
Corrective Measures Investigation Report

Stormwater System Evaluation

ALCO – Maxon Site – Parcel B, BCP Site No. C447043

Maxon ALCO Holdings, LLC

220 Harborside Drive, Suite 300

Schenectady, NY 12305

Prepared For

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1.0 INTRODUCTION

On behalf of Maxon ALCO Holdings, LLC, (Volunteer) (Schenectady, NY) in response to the New York State Department of Environmental Conservation's (NYSDEC) July 22, 2021 correspondence, Barton & Loguidice, D.P.C. (B&L), presents the results of evaluations performed on the Harborside Drive stormwater network and investigations of the possible sources of residual sub-surface petroleum entering the stormwater system. This report presents a summary of the investigation actions performed to date, observations, design evaluation of the Harborside Drive stormwater collection network and the feasibility of engineering control modifications, and the proposed additional mitigation measures to address residual petroleum entering the system.

1.1 Background

Despite the extensive remedial action programs already implemented at the former ALCO industrial site, occurrences of residual sheens to the Harbor surface have been observed during periods of intense rainfall and/or Mohawk River level fluctuations. These sheens have been associated with residual aged subsurface petroleum entering the Harborside Drive stormwater network (Stormwater Network #1), which conveys flow to Outfall #1 located along the western end of the Harbor (Figure 1). This drainage network extends from the northeast portion of the property, and runs southwest along Harborside Drive, turning north near River Street, and then northeast at the point of flow into the Harbor. Under normal operation, runoff from buildings, site features, and surface water enters the stormwater system via catch basins then is transported via a series of high density polyethylene (HDPE) pipes ranging from 18- to 30-inches through Diversion Structure-1 (DS-1) to Vortechs unit #1. The Vortechs unit is an in-line mitigation system that is designed to effectively remove finer sediment, oil, and floating/sinking debris under normal flow conditions. Pollutants captured within the Vortechs system are removed twice a year via access manholes. Vortechs #1 is rated to treat 15.74 cubic feet per second (CFS) and can bypass up to 40 CFS during high flow conditions at which point stormwater flows overtop a concrete weir wall in DS-1 and bypasses the Vortechs unit. These bypassed flows are diverted into the 36-inch conveyance pipe directly to the system outfall point, flowing into the harbor. During rainfall periods where intensity exceeds 1.2-inches, the Vortechs unit become less effective and oil within the system can flow to man-hole -13 (MH-13) where the overflow from DS-1 and the Vortechs unit merge, resulting in instances of observed surface sheens in the Harbor.

Another instance when sheen has been observed is when the water level within the Mohawk River (and Harbor) are lowered, either by the New York State Canal Corporation or extreme dry weather conditions. When water levels within the Harbor are above the top of the Outfall #1 discharge pipe, petroleum product that has bypassed DS-1, becomes trapped within the discharge pipe; however, when the water level subsides below 209-feet, the top of the stormwater system outfall pipe is exposed, allowing residual petroleum trapped within the 36-inch conveyance pipe to enter into the harbor as a more visible slug flow. Trapped petroleum product occurs downstream of DS-1 and the Vortechs unit. As depicted on Figure 1, the invert

elevation of the 36-inch discharge pipe for Stormwater Network #1 is set at an elevation of 206 feet. Water levels in excess of 209 feet allow residual petroleum to be trapped on the water surface within the 36-inch discharge pipe (refer to Figure 2 Storm Network #1 Profile). When water levels drop below 209 feet, sheens in the Harbor have been observed. Other potential sources of petroleum detected in the Harbor have been associated with leaks within the sheet wall, discussed further in Section 2.4 (See Figure 1).

The stormwater system at the ALCO Site is divided into three separate networks, each of which captures and conveys stormwater from different areas of the site. Each stormwater conveyance network contains separate stormwater Vortechs units. The system has been effective controlling stormwater. Here the issue is instances where there is entry of subsurface residual petroleum into the system; a condition that can be addressed by the remedial response recommended as noted below.

As identified above, Storm Network #1 drains the northeast portion of the site. Storm Network #2 primarily consists of drainage from the River's Casino buildings and parking lots. Storm drains flow east/northeast along Harborside Drive, turning north near River Street, and discharging to the west of Outfall #1 in the Harbor. Similar to Storm Network #1, Diversion Structures #2A and #2B and Vortechs Units #2A and #2B have been installed to treat stormwater prior to flowing into the Harbor. To date no issues with sheens have been noted for Storm Network #2. Storm Network #3 consists of drainage in the undeveloped area between River's Casino, the Harbor, and the Rensselaer Polytechnic Institute (RPI) building along River Street. The storm drainage system combines and is managed and treated by Diversion Structure #3 (DS-3) and Vortechs Unit #3. Similar to those in Storm Network #2, these structures have not shown any issues with petroleum sheens or entry of residual subsurface conditions entering the system; therefore, the focus of this investigation has been on Storm Network #1.

The results of the subsurface investigation and stormwater system infiltration evaluation has led to the determination that a recovery well system is a cost effective and practical approach to reducing an observed petroleum source adjacent to a stormwater structure (DS-1) and conveyance piping. The recovery well is consistent with the Site Management Plan (SMP) as to the identification and response to subsurface conditions discovered after completion of the Remedial Action Work Plan (RAWP) and issuance of the Certificate of Completion (COC). Two additional remedial technologies were evaluated to treat end of pipe discharges, including oil/water separators or oil/sand interceptors; however, these solutions are infeasible based on burial depth, impacts to functionality of the existing stormwater system, cost, and overall impacts to the existing site facilities. Because of the significant adverse impacts of these other two alternatives, such intrusive measures are not considered practicable as a remedial response to address the residual petroleum incidents associated with entry into the storm water system.

2.0 CORRECTIVE MEASURE INVESTIGATIONS ACTIVITIES

B&L has been assisting the Volunteer Maxon ALCO Holdings, LLC since 2010, providing environmental engineering service to monitor and, when necessary, abate environment related conditions during pre and post brown-field site development activities. Most recently, B&L has been investigating Storm Network #1 and potential issues with petroleum infiltrating the stormwater collection system. Several remedial efforts have included assistance from the remedial contractor Precision Industrial Maintenance, Inc. (PIM) (Schenectady, NY), which has provided confined space entry and inspection services of stormwater structures and subsequent cleaning. Storm Network #1 investigations/remedial services provided to date by both B&L and PIM have been outlined below and further described in subsequent sections of the report.

- Summer of 2019 – Inspection and cleaning of MH-7 and installation of absorbent boom and temporary baffle system to monitor product collection.
- April 21, 2020 – A manhole inspection of MH-7 was completed by PIM.
- June 25, 2020 – An inspection of DS-1 structure was conducted by PIM.
- July 13, 2020 – Grout sealing of exterior pipe penetrations at DS-1 performed by PIM.
- August 10-12, 2020 – A subsurface soil investigation was performed around DS-1 by B&L.
- October 21-23, 2020 – The interior refurbishment of the DS-1 structure was completed by PIM through the application of an epoxy coating.
- December 7-11, 2020 – Re-sealing sheet piles along the southeastern side of the Harbor completed by Rifenburg Construction, Inc., (Rifenburg)'s (General Contractor) (Troy, NY) subcontractor DeBrino Caulking Assoc., Inc. (Castleton, NY).
- June 2, 2021 – A comprehensive evaluation of the Storm Network #1 completed by B&L.
- On-going – Daily maintenance of booms and absorbent devices to control sheen extent in Harbor by B&L and site maintenance staff.

Further discussion of corrective actions and investigations of the stormwater system are presented below.

2.1 Diversion Structure Investigation & Remediation

2.1.1 MH-7 Investigation

As a result of occasional sheens on the Harbor surface after intense periods of precipitation, investigation of MH-7 was performed by PIM during the early summer of 2019 in an effort to isolate a section where petroleum may be infiltrating the stormwater drainage system. During this investigation MH-7 was cleaned and a series of 10-foot sections of 8-inch absorbent boom were installed within the 36-inch stormwater discharge pipe extending from MH-7 to the Harbor stormwater outfall (refer to Figure 2,

Plan View). The boom was placed to help determine how much residual petroleum was entering and then flowing through the stormwater system during precipitation events. This boom was replaced five times with no evidence of additional oil collected beyond a thin film of residual hydrocarbon on the rope itself, leading to a determination that small amounts of oil were collecting in the stormwater system over time and coming out either due to low water events exposing the outlet or heavy rain events. In addition to the absorbent boom, plywood constructed baffle structures were placed vertically in MH-7 and MH-13 allowing flow below the plywood and trapping floating hydrocarbons on the upstream water surface. Absorbent pads were placed on the upstream side of the plywood baffles to identify areas of oil collection. Neither oil nor petroleum products were observed during this investigation and the baffles were removed to prevent damage to the stormwater system.

On April 21, 2020 another investigation was performed on MH-7. A team of three personnel from PIM performed confined space entry to clean and inspect the structure. During the inspection, stormwater debris and observed surface sheen were vacuumed from the structure prior to pressure washing. Once cleaned, a video inspection of the inside of the manhole was performed. Again, no obvious signs of infiltration into the stormwater system were noted at this location and further investigation was warranted upstream of this location, specifically focusing on DS-1.

2.1.2 Diversion Structure #1 (DS-1) Inspection and Sealing

An investigation of the interior condition of upstream location DS-1 was performed by PIM on June 25, 2020. Utilizing a vacuum truck, PIM evacuated all stormwater from the structure and pressure washed the structure sidewalls. Once clean, the interior of the structure was visually inspected for defects. Observed areas of grout deterioration and cracking at the bottom of the pipe penetrations were noted with some seepage of water. The seepage was noted to have a slight odor and detectable sheen. As a result, PIM was contracted to remove loose and failing grout from around the pipe penetrations. A foaming expansion grout manufactured by Avanti was injected from the interior of the structure into the affected areas. The interior of the structure was inspected by PIM on July 13, 2020, subsequent to the grout injection and noted that the grout repair had successfully stopped seepage into the structure. Since the seepage into the structure was noted to contain a sheen and have an odor, further investigation of the subsurface conditions around the DS-1 structure was deemed warranted.

Additional measures to seal the stormwater system components (pipes, structures, penetrations, etc.) to prevent infiltration of contaminants and subsequent discharge was completed by PIM on October 21-23, 2020. The diversion structure was thoroughly cleaned and visual inspected for any cracks or other structural defects. Following the inspection, PIM field staff performed confined space entry and applied Epoxytec CPP, a moisture insensitive, chemical resistant, non VOC epoxy coating to the interior surface

of the structure, including the primary and secondary outflow pipe penetrations and structure joints. Part A and Part B were mixed for a minimum of four (4) minutes with a low speed drill until a homogenous blend was achieved. The product was applied using a spatula and allowed to cure for eighteen (+) hours. Refer to the Photo Log and Epoxytec CPP Safety Data Sheets included in Appendix C. Product information indicates the product is VOC solvent free, and therefore will not off-gas once applied.

2.2 Diversion Structure #1 (DS-1) Subsurface Investigation

In accordance with the approved revised DS-1 Subsurface Investigation letter work plan to the NYSDEC dated July 23, 2020 and the Parcel B SMP, B&L field staff completed a subsurface investigation on August 10 and 11, 2020 around the exterior of DS-1. The purpose of the investigation was to assess the subsurface conditions around the outside of the DS-1 stormwater structure. In accordance with the SMP, a Community Air Monitoring Program (CAMP) was in place during the subsurface investigation. The CAMP consisted of Dustrak meters placed upwind and downwind of the intrusive activity. The downwind location also included a PID meter that continuously monitored the air quality for VOCs. The Dustrak meters and PID were monitored regularly to ensure compliance with CAMP regulations.

Throughout the subsurface investigation, no particulate exceedances (particulate value greater than 100 mcg/m³ for more than a 15-minute interval) were observed upwind or downwind. Additionally, no total organic vapor exceedances (VOC value greater than 5 ppm for more than a 15-minute interval) were observed downwind. No corrective measures were required to be implemented during the investigation.

During the investigation, eight (8) soil borings were advanced around DS-1 (Figure 3). Three locations were converted into monitoring wells (designated as MW-1, MW-2 and MW-3) based on presence of a thin layer of free-phased petroleum product observed in the soil sample and along the estimated water table interface, approximately 17-18 feet below ground surface. All soil cuttings generated during the subsurface investigation were placed back down the boreholes.

The monitoring well screens were placed at 16-26 feet below ground surface (bgs) and fitted with transparent bailers to allow for the observation of accumulated free-phase petroleum product. PID readings exceeded 50 parts per million (ppm) at five of the eight soil boring locations, including B-1, B-2, B-3, B-7, and B-8. During the investigation, a total of three (3) soil samples were collected from locations B-2 20'-24', B-3 20'-24', and B-4 20'-24' and analyzed for the presence of Volatile Organic Compounds (VOCs) and Semi-Volatile Organic Compounds (SVOCs). The following VOC and SVOC detections were noted in the soil samples:

- B-2 20'-24' - benzo(a)anthracene, chrysene, and pyrene, 2-Butanone (MEK), acetone, carbon disulfide, isopropylbenzene, naphthalene, and n-butylbenzene.

- B-3 20'-24' - acenaphthene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluorene, 2-butanone, acetone, carbon disulfide, isopropylbenzene, naphthalene, n-propylbenzene, sec-butylbenzene, and tert-butylbenzene
- B-4 20'-24' – benzo(a)anthracene, benzo(a)pyrene, benzo(b), fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, ideno(1,2,3-cd)pyrene, pyrene, 2-butanone, 4-methyl-2-pentanone, acetone, carbon disulfide, isopropylbenzene, n-propylbenzene, p-isopropyltoluene, and sec-butylbenzene

In addition, a total of three (3) groundwater samples were collected from locations B-4 (MW-1), B-6 (MW-2), and B-8 (MW-3) and analyzed for the presence of VOCs and SVOCs. The following VOC and SVOC compounds were detected in the groundwater samples:

- B-4 (MW-1) – fluoranthene and pyrene
- B-6 (MW-2) – Non-detect
- B-8 (MW-3) – fluoranthene, benzo(a)anthracene, benzo(b)fluoranthene, chrysene, pyrene, acetone, and naphthalene

Based on the analytical results, field observations, and site history the suspected aged petroleum type is diesel. The analytical results for the groundwater samples collected during the August 2020 DS-1 Subsurface Investigation were not available when the report was submitted. The DS-1 Subsurface Investigation Report which includes the analytical data (soil only), boring and well construction logs, and the clearly labeled upwind/downwind CAMP records is included as Appendix A1. The previously groundwater data that was not available during the preparation of the August 2020 Subsurface Investigation Report is included as Appendix A2. Follow-on observations of the monitoring wells identified the presence of free-phase petroleum in the wells. Once a week, starting in September 2020, measurements of accumulated oil are monitored utilizing both an interface probe and transparent bailers. The free-phase product is measured in terms of thickness in each monitoring well and recorded on the weekly inspection log that is provided to the Department on a weekly basis. In addition, the volume purged from each monitoring well is also recorded on the inspection log. If the product thickness is immeasurable, it is recorded on the weekly inspection log. The monitoring wells are hand bailed weekly, removing approximately 0.02 gallons of petroleum product from MW-3 each week. Monitoring well MW-1 and MW-2 have a detectable odor and sheen; however, no observed free product was present.

In an effort to further improve the capturing of free phase oil, B&L installed a Whale Pump Model I submersible pump into monitoring wells MW-1, MW-2, and MW-3 on May 6, 2021 to induce a more aggressive drawdown to determine if product recovery could be increased. Water collected from the wells was discharged to the on-site oil/water separator. Monitoring well MW-3, which typically produces around 0.02 gallons of product during the weekly purging event, had approximately 22 gallons of water removed during the drawdown process. Monitoring well MW-2 had approximately 30 gallons of water removed and MW-1 had

approximately 48 gallons removed. Neither MW-1 nor MW-2 had measurable product before the drawdown process.

By aggressively pumping each well, although not instantaneous, it was determined that the product recovery could be temporarily increased using this method. Two weeks following the investigation, an increase in product and odor were noted at wells MW-2 and MW-3. Measured product in MW-3 increased to approximately 0.05 feet after aggressively drawing down the well; however, product recovery remained elevated for roughly three weeks before returning to normal levels. Prior to the aggressive drawdown, MW-2 did not display any measurable product; however, following the aggressive drawdown, 0.01' of product was measured from this location on two occasions.

Since September 2020, approximately 583 gallons of purge water has been removed from MW-1, MW-2, and MW-3. Of that, less than ½ gallon, approximately 0.47, of product have been purged from MW-3. All purge water has been disposed of in the oil/water separator (583 gallons). Refer to Appendix B that includes the free-phase petroleum observations reported in terms of product thickness, a summary of purge records, total product recovery to date, and quantity disposed of in the oil/water separator in tabular format.

2.3 Evaluation of Engineering Controls to abate Future Releases

2.3.1 Storm Network #1 Investigation

On June 2, 2021, B&L investigated the conditions in DS-1 as well as upstream manhole/catch basin locations (refer to Figure 1) in accordance with the Harbor Operation and Maintenance letter submitted to the Department April 30th, 2021, and subsequently approved on May 6th, 2021 via email correspondence. The purpose of this investigation was to isolate a section(s) upstream of the DS-1 structure, where residual petroleum in the subsurface could potentially be entering the system, as specified in the NYSDEC approved letter. As discussed in Section 1.1, two of the three stormwater structures downstream of the DS-1 structure (MW-7 and MH-13) were previously investigated by PIM, and no obvious signs of infiltration into the stormwater system were noted and therefore eliminated from this investigation. In addition, this investigation omitted lateral connections; only the main system drainage header was investigated.

On June 2, 2021 B&L field representatives conducted an upstream stormwater investigation of Storm Network #1. During the week prior to the investigation (May 26th through June 2nd), the temperature average 54.6 degree Fahrenheit. The precipitation averaged 0.18 inches, with the most significant rainfall events occurring on May 29th (0.68 inches) and on May 31st (0.66 inches). The total rainfall amount in the week prior to the investigation was 1.50 inches. Weather conditions the day of the investigation were noted at 74 degrees Fahrenheit and sunny. At the time of this investigation, one

weekly inspection was conducted every Friday. The inspection was completed on June 2, 2021, and no observable sheen was noted in the Harbor. Flow conditions (steady drip) were observed in structures CB-14, MH-1, Structure 1136, and Structure 985, during the investigation. These conditions are considered representative in terms of determining if residual petroleum is present in the stormwater structures.

The methodology of this investigation included lowering a photoionization detector (PID) to the bottom of each structure to monitor for the presence of volatile organic compounds, supplemented by an internal swab around each pipe penetration and structure joint/or seal using sorbent pads and a PVC pole. In addition, a video log was captured for any structure that exhibited PID readings. The PID meter was lowered into each structure and hung at the surface of the water for approximately two minutes. The PID meter was set to log data at a one-minute interval. The peak PID readings, depth of structure, and whether water/liquid was present for each location are shown in the table below. The timestamped logging has been included in Appendix E.

MANHOLE/ CATCH BASIN LOCATION	MAXIMUM PID READING (PPM)	DEPTH OF MANHOLE (RIM TO BOTTOM OF OUTLET PIPE IN FT)	WATER PRESENT DURING INVESTIGATION
DS-1	42	Unknown	Yes (indiscernible)
MH-11	0.0	18.00	Yes (below outlet)
MH-10	0.5	17.10	Yes (indiscernible)
STRUCTURE 985	0.0	15.55	Yes (below outlet)
MH-1	0.0	15.66	Yes (below outlet)
CB-15	0.1	12.24	Yes (below outlet)
STRUCTURE 1136	0.2	13.65	Yes (below outlet)
CB-14	0.0	11.00	Yes (above outlet)
CB-13	0.5	10.30	Yes (below outlet)
CB-12	0.0	9.35	Yes (above outlet)

The DS-1 structure exhibited a maximum PID reading of 42.0 part per million (ppm). The remaining upstream manhole/catch basin PID readings ranged from non-detect to 0.5 ppm. A mild sheen was noted at locations DS-1, Structure 985, and a small patch in CB-12. Petroleum odors were noted at locations DS-1, MH-10, and CB-15; however, no elevated PID readings were observed within any of the structures. Sorbent pads were also lowered into the water/liquid of each structure and allow to soak for approximately ten (10) seconds. No visible free product was noted on the sorbent pads following each internal swab.

An inspection video log captured the interior condition of the DS-1 structure. Review of the video confirmed that there were no signs of staining/leaking within the structure, around the pipe penetrations or structure joints. The epoxy coating applied in October 2020 is functioning as designed.

A photo log of the investigation is included in Appendix F.

Based on the stormwater system evaluation there was little to no indication that free product is entering the DS-1 structure via upstream locations. Based on the results of the stormwater system investigation and as requested by the Department, an additional inspection of the entire network (including laterals) is required. This additional investigation will be completed as part of a separate Corrective Measures Remedial Design Work Plan which will be submitted to the Department for approval.

Several hypotheses as to why the DS-1 structure exhibited a PID reading of 42 ppm were discussed. It is possible that VOCs measured in the DS-1 structure may be a direct influence of the Vortechs unit which is connected to the DS-1 structure approximately 80 feet downstream, which traps floatable solids and oil. It is possible that an appreciable level of gases/vapors has accumulated within the Vortechs unit with vapors migrating back to the DS-1 structure resulting in a PID detection. A second possibility is that oil may be accessing the system along a pipe joint between DS-1 and downgradient manhole MH-13. MH-13 is where the Vortechs unit piping ties back into the 36-inch discharge pipe to the Harbor (Figure 2, Plan View).

To eliminate the second hypothesis, B&L conducted a visual inspection of MH-13 on August 4, 2021. During the week prior to the investigation (July 28th through August 4th), the temperature averaged 63.6 degree Fahrenheit. The precipitation averaged 0.18 inches, with the most significant rainfall events occurring on July 30th (0.80 inches) and on August 2nd (0.41 inches). Weather conditions the day of the investigation were noted at 76 degrees Fahrenheit and sunny. No observable sheen was noted in the Harbor during the weekly inspection. Water was noted below the outlet pipe; however, no flow conditions were observed. These conditions are considered representative of the June 2, 2021 investigation.

During this investigation, no PID screening was conducted; however, an internal swab around each pipe penetration and structure joint/or seal using sorbent pads and a PVC pole was conducted. No visible free product was noted on the swab, and no petroleum odors were noted.

Lastly, it is possible that residual oil may be infiltrating the system along a pipe joint between MH-11 and DS-1; however, minimal sheen and no staining was observed within either structure.

2.4 Re-sealing Harbor Sheet Piles

Observed seepage of residual petroleum product through section(s) of sheeting on the southeastern side of the Harbor in 2020 resulted in additional measures to address noted sheens on the Harbor surface (Refer to the Photo Log presented in Appendix D). Sheens emanating from the sheet piling along the southeastern Harbor wall were promptly responded to and contained through the use of temporary absorbent boom, pads, and sweeps (pre-2018). In 2018, Rifenburg subcontracted the services of DeBrino Caulking Assoc., Inc. to seal the seams in a lower section of sheeting along the eastern Harbor wall; however, additional seepage in the summer of 2020 were observed to be occurring from an area higher up in the sheeting within

the same general location. During the 2018 event, 125 vertical sheet pile seams were cleaned using a 4,000 pounds/square inch (PSI) pressure washer to remove any residual debris from the sheeting where injecto tubes were to be installed. Injecto tubes were pasted along the sheeting seams and grouted in place (refer to Harbor-1 cut sheet and photolog provided by Debrino, Appendix D). Injecto tubes were used to inject a hydrophobic caulking (AV-248/249-LV Flexseal LV™) manufactured by Avanti (Appendix D) into the seams between the affected sheet piles. The flexseal caulking was installed in 9 foot vertical intervals; six-feet above the Harbor surface and three-feet below the Harbor surface. Injecto tubes extending below the Harbor surface required the use of a diving team. The area where the sealing was performed is presented in Figure 4. According to the United States Geological Survey (USGS) Mohawk River at Freeman's Bridge gage height, the Harbor surface elevation during the 2018 sealing event averaged 210.41 feet above North American Vertical Datum of 1988 (NAVD 88); therefore, the vertical elevation sealed was approximately 207.41 feet above NAVD 88 to 216.41 feet above NAVD 88.

During the week of December 7, 2020, Rifenburg subcontracted the services of DeBrino to seal the upper section of the sheeting where previous seepage was observed. On December 7th, 8th, and 14th, three (3) injecto tubes were installed along the eastern Harbor wall. DeBrino began injections along the affected seams on December 15th, 2020. During the injection process, DeBrino staff noted that the injecto tube took little to no caulking material. In conclusion, it was the professional opinion of DeBrino staff that there was no leak in the sheet pile joints. Based on in-field observations and daily Harbor inspections, no visual staining is observed on the absorbent sweeps lining the eastern Harbor wall, suggesting the application of the 2017 and 2020 sealant has been successful in preventing petroleum seepage through the sheeting.

It should be noted that in response to NYSDEC Spill no. 2107223 reported on November 4, 2021 and subsequent discussion with the Department on December 8, 2021, a separate Corrective Measures Investigation Work Plan to investigate the conditions of the eastern harbor wall in the vicinity of Recovery Well #3 will be submitted for Department approval in April 2022. So that there is no misunderstanding as to the administrative listing of the #2107223 spill number, it is noted that the condition arises from the residual petroleum conditions that have always served as the primary basis for the activities set forth in the SMP. There was no active new spill that occurred at the property on November 4, 2021.

2.5 Continued Maintenance

Continued effort by the Volunteer to contain sheens from discharging into the Harbor are on-going. Remedial contractor PIM has been contracted to install absorbent boom/sweeps along the western dock section and replace them as needed. The condition of the Harbor is inspected daily by maintenance staff and/or B&L, which documents the condition of the booms/sweeps, presence of sheen (fully contained or not), presence and/or removal of debris around the boom, condition of absorbent socks in baffles, and any corrective actions required. The daily monitoring log is provided to the Department on a weekly basis.

3.0 PROPOSED CORRECTIVE/REMEDIAL MEASURES

Three (3) remedial options were evaluated to mitigate aged, residual subsurface petroleum from entering the stormwater system and inevitably releasing into the Harbor; oil/water separator, oil/sand interceptor, and groundwater recovery system. The following section reviews the stormwater system design of Storm Network #1 and evaluates the feasibility for each remedial options.

Based on the subsurface investigation performed around the DS-1 structure, a residual petroleum condition has been identified to the immediate north and west of the DS-1 structure. Corrective measures to seal the DS-1 structure have successfully eliminated petroleum seepage into the system at that location based on video inspection; however, during heavy precipitation events, occasional sheens are still being noted at the Harborside Drive Storm Network #1 Outfall in the Harbor (Figure 1). As previously discussed, further evaluation of the stormwater system including structures upstream and downstream of DS-1 has not been conclusive in determining the point of residual petroleum access into the system. Installation of an engineered control system (oil/water separator or oil/sand interceptor) in line with the stormwater system is not feasible from a constructability or cost perspective, further discussed below in Sections 3.3 and 3.4. Subsequently, a groundwater recovery system intended to reduce the identified area of petroleum contamination near the DS-1 structure likely impacting the stormwater system, has been evaluated. This remedial option was found to be the most practicable and discussed further below in Section 3.2.

3.1 Stormwater System Design Evaluation

B&L has reviewed the hydrologic and hydraulic modeling for Storm Network #1 along Harborside Drive which was included as an Appendix to the Stormwater Pollution Prevention Plan (SWPPP) dated December 29, 2014 and revised through December 9, 2015 as prepared by Hershberg & Hershberg Consulting Engineers (H&H). Refer to Appendix G for the H&H hydrologic and hydraulic modeling calculations. Storm Network #1 includes a tributary area of 585,379 square feet (sf) or 13.44 acres (ac). Calculated impervious area of the drainage network comprises 469,431 sf or 10.78 ac, which accounts for approximately 80 percent of the drainage area. The modeling calculates the following peak discharged rates for the water quality volume (WQv)-, 1-, 10-, and 100-year storm events:

- WQv storm event
 - Rainfall Intensity 1.2 inches
 - Peak Discharge 15.69 cubic feet per second (CFS)
- 1-year storm event
 - Rainfall Intensity 2.5 inches
 - Peak Discharge 39.47 CFS
- 10-year storm event
 - Rainfall Intensity 4.5 inches
 - Peak Discharge 75.44 CFS
- 100-year storm event
 - Rainfall Intensity 6.6 inches
 - Peak Discharge 112.65 CFS

As previously discussed in Section 1.1, the beginning of Storm Network #1 collects and conveys captured stormwater runoff from buildings, site features, and surface water via a series of 18- and 30-inch HDPE pipes and catch basins. At MH-1, located near the southwest corner of the River House Apartment Complex, the drainage pipe sizing is increased to 30-inch HDPE to accommodate increased flow volumes generated from lateral connections to the system. Approximately 69 feet to the north of MH-11 stormwater discharges into Diversion Structure #1 (DS-1) (Figure 1). Under normal flow conditions, water is conveyed from DS-1 to the Vortechs stormwater treatment system (Vortechs #1) via a 36-inch HDPE pipe. The Vortechs unit effectively removes finer sediment, oil, and floating/sinking debris under normal flow conditions. Vortechs #1 is rated to treat 15.74 CFS and can bypass up to 40 CFS during high flow conditions at which point stormwater flows overtop a concrete weir wall in DS-1 and bypasses the Vortechs unit completely. These bypassed flows are diverted via a 36-inch conveyance pipe directly to the system outfall point, flowing into the Harbor.

Review of the H&H modeling of the system indicates that Vortechs #1 is capable of providing treatment of flow up to the WQv storm event (i.e. the 90th percentile rain event). Peak flows from the 1-year, 24-hour duration storm event will bypass through the Vortechs unit but will not receive the treatment that the unit is rated for. Any storm events larger than the 1-year storm will bypass the Vortechs unit. Discussions with a representative from Contech, the manufacturer of the Vortechs unit, verified that they do not have a product that would work in the system to help capture oil. Therefore, an additional stormwater structure would need to be evaluated beyond the Vortechs unit to prevent/contain future releases where the stormwater flow exceeds 40 CFS and water within DS-1 overflows the weir, resulting in flow into the Harbor.

Typically, water levels within the Harbor are above the top of the Outfall #1 discharge pipe, which allows free-phase residual petroleum that has bypassed DS-1, to be trapped within the pipe. Water levels within the harbor are controlled by the NYS Canal Corporation, and when the water level within the Mohawk River (and harbor) are lowered such that the stormwater system outfall pipe is exposed, free-phased petroleum trapped within the 36-inch conveyance pipe, downstream of DS-1 and the Vortechs unit flows into the harbor.

As a result of the investigations performed to date, the operating hypothesis is that infiltration of petroleum into the stormwater system is potentially related to a pocket of subsurface contamination situated adjacent to the DS-1 structure. Infiltration upstream of the DS-1 structure is not apparent as determined through the investigatory efforts summarized above; however historical petroleum infiltration into the DS-1 structure would suggest the potential for access into the stormwater piping downstream of this location. Engineered technologies to alleviate future impacts to the Harbor stormwater system have been evaluated below:

3.2 Groundwater Recovery System Remedial Technology

Installation of a free product recovery and groundwater depression system is proposed for the area of monitoring wells MW-2 and MW-3 located on the north side of the DS-1 structure, where free product has been noted during the DS-1 subsurface investigation. The conceptual design of the petroleum recovery system would include the installation of a recovery well that would be situated in close proximity to MW-3, where the majority of free product is documented during weekly inspections (Figure 5). The system would be anticipated to lower the water table in the immediate vicinity of the DS-1 structure, thereby inducing a cone of depression and redirecting groundwater flow and free product toward the recovery system. The recovery system would be equipped with a belt skimmer that would continuously remove free product from the groundwater surface that is drawn towards the system. Overall, the recovery system would reduce the amount of free product identified around DS-1 and suspected of infiltrating the storm system. Removal of petroleum product from the soils in the vicinity of the DS-1 structure is expected to reduce petroleum infiltration into the stormwater piping and potentially minimizing the amount of trapped petroleum product that accumulates within the discharge pipe, and exits to the Harbor. The recovery system would be anticipated to operate at a lower pumping rate to minimize smearing of product into lower portions of the aquifer, thereby making extraction difficult or minimizing product capture.

Further hydrogeologic evaluations of the existing wells would need to be completed to help determine hydraulic conductivity, groundwater gradient, pumping rates, and radius of influence of a pumping well. The recovery system conceptually would consist of the installation of a 12-inch well casing extending to a depth of 26 feet below grade. The recovery well casing would be perforated/screened from 16 to 26 feet below ground surface allowing the water table to be intercepted (approximately 17-18 feet below ground surface). Installation of a pumping system would be situated at the upper surface of the water table to capture as much product as possible (Figure 4). A source of power to operate the pump would need to be evaluated and installed in close proximity to the recovery well. Collected fluid would be transferred via a 1-inch discharge line exiting the recovery well casing through a below grade pit less adapter and piped to the existing on-site 1,200 gallon oil/water separator, which discharges to the sanitary sewer. Free product scraped from the belt skimmer would be collected in a 55 gallon drum that would be disposed of by a remedial contractor or pumped to the existing oil/water separator. Currently, samples are collected on a quarterly bases downstream of the oil/water separator prior to discharging to the sewer system and would need to be maintained to monitor effectiveness of the oil/water separator. The discharge piping route currently under consideration would exit the well traveling west towards the bike path, then northerly along the bike path, and then easterly to the oil/water separator (Figure 5). Special consideration to the location and depth of existing utilities (water, telecommunications, and gas) would need to be reviewed, as these utilities are also located within the bike path corridor. A more direct route is also being reviewed; however, other obstacles such as the Vortechs units, sprinkler system, and Harbor access sidewalk present similar challenges.

Conceptually, installation of a product recovery/groundwater suppression system would promote a more aggressive extraction of residual petroleum product. The system has the potential to minimize seepage into the stormwater system, if in-fact it is the source causing the issue. From a design standpoint, installation of a product recovery system is possible; however special consideration to hydrology, disturbance to existing landscape/pavement, utilities, and sprinkler system need to be reviewed.

A cost estimate for the groundwater recovery system was prepared and provided in Appendix H. Given the installation costs, site space constraints, redevelopment impacts and logistics of this technology, it was determined that this is the most practical solution that would be cost effective, and an efficient remedy to treat the source area that could be infiltrating the stormwater system in the vicinity of DS-1.

3.3 Oil/Water Separator Remedial Technology

As requested by the Department, B&L has evaluated end of pipe treatment technologies. One treatment technology reviewed was the installation of an underground oil/water separator (OWS) tank (or multiple) downstream of DS-1 and Vortechs #1 to capture and treat all flows through Harborside Drive stormwater network (Storm Network #1). The underground treatment system was conceptually designed to handle a 10-year storm event which has a peak flow of 75.44 CFS or 33,860 GPM. In order to treat this flow, a minimum of six 6,000 GPM (60,000 gallon) oil/water separator tanks as manufactured by Highland Tank would need to be installed. Since each tank measures 13' wide by 60.5' long, an area of approximately 120' wide by 80' long would be required for installation. Due to site configuration, and the need to install the OWSs downstream of where the DS-1 bypass pipe and Vortechs #1 discharge pipe recombine, the oil water separators would significantly and adversely affect the current development and use of the property since it would need to be installed within the footprint of the existing amphitheater; a very significant interference with the redevelopment of this former industrial Site that is helping with the revitalization of Schenectady. A preliminary design analysis indicates that the required excavation would extend to a depth of 25 to 35 feet below existing grade, creating a significant water and material management issue. Excavated soil would require screening and unsuitable soil would require excavation with heavy equipment, truck transport and disposal at an approved off-site disposal facility as well as water treatment measures. Flow would be diverted via the existing 36-inch HDPE conveyance pipe into a manifold pipe allowing flow to be dispersed across the six (6) 60,000 gallon oil/water separator tanks.

Additionally, this heavy construction and installation presents concerns for the ability of the existing system to pass larger storm events since all flows would be directed through the pipe manifold and OWSs. Moreover, flows in excess of the 10-year event would continue to not have any treatment as emulsified oil would likely be able bypass the system. Based on the conceptual design evaluation of this technology, we estimate that the temporary shoring and excavation costs alone to install these six (6) OWSs would exceed \$1.5 million (Refer to Appendix I for cost

estimate of OWS system). This estimate does not include the cost of manifold piping, certified clean backfill, groundwater management, or amphitheater deconstruction and restoration, assuming that such was feasible. Given the construction costs, fossil fuel emissions, site space constraints, redevelopment impacts and logistics of this technology, this is not a solution that would be considered practicable or cost effective. It would be wholly inconsistent with green remediation principles considering the use of fossil fuel powered heavy equipment and depletion of natural resources necessary to construct such an intrusive approach. Therefore this technology is not considered an applicable remedial response to this Site condition.

3.4 Oil/Sand Interceptor Remedial Technology

B&L evaluated the installation of an inline, underground oil/sand interceptor (OSI) tank (or multiple) with a baffle wall(s), bypassing water from the bottom of the tank between each baffle, trapping oil prior to treated water discharge. The intent would be to capture free phase petroleum product (emulsified oil would still be able to bypass the baffle system). This structure would additionally allow for regular inspection and removal which is currently infeasible on site. The goal would be to provide some added protection while allowing for inspection and potential recovery of product captured within the interceptor. Similar to the OWS alternative, the OSI would be located within the amphitheater beyond DS-1 and Vortechs #1. Stormwater treatment capabilities were again modeled for a 10 year storm event. Utilizing Highland Tank oil/interceptor sizing guide, the largest manufactured system is capable of handling flows of 6,000 gpm (60,000 gallon tank). Highland's oil/sand interceptors are constructed of steel and have a standard gauge rated for a maximum burial depth of 60-inches. As previously mentioned in the discussion of OWSs, anticipated burial depths are around 25 to 35 feet below existing grade, which is problematic with this specific treatment system design. To achieve functionality at greater depths, specially designed tanks with increased wall thickness would be required. Comparable to the OWSs, the site space constraints for installation of the OSI system, cost effectiveness, adverse impacts to the redevelopment of the Site, and constructability, make this a non-green remedial technology and infeasible (Refer to Appendix J for cost estimate of OSI system).

Additionally, when considering the OWS or OSI, the existing site stormwater system was designed to provide treatment to peak flows associated with a 90th percentile storm event (WQv sized storm), with the ability to bypass greater flows during larger events. The addition of an engineered treatment system in line with the stormwater system prior to discharging the Harbor that would be capable of providing treatment for larger storm events would have the potential to adversely impact the overall functionality of the system and would not provide treatment for storms that result in greater than 75CFS peak flow. While this flow represents 4.5 inches of rain over a 24-hour period, many of the storms we now receive are shorter in duration which therefore increase peak flows. Given the extreme logistical challenges of constructing such a system and the anticipated construction costs, we find that such a system would provide minimal treatment benefits and is therefore considered infeasible.

4.0 SUMMARY

To date, several investigative actions have been performed in attempts to locate the specific source of residual, aged, subsurface petroleum entering the stormwater system and ultimately flowing to the Harbor. The investigations included three (3) manhole investigations, a sewer system investigation, and a subsurface investigation which included the installation of soil borings and monitoring wells surrounding the DS-1 structure. Based on the investigations, it was concluded that petroleum contamination was found to be centralized in the immediate vicinity of DS-1.

Corrective measures have been performed to mitigate petroleum from infiltrating the stormwater system and ultimately flowing into the Harbor. To date, they include epoxy lining the DS-1 structure, grout sealing the pipe penetrations within the structure, sealing a segment of steel sheeting within the Harbor, and installing temporary submersible pumps into the wells surrounding DS-1 to induce a more aggressive drawdown and product recovery.

Two engineered technologies to potentially alleviate future flows to the Harbor were also considered; however, it was determined that the engineering controls are not cost effective or practical and would compromise the functionality of the existing stormwater system, would require significant spatial requirements, installation depths, and ultimately would be infeasible. It was determined that product recovery could be increased by installing a submersible pump into the monitoring wells adjacent to the DS-1 structure.

Based on these results, the proposed corrective action is to install a groundwater recovery system with belt skimmer in the immediate vicinity of the DS-1 area that would effectively capture and convey free phase oil to the oil/water separator and depress the groundwater table, thereby treating the assumed source area infiltrating the stormwater system and reducing and/or eliminating petroleum sheens in the Harbor.

Subsequent to the Departments review and concurrence that the groundwater collection system is a prudent remedial measure, a work plan will be assembled presenting required hydrogeologic assessments of the existing monitoring well network around DS-1 assisting in the calculation of pumping rates, determining estimated cone of influence, and present the proposed final system design and layout.

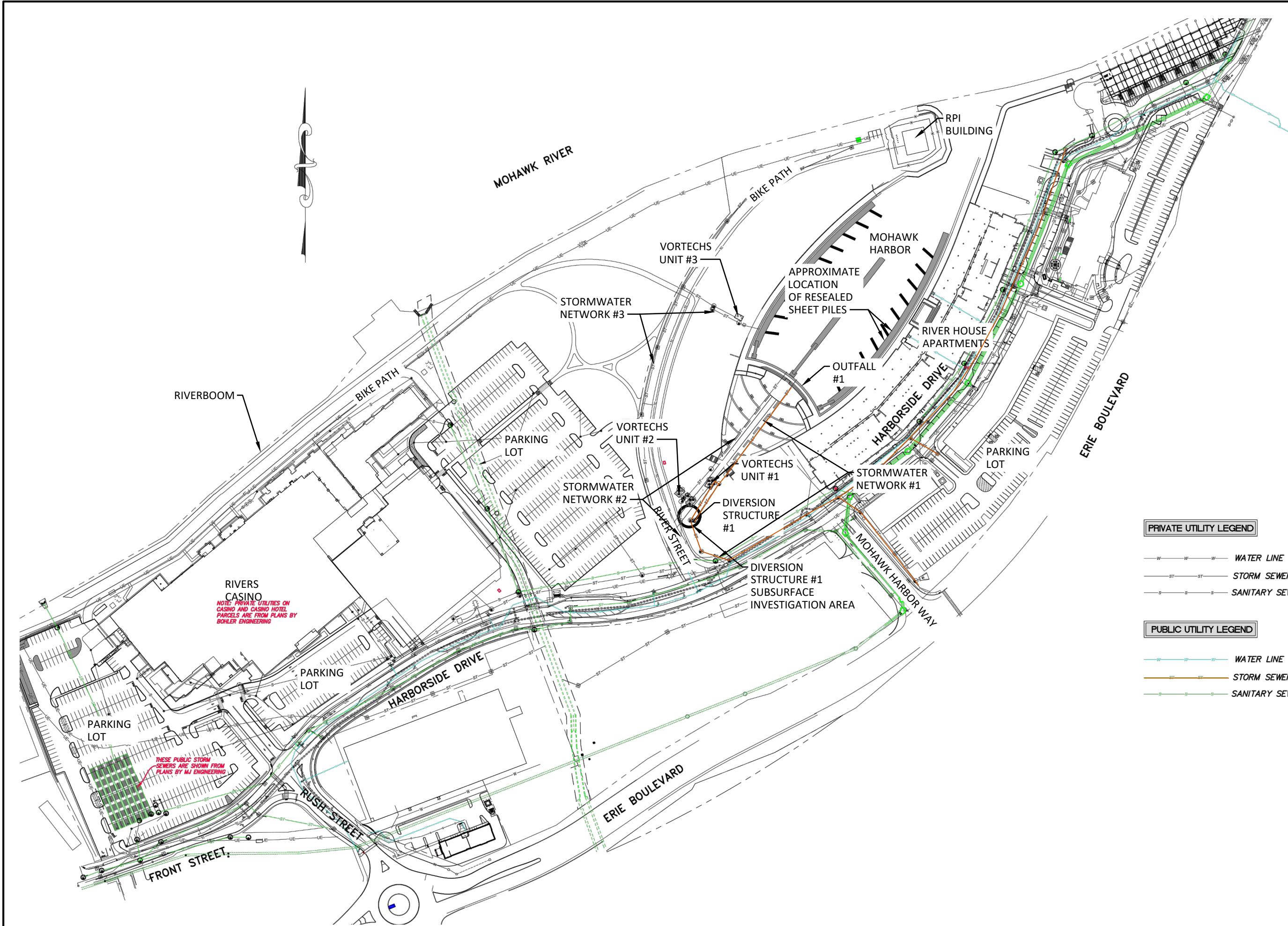
Figures

Figure 1

Site Plan

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SYR By: bas



RIVERS CASINO
 NOTE: PRIVATE UTILITIES ON CASINO AND CASINO HOTEL PARCELS ARE FROM PLANS BY BOHLER ENGINEERING

THESE PUBLIC STORM SEWERS ARE SHOWN FROM PLANS BY MJ ENGINEERING

- PRIVATE UTILITY LEGEND**
- W — W — W — WATER LINE
 - ST — ST — ST — STORM SEWER
 - S — S — S — S — SANITARY SEWER
- PUBLIC UTILITY LEGEND**
- W — W — W — WATER LINE
 - ST — ST — ST — STORM SEWER
 - S — S — S — S — SANITARY SEWER

MAXON ALCO HOLDINGS, LLC
 CORRECTIVE MEASURES INVESTIGATION REPORT
 SITE PLAN

CITY OF SCHENECTADY
 SCHENECTADY COUNTY, NEW YORK

B&L

Barton & Loguidice, D.P.C.

10 Airline Drive
 Suite 200
 Albany, NY
 12205

Date
 OCTOBER 2021

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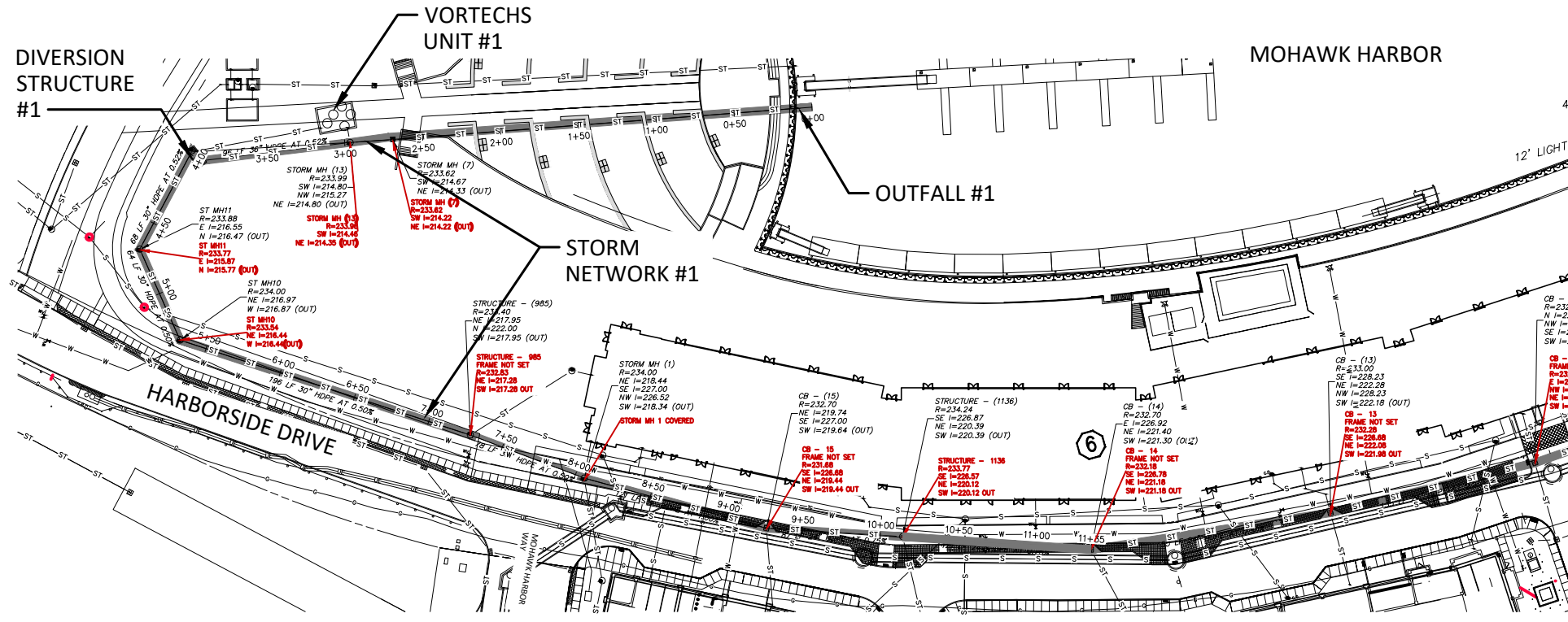
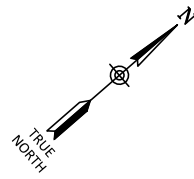
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Project Number
 1368.001.005

Figure 2

Storm Network #1

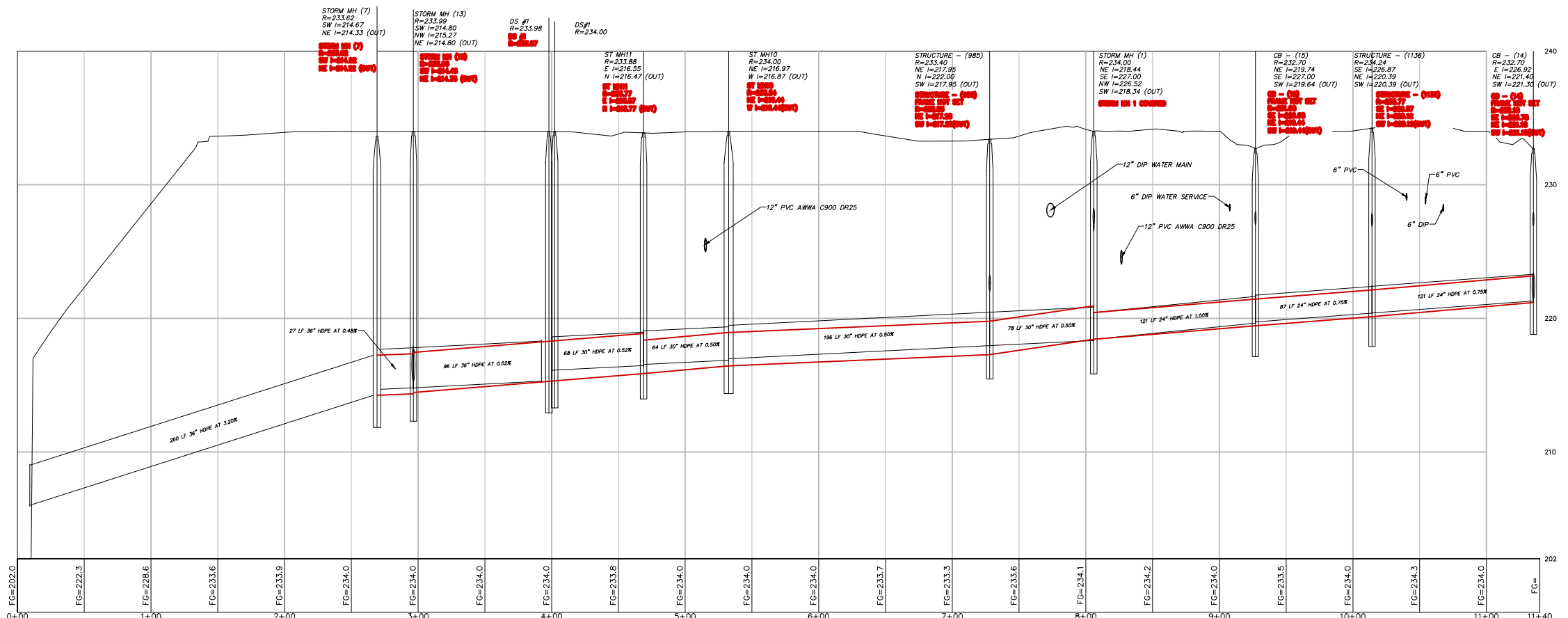
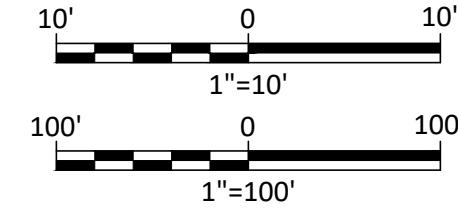
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RED = AS-BUILT

PLAN

SCALE: 1" = 100'



STORM SEWER PROFILE B

HORIZONTAL SCALE: 1" = 100'
 VERTICAL SCALE: 1" = 10'

MAXON ALCO HOLDINGS, LLC.
 CORRECTIVE MEASURES INVESTIGATION REPORT

STORM NETWORK #1

CITY OF SCHENECTADY

B&L
 443 Electronics Parkway
 Liverpool, NY
 13088
Barton & Loguidice, D.P.C.

Date
 OCTOBER 2021

Scale
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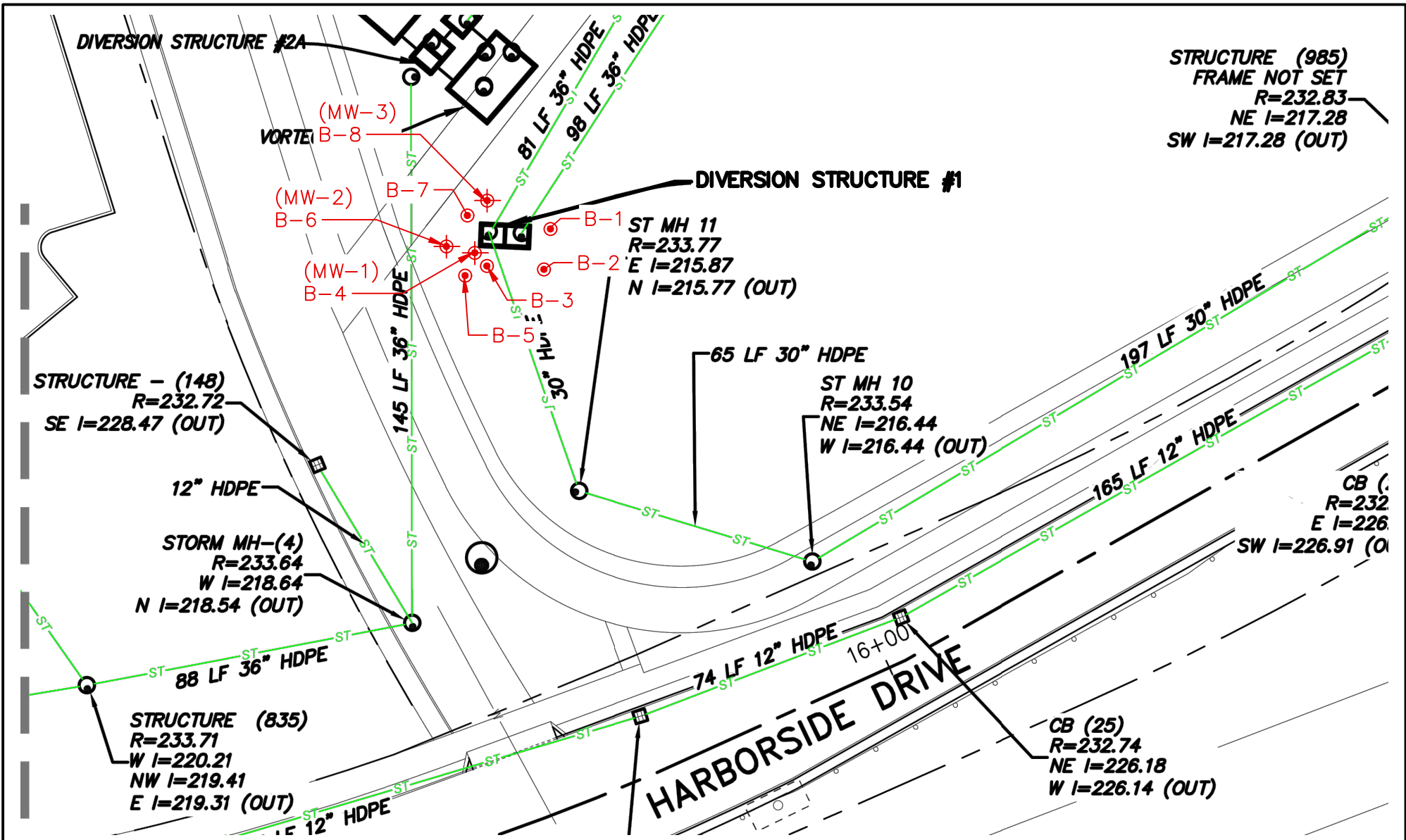
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Project Number
 1368.001.005

SCHENECTADY COUNTY, NEW YORK

Figure 3

DS-1 Subsurface Investigation



Barton & Loguidice

Date: OCTOBER 2021
 Scale: NOT TO SCALE

LEGEND

- APPROX. SOIL BORING LOCATION
- ⊕ APPROX. MONITORING WELL LOCATION

MAXON ALCO HOLDINGS, LLC.
 CORRECTIVE MEASURES INVESTIGATION REPORT

DS-1 SUBSURFACE INVESTIGATION

CITY OF SCHENECTADY SCHENECTADY COUNTY, NEW YORK

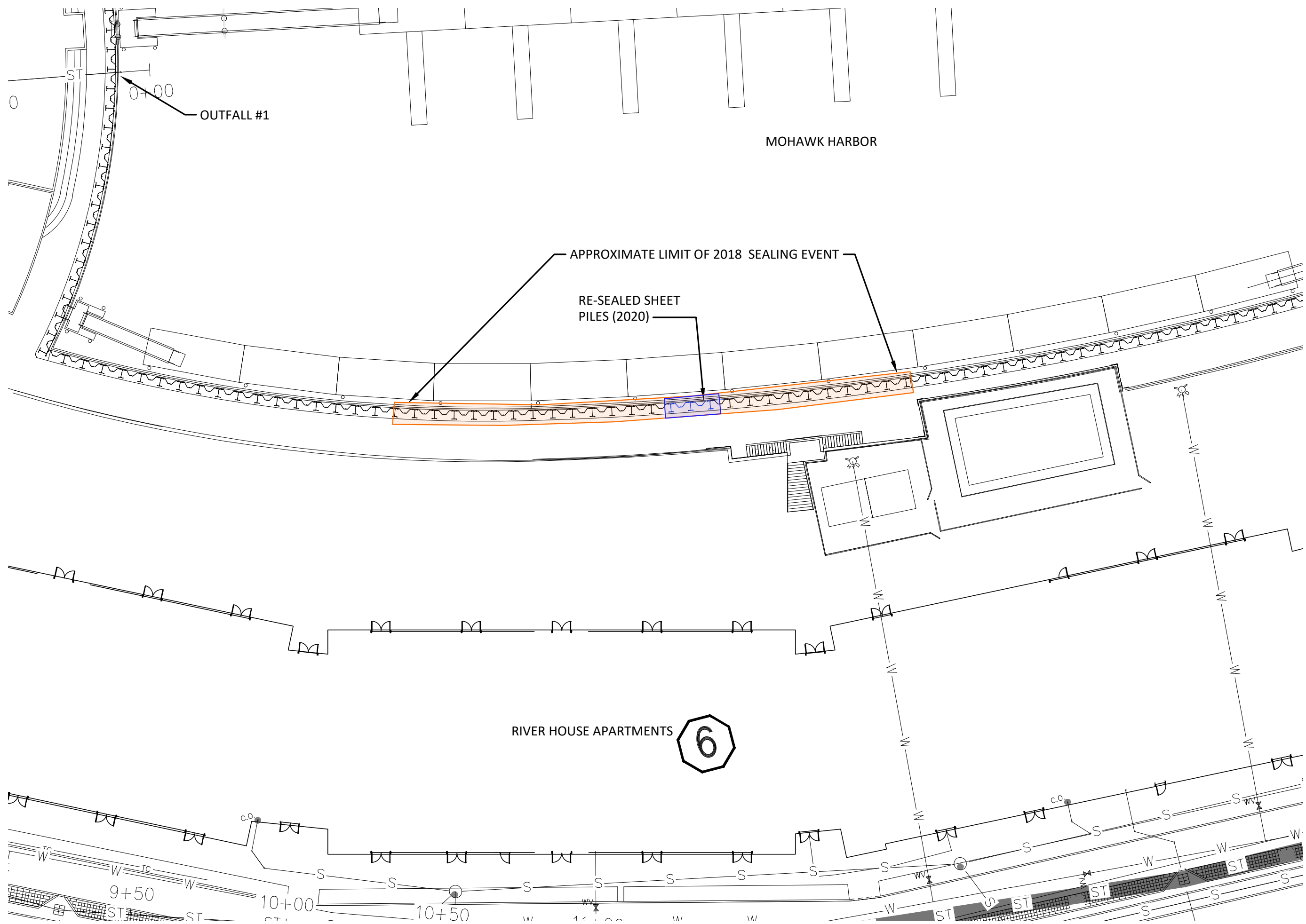
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Project Number
 1368.001.005

Figure 4

Harbor Sealing Extent

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MAXON ALCO HOLDINGS, LLC.
CORRECTIVE MEASURES INVESTIGATION REPORT
RE-SEALED SHEET PILE LOCATION

B&L
10 Airline Drive
Suite 200
Albany, NY
12205
Barton & Loguidice, D.P.C.

Date
OCTOBER 2021

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Figure Number
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Project Number
1368.001.005

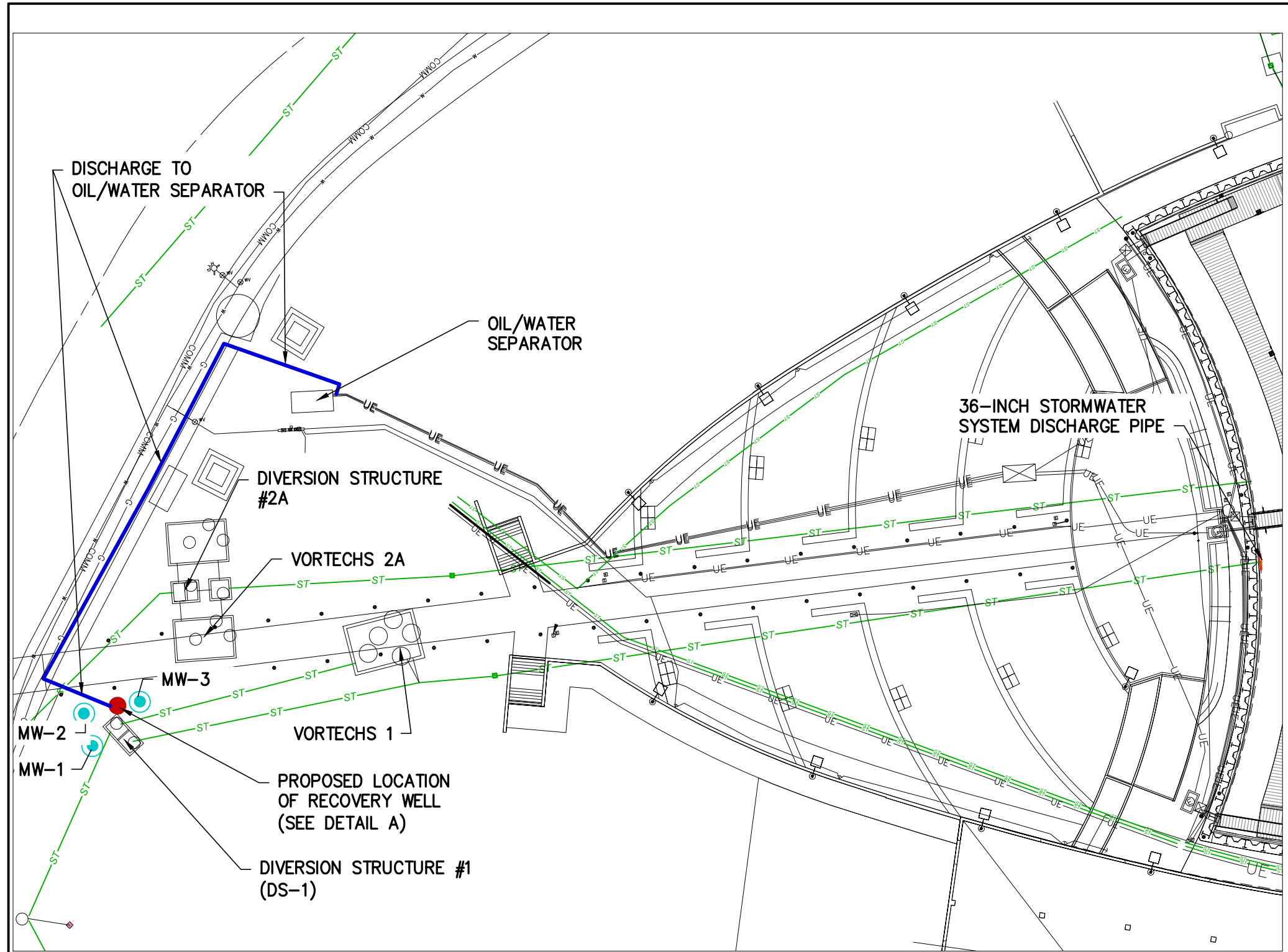
SCHENECTADY COUNTY, NEW YORK

CITY OF SCHENECTADY

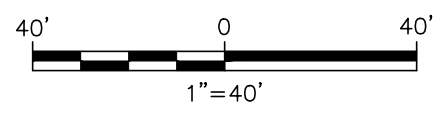
Figure 5

Proposed Recovery Well System

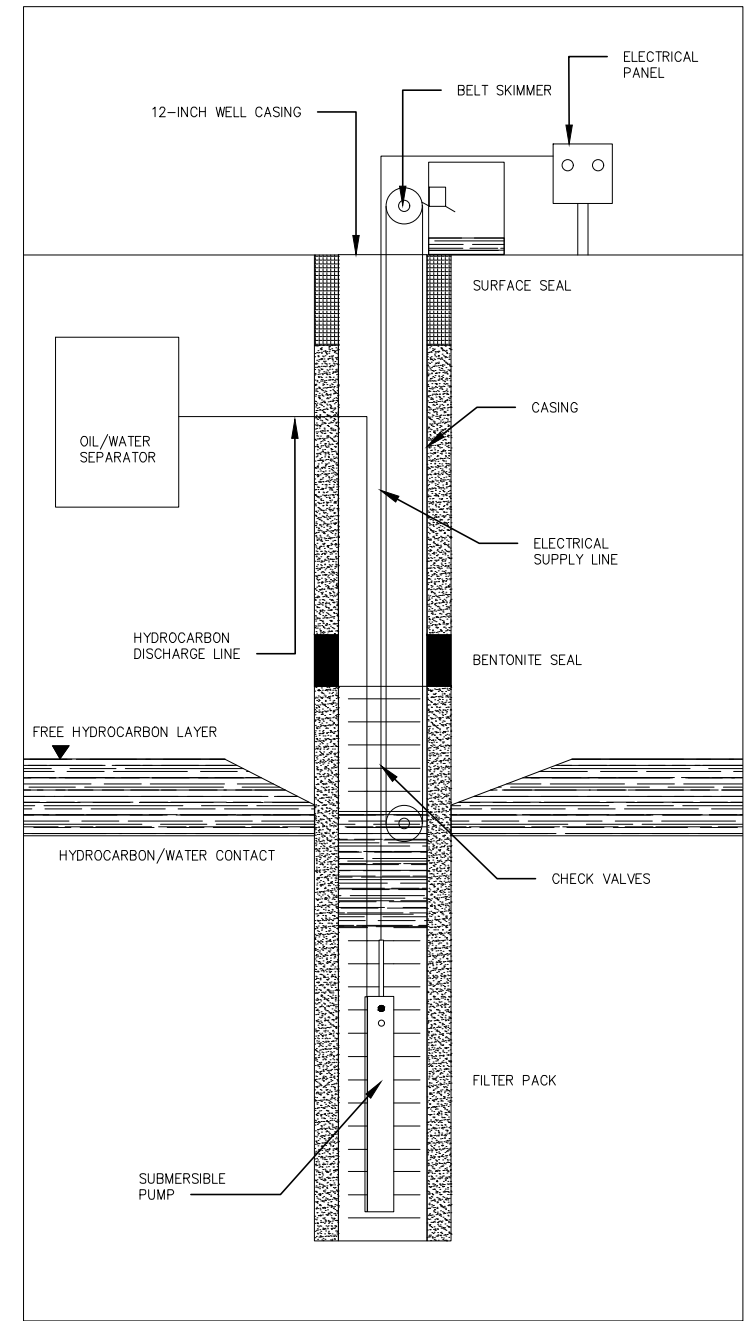
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 Z:\BL-Vault\102\182\17AD2-1\7-1-4823-8927-99D5C4054147\0\1322000-1322999\1322759\Figure 5 - RECOVERY WELL CONCEPT (ID 1322759).dwg



- LEGEND:**
- PROPOSED 12-INCH RECOVERY WELL
 - EXISTING RECOVERY WELLS
 - ST — STORMWATER SYSTEM
 - UE — ELECTRICAL SERVICE
 - W — WATER LINE
 - G — GAS LINE
 - COMM — TELECOMMUNICATION LINE



DETAIL A
CONCEPTUAL PETROLEUM
RECOVERY WELL SYSTEM



NOT TO SCALE

MAXON ALCO HOLDINGS, LLC
 CORRECTIVE MEASURES INVESTIGATION REPORT
 RECOVERY WELL SYSTEM CONCEPTUAL DESIGN
 CITY OF SCHENECTADY
 SCHENECTADY COUNTY, NEW YORK

Barton & Loguidice, D.P.C.

10 Airline Drive
 Suite 200
 Albany, NY
 12205

Date
 OCTOBER 2021

Scale
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Figure Number
 5

Project Number
 1368.001.005

Appendices

Appendix A1

DS-1 Subsurface Investigation Report

August 25, 2020

Via Electronic Mail

Mr. Joshua Haugh, PG
Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation
Region 4
1130 North Westcott Road
Schenectady, New York 12306

Re: Site Management Plan Response – DS-1 Subsurface Investigation Revision
ALCO-Maxon Site – Parcel B, BCP Site No. C447043, Schenectady

File: 1368.001.004

Dear Mr Haugh:

Barton & Loguidice, D.P.C. (B&L) has prepared the following summary report describing the methodology and field observations from the subsurface investigation completed at the ALCO-Maxon site to investigate the source of free-phase petroleum that has seeped into the stormwater system. The work was performed in accordance with the DS-1 Subsurface Investigation Revision letter to the NYSDEC dated July 23, 2020 and the approved Site Management Plan (SMP). During the investigation, eight (8) soil borings were advanced around the stormwater diversion structure DS-1. Three of the locations were sampled for the presence of VOCs and SVOCs (EPA methods 8260 and 8270) and three locations were converted into monitoring/recovery wells based on presence of free-phased petroleum product.

Methodology

B&L staff was on-site to oversee the advancement of eight (8) soil borings (B-1 through B-8) around the outside of DS-1. Drilling was performed by Cascade Environmental of Schenectady, NY. Borings were initially installed with a direct-push Geoprobe 7822DT unit, equipped with a MacroCore sampler, to a depth of 20-25 feet below ground surface (bgs) to determine depth to water and presence of free-phase petroleum product. Continuous soil samples were collected at each location at 5-foot intervals. Soils were screened for VOCs using a PID meter and visual and olfactory observations were documented. Location B-1 was drilled to a depth of 20 feet bgs; and thereafter B&L staff made a decision to drill deeper at subsequent locations to better intercept the water table and observe potential petroleum impacts.

A total of three (3) soil samples were collected from locations containing petroleum-impacted soils (B-2, B-3, and B-4). Samples were collected from a depth of 20-24 feet bgs at each location. These samples were chosen due to the presence of black staining, elevated PID readings, strong petroleum odor, and observation of potential free-phase petroleum product. Location B-2 had the highest PID reading within this zone (20-24 feet bgs), with a reading of 57.9 ppm. Location B-3 had an observed sheen to the groundwater within the soils and a PID reading of 51.9 ppm. Location B-4 also had an observed sheen to the soils and groundwater, the presence of free-phase petroleum product at a depth of approximately 20.0-21.5 feet bgs, and a PID reading of 51.9 ppm. Representative soil samples were collected and submitted to Pace Analytical for the

analysis of VOCs and SVOCs (EPA methods 8260 and 8270). Upon receipt of the soil quality analytical data, a summary of results will be submitted to the NYSDEC for review. Soil boring locations are included in Figure 1 and boring logs are included in Appendix A of this summary report.

In accordance with the SMP, a Community Air Monitoring Program (CAMP) was in place during the subsurface investigation. The CAMP consisted of Dustrak meters placed upwind and downwind of the intrusive activity. The downwind location also included a PID meter that continuously monitored the air quality for VOCs. The Dustrak meters and PID were monitored regularly to ensure compliance with CAMP regulations.

Throughout the subsurface investigation, no particulate exceedances (particulate value greater than 100 mcg/m³ for more than a 15-minute interval) were observed upwind or downwind. Additionally, no total organic vapor exceedances (VOC value greater than 5 ppm for more than a 15-minute interval) were observed downwind. No corrective measures were required to be implemented during the investigation. CAMP results are included in Appendix B of this summary report.

Locations containing free-phase petroleum product (B-4, B-6, and B-8) were converted into screened monitoring wells. Monitoring wells were installed with 2" diameter PVC consisting of a 10-foot section of .020 slot screen. Wells were completed with an appropriate sand pack and bentonite seal. Once the bentonite seal was placed, borings were backfilled with native material/drill cuttings to the ground surface. Monitoring wells were installed to a depth of 26 feet bgs and situated within a fine- to medium-grained sand that contained some gravel. This placement depth allowed the well screen (16-26 feet bgs) to intercept the water table, while also accounting for water table fluctuations and corresponding intervals of observed petroleum impacts. Groundwater saturation was observed approximately 20-21 feet bgs at each boring location. Static groundwater in the completed monitoring wells is approximately 17.65 feet bgs at B-4, 17.96 feet bgs at B-6, and 18.44 feet bgs at B-8. The B-4 well was installed immediately west of DS-1, the B-6 well was installed northwest of DS-1, and the B-8 well was installed north of DS-1.

The installed monitoring wells will be inspected twice weekly for up to four weeks for the presence of free-phase petroleum using a transparent bailer. Groundwater removed from each monitoring well will be placed in a 5 gallon bucket and discharged into the site's Vortechs unit, which will be evacuated during scheduled maintenance. Representative groundwater samples were collected from each monitoring well location and analyzed for VOCs and SVOCs (EPA methods 8260 and 8270) on August 20, 2020 by B&L staff. Upon receipt of the groundwater quality analytical data, a summary of results will be submitted to the NYSDEC for review. Monitoring well locations are included in Figure 1 and well completion logs are included in Appendix A of this summary report.

Field Observations

During the course of the subsurface investigation, visual and olfactory observations were noted at each boring location. Observations included the inspection of free-phase petroleum product, soil staining, and the presence of petroleum odor. In general, all eight (8) wells exhibited varying amounts of petroleum-impacted soil; however, free-phase petroleum product was only observed at depths of 20-24 feet bgs at locations B-4, B-6, B-7, and B-8. Location B-3 did not contain free-phase petroleum, but did have a visible sheen on the

groundwater within the soil. Field observations, peak PID readings, and depths of impact(s) are shown on Table 1. Additional field observations are included in the boring and well completion logs presented in Appendix A.

TABLE 1			
Soil Boring	Depth of Impact(s)	Peak PID Readings (ppm)	Observed Contamination
B-1	10-15'	85.4	No staining; strong, sharp (non-petroleum) odor ~ 11-12' bgs
B-2	10-15'	12.5	No staining; slight, sharp (non-petroleum) odor
	20-25'	57.9	Black staining; petroleum odor
B-3	10-15'	33.2	No staining; moderate, sharp (non-petroleum) odor
	15-20'	35.0	No staining; slight petroleum odor
	20-25'	51.9	Black staining; petroleum odor; visible sheen on groundwater
B-4	20-25'	35.9	Black staining; petroleum odor; visible sheen on groundwater; free petroleum product ~ 20-21.5' bgs
B-5	10-15'	11.3	No staining; strong, sharp (non-petroleum) odor ~ 10.5-15' bgs
	20-25'	24.0	Black staining; petroleum odor ~ 22.5-24.5' bgs
B-6	10-15'	42.9	No staining; strong, sharp (non-petroleum) odor ~ 11-15' bgs
	20-25'	36.7	Black staining; petroleum odor; visible sheen on groundwater; free petroleum product ~ 21.5-24.5' bgs
B-7	15-20'	36.2	No staining; slight, sharp (non-petroleum) odor
	20-25'	52.0	Black staining; petroleum odor; slight visible sheen on groundwater; some free product ~ 22-24.5' bgs
B-8	20-25'	52.8	Black staining; petroleum odor; visible sheen on groundwater; free petroleum product ~ 21.5-24.5' bgs

Summary

The subsurface investigation performed around the DS-1 stormwater structure resulted in the installation of eight (8) borings advanced to a depth of 25 feet bgs, with the exception of B-1, which was installed to a depth of 20 feet bgs. Monitoring wells were installed at three (3) locations where free-phase petroleum product was observed at the water table interface, with well screens placed at 16-26 feet bgs. The installed



Joshua Haugh, PG
NYSDEC Region 4
August 25, 2020
Page 4

monitoring wells have been fitted with transparent bailers to allow for the observation of accumulated free-phase petroleum product. Measurements of accumulated oil will be monitored two times a week utilizing both an interface probe and transparent bailers. Once available, the analytical results of the soil and groundwater samples will be presented to the NYSDEC for review.

If you have any questions or would like to discuss any of the above sampling methodology or field observations in greater detail, please feel free to contact me at your convenience at (518) 218-1801.

Sincerely,

BARTON & LOGUIDICE, D.P.C.

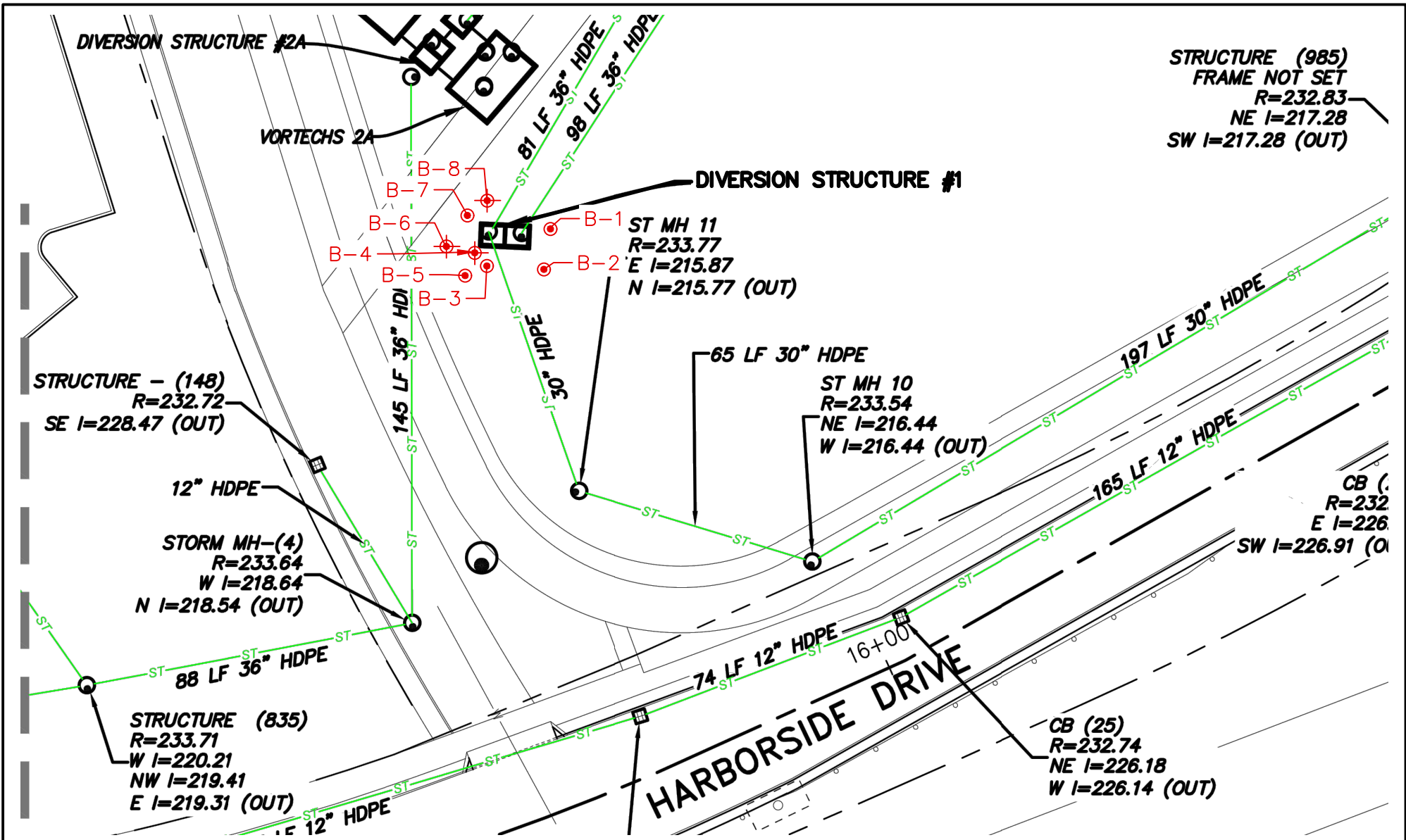
A handwritten signature in black ink, appearing to read 'Andrew J. Barber', is positioned above the printed name.

Andrew J. Barber
Sr. Environmental Consultant

PNP/AJB
Enclosure

cc: Tom Owens, Esq. - Maxon ALCO Holdings LLC
Steve Luciano - Maxon ALCO Holdings LLC
Paul Fallati - Maxon ALCO Holdings LLC
Dean Sommer, Esq. - Young Sommer
J. Andaloro, Esq. - NYSDEC Region 4, OGC
G. Burke - NYSDEC DER CO
A. Fleck - NYSDEC Region 4, DER
V. Schmitt -NYSDEC, Region 4
K. Goertz -NYSDEC, Region 4
G. Heitzman -NYSDEC, DER CO
S. Lawrence -NYSDOH

Figures



Barton & Loguidice

LEGEND

- APPROX. SOIL BORING LOCATION
- APPROX. MONITORING WELL LOCATION

Date
 AUGUST 2020

Scale
 NOT TO SCALE

MAXON ALCO HOLDINGS
 HARBOR CORRECTIVE MEASURES
 DS-1 SUBSURFACE INVESTIGATION
 DS-1 BORING LOCATIONS

Figure Number

1

Project Number

1368.001.004

Appendix A

Soil Boring and Well Completion Logs



SUBSURFACE INVESTIGATION LOG

BORING NO. **B-1**

Project No. **1368.001.004**

PROJECT INFORMATION	DRILLING INFORMATION
Project: ALCO DS-1 Drilling	Drilling Co: CASCADE
Client: Maxon ALCO Holdings, LLC	Driller(s): Joe Hutchins/Zach Fordley/Jason Frederick
Site Location: Schenectady, NY	Rig Type: Track-mounted Geoprobe 7822DT
Job No: 1368.001.004	Drilling Method(s): Direct Push
Project Manager: Andrew Barber	Hammer Wt/Drop: n/a
Logged By: Paige Pramik	Hammer Type: n/a
Dates Drilled: 8/10/2020 - 8/11/2020	Borehole Diam: 2" Total Depth: 20.0'

Barton & Loguidice,
D.P.C.
ALCO DS-1 Drilling
BORING NO: B-1

Depth	Sample Type	PID (ppm)	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	Notes / Well Construction
1			0.0-1.2' pavement (asphalt/concrete) material					*Boring backfilled with native soil and sand
2		0.0	1.2-1.8' Brown FM SAND, dry					
3			1.8-5.0' Brown FM SAND, few FMC subround to subangular Gravel, occasional brick material, slightly moist			3.3'	n/a	
4		1.0	-no staining or odor throughout					
5								
6			5.0-6.8' SAA					
7		0.7	6.8-10.0' Brown FM SAND					
8			-no staining or odor throughout			2.9'	n/a	
9		0.3						
10								
11			10.0-15.0' Brown FM SAND, few FM subround to subangular Gravel, slightly moist to moist					
12		85.4	-strong, sharp (non-petroleum) odor at ~ 10-12' bgs					
13			-no staining throughout			3.3'	n/a	
14		27.2						
15								
16			SAA, very moist					
17		3.7	-slight petroleum odor, no staining throughout					
18			-saturated last 2" of sample			2.0	n/a	
19		5.7						
20								



SUBSURFACE INVESTIGATION LOG

BORING NO. **B-2**

Project No. **1368.001.004**

PROJECT INFORMATION	DRILLING INFORMATION
Project: ALCO DS-1 Drilling	Drilling Co: CASCADE
Client: Maxon ALCO Holdings, LLC	Driller(s): Joe Hutchins/Zach Fordley/Jason Frederick
Site Location: Schenectady, NY	Rig Type: Track-mounted Geoprobe 7822DT
Job No: 1368.001.004	Drilling Method(s): Direct Push
Project Manager: Andrew Barber	Hammer Wt/Drop: n/a
Logged By: Paige Pramik	Hammer Type: n/a
Dates Drilled: 8/11/2020	Borehole Diam: 2" Total Depth: 25.0'

**Barton & Loguidice,
D.P.C.**
ALCO DS-1 Drilling
BORING NO: B-2

Depth	Sample Type	PID (ppm)	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	Notes / Well Construction
1			0.0-1.7' pavement (asphalt/concrete) material					*Boring backfilled with native soil and sand
2		1.6	1.7-5.0' Brown FM SAND, few FM subround to subangular Gravel, occasional brick material, dry to slightly moist					
3			-no staining or odor throughout			3.1'	n/a	
4		1.5						
5								
6			5.0-5.8' SAA -very slight, sharp (non-petroleum) odor					
7		6.2	5.8-10.0' Brown FM SAND, slightly moist -no odor					
8			-no staining throughout			2.7'	n/a	
9		1.7						
10								
11			10.0-15.0' SAA, few FM subround to subangular Gravel -very moist last 1.1'					
12		12.5						
13			-slight, sharp (non-petroleum) odor and no staining throughout			2.6'	n/a	
14		7.7						
15								
16			15.0-20.0' SAA, occasional brick material					
17		1.3	-saturated last 3" of sample					
18			-no odor or staining throughout			2.3'	n/a	
19		0.2						
20								

Barton & Loguidice, D.P.C.		ALCO DS-1 Drilling				BORING NO: B-2		
Depth	Sample Type	PID (ppm)	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	Notes / Well Construction
21	SS	57.9	20.0-25.0' SAA, saturated	soil sample 1	20-24'	2.0'	n/a	End boring @ 25' bgs
22			-petroleum odor throughout; black staining ~ 20-24.5' bgs					
23								
24								
25			11.2					
26								
27								
28								
29								
30								



SUBSURFACE INVESTIGATION LOG

BORING NO. **B-3**

Project No. **1368.001.004**

PROJECT INFORMATION	DRILLING INFORMATION
Project: ALCO DS-1 Drilling	Drilling Co: CASCADE
Client: Maxon ALCO Holdings, LLC	Driller(s): Joe Hutchins/Zach Fordley/Jason Frederick
Site Location: Schenectady, NY	Rig Type: Track-mounted Geoprobe 7822DT
Job No: 1368.001.004	Drilling Method(s): Direct Push
Project Manager: Andrew Barber	Hammer Wt/Drop: n/a
Logged By: Paige Pramik	Hammer Type: n/a
Dates Drilled: 8/11/2020	Borehole Diam: 2" Total Depth: 25.0'

Barton & Loguidice, D.P.C. ALCO DS-1 Drilling BORING NO: B-3

Depth	Sample Type	PID (ppm)	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	Notes / Well Construction
1			0.0-1.3' pavement (asphalt/concrete) material					*Boring backfilled with native soil and sand
2		0.0	1.3-5.0' Brown FM SAND, few FM subround to subangular Gravel, trace Clay, occasional brick material, dry			3.3'	n/a	
3			-no odor or staining throughout					
4		0.0						
5								
6			5.0-6.0' SAA					
7		0.0	6.0-10.0' Brown FM SAND, dry to slightly moist					
8			-no odor or staining throughout			2.9'	n/a	
9		3.2						
10								
11			10.0-11.1' SAA					
12		1.7	11.1-15.0' Gray-brown FM SAND, few FM subround to subangular Gravel, slightly moist					
13			-Moderate, sharp (non-petroleum) odor ~ 14-15' bgs			2.3'	n/a	
14		33.2	-No staining throughout					
15								
16			15.0-20.0' Brown FMC SAND, some (-) FMC subround to angular Gravel, moist					
17			-slight petroleum odor, no staining throughout					
18		35.0				1.2'	n/a	
19								
20								

Barton & Loguidice, D.P.C.		ALCO DS-1 Drilling				BORING NO: B-3		
Depth	Sample Type	PID (ppm)	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	Notes / Well Construction
21	SS	51.9	20.0-20.5' SAA, saturated	soil sample 2	20-24'	3.9'	n/a	End boring @ 25' bgs
22			20.5-21.5' FM subround GRAVEL, saturated					
23			21.5-23.2' Brown to black FM SAND, saturated -petroleum odor, black staining, slight sheen to soils/groundwater					
24		6.6	23.2-25.0' Brown FMC SAND, no staining, slight odor					
25								
26								
27								
28								
29								
30								



SUBSURFACE INVESTIGATION LOG

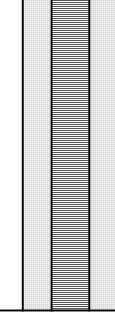
BORING NO. **B-4**

Project No. **1368.001.004**

PROJECT INFORMATION	DRILLING INFORMATION
Project: ALCO DS-1 Drilling	Drilling Co: CASCADE
Client: Maxon ALCO Holdings, LLC	Driller(s): Joe Hutchins/Zach Fordley/Jason Frederick
Site Location: Schenectady, NY	Rig Type: Track-mounted Geoprobe 7822DT
Job No: 1368.001.004	Drilling Method(s): Direct Push
Project Manager: Andrew Barber	Hammer Wt/Drop: n/a
Logged By: Paige Pramik	Hammer Type: n/a
Dates Drilled: 8/11/2020 - 8/12/2020	Borehole Diam: 2" Total Depth: 26.0'

Barton & Loguidice, D.P.C.	ALCO DS-1 Drilling	BORING NO: B-4
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Depth	Sample Type	PID (ppm)	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	Notes / Well Construction
1			0.0-1.0' pavement (asphalt/concrete) material					<p style="font-size: small; text-align: right;">*Boring backfilled with native soil and sand</p>
2		0.0	1.0-5.0' Brown FM SAND, few FM subround to subangular Gravel, trace Clay, dry					
3			-no odor or staining throughout			3.5'	n/a	
4		0.0						
5								
6			5.0-5.5' SAA					
7		0.0	5.5-10.0' Brown FMC SAND, some FM subround to subangular Gravel, trace Clay, slightly moist					
8			-no odor or staining throughout			2.7'	n/a	
9		0.0						
10								
11			10.0-10.6' SAA					
12		2.1	10.6-15.0' Brown FM SAND, some FM subround to angular Gravel, moist					
13			-no odor or staining throughout			2.6'	n/a	
14		5.3						
15								
16			15.0-20.0' SAA					
17		1.6	-no staining throughout; slight petroleum odor 19.5-20' bgs					
18			-saturated last 3" of sample			2.0'	n/a	
19		9.2						
20								

Barton & Loguidice, D.P.C.		ALCO DS-1 Drilling					BORING NO: B-4	
Depth	Sample Type	PID (ppm)	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	Notes / Well Construction
21	SS	35.9	20.0-21.4' SAA, saturated -black staining, petroleum odor -free product and sheen on groundwater	soil sample 3	20-24'	4.0'	n/a	
22								
23		26.6	21.4-25.0' SAA, occasional wood and brick material -slight staining, slight odor					
24								
25								
26			Well installed @ 16-26' bgs					End boring @ 25' bgs
27								
28								
29								
30								



SUBSURFACE INVESTIGATION LOG

BORING NO. **B-5**

Project No. **1368.001.004**

PROJECT INFORMATION	DRILLING INFORMATION
Project: ALCO DS-1 Drilling	Drilling Co: CASCADE
Client: Maxon ALCO Holdings, LLC	Driller(s): Joe Hutchins/Zach Fordley/Jason Frederick
Site Location: Schenectady, NY	Rig Type: Track-mounted Geoprobe 7822DT
Job No: 1368.001.004	Drilling Method(s): Direct Push
Project Manager: Andrew Barber	Hammer Wt/Drop: n/a
Logged By: Paige Pramik	Hammer Type: n/a
Dates Drilled: 8/12/2020	Borehole Diam: 2" Total Depth: 25.0'

Barton & Loguidice, D.P.C.	ALCO DS-1 Drilling	BORING NO: B-5
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Depth	Sample Type	PID (ppm)	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	Notes / <i>Well Construction</i>
1		1.1	0.0-1.8' Brown FM SAND, dry					*Boring backfilled with native soil and sand
2			1.8'-5.0' SAA, some FMC subangular to subround Gravel, trace Clay, occasional brick material, dry					
3			-no odor or staining throughout			3.6'	n/a	
4		1.2						
5								
6		1.3	5.0-5.8' SAA					
7			5.8-10.0' Brown FM SAND, dry					
8			-no odor or staining throughout			2.5'	n/a	
9		2.2						
10								
11		10.8	10.0-10.3' SAA					
12			10.3-15.0' Brown FM SAND, few FM subround to round Gravel, occasional brick and coal material, slightly moist					
13			-sharp (non-petroleum) odor ~ 10.5-15.0' bgs; no staining throughout			3.3'	n/a	
14		11.3						
15								
16		5.3	15.0-15.5' SAA					
17			-slight, sharp (non-petroleum) odor, no staining					
18		1.4	15.5-20.0' Brown FM SAND, moist					
19			-no odor or staining			3.3'	n/a	
20								

Barton & Loguidice, D.P.C.		ALCO DS-1 Drilling				BORING NO: B-5		
Depth	Sample Type	PID (ppm)	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	Notes / Well Construction
21		16.9	20.0-22.3' SAA, very moist -slight petroleum odor, no staining					no staining last 3" of sample End boring @ 25' bgs
22			22.3-24.5' SAA, saturated -black staining, moderate petroleum odor			4.8'	n/a	
23								
24		24.0						
25		5.5	24.5-25.0' SAA -very slight petroleum odor, no staining last 3"					
26								
27								
28								
29								
30								



SUBSURFACE INVESTIGATION LOG

BORING NO. **B-6**

Project No. **1368.001.004**

PROJECT INFORMATION	DRILLING INFORMATION
Project: ALCO DS-1 Drilling	Drilling Co: CASCADE
Client: Maxon ALCO Holdings, LLC	Driller(s): Joe Hutchins/Zach Fordley/Jason Frederick
Site Location: Schenectady, NY	Rig Type: Track-mounted Geoprobe 7822DT
Job No: 1368.001.004	Drilling Method(s): Direct Push
Project Manager: Andrew Barber	Hammer Wt/Drop: n/a
Logged By: Paige Pramik	Hammer Type: n/a
Dates Drilled: 8/12/2020	Borehole Diam: 2" Total Depth: 26.0'

Barton & Loguidice, D.P.C.	ALCO DS-1 Drilling	BORING NO: B-6
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Depth	Sample Type	PID (ppm)	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	Notes / Well Construction
1			0.0-1.8' Brown FMC SAND, dry					<p style="font-size: small;">*Boring backfilled with native soil and sand</p>
2		0.0	1.8-5.0' SAA, few FM subround to subangular Gravel, occasional brick and concrete material, dry					
3	-		-no odor or staining throughout	-	-	3.5'	n/a	
4		1.2						
5								
6			5.0-6.1' SAA					
7		0.9	6.1-10.0' Brown FM SAND, dry					
8	-		-no odor or staining throughout	-	-	2.7'	n/a	
9		0.7						
10								
11			10.0-11.0' SAA					
12		5.4	-no odor or staining					
13	-		11.0-15.0' SAA, few FM subround to subangular Gravel, trace Clay, occasional brick, coal, and wood material, slightly moist	-	-	3.4'	n/a	
14		42.9	-slight, sharp (non-petroleum) odor, no staining					
15								
16			15.0-15.6' SAA					
17		8.6	-slight, sharp (non-petroleum) odor, no staining					
18	-		15.6-20.0' Brown FM SAND, very moist	-	-	2.0'	n/a	
19		7.7	-no odor or staining					
20								

Barton & Loguidice, D.P.C.		ALCO DS-1 Drilling				BORING NO: B-6		
Depth	Sample Type	PID (ppm)	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	Notes / Well Construction
21	-	10.3	20.0-21.5' SAA, saturated -very slight petroleum odor, no staining	-	-	4.8'	n/a	End boring @ 25' bgs
22			21.5-24.3' SAA, saturated					
23		-petroleum odor, black staining, free petroleum product						
24		36.7						
25		9.9	24.3-25.0' Brown F SAND and SILT -no odor or staining					
26			Well installed @ 16-26' bgs					
27								
28								
29								
30								



SUBSURFACE INVESTIGATION LOG

BORING NO. **B-7**

Project No. **1368.001.004**

PROJECT INFORMATION	DRILLING INFORMATION
Project: ALCO DS-1 Drilling	Drilling Co: CASCADE
Client: Maxon ALCO Holdings, LLC	Driller(s): Joe Hutchins/Zach Fordley/Jason Frederick
Site Location: Schenectady, NY	Rig Type: Track-mounted Geoprobe 7822DT
Job No: 1368.001.004	Drilling Method(s): Direct Push
Project Manager: Andrew Barber	Hammer Wt/Drop: n/a
Logged By: Paige Pramik	Hammer Type: n/a
Dates Drilled: 8/12/2020	Borehole Diam: 2" Total Depth: 25.0'

**Barton & Loguidice,
D.P.C.**
ALCO DS-1 Drilling
BORING NO: B-7

Depth	Sample Type	PID (ppm)	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	Notes / Well Construction
1			0.0-1.0' FMC Brown SAND, dry					*Boring backfilled with native soil and sand
2		0.0	1.0-2.8' SAA, some FM subround to subangular Gravel, occasional concrete and brick material, dry					
3			2.8-5.0' white stoney material			3.7'	n/a	
4		0.0	-no odor or staining throughout					
5								
6			5.0-5.7' Brown FMC SAND, some FM subround to subangular Gravel, dry					
7		0.0	5.7-10.0' Brown FM SAND, dry					
8			-no odor or staining throughout			3.0'	n/a	
9		0.2						
10								
11			10.0-10.9' SAA -no odor or staining					
12		2.5	10.9-15.0' SAA, some FMC subround to subangular Gravel, trace Clay, slightly damp					
13			-very slight, sharp (non-petroleum) odor, no staining			3.5'	n/a	
14		7.6						
15								
16			15.0-17.2' SAA -less (non-petroleum) odor					
17		5.9						
18			17.2-20.0' Brown FMC SAND, very moist -slight, sharp (non-petroleum) odor, no staining			3.2'	n/a	
19		36.2						
20								

Barton & Loguidice, D.P.C.		ALCO DS-1 Drilling				BORING NO: B-7		
Depth	Sample Type	PID (ppm)	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	Notes / Well Construction
21		52.0	20.0-21.8' Brown FMC SAND, saturated -petroleum odor, no staining, slight sheen to soil and groundwater					End boring @ 25' bgs
22			21.8-24.3' SAA, few FM subround to subangular Gravel -petroleum odor, black staining, some free product			4.9'	n/a	
23								
24		49.1						
25		1.1		24.3-25.0' Brown FMC SAND -very slight odor, no staining				
26								
27								
28								
29								
30								



SUBSURFACE INVESTIGATION LOG

BORING NO. **B-8**

Project No. **1368.001.004**

PROJECT INFORMATION

Project: ALCO DS-1 Drilling
Client: Maxon ALCO Holdings, LLC
Site Location: Schenectady, NY
Job No: 1368.001.004
Project Manager: Andrew Barber
Logged By: Paige Pramik
Dates Drilled: 8/12/2020

DRILLING INFORMATION

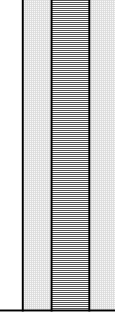
Drilling Co: CASCADE
Driller(s): Joe Hutchins/Zach Fordley/Jason Frederick
Rig Type: Track-mounted Geoprobe 7822DT
Drilling Method(s): Direct Push
Hammer Wt/Drop: n/a
Hammer Type: n/a
Borehole Diam: 2" **Total Depth:** 26.0'

Barton & Loguidice,
D.P.C.

ALCO DS-1 Drilling

BORING NO: B-8

Depth	Sample Type	PID (ppm)	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	Notes / Well Construction	
1		0.2	0.0-1.4' Brown FMC SAND -no odor or staining					*Boring backfilled with native soil and sand	
2			1.4-5.0' SAA, some FM subround to subangular Gravel, occasional brick and concrete material -very slight, sharp (non-petroleum) odor, no staining			3.7'	n/a		
3									
4									
5									
6		1.1	5.0-5.7' SAA						
7			5.7-5.0' Brown FM SAND, dry -no odor or staining throughout			2.7'	n/a		
8									
9									
10		0.6	10.0-11.0' SAA						
11			11.0-15.0' SAA, some FM subround to subangular Gravel, few Clay, slightly moist -no odor or staining throughout			3.7'	n/a		
12									
13									
14		14.1							
15		3.7	15.0-15.7' SAA, slightly moist						
16			15.7-20.0' Red-brown FMC SAND, few MC subround Gravel, occasional brick material and black spots/areas, moist -no odor or staining throughout			2.6'	n/a		
17									
18									
19									
20		10.2							

Barton & Loguidice, D.P.C.		ALCO DS-1 Drilling				BORING NO: B-8			
Depth	Sample Type	PID (ppm)	Description	Sample No.	Sample Int.	Recovery	Blows Per 6"	Notes / Well Construction	
21		16.1	20.0-21.3' Brown FM SAND, saturated -no odor or staining						
22			21.3-24.2' SAA, few FM subangular Gravel, saturated -petroleum odor and black staining, visible sheen on groundwater			4.3'	n/a		
23		52.8	-free product ~ 21.5-23' bgs						
24									
25		6.3	24.2-25.0' SAA -very slight petroleum odor, no staining						End boring @ 25' bgs
26			Well installed @ 16-26' bgs						
27									
28									
29									
30									

Appendix B

CAMP Results

UPWIND

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530173301
Firmware Version	3.7
Calibration Date	8/14/2017
Test Name	MANUAL_003
Test Start Time	7:45:24 AM
Test Start Date	8/11/2020
Test Length [D:H:M]	0:00:24
Test Interval [M:S]	0:15
Mass Average [mg/m3]	0.034
Mass Minimum [mg/m3]	0.026
Mass Maximum [mg/m3]	0.177
Mass TWA [mg/m3]	0.002
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	99

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
15	0.177		
30	0.032		
45	0.029		
60	0.03		
75	0.034		
90	0.033		
105	0.033		
120	0.029		
135	0.029		
150	0.033		
165	0.036		
180	0.032		
195	0.029		
210	0.027		
225	0.027		
240	0.028		
255	0.027		
270	0.028		
285	0.027		
300	0.03		
315	0.03		
330	0.029		
345	0.03		
360	0.029		
375	0.032		
390	0.037		

405	0.033
420	0.033
435	0.031
450	0.029
465	0.03
480	0.032
495	0.031
510	0.036
525	0.038
540	0.037
555	0.035
570	0.035
585	0.032
600	0.028
615	0.027
630	0.034
645	0.04
660	0.037
675	0.044
690	0.041
705	0.032
720	0.028
735	0.027
750	0.028
765	0.027
780	0.028
795	0.028
810	0.028
825	0.028
840	0.027
855	0.027
870	0.027
885	0.027
900	0.027
915	0.026
930	0.027
945	0.034
960	0.045
975	0.041
990	0.034
1005	0.039
1020	0.042
1035	0.029
1050	0.027
1065	0.026
1080	0.028
1095	0.027

1110	0.029
1125	0.031
1140	0.034
1155	0.039
1170	0.049
1185	0.048
1200	0.047
1215	0.035
1230	0.031
1245	0.034
1260	0.043
1275	0.032
1290	0.031
1305	0.03
1320	0.031
1335	0.034
1350	0.035
1365	0.033
1380	0.035
1395	0.033
1410	0.036
1425	0.035
1440	0.031
1455	0.035
1470	0.028
1485	0.027

UPWIND

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530173301
Firmware Version	3.7
Calibration Date	8/14/2017
Test Name	MANUAL_004
Test Start Time	11:07:15 AM
Test Start Date	8/11/2020
Test Length [D:H:M]	0:04:20
Test Interval [M:S]	0:15
Mass Average [mg/m3]	0.047
Mass Minimum [mg/m3]	0.036
Mass Maximum [mg/m3]	0.325
Mass TWA [mg/m3]	0.025
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	1040

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
15	0.103		
30	0.047		
45	0.04		
60	0.039		
75	0.038		
90	0.04		
105	0.04		
120	0.039		
135	0.039		
150	0.039		
165	0.039		
180	0.039		
195	0.039		
210	0.039		
225	0.039		
240	0.038		
255	0.039		
270	0.038		
285	0.038		
300	0.038		
315	0.039		
330	0.04		
345	0.039		
360	0.038		
375	0.039		
390	0.04		

405	0.039
420	0.039
435	0.039
450	0.038
465	0.038
480	0.038
495	0.04
510	0.04
525	0.04
540	0.039
555	0.04
570	0.04
585	0.039
600	0.039
615	0.04
630	0.04
645	0.04
660	0.04
675	0.039
690	0.039
705	0.039
720	0.039
735	0.039
750	0.04
765	0.039
780	0.04
795	0.039
810	0.04
825	0.04
840	0.039
855	0.039
870	0.039
885	0.04
900	0.038
915	0.039
930	0.039
945	0.038
960	0.039
975	0.038
990	0.038
1005	0.038
1020	0.037
1035	0.038
1050	0.037
1065	0.037
1080	0.038
1095	0.038

1110	0.038
1125	0.038
1140	0.038
1155	0.039
1170	0.039
1185	0.038
1200	0.038
1215	0.038
1230	0.037
1245	0.038
1260	0.038
1275	0.038
1290	0.037
1305	0.037
1320	0.037
1335	0.038
1350	0.038
1365	0.038
1380	0.038
1395	0.039
1410	0.038
1425	0.038
1440	0.039
1455	0.038
1470	0.039
1485	0.039
1500	0.04
1515	0.04
1530	0.039
1545	0.039
1560	0.04
1575	0.039
1590	0.038
1605	0.039
1620	0.038
1635	0.038
1650	0.038
1665	0.038
1680	0.038
1695	0.037
1710	0.038
1725	0.037
1740	0.037
1755	0.039
1770	0.038
1785	0.037
1800	0.038

1815	0.038
1830	0.037
1845	0.037
1860	0.037
1875	0.038
1890	0.037
1905	0.037
1920	0.038
1935	0.038
1950	0.037
1965	0.037
1980	0.038
1995	0.036
2010	0.037
2025	0.038
2040	0.037
2055	0.038
2070	0.038
2085	0.037
2100	0.038
2115	0.039
2130	0.038
2145	0.038
2160	0.038
2175	0.038
2190	0.038
2205	0.038
2220	0.038
2235	0.038
2250	0.039
2265	0.039
2280	0.038
2295	0.039
2310	0.038
2325	0.038
2340	0.039
2355	0.038
2370	0.036
2385	0.037
2400	0.037
2415	0.038
2430	0.038
2445	0.038
2460	0.038
2475	0.038
2490	0.038
2505	0.037

2520	0.038
2535	0.038
2550	0.038
2565	0.039
2580	0.038
2595	0.038
2610	0.04
2625	0.038
2640	0.038
2655	0.039
2670	0.038
2685	0.038
2700	0.038
2715	0.038
2730	0.039
2745	0.039
2760	0.038
2775	0.037
2790	0.038
2805	0.039
2820	0.038
2835	0.039
2850	0.039
2865	0.038
2880	0.038
2895	0.038
2910	0.038
2925	0.039
2940	0.037
2955	0.038
2970	0.039
2985	0.038
3000	0.038
3015	0.038
3030	0.039
3045	0.039
3060	0.038
3075	0.038
3090	0.039
3105	0.038
3120	0.038
3135	0.038
3150	0.039
3165	0.038
3180	0.039
3195	0.038
3210	0.04

3225	0.043
3240	0.041
3255	0.04
3270	0.039
3285	0.038
3300	0.039
3315	0.039
3330	0.039
3345	0.039
3360	0.039
3375	0.039
3390	0.039
3405	0.039
3420	0.038
3435	0.039
3450	0.039
3465	0.038
3480	0.039
3495	0.039
3510	0.039
3525	0.039
3540	0.04
3555	0.041
3570	0.04
3585	0.039
3600	0.039
3615	0.039
3630	0.038
3645	0.04
3660	0.039
3675	0.039
3690	0.039
3705	0.039
3720	0.04
3735	0.039
3750	0.04
3765	0.039
3780	0.04
3795	0.04
3810	0.039
3825	0.039
3840	0.039
3855	0.04
3870	0.04
3885	0.039
3900	0.04
3915	0.042

3930	0.04
3945	0.039
3960	0.04
3975	0.047
3990	0.058
4005	0.046
4020	0.04
4035	0.04
4050	0.041
4065	0.041
4080	0.039
4095	0.04
4110	0.039
4125	0.04
4140	0.04
4155	0.04
4170	0.041
4185	0.04
4200	0.039
4215	0.039
4230	0.039
4245	0.041
4260	0.04
4275	0.041
4290	0.04
4305	0.04
4320	0.041
4335	0.04
4350	0.041
4365	0.04
4380	0.041
4395	0.042
4410	0.04
4425	0.04
4440	0.04
4455	0.04
4470	0.04
4485	0.04
4500	0.04
4515	0.042
4530	0.041
4545	0.04
4560	0.04
4575	0.04
4590	0.04
4605	0.04
4620	0.04

4635	0.041
4650	0.04
4665	0.04
4680	0.04
4695	0.039
4710	0.04
4725	0.04
4740	0.04
4755	0.039
4770	0.04
4785	0.039
4800	0.04
4815	0.051
4830	0.04
4845	0.04
4860	0.041
4875	0.041
4890	0.041
4905	0.04
4920	0.041
4935	0.04
4950	0.041
4965	0.04
4980	0.041
4995	0.04
5010	0.04
5025	0.04
5040	0.04
5055	0.041
5070	0.041
5085	0.04
5100	0.04
5115	0.041
5130	0.041
5145	0.04
5160	0.04
5175	0.041
5190	0.042
5205	0.041
5220	0.041
5235	0.041
5250	0.041
5265	0.041
5280	0.041
5295	0.042
5310	0.058
5325	0.045

5340	0.049
5355	0.043
5370	0.043
5385	0.042
5400	0.041
5415	0.042
5430	0.041
5445	0.041
5460	0.042
5475	0.042
5490	0.042
5505	0.042
5520	0.04
5535	0.041
5550	0.041
5565	0.041
5580	0.042
5595	0.041
5610	0.042
5625	0.04
5640	0.041
5655	0.041
5670	0.041
5685	0.042
5700	0.042
5715	0.041
5730	0.041
5745	0.04
5760	0.042
5775	0.041
5790	0.043
5805	0.044
5820	0.043
5835	0.051
5850	0.058
5865	0.05
5880	0.045
5895	0.049
5910	0.05
5925	0.072
5940	0.051
5955	0.048
5970	0.045
5985	0.044
6000	0.043
6015	0.053
6030	0.071

6045	0.046
6060	0.054
6075	0.046
6090	0.044
6105	0.047
6120	0.043
6135	0.042
6150	0.042
6165	0.042
6180	0.043
6195	0.042
6210	0.042
6225	0.042
6240	0.041
6255	0.041
6270	0.041
6285	0.042
6300	0.041
6315	0.044
6330	0.042
6345	0.047
6360	0.043
6375	0.053
6390	0.048
6405	0.048
6420	0.046
6435	0.044
6450	0.044
6465	0.042
6480	0.044
6495	0.042
6510	0.042
6525	0.044
6540	0.051
6555	0.05
6570	0.045
6585	0.044
6600	0.044
6615	0.043
6630	0.042
6645	0.042
6660	0.042
6675	0.042
6690	0.044
6705	0.042
6720	0.042
6735	0.042

6750	0.042
6765	0.043
6780	0.043
6795	0.043
6810	0.042
6825	0.042
6840	0.042
6855	0.042
6870	0.042
6885	0.042
6900	0.043
6915	0.043
6930	0.042
6945	0.043
6960	0.043
6975	0.042
6990	0.044
7005	0.043
7020	0.043
7035	0.043
7050	0.044
7065	0.042
7080	0.043
7095	0.043
7110	0.042
7125	0.043
7140	0.043
7155	0.043
7170	0.044
7185	0.042
7200	0.046
7215	0.045
7230	0.043
7245	0.043
7260	0.049
7275	0.046
7290	0.043
7305	0.045
7320	0.068
7335	0.236
7350	0.056
7365	0.045
7380	0.043
7395	0.045
7410	0.043
7425	0.042
7440	0.042

7455	0.042
7470	0.044
7485	0.049
7500	0.052
7515	0.043
7530	0.045
7545	0.063
7560	0.077
7575	0.057
7590	0.046
7605	0.043
7620	0.043
7635	0.043
7650	0.043
7665	0.043
7680	0.043
7695	0.043
7710	0.042
7725	0.043
7740	0.043
7755	0.043
7770	0.043
7785	0.043
7800	0.044
7815	0.044
7830	0.045
7845	0.043
7860	0.042
7875	0.043
7890	0.044
7905	0.053
7920	0.064
7935	0.054
7950	0.066
7965	0.045
7980	0.042
7995	0.042
8010	0.043
8025	0.042
8040	0.042
8055	0.043
8070	0.042
8085	0.043
8100	0.042
8115	0.042
8130	0.043
8145	0.042

8160	0.042
8175	0.042
8190	0.042
8205	0.041
8220	0.045
8235	0.044
8250	0.044
8265	0.042
8280	0.042
8295	0.041
8310	0.041
8325	0.041
8340	0.042
8355	0.047
8370	0.047
8385	0.045
8400	0.045
8415	0.043
8430	0.043
8445	0.045
8460	0.043
8475	0.044
8490	0.042
8505	0.043
8520	0.042
8535	0.042
8550	0.042
8565	0.065
8580	0.065
8595	0.07
8610	0.057
8625	0.042
8640	0.043
8655	0.057
8670	0.047
8685	0.042
8700	0.042
8715	0.043
8730	0.042
8745	0.043
8760	0.045
8775	0.044
8790	0.043
8805	0.043
8820	0.043
8835	0.042
8850	0.083

8865	0.061
8880	0.056
8895	0.044
8910	0.052
8925	0.05
8940	0.072
8955	0.044
8970	0.044
8985	0.045
9000	0.047
9015	0.045
9030	0.043
9045	0.043
9060	0.043
9075	0.043
9090	0.044
9105	0.044
9120	0.045
9135	0.048
9150	0.044
9165	0.043
9180	0.044
9195	0.044
9210	0.045
9225	0.043
9240	0.044
9255	0.043
9270	0.075
9285	0.083
9300	0.046
9315	0.047
9330	0.046
9345	0.045
9360	0.044
9375	0.043
9390	0.043
9405	0.044
9420	0.049
9435	0.047
9450	0.047
9465	0.05
9480	0.043
9495	0.043
9510	0.044
9525	0.045
9540	0.044
9555	0.044

9570	0.045
9585	0.044
9600	0.044
9615	0.044
9630	0.044
9645	0.044
9660	0.044
9675	0.044
9690	0.044
9705	0.044
9720	0.044
9735	0.044
9750	0.044
9765	0.044
9780	0.044
9795	0.044
9810	0.045
9825	0.044
9840	0.043
9855	0.044
9870	0.044
9885	0.043
9900	0.043
9915	0.044
9930	0.045
9945	0.044
9960	0.044
9975	0.045
9990	0.045
10005	0.044
10020	0.044
10035	0.045
10050	0.045
10065	0.045
10080	0.044
10095	0.044
10110	0.044
10125	0.045
10140	0.047
10155	0.045
10170	0.044
10185	0.046
10200	0.049
10215	0.045
10230	0.046
10245	0.045
10260	0.048

10275	0.049
10290	0.046
10305	0.045
10320	0.045
10335	0.048
10350	0.048
10365	0.045
10380	0.048
10395	0.045
10410	0.046
10425	0.044
10440	0.048
10455	0.045
10470	0.047
10485	0.045
10500	0.046
10515	0.046
10530	0.045
10545	0.046
10560	0.045
10575	0.045
10590	0.045
10605	0.049
10620	0.049
10635	0.05
10650	0.048
10665	0.075
10680	0.056
10695	0.051
10710	0.066
10725	0.063
10740	0.066
10755	0.14
10770	0.325
10785	0.084
10800	0.053
10815	0.048
10830	0.05
10845	0.052
10860	0.054
10875	0.053
10890	0.067
10905	0.06
10920	0.054
10935	0.053
10950	0.048
10965	0.046

10980	0.065
10995	0.058
11010	0.07
11025	0.059
11040	0.054
11055	0.064
11070	0.069
11085	0.064
11100	0.055
11115	0.054
11130	0.07
11145	0.056
11160	0.05
11175	0.051
11190	0.046
11205	0.047
11220	0.051
11235	0.049
11250	0.049
11265	0.049
11280	0.047
11295	0.046
11310	0.047
11325	0.047
11340	0.047
11355	0.049
11370	0.051
11385	0.05
11400	0.048
11415	0.048
11430	0.053
11445	0.049
11460	0.051
11475	0.072
11490	0.052
11505	0.053
11520	0.051
11535	0.047
11550	0.052
11565	0.068
11580	0.07
11595	0.061
11610	0.05
11625	0.048
11640	0.048
11655	0.106
11670	0.107

11685	0.064
11700	0.065
11715	0.056
11730	0.053
11745	0.048
11760	0.049
11775	0.056
11790	0.05
11805	0.049
11820	0.047
11835	0.048
11850	0.048
11865	0.047
11880	0.047
11895	0.047
11910	0.046
11925	0.049
11940	0.049
11955	0.047
11970	0.048
11985	0.058
12000	0.047
12015	0.055
12030	0.05
12045	0.046
12060	0.047
12075	0.047
12090	0.047
12105	0.046
12120	0.048
12135	0.048
12150	0.048
12165	0.048
12180	0.047
12195	0.046
12210	0.046
12225	0.047
12240	0.047
12255	0.047
12270	0.046
12285	0.046
12300	0.046
12315	0.047
12330	0.051
12345	0.049
12360	0.049
12375	0.047

12390	0.048
12405	0.048
12420	0.048
12435	0.047
12450	0.047
12465	0.047
12480	0.048
12495	0.047
12510	0.048
12525	0.051
12540	0.047
12555	0.047
12570	0.048
12585	0.048
12600	0.047
12615	0.048
12630	0.049
12645	0.1
12660	0.101
12675	0.059
12690	0.05
12705	0.052
12720	0.049
12735	0.051
12750	0.05
12765	0.053
12780	0.053
12795	0.062
12810	0.056
12825	0.061
12840	0.05
12855	0.049
12870	0.054
12885	0.068
12900	0.051
12915	0.049
12930	0.05
12945	0.048
12960	0.05
12975	0.049
12990	0.051
13005	0.053
13020	0.063
13035	0.054
13050	0.05
13065	0.051
13080	0.053

13095	0.065
13110	0.115
13125	0.069
13140	0.052
13155	0.049
13170	0.049
13185	0.05
13200	0.05
13215	0.052
13230	0.054
13245	0.053
13260	0.053
13275	0.053
13290	0.052
13305	0.053
13320	0.054
13335	0.053
13350	0.053
13365	0.054
13380	0.051
13395	0.049
13410	0.052
13425	0.051
13440	0.049
13455	0.05
13470	0.049
13485	0.049
13500	0.05
13515	0.049
13530	0.055
13545	0.055
13560	0.062
13575	0.049
13590	0.049
13605	0.05
13620	0.062
13635	0.05
13650	0.05
13665	0.049
13680	0.051
13695	0.05
13710	0.052
13725	0.049
13740	0.061
13755	0.065
13770	0.082
13785	0.076

13800	0.065
13815	0.063
13830	0.058
13845	0.063
13860	0.048
13875	0.051
13890	0.051
13905	0.049
13920	0.054
13935	0.063
13950	0.058
13965	0.056
13980	0.053
13995	0.051
14010	0.059
14025	0.061
14040	0.063
14055	0.064
14070	0.061
14085	0.054
14100	0.049
14115	0.048
14130	0.05
14145	0.049
14160	0.049
14175	0.05
14190	0.049
14205	0.048
14220	0.049
14235	0.077
14250	0.053
14265	0.049
14280	0.051
14295	0.056
14310	0.055
14325	0.066
14340	0.142
14355	0.218
14370	0.066
14385	0.051
14400	0.049
14415	0.049
14430	0.051
14445	0.051
14460	0.058
14475	0.057
14490	0.05

14505	0.052
14520	0.051
14535	0.054
14550	0.067
14565	0.061
14580	0.062
14595	0.049
14610	0.049
14625	0.049
14640	0.056
14655	0.052
14670	0.049
14685	0.051
14700	0.05
14715	0.052
14730	0.053
14745	0.06
14760	0.063
14775	0.06
14790	0.051
14805	0.05
14820	0.05
14835	0.049
14850	0.049
14865	0.049
14880	0.049
14895	0.052
14910	0.05
14925	0.051
14940	0.051
14955	0.05
14970	0.05
14985	0.049
15000	0.05
15015	0.05
15030	0.049
15045	0.05
15060	0.049
15075	0.049
15090	0.049
15105	0.05
15120	0.049
15135	0.049
15150	0.05
15165	0.05
15180	0.05
15195	0.054

15210	0.05
15225	0.05
15240	0.05
15255	0.049
15270	0.049
15285	0.049
15300	0.049
15315	0.05
15330	0.053
15345	0.052
15360	0.063
15375	0.067
15390	0.11
15405	0.055
15420	0.05
15435	0.05
15450	0.05
15465	0.054
15480	0.051
15495	0.052
15510	0.053
15525	0.051
15540	0.05
15555	0.076
15570	0.063
15585	0.054
15600	0.05

UPWIND

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530173301
Firmware Version	3.7
Calibration Date	8/14/2017
Test Name	MANUAL_005
Test Start Time	7:26:49 AM
Test Start Date	8/12/2020
Test Length [D:H:M]	0:04:05
Test Interval [M:S]	0:15
Mass Average [mg/m3]	0.015
Mass Minimum [mg/m3]	0.009
Mass Maximum [mg/m3]	0.691
Mass TWA [mg/m3]	0.007
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	980

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
15	0.028		
30	0.017		
45	0.018		
60	0.017		
75	0.017		
90	0.016		
105	0.016		
120	0.016		
135	0.016		
150	0.017		
165	0.016		
180	0.016		
195	0.016		
210	0.016		
225	0.016		
240	0.016		
255	0.015		
270	0.016		
285	0.016		
300	0.015		
315	0.016		
330	0.016		
345	0.016		
360	0.015		
375	0.015		
390	0.015		

405	0.016
420	0.015
435	0.015
450	0.015
465	0.015
480	0.015
495	0.015
510	0.015
525	0.015
540	0.015
555	0.015
570	0.015
585	0.017
600	0.017
615	0.018
630	0.018
645	0.018
660	0.017
675	0.016
690	0.015
705	0.015
720	0.015
735	0.014
750	0.014
765	0.014
780	0.014
795	0.015
810	0.014
825	0.014
840	0.014
855	0.014
870	0.014
885	0.014
900	0.014
915	0.015
930	0.028
945	0.015
960	0.014
975	0.015
990	0.014
1005	0.015
1020	0.014
1035	0.014
1050	0.018
1065	0.017
1080	0.014
1095	0.014

1110	0.014
1125	0.017
1140	0.016
1155	0.014
1170	0.015
1185	0.014
1200	0.014
1215	0.014
1230	0.014
1245	0.014
1260	0.014
1275	0.013
1290	0.014
1305	0.014
1320	0.014
1335	0.014
1350	0.014
1365	0.018
1380	0.016
1395	0.015
1410	0.014
1425	0.014
1440	0.013
1455	0.013
1470	0.013
1485	0.013
1500	0.013
1515	0.012
1530	0.013
1545	0.013
1560	0.013
1575	0.013
1590	0.013
1605	0.013
1620	0.013
1635	0.012
1650	0.013
1665	0.013
1680	0.013
1695	0.013
1710	0.013
1725	0.013
1740	0.013
1755	0.013
1770	0.027
1785	0.016
1800	0.051

1815	0.078
1830	0.047
1845	0.013
1860	0.013
1875	0.012
1890	0.013
1905	0.013
1920	0.013
1935	0.016
1950	0.015
1965	0.018
1980	0.012
1995	0.013
2010	0.015
2025	0.015
2040	0.022
2055	0.033
2070	0.015
2085	0.013
2100	0.013
2115	0.017
2130	0.056
2145	0.026
2160	0.025
2175	0.012
2190	0.013
2205	0.013
2220	0.013
2235	0.013
2250	0.012
2265	0.012
2280	0.013
2295	0.013
2310	0.015
2325	0.014
2340	0.015
2355	0.069
2370	0.032
2385	0.014
2400	0.014
2415	0.02
2430	0.021
2445	0.016
2460	0.02
2475	0.013
2490	0.012
2505	0.039

2520	0.018
2535	0.016
2550	0.014
2565	0.028
2580	0.015
2595	0.032
2610	0.028
2625	0.013
2640	0.012
2655	0.013
2670	0.012
2685	0.012
2700	0.012
2715	0.012
2730	0.013
2745	0.012
2760	0.012
2775	0.013
2790	0.012
2805	0.012
2820	0.012
2835	0.012
2850	0.012
2865	0.012
2880	0.012
2895	0.012
2910	0.012
2925	0.012
2940	0.012
2955	0.012
2970	0.012
2985	0.013
3000	0.012
3015	0.012
3030	0.012
3045	0.012
3060	0.012
3075	0.012
3090	0.012
3105	0.012
3120	0.012
3135	0.012
3150	0.012
3165	0.012
3180	0.012
3195	0.012
3210	0.012

3225	0.012
3240	0.012
3255	0.012
3270	0.012
3285	0.012
3300	0.012
3315	0.012
3330	0.012
3345	0.027
3360	0.013
3375	0.012
3390	0.012
3405	0.013
3420	0.014
3435	0.013
3450	0.016
3465	0.017
3480	0.015
3495	0.02
3510	0.023
3525	0.018
3540	0.012
3555	0.039
3570	0.013
3585	0.012
3600	0.014
3615	0.012
3630	0.012
3645	0.012
3660	0.012
3675	0.012
3690	0.012
3705	0.012
3720	0.012
3735	0.013
3750	0.012
3765	0.012
3780	0.016
3795	0.044
3810	0.079
3825	0.036
3840	0.04
3855	0.031
3870	0.031
3885	0.013
3900	0.014
3915	0.013

3930	0.013
3945	0.019
3960	0.023
3975	0.02
3990	0.014
4005	0.015
4020	0.013
4035	0.012
4050	0.012
4065	0.036
4080	0.028
4095	0.014
4110	0.014
4125	0.013
4140	0.013
4155	0.026
4170	0.014
4185	0.012
4200	0.012
4215	0.012
4230	0.012
4245	0.045
4260	0.013
4275	0.012
4290	0.037
4305	0.033
4320	0.017
4335	0.029
4350	0.012
4365	0.012
4380	0.012
4395	0.012
4410	0.012
4425	0.012
4440	0.012
4455	0.012
4470	0.012
4485	0.012
4500	0.012
4515	0.012
4530	0.012
4545	0.012
4560	0.012
4575	0.012
4590	0.012
4605	0.012
4620	0.012

4635	0.012
4650	0.018
4665	0.049
4680	0.019
4695	0.013
4710	0.011
4725	0.012
4740	0.012
4755	0.012
4770	0.012
4785	0.012
4800	0.011
4815	0.012
4830	0.012
4845	0.012
4860	0.012
4875	0.012
4890	0.012
4905	0.012
4920	0.012
4935	0.012
4950	0.012
4965	0.013
4980	0.012
4995	0.012
5010	0.012
5025	0.012
5040	0.012
5055	0.012
5070	0.012
5085	0.012
5100	0.012
5115	0.012
5130	0.012
5145	0.012
5160	0.012
5175	0.012
5190	0.012
5205	0.013
5220	0.012
5235	0.012
5250	0.012
5265	0.012
5280	0.012
5295	0.012
5310	0.013
5325	0.012

5340	0.013
5355	0.012
5370	0.012
5385	0.012
5400	0.012
5415	0.012
5430	0.012
5445	0.012
5460	0.012
5475	0.012
5490	0.012
5505	0.012
5520	0.012
5535	0.012
5550	0.012
5565	0.011
5580	0.012
5595	0.012
5610	0.012
5625	0.012
5640	0.011
5655	0.012
5670	0.012
5685	0.012
5700	0.012
5715	0.012
5730	0.012
5745	0.011
5760	0.011
5775	0.011
5790	0.012
5805	0.012
5820	0.011
5835	0.012
5850	0.011
5865	0.012
5880	0.011
5895	0.012
5910	0.012
5925	0.012
5940	0.011
5955	0.011
5970	0.012
5985	0.011
6000	0.012
6015	0.012
6030	0.029

6045	0.013
6060	0.012
6075	0.012
6090	0.011
6105	0.011
6120	0.011
6135	0.011
6150	0.011
6165	0.011
6180	0.011
6195	0.012
6210	0.013
6225	0.011
6240	0.012
6255	0.024
6270	0.033
6285	0.012
6300	0.012
6315	0.012
6330	0.012
6345	0.013
6360	0.012
6375	0.012
6390	0.012
6405	0.012
6420	0.012
6435	0.012
6450	0.015
6465	0.012
6480	0.012
6495	0.012
6510	0.012
6525	0.011
6540	0.012
6555	0.012
6570	0.012
6585	0.012
6600	0.011
6615	0.011
6630	0.012
6645	0.011
6660	0.011
6675	0.012
6690	0.012
6705	0.014
6720	0.011
6735	0.012

6750	0.012
6765	0.012
6780	0.012
6795	0.011
6810	0.011
6825	0.012
6840	0.011
6855	0.012
6870	0.011
6885	0.012
6900	0.012
6915	0.011
6930	0.011
6945	0.012
6960	0.011
6975	0.011
6990	0.012
7005	0.011
7020	0.012
7035	0.012
7050	0.014
7065	0.018
7080	0.012
7095	0.016
7110	0.042
7125	0.059
7140	0.03
7155	0.04
7170	0.019
7185	0.018
7200	0.024
7215	0.041
7230	0.018
7245	0.018
7260	0.016
7275	0.013
7290	0.015
7305	0.015
7320	0.012
7335	0.012
7350	0.013
7365	0.013
7380	0.012
7395	0.012
7410	0.014
7425	0.012
7440	0.013

7455	0.017
7470	0.011
7485	0.011
7500	0.012
7515	0.012
7530	0.012
7545	0.035
7560	0.019
7575	0.012
7590	0.012
7605	0.012
7620	0.012
7635	0.012
7650	0.012
7665	0.011
7680	0.012
7695	0.012
7710	0.012
7725	0.012
7740	0.012
7755	0.011
7770	0.012
7785	0.012
7800	0.012
7815	0.012
7830	0.012
7845	0.012
7860	0.012
7875	0.012
7890	0.012
7905	0.012
7920	0.012
7935	0.012
7950	0.013
7965	0.012
7980	0.012
7995	0.012
8010	0.012
8025	0.012
8040	0.012
8055	0.012
8070	0.012
8085	0.012
8100	0.012
8115	0.012
8130	0.012
8145	0.012

8160	0.012
8175	0.012
8190	0.012
8205	0.023
8220	0.029
8235	0.013
8250	0.011
8265	0.011
8280	0.012
8295	0.012
8310	0.012
8325	0.015
8340	0.012
8355	0.012
8370	0.011
8385	0.011
8400	0.011
8415	0.011
8430	0.011
8445	0.012
8460	0.011
8475	0.011
8490	0.011
8505	0.011
8520	0.012
8535	0.011
8550	0.011
8565	0.012
8580	0.012
8595	0.011
8610	0.011
8625	0.012
8640	0.011
8655	0.012
8670	0.012
8685	0.011
8700	0.01
8715	0.011
8730	0.01
8745	0.011
8760	0.011
8775	0.011
8790	0.011
8805	0.011
8820	0.011
8835	0.01
8850	0.011

8865	0.011
8880	0.011
8895	0.011
8910	0.011
8925	0.01
8940	0.011
8955	0.011
8970	0.011
8985	0.01
9000	0.01
9015	0.011
9030	0.011
9045	0.01
9060	0.01
9075	0.01
9090	0.01
9105	0.01
9120	0.011
9135	0.01
9150	0.01
9165	0.011
9180	0.01
9195	0.01
9210	0.01
9225	0.01
9240	0.01
9255	0.01
9270	0.01
9285	0.01
9300	0.011
9315	0.011
9330	0.011
9345	0.011
9360	0.011
9375	0.01
9390	0.01
9405	0.01
9420	0.01
9435	0.01
9450	0.01
9465	0.01
9480	0.01
9495	0.01
9510	0.01
9525	0.01
9540	0.01
9555	0.01

9570	0.01
9585	0.01
9600	0.009
9615	0.01
9630	0.01
9645	0.01
9660	0.01
9675	0.01
9690	0.01
9705	0.01
9720	0.01
9735	0.01
9750	0.01
9765	0.01
9780	0.01
9795	0.01
9810	0.01
9825	0.01
9840	0.01
9855	0.01
9870	0.01
9885	0.01
9900	0.01
9915	0.01
9930	0.01
9945	0.01
9960	0.01
9975	0.01
9990	0.01
10005	0.01
10020	0.01
10035	0.01
10050	0.01
10065	0.01
10080	0.01
10095	0.01
10110	0.01
10125	0.01
10140	0.01
10155	0.01
10170	0.011
10185	0.01
10200	0.01
10215	0.01
10230	0.127
10245	0.691
10260	0.013

10275	0.011
10290	0.027
10305	0.019
10320	0.021
10335	0.013
10350	0.011
10365	0.011
10380	0.01
10395	0.035
10410	0.01
10425	0.01
10440	0.01
10455	0.01
10470	0.01
10485	0.01
10500	0.009
10515	0.01
10530	0.01
10545	0.01
10560	0.011
10575	0.01
10590	0.009
10605	0.01
10620	0.01
10635	0.01
10650	0.01
10665	0.01
10680	0.009
10695	0.009
10710	0.01
10725	0.01
10740	0.01
10755	0.009
10770	0.01
10785	0.009
10800	0.009
10815	0.01
10830	0.009
10845	0.01
10860	0.01
10875	0.009
10890	0.01
10905	0.01
10920	0.01
10935	0.01
10950	0.01
10965	0.01

10980	0.009
10995	0.01
11010	0.01
11025	0.01
11040	0.011
11055	0.01
11070	0.01
11085	0.01
11100	0.01
11115	0.01
11130	0.01
11145	0.01
11160	0.01
11175	0.01
11190	0.01
11205	0.011
11220	0.011
11235	0.01
11250	0.01
11265	0.01
11280	0.01
11295	0.01
11310	0.01
11325	0.011
11340	0.01
11355	0.01
11370	0.01
11385	0.011
11400	0.01
11415	0.011
11430	0.011
11445	0.011
11460	0.01
11475	0.01
11490	0.01
11505	0.01
11520	0.01
11535	0.01
11550	0.011
11565	0.011
11580	0.01
11595	0.01
11610	0.01
11625	0.01
11640	0.01
11655	0.011
11670	0.01

11685	0.01
11700	0.01
11715	0.01
11730	0.01
11745	0.01
11760	0.01
11775	0.01
11790	0.01
11805	0.01
11820	0.01
11835	0.01
11850	0.01
11865	0.01
11880	0.01
11895	0.01
11910	0.01
11925	0.01
11940	0.009
11955	0.009
11970	0.01
11985	0.01
12000	0.01
12015	0.01
12030	0.01
12045	0.01
12060	0.01
12075	0.01
12090	0.009
12105	0.011
12120	0.011
12135	0.01
12150	0.01
12165	0.01
12180	0.01
12195	0.01
12210	0.011
12225	0.01
12240	0.01
12255	0.011
12270	0.011
12285	0.011
12300	0.011
12315	0.013
12330	0.013
12345	0.01
12360	0.01
12375	0.011

12390	0.01
12405	0.01
12420	0.01
12435	0.01
12450	0.01
12465	0.009
12480	0.01
12495	0.01
12510	0.01
12525	0.01
12540	0.065
12555	0.029
12570	0.03
12585	0.055
12600	0.011
12615	0.011
12630	0.011
12645	0.01
12660	0.011
12675	0.026
12690	0.031
12705	0.028
12720	0.056
12735	0.049
12750	0.063
12765	0.063
12780	0.058
12795	0.023
12810	0.017
12825	0.011
12840	0.01
12855	0.011
12870	0.01
12885	0.011
12900	0.01
12915	0.01
12930	0.01
12945	0.011
12960	0.011
12975	0.011
12990	0.011
13005	0.01
13020	0.01
13035	0.011
13050	0.01
13065	0.01
13080	0.01

13095	0.011
13110	0.01
13125	0.01
13140	0.01
13155	0.01
13170	0.011
13185	0.016
13200	0.014
13215	0.012
13230	0.024
13245	0.022
13260	0.018
13275	0.015
13290	0.011
13305	0.012
13320	0.011
13335	0.01
13350	0.011
13365	0.011
13380	0.011
13395	0.011
13410	0.011
13425	0.011
13440	0.011
13455	0.011
13470	0.012
13485	0.012
13500	0.012
13515	0.012
13530	0.011
13545	0.011
13560	0.012
13575	0.012
13590	0.011
13605	0.011
13620	0.01
13635	0.081
13650	0.011
13665	0.011
13680	0.02
13695	0.011
13710	0.01
13725	0.01
13740	0.011
13755	0.011
13770	0.011
13785	0.011

13800	0.01
13815	0.01
13830	0.01
13845	0.011
13860	0.012
13875	0.026
13890	0.011
13905	0.015
13920	0.011
13935	0.011
13950	0.011
13965	0.011
13980	0.011
13995	0.015
14010	0.011
14025	0.011
14040	0.01
14055	0.01
14070	0.011
14085	0.01
14100	0.01
14115	0.011
14130	0.01
14145	0.01
14160	0.01
14175	0.011
14190	0.01
14205	0.01
14220	0.01
14235	0.01
14250	0.01
14265	0.01
14280	0.01
14295	0.01
14310	0.01
14325	0.011
14340	0.01
14355	0.01
14370	0.011
14385	0.01
14400	0.01
14415	0.011
14430	0.011
14445	0.01
14460	0.011
14475	0.01
14490	0.01

14505	0.01
14520	0.01
14535	0.01
14550	0.01
14565	0.01
14580	0.01
14595	0.01
14610	0.01
14625	0.011
14640	0.01
14655	0.01
14670	0.01
14685	0.01
14700	0.01

DOWNWIND

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530141709
Firmware Version	3.9
Calibration Date	2/26/2020
Test Name	MANUAL_001
Test Start Time	7:46:40 AM
Test Start Date	8/11/2020
Test Length [D:H:M]	0:00:24
Test Interval [M:S]	0:15
Mass Average [mg/m3]	0.022
Mass Minimum [mg/m3]	0.019
Mass Maximum [mg/m3]	0.027
Mass TWA [mg/m3]	0.001
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	99

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
15	0.024		
30	0.023		
45	0.024		
60	0.025		
75	0.024		
90	0.026		
105	0.026		
120	0.023		
135	0.023		
150	0.024		
165	0.024		
180	0.023		
195	0.021		
210	0.021		
225	0.021		
240	0.023		
255	0.021		
270	0.021		
285	0.021		
300	0.022		
315	0.022		
330	0.024		
345	0.024		
360	0.024		
375	0.023		
390	0.023		

405	0.022
420	0.021
435	0.021
450	0.025
465	0.023
480	0.022
495	0.022
510	0.021
525	0.023
540	0.024
555	0.024
570	0.023
585	0.024
600	0.024
615	0.024
630	0.023
645	0.025
660	0.026
675	0.025
690	0.023
705	0.021
720	0.02
735	0.02
750	0.02
765	0.022
780	0.02
795	0.02
810	0.02
825	0.021
840	0.02
855	0.02
870	0.02
885	0.019
900	0.02
915	0.021
930	0.022
945	0.025
960	0.022
975	0.02
990	0.02
1005	0.019
1020	0.02
1035	0.021
1050	0.02
1065	0.019
1080	0.02
1095	0.021

1110	0.021
1125	0.022
1140	0.021
1155	0.022
1170	0.024
1185	0.027
1200	0.024
1215	0.023
1230	0.022
1245	0.022
1260	0.021
1275	0.021
1290	0.021
1305	0.02
1320	0.02
1335	0.022
1350	0.022
1365	0.022
1380	0.022
1395	0.021
1410	0.02
1425	0.02
1440	0.02
1455	0.02
1470	0.02
1485	0.02

DOWNWIND

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530141709
Firmware Version	3.9
Calibration Date	2/26/2020
Test Name	MANUAL_002
Test Start Time	11:09:41 AM
Test Start Date	8/11/2020
Test Length [D:H:M]	0:04:19
Test Interval [M:S]	0:15
Mass Average [mg/m3]	0.036
Mass Minimum [mg/m3]	0.028
Mass Maximum [mg/m3]	0.351
Mass TWA [mg/m3]	0.019
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	1037

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
15	0.034		
30	0.037		
45	0.098		
60	0.03		
75	0.031		
90	0.029		
105	0.029		
120	0.029		
135	0.029		
150	0.029		
165	0.144		
180	0.037		
195	0.029		
210	0.032		
225	0.029		
240	0.028		
255	0.029		
270	0.029		
285	0.03		
300	0.029		
315	0.032		
330	0.03		
345	0.029		
360	0.033		
375	0.042		
390	0.034		

405	0.033
420	0.032
435	0.029
450	0.03
465	0.032
480	0.03
495	0.03
510	0.029
525	0.031
540	0.03
555	0.031
570	0.028
585	0.029
600	0.029
615	0.031
630	0.029
645	0.028
660	0.03
675	0.031
690	0.033
705	0.033
720	0.029
735	0.031
750	0.031
765	0.029
780	0.028
795	0.028
810	0.028
825	0.029
840	0.029
855	0.031
870	0.028
885	0.029
900	0.029
915	0.029
930	0.028
945	0.247
960	0.099
975	0.034
990	0.031
1005	0.041
1020	0.03
1035	0.03
1050	0.03
1065	0.03
1080	0.03
1095	0.03

1

1110	0.029
1125	0.03
1140	0.032
1155	0.031
1170	0.033
1185	0.03
1200	0.03
1215	0.059
1230	0.029
1245	0.032
1260	0.047
1275	0.083
1290	0.095
1305	0.031
1320	0.031
1335	0.032
1350	0.031
1365	0.031
1380	0.032
1395	0.031
1410	0.03
1425	0.031
1440	0.052
1455	0.037
1470	0.074
1485	0.039
1500	0.03
1515	0.029
1530	0.029
1545	0.029
1560	0.029
1575	0.053
1590	0.133
1605	0.039
1620	0.351
1635	0.075
1650	0.034
1665	0.03
1680	0.029
1695	0.03
1710	0.03
1725	0.029
1740	0.029
1755	0.029
1770	0.029
1785	0.028
1800	0.029

1

1815	0.043	
1830	0.029	
1845	0.046	
1860	0.036	
1875	0.03	
1890	0.073	
1905	0.032	
1920	0.162	1
1935	0.031	
1950	0.035	
1965	0.034	
1980	0.029	
1995	0.042	
2010	0.028	
2025	0.028	
2040	0.029	
2055	0.037	
2070	0.029	
2085	0.029	
2100	0.028	
2115	0.03	
2130	0.033	
2145	0.165	1
2160	0.095	
2175	0.03	
2190	0.046	
2205	0.05	
2220	0.03	
2235	0.03	
2250	0.028	
2265	0.029	
2280	0.034	
2295	0.089	
2310	0.031	
2325	0.031	
2340	0.111	
2355	0.055	
2370	0.031	
2385	0.046	
2400	0.03	
2415	0.03	
2430	0.03	
2445	0.029	
2460	0.031	
2475	0.031	
2490	0.032	
2505	0.031	

2520	0.032
2535	0.031
2550	0.03
2565	0.031
2580	0.031
2595	0.03
2610	0.031
2625	0.032
2640	0.032
2655	0.03
2670	0.034
2685	0.031
2700	0.031
2715	0.032
2730	0.033
2745	0.084
2760	0.04
2775	0.11
2790	0.086
2805	0.09
2820	0.113
2835	0.03
2850	0.032
2865	0.031
2880	0.03
2895	0.03
2910	0.03
2925	0.03
2940	0.03
2955	0.032
2970	0.03
2985	0.03
3000	0.03
3015	0.029
3030	0.029
3045	0.029
3060	0.031
3075	0.03
3090	0.033
3105	0.032
3120	0.031
3135	0.032
3150	0.031
3165	0.028
3180	0.031
3195	0.03
3210	0.029

3225	0.031
3240	0.032
3255	0.03
3270	0.03
3285	0.034
3300	0.032
3315	0.032
3330	0.031
3345	0.034
3360	0.033
3375	0.029
3390	0.03
3405	0.031
3420	0.032
3435	0.031
3450	0.03
3465	0.03
3480	0.033
3495	0.031
3510	0.03
3525	0.03
3540	0.031
3555	0.03
3570	0.031
3585	0.03
3600	0.029
3615	0.029
3630	0.033
3645	0.03
3660	0.03
3675	0.032
3690	0.031
3705	0.031
3720	0.029
3735	0.032
3750	0.036
3765	0.029
3780	0.032
3795	0.032
3810	0.031
3825	0.03
3840	0.03
3855	0.031
3870	0.033
3885	0.033
3900	0.03
3915	0.03

3930	0.031
3945	0.031
3960	0.03
3975	0.032
3990	0.029
4005	0.03
4020	0.034
4035	0.033
4050	0.031
4065	0.029
4080	0.029
4095	0.029
4110	0.031
4125	0.028
4140	0.029
4155	0.029
4170	0.029
4185	0.029
4200	0.029
4215	0.028
4230	0.029
4245	0.029
4260	0.029
4275	0.029
4290	0.029
4305	0.029
4320	0.029
4335	0.029
4350	0.028
4365	0.029
4380	0.029
4395	0.029
4410	0.029
4425	0.029
4440	0.029
4455	0.029
4470	0.029
4485	0.028
4500	0.029
4515	0.029
4530	0.029
4545	0.028
4560	0.029
4575	0.03
4590	0.029
4605	0.029
4620	0.028

4635	0.028
4650	0.028
4665	0.029
4680	0.029
4695	0.029
4710	0.032
4725	0.029
4740	0.029
4755	0.029
4770	0.029
4785	0.029
4800	0.029
4815	0.029
4830	0.029
4845	0.029
4860	0.029
4875	0.029
4890	0.029
4905	0.028
4920	0.029
4935	0.029
4950	0.029
4965	0.029
4980	0.029
4995	0.029
5010	0.029
5025	0.029
5040	0.029
5055	0.029
5070	0.029
5085	0.029
5100	0.03
5115	0.029
5130	0.029
5145	0.029
5160	0.03
5175	0.029
5190	0.034
5205	0.033
5220	0.03
5235	0.029
5250	0.029
5265	0.029
5280	0.029
5295	0.029
5310	0.029
5325	0.028

5340	0.029
5355	0.029
5370	0.029
5385	0.029
5400	0.029
5415	0.028
5430	0.028
5445	0.029
5460	0.03
5475	0.028
5490	0.03
5505	0.028
5520	0.029
5535	0.029
5550	0.029
5565	0.029
5580	0.03
5595	0.029
5610	0.029
5625	0.029
5640	0.028
5655	0.028
5670	0.028
5685	0.031
5700	0.031
5715	0.03
5730	0.037
5745	0.034
5760	0.031
5775	0.035
5790	0.036
5805	0.031
5820	0.036
5835	0.037
5850	0.036
5865	0.032
5880	0.03
5895	0.031
5910	0.035
5925	0.033
5940	0.031
5955	0.032
5970	0.03
5985	0.029
6000	0.03
6015	0.029
6030	0.03

6045	0.03
6060	0.03
6075	0.03
6090	0.03
6105	0.029
6120	0.03
6135	0.03
6150	0.029
6165	0.028
6180	0.029
6195	0.029
6210	0.03
6225	0.031
6240	0.03
6255	0.031
6270	0.032
6285	0.032
6300	0.032
6315	0.031
6330	0.03
6345	0.029
6360	0.029
6375	0.029
6390	0.029
6405	0.03
6420	0.031
6435	0.033
6450	0.031
6465	0.03
6480	0.029
6495	0.029
6510	0.029
6525	0.029
6540	0.029
6555	0.029
6570	0.029
6585	0.029
6600	0.029
6615	0.029
6630	0.029
6645	0.029
6660	0.029
6675	0.029
6690	0.029
6705	0.03
6720	0.028
6735	0.03

6750	0.029
6765	0.029
6780	0.03
6795	0.029
6810	0.029
6825	0.03
6840	0.03
6855	0.03
6870	0.03
6885	0.031
6900	0.03
6915	0.029
6930	0.03
6945	0.03
6960	0.029
6975	0.029
6990	0.029
7005	0.029
7020	0.029
7035	0.029
7050	0.032
7065	0.029
7080	0.03
7095	0.03
7110	0.029
7125	0.03
7140	0.03
7155	0.029
7170	0.03
7185	0.029
7200	0.03
7215	0.038
7230	0.039
7245	0.032
7260	0.029
7275	0.031
7290	0.03
7305	0.029
7320	0.029
7335	0.029
7350	0.029
7365	0.03
7380	0.034
7395	0.03
7410	0.03
7425	0.034
7440	0.036

7455	0.047
7470	0.033
7485	0.03
7500	0.029
7515	0.03
7530	0.03
7545	0.03
7560	0.03
7575	0.03
7590	0.03
7605	0.03
7620	0.03
7635	0.029
7650	0.029
7665	0.03
7680	0.029
7695	0.029
7710	0.03
7725	0.029
7740	0.029
7755	0.029
7770	0.029
7785	0.033
7800	0.049
7815	0.031
7830	0.035
7845	0.03
7860	0.036
7875	0.034
7890	0.03
7905	0.029
7920	0.029
7935	0.029
7950	0.029
7965	0.029
7980	0.029
7995	0.029
8010	0.041
8025	0.033
8040	0.062
8055	0.036
8070	0.03
8085	0.029
8100	0.029
8115	0.029
8130	0.029
8145	0.028

8160	0.028
8175	0.029
8190	0.029
8205	0.028
8220	0.029
8235	0.029
8250	0.029
8265	0.03
8280	0.03
8295	0.03
8310	0.03
8325	0.03
8340	0.03
8355	0.029
8370	0.029
8385	0.029
8400	0.029
8415	0.03
8430	0.03
8445	0.031
8460	0.036
8475	0.045
8490	0.044
8505	0.031
8520	0.03
8535	0.031
8550	0.032
8565	0.029
8580	0.029
8595	0.03
8610	0.03
8625	0.029
8640	0.029
8655	0.03
8670	0.03
8685	0.03
8700	0.03
8715	0.03
8730	0.032
8745	0.033
8760	0.035
8775	0.031
8790	0.032
8805	0.032
8820	0.036
8835	0.03
8850	0.03

8865	0.03
8880	0.03
8895	0.031
8910	0.031
8925	0.03
8940	0.031
8955	0.03
8970	0.06
8985	0.039
9000	0.031
9015	0.03
9030	0.03
9045	0.032
9060	0.03
9075	0.031
9090	0.03
9105	0.03
9120	0.03
9135	0.03
9150	0.034
9165	0.043
9180	0.035
9195	0.032
9210	0.032
9225	0.03
9240	0.031
9255	0.03
9270	0.03
9285	0.03
9300	0.035
9315	0.031
9330	0.031
9345	0.031
9360	0.03
9375	0.03
9390	0.03
9405	0.03
9420	0.031
9435	0.031
9450	0.03
9465	0.031
9480	0.031
9495	0.031
9510	0.031
9525	0.03
9540	0.03
9555	0.03

9570	0.031
9585	0.03
9600	0.03
9615	0.031
9630	0.031
9645	0.03
9660	0.03
9675	0.031
9690	0.032
9705	0.032
9720	0.031
9735	0.031
9750	0.031
9765	0.031
9780	0.03
9795	0.031
9810	0.031
9825	0.031
9840	0.031
9855	0.032
9870	0.031
9885	0.031
9900	0.032
9915	0.031
9930	0.031
9945	0.032
9960	0.033
9975	0.031
9990	0.031
10005	0.031
10020	0.032
10035	0.032
10050	0.032
10065	0.032
10080	0.031
10095	0.031
10110	0.032
10125	0.032
10140	0.032
10155	0.033
10170	0.032
10185	0.032
10200	0.032
10215	0.033
10230	0.034
10245	0.032
10260	0.031

10275	0.031
10290	0.032
10305	0.032
10320	0.033
10335	0.032
10350	0.032
10365	0.032
10380	0.032
10395	0.031
10410	0.032
10425	0.032
10440	0.032
10455	0.031
10470	0.032
10485	0.033
10500	0.033
10515	0.033
10530	0.032
10545	0.039
10560	0.04
10575	0.034
10590	0.039
10605	0.034
10620	0.038
10635	0.038
10650	0.096
10665	0.067
10680	0.039
10695	0.033
10710	0.035
10725	0.035
10740	0.038
10755	0.037
10770	0.038
10785	0.038
10800	0.037
10815	0.039
10830	0.033
10845	0.032
10860	0.034
10875	0.041
10890	0.054
10905	0.037
10920	0.037
10935	0.04
10950	0.039
10965	0.043

10980	0.037
10995	0.034
11010	0.038
11025	0.038
11040	0.034
11055	0.033
11070	0.039
11085	0.045
11100	0.033
11115	0.034
11130	0.033
11145	0.033
11160	0.033
11175	0.033
11190	0.034
11205	0.033
11220	0.033
11235	0.033
11250	0.035
11265	0.037
11280	0.036
11295	0.033
11310	0.035
11325	0.034
11340	0.034
11355	0.04
11370	0.036
11385	0.035
11400	0.036
11415	0.043
11430	0.035
11445	0.063
11460	0.047
11475	0.042
11490	0.034
11505	0.036
11520	0.039
11535	0.05
11550	0.056
11565	0.037
11580	0.036
11595	0.041
11610	0.04
11625	0.034
11640	0.034
11655	0.038
11670	0.05

11685	0.056
11700	0.036
11715	0.038
11730	0.064
11745	0.034
11760	0.052
11775	0.035
11790	0.035
11805	0.106
11820	0.054
11835	0.034
11850	0.033
11865	0.034
11880	0.033
11895	0.034
11910	0.033
11925	0.033
11940	0.033
11955	0.038
11970	0.046
11985	0.034
12000	0.045
12015	0.034
12030	0.036
12045	0.071
12060	0.091
12075	0.034
12090	0.04
12105	0.04
12120	0.057
12135	0.033
12150	0.034
12165	0.04
12180	0.033
12195	0.033
12210	0.034
12225	0.035
12240	0.034
12255	0.075
12270	0.046
12285	0.038
12300	0.034
12315	0.037
12330	0.034
12345	0.043
12360	0.035
12375	0.038

12390	0.044
12405	0.036
12420	0.059
12435	0.038
12450	0.035
12465	0.054
12480	0.035
12495	0.034
12510	0.035
12525	0.038
12540	0.049
12555	0.043
12570	0.04
12585	0.052
12600	0.045
12615	0.044
12630	0.036
12645	0.036
12660	0.036
12675	0.038
12690	0.04
12705	0.04
12720	0.035
12735	0.064
12750	0.052
12765	0.046
12780	0.035
12795	0.046
12810	0.063
12825	0.037
12840	0.04
12855	0.06
12870	0.036
12885	0.051
12900	0.044
12915	0.045
12930	0.036
12945	0.036
12960	0.038
12975	0.037
12990	0.058
13005	0.069
13020	0.052
13035	0.035
13050	0.035
13065	0.051
13080	0.039

13095	0.036
13110	0.038
13125	0.038
13140	0.037
13155	0.038
13170	0.036
13185	0.037
13200	0.035
13215	0.036
13230	0.036
13245	0.036
13260	0.035
13275	0.036
13290	0.035
13305	0.035
13320	0.035
13335	0.036
13350	0.035
13365	0.035
13380	0.035
13395	0.035
13410	0.035
13425	0.035
13440	0.035
13455	0.034
13470	0.035
13485	0.036
13500	0.036
13515	0.036
13530	0.035
13545	0.035
13560	0.036
13575	0.035
13590	0.035
13605	0.035
13620	0.036
13635	0.038
13650	0.042
13665	0.04
13680	0.038
13695	0.038
13710	0.037
13725	0.038
13740	0.035
13755	0.037
13770	0.035
13785	0.323

13800	0.036
13815	0.04
13830	0.038
13845	0.038
13860	0.039
13875	0.037
13890	0.037
13905	0.039
13920	0.042
13935	0.035
13950	0.038
13965	0.035
13980	0.053
13995	0.034
14010	0.046
14025	0.035
14040	0.043
14055	0.042
14070	0.037
14085	0.035
14100	0.035
14115	0.036
14130	0.038
14145	0.062
14160	0.038
14175	0.04
14190	0.046
14205	0.064
14220	0.044
14235	0.053
14250	0.037
14265	0.037
14280	0.036
14295	0.034
14310	0.036
14325	0.037
14340	0.043
14355	0.04
14370	0.072
14385	0.09
14400	0.054
14415	0.037
14430	0.038
14445	0.04
14460	0.039
14475	0.037
14490	0.035

14505	0.035
14520	0.037
14535	0.042
14550	0.036
14565	0.035
14580	0.035
14595	0.035
14610	0.036
14625	0.036
14640	0.036
14655	0.035
14670	0.035
14685	0.035
14700	0.045
14715	0.035
14730	0.034
14745	0.035
14760	0.035
14775	0.037
14790	0.06
14805	0.037
14820	0.036
14835	0.043
14850	0.034
14865	0.035
14880	0.034
14895	0.035
14910	0.034
14925	0.034
14940	0.034
14955	0.035
14970	0.035
14985	0.035
15000	0.035
15015	0.035
15030	0.035
15045	0.035
15060	0.034
15075	0.035
15090	0.035
15105	0.035
15120	0.035
15135	0.035
15150	0.035
15165	0.035
15180	0.035
15195	0.035

15210	0.036
15225	0.037
15240	0.037
15255	0.037
15270	0.052
15285	0.041
15300	0.036
15315	0.036
15330	0.036
15345	0.036
15360	0.036
15375	0.037
15390	0.036
15405	0.036
15420	0.036
15435	0.046
15450	0.044
15465	0.035
15480	0.036
15495	0.035
15510	0.047
15525	0.112
15540	0.085
15555	0.047

DOWNWIND

Instrument Name	DustTrak II
Model Number	8530
Serial Number	8530141709
Firmware Version	3.9
Calibration Date	2/26/2020
Test Name	MANUAL_003
Test Start Time	7:30:21 AM
Test Start Date	8/12/2020
Test Length [D:H:M]	0:04:04
Test Interval [M:S]	0:15
Mass Average [mg/m3]	0.013
Mass Minimum [mg/m3]	0.008
Mass Maximum [mg/m3]	0.283
Mass TWA [mg/m3]	0.007
Photometric User Cal	1
Flow User Cal	0
Errors	
Number of Samples	979

Elapsed Time [s]	Mass [mg/m3]	Alarms	Errors
15	0.022		
30	0.283	1	
45	0.021		
60	0.021		
75	0.02		
90	0.02		
105	0.02		
120	0.02		
135	0.02		
150	0.019		
165	0.02		
180	0.02		
195	0.02		
210	0.02		
225	0.021		
240	0.02		
255	0.019		
270	0.019		
285	0.019		
300	0.02		
315	0.019		
330	0.02		
345	0.018		
360	0.019		
375	0.02		
390	0.02		

405	0.019
420	0.019
435	0.02
450	0.019
465	0.019
480	0.019
495	0.019
510	0.019
525	0.019
540	0.019
555	0.019
570	0.018
585	0.017
600	0.019
615	0.019
630	0.018
645	0.018
660	0.018
675	0.018
690	0.018
705	0.018
720	0.02
735	0.019
750	0.019
765	0.019
780	0.019
795	0.018
810	0.019
825	0.02
840	0.019
855	0.048
870	0.019
885	0.018
900	0.019
915	0.018
930	0.046
945	0.019
960	0.019
975	0.019
990	0.019
1005	0.019
1020	0.019
1035	0.018
1050	0.019
1065	0.018
1080	0.018
1095	0.017

1110	0.018
1125	0.017
1140	0.018
1155	0.018
1170	0.017
1185	0.019
1200	0.019
1215	0.017
1230	0.017
1245	0.017
1260	0.017
1275	0.017
1290	0.017
1305	0.017
1320	0.018
1335	0.017
1350	0.018
1365	0.018
1380	0.017
1395	0.017
1410	0.017
1425	0.016
1440	0.017
1455	0.016
1470	0.017
1485	0.016
1500	0.018
1515	0.017
1530	0.017
1545	0.016
1560	0.017
1575	0.017
1590	0.016
1605	0.016
1620	0.017
1635	0.016
1650	0.016
1665	0.017
1680	0.017
1695	0.017
1710	0.017
1725	0.016
1740	0.017
1755	0.017
1770	0.016
1785	0.016
1800	0.016

1815	0.016
1830	0.016
1845	0.016
1860	0.016
1875	0.017
1890	0.019
1905	0.016
1920	0.017
1935	0.016
1950	0.016
1965	0.016
1980	0.016
1995	0.015
2010	0.016
2025	0.016
2040	0.016
2055	0.016
2070	0.016
2085	0.017
2100	0.015
2115	0.018
2130	0.015
2145	0.016
2160	0.015
2175	0.015
2190	0.015
2205	0.015
2220	0.015
2235	0.015
2250	0.015
2265	0.015
2280	0.016
2295	0.015
2310	0.015
2325	0.016
2340	0.015
2355	0.015
2370	0.015
2385	0.015
2400	0.015
2415	0.015
2430	0.015
2445	0.016
2460	0.015
2475	0.015
2490	0.015
2505	0.015

2520	0.015
2535	0.015
2550	0.016
2565	0.015
2580	0.015
2595	0.015
2610	0.016
2625	0.015
2640	0.016
2655	0.015
2670	0.015
2685	0.016
2700	0.015
2715	0.015
2730	0.015
2745	0.014
2760	0.015
2775	0.016
2790	0.015
2805	0.014
2820	0.016
2835	0.015
2850	0.015
2865	0.014
2880	0.015
2895	0.015
2910	0.014
2925	0.015
2940	0.015
2955	0.015
2970	0.015
2985	0.015
3000	0.015
3015	0.014
3030	0.015
3045	0.014
3060	0.015
3075	0.015
3090	0.015
3105	0.014
3120	0.015
3135	0.014
3150	0.015
3165	0.015
3180	0.014
3195	0.016
3210	0.015

3225	0.014
3240	0.015
3255	0.014
3270	0.014
3285	0.014
3300	0.015
3315	0.014
3330	0.015
3345	0.015
3360	0.015
3375	0.015
3390	0.015
3405	0.014
3420	0.016
3435	0.015
3450	0.015
3465	0.015
3480	0.015
3495	0.014
3510	0.014
3525	0.015
3540	0.014
3555	0.014
3570	0.014
3585	0.014
3600	0.014
3615	0.014
3630	0.014
3645	0.015
3660	0.015
3675	0.014
3690	0.015
3705	0.015
3720	0.014
3735	0.015
3750	0.015
3765	0.015
3780	0.014
3795	0.016
3810	0.015
3825	0.015
3840	0.014
3855	0.015
3870	0.016
3885	0.015
3900	0.014
3915	0.015

3930	0.014
3945	0.014
3960	0.015
3975	0.016
3990	0.015
4005	0.014
4020	0.014
4035	0.014
4050	0.015
4065	0.014
4080	0.014
4095	0.014
4110	0.014
4125	0.015
4140	0.015
4155	0.014
4170	0.015
4185	0.014
4200	0.014
4215	0.015
4230	0.014
4245	0.014
4260	0.014
4275	0.015
4290	0.015
4305	0.014
4320	0.015
4335	0.015
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4365	0.014
4380	0.015
4395	0.015
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4440	0.015
4455	0.015
4470	0.014
4485	0.014
4500	0.015
4515	0.014
4530	0.014
4545	0.015
4560	0.016
4575	0.014
4590	0.014
4605	0.016
4620	0.015

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4650	0.015
4665	0.015
4680	0.015
4695	0.015
4710	0.015
4725	0.014
4740	0.014
4755	0.014
4770	0.014
4785	0.014
4800	0.015
4815	0.014
4830	0.015
4845	0.014
4860	0.015
4875	0.015
4890	0.018
4905	0.014
4920	0.014
4935	0.015
4950	0.015
4965	0.015
4980	0.015
4995	0.015
5010	0.015
5025	0.014
5040	0.014
5055	0.015
5070	0.015
5085	0.015
5100	0.015
5115	0.015
5130	0.015
5145	0.014
5160	0.015
5175	0.014
5190	0.014
5205	0.014
5220	0.014
5235	0.014
5250	0.014
5265	0.015
5280	0.014
5295	0.013
5310	0.014
5325	0.015

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5355	0.013
5370	0.014
5385	0.014
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5415	0.014
5430	0.013
5445	0.014
5460	0.013
5475	0.013
5490	0.013
5505	0.014
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5550	0.013
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5595	0.014
5610	0.013
5625	0.013
5640	0.013
5655	0.014
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5685	0.014
5700	0.013
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5790	0.013
5805	0.014
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5955	0.013
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5985	0.012
6000	0.013
6015	0.012
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6045	0.013
6060	0.013
6075	0.013
6090	0.012
6105	0.013
6120	0.013
6135	0.013
6150	0.013
6165	0.013
6180	0.013
6195	0.013
6210	0.012
6225	0.013
6240	0.013
6255	0.014
6270	0.013
6285	0.013
6300	0.013
6315	0.013
6330	0.013
6345	0.014
6360	0.013
6375	0.013
6390	0.013
6405	0.013
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6795	0.012
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6855	0.013
6870	0.013
6885	0.013
6900	0.013
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6945	0.013
6960	0.013
6975	0.014
6990	0.013
7005	0.013
7020	0.013
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7065	0.014
7080	0.013
7095	0.014
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7125	0.013
7140	0.014
7155	0.014
7170	0.015
7185	0.013
7200	0.014
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7260	0.013
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7590	0.013
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7680	0.014
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7815	0.014
7830	0.013
7845	0.012
7860	0.013
7875	0.013
7890	0.013
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7950	0.013
7965	0.013
7980	0.014
7995	0.014
8010	0.013
8025	0.012
8040	0.013
8055	0.013
8070	0.012
8085	0.013
8100	0.013
8115	0.012
8130	0.012
8145	0.012

8160	0.013
8175	0.012
8190	0.013
8205	0.012
8220	0.013
8235	0.012
8250	0.013
8265	0.013
8280	0.014
8295	0.012
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8325	0.012
8340	0.012
8355	0.012
8370	0.012
8385	0.013
8400	0.013
8415	0.013
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8445	0.012
8460	0.011
8475	0.012
8490	0.012
8505	0.013
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8535	0.011
8550	0.011
8565	0.012
8580	0.011
8595	0.012
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8625	0.012
8640	0.011
8655	0.011
8670	0.012
8685	0.011
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8715	0.011
8730	0.011
8745	0.011
8760	0.011
8775	0.011
8790	0.012
8805	0.011
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8850	0.011

8865	0.011
8880	0.011
8895	0.012
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8940	0.011
8955	0.011
8970	0.011
8985	0.011
9000	0.011
9015	0.011
9030	0.011
9045	0.011
9060	0.012
9075	0.01
9090	0.012
9105	0.01
9120	0.011
9135	0.012
9150	0.011
9165	0.011
9180	0.011
9195	0.01
9210	0.011
9225	0.01
9240	0.01
9255	0.011
9270	0.012
9285	0.01
9300	0.011
9315	0.01
9330	0.01
9345	0.01
9360	0.01
9375	0.011
9390	0.01
9405	0.01
9420	0.01
9435	0.01
9450	0.01
9465	0.01
9480	0.009
9495	0.01
9510	0.01
9525	0.01
9540	0.011
9555	0.009

9570	0.01
9585	0.009
9600	0.011
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9645	0.009
9660	0.009
9675	0.009
9690	0.01
9705	0.009
9720	0.01
9735	0.016
9750	0.011
9765	0.01
9780	0.01
9795	0.009
9810	0.01
9825	0.01
9840	0.01
9855	0.01
9870	0.01
9885	0.01
9900	0.01
9915	0.01
9930	0.01
9945	0.01
9960	0.009
9975	0.009
9990	0.01
10005	0.009
10020	0.01
10035	0.01
10050	0.01
10065	0.011
10080	0.011
10095	0.011
10110	0.012
10125	0.01
10140	0.011
10155	0.011
10170	0.01
10185	0.01
10200	0.011
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10230	0.009
10245	0.009
10260	0.009

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10290	0.009
10305	0.009
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10335	0.009
10350	0.009
10365	0.01
10380	0.009
10395	0.009
10410	0.009
10425	0.009
10440	0.009
10455	0.009
10470	0.009
10485	0.009
10500	0.009
10515	0.009
10530	0.009
10545	0.009
10560	0.01
10575	0.009
10590	0.009
10605	0.009
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10650	0.009
10665	0.009
10680	0.009
10695	0.009
10710	0.009
10725	0.011
10740	0.009
10755	0.009
10770	0.009
10785	0.009
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10830	0.01
10845	0.009
10860	0.01
10875	0.009
10890	0.01
10905	0.01
10920	0.01
10935	0.01
10950	0.009
10965	0.01

10980	0.01
10995	0.01
11010	0.009
11025	0.01
11040	0.01
11055	0.01
11070	0.01
11085	0.01
11100	0.01
11115	0.01
11130	0.011
11145	0.01
11160	0.009
11175	0.01
11190	0.01
11205	0.009
11220	0.009
11235	0.01
11250	0.011
11265	0.011
11280	0.009
11295	0.009
11310	0.009
11325	0.009
11340	0.01
11355	0.009
11370	0.009
11385	0.01
11400	0.01
11415	0.009
11430	0.009
11445	0.009
11460	0.009
11475	0.009
11490	0.009
11505	0.009
11520	0.009
11535	0.009
11550	0.009
11565	0.009
11580	0.008
11595	0.009
11610	0.009
11625	0.009
11640	0.009
11655	0.009
11670	0.009

11685	0.009
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11715	0.009
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11760	0.009
11775	0.009
11790	0.009
11805	0.01
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11835	0.009
11850	0.008
11865	0.008
11880	0.009
11895	0.01
11910	0.01
11925	0.009
11940	0.008
11955	0.008
11970	0.009
11985	0.008
12000	0.008
12015	0.009
12030	0.009
12045	0.009
12060	0.008
12075	0.009
12090	0.008
12105	0.009
12120	0.009
12135	0.008
12150	0.009
12165	0.009
12180	0.009
12195	0.009
12210	0.009
12225	0.008
12240	0.008
12255	0.008
12270	0.009
12285	0.009
12300	0.01
12315	0.009
12330	0.009
12345	0.008
12360	0.009
12375	0.008

12390	0.009
12405	0.009
12420	0.009
12435	0.009
12450	0.009
12465	0.009
12480	0.009
12495	0.009
12510	0.009
12525	0.009
12540	0.009
12555	0.009
12570	0.01
12585	0.009
12600	0.01
12615	0.01
12630	0.01
12645	0.009
12660	0.009
12675	0.009
12690	0.009
12705	0.01
12720	0.01
12735	0.01
12750	0.01
12765	0.01
12780	0.01
12795	0.01
12810	0.011
12825	0.01
12840	0.01
12855	0.01
12870	0.01
12885	0.009
12900	0.009
12915	0.009
12930	0.009
12945	0.009
12960	0.01
12975	0.009
12990	0.01
13005	0.009
13020	0.009
13035	0.011
13050	0.024
13065	0.009
13080	0.009

13095	0.009
13110	0.009
13125	0.009
13140	0.01
13155	0.011
13170	0.01
13185	0.009
13200	0.01
13215	0.009
13230	0.009
13245	0.01
13260	0.01
13275	0.01
13290	0.01
13305	0.01
13320	0.01
13335	0.01
13350	0.009
13365	0.01
13380	0.01
13395	0.01
13410	0.01
13425	0.009
13440	0.01
13455	0.009
13470	0.009
13485	0.009
13500	0.009
13515	0.01
13530	0.01
13545	0.009
13560	0.009
13575	0.009
13590	0.01
13605	0.01
13620	0.01
13635	0.01
13650	0.01
13665	0.009
13680	0.009
13695	0.009
13710	0.009
13725	0.009
13740	0.009
13755	0.009
13770	0.01
13785	0.009

13800	0.009
13815	0.009
13830	0.01
13845	0.009
13860	0.009
13875	0.009
13890	0.01
13905	0.009
13920	0.009
13935	0.01
13950	0.009
13965	0.009
13980	0.009
13995	0.009
14010	0.01
14025	0.009
14040	0.009
14055	0.009
14070	0.008
14085	0.01
14100	0.008
14115	0.009
14130	0.009
14145	0.009
14160	0.009
14175	0.009
14190	0.009
14205	0.009
14220	0.009
14235	0.01
14250	0.009
14265	0.009
14280	0.009
14295	0.009
14310	0.009
14325	0.009
14340	0.009
14355	0.009
14370	0.009
14385	0.01
14400	0.009
14415	0.008
14430	0.008
14445	0.01
14460	0.01
14475	0.009
14490	0.009

14505	0.009
14520	0.009
14535	0.009
14550	0.009
14565	0.009
14580	0.009
14595	0.009
14610	0.009
14625	0.009
14640	0.01
14655	0.008
14670	0.009
14685	0.009

20/08/11 04:52

Summary

Unit Name MiniRAE 3000 +(PGM-7320)
Unit SN 592-928260
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID RAE00000
User ID USER0000

Begin 8/11/2020 4:52 **7:52 am**
End 8/11/2020 5:16 **8:16 am**
Sample Period(s) 60
Number of Records 23

Sensor PID(ppm)
Sensor SN S023030229W6
Measure Type Min; Avg; Max; Real
Span 100
Span 2 1000
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 70
TWA Alarm 65
Measurement Gas Isobutylene
Calibration Time 7/30/2020 10:41
Peak 0
Min 0
Average 0

Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
1	8/11/2020 4:53	0.000	0.000	0.000	0.000
2	8/11/2020 4:54	0.000	0.000	0.000	0.000
3	8/11/2020 4:55	0.000	0.000	0.000	0.000
4	8/11/2020 4:56	0.000	0.000	0.000	0.000
5	8/11/2020 4:57	0.000	0.000	0.000	0.000

6	8/11/2020 4:58	0.000	0.000	0.000	0.000
7	8/11/2020 4:59	0.000	0.000	0.000	0.000
8	8/11/2020 5:00	0.000	0.000	0.000	0.000
9	8/11/2020 5:01	0.000	0.000	0.000	0.000
10	8/11/2020 5:02	0.000	0.000	0.000	0.000
11	8/11/2020 5:03	0.000	0.000	0.000	0.000
12	8/11/2020 5:04	0.000	0.000	0.000	0.000
13	8/11/2020 5:05	0.000	0.000	0.000	0.000
14	8/11/2020 5:06	0.000	0.000	0.000	0.000
15	8/11/2020 5:07	0.000	0.000	0.000	0.000
16	8/11/2020 5:08	0.000	0.000	0.000	0.000
17	8/11/2020 5:09	0.000	0.000	0.000	0.000
18	8/11/2020 5:10	0.000	0.000	0.000	0.000
19	8/11/2020 5:11	0.000	0.000	0.000	0.000
20	8/11/2020 5:12	0.000	0.000	0.000	0.000
21	8/11/2020 5:13	0.000	0.000	0.000	0.000
22	8/11/2020 5:14	0.000	0.000	0.000	0.000
23	8/11/2020 5:15	0.000	0.000	0.000	0.000
Peak		0.000	0.000	0.000	0.000
Min		0.000	0.000	0.000	0.000
Average		0.000	0.000	0.000	0.000

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
1	8/11/2020 4:53	0.000	---
2	8/11/2020 4:54	0.000	---
3	8/11/2020 4:55	0.000	---
4	8/11/2020 4:56	0.000	---
5	8/11/2020 4:57	0.000	---
6	8/11/2020 4:58	0.000	---
7	8/11/2020 4:59	0.000	---
8	8/11/2020 5:00	0.000	---
9	8/11/2020 5:01	0.000	---
10	8/11/2020 5:02	0.000	---
11	8/11/2020 5:03	0.000	---
12	8/11/2020 5:04	0.000	---
13	8/11/2020 5:05	0.000	---
14	8/11/2020 5:06	0.000	---
15	8/11/2020 5:07	0.000	0.000
16	8/11/2020 5:08	0.000	0.000
17	8/11/2020 5:09	0.000	0.000
18	8/11/2020 5:10	0.000	0.000
19	8/11/2020 5:11	0.000	0.000
20	8/11/2020 5:12	0.000	0.000
21	8/11/2020 5:13	0.000	0.000

22	8/11/2020 5:14	0.000	0.000
23	8/11/2020 5:15	0.000	0.000

20/08/10 06:06

Summary

Unit Name MiniRAE 3000 +(PGM-7320)
Unit SN 592-928260
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID RAE00000
User ID USER0000

Begin 8/10/2020 6:06 **9:06 am**
End 8/10/2020 6:43 **9:43 am**
Sample Period(s) 60
Number of Records 37

Sensor PID(ppm)
Sensor SN S023030229W6
Measure Type Min; Avg; Max; Real
Span 100
Span 2 1000
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 70
TWA Alarm 65
Measurement Gas Isobutylene
Calibration Time 7/30/2020 10:41
Peak 0
Min 0
Average 0

Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
1	8/10/2020 6:07	0.000	0.000	0.000	0.000
2	8/10/2020 6:08	0.000	0.000	0.000	0.000
3	8/10/2020 6:09	0.000	0.000	0.000	0.000
4	8/10/2020 6:10	0.000	0.000	0.000	0.000
5	8/10/2020 6:11	0.000	0.000	0.000	0.000

6	8/10/2020 6:12	0.000	0.000	0.000	0.000
7	8/10/2020 6:13	0.000	0.000	0.000	0.000
8	8/10/2020 6:14	0.000	0.000	0.000	0.000
9	8/10/2020 6:15	0.000	0.000	0.000	0.000
10	8/10/2020 6:16	0.000	0.000	0.000	0.000
11	8/10/2020 6:17	0.000	0.000	0.000	0.000
12	8/10/2020 6:18	0.000	0.000	0.000	0.000
13	8/10/2020 6:19	0.000	0.000	0.000	0.000
14	8/10/2020 6:20	0.000	0.000	0.000	0.000
15	8/10/2020 6:21	0.000	0.000	0.000	0.000
16	8/10/2020 6:22	0.000	0.000	0.000	0.000
17	8/10/2020 6:23	0.000	0.000	0.000	0.000
18	8/10/2020 6:24	0.000	0.000	0.000	0.000
19	8/10/2020 6:25	0.000	0.000	0.000	0.000
20	8/10/2020 6:26	0.000	0.000	0.000	0.000
21	8/10/2020 6:27	0.000	0.000	0.000	0.000
22	8/10/2020 6:28	0.000	0.000	0.000	0.000
23	8/10/2020 6:29	0.000	0.000	0.000	0.000
24	8/10/2020 6:30	0.000	0.000	0.000	0.000
25	8/10/2020 6:31	0.000	0.000	0.000	0.000
26	8/10/2020 6:32	0.000	0.000	0.000	0.000
27	8/10/2020 6:33	0.000	0.000	0.000	0.000
28	8/10/2020 6:34	0.000	0.000	0.000	0.000
29	8/10/2020 6:35	0.000	0.000	0.000	0.000
30	8/10/2020 6:36	0.000	0.000	0.000	0.000
31	8/10/2020 6:37	0.000	0.000	0.000	0.000
32	8/10/2020 6:38	0.000	0.000	0.000	0.000
33	8/10/2020 6:39	0.000	0.000	0.000	0.000
34	8/10/2020 6:40	0.000	0.000	0.000	0.000
35	8/10/2020 6:41	0.000	0.000	0.000	0.000
36	8/10/2020 6:42	0.000	0.000	0.000	0.000
37	8/10/2020 6:43	0.000	0.000	0.000	0.000

Peak		0.000	0.000	0.000	0.000
Min		0.000	0.000	0.000	0.000
Average		0.000	0.000	0.000	0.000

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
1	8/10/2020 6:07	0.000	---
2	8/10/2020 6:08	0.000	---
3	8/10/2020 6:09	0.000	---
4	8/10/2020 6:10	0.000	---
5	8/10/2020 6:11	0.000	---
6	8/10/2020 6:12	0.000	---
7	8/10/2020 6:13	0.000	---

8	8/10/2020 6:14	0.000	---
9	8/10/2020 6:15	0.000	---
10	8/10/2020 6:16	0.000	---
11	8/10/2020 6:17	0.000	---
12	8/10/2020 6:18	0.000	---
13	8/10/2020 6:19	0.000	---
14	8/10/2020 6:20	0.000	---
15	8/10/2020 6:21	0.000	0.000
16	8/10/2020 6:22	0.000	0.000
17	8/10/2020 6:23	0.000	0.000
18	8/10/2020 6:24	0.000	0.000
19	8/10/2020 6:25	0.000	0.000
20	8/10/2020 6:26	0.000	0.000
21	8/10/2020 6:27	0.000	0.000
22	8/10/2020 6:28	0.000	0.000
23	8/10/2020 6:29	0.000	0.000
24	8/10/2020 6:30	0.000	0.000
25	8/10/2020 6:31	0.000	0.000
26	8/10/2020 6:32	0.000	0.000
27	8/10/2020 6:33	0.000	0.000
28	8/10/2020 6:34	0.000	0.000
29	8/10/2020 6:35	0.000	0.000
30	8/10/2020 6:36	0.000	0.000
31	8/10/2020 6:37	0.000	0.000
32	8/10/2020 6:38	0.000	0.000
33	8/10/2020 6:39	0.000	0.000
34	8/10/2020 6:40	0.000	0.000
35	8/10/2020 6:41	0.000	0.000
36	8/10/2020 6:42	0.000	0.000
37	8/10/2020 6:43	0.000	0.000

20/08/11 08:14

Summary

Unit Name MiniRAE 3000 +(PGM-7320)
Unit SN 592-928260
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID RAE00000
User ID USER0000

Begin 8/11/2020 8:14 **11:14 am**
End 8/11/2020 12:33 **3:33 pm**
Sample Period(s) 60
Number of Records 259

Sensor PID(ppm)
Sensor SN S023030229W6
Measure Type Min; Avg; Max; Real
Span 100
Span 2 1000
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 70
TWA Alarm 65
Measurement Gas Isobutylene
Calibration Time 7/30/2020 10:41
Peak 0
Min 0
Average 0

Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
1	8/11/2020 8:15	0.000	0.000	0.000	0.000
2	8/11/2020 8:16	0.000	0.000	0.000	0.000
3	8/11/2020 8:17	0.000	0.000	0.000	0.000
4	8/11/2020 8:18	0.000	0.000	0.000	0.000
5	8/11/2020 8:19	0.000	0.000	0.000	0.000

6	8/11/2020 8:20	0.000	0.000	0.000	0.000
7	8/11/2020 8:21	0.000	0.000	0.000	0.000
8	8/11/2020 8:22	0.000	0.000	0.000	0.000
9	8/11/2020 8:23	0.000	0.000	0.000	0.000
10	8/11/2020 8:24	0.000	0.000	0.000	0.000
11	8/11/2020 8:25	0.000	0.000	0.000	0.000
12	8/11/2020 8:26	0.000	0.000	0.000	0.000
13	8/11/2020 8:27	0.000	0.000	0.000	0.000
14	8/11/2020 8:28	0.000	0.000	0.000	0.000
15	8/11/2020 8:29	0.000	0.000	0.000	0.000
16	8/11/2020 8:30	0.000	0.000	0.000	0.000
17	8/11/2020 8:31	0.000	0.000	0.000	0.000
18	8/11/2020 8:32	0.000	0.000	0.000	0.000
19	8/11/2020 8:33	0.000	0.000	0.000	0.000
20	8/11/2020 8:34	0.000	0.000	0.000	0.000
21	8/11/2020 8:35	0.000	0.000	0.000	0.000
22	8/11/2020 8:36	0.000	0.000	0.000	0.000
23	8/11/2020 8:37	0.000	0.000	0.000	0.000
24	8/11/2020 8:38	0.000	0.000	0.000	0.000
25	8/11/2020 8:39	0.000	0.000	0.000	0.000
26	8/11/2020 8:40	0.000	0.000	0.000	0.000
27	8/11/2020 8:41	0.000	0.000	0.000	0.000
28	8/11/2020 8:42	0.000	0.000	0.000	0.000
29	8/11/2020 8:43	0.000	0.000	0.000	0.000
30	8/11/2020 8:44	0.000	0.000	0.000	0.000
31	8/11/2020 8:45	0.000	0.000	0.000	0.000
32	8/11/2020 8:46	0.000	0.000	0.000	0.000
33	8/11/2020 8:47	0.000	0.000	0.000	0.000
34	8/11/2020 8:48	0.000	0.000	0.000	0.000
35	8/11/2020 8:49	0.000	0.000	0.000	0.000
36	8/11/2020 8:50	0.000	0.000	0.000	0.000
37	8/11/2020 8:51	0.000	0.000	0.000	0.000
38	8/11/2020 8:52	0.000	0.000	0.000	0.000
39	8/11/2020 8:53	0.000	0.000	0.000	0.000
40	8/11/2020 8:54	0.000	0.000	0.000	0.000
41	8/11/2020 8:55	0.000	0.000	0.000	0.000
42	8/11/2020 8:56	0.000	0.000	0.000	0.000
43	8/11/2020 8:57	0.000	0.000	0.000	0.000
44	8/11/2020 8:58	0.000	0.000	0.000	0.000
45	8/11/2020 8:59	0.000	0.000	0.000	0.000
46	8/11/2020 9:00	0.000	0.000	0.000	0.000
47	8/11/2020 9:01	0.000	0.000	0.000	0.000
48	8/11/2020 9:02	0.000	0.000	0.000	0.000
49	8/11/2020 9:03	0.000	0.000	0.000	0.000
50	8/11/2020 9:04	0.000	0.000	0.000	0.000
51	8/11/2020 9:05	0.000	0.000	0.000	0.000
52	8/11/2020 9:06	0.000	0.000	0.000	0.000

53	8/11/2020 9:07	0.000	0.000	0.000	0.000
54	8/11/2020 9:08	0.000	0.000	0.000	0.000
55	8/11/2020 9:09	0.000	0.000	0.000	0.000
56	8/11/2020 9:10	0.000	0.000	0.000	0.000
57	8/11/2020 9:11	0.000	0.000	0.000	0.000
58	8/11/2020 9:12	0.000	0.000	0.000	0.000
59	8/11/2020 9:13	0.000	0.000	0.000	0.000
60	8/11/2020 9:14	0.000	0.000	0.000	0.000
61	8/11/2020 9:15	0.000	0.000	0.000	0.000
62	8/11/2020 9:16	0.000	0.000	0.000	0.000
63	8/11/2020 9:17	0.000	0.000	0.000	0.000
64	8/11/2020 9:18	0.000	0.000	0.000	0.000
65	8/11/2020 9:19	0.000	0.000	0.000	0.000
66	8/11/2020 9:20	0.000	0.000	0.000	0.000
67	8/11/2020 9:21	0.000	0.000	0.000	0.000
68	8/11/2020 9:22	0.000	0.000	0.000	0.000
69	8/11/2020 9:23	0.000	0.000	0.000	0.000
70	8/11/2020 9:24	0.000	0.000	0.000	0.000
71	8/11/2020 9:25	0.000	0.000	0.000	0.000
72	8/11/2020 9:26	0.000	0.000	0.000	0.000
73	8/11/2020 9:27	0.000	0.000	0.000	0.000
74	8/11/2020 9:28	0.000	0.000	0.000	0.000
75	8/11/2020 9:29	0.000	0.000	0.000	0.000
76	8/11/2020 9:30	0.000	0.000	0.000	0.000
77	8/11/2020 9:31	0.000	0.000	0.000	0.000
78	8/11/2020 9:32	0.000	0.000	0.000	0.000
79	8/11/2020 9:33	0.000	0.000	0.000	0.000
80	8/11/2020 9:34	0.000	0.000	0.000	0.000
81	8/11/2020 9:35	0.000	0.000	0.000	0.000
82	8/11/2020 9:36	0.000	0.000	0.000	0.000
83	8/11/2020 9:37	0.000	0.000	0.000	0.000
84	8/11/2020 9:38	0.000	0.000	0.000	0.000
85	8/11/2020 9:39	0.000	0.000	0.000	0.000
86	8/11/2020 9:40	0.000	0.000	0.000	0.000
87	8/11/2020 9:41	0.000	0.000	0.000	0.000
88	8/11/2020 9:42	0.000	0.000	0.000	0.000
89	8/11/2020 9:43	0.000	0.000	0.000	0.000
90	8/11/2020 9:44	0.000	0.000	0.000	0.000
91	8/11/2020 9:45	0.000	0.000	0.000	0.000
92	8/11/2020 9:46	0.000	0.000	0.000	0.000
93	8/11/2020 9:47	0.000	0.000	0.000	0.000
94	8/11/2020 9:48	0.000	0.000	0.000	0.000
95	8/11/2020 9:49	0.000	0.000	0.000	0.000
96	8/11/2020 9:50	0.000	0.000	0.000	0.000
97	8/11/2020 9:51	0.000	0.000	0.000	0.000
98	8/11/2020 9:52	0.000	0.000	0.000	0.000
99	8/11/2020 9:53	0.000	0.000	0.000	0.000

100	8/11/2020 9:54	0.000	0.000	0.000	0.000
101	8/11/2020 9:55	0.000	0.000	0.000	0.000
102	8/11/2020 9:56	0.000	0.000	0.000	0.000
103	8/11/2020 9:57	0.000	0.000	0.000	0.000
104	8/11/2020 9:58	0.000	0.000	0.000	0.000
105	8/11/2020 9:59	0.000	0.000	0.000	0.000
106	8/11/2020 10:00	0.000	0.000	0.000	0.000
107	8/11/2020 10:01	0.000	0.000	0.000	0.000
108	8/11/2020 10:02	0.000	0.000	0.000	0.000
109	8/11/2020 10:03	0.000	0.000	0.000	0.000
110	8/11/2020 10:04	0.000	0.000	0.000	0.000
111	8/11/2020 10:05	0.000	0.000	0.000	0.000
112	8/11/2020 10:06	0.000	0.000	0.000	0.000
113	8/11/2020 10:07	0.000	0.000	0.000	0.000
114	8/11/2020 10:08	0.000	0.000	0.000	0.000
115	8/11/2020 10:09	0.000	0.000	0.000	0.000
116	8/11/2020 10:10	0.000	0.000	0.000	0.000
117	8/11/2020 10:11	0.000	0.000	0.000	0.000
118	8/11/2020 10:12	0.000	0.000	0.000	0.000
119	8/11/2020 10:13	0.000	0.000	0.000	0.000
120	8/11/2020 10:14	0.000	0.000	0.000	0.000
121	8/11/2020 10:15	0.000	0.000	0.000	0.000
122	8/11/2020 10:16	0.000	0.000	0.000	0.000
123	8/11/2020 10:17	0.000	0.000	0.000	0.000
124	8/11/2020 10:18	0.000	0.000	0.000	0.000
125	8/11/2020 10:19	0.000	0.000	0.000	0.000
126	8/11/2020 10:20	0.000	0.000	0.000	0.000
127	8/11/2020 10:21	0.000	0.000	0.000	0.000
128	8/11/2020 10:22	0.000	0.000	0.000	0.000
129	8/11/2020 10:23	0.000	0.000	0.000	0.000
130	8/11/2020 10:24	0.000	0.000	0.000	0.000
131	8/11/2020 10:25	0.000	0.000	0.000	0.000
132	8/11/2020 10:26	0.000	0.000	0.000	0.000
133	8/11/2020 10:27	0.000	0.000	0.000	0.000
134	8/11/2020 10:28	0.000	0.000	0.000	0.000
135	8/11/2020 10:29	0.000	0.000	0.000	0.000
136	8/11/2020 10:30	0.000	0.000	0.000	0.000
137	8/11/2020 10:31	0.000	0.000	0.000	0.000
138	8/11/2020 10:32	0.000	0.000	0.000	0.000
139	8/11/2020 10:33	0.000	0.000	0.000	0.000
140	8/11/2020 10:34	0.000	0.000	0.000	0.000
141	8/11/2020 10:35	0.000	0.000	0.000	0.000
142	8/11/2020 10:36	0.000	0.000	0.000	0.000
143	8/11/2020 10:37	0.000	0.000	0.000	0.000
144	8/11/2020 10:38	0.000	0.000	0.000	0.000
145	8/11/2020 10:39	0.000	0.000	0.000	0.000
146	8/11/2020 10:40	0.000	0.000	0.000	0.000

147	8/11/2020 10:41	0.000	0.000	0.000	0.000
148	8/11/2020 10:42	0.000	0.000	0.000	0.000
149	8/11/2020 10:43	0.000	0.000	0.000	0.000
150	8/11/2020 10:44	0.000	0.000	0.000	0.000
151	8/11/2020 10:45	0.000	0.000	0.000	0.000
152	8/11/2020 10:46	0.000	0.000	0.000	0.000
153	8/11/2020 10:47	0.000	0.000	0.000	0.000
154	8/11/2020 10:48	0.000	0.000	0.000	0.000
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156	8/11/2020 10:50	0.000	0.000	0.000	0.000
157	8/11/2020 10:51	0.000	0.000	0.000	0.000
158	8/11/2020 10:52	0.000	0.000	0.000	0.000
159	8/11/2020 10:53	0.000	0.000	0.000	0.000
160	8/11/2020 10:54	0.000	0.000	0.000	0.000
161	8/11/2020 10:55	0.000	0.000	0.000	0.000
162	8/11/2020 10:56	0.000	0.000	0.000	0.000
163	8/11/2020 10:57	0.000	0.000	0.000	0.000
164	8/11/2020 10:58	0.000	0.000	0.000	0.000
165	8/11/2020 10:59	0.000	0.000	0.000	0.000
166	8/11/2020 11:00	0.000	0.000	0.000	0.000
167	8/11/2020 11:01	0.000	0.000	0.000	0.000
168	8/11/2020 11:02	0.000	0.000	0.000	0.000
169	8/11/2020 11:03	0.000	0.000	0.000	0.000
170	8/11/2020 11:04	0.000	0.000	0.000	0.000
171	8/11/2020 11:05	0.000	0.000	0.000	0.000
172	8/11/2020 11:06	0.000	0.000	0.000	0.000
173	8/11/2020 11:07	0.000	0.000	0.000	0.000
174	8/11/2020 11:08	0.000	0.000	0.000	0.000
175	8/11/2020 11:09	0.000	0.000	0.000	0.000
176	8/11/2020 11:10	0.000	0.000	0.000	0.000
177	8/11/2020 11:11	0.000	0.000	0.000	0.000
178	8/11/2020 11:12	0.000	0.000	0.000	0.000
179	8/11/2020 11:13	0.000	0.000	0.000	0.000
180	8/11/2020 11:14	0.000	0.000	0.000	0.000
181	8/11/2020 11:15	0.000	0.000	0.000	0.000
182	8/11/2020 11:16	0.000	0.000	0.000	0.000
183	8/11/2020 11:17	0.000	0.000	0.000	0.000
184	8/11/2020 11:18	0.000	0.000	0.000	0.000
185	8/11/2020 11:19	0.000	0.000	0.000	0.000
186	8/11/2020 11:20	0.000	0.000	0.000	0.000
187	8/11/2020 11:21	0.000	0.000	0.000	0.000
188	8/11/2020 11:22	0.000	0.000	0.000	0.000
189	8/11/2020 11:23	0.000	0.000	0.000	0.000
190	8/11/2020 11:24	0.000	0.000	0.000	0.000
191	8/11/2020 11:25	0.000	0.000	0.000	0.000
192	8/11/2020 11:26	0.000	0.000	0.000	0.000
193	8/11/2020 11:27	0.000	0.000	0.000	0.000

194	8/11/2020 11:28	0.000	0.000	0.000	0.000
195	8/11/2020 11:29	0.000	0.000	0.000	0.000
196	8/11/2020 11:30	0.000	0.000	0.000	0.000
197	8/11/2020 11:31	0.000	0.000	0.000	0.000
198	8/11/2020 11:32	0.000	0.000	0.000	0.000
199	8/11/2020 11:33	0.000	0.000	0.000	0.000
200	8/11/2020 11:34	0.000	0.000	0.000	0.000
201	8/11/2020 11:35	0.000	0.000	0.000	0.000
202	8/11/2020 11:36	0.000	0.000	0.000	0.000
203	8/11/2020 11:37	0.000	0.000	0.000	0.000
204	8/11/2020 11:38	0.000	0.000	0.000	0.000
205	8/11/2020 11:39	0.000	0.000	0.000	0.000
206	8/11/2020 11:40	0.000	0.000	0.000	0.000
207	8/11/2020 11:41	0.000	0.000	0.000	0.000
208	8/11/2020 11:42	0.000	0.000	0.000	0.000
209	8/11/2020 11:43	0.000	0.000	0.000	0.000
210	8/11/2020 11:44	0.000	0.000	0.000	0.000
211	8/11/2020 11:45	0.000	0.000	0.000	0.000
212	8/11/2020 11:46	0.000	0.000	0.000	0.000
213	8/11/2020 11:47	0.000	0.000	0.000	0.000
214	8/11/2020 11:48	0.000	0.000	0.000	0.000
215	8/11/2020 11:49	0.000	0.000	0.000	0.000
216	8/11/2020 11:50	0.000	0.000	0.000	0.000
217	8/11/2020 11:51	0.000	0.000	0.000	0.000
218	8/11/2020 11:52	0.000	0.000	0.000	0.000
219	8/11/2020 11:53	0.000	0.000	0.000	0.000
220	8/11/2020 11:54	0.000	0.000	0.000	0.000
221	8/11/2020 11:55	0.000	0.000	0.000	0.000
222	8/11/2020 11:56	0.000	0.000	0.000	0.000
223	8/11/2020 11:57	0.000	0.000	0.000	0.000
224	8/11/2020 11:58	0.000	0.000	0.000	0.000
225	8/11/2020 11:59	0.000	0.000	0.000	0.000
226	8/11/2020 12:00	0.000	0.000	0.000	0.000
227	8/11/2020 12:01	0.000	0.000	0.000	0.000
228	8/11/2020 12:02	0.000	0.000	0.000	0.000
229	8/11/2020 12:03	0.000	0.000	0.000	0.000
230	8/11/2020 12:04	0.000	0.000	0.000	0.000
231	8/11/2020 12:05	0.000	0.000	0.000	0.000
232	8/11/2020 12:06	0.000	0.000	0.000	0.000
233	8/11/2020 12:07	0.000	0.000	0.000	0.000
234	8/11/2020 12:08	0.000	0.000	0.000	0.000
235	8/11/2020 12:09	0.000	0.000	0.000	0.000
236	8/11/2020 12:10	0.000	0.000	0.000	0.000
237	8/11/2020 12:11	0.000	0.000	0.000	0.000
238	8/11/2020 12:12	0.000	0.000	0.000	0.000
239	8/11/2020 12:13	0.000	0.000	0.000	0.000
240	8/11/2020 12:14	0.000	0.000	0.000	0.000

241	8/11/2020 12:15	0.000	0.000	0.000	0.000
242	8/11/2020 12:16	0.000	0.000	0.000	0.000
243	8/11/2020 12:17	0.000	0.000	0.000	0.000
244	8/11/2020 12:18	0.000	0.000	0.000	0.000
245	8/11/2020 12:19	0.000	0.000	0.000	0.000
246	8/11/2020 12:20	0.000	0.000	0.000	0.000
247	8/11/2020 12:21	0.000	0.000	0.000	0.000
248	8/11/2020 12:22	0.000	0.000	0.000	0.000
249	8/11/2020 12:23	0.000	0.000	0.000	0.000
250	8/11/2020 12:24	0.000	0.000	0.000	0.000
251	8/11/2020 12:25	0.000	0.000	0.000	0.000
252	8/11/2020 12:26	0.000	0.000	0.000	0.000
253	8/11/2020 12:27	0.000	0.000	0.000	0.000
254	8/11/2020 12:28	0.000	0.000	0.000	0.000
255	8/11/2020 12:29	0.000	0.000	0.000	0.000
256	8/11/2020 12:30	0.000	0.000	0.000	0.000
257	8/11/2020 12:31	0.000	0.000	0.000	0.000
258	8/11/2020 12:32	0.000	0.000	0.000	0.000
259	8/11/2020 12:33	0.000	0.000	0.000	0.000
Peak		0.000	0.000	0.000	0.000
Min		0.000	0.000	0.000	0.000
Average		0.000	0.000	0.000	0.000

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
1	8/11/2020 8:15	0.000	---
2	8/11/2020 8:16	0.000	---
3	8/11/2020 8:17	0.000	---
4	8/11/2020 8:18	0.000	---
5	8/11/2020 8:19	0.000	---
6	8/11/2020 8:20	0.000	---
7	8/11/2020 8:21	0.000	---
8	8/11/2020 8:22	0.000	---
9	8/11/2020 8:23	0.000	---
10	8/11/2020 8:24	0.000	---
11	8/11/2020 8:25	0.000	---
12	8/11/2020 8:26	0.000	---
13	8/11/2020 8:27	0.000	---
14	8/11/2020 8:28	0.000	---
15	8/11/2020 8:29	0.000	0.000
16	8/11/2020 8:30	0.000	0.000
17	8/11/2020 8:31	0.000	0.000
18	8/11/2020 8:32	0.000	0.000
19	8/11/2020 8:33	0.000	0.000
20	8/11/2020 8:34	0.000	0.000

21	8/11/2020 8:35	0.000	0.000
22	8/11/2020 8:36	0.000	0.000
23	8/11/2020 8:37	0.000	0.000
24	8/11/2020 8:38	0.000	0.000
25	8/11/2020 8:39	0.000	0.000
26	8/11/2020 8:40	0.000	0.000
27	8/11/2020 8:41	0.000	0.000
28	8/11/2020 8:42	0.000	0.000
29	8/11/2020 8:43	0.000	0.000
30	8/11/2020 8:44	0.000	0.000
31	8/11/2020 8:45	0.000	0.000
32	8/11/2020 8:46	0.000	0.000
33	8/11/2020 8:47	0.000	0.000
34	8/11/2020 8:48	0.000	0.000
35	8/11/2020 8:49	0.000	0.000
36	8/11/2020 8:50	0.000	0.000
37	8/11/2020 8:51	0.000	0.000
38	8/11/2020 8:52	0.000	0.000
39	8/11/2020 8:53	0.000	0.000
40	8/11/2020 8:54	0.000	0.000
41	8/11/2020 8:55	0.000	0.000
42	8/11/2020 8:56	0.000	0.000
43	8/11/2020 8:57	0.000	0.000
44	8/11/2020 8:58	0.000	0.000
45	8/11/2020 8:59	0.000	0.000
46	8/11/2020 9:00	0.000	0.000
47	8/11/2020 9:01	0.000	0.000
48	8/11/2020 9:02	0.000	0.000
49	8/11/2020 9:03	0.000	0.000
50	8/11/2020 9:04	0.000	0.000
51	8/11/2020 9:05	0.000	0.000
52	8/11/2020 9:06	0.000	0.000
53	8/11/2020 9:07	0.000	0.000
54	8/11/2020 9:08	0.000	0.000
55	8/11/2020 9:09	0.000	0.000
56	8/11/2020 9:10	0.000	0.000
57	8/11/2020 9:11	0.000	0.000
58	8/11/2020 9:12	0.000	0.000
59	8/11/2020 9:13	0.000	0.000
60	8/11/2020 9:14	0.000	0.000
61	8/11/2020 9:15	0.000	0.000
62	8/11/2020 9:16	0.000	0.000
63	8/11/2020 9:17	0.000	0.000
64	8/11/2020 9:18	0.000	0.000
65	8/11/2020 9:19	0.000	0.000
66	8/11/2020 9:20	0.000	0.000
67	8/11/2020 9:21	0.000	0.000

68	8/11/2020 9:22	0.000	0.000
69	8/11/2020 9:23	0.000	0.000
70	8/11/2020 9:24	0.000	0.000
71	8/11/2020 9:25	0.000	0.000
72	8/11/2020 9:26	0.000	0.000
73	8/11/2020 9:27	0.000	0.000
74	8/11/2020 9:28	0.000	0.000
75	8/11/2020 9:29	0.000	0.000
76	8/11/2020 9:30	0.000	0.000
77	8/11/2020 9:31	0.000	0.000
78	8/11/2020 9:32	0.000	0.000
79	8/11/2020 9:33	0.000	0.000
80	8/11/2020 9:34	0.000	0.000
81	8/11/2020 9:35	0.000	0.000
82	8/11/2020 9:36	0.000	0.000
83	8/11/2020 9:37	0.000	0.000
84	8/11/2020 9:38	0.000	0.000
85	8/11/2020 9:39	0.000	0.000
86	8/11/2020 9:40	0.000	0.000
87	8/11/2020 9:41	0.000	0.000
88	8/11/2020 9:42	0.000	0.000
89	8/11/2020 9:43	0.000	0.000
90	8/11/2020 9:44	0.000	0.000
91	8/11/2020 9:45	0.000	0.000
92	8/11/2020 9:46	0.000	0.000
93	8/11/2020 9:47	0.000	0.000
94	8/11/2020 9:48	0.000	0.000
95	8/11/2020 9:49	0.000	0.000
96	8/11/2020 9:50	0.000	0.000
97	8/11/2020 9:51	0.000	0.000
98	8/11/2020 9:52	0.000	0.000
99	8/11/2020 9:53	0.000	0.000
100	8/11/2020 9:54	0.000	0.000
101	8/11/2020 9:55	0.000	0.000
102	8/11/2020 9:56	0.000	0.000
103	8/11/2020 9:57	0.000	0.000
104	8/11/2020 9:58	0.000	0.000
105	8/11/2020 9:59	0.000	0.000
106	8/11/2020 10:00	0.000	0.000
107	8/11/2020 10:01	0.000	0.000
108	8/11/2020 10:02	0.000	0.000
109	8/11/2020 10:03	0.000	0.000
110	8/11/2020 10:04	0.000	0.000
111	8/11/2020 10:05	0.000	0.000
112	8/11/2020 10:06	0.000	0.000
113	8/11/2020 10:07	0.000	0.000
114	8/11/2020 10:08	0.000	0.000

115	8/11/2020 10:09	0.000	0.000
116	8/11/2020 10:10	0.000	0.000
117	8/11/2020 10:11	0.000	0.000
118	8/11/2020 10:12	0.000	0.000
119	8/11/2020 10:13	0.000	0.000
120	8/11/2020 10:14	0.000	0.000
121	8/11/2020 10:15	0.000	0.000
122	8/11/2020 10:16	0.000	0.000
123	8/11/2020 10:17	0.000	0.000
124	8/11/2020 10:18	0.000	0.000
125	8/11/2020 10:19	0.000	0.000
126	8/11/2020 10:20	0.000	0.000
127	8/11/2020 10:21	0.000	0.000
128	8/11/2020 10:22	0.000	0.000
129	8/11/2020 10:23	0.000	0.000
130	8/11/2020 10:24	0.000	0.000
131	8/11/2020 10:25	0.000	0.000
132	8/11/2020 10:26	0.000	0.000
133	8/11/2020 10:27	0.000	0.000
134	8/11/2020 10:28	0.000	0.000
135	8/11/2020 10:29	0.000	0.000
136	8/11/2020 10:30	0.000	0.000
137	8/11/2020 10:31	0.000	0.000
138	8/11/2020 10:32	0.000	0.000
139	8/11/2020 10:33	0.000	0.000
140	8/11/2020 10:34	0.000	0.000
141	8/11/2020 10:35	0.000	0.000
142	8/11/2020 10:36	0.000	0.000
143	8/11/2020 10:37	0.000	0.000
144	8/11/2020 10:38	0.000	0.000
145	8/11/2020 10:39	0.000	0.000
146	8/11/2020 10:40	0.000	0.000
147	8/11/2020 10:41	0.000	0.000
148	8/11/2020 10:42	0.000	0.000
149	8/11/2020 10:43	0.000	0.000
150	8/11/2020 10:44	0.000	0.000
151	8/11/2020 10:45	0.000	0.000
152	8/11/2020 10:46	0.000	0.000
153	8/11/2020 10:47	0.000	0.000
154	8/11/2020 10:48	0.000	0.000
155	8/11/2020 10:49	0.000	0.000
156	8/11/2020 10:50	0.000	0.000
157	8/11/2020 10:51	0.000	0.000
158	8/11/2020 10:52	0.000	0.000
159	8/11/2020 10:53	0.000	0.000
160	8/11/2020 10:54	0.000	0.000
161	8/11/2020 10:55	0.000	0.000

162	8/11/2020 10:56	0.000	0.000
163	8/11/2020 10:57	0.000	0.000
164	8/11/2020 10:58	0.000	0.000
165	8/11/2020 10:59	0.000	0.000
166	8/11/2020 11:00	0.000	0.000
167	8/11/2020 11:01	0.000	0.000
168	8/11/2020 11:02	0.000	0.000
169	8/11/2020 11:03	0.000	0.000
170	8/11/2020 11:04	0.000	0.000
171	8/11/2020 11:05	0.000	0.000
172	8/11/2020 11:06	0.000	0.000
173	8/11/2020 11:07	0.000	0.000
174	8/11/2020 11:08	0.000	0.000
175	8/11/2020 11:09	0.000	0.000
176	8/11/2020 11:10	0.000	0.000
177	8/11/2020 11:11	0.000	0.000
178	8/11/2020 11:12	0.000	0.000
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180	8/11/2020 11:14	0.000	0.000
181	8/11/2020 11:15	0.000	0.000
182	8/11/2020 11:16	0.000	0.000
183	8/11/2020 11:17	0.000	0.000
184	8/11/2020 11:18	0.000	0.000
185	8/11/2020 11:19	0.000	0.000
186	8/11/2020 11:20	0.000	0.000
187	8/11/2020 11:21	0.000	0.000
188	8/11/2020 11:22	0.000	0.000
189	8/11/2020 11:23	0.000	0.000
190	8/11/2020 11:24	0.000	0.000
191	8/11/2020 11:25	0.000	0.000
192	8/11/2020 11:26	0.000	0.000
193	8/11/2020 11:27	0.000	0.000
194	8/11/2020 11:28	0.000	0.000
195	8/11/2020 11:29	0.000	0.000
196	8/11/2020 11:30	0.000	0.000
197	8/11/2020 11:31	0.000	0.000
198	8/11/2020 11:32	0.000	0.000
199	8/11/2020 11:33	0.000	0.000
200	8/11/2020 11:34	0.000	0.000
201	8/11/2020 11:35	0.000	0.000
202	8/11/2020 11:36	0.000	0.000
203	8/11/2020 11:37	0.000	0.000
204	8/11/2020 11:38	0.000	0.000
205	8/11/2020 11:39	0.000	0.000
206	8/11/2020 11:40	0.000	0.000
207	8/11/2020 11:41	0.000	0.000
208	8/11/2020 11:42	0.000	0.000

209	8/11/2020 11:43	0.000	0.000
210	8/11/2020 11:44	0.000	0.000
211	8/11/2020 11:45	0.000	0.000
212	8/11/2020 11:46	0.000	0.000
213	8/11/2020 11:47	0.000	0.000
214	8/11/2020 11:48	0.000	0.000
215	8/11/2020 11:49	0.000	0.000
216	8/11/2020 11:50	0.000	0.000
217	8/11/2020 11:51	0.000	0.000
218	8/11/2020 11:52	0.000	0.000
219	8/11/2020 11:53	0.000	0.000
220	8/11/2020 11:54	0.000	0.000
221	8/11/2020 11:55	0.000	0.000
222	8/11/2020 11:56	0.000	0.000
223	8/11/2020 11:57	0.000	0.000
224	8/11/2020 11:58	0.000	0.000
225	8/11/2020 11:59	0.000	0.000
226	8/11/2020 12:00	0.000	0.000
227	8/11/2020 12:01	0.000	0.000
228	8/11/2020 12:02	0.000	0.000
229	8/11/2020 12:03	0.000	0.000
230	8/11/2020 12:04	0.000	0.000
231	8/11/2020 12:05	0.000	0.000
232	8/11/2020 12:06	0.000	0.000
233	8/11/2020 12:07	0.000	0.000
234	8/11/2020 12:08	0.000	0.000
235	8/11/2020 12:09	0.000	0.000
236	8/11/2020 12:10	0.000	0.000
237	8/11/2020 12:11	0.000	0.000
238	8/11/2020 12:12	0.000	0.000
239	8/11/2020 12:13	0.000	0.000
240	8/11/2020 12:14	0.000	0.000
241	8/11/2020 12:15	0.000	0.000
242	8/11/2020 12:16	0.000	0.000
243	8/11/2020 12:17	0.000	0.000
244	8/11/2020 12:18	0.000	0.000
245	8/11/2020 12:19	0.000	0.000
246	8/11/2020 12:20	0.000	0.000
247	8/11/2020 12:21	0.000	0.000
248	8/11/2020 12:22	0.000	0.000
249	8/11/2020 12:23	0.000	0.000
250	8/11/2020 12:24	0.000	0.000
251	8/11/2020 12:25	0.000	0.000
252	8/11/2020 12:26	0.000	0.000
253	8/11/2020 12:27	0.000	0.000
254	8/11/2020 12:28	0.000	0.000
255	8/11/2020 12:29	0.000	0.000

256	8/11/2020 12:30	0.000	0.000
257	8/11/2020 12:31	0.000	0.000
258	8/11/2020 12:32	0.000	0.000
259	8/11/2020 12:33	0.000	0.000

20/08/12 04:31

Summary

Unit Name MiniRAE 3000 +(PGM-7320)
Unit SN 592-928260
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Pause in Menu Mode

Site ID RAE00000
User ID USER0000

Begin 8/12/2020 4:31 **7:31 AM**
End 8/12/2020 4:33 **7:33 AM**
Sample Period(s) 60
Number of Records 1

Sensor PID(ppm)
Sensor SN S023030229W6
Measure Type Min; Avg; Max; Real
Span 100
Span 2 1000
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 70
TWA Alarm 65
Measurement Gas Isobutylene
Calibration Time 7/30/2020 10:41
Peak 0
Min 0
Average 0

Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
1	8/12/2020 4:32	0.000	0.000	0.000	0.000
Peak		0.000	0.000	0.000	0.000
Min		0.000	0.000	0.000	0.000
Average		0.000	0.000	0.000	0.000

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
1	8/12/2020 4:32	0.000	---

20/08/12 04:34

Summary

Unit Name MiniRAE 3000 +(PGM-7320)
Unit SN 592-928260
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Pause in Menu Mode

Site ID RAE00000
User ID USER0000

Begin 8/12/2020 4:34 **7:34 AM**
End 8/12/2020 4:48 **7:48 AM**
Sample Period(s) 60
Number of Records 13

Sensor PID(ppm)
Sensor SN S023030229W6
Measure Type Min; Avg; Max; Real
Span 100
Span 2 1000
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 70
TWA Alarm 65
Measurement Gas Isobutylene
Calibration Time 7/30/2020 10:41
Peak 0.2
Min 0
Average 0.1

Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
1	8/12/2020 4:35	0.000	0.000	0.000	0.000
2	8/12/2020 4:36	0.000	0.000	0.000	0.000
3	8/12/2020 4:37	0.000	0.000	0.100	0.000
4	8/12/2020 4:38	0.000	0.100	0.100	0.100
5	8/12/2020 4:39	0.100	0.100	0.100	0.100

6	8/12/2020 4:40	0.100	0.100	0.100	0.100
7	8/12/2020 4:41	0.100	0.100	0.100	0.100
8	8/12/2020 4:42	0.100	0.100	0.100	0.100
9	8/12/2020 4:43	0.100	0.100	0.100	0.100
10	8/12/2020 4:44	0.100	0.200	0.200	0.200
11	8/12/2020 4:45	0.200	0.200	0.200	0.200
12	8/12/2020 4:46	0.200	0.200	0.200	0.200
13	8/12/2020 4:47	0.200	0.200	0.200	0.200
Peak		0.200	0.200	0.200	0.200
Min		0.000	0.000	0.000	0.000
Average		0.100	0.100	0.100	0.100

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
1	8/12/2020 4:35	0.000	---
2	8/12/2020 4:36	0.000	---
3	8/12/2020 4:37	0.000	---
4	8/12/2020 4:38	0.000	---
5	8/12/2020 4:39	0.000	---
6	8/12/2020 4:40	0.000	---
7	8/12/2020 4:41	0.000	---
8	8/12/2020 4:42	0.000	---
9	8/12/2020 4:43	0.000	---
10	8/12/2020 4:44	0.000	---
11	8/12/2020 4:45	0.000	---
12	8/12/2020 4:46	0.000	---
13	8/12/2020 4:47	0.000	---

20/08/12 04:50

Summary

Unit Name MiniRAE 3000 +(PGM-7320)
Unit SN 592-928260
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Pause in Menu Mode

Site ID RAE00000
User ID USER0000

Begin 8/12/2020 4:50 **7:50 AM**
End 8/12/2020 8:12 **11:12 AM**
Sample Period(s) 60
Number of Records 202

Sensor PID(ppm)
Sensor SN S023030229W6
Measure Type Min; Avg; Max; Real
Span 100
Span 2 1000
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 70
TWA Alarm 65
Measurement Gas Isobutylene
Calibration Time 7/30/2020 10:41
Peak 0.7
Min 0
Average 0.4

Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
1	8/12/2020 4:51	0.000	0.000	0.000	0.000
2	8/12/2020 4:52	0.000	0.000	0.000	0.000
3	8/12/2020 4:53	0.000	0.000	0.000	0.000
4	8/12/2020 4:54	0.000	0.000	0.000	0.000
5	8/12/2020 4:55	0.000	0.000	0.000	0.000

6	8/12/2020 4:56	0.000	0.000	0.000	0.000
7	8/12/2020 4:57	0.000	0.000	0.000	0.000
8	8/12/2020 4:58	0.000	0.000	0.000	0.000
9	8/12/2020 4:59	0.000	0.000	0.000	0.000
10	8/12/2020 5:00	0.000	0.000	0.000	0.000
11	8/12/2020 5:01	0.000	0.000	0.100	0.000
12	8/12/2020 5:02	0.000	0.100	0.100	0.100
13	8/12/2020 5:03	0.000	0.100	0.100	0.100
14	8/12/2020 5:04	0.100	0.100	0.100	0.100
15	8/12/2020 5:05	0.100	0.100	0.100	0.100
16	8/12/2020 5:06	0.100	0.100	0.100	0.100
17	8/12/2020 5:07	0.100	0.100	0.100	0.100
18	8/12/2020 5:08	0.100	0.100	0.100	0.100
19	8/12/2020 5:09	0.100	0.100	0.100	0.100
20	8/12/2020 5:10	0.100	0.100	0.100	0.100
21	8/12/2020 5:11	0.100	0.100	0.100	0.100
22	8/12/2020 5:12	0.100	0.100	0.100	0.100
23	8/12/2020 5:13	0.100	0.100	0.100	0.100
24	8/12/2020 5:14	0.100	0.100	0.100	0.100
25	8/12/2020 5:15	0.100	0.100	0.100	0.100
26	8/12/2020 5:16	0.100	0.100	0.100	0.100
27	8/12/2020 5:17	0.100	0.100	0.100	0.100
28	8/12/2020 5:18	0.100	0.100	0.100	0.100
29	8/12/2020 5:19	0.100	0.100	0.100	0.100
30	8/12/2020 5:20	0.100	0.100	0.200	0.100
31	8/12/2020 5:21	0.100	0.100	0.100	0.100
32	8/12/2020 5:22	0.100	0.100	0.100	0.100
33	8/12/2020 5:23	0.100	0.100	0.200	0.100
34	8/12/2020 5:24	0.100	0.100	0.100	0.100
35	8/12/2020 5:25	0.100	0.100	0.200	0.200
36	8/12/2020 5:26	0.100	0.200	0.200	0.200
37	8/12/2020 5:27	0.100	0.200	0.200	0.100
38	8/12/2020 5:28	0.100	0.200	0.200	0.200
39	8/12/2020 5:29	0.100	0.200	0.200	0.200
40	8/12/2020 5:30	0.100	0.200	0.200	0.200
41	8/12/2020 5:31	0.200	0.200	0.200	0.200
42	8/12/2020 5:32	0.200	0.200	0.200	0.200
43	8/12/2020 5:33	0.200	0.200	0.200	0.200
44	8/12/2020 5:34	0.100	0.200	0.200	0.200
45	8/12/2020 5:35	0.200	0.200	0.200	0.200
46	8/12/2020 5:36	0.200	0.200	0.200	0.200
47	8/12/2020 5:37	0.200	0.200	0.200	0.200
48	8/12/2020 5:38	0.200	0.200	0.200	0.200
49	8/12/2020 5:39	0.200	0.200	0.200	0.200
50	8/12/2020 5:40	0.200	0.200	0.200	0.200
51	8/12/2020 5:41	0.200	0.200	0.200	0.200
52	8/12/2020 5:42	0.200	0.200	0.200	0.200

53	8/12/2020 5:43	0.200	0.200	0.200	0.200
54	8/12/2020 5:44	0.200	0.200	0.300	0.300
55	8/12/2020 5:45	0.200	0.200	0.300	0.300
56	8/12/2020 5:46	0.200	0.300	0.300	0.300
57	8/12/2020 5:47	0.300	0.300	0.300	0.300
58	8/12/2020 5:48	0.200	0.300	0.300	0.300
59	8/12/2020 5:49	0.200	0.300	0.300	0.200
60	8/12/2020 5:50	0.200	0.300	0.300	0.300
61	8/12/2020 5:51	0.200	0.300	0.300	0.300
62	8/12/2020 5:52	0.200	0.300	0.300	0.300
63	8/12/2020 5:53	0.200	0.300	0.300	0.200
64	8/12/2020 5:54	0.200	0.200	0.300	0.200
65	8/12/2020 5:55	0.200	0.300	0.300	0.200
66	8/12/2020 5:56	0.200	0.300	0.300	0.300
67	8/12/2020 5:57	0.200	0.300	0.300	0.300
68	8/12/2020 5:58	0.200	0.300	0.300	0.300
69	8/12/2020 5:59	0.300	0.300	0.300	0.300
70	8/12/2020 6:00	0.200	0.300	0.300	0.300
71	8/12/2020 6:01	0.200	0.300	0.300	0.200
72	8/12/2020 6:02	0.200	0.300	0.300	0.300
73	8/12/2020 6:03	0.200	0.300	0.300	0.300
74	8/12/2020 6:04	0.200	0.300	0.300	0.300
75	8/12/2020 6:05	0.200	0.300	0.300	0.300
76	8/12/2020 6:06	0.300	0.300	0.300	0.300
77	8/12/2020 6:07	0.200	0.300	0.300	0.200
78	8/12/2020 6:08	0.200	0.300	0.300	0.300
79	8/12/2020 6:09	0.300	0.300	0.300	0.300
80	8/12/2020 6:10	0.300	0.300	0.300	0.300
81	8/12/2020 6:11	0.200	0.300	0.300	0.300
82	8/12/2020 6:12	0.300	0.300	0.400	0.300
83	8/12/2020 6:13	0.300	0.300	0.400	0.400
84	8/12/2020 6:14	0.300	0.300	0.400	0.300
85	8/12/2020 6:15	0.300	0.400	0.400	0.400
86	8/12/2020 6:16	0.300	0.400	0.400	0.400
87	8/12/2020 6:17	0.300	0.400	0.400	0.300
88	8/12/2020 6:18	0.300	0.300	0.400	0.400
89	8/12/2020 6:19	0.300	0.300	0.400	0.400
90	8/12/2020 6:20	0.300	0.300	0.400	0.400
91	8/12/2020 6:21	0.300	0.400	0.400	0.400
92	8/12/2020 6:22	0.300	0.400	0.400	0.400
93	8/12/2020 6:23	0.300	0.400	0.400	0.400
94	8/12/2020 6:24	0.300	0.400	0.400	0.400
95	8/12/2020 6:25	0.300	0.400	0.400	0.400
96	8/12/2020 6:26	0.300	0.400	0.400	0.400
97	8/12/2020 6:27	0.300	0.400	0.400	0.400
98	8/12/2020 6:28	0.400	0.400	0.500	0.400
99	8/12/2020 6:29	0.400	0.400	0.500	0.400

100	8/12/2020 6:30	0.400	0.400	0.400	0.400
101	8/12/2020 6:31	0.400	0.400	0.400	0.400
102	8/12/2020 6:32	0.300	0.400	0.400	0.400
103	8/12/2020 6:33	0.300	0.400	0.400	0.400
104	8/12/2020 6:34	0.300	0.400	0.400	0.400
105	8/12/2020 6:35	0.300	0.400	0.400	0.400
106	8/12/2020 6:36	0.300	0.400	0.500	0.400
107	8/12/2020 6:37	0.300	0.400	0.400	0.400
108	8/12/2020 6:38	0.300	0.400	0.400	0.400
109	8/12/2020 6:39	0.400	0.400	0.500	0.500
110	8/12/2020 6:40	0.300	0.400	0.500	0.300
111	8/12/2020 6:41	0.300	0.400	0.500	0.400
112	8/12/2020 6:42	0.300	0.400	0.500	0.400
113	8/12/2020 6:43	0.400	0.400	0.500	0.400
114	8/12/2020 6:44	0.400	0.400	0.500	0.500
115	8/12/2020 6:45	0.400	0.500	0.500	0.400
116	8/12/2020 6:46	0.400	0.500	0.500	0.400
117	8/12/2020 6:47	0.400	0.500	0.500	0.500
118	8/12/2020 6:48	0.300	0.400	0.500	0.500
119	8/12/2020 6:49	0.400	0.500	0.500	0.500
120	8/12/2020 6:50	0.400	0.400	0.500	0.400
121	8/12/2020 6:51	0.400	0.400	0.500	0.500
122	8/12/2020 6:52	0.400	0.500	0.500	0.500
123	8/12/2020 6:53	0.400	0.500	0.500	0.500
124	8/12/2020 6:54	0.400	0.400	0.500	0.400
125	8/12/2020 6:55	0.400	0.500	0.600	0.600
126	8/12/2020 6:56	0.600	0.600	0.600	0.600
127	8/12/2020 6:57	0.500	0.600	0.700	0.600
128	8/12/2020 6:58	0.600	0.600	0.700	0.600
129	8/12/2020 6:59	0.500	0.600	0.600	0.600
130	8/12/2020 7:00	0.500	0.600	0.600	0.600
131	8/12/2020 7:01	0.500	0.600	0.700	0.600
132	8/12/2020 7:02	0.500	0.600	0.700	0.700
133	8/12/2020 7:03	0.500	0.600	0.700	0.600
134	8/12/2020 7:04	0.600	0.600	0.700	0.700
135	8/12/2020 7:05	0.600	0.600	0.700	0.600
136	8/12/2020 7:06	0.500	0.600	0.700	0.600
137	8/12/2020 7:07	0.600	0.600	0.700	0.600
138	8/12/2020 7:08	0.600	0.600	0.700	0.600
139	8/12/2020 7:09	0.500	0.700	0.700	0.700
140	8/12/2020 7:10	0.600	0.600	0.700	0.700
141	8/12/2020 7:11	0.600	0.700	0.700	0.700
142	8/12/2020 7:12	0.600	0.700	0.700	0.700
143	8/12/2020 7:13	0.600	0.700	0.700	0.700
144	8/12/2020 7:14	0.700	0.700	0.700	0.700
145	8/12/2020 7:15	0.600	0.700	0.700	0.700
146	8/12/2020 7:16	0.600	0.700	0.700	0.700

147	8/12/2020 7:17	0.600	0.700	0.700	0.600
148	8/12/2020 7:18	0.600	0.600	0.700	0.600
149	8/12/2020 7:19	0.600	0.700	0.700	0.700
150	8/12/2020 7:20	0.600	0.700	0.700	0.700
151	8/12/2020 7:21	0.600	0.700	0.700	0.600
152	8/12/2020 7:22	0.600	0.700	0.700	0.700
153	8/12/2020 7:23	0.600	0.700	0.700	0.700
154	8/12/2020 7:24	0.700	0.700	0.700	0.700
155	8/12/2020 7:25	0.700	0.700	0.700	0.700
156	8/12/2020 7:26	0.700	0.700	0.700	0.700
157	8/12/2020 7:27	0.700	0.700	0.700	0.700
158	8/12/2020 7:28	0.700	0.700	0.700	0.700
159	8/12/2020 7:29	0.600	0.700	0.700	0.700
160	8/12/2020 7:30	0.700	0.700	0.700	0.700
161	8/12/2020 7:31	0.700	0.700	0.700	0.700
162	8/12/2020 7:32	0.700	0.700	0.700	0.700
163	8/12/2020 7:33	0.600	0.700	0.700	0.600
164	8/12/2020 7:34	0.600	0.600	0.700	0.600
165	8/12/2020 7:35	0.600	0.600	0.700	0.600
166	8/12/2020 7:36	0.600	0.600	0.600	0.600
167	8/12/2020 7:37	0.600	0.600	0.600	0.600
168	8/12/2020 7:38	0.600	0.600	0.600	0.600
169	8/12/2020 7:39	0.500	0.600	0.600	0.500
170	8/12/2020 7:40	0.500	0.600	0.600	0.600
171	8/12/2020 7:41	0.600	0.600	0.600	0.600
172	8/12/2020 7:42	0.600	0.600	0.600	0.600
173	8/12/2020 7:43	0.600	0.600	0.600	0.600
174	8/12/2020 7:44	0.600	0.600	0.600	0.600
175	8/12/2020 7:45	0.600	0.600	0.600	0.600
176	8/12/2020 7:46	0.600	0.600	0.600	0.600
177	8/12/2020 7:47	0.600	0.600	0.600	0.600
178	8/12/2020 7:48	0.600	0.600	0.700	0.600
179	8/12/2020 7:49	0.600	0.600	0.700	0.700
180	8/12/2020 7:50	0.600	0.600	0.700	0.600
181	8/12/2020 7:51	0.600	0.600	0.700	0.600
182	8/12/2020 7:52	0.600	0.600	0.600	0.600
183	8/12/2020 7:53	0.600	0.600	0.700	0.600
184	8/12/2020 7:54	0.600	0.600	0.700	0.700
185	8/12/2020 7:55	0.600	0.600	0.700	0.600
186	8/12/2020 7:56	0.600	0.600	0.700	0.600
187	8/12/2020 7:57	0.600	0.600	0.700	0.600
188	8/12/2020 7:58	0.600	0.700	0.700	0.700
189	8/12/2020 7:59	0.600	0.600	0.700	0.700
190	8/12/2020 8:00	0.600	0.700	0.700	0.700
191	8/12/2020 8:01	0.700	0.700	0.700	0.700
192	8/12/2020 8:02	0.700	0.700	0.700	0.700
193	8/12/2020 8:03	0.700	0.700	0.700	0.700

194	8/12/2020 8:04	0.700	0.700	0.700	0.700
195	8/12/2020 8:05	0.700	0.700	0.700	0.700
196	8/12/2020 8:06	0.700	0.700	0.700	0.700
197	8/12/2020 8:07	0.700	0.700	0.700	0.700
198	8/12/2020 8:08	0.600	0.700	0.700	0.700
199	8/12/2020 8:09	0.600	0.600	0.700	0.600
200	8/12/2020 8:10	0.600	0.600	0.600	0.600
201	8/12/2020 8:11	0.600	0.600	0.700	0.600
202	8/12/2020 8:12	0.600	0.600	0.700	0.600
Peak		0.700	0.700	0.700	0.700
Min		0.000	0.000	0.000	0.000
Average		0.400	0.400	0.400	0.400

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
1	8/12/2020 4:51	0.000	---
2	8/12/2020 4:52	0.000	---
3	8/12/2020 4:53	0.000	---
4	8/12/2020 4:54	0.000	---
5	8/12/2020 4:55	0.000	---
6	8/12/2020 4:56	0.000	---
7	8/12/2020 4:57	0.000	---
8	8/12/2020 4:58	0.000	---
9	8/12/2020 4:59	0.000	---
10	8/12/2020 5:00	0.000	---
11	8/12/2020 5:01	0.000	---
12	8/12/2020 5:02	0.000	---
13	8/12/2020 5:03	0.000	---
14	8/12/2020 5:04	0.000	---
15	8/12/2020 5:05	0.000	0.000
16	8/12/2020 5:06	0.000	0.000
17	8/12/2020 5:07	0.000	0.000
18	8/12/2020 5:08	0.000	0.000
19	8/12/2020 5:09	0.000	0.100
20	8/12/2020 5:10	0.000	0.100
21	8/12/2020 5:11	0.000	0.100
22	8/12/2020 5:12	0.000	0.100
23	8/12/2020 5:13	0.000	0.100
24	8/12/2020 5:14	0.000	0.100
25	8/12/2020 5:15	0.000	0.100
26	8/12/2020 5:16	0.000	0.100
27	8/12/2020 5:17	0.000	0.100
28	8/12/2020 5:18	0.000	0.100
29	8/12/2020 5:19	0.000	0.100
30	8/12/2020 5:20	0.000	0.100

31	8/12/2020 5:21	0.000	0.100
32	8/12/2020 5:22	0.000	0.100
33	8/12/2020 5:23	0.000	0.100
34	8/12/2020 5:24	0.000	0.100
35	8/12/2020 5:25	0.000	0.100
36	8/12/2020 5:26	0.000	0.100
37	8/12/2020 5:27	0.000	0.100
38	8/12/2020 5:28	0.000	0.100
39	8/12/2020 5:29	0.000	0.100
40	8/12/2020 5:30	0.000	0.100
41	8/12/2020 5:31	0.000	0.100
42	8/12/2020 5:32	0.000	0.200
43	8/12/2020 5:33	0.000	0.200
44	8/12/2020 5:34	0.000	0.200
45	8/12/2020 5:35	0.000	0.200
46	8/12/2020 5:36	0.000	0.200
47	8/12/2020 5:37	0.000	0.200
48	8/12/2020 5:38	0.000	0.200
49	8/12/2020 5:39	0.000	0.200
50	8/12/2020 5:40	0.000	0.200
51	8/12/2020 5:41	0.000	0.200
52	8/12/2020 5:42	0.000	0.200
53	8/12/2020 5:43	0.000	0.200
54	8/12/2020 5:44	0.000	0.200
55	8/12/2020 5:45	0.000	0.200
56	8/12/2020 5:46	0.000	0.200
57	8/12/2020 5:47	0.000	0.200
58	8/12/2020 5:48	0.000	0.200
59	8/12/2020 5:49	0.000	0.200
60	8/12/2020 5:50	0.000	0.300
61	8/12/2020 5:51	0.000	0.300
62	8/12/2020 5:52	0.000	0.300
63	8/12/2020 5:53	0.000	0.300
64	8/12/2020 5:54	0.000	0.300
65	8/12/2020 5:55	0.000	0.300
66	8/12/2020 5:56	0.000	0.300
67	8/12/2020 5:57	0.000	0.300
68	8/12/2020 5:58	0.000	0.300
69	8/12/2020 5:59	0.000	0.300
70	8/12/2020 6:00	0.000	0.300
71	8/12/2020 6:01	0.000	0.300
72	8/12/2020 6:02	0.000	0.300
73	8/12/2020 6:03	0.000	0.300
74	8/12/2020 6:04	0.000	0.300
75	8/12/2020 6:05	0.000	0.300
76	8/12/2020 6:06	0.000	0.300
77	8/12/2020 6:07	0.000	0.300

78	8/12/2020 6:08	0.000	0.300
79	8/12/2020 6:09	0.000	0.300
80	8/12/2020 6:10	0.000	0.300
81	8/12/2020 6:11	0.000	0.300
82	8/12/2020 6:12	0.000	0.300
83	8/12/2020 6:13	0.000	0.300
84	8/12/2020 6:14	0.000	0.300
85	8/12/2020 6:15	0.000	0.300
86	8/12/2020 6:16	0.000	0.300
87	8/12/2020 6:17	0.000	0.300
88	8/12/2020 6:18	0.000	0.300
89	8/12/2020 6:19	0.000	0.300
90	8/12/2020 6:20	0.000	0.400
91	8/12/2020 6:21	0.000	0.400
92	8/12/2020 6:22	0.000	0.400
93	8/12/2020 6:23	0.000	0.400
94	8/12/2020 6:24	0.000	0.400
95	8/12/2020 6:25	0.000	0.400
96	8/12/2020 6:26	0.000	0.400
97	8/12/2020 6:27	0.000	0.400
98	8/12/2020 6:28	0.000	0.400
99	8/12/2020 6:29	0.000	0.400
100	8/12/2020 6:30	0.000	0.400
101	8/12/2020 6:31	0.000	0.400
102	8/12/2020 6:32	0.000	0.400
103	8/12/2020 6:33	0.000	0.400
104	8/12/2020 6:34	0.000	0.400
105	8/12/2020 6:35	0.000	0.400
106	8/12/2020 6:36	0.000	0.400
107	8/12/2020 6:37	0.000	0.400
108	8/12/2020 6:38	0.100	0.400
109	8/12/2020 6:39	0.100	0.400
110	8/12/2020 6:40	0.100	0.400
111	8/12/2020 6:41	0.100	0.400
112	8/12/2020 6:42	0.100	0.400
113	8/12/2020 6:43	0.100	0.400
114	8/12/2020 6:44	0.100	0.400
115	8/12/2020 6:45	0.100	0.400
116	8/12/2020 6:46	0.100	0.400
117	8/12/2020 6:47	0.100	0.400
118	8/12/2020 6:48	0.100	0.400
119	8/12/2020 6:49	0.100	0.500
120	8/12/2020 6:50	0.100	0.500
121	8/12/2020 6:51	0.100	0.500
122	8/12/2020 6:52	0.100	0.500
123	8/12/2020 6:53	0.100	0.500
124	8/12/2020 6:54	0.100	0.500

125	8/12/2020 6:55	0.100	0.500
126	8/12/2020 6:56	0.100	0.500
127	8/12/2020 6:57	0.100	0.500
128	8/12/2020 6:58	0.100	0.500
129	8/12/2020 6:59	0.100	0.500
130	8/12/2020 7:00	0.100	0.500
131	8/12/2020 7:01	0.100	0.600
132	8/12/2020 7:02	0.100	0.600
133	8/12/2020 7:03	0.100	0.600
134	8/12/2020 7:04	0.100	0.600
135	8/12/2020 7:05	0.100	0.600
136	8/12/2020 7:06	0.100	0.600
137	8/12/2020 7:07	0.100	0.600
138	8/12/2020 7:08	0.100	0.600
139	8/12/2020 7:09	0.100	0.600
140	8/12/2020 7:10	0.100	0.700
141	8/12/2020 7:11	0.100	0.700
142	8/12/2020 7:12	0.100	0.700
143	8/12/2020 7:13	0.100	0.700
144	8/12/2020 7:14	0.100	0.700
145	8/12/2020 7:15	0.100	0.700
146	8/12/2020 7:16	0.100	0.700
147	8/12/2020 7:17	0.100	0.700
148	8/12/2020 7:18	0.100	0.700
149	8/12/2020 7:19	0.100	0.700
150	8/12/2020 7:20	0.100	0.700
151	8/12/2020 7:21	0.100	0.700
152	8/12/2020 7:22	0.100	0.700
153	8/12/2020 7:23	0.100	0.700
154	8/12/2020 7:24	0.100	0.700
155	8/12/2020 7:25	0.100	0.700
156	8/12/2020 7:26	0.100	0.700
157	8/12/2020 7:27	0.100	0.700
158	8/12/2020 7:28	0.100	0.700
159	8/12/2020 7:29	0.100	0.700
160	8/12/2020 7:30	0.100	0.700
161	8/12/2020 7:31	0.100	0.700
162	8/12/2020 7:32	0.100	0.700
163	8/12/2020 7:33	0.100	0.700
164	8/12/2020 7:34	0.100	0.700
165	8/12/2020 7:35	0.100	0.700
166	8/12/2020 7:36	0.100	0.700
167	8/12/2020 7:37	0.100	0.700
168	8/12/2020 7:38	0.100	0.700
169	8/12/2020 7:39	0.100	0.700
170	8/12/2020 7:40	0.100	0.700
171	8/12/2020 7:41	0.100	0.700

172	8/12/2020 7:42	0.100	0.700
173	8/12/2020 7:43	0.100	0.700
174	8/12/2020 7:44	0.100	0.700
175	8/12/2020 7:45	0.100	0.700
176	8/12/2020 7:46	0.100	0.600
177	8/12/2020 7:47	0.100	0.600
178	8/12/2020 7:48	0.100	0.600
179	8/12/2020 7:49	0.100	0.600
180	8/12/2020 7:50	0.100	0.600
181	8/12/2020 7:51	0.100	0.600
182	8/12/2020 7:52	0.100	0.600
183	8/12/2020 7:53	0.100	0.600
184	8/12/2020 7:54	0.100	0.600
185	8/12/2020 7:55	0.100	0.700
186	8/12/2020 7:56	0.100	0.700
187	8/12/2020 7:57	0.100	0.700
188	8/12/2020 7:58	0.200	0.700
189	8/12/2020 7:59	0.200	0.700
190	8/12/2020 8:00	0.200	0.700
191	8/12/2020 8:01	0.200	0.700
192	8/12/2020 8:02	0.200	0.700
193	8/12/2020 8:03	0.200	0.700
194	8/12/2020 8:04	0.200	0.700
195	8/12/2020 8:05	0.200	0.700
196	8/12/2020 8:06	0.200	0.700
197	8/12/2020 8:07	0.200	0.700
198	8/12/2020 8:08	0.200	0.700
199	8/12/2020 8:09	0.200	0.700
200	8/12/2020 8:10	0.200	0.700
201	8/12/2020 8:11	0.200	0.700
202	8/12/2020 8:12	0.200	0.700

20/08/12 08:36

Summary

Unit Name MiniRAE 3000 +(PGM-7320)
Unit SN 592-928260
Unit Firmware Ver V2.20A

Running Mode Hygiene Mode
Datalog Mode Auto
Diagnostic Mode No
Stop Reason Power Down

Site ID RAE00000
User ID USER0000

Begin 8/12/2020 8:36 **11:36 AM**
End 8/12/2020 8:39 **11:39 AM**
Sample Period(s) 60
Number of Records 3

Sensor PID(ppm)
Sensor SN S023030229W6
Measure Type Min; Avg; Max; Real
Span 100
Span 2 1000
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 70
TWA Alarm 65
Measurement Gas Isobutylene
Calibration Time 7/30/2020 10:41
Peak 0
Min 0
Average 0

Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
1	8/12/2020 8:37	0.000	0.000	0.000	0.000
2	8/12/2020 8:38	0.000	0.000	0.000	0.000
3	8/12/2020 8:39	0.000	0.000	0.000	0.000
Peak		0.000	0.000	0.000	0.000
Min		0.000	0.000	0.000	0.000

Average 0.000 0.000 0.000 0.000

TWA/STEL

Index	Date/Time	PID(ppm)	
		(TWA)	(STEL)
1	8/12/2020 8:37	0.000	---
2	8/12/2020 8:38	0.000	---
3	8/12/2020 8:39	0.000	---

Analytical Laboratory Reports (Soil Only)

August 26, 2020

Corinne Steinmuller
Barton and Loguidice
10 Airline Drive Suite 200
Albany,

RE: Project: ALCO 8/11
Pace Project No.: 70141429

Dear Corinne Steinmuller:

Enclosed are the analytical results for sample(s) received by the laboratory on August 12, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Aracri
jennifer.aracri@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Andy Barber, B&L
Nicholas Despart, Barton and Loguidice-Albany



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: ALCO 8/11

Pace Project No.: 70141429

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747

New York Certification #: 10478 Primary Accrediting Body

New Jersey Certification #: NY158

Pennsylvania Certification #: 68-00350

Connecticut Certification #: PH-0435

Maryland Certification #: 208

Rhode Island Certification #: LAO00340

Massachusetts Certification #: M-NY026

New Hampshire Certification #: 2987

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ALCO 8/11

Pace Project No.: 70141429

Sample: B-2 20-24' Lab ID: 70141429001 Collected: 08/11/20 12:10 Received: 08/12/20 10:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV								
Analytical Method: EPA 8270D Preparation Method: EPA 3545A								
Pace Analytical Services - Melville								
2,2'-Oxybis(1-chloropropane)	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	108-60-1	
2,4,5-Trichlorophenol	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	95-95-4	
2,4,6-Trichlorophenol	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	88-06-2	
2,4-Dichlorophenol	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	120-83-2	
2,4-Dimethylphenol	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	105-67-9	
2,4-Dinitrophenol	<808	ug/kg	808	1	08/13/20 12:24	08/17/20 17:38	51-28-5	CL
2,4-Dinitrotoluene	<398	ug/kg	398	1	08/13/20 12:24	08/17/20 17:38	121-14-2	
2,6-Dinitrotoluene	<398	ug/kg	398	1	08/13/20 12:24	08/17/20 17:38	606-20-2	
2-Chloronaphthalene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	91-58-7	
2-Chlorophenol	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	95-57-8	
2-Methylnaphthalene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	91-57-6	
2-Methylphenol(o-Cresol)	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	95-48-7	
2-Nitroaniline	<398	ug/kg	398	1	08/13/20 12:24	08/17/20 17:38	88-74-4	
2-Nitrophenol	<398	ug/kg	398	1	08/13/20 12:24	08/17/20 17:38	88-75-5	
3&4-Methylphenol(m&p Cresol)	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38		
3,3'-Dichlorobenzidine	<398	ug/kg	398	1	08/13/20 12:24	08/17/20 17:38	91-94-1	
3-Nitroaniline	<398	ug/kg	398	1	08/13/20 12:24	08/17/20 17:38	99-09-2	
4,6-Dinitro-2-methylphenol	<808	ug/kg	808	1	08/13/20 12:24	08/17/20 17:38	534-52-1	CL
4-Bromophenylphenyl ether	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	101-55-3	
4-Chloro-3-methylphenol	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	59-50-7	
4-Chloroaniline	<398	ug/kg	398	1	08/13/20 12:24	08/17/20 17:38	106-47-8	
4-Chlorophenylphenyl ether	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	7005-72-3	
4-Nitroaniline	<398	ug/kg	398	1	08/13/20 12:24	08/17/20 17:38	100-01-6	
4-Nitrophenol	<808	ug/kg	808	1	08/13/20 12:24	08/17/20 17:38	100-02-7	
Acenaphthene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	83-32-9	
Acenaphthylene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	208-96-8	
Anthracene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	120-12-7	
Benzo(a)anthracene	96.1	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	56-55-3	
Benzo(a)pyrene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	50-32-8	
Benzo(b)fluoranthene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	205-99-2	
Benzo(g,h,i)perylene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	191-24-2	
Benzo(k)fluoranthene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	207-08-9	
Butylbenzylphthalate	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	85-68-7	
Carbazole	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	86-74-8	
Chrysene	123	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	218-01-9	
Di-n-butylphthalate	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	84-74-2	
Di-n-octylphthalate	<398	ug/kg	398	1	08/13/20 12:24	08/17/20 17:38	117-84-0	
Dibenz(a,h)anthracene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	53-70-3	
Dibenzofuran	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	132-64-9	
Diethylphthalate	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	84-66-2	
Dimethylphthalate	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	131-11-3	
Fluoranthene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	206-44-0	
Fluorene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	86-73-7	
Hexachloro-1,3-butadiene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	87-68-3	
Hexachlorobenzene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	118-74-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ALCO 8/11

Pace Project No.: 70141429

Sample: B-2 20-24' **Lab ID: 70141429001** Collected: 08/11/20 12:10 Received: 08/12/20 10:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV								
Analytical Method: EPA 8270D Preparation Method: EPA 3545A								
Pace Analytical Services - Melville								
Hexachlorocyclopentadiene	<398	ug/kg	398	1	08/13/20 12:24	08/17/20 17:38	77-47-4	
Hexachloroethane	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	67-72-1	
Indeno(1,2,3-cd)pyrene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	193-39-5	
Isophorone	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	78-59-1	
N-Nitroso-di-n-propylamine	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	621-64-7	
N-Nitrosodiphenylamine	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	86-30-6	
Naphthalene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	91-20-3	
Nitrobenzene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	98-95-3	
Pentachlorophenol	<808	ug/kg	808	1	08/13/20 12:24	08/17/20 17:38	87-86-5	CL
Phenanthrene	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	85-01-8	
Phenol	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	108-95-2	
Pyrene	226	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	129-00-0	
bis(2-Chloroethoxy)methane	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	111-91-1	
bis(2-Chloroethyl) ether	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	111-44-4	
bis(2-Ethylhexyl)phthalate	<80.8	ug/kg	80.8	1	08/13/20 12:24	08/17/20 17:38	117-81-7	
Surrogates								
Nitrobenzene-d5 (S)	44	%	23-120	1	08/13/20 12:24	08/17/20 17:38	4165-60-0	
2-Fluorobiphenyl (S)	48	%	30-115	1	08/13/20 12:24	08/17/20 17:38	321-60-8	
p-Terphenyl-d14 (S)	50	%	18-137	1	08/13/20 12:24	08/17/20 17:38	1718-51-0	
Phenol-d5 (S)	49	%	24-113	1	08/13/20 12:24	08/17/20 17:38	4165-62-2	
2-Fluorophenol (S)	50	%	25-121	1	08/13/20 12:24	08/17/20 17:38	367-12-4	
2,4,6-Tribromophenol (S)	55	%	19-122	1	08/13/20 12:24	08/17/20 17:38	118-79-6	
2-Chlorophenol-d4 (S)	45	%	20-130	1	08/13/20 12:24	08/17/20 17:38	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	38	%	20-130	1	08/13/20 12:24	08/17/20 17:38	2199-69-1	
8260C MSV 5035A-L Low Level								
Analytical Method: EPA 8260C Preparation Method: EPA 5035A-L								
Pace Analytical Services - Melville								
1,1,1,2-Tetrachloroethane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	630-20-6	
1,1,1-Trichloroethane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	71-55-6	
1,1,2,2-Tetrachloroethane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	79-34-5	
1,1,2-Trichloroethane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	79-00-5	
1,1-Dichloroethane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	75-34-3	
1,1-Dichloroethene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	75-35-4	
1,1-Dichloropropene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	563-58-6	
1,2,3-Trichlorobenzene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	87-61-6	
1,2,3-Trichloropropane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	96-18-4	
1,2,4-Trichlorobenzene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	120-82-1	
1,2,4-Trimethylbenzene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	95-63-6	
1,2-Dibromo-3-chloropropane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	96-12-8	
1,2-Dibromoethane (EDB)	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	106-93-4	
1,2-Dichlorobenzene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	95-50-1	
1,2-Dichloroethane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	107-06-2	
1,2-Dichloropropane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	78-87-5	
1,3,5-Trimethylbenzene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	108-67-8	
1,3-Dichlorobenzene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ALCO 8/11

Pace Project No.: 70141429

Sample: B-2 20-24' **Lab ID: 70141429001** Collected: 08/11/20 12:10 Received: 08/12/20 10:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C MSV 5035A-L Low Level		Analytical Method: EPA 8260C Preparation Method: EPA 5035A-L Pace Analytical Services - Melville						
1,3-Dichloropropane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	142-28-9	
1,4-Dichlorobenzene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	106-46-7	
2,2-Dichloropropane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	594-20-7	
2-Butanone (MEK)	11.9	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	78-93-3	
2-Chlorotoluene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	95-49-8	
2-Hexanone	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	591-78-6	
4-Chlorotoluene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	106-43-4	
4-Methyl-2-pentanone (MIBK)	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	108-10-1	
Acetone	97.7	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	67-64-1	C1,CH, E,IH
Benzene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	71-43-2	
Bromobenzene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	108-86-1	
Bromochloromethane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	74-97-5	
Bromodichloromethane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	75-27-4	
Bromoform	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	75-25-2	
Bromomethane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	74-83-9	
Carbon disulfide	3.6	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	75-15-0	
Carbon tetrachloride	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	56-23-5	
Chlorobenzene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	108-90-7	
Chloroethane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	75-00-3	
Chloroform	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	67-66-3	
Chloromethane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	74-87-3	
Dibromochloromethane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	124-48-1	
Dibromomethane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	74-95-3	
Dichlorodifluoromethane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	75-71-8	
Ethylbenzene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	100-41-4	
Hexachloro-1,3-butadiene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	87-68-3	
Isopropylbenzene (Cumene)	1.0	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	98-82-8	
Methyl-tert-butyl ether	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	1634-04-4	
Methylene Chloride	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	75-09-2	
Naphthalene	21.4	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	91-20-3	
Styrene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	100-42-5	
Tetrachloroethene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	127-18-4	
Toluene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	108-88-3	
Trichloroethene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	79-01-6	
Trichlorofluoromethane	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	75-69-4	
Vinyl acetate	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	108-05-4	
Vinyl chloride	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	75-01-4	
Xylene (Total)	<1.2	ug/kg	1.2	1	08/25/20 06:37	08/25/20 11:14	1330-20-7	
cis-1,2-Dichloroethene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	156-59-2	
cis-1,3-Dichloropropene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	10061-01-5	
m&p-Xylene	<1.2	ug/kg	1.2	1	08/25/20 06:37	08/25/20 11:14	179601-23-1	
n-Butylbenzene	16.7	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	104-51-8	
n-Propylbenzene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	103-65-1	
o-Xylene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	95-47-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ALCO 8/11

Pace Project No.: 70141429

Sample: B-2 20-24' **Lab ID: 70141429001** Collected: 08/11/20 12:10 Received: 08/12/20 10:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C MSV 5035A-L Low Level		Analytical Method: EPA 8260C Preparation Method: EPA 5035A-L Pace Analytical Services - Melville						
p-Isopropyltoluene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	99-87-6	
sec-Butylbenzene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	135-98-8	
tert-Butylbenzene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	98-06-6	
trans-1,2-Dichloroethene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	156-60-5	
trans-1,3-Dichloropropene	<0.62	ug/kg	0.62	1	08/25/20 06:37	08/25/20 11:14	10061-02-6	
Surrogates								
Toluene-d8 (S)	139	%	43-157	1	08/25/20 06:37	08/25/20 11:14	2037-26-5	
4-Bromofluorobenzene (S)	220	%	34-145	1	08/25/20 06:37	08/25/20 11:14	460-00-4	SO
1,2-Dichloroethane-d4 (S)	117	%	33-150	1	08/25/20 06:37	08/25/20 11:14	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2216-05M Pace Analytical Services - Melville						
Percent Moisture	17.4	%	0.10	1		08/14/20 11:30		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ALCO 8/11

Pace Project No.: 70141429

Sample: B-3 20-24 **Lab ID: 70141429002** Collected: 08/11/20 14:58 Received: 08/12/20 10:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV								
Analytical Method: EPA 8270D Preparation Method: EPA 3545A								
Pace Analytical Services - Melville								
2,2'-Oxybis(1-chloropropane)	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	108-60-1	
2,4,5-Trichlorophenol	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	95-95-4	
2,4,6-Trichlorophenol	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	88-06-2	
2,4-Dichlorophenol	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	120-83-2	
2,4-Dimethylphenol	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	105-67-9	
2,4-Dinitrophenol	<796	ug/kg	796	1	08/13/20 12:24	08/17/20 18:08	51-28-5	CL
2,4-Dinitrotoluene	<392	ug/kg	392	1	08/13/20 12:24	08/17/20 18:08	121-14-2	
2,6-Dinitrotoluene	<392	ug/kg	392	1	08/13/20 12:24	08/17/20 18:08	606-20-2	R1
2-Chloronaphthalene	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	91-58-7	R1
2-Chlorophenol	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	95-57-8	
2-Methylnaphthalene	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	91-57-6	
2-Methylphenol(o-Cresol)	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	95-48-7	
2-Nitroaniline	<392	ug/kg	392	1	08/13/20 12:24	08/17/20 18:08	88-74-4	
2-Nitrophenol	<392	ug/kg	392	1	08/13/20 12:24	08/17/20 18:08	88-75-5	
3&4-Methylphenol(m&p Cresol)	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08		
3,3'-Dichlorobenzidine	<392	ug/kg	392	1	08/13/20 12:24	08/17/20 18:08	91-94-1	
3-Nitroaniline	<392	ug/kg	392	1	08/13/20 12:24	08/17/20 18:08	99-09-2	
4,6-Dinitro-2-methylphenol	<796	ug/kg	796	1	08/13/20 12:24	08/17/20 18:08	534-52-1	CL
4-Bromophenylphenyl ether	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	101-55-3	
4-Chloro-3-methylphenol	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	59-50-7	
4-Chloroaniline	<392	ug/kg	392	1	08/13/20 12:24	08/17/20 18:08	106-47-8	M1,R1
4-Chlorophenylphenyl ether	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	7005-72-3	
4-Nitroaniline	<392	ug/kg	392	1	08/13/20 12:24	08/17/20 18:08	100-01-6	R1
4-Nitrophenol	<796	ug/kg	796	1	08/13/20 12:24	08/17/20 18:08	100-02-7	M1,R1
Acenaphthene	677	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	83-32-9	
Acenaphthylene	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	208-96-8	
Anthracene	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	120-12-7	
Benzo(a)anthracene	179	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	56-55-3	
Benzo(a)pyrene	99.0	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	50-32-8	
Benzo(b)fluoranthene	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	205-99-2	
Benzo(g,h,i)perylene	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	191-24-2	
Benzo(k)fluoranthene	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	207-08-9	
Butylbenzylphthalate	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	85-68-7	
Carbazole	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	86-74-8	
Chrysene	228	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	218-01-9	
Di-n-butylphthalate	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	84-74-2	
Di-n-octylphthalate	<392	ug/kg	392	1	08/13/20 12:24	08/17/20 18:08	117-84-0	
Dibenz(a,h)anthracene	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	53-70-3	
Dibenzofuran	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	132-64-9	
Diethylphthalate	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	84-66-2	
Dimethylphthalate	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	131-11-3	
Fluoranthene	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	206-44-0	
Fluorene	739	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	86-73-7	
Hexachloro-1,3-butadiene	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	87-68-3	
Hexachlorobenzene	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	118-74-1	

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ANALYTICAL RESULTS

Project: ALCO 8/11

Pace Project No.: 70141429

Sample: B-3 20-24 **Lab ID: 70141429002** Collected: 08/11/20 14:58 Received: 08/12/20 10:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV								
Analytical Method: EPA 8270D Preparation Method: EPA 3545A								
Pace Analytical Services - Melville								
Hexachlorocyclopentadiene	<392	ug/kg	392	1	08/13/20 12:24	08/17/20 18:08	77-47-4	M1
Hexachloroethane	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	67-72-1	
Indeno(1,2,3-cd)pyrene	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	193-39-5	
Isophorone	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	78-59-1	
N-Nitroso-di-n-propylamine	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	621-64-7	
N-Nitrosodiphenylamine	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	86-30-6	M1
Naphthalene	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	91-20-3	
Nitrobenzene	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	98-95-3	
Pentachlorophenol	<796	ug/kg	796	1	08/13/20 12:24	08/17/20 18:08	87-86-5	CL
Phenanthrene	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	85-01-8	
Phenol	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	108-95-2	
Pyrene	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	129-00-0	
bis(2-Chloroethoxy)methane	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	111-91-1	
bis(2-Chloroethyl) ether	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	111-44-4	
bis(2-Ethylhexyl)phthalate	<79.6	ug/kg	79.6	1	08/13/20 12:24	08/17/20 18:08	117-81-7	

Surrogates

Nitrobenzene-d5 (S)	55	%	23-120	1	08/13/20 12:24	08/17/20 18:08	4165-60-0	
2-Fluorobiphenyl (S)	65	%	30-115	1	08/13/20 12:24	08/17/20 18:08	321-60-8	
p-Terphenyl-d14 (S)	61	%	18-137	1	08/13/20 12:24	08/17/20 18:08	1718-51-0	
Phenol-d5 (S)	59	%	24-113	1	08/13/20 12:24	08/17/20 18:08	4165-62-2	
2-Fluorophenol (S)	60	%	25-121	1	08/13/20 12:24	08/17/20 18:08	367-12-4	
2,4,6-Tribromophenol (S)	65	%	19-122	1	08/13/20 12:24	08/17/20 18:08	118-79-6	
2-Chlorophenol-d4 (S)	55	%	20-130	1	08/13/20 12:24	08/17/20 18:08	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	51	%	20-130	1	08/13/20 12:24	08/17/20 18:08	2199-69-1	

8260C MSV 5035A-L Low Level

Analytical Method: EPA 8260C Preparation Method: EPA 5035A-L

Pace Analytical Services - Melville

1,1,1,2-Tetrachloroethane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	630-20-6	
1,1,1-Trichloroethane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	71-55-6	
1,1,1,2,2-Tetrachloroethane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	79-34-5	
1,1,2-Trichloroethane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	79-00-5	
1,1-Dichloroethane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	75-34-3	
1,1-Dichloroethene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	75-35-4	
1,1-Dichloropropene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	563-58-6	
1,2,3-Trichlorobenzene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	87-61-6	
1,2,3-Trichloropropane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	96-18-4	
1,2,4-Trichlorobenzene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	120-82-1	
1,2,4-Trimethylbenzene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	95-63-6	
1,2-Dibromo-3-chloropropane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	96-12-8	
1,2-Dibromoethane (EDB)	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	106-93-4	
1,2-Dichlorobenzene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	95-50-1	
1,2-Dichloroethane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	107-06-2	
1,2-Dichloropropane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	78-87-5	
1,3,5-Trimethylbenzene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	108-67-8	
1,3-Dichlorobenzene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ALCO 8/11

Pace Project No.: 70141429

Sample: B-3 20-24 Lab ID: 70141429002 Collected: 08/11/20 14:58 Received: 08/12/20 10:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C MSV 5035A-L Low Level		Analytical Method: EPA 8260C Preparation Method: EPA 5035A-L Pace Analytical Services - Melville						
1,3-Dichloropropane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	142-28-9	
1,4-Dichlorobenzene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	106-46-7	
2,2-Dichloropropane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	594-20-7	
2-Butanone (MEK)	12.1	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	78-93-3	
2-Chlorotoluene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	95-49-8	
2-Hexanone	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	591-78-6	
4-Chlorotoluene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	106-43-4	
4-Methyl-2-pentanone (MIBK)	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	108-10-1	
Acetone	64.7	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	67-64-1	C1,CH, E,IH
Benzene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	71-43-2	
Bromobenzene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	108-86-1	
Bromochloromethane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	74-97-5	
Bromodichloromethane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	75-27-4	
Bromoform	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	75-25-2	
Bromomethane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	74-83-9	
Carbon disulfide	1.8	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	75-15-0	
Carbon tetrachloride	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	56-23-5	
Chlorobenzene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	108-90-7	
Chloroethane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	75-00-3	
Chloroform	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	67-66-3	
Chloromethane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	74-87-3	
Dibromochloromethane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	124-48-1	
Dibromomethane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	74-95-3	
Dichlorodifluoromethane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	75-71-8	
Ethylbenzene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	100-41-4	
Hexachloro-1,3-butadiene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	87-68-3	
Isopropylbenzene (Cumene)	2.3	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	98-82-8	
Methyl-tert-butyl ether	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	1634-04-4	
Methylene Chloride	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	75-09-2	
Naphthalene	43.2	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	91-20-3	
Styrene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	100-42-5	
Tetrachloroethene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	127-18-4	
Toluene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	108-88-3	
Trichloroethene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	79-01-6	
Trichlorofluoromethane	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	75-69-4	
Vinyl acetate	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	108-05-4	
Vinyl chloride	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	75-01-4	
Xylene (Total)	<1.2	ug/kg	1.2	1	08/25/20 06:37	08/25/20 16:24	1330-20-7	
cis-1,2-Dichloroethene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	156-59-2	
cis-1,3-Dichloropropene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	10061-01-5	
m&p-Xylene	<1.2	ug/kg	1.2	1	08/25/20 06:37	08/25/20 16:24	179601-23-1	
n-Butylbenzene	26.6	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	104-51-8	
n-Propylbenzene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	103-65-1	
o-Xylene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	95-47-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ALCO 8/11

Pace Project No.: 70141429

Sample: B-3 20-24 **Lab ID: 70141429002** Collected: 08/11/20 14:58 Received: 08/12/20 10:50 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C MSV 5035A-L Low Level		Analytical Method: EPA 8260C Preparation Method: EPA 5035A-L Pace Analytical Services - Melville						
p-Isopropyltoluene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	99-87-6	
sec-Butylbenzene	38.6	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	135-98-8	
tert-Butylbenzene	8.6	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	98-06-6	
trans-1,2-Dichloroethene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	156-60-5	
trans-1,3-Dichloropropene	<0.60	ug/kg	0.60	1	08/25/20 06:37	08/25/20 16:24	10061-02-6	
Surrogates								
Toluene-d8 (S)	151	%	43-157	1	08/25/20 06:37	08/25/20 16:24	2037-26-5	
4-Bromofluorobenzene (S)	137	%	34-145	1	08/25/20 06:37	08/25/20 16:24	460-00-4	
1,2-Dichloroethane-d4 (S)	140	%	33-150	1	08/25/20 06:37	08/25/20 16:24	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2216-05M Pace Analytical Services - Melville						
Percent Moisture	16.1	%	0.10	1		08/14/20 11:31		

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QUALITY CONTROL DATA

Project: ALCO 8/11
Pace Project No.: 70141429

QC Batch: 174448 Analysis Method: EPA 8260C
QC Batch Method: EPA 5035A-L Analysis Description: 8260 MSV 5035A-L Low Level
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70141429001, 70141429002

METHOD BLANK: 845715 Matrix: Solid

Associated Lab Samples: 70141429001, 70141429002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,1,1-Trichloroethane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,1,2,2-Tetrachloroethane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,1,2-Trichloroethane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,1-Dichloroethane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,1-Dichloroethene	ug/kg	<2.0	2.0	08/25/20 07:42	
1,1-Dichloropropene	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2,3-Trichlorobenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2,3-Trichloropropane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2,4-Trichlorobenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2,4-Trimethylbenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2-Dibromo-3-chloropropane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2-Dibromoethane (EDB)	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2-Dichlorobenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2-Dichloroethane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2-Dichloropropane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,3,5-Trimethylbenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
1,3-Dichlorobenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
1,3-Dichloropropane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,4-Dichlorobenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
2,2-Dichloropropane	ug/kg	<2.0	2.0	08/25/20 07:42	
2-Butanone (MEK)	ug/kg	<2.0	2.0	08/25/20 07:42	
2-Chlorotoluene	ug/kg	<2.0	2.0	08/25/20 07:42	
2-Hexanone	ug/kg	<2.0	2.0	08/25/20 07:42	
4-Chlorotoluene	ug/kg	<2.0	2.0	08/25/20 07:42	
4-Methyl-2-pentanone (MIBK)	ug/kg	<2.0	2.0	08/25/20 07:42	
Acetone	ug/kg	<2.0	2.0	08/25/20 07:42	
Benzene	ug/kg	<2.0	2.0	08/25/20 07:42	
Bromobenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
Bromochloromethane	ug/kg	<2.0	2.0	08/25/20 07:42	
Bromodichloromethane	ug/kg	<2.0	2.0	08/25/20 07:42	
Bromoform	ug/kg	<2.0	2.0	08/25/20 07:42	
Bromomethane	ug/kg	<2.0	2.0	08/25/20 07:42	
Carbon disulfide	ug/kg	<2.0	2.0	08/25/20 07:42	
Carbon tetrachloride	ug/kg	<2.0	2.0	08/25/20 07:42	
Chlorobenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
Chloroethane	ug/kg	<2.0	2.0	08/25/20 07:42	
Chloroform	ug/kg	<2.0	2.0	08/25/20 07:42	
Chloromethane	ug/kg	<2.0	2.0	08/25/20 07:42	
cis-1,2-Dichloroethene	ug/kg	<2.0	2.0	08/25/20 07:42	

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QUALITY CONTROL DATA

Project: ALCO 8/11
Pace Project No.: 70141429

METHOD BLANK: 845715 Matrix: Solid
Associated Lab Samples: 70141429001, 70141429002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,3-Dichloropropene	ug/kg	<2.0	2.0	08/25/20 07:42	
Dibromochloromethane	ug/kg	<2.0	2.0	08/25/20 07:42	
Dibromomethane	ug/kg	<2.0	2.0	08/25/20 07:42	
Dichlorodifluoromethane	ug/kg	<2.0	2.0	08/25/20 07:42	
Ethylbenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
Hexachloro-1,3-butadiene	ug/kg	<2.0	2.0	08/25/20 07:42	
Isopropylbenzene (Cumene)	ug/kg	<2.0	2.0	08/25/20 07:42	
m&p-Xylene	ug/kg	<3.9	3.9	08/25/20 07:42	
Methyl-tert-butyl ether	ug/kg	<2.0	2.0	08/25/20 07:42	
Methylene Chloride	ug/kg	<2.0	2.0	08/25/20 07:42	
n-Butylbenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
n-Propylbenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
Naphthalene	ug/kg	<2.0	2.0	08/25/20 07:42	
o-Xylene	ug/kg	<2.0	2.0	08/25/20 07:42	
p-Isopropyltoluene	ug/kg	<2.0	2.0	08/25/20 07:42	
sec-Butylbenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
Styrene	ug/kg	<2.0	2.0	08/25/20 07:42	
tert-Butylbenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
Tetrachloroethene	ug/kg	<2.0	2.0	08/25/20 07:42	
Toluene	ug/kg	<2.0	2.0	08/25/20 07:42	
trans-1,2-Dichloroethene	ug/kg	<2.0	2.0	08/25/20 07:42	
trans-1,3-Dichloropropene	ug/kg	<2.0	2.0	08/25/20 07:42	
Trichloroethene	ug/kg	<2.0	2.0	08/25/20 07:42	
Trichlorofluoromethane	ug/kg	<2.0	2.0	08/25/20 07:42	
Vinyl acetate	ug/kg	<2.0	2.0	08/25/20 07:42	
Vinyl chloride	ug/kg	<2.0	2.0	08/25/20 07:42	
Xylene (Total)	ug/kg	<3.9	3.9	08/25/20 07:42	
1,2-Dichloroethane-d4 (S)	%	105	33-150	08/25/20 07:42	
4-Bromofluorobenzene (S)	%	100	34-145	08/25/20 07:42	
Toluene-d8 (S)	%	100	43-157	08/25/20 07:42	

LABORATORY CONTROL SAMPLE: 845716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	50.1	50.1	100	74-140	
1,1,1-Trichloroethane	ug/kg	50.1	48.0	96	59-134	
1,1,2,2-Tetrachloroethane	ug/kg	50.1	47.0	94	69-132	
1,1,2-Trichloroethane	ug/kg	50.1	49.0	98	73-135	
1,1-Dichloroethane	ug/kg	50.1	49.3	98	53-160	
1,1-Dichloroethene	ug/kg	50.1	45.9	92	47-152	
1,1-Dichloropropene	ug/kg	50.1	49.5	99	56-130	
1,2,3-Trichlorobenzene	ug/kg	50.1	48.5	97	48-144	
1,2,3-Trichloropropane	ug/kg	50.1	47.5	95	67-129	
1,2,4-Trichlorobenzene	ug/kg	50.1	49.3	98	52-140	

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QUALITY CONTROL DATA

Project: ALCO 8/11

Pace Project No.: 70141429

LABORATORY CONTROL SAMPLE: 845716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	50.1	50.0	100	59-126	
1,2-Dibromo-3-chloropropane	ug/kg	50.1	47.3	94	57-140	
1,2-Dibromoethane (EDB)	ug/kg	50.1	50.0	100	76-138	
1,2-Dichlorobenzene	ug/kg	50.1	49.7	99	67-125	
1,2-Dichloroethane	ug/kg	50.1	48.5	97	65-143	
1,2-Dichloropropane	ug/kg	50.1	50.4	101	72-131	
1,3,5-Trimethylbenzene	ug/kg	50.1	49.5	99	49-134	
1,3-Dichlorobenzene	ug/kg	50.1	48.6	97	64-124	
1,3-Dichloropropane	ug/kg	50.1	48.6	97	73-130	
1,4-Dichlorobenzene	ug/kg	50.1	48.9	98	61-127	
2,2-Dichloropropane	ug/kg	50.1	52.5	105	55-140	
2-Butanone (MEK)	ug/kg	50.1	44.0	88	52-164	
2-Chlorotoluene	ug/kg	50.1	48.9	98	62-125	
2-Hexanone	ug/kg	50.1	50.0	100	66-151	
4-Chlorotoluene	ug/kg	50.1	49.8	99	62-125	
4-Methyl-2-pentanone (MIBK)	ug/kg	50.1	50.2	100	63-154	
Acetone	ug/kg	50.1	47.5	95	23-196	CH,IH
Benzene	ug/kg	50.1	49.2	98	65-129	
Bromobenzene	ug/kg	50.1	48.5	97	63-130	
Bromochloromethane	ug/kg	50.1	48.0	96	78-136	
Bromodichloromethane	ug/kg	50.1	51.1	102	74-141	
Bromoform	ug/kg	50.1	49.5	99	59-136	
Bromomethane	ug/kg	50.1	49.8	99	32-182	
Carbon disulfide	ug/kg	50.1	48.1	96	26-160	
Carbon tetrachloride	ug/kg	50.1	48.8	97	57-135	
Chlorobenzene	ug/kg	50.1	49.2	98	62-136	
Chloroethane	ug/kg	50.1	53.1	106	50-159	
Chloroform	ug/kg	50.1	49.8	99	71-135	
Chloromethane	ug/kg	50.1	49.1	98	44-139	
cis-1,2-Dichloroethene	ug/kg	50.1	50.2	100	75-130	
cis-1,3-Dichloropropene	ug/kg	50.1	51.4	103	74-140	
Dibromochloromethane	ug/kg	50.1	49.4	99	71-133	
Dibromomethane	ug/kg	50.1	49.2	98	75-136	
Dichlorodifluoromethane	ug/kg	50.1	35.1	70	10-155	
Ethylbenzene	ug/kg	50.1	49.5	99	59-135	
Hexachloro-1,3-butadiene	ug/kg	50.1	46.5	93	19-152	
Isopropylbenzene (Cumene)	ug/kg	50.1	48.5	97	56-129	
m&p-Xylene	ug/kg	100	99.5	99	69-133	
Methyl-tert-butyl ether	ug/kg	50.1	52.4	105	25-171	
Methylene Chloride	ug/kg	50.1	49.5	99	50-164	
n-Butylbenzene	ug/kg	50.1	51.5	103	54-121	
n-Propylbenzene	ug/kg	50.1	49.4	99	56-125	
Naphthalene	ug/kg	50.1	48.1	96	55-145	
o-Xylene	ug/kg	50.1	50.3	100	71-135	
p-Isopropyltoluene	ug/kg	50.1	50.3	100	54-126	
sec-Butylbenzene	ug/kg	50.1	49.8	99	50-126	
Styrene	ug/kg	50.1	49.5	99	73-133	

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QUALITY CONTROL DATA

Project: ALCO 8/11
Pace Project No.: 70141429

LABORATORY CONTROL SAMPLE: 845716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butylbenzene	ug/kg	50.1	48.9	98	56-127	
Tetrachloroethene	ug/kg	50.1	49.6	99	10-176	
Toluene	ug/kg	50.1	48.7	97	66-131	
trans-1,2-Dichloroethene	ug/kg	50.1	49.1	98	53-157	
trans-1,3-Dichloropropene	ug/kg	50.1	52.0	104	66-144	
Trichloroethene	ug/kg	50.1	49.6	99	62-130	
Trichlorofluoromethane	ug/kg	50.1	48.2	96	38-166	
Vinyl acetate	ug/kg	50.1	51.0	102	10-155	
Vinyl chloride	ug/kg	50.1	48.2	96	45-137	
Xylene (Total)	ug/kg	150	150	100	62-135	
1,2-Dichloroethane-d4 (S)	%			100	33-150	
4-Bromofluorobenzene (S)	%			102	34-145	
Toluene-d8 (S)	%			99	43-157	

MATRIX SPIKE SAMPLE: 845889

Parameter	Units	70142243005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<1.8	47.2	43.6	92	74-140	
1,1,1-Trichloroethane	ug/kg	<1.8	47.2	48.5	103	59-134	
1,1,2,2-Tetrachloroethane	ug/kg	<1.8	47.2	41.8	88	69-132	
1,1,2-Trichloroethane	ug/kg	<1.8	47.2	35.1	74	73-135	
1,1-Dichloroethane	ug/kg	<1.8	47.2	45.4	96	53-160	
1,1-Dichloroethene	ug/kg	<1.8	47.2	47.3	100	47-152	
1,1-Dichloropropene	ug/kg	<1.8	47.2	47.5	101	56-130	
1,2,3-Trichlorobenzene	ug/kg	<1.8	47.2	26.8	57	48-144	
1,2,3-Trichloropropane	ug/kg	<1.8	47.2	41.7	88	67-129	
1,2,4-Trichlorobenzene	ug/kg	<1.8	47.2	30.1	64	52-140	
1,2,4-Trimethylbenzene	ug/kg	9.4	47.2	50.9	88	59-126	
1,2-Dibromo-3-chloropropane	ug/kg	<1.8	47.2	37.3	79	57-140	
1,2-Dibromoethane (EDB)	ug/kg	<1.8	47.2	34.7	73	76-138	M1
1,2-Dichlorobenzene	ug/kg	<1.8	47.2	42.5	90	67-125	
1,2-Dichloroethane	ug/kg	<1.8	47.2	36.6	77	65-143	
1,2-Dichloropropane	ug/kg	<1.8	47.2	41.5	88	72-131	
1,3,5-Trimethylbenzene	ug/kg	1.8	47.2	50.6	103	49-134	
1,3-Dichlorobenzene	ug/kg	<1.8	47.2	43.9	93	64-124	
1,3-Dichloropropane	ug/kg	<1.8	47.2	39.1	83	73-130	
1,4-Dichlorobenzene	ug/kg	<1.8	47.2	44.3	94	61-127	
2,2-Dichloropropane	ug/kg	<1.8	47.2	48.5	103	55-140	
2-Butanone (MEK)	ug/kg	<1.8	47.2	27.8	59	52-164	
2-Chlorotoluene	ug/kg	<1.8	47.2	49.2	104	62-125	
2-Hexanone	ug/kg	<1.8	47.2	37.0	78	66-151	
4-Chlorotoluene	ug/kg	<1.8	47.2	49.1	104	62-125	
4-Methyl-2-pentanone (MIBK)	ug/kg	<1.8	47.2	33.8	72	63-154	
Acetone	ug/kg	<1.8	47.2	31.5	67	23-196	CH,IH
Benzene	ug/kg	<1.8	47.2	45.0	95	65-129	

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QUALITY CONTROL DATA

Project: ALCO 8/11
Pace Project No.: 70141429

MATRIX SPIKE SAMPLE: 845889		70142243005	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Bromobenzene	ug/kg	<1.8	47.2	49.1	104	63-130	
Bromochloromethane	ug/kg	<1.8	47.2	39.4	83	78-136	
Bromodichloromethane	ug/kg	<1.8	47.2	41.0	87	74-141	
Bromoform	ug/kg	<1.8	47.2	35.7	75	59-136	
Bromomethane	ug/kg	<1.8	47.2	56.9	121	32-182	
Carbon disulfide	ug/kg	<1.8	47.2	44.2	94	26-160	
Carbon tetrachloride	ug/kg	<1.8	47.2	47.8	101	57-135	
Chlorobenzene	ug/kg	<1.8	47.2	43.6	92	62-136	
Chloroethane	ug/kg	<1.8	47.2	50.0	106	50-159	
Chloroform	ug/kg	<1.8	47.2	43.8	93	71-135	
Chloromethane	ug/kg	<1.8	47.2	44.9	95	44-139	
cis-1,2-Dichloroethene	ug/kg	<1.8	47.2	43.4	92	75-130	
cis-1,3-Dichloropropene	ug/kg	<1.8	47.2	41.0	87	74-140	
Dibromochloromethane	ug/kg	<1.8	47.2	40.2	85	71-133	
Dibromomethane	ug/kg	<1.8	47.2	35.4	75	75-136	
Dichlorodifluoromethane	ug/kg	<1.8	47.2	28.1	60	10-155	
Ethylbenzene	ug/kg	<1.8	47.2	46.4	98	59-135	
Hexachloro-1,3-butadiene	ug/kg	<1.8	47.2	24.5	52	19-152	
Isopropylbenzene (Cumene)	ug/kg	<1.8	47.2	52.3	111	56-129	
m&p-Xylene	ug/kg	<3.6	94.5	90.9	96	69-133	
Methyl-tert-butyl ether	ug/kg	<1.8	47.2	38.0	80	25-171	
Methylene Chloride	ug/kg	4.2	47.2	47.5	92	50-164	
n-Butylbenzene	ug/kg	<1.8	47.2	42.3	86	54-121	
n-Propylbenzene	ug/kg	<1.8	47.2	50.6	104	56-125	
Naphthalene	ug/kg	<1.8	47.2	34.9	70	55-145	
o-Xylene	ug/kg	<1.8	47.2	44.2	94	71-135	
p-Isopropyltoluene	ug/kg	<1.8	47.2	46.7	96	54-126	
sec-Butylbenzene	ug/kg	<1.8	47.2	46.5	96	50-126	
Styrene	ug/kg	<1.8	47.2	42.0	89	73-133	
tert-Butylbenzene	ug/kg	<1.8	47.2	46.2	98	56-127	
Tetrachloroethene	ug/kg	<1.8	47.2	57.4	121	10-176	
Toluene	ug/kg	<1.8	47.2	42.4	90	66-131	
trans-1,2-Dichloroethene	ug/kg	<1.8	47.2	47.3	100	53-157	
trans-1,3-Dichloropropene	ug/kg	<1.8	47.2	38.2	81	66-144	
Trichloroethene	ug/kg	<1.8	47.2	45.7	97	62-130	
Trichlorofluoromethane	ug/kg	<1.8	47.2	46.6	99	38-166	
Vinyl acetate	ug/kg	<1.8	47.2	36.0	76	10-155	
Vinyl chloride	ug/kg	<1.8	47.2	47.0	100	45-137	
Xylene (Total)	ug/kg	<3.6	142	135	95	62-135	
1,2-Dichloroethane-d4 (S)	%				84	33-150	
4-Bromofluorobenzene (S)	%				92	34-145	
Toluene-d8 (S)	%				107	43-157	

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QUALITY CONTROL DATA

Project: ALCO 8/11
Pace Project No.: 70141429

QC Batch: 172648 Analysis Method: EPA 8270D
QC Batch Method: EPA 3545A Analysis Description: 8270 Solid MSSV
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70141429001, 70141429002

METHOD BLANK: 836295 Matrix: Solid

Associated Lab Samples: 70141429001, 70141429002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,2'-Oxybis(1-chloropropane)	ug/kg	<67.0	67.0	08/17/20 15:06	
2,4,5-Trichlorophenol	ug/kg	<67.0	67.0	08/17/20 15:06	
2,4,6-Trichlorophenol	ug/kg	<67.0	67.0	08/17/20 15:06	
2,4-Dichlorophenol	ug/kg	<67.0	67.0	08/17/20 15:06	
2,4-Dimethylphenol	ug/kg	<67.0	67.0	08/17/20 15:06	
2,4-Dinitrophenol	ug/kg	<67.0	67.0	08/17/20 15:06	CL
2,4-Dinitrotoluene	ug/kg	<330	330	08/17/20 15:06	
2,6-Dinitrotoluene	ug/kg	<330	330	08/17/20 15:06	
2-Chloronaphthalene	ug/kg	<67.0	67.0	08/17/20 15:06	
2-Chlorophenol	ug/kg	<67.0	67.0	08/17/20 15:06	
2-Methylnaphthalene	ug/kg	<67.0	67.0	08/17/20 15:06	
2-Methylphenol(o-Cresol)	ug/kg	<67.0	67.0	08/17/20 15:06	
2-Nitroaniline	ug/kg	<330	330	08/17/20 15:06	
2-Nitrophenol	ug/kg	<330	330	08/17/20 15:06	
3&4-Methylphenol(m&p Cresol)	ug/kg	<67.0	67.0	08/17/20 15:06	
3,3'-Dichlorobenzidine	ug/kg	<330	330	08/17/20 15:06	
3-Nitroaniline	ug/kg	<330	330	08/17/20 15:06	
4,6-Dinitro-2-methylphenol	ug/kg	<67.0	67.0	08/17/20 15:06	CL
4-Bromophenylphenyl ether	ug/kg	<67.0	67.0	08/17/20 15:06	
4-Chloro-3-methylphenol	ug/kg	<67.0	67.0	08/17/20 15:06	
4-Chloroaniline	ug/kg	<330	330	08/17/20 15:06	
4-Chlorophenylphenyl ether	ug/kg	<67.0	67.0	08/17/20 15:06	
4-Nitroaniline	ug/kg	<330	330	08/17/20 15:06	
4-Nitrophenol	ug/kg	<67.0	67.0	08/17/20 15:06	
Acenaphthene	ug/kg	<67.0	67.0	08/17/20 15:06	
Acenaphthylene	ug/kg	<67.0	67.0	08/17/20 15:06	
Anthracene	ug/kg	<67.0	67.0	08/17/20 15:06	
Benzo(a)anthracene	ug/kg	<67.0	67.0	08/17/20 15:06	
Benzo(a)pyrene	ug/kg	<67.0	67.0	08/17/20 15:06	
Benzo(b)fluoranthene	ug/kg	<67.0	67.0	08/17/20 15:06	
Benzo(g,h,i)perylene	ug/kg	<67.0	67.0	08/17/20 15:06	
Benzo(k)fluoranthene	ug/kg	<67.0	67.0	08/17/20 15:06	
bis(2-Chloroethoxy)methane	ug/kg	<67.0	67.0	08/17/20 15:06	
bis(2-Chloroethyl) ether	ug/kg	<67.0	67.0	08/17/20 15:06	
bis(2-Ethylhexyl)phthalate	ug/kg	<67.0	67.0	08/17/20 15:06	
Butylbenzylphthalate	ug/kg	<67.0	67.0	08/17/20 15:06	
Carbazole	ug/kg	<67.0	67.0	08/17/20 15:06	
Chrysene	ug/kg	<67.0	67.0	08/17/20 15:06	
Di-n-butylphthalate	ug/kg	<67.0	67.0	08/17/20 15:06	
Di-n-octylphthalate	ug/kg	<330	330	08/17/20 15:06	

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QUALITY CONTROL DATA

Project: ALCO 8/11

Pace Project No.: 70141429

METHOD BLANK: 836295

Matrix: Solid

Associated Lab Samples: 70141429001, 70141429002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibenz(a,h)anthracene	ug/kg	<67.0	67.0	08/17/20 15:06	
Dibenzofuran	ug/kg	<67.0	67.0	08/17/20 15:06	
Diethylphthalate	ug/kg	<67.0	67.0	08/17/20 15:06	
Dimethylphthalate	ug/kg	<67.0	67.0	08/17/20 15:06	
Fluoranthene	ug/kg	<67.0	67.0	08/17/20 15:06	
Fluorene	ug/kg	<67.0	67.0	08/17/20 15:06	
Hexachloro-1,3-butadiene	ug/kg	<67.0	67.0	08/17/20 15:06	
Hexachlorobenzene	ug/kg	<67.0	67.0	08/17/20 15:06	
Hexachlorocyclopentadiene	ug/kg	<330	330	08/17/20 15:06	
Hexachloroethane	ug/kg	<67.0	67.0	08/17/20 15:06	
Indeno(1,2,3-cd)pyrene	ug/kg	<67.0	67.0	08/17/20 15:06	
Isophorone	ug/kg	<67.0	67.0	08/17/20 15:06	
N-Nitroso-di-n-propylamine	ug/kg	<67.0	67.0	08/17/20 15:06	
N-Nitrosodiphenylamine	ug/kg	<67.0	67.0	08/17/20 15:06	
Naphthalene	ug/kg	<67.0	67.0	08/17/20 15:06	
Nitrobenzene	ug/kg	<67.0	67.0	08/17/20 15:06	
Pentachlorophenol	ug/kg	<670	670	08/17/20 15:06	CL
Phenanthrene	ug/kg	<67.0	67.0	08/17/20 15:06	
Phenol	ug/kg	<67.0	67.0	08/17/20 15:06	
Pyrene	ug/kg	<67.0	67.0	08/17/20 15:06	
1,2-Dichlorobenzene-d4 (S)	%	62	20-130	08/17/20 15:06	
2,4,6-Tribromophenol (S)	%	90	19-122	08/17/20 15:06	
2-Chlorophenol-d4 (S)	%	71	20-130	08/17/20 15:06	
2-Fluorobiphenyl (S)	%	72	30-115	08/17/20 15:06	
2-Fluorophenol (S)	%	74	25-121	08/17/20 15:06	
Nitrobenzene-d5 (S)	%	74	23-120	08/17/20 15:06	
p-Terphenyl-d14 (S)	%	85	18-137	08/17/20 15:06	
Phenol-d5 (S)	%	71	24-113	08/17/20 15:06	

LABORATORY CONTROL SAMPLE: 836296

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,2'-Oxybis(1-chloropropane)	ug/kg	1670	806	48	33-116	
2,4,5-Trichlorophenol	ug/kg	1670	1030	62	45-111	
2,4,6-Trichlorophenol	ug/kg	1670	1060	63	45-110	
2,4-Dichlorophenol	ug/kg	1670	1020	61	41-117	
2,4-Dimethylphenol	ug/kg	1670	1090	65	24-96	
2,4-Dinitrophenol	ug/kg	1670	<670	38	10-80	CL
2,4-Dinitrotoluene	ug/kg	1670	1070	64	49-112	
2,6-Dinitrotoluene	ug/kg	1670	1100	66	50-109	
2-Chloronaphthalene	ug/kg	1670	876	53	35-107	
2-Chlorophenol	ug/kg	1670	927	56	36-109	
2-Methylnaphthalene	ug/kg	1670	942	57	31-135	
2-Methylphenol(o-Cresol)	ug/kg	1670	949	57	36-104	

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QUALITY CONTROL DATA

Project: ALCO 8/11

Pace Project No.: 70141429

LABORATORY CONTROL SAMPLE: 836296

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Nitroaniline	ug/kg	1670	809	49	42-118	
2-Nitrophenol	ug/kg	1670	892	54	36-117	
3&4-Methylphenol(m&p Cresol)	ug/kg	1670	852	51	37-137	
3,3'-Dichlorobenzidine	ug/kg	1670	965	58	41-116	
3-Nitroaniline	ug/kg	1670	1040	62	40-95	
4,6-Dinitro-2-methylphenol	ug/kg	1670	<670	37	16-104	CL
4-Bromophenylphenyl ether	ug/kg	1670	1070	64	50-116	
4-Chloro-3-methylphenol	ug/kg	1670	1070	64	45-118	
4-Chloroaniline	ug/kg	1670	537	32	29-88	
4-Chlorophenylphenyl ether	ug/kg	1670	982	59	48-111	
4-Nitroaniline	ug/kg	1670	1060	64	46-110	
4-Nitrophenol	ug/kg	1670	1290	77	26-118	
Acenaphthene	ug/kg	1670	929	56	45-109	
Acenaphthylene	ug/kg	1670	1040	63	43-107	
Anthracene	ug/kg	1670	1020	61	50-117	
Benzo(a)anthracene	ug/kg	1670	1040	63	52-116	
Benzo(a)pyrene	ug/kg	1670	1010	60	56-119	
Benzo(b)fluoranthene	ug/kg	1670	1010	61	45-122	
Benzo(g,h,i)perylene	ug/kg	1670	1100	66	30-107	
Benzo(k)fluoranthene	ug/kg	1670	982	59	54-124	
bis(2-Chloroethoxy)methane	ug/kg	1670	692	42	29-112	
bis(2-Chloroethyl) ether	ug/kg	1670	746	45	32-116	
bis(2-Ethylhexyl)phthalate	ug/kg	1670	1040	62	60-127	
Butylbenzylphthalate	ug/kg	1670	979	59	54-130	
Carbazole	ug/kg	1670	1010	61	40-120	
Chrysene	ug/kg	1670	959	58	48-121	
Di-n-butylphthalate	ug/kg	1670	1140	68	53-124	
Di-n-octylphthalate	ug/kg	1670	1060	64	46-141	
Dibenz(a,h)anthracene	ug/kg	1670	1020	61	52-109	
Dibenzofuran	ug/kg	1670	1030	62	48-112	
Diethylphthalate	ug/kg	1670	1130	68	51-114	
Dimethylphthalate	ug/kg	1670	1140	68	49-112	
Fluoranthene	ug/kg	1670	1060	64	45-126	
Fluorene	ug/kg	1670	908	54	47-108	
Hexachloro-1,3-butadiene	ug/kg	1670	905	54	36-118	
Hexachlorobenzene	ug/kg	1670	1130	68	51-110	
Hexachlorocyclopentadiene	ug/kg	1670	939	56	10-97	
Hexachloroethane	ug/kg	1670	762	46	34-105	
Indeno(1,2,3-cd)pyrene	ug/kg	1670	1030	62	50-108	
Isophorone	ug/kg	1670	925	55	14-129	
N-Nitroso-di-n-propylamine	ug/kg	1670	829	50	33-109	
N-Nitrosodiphenylamine	ug/kg	1670	975	58	39-90	
Naphthalene	ug/kg	1670	901	54	18-142	
Nitrobenzene	ug/kg	1670	836	50	36-119	
Pentachlorophenol	ug/kg	1670	770	46	22-115	CL
Phenanthrene	ug/kg	1670	1010	60	47-124	
Phenol	ug/kg	1670	965	58	38-104	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ALCO 8/11
Pace Project No.: 70141429

LABORATORY CONTROL SAMPLE: 836296

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/kg	1670	1080	65	49-132	
1,2-Dichlorobenzene-d4 (S)	%			47	20-130	
2,4,6-Tribromophenol (S)	%			79	19-122	
2-Chlorophenol-d4 (S)	%			57	20-130	
2-Fluorobiphenyl (S)	%			56	30-115	
2-Fluorophenol (S)	%			60	25-121	
Nitrobenzene-d5 (S)	%			53	23-120	
p-Terphenyl-d14 (S)	%			69	18-137	
Phenol-d5 (S)	%			62	24-113	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 836444 836445

Parameter	70141429002		MS	MSD	MS		MSD		% Rec	RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec			
2,2'-Oxybis(1-chloropropane)	ug/kg	<79.6	1970	1980	1060	1160	54	58	33-116	9	
2,4,5-Trichlorophenol	ug/kg	<79.6	1970	1980	1370	1480	69	75	45-111	8	
2,4,6-Trichlorophenol	ug/kg	<79.6	1970	1980	1220	1300	62	66	45-110	7	
2,4-Dichlorophenol	ug/kg	<79.6	1970	1980	1340	1470	68	75	41-117	10	
2,4-Dimethylphenol	ug/kg	<79.6	1970	1980	1820	1760	92	89	24-96	3	
2,4-Dinitrophenol	ug/kg	<796	1970	1980	<793	<795	33	33	10-80		CL
2,4-Dinitrotoluene	ug/kg	<392	1970	1980	1570	1660	80	84	49-112	5	
2,6-Dinitrotoluene	ug/kg	<392	1970	1980	1020	1410	52	71	50-109	31	R1
2-Chloronaphthalene	ug/kg	<79.6	1970	1980	841	1360	43	69	35-107	47	R1
2-Chlorophenol	ug/kg	<79.6	1970	1980	1080	1230	55	62	36-109	12	
2-Methylnaphthalene	ug/kg	<79.6	1970	1980	1200	1290	61	65	31-135	7	
2-Methylphenol(o-Cresol)	ug/kg	<79.6	1970	1980	1180	1290	60	65	36-104	9	
2-Nitroaniline	ug/kg	<392	1970	1980	1810	2080	92	105	42-118	14	
2-Nitrophenol	ug/kg	<392	1970	1980	831	999	42	51	36-117	18	
3&4-Methylphenol(m&p Cresol)	ug/kg	<79.6	1970	1980	1050	1170	53	59	37-137	11	
3,3'-Dichlorobenzidine	ug/kg	<392	1970	1980	1300	1230	66	62	41-116	6	
3-Nitroaniline	ug/kg	<392	1970	1980	1260	1600	64	81	40-95	24	
4,6-Dinitro-2-methylphenol	ug/kg	<796	1970	1980	<793	<795	22	18	16-104		CL
4-Bromophenylphenyl ether	ug/kg	<79.6	1970	1980	1410	1860	72	94	50-116	27	
4-Chloro-3-methylphenol	ug/kg	<79.6	1970	1980	1240	1430	63	72	45-118	14	
4-Chloroaniline	ug/kg	<392	1970	1980	497	742	25	38	29-88	40	M1,R1
4-Chlorophenylphenyl ether	ug/kg	<79.6	1970	1980	1130	1290	57	65	48-111	13	
4-Nitroaniline	ug/kg	<392	1970	1980	1020	1590	52	80	46-110	44	R1
4-Nitrophenol	ug/kg	<796	1970	1980	1890	3440	96	174	26-118	58	M1,R1
Acenaphthene	ug/kg	677	1970	1980	1760	1830	55	59	45-109	4	
Acenaphthylene	ug/kg	<79.6	1970	1980	1470	1610	75	81	43-107	9	
Anthracene	ug/kg	<79.6	1970	1980	1260	1550	64	78	50-117	20	
Benzo(a)anthracene	ug/kg	179	1970	1980	1480	1470	66	65	52-116	1	
Benzo(a)pyrene	ug/kg	99.0	1970	1980	1350	1330	63	63	56-119	1	
Benzo(b)fluoranthene	ug/kg	<79.6	1970	1980	1470	1360	75	69	45-122	8	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ALCO 8/11
Pace Project No.: 70141429

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 836444			836445									
Parameter	Units	70141429002 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Benzo(g,h,i)perylene	ug/kg	<79.6	1970	1980	1260	1280	64	65	30-107		1	
Benzo(k)fluoranthene	ug/kg	<79.6	1970	1980	1150	1270	58	64	54-124		10	
bis(2-Chloroethoxy)methane	ug/kg	<79.6	1970	1980	937	1010	47	51	29-112		7	
bis(2-Chloroethyl) ether	ug/kg	<79.6	1970	1980	1290	1280	65	65	32-116		0	
bis(2-Ethylhexyl)phthalate	ug/kg	<79.6	1970	1980	1520	1420	77	72	60-127		7	
Butylbenzylphthalate	ug/kg	<79.6	1970	1980	1320	1500	67	76	54-130		12	
Carbazole	ug/kg	<79.6	1970	1980	1220	1380	62	70	40-120		12	
Chrysene	ug/kg	228	1970	1980	1480	1460	64	63	48-121		1	
Di-n-butylphthalate	ug/kg	<79.6	1970	1980	1430	1590	72	80	53-124		11	
Di-n-octylphthalate	ug/kg	<392	1970	1980	1360	1450	69	73	46-141		7	
Dibenz(a,h)anthracene	ug/kg	<79.6	1970	1980	1240	1330	63	67	52-109		7	
Dibenzofuran	ug/kg	<79.6	1970	1980	1460	1590	74	80	48-112		8	
Diethylphthalate	ug/kg	<79.6	1970	1980	1390	1490	70	75	51-114		7	
Dimethylphthalate	ug/kg	<79.6	1970	1980	1220	1470	62	74	49-112		19	
Fluoranthene	ug/kg	<79.6	1970	1980	1540	1540	78	78	45-126		0	
Fluorene	ug/kg	739	1970	1980	1850	1730	56	50	47-108		7	
Hexachloro-1,3-butadiene	ug/kg	<79.6	1970	1980	1160	1240	59	63	36-118		6	
Hexachlorobenzene	ug/kg	<79.6	1970	1980	1420	1570	72	79	51-110		10	
Hexachlorocyclopentadiene	ug/kg	<392	1970	1980	<391	<391	1	1	10-97			M1
Hexachloroethane	ug/kg	<79.6	1970	1980	791	842	40	43	34-105		6	
Indeno(1,2,3-cd)pyrene	ug/kg	<79.6	1970	1980	1250	1290	63	65	50-108		4	
Isophorone	ug/kg	<79.6	1970	1980	1430	1420	73	72	14-129		1	
N-Nitroso-di-n-propylamine	ug/kg	<79.6	1970	1980	1200	1210	61	61	33-109		0	
N-Nitrosodiphenylamine	ug/kg	<79.6	1970	1980	3920	4080	198	206	39-90		4	M1
Naphthalene	ug/kg	<79.6	1970	1980	1240	1300	63	66	18-142		4	
Nitrobenzene	ug/kg	<79.6	1970	1980	1160	1140	59	58	36-119		2	
Pentachlorophenol	ug/kg	<796	1970	1980	<793	1200	40	61	22-115			CL
Phenanthrene	ug/kg	<79.6	1970	1980	1190	1430	60	73	47-124		18	
Phenol	ug/kg	<79.6	1970	1980	1130	1290	57	65	38-104		14	
Pyrene	ug/kg	<79.6	1970	1980	1800	1590	91	80	49-132		12	
1,2-Dichlorobenzene-d4 (S)	%						48	48	20-130			
2,4,6-Tribromophenol (S)	%						56	65	19-122			
2-Chlorophenol-d4 (S)	%						54	56	20-130			
2-Fluorobiphenyl (S)	%						57	67	30-115			
2-Fluorophenol (S)	%						57	61	25-121			
Nitrobenzene-d5 (S)	%						59	55	23-120			
p-Terphenyl-d14 (S)	%						61	60	18-137			
Phenol-d5 (S)	%						58	61	24-113			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ALCO 8/11
Pace Project No.: 70141429

QC Batch: 172838	Analysis Method: ASTM D2216-05M
QC Batch Method: ASTM D2216-05M	Analysis Description: Dry Weight/Percent Moisture
	Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70141429001, 70141429002

SAMPLE DUPLICATE: 837460

Parameter	Units	30376569001 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	29.3	24.6	17	

SAMPLE DUPLICATE: 837461

Parameter	Units	30376569002 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	22.7	21.2	7	

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QUALIFIERS

Project: ALCO 8/11

Pace Project No.: 70141429

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

SAMPLE QUALIFIERS

Sample: 70141429001

[1] Method 8260C: The internal standard response exceeded the lower acceptance limits and confirmed by reanalysis. Results may be biased high.

Sample: 70141429002

[1] Method 8260C: The internal standard response exceeded the lower acceptance limits and confirmed by reanalysis. Results may be biased high.

ANALYTE QUALIFIERS

C1 Result could not be confirmed by second analysis.

CH The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

CL The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

IH This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

S0 Surrogate recovery outside laboratory control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: ALCO 8/11
Pace Project No.: 70141429

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70141429001	B-2 20-24'	EPA 3545A	172648	EPA 8270D	172741
70141429002	B-3 20-24	EPA 3545A	172648	EPA 8270D	172741
70141429001	B-2 20-24'	EPA 5035A-L	174448	EPA 8260C	174468
70141429002	B-3 20-24	EPA 5035A-L	174448	EPA 8260C	174468
70141429001	B-2 20-24'	ASTM D2216-05M	172838		
70141429002	B-3 20-24	ASTM D2216-05M	172838		

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WO#: 70141429



CHAIN-OF-CUSTODY / Analytical
The Chain-of-Custody is a LEGAL DOCUMENT

Section A		Section B		Section C	
Required Client Information:		Required Project Information:		Invoice Information:	
Company:	Barton and Loguidice-Albany	Report To:	Steinmuller, Corinne	Attention:	
Address:	10 Airline Drive Suite 200	Copy To:		Company Name:	
Albany, NY 12205		Purchase Order #:		Address:	
Email:	csteinmuller@bartonandloguidice.com	Project Name:	ALCO	Pace Quote:	
Phone:	NONE	Requested Due Date:		Pace Project Manager:	jennifer.araci@paceclabs.com
Requested Due Date:		Project #:		Pace Profile #:	0
				Regulatory Agency	
				State / Location	
				NY	

1 Of

ITEM #	MATRIX	CODE	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		DATE	TIME	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP in C	Received on	Custody	Sealed	Cooler	Samples	Intact	
				START	END															
1	Drinking Water	DW	SL	8/11	1210	8/11	1210		5											
2	Drinking Water	DW	SL	8/11	1450	8/11	1450		5											
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Pace Preserved / B+L	8/11/20	15:10	[Signature]	8/11/20	15:10	
	[Signature]	8/11/20	16:00	[Signature]	8/11/20	16:00	
				[Signature]	8/11/20	16:00	

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER:
 SIGNATURE of SAMPLER:
 DATE Signed:



Sample Condition Upon Receipt

Client Name: _____

Project _____

WO#: 70141429

PM: JSA

Due Date: 08/26/20

CLIENT: B&L

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: 4099 9900 8139

Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags Ziploc None Other

Thermometer Used: TH091 Correction Factor: +0.4

Cooler Temperature (°C): 1.2 Cooler Temperature Corrected (°C): 1.6

Temp should be above freezing to 6.0°C

USDA Regulated Soil (N/A, water sample)

Date and Initials of person examining contents: 8/16/20 ED

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? YES NO

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

		COMMENTS:
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume: (Triple volume provided for MS/MSD)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12.
-Includes date/time/ID/Analysis Matrix <u>SL W/P OIL</u>		
All containers needing preservation have been checked:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
pH paper Lot #		Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl, NaOH>9 Sulfide, NAOH>12 Cyanide)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis		Initial when completed: Lot # of added preservative: Date/Time preservative added
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14. Positive for Res. Chlorine? Y N
KI starch test strips Lot #		
Residual chlorine strips Lot #		
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if applicable):		

Client Notification/ Resolution: _____

Field Data Required? Y / N

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: _____

* PM (Project Manager) review is documented electronically in LIMS.

August 27, 2020

Corinne Steinmuller
Barton and Loguidice
10 Airline Drive Suite 200
Albany,

RE: Project: ALCO 8/12
Pace Project No.: 70141731

Dear Corinne Steinmuller:

Enclosed are the analytical results for sample(s) received by the laboratory on August 13, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Aracri
jennifer.aracri@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Andy Barber, B&L
Nicholas Despart, Barton and Loguidice-Albany



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: ALCO 8/12

Pace Project No.: 70141731

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747

New York Certification #: 10478 Primary Accrediting Body

New Jersey Certification #: NY158

Pennsylvania Certification #: 68-00350

Connecticut Certification #: PH-0435

Maryland Certification #: 208

Rhode Island Certification #: LAO00340

Massachusetts Certification #: M-NY026

New Hampshire Certification #: 2987

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ALCO 8/12

Pace Project No.: 70141731

Sample: B-4 20-24' Lab ID: 70141731001 Collected: 08/12/20 07:54 Received: 08/13/20 11:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV								
Analytical Method: EPA 8270D Preparation Method: EPA 3545A								
Pace Analytical Services - Melville								
2,2'-Oxybis(1-chloropropane)	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	108-60-1	
2,4,5-Trichlorophenol	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	95-95-4	
2,4,6-Trichlorophenol	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	88-06-2	
2,4-Dichlorophenol	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	120-83-2	
2,4-Dimethylphenol	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	105-67-9	
2,4-Dinitrophenol	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	51-28-5	
2,4-Dinitrotoluene	<395	ug/kg	395	1	08/18/20 11:34	08/19/20 19:21	121-14-2	
2,6-Dinitrotoluene	<395	ug/kg	395	1	08/18/20 11:34	08/19/20 19:21	606-20-2	
2-Chloronaphthalene	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	91-58-7	
2-Chlorophenol	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	95-57-8	
2-Methylnaphthalene	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	91-57-6	
2-Methylphenol(o-Cresol)	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	95-48-7	
2-Nitroaniline	<395	ug/kg	395	1	08/18/20 11:34	08/19/20 19:21	88-74-4	
2-Nitrophenol	<395	ug/kg	395	1	08/18/20 11:34	08/19/20 19:21	88-75-5	
3&4-Methylphenol(m&p Cresol)	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21		
3,3'-Dichlorobenzidine	<395	ug/kg	395	1	08/18/20 11:34	08/19/20 19:21	91-94-1	
3-Nitroaniline	<395	ug/kg	395	1	08/18/20 11:34	08/19/20 19:21	99-09-2	
4,6-Dinitro-2-methylphenol	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	534-52-1	
4-Bromophenylphenyl ether	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	101-55-3	
4-Chloro-3-methylphenol	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	59-50-7	
4-Chloroaniline	<395	ug/kg	395	1	08/18/20 11:34	08/19/20 19:21	106-47-8	
4-Chlorophenylphenyl ether	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	7005-72-3	
4-Nitroaniline	<395	ug/kg	395	1	08/18/20 11:34	08/19/20 19:21	100-01-6	
4-Nitrophenol	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	100-02-7	
Acenaphthene	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	83-32-9	
Acenaphthylene	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	208-96-8	
Anthracene	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	120-12-7	
Benzo(a)anthracene	306	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	56-55-3	
Benzo(a)pyrene	250	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	50-32-8	L2
Benzo(b)fluoranthene	271	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	205-99-2	
Benzo(g,h,i)perylene	164	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	191-24-2	
Benzo(k)fluoranthene	116	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	207-08-9	L2
Butylbenzylphthalate	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	85-68-7	
Carbazole	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	86-74-8	
Chrysene	337	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	218-01-9	
Di-n-butylphthalate	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	84-74-2	
Di-n-octylphthalate	<395	ug/kg	395	1	08/18/20 11:34	08/19/20 19:21	117-84-0	
Dibenz(a,h)anthracene	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	53-70-3	
Dibenzofuran	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	132-64-9	
Diethylphthalate	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	84-66-2	
Dimethylphthalate	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	131-11-3	
Fluoranthene	646	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	206-44-0	
Fluorene	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	86-73-7	
Hexachloro-1,3-butadiene	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	87-68-3	
Hexachlorobenzene	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	118-74-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ALCO 8/12

Pace Project No.: 70141731

Sample: B-4 20-24' **Lab ID: 70141731001** Collected: 08/12/20 07:54 Received: 08/13/20 11:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV								
Analytical Method: EPA 8270D Preparation Method: EPA 3545A								
Pace Analytical Services - Melville								
Hexachlorocyclopentadiene	<395	ug/kg	395	1	08/18/20 11:34	08/19/20 19:21	77-47-4	
Hexachloroethane	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	67-72-1	
Indeno(1,2,3-cd)pyrene	164	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	193-39-5	
Isophorone	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	78-59-1	
N-Nitroso-di-n-propylamine	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	621-64-7	
N-Nitrosodiphenylamine	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	86-30-6	
Naphthalene	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	91-20-3	
Nitrobenzene	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	98-95-3	
Pentachlorophenol	<802	ug/kg	802	1	08/18/20 11:34	08/19/20 19:21	87-86-5	
Phenanthrene	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	85-01-8	
Phenol	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	108-95-2	
Pyrene	748	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	129-00-0	
bis(2-Chloroethoxy)methane	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	111-91-1	
bis(2-Chloroethyl) ether	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	111-44-4	
bis(2-Ethylhexyl)phthalate	<80.2	ug/kg	80.2	1	08/18/20 11:34	08/19/20 19:21	117-81-7	L2
Surrogates								
Nitrobenzene-d5 (S)	46	%	23-120	1	08/18/20 11:34	08/19/20 19:21	4165-60-0	
2-Fluorobiphenyl (S)	47	%	30-115	1	08/18/20 11:34	08/19/20 19:21	321-60-8	
p-Terphenyl-d14 (S)	49	%	18-137	1	08/18/20 11:34	08/19/20 19:21	1718-51-0	
Phenol-d5 (S)	44	%	24-113	1	08/18/20 11:34	08/19/20 19:21	4165-62-2	
2-Fluorophenol (S)	46	%	25-121	1	08/18/20 11:34	08/19/20 19:21	367-12-4	
2,4,6-Tribromophenol (S)	50	%	19-122	1	08/18/20 11:34	08/19/20 19:21	118-79-6	
2-Chlorophenol-d4 (S)	42	%	20-130	1	08/18/20 11:34	08/19/20 19:21	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	38	%	20-130	1	08/18/20 11:34	08/19/20 19:21	2199-69-1	
8260C MSV 5035A-L Low Level								
Analytical Method: EPA 8260C Preparation Method: EPA 5035A-L								
Pace Analytical Services - Melville								
1,1,1,2-Tetrachloroethane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	630-20-6	
1,1,1-Trichloroethane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	71-55-6	
1,1,2,2-Tetrachloroethane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	79-34-5	
1,1,2-Trichloroethane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	79-00-5	
1,1-Dichloroethane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	75-34-3	
1,1-Dichloroethene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	75-35-4	
1,1-Dichloropropene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	563-58-6	
1,2,3-Trichlorobenzene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	87-61-6	
1,2,3-Trichloropropane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	96-18-4	
1,2,4-Trichlorobenzene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	120-82-1	
1,2,4-Trimethylbenzene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	95-63-6	
1,2-Dibromo-3-chloropropane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	96-12-8	
1,2-Dibromoethane (EDB)	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	106-93-4	
1,2-Dichlorobenzene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	95-50-1	
1,2-Dichloroethane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	107-06-2	
1,2-Dichloropropane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	78-87-5	
1,3,5-Trimethylbenzene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	108-67-8	
1,3-Dichlorobenzene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	541-73-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ALCO 8/12
Pace Project No.: 70141731

Sample: B-4 20-24' Lab ID: **70141731001** Collected: 08/12/20 07:54 Received: 08/13/20 11:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C MSV 5035A-L Low Level		Analytical Method: EPA 8260C Preparation Method: EPA 5035A-L Pace Analytical Services - Melville						
1,3-Dichloropropane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	142-28-9	
1,4-Dichlorobenzene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	106-46-7	
2,2-Dichloropropane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	594-20-7	
2-Butanone (MEK)	19.6	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	78-93-3	
2-Chlorotoluene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	95-49-8	
2-Hexanone	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	591-78-6	
4-Chlorotoluene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	106-43-4	
4-Methyl-2-pentanone (MIBK)	1.3	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	108-10-1	
Acetone	108	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	67-64-1	C1,CH, E,IH
Benzene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	71-43-2	
Bromobenzene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	108-86-1	
Bromochloromethane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	74-97-5	
Bromodichloromethane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	75-27-4	
Bromoform	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	75-25-2	
Bromomethane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	74-83-9	
Carbon disulfide	2.8	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	75-15-0	
Carbon tetrachloride	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	56-23-5	
Chlorobenzene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	108-90-7	
Chloroethane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	75-00-3	
Chloroform	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	67-66-3	
Chloromethane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	74-87-3	
Dibromochloromethane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	124-48-1	
Dibromomethane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	74-95-3	
Dichlorodifluoromethane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	75-71-8	
Ethylbenzene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	100-41-4	
Hexachloro-1,3-butadiene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	87-68-3	
Isopropylbenzene (Cumene)	5.0	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	98-82-8	
Methyl-tert-butyl ether	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	1634-04-4	
Methylene Chloride	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	75-09-2	
Naphthalene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	91-20-3	
Styrene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	100-42-5	
Tetrachloroethene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	127-18-4	
Toluene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	108-88-3	
Trichloroethene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	79-01-6	
Trichlorofluoromethane	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	75-69-4	
Vinyl acetate	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	108-05-4	
Vinyl chloride	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	75-01-4	
Xylene (Total)	<1.1	ug/kg	1.1	1	08/25/20 06:37	08/25/20 11:56	1330-20-7	
cis-1,2-Dichloroethene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	156-59-2	
cis-1,3-Dichloropropene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	10061-01-5	
m&p-Xylene	<1.1	ug/kg	1.1	1	08/25/20 06:37	08/25/20 11:56	179601-23-1	
n-Butylbenzene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	104-51-8	
n-Propylbenzene	2.9	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	103-65-1	
o-Xylene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	95-47-6	

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ANALYTICAL RESULTS

Project: ALCO 8/12

Pace Project No.: 70141731

Sample: B-4 20-24' **Lab ID: 70141731001** Collected: 08/12/20 07:54 Received: 08/13/20 11:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C MSV 5035A-L Low Level		Analytical Method: EPA 8260C Preparation Method: EPA 5035A-L Pace Analytical Services - Melville						
p-Isopropyltoluene	10.7	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	99-87-6	
sec-Butylbenzene	61.7	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	135-98-8	E
tert-Butylbenzene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	98-06-6	
trans-1,2-Dichloroethene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	156-60-5	
trans-1,3-Dichloropropene	<0.54	ug/kg	0.54	1	08/25/20 06:37	08/25/20 11:56	10061-02-6	
Surrogates								
Toluene-d8 (S)	149	%	43-157	1	08/25/20 06:37	08/25/20 11:56	2037-26-5	
4-Bromofluorobenzene (S)	113	%	34-145	1	08/25/20 06:37	08/25/20 11:56	460-00-4	
1,2-Dichloroethane-d4 (S)	139	%	33-150	1	08/25/20 06:37	08/25/20 11:56	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2216-05M Pace Analytical Services - Melville						
Percent Moisture	16.9	%	0.10	1		08/14/20 11:31		

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ANALYTICAL RESULTS

Project: ALCO 8/12

Pace Project No.: 70141731

Sample: TRIP BLANKS	Lab ID: 70141731002	Collected: 08/12/20 00:00	Received: 08/13/20 11:15	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics		Analytical Method: EPA 8260C/5030C Pace Analytical Services - Melville						
1,1,1,2-Tetrachloroethane	<1.0	ug/L	1.0	1		08/20/20 23:05	630-20-6	
1,1,1-Trichloroethane	<1.0	ug/L	1.0	1		08/20/20 23:05	71-55-6	
1,1,2,2-Tetrachloroethane	<1.0	ug/L	1.0	1		08/20/20 23:05	79-34-5	
1,1,2-Trichloroethane	<1.0	ug/L	1.0	1		08/20/20 23:05	79-00-5	
1,1-Dichloroethane	<1.0	ug/L	1.0	1		08/20/20 23:05	75-34-3	
1,1-Dichloroethene	<1.0	ug/L	1.0	1		08/20/20 23:05	75-35-4	
1,1-Dichloropropene	<1.0	ug/L	1.0	1		08/20/20 23:05	563-58-6	
1,2,3-Trichlorobenzene	<1.0	ug/L	1.0	1		08/20/20 23:05	87-61-6	
1,2,3-Trichloropropane	<1.0	ug/L	1.0	1		08/20/20 23:05	96-18-4	
1,2,4-Trichlorobenzene	<1.0	ug/L	1.0	1		08/20/20 23:05	120-82-1	
1,2,4-Trimethylbenzene	<1.0	ug/L	1.0	1		08/20/20 23:05	95-63-6	
1,2-Dibromo-3-chloropropane	<1.0	ug/L	1.0	1		08/20/20 23:05	96-12-8	
1,2-Dibromoethane (EDB)	<1.0	ug/L	1.0	1		08/20/20 23:05	106-93-4	
1,2-Dichlorobenzene	<1.0	ug/L	1.0	1		08/20/20 23:05	95-50-1	
1,2-Dichloroethane	<1.0	ug/L	1.0	1		08/20/20 23:05	107-06-2	
1,2-Dichloropropane	<1.0	ug/L	1.0	1		08/20/20 23:05	78-87-5	
1,3,5-Trimethylbenzene	<1.0	ug/L	1.0	1		08/20/20 23:05	108-67-8	
1,3-Dichlorobenzene	<1.0	ug/L	1.0	1		08/20/20 23:05	541-73-1	
1,3-Dichloropropane	<1.0	ug/L	1.0	1		08/20/20 23:05	142-28-9	
1,4-Dichlorobenzene	<1.0	ug/L	1.0	1		08/20/20 23:05	106-46-7	
2,2-Dichloropropane	<1.0	ug/L	1.0	1		08/20/20 23:05	594-20-7	
2-Butanone (MEK)	<5.0	ug/L	5.0	1		08/20/20 23:05	78-93-3	IL
2-Chlorotoluene	<1.0	ug/L	1.0	1		08/20/20 23:05	95-49-8	
2-Hexanone	<5.0	ug/L	5.0	1		08/20/20 23:05	591-78-6	
4-Chlorotoluene	<1.0	ug/L	1.0	1		08/20/20 23:05	106-43-4	
4-Methyl-2-pentanone (MIBK)	<5.0	ug/L	5.0	1		08/20/20 23:05	108-10-1	
Acetone	<5.0	ug/L	5.0	1		08/20/20 23:05	67-64-1	CH
Benzene	<1.0	ug/L	1.0	1		08/20/20 23:05	71-43-2	
Bromobenzene	<1.0	ug/L	1.0	1		08/20/20 23:05	108-86-1	
Bromochloromethane	<1.0	ug/L	1.0	1		08/20/20 23:05	74-97-5	
Bromodichloromethane	<1.0	ug/L	1.0	1		08/20/20 23:05	75-27-4	
Bromoform	<1.0	ug/L	1.0	1		08/20/20 23:05	75-25-2	
Bromomethane	<1.0	ug/L	1.0	1		08/20/20 23:05	74-83-9	
Carbon disulfide	<1.0	ug/L	1.0	1		08/20/20 23:05	75-15-0	
Carbon tetrachloride	<1.0	ug/L	1.0	1		08/20/20 23:05	56-23-5	
Chlorobenzene	<1.0	ug/L	1.0	1		08/20/20 23:05	108-90-7	
Chloroethane	<1.0	ug/L	1.0	1		08/20/20 23:05	75-00-3	
Chloroform	<1.0	ug/L	1.0	1		08/20/20 23:05	67-66-3	
Chloromethane	<1.0	ug/L	1.0	1		08/20/20 23:05	74-87-3	
Dibromochloromethane	<1.0	ug/L	1.0	1		08/20/20 23:05	124-48-1	
Dibromomethane	<1.0	ug/L	1.0	1		08/20/20 23:05	74-95-3	
Dichlorodifluoromethane	<1.0	ug/L	1.0	1		08/20/20 23:05	75-71-8	
Ethylbenzene	<1.0	ug/L	1.0	1		08/20/20 23:05	100-41-4	
Hexachloro-1,3-butadiene	<1.0	ug/L	1.0	1		08/20/20 23:05	87-68-3	
Isopropylbenzene (Cumene)	<1.0	ug/L	1.0	1		08/20/20 23:05	98-82-8	
Methyl-tert-butyl ether	<1.0	ug/L	1.0	1		08/20/20 23:05	1634-04-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ALCO 8/12

Pace Project No.: 70141731

Sample: TRIP BLANKS	Lab ID: 70141731002	Collected: 08/12/20 00:00	Received: 08/13/20 11:15	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics		Analytical Method: EPA 8260C/5030C Pace Analytical Services - Melville						
Methylene Chloride	<1.0	ug/L	1.0	1		08/20/20 23:05	75-09-2	
Naphthalene	<1.0	ug/L	1.0	1		08/20/20 23:05	91-20-3	
Styrene	<1.0	ug/L	1.0	1		08/20/20 23:05	100-42-5	
Tetrachloroethene	<1.0	ug/L	1.0	1		08/20/20 23:05	127-18-4	
Toluene	<1.0	ug/L	1.0	1		08/20/20 23:05	108-88-3	
Trichloroethene	<1.0	ug/L	1.0	1		08/20/20 23:05	79-01-6	
Trichlorofluoromethane	<1.0	ug/L	1.0	1		08/20/20 23:05	75-69-4	
Vinyl acetate	<1.0	ug/L	1.0	1		08/20/20 23:05	108-05-4	
Vinyl chloride	<1.0	ug/L	1.0	1		08/20/20 23:05	75-01-4	
Xylene (Total)	<3.0	ug/L	3.0	1		08/20/20 23:05	1330-20-7	
cis-1,2-Dichloroethene	<1.0	ug/L	1.0	1		08/20/20 23:05	156-59-2	
cis-1,3-Dichloropropene	<1.0	ug/L	1.0	1		08/20/20 23:05	10061-01-5	
m&p-Xylene	<2.0	ug/L	2.0	1		08/20/20 23:05	179601-23-1	
n-Butylbenzene	<1.0	ug/L	1.0	1		08/20/20 23:05	104-51-8	
n-Propylbenzene	<1.0	ug/L	1.0	1		08/20/20 23:05	103-65-1	
o-Xylene	<1.0	ug/L	1.0	1		08/20/20 23:05	95-47-6	
p-Isopropyltoluene	<1.0	ug/L	1.0	1		08/20/20 23:05	99-87-6	
sec-Butylbenzene	<1.0	ug/L	1.0	1		08/20/20 23:05	135-98-8	
tert-Butylbenzene	<1.0	ug/L	1.0	1		08/20/20 23:05	98-06-6	
trans-1,2-Dichloroethene	<1.0	ug/L	1.0	1		08/20/20 23:05	156-60-5	
trans-1,3-Dichloropropene	<1.0	ug/L	1.0	1		08/20/20 23:05	10061-02-6	
Surrogates								
1,2-Dichloroethane-d4 (S)	105	%	68-153	1		08/20/20 23:05	17060-07-0	
4-Bromofluorobenzene (S)	97	%	79-124	1		08/20/20 23:05	460-00-4	
Toluene-d8 (S)	99	%	69-124	1		08/20/20 23:05	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ALCO 8/12
Pace Project No.: 70141731

QC Batch: 174448	Analysis Method: EPA 8260C
QC Batch Method: EPA 5035A-L	Analysis Description: 8260 MSV 5035A-L Low Level
	Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70141731001

METHOD BLANK: 845715 Matrix: Solid

Associated Lab Samples: 70141731001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,1,1-Trichloroethane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,1,2,2-Tetrachloroethane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,1,2-Trichloroethane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,1-Dichloroethane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,1-Dichloroethene	ug/kg	<2.0	2.0	08/25/20 07:42	
1,1-Dichloropropene	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2,3-Trichlorobenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2,3-Trichloropropane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2,4-Trichlorobenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2,4-Trimethylbenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2-Dibromo-3-chloropropane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2-Dibromoethane (EDB)	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2-Dichlorobenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2-Dichloroethane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,2-Dichloropropane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,3,5-Trimethylbenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
1,3-Dichlorobenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
1,3-Dichloropropane	ug/kg	<2.0	2.0	08/25/20 07:42	
1,4-Dichlorobenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
2,2-Dichloropropane	ug/kg	<2.0	2.0	08/25/20 07:42	
2-Butanone (MEK)	ug/kg	<2.0	2.0	08/25/20 07:42	
2-Chlorotoluene	ug/kg	<2.0	2.0	08/25/20 07:42	
2-Hexanone	ug/kg	<2.0	2.0	08/25/20 07:42	
4-Chlorotoluene	ug/kg	<2.0	2.0	08/25/20 07:42	
4-Methyl-2-pentanone (MIBK)	ug/kg	<2.0	2.0	08/25/20 07:42	
Acetone	ug/kg	<2.0	2.0	08/25/20 07:42	
Benzene	ug/kg	<2.0	2.0	08/25/20 07:42	
Bromobenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
Bromochloromethane	ug/kg	<2.0	2.0	08/25/20 07:42	
Bromodichloromethane	ug/kg	<2.0	2.0	08/25/20 07:42	
Bromoform	ug/kg	<2.0	2.0	08/25/20 07:42	
Bromomethane	ug/kg	<2.0	2.0	08/25/20 07:42	
Carbon disulfide	ug/kg	<2.0	2.0	08/25/20 07:42	
Carbon tetrachloride	ug/kg	<2.0	2.0	08/25/20 07:42	
Chlorobenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
Chloroethane	ug/kg	<2.0	2.0	08/25/20 07:42	
Chloroform	ug/kg	<2.0	2.0	08/25/20 07:42	
Chloromethane	ug/kg	<2.0	2.0	08/25/20 07:42	
cis-1,2-Dichloroethene	ug/kg	<2.0	2.0	08/25/20 07:42	

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QUALITY CONTROL DATA

Project: ALCO 8/12
Pace Project No.: 70141731

METHOD BLANK: 845715
Associated Lab Samples: 70141731001

Matrix: Solid

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,3-Dichloropropene	ug/kg	<2.0	2.0	08/25/20 07:42	
Dibromochloromethane	ug/kg	<2.0	2.0	08/25/20 07:42	
Dibromomethane	ug/kg	<2.0	2.0	08/25/20 07:42	
Dichlorodifluoromethane	ug/kg	<2.0	2.0	08/25/20 07:42	
Ethylbenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
Hexachloro-1,3-butadiene	ug/kg	<2.0	2.0	08/25/20 07:42	
Isopropylbenzene (Cumene)	ug/kg	<2.0	2.0	08/25/20 07:42	
m&p-Xylene	ug/kg	<3.9	3.9	08/25/20 07:42	
Methyl-tert-butyl ether	ug/kg	<2.0	2.0	08/25/20 07:42	
Methylene Chloride	ug/kg	<2.0	2.0	08/25/20 07:42	
n-Butylbenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
n-Propylbenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
Naphthalene	ug/kg	<2.0	2.0	08/25/20 07:42	
o-Xylene	ug/kg	<2.0	2.0	08/25/20 07:42	
p-Isopropyltoluene	ug/kg	<2.0	2.0	08/25/20 07:42	
sec-Butylbenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
Styrene	ug/kg	<2.0	2.0	08/25/20 07:42	
tert-Butylbenzene	ug/kg	<2.0	2.0	08/25/20 07:42	
Tetrachloroethene	ug/kg	<2.0	2.0	08/25/20 07:42	
Toluene	ug/kg	<2.0	2.0	08/25/20 07:42	
trans-1,2-Dichloroethene	ug/kg	<2.0	2.0	08/25/20 07:42	
trans-1,3-Dichloropropene	ug/kg	<2.0	2.0	08/25/20 07:42	
Trichloroethene	ug/kg	<2.0	2.0	08/25/20 07:42	
Trichlorofluoromethane	ug/kg	<2.0	2.0	08/25/20 07:42	
Vinyl acetate	ug/kg	<2.0	2.0	08/25/20 07:42	
Vinyl chloride	ug/kg	<2.0	2.0	08/25/20 07:42	
Xylene (Total)	ug/kg	<3.9	3.9	08/25/20 07:42	
1,2-Dichloroethane-d4 (S)	%	105	33-150	08/25/20 07:42	
4-Bromofluorobenzene (S)	%	100	34-145	08/25/20 07:42	
Toluene-d8 (S)	%	100	43-157	08/25/20 07:42	

LABORATORY CONTROL SAMPLE: 845716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	50.1	50.1	100	74-140	
1,1,1-Trichloroethane	ug/kg	50.1	48.0	96	59-134	
1,1,2,2-Tetrachloroethane	ug/kg	50.1	47.0	94	69-132	
1,1,2-Trichloroethane	ug/kg	50.1	49.0	98	73-135	
1,1-Dichloroethane	ug/kg	50.1	49.3	98	53-160	
1,1-Dichloroethene	ug/kg	50.1	45.9	92	47-152	
1,1-Dichloropropene	ug/kg	50.1	49.5	99	56-130	
1,2,3-Trichlorobenzene	ug/kg	50.1	48.5	97	48-144	
1,2,3-Trichloropropane	ug/kg	50.1	47.5	95	67-129	
1,2,4-Trichlorobenzene	ug/kg	50.1	49.3	98	52-140	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ALCO 8/12
Pace Project No.: 70141731

LABORATORY CONTROL SAMPLE: 845716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	50.1	50.0	100	59-126	
1,2-Dibromo-3-chloropropane	ug/kg	50.1	47.3	94	57-140	
1,2-Dibromoethane (EDB)	ug/kg	50.1	50.0	100	76-138	
1,2-Dichlorobenzene	ug/kg	50.1	49.7	99	67-125	
1,2-Dichloroethane	ug/kg	50.1	48.5	97	65-143	
1,2-Dichloropropane	ug/kg	50.1	50.4	101	72-131	
1,3,5-Trimethylbenzene	ug/kg	50.1	49.5	99	49-134	
1,3-Dichlorobenzene	ug/kg	50.1	48.6	97	64-124	
1,3-Dichloropropane	ug/kg	50.1	48.6	97	73-130	
1,4-Dichlorobenzene	ug/kg	50.1	48.9	98	61-127	
2,2-Dichloropropane	ug/kg	50.1	52.5	105	55-140	
2-Butanone (MEK)	ug/kg	50.1	44.0	88	52-164	
2-Chlorotoluene	ug/kg	50.1	48.9	98	62-125	
2-Hexanone	ug/kg	50.1	50.0	100	66-151	
4-Chlorotoluene	ug/kg	50.1	49.8	99	62-125	
4-Methyl-2-pentanone (MIBK)	ug/kg	50.1	50.2	100	63-154	
Acetone	ug/kg	50.1	47.5	95	23-196	CH,IH
Benzene	ug/kg	50.1	49.2	98	65-129	
Bromobenzene	ug/kg	50.1	48.5	97	63-130	
Bromochloromethane	ug/kg	50.1	48.0	96	78-136	
Bromodichloromethane	ug/kg	50.1	51.1	102	74-141	
Bromoform	ug/kg	50.1	49.5	99	59-136	
Bromomethane	ug/kg	50.1	49.8	99	32-182	
Carbon disulfide	ug/kg	50.1	48.1	96	26-160	
Carbon tetrachloride	ug/kg	50.1	48.8	97	57-135	
Chlorobenzene	ug/kg	50.1	49.2	98	62-136	
Chloroethane	ug/kg	50.1	53.1	106	50-159	
Chloroform	ug/kg	50.1	49.8	99	71-135	
Chloromethane	ug/kg	50.1	49.1	98	44-139	
cis-1,2-Dichloroethene	ug/kg	50.1	50.2	100	75-130	
cis-1,3-Dichloropropene	ug/kg	50.1	51.4	103	74-140	
Dibromochloromethane	ug/kg	50.1	49.4	99	71-133	
Dibromomethane	ug/kg	50.1	49.2	98	75-136	
Dichlorodifluoromethane	ug/kg	50.1	35.1	70	10-155	
Ethylbenzene	ug/kg	50.1	49.5	99	59-135	
Hexachloro-1,3-butadiene	ug/kg	50.1	46.5	93	19-152	
Isopropylbenzene (Cumene)	ug/kg	50.1	48.5	97	56-129	
m&p-Xylene	ug/kg	100	99.5	99	69-133	
Methyl-tert-butyl ether	ug/kg	50.1	52.4	105	25-171	
Methylene Chloride	ug/kg	50.1	49.5	99	50-164	
n-Butylbenzene	ug/kg	50.1	51.5	103	54-121	
n-Propylbenzene	ug/kg	50.1	49.4	99	56-125	
Naphthalene	ug/kg	50.1	48.1	96	55-145	
o-Xylene	ug/kg	50.1	50.3	100	71-135	
p-Isopropyltoluene	ug/kg	50.1	50.3	100	54-126	
sec-Butylbenzene	ug/kg	50.1	49.8	99	50-126	
Styrene	ug/kg	50.1	49.5	99	73-133	

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QUALITY CONTROL DATA

Project: ALCO 8/12
Pace Project No.: 70141731

LABORATORY CONTROL SAMPLE: 845716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butylbenzene	ug/kg	50.1	48.9	98	56-127	
Tetrachloroethene	ug/kg	50.1	49.6	99	10-176	
Toluene	ug/kg	50.1	48.7	97	66-131	
trans-1,2-Dichloroethene	ug/kg	50.1	49.1	98	53-157	
trans-1,3-Dichloropropene	ug/kg	50.1	52.0	104	66-144	
Trichloroethene	ug/kg	50.1	49.6	99	62-130	
Trichlorofluoromethane	ug/kg	50.1	48.2	96	38-166	
Vinyl acetate	ug/kg	50.1	51.0	102	10-155	
Vinyl chloride	ug/kg	50.1	48.2	96	45-137	
Xylene (Total)	ug/kg	150	150	100	62-135	
1,2-Dichloroethane-d4 (S)	%			100	33-150	
4-Bromofluorobenzene (S)	%			102	34-145	
Toluene-d8 (S)	%			99	43-157	

MATRIX SPIKE SAMPLE: 845889

Parameter	Units	70142243005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<1.8	47.2	43.6	92	74-140	
1,1,1-Trichloroethane	ug/kg	<1.8	47.2	48.5	103	59-134	
1,1,2,2-Tetrachloroethane	ug/kg	<1.8	47.2	41.8	88	69-132	
1,1,2-Trichloroethane	ug/kg	<1.8	47.2	35.1	74	73-135	
1,1-Dichloroethane	ug/kg	<1.8	47.2	45.4	96	53-160	
1,1-Dichloroethene	ug/kg	<1.8	47.2	47.3	100	47-152	
1,1-Dichloropropene	ug/kg	<1.8	47.2	47.5	101	56-130	
1,2,3-Trichlorobenzene	ug/kg	<1.8	47.2	26.8	57	48-144	
1,2,3-Trichloropropane	ug/kg	<1.8	47.2	41.7	88	67-129	
1,2,4-Trichlorobenzene	ug/kg	<1.8	47.2	30.1	64	52-140	
1,2,4-Trimethylbenzene	ug/kg	9.4	47.2	50.9	88	59-126	
1,2-Dibromo-3-chloropropane	ug/kg	<1.8	47.2	37.3	79	57-140	
1,2-Dibromoethane (EDB)	ug/kg	<1.8	47.2	34.7	73	76-138	M1
1,2-Dichlorobenzene	ug/kg	<1.8	47.2	42.5	90	67-125	
1,2-Dichloroethane	ug/kg	<1.8	47.2	36.6	77	65-143	
1,2-Dichloropropane	ug/kg	<1.8	47.2	41.5	88	72-131	
1,3,5-Trimethylbenzene	ug/kg	1.8	47.2	50.6	103	49-134	
1,3-Dichlorobenzene	ug/kg	<1.8	47.2	43.9	93	64-124	
1,3-Dichloropropane	ug/kg	<1.8	47.2	39.1	83	73-130	
1,4-Dichlorobenzene	ug/kg	<1.8	47.2	44.3	94	61-127	
2,2-Dichloropropane	ug/kg	<1.8	47.2	48.5	103	55-140	
2-Butanone (MEK)	ug/kg	<1.8	47.2	27.8	59	52-164	
2-Chlorotoluene	ug/kg	<1.8	47.2	49.2	104	62-125	
2-Hexanone	ug/kg	<1.8	47.2	37.0	78	66-151	
4-Chlorotoluene	ug/kg	<1.8	47.2	49.1	104	62-125	
4-Methyl-2-pentanone (MIBK)	ug/kg	<1.8	47.2	33.8	72	63-154	
Acetone	ug/kg	<1.8	47.2	31.5	67	23-196	CH,IH
Benzene	ug/kg	<1.8	47.2	45.0	95	65-129	

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QUALITY CONTROL DATA

Project: ALCO 8/12

Pace Project No.: 70141731

MATRIX SPIKE SAMPLE: 845889		70142243005	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Bromobenzene	ug/kg	<1.8	47.2	49.1	104	63-130	
Bromochloromethane	ug/kg	<1.8	47.2	39.4	83	78-136	
Bromodichloromethane	ug/kg	<1.8	47.2	41.0	87	74-141	
Bromoform	ug/kg	<1.8	47.2	35.7	75	59-136	
Bromomethane	ug/kg	<1.8	47.2	56.9	121	32-182	
Carbon disulfide	ug/kg	<1.8	47.2	44.2	94	26-160	
Carbon tetrachloride	ug/kg	<1.8	47.2	47.8	101	57-135	
Chlorobenzene	ug/kg	<1.8	47.2	43.6	92	62-136	
Chloroethane	ug/kg	<1.8	47.2	50.0	106	50-159	
Chloroform	ug/kg	<1.8	47.2	43.8	93	71-135	
Chloromethane	ug/kg	<1.8	47.2	44.9	95	44-139	
cis-1,2-Dichloroethene	ug/kg	<1.8	47.2	43.4	92	75-130	
cis-1,3-Dichloropropene	ug/kg	<1.8	47.2	41.0	87	74-140	
Dibromochloromethane	ug/kg	<1.8	47.2	40.2	85	71-133	
Dibromomethane	ug/kg	<1.8	47.2	35.4	75	75-136	
Dichlorodifluoromethane	ug/kg	<1.8	47.2	28.1	60	10-155	
Ethylbenzene	ug/kg	<1.8	47.2	46.4	98	59-135	
Hexachloro-1,3-butadiene	ug/kg	<1.8	47.2	24.5	52	19-152	
Isopropylbenzene (Cumene)	ug/kg	<1.8	47.2	52.3	111	56-129	
m&p-Xylene	ug/kg	<3.6	94.5	90.9	96	69-133	
Methyl-tert-butyl ether	ug/kg	<1.8	47.2	38.0	80	25-171	
Methylene Chloride	ug/kg	4.2	47.2	47.5	92	50-164	
n-Butylbenzene	ug/kg	<1.8	47.2	42.3	86	54-121	
n-Propylbenzene	ug/kg	<1.8	47.2	50.6	104	56-125	
Naphthalene	ug/kg	<1.8	47.2	34.9	70	55-145	
o-Xylene	ug/kg	<1.8	47.2	44.2	94	71-135	
p-Isopropyltoluene	ug/kg	<1.8	47.2	46.7	96	54-126	
sec-Butylbenzene	ug/kg	<1.8	47.2	46.5	96	50-126	
Styrene	ug/kg	<1.8	47.2	42.0	89	73-133	
tert-Butylbenzene	ug/kg	<1.8	47.2	46.2	98	56-127	
Tetrachloroethene	ug/kg	<1.8	47.2	57.4	121	10-176	
Toluene	ug/kg	<1.8	47.2	42.4	90	66-131	
trans-1,2-Dichloroethene	ug/kg	<1.8	47.2	47.3	100	53-157	
trans-1,3-Dichloropropene	ug/kg	<1.8	47.2	38.2	81	66-144	
Trichloroethene	ug/kg	<1.8	47.2	45.7	97	62-130	
Trichlorofluoromethane	ug/kg	<1.8	47.2	46.6	99	38-166	
Vinyl acetate	ug/kg	<1.8	47.2	36.0	76	10-155	
Vinyl chloride	ug/kg	<1.8	47.2	47.0	100	45-137	
Xylene (Total)	ug/kg	<3.6	142	135	95	62-135	
1,2-Dichloroethane-d4 (S)	%				84	33-150	
4-Bromofluorobenzene (S)	%				92	34-145	
Toluene-d8 (S)	%				107	43-157	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ALCO 8/12
Pace Project No.: 70141731

QC Batch: 173826	Analysis Method: EPA 8260C/5030C
QC Batch Method: EPA 8260C/5030C	Analysis Description: 8260 MSV
	Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70141731002

METHOD BLANK: 842398 Matrix: Water
Associated Lab Samples: 70141731002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<1.0	1.0	08/20/20 15:41	
1,1,1-Trichloroethane	ug/L	<1.0	1.0	08/20/20 15:41	
1,1,2,2-Tetrachloroethane	ug/L	<1.0	1.0	08/20/20 15:41	
1,1,2-Trichloroethane	ug/L	<1.0	1.0	08/20/20 15:41	
1,1-Dichloroethane	ug/L	<1.0	1.0	08/20/20 15:41	
1,1-Dichloroethene	ug/L	<1.0	1.0	08/20/20 15:41	
1,1-Dichloropropene	ug/L	<1.0	1.0	08/20/20 15:41	
1,2,3-Trichlorobenzene	ug/L	<1.0	1.0	08/20/20 15:41	
1,2,3-Trichloropropane	ug/L	<1.0	1.0	08/20/20 15:41	
1,2,4-Trichlorobenzene	ug/L	<1.0	1.0	08/20/20 15:41	
1,2,4-Trimethylbenzene	ug/L	<1.0	1.0	08/20/20 15:41	
1,2-Dibromo-3-chloropropane	ug/L	<1.0	1.0	08/20/20 15:41	
1,2-Dibromoethane (EDB)	ug/L	<1.0	1.0	08/20/20 15:41	
1,2-Dichlorobenzene	ug/L	<1.0	1.0	08/20/20 15:41	
1,2-Dichloroethane	ug/L	<1.0	1.0	08/20/20 15:41	
1,2-Dichloropropane	ug/L	<1.0	1.0	08/20/20 15:41	
1,3,5-Trimethylbenzene	ug/L	<1.0	1.0	08/20/20 15:41	
1,3-Dichlorobenzene	ug/L	<1.0	1.0	08/20/20 15:41	
1,3-Dichloropropane	ug/L	<1.0	1.0	08/20/20 15:41	
1,4-Dichlorobenzene	ug/L	<1.0	1.0	08/20/20 15:41	
2,2-Dichloropropane	ug/L	<1.0	1.0	08/20/20 15:41	
2-Butanone (MEK)	ug/L	<5.0	5.0	08/20/20 15:41	IL
2-Chlorotoluene	ug/L	<1.0	1.0	08/20/20 15:41	
2-Hexanone	ug/L	<5.0	5.0	08/20/20 15:41	
4-Chlorotoluene	ug/L	<1.0	1.0	08/20/20 15:41	
4-Methyl-2-pentanone (MIBK)	ug/L	<5.0	5.0	08/20/20 15:41	
Acetone	ug/L	<5.0	5.0	08/20/20 15:41	
Benzene	ug/L	<1.0	1.0	08/20/20 15:41	
Bromobenzene	ug/L	<1.0	1.0	08/20/20 15:41	
Bromochloromethane	ug/L	<1.0	1.0	08/20/20 15:41	
Bromodichloromethane	ug/L	<1.0	1.0	08/20/20 15:41	
Bromoform	ug/L	<1.0	1.0	08/20/20 15:41	
Bromomethane	ug/L	<1.0	1.0	08/20/20 15:41	
Carbon disulfide	ug/L	<1.0	1.0	08/20/20 15:41	
Carbon tetrachloride	ug/L	<1.0	1.0	08/20/20 15:41	
Chlorobenzene	ug/L	<1.0	1.0	08/20/20 15:41	
Chloroethane	ug/L	<1.0	1.0	08/20/20 15:41	
Chloroform	ug/L	<1.0	1.0	08/20/20 15:41	
Chloromethane	ug/L	<1.0	1.0	08/20/20 15:41	
cis-1,2-Dichloroethene	ug/L	<1.0	1.0	08/20/20 15:41	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ALCO 8/12
Pace Project No.: 70141731

METHOD BLANK: 842398

Matrix: Water

Associated Lab Samples: 70141731002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,3-Dichloropropene	ug/L	<1.0	1.0	08/20/20 15:41	
Dibromochloromethane	ug/L	<1.0	1.0	08/20/20 15:41	
Dibromomethane	ug/L	<1.0	1.0	08/20/20 15:41	
Dichlorodifluoromethane	ug/L	<1.0	1.0	08/20/20 15:41	
Ethylbenzene	ug/L	<1.0	1.0	08/20/20 15:41	
Hexachloro-1,3-butadiene	ug/L	<1.0	1.0	08/20/20 15:41	
Isopropylbenzene (Cumene)	ug/L	<1.0	1.0	08/20/20 15:41	
m&p-Xylene	ug/L	<2.0	2.0	08/20/20 15:41	
Methyl-tert-butyl ether	ug/L	<1.0	1.0	08/20/20 15:41	
Methylene Chloride	ug/L	<1.0	1.0	08/20/20 15:41	
n-Butylbenzene	ug/L	<1.0	1.0	08/20/20 15:41	
n-Propylbenzene	ug/L	<1.0	1.0	08/20/20 15:41	
Naphthalene	ug/L	<1.0	1.0	08/20/20 15:41	
o-Xylene	ug/L	<1.0	1.0	08/20/20 15:41	
p-Isopropyltoluene	ug/L	<1.0	1.0	08/20/20 15:41	
sec-Butylbenzene	ug/L	<1.0	1.0	08/20/20 15:41	
Styrene	ug/L	<1.0	1.0	08/20/20 15:41	
tert-Butylbenzene	ug/L	<1.0	1.0	08/20/20 15:41	
Tetrachloroethene	ug/L	<1.0	1.0	08/20/20 15:41	
Toluene	ug/L	<1.0	1.0	08/20/20 15:41	
trans-1,2-Dichloroethene	ug/L	<1.0	1.0	08/20/20 15:41	
trans-1,3-Dichloropropene	ug/L	<1.0	1.0	08/20/20 15:41	
Trichloroethene	ug/L	<1.0	1.0	08/20/20 15:41	
Trichlorofluoromethane	ug/L	<1.0	1.0	08/20/20 15:41	
Vinyl acetate	ug/L	<1.0	1.0	08/20/20 15:41	
Vinyl chloride	ug/L	<1.0	1.0	08/20/20 15:41	
Xylene (Total)	ug/L	<3.0	3.0	08/20/20 15:41	
1,2-Dichloroethane-d4 (S)	%	108	68-153	08/20/20 15:41	
4-Bromofluorobenzene (S)	%	100	79-124	08/20/20 15:41	
Toluene-d8 (S)	%	98	69-124	08/20/20 15:41	

LABORATORY CONTROL SAMPLE: 842399

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	46.8	94	74-113	
1,1,1-Trichloroethane	ug/L	50	40.8	82	65-118	
1,1,2,2-Tetrachloroethane	ug/L	50	49.9	100	74-121	
1,1,2-Trichloroethane	ug/L	50	49.2	98	80-117	
1,1-Dichloroethane	ug/L	50	44.8	90	83-151	
1,1-Dichloroethene	ug/L	50	42.5	85	45-146	
1,1-Dichloropropene	ug/L	50	40.6	81	59-127	
1,2,3-Trichlorobenzene	ug/L	50	42.8	86	67-103	
1,2,3-Trichloropropane	ug/L	50	49.6	99	71-123	
1,2,4-Trichlorobenzene	ug/L	50	43.4	87	66-116	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ALCO 8/12
Pace Project No.: 70141731

LABORATORY CONTROL SAMPLE: 842399

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	50	42.3	85	68-116	
1,2-Dibromo-3-chloropropane	ug/L	50	56.5	113	74-119	
1,2-Dibromoethane (EDB)	ug/L	50	49.9	100	83-115	
1,2-Dichlorobenzene	ug/L	50	44.8	90	74-113	
1,2-Dichloroethane	ug/L	50	49.3	99	74-129	
1,2-Dichloropropane	ug/L	50	46.0	92	75-117	
1,3,5-Trimethylbenzene	ug/L	50	41.4	83	67-116	
1,3-Dichlorobenzene	ug/L	50	43.8	88	71-112	
1,3-Dichloropropane	ug/L	50	49.5	99	74-112	
1,4-Dichlorobenzene	ug/L	50	43.8	88	71-113	
2,2-Dichloropropane	ug/L	50	43.7	87	63-133	
2-Butanone (MEK)	ug/L	50	55.2	110	44-162	IL
2-Chlorotoluene	ug/L	50	43.5	87	74-101	
2-Hexanone	ug/L	50	57.2	114	32-183	
4-Chlorotoluene	ug/L	50	43.7	87	74-101	
4-Methyl-2-pentanone (MIBK)	ug/L	50	48.0	96	69-132	
Acetone	ug/L	50	77.1	154	23-188	CH
Benzene	ug/L	50	43.5	87	73-119	
Bromobenzene	ug/L	50	45.5	91	72-102	
Bromochloromethane	ug/L	50	47.4	95	81-116	
Bromodichloromethane	ug/L	50	49.8	100	78-117	
Bromoform	ug/L	50	41.8	84	65-122	
Bromomethane	ug/L	50	41.9	84	52-147	
Carbon disulfide	ug/L	50	42.2	84	41-144	
Carbon tetrachloride	ug/L	50	40.8	82	59-120	
Chlorobenzene	ug/L	50	44.0	88	75-113	
Chloroethane	ug/L	50	41.9	84	49-151	
Chloroform	ug/L	50	46.9	94	72-122	
Chloromethane	ug/L	50	40.2	80	46-144	
cis-1,2-Dichloroethene	ug/L	50	46.2	92	72-121	
cis-1,3-Dichloropropene	ug/L	50	49.1	98	78-116	
Dibromochloromethane	ug/L	50	54.0	108	70-120	
Dibromomethane	ug/L	50	48.0	96	75-125	
Dichlorodifluoromethane	ug/L	50	37.9	76	22-154	
Ethylbenzene	ug/L	50	42.2	84	70-113	
Hexachloro-1,3-butadiene	ug/L	50	37.6	75	59-121	
Isopropylbenzene (Cumene)	ug/L	50	41.5	83	67-115	
m&p-Xylene	ug/L	100	86.7	87	72-115	
Methyl-tert-butyl ether	ug/L	50	49.1	98	72-131	
Methylene Chloride	ug/L	50	44.7	89	61-142	
n-Butylbenzene	ug/L	50	40.3	81	73-107	
n-Propylbenzene	ug/L	50	41.7	83	68-116	
Naphthalene	ug/L	50	43.5	87	70-118	
o-Xylene	ug/L	50	43.7	87	73-117	
p-Isopropyltoluene	ug/L	50	39.4	79	73-101	
sec-Butylbenzene	ug/L	50	39.2	78	72-103	
Styrene	ug/L	50	45.5	91	72-118	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ALCO 8/12
Pace Project No.: 70141731

LABORATORY CONTROL SAMPLE: 842399

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butylbenzene	ug/L	50	39.4	79	68-100	
Tetrachloroethene	ug/L	50	44.3	89	60-128	
Toluene	ug/L	50	43.5	87	72-119	
trans-1,2-Dichloroethene	ug/L	50	42.5	85	56-142	
trans-1,3-Dichloropropene	ug/L	50	53.1	106	79-116	
Trichloroethene	ug/L	50	42.7	85	69-117	
Trichlorofluoromethane	ug/L	50	41.2	82	27-173	
Vinyl acetate	ug/L	50	52.6	105	20-158	
Vinyl chloride	ug/L	50	39.9	80	43-143	
Xylene (Total)	ug/L	150	130	87	71-109	
1,2-Dichloroethane-d4 (S)	%			101	68-153	
4-Bromofluorobenzene (S)	%			102	79-124	
Toluene-d8 (S)	%			101	69-124	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 843448 843449

Parameter	Units	70142185002		MS	MSD	MS		MSD		% Rec Limits	RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec			
1,1,1,2-Tetrachloroethane	ug/L	1.0 U	50	50	43.7	50.1	87	100	74-113	14		
1,1,1-Trichloroethane	ug/L	1.0 U	50	50	42.0	48.7	84	97	65-118	15		
1,1,2,2-Tetrachloroethane	ug/L	1.0 U	50	50	46.2	50.4	92	101	74-121	9		
1,1,2-Trichloroethane	ug/L	1.0 U	50	50	47.5	51.2	95	102	80-117	8		
1,1-Dichloroethane	ug/L	1.0 U	50	50	43.7	50.7	87	101	83-151	15		
1,1-Dichloroethene	ug/L	1.0 U	50	50	43.5	51.9	87	104	45-146	18		
1,1-Dichloropropene	ug/L	1.0 U	50	50	41.8	47.9	84	96	59-127	14		
1,2,3-Trichlorobenzene	ug/L	1.0 U	50	50	41.6	51.4	83	103	67-103	21 R1		
1,2,3-Trichloropropane	ug/L	1.0 U	50	50	47.1	51.3	94	103	71-123	9		
1,2,4-Trichlorobenzene	ug/L	1.0 U	50	50	43.0	49.8	86	100	66-116	15		
1,2,4-Trimethylbenzene	ug/L	1.0 U	50	50	42.5	46.4	85	93	68-116	9		
1,2-Dibromo-3-chloropropane	ug/L	1.0 U	50	50	47.7	57.7	95	115	74-119	19		
1,2-Dibromoethane (EDB)	ug/L	1.0 U	50	50	47.6	51.3	95	103	83-115	7		
1,2-Dichlorobenzene	ug/L	1.0 U	50	50	43.0	48.1	86	96	74-113	11		
1,2-Dichloroethane	ug/L	1.0 U	50	50	46.0	53.1	92	106	74-129	14		
1,2-Dichloropropane	ug/L	1.0 U	50	50	43.3	49.0	87	98	75-117	12		
1,3,5-Trimethylbenzene	ug/L	1.0 U	50	50	42.6	46.7	85	93	67-116	9		
1,3-Dichlorobenzene	ug/L	1.0 U	50	50	42.3	47.0	85	94	71-112	10		
1,3-Dichloropropane	ug/L	1.0 U	50	50	45.1	49.0	90	98	74-112	8		
1,4-Dichlorobenzene	ug/L	1.0 U	50	50	42.1	46.6	84	93	71-113	10		
2,2-Dichloropropane	ug/L	1.0 U	50	50	40.1	46.5	80	93	63-133	15		
2-Butanone (MEK)	ug/L	5.0 U	50	50	47.6	51.4	95	103	44-162	8 IL		
2-Chlorotoluene	ug/L	1.0 U	50	50	43.0	47.5	86	95	74-101	10		
2-Hexanone	ug/L	5.0 U	50	50	45.7	49.0	91	98	32-183	7		
4-Chlorotoluene	ug/L	1.0 U	50	50	43.6	47.6	87	95	74-101	9		
4-Methyl-2-pentanone (MIBK)	ug/L	5.0 U	50	50	46.1	50.1	92	100	69-132	8		
Acetone	ug/L	5.0 U	50	50	44.9	53.3	87	104	23-188	17 CH		

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QUALITY CONTROL DATA

Project: ALCO 8/12

Pace Project No.: 70141731

Parameter	70142185002		MS		MSD		MS		MSD		% Rec	Limits	RPD	Qual
	Units	Result	Spike Conc.	MSD Spike Conc.	Result	MSD Result	% Rec	MSD % Rec						
Benzene	ug/L	1.0 U	50	50	43.0	48.5	86	97	73-119	12				
Bromobenzene	ug/L	1.0 U	50	50	42.8	46.9	86	94	72-102	9				
Bromochloromethane	ug/L	1.0 U	50	50	44.0	50.9	88	102	81-116	15				
Bromodichloromethane	ug/L	1.0 U	50	50	47.1	53.5	94	107	78-117	13				
Bromoform	ug/L	1.0 U	50	50	35.3	44.2	71	88	65-122	22	R1			
Bromomethane	ug/L	1.0 U	50	50	38.0	50.2	76	100	52-147	28	R1			
Carbon disulfide	ug/L	1.0 U	50	50	42.5	52.7	85	105	41-144	22	R1			
Carbon tetrachloride	ug/L	1.0 U	50	50	41.4	48.7	83	97	59-120	16				
Chlorobenzene	ug/L	1.0 U	50	50	42.2	46.1	84	92	75-113	9				
Chloroethane	ug/L	1.0 U	50	50	41.8	50.5	84	101	49-151	19				
Chloroform	ug/L	1.0 U	50	50	46.3	52.2	93	104	72-122	12				
Chloromethane	ug/L	1.0 U	50	50	41.4	48.9	83	98	46-144	17				
cis-1,2-Dichloroethene	ug/L	1.0 U	50	50	44.7	50.5	89	101	72-121	12				
cis-1,3-Dichloropropene	ug/L	1.0 U	50	50	46.0	51.0	92	102	78-116	10				
Dibromochloromethane	ug/L	1.0 U	50	50	46.3	52.2	93	104	70-120	12				
Dibromomethane	ug/L	1.0 U	50	50	45.5	50.2	91	100	75-125	10				
Dichlorodifluoromethane	ug/L	1.0 U	50	50	39.4	46.3	79	93	22-154	16				
Ethylbenzene	ug/L	1.0 U	50	50	41.2	45.2	82	90	70-113	9				
Hexachloro-1,3-butadiene	ug/L	1.0 U	50	50	41.7	48.2	83	96	59-121	14				
Isopropylbenzene (Cumene)	ug/L	1.0 U	50	50	42.4	46.3	85	93	67-115	9				
m&p-Xylene	ug/L	2.0 U	100	100	82.2	91.7	82	92	72-115	11				
Methyl-tert-butyl ether	ug/L	1.0 U	50	50	46.6	54.1	93	108	72-131	15				
Methylene Chloride	ug/L	1.0 U	50	50	41.8	49.9	84	100	61-142	18				
n-Butylbenzene	ug/L	1.0 U	50	50	42.9	47.5	86	95	73-107	10				
n-Propylbenzene	ug/L	1.0 U	50	50	42.7	46.8	85	94	68-116	9				
Naphthalene	ug/L	1.0 U	50	50	40.4	49.7	81	99	70-118	21	R1			
o-Xylene	ug/L	1.0 U	50	50	40.8	45.5	82	91	73-117	11				
p-Isopropyltoluene	ug/L	1.0 U	50	50	41.9	46.5	84	93	73-101	10				
sec-Butylbenzene	ug/L	1.0 U	50	50	42.4	46.4	85	93	72-103	9				
Styrene	ug/L	1.0 U	50	50	41.1	46.4	82	93	72-118	12				
tert-Butylbenzene	ug/L	1.0 U	50	50	42.0	45.9	84	92	68-100	9				
Tetrachloroethene	ug/L	1.0 U	50	50	40.4	44.3	81	89	60-128	9				
Toluene	ug/L	1.0 U	50	50	43.0	48.6	86	97	72-119	12				
trans-1,2-Dichloroethene	ug/L	1.0 U	50	50	43.6	52.0	87	104	56-142	18				
trans-1,3-Dichloropropene	ug/L	1.0 U	50	50	48.2	53.8	96	108	79-116	11				
Trichloroethene	ug/L	1.0 U	50	50	42.6	48.3	85	97	69-117	12				
Trichlorofluoromethane	ug/L	1.0 U	50	50	43.4	52.1	87	104	27-173	18				
Vinyl acetate	ug/L	1.0 U	50	50	48.9	54.0	98	108	20-158	10				
Vinyl chloride	ug/L	1.0 U	50	50	41.3	51.0	83	102	43-143	21	R1			
Xylene (Total)	ug/L	3.0 U	150	150	123	137	82	91	71-109	11				
1,2-Dichloroethane-d4 (S)	%						103	108	68-153					
4-Bromofluorobenzene (S)	%						100	101	79-124					
Toluene-d8 (S)	%						99	98	69-124					

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ALCO 8/12
Pace Project No.: 70141731

QC Batch: 173191	Analysis Method: EPA 8270D
QC Batch Method: EPA 3545A	Analysis Description: 8270 Solid MSSV
	Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70141731001

METHOD BLANK: 839426 Matrix: Solid

Associated Lab Samples: 70141731001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,2'-Oxybis(1-chloropropane)	ug/kg	<67.0	67.0	08/19/20 18:18	
2,4,5-Trichlorophenol	ug/kg	<67.0	67.0	08/19/20 18:18	
2,4,6-Trichlorophenol	ug/kg	<67.0	67.0	08/19/20 18:18	
2,4-Dichlorophenol	ug/kg	<67.0	67.0	08/19/20 18:18	
2,4-Dimethylphenol	ug/kg	<67.0	67.0	08/19/20 18:18	
2,4-Dinitrophenol	ug/kg	<67.0	67.0	08/19/20 18:18	
2,4-Dinitrotoluene	ug/kg	<330	330	08/19/20 18:18	
2,6-Dinitrotoluene	ug/kg	<330	330	08/19/20 18:18	
2-Chloronaphthalene	ug/kg	<67.0	67.0	08/19/20 18:18	
2-Chlorophenol	ug/kg	<67.0	67.0	08/19/20 18:18	
2-Methylnaphthalene	ug/kg	<67.0	67.0	08/19/20 18:18	
2-Methylphenol(o-Cresol)	ug/kg	<67.0	67.0	08/19/20 18:18	
2-Nitroaniline	ug/kg	<330	330	08/19/20 18:18	
2-Nitrophenol	ug/kg	<330	330	08/19/20 18:18	
3&4-Methylphenol(m&p Cresol)	ug/kg	<67.0	67.0	08/19/20 18:18	
3,3'-Dichlorobenzidine	ug/kg	<330	330	08/19/20 18:18	
3-Nitroaniline	ug/kg	<330	330	08/19/20 18:18	
4,6-Dinitro-2-methylphenol	ug/kg	<67.0	67.0	08/19/20 18:18	
4-Bromophenylphenyl ether	ug/kg	<67.0	67.0	08/19/20 18:18	
4-Chloro-3-methylphenol	ug/kg	<67.0	67.0	08/19/20 18:18	
4-Chloroaniline	ug/kg	<330	330	08/19/20 18:18	
4-Chlorophenylphenyl ether	ug/kg	<67.0	67.0	08/19/20 18:18	
4-Nitroaniline	ug/kg	<330	330	08/19/20 18:18	
4-Nitrophenol	ug/kg	<67.0	67.0	08/19/20 18:18	
Acenaphthene	ug/kg	<67.0	67.0	08/19/20 18:18	
Acenaphthylene	ug/kg	<67.0	67.0	08/19/20 18:18	
Anthracene	ug/kg	<67.0	67.0	08/19/20 18:18	
Benzo(a)anthracene	ug/kg	<67.0	67.0	08/19/20 18:18	
Benzo(a)pyrene	ug/kg	<67.0	67.0	08/19/20 18:18	
Benzo(b)fluoranthene	ug/kg	<67.0	67.0	08/19/20 18:18	
Benzo(g,h,i)perylene	ug/kg	<67.0	67.0	08/19/20 18:18	
Benzo(k)fluoranthene	ug/kg	<67.0	67.0	08/19/20 18:18	
bis(2-Chloroethoxy)methane	ug/kg	<67.0	67.0	08/19/20 18:18	
bis(2-Chloroethyl) ether	ug/kg	<67.0	67.0	08/19/20 18:18	
bis(2-Ethylhexyl)phthalate	ug/kg	<67.0	67.0	08/19/20 18:18	
Butylbenzylphthalate	ug/kg	<67.0	67.0	08/19/20 18:18	
Carbazole	ug/kg	<67.0	67.0	08/19/20 18:18	
Chrysene	ug/kg	<67.0	67.0	08/19/20 18:18	
Di-n-butylphthalate	ug/kg	<67.0	67.0	08/19/20 18:18	
Di-n-octylphthalate	ug/kg	<330	330	08/19/20 18:18	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ALCO 8/12
Pace Project No.: 70141731

METHOD BLANK: 839426

Matrix: Solid

Associated Lab Samples: 70141731001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibenz(a,h)anthracene	ug/kg	<67.0	67.0	08/19/20 18:18	
Dibenzofuran	ug/kg	<67.0	67.0	08/19/20 18:18	
Diethylphthalate	ug/kg	<67.0	67.0	08/19/20 18:18	
Dimethylphthalate	ug/kg	<67.0	67.0	08/19/20 18:18	
Fluoranthene	ug/kg	<67.0	67.0	08/19/20 18:18	
Fluorene	ug/kg	<67.0	67.0	08/19/20 18:18	
Hexachloro-1,3-butadiene	ug/kg	<67.0	67.0	08/19/20 18:18	
Hexachlorobenzene	ug/kg	<67.0	67.0	08/19/20 18:18	
Hexachlorocyclopentadiene	ug/kg	<330	330	08/19/20 18:18	
Hexachloroethane	ug/kg	<67.0	67.0	08/19/20 18:18	
Indeno(1,2,3-cd)pyrene	ug/kg	<67.0	67.0	08/19/20 18:18	
Isophorone	ug/kg	<67.0	67.0	08/19/20 18:18	
N-Nitroso-di-n-propylamine	ug/kg	<67.0	67.0	08/19/20 18:18	
N-Nitrosodiphenylamine	ug/kg	<67.0	67.0	08/19/20 18:18	
Naphthalene	ug/kg	<67.0	67.0	08/19/20 18:18	
Nitrobenzene	ug/kg	<67.0	67.0	08/19/20 18:18	
Pentachlorophenol	ug/kg	<670	670	08/19/20 18:18	
Phenanthrene	ug/kg	<67.0	67.0	08/19/20 18:18	
Phenol	ug/kg	<67.0	67.0	08/19/20 18:18	
Pyrene	ug/kg	<67.0	67.0	08/19/20 18:18	
1,2-Dichlorobenzene-d4 (S)	%	43	20-130	08/19/20 18:18	
2,4,6-Tribromophenol (S)	%	55	19-122	08/19/20 18:18	
2-Chlorophenol-d4 (S)	%	47	20-130	08/19/20 18:18	
2-Fluorobiphenyl (S)	%	44	30-115	08/19/20 18:18	
2-Fluorophenol (S)	%	51	25-121	08/19/20 18:18	
Nitrobenzene-d5 (S)	%	47	23-120	08/19/20 18:18	
p-Terphenyl-d14 (S)	%	64	18-137	08/19/20 18:18	
Phenol-d5 (S)	%	48	24-113	08/19/20 18:18	

LABORATORY CONTROL SAMPLE: 839427

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,2'-Oxybis(1-chloropropane)	ug/kg	1670	847	51	33-116	
2,4,5-Trichlorophenol	ug/kg	1670	939	56	45-111	
2,4,6-Trichlorophenol	ug/kg	1670	923	55	45-110	
2,4-Dichlorophenol	ug/kg	1670	888	53	41-117	
2,4-Dimethylphenol	ug/kg	1670	896	54	24-96	
2,4-Dinitrophenol	ug/kg	1670	847	51	10-80	
2,4-Dinitrotoluene	ug/kg	1670	955	57	49-112	
2,6-Dinitrotoluene	ug/kg	1670	943	57	50-109	
2-Chloronaphthalene	ug/kg	1670	777	47	35-107	
2-Chlorophenol	ug/kg	1670	862	52	36-109	
2-Methylnaphthalene	ug/kg	1670	864	52	31-135	
2-Methylphenol(o-Cresol)	ug/kg	1670	874	52	36-104	

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QUALITY CONTROL DATA

Project: ALCO 8/12
Pace Project No.: 70141731

LABORATORY CONTROL SAMPLE: 839427

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Nitroaniline	ug/kg	1670	844	51	42-118	
2-Nitrophenol	ug/kg	1670	878	53	36-117	
3&4-Methylphenol(m&p Cresol)	ug/kg	1670	866	52	37-137	
3,3'-Dichlorobenzidine	ug/kg	1670	883	53	41-116	
3-Nitroaniline	ug/kg	1670	959	58	40-95	
4,6-Dinitro-2-methylphenol	ug/kg	1670	878	53	16-104	
4-Bromophenylphenyl ether	ug/kg	1670	935	56	50-116	
4-Chloro-3-methylphenol	ug/kg	1670	939	56	45-118	
4-Chloroaniline	ug/kg	1670	675	41	29-88	
4-Chlorophenylphenyl ether	ug/kg	1670	906	54	48-111	
4-Nitroaniline	ug/kg	1670	857	51	46-110	
4-Nitrophenol	ug/kg	1670	881	53	26-118	
Acenaphthene	ug/kg	1670	912	55	45-109	
Acenaphthylene	ug/kg	1670	943	57	43-107	
Anthracene	ug/kg	1670	947	57	50-117	
Benzo(a)anthracene	ug/kg	1670	927	56	52-116	
Benzo(a)pyrene	ug/kg	1670	888	53	56-119	L2
Benzo(b)fluoranthene	ug/kg	1670	900	54	45-122	
Benzo(g,h,i)perylene	ug/kg	1670	981	59	30-107	
Benzo(k)fluoranthene	ug/kg	1670	849	51	54-124	L2
bis(2-Chloroethoxy)methane	ug/kg	1670	817	49	29-112	
bis(2-Chloroethyl) ether	ug/kg	1670	863	52	32-116	
bis(2-Ethylhexyl)phthalate	ug/kg	1670	991	59	60-127	L2
Butylbenzylphthalate	ug/kg	1670	933	56	54-130	
Carbazole	ug/kg	1670	940	56	40-120	
Chrysene	ug/kg	1670	939	56	48-121	
Di-n-butylphthalate	ug/kg	1670	1030	62	53-124	
Di-n-octylphthalate	ug/kg	1670	977	59	46-141	
Dibenz(a,h)anthracene	ug/kg	1670	878	53	52-109	
Dibenzofuran	ug/kg	1670	889	53	48-112	
Diethylphthalate	ug/kg	1670	927	56	51-114	
Dimethylphthalate	ug/kg	1670	907	54	49-112	
Fluoranthene	ug/kg	1670	955	57	45-126	
Fluorene	ug/kg	1670	913	55	47-108	
Hexachloro-1,3-butadiene	ug/kg	1670	830	50	36-118	
Hexachlorobenzene	ug/kg	1670	946	57	51-110	
Hexachlorocyclopentadiene	ug/kg	1670	896	54	10-97	
Hexachloroethane	ug/kg	1670	762	46	34-105	
Indeno(1,2,3-cd)pyrene	ug/kg	1670	968	58	50-108	
Isophorone	ug/kg	1670	885	53	14-129	
N-Nitroso-di-n-propylamine	ug/kg	1670	843	51	33-109	
N-Nitrosodiphenylamine	ug/kg	1670	936	56	39-90	
Naphthalene	ug/kg	1670	853	51	18-142	
Nitrobenzene	ug/kg	1670	835	50	36-119	
Pentachlorophenol	ug/kg	1670	<670	39	22-115	
Phenanthrene	ug/kg	1670	950	57	47-124	
Phenol	ug/kg	1670	854	51	38-104	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ALCO 8/12
Pace Project No.: 70141731

LABORATORY CONTROL SAMPLE: 839427

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyrene	ug/kg	1670	935	56	49-132	
1,2-Dichlorobenzene-d4 (S)	%			40	20-130	
2,4,6-Tribromophenol (S)	%			56	19-122	
2-Chlorophenol-d4 (S)	%			50	20-130	
2-Fluorobiphenyl (S)	%			48	30-115	
2-Fluorophenol (S)	%			52	25-121	
Nitrobenzene-d5 (S)	%			47	23-120	
p-Terphenyl-d14 (S)	%			59	18-137	
Phenol-d5 (S)	%			53	24-113	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 840785 840786

Parameter	Units	70142243001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
			Spike Conc.	MS Spike Conc.	MSD Spike Conc.	MS Result					
2,2'-Oxybis(1-chloropropane)	ug/kg	<74.0	1830	1840	1040	927	57	50	33-116	12	
2,4,5-Trichlorophenol	ug/kg	<74.0	1830	1840	1200	1060	66	58	45-111	13	
2,4,6-Trichlorophenol	ug/kg	<74.0	1830	1840	1100	949	60	52	45-110	15	
2,4-Dichlorophenol	ug/kg	<74.0	1830	1840	1060	979	58	53	41-117	8	
2,4-Dimethylphenol	ug/kg	<74.0	1830	1840	587	541	32	29	24-96	8	
2,4-Dinitrophenol	ug/kg	<740	1830	1840	<736	<739	31	32	10-80		
2,4-Dinitrotoluene	ug/kg	<365	1830	1840	1160	1020	63	55	49-112	13	
2,6-Dinitrotoluene	ug/kg	<365	1830	1840	1160	1020	63	56	50-109	13	
2-Chloronaphthalene	ug/kg	<74.0	1830	1840	1030	863	56	47	35-107	17	
2-Chlorophenol	ug/kg	<74.0	1830	1840	976	864	53	47	36-109	12	
2-Methylnaphthalene	ug/kg	<74.0	1830	1840	1030	920	56	50	31-135	11	
2-Methylphenol(o-Cresol)	ug/kg	<74.0	1830	1840	1120	928	61	50	36-104	19	
2-Nitroaniline	ug/kg	<365	1830	1840	1130	1040	62	57	42-118	8	
2-Nitrophenol	ug/kg	<365	1830	1840	1020	941	56	51	36-117	8	
3&4-Methylphenol(m&p Cresol)	ug/kg	<74.0	1830	1840	982	846	54	46	37-137	15	
3,3'-Dichlorobenzidine	ug/kg	<365	1830	1840	541	629	30	34	41-116	15	M1
3-Nitroaniline	ug/kg	<365	1830	1840	1220	1070	67	58	40-95	13	
4,6-Dinitro-2-methylphenol	ug/kg	<740	1830	1840	<736	<739	25	26	16-104		
4-Bromophenylphenyl ether	ug/kg	<74.0	1830	1840	1140	1040	62	56	50-116	10	
4-Chloro-3-methylphenol	ug/kg	<74.0	1830	1840	1170	1060	64	58	45-118	9	
4-Chloroaniline	ug/kg	<365	1830	1840	578	526	32	29	29-88	10	
4-Chlorophenylphenyl ether	ug/kg	<74.0	1830	1840	1150	1020	63	55	48-111	12	
4-Nitroaniline	ug/kg	<365	1830	1840	1020	968	56	53	46-110	5	
4-Nitrophenol	ug/kg	<740	1830	1840	1280	1090	70	59	26-118	16	
Acenaphthene	ug/kg	<74.0	1830	1840	1140	1030	62	56	45-109	10	
Acenaphthylene	ug/kg	<74.0	1830	1840	1140	1030	62	56	43-107	10	
Anthracene	ug/kg	<74.0	1830	1840	1150	1050	63	57	50-117	9	
Benzo(a)anthracene	ug/kg	<74.0	1830	1840	1310	1160	71	63	52-116	12	
Benzo(a)pyrene	ug/kg	<74.0	1830	1840	1280	1110	70	61	56-119	14	
Benzo(b)fluoranthene	ug/kg	75.0	1830	1840	1300	1150	67	58	45-122	12	

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QUALITY CONTROL DATA

Project: ALCO 8/12
Pace Project No.: 70141731

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 840785												840786											
Parameter	Units	70142243001		MS	MSD	MS		MSD		% Rec		Limits	RPD	Qual									
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec														
Benzo(g,h,i)perylene	ug/kg	<74.0	1830	1840	1840	1120	990	61	54	30-107	12												
Benzo(k)fluoranthene	ug/kg	<74.0	1830	1840	1840	1200	1020	63	53	54-124	16	M0											
bis(2-Chloroethoxy)methane	ug/kg	<74.0	1830	1840	1840	1000	926	55	50	29-112	8												
bis(2-Chloroethyl) ether	ug/kg	<74.0	1830	1840	1840	1110	920	61	50	32-116	19												
bis(2-Ethylhexyl)phthalate	ug/kg	<74.0	1830	1840	1840	1290	1160	70	63	60-127	11												
Butylbenzylphthalate	ug/kg	<74.0	1830	1840	1840	1180	1080	64	59	54-130	9												
Carbazole	ug/kg	<74.0	1830	1840	1840	1150	1010	63	55	40-120	13												
Chrysene	ug/kg	<74.0	1830	1840	1840	1290	1150	71	62	48-121	12												
Di-n-butylphthalate	ug/kg	<74.0	1830	1840	1840	1280	1150	70	63	53-124	11												
Di-n-octylphthalate	ug/kg	<365	1830	1840	1840	1380	1220	75	66	46-141	12												
Dibenz(a,h)anthracene	ug/kg	<74.0	1830	1840	1840	1030	1020	56	55	52-109	1												
Dibenzofuran	ug/kg	<74.0	1830	1840	1840	1120	997	61	54	48-112	12												
Diethylphthalate	ug/kg	<74.0	1830	1840	1840	1160	1030	64	56	51-114	12												
Dimethylphthalate	ug/kg	<74.0	1830	1840	1840	1130	994	62	54	49-112	13												
Fluoranthene	ug/kg	120	1830	1840	1840	1470	1210	74	59	45-126	19												
Fluorene	ug/kg	<74.0	1830	1840	1840	1140	1020	62	55	47-108	12												
Hexachloro-1,3-butadiene	ug/kg	<74.0	1830	1840	1840	890	795	49	43	36-118	11												
Hexachlorobenzene	ug/kg	<74.0	1830	1840	1840	1130	1030	61	56	51-110	9												
Hexachlorocyclopentadiene	ug/kg	<365	1830	1840	1840	483	463	26	25	10-97	4												
Hexachloroethane	ug/kg	<74.0	1830	1840	1840	687	568	38	31	34-105	19	M1											
Indeno(1,2,3-cd)pyrene	ug/kg	<74.0	1830	1840	1840	1170	1020	64	56	50-108	14												
Isophorone	ug/kg	<74.0	1830	1840	1840	1110	1020	61	55	14-129	8												
N-Nitroso-di-n-propylamine	ug/kg	<74.0	1830	1840	1840	1030	927	56	50	33-109	11												
N-Nitrosodiphenylamine	ug/kg	<74.0	1830	1840	1840	1020	916	56	50	39-90	11												
Naphthalene	ug/kg	<74.0	1830	1840	1840	985	884	54	48	18-142	11												
Nitrobenzene	ug/kg	<74.0	1830	1840	1840	1000	917	55	50	36-119	9												
Pentachlorophenol	ug/kg	<740	1830	1840	1840	750	<739	41	38	22-115													
Phenanthrene	ug/kg	<74.0	1830	1840	1840	1280	1120	70	61	47-124	13												
Phenol	ug/kg	<74.0	1830	1840	1840	980	879	54	48	38-104	11												
Pyrene	ug/kg	109	1830	1840	1840	1460	1230	74	61	49-132	17												
1,2-Dichlorobenzene-d4 (S)	%							30	25	20-130													
2,4,6-Tribromophenol (S)	%							57	52	19-122													
2-Chlorophenol-d4 (S)	%							51	45	20-130													
2-Fluorobiphenyl (S)	%							52	46	30-115													
2-Fluorophenol (S)	%							54	49	25-121													
Nitrobenzene-d5 (S)	%							53	48	23-120													
p-Terphenyl-d14 (S)	%							66	60	18-137													
Phenol-d5 (S)	%							57	53	24-113													

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ALCO 8/12
Pace Project No.: 70141731

QC Batch: 172838	Analysis Method: ASTM D2216-05M
QC Batch Method: ASTM D2216-05M	Analysis Description: Dry Weight/Percent Moisture
	Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70141731001

SAMPLE DUPLICATE: 837460

Parameter	Units	30376569001 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	29.3	24.6	17	

SAMPLE DUPLICATE: 837461

Parameter	Units	30376569002 Result	Dup Result	RPD	Qualifiers
Percent Moisture	%	22.7	21.2	7	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALIFIERS

Project: ALCO 8/12
Pace Project No.: 70141731

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

SAMPLE QUALIFIERS

Sample: 70141731001

[1] Method 8260C: The internal standard response exceeded the lower acceptance limits and confirmed by reanalysis. Results may be biased high.

Sample: 70141731002

[1] 2-Chloroethylvinyl ether not reportable due to improper sample preservation.

ANALYTE QUALIFIERS

C1 Result could not be confirmed by second analysis.

CH The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

IH This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.

IL This analyte exceeded secondary source verification criteria low for the initial calibration. The reported results should be considered an estimated value.

L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: ALCO 8/12
Pace Project No.: 70141731

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70141731001	B-4 20-24'	EPA 3545A	173191	EPA 8270D	173577
70141731001	B-4 20-24'	EPA 5035A-L	174448	EPA 8260C	174468
70141731002	TRIP BLANKS	EPA 8260C/5030C	173826		
70141731001	B-4 20-24'	ASTM D2216-05M	172838		

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WO#: 70141731



CHAIN-OF-CUSTODY
The Chain-of-Custody is a LEGAL

e: 1 Of 1



Section A Required Client Information:

Company: Barton and Loguidice-Albany
 Address: 10 Airline Drive Suite 200
 Albany, NY 12205
 Email: csteinmuller@bartonandloguidice.com
 Phone: NONE
 Fax:
 Requested Due Date:

Section B Required Project Information:

Report To: Steinmuller, Corinne
 Copy To:
 Project Name: ALCO
 Project #:

Section C Invoice Information:

Attention:
 Company Name:
 Address:
 Pace Quote:
 Pace Project Manager: jennifer.araci@pacelabs.com,
 Pace Profile #:

Regulatory Agency
 State / Location
 NY

ITEM #	MATRIX	CODE	COLLECTED		SAMPLE TYPE (G-GRAB C-COMP)	MATRIX CODE (see valid codes to left)	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP in C	Received on	Custody	Sealed	Cooler	Samples Intact
			START	END														
1	Drinking Water	DW	8/12/20	0754		SL	Pace Personal / BAL	8/12/20	1330	MATJ	8/12/20	1330						
2	Waste Water	WW				WT	MATJ	8/12/20	1600	MATJ	8/12/20	1600						
3	Product	P																
4	Soil/Solid	SL																
5	Wipe	WP																
6	Air	AR																
7	Other	OT																
8	Tissue	TS																
9																		
10																		
11																		
12																		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP in C	Received on	Custody	Sealed	Cooler	Samples Intact
	Pace Personal / BAL	8/12/20	1330	MATJ	8/12/20	1330						
	MATJ	8/12/20	1600	MATJ	8/12/20	1600						

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER:
 SIGNATURE of SAMPLER:
 DATE Signed:



Sample Condition Upon Receipt

Client Name: _____

Project _____

WO#: 70141731

PM: JSA

Due Date: 08/27/20

CLIENT: B&L

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: 9099 9900, 8209
Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags Ziploc None Other

Thermometer Used: TH091 Correction Factor: +0.4

Cooler Temperature (°C): 3.3 Cooler Temperature Corrected (°C): 3.7

Temp should be above freezing to 6.0°C

USDA Regulated Soil (N/A, water sample)

Date and Initials of person examining contents: HR 8/13/20

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? YES NO

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

			COMMENTS:
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	7.
Sufficient Volume: (Triple volume provided for MS/MSD)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Containers Intact:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	12.
-Includes date/time/ID/Analysis Matrix: <u>SL</u> <u>WT</u> <u>OIL</u>			
All containers needing preservation have been checked	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
pH paper Lot #			Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl, NaOH > 9 Sulfide, NaOH > 12 Cyanide)	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis			Initial when completed: _____ Lot # of added preservative: _____ Date/Time preservative added: _____
Samples checked for dechlorination:	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14. Positive for Res. Chlorine? Y N
KI starch test strips Lot #			
Residual chlorine strips Lot #			
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if applicable): _____			

Client Notification/ Resolution: _____

Field Data Required? Y / N

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: _____

* PM (Project Manager) review is documented electronically in LIMS.

Appendix A2

Previously Unsubmitted Analytical Results (Groundwater Only)

August 31, 2020

Corinne Steinmuller
Barton and Loguidice
10 Airline Drive Suite 200
Albany,

RE: Project: ALCO 8/20
Pace Project No.: 70143224

Dear Corinne Steinmuller:

Enclosed are the analytical results for sample(s) received by the laboratory on August 21, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Aracri
jennifer.aracri@pacelabs.com
(631)694-3040
Project Manager

Enclosures

cc: Andy Barber, B&L
Nicholas Despart, Barton and Loguidice-Albany



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: ALCO 8/20

Pace Project No.: 70143224

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747

New York Certification #: 10478 Primary Accrediting Body

New Jersey Certification #: NY158

Pennsylvania Certification #: 68-00350

Connecticut Certification #: PH-0435

Maryland Certification #: 208

Rhode Island Certification #: LAO00340

Massachusetts Certification #: M-NY026

New Hampshire Certification #: 2987

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ALCO 8/20

Pace Project No.: 70143224

Sample: B-4	Lab ID: 70143224001	Collected: 08/20/20 08:25	Received: 08/21/20 11:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV								
Analytical Method: EPA 8270D Preparation Method: EPA 3510C								
Pace Analytical Services - Melville								
Acenaphthene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	83-32-9	
Acenaphthylene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	208-96-8	
Anthracene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	120-12-7	
Benzo(a)anthracene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	56-55-3	
Benzo(a)pyrene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	50-32-8	
Benzo(b)fluoranthene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	205-99-2	
Benzo(g,h,i)perylene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	191-24-2	
Benzo(k)fluoranthene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	207-08-9	
4-Bromophenylphenyl ether	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	101-55-3	
Butylbenzylphthalate	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	85-68-7	L1
Carbazole	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	86-74-8	
4-Chloro-3-methylphenol	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	59-50-7	
4-Chloroaniline	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	106-47-8	
bis(2-Chloroethoxy)methane	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	111-91-1	
bis(2-Chloroethyl) ether	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	111-44-4	
4-Chlorophenylphenyl ether	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	7005-72-3	
Chrysene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	218-01-9	
Dibenz(a,h)anthracene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	53-70-3	
Dibenzofuran	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	132-64-9	
Diethylphthalate	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	84-66-2	
3,3'-Dimethylbenzidine	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	119-93-7	
Dimethylphthalate	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	131-11-3	
Di-n-butylphthalate	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	84-74-2	
4,6-Dinitro-2-methylphenol	<100	ug/L	100	10	08/27/20 09:41	08/27/20 23:33	534-52-1	
Di-n-octylphthalate	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	117-84-0	
bis(2-Ethylhexyl)phthalate	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	117-81-7	
Fluoranthene	60.2	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	206-44-0	
Fluorene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	86-73-7	
Hexachloro-1,3-butadiene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	87-68-3	
Hexachlorobenzene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	118-74-1	
Hexachlorocyclopentadiene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	77-47-4	
Hexachloroethane	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	67-72-1	L2
Indeno(1,2,3-cd)pyrene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	193-39-5	
Isophorone	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	78-59-1	
Naphthalene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	91-20-3	
3-Nitroaniline	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	99-09-2	
4-Nitroaniline	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	100-01-6	
Nitrobenzene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	98-95-3	
4-Nitrophenol	<100	ug/L	100	10	08/27/20 09:41	08/27/20 23:33	100-02-7	
N-Nitroso-di-n-propylamine	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	621-64-7	
N-Nitrosodiphenylamine	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	86-30-6	
Pentachlorophenol	<100	ug/L	100	10	08/27/20 09:41	08/27/20 23:33	87-86-5	
Phenanthrene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	85-01-8	
Phenol	<50.0	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	108-95-2	
Pyrene	64.8	ug/L	50.0	10	08/27/20 09:41	08/27/20 23:33	129-00-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ALCO 8/20

Pace Project No.: 70143224

Sample: B-4	Lab ID: 70143224001	Collected: 08/20/20 08:25	Received: 08/21/20 11:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

8270 MSSV

Analytical Method: EPA 8270D Preparation Method: EPA 3510C

Pace Analytical Services - Melville

Surrogates

Nitrobenzene-d5 (S)	77	%	35-114	10	08/27/20 09:41	08/27/20 23:33	4165-60-0	
2-Fluorobiphenyl (S)	90	%	43-116	10	08/27/20 09:41	08/27/20 23:33	321-60-8	
p-Terphenyl-d14 (S)	87	%	33-141	10	08/27/20 09:41	08/27/20 23:33	1718-51-0	
Phenol-d5 (S)	26	%	10-110	10	08/27/20 09:41	08/27/20 23:33	4165-62-2	
2-Fluorophenol (S)	42	%	21-110	10	08/27/20 09:41	08/27/20 23:33	367-12-4	
2,4,6-Tribromophenol (S)	99	%	10-123	10	08/27/20 09:41	08/27/20 23:33	118-79-6	
2-Chlorophenol-d4 (S)	85	%	33-110	10	08/27/20 09:41	08/27/20 23:33	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	44	%	16-110	10	08/27/20 09:41	08/27/20 23:33	2199-69-1	

8260C Volatile Organics

Analytical Method: EPA 8260C/5030C

Pace Analytical Services - Melville

1,1,1,2-Tetrachloroethane	<1.0	ug/L	1.0	1		08/27/20 14:20	630-20-6	
1,1,1-Trichloroethane	<1.0	ug/L	1.0	1		08/27/20 14:20	71-55-6	CL
1,1,2,2-Tetrachloroethane	<1.0	ug/L	1.0	1		08/27/20 14:20	79-34-5	
1,1,2-Trichloroethane	<1.0	ug/L	1.0	1		08/27/20 14:20	79-00-5	
1,1-Dichloroethane	<1.0	ug/L	1.0	1		08/27/20 14:20	75-34-3	
1,1-Dichloroethene	<1.0	ug/L	1.0	1		08/27/20 14:20	75-35-4	
1,1-Dichloropropene	<1.0	ug/L	1.0	1		08/27/20 14:20	563-58-6	
1,2,3-Trichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 14:20	87-61-6	
1,2,3-Trichloropropane	<1.0	ug/L	1.0	1		08/27/20 14:20	96-18-4	
1,2,4-Trichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 14:20	120-82-1	
1,2,4-Trimethylbenzene	<1.0	ug/L	1.0	1		08/27/20 14:20	95-63-6	
1,2-Dibromo-3-chloropropane	<1.0	ug/L	1.0	1		08/27/20 14:20	96-12-8	
1,2-Dibromoethane (EDB)	<1.0	ug/L	1.0	1		08/27/20 14:20	106-93-4	
1,2-Dichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 14:20	95-50-1	
1,2-Dichloroethane	<1.0	ug/L	1.0	1		08/27/20 14:20	107-06-2	
1,2-Dichloropropane	<1.0	ug/L	1.0	1		08/27/20 14:20	78-87-5	
1,3,5-Trimethylbenzene	<1.0	ug/L	1.0	1		08/27/20 14:20	108-67-8	
1,3-Dichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 14:20	541-73-1	
1,3-Dichloropropane	<1.0	ug/L	1.0	1		08/27/20 14:20	142-28-9	
1,4-Dichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 14:20	106-46-7	
2,2-Dichloropropane	<1.0	ug/L	1.0	1		08/27/20 14:20	594-20-7	CL,L2
2-Butanone (MEK)	<5.0	ug/L	5.0	1		08/27/20 14:20	78-93-3	IL
2-Chlorotoluene	<1.0	ug/L	1.0	1		08/27/20 14:20	95-49-8	
2-Hexanone	<5.0	ug/L	5.0	1		08/27/20 14:20	591-78-6	
4-Chlorotoluene	<1.0	ug/L	1.0	1		08/27/20 14:20	106-43-4	
4-Methyl-2-pentanone (MIBK)	<5.0	ug/L	5.0	1		08/27/20 14:20	108-10-1	
Acetone	<5.0	ug/L	5.0	1		08/27/20 14:20	67-64-1	CH,IC
Benzene	<1.0	ug/L	1.0	1		08/27/20 14:20	71-43-2	
Bromobenzene	<1.0	ug/L	1.0	1		08/27/20 14:20	108-86-1	
Bromochloromethane	<1.0	ug/L	1.0	1		08/27/20 14:20	74-97-5	
Bromodichloromethane	<1.0	ug/L	1.0	1		08/27/20 14:20	75-27-4	
Bromoform	<1.0	ug/L	1.0	1		08/27/20 14:20	75-25-2	
Bromomethane	<1.0	ug/L	1.0	1		08/27/20 14:20	74-83-9	
Carbon disulfide	<1.0	ug/L	1.0	1		08/27/20 14:20	75-15-0	

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ANALYTICAL RESULTS

Project: ALCO 8/20

Pace Project No.: 70143224

Sample: B-4	Lab ID: 70143224001	Collected: 08/20/20 08:25	Received: 08/21/20 11:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics		Analytical Method: EPA 8260C/5030C Pace Analytical Services - Melville						
Carbon tetrachloride	<1.0	ug/L	1.0	1		08/27/20 14:20	56-23-5	
Chlorobenzene	<1.0	ug/L	1.0	1		08/27/20 14:20	108-90-7	
Chloroethane	<1.0	ug/L	1.0	1		08/27/20 14:20	75-00-3	
Chloroform	<1.0	ug/L	1.0	1		08/27/20 14:20	67-66-3	
Chloromethane	<1.0	ug/L	1.0	1		08/27/20 14:20	74-87-3	
Dibromochloromethane	<1.0	ug/L	1.0	1		08/27/20 14:20	124-48-1	
Dibromomethane	<1.0	ug/L	1.0	1		08/27/20 14:20	74-95-3	
Dichlorodifluoromethane	<1.0	ug/L	1.0	1		08/27/20 14:20	75-71-8	CL
Ethylbenzene	<1.0	ug/L	1.0	1		08/27/20 14:20	100-41-4	
Hexachloro-1,3-butadiene	<1.0	ug/L	1.0	1		08/27/20 14:20	87-68-3	
Isopropylbenzene (Cumene)	<1.0	ug/L	1.0	1		08/27/20 14:20	98-82-8	
Methyl-tert-butyl ether	<1.0	ug/L	1.0	1		08/27/20 14:20	1634-04-4	
Methylene Chloride	<1.0	ug/L	1.0	1		08/27/20 14:20	75-09-2	
Naphthalene	<1.0	ug/L	1.0	1		08/27/20 14:20	91-20-3	
Styrene	<1.0	ug/L	1.0	1		08/27/20 14:20	100-42-5	
Tetrachloroethene	<1.0	ug/L	1.0	1		08/27/20 14:20	127-18-4	
Toluene	<1.0	ug/L	1.0	1		08/27/20 14:20	108-88-3	
Trichloroethene	<1.0	ug/L	1.0	1		08/27/20 14:20	79-01-6	
Trichlorofluoromethane	<1.0	ug/L	1.0	1		08/27/20 14:20	75-69-4	
Vinyl acetate	<1.0	ug/L	1.0	1		08/27/20 14:20	108-05-4	CL
Vinyl chloride	<1.0	ug/L	1.0	1		08/27/20 14:20	75-01-4	
Xylene (Total)	<3.0	ug/L	3.0	1		08/27/20 14:20	1330-20-7	
cis-1,2-Dichloroethene	<1.0	ug/L	1.0	1		08/27/20 14:20	156-59-2	
cis-1,3-Dichloropropene	<1.0	ug/L	1.0	1		08/27/20 14:20	10061-01-5	
m&p-Xylene	<2.0	ug/L	2.0	1		08/27/20 14:20	179601-23-1	
n-Butylbenzene	<1.0	ug/L	1.0	1		08/27/20 14:20	104-51-8	
n-Propylbenzene	<1.0	ug/L	1.0	1		08/27/20 14:20	103-65-1	
o-Xylene	<1.0	ug/L	1.0	1		08/27/20 14:20	95-47-6	
p-Isopropyltoluene	<1.0	ug/L	1.0	1		08/27/20 14:20	99-87-6	
sec-Butylbenzene	<1.0	ug/L	1.0	1		08/27/20 14:20	135-98-8	
tert-Butylbenzene	<1.0	ug/L	1.0	1		08/27/20 14:20	98-06-6	
trans-1,2-Dichloroethene	<1.0	ug/L	1.0	1		08/27/20 14:20	156-60-5	
trans-1,3-Dichloropropene	<1.0	ug/L	1.0	1		08/27/20 14:20	10061-02-6	CL,L2
Surrogates								
1,2-Dichloroethane-d4 (S)	91	%	68-153	1		08/27/20 14:20	17060-07-0	
4-Bromofluorobenzene (S)	93	%	79-124	1		08/27/20 14:20	460-00-4	
Toluene-d8 (S)	93	%	69-124	1		08/27/20 14:20	2037-26-5	

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ANALYTICAL RESULTS

Project: ALCO 8/20
Pace Project No.: 70143224

Sample: B-6	Lab ID: 70143224002	Collected: 08/20/20 08:38	Received: 08/21/20 11:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV								
Analytical Method: EPA 8270D Preparation Method: EPA 3510C								
Pace Analytical Services - Melville								
Acenaphthene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	83-32-9	
Acenaphthylene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	208-96-8	
Anthracene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	120-12-7	
Benzo(a)anthracene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	56-55-3	
Benzo(a)pyrene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	50-32-8	
Benzo(b)fluoranthene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	205-99-2	
Benzo(g,h,i)perylene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	191-24-2	
Benzo(k)fluoranthene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	207-08-9	
4-Bromophenylphenyl ether	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	101-55-3	
Butylbenzylphthalate	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	85-68-7	L1
Carbazole	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	86-74-8	
4-Chloro-3-methylphenol	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	59-50-7	
4-Chloroaniline	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	106-47-8	
bis(2-Chloroethoxy)methane	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	111-91-1	M1
bis(2-Chloroethyl) ether	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	111-44-4	
4-Chlorophenylphenyl ether	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	7005-72-3	
Chrysene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	218-01-9	
Dibenz(a,h)anthracene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	53-70-3	
Dibenzofuran	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	132-64-9	
Diethylphthalate	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	84-66-2	
Dimethylphthalate	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	131-11-3	
Di-n-butylphthalate	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	84-74-2	
4,6-Dinitro-2-methylphenol	<10.0	ug/L	10.0	1	08/27/20 09:41	08/27/20 20:50	534-52-1	
Di-n-octylphthalate	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	117-84-0	
bis(2-Ethylhexyl)phthalate	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	117-81-7	
Fluoranthene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	206-44-0	
Fluorene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	86-73-7	
Hexachloro-1,3-butadiene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	87-68-3	
Hexachlorobenzene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	118-74-1	
Hexachlorocyclopentadiene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	77-47-4	
Hexachloroethane	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	67-72-1	L2,M0
Indeno(1,2,3-cd)pyrene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	193-39-5	
Isophorone	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	78-59-1	
Naphthalene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	91-20-3	M1
3-Nitroaniline	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	99-09-2	
4-Nitroaniline	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	100-01-6	M1
Nitrobenzene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	98-95-3	M1
4-Nitrophenol	<10.0	ug/L	10.0	1	08/27/20 09:41	08/27/20 20:50	100-02-7	
N-Nitroso-di-n-propylamine	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	621-64-7	M1
N-Nitrosodiphenylamine	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	86-30-6	M1
Pentachlorophenol	<10.0	ug/L	10.0	1	08/27/20 09:41	08/27/20 20:50	87-86-5	
Phenanthrene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	85-01-8	
Phenol	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	108-95-2	
Pyrene	<5.0	ug/L	5.0	1	08/27/20 09:41	08/27/20 20:50	129-00-0	
Surrogates								
Nitrobenzene-d5 (S)	95	%	35-114	1	08/27/20 09:41	08/27/20 20:50	4165-60-0	

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ANALYTICAL RESULTS

Project: ALCO 8/20
Pace Project No.: 70143224

Sample: B-6	Lab ID: 70143224002	Collected: 08/20/20 08:38	Received: 08/21/20 11:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

8270 MSSV

Analytical Method: EPA 8270D Preparation Method: EPA 3510C
Pace Analytical Services - Melville

Surrogates

2-Fluorobiphenyl (S)	79	%	43-116	1	08/27/20 09:41	08/27/20 20:50	321-60-8	
p-Terphenyl-d14 (S)	108	%	33-141	1	08/27/20 09:41	08/27/20 20:50	1718-51-0	
Phenol-d5 (S)	21	%	10-110	1	08/27/20 09:41	08/27/20 20:50	4165-62-2	
2-Fluorophenol (S)	38	%	21-110	1	08/27/20 09:41	08/27/20 20:50	367-12-4	
2,4,6-Tribromophenol (S)	105	%	10-123	1	08/27/20 09:41	08/27/20 20:50	118-79-6	
2-Chlorophenol-d4 (S)	72	%	33-110	1	08/27/20 09:41	08/27/20 20:50	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	62	%	16-110	1	08/27/20 09:41	08/27/20 20:50	2199-69-1	

8260C Volatile Organics

Analytical Method: EPA 8260C/5030C
Pace Analytical Services - Melville

1,1,1,2-Tetrachloroethane	<1.0	ug/L	1.0	1		08/27/20 14:43	630-20-6	
1,1,1-Trichloroethane	<1.0	ug/L	1.0	1		08/27/20 14:43	71-55-6	CL
1,1,2,2-Tetrachloroethane	<1.0	ug/L	1.0	1		08/27/20 14:43	79-34-5	
1,1,2-Trichloroethane	<1.0	ug/L	1.0	1		08/27/20 14:43	79-00-5	
1,1-Dichloroethane	<1.0	ug/L	1.0	1		08/27/20 14:43	75-34-3	
1,1-Dichloroethene	<1.0	ug/L	1.0	1		08/27/20 14:43	75-35-4	
1,1-Dichloropropene	<1.0	ug/L	1.0	1		08/27/20 14:43	563-58-6	
1,2,3-Trichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 14:43	87-61-6	
1,2,3-Trichloropropane	<1.0	ug/L	1.0	1		08/27/20 14:43	96-18-4	
1,2,4-Trichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 14:43	120-82-1	
1,2,4-Trimethylbenzene	<1.0	ug/L	1.0	1		08/27/20 14:43	95-63-6	
1,2-Dibromo-3-chloropropane	<1.0	ug/L	1.0	1		08/27/20 14:43	96-12-8	
1,2-Dibromoethane (EDB)	<1.0	ug/L	1.0	1		08/27/20 14:43	106-93-4	
1,2-Dichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 14:43	95-50-1	
1,2-Dichloroethane	<1.0	ug/L	1.0	1		08/27/20 14:43	107-06-2	
1,2-Dichloropropane	<1.0	ug/L	1.0	1		08/27/20 14:43	78-87-5	
1,3,5-Trimethylbenzene	<1.0	ug/L	1.0	1		08/27/20 14:43	108-67-8	
1,3-Dichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 14:43	541-73-1	
1,3-Dichloropropane	<1.0	ug/L	1.0	1		08/27/20 14:43	142-28-9	
1,4-Dichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 14:43	106-46-7	
2,2-Dichloropropane	<1.0	ug/L	1.0	1		08/27/20 14:43	594-20-7	CL,L2
2-Butanone (MEK)	<5.0	ug/L	5.0	1		08/27/20 14:43	78-93-3	IL
2-Chlorotoluene	<1.0	ug/L	1.0	1		08/27/20 14:43	95-49-8	
2-Hexanone	<5.0	ug/L	5.0	1		08/27/20 14:43	591-78-6	
4-Chlorotoluene	<1.0	ug/L	1.0	1		08/27/20 14:43	106-43-4	
4-Methyl-2-pentanone (MIBK)	<5.0	ug/L	5.0	1		08/27/20 14:43	108-10-1	
Acetone	<5.0	ug/L	5.0	1		08/27/20 14:43	67-64-1	CH,IC
Benzene	<1.0	ug/L	1.0	1		08/27/20 14:43	71-43-2	
Bromobenzene	<1.0	ug/L	1.0	1		08/27/20 14:43	108-86-1	
Bromochloromethane	<1.0	ug/L	1.0	1		08/27/20 14:43	74-97-5	
Bromodichloromethane	<1.0	ug/L	1.0	1		08/27/20 14:43	75-27-4	
Bromoform	<1.0	ug/L	1.0	1		08/27/20 14:43	75-25-2	
Bromomethane	<1.0	ug/L	1.0	1		08/27/20 14:43	74-83-9	
Carbon disulfide	<1.0	ug/L	1.0	1		08/27/20 14:43	75-15-0	
Carbon tetrachloride	<1.0	ug/L	1.0	1		08/27/20 14:43	56-23-5	

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ANALYTICAL RESULTS

Project: ALCO 8/20
Pace Project No.: 70143224

Sample: B-6	Lab ID: 70143224002	Collected: 08/20/20 08:38	Received: 08/21/20 11:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics		Analytical Method: EPA 8260C/5030C Pace Analytical Services - Melville						
Chlorobenzene	<1.0	ug/L	1.0	1		08/27/20 14:43	108-90-7	
Chloroethane	<1.0	ug/L	1.0	1		08/27/20 14:43	75-00-3	
Chloroform	<1.0	ug/L	1.0	1		08/27/20 14:43	67-66-3	
Chloromethane	<1.0	ug/L	1.0	1		08/27/20 14:43	74-87-3	
Dibromochloromethane	<1.0	ug/L	1.0	1		08/27/20 14:43	124-48-1	
Dibromomethane	<1.0	ug/L	1.0	1		08/27/20 14:43	74-95-3	
Dichlorodifluoromethane	<1.0	ug/L	1.0	1		08/27/20 14:43	75-71-8	CL
Ethylbenzene	<1.0	ug/L	1.0	1		08/27/20 14:43	100-41-4	
Hexachloro-1,3-butadiene	<1.0	ug/L	1.0	1		08/27/20 14:43	87-68-3	
Isopropylbenzene (Cumene)	<1.0	ug/L	1.0	1		08/27/20 14:43	98-82-8	
Methyl-tert-butyl ether	<1.0	ug/L	1.0	1		08/27/20 14:43	1634-04-4	
Methylene Chloride	<1.0	ug/L	1.0	1		08/27/20 14:43	75-09-2	
Naphthalene	<1.0	ug/L	1.0	1		08/27/20 14:43	91-20-3	
Styrene	<1.0	ug/L	1.0	1		08/27/20 14:43	100-42-5	
Tetrachloroethene	<1.0	ug/L	1.0	1		08/27/20 14:43	127-18-4	
Toluene	<1.0	ug/L	1.0	1		08/27/20 14:43	108-88-3	
Trichloroethene	<1.0	ug/L	1.0	1		08/27/20 14:43	79-01-6	
Trichlorofluoromethane	<1.0	ug/L	1.0	1		08/27/20 14:43	75-69-4	
Vinyl acetate	<1.0	ug/L	1.0	1		08/27/20 14:43	108-05-4	CL
Vinyl chloride	<1.0	ug/L	1.0	1		08/27/20 14:43	75-01-4	
Xylene (Total)	<3.0	ug/L	3.0	1		08/27/20 14:43	1330-20-7	
cis-1,2-Dichloroethene	<1.0	ug/L	1.0	1		08/27/20 14:43	156-59-2	
cis-1,3-Dichloropropene	<1.0	ug/L	1.0	1		08/27/20 14:43	10061-01-5	
m&p-Xylene	<2.0	ug/L	2.0	1		08/27/20 14:43	179601-23-1	
n-Butylbenzene	<1.0	ug/L	1.0	1		08/27/20 14:43	104-51-8	
n-Propylbenzene	<1.0	ug/L	1.0	1		08/27/20 14:43	103-65-1	
o-Xylene	<1.0	ug/L	1.0	1		08/27/20 14:43	95-47-6	
p-Isopropyltoluene	<1.0	ug/L	1.0	1		08/27/20 14:43	99-87-6	
sec-Butylbenzene	<1.0	ug/L	1.0	1		08/27/20 14:43	135-98-8	
tert-Butylbenzene	<1.0	ug/L	1.0	1		08/27/20 14:43	98-06-6	
trans-1,2-Dichloroethene	<1.0	ug/L	1.0	1		08/27/20 14:43	156-60-5	
trans-1,3-Dichloropropene	<1.0	ug/L	1.0	1		08/27/20 14:43	10061-02-6	CL,L2
Surrogates								
1,2-Dichloroethane-d4 (S)	91	%	68-153	1		08/27/20 14:43	17060-07-0	
4-Bromofluorobenzene (S)	93	%	79-124	1		08/27/20 14:43	460-00-4	
Toluene-d8 (S)	94	%	69-124	1		08/27/20 14:43	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ALCO 8/20

Pace Project No.: 70143224

Sample: B-8	Lab ID: 70143224003	Collected: 08/20/20 08:57	Received: 08/21/20 11:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV								
Analytical Method: EPA 8270D Preparation Method: EPA 3510C								
Pace Analytical Services - Melville								
Acenaphthene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	83-32-9	
Acenaphthylene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	208-96-8	
Anthracene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	120-12-7	
Benzo(a)anthracene	51.6	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	56-55-3	
Benzo(a)pyrene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	50-32-8	
Benzo(b)fluoranthene	52.4	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	205-99-2	
Benzo(g,h,i)perylene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	191-24-2	
Benzo(k)fluoranthene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	207-08-9	
4-Bromophenylphenyl ether	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	101-55-3	
Butylbenzylphthalate	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	85-68-7	L1
Carbazole	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	86-74-8	
4-Chloro-3-methylphenol	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	59-50-7	
4-Chloroaniline	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	106-47-8	
bis(2-Chloroethoxy)methane	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	111-91-1	
bis(2-Chloroethyl) ether	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	111-44-4	
4-Chlorophenylphenyl ether	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	7005-72-3	
Chrysene	53.9	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	218-01-9	
Dibenz(a,h)anthracene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	53-70-3	
Dibenzofuran	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	132-64-9	
Diethylphthalate	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	84-66-2	
3,3'-Dimethylbenzidine	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	119-93-7	
Dimethylphthalate	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	131-11-3	
Di-n-butylphthalate	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	84-74-2	
4,6-Dinitro-2-methylphenol	<100	ug/L	100	10	08/27/20 09:41	08/28/20 00:05	534-52-1	
Di-n-octylphthalate	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	117-84-0	
bis(2-Ethylhexyl)phthalate	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	117-81-7	
Fluoranthene	128	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	206-44-0	
Fluorene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	86-73-7	
Hexachloro-1,3-butadiene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	87-68-3	
Hexachlorobenzene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	118-74-1	
Hexachlorocyclopentadiene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	77-47-4	
Hexachloroethane	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	67-72-1	L2
Indeno(1,2,3-cd)pyrene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	193-39-5	
Isophorone	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	78-59-1	
Naphthalene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	91-20-3	
3-Nitroaniline	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	99-09-2	
4-Nitroaniline	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	100-01-6	
Nitrobenzene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	98-95-3	
4-Nitrophenol	<100	ug/L	100	10	08/27/20 09:41	08/28/20 00:05	100-02-7	
N-Nitroso-di-n-propylamine	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	621-64-7	
N-Nitrosodiphenylamine	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	86-30-6	
Pentachlorophenol	<100	ug/L	100	10	08/27/20 09:41	08/28/20 00:05	87-86-5	
Phenanthrene	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	85-01-8	
Phenol	<50.0	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	108-95-2	
Pyrene	179	ug/L	50.0	10	08/27/20 09:41	08/28/20 00:05	129-00-0	

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ANALYTICAL RESULTS

Project: ALCO 8/20

Pace Project No.: 70143224

Sample: B-8 **Lab ID: 70143224003** Collected: 08/20/20 08:57 Received: 08/21/20 11:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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8270 MSSV

Analytical Method: EPA 8270D Preparation Method: EPA 3510C
Pace Analytical Services - Melville

Surrogates

Nitrobenzene-d5 (S)	74	%	35-114	10	08/27/20 09:41	08/28/20 00:05	4165-60-0	
2-Fluorobiphenyl (S)	89	%	43-116	10	08/27/20 09:41	08/28/20 00:05	321-60-8	
p-Terphenyl-d14 (S)	91	%	33-141	10	08/27/20 09:41	08/28/20 00:05	1718-51-0	
Phenol-d5 (S)	27	%	10-110	10	08/27/20 09:41	08/28/20 00:05	4165-62-2	
2-Fluorophenol (S)	53	%	21-110	10	08/27/20 09:41	08/28/20 00:05	367-12-4	
2,4,6-Tribromophenol (S)	151	%	10-123	10	08/27/20 09:41	08/28/20 00:05	118-79-6	S4
2-Chlorophenol-d4 (S)	71	%	33-110	10	08/27/20 09:41	08/28/20 00:05	93951-73-6	
1,2-Dichlorobenzene-d4 (S)	57	%	16-110	10	08/27/20 09:41	08/28/20 00:05	2199-69-1	

8260C Volatile Organics

Analytical Method: EPA 8260C/5030C
Pace Analytical Services - Melville

1,1,1,2-Tetrachloroethane	<1.0	ug/L	1.0	1		08/27/20 16:42	630-20-6	
1,1,1-Trichloroethane	<1.0	ug/L	1.0	1		08/27/20 16:42	71-55-6	CL
1,1,2,2-Tetrachloroethane	<1.0	ug/L	1.0	1		08/27/20 16:42	79-34-5	
1,1,2-Trichloroethane	<1.0	ug/L	1.0	1		08/27/20 16:42	79-00-5	
1,1-Dichloroethane	<1.0	ug/L	1.0	1		08/27/20 16:42	75-34-3	
1,1-Dichloroethene	<1.0	ug/L	1.0	1		08/27/20 16:42	75-35-4	
1,1-Dichloropropene	<1.0	ug/L	1.0	1		08/27/20 16:42	563-58-6	
1,2,3-Trichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 16:42	87-61-6	
1,2,3-Trichloropropane	<1.0	ug/L	1.0	1		08/27/20 16:42	96-18-4	
1,2,4-Trichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 16:42	120-82-1	
1,2,4-Trimethylbenzene	<1.0	ug/L	1.0	1		08/27/20 16:42	95-63-6	
1,2-Dibromo-3-chloropropane	<1.0	ug/L	1.0	1		08/27/20 16:42	96-12-8	
1,2-Dibromoethane (EDB)	<1.0	ug/L	1.0	1		08/27/20 16:42	106-93-4	
1,2-Dichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 16:42	95-50-1	
1,2-Dichloroethane	<1.0	ug/L	1.0	1		08/27/20 16:42	107-06-2	
1,2-Dichloropropane	<1.0	ug/L	1.0	1		08/27/20 16:42	78-87-5	
1,3,5-Trimethylbenzene	<1.0	ug/L	1.0	1		08/27/20 16:42	108-67-8	
1,3-Dichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 16:42	541-73-1	
1,3-Dichloropropane	<1.0	ug/L	1.0	1		08/27/20 16:42	142-28-9	
1,4-Dichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 16:42	106-46-7	
2,2-Dichloropropane	<1.0	ug/L	1.0	1		08/27/20 16:42	594-20-7	CL,L2
2-Butanone (MEK)	<5.0	ug/L	5.0	1		08/27/20 16:42	78-93-3	IL
2-Chlorotoluene	<1.0	ug/L	1.0	1		08/27/20 16:42	95-49-8	
2-Hexanone	<5.0	ug/L	5.0	1		08/27/20 16:42	591-78-6	
4-Chlorotoluene	<1.0	ug/L	1.0	1		08/27/20 16:42	106-43-4	
4-Methyl-2-pentanone (MIBK)	<5.0	ug/L	5.0	1		08/27/20 16:42	108-10-1	
Acetone	9.6	ug/L	5.0	1		08/27/20 16:42	67-64-1	CH,IC
Benzene	<1.0	ug/L	1.0	1		08/27/20 16:42	71-43-2	
Bromobenzene	<1.0	ug/L	1.0	1		08/27/20 16:42	108-86-1	
Bromochloromethane	<1.0	ug/L	1.0	1		08/27/20 16:42	74-97-5	
Bromodichloromethane	<1.0	ug/L	1.0	1		08/27/20 16:42	75-27-4	
Bromoform	<1.0	ug/L	1.0	1		08/27/20 16:42	75-25-2	
Bromomethane	<1.0	ug/L	1.0	1		08/27/20 16:42	74-83-9	
Carbon disulfide	<1.0	ug/L	1.0	1		08/27/20 16:42	75-15-0	

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ANALYTICAL RESULTS

Project: ALCO 8/20

Pace Project No.: 70143224

Sample: B-8	Lab ID: 70143224003	Collected: 08/20/20 08:57	Received: 08/21/20 11:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics		Analytical Method: EPA 8260C/5030C Pace Analytical Services - Melville						
Carbon tetrachloride	<1.0	ug/L	1.0	1		08/27/20 16:42	56-23-5	
Chlorobenzene	<1.0	ug/L	1.0	1		08/27/20 16:42	108-90-7	
Chloroethane	<1.0	ug/L	1.0	1		08/27/20 16:42	75-00-3	
Chloroform	<1.0	ug/L	1.0	1		08/27/20 16:42	67-66-3	
Chloromethane	<1.0	ug/L	1.0	1		08/27/20 16:42	74-87-3	
Dibromochloromethane	<1.0	ug/L	1.0	1		08/27/20 16:42	124-48-1	
Dibromomethane	<1.0	ug/L	1.0	1		08/27/20 16:42	74-95-3	
Dichlorodifluoromethane	<1.0	ug/L	1.0	1		08/27/20 16:42	75-71-8	CL
Ethylbenzene	<1.0	ug/L	1.0	1		08/27/20 16:42	100-41-4	
Hexachloro-1,3-butadiene	<1.0	ug/L	1.0	1		08/27/20 16:42	87-68-3	
Isopropylbenzene (Cumene)	<1.0	ug/L	1.0	1		08/27/20 16:42	98-82-8	
Methyl-tert-butyl ether	<1.0	ug/L	1.0	1		08/27/20 16:42	1634-04-4	
Methylene Chloride	<1.0	ug/L	1.0	1		08/27/20 16:42	75-09-2	
Naphthalene	1.2	ug/L	1.0	1		08/27/20 16:42	91-20-3	
Styrene	<1.0	ug/L	1.0	1		08/27/20 16:42	100-42-5	
Tetrachloroethene	<1.0	ug/L	1.0	1		08/27/20 16:42	127-18-4	
Toluene	<1.0	ug/L	1.0	1		08/27/20 16:42	108-88-3	
Trichloroethene	<1.0	ug/L	1.0	1		08/27/20 16:42	79-01-6	
Trichlorofluoromethane	<1.0	ug/L	1.0	1		08/27/20 16:42	75-69-4	
Vinyl acetate	<1.0	ug/L	1.0	1		08/27/20 16:42	108-05-4	CL
Vinyl chloride	<1.0	ug/L	1.0	1		08/27/20 16:42	75-01-4	
Xylene (Total)	<3.0	ug/L	3.0	1		08/27/20 16:42	1330-20-7	
cis-1,2-Dichloroethene	<1.0	ug/L	1.0	1		08/27/20 16:42	156-59-2	
cis-1,3-Dichloropropene	<1.0	ug/L	1.0	1		08/27/20 16:42	10061-01-5	
m&p-Xylene	<2.0	ug/L	2.0	1		08/27/20 16:42	179601-23-1	
n-Butylbenzene	<1.0	ug/L	1.0	1		08/27/20 16:42	104-51-8	
n-Propylbenzene	<1.0	ug/L	1.0	1		08/27/20 16:42	103-65-1	
o-Xylene	<1.0	ug/L	1.0	1		08/27/20 16:42	95-47-6	
p-Isopropyltoluene	<1.0	ug/L	1.0	1		08/27/20 16:42	99-87-6	
sec-Butylbenzene	<1.0	ug/L	1.0	1		08/27/20 16:42	135-98-8	
tert-Butylbenzene	<1.0	ug/L	1.0	1		08/27/20 16:42	98-06-6	
trans-1,2-Dichloroethene	<1.0	ug/L	1.0	1		08/27/20 16:42	156-60-5	
trans-1,3-Dichloropropene	<1.0	ug/L	1.0	1		08/27/20 16:42	10061-02-6	CL,L2
Surrogates								
1,2-Dichloroethane-d4 (S)	90	%	68-153	1		08/27/20 16:42	17060-07-0	
4-Bromofluorobenzene (S)	93	%	79-124	1		08/27/20 16:42	460-00-4	
Toluene-d8 (S)	93	%	69-124	1		08/27/20 16:42	2037-26-5	

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ANALYTICAL RESULTS

Project: ALCO 8/20

Pace Project No.: 70143224

Sample: TRIP BLANK	Lab ID: 70143224004	Collected: 08/20/20 00:00	Received: 08/21/20 11:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics		Analytical Method: EPA 8260C/5030C Pace Analytical Services - Melville						
1,1,1,2-Tetrachloroethane	<1.0	ug/L	1.0	1		08/27/20 17:28	630-20-6	
1,1,1-Trichloroethane	<1.0	ug/L	1.0	1		08/27/20 17:28	71-55-6	CL
1,1,2,2-Tetrachloroethane	<1.0	ug/L	1.0	1		08/27/20 17:28	79-34-5	
1,1,2-Trichloroethane	<1.0	ug/L	1.0	1		08/27/20 17:28	79-00-5	
1,1-Dichloroethane	<1.0	ug/L	1.0	1		08/27/20 17:28	75-34-3	
1,1-Dichloroethene	<1.0	ug/L	1.0	1		08/27/20 17:28	75-35-4	
1,1-Dichloropropene	<1.0	ug/L	1.0	1		08/27/20 17:28	563-58-6	
1,2,3-Trichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 17:28	87-61-6	
1,2,3-Trichloropropane	<1.0	ug/L	1.0	1		08/27/20 17:28	96-18-4	
1,2,4-Trichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 17:28	120-82-1	
1,2,4-Trimethylbenzene	<1.0	ug/L	1.0	1		08/27/20 17:28	95-63-6	
1,2-Dibromo-3-chloropropane	<1.0	ug/L	1.0	1		08/27/20 17:28	96-12-8	
1,2-Dibromoethane (EDB)	<1.0	ug/L	1.0	1		08/27/20 17:28	106-93-4	
1,2-Dichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 17:28	95-50-1	
1,2-Dichloroethane	<1.0	ug/L	1.0	1		08/27/20 17:28	107-06-2	
1,2-Dichloropropane	<1.0	ug/L	1.0	1		08/27/20 17:28	78-87-5	
1,3,5-Trimethylbenzene	<1.0	ug/L	1.0	1		08/27/20 17:28	108-67-8	
1,3-Dichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 17:28	541-73-1	
1,3-Dichloropropane	<1.0	ug/L	1.0	1		08/27/20 17:28	142-28-9	
1,4-Dichlorobenzene	<1.0	ug/L	1.0	1		08/27/20 17:28	106-46-7	
2,2-Dichloropropane	<1.0	ug/L	1.0	1		08/27/20 17:28	594-20-7	CL,L2
2-Butanone (MEK)	<5.0	ug/L	5.0	1		08/27/20 17:28	78-93-3	IL
2-Chlorotoluene	<1.0	ug/L	1.0	1		08/27/20 17:28	95-49-8	
2-Hexanone	<5.0	ug/L	5.0	1		08/27/20 17:28	591-78-6	
4-Chlorotoluene	<1.0	ug/L	1.0	1		08/27/20 17:28	106-43-4	
4-Methyl-2-pentanone (MIBK)	<5.0	ug/L	5.0	1		08/27/20 17:28	108-10-1	
Acetone	<5.0	ug/L	5.0	1		08/27/20 17:28	67-64-1	IC
Benzene	<1.0	ug/L	1.0	1		08/27/20 17:28	71-43-2	
Bromobenzene	<1.0	ug/L	1.0	1		08/27/20 17:28	108-86-1	
Bromochloromethane	<1.0	ug/L	1.0	1		08/27/20 17:28	74-97-5	
Bromodichloromethane	<1.0	ug/L	1.0	1		08/27/20 17:28	75-27-4	
Bromoform	<1.0	ug/L	1.0	1		08/27/20 17:28	75-25-2	
Bromomethane	<1.0	ug/L	1.0	1		08/27/20 17:28	74-83-9	
Carbon disulfide	<1.0	ug/L	1.0	1		08/27/20 17:28	75-15-0	
Carbon tetrachloride	<1.0	ug/L	1.0	1		08/27/20 17:28	56-23-5	
Chlorobenzene	<1.0	ug/L	1.0	1		08/27/20 17:28	108-90-7	
Chloroethane	<1.0	ug/L	1.0	1		08/27/20 17:28	75-00-3	
Chloroform	<1.0	ug/L	1.0	1		08/27/20 17:28	67-66-3	
Chloromethane	<1.0	ug/L	1.0	1		08/27/20 17:28	74-87-3	
Dibromochloromethane	<1.0	ug/L	1.0	1		08/27/20 17:28	124-48-1	
Dibromomethane	<1.0	ug/L	1.0	1		08/27/20 17:28	74-95-3	
Dichlorodifluoromethane	<1.0	ug/L	1.0	1		08/27/20 17:28	75-71-8	CL
Ethylbenzene	<1.0	ug/L	1.0	1		08/27/20 17:28	100-41-4	
Hexachloro-1,3-butadiene	<1.0	ug/L	1.0	1		08/27/20 17:28	87-68-3	
Isopropylbenzene (Cumene)	<1.0	ug/L	1.0	1		08/27/20 17:28	98-82-8	
Methyl-tert-butyl ether	<1.0	ug/L	1.0	1		08/27/20 17:28	1634-04-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: ALCO 8/20

Pace Project No.: 70143224

Sample: TRIP BLANK	Lab ID: 70143224004	Collected: 08/20/20 00:00	Received: 08/21/20 11:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260C Volatile Organics		Analytical Method: EPA 8260C/5030C Pace Analytical Services - Melville						
Methylene Chloride	<1.0	ug/L	1.0	1		08/27/20 17:28	75-09-2	
Naphthalene	<1.0	ug/L	1.0	1		08/27/20 17:28	91-20-3	
Styrene	<1.0	ug/L	1.0	1		08/27/20 17:28	100-42-5	
Tetrachloroethene	<1.0	ug/L	1.0	1		08/27/20 17:28	127-18-4	
Toluene	<1.0	ug/L	1.0	1		08/27/20 17:28	108-88-3	
Trichloroethene	<1.0	ug/L	1.0	1		08/27/20 17:28	79-01-6	
Trichlorofluoromethane	<1.0	ug/L	1.0	1		08/27/20 17:28	75-69-4	
Vinyl acetate	<1.0	ug/L	1.0	1		08/27/20 17:28	108-05-4	CL
Vinyl chloride	<1.0	ug/L	1.0	1		08/27/20 17:28	75-01-4	
Xylene (Total)	<3.0	ug/L	3.0	1		08/27/20 17:28	1330-20-7	
cis-1,2-Dichloroethene	<1.0	ug/L	1.0	1		08/27/20 17:28	156-59-2	
cis-1,3-Dichloropropene	<1.0	ug/L	1.0	1		08/27/20 17:28	10061-01-5	
m&p-Xylene	<2.0	ug/L	2.0	1		08/27/20 17:28	179601-23-1	
n-Butylbenzene	<1.0	ug/L	1.0	1		08/27/20 17:28	104-51-8	
n-Propylbenzene	<1.0	ug/L	1.0	1		08/27/20 17:28	103-65-1	
o-Xylene	<1.0	ug/L	1.0	1		08/27/20 17:28	95-47-6	
p-Isopropyltoluene	<1.0	ug/L	1.0	1		08/27/20 17:28	99-87-6	
sec-Butylbenzene	<1.0	ug/L	1.0	1		08/27/20 17:28	135-98-8	
tert-Butylbenzene	<1.0	ug/L	1.0	1		08/27/20 17:28	98-06-6	
trans-1,2-Dichloroethene	<1.0	ug/L	1.0	1		08/27/20 17:28	156-60-5	
trans-1,3-Dichloropropene	<1.0	ug/L	1.0	1		08/27/20 17:28	10061-02-6	CL,L2
Surrogates								
1,2-Dichloroethane-d4 (S)	91	%	68-153	1		08/27/20 17:28	17060-07-0	
4-Bromofluorobenzene (S)	93	%	79-124	1		08/27/20 17:28	460-00-4	
Toluene-d8 (S)	93	%	69-124	1		08/27/20 17:28	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ALCO 8/20
Pace Project No.: 70143224

QC Batch: 174793 Analysis Method: EPA 8260C/5030C
QC Batch Method: EPA 8260C/5030C Analysis Description: 8260 MSV
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70143224001, 70143224002, 70143224003, 70143224004

METHOD BLANK: 847640 Matrix: Water
Associated Lab Samples: 70143224001, 70143224002, 70143224003, 70143224004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<1.0	1.0	08/27/20 11:11	
1,1,1-Trichloroethane	ug/L	<1.0	1.0	08/27/20 11:11	CL
1,1,2,2-Tetrachloroethane	ug/L	<1.0	1.0	08/27/20 11:11	
1,1,2-Trichloroethane	ug/L	<1.0	1.0	08/27/20 11:11	
1,1-Dichloroethane	ug/L	<1.0	1.0	08/27/20 11:11	
1,1-Dichloroethene	ug/L	<1.0	1.0	08/27/20 11:11	
1,1-Dichloropropene	ug/L	<1.0	1.0	08/27/20 11:11	
1,2,3-Trichlorobenzene	ug/L	<1.0	1.0	08/27/20 11:11	
1,2,3-Trichloropropane	ug/L	<1.0	1.0	08/27/20 11:11	
1,2,4-Trichlorobenzene	ug/L	<1.0	1.0	08/27/20 11:11	
1,2,4-Trimethylbenzene	ug/L	<1.0	1.0	08/27/20 11:11	
1,2-Dibromo-3-chloropropane	ug/L	<1.0	1.0	08/27/20 11:11	
1,2-Dibromoethane (EDB)	ug/L	<1.0	1.0	08/27/20 11:11	
1,2-Dichlorobenzene	ug/L	<1.0	1.0	08/27/20 11:11	
1,2-Dichloroethane	ug/L	<1.0	1.0	08/27/20 11:11	
1,2-Dichloropropane	ug/L	<1.0	1.0	08/27/20 11:11	
1,3,5-Trimethylbenzene	ug/L	<1.0	1.0	08/27/20 11:11	
1,3-Dichlorobenzene	ug/L	<1.0	1.0	08/27/20 11:11	
1,3-Dichloropropane	ug/L	<1.0	1.0	08/27/20 11:11	
1,4-Dichlorobenzene	ug/L	<1.0	1.0	08/27/20 11:11	
2,2-Dichloropropane	ug/L	<1.0	1.0	08/27/20 11:11	CL
2-Butanone (MEK)	ug/L	<5.0	5.0	08/27/20 11:11	IL
2-Chlorotoluene	ug/L	<1.0	1.0	08/27/20 11:11	
2-Hexanone	ug/L	<5.0	5.0	08/27/20 11:11	
4-Chlorotoluene	ug/L	<1.0	1.0	08/27/20 11:11	
4-Methyl-2-pentanone (MIBK)	ug/L	<5.0	5.0	08/27/20 11:11	
Acetone	ug/L	<5.0	5.0	08/27/20 11:11	IC
Benzene	ug/L	<1.0	1.0	08/27/20 11:11	
Bromobenzene	ug/L	<1.0	1.0	08/27/20 11:11	
Bromochloromethane	ug/L	<1.0	1.0	08/27/20 11:11	
Bromodichloromethane	ug/L	<1.0	1.0	08/27/20 11:11	
Bromoform	ug/L	<1.0	1.0	08/27/20 11:11	
Bromomethane	ug/L	<1.0	1.0	08/27/20 11:11	
Carbon disulfide	ug/L	<1.0	1.0	08/27/20 11:11	
Carbon tetrachloride	ug/L	<1.0	1.0	08/27/20 11:11	
Chlorobenzene	ug/L	<1.0	1.0	08/27/20 11:11	
Chloroethane	ug/L	<1.0	1.0	08/27/20 11:11	
Chloroform	ug/L	<1.0	1.0	08/27/20 11:11	
Chloromethane	ug/L	<1.0	1.0	08/27/20 11:11	
cis-1,2-Dichloroethene	ug/L	<1.0	1.0	08/27/20 11:11	

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QUALITY CONTROL DATA

Project: ALCO 8/20
Pace Project No.: 70143224

METHOD BLANK: 847640 Matrix: Water
Associated Lab Samples: 70143224001, 70143224002, 70143224003, 70143224004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,3-Dichloropropene	ug/L	<1.0	1.0	08/27/20 11:11	
Dibromochloromethane	ug/L	<1.0	1.0	08/27/20 11:11	
Dibromomethane	ug/L	<1.0	1.0	08/27/20 11:11	
Dichlorodifluoromethane	ug/L	<1.0	1.0	08/27/20 11:11	CL
Ethylbenzene	ug/L	<1.0	1.0	08/27/20 11:11	
Hexachloro-1,3-butadiene	ug/L	<1.0	1.0	08/27/20 11:11	
Isopropylbenzene (Cumene)	ug/L	<1.0	1.0	08/27/20 11:11	
m&p-Xylene	ug/L	<2.0	2.0	08/27/20 11:11	
Methyl-tert-butyl ether	ug/L	<1.0	1.0	08/27/20 11:11	
Methylene Chloride	ug/L	<1.0	1.0	08/27/20 11:11	
n-Butylbenzene	ug/L	<1.0	1.0	08/27/20 11:11	
n-Propylbenzene	ug/L	<1.0	1.0	08/27/20 11:11	
Naphthalene	ug/L	<1.0	1.0	08/27/20 11:11	
o-Xylene	ug/L	<1.0	1.0	08/27/20 11:11	
p-Isopropyltoluene	ug/L	<1.0	1.0	08/27/20 11:11	
sec-Butylbenzene	ug/L	<1.0	1.0	08/27/20 11:11	
Styrene	ug/L	<1.0	1.0	08/27/20 11:11	
tert-Butylbenzene	ug/L	<1.0	1.0	08/27/20 11:11	
Tetrachloroethene	ug/L	<1.0	1.0	08/27/20 11:11	
Toluene	ug/L	<1.0	1.0	08/27/20 11:11	
trans-1,2-Dichloroethene	ug/L	<1.0	1.0	08/27/20 11:11	
trans-1,3-Dichloropropene	ug/L	<1.0	1.0	08/27/20 11:11	CL
Trichloroethene	ug/L	<1.0	1.0	08/27/20 11:11	
Trichlorofluoromethane	ug/L	<1.0	1.0	08/27/20 11:11	
Vinyl acetate	ug/L	<1.0	1.0	08/27/20 11:11	CL
Vinyl chloride	ug/L	<1.0	1.0	08/27/20 11:11	
Xylene (Total)	ug/L	<3.0	3.0	08/27/20 11:11	
1,2-Dichloroethane-d4 (S)	%	92	68-153	08/27/20 11:11	
4-Bromofluorobenzene (S)	%	93	79-124	08/27/20 11:11	
Toluene-d8 (S)	%	93	69-124	08/27/20 11:11	

LABORATORY CONTROL SAMPLE: 847641

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	43.8	88	74-113	
1,1,1-Trichloroethane	ug/L	50	37.9	76	65-118	CL
1,1,2,2-Tetrachloroethane	ug/L	50	49.3	99	74-121	
1,1,2-Trichloroethane	ug/L	50	48.9	98	80-117	
1,1-Dichloroethane	ug/L	50	48.7	97	83-151	
1,1-Dichloroethene	ug/L	50	46.0	92	45-146	
1,1-Dichloropropene	ug/L	50	44.6	89	59-127	
1,2,3-Trichlorobenzene	ug/L	50	45.1	90	67-103	
1,2,3-Trichloropropane	ug/L	50	46.6	93	71-123	
1,2,4-Trichlorobenzene	ug/L	50	45.6	91	66-116	

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QUALITY CONTROL DATA

Project: ALCO 8/20

Pace Project No.: 70143224

LABORATORY CONTROL SAMPLE: 847641

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	50	46.1	92	68-116	
1,2-Dibromo-3-chloropropane	ug/L	50	41.8	84	74-119	
1,2-Dibromoethane (EDB)	ug/L	50	47.4	95	83-115	
1,2-Dichlorobenzene	ug/L	50	47.8	96	74-113	
1,2-Dichloroethane	ug/L	50	49.5	99	74-129	
1,2-Dichloropropane	ug/L	50	46.3	93	75-117	
1,3,5-Trimethylbenzene	ug/L	50	45.6	91	67-116	
1,3-Dichlorobenzene	ug/L	50	47.7	95	71-112	
1,3-Dichloropropane	ug/L	50	49.3	99	74-112	
1,4-Dichlorobenzene	ug/L	50	47.4	95	71-113	
2,2-Dichloropropane	ug/L	50	30.9	62	63-133	CL,L2
2-Butanone (MEK)	ug/L	50	45.0	90	44-162	IL
2-Chlorotoluene	ug/L	50	45.6	91	74-101	
2-Hexanone	ug/L	50	41.4	83	32-183	
4-Chlorotoluene	ug/L	50	45.9	92	74-101	
4-Methyl-2-pentanone (MIBK)	ug/L	50	45.2	90	69-132	
Acetone	ug/L	50	66.7	133	23-188	CH,IC
Benzene	ug/L	50	46.8	94	73-119	
Bromobenzene	ug/L	50	46.5	93	72-102	
Bromochloromethane	ug/L	50	53.2	106	81-116	
Bromodichloromethane	ug/L	50	46.5	93	78-117	
Bromoform	ug/L	50	47.7	95	65-122	
Bromomethane	ug/L	50	63.0	126	52-147	CH,IH
Carbon disulfide	ug/L	50	45.9	92	41-144	
Carbon tetrachloride	ug/L	50	43.3	87	59-120	
Chlorobenzene	ug/L	50	47.5	95	75-113	
Chloroethane	ug/L	50	47.7	95	49-151	
Chloroform	ug/L	50	49.5	99	72-122	
Chloromethane	ug/L	50	41.2	82	46-144	
cis-1,2-Dichloroethene	ug/L	50	50.9	102	72-121	
cis-1,3-Dichloropropene	ug/L	50	40.6	81	78-116	
Dibromochloromethane	ug/L	50	47.9	96	70-120	
Dibromomethane	ug/L	50	47.8	96	75-125	
Dichlorodifluoromethane	ug/L	50	33.7	67	22-154	CL
Ethylbenzene	ug/L	50	47.3	95	70-113	
Hexachloro-1,3-butadiene	ug/L	50	43.0	86	59-121	
Isopropylbenzene (Cumene)	ug/L	50	45.0	90	67-115	
m&p-Xylene	ug/L	100	94.6	95	72-115	
Methyl-tert-butyl ether	ug/L	50	44.7	89	72-131	
Methylene Chloride	ug/L	50	50.0	100	61-142	
n-Butylbenzene	ug/L	50	47.3	95	73-107	
n-Propylbenzene	ug/L	50	46.4	93	68-116	
Naphthalene	ug/L	50	47.4	95	70-118	
o-Xylene	ug/L	50	47.0	94	73-117	
p-Isopropyltoluene	ug/L	50	44.5	89	73-101	
sec-Butylbenzene	ug/L	50	46.2	92	72-103	
Styrene	ug/L	50	48.4	97	72-118	

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QUALITY CONTROL DATA

Project: ALCO 8/20

Pace Project No.: 70143224

LABORATORY CONTROL SAMPLE: 847641

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butylbenzene	ug/L	50	45.3	91	68-100	
Tetrachloroethene	ug/L	50	44.2	88	60-128	
Toluene	ug/L	50	47.4	95	72-119	
trans-1,2-Dichloroethene	ug/L	50	48.4	97	56-142	
trans-1,3-Dichloropropene	ug/L	50	36.3	73	79-116	CL,L2
Trichloroethene	ug/L	50	45.3	91	69-117	
Trichlorofluoromethane	ug/L	50	45.0	90	27-173	
Vinyl acetate	ug/L	50	36.7	73	20-158	CL
Vinyl chloride	ug/L	50	45.2	90	43-143	IH
Xylene (Total)	ug/L	150	142	94	71-109	
1,2-Dichloroethane-d4 (S)	%			91	68-153	
4-Bromofluorobenzene (S)	%			94	79-124	
Toluene-d8 (S)	%			95	69-124	

SAMPLE DUPLICATE: 848884

Parameter	Units	70143575002 Result	Dup Result	RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<1.0	<1.0		
1,1,1-Trichloroethane	ug/L	<1.0	<1.0		CL
1,1,2,2-Tetrachloroethane	ug/L	<1.0	<1.0		
1,1,2-Trichloroethane	ug/L	<1.0	<1.0		
1,1-Dichloroethane	ug/L	<1.0	<1.0		
1,1-Dichloroethene	ug/L	<1.0	<1.0		
1,1-Dichloropropene	ug/L	<1.0	<1.0		
1,2,3-Trichlorobenzene	ug/L	<1.0	<1.0		
1,2,3-Trichloropropane	ug/L	<1.0	<1.0		
1,2,4-Trichlorobenzene	ug/L	<1.0	<1.0		
1,2,4-Trimethylbenzene	ug/L	<1.0	<1.0		
1,2-Dibromo-3-chloropropane	ug/L	<1.0	<1.0		
1,2-Dibromoethane (EDB)	ug/L	<1.0	<1.0		
1,2-Dichlorobenzene	ug/L	<1.0	<1.0		
1,2-Dichloroethane	ug/L	<1.0	<1.0		
1,2-Dichloropropane	ug/L	<1.0	<1.0		
1,3,5-Trimethylbenzene	ug/L	<1.0	<1.0		
1,3-Dichlorobenzene	ug/L	<1.0	<1.0		
1,3-Dichloropropane	ug/L	<1.0	<1.0		
1,4-Dichlorobenzene	ug/L	<1.0	<1.0		
2,2-Dichloropropane	ug/L	<1.0	<1.0		CL
2-Butanone (MEK)	ug/L	<5.0	<5.0		IL
2-Chlorotoluene	ug/L	<1.0	<1.0		
2-Hexanone	ug/L	<5.0	<5.0		
4-Chlorotoluene	ug/L	<1.0	<1.0		
4-Methyl-2-pentanone (MIBK)	ug/L	<5.0	<5.0		
Acetone	ug/L	<5.0	<5.0		IC
Benzene	ug/L	<1.0	<1.0		

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QUALITY CONTROL DATA

Project: ALCO 8/20

Pace Project No.: 70143224

SAMPLE DUPLICATE: 848884

Parameter	Units	70143575002 Result	Dup Result	RPD	Qualifiers
Bromobenzene	ug/L	<1.0	<1.0		
Bromochloromethane	ug/L	<1.0	<1.0		
Bromodichloromethane	ug/L	<1.0	<1.0		
Bromoform	ug/L	<1.0	<1.0		
Bromomethane	ug/L	<1.0	<1.0		
Carbon disulfide	ug/L	<1.0	<1.0		
Carbon tetrachloride	ug/L	<1.0	<1.0		
Chlorobenzene	ug/L	<1.0	<1.0		
Chloroethane	ug/L	<1.0	<1.0		
Chloroform	ug/L	<1.0	<1.0		
Chloromethane	ug/L	<1.0	<1.0		
cis-1,2-Dichloroethene	ug/L	<1.0	<1.0		
cis-1,3-Dichloropropene	ug/L	<1.0	<1.0		
Dibromochloromethane	ug/L	<1.0	<1.0		
Dibromomethane	ug/L	<1.0	<1.0		
Dichlorodifluoromethane	ug/L	<1.0	<1.0		CL
Ethylbenzene	ug/L	<1.0	<1.0		
Hexachloro-1,3-butadiene	ug/L	<1.0	<1.0		
Isopropylbenzene (Cumene)	ug/L	<1.0	<1.0		
m&p-Xylene	ug/L	<2.0	<2.0		
Methyl-tert-butyl ether	ug/L	<1.0	<1.0		
Methylene Chloride	ug/L	<1.0	<1.0		
n-Butylbenzene	ug/L	<1.0	<1.0		
n-Propylbenzene	ug/L	<1.0	<1.0		
Naphthalene	ug/L	<1.0	<1.0		
o-Xylene	ug/L	<1.0	<1.0		
p-Isopropyltoluene	ug/L	<1.0	<1.0		
sec-Butylbenzene	ug/L	<1.0	<1.0		
Styrene	ug/L	<1.0	<1.0		
tert-Butylbenzene	ug/L	<1.0	<1.0		
Tetrachloroethene	ug/L	<1.0	<1.0		
Toluene	ug/L	<1.0	<1.0		
trans-1,2-Dichloroethene	ug/L	<1.0	<1.0		
trans-1,3-Dichloropropene	ug/L	<1.0	<1.0		CL
Trichloroethene	ug/L	<1.0	<1.0		
Trichlorofluoromethane	ug/L	<1.0	<1.0		
Vinyl acetate	ug/L	<1.0	<1.0		CL
Vinyl chloride	ug/L	<1.0	<1.0		
Xylene (Total)	ug/L	<3.0	<3.0		
1,2-Dichloroethane-d4 (S)	%	92	91		
4-Bromofluorobenzene (S)	%	94	94		
Toluene-d8 (S)	%	94	94		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ALCO 8/20
Pace Project No.: 70143224

QC Batch: 174736 Analysis Method: EPA 8270D
QC Batch Method: EPA 3510C Analysis Description: 8270 Water MSSV
Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70143224001, 70143224002, 70143224003

METHOD BLANK: 847409 Matrix: Water

Associated Lab Samples: 70143224001, 70143224002, 70143224003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
3,3'-Dimethylbenzidine	ug/L	<5.0	5.0	08/27/20 18:38	
3-Nitroaniline	ug/L	<5.0	5.0	08/27/20 18:38	
4,6-Dinitro-2-methylphenol	ug/L	<10.0	10.0	08/27/20 18:38	
4-Bromophenylphenyl ether	ug/L	<5.0	5.0	08/27/20 18:38	
4-Chloro-3-methylphenol	ug/L	<5.0	5.0	08/27/20 18:38	
4-Chloroaniline	ug/L	<5.0	5.0	08/27/20 18:38	
4-Chlorophenylphenyl ether	ug/L	<5.0	5.0	08/27/20 18:38	
4-Nitroaniline	ug/L	<5.0	5.0	08/27/20 18:38	
4-Nitrophenol	ug/L	<10.0	10.0	08/27/20 18:38	
Acenaphthene	ug/L	<5.0	5.0	08/27/20 18:38	
Acenaphthylene	ug/L	<5.0	5.0	08/27/20 18:38	
Anthracene	ug/L	<5.0	5.0	08/27/20 18:38	
Benzo(a)anthracene	ug/L	<5.0	5.0	08/27/20 18:38	
Benzo(a)pyrene	ug/L	<5.0	5.0	08/27/20 18:38	
Benzo(b)fluoranthene	ug/L	<5.0	5.0	08/27/20 18:38	
Benzo(g,h,i)perylene	ug/L	<5.0	5.0	08/27/20 18:38	
Benzo(k)fluoranthene	ug/L	<5.0	5.0	08/27/20 18:38	
bis(2-Chloroethoxy)methane	ug/L	<5.0	5.0	08/27/20 18:38	
bis(2-Chloroethyl) ether	ug/L	<5.0	5.0	08/27/20 18:38	
bis(2-Ethylhexyl)phthalate	ug/L	<5.0	5.0	08/27/20 18:38	
Butylbenzylphthalate	ug/L	<5.0	5.0	08/27/20 18:38	
Carbazole	ug/L	<5.0	5.0	08/27/20 18:38	
Chrysene	ug/L	<5.0	5.0	08/27/20 18:38	
Di-n-butylphthalate	ug/L	<5.0	5.0	08/27/20 18:38	
Di-n-octylphthalate	ug/L	<5.0	5.0	08/27/20 18:38	
Dibenz(a,h)anthracene	ug/L	<5.0	5.0	08/27/20 18:38	
Dibenzofuran	ug/L	<5.0	5.0	08/27/20 18:38	
Diethylphthalate	ug/L	<5.0	5.0	08/27/20 18:38	
Dimethylphthalate	ug/L	<5.0	5.0	08/27/20 18:38	
Fluoranthene	ug/L	<5.0	5.0	08/27/20 18:38	
Fluorene	ug/L	<5.0	5.0	08/27/20 18:38	
Hexachloro-1,3-butadiene	ug/L	<5.0	5.0	08/27/20 18:38	
Hexachlorobenzene	ug/L	<5.0	5.0	08/27/20 18:38	
Hexachlorocyclopentadiene	ug/L	<5.0	5.0	08/27/20 18:38	
Hexachloroethane	ug/L	<5.0	5.0	08/27/20 18:38	
Indeno(1,2,3-cd)pyrene	ug/L	<5.0	5.0	08/27/20 18:38	
Isophorone	ug/L	<5.0	5.0	08/27/20 18:38	
N-Nitroso-di-n-propylamine	ug/L	<5.0	5.0	08/27/20 18:38	
N-Nitrosodiphenylamine	ug/L	<5.0	5.0	08/27/20 18:38	
Naphthalene	ug/L	<5.0	5.0	08/27/20 18:38	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: ALCO 8/20
Pace Project No.: 70143224

METHOD BLANK: 847409 Matrix: Water

Associated Lab Samples: 70143224001, 70143224002, 70143224003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrobenzene	ug/L	<5.0	5.0	08/27/20 18:38	
Pentachlorophenol	ug/L	<10.0	10.0	08/27/20 18:38	
Phenanthrene	ug/L	<5.0	5.0	08/27/20 18:38	
Phenol	ug/L	<5.0	5.0	08/27/20 18:38	
Pyrene	ug/L	<5.0	5.0	08/27/20 18:38	
1,2-Dichlorobenzene-d4 (S)	%	41	16-110	08/27/20 18:38	
2,4,6-Tribromophenol (S)	%	91	10-123	08/27/20 18:38	
2-Chlorophenol-d4 (S)	%	60	33-110	08/27/20 18:38	
2-Fluorobiphenyl (S)	%	83	43-116	08/27/20 18:38	
2-Fluorophenol (S)	%	36	21-110	08/27/20 18:38	
Nitrobenzene-d5 (S)	%	82	35-114	08/27/20 18:38	
p-Terphenyl-d14 (S)	%	91	33-141	08/27/20 18:38	
Phenol-d5 (S)	%	21	10-110	08/27/20 18:38	

LABORATORY CONTROL SAMPLE: 847410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
3,3'-Dimethylbenzidine	ug/L		<5.0			
3-Nitroaniline	ug/L	25	27.3	109	46-112	
4,6-Dinitro-2-methylphenol	ug/L	25	18.9	76	28-150	
4-Bromophenylphenyl ether	ug/L	25	21.2	85	53-121	
4-Chloro-3-methylphenol	ug/L	25	22.4	90	48-124	
4-Chloroaniline	ug/L	25	21.5	86	25-133	
4-Chlorophenylphenyl ether	ug/L	25	21.6	86	53-116	
4-Nitroaniline	ug/L	25	26.0	104	51-113	
4-Nitrophenol	ug/L	25	<10.0	24	10-102	
Acenaphthene	ug/L	25	22.0	88	50-116	
Acenaphthylene	ug/L	25	22.3	89	50-109	
Anthracene	ug/L	25	22.6	90	54-117	
Benzo(a)anthracene	ug/L	25	27.2	109	31-128	
Benzo(a)pyrene	ug/L	25	22.9	92	30-146	
Benzo(b)fluoranthene	ug/L	25	23.3	93	43-147	
Benzo(g,h,i)perylene	ug/L	25	25.1	100	25-153	
Benzo(k)fluoranthene	ug/L	25	23.1	92	28-148	
bis(2-Chloroethoxy)methane	ug/L	25	23.9	96	47-102	
bis(2-Chloroethyl) ether	ug/L	25	18.4	74	39-111	
bis(2-Ethylhexyl)phthalate	ug/L	25	28.3	113	37-138	
Butylbenzylphthalate	ug/L	25	37.2	149	38-135 L1	
Carbazole	ug/L	25	21.6	87	69-127	
Chrysene	ug/L	25	26.3	105	42-140	
Di-n-butylphthalate	ug/L	25	23.0	92	50-128	
Di-n-octylphthalate	ug/L	25	26.1	104	32-148	
Dibenz(a,h)anthracene	ug/L	25	24.6	98	22-147	
Dibenzofuran	ug/L	25	22.7	91	53-117	

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QUALITY CONTROL DATA

Project: ALCO 8/20

Pace Project No.: 70143224

LABORATORY CONTROL SAMPLE: 847410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diethylphthalate	ug/L	25	27.4	110	54-124	
Dimethylphthalate	ug/L	25	25.7	103	56-121	
Fluoranthene	ug/L	25	19.8	79	50-123	
Fluorene	ug/L	25	23.9	95	51-118	
Hexachloro-1,3-butadiene	ug/L	25	7.3	29	18-90	
Hexachlorobenzene	ug/L	25	18.7	75	52-128	
Hexachlorocyclopentadiene	ug/L	25	5.1	21	13-119	
Hexachloroethane	ug/L	25	7.0	28	41-119 L2	
Indeno(1,2,3-cd)pyrene	ug/L	25	25.7	103	26-156	
Isophorone	ug/L	25	21.1	84	46-118	
N-Nitroso-di-n-propylamine	ug/L	25	24.1	96	40-124	
N-Nitrosodiphenylamine	ug/L	25	21.8	87	41-95	
Naphthalene	ug/L	25	12.5	50	39-107	
Nitrobenzene	ug/L	25	21.0	84	41-122	
Pentachlorophenol	ug/L	25	17.4	70	12-124	
Phenanthrene	ug/L	25	24.0	96	52-126	
Phenol	ug/L	25	6.0	24	10-99	
Pyrene	ug/L	25	30.2	121	41-137	
1,2-Dichlorobenzene-d4 (S)	%			45	16-110	
2,4,6-Tribromophenol (S)	%			90	10-123	
2-Chlorophenol-d4 (S)	%			64	33-110	
2-Fluorobiphenyl (S)	%			77	43-116	
2-Fluorophenol (S)	%			36	21-110	
Nitrobenzene-d5 (S)	%			89	35-114	
p-Terphenyl-d14 (S)	%			131	33-141	
Phenol-d5 (S)	%			20	10-110	

MATRIX SPIKE SAMPLE: 847660

Parameter	Units	70143224002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
3,3'-Dimethylbenzidine	ug/L	<5.0		<5.0			
3-Nitroaniline	ug/L	<5.0	25	20.6	82	46-112	
4,6-Dinitro-2-methylphenol	ug/L	<10.0	25	18.4	73	28-150	
4-Bromophenylphenyl ether	ug/L	<5.0	25	24.1	96	53-121	
4-Chloro-3-methylphenol	ug/L	<5.0	25	22.9	92	48-124	
4-Chloroaniline	ug/L	<5.0	25	19.4	78	25-133	
4-Chlorophenylphenyl ether	ug/L	<5.0	25	23.2	93	53-116	
4-Nitroaniline	ug/L	<5.0	25	11.1	44	51-113 M1	
4-Nitrophenol	ug/L	<10.0	25	12.0	48	10-102	
Acenaphthene	ug/L	<5.0	25	28.9	116	50-116	
Acenaphthylene	ug/L	<5.0	25	26.8	107	50-109	
Anthracene	ug/L	<5.0	25	24.9	100	54-117	
Benzo(a)anthracene	ug/L	<5.0	25	25.7	103	31-128	
Benzo(a)pyrene	ug/L	<5.0	25	22.8	91	30-146	
Benzo(b)fluoranthene	ug/L	<5.0	25	24.6	99	43-147	

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QUALITY CONTROL DATA

Project: ALCO 8/20

Pace Project No.: 70143224

MATRIX SPIKE SAMPLE: 847660		70143224002	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Benzo(g,h,i)perylene	ug/L	<5.0	25	16.4	66	25-153	
Benzo(k)fluoranthene	ug/L	<5.0	25	25.0	100	28-148	
bis(2-Chloroethoxy)methane	ug/L	<5.0	25	29.8	119	47-102	M1
bis(2-Chloroethyl) ether	ug/L	<5.0	25	24.6	98	39-111	
bis(2-Ethylhexyl)phthalate	ug/L	<5.0	25	27.7	111	37-138	
Butylbenzylphthalate	ug/L	<5.0	25	26.5	106	38-135	
Carbazole	ug/L	<5.0	25	25.0	100	69-127	
Chrysene	ug/L	<5.0	25	26.0	104	42-140	
Di-n-butylphthalate	ug/L	<5.0	25	25.2	101	50-128	
Di-n-octylphthalate	ug/L	<5.0	25	26.7	107	32-148	
Dibenz(a,h)anthracene	ug/L	<5.0	25	15.7	63	22-147	
Dibenzofuran	ug/L	<5.0	25	25.8	103	53-117	
Diethylphthalate	ug/L	<5.0	25	25.4	102	54-124	
Dimethylphthalate	ug/L	<5.0	25	24.7	99	56-121	
Fluoranthene	ug/L	<5.0	25	26.1	97	50-123	
Fluorene	ug/L	<5.0	25	28.4	113	51-118	
Hexachloro-1,3-butadiene	ug/L	<5.0	25	20.6	82	18-90	
Hexachlorobenzene	ug/L	<5.0	25	22.1	88	52-128	
Hexachlorocyclopentadiene	ug/L	<5.0	25	12.4	50	13-119	
Hexachloroethane	ug/L	<5.0	25	141	563	41-119	E,M0
Indeno(1,2,3-cd)pyrene	ug/L	<5.0	25	16.9	68	26-156	
Isophorone	ug/L	<5.0	25	27.3	109	46-118	
N-Nitroso-di-n-propylamine	ug/L	<5.0	25	32.5	130	40-124	M1
N-Nitrosodiphenylamine	ug/L	<5.0	25	33.0	132	41-95	M1
Naphthalene	ug/L	<5.0	25	140	558	39-107	E,M1
Nitrobenzene	ug/L	<5.0	25	51.0	204	41-122	M1
Pentachlorophenol	ug/L	<10.0	25	25.5	102	12-124	
Phenanthrene	ug/L	<5.0	25	26.9	108	52-126	
Phenol	ug/L	<5.0	25	8.3	33	10-99	
Pyrene	ug/L	<5.0	25	29.4	105	41-137	
1,2-Dichlorobenzene-d4 (S)	%				82	16-110	
2,4,6-Tribromophenol (S)	%				98	10-123	
2-Chlorophenol-d4 (S)	%				76	33-110	
2-Fluorobiphenyl (S)	%				92	43-116	
2-Fluorophenol (S)	%				41	21-110	
Nitrobenzene-d5 (S)	%				106	35-114	
p-Terphenyl-d14 (S)	%				70	33-141	
Phenol-d5 (S)	%				70	10-110	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: ALCO 8/20
Pace Project No.: 70143224

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
CL	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
IC	The initial calibration for this compound was outside of method control limits. The result is estimated.
IH	This analyte exceeded secondary source verification criteria high for the initial calibration. The reported results should be considered an estimated value.
IL	This analyte exceeded secondary source verification criteria low for the initial calibration. The reported results should be considered an estimated value.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: ALCO 8/20

Pace Project No.: 70143224

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70143224001	B-4	EPA 3510C	174736	EPA 8270D	174916
70143224002	B-6	EPA 3510C	174736	EPA 8270D	174916
70143224003	B-8	EPA 3510C	174736	EPA 8270D	174916
70143224001	B-4	EPA 8260C/5030C	174793		
70143224002	B-6	EPA 8260C/5030C	174793		
70143224003	B-8	EPA 8260C/5030C	174793		
70143224004	TRIP BLANK	EPA 8260C/5030C	174793		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Required Client Information:
 Company: Barton and Loguidice-Albany
 Address: 10 Airline Drive Suite 200
 Albany, NY 12205
 Email: csleinmuller@bartonandloguidice.com
 Phone: NONE Fax:
 Requested Due Date: NOVEMBER 12, 2010

Required Project Information:
 Report To: Steinmuller, Corinne
 Copy To:
 Purchase Order #: 1368.004.001
 Project Name: ALCO
 Pace Project Manager: jennifer.arac@pacelabs.com
 Pace Profile #: 0

Attention: Accounts Payable
 Company Name: Barton and Loguidice, LLC
 Address: 337 ELECTRICITY PLAZA, (448)
 Regulatory Agency
 State / Location: NY

ITEM #	MATRIX	MATRIX CODE	COLLECTED		SAMPLE TYPE (G-GRAB C-COMP)	MATRIX CODE (see valid codes to left)	DATE	TIME	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP In C	Received on	Custody (Y/N)	Sealed Cooler (Y/N)	Intact Samples (Y/N)
			START	END														
1	Drinking Water	DW	8/20/10	8:25	WT	WT	8/20/10	9:15a	8/20/10	9:15	MAJ. PACE	8/20/10	9:15					
2	Water	WT	8/20/10	8:38	WT	WT	8/20/10	9:15a	8/20/10	9:15	MAJ. PACE	8/20/10	9:15					
3	Waste Water	WW	8/20/10	8:57	WT	WT	8/20/10	9:15a	8/20/10	9:15	MAJ. PACE	8/20/10	9:15					
4	Product	P																
5	Soil/Solid	SL																
6	Oil	OL																
7	Wipe	WP																
8	Air	AR																
9	Other	OT																
10	Tissue	TS																
11																		
12																		

Requested Analysis Filtered (Y/N)

VOC by 8260
 VOC by 8270
 VOC by 8260 (Trip Blank)
 Residual Chlorine (Y/N)

WO#: 70143224

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION: MAJ. PACE DATE: 8/20/10 TIME: 9:15a
 ACCEPTED BY / AFFILIATION: MAJ. PACE DATE: 8/20/10 TIME: 9:15
 SIGNATURE of SAMPLER: MAJ. PACE DATE Signed: 8/20/10
 SIGNATURE of SAMPLER: CORINNE STEINMULLER DATE Signed: 8/20/10

Sample Condition Upon Receipt



Client Name: _____

Project _____

WO#: 70143224

PM: JSA

Due Date: 09/04/20

CLIENT: B&L

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: 9099 9900 8426
 Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags Ziploc None Other

Thermometer Used: TH091 Correction Factor: +0.4
 Cooler Temperature (°C): 1.2 Cooler Temperature Corrected (°C): 1.6

Temperature Blank Present: Yes No

Type of Ice: Wet Blue None

Samples on ice, cooling process has begun

Date/Time 5035A kits placed in freezer _____

Temp should be above freezing to 6.0°C

USDA Regulated Soil (N/A, water sample)

Date and Initials of person examining contents: IT-8/ziko

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? YES NO

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

	COMMENTS:
Chain of Custody Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Chain of Custody Relinquished: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.
Sampler Name & Signature on COC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
Short Hold Time Analysis (<72hr): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume: (Triple volume provided for MS/MSD) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
Correct Containers Used: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Containers Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12.
-Includes date/time/ID/Analysis Matrix <u>SL</u> <u>WT</u> <u>OIL</u>	
All containers needing preservation have been checked <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
pH paper Lot #	Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl, NaOH > 9 Sulfide, NaOH > 12 Cyanide) <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/B015 (water), Per Method, VOA pH is checked after analysis	Initial when completed: _____ Lot # of added preservative: _____ Date/Time preservative added: _____
Samples checked for dechlorination: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14. Positive for Res. Chlorine? Y N
KI starch test strips Lot #	
Residual chlorine strips Lot #	
Headspace in VOA Vials (>6mm): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Present: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if applicable): _____	

Field Data Required? Y / N

Date/Time: _____

Client Notification/ Resolution: _____

Person Contacted: _____

Comments/ Resolution: TRIP BLANKS PRESENT, NOT NOTED ON COC.

* PM (Project Manager) review is documented electronically in LIMS.

Appendix B

Volumes Purged/Discarded Table

- MW-1, MW-2, and MW-3 PURGE/DISPOSAL VOLUMES -

Date	Time	Staff	Well Notes			Thickness of Product in MW-3 (decimal feet)	Volume of Product in MW-3 (gallons)	Total Volume Purged from Wells (gallons)	Total Volume Disposed of in O/W Separator (gallons)
			Well #1	Well #2	Well #3				
9/4/2020	8:00am	RBW	Did not check	Did not check	Did not check				
9/11/2020	6:45pm	RBW	Did not check	Did not check	Did not check				
9/14/2020	4:00pm	PNP	very minimal product - no product recovery	very minimal product - no product recovery	very minimal product - no product recovery				
9/15/2020	3:30pm	PNP	did not check	did not check	did not check				
9/16/2020	4:45pm	RBW	Did not check	Did not check	Did not check				
9/17/2020	3:30pm	PNP	Did not check	Did not check	Did not check				
9/18/2020	2:30pm	RBW	Did not check	Did not check	Did not check				
9/19/2020	No Inspection								
9/20/2020	No Inspection								
9/21/2020		PNP	Did not check	Did not check	Did not check				
9/22/2020		CIS							
9/23/2020		CIS							
9/24/2020		CIS							
9/25/2020		PNP	Did not check	Did not check	Did not check				

- MW-1, MW-2, and MW-3 PURGE/DISPOSAL VOLUMES -

Date	Time	Staff	Well Notes			Thickness of Product in MW-3 (decimal feet)	Volume of Product in MW-3 (gallons)	Total Volume Purged from Wells (gallons)	Total Volume Disposed of in O/W Separator (gallons)
			Well #1	Well #2	Well #3				
9/26/2020			No Inspection						
9/27/2020			No Inspection						
9/28/2020	2:30 AM	PNP	Did not check	Did not check	Did not check				
9/29/2020		CIS							
9/30/2020		CIS							
10/1/2020		CIS							
10/2/2020	3:00 AM	PNP	Did not check	Did not check	Did not check				
10/3/2020			No Inspection						
10/4/2020			No Inspection						
10/5/2020	4:30 AM	RBW	Did not check	Did not check	Did not check				
10/6/2020		CIS							
10/7/2020		CIS							
10/8/2020		CIS							
10/9/2020	4:30pm	PNP	Did not check	Did not check	Did not check				

- MW-1, MW-2, and MW-3 PURGE/DISPOSAL VOLUMES -

Date	Time	Staff	Well Notes			Thickness of Product in MW-3 (decimal feet)	Volume of Product in MW-3 (gallons)	Total Volume Purged from Wells (gallons)	Total Volume Disposed of in O/W Separator (gallons)
			Well #1	Well #2	Well #3				
10/10/2020			No Inspection						
10/11/2020			No Inspection						
10/12/2020	4:00pm	PNP	Did not check	Did not check	Did not check				
10/13/2020		CIS							
10/14/2020		CIS							
10/15/2020		CIS							
10/16/2020	12:00 PM	PNP	Did not check	Did not check	Did not check				
10/17/2020			No Inspection						
10/18/2020			No Inspection						
10/19/2020	2:00 PM	RBW	Did not check	Did not check	Did not check				
10/20/2020	8:45 AM	RBW	Did not check	Did not check	Did not check				
10/21/2020	8:45 AM	RBW	Did not check	Did not check	Did not check				
10/22/2020	1:30 PM	RBW	Did not check	Did not check	Did not check				
10/23/2020	2:00 PM	RBW	Did not check	Did not check	Did not check				

- MW-1, MW-2, and MW-3 PURGE/DISPOSAL VOLUMES -

Date	Time	Staff	Well Notes			Thickness of Product in MW-3 (decimal feet)	Volume of Product in MW-3 (gallons)	Total Volume Purged from Wells (gallons)	Total Volume Disposed of in O/W Separator (gallons)
			Well #1	Well #2	Well #3				
10/24/2020			No Inspection						
10/25/2020			No Inspection						
10/26/2020	5:00 PM	RBW	Did not check	Did not check	Did not check				
10/27/2020	5:00 PM	BAS	Purged 4.5 gallons. Product on bailer, non-measureable amount inside bailer. Heavy sheen in bucket.	Purged 4.5 gallons. Product on bailer, non-measureable amount inside bailer. Brown foam in bucket.	Purged 4.5 gallons. Product on outside of bailer, non-measureable amount inside bailer. Heavy sheen inside bucket.	0		13.5	13.5
10/28/2020	5:30 PM	RBW	Did not check	Did not check	Did not check				
10/29/2020			No Inspection						
10/30/2020	2:30 PM	BAS	Did not check	Did not check	Did not check				
10/31/2020			No Inspection						
11/1/2020			No Inspection						
11/2/2020	11:45 AM & 4:30 PM	RBW	Did not check	Did not check	Did not check				
11/3/2020	8:45 AM	RBW	Did not check	Did not check	Did not check				
11/4/2020	9:00 AM	RBW	Did not check	Did not check	Did not check				
11/5/2020	3:00 PM	PNP	Purged 6 gallons. No product on bailer. Mild sheen and mild odor.	Purged 5.5 gallons. Moderate sheen and odor noted.	Purged 3 gallons. Product on outside of bailer, about half an inch of product in bailer. Prominent sheen and odor noted.	0.05	0.00816	14.5	14.5
11/6/2020	11:00 AM	PNP	Did not check	Did not check	Did not check				

- MW-1, MW-2, and MW-3 PURGE/DISPOSAL VOLUMES -

Date	Time	Staff	Well Notes			Thickness of Product in MW-3 (decimal feet)	Volume of Product in MW-3 (gallons)	Total Volume Purged from Wells (gallons)	Total Volume Disposed of in O/W Separator (gallons)
			Well #1	Well #2	Well #3				
11/7/2020			No Inspection						
11/8/2020			No Inspection						
11/9/2020			No Inspection						
11/10/2020	8:30 AM	RBW	Did not check	Did not check	Did not check				
11/11/2020	9:00 AM	RBW & BAS	Did not check	Did not check	Did not check				
11/12/2020	2:30 PM	PNP	Purged 6 gallons. No product on bailer. Mild sheen and mild odor.	Purged 2.5 gallons. Moderate sheen and odor noted.	Purged 2.5 gallons. Prominent sheen and odor noted. Looked like there was about an inch of product in bailer.	0.05	0.00816	11	11
11/13/2020		PNP							
11/14/2020			No Inspection						
11/15/2020			No Inspection						
11/16/2020									
11/17/2020	3:00 PM	BAS	Did not check	Did not check	Did not check				
11/18/2020	12:00 PM	BAS	Did not check	Did not check	Did not check				
11/19/2020	3:00 PM	BAS	Did not check	Did not check	Did not check				
11/20/2020			Purged 5.5 gallons. Minimal product on bailer, no measureable product within. Mild sheen and odor.	Purged 5.5 gallons. Product on bailer, no measureable product within. Mild sheen and odor noted.	Purged 4.5 gallons. Product on outside of bailer, 0.25" of product within. Moderate sheen and odor.	0.025	0.00408	15.5	15.5

- MW-1, MW-2, and MW-3 PURGE/DISPOSAL VOLUMES -

Date	Time	Staff	Well Notes			Thickness of Product in MW-3 (decimal feet)	Volume of Product in MW-3 (gallons)	Total Volume Purged from Wells (gallons)	Total Volume Disposed of in O/W Separator (gallons)
			Well #1	Well #2	Well #3				
11/21/2020			No Inspection						
11/22/2020			No Inspection						
11/23/2020	2:00 PM	BAS	Did not check	Did not check	Did not check				
11/24/2020									
11/25/2020	1:00 PM	BAS	Did not check	Did not check	Did not check				
11/26/2020			No Inspection (Thanksgiving)						
11/27/2020									
11/27/2020	11:00 AM	BAS	Purged 4.5 gallons. Minimal product on bailer, no measureable product within. Mild sheen and odor.	Purged 4.75 gallons. Product on bailer, no measureable product within. Mild sheen and odor noted.	Purged 3.75 gallons. Product on outside of bailer, 0.5" of product within. Moderate sheen and odor.	0.05	0.00816	13	13
11/29/2020			No Inspection						
11/30/2020	2:30 PM	BAS	Did not check	Did not check	Did not check				
12/1/2020	3:00 PM	BAS	Did not check	Did not check	Did not check				
12/2/2020	12:00 PM	BAS	Did not check	Did not check	Did not check				
12/3/2020	2:30 PM	BAS	Purged 4.5 gallons. Mild sheen and odor. No measureable product.	Purged 3.25 gallons. Mild sheen and odor. No measureable product.	Purged 5.25 gallons. Product on outside of bailer, no measureable product. Moderate sheen and odor.	0		13	13
12/4/2020	8:00 AM	BAS	Did not check	Did not check	Did not check				

- MW-1, MW-2, and MW-3 PURGE/DISPOSAL VOLUMES -

Date	Time	Staff	Well Notes			Thickness of Product in MW-3 (decimal feet)	Volume of Product in MW-3 (gallons)	Total Volume Purged from Wells (gallons)	Total Volume Disposed of in O/W Separator (gallons)
			Well #1	Well #2	Well #3				
12/19/2020			No Inspection			0.03	0.004896	6.75	6.75
12/20/2020			No Inspection						
12/21/2020									
12/22/2020			3.5 gallons removed	1.25 gallons removed	0.03' of product, 2 gallons removed				
12/23/2020									
12/24/2020			No Inspection						
12/25/2020			No Inspection						
12/26/2020	12:00 PM	BAS	Did not check	Did not check	Did not check				
12/27/2020			No Inspection						
12/28/2020			No Inspection						
12/29/2020	8:00 AM	BAS	Did not check	Did not check	Did not check				
12/30/2020	3:00 PM	BAS	2.75 gallons purged, odor, mild sheen	2.0 gallons purged, odor, mild sheen	1.75 gallons purged. 0.02' of free product.				
12/31/2020			No Inspection						

- MW-1, MW-2, and MW-3 PURGE/DISPOSAL VOLUMES -

Date	Time	Staff	Well Notes			Thickness of Product in MW-3 (decimal feet)	Volume of Product in MW-3 (gallons)	Total Volume Purged from Wells (gallons)	Total Volume Disposed of in O/W Separator (gallons)
			Well #1	Well #2	Well #3				
1/1/2021	3:00 PM	BAS	Did not check	Did not check	Did not check				
1/2/2021	12:00 PM	BAS	Did not check	Did not check	Did not check				
1/3/2021	No inspection								
1/4/2021	3:30 PM	BAS	Did not check	Did not check	Did not check				
1/5/2021	3:30 PM	BAS	Did not check	Did not check	Did not check				
1/6/2021									
1/7/2021									
1/8/2021	4:00 PM	BAS	Purged 3.25 gallons. Mild odor and sheen	Purged 2.5 gallons. Mild odor and sheen	Purged 2.25 gallons. 0.03' free product measured with interface probe.	0.03	0.004896	8	8
Week of Jan 11-15			Purged 3.0 gallons. Mild odor and sheen observed	Purged 3.0 gallons. Mild odor and sheen observed	Purged 3.0 gallons. 0.14 inches of free product observed, per the interface probe measurement				
Week of Jan 18-22	4:00 PM	PNP	Purged 5.5 gallons. Very mild odor observed. No sheen.	Purged 1.5 gallons. Mild odor and mild sheen observed.	Purged 4.5 gallons. Measured 0.10 feet of free product.	0.1	0.01632	11.5	11.5
Week of Jan 25-29	3:00 PM	PNP	Purged 4.0 gallons. Very mild odor observed and very mild sheen..	Purged 1.5 gallons. Mild odor and mild sheen observed. Well does not have much water in it.	Purged 3.0 gallons. Measured 0.06 feet of free product.	0.06	0.009792	18	18
Week of Feb 1-5	3:00 PM	PNP	Purged 3 gallons. Very mild odor. No sheen observed.	Purged 1.25 gallons. Mild odor and mild sheen. Water was a yellow-orange color, which I've never seen before.	Purged 2.5 gallons. Measured 0.17 feet of free product.	0.17	0.027744	6.75	6.75
Week of Feb 8-12	12:00 PM	BAS	Purged 3.25 gallons, mild odor, mild sheen.	Purged 1.5 gallons, mild odor, mild sheen. Rusty H2O color.	Purged 3.25 gallons. Measured 0.12 feet of free product.	0.12	0.019584	8	8
Week of Feb 15-19	11:00 AM	BAS	Purged 3.0 gallons, mild odor, mild sheen.	Purged 1.25 gallons, mild odor, mild sheen. Mild rust color.	Purged 3.0 gallons. Measured 0.08 feet of free product.	0.08	0.013056	7.25	7.25
Week of Feb 22-26	3:00 PM	PNP	Purged 5.0 gallons, very mild odor, little to no sheen	Purged 1.25 gallons, mild odor, mild sheen, mild rust color	Purged 3.0 gallons. Measured 0.10 feet of free product.	0.1	0.01632	9.25	9.25
Week of Mar 1-5	2:00 PM	PNP	Purged 4.5 Gallons, very mild odor, little to no sheen	Purged 0.25 gallons. Lost bailer in well. Will need to retrieve bailer.	Purged 4.0 gallons. Measured 0.08 feet of free product.	0.08	0.013056	8.75	8.75
Week of Mar 8-12	2:00PM	PNP	Purged 5 gallons, very mild odor, little to no sheen	Purged 3.5 gallons, Mild odor, Mild rust color	Purged 4.5 gallons. Measured 0.10 feet of free product.	0.1	0.01632	13	13
Week of Mar 15-19	11:00AM	PNP	Purged 4.5 gallons, very mild odor, little to no sheen	Purged 3.0 gallons, mild odor, mild rust color	Purged 4.5 gallons. Measured 0.06 feet of free product.	0.06	0.009792	12	12
Week of Mar 22-26	12:00PM	PNP	Purged 5.5 gallons. Very mild odor, little sheen.	Purged 4.0 Gallons. Mild odor, mild rust color, mild sheen.	Purged 6.0 gallons. Measured 0.13 feet of free product.	0.13	0.021216	15.5	15.5
Week of Mar 29-Apr 2		BAS							
Week of Apr 5 - Apr 9	1:00 PM	PNP	Purged 5.5 Gallons, very mild odor, little sheen	Purged 4.5 Gallons. Mild odor, Mild brown color, some product on bailer, mild sheen	Purged 5.5 Gallons. Measured 0.12 feet of free product.	0.12	0.019584	15.5	15.5
Week of Apr 12 - Apr 16	12:00 PM	PNP	Purged 6.0 gallons, very mild odor, little sheen	Purged 4.5 gallons. Mild odor, mild brown color, some product on the bailer, mild sheen	Purged 6.0 gallons. Measured 0.12 feet of free product.	0.12	0.019584	16.5	16.5
Week of Apr 19 - Apr 23	1:00 PM	PNP	Purged 5.5 gallons, very mild odor, little sheen	Purged 4.5 gallons. Mild odor, mild brown color, some product on the bailer, mild sheen	Purged 6.0 gallons. Measured 0.10 feet of free product	0.1	0.01632	16	16

- MW-1, MW-2, and MW-3 PURGE/DISPOSAL VOLUMES -

Date	Time	Staff	Well Notes			Thickness of Product in MW-3 (decimal feet)	Volume of Product in MW-3 (gallons)	Total Volume Purged from Wells (gallons)	Total Volume Disposed of in O/W Separator (gallons)
			Well #1	Well #2	Well #3				
Week of Apr 26 - Apr 30	7:00 AM	PNP	Purged 5.5 gallons, very mild odor, little sheen	Purged 4.5 gallons. Mild odor, mild brown color, some product on the bailer, mild sheen	Purged 5.5 gallons. Measured 0.13 feet of free product	0.13	0.021216	15.5	15.5
Week of May 17 - May 21	2:00 PM	PNP	did not purge	Purged 4.5 gallons. Moderate odor, slight brown color, 0.01' measured product	Purged 5.0 gallons. Measured 0.17' of product.	0.17	0.027744	9.5	9.5
Week of May 24 - May 28	2:00 PM	PNP	Purged 4.5 gallons. Mild odor.	Purged 5.0 gallons. Moderate odor, slight brown color, product on the bailer.	Purged 5.5 gallons. Measured 0.14' of product	0.14	0.022848	15	15
Week of May 31 - June 4	4:00 PM	BAS	Purged 4.25 gallons. Mild odor.	Purged 4.75 gallons. Moderate odor, slight brown color, product on the bailer.	Purged 5.5 gallons. Measured 0.11' of product	0.11	0.017952	14.5	14.5
Week of June 7 - June 11	1:00 PM	PNP	Purged 5.0 gallons, mild odor, sheen and some product droplets noticed in bailer	Purged 4.0 gallons. Moderate odor, slight brown color, no measurable product	Purged 4.5 gallons. Measured 0.18' of product	0.18	0.029376	13.5	13.5
* Begin									
6/14/2021	-	-	-	-	-				
6/15/2021	2:00 PM	PNP	did not check	did not check	did not check				
6/16/2021	12:00 PM	PNP	did not check	did not check	did not check				
6/17/2021	3:00 PM	PNP	did not check	did not check	did not check				
6/18/2021	12:00 PM	PNP	purged 3.5 gallons, slight odor and slight discoloration to water,	purged 3.5 gallons, slight odor, slight brown color, no measurable product, some product on bailer	purged 4.0 gallons, measured 0.12 feet of products	0.12	0.019584	11	11
weekend - installed stiff-arms and extra 40 feet of boom on Saturday (6/19/21)									
6/21/2021	4:00 PM	PNP	N/A	N/A	N/A				
6/22/2021	10:00 AM	RBW	NA	NA	NA				
6/23/2021	3:00 PM	RBW	NA	NA	NA				
6/24/2021	4:00 PM	RBW	NA	NA	NA				
6/25/2021	6:00 AM	PNP	purged 4.5 gallons. Very mild odor, no discoloration to the water	Purged 5.0 gallons. Mild odor, product noticed on outside of bailer, no measureable product	purged 5.0 gallons. Measured 0.09 feet of product	0.09	0.014688	14.5	14.5
weekend									
6/28/2021	7:00 PM	PNP	NA	NA	NA				
6/29/2021	7:30 PM	PNP	NA	NA	NA				
6/30/2021	8:00 PM	PNP	NA	NA	NA				

- MW-1, MW-2, and MW-3 PURGE/DISPOSAL VOLUMES -

Date	Time	Staff	Well Notes			Thickness of Product in MW-3 (decimal feet)	Volume of Product in MW-3 (gallons)	Total Volume Purged from Wells (gallons)	Total Volume Disposed of in O/W Separator (gallons)
			Well #1	Well #2	Well #3				
7/26/2021	6:30 AM	PNP	na	na	na				
7/27/2021	5:00 PM	PNP	na	na	na				
7/28/2021	6:00 AM	PNP	na	na	na				
7/29/2021	6:00 AM	PNP	na	na	na				
7/30/2021	4:30 PM	PNP	Did not purge	Purged 5.0 gallons. No measurable product. Very mild odor. No product on bailer.	Purged 6.5 gallons. No measured product. Some product on bailer. Mild odor.			11.5	11.5
weekend									
8/2/2021	2:30 PM	PNP	na	na	na				
* Begin								11.5	11.5
8/6/2021	3:00 PM	PNP		5.5	6.5			12	12
8/13/2021	7:00 AM	PNP		5.5	6	0.08	0.013056	11.5	11.5
8/20/2021	8:00 AM	BAS	5.25	4.5	5.75	0.15	0.02448	15.5	15.5
8/27/2021	8:00 AM	PIJ	5	3.5	5			13.5	13.5
9/3/2021	8:00 AM	PIJ	4.5	4.75	4.75			14	14
9/10/2021	8:00 AM	PIJ	4.5	4.75	4.75			14	14
9/17/2021	8:00 AM	PIJ	4.5	4.5	4.2			13.2	13.2
9/24/2021	8:00 AM	PIJ	4.5	4.5	4.2			13.2	13.2
10/1/2021	8:00 AM	PIJ	3.5	4.5	4.2			12.2	12.2

- MW-1, MW-2, and MW-3 PURGE/DISPOSAL VOLUMES -

Date	Time	Staff	Well Notes			Thickness of Product in MW-3 (decimal feet)	Volume of Product in MW-3 (gallons)	Total Volume Purged from Wells (gallons)	Total Volume Disposed of in O/W Separator (gallons)
			Well #1	Well #2	Well #3				
10/8/2021	8:00 AM	PIJ	4.6	4.5	4.3			13.4	13.4
10/15/2021	8:00 AM	PIJ	4.5	4.1	4.2			12.8	12.8
10/22/2021	8:00 AM	PIJ							

TOTAL PRODUCT VOLUME HAND BAILED (GALLONS)	TOTAL VOLUME PURGED FROM WELLS (GALLONS)	TOTAL VOLUME DISPOSED OFF IN O/W SEP (GALLONS)
0.472464	583.05	583.05

Appendix C

Epoxy Coating – Safety Data Sheets and Photo Log



Structural-grade, reinforced epoxy Compound Polymer Paste

Item# RC3 Revised: 12/13/2014

Description

Epoxytec CPP™ is a two-component moisture insensitive, highly adhesive, chemical resistant, 100% solids, high strength and reinforced structural-grade epoxy. CPP™ is truly versatile and can be used as an adhesive, patching filler, or even as a high-build, stand-alone protective liner. The material can be applied as thin as a skim-coat and up to 1/2" per pass (vertical/overhead). Blended with reinforcing agents and various fibers, the Epoxytec CPP™ when cured acts as a fiber-reinforced-polymer (FRP), with high flexural properties. Contains no solvents (no VOCs). CPP™ bonds to concrete, steel, wood, brick, some plastics and most construction materials.

Typical Uses

CPP™ has been proven in many aggressive, closed, immersive, and partially opened environments. Performs in areas subject to chemical attack, and as a sealer preventing oxidation while holding back water migration and hydrostatic pressure. Ideally suited as a protective coating/lining solution, repair/filling epoxy as:

- Adhesive, segmental and anchoring epoxy
- Patching filler, concrete repair and protection
- Chemical resistant liner
- Ultra high moisture, wet solution sealed barrier
- Industrial and treatment structures, tanks, pipes, stations, manholes, invert sections, flow channels, etc. Including potable water.

(ultra-high hydrogen sulfide [H₂S] resistance [+800ppm] and resistant to sulfuric byproduct)

Film Thickness

CPP™ can be applied as a single coat or multi-coat system. It can be feather-edged from a low mil thickness (almost transparent) to a high build barrier liner of 0.5" (inches) @ 70F thick without sag per coat.

For potable water settings, apply between 30 -120 mils DFT.

For thicker passes, consult Epoxytec for various options.

Theoretical Coverage

CPP™ is 100% solid and will not shrink. Therefore, the theoretical coverage properties between wet film thickness (WFT) and dry film thickness (DFT) are the same. Twenty-six (26) square feet (sq.ft.) per gallon (gal.) at 1/16 inch (62.5 mils) thick. One gallon of neat CPP™ yields 231 cu.in. of epoxy.

Features

- ANSI/NSF-61 Certified
- EPA-ETV Verified for Infrastructure Rehabilitation Technologies
- Indefinite recoat window
- Excellent chemical resistance
- Structural, with movement tolerance
- No sag, ultra-high build, trowel-applied
- Surface & moisture tolerant (cures underwater)
- Ultra-high adhesion, self-priming
- Great for sectional lining requirements
- "Green" - 100% solids, no VOCs



Surface Preparation

The success of any coating application is directly proportional to the completeness of the substrate preparation and the care the application crew puts into the application. Surface must be clean and sound. Remove all dust, contaminants, grease, curing compounds, rust, impregnation, waxes, foreign particles, and disintegrated materials from the surface, in order to achieve a clean and profiled surface.

Concrete: Prepare the concrete by abrasive blasting, high pressure water cleaning, and/or approved mechanical method to achieve clean, sound, and profiled concrete. When logistics permit, prepare concrete in accordance with SSPC-SP 13/NACE No. 6. "Surface Preparation of Concrete."

Steel: Before preparing steel, please inspect and remove oil, grease, or other contaminants - "Solvent Cleaning" (SSPC-SP1) may be required. Abrasive blasting (or other approved mechanical methods) must be used in order to achieve a clean surface with a minimum profile of 3 mils. To prevent flash rusting, consider the use of an Epoxytec recommended holding primer.

Mixing

Add Part B to Part A and mix for a minimum of 4 minutes with a low speed drill until a homogenous blend (uniformed color, with no streaks) is achieved. Mix with movement, getting the pail's edges, walls, and bottom. Do not add sand or aggregate; a special gelling agent and filler is incorporated to allow up to 0.5 inches @ 70F of fill and hang on vertical or overhead surfaces without sagging, and to achieve performance properties.



Application Method

CPP™ must be applied by trowel, spatula or other hand applied method. To control the thickness Epoxytec recommends utilizing a notch trowel via two different means:

1. Option #1 - use a notch trowel first and let it cure; afterwards, return to fill the notches with a straight-edge trowel.
2. Option #2 – use a notch trowel, then flatten the application to achieve uniformed thickness.

Kits are premeasured. Mix full kit in its entirety.

As an Adhesive: Apply to both bonding surfaces with spatula (putty-knife) or trowel. Join material. If necessary, clamp until cured. Strike off excess material.

As an Anchor/Dowel: Vertical and overhead. Partially fill drill hole with CPP™. It is permissible for the hole to be damp (remove excess water), however, the object must be dry. Work bolt in and out to compact the paste. Secure with templates. With object in position fill in remaining void.

As a Coat / Patch / Fill: Vertical and horizontal surfaces. Apply to area with trowel or spatula. Work in at maximum layer of 0.5 inches per coat. Minimum application thickness = N/A.

For potable water settings, apply between 30 -120 mils DFT.

Thinning

Do not thin Epoxytec CPP.

Storage & Handling

- Shelf life: 24 months, sealed.
- Storage: Store in a dry area away from direct sunlight. The material should be conditioned to between 70° F and 85° F before use.

Safety

Consult Material Safety Data Sheet (MSDS) for all material safety information.

Packaging & Color

- 2 Gallon Kit (pail)
- 1/2 Gallon Kit (tub)

Item# RC3-G2 (grey)
Item# RC3-K05 (grey)

Technical Properties

Finish		light coarse – alabaster (depending on application)
Mix Ratio		premeasured
Type		proprietary hybrid fiber-reinforced-polymer (epoxy/epoxide)
Potable Drinking Water	ANSI/NSF-61	NSF Certified
Solids by Volume	ASTM D2697	100%
Solvent (VOC)	ASTM D3960	none
Pot Life		30 min. (77F / 200 g mass)
Adhesion Strength (concrete, dry)	ASTM D4541 (mod) CIGMAT CT-2/3	substrate failure
Adhesion Strength (brick, wet)	CIGMAT CT-2/3	substrate failure
Adhesion Strength (steel)	ASTM D4541	1,500 psi
Water Absorption	ASTM D1653	< 0.1 g/sq.m.
Acid Exposure (pH 1, H ₂ SO ₄)	CIGMAT CT-1	passed
Tensile Strength	ASTM D638	8,900 psi
Flexural Modulus	ASTM D790	600,000 psi
Flexural Strength	ASTM D790	7,630 psi
Compressive Strength	ASTM D695	16,000 psi
Elongation	ASTM D2370	5.5%
Gel Time		6 hours (77F)
Complete Cure		18 hours (77F)
Temperature Exposure (dry)		5F - 160F
Temperature Exposure (wet)		32F - 160F
Recoat Time		when firm – no max.

** Epoxytec CPP™ passes ASTM D2512 / D4809-02863 test for Oxygen compatibility.*



Important! Although the technical details and recommendations contained in this data sheet correspond to the best of our knowledge and experience, all the above information must, in every case be taken as merely indicative and subject to confirmation after long-term practical applications; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product. The sole liability of Epoxytec for any claims out of the manufacturer's use of sale of its products shall be for the buyer's purchase price.

Section 1: Product and Company Identification

1.1 Product Identifier

Trade Name CPP | mCrete R Compound (Part A)
Product Number RC3-A
Product Description Epoxy Formulation

1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Protective Coating

1.3 Details of the Supplier of the Safety Data Sheet

Company EPOXYTEC INTL, INC.
3000 N 29 CT
HOLLYWOOD, FLORIDA 33020
Telephone (General): 954-961-4656

1.4 Emergency Telephone Number

3E Company N. America/S. America (+)1.760.476.3962
Contract # 14738 Europe (+)1.760.476.3962
Asia Pacific (+)1.760.476.3960
Middle East/Africa (+)1.760.476.3959

Section 2: Hazard(s) Identification

The product is classified and labeled according to the Globally Harmonized System (GHS) Classification in accordance with 29 CFR 1910 (OSHA HCS) and Regulation (EC) No 1907/2006 (REACH).


2.1. Classification of the mixture

Component(s) Contributing to Classification(s)

Diglycidyl ether of Bisphenol A (Number average MW <= 700), Polymer, Fiber

Carcinogens: No carcinogens as a mixture. Any and all carcinogens reported here for pigments or fillers are related to airborne dust exposure only, they are not known to be hazardous after blended into a liquid. If product is machined, sanded or grinded, in an airborne dry form, these substances can cause severe lung diseases if you breathe their dusts, see Section 8 for recommended respiratory protection.

2.2. GHS Label elements, including precautionary statements

Pictogram(s)	
Signal Word	Warning
GHS Hazard Classification	Skin Irritation Category 2 Skin Sensitization Category 1 Eye Irritation Category 2A STOT SE 3 (Respiratory Irritation) Aquatic Chronic Category 2

Hazard Statements	H315 H317 H319 H335 H411	Causes skin irritation May cause an allergic skin reaction Causes serious eye irritation May cause respiratory irritation Toxic to aquatic life with long lasting effects
Prevention Statements	P261 P264 P271 P272 P273 P280	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. Wash skin thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves, eye and face protection.
Response Statements	P302+352 P321 P305+P351+P338 P332 + P313 P337 + P313 P362+P364 P304+P340 P312 P391	IF ON SKIN: Wash with plenty of soap and water. Specific Treatment (See section 4 on this SDS) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/ attention. Take off contaminated clothing and wash before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. Collect spillage
Storage/Disposal	P403+P233 P405 P501	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents/ container to an approved waste disposal plant.

2.3 Other Hazards

None Applicable_

Section 3: Composition/Information on Ingredients**Chemical Characterization:** Mixture**Description Mixture:** Consisting of the following components

Materials	CAS #	EINECS #	Index #	Percentage	Classification
Diglycidyl ether of Bisphenol A (Number average MW <= 700)	25085-99-8	Not Listed	Not Listed	40-70	Skin Irrit. Cat 2 Skin Sens. Cat 1 Eye Irrit. Cat 2 Aquatic Chronic Cat 2
Silica (Amorphous)	7631-86-9	231-545-4	Not Listed	10-20	Not Classified
Polymer	Not Available	Not Available	Not Applicable	10-25	STOT SE 3
Fiber	Not Available	Not Available	Not Applicable	1-10	STOT SE 3

Additional Information:

See SECTION 16 for full Classification phrases.

Section 4: First Aid Measures

4.1 Description of first aid measures

General advice

Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance. If product is machined, sanded or grinded, in an airborne dry form, these substances can cause severe lung diseases if you breathe their dusts, see Section 8 for recommended respiratory protection.

If inhaled,

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Remove clothing contaminated with epoxy resin system chemicals and immediately wash off any epoxies that get on your skin. Pay particular attention to your fingernails and the area around the nail.

In case of eye contact

Flush eyes with water at least 15 minutes. Consult a physician

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2)

4.3 Indication of immediate medical attention and special treatment needed

No specific antidote. Treatment of exposure should be directed at the control of symptoms and clinical condition of the patient.

Section 5: Firefighting Measures

5.1. Extinguishing media

Fire can be extinguished using: Foam. Alcohol resistant foam. Dry chemicals, sand, dolomite etc.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors and inorganic fillers such as Silicon oxides.

5.3. Advice for firefighters

Special Fire Fighting Procedures:

Use water to keep fire exposed containers cool and disperse vapours.

Protective equipment for fire-fighters:

Wear self-contained breathing apparatus and full protective clothing in case of fire.

Section 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Do not let product enter drains, do not allow to sewers/surface or ground water. Prevent leakage or spillage.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (sand, earth, vermiculate, and universal binders)

Wear necessary protective equipment. Wash thoroughly after dealing with a spillage.

6.4. Reference to other sections

Wear protective clothing and niosh/msha approved self-contained breathing apparatus as described in Section 8 of this safety data sheet.

See section 11 for additional information on health hazards.

For waste disposal, see section 13.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Use soap and water or a commercial hand cleaner. Don't use solvents to clean your hands; they remove the natural protective oils from your skin and leave your skin dry and irritated. After washing, use a skin conditioner or lotion to help keep the skin on your hands in good condition.

Handle with good mechanical ventilation and local exhaust. Avoid inhalation of vapor or mist. For precautions see section 2.2. Avoid use of electric band heaters. Failures of electric band heaters have been reported to cause drums of epoxy resin to catch fire.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place, away from heat, and strong oxidizers.

Recommended storage temperature 35-109 °F (2-43 °C).

Shelf life: Use within storage temperature, 24 months.

7.3 Specific end uses.

See section 1.2.

Section 8: Exposure Controls/Personal Protection

8.1 Control parameters

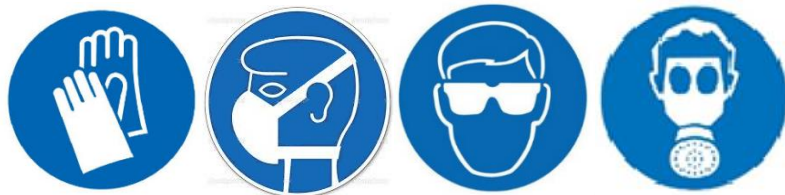
Additional Information for the Limit Values Due to the wetted form, the limit values for the dust form listed are not required. The limit values must be followed strictly if dust form occurs during any of the use. As a classified Carcinogen, there may be NO safe level of exposure; reduce all contact to the lowest possible level.

Other Engineering Measures or Controls Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Some of the substances listed are present in concentration of 1% or greater, or 0.1% if cited as a potential Carcinogen in the OSHA hazards communication standard.

Ingredient	CAS #	Agency	Limit type
Fiber	Not Available	ACGIH NIOSH	TLV, -TWA: 10 mg/m ³ TWA: 15 mg/m ³

8.2 Personal Protective Equipment



8.3 Exposure Controls

Respiratory Protection

In case of inadequate ventilation wear respiratory protection. If cured product is machined, sanded or grinded, wear particulate respirators or other air-purifying respirators based on the specific airborne concentration found in the workplace.

Hand Protection

Wear chemical-resistant gloves such as: Nitrile, neoprene, and butyl. Gloves should conform to EN374

Eye Protection

Chemical goggles or safety glasses with side shields

Body Protection

If frequent or prolonged skin contact with epoxy resin systems is unavoidable, protective equipment such as gloves, goggles should be worn. Protective clothing should be made of a material that will protect you from the chemicals in the epoxy resin system you use.

Hygiene measures

Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated. When using do not eat, drink or smoke.

Section 9: Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties of Mixture

Appearance

Form	Thixotropic liquid
Color	Warm White
Odor	Mild epoxy odor
Odor Threshold	Not applicable
pH	Not applicable
Melting point / freezing point	Not established
Boiling Point (deg. C)	Not established
Flash Point	Not established
Evaporation Rate	Not established
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	Not applicable
Vapour pressure	Not established
Vapour density	Not established
Relative density	1.1 g/cm ³ at at 70 °F (21 °C)
Solubility	Not established
Partition coefficient	Not established
Auto-ignition temperature	Not established
Decomposition temperature	Not established
Viscosity	Not established

Section 10: Stability and Reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical Stability

Stable under recommended storage conditions. See Storage, Section 7.

10.3 Possibility of Hazardous Reactions

Polymerization will not occur by itself. Masses of more than one pound (0.5 kg) of product plus an aliphatic amine will cause irreversible polymerization with considerable heat build-up.

10.4 Thermal Decomposition and Conditions to be avoided

Avoid short term exposures to temperatures above 300 °C (572 °F). Avoid prolonged exposure to temperatures above 250 °C (482 °F). Potentially violent decomposition can occur above 350 °C (662 °F). Generation of gas during decomposition can cause pressure in closed systems. Pressure build-up can be rapid.

10.5 Incompatible materials

Avoid contact with oxidizing materials. Avoid contact with: acids, bases and oxidizing agents such as fluorine, chlorine. Avoid unintended contact with amines.

10.6 Hazardous Decomposition Products

Decomposition products depend upon temperature, air supply and the presence of other materials. Gases are released during decomposition. Uncontrolled exothermic reaction of epoxy resins release phenolics, carbon monoxide, and water.

Section 11: Toxicological Information

11.1 Information on Toxicological Effects

Toxicological information on ingredients:

Name	Route	Species	Value
Diglycidyl ether of Bisphenol A	Dermal	Rabbit	LD50 - 23,000 mg/kg
	Ingestion	Rat	LD50 - 15,000 mg/kg
Fiber	Ingestion	Rat	LD50 - >5000 mg/kg
	Dermal	Rat	LD50 - >2000 mg/kg

11.1.2 Mixtures

Acute toxicity	Based on available data, the classification criteria are not met
Skin corrosion / irritation	Skin Irritation Category 2
Serious eye damage / irritation	Serious Eye Irritation Category 2A
Respiratory or skin sensitization	Skin Sensitization Category 1
Germ cell mutagenicity	Based on available data, the classification criteria are not met
Carcinogenicity	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT-single exposure	STOT SE 3 (Respiratory Irritation)
STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met

Other Information

Eye damage/eye irritation

May cause moderate eye irritation.

Skin corrosion/irritation

Brief contact may cause moderate skin irritation with local redness. Sensitization

Skin

Has caused allergic skin reactions in humans. Has demonstrated the potential for contact allergy in mice.

Respiratory

No relevant data found.

Repeated Dose Toxicity

Except for skin sensitization, repeated exposures to low molecular weight epoxy resins of this type are not anticipated to cause any significant adverse effects.

Developmental Toxicity

Did not cause birth defects or other adverse effects on the fetus when pregnant rabbits were exposed by skin contact, the most likely route of exposure, or when pregnant rats or rabbits were exposed orally.

Reproductive Toxicity

In animal studies, did not interfere with reproduction.

Genetic Toxicology

In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

Carcinogenicity Classification

Carcinogens: No carcinogens as a mixture. Any and all carcinogens reported here for pigments or fillers are related to airborne dust exposure, they are not known to be hazardous after blended into a liquid. If product is machined, sanded or grinded, in an airborne dry form, these substances can cause severe lung diseases if you breathe their dusts, see Section 8 for recommended respiratory protection.

DIGLYCIDYL ETHER OF BISPHENOL A

ACGIH : Not classified

IARC : Not classified

NTP : Not classified

OSHA : Not classified

EU : Not classified

12.1 TOXICITY:

Section 12: Ecological Information

OVERVIEW: No ecological information available on the specific mixture.

Ecological information of components

Name	Toxicity to fish	Toxicity to daphnia	Toxicity to algae
Diglycidyl ether of Bisphenol A	Rainbow trout LC50 (96 h): 2 mg/l	EC50 (48 h): 1.8 mg/l	ErC50 (72 h): 11 mg/l

Eco toxicological data have not been determined for this product. The information is given below is based on a knowledge of the components and ecotoxicology of similar components.

No levels of volatile organic compound emissions are expected at ambient temperatures and pressure; however, higher levels of VOC and low molecular weight hydrocarbons may be emitted at cure temperatures.

12.2 PERSISTENCE AND DEGRADABILITY:

Based on stringent OECD test guidelines, Diglycidyl ether of Bisphenol A cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

12.3 BIOACCUMULATIVE POTENTIAL:

No specific data available on this product.

12.4 MOBILITY IN SOIL:

Potential for mobility in soil is low

12.5 RESULTS OF PBT AND vPvB ASSESSMENT:

No specific data available on this product.

12.6 OTHER ADVERSE EFFECTS:

No specific data available on this product.

12.7 WATER ENDANGERMENT CLASS:

May be water endangering in accordance with EU Guideline 91/155-EWG. Do not allow product to reach ground water, water course or sewage system. At present there are no ecotoxicological assessments for this product.

Section 13: Disposal Considerations

13.1 Waste Treatment Methods

Do not dump into any sewers, on the ground, or into any body of water. For disposal of residual product, mix by weight 5 parts Part A with 1 parts Part B. Allow mix to solidify in well ventilated area or outdoors. Regulations may vary in different locations. Dispose of in accordance with all applicable local and national regulations. Labels should not be removed from containers until they have been cleaned. Empty containers may contain hazardous residues. Dispose of containers with care. Dispose of in accordance with all applicable local, state and national regulations.

Section 14: Transport Information

DOT

Not regulated for transport

IMDG

Basic Shipping Requirements:

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S.

Technical Name: Diglycidyl ether of Bisphenol A

Hazard Class: 9

ID Number: UN3082

Packing Group: PG III

IMO

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S.

Marine pollutant: Yes

Product Name: Diglycidyl ether of Bisphenol A

Hazard Class: 9

ID Number: UN3082

Packing Group: PG III

ICAO/IATA

Proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S.

Technical Name: Diglycidyl ether of Bisphenol A

Hazard Class: 9

ID Number: UN3082

Packing Group: PG III

Cargo Packing Instruction: 964

Passenger Packing Instruction: 964

Section 15: Regulatory Information

OSHA Hazard Communication Standard

Epoxy is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29CFR 1910.1200.

Superfund Amendments and Reauthorization Act (SARA) of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312 (Hazardous Chemical Storage Reporting Requirements)

Acute Health Hazard

Diglycidyl ether of Bisphenol A

Immediate (Acute) Health Hazard: Yes, A

Delayed (Chronic) Health Hazard: No

Fire Hazard: No

Reactive Hazard: No

Sudden Release of Pressure Hazard: No

Silica (Amorphous)

Immediate (Acute) Health Hazard: Yes, A

Delayed (Chronic) Health Hazard: Yes, C

Superfund Amendments and Reauthorization Act (SARA) of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313 (Toxic Chemical Release Inventory)

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Fiber

New Jersey Right To Know Components

Fiber

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):

Chemicals known to cause cancer: 14808-60-7/Quartz (SiO₂)

Chemicals known to cause reproductive toxicity: None of the ingredients is listed.

(DSL) Canada Domestic Substance List:

All components of this product are on the DSL (Canada Domestic Substance List) or are exempt from DSL requirements.

CANADIAN DSL/NDSL INVENTORY STATUS: Components are DSL Listed, NDSL Listed and/or are exempt from listing

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: This product has been classified per WHMIS 2015.

EUROPEAN ECONOMIC COMMUNITY INFORMATION:

This product does meet the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.

See Section 2 for Details

CHEMICAL SAFETY ASSESSMENT :

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

AUSTRALIAN INFORMATION FOR PRODUCT:

This product does meet the definition of a hazardous substance or preparation as defined by the Safe Work Australia Act. Components of this product are listed on the International Chemical Inventory list

Contains epoxy constituents and inorganic fillers. See information supplied by the manufacturer.

Section 16: Other Information

Contains epoxy constituents and inorganic fillers. See information supplied by the manufacturer.

HMIS Rating (Scale 0-4)

Health hazard: 2

Flammability: 1

Reactivity Hazard: 1

NFPA Rating (Scale 0-4)

Health hazard: 2

Flammability Hazard: 1

Reactivity Hazard: 1

Abbreviations and acronyms

A	<i>Acute Health Hazard</i>
A2	<i>Suspected human carcinogen.</i>
ACGIH	<i>Industrial Hygienists Suggest Exposure Limits</i>
C	<i>Chronic Health Hazard</i>
EPA	<i>Environmental Protection Agency</i>
F	<i>Fire Hazard</i>
DOT	<i>Federal Department of Transportation</i>
DSL	<i>Domestic Substance List</i>
HMIS	<i>Hazardous Material Identification System</i>
IARC	<i>International Agency for Research on Cancer</i>
IATA	<i>The International Air Transport Association</i>
ICAO	<i>International Civil Aviation Organization</i>
IMDG	<i>International Maritime Dangerous Goods</i>
IMO	<i>International Maritime Organization</i>
LD50/LC0	<i>Lethal Concentration/Dose, 50 percent</i>
NFPA	<i>National Fire Protection Association</i>
NIOSH	<i>National Institute for Occupational Safety and Health</i>
NTP	<i>National Toxicology Program</i>
OSHA	<i>Occupational Safety and Health</i>
PELs	<i>Permissible Exposure Limits</i>
R	<i>Reactive Hazard</i>

SAFETY DATA SHEET

Epoxytec

CPP PART A

www.epoxytec.com

S	Sudden Release of Pressure Hazard
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value,
TWA	Time-Weighted Average
Skin Irrit.	Skin Irritation
Skin Sens.	Skin Sensitization
Eye Irrit.	Eye Irritation
STOT SE	Single Target Organ Toxicity – Single Exposure

Special Precautions: Silica fillers in a dry form can cause severe lung diseases if you breathe their dusts. Do not sand or grind hardened epoxies that contain these substances. They are not known to be hazardous after blended into a liquid. Wet sanding is suggested to eliminate airborne dust, if product is machined or ground. The only other exposure limits established for ingredients of this product apply to nuisance dusts from inert fillers. These fillers are blended into a liquid and pose no hazard as supplied. Substances listed are present in concentration of 1% or greater, cited as a potential Carcinogen in the OSHA hazards communication standard.

Explanation and Disclaimer: Each customer or recipient has to become aware of and understand the data given in this SDS and any hazards associated with the product. The information is provided in good faith and believed to be accurate; however, does not appear all inclusive and shall be used only as a guide. Regulatory requirements are subject to change and may differ between various locations, it is buyer's responsibility to ensure that comply with all state, federal or local laws. The information in this document is based on the present state of our knowledge applicable to the product with regard to safety precautions. The information presented in here relates only to the product as shipped, and it is the buyer's responsibility to determine the conditions necessary for the safe use of this product. If you have received this SDS from any source other than Epoxytec or its authorized agent, the information contained in it may have been modified from the original document and it may not be the most current revision.

Epoxytec products are designed for Industrial use only.

Revision History:

June 19 2015	- Document creation.
July 03 2016	- Template updated to include EU and Australia compliance requirements.
April 17, 2016	- Material form recreation

END OF SDS

Section 1: Product and Company Identification

1.1 Product Identifier

Trade Name CPP Part B
 Product Number Not Available
 Product Description Epoxy Formulation

1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Protective Coating

1.3 Details of the Supplier of the Safety Data Sheet

Company EPOXYTEC INTL, INC.
 DBA MCOR
 3000 N 29 CT
 HOLLYWOOD, FLORIDA 33020
 Telephone (General): 954-961-4656

1.4 Emergency Telephone Number

3E Company N. America/S. America (+)1.760.476.3962
 Contract # 14738 Europe (+)1.760.476.3962
 Asia Pacific (+)1.760.476.3960
 Middle East/Africa (+)1.760.476.3959

Section 2: Hazard(s) Identification


The product is classified and labeled according to the Globally Harmonized System (GHS) Classification in accordance with 29 CFR 1910 (OSHA HCS) and Regulation (EC) No 1907/2006 (REACH).

2.1. Classification of the mixture

Component(s) Contributing to Classification(s)

All components listed in Section 3

2.2. GHS Label elements, including precautionary statements

Pictogram(s)	
Signal Word	Danger
GHS Hazard Classification	Acute Toxicity Category 4 (Oral, Dermal) Acute Toxicity Category 3 (Inhalation) Skin Corrosion Category 1 Eye Damage Category 1 Skin Sensitization Category 1 Reproductive Toxicity Category 2 Aquatic Acute Category 2 Aquatic Chronic Category 2

Hazard Statements	H302 H312 H331 H314 H317 H361 H401 H411	Harmful if swallowed Harmful in contact with skin Toxic if inhaled Causes severe skin burns and eye damage May cause an allergic skin reaction Suspected of damaging fertility or the unborn child Toxic to aquatic life Toxic to aquatic life with long lasting effects
Prevention Statements	P201 P202 P260 P264 P270 P271 P272 P280 P273	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye and face protection. Avoid release to the environment.
Response Statements	P301+P330+P331 P308+P313 P304+P340+P312 P311 P303+P361+P353 P305+P351+P338 P333+P313 P310 P363 P321 P314 P391	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF exposed or concerned: Get medical advice/ attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical advice/attention. Immediately call a POISON CENTER or doctor/ physician. Wash contaminated clothing before reuse. Specific treatment (see section 4 of this SDS) Get medical advice/attention if you feel unwell. Collect spillage.
Storage/Disposal	P403+P233 P405 P501	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Dispose of contents/ container to an approved waste disposal plant.

2.3 Other Hazards

None applicable

Section 3: Composition/Information on Ingredients

Chemical Characterization: Mixture

Description Mixture: Consisting of the following components

Materials	CAS #	EINECS #	Index #	Percentage	Classification
Fatty acids, C18 unsatd., dimers, reaction products with polyethylenepolyamines	68410-23-1	614-452-7	Not Listed	30-60	Skin Irrit. Cat 2 Skin Sens Cat 1 Eye Dam. Cat 1 Aquatic Chronic 2
2,4,6-tri(dimethylaminomethyl)phenol	90-72-2	202-013-9	603-069-00-0	5-10	Acute Tox Cat 4(Oral, Dermal) Skin Irrit Cat 2 Eye Dam Cat 1

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Diethylenetriamine	111-40-0	203-865-4	612-058-00-X	1-5	Acute Tox. Cat 4 (Oral, Dermal) Acute Tox. Cat 2 (In- halation) Skin Corr. Cat. 1B Skin Sens Cat 1 STOT SE Cat 3 (Resp Irrit)
4,4'-Isopropylidenediphenol	80-05-7	201-245-8	604-030-00-0	1-5	Acute Tox Cat 5 (Oral) Skin Irrit Cat 3 Eye Damage Cat 1 Skin Sens Cat 1 STOT SE Cat 3 (Resp Irrit) Repr. Cat 2 Aquatic Acute Cat 2 Aquatic Chronic Cat 2
Triethylenetetramine	112-24-3	203-950-6	612-059-00-5	.1-1	Acute Tox. Cat 4 (Oral, Dermal) Skin Corr. Cat. 1B Skin Sens Cat 1 STOT SE Cat 3 Aquatic Acute Cat 3 Aquatic Chronic Cat 3

Additional Information:

See SECTION 16 for full Classification phrases.

* Actual concentration of ingredients is Company Trade Secret - Business Confidential. The manufacturer is withholding the specific chemical identity under provision of WHMIS 2015 and the OSHA Hazard Communication Rule Trade Secrets (1910.1200(i)(1)). The specific chemical concentration will be made available to health professionals.

Section 4: First Aid Measures**4.1 Description of first aid measures****General advice**

Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled,

If breathed in, remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention.

In case of skin contact,

Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Consult a physician.

In case of eye contact,

Immediately flush eyes with plenty of water for 15 minutes while holding eyelids open. Get medical attention.

If swallowed,

Wash out mouth with water. Remove dentures if any. Never give anything by mouth to an unconscious person. Do not induce vomiting. In general, no treatment is necessary unless large quantities of product are ingested. However, get medical advice.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in toxicological effects on section 11

4.3 Indication of immediate medical attention and special treatment needed

No specific antidote. Treatment of exposure should be directed at the control of symptoms and clinical condition of the patient.

Section 5: Firefighting Measures

5.1. Extinguishing media

Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

5.2. Specific hazards arising from the chemical

In a fire or if heated, a pressure increase will occur and the container may burst.

5.3. Special hazards arising from the substance or mixture

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Phenolics, Carbon monoxide, Carbon dioxide, Silicon dioxide.

5.4. Special firefighting Procedure

Firefighters should wear NFPA compliant structural firefighting protective equipment, including self-contained breathing apparatus and NFPA compliant helmet, hood, boots, and gloves. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse.

Wear self-contained breathing apparatus and full protective clothing in case of fire.

Section 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

No action shall be taken involving any personal risk or without suitable training. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Use appropriate respirator when ventilation is inadequate and use personal protective clothing as described in Section 8 of this safety data sheet. See section 11 for additional information on health hazards.

6.2. Environmental precautions

Do not let product enter drains, do not allow to sewers/surface or ground water. See Section 12, Ecological information.

6.3. Methods and material for containment and cleaning up

Wear necessary protective equipment. Vacuum or sweep up material and place in designated labeled waste container. Dispose of via a licensed waste disposal contractor. Wash thoroughly with soap and hot water after dealing with a spillage. For waste disposal, see section 13.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Put on appropriate personal protective equipment (see section 8 of SDS). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Use soap and water or a commercial hand cleaner. Person with a history of skin sensitization problems should not be employed in any process in which this product is used.

Handle with good mechanical ventilation and local exhaust. Avoid inhalation of vapor or mist. For precautions see section 2.2. Avoid use of electric band heaters. Failures of electric band heaters have been reported to cause drums of epoxy resin to catch fire.

7.2 Conditions for safe storage, including any incompatibilities

Store in original container protected from direct sunlight, keep container tightly closed in a dry and well-ventilated place, away from heat, and strong oxidizers. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

7.3 Specific end uses.

See section 1.2.

Section 8: Exposure Controls/Personal Protection

8.1. Control parameters

If user operations generate dust, fumes, gas, vapor, or mist use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The limit values must be followed strictly if dust form occurs during any of the use.

Ingredient	CAS #	Agency	Limit type
Fatty acids, C18 unsatd., dimers, reaction products with polyethylenepolyamines	68410-23-1	No Data	No Data
Triethylenetetramine	112-24-3	WEEL	TWA: 1 ppm (skin)
Diethylenetriamine	111-40-0	ACGIH NIOSH	1 ppm 4 mg/m ³
4,4'-Isopropylidenediphenol	80-05-7	No Data	No Data
2,4,6-tri(dimethylaminomethyl)phenol	90-72-2	No Data	No Data

8.2. Personal Protective Equipment



8.3. Exposure controls**Respiratory Protection**

In case of inadequate ventilation wear respiratory protection. If product is machined, sanded or grinded, wear particulate respirators or other air-purifying respirators based on the specific airborne concentration found in the workplace.

Hand Protection

Wear chemical-resistant gloves such as: Nitrile, butyl rubber, neoprene, and polyvinyl chloride. Gloves should conform to EN374

Eye Protection

Safety eyewear complying with an approved standard should be used: chemical goggles or safety glasses with side shields.

Body Protection

Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Wash hands at the end of each work shift and before eating, smoking and using the lavatory. Wash promptly if skin becomes wet or contaminated. When using do not eat, drink or smoke. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to workstation location.

Control of environmental exposure

Prevent spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9: Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties of Mixture**Appearance**

Form	Liquid
Color	Clear to grey
Odor	Mild epoxy odor
Odor Threshold	Not applicable
pH	Not applicable
Boiling Point (deg. C)	Not Available
Flash Point	>93°C (>200°F)
Evaporation Rate	Slower than Ether
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	Not Available
Vapour pressure	Not Available
Vapour density	Heavier than air
Relative density	Not established
Solubility	Not established
Partition coefficient	Not established
Auto-ignition temperature	Not established
Decomposition temperature	Not established
Viscosity	Not established
Weight per Gallon	8.62 +/- .1
Percent Volatile	Not Available

Section 10: Stability and Reactivity

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical Stability

Stable under recommended storage conditions. See Storage, Section 7.

10.3 Possibility of Hazardous Reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Thermal Decomposition and Conditions to be avoided

Heat, flames and sparks. Ignition sources.

10.5 Incompatible materials

Avoid contact with oxidizing materials.

10.6 Hazardous Decomposition Products

Nature of decomposition products unknown.

Section 11: Toxicological Information

11.1 Information on Toxicological Effects

Epoxy Resin together with inorganic fillers. Toxicological data has not been determined for this product. The information is given below is based on main component of this product.

Toxicological information on ingredients:

Name	Route	Species	Value
Diethylenetriamine	Oral	Rat	LD50 – 1,080 mg/kg
	Dermal	Rabbit	LD50 – 1,090 mg/kg
	Inhalation	Rat	LC50 – 0.3 mg/l -4h
4,4'-Isopropylidenediphenol	Oral	Rat	LD50 – 2,000 – 5,000 mg/kg
	Dermal	Rabbit	LD50 – 6,400 mg/kg
	Inhalation	Rat	LC50 – 170 mg/m ³ – 6h
2,4,6-tri(dimethylaminomethyl)phenol	Oral	Rat	LD50 – 2,169 mg/kg
Fatty acids, C18 unsatd., dimers, reaction products with polyethylenepolyamines	Ingestion	Rat	LD50 – > 8000 mg/kg

11.1.2 Mixtures

Acute toxicity	Acute Toxicity Category 4 (Oral, Dermal) Acute Toxicity Category 3 (Inhalation)
Skin corrosion / irritation	Skin Corrosion Category 1
Serious eye damage / irritation	Eye Damage Category 1
Respiratory or skin sensitization	Skin Sensitization Category 1
Germ cell mutagenicity	Based on available data, the classification criteria are not met
Carcinogenicity	Based on available data, the classification criteria are not met
Reproductive toxicity	Reproductive Toxicity Category 2
STOT-single exposure	Based on available data, the classification criteria are not met
STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met

Other Information

Eye damage/eye irritation : May cause damage to the eyes.

Skin corrosion/irritation : May cause skin burns. May cause an allergic skin reaction.

Inhalation : May be toxic if inhaled.

Ingestion : Irritating to mouth, throat and stomach.

Carcinogenicity Classification

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

Bisphenol-A is suspected of damaging fertility or the unborn child. High doses of BPA given orally and by injection to laboratory animals have produced slight effects on certain reproductive endpoints, such as enlargement of the uterus; the effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. There is no evidence of reproductive toxicity in humans.

Section 12: Ecological Information

12.1 TOXICITY:

No ecological information available on the specific mixture. The following is information for components.

Name	Toxicity to fish	Toxicity to daphnia	Toxicity to algae
Fatty acids, C18 unsatd., dimers, reaction products with polyethylenepolyamines	Golden Orfe LC50 – 2.3 mg/l	Daphnia Magna EC50 – 31.1 mg/l	Scenedesmus subspicatus EC50 – 2.5 mg/l
4,4'-Isopropylidenediphenol	Fathead minnow LC50 (96 h): 4.6 mg/l	Water Flea EC50 (48 h) 1 - 16 mg/l	EC50 (96 h): 2.73 mg/l

12.2 PERSISTENCE AND DEGRADABILITY:

No data is available for product.

12.3 BIOACCUMULATIVE POTENTIAL:

No specific data available on this product.

12.4 MOBILITY IN SOIL:

No data is available for product.

12.5 RESULTS OF PBT AND vPvB ASSESSMENT:

No specific data available on this product.

12.6 OTHER ADVERSE EFFECTS:

No specific data available on this product.

12.7 WATER ENDANGERMENT CLASS:

May be water endangering in accordance with EU Guideline 91/155-EWG. Do not allow product to reach ground water, water course or sewage system. At present there are no ecotoxicological assessments for this product

Section 13: Disposal Considerations

13.1 Waste Treatment Methods

The generation of waste should be avoided or minimized. Do not dump into any sewers, on the ground, or into any body of water. For disposal of residual product, mix by weight 1 parts Part A with 1 parts Part B. Allow mix to solidify in well ventilated area or outdoors. Regulations may vary in different locations. Dispose of this product, and/or any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Labels should not be removed from containers until they have been cleaned. Empty containers may contain hazardous residues.

Section 14: Transport Information

Road Transport: DOT / ADR

Proper Shipping Name : Amines, liquid, corrosive, n.o.s. (Isophoronediamine, Polyamines, Diethylenetriamine)
Hazard Class : 8
UN/ID Number : UN2735
Packing Group : III
Marine Pollutant : Yes

Air Transport: IATA/ICAO

Proper Shipping Name : Amines, liquid, corrosive, n.o.s. (Isophoronediamine, Polyamines, Diethylenetriamine)
Hazard Class : 8
UN/ID Number : UN2735
Packing Group : III
Marine Pollutant : Yes

Sea Transport: IMDG

Proper Shipping Name : Amines, liquid, corrosive, n.o.s. (Isophoronediamine, Polyamines, Diethylenetriamine)
Hazard Class : 8
UN/ID Number : UN2735
Packing Group : III
Marine Pollutant : Yes

Section 15: Regulatory Information

OSHA Hazard Communication Standard

Epoxy is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29CFR 1910.1200.

Section 16: Other Information

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Superfund Amendments and Reauthorization Act (SARA) of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312 (Hazardous Chemical Storage Reporting Requirements)

Acute Health Hazard

Superfund Amendments and Reauthorization Act (SARA) of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313 (Toxic Chemical Release Inventory)

This material does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimis) reporting levels established by SARA Title III, Section 313.

Massachusetts Right To Know Components

Diethylenetriamine	CAS # 111-40-0
4,4'-Isopropylidenediphenol	CAS # 80-05-7


Pennsylvania Right To Know Components

Diethylenetriamine	CAS # 111-40-0
2,4,6-tri(dimethylaminomethyl)phenol	CAS # 90-72-2
4,4'-Isopropylidenediphenol	CAS # 80-05-7

New Jersey Right To Know Components

Diethylenetriamine	CAS # 111-40-0
2,4,6-tri(dimethylaminomethyl)phenol	CAS # 90-72-2
4,4'-Isopropylidenediphenol	CAS # 80-05-7

California Prop. 65 Components (Safe Drinking Water and Toxic Enforcement Act of 1986)

 **WARNING!** This product can expose you to chemicals such as Bisphenol A which is known to the State of California to be a reproductive hazard. For more information, go to WWW.P65Warning.ca.gov.

CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: Components are DSL Listed, NDSL Listed and/or are exempt from listing

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.

CANADIAN WHMIS CLASSIFICATION and SYMBOLS: This product has been classified per WHMIS 2015.

EUROPEAN ECONOMIC COMMUNITY INFORMATION:

This product does meet the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.
See Section 2 for Details.

CHEMICAL SAFETY ASSESSMENT :

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

AUSTRALIAN INFORMATION FOR PRODUCT:

This product does meet the definition of a hazardous substance or preparation as defined by the Safe Work Australia Act. Components of this product are listed on the International Chemical Inventory list

HMIS Rating (Scale 0-4)

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Health hazard: 3
Flammability: 1
Physical Hazard: 0

NFPA Rating (Scale 0-4)

Health hazard: 3
Flammability Hazard: 1
Reactivity Hazard: 0

Caution: HMIS ratings are based on a 0-4 rating scale

0= Minimal Hazard

1= Slight

2= Moderate

3= High

4= Extreme

Abbreviations and acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American International Health Alliance
CFR	Code of Federal Regulations
DOT	Federal Department of Transportation
DSL	Domestic Substance List
EC50	Half maximal effective concentration
GHS	The Globally Harmonized System of Classification and Labelling of Chemicals
HMIS	Hazardous Material Identification System
HCS	Hazard Communication Standard
IARC	International Agency for Research on Cancer
IATA	The International Air Transport Association
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
LD50/LC50	Lethal Concentration/Dose, 50 percent
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OEL	Occupational Exposure Limit
OSHA	Occupational Safety and Health
REL	Recommended Exposure Limit
SARA	Superfund Amendments and Reauthorization Act
TLV	ACGIH Threshold Limit Value
TWA	Time-Weighted Average
WEEL	Workplace Environmental Exposure Levels
Skin Corr.	Skin Corrosion
Skin Sens.	Skin Sensitization
Eye Irrit.	Eye Irritation
Acute Tox	Acute Toxicity
Repr	Reproductive Toxicity
STOT SE	Single Target Organ Toxicity - Single Exposure

Explanation and Disclaimer: Each customer or recipient has to become aware of and understand the data given in this SDS and any hazards associated with the product. The information is provided in good faith and believed to be accurate; however, does not appear all inclusive and shall be used only as a guide. Regulatory requirements are subject to change and may differ between various locations, it is buyer's responsibility to ensure that comply with all state, federal or local laws. The information in this document is based on the pre-

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sent state of our knowledge applicable to the product with regard to safety precautions. The information presented in here relates only to the product as shipped, and it is the buyer's responsibility to determine the conditions necessary for the safe use of this product. If you have received this SDS from any source other than Epoxytec/MCOR or its authorized agent, the information contained in it may have been modified from the original document.

MCOR products are designed for industrial use only.

Revision History:

November 19, 2015

July 03, 2016

April 17, 2018

- Document creation.
- Template updated to include EU and Australia compliance requirements.
- Document recreation.

END OF SDS



Figure 1: Epoxy seal (inlet pipe connection)



Figure 2: Epoxy seal (DS-1 floor)



Figure 3: Epoxy Seal (DS-1 floor)



Figure 4: Epoxy Seal (outlet pipe connection)

Appendix D

Re-Sealing Sheet Piles – Photo Log

Attachments



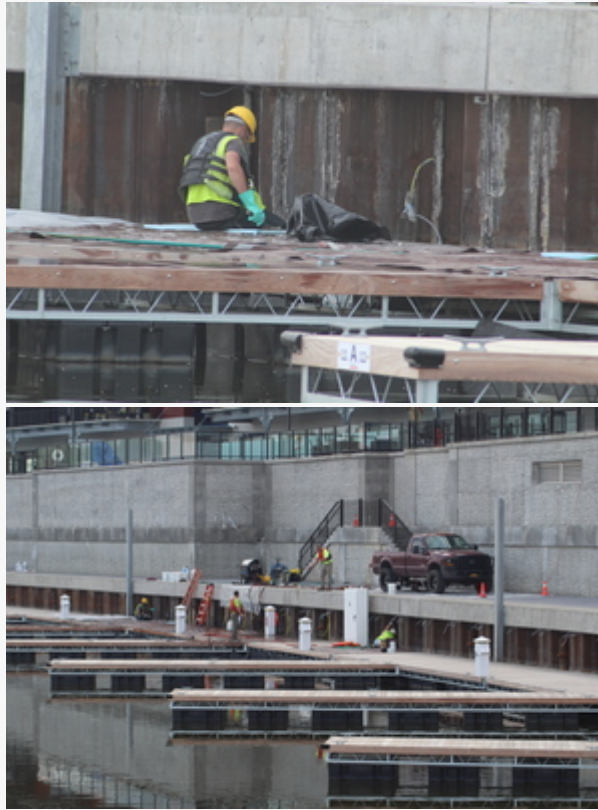
Attachments



Attachments



Attachments



MOHAWK HARBOR UPDATE

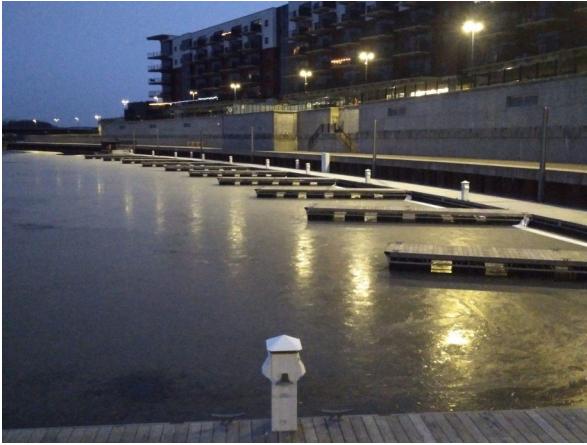


Photo was taken 12-9 at about 6:55 AM

Water needs to drop 10" to do injection

Harbor has a light ice over the Harbor

Current Temperature : 26 degree



Harbor - Joints are prep and ready to inject

Additional 12" of injecto tube is to be installed when water to drop

This was taken and performed 12- 8

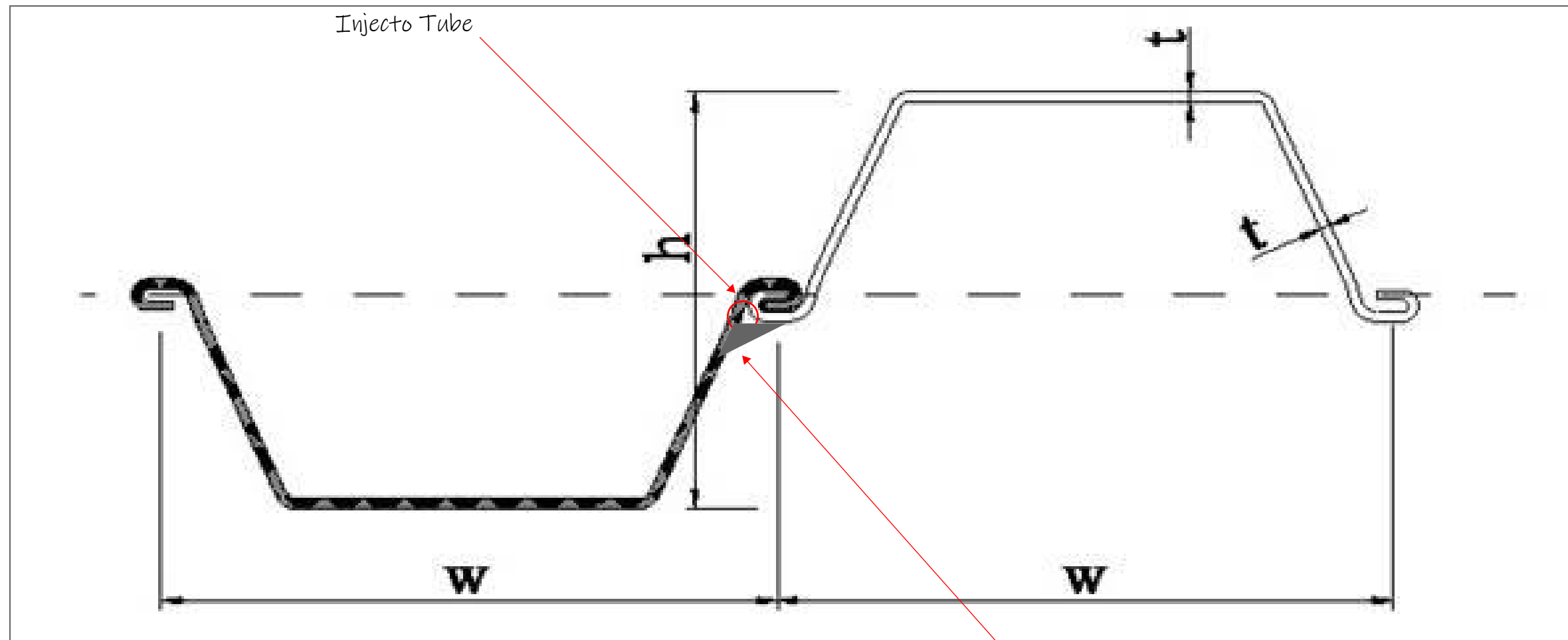
12-9-2020	Mohawk Harbor—Leak	Photo taken 12-9- 2020
DCA # 9040-01	Mohawk Harbor Schenectady, NY	Prepared 12-9-2020

ADDITIONAL PROVISIONS-SUBCONTRACT

A. THE WORK:

Note: Contract Page 7 the work

1. Scope: The Subcontractor will furnish all supervision, labor, materials, equipment, and supplies necessary to complete waterstop sealing of the Mohawk Harbor Sheet Pile bulkhead. The sealing of sheet pile joint is limited to (1) continuous portion of the bulkhead wall comprising a total of approximately (125) vertical joints that are 9 FT long (specifically, each joint extends from bottom of concrete pile cap down 9 vertical feet) for a total of 1,125 vertical feet. As a matter of record only, the intent is to seal 6 VF above water and 3 VF below water. Actual water level at the time of the work will dictate.
2. Work will be billed as separate Debrino daily crew rates for above dry work & wet work plus materials, plus markup of



Injecto Injection Procedures

1. Clean Metal and area for placing injecto tube
2. Place injecto tube
3. Paste the injecto tube in place along the seam of the steel piling let set overnight
4. Place Injection zerks to inject in the injecto tubes ends
5. Inject the hoses using AV-248/249

SKETCH NUMBER

Harbor - 1



AVANTI

Stop leaks. Stabilize soil.
Control groundwater. **Permanently.**

Physical: 822 Bay Star Blvd - Webster, TX 77598

Mailing: P.O. Box 58448 - Webster, TX 77598

P: 800.877.2570 F: 281.486.7300

www.AvantiGrout.com

August 10, 2020

Concrete Chemical Solutions
24 West Shore Drive
South Hampton, New Jersey 08088

Attn: Mr. John Wager

Re: Chemical Resistance of AV-248-LV against Diesel Fuel

Dear Mr. Wager:

Avanti International (Avanti) has been requested to provide our experience and understanding of chemical resistance of hydrophobic polyurethane grout, AV-248-LV Flexseal against diesel fuel.

Hydrophobic urethane grouts like AV-248-LV Flexseal are generally affected by strong acids and bases. We understand diesel is a mixture of alkanes and aromatics (naphthalene) and is considered to be hydrophobic (non-polar). Although AV-248-LV have not been tested against diesel fuel specifically, we have tested our hydrophilic urethanes against Heptane (an alkane) and Toluene (an aromatic) and in both cases performed "good." For this reason, it is our opinion that AV248-LV will perform well against diesel fuel.

Thank you for your interest in solutions by Avanti. If you have questions, please call.

Sincerely,
Avanti International

Reviewed by:

Roger Borremans
Technical Director

Britt N. Babcock, PE
President



Section 1: Identification

GHS Product Identifier: AV-248-LV Flexseal LV
Classification: Hydrophobic Foam
Product Use: Industrial Use Only

Supplier
 Avanti International
 1100 Hercules Ave., Suite 320
 Houston, TX 77058
 Phone: 800.877.2570
 Fax: 281.486.7300

24 HR. EMERGENCY TELEPHONE NUMBER
 Chemtrec: 800.424.9300

Section 2: Hazards Identification

GHS Classification

Classification	Category	
Resp. Sens.	1	
Skin Sens.	1	
STOT RE	2	Specific target organ toxicity - repeated exposure

GHS Label Elements

Hazard pictograms:



Signal Word:	Danger
Hazards Statements:	
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
Precautionary Statements:	General:
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P261	Avoid breathing vapors, spray or mist.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear eye protection, protective clothing and protective gloves.
P284	In case of inadequate ventilation] wear respiratory protection.
P314	Get medical advice/attention if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P501	Dispose of contents/container according to local, regional, national, and international regulations.

Other hazards not contributing to the classification:

Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

Unknown Acute Toxicity (GHS-US):

No data available.

Section 3: Composition/Information on Ingredients

Weight %	Components	CAS-No./EINCS	Classification
50-60%	4,4' – Diphenylmethane Diisocyanate (MDI)	(CAS) 26447-40-5 (EINECS) 247-714-0	Resp Sens. 1A, H334
15-20%	Dibutyl maleate	(CAS) 105-76-0 (EINECS) 203-328-4	Skin Sens 1, H317 STOT RE 2, H373
30-40%	Polyoxyalkylene Polyol	(CAS) 9082-00-2 (EINECS) 618-655-1	Not Classified

Full text of H-phrases: See Section 16

Section 4: First-Aid Measures

Description of First-Aid Measures

First-aid Measures General:

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

First-aid Measures After Inhalation:

Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

First-aid Measures After Skin Contact:

Rinse immediately with plenty of water. Obtain medical attention if irritation develops or persists.

First-aid Measures After Eye Contact:

Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-aid Measures After Ingestion:

Do NOT induce vomiting. Rinse mouth. Immediately call a Poison Center or doctor/physician.

May cause an allergic skin reaction. Inhalation may cause allergic respiratory reaction with asthma-like symptoms and difficulty breathing.

May cause eye irritation.

Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms:

Exposure may produce an allergic reaction.

If exposed or concerned, get medical advice and attention.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media:

Use dry chemical, water spray or other extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media:

Do not use heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising from Substance or Mixture

Fire Hazard: Not considered flammable but may burn at high temperatures.

Reactivity: Hazardous reactions will not occur under normal conditions.

Explosion Hazard: Product is not explosive. DO NOT weld, burn or cut empty containers.

Fire-fighting Procedure

Exercise caution when fighting any chemical fire. Fire fighters should wear self-contained breathing apparatus to protect against inhalation of cyanates vapors and other decomposition/combustion products. Do not release runoff from fire control methods to sewers or waterways. Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

Other information

Refer to Section 9 for flammability properties.

Section 6: Accidental Release Measures**Personal Precautions, Protective Equipment and Emergency Procedures****General Measures**

Do not get in eyes, on skin, or on clothing. Do not breathe vapor or mist.

For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Stop leak if safe to do so. Eliminate ignition sources. Ventilate area.

Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

Methods and Material for Containment and Cleaning-Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Cleaning up: Clear up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

Reference to Other Sections

See Heading 8. Exposure controls and personal protection

Section 7: Handling and Storage**Precautions for Safe Handling**

Keep away from sources of ignition - No smoking. Keep away from heat & open flame. Avoid all eye & skin contact & do not breathe vapor or mist. Always wash hands after handling. Do not eat, drink or smoke when using this product. Ensure there is adequate ventilation. Wear recommended personal protective equipment. Take precautionary measures against static discharge. Use grounded electrical/mechanical equipment.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Conditions for Safe Storage (Including Any Incompatibilities)

Technical Measures: Comply with applicable regulations.

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Products: Isocyanates react slowly with water, alcohols, amines, acids and bases.

Section 8: Exposure Controls/Personal Protection**Control Parameters**

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), or OSHA (PEL).

Exposure Controls

Appropriate Engineering Controls: Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Personal Protective Equipment: Protective goggles, gloves, protective clothing. If insufficient ventilation: wear respiratory protection.



Personal Protective Equipment

Respiratory Protection:

Follow OSHA respirator regulation 29 CFR 1910.134 and European Standards EN 141, 143 and 371; wear a MSHA/NIOSH or European Standards EN 141, 143 and 371 approved respirators when needed.

Skin and Body Protection:

Chemically resistant materials and fabrics. Wear suitable protective clothing. Wear chemically resistant protective gloves.

Eye Protection:

Chemical goggles or safety glasses.

Environmental Exposure Controls:

Do not allow the product to be released into the environment.

Consumer Exposure Controls:

Do not eat, drink or smoke during use.

Section 9: Physical and Chemical Properties

Appearance: Clear to opaque liquid

Odor: No data available

Odor Threshold: No data available

pH: No data available

Freezing Point: <-34°F (<-29°C)

Boiling Point: > 500°F (260°C)

Flashpoint: > 200°F (>93°C)

Evaporation Rate: No data available (butylacetate=1)

Flammability: No data available

Lower Explosion Limits: Not determined

Upper explosion limits: Not determined

Vapor Pressure: No data available

Relative Vapor Density at 20°C: No data available

Relative Density: No data available.

Solubility in Water: Reacts very slowly with water

Partition Coefficient n-octanol/water: No data available

Auto-ignition Temperature: No data available

Decomposition Temperature: No data available

Viscosity: 150-250 cP @ 77°F (25°C)

Oxidizing Properties: No data available

Specific Gravity: 1.06 (water = 1)

Explosive Properties: Product is not explosive

Section 10: Stability and Reactivity

Reactivity

Hazardous reactions will not occur under normal conditions.

Chemical stability

Stable under recommended handling and storage conditions (see Section 7).

Possibility of hazardous reactions

Hazardous polymerization will not occur.

Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Ignition sources. Incompatible materials.

Incompatible materials

Water (moisture), metal compounds, acids, bases, and surface-active materials.

Hazardous decomposition products

Toxic fumes are released in fire situations, including isocyanate vapor and mist, carbon dioxide, carbon monoxide, nitrogen oxides, and traces of hydrogen cyanide.

Section 11: Toxicological Information

Acute Toxicity/Effects

Not Classified

Dibutyl Maleate (105-76-0)	
LC50 Inhalation Rat (ppm)	> 5,000 mg/m ³
LD50 Oral Rat (mg/kg)	> 3,730 mg/kg
LD50 Dermal Rabbit	> 2,000 mg/kg
Polyoxyalkylene Polyol (9082-00-2)	
LD50 Oral Rat	>10,000 mg/kg
LD50 Dermal Rabbit	> 5,000 ml/kg
Skin Corrosion/Irritation	May cause minor skin irritation
Serious Eye Damage/Irritation	May cause mild eye irritation
Respiratory or Skin Sensitization	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ Cell Mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive Toxicity	Not classified
Specific Target Organ Toxicity (Single Exposure)	Not classified
Specific Target Organ Toxicity (Repeated Exposure)	Not classified
Aspiration Hazard	Not classified

Section 12: Ecological Information

Toxicity

Dibutyl Maleate (105-76-0)	
LC50 fishes 1	1.2 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
EC50 Daphnia 1	21 mg/l (Exposure time: 18 h - Species: Daphnia magna [Static])

EC50 other aquatic organisms 1 | 6.2 mg/l (Exposure time: 72 h - Species: Scenedesmus subspicatus [alga])

Persistence and Degradability:

No additional information available.

Bioaccumulative Potential:

No additional information available.

Mobility in Soil:

No additional information available.

Other Adverse Effects:

Avoid release to the environment.

Section 13: Disposal Considerations

Waste Disposal Recommendations:

Dispose of waste material in accordance with all local, regional, national, & international regulations.

Sewage Waste Recommendations:

Do not dispose of waste into sewer.

Section 14: Transport Information

DOT (Department of Transportation)

Proper Shipping Name: Liquid Resin (Non-Regulated)

Hazard Class: Non-regulated

UN Number: Not applicable

Packing Group: None

Label: Not applicable

Placard: Not applicable

NMFC (National Motor Freight Carriers)

Freight Class: 55

IMO / IMDG CODE (OCEAN) HAZARD CLASS DIVISION NUMBER: Non-regulated/Not dangerous goods

ICAO / IATA (AIR) HAZARD CLASS DIVISION NUMBER: Non-regulated/Not dangerous goods

Section 15: Regulatory Information

US Federal Regulations

SARA Section 311/312 Hazard Classes: Immediate (acute) health hazard

US State Regulations

Dibutyl Maleate (105-76-0)

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

Polyoxyalkylene Polyol (9082-00-2)

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

Section 16: Other Information

Skin Sens. A	H317	Skin sensitization Category 1
Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
STOT Re 2	H373	May cause damage to organs through prolonged or repeated exposure.

NFPA 704M ratings:	Health 2	Flammability 1	Reactivity 1	Other
HMIS ratings: 0-Insignificant 1-Slight 2-Moderate 3-High 4-Extreme	Health 2	Flammability 1	Physical Hazard 1	Personal Protection G

Other Information: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

The information provided in this Safety Data Sheet is correct to the best of Avanti International's knowledge, information and belief at the date of this publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process, unless specified in the text. AVANTI INTERNATIONAL MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. Given the variety of factors that can affect the use and application of this product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the product to determine whether it is fit for a particular purpose and suitable for user's method of use or application. Each user is also responsible for evaluating the conditions of use and designing the appropriate protective mechanisms to prevent employee exposures, property damage, or release to the environment. Avanti International assumes no responsibility for injury to the recipient or third persons or for any damage to any property resulting from misuse of the product.



Section 1: Identification

GHS Product Identifier: AV-249-LV Flexseal Cat LV
Classification: Catalyst
Product Use: Industrial Use Only

Supplier
 Avanti International
 1100 Hercules Ave., Suite 320
 Houston, TX 77058
 Phone: 800.877.2570
 Fax: 281.486.7300

24 HR. EMERGENCY TELEPHONE NUMBER
 Chemtrec: 800.424.9300

Section 2: Hazards Identification

GHS Classification

Hazard Class	Category	
Acute tox.	4	Acute toxicity (Oral)
Skin irrit.	2	Skin corrosion/irritation
Eye irrit.	2A	Serious eye damage/ irritation
Skin sens.	1	Skin sensitization
STOT RE	2 (Oral)	Specific target organ toxicity - repeated exposure (Oral)

GHS Label Elements

Hazard pictograms:



Signal Word:	Warning
Hazards Statements:	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H320	Causes eye irritation.
H373	May cause damage to internal organs through prolonged or repeated exposure.
Precautionary Statements:	Prevention:
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/gas/mist/vapors.
P264	Wash skin and face thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face.
P284	In case of inadequate ventilation wear respiratory protection. The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134) or regional standards. For additional details, see section 8 of the SDS.
	Response:
P302+ P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses, if present

	and easy to do. Continue rinsing.
P312	Call a poison center or doctor/physician if you feel unwell.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P342 + P311	If experiencing respiratory symptoms: Call a poison center or doctor/physician.
P362 + P364	Take off contaminated clothing and wash before reuse.
	Storage:
P405	Store locked up.
	Disposal:
P501	Dispose of contents and container in accordance with existing federal, state, and local environmental control laws.

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

Section 3: Composition/Information on Ingredients

Weight %	Components	CAS-No.	Classification
35 - 55%	Tertiary Amine	CAS# is a Trade Secret	Acute toxicity Category 4 Oral. Skin irritation Category 1B. Eye irritation Category 1.
35 - 55%	Dibutyl maleate	105-76-0	Skin sensitization Category 1. Specific target organ toxicity - repeated exposure Category 2 (Oral).
Trade Secret	Polyalkyleneoxidemethylsiloxane	CAS# is a Trade Secret	Not classified for physical or health hazards under GHS.

The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret.

Section 4: First-Aid Measures

Description of First-Aid Measures

General advice:

Remove contaminated clothing.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

If on skin:

Wash affected areas thoroughly with soap and water for at least 25 minutes. If irritation develops, seek medical attention.

If in eyes:

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water.

If swallowed:

Rinse mouth and then drink plenty of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

Symptoms of exposure:

Skin contact: exposure to this product will result in rash and irritation.

Eyes: symptoms include itching, burning, redness and tearing.

Respiratory: symptoms may include burning sensation in the upper respiratory system, shortness of breath, and choking/coughing.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media: Dry chemical, Carbon dioxide (CO₂), Foam, water spray for large fires.

Unsuitable Extinguishing Media: High volume water jet

Fire-fighting Procedure

Firefighters should wear NFPA compliant structural firefighting protective equipment, including self-contained breathing apparatus and NFPA compliant helmet, hood, boots and gloves. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse. During a fire, isocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Exposure to heated diisocyanate can be extremely dangerous.

Hazardous Decomposition Products

By Fire and High Heat: Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), hydrogen gas and ammonia, other undetermined compounds.

Unusual Fire/Explosion Hazards

Vapors can travel to a source of ignition and flash back.

Section 6: Accidental Release Measures**Personal Precautions, Protective Equipment and Emergency Procedures**

Clear area. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Environmental Precautions

Do not discharge into drains/surface waters/groundwater.

Methods and Material for Containment and Cleaning-Up

For small amounts: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.

For large amounts: Contain in diked area. Pump into appropriate container for recovery or disposal. Adsorb residual liquid as above.

Section 7: Handling and Storage**Precautions for Safe Handling**

Provide suitable exhaust ventilation at the processing machines. Ensure thorough ventilation of storage and work areas. Avoid aerosol formation. When handling heated product, vapors of the product should be ventilated and respiratory protection used. Wear respiratory protection when spraying. Danger of bursting when sealed gastight. If bulging of drum occurs, transfer to well ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing. Protection against fire and explosion: No explosion proofing necessary.

Conditions for Safe Storage (Including Any Incompatibilities)

Store containers away from acids and strong oxidizing agents.

Storage stability:

Storage temperature: 45°F - 95°F (7°C - 35°C)

Section 8: Exposure Controls/Personal Protection**Components with Occupational Exposure Limits**

No exposure limits established for this product or its individual components.

Advice on system design:

Provide local exhaust ventilation to control vapors/mists.



Personal Protective Equipment

Respiratory Protection:

When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators. When atmospheric levels may exceed the occupational exposure limit (PEL or TLV) NIOSH-certified air-purifying respirators equipped with an organic vapor sorbent and particulate filter can be used as long as appropriate precautions and change out schedules are in place. Wear a NIOSH-certified (or equivalent) TC19C positive pressure air supplied respirator. For emergency or non-routine, high exposure situations, including confined space entry, use a NIOSH certified full face piece pressure demand self-contained breathing apparatus (SCBA) or a full face piece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand Protection:

Chemical resistant protective gloves, Suitable materials, chloroprene rubber (Neoprene), chlorinated polyethylene, polyvinylchloride (Pylox), butyl rubber, fluoroelastomer (Viton), nitrile rubber (Buna N)

Eye Protection:

Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

General Safety and Hygiene Measures:

Wear protective clothing as necessary to prevent contact. Eye wash fountains and safety showers must be easily accessible. Observe the appropriate PEL value. Wash soiled clothing immediately. Contaminated equipment or clothing should be cleaned after each use or disposed of.

Section 9: Physical and Chemical Properties

Appearance: Clear liquid

Odor: Amine odor

Odor Threshold: Not determined

pH: Not determined

Freezing Point: -7°F (-22°C)

Boiling Point: Not determined.

Flashpoint: > 200°F (>93°C)

Evaporation Rate: Not determined

Flammability: Not flammable

Lower Explosion Limits: Not determined

Upper explosion limits: Not determined

Vapor Pressure: Not determined

Vapor Density: Not determined

Relative Density: 0.894 @ 72°F (22°C) ± 3%

Solubility in Water: Insoluble in water

Partition Coefficient n-octanol/water: Not determined

Auto-ignition Temperature: Not determined

Decomposition Temperature: Not determined

Viscosity: Not determined

Section 10: Stability and Reactivity

Reactivity

Corrosion to metals: No corrosive effect on metal.

Oxidizing properties: Not an oxidizer.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

Reacts with acids.

Conditions to avoid

Avoid contact with acids, acid anhydrides, oxidizing agents, copper and copper alloys.

Incompatible materials

Acids, acid anhydrides, oxidizing agents, copper and copper alloys.

Hazardous decomposition products

None known

Section 11: Toxicological Information**Primary routes of exposure**

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/EffectsAcute toxicity**Oral**

Information on: Tertiary amine

Type of value: LD50

Species: rat (male/female)

Value: 200 mg/kg

Literature Data

Information on: Dibutyl maleate (DBM)

Type of value: LD50

Species: rat (male/female)

Value: >= 3,700 mg/kg

Literature Data

Inhalation

Information on: Dibutyl maleate (DBM)

Type of value: LC50 (4h)

Species: rat (male/female)

Value: > 5mg/l

Literature Data

Dermal

Information on: Dibutyl maleate (DBM)

Type of value: LD50

Species: rat (male/female)

Value: 10,000 mg/kg

Literature Data

Irritation / Corrosion

Assessment of irritating effects: Irritating to eyes, respiratory system and skin. Skin contact may result in dermatitis, either irritative or allergic.

Skin

Information on: Dibutyl maleate (DBM)

Species: rabbit 500mg open skin

Result: Mild Irritating.

Literature Data

Eye

No data

Sensitization

No data

Chronic Toxicity/Effects

Repeated Dose Toxicity

Information on: Dibutyl maleate (DBM)

May cause damage to organs through prolonged or repeated oral exposure.

Result: Kidney-Kidney disorders.

Repeated dose toxicity - rat - male and female - Oral

RTECS: ON0875000

Literature Data

Genetic Toxicity

Assessment of mutagenicity: No data.

Carcinogenicity

Assessment of carcinogenicity: No data

Reproductive toxicity

Assessment of reproduction toxicity: No data.

Teratogenicity

Assessment of teratogenicity: No data.

Development

No data.

Other Toxicological information

Information on: Tertiary amine

Skin Corrosion/Irritation: Guinea Pig, Undiluted material, open application test

Severe Irritant

Skin Corrosion/Irritation: Guinea Pig, 30% solution in ethanol, open application test

Severe Irritant

Skin Corrosion/Irritation: Guinea Pig, 10% solution in ethanol, open application test

Severe Irritant

Skin Corrosion/Irritation: Guinea Pig, 3% solution in ethanol, open application test

Non Irritant

Section 12: Ecological Information

Toxicity

Aquatic Toxicity

Toxicity to fish

Information on: Dibutyl maleate (DBM)

LC50 (96 h) 1.2 mg/l, *Oncorhynchus mykiss* (static)

Information on: Tertiary amine

LC50 (96 h) 0.1 -1 mg/l, Zebrafish

The details of the toxic effect relate to the nominal concentration. Literature data.

Aquatic invertebrates

Information on: Dibutyl maleate (DBM)

EC50 (18 h) 21 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

The details of the toxic effect relate to the nominal concentration. The product has not been tested.

The statement has been derived from substances/products of a similar structure or composition.

Microorganisms/Effect on Activated Sludge

Toxicity to Microorganisms
No data available. The product has not been tested.

Persistence and Degradability

Assessment Biodegradation and Elimination (H₂O)
No data available

Bioaccumulation Potential

No data available.
The product has not been tested.

Mobility in soil

Assessment transport between environmental compartments
No data available.
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Additional information

Absorbable organically-bound halogen (AOX): This product contains no organically-bound halogen.

Section 13: Disposal Considerations

Dispose of in accordance with local, state, and federal regulations.

Section 14: Transport Information**DOT (Department of Transportation)**

Proper Shipping Name: Not applicable
Hazard Class: Not applicable
UN Number: Not applicable
Packing Group: Not applicable
Label: Not applicable
Placard: Not applicable

NMFC (National Motor Freight Carriers)

Freight Class: 55

Section 15: Regulatory Information

EPCRA 311/312 (hazard categories): Acute; Chronic

EPCRA 313:

CAS Number Chemical name

Not regulated

CERCLA RQ CAS Number Chemical name

Not regulated

State regulations

State RTK CAS Number Chemical name

NJ,PA 105-76-0 Dibutyl maleate

CA Prop. 65:

No ingredients are listed.

NFPA Hazard codes:

Health : 1 - Fire: 1 - Reactivity: 1 - Special: 0

HMIS III rating

Health: 1 - Flammability: 1 - Physical hazard: 0

Section 16: Other Information

The information provided in this Safety Data Sheet is correct to the best of Avanti International's knowledge, information and belief at the date of this publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process, unless specified in the text. AVANTI INTERNATIONAL MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. Given the variety of factors that can affect the use and application of this product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the product to determine whether it is fit for a particular purpose and suitable for user's method of use or application. Each user is also responsible for evaluating the conditions of use and designing the appropriate protective mechanisms to prevent employee exposures, property damage, or release to the environment. Avanti International assumes no responsibility for injury to the recipient or third persons or for any damage to any property resulting from misuse of the product.



AV-248-LV FLEXSEAL LV

HYDROPHOBIC POLYURETHANE FOAM

DESCRIPTION

Avanti's unique **AV-248-LV** Flexseal LV is the low viscosity version of the original **AV-248**. Injected as a single component, catalyzed **AV-248-LV** Flexseal LV is a moisture activated MDI-based polyurethane resin. The chemical reaction is catalyzed by using **AV-249-LV** Cat-LV and uses moisture as an initiator. Like other hydrophobics, **AV-248-LV** Flexseal LV withstands wet/dry cycles and reacts with moisture; but unlike all other hydrophobics, it forms a resilient, impermeable *flexible* foam. This high quality resin is designed for sealing active and potential water leaks in various cracks and annular spaces where flexibility is needed but is susceptible to wet/dry cycles. Avanti's **AV-248-LV** is one of the most versatile products on the market.

APPLICATION

- Fine cracks above or below grade in humid or arid atmospheres
- Fills various voids and pipe penetrations
- Stops leaks in concrete structures
- Designed for tunnels, mines, dams, reservoirs, block walls, and structures that may shift

FEATURES AND BENEFITS

- Very low viscosity
- Expands 400% – 600%
- Solvent-free system
- Controllable reaction time by adjusting **AV-249-LV** Cat-LV volume
- Withstands wet/dry cycles
- Unique hydrophobic that cures into a flexible, closed-cell foam

GROUTING TECHNIQUES

- Expanded Gasket Placement Technique (EGP)
- Variable Pressure Application Technique (V-PAT) – Crack Injection

HOW IT WORKS

AV-248-LV is a water-activated reaction. When injected or placed into the space, the low viscosity resin will react with moisture and begin to expand. The final product is a very dense, closed cell foam impermeable to water yet flexible in nature.

ADDITIVES

- **AV-249-LV** Cat-LV – catalyst, 32 oz. (0.95 L)

PACKAGING

- Please contact Avanti for more information.

SHIPPING

- Motor Class 55
- Non-Hazardous
- Air freight available

CLEANING PRODUCTS

- **AV-208** Acetone, Technical Grade (CAS# 67-64-1) – removes moisture from equipment
- **AV-284** Pump Wash (Proprietary Blend) – removes uncured resin from pump and hose
- **AV-222** Cleaner (Proprietary Blend) – removes cured resin from equipment

PROPERTIES*

AV-248-LV – UNCURED

Appearance:	Milky white to clear liquid
Viscosity:	150 – 250 cP @ 72°F (22°C)
Flash Point:	>200°F (>93°C)
Specific Gravity:	1.056 @ 72°F (22°C) ± 3%
Weight:	8.8 lb/gal ± 3% (1.054 kg/L ± 3%)

AV-248-LV – CURED

Appearance:	Milky white flexible foam
Tensile Strength:	TBD
Toxicity:	Non-toxic

AV-249 Cat-LV

Appearance:	Light yellow to white, clear liquid
Viscosity:	5 cP @ 72°F (22°C)
Flash Point:	>200°F (>93°C)
Specific Gravity:	1.02 @ 72°F (22°C) ± 3%
Weight:	8.5 lb/gal ± 3% (1.018 kg/L ± 3%)

*Laboratory Results

MIX PROCEDURE

Typically, one container of **AV-249-LV** Cat-LV is used per 5-gallon container of **AV-248-LV** Flexseal LV. Depending on the desired reaction time, **AV-249-LV** may be doubled. Mix thoroughly, but slowly, to avoid creating bubbles in the solution. Perform the standard cup test with site water to determine the desired reaction time.

PERFORMANCE

Flush equipment with **AV-208** before and after use to remove moisture and clean equipment. Performance will be influenced by site conditions. If site temperatures are low, heat the product to recommended operating temperatures of 60°F – 90°F (16°C – 32°C) and/or increase catalyst amount by 1% – 2%. Do not exceed more than 78 oz (2.3 L) of **AV-249-LV** Cat-LV per 5-gallon container of **AV-248-LV** Flexseal LV resin. Do not use open flame as a heat source. Excess amounts of **AV-249-LV** may adversely affect performance. Because catalyzed resin will react to moisture from the air, use product soon after mixing for best results.

STORAGE

Store in temperatures within or near 60°F – 100°F (16°C – 38°C) in a dry atmosphere.

SAFETY

Always use OSHA-approved personal protective equipment (PPE). Refer to the MSDS for complete safety precautions. The MSDS is available by request or via download at www.AvantiGrout.com.

NOTICE

The data, information and statements contained herein are believed to be reliable, but are not construed as a warranty or representation for which Avanti International assumes any legal responsibility. Since field conditions vary widely, users must undertake sufficient verification and testing to determine the suitability of any product or process mentioned in this or any other written material from Avanti for their own particular use. NO WARRANTY OF SUITABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE. In no case shall Avanti International be liable for consequential, special, or indirect damages resulting from the use or handling of this product.

AV-284 PUMP WASH™**SECTION 1. IDENTIFICATION**

Product Identifier	AV-284 PUMP WASH
Other Means of Identification	Pump Cleaner
Recommended Use	Industrial Use Only.
Restrictions on Use	None known.
Manufacturer/Supplier Identifier	Avanti International, 822 Bay Star Blvd, Webster, TX, 77598, USA, 281.486.5600, avantigrout.com
Emergency Phone No.	ChemTrec, 800.424.9300
Date of Preparation	April 17, 2018

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Skin irritation - Category 2; Eye irritation - Category 2; Specific target organ toxicity (single exposure) - Category 3

Label Elements

Signal Word:

Warning

Hazard Statement(s):

- H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.

Precautionary Statement(s):

Prevention:

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash hands and skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear eye protection/face protection.
P280 Wear protective gloves.

Response:

- P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTRE or doctor if you feel unwell.
P332 + P313 If skin irritation occurs: Get medical advice or attention.

Product Identifier: AV-284 PUMP WASH - Ver. 1
Date of Preparation: April 17, 2018
Date of Last Revision: May 14, 2018

P337 + P313 If eye irritation persists: Get medical advice or attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.
 Storage:
 P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
 Disposal:
 P501 Dispose of contents and container in accordance with local, regional, national and international regulations.
Other Hazards
 None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	%	Other Identifiers	Other Names
DIMETHYL ADIPATE	627-93-0	65	Dimethyl Adipate	
DIMETHYL SUCCINATE	106-65-0	20	Dimethyl Succinate	
DIMETHYL GLUTARATE	1119-40-0	15	Dimethyl Glutarate	

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Move to fresh air.

Skin Contact

Avoid direct contact. Wear chemical protective clothing if necessary. Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes.

Eye Contact

Avoid direct contact. Wear chemical protective gloves if necessary. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open.

Ingestion

Rinse mouth with water.

First-aid Comments

Get medical advice or attention if you feel unwell or are concerned.

Most Important Symptoms and Effects, Acute and Delayed

If inhaled: can irritate the nose and throat. Symptoms may include headache, nausea, dizziness, drowsiness and confusion. If on skin: causes moderate to severe irritation.

Immediate Medical Attention and Special Treatment

Target Organs

Eyes, skin.

Special Instructions

Not applicable.

Medical Conditions Aggravated by Exposure

None known.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Use water to keep non-leaking, fire-exposed containers cool.

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Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Can ignite if strongly heated.

In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide.

Special Protective Equipment and Precautions for Fire-fighters

Before entry, especially into confined areas, use an appropriate monitor to check for: toxic gases or vapours.

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Do not touch damaged containers or spilled product unless wearing appropriate protective equipment.

Environmental Precautions

It is good practice to prevent releases into the environment.

Methods and Materials for Containment and Cleaning Up

Small spills or leaks: stop or reduce leak if safe to do so. Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal. Contaminated absorbent poses the same hazard as the spilled product. Large spills or leaks: dike spilled product to prevent runoff. Remove or recover liquid using pumps or vacuum equipment. Store recovered product in suitable containers that are: covered.

Other Information

Contact supplier, local fire and emergency services for help. Report spills to local health, safety and environmental authorities, as required.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Avoid breathing in this product. Prevent skin contact. Do not get in eyes. Avoid heating that will increase the amount of vapours. Wear personal protective equipment to avoid direct contact with this chemical. General hygiene considerations: wash hands thoroughly after handling this material. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

Conditions for Safe Storage

Store in an area that is: cool, ventilated. Empty containers may contain hazardous residue. Store separately. Keep closed. Follow all precautions given on this safety data sheet.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Not available.

Appropriate Engineering Controls

General ventilation is usually adequate. Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Provide eyewash and safety shower if contact or splash hazard exists.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Chemical Resistant Gloves: butyl rubber, neoprene rubber, nitrile rubber. Chemical Resistant Suit: Barrier® (PE/PA/PE), Saranex®, Tychem® SL.

Respiratory Protection

Not usually required when working with small quantities. Wear a NIOSH approved air-purifying respirator with an

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organic vapour cartridge. Either full-face piece or half-face piece with splash goggles.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Clear colourless liquid.
Odour	Not available
Odour Threshold	Not applicable
pH	Not available
Melting Point/Freezing Point	Not available (melting); Not available (freezing)
Initial Boiling Point/Range	412 °F (211 °C)
Flash Point	212 °F (100 °C)
Evaporation Rate	0.076
Flammability (solid, gas)	Not available
Upper/Lower Flammability or Explosive Limit	Not available (upper); 1% (lower)
Vapour Pressure	0.45 mm Hg (0.06 kPa) at 68 °F (20 °C)
Vapour Density (air = 1)	5.5
Relative Density (water = 1)	1.090
Solubility	Not available in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	748 °F (398 °C)
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Not reactive.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None expected under normal conditions of storage and use.

Conditions to Avoid

None known.

Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid).

Not corrosive to metals.

Hazardous Decomposition Products

Very toxic carbon monoxide, carbon dioxide.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; ingestion; eye contact; skin absorption.

Acute Toxicity

LC50: No information was located.

LD50 (oral): No information was located.

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LD50 (dermal): No information was located.

Skin Corrosion/Irritation

Symptoms include slight redness and swelling. Human experience shows moderate or severe irritation.

Serious Eye Damage/Irritation

May cause serious eye irritation based on information for closely related materials.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

May cause severe nose and throat irritation, depression of the central nervous system. Symptoms may include headache, nausea, dizziness, drowsiness and confusion.

Skin Absorption

May cause Symptoms may include redness, rash, swelling and itching.

Ingestion

May cause depression of the central nervous system. Symptoms may include headache, nausea, dizziness, drowsiness and confusion. Irritation of the mouth, throat and stomach, a laxative effect. Symptoms may include nausea, vomiting, stomach cramps and diarrhea.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

May cause effects similar to STOT (Specific Target Organ Toxicity) - Single Exposure, as described above.

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

No information was located.

Reproductive Toxicity

Development of Offspring

No information was located.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

No information was located.

Persistence and Degradability

No information was located.

Bioaccumulative Potential

No information was located.

Mobility in Soil

No information was located.

Other Adverse Effects

There is no information available.

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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

The preferred waste management options are: treat waste in an approved waste disposal facility.

SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

Environmental Hazards Not applicable

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL/NDSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

NFPA Rating Health - 2 Flammability - 1 Instability - 0

SDS Prepared By Avanti International

Date of Preparation April 17, 2018

Date of Last Revision May 14, 2018

Revision Indicators Not applicable.

Key to Abbreviations ACGIH® = American Conference of Governmental Industrial Hygienists

IARC = International Agency for Research on Cancer

NFPA = National Fire Protection Association NIOSH = National Institute for Occupational Safety and Health

NTP = National Toxicology Program

OSHA = US Occupational Safety and Health Administration

RTECS® = Registry of Toxic Effects of Chemical Substances

References

CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

HSDB® database. US National Library of Medicine. Available from Canadian Centre for Occupational Health and Safety (CCOHS). NIOSH Pocket Guide database. National Institute

for Occupational Safety and Health. Available from Canadian Centre for Occupational Health and Safety (CCOHS). Registry of Toxic Effects of Chemical Substances (RTECS®) database.

Dassault Systèmes/BIOVIA ("BIOVIA"). Available from Canadian Centre for Occupational Health and Safety (CCOHS).

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TECHNICAL DATA SHEET

AV-284 PUMP WASH™

PUMP FLUSHING AGENT

DESCRIPTION

AV-284 Pump Wash is a non-flammable, **non-drying compound** used to remove uncured polyurethane resin from grouting equipment. **AV-284** Pump Wash is designed to be stored in the pump for extended periods of time between pump usages.

PACKAGING

Product packaged by weight based on specific gravity.

Drum	Net Wt. 473 lbs. (215 kg)
Pail	Net Wt. 43 lbs. (19.5 kg)

SHIPPING

- Motor Class 85
- Non-Hazardous
- Air freight available

CLEANING PRODUCTS

- **AV-208** Technical Grade Acetone™ (CAS# 67-64-1) – removes moisture from grouting equipment

PROPERTIES*

Appearance:	Clear Liquid
Viscosity:	5 cP @ 68°F (20°C)
Flash Point:	>212°F (>100°C)
pH:	7.5 – 8.5
Specific Gravity:	1.095 @ 68/39.8°F (20/4.3°C)
Water Solubility:	+/- 3.5%

*Laboratory Results

HOW IT WORKS

Once grouting operations are completed and all residual grout is removed from the pumping system, **AV-284** can be introduced to maintain pump. As a side note, the material may be stored in grouting equipment for extended periods when pump is not in use.

STORAGE

Store in a tightly closed container in a cool, ventilated, dry atmosphere.

NOTE: when exposed to light, **AV-284** can develop a pink/purple-ish color. This color is due to some photochemical sensitive impurities present at very low concentrations and doesn't affect performance of the **AV-284** Pump Wash.

SAFETY

Always use OSHA-approved personal protective equipment (PPE). Refer to the SDS for complete safety precautions. The SDS is available by request or via download at avantigrout.com.

NOTICE

The data, information and statements contained herein are believed to be reliable, but are not construed as a warranty or representation for which Avanti International assumes any legal responsibility. Since field conditions vary widely, users must undertake sufficient verification and testing to determine the suitability of any product or process mentioned in this or any other written material from Avanti for their own particular use. **NO WARRANTY OF SUITABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS MADE.** In no case shall Avanti International be liable for consequential, special, or indirect damages resulting from the use or handling of this product.

Appendix E

Stormwater System Investigation – Timestamped PID Data

21/06/02 11:14

Summary

Unit Name MiniRAE 3000(PGM-7320)
Unit SN 592-919907
Unit Firmware Ver V2.14

Running Mode Hygiene Mode
Datalog Mode Manual
Diagnostic Mode No
Stop Reason Power Down

Site ID RAE00000
User ID USER0000

Begin 6/2/2021 11:14
End 6/2/2021 13:00
Sample Period(s) 60
Number of Records 106

Sensor PID(ppm)
Sensor SN S023030042U2
Measure Type Min; Avg; Max; Real
Span 100
Span 2 1000
Low Alarm 50
High Alarm 100
Over Alarm 15000
STEL Alarm 25
TWA Alarm 10
Measurement Gas Isobutylene
Calibration Time 6/1/2021 12:40
Peak 18.4
Min 0
Average 0.3

Datalog

Index	Date/Time	PID(ppm) (Min)	PID(ppm) (Avg)	PID(ppm) (Max)	PID(ppm) (Real)
1	6/2/2021 11:15	0	0	0	0
2	6/2/2021 11:16	0	0	0	0
3	6/2/2021 11:17	0	0	0	0
4	6/2/2021 11:18	0	0	0	0
5	6/2/2021 11:19	0	0	0	0
6	6/2/2021 11:20	0	0	0	0
7	6/2/2021 11:21	0	0	0	0
8	6/2/2021 11:22	0	0	0	0
9	6/2/2021 11:23	0	0	0.2	0
10	6/2/2021 11:24	0	0	0	0
11	6/2/2021 11:25	0	0	0	0
12	6/2/2021 11:26	0	0	0	0
13	6/2/2021 11:27	0	0	0.1	0
14	6/2/2021 11:28	0	0	0	0
15	6/2/2021 11:29	0	0	0	0
16	6/2/2021 11:30	0	0	0	0
17	6/2/2021 11:31	0	0	0	0

18	6/2/2021 11:32	0	0	0	0	
19	6/2/2021 11:33	0	0	0	0	
20	6/2/2021 11:34	0	0	0	0	
21	6/2/2021 11:35	0	0	0	0	
22	6/2/2021 11:36	0	2.4	18.4	18.4	DS-1
23	6/2/2021 11:37	2.8	22.2	42	2.8	
24	6/2/2021 11:38	0	0.6	2.7	0.1	
25	6/2/2021 11:39	0	0.1	0.4	0	
26	6/2/2021 11:40	0	0	0.1	0	
27	6/2/2021 11:41	0	0	0	0	MH-11
28	6/2/2021 11:42	0	0	0	0	
29	6/2/2021 11:43	0	0	0.3	0	
30	6/2/2021 11:44	0	0	0.3	0	
31	6/2/2021 11:45	0	0	0.1	0	
32	6/2/2021 11:46	0	0	0.5	0	MH-10
33	6/2/2021 11:47	0	0	0.1	0	
34	6/2/2021 11:48	0	0	0	0	
35	6/2/2021 11:49	0	0	0	0	
36	6/2/2021 11:50	0	0	0	0	
37	6/2/2021 11:51	0	0	0	0	STRUCTURE 985
38	6/2/2021 11:52	0	0	0	0	
39	6/2/2021 11:53	0	0	0	0	
40	6/2/2021 11:54	0	2	9.2	9.2	
41	6/2/2021 11:55	0	1.1	9.4	0	
42	6/2/2021 11:56	0	0	0	0	
43	6/2/2021 11:57	0	0	0	0	
44	6/2/2021 11:58	0	0	0	0	
45	6/2/2021 11:59	0	0	0	0	
46	6/2/2021 12:00	0	0	0	0	
47	6/2/2021 12:01	0	0	0	0	
48	6/2/2021 12:02	0	0	0.1	0	
49	6/2/2021 12:03	0	0	0	0	
50	6/2/2021 12:04	0	0	0	0	
51	6/2/2021 12:05	0	0	0	0	
52	6/2/2021 12:06	0	0	0	0	MH-1
53	6/2/2021 12:07	0	0	0	0	
54	6/2/2021 12:08	0	0	0	0	
55	6/2/2021 12:09	0	0	0	0	
56	6/2/2021 12:10	0	0	0	0	
57	6/2/2021 12:11	0	0	0	0	
58	6/2/2021 12:12	0	0	0.1	0.1	CB-15
59	6/2/2021 12:13	0	0	0.1	0.1	
60	6/2/2021 12:14	0	0	0.2	0	
61	6/2/2021 12:15	0	0	0.2	0.1	
62	6/2/2021 12:16	0	0	0.2	0	STRUCTURE 1136
63	6/2/2021 12:17	0	0	0.2	0	
64	6/2/2021 12:18	0	0	0.2	0	
65	6/2/2021 12:19	0	0	0.1	0	
66	6/2/2021 12:20	0	0	0	0	
67	6/2/2021 12:21	0	0	0	0	
68	6/2/2021 12:22	0	0	0	0	
69	6/2/2021 12:23	0	0	0	0	CB-14
70	6/2/2021 12:24	0	0	0	0	
71	6/2/2021 12:25	0	0	0	0	
72	6/2/2021 12:26	0	0	0.1	0	CB-13
73	6/2/2021 12:27	0	0.2	0.5	0	
74	6/2/2021 12:28	0	0	0.1	0	
75	6/2/2021 12:29	0	0	0.1	0	
76	6/2/2021 12:30	0	0	0.1	0	

77	6/2/2021 12:31	0	0	0	0
78	6/2/2021 12:32	0	0	0	0
79	6/2/2021 12:33	0	0	0	0
80	6/2/2021 12:34	0	0	0	0
81	6/2/2021 12:35	0	0	0.1	0
82	6/2/2021 12:36	0	0	0	0
83	6/2/2021 12:37	0	0	0	0
84	6/2/2021 12:38	0	0	0	0
85	6/2/2021 12:39	0	0	0	0
86	6/2/2021 12:40	0	0	0	0
87	6/2/2021 12:41	0	0	0	0
88	6/2/2021 12:42	0	0	0	0
89	6/2/2021 12:43	0	0	0	0
90	6/2/2021 12:44	0	0	0	0
91	6/2/2021 12:45	0	0	0	0
92	6/2/2021 12:46	0	0	0	0
93	6/2/2021 12:47	0	0	0	0
94	6/2/2021 12:48	0	0	0	0
95	6/2/2021 12:49	0	0	0	0
96	6/2/2021 12:50	0	0	0	0
97	6/2/2021 12:51	0	0	0	0
98	6/2/2021 12:52	0	0	0	0
99	6/2/2021 12:53	0	0	0	0
100	6/2/2021 12:54	0	0	0.2	0
101	6/2/2021 12:55	0	0	0	0
102	6/2/2021 12:56	0	0	0	0
103	6/2/2021 12:57	0	0	0	0
104	6/2/2021 12:58	0	0	0	0
105	6/2/2021 12:59	0	0	0	0
106	6/2/2021 13:00	0	0	0	0
Peak		2.8	22.2	42	18.4
Min		0	0	0	0
Average		0	0.3	0.8	0.3

CB NEAR MH-11

TWA/STEL

Index	Date/Time	PID(ppm) (TWA)	PID(ppm) (STEL)
1	6/2/2021 11:15	0	---
2	6/2/2021 11:16	0	---
3	6/2/2021 11:17	0	---
4	6/2/2021 11:18	0	---
5	6/2/2021 11:19	0	---
6	6/2/2021 11:20	0	---
7	6/2/2021 11:21	0	---
8	6/2/2021 11:22	0	---
9	6/2/2021 11:23	0	---
10	6/2/2021 11:24	0	---
11	6/2/2021 11:25	0	---
12	6/2/2021 11:26	0	---
13	6/2/2021 11:27	0	---
14	6/2/2021 11:28	0	---
15	6/2/2021 11:29	0	0
16	6/2/2021 11:30	0	0
17	6/2/2021 11:31	0	0
18	6/2/2021 11:32	0	0
19	6/2/2021 11:33	0	0
20	6/2/2021 11:34	0	0
21	6/2/2021 11:35	0	0

22	6/2/2021 11:36	0	1.2
23	6/2/2021 11:37	0	1.4
24	6/2/2021 11:38	0	1.4
25	6/2/2021 11:39	0	1.4
26	6/2/2021 11:40	0	1.4
27	6/2/2021 11:41	0	1.4
28	6/2/2021 11:42	0	1.4
29	6/2/2021 11:43	0	1.4
30	6/2/2021 11:44	0	1.4
31	6/2/2021 11:45	0	1.4
32	6/2/2021 11:46	0	1.4
33	6/2/2021 11:47	0	1.4
34	6/2/2021 11:48	0	1.4
35	6/2/2021 11:49	0	1.4
36	6/2/2021 11:50	0	1.4
37	6/2/2021 11:51	0	1.4
38	6/2/2021 11:52	0	0.2
39	6/2/2021 11:53	0	0
40	6/2/2021 11:54	0.1	0.6
41	6/2/2021 11:55	0.1	0.6
42	6/2/2021 11:56	0.1	0.6
43	6/2/2021 11:57	0.1	0.6
44	6/2/2021 11:58	0.1	0.6
45	6/2/2021 11:59	0.1	0.6
46	6/2/2021 12:00	0.1	0.6
47	6/2/2021 12:01	0.1	0.6
48	6/2/2021 12:02	0.1	0.6
49	6/2/2021 12:03	0.1	0.6
50	6/2/2021 12:04	0.1	0.6
51	6/2/2021 12:05	0.1	0.6
52	6/2/2021 12:06	0.1	0.6
53	6/2/2021 12:07	0.1	0.6
54	6/2/2021 12:08	0.1	0.6
55	6/2/2021 12:09	0.1	0.6
56	6/2/2021 12:10	0.1	0
57	6/2/2021 12:11	0.1	0
58	6/2/2021 12:12	0.1	0
59	6/2/2021 12:13	0.1	0
60	6/2/2021 12:14	0.1	0
61	6/2/2021 12:15	0.1	0
62	6/2/2021 12:16	0.1	0
63	6/2/2021 12:17	0.1	0
64	6/2/2021 12:18	0.1	0
65	6/2/2021 12:19	0.1	0
66	6/2/2021 12:20	0.1	0
67	6/2/2021 12:21	0.1	0
68	6/2/2021 12:22	0.1	0
69	6/2/2021 12:23	0.1	0
70	6/2/2021 12:24	0.1	0
71	6/2/2021 12:25	0.1	0
72	6/2/2021 12:26	0.1	0
73	6/2/2021 12:27	0.1	0
74	6/2/2021 12:28	0.1	0
75	6/2/2021 12:29	0.1	0
76	6/2/2021 12:30	0.1	0
77	6/2/2021 12:31	0.1	0
78	6/2/2021 12:32	0.1	0
79	6/2/2021 12:33	0.1	0
80	6/2/2021 12:34	0.1	0

81	6/2/2021 12:35	0.1	0
82	6/2/2021 12:36	0.1	0
83	6/2/2021 12:37	0.1	0
84	6/2/2021 12:38	0.1	0
85	6/2/2021 12:39	0.1	0
86	6/2/2021 12:40	0.1	0
87	6/2/2021 12:41	0.1	0
88	6/2/2021 12:42	0.1	0
89	6/2/2021 12:43	0.1	0
90	6/2/2021 12:44	0.1	0
91	6/2/2021 12:45	0.1	0
92	6/2/2021 12:46	0.1	0
93	6/2/2021 12:47	0.1	0
94	6/2/2021 12:48	0.1	0
95	6/2/2021 12:49	0.1	0
96	6/2/2021 12:50	0.1	0
97	6/2/2021 12:51	0.1	0
98	6/2/2021 12:52	0.1	0
99	6/2/2021 12:53	0.1	0
100	6/2/2021 12:54	0.1	0
101	6/2/2021 12:55	0.1	0
102	6/2/2021 12:56	0.1	0
103	6/2/2021 12:57	0.1	0
104	6/2/2021 12:58	0.1	0
105	6/2/2021 12:59	0.1	0
106	6/2/2021 13:00	0.1	0

Appendix F

Stormwater System Investigation – Photo Log

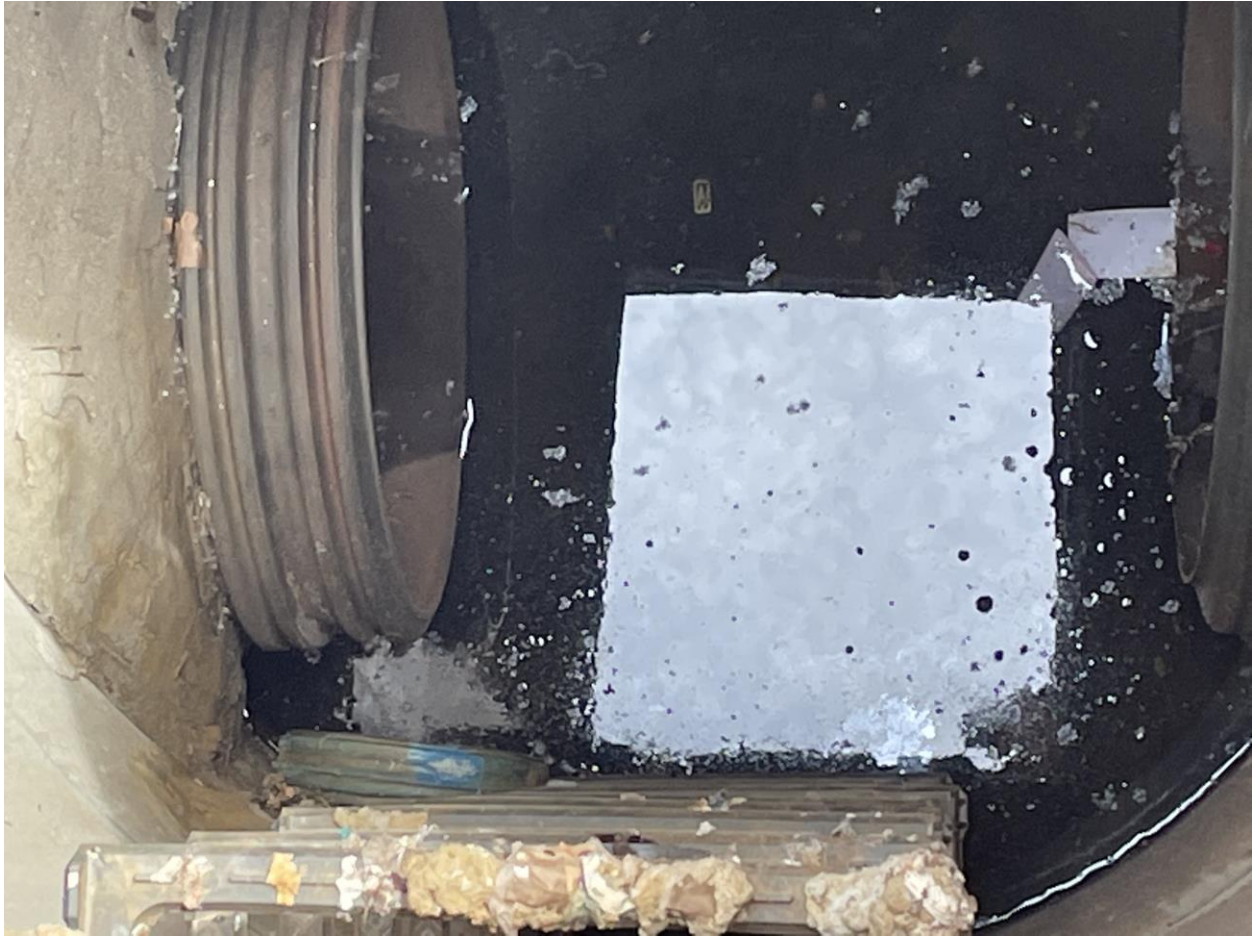


Figure 1: CB-12



Figure 2: CB-14



Figure 3: CB-15



Figure 4: DS-1



Figure 5: MH-1



Figure 6: MH-10



Figure 7: MH-10 internal swab



Figure 8: MH-11



Figure 9: Structure 985 with internal swab



Figure 10: Structure 1136



Figure 11: CB-12



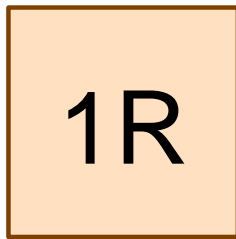
Figure 12: CB-13

Appendix G

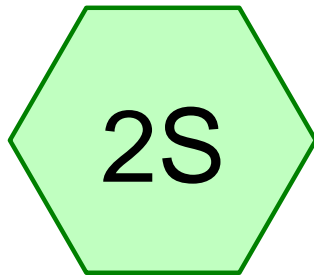
Hershberg and Hershberg Hydrologic and Hydraulic Calculations

APPENDIX 3

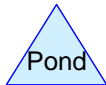
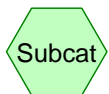
**HYDROCAD® PRE & POST CALCULATIONS
WQ_v CALCULATIONS
PIPE CALCULATIONS**



MOHAWK RIVER



PRE



Drainage Diagram for 120158-Pre

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
20.060	86	<50% Grass cover, Poor, HSG C (2S)
39.880	98	Roofs and Pavement (2S)
59.940		TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Goup	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
20.060	HSG C	2S
0.000	HSG D	
39.880	Other	2S
59.940		TOTAL AREA

120158-Pre

Type II 24-hr 1 year Rainfall=2.20"

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Time span=0.00-30.00 hrs, dt=0.10 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 2S: PRE

Runoff Area=2,610,987 sf 66.53% Impervious Runoff Depth=1.58"
Flow Length=1,480' Tc=13.2 min CN=94 Runoff=118.55 cfs 7.914 af

Reach 1R: MOHAWK RIVER

Inflow=118.55 cfs 7.914 af
Outflow=118.55 cfs 7.914 af

Total Runoff Area = 59.940 ac Runoff Volume = 7.914 af Average Runoff Depth = 1.58"
33.47% Pervious = 20.060 ac 66.53% Impervious = 39.880 ac

120158-Pre

Type II 24-hr 1 year Rainfall=2.20"

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Summary for Subcatchment 2S: PRE

Runoff = 118.55 cfs @ 12.04 hrs, Volume= 7.914 af, Depth= 1.58"

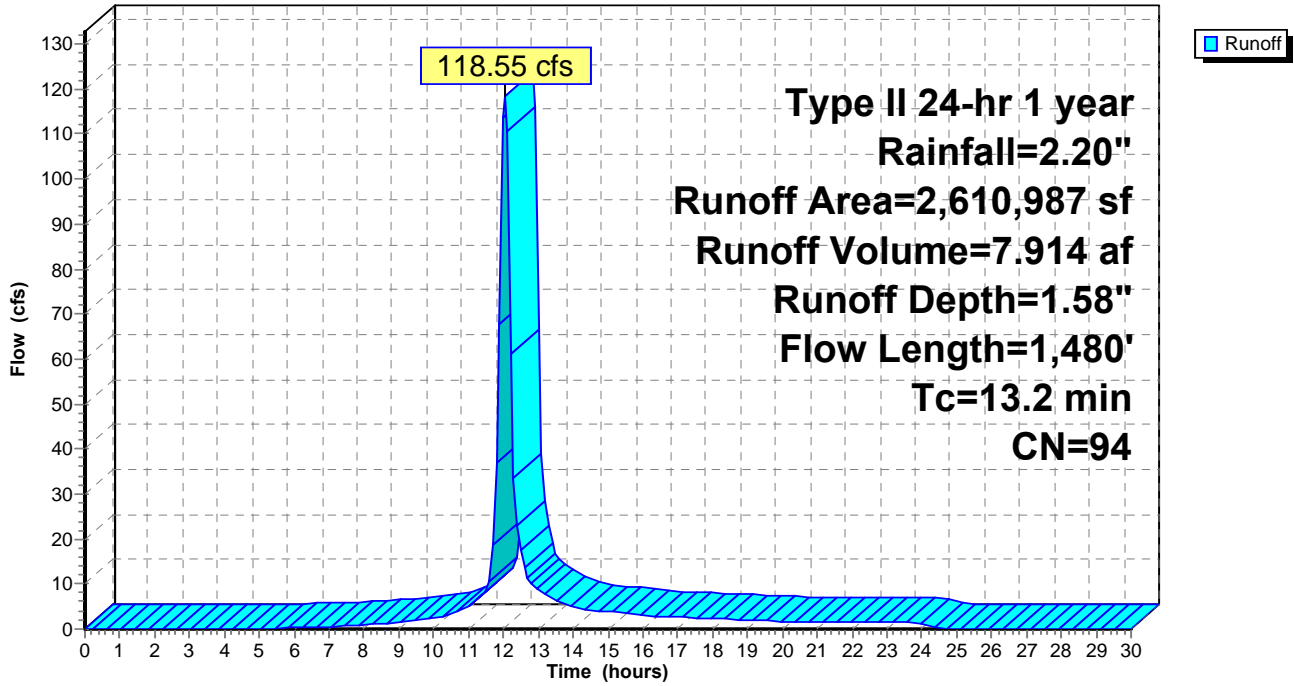
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr 1 year Rainfall=2.20"

Area (sf)	CN	Description
* 1,737,173	98	Roofs and Pavement
873,814	86	<50% Grass cover, Poor, HSG C
2,610,987	94	Weighted Average
873,814		Pervious Area
1,737,173		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8	62	0.0177	0.13		Sheet Flow, Grass Grass: Short n= 0.150 P2= 2.60"
2.3	275	0.0156	2.01		Shallow Concentrated Flow, GRASS Unpaved Kv= 16.1 fps
0.8	197	0.0050	4.17	3.28	Circular Channel (pipe), 12" STORM LINE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.010 PVC, smooth interior
2.3	946	0.0050	6.88	194.65	Circular Channel (pipe), 6' COLLEGE CREEK Diam= 72.0" Area= 28.3 sf Perim= 18.8' r= 1.50' n= 0.020 Corrugated PE, corrugated interior
13.2	1,480	Total			

Subcatchment 2S: PRE

Hydrograph



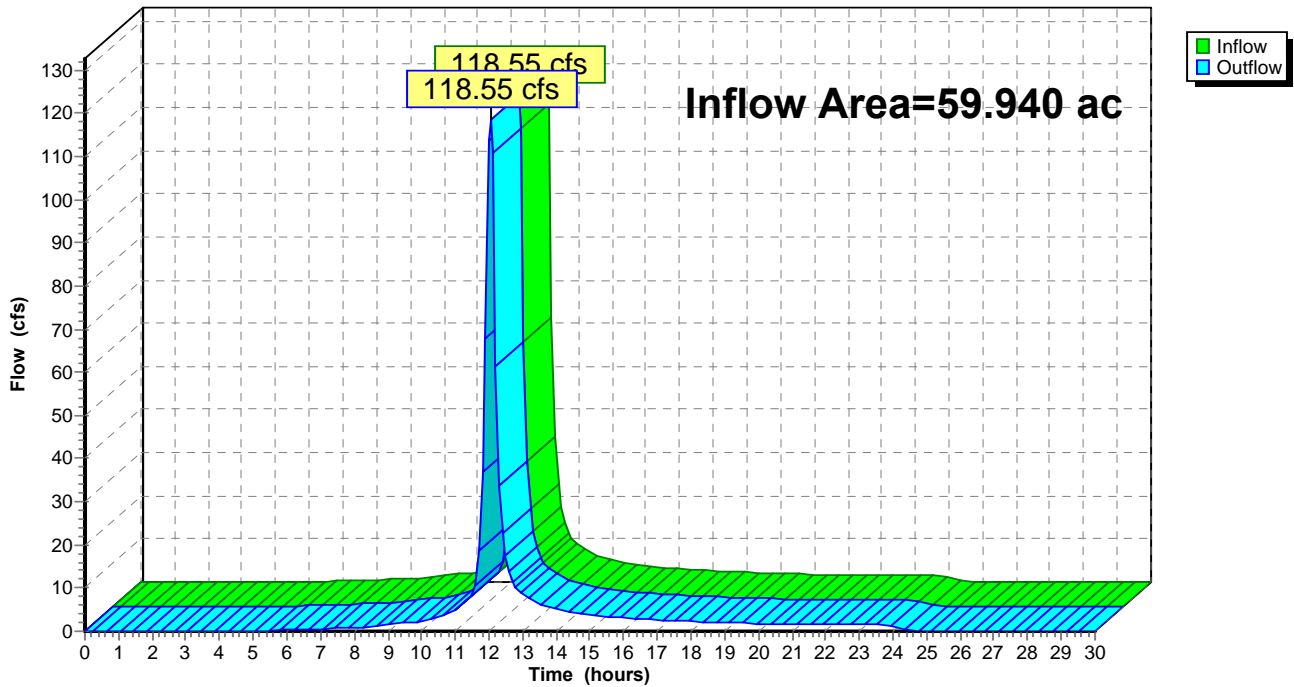
Summary for Reach 1R: MOHAWK RIVER

Inflow Area = 59.940 ac, 66.53% Impervious, Inflow Depth = 1.58" for 1 year event
Inflow = 118.55 cfs @ 12.04 hrs, Volume= 7.914 af
Outflow = 118.55 cfs @ 12.04 hrs, Volume= 7.914 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

Reach 1R: MOHAWK RIVER

Hydrograph



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Type II 24-hr 10 year Rainfall=4.30"

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Time span=0.00-30.00 hrs, dt=0.10 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 2S: PRE

Runoff Area=2,610,987 sf 66.53% Impervious Runoff Depth=3.62"
Flow Length=1,480' Tc=13.2 min CN=94 Runoff=259.78 cfs 18.076 af

Reach 1R: MOHAWK RIVER

Inflow=259.78 cfs 18.076 af
Outflow=259.78 cfs 18.076 af

Total Runoff Area = 59.940 ac Runoff Volume = 18.076 af Average Runoff Depth = 3.62"
33.47% Pervious = 20.060 ac 66.53% Impervious = 39.880 ac

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Type II 24-hr 10 year Rainfall=4.30"

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Summary for Subcatchment 2S: PRE

Runoff = 259.78 cfs @ 12.04 hrs, Volume= 18.076 af, Depth= 3.62"

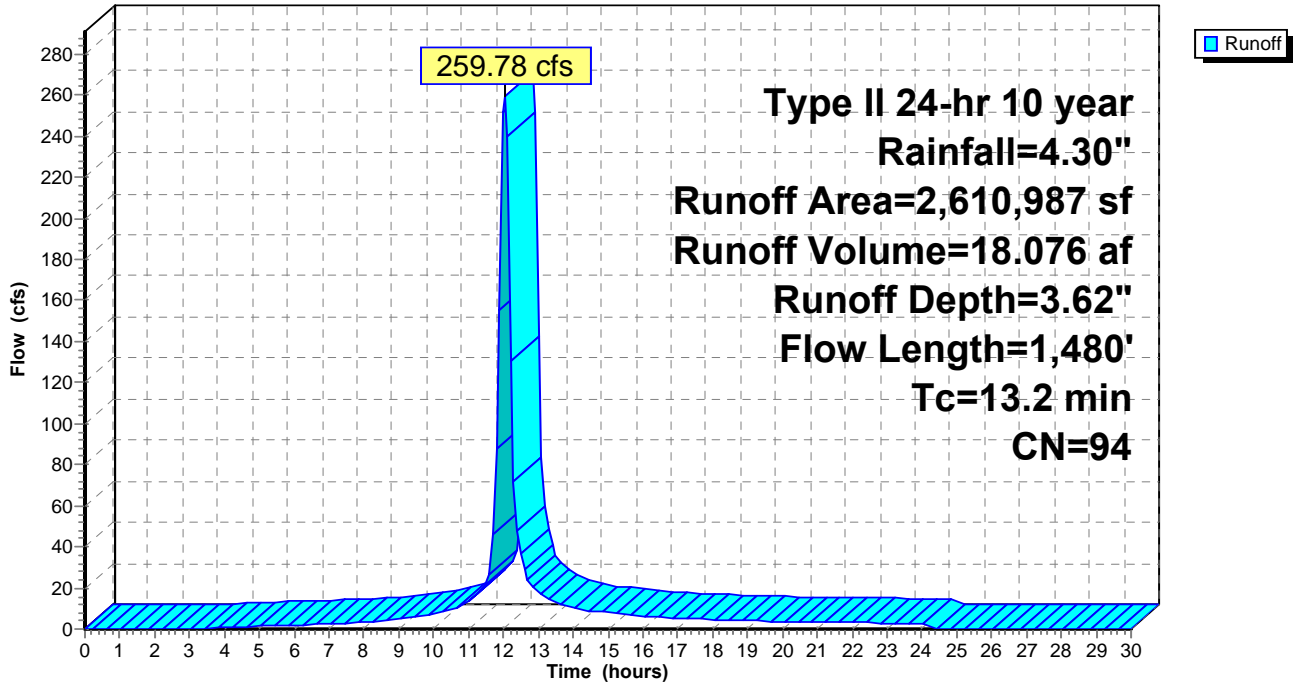
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
 Type II 24-hr 10 year Rainfall=4.30"

Area (sf)	CN	Description
* 1,737,173	98	Roofs and Pavement
873,814	86	<50% Grass cover, Poor, HSG C
2,610,987	94	Weighted Average
873,814		Pervious Area
1,737,173		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8	62	0.0177	0.13		Sheet Flow, Grass Grass: Short n= 0.150 P2= 2.60"
2.3	275	0.0156	2.01		Shallow Concentrated Flow, GRASS Unpaved Kv= 16.1 fps
0.8	197	0.0050	4.17	3.28	Circular Channel (pipe), 12" STORM LINE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.010 PVC, smooth interior
2.3	946	0.0050	6.88	194.65	Circular Channel (pipe), 6' COLLEGE CREEK Diam= 72.0" Area= 28.3 sf Perim= 18.8' r= 1.50' n= 0.020 Corrugated PE, corrugated interior
13.2	1,480	Total			

Subcatchment 2S: PRE

Hydrograph



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Type II 24-hr 10 year Rainfall=4.30"

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Summary for Reach 1R: MOHAWK RIVER

Inflow Area = 59.940 ac, 66.53% Impervious, Inflow Depth = 3.62" for 10 year event

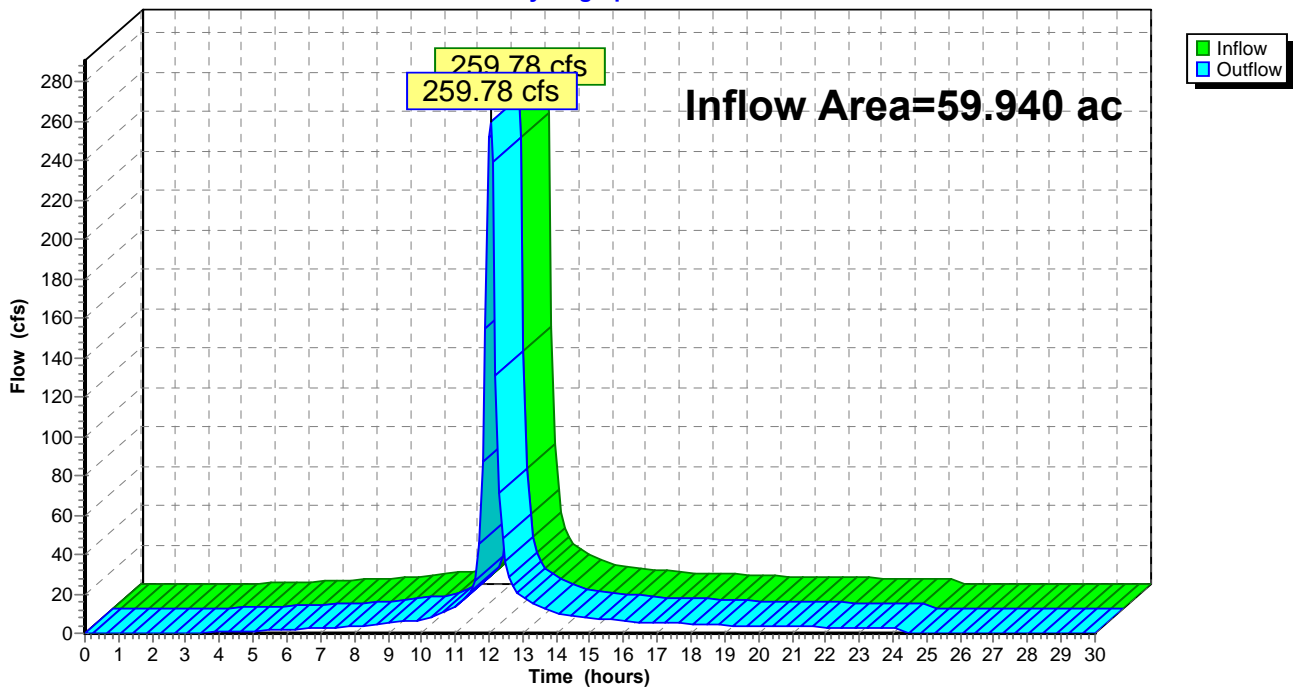
Inflow = 259.78 cfs @ 12.04 hrs, Volume= 18.076 af

Outflow = 259.78 cfs @ 12.04 hrs, Volume= 18.076 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

Reach 1R: MOHAWK RIVER

Hydrograph



120158-Pre

Type II 24-hr 100 year Rainfall=6.00"

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Time span=0.00-30.00 hrs, dt=0.10 hrs, 301 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 2S: PRE

Runoff Area=2,610,987 sf 66.53% Impervious Runoff Depth=5.30"
Flow Length=1,480' Tc=13.2 min CN=94 Runoff=372.32 cfs 26.457 af

Reach 1R: MOHAWK RIVER

Inflow=372.32 cfs 26.457 af
Outflow=372.32 cfs 26.457 af

Total Runoff Area = 59.940 ac Runoff Volume = 26.457 af Average Runoff Depth = 5.30"
33.47% Pervious = 20.060 ac 66.53% Impervious = 39.880 ac

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Type II 24-hr 100 year Rainfall=6.00"

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Summary for Subcatchment 2S: PRE

Runoff = 372.32 cfs @ 12.04 hrs, Volume= 26.457 af, Depth= 5.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr 100 year Rainfall=6.00"

Area (sf)	CN	Description
* 1,737,173	98	Roofs and Pavement
873,814	86	<50% Grass cover, Poor, HSG C
2,610,987	94	Weighted Average
873,814		Pervious Area
1,737,173		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8	62	0.0177	0.13		Sheet Flow, Grass Grass: Short n= 0.150 P2= 2.60"
2.3	275	0.0156	2.01		Shallow Concentrated Flow, GRASS Unpaved Kv= 16.1 fps
0.8	197	0.0050	4.17	3.28	Circular Channel (pipe), 12" STORM LINE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.010 PVC, smooth interior
2.3	946	0.0050	6.88	194.65	Circular Channel (pipe), 6' COLLEGE CREEK Diam= 72.0" Area= 28.3 sf Perim= 18.8' r= 1.50' n= 0.020 Corrugated PE, corrugated interior
13.2	1,480	Total			

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PRE

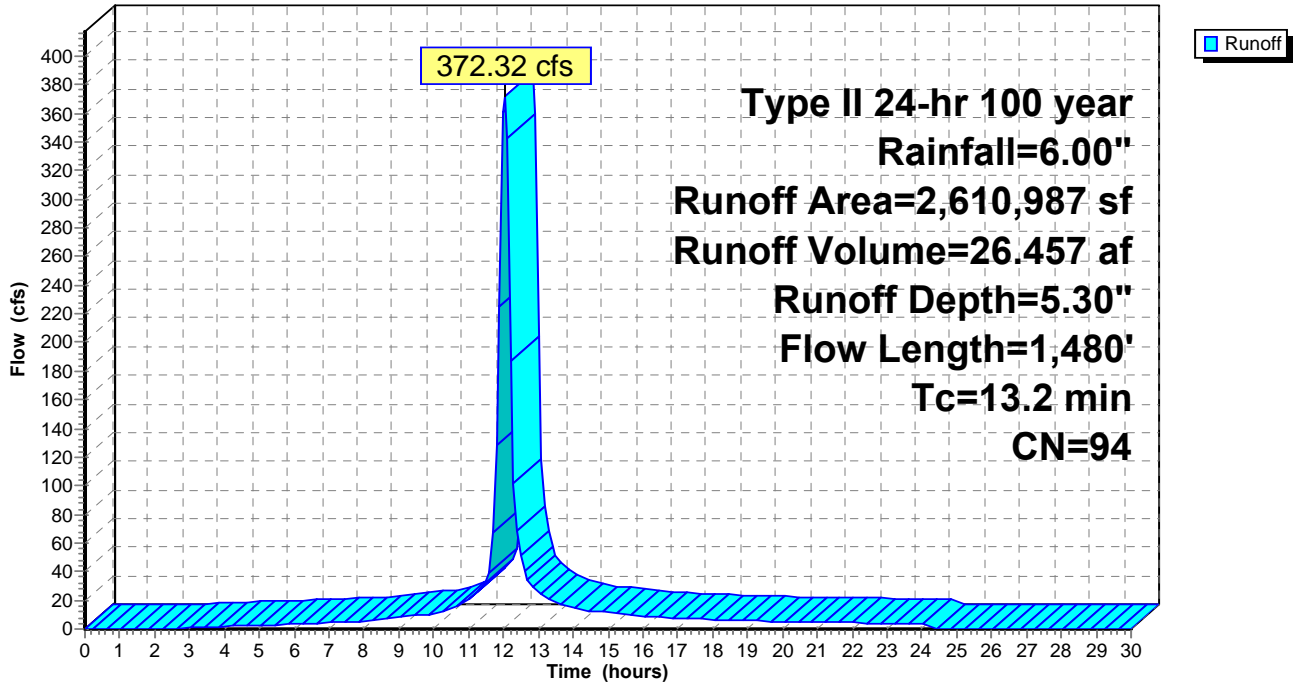
Type II 24-hr 100 year Rainfall=6.00"

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Subcatchment 2S: PRE

Hydrograph



120158-Pre

Type II 24-hr 100 year Rainfall=6.00"

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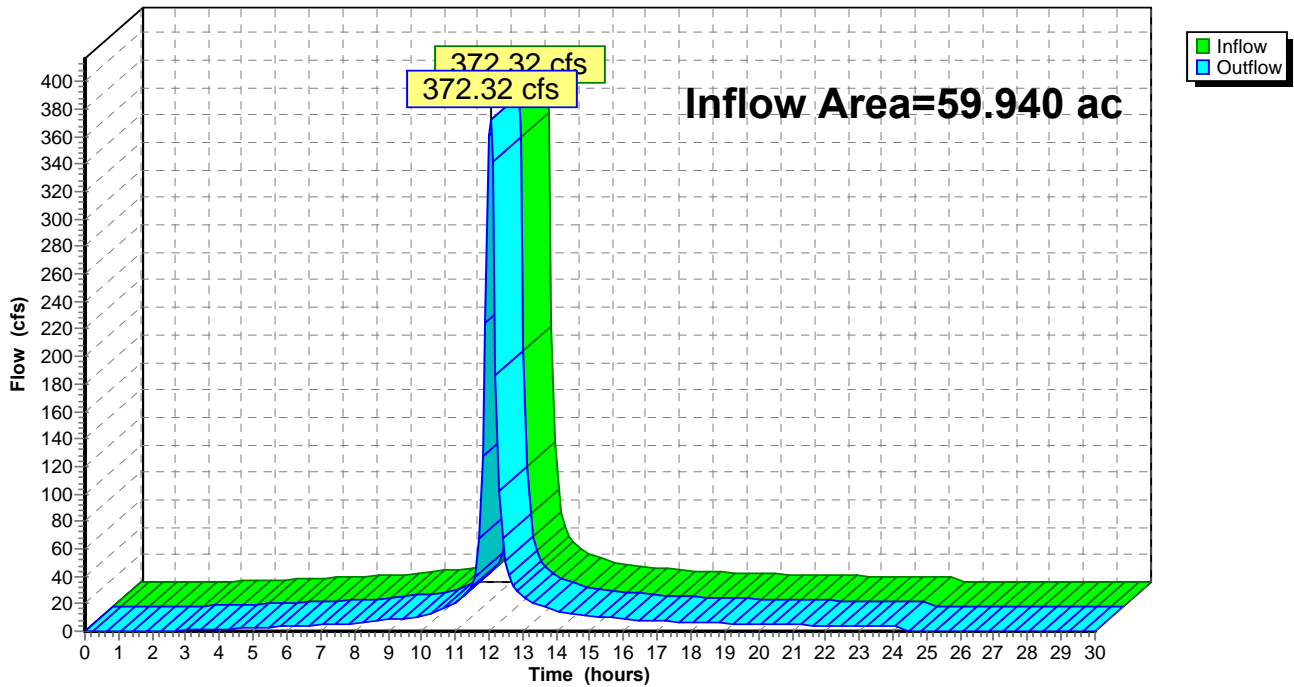
Summary for Reach 1R: MOHAWK RIVER

Inflow Area = 59.940 ac, 66.53% Impervious, Inflow Depth = 5.30" for 100 year event
Inflow = 372.32 cfs @ 12.04 hrs, Volume= 26.457 af
Outflow = 372.32 cfs @ 12.04 hrs, Volume= 26.457 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

Reach 1R: MOHAWK RIVER

Hydrograph



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Time span=0.00-30.00 hrs, dt=0.10 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 2S: PRE

Runoff Area=2,610,987 sf 66.53% Impervious Runoff Depth=0.67"
Flow Length=1,480' Tc=13.2 min CN=94 Runoff=51.46 cfs 3.358 af

Reach 1R: MOHAWK RIVER

Inflow=51.46 cfs 3.358 af
Outflow=51.46 cfs 3.358 af

Total Runoff Area = 59.940 ac Runoff Volume = 3.358 af Average Runoff Depth = 0.67"
33.47% Pervious = 20.060 ac 66.53% Impervious = 39.880 ac

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Summary for Subcatchment 2S: PRE

Runoff = 51.46 cfs @ 12.05 hrs, Volume= 3.358 af, Depth= 0.67"

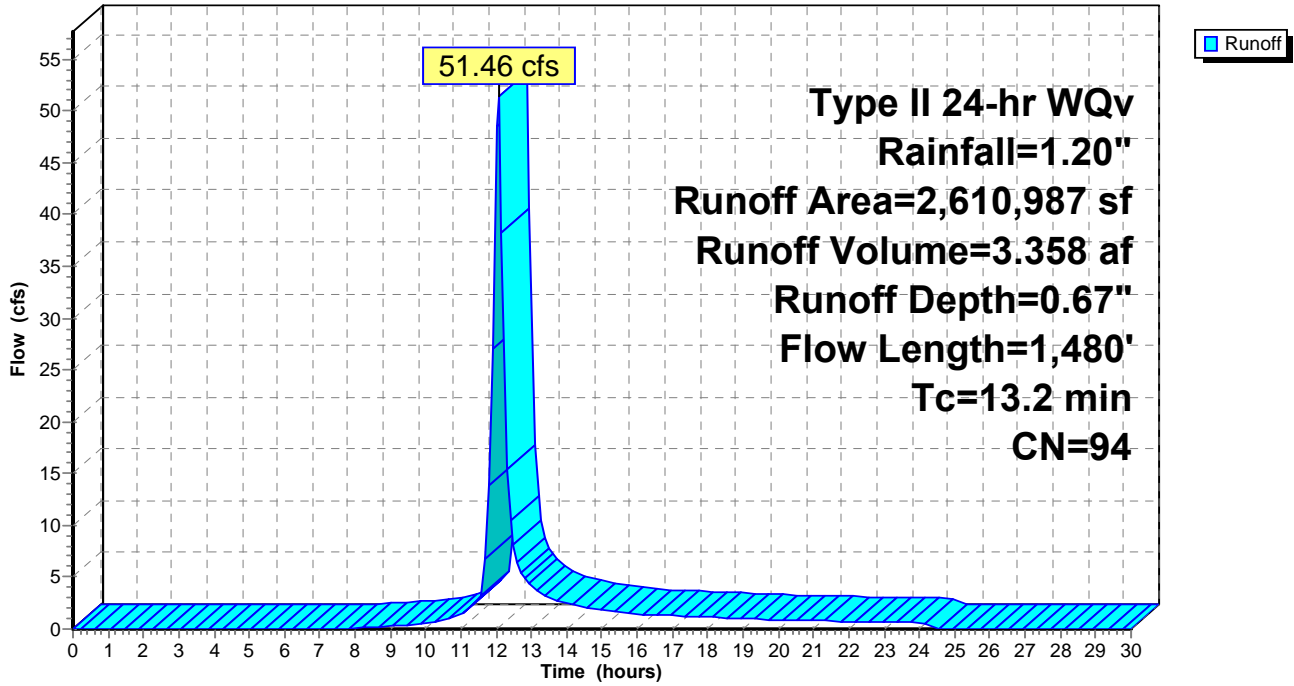
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
 Type II 24-hr WQv Rainfall=1.20"

Area (sf)	CN	Description
* 1,737,173	98	Roofs and Pavement
873,814	86	<50% Grass cover, Poor, HSG C
2,610,987	94	Weighted Average
873,814		Pervious Area
1,737,173		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.8	62	0.0177	0.13		Sheet Flow, Grass Grass: Short n= 0.150 P2= 2.60"
2.3	275	0.0156	2.01		Shallow Concentrated Flow, GRASS Unpaved Kv= 16.1 fps
0.8	197	0.0050	4.17	3.28	Circular Channel (pipe), 12" STORM LINE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.010 PVC, smooth interior
2.3	946	0.0050	6.88	194.65	Circular Channel (pipe), 6' COLLEGE CREEK Diam= 72.0" Area= 28.3 sf Perim= 18.8' r= 1.50' n= 0.020 Corrugated PE, corrugated interior
13.2	1,480	Total			

Subcatchment 2S: PRE

Hydrograph



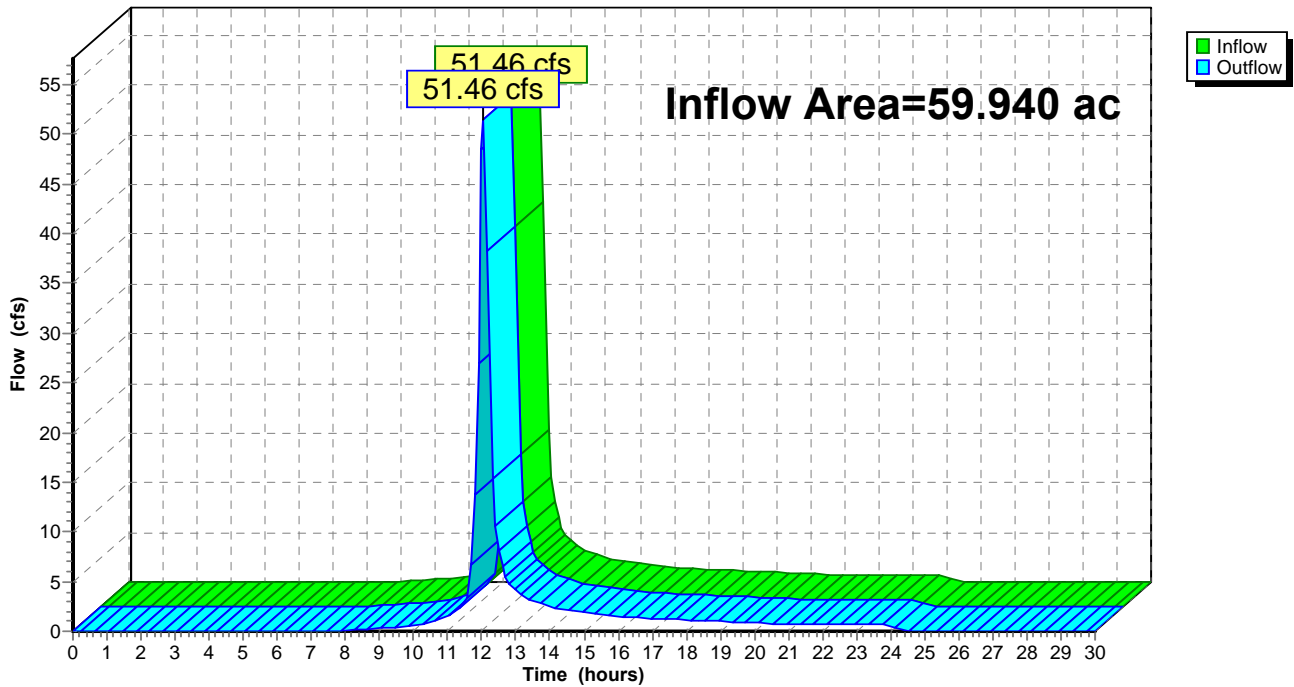
Summary for Reach 1R: MOHAWK RIVER

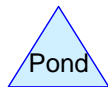
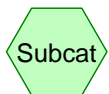
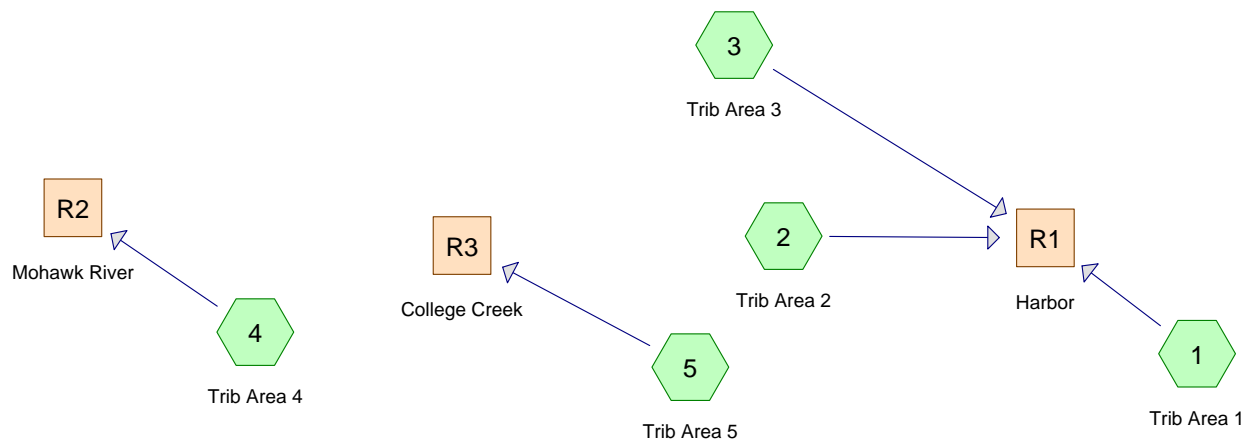
Inflow Area = 59.940 ac, 66.53% Impervious, Inflow Depth = 0.67" for WQv event
Inflow = 51.46 cfs @ 12.05 hrs, Volume= 3.358 af
Outflow = 51.46 cfs @ 12.05 hrs, Volume= 3.358 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

Reach 1R: MOHAWK RIVER

Hydrograph





Drainage Diagram for 120158-Post(4)
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Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
12.196	84	50-75% Grass cover, Fair, HSG D (1,2,3,4)
11.795	98	BUILDING, HSG D (1,2,3,5)
27.332	98	Paved parking, HSG D (1,2,3,4,5)
51.324		TOTAL AREA

120158-Post(4)

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Soil Listing (all nodes)

Area (acres)	Soil Goup	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
51.324	HSG D	1, 2, 3, 4, 5
0.000	Other	
51.324		TOTAL AREA

120158-Post(4)

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POST
Type II 24-hr 1 year Rainfall=2.50"

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Time span=0.00-30.00 hrs, dt=0.10 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1: Trib Area 1

Runoff Area=585,379 sf 80.19% Impervious Runoff Depth=1.96"
Flow Length=2,723' Tc=6.9 min CN=95 Runoff=39.47 cfs 2.199 af

Subcatchment 2: Trib Area 2

Runoff Area=918,145 sf 67.77% Impervious Runoff Depth=1.78"
Flow Length=2,212' Tc=6.8 min CN=93 Runoff=57.75 cfs 3.125 af

Subcatchment 3: Trib Area 3

Runoff Area=197,032 sf 83.38% Impervious Runoff Depth=2.06"
Flow Length=1,809' Tc=6.5 min CN=96 Runoff=13.71 cfs 0.777 af

Subcatchment 4: Trib Area 4

Runoff Area=179,732 sf 51.77% Impervious Runoff Depth=1.61"
Flow Length=2,517' Tc=9.5 min CN=91 Runoff=9.74 cfs 0.554 af

Subcatchment 5: Trib Area 5

Runoff Area=355,372 sf 100.00% Impervious Runoff Depth=2.27"
Flow Length=717' Tc=4.2 min CN=98 Runoff=25.89 cfs 1.544 af

Reach R1: Harbor

Inflow=110.92 cfs 6.101 af
Outflow=110.92 cfs 6.101 af

Reach R2: Mohawk River

Inflow=9.74 cfs 0.554 af
Outflow=9.74 cfs 0.554 af

Reach R3: College Creek

Inflow=25.89 cfs 1.544 af
Outflow=25.89 cfs 1.544 af

Total Runoff Area = 51.324 ac Runoff Volume = 8.199 af Average Runoff Depth = 1.92"
23.76% Pervious = 12.196 ac 76.24% Impervious = 39.127 ac

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Type II 24-hr 1 year Rainfall=2.50"

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Summary for Subcatchment 1: Trib Area 1

Runoff = 39.47 cfs @ 11.98 hrs, Volume= 2.199 af, Depth= 1.96"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr 1 year Rainfall=2.50"

	Area (sf)	CN	Description
*	166,024	98	BUILDING, HSG D
	303,407	98	Paved parking, HSG D
	115,948	84	50-75% Grass cover, Fair, HSG D
	585,379	95	Weighted Average
	115,948		Pervious Area
	469,431		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	150	0.1330	2.87		Sheet Flow, ROOF Smooth surfaces n= 0.011 P2= 2.60"
0.2	63	0.0200	4.90	1.71	Circular Channel (pipe), ROOF DRAIN Diam= 8.0" Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
0.6	153	0.0051	4.21	3.31	Circular Channel (pipe), 12" HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.010 PVC, smooth interior
0.6	226	0.0157	6.60	8.09	Circular Channel (pipe), 15" HDPE Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.9	310	0.0052	5.57	9.85	Circular Channel (pipe), 18" HDPE Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.010 PVC, smooth interior
2.3	1,035	0.0067	7.66	24.07	Circular Channel (pipe), 24" HDPE Diam= 24.0" Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.010 PVC, smooth interior
1.1	516	0.0050	7.68	37.70	Circular Channel (pipe), 30" HDPE Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.010 PVC, smooth interior
0.3	270	0.0319	16.85	119.13	Circular Channel (pipe), 36" HDPE Diam= 36.0" Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
6.9	2,723	Total			

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POST

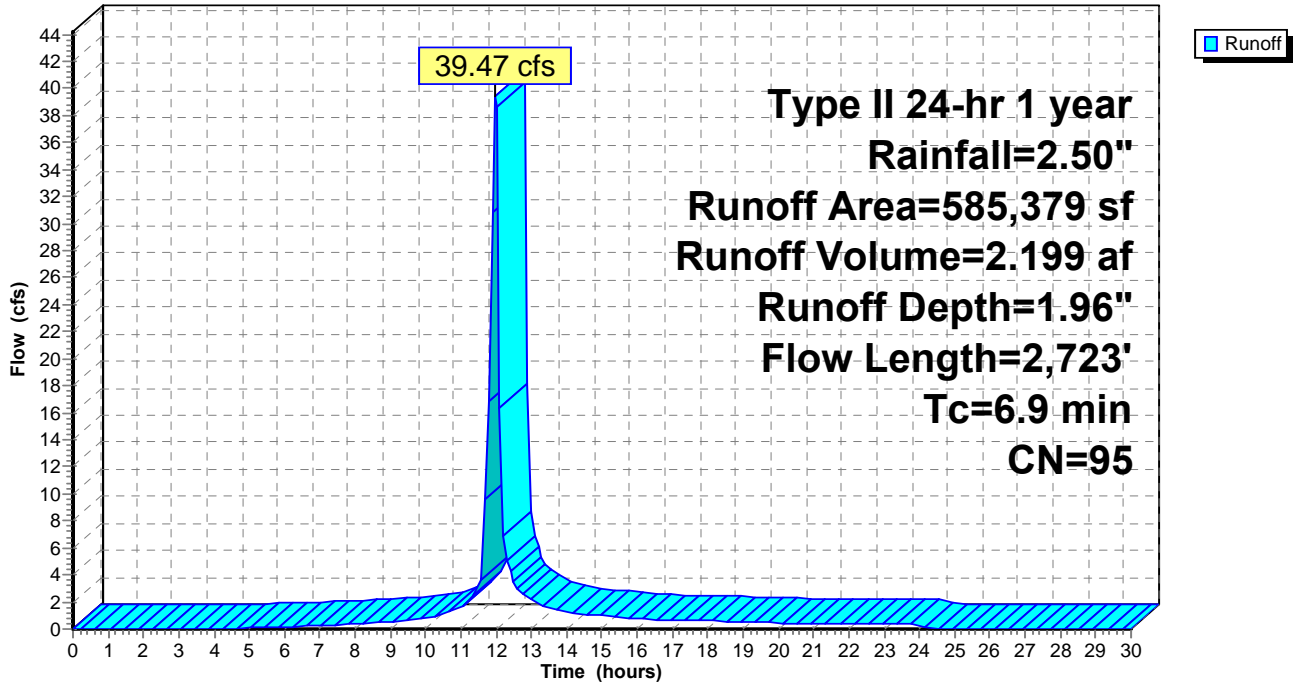
Type II 24-hr 1 year Rainfall=2.50"

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Subcatchment 1: Trib Area 1

Hydrograph



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Type II 24-hr 1 year Rainfall=2.50"

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Summary for Subcatchment 2: Trib Area 2

Runoff = 57.75 cfs @ 11.98 hrs, Volume= 3.125 af, Depth= 1.78"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr 1 year Rainfall=2.50"

Area (sf)	CN	Description
* 233,398	98	BUILDING, HSG D
388,841	98	Paved parking, HSG D
295,906	84	50-75% Grass cover, Fair, HSG D
918,145	93	Weighted Average
295,906		Pervious Area
622,239		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0180	1.19		Sheet Flow, ASPHALT Smooth surfaces n= 0.011 P2= 2.60"
0.5	83	0.0040	2.59	0.90	Circular Channel (pipe), 8" HDPE Diam= 8.0" Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.011 PVC, smooth interior
0.2	26	0.0040	2.87	2.25	Circular Channel (pipe), 12" HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.7	175	0.0040	4.33	5.31	Circular Channel (pipe), 15" HDPE Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.010 PVC, smooth interior
1.3	372	0.0040	4.89	8.64	Circular Channel (pipe), 18" HDPE Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.010 PVC, smooth interior
1.4	578	0.0040	6.87	33.72	Circular Channel (pipe), 30" HDPE Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.010 PVC, smooth interior
0.6	274	0.0090	7.93	38.91	Circular Channel (pipe), 30" HDPE Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.013 Corrugated PE, smooth interior
0.7	604	0.0236	14.50	102.46	Circular Channel (pipe), 36" HDPE Diam= 36.0" Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
6.8	2,212	Total			

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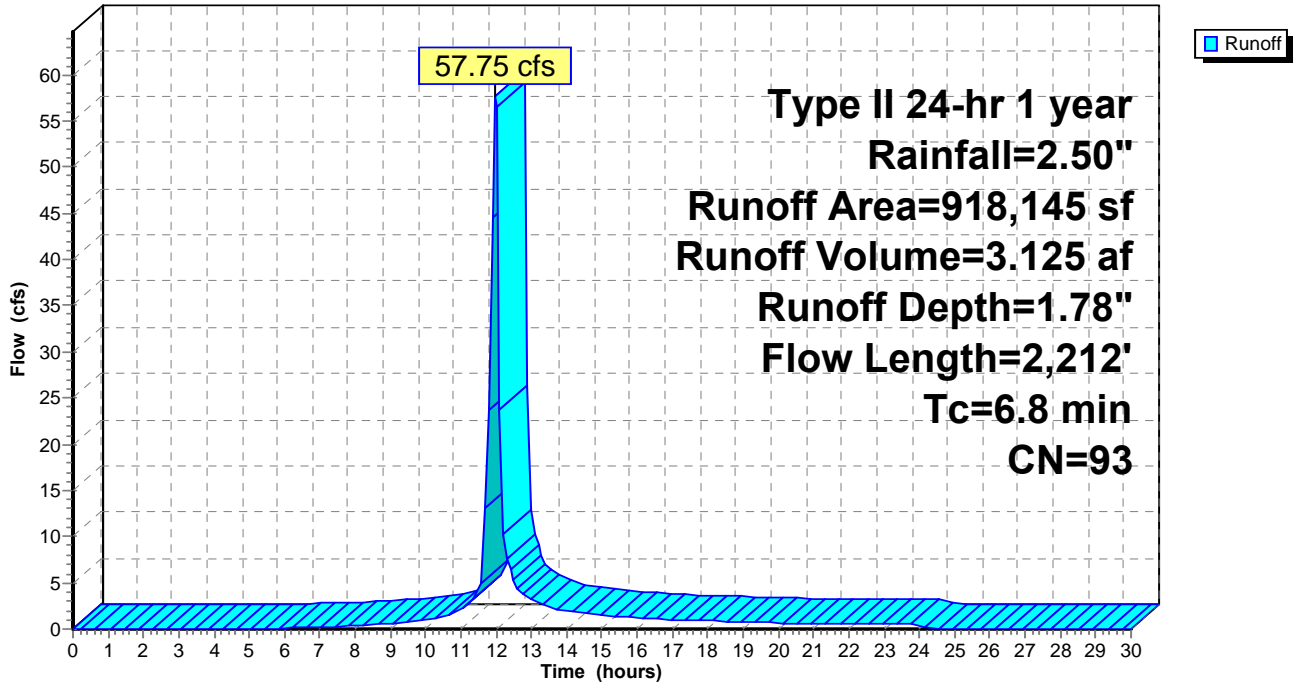
Type II 24-hr 1 year Rainfall=2.50"

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Subcatchment 2: Trib Area 2

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Type II 24-hr 1 year Rainfall=2.50"

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Summary for Subcatchment 3: Trib Area 3

Runoff = 13.71 cfs @ 11.97 hrs, Volume= 0.777 af, Depth= 2.06"

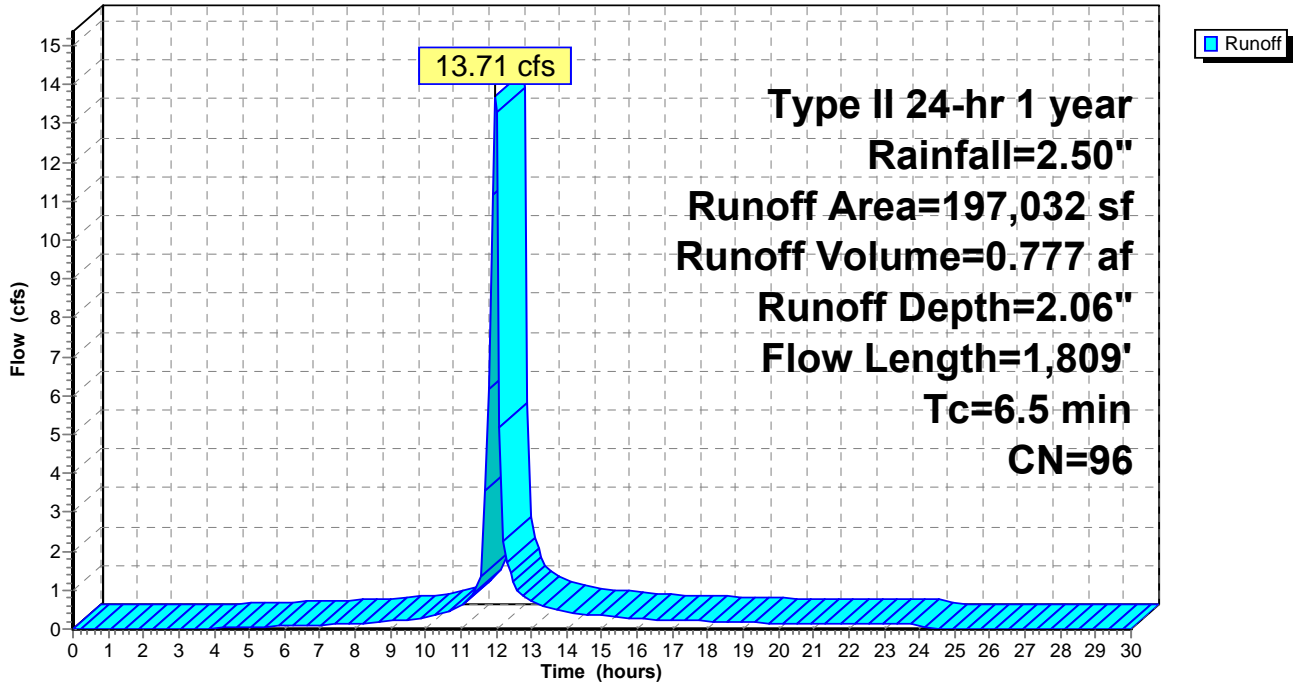
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr 1 year Rainfall=2.50"

Area (sf)	CN	Description
* 40,917	98	BUILDING, HSG D
123,374	98	Paved parking, HSG D
32,741	84	50-75% Grass cover, Fair, HSG D
197,032	96	Weighted Average
32,741		Pervious Area
164,291		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	100	0.3000	3.66		Sheet Flow, ROOF Smooth surfaces n= 0.011 P2= 2.60"
0.6	83	0.0040	2.19	0.76	Circular Channel (pipe), 8" HDPE Diam= 8.0" Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
0.2	26	0.0040	2.87	2.25	Circular Channel (pipe), 12 HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.0	201	0.0040	3.33	4.09	Circular Channel (pipe), 15" HDPE Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
1.6	372	0.0040	3.76	6.64	Circular Channel (pipe), 18" HDPE Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
2.3	852	0.0056	6.25	30.69	Circular Channel (pipe), 30" HDPE Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.013 Corrugated PE, smooth interior
0.3	175	0.0081	9.41	90.55	Circular Channel (pipe), 42" HDPE Diam= 42.0" Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.013 Corrugated PE, smooth interior
6.5	1,809	Total			

Subcatchment 3: Trib Area 3

Hydrograph



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Type II 24-hr 1 year Rainfall=2.50"

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Summary for Subcatchment 4: Trib Area 4

Runoff = 9.74 cfs @ 12.00 hrs, Volume= 0.554 af, Depth= 1.61"

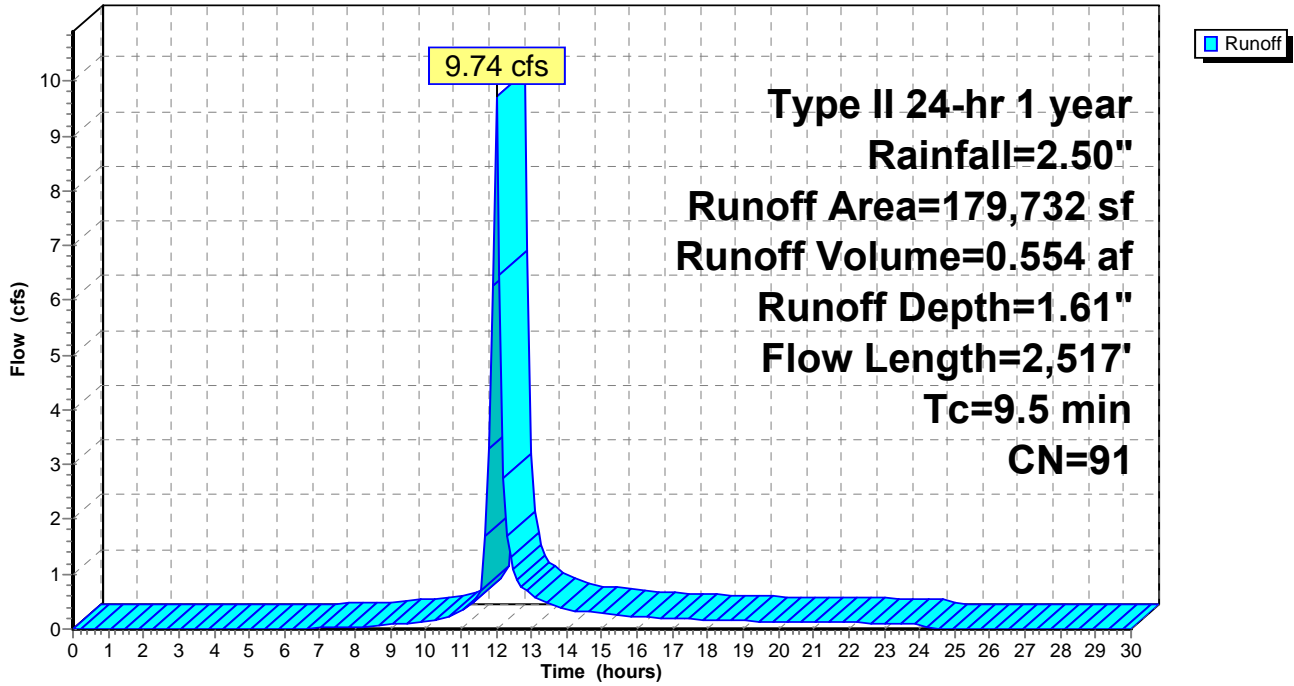
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr 1 year Rainfall=2.50"

Area (sf)	CN	Description
*	0	98 BUILDING, HSG D
93,055	98	Paved parking, HSG D
86,677	84	50-75% Grass cover, Fair, HSG D
179,732	91	Weighted Average
86,677		Pervious Area
93,055		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	54	0.0120	0.89		Sheet Flow, ASPHALT Smooth surfaces n= 0.011 P2= 2.60"
3.3	721	0.0063	3.60	2.83	Circular Channel (pipe), 12" HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.3	284	0.0051	3.76	4.61	Circular Channel (pipe), 15" HDPE Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.9	303	0.0050	5.46	9.66	Circular Channel (pipe), 18" HDPE Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.010 PVC, smooth interior
1.2	358	0.0051	5.14	16.16	Circular Channel (pipe), 24" HDPE Diam= 24.0" Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
1.2	490	0.0050	6.67	47.16	Circular Channel (pipe), 36" HDPE Diam= 36.0" Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
0.6	307	0.0050	8.08	101.57	Circular Channel (pipe), 48" HDPE Diam= 48.0" Area= 12.6 sf Perim= 12.6' r= 1.00' n= 0.013 Corrugated PE, smooth interior
9.5	2,517	Total			

Subcatchment 4: Trib Area 4

Hydrograph



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Type II 24-hr 1 year Rainfall=2.50"

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Summary for Subcatchment 5: Trib Area 5

Runoff = 25.89 cfs @ 11.92 hrs, Volume= 1.544 af, Depth= 2.27"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr 1 year Rainfall=2.50"

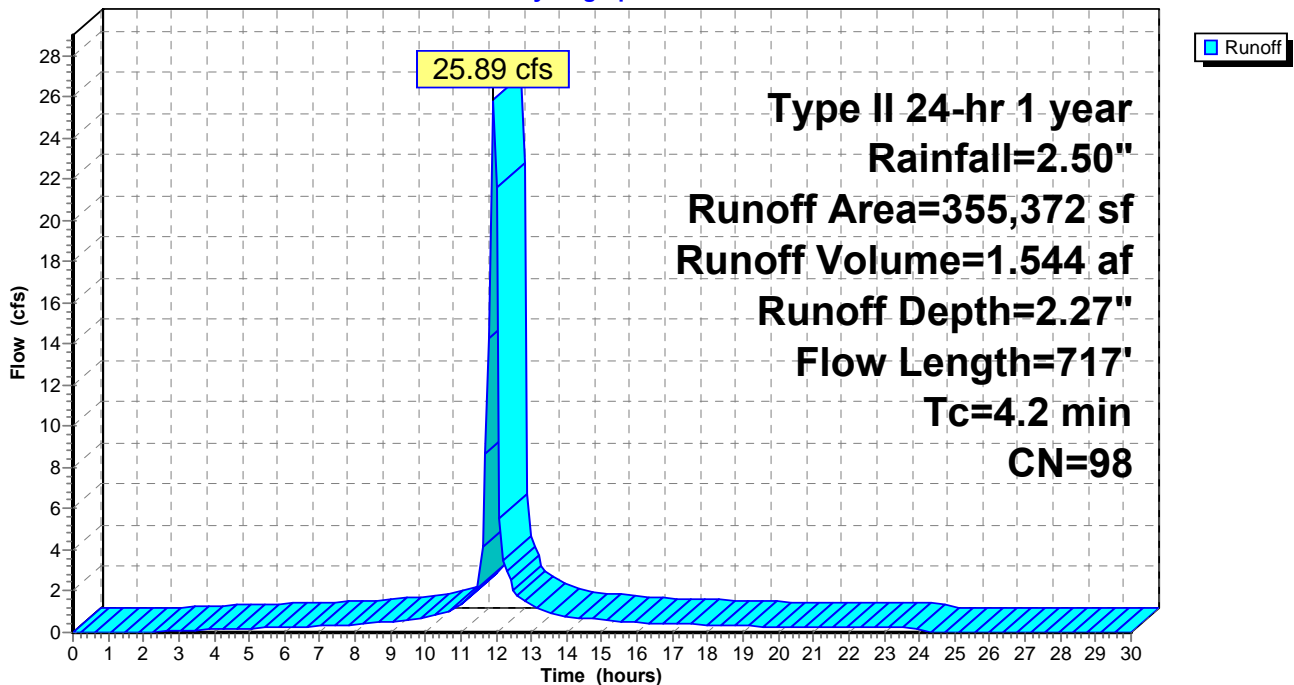
	Area (sf)	CN	Description
*	73,450	98	BUILDING, HSG D
	281,922	98	Paved parking, HSG D
	355,372	98	Weighted Average
	355,372		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	100	0.0640	1.97		Sheet Flow, PAVEMENT Smooth surfaces n= 0.011 P2= 2.60"
0.9	134	0.0156	2.54		Shallow Concentrated Flow, PAVEMENT Paved Kv= 20.3 fps
2.5	483	0.0050	3.21	2.52	Circular Channel (pipe), 12" HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior

4.2 717 Total

Subcatchment 5: Trib Area 5

Hydrograph



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Type II 24-hr 1 year Rainfall=2.50"

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Summary for Reach R1: Harbor

Inflow Area = 39.039 ac, 73.86% Impervious, Inflow Depth = 1.88" for 1 year event

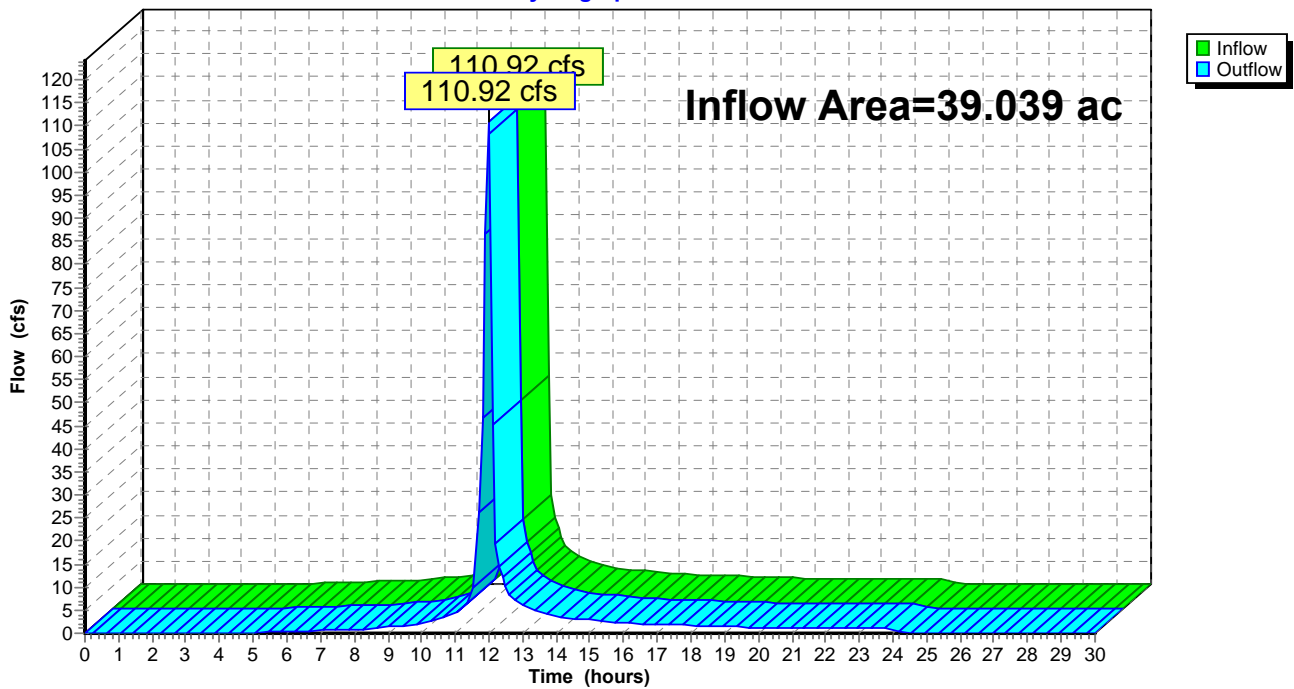
Inflow = 110.92 cfs @ 11.98 hrs, Volume= 6.101 af

Outflow = 110.92 cfs @ 11.98 hrs, Volume= 6.101 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

Reach R1: Harbor

Hydrograph



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Type II 24-hr 1 year Rainfall=2.50"

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Summary for Reach R2: Mohawk River

Inflow Area = 4.126 ac, 51.77% Impervious, Inflow Depth = 1.61" for 1 year event

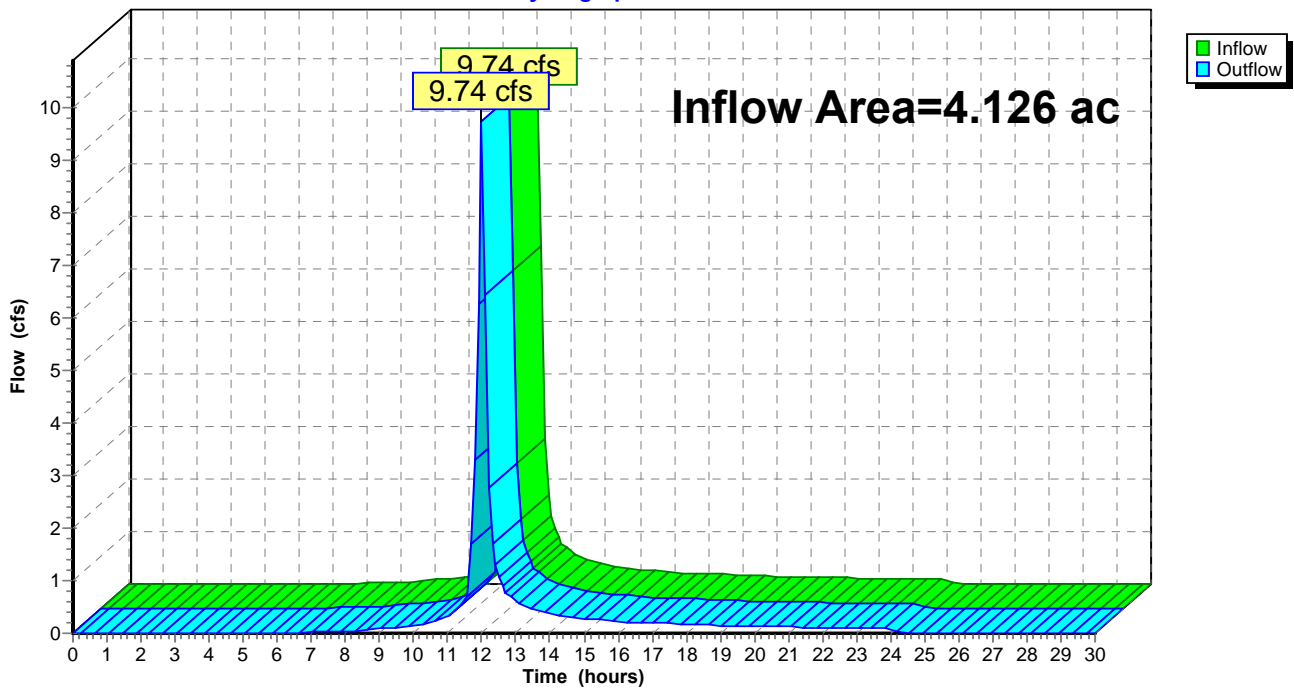
Inflow = 9.74 cfs @ 12.00 hrs, Volume= 0.554 af

Outflow = 9.74 cfs @ 12.00 hrs, Volume= 0.554 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

Reach R2: Mohawk River

Hydrograph



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Type II 24-hr 1 year Rainfall=2.50"

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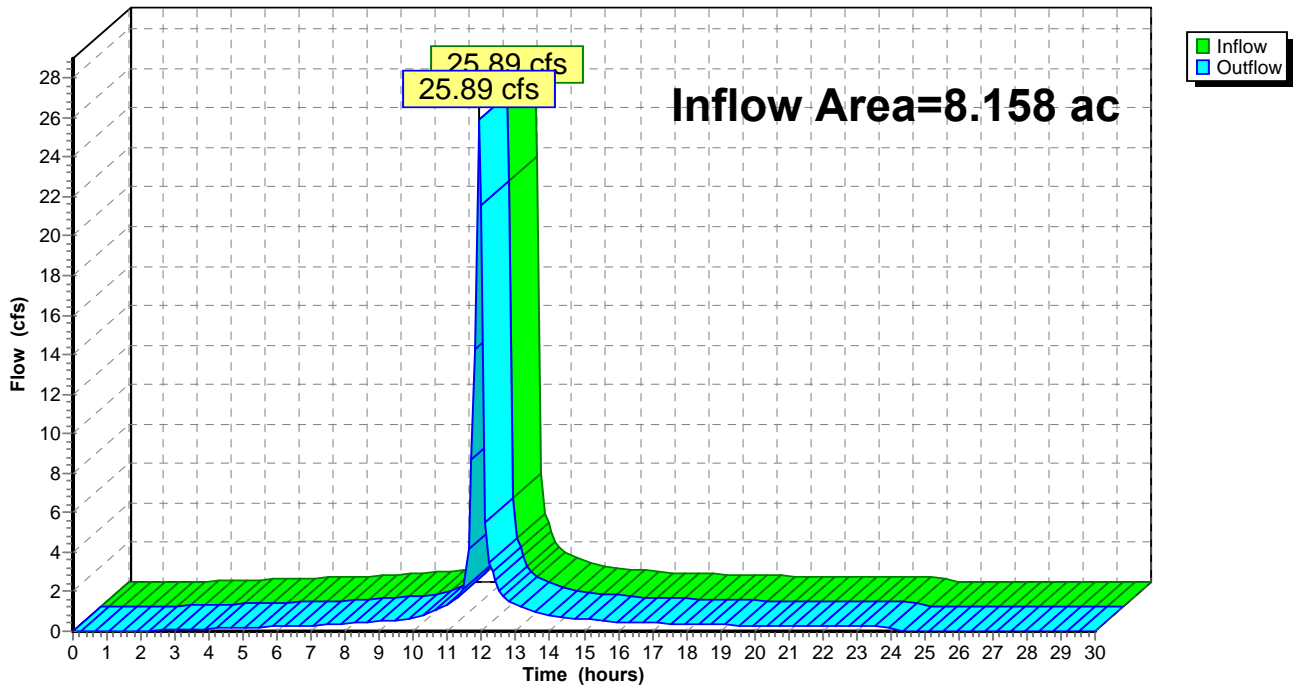
Summary for Reach R3: College Creek

Inflow Area = 8.158 ac, 100.00% Impervious, Inflow Depth = 2.27" for 1 year event
Inflow = 25.89 cfs @ 11.92 hrs, Volume= 1.544 af
Outflow = 25.89 cfs @ 11.92 hrs, Volume= 1.544 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

Reach R3: College Creek

Hydrograph



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Type II 24-hr 10 year Rainfall=4.50"

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Time span=0.00-30.00 hrs, dt=0.10 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1: Trib Area 1

Runoff Area=585,379 sf 80.19% Impervious Runoff Depth=3.92"
Flow Length=2,723' Tc=6.9 min CN=95 Runoff=75.44 cfs 4.395 af

Subcatchment 2: Trib Area 2

Runoff Area=918,145 sf 67.77% Impervious Runoff Depth=3.71"
Flow Length=2,212' Tc=6.8 min CN=93 Runoff=114.88 cfs 6.513 af

Subcatchment 3: Trib Area 3

Runoff Area=197,032 sf 83.38% Impervious Runoff Depth=4.04"
Flow Length=1,809' Tc=6.5 min CN=96 Runoff=25.74 cfs 1.521 af

Subcatchment 4: Trib Area 4

Runoff Area=179,732 sf 51.77% Impervious Runoff Depth=3.50"
Flow Length=2,517' Tc=9.5 min CN=91 Runoff=20.40 cfs 1.203 af

Subcatchment 5: Trib Area 5

Runoff Area=355,372 sf 100.00% Impervious Runoff Depth=4.26"
Flow Length=717' Tc=4.2 min CN=98 Runoff=47.26 cfs 2.899 af

Reach R1: Harbor

Inflow=216.04 cfs 12.429 af
Outflow=216.04 cfs 12.429 af

Reach R2: Mohawk River

Inflow=20.40 cfs 1.203 af
Outflow=20.40 cfs 1.203 af

Reach R3: College Creek

Inflow=47.26 cfs 2.899 af
Outflow=47.26 cfs 2.899 af

Total Runoff Area = 51.324 ac Runoff Volume = 16.531 af Average Runoff Depth = 3.87"
23.76% Pervious = 12.196 ac 76.24% Impervious = 39.127 ac

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Type II 24-hr 10 year Rainfall=4.50"

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Summary for Subcatchment 1: Trib Area 1

Runoff = 75.44 cfs @ 11.97 hrs, Volume= 4.395 af, Depth= 3.92"

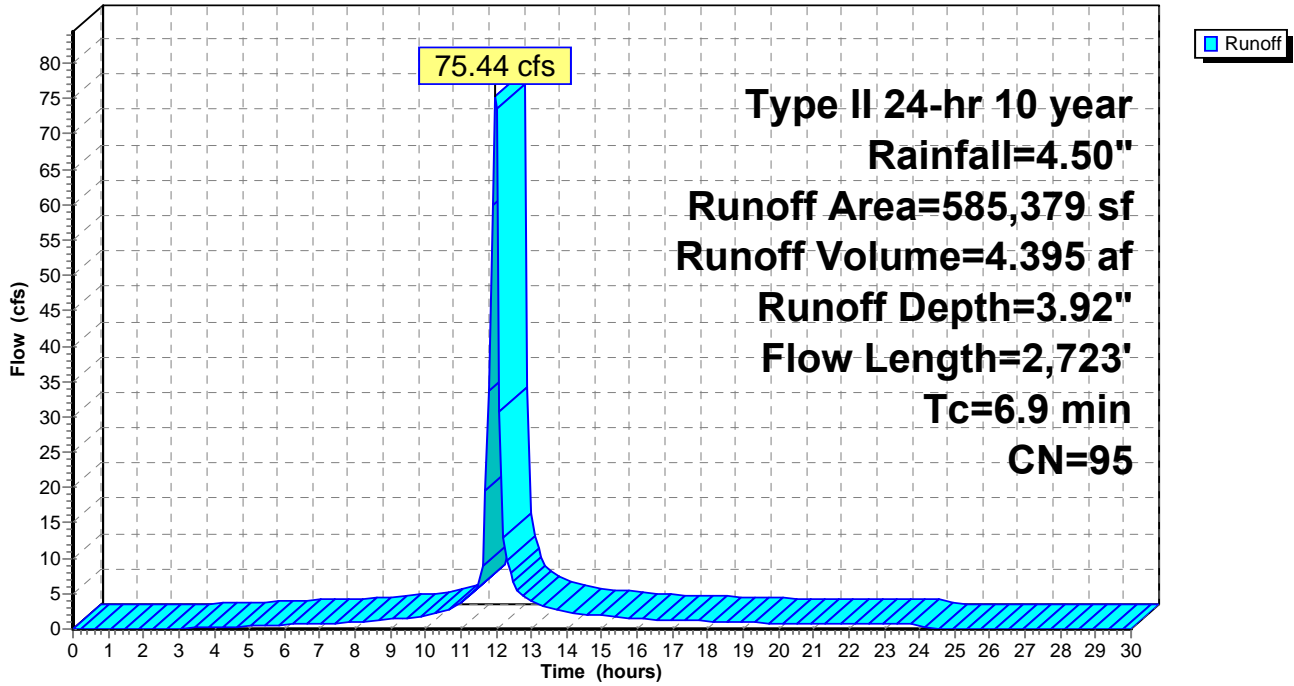
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr 10 year Rainfall=4.50"

	Area (sf)	CN	Description
*	166,024	98	BUILDING, HSG D
	303,407	98	Paved parking, HSG D
	115,948	84	50-75% Grass cover, Fair, HSG D
	585,379	95	Weighted Average
	115,948		Pervious Area
	469,431		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	150	0.1330	2.87		Sheet Flow, ROOF Smooth surfaces n= 0.011 P2= 2.60"
0.2	63	0.0200	4.90	1.71	Circular Channel (pipe), ROOF DRAIN Diam= 8.0" Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
0.6	153	0.0051	4.21	3.31	Circular Channel (pipe), 12" HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.010 PVC, smooth interior
0.6	226	0.0157	6.60	8.09	Circular Channel (pipe), 15" HDPE Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.9	310	0.0052	5.57	9.85	Circular Channel (pipe), 18" HDPE Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.010 PVC, smooth interior
2.3	1,035	0.0067	7.66	24.07	Circular Channel (pipe), 24" HDPE Diam= 24.0" Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.010 PVC, smooth interior
1.1	516	0.0050	7.68	37.70	Circular Channel (pipe), 30" HDPE Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.010 PVC, smooth interior
0.3	270	0.0319	16.85	119.13	Circular Channel (pipe), 36" HDPE Diam= 36.0" Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
6.9	2,723	Total			

Subcatchment 1: Trib Area 1

Hydrograph



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Type II 24-hr 10 year Rainfall=4.50"

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Summary for Subcatchment 2: Trib Area 2

Runoff = 114.88 cfs @ 11.97 hrs, Volume= 6.513 af, Depth= 3.71"

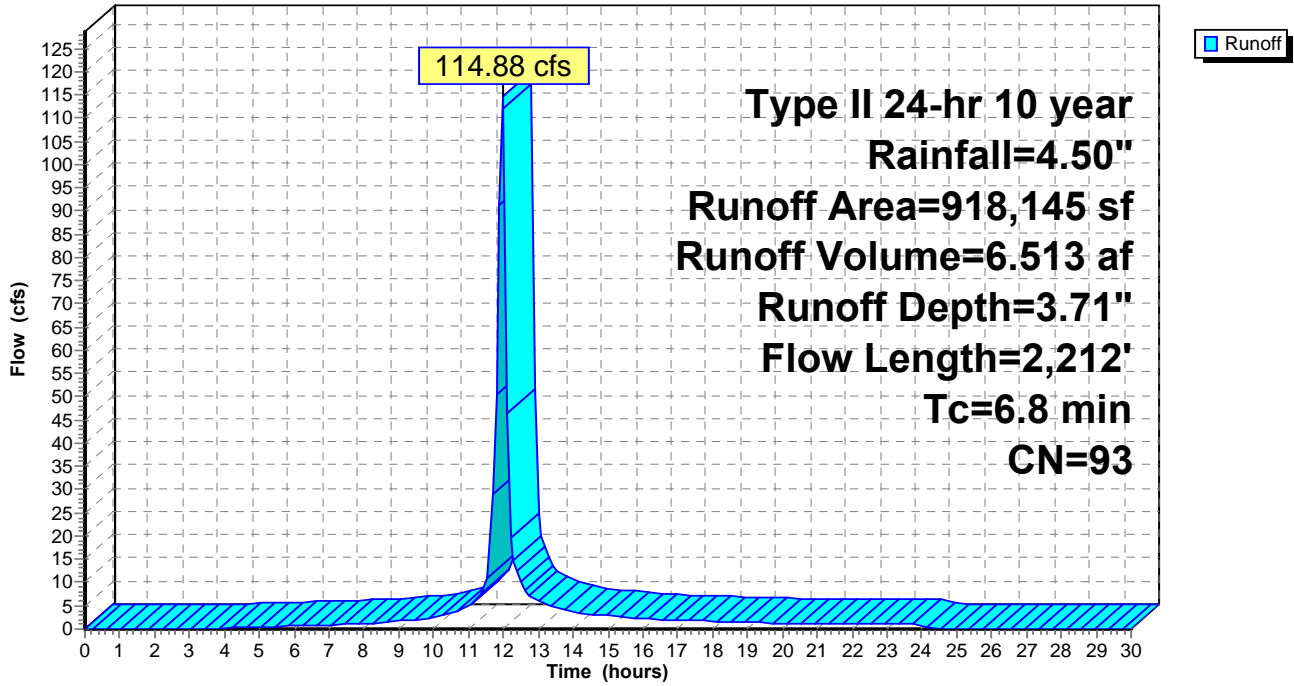
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr 10 year Rainfall=4.50"

Area (sf)	CN	Description
* 233,398	98	BUILDING, HSG D
388,841	98	Paved parking, HSG D
295,906	84	50-75% Grass cover, Fair, HSG D
918,145	93	Weighted Average
295,906		Pervious Area
622,239		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0180	1.19		Sheet Flow, ASPHALT Smooth surfaces n= 0.011 P2= 2.60"
0.5	83	0.0040	2.59	0.90	Circular Channel (pipe), 8" HDPE Diam= 8.0" Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.011 PVC, smooth interior
0.2	26	0.0040	2.87	2.25	Circular Channel (pipe), 12" HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.7	175	0.0040	4.33	5.31	Circular Channel (pipe), 15" HDPE Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.010 PVC, smooth interior
1.3	372	0.0040	4.89	8.64	Circular Channel (pipe), 18" HDPE Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.010 PVC, smooth interior
1.4	578	0.0040	6.87	33.72	Circular Channel (pipe), 30" HDPE Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.010 PVC, smooth interior
0.6	274	0.0090	7.93	38.91	Circular Channel (pipe), 30" HDPE Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.013 Corrugated PE, smooth interior
0.7	604	0.0236	14.50	102.46	Circular Channel (pipe), 36" HDPE Diam= 36.0" Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
6.8	2,212	Total			

Subcatchment 2: Trib Area 2

Hydrograph



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Type II 24-hr 10 year Rainfall=4.50"

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Summary for Subcatchment 3: Trib Area 3

Runoff = 25.74 cfs @ 11.97 hrs, Volume= 1.521 af, Depth= 4.04"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

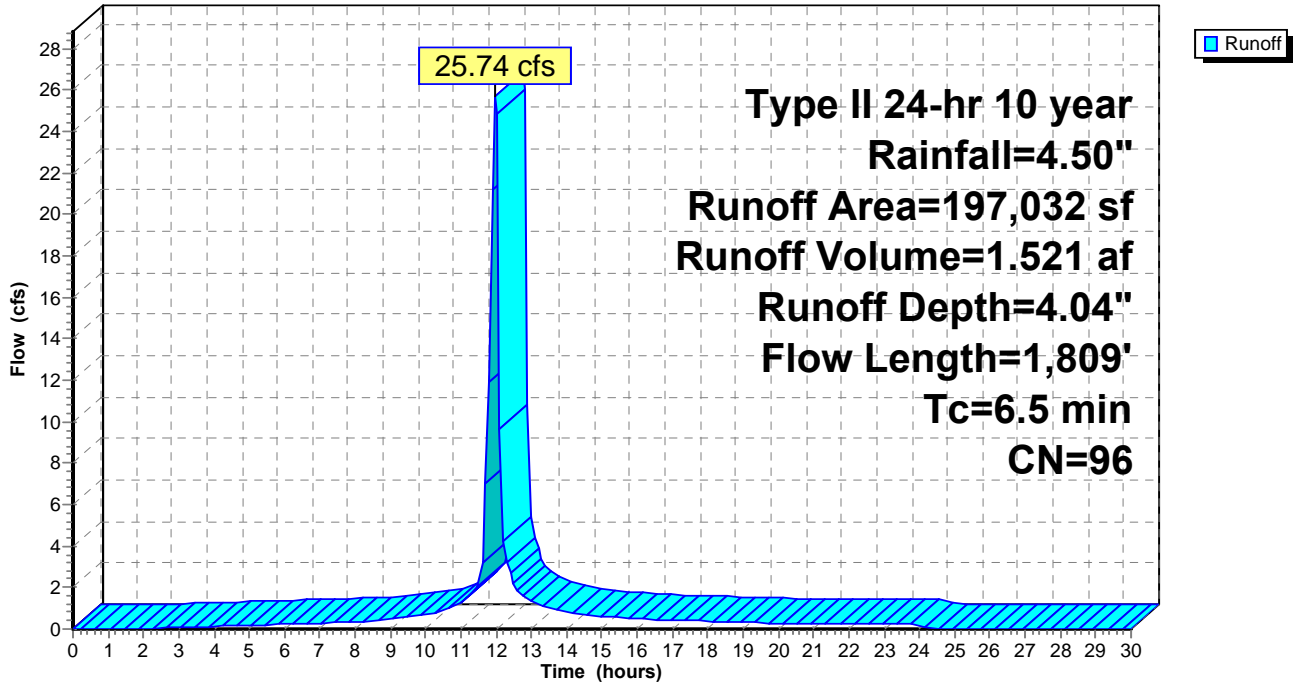
Type II 24-hr 10 year Rainfall=4.50"

Area (sf)	CN	Description
* 40,917	98	BUILDING, HSG D
123,374	98	Paved parking, HSG D
32,741	84	50-75% Grass cover, Fair, HSG D
197,032	96	Weighted Average
32,741		Pervious Area
164,291		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	100	0.3000	3.66		Sheet Flow, ROOF Smooth surfaces n= 0.011 P2= 2.60"
0.6	83	0.0040	2.19	0.76	Circular Channel (pipe), 8" HDPE Diam= 8.0" Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
0.2	26	0.0040	2.87	2.25	Circular Channel (pipe), 12 HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.0	201	0.0040	3.33	4.09	Circular Channel (pipe), 15" HDPE Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
1.6	372	0.0040	3.76	6.64	Circular Channel (pipe), 18" HDPE Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
2.3	852	0.0056	6.25	30.69	Circular Channel (pipe), 30" HDPE Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.013 Corrugated PE, smooth interior
0.3	175	0.0081	9.41	90.55	Circular Channel (pipe), 42" HDPE Diam= 42.0" Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.013 Corrugated PE, smooth interior
6.5	1,809	Total			

Subcatchment 3: Trib Area 3

Hydrograph



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Type II 24-hr 10 year Rainfall=4.50"

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Summary for Subcatchment 4: Trib Area 4

Runoff = 20.40 cfs @ 12.00 hrs, Volume= 1.203 af, Depth= 3.50"

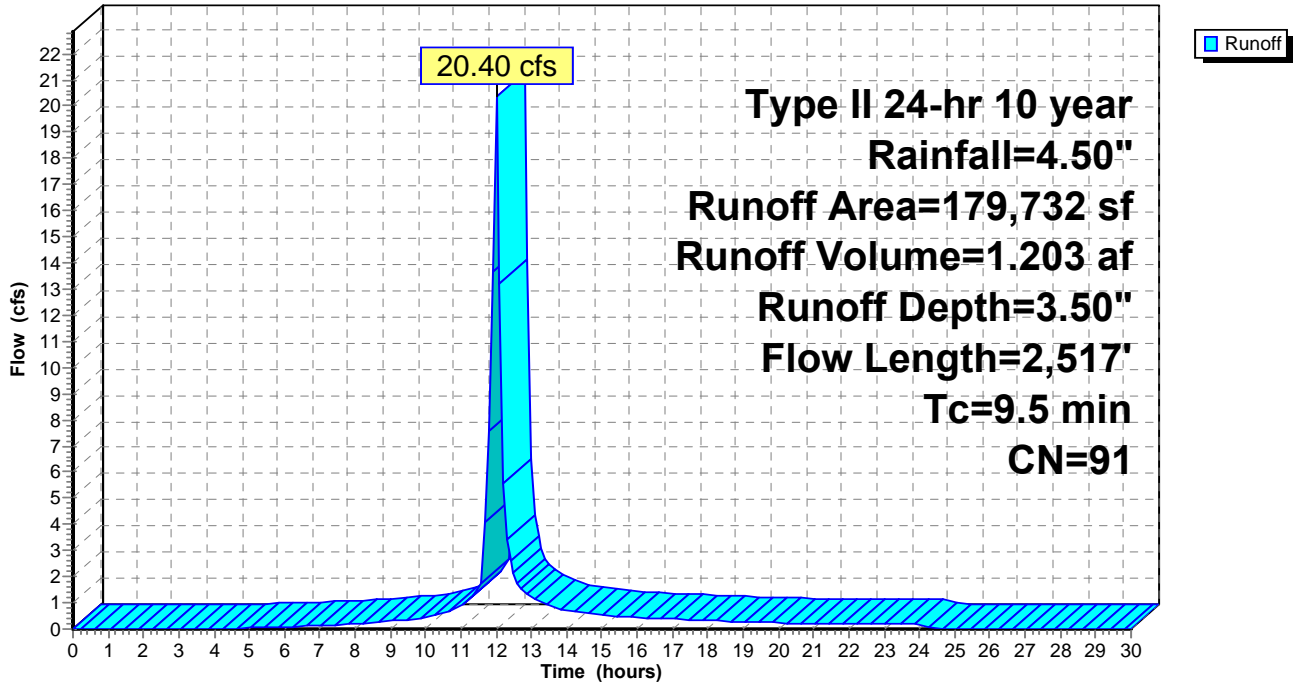
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr 10 year Rainfall=4.50"

Area (sf)	CN	Description
*	0	98 BUILDING, HSG D
93,055	98	Paved parking, HSG D
86,677	84	50-75% Grass cover, Fair, HSG D
179,732	91	Weighted Average
86,677		Pervious Area
93,055		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	54	0.0120	0.89		Sheet Flow, ASPHALT Smooth surfaces n= 0.011 P2= 2.60"
3.3	721	0.0063	3.60	2.83	Circular Channel (pipe), 12" HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.3	284	0.0051	3.76	4.61	Circular Channel (pipe), 15" HDPE Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.9	303	0.0050	5.46	9.66	Circular Channel (pipe), 18" HDPE Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.010 PVC, smooth interior
1.2	358	0.0051	5.14	16.16	Circular Channel (pipe), 24" HDPE Diam= 24.0" Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
1.2	490	0.0050	6.67	47.16	Circular Channel (pipe), 36" HDPE Diam= 36.0" Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
0.6	307	0.0050	8.08	101.57	Circular Channel (pipe), 48" HDPE Diam= 48.0" Area= 12.6 sf Perim= 12.6' r= 1.00' n= 0.013 Corrugated PE, smooth interior
9.5	2,517	Total			

Subcatchment 4: Trib Area 4

Hydrograph



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Type II 24-hr 10 year Rainfall=4.50"

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Summary for Subcatchment 5: Trib Area 5

Runoff = 47.26 cfs @ 11.92 hrs, Volume= 2.899 af, Depth= 4.26"

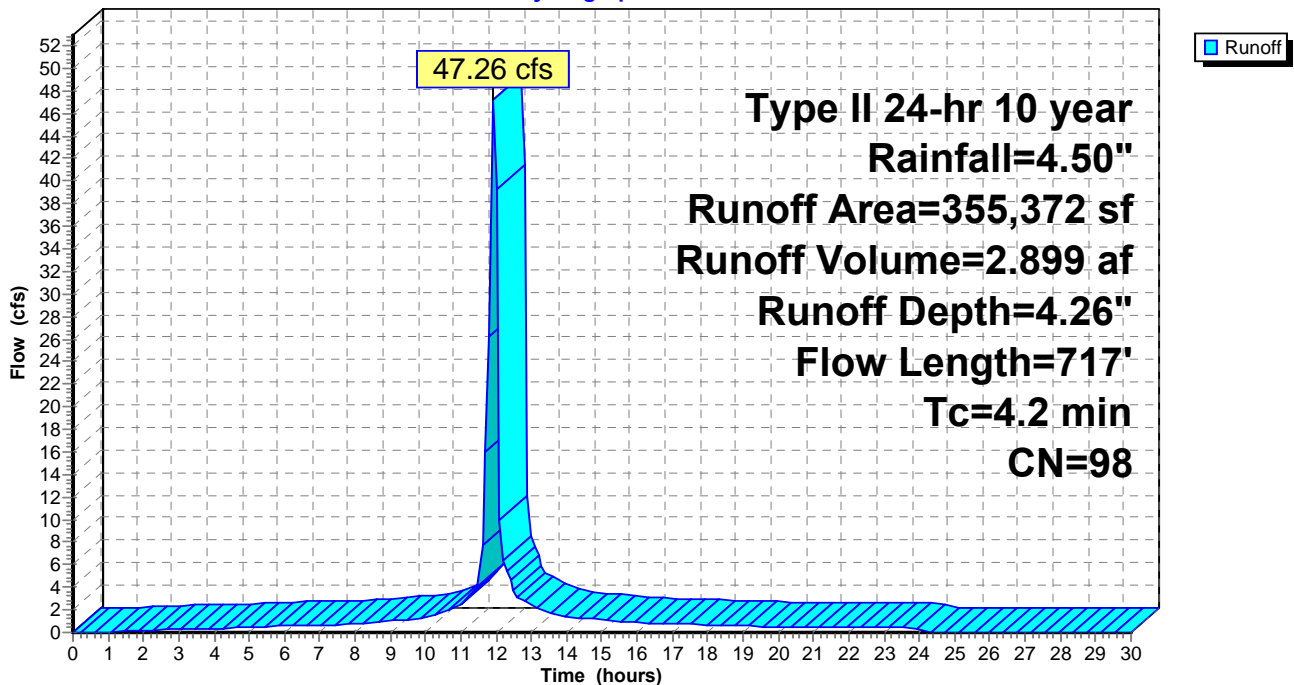
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr 10 year Rainfall=4.50"

	Area (sf)	CN	Description
*	73,450	98	BUILDING, HSG D
	281,922	98	Paved parking, HSG D
	355,372	98	Weighted Average
	355,372		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	100	0.0640	1.97		Sheet Flow, PAVEMENT Smooth surfaces n= 0.011 P2= 2.60"
0.9	134	0.0156	2.54		Shallow Concentrated Flow, PAVEMENT Paved Kv= 20.3 fps
2.5	483	0.0050	3.21	2.52	Circular Channel (pipe), 12" HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
4.2	717	Total			

Subcatchment 5: Trib Area 5

Hydrograph



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Type II 24-hr 10 year Rainfall=4.50"

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Summary for Reach R1: Harbor

Inflow Area = 39.039 ac, 73.86% Impervious, Inflow Depth = 3.82" for 10 year event

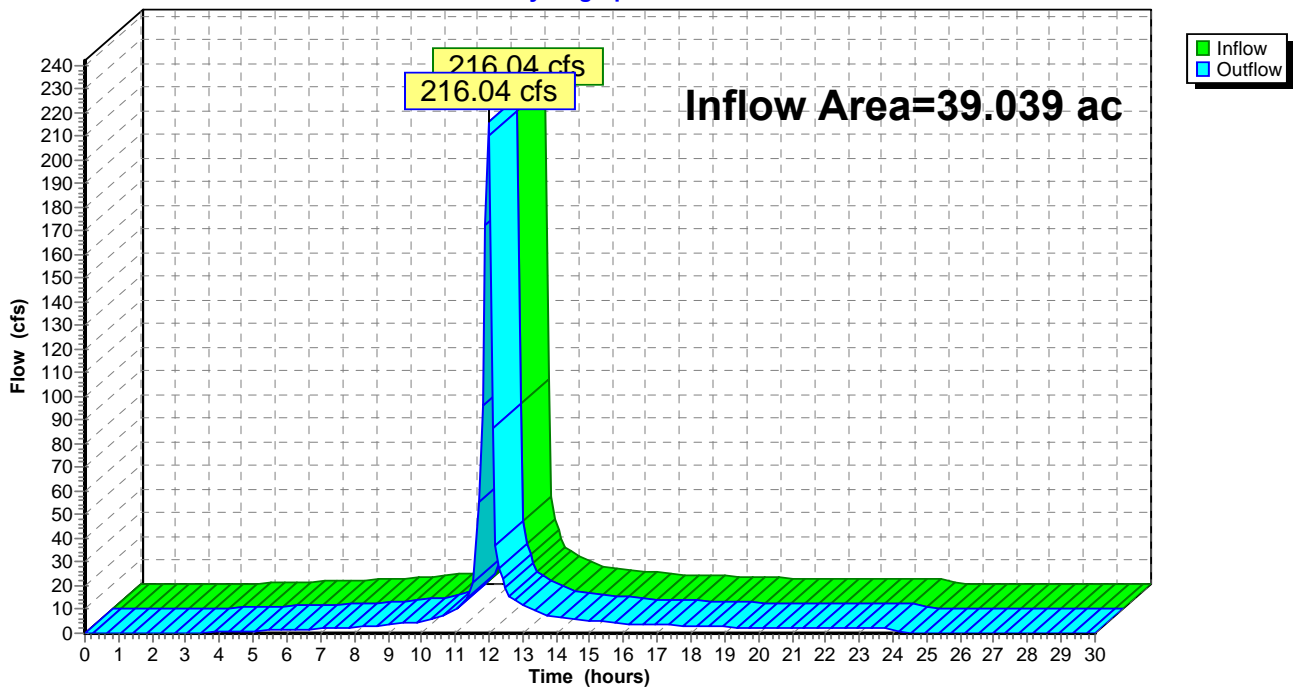
Inflow = 216.04 cfs @ 11.97 hrs, Volume= 12.429 af

Outflow = 216.04 cfs @ 11.97 hrs, Volume= 12.429 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

Reach R1: Harbor

Hydrograph



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Type II 24-hr 10 year Rainfall=4.50"

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Summary for Reach R2: Mohawk River

Inflow Area = 4.126 ac, 51.77% Impervious, Inflow Depth = 3.50" for 10 year event

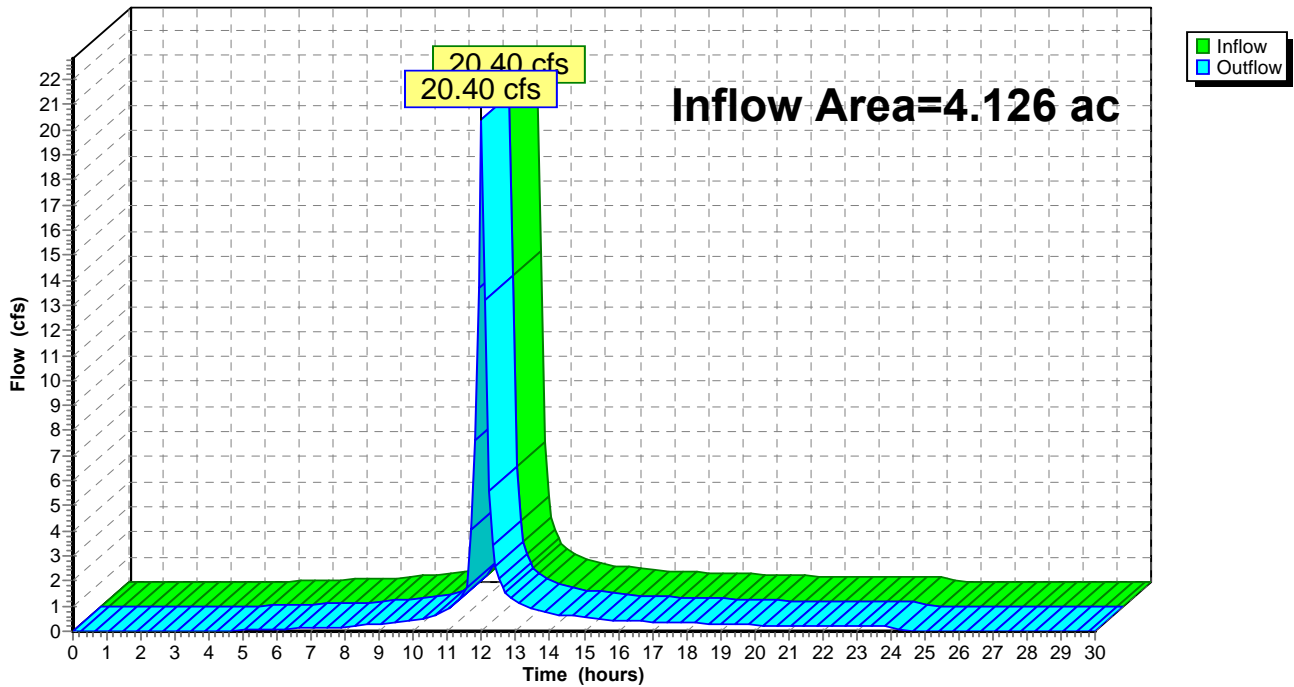
Inflow = 20.40 cfs @ 12.00 hrs, Volume= 1.203 af

Outflow = 20.40 cfs @ 12.00 hrs, Volume= 1.203 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

Reach R2: Mohawk River

Hydrograph



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Type II 24-hr 10 year Rainfall=4.50"

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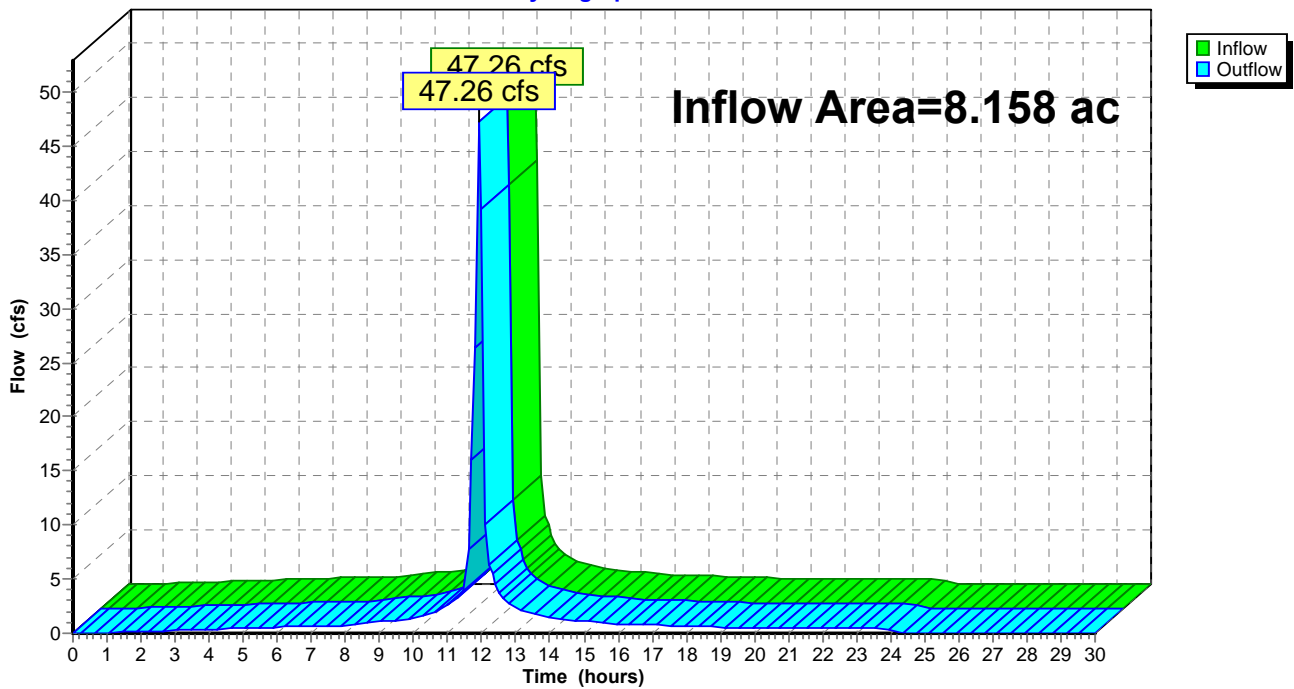
Summary for Reach R3: College Creek

Inflow Area = 8.158 ac, 100.00% Impervious, Inflow Depth = 4.26" for 10 year event
Inflow = 47.26 cfs @ 11.92 hrs, Volume= 2.899 af
Outflow = 47.26 cfs @ 11.92 hrs, Volume= 2.899 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

Reach R3: College Creek

Hydrograph



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Type II 24-hr 100 year Rainfall=6.60"

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Time span=0.00-30.00 hrs, dt=0.10 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1: Trib Area 1

Runoff Area=585,379 sf 80.19% Impervious Runoff Depth=6.01"
Flow Length=2,723' Tc=6.9 min CN=95 Runoff=112.65 cfs 6.728 af

Subcatchment 2: Trib Area 2

Runoff Area=918,145 sf 67.77% Impervious Runoff Depth=5.78"
Flow Length=2,212' Tc=6.8 min CN=93 Runoff=173.91 cfs 10.144 af

Subcatchment 3: Trib Area 3

Runoff Area=197,032 sf 83.38% Impervious Runoff Depth=6.13"
Flow Length=1,809' Tc=6.5 min CN=96 Runoff=38.21 cfs 2.309 af

Subcatchment 4: Trib Area 4

Runoff Area=179,732 sf 51.77% Impervious Runoff Depth=5.55"
Flow Length=2,517' Tc=9.5 min CN=91 Runoff=31.47 cfs 1.907 af

Subcatchment 5: Trib Area 5

Runoff Area=355,372 sf 100.00% Impervious Runoff Depth=6.36"
Flow Length=717' Tc=4.2 min CN=98 Runoff=69.58 cfs 4.325 af

Reach R1: Harbor

Inflow=324.74 cfs 19.181 af
Outflow=324.74 cfs 19.181 af

Reach R2: Mohawk River

Inflow=31.47 cfs 1.907 af
Outflow=31.47 cfs 1.907 af

Reach R3: College Creek

Inflow=69.58 cfs 4.325 af
Outflow=69.58 cfs 4.325 af

Total Runoff Area = 51.324 ac Runoff Volume = 25.413 af Average Runoff Depth = 5.94"
23.76% Pervious = 12.196 ac 76.24% Impervious = 39.127 ac

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Type II 24-hr 100 year Rainfall=6.60"

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Summary for Subcatchment 1: Trib Area 1

Runoff = 112.65 cfs @ 11.97 hrs, Volume= 6.728 af, Depth= 6.01"

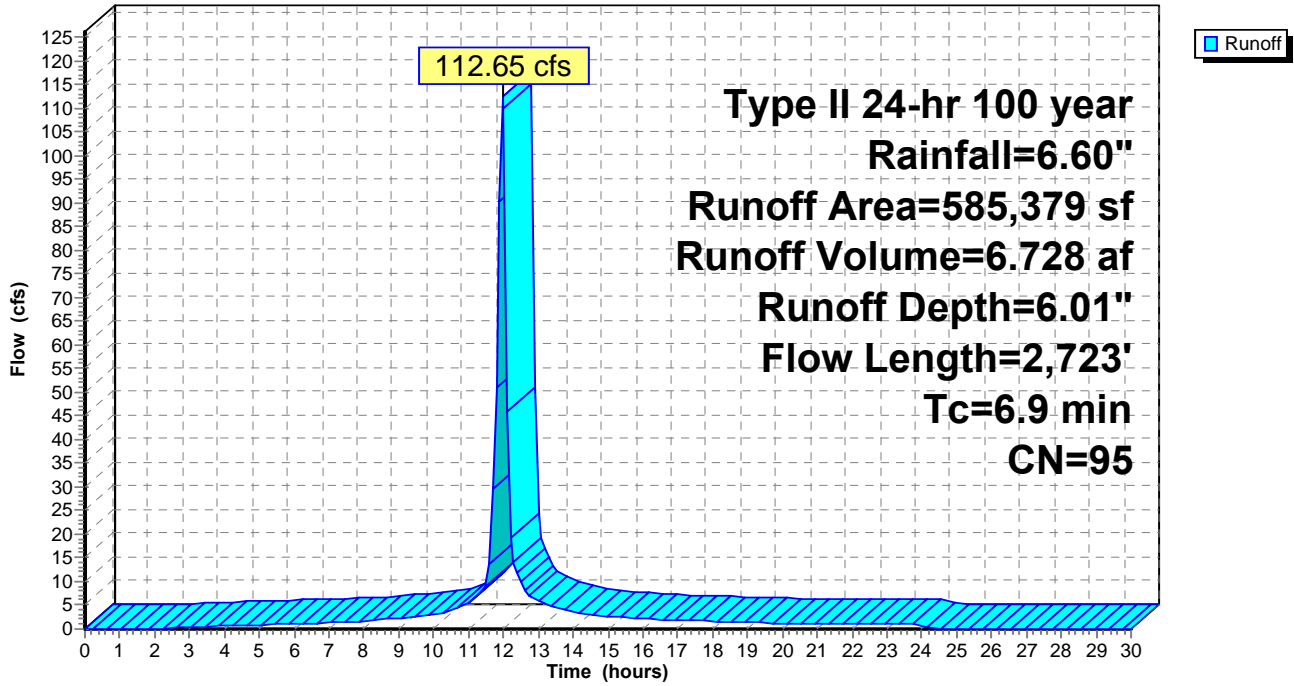
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr 100 year Rainfall=6.60"

	Area (sf)	CN	Description
*	166,024	98	BUILDING, HSG D
	303,407	98	Paved parking, HSG D
	115,948	84	50-75% Grass cover, Fair, HSG D
	585,379	95	Weighted Average
	115,948		Pervious Area
	469,431		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	150	0.1330	2.87		Sheet Flow, ROOF Smooth surfaces n= 0.011 P2= 2.60"
0.2	63	0.0200	4.90	1.71	Circular Channel (pipe), ROOF DRAIN Diam= 8.0" Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
0.6	153	0.0051	4.21	3.31	Circular Channel (pipe), 12" HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.010 PVC, smooth interior
0.6	226	0.0157	6.60	8.09	Circular Channel (pipe), 15" HDPE Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.9	310	0.0052	5.57	9.85	Circular Channel (pipe), 18" HDPE Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.010 PVC, smooth interior
2.3	1,035	0.0067	7.66	24.07	Circular Channel (pipe), 24" HDPE Diam= 24.0" Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.010 PVC, smooth interior
1.1	516	0.0050	7.68	37.70	Circular Channel (pipe), 30" HDPE Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.010 PVC, smooth interior
0.3	270	0.0319	16.85	119.13	Circular Channel (pipe), 36" HDPE Diam= 36.0" Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
6.9	2,723	Total			

Subcatchment 1: Trib Area 1

Hydrograph



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Type II 24-hr 100 year Rainfall=6.60"

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Summary for Subcatchment 2: Trib Area 2

Runoff = 173.91 cfs @ 11.97 hrs, Volume= 10.144 af, Depth= 5.78"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

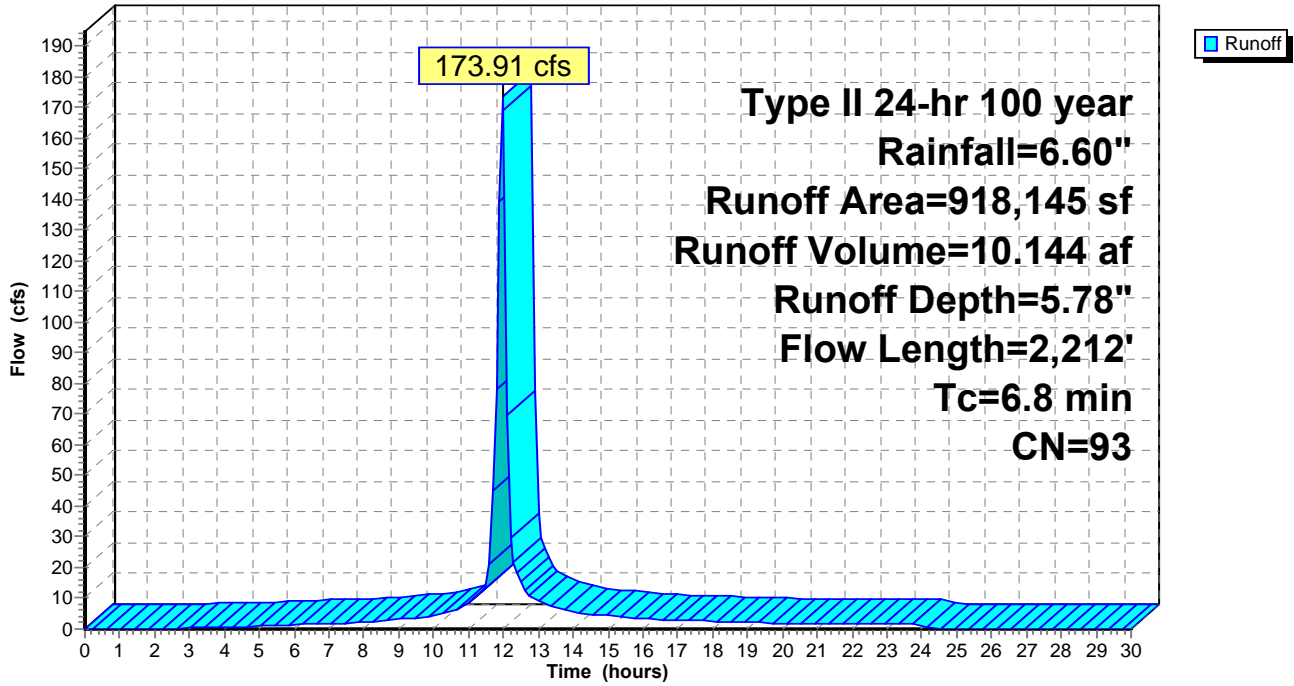
Type II 24-hr 100 year Rainfall=6.60"

	Area (sf)	CN	Description
*	233,398	98	BUILDING, HSG D
	388,841	98	Paved parking, HSG D
	295,906	84	50-75% Grass cover, Fair, HSG D
	918,145	93	Weighted Average
	295,906		Pervious Area
	622,239		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0180	1.19		Sheet Flow, ASPHALT Smooth surfaces n= 0.011 P2= 2.60"
0.5	83	0.0040	2.59	0.90	Circular Channel (pipe), 8" HDPE Diam= 8.0" Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.011 PVC, smooth interior
0.2	26	0.0040	2.87	2.25	Circular Channel (pipe), 12" HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.7	175	0.0040	4.33	5.31	Circular Channel (pipe), 15" HDPE Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.010 PVC, smooth interior
1.3	372	0.0040	4.89	8.64	Circular Channel (pipe), 18" HDPE Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.010 PVC, smooth interior
1.4	578	0.0040	6.87	33.72	Circular Channel (pipe), 30" HDPE Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.010 PVC, smooth interior
0.6	274	0.0090	7.93	38.91	Circular Channel (pipe), 30" HDPE Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.013 Corrugated PE, smooth interior
0.7	604	0.0236	14.50	102.46	Circular Channel (pipe), 36" HDPE Diam= 36.0" Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
6.8	2,212	Total			

Subcatchment 2: Trib Area 2

Hydrograph



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Type II 24-hr 100 year Rainfall=6.60"

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Summary for Subcatchment 3: Trib Area 3

Runoff = 38.21 cfs @ 11.97 hrs, Volume= 2.309 af, Depth= 6.13"

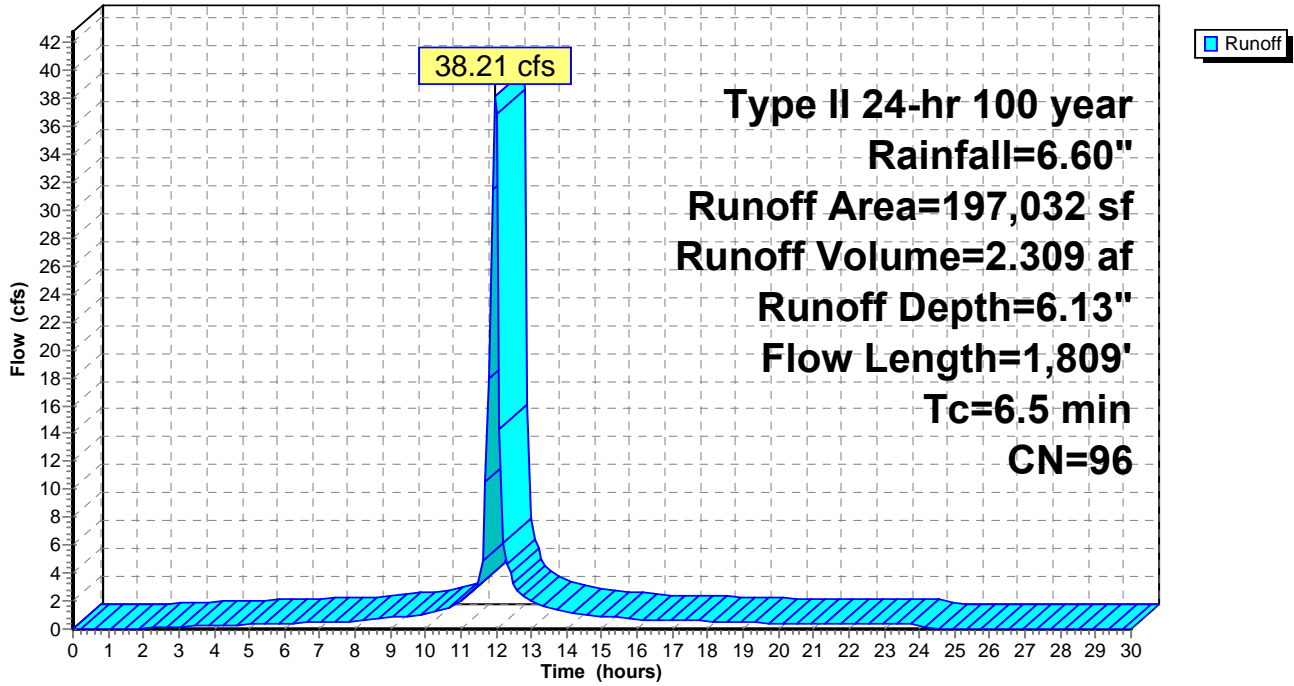
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr 100 year Rainfall=6.60"

Area (sf)	CN	Description
* 40,917	98	BUILDING, HSG D
123,374	98	Paved parking, HSG D
32,741	84	50-75% Grass cover, Fair, HSG D
197,032	96	Weighted Average
32,741		Pervious Area
164,291		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	100	0.3000	3.66		Sheet Flow, ROOF Smooth surfaces n= 0.011 P2= 2.60"
0.6	83	0.0040	2.19	0.76	Circular Channel (pipe), 8" HDPE Diam= 8.0" Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
0.2	26	0.0040	2.87	2.25	Circular Channel (pipe), 12 HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.0	201	0.0040	3.33	4.09	Circular Channel (pipe), 15" HDPE Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
1.6	372	0.0040	3.76	6.64	Circular Channel (pipe), 18" HDPE Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
2.3	852	0.0056	6.25	30.69	Circular Channel (pipe), 30" HDPE Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.013 Corrugated PE, smooth interior
0.3	175	0.0081	9.41	90.55	Circular Channel (pipe), 42" HDPE Diam= 42.0" Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.013 Corrugated PE, smooth interior
6.5	1,809	Total			

Subcatchment 3: Trib Area 3

Hydrograph



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Type II 24-hr 100 year Rainfall=6.60"

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Summary for Subcatchment 4: Trib Area 4

Runoff = 31.47 cfs @ 12.00 hrs, Volume= 1.907 af, Depth= 5.55"

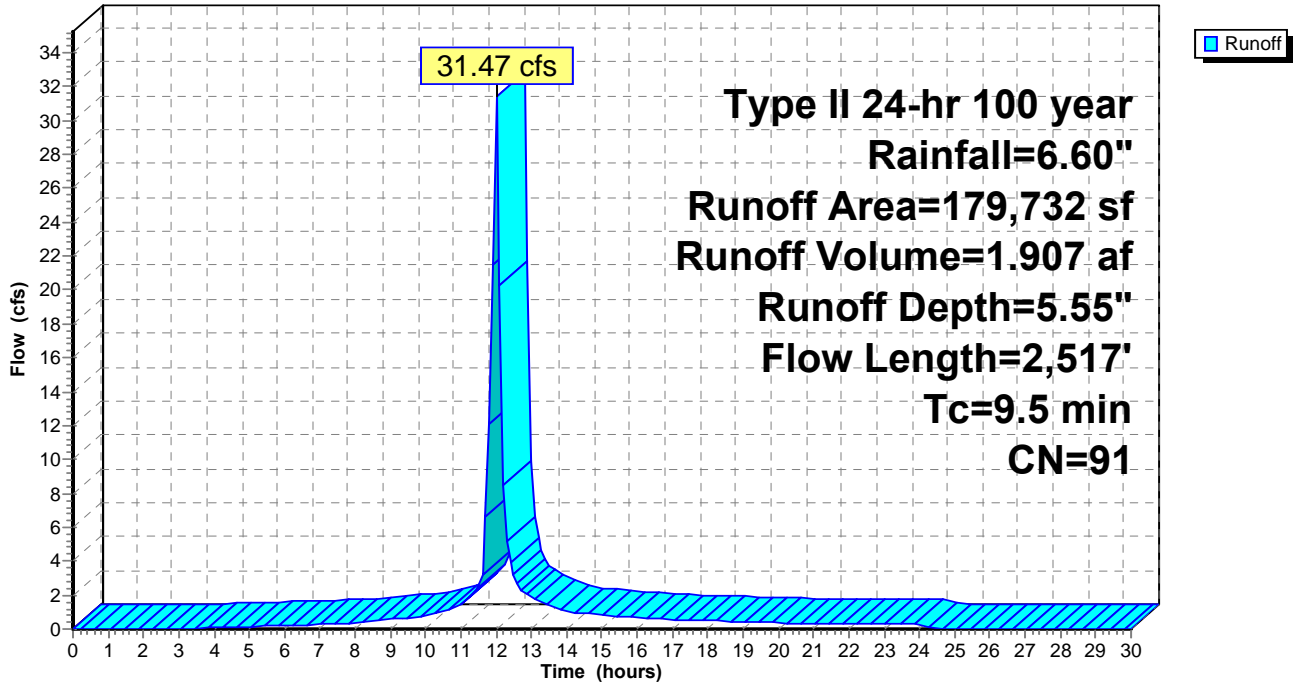
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr 100 year Rainfall=6.60"

Area (sf)	CN	Description
*	0	98 BUILDING, HSG D
93,055	98	Paved parking, HSG D
86,677	84	50-75% Grass cover, Fair, HSG D
179,732	91	Weighted Average
86,677		Pervious Area
93,055		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	54	0.0120	0.89		Sheet Flow, ASPHALT Smooth surfaces n= 0.011 P2= 2.60"
3.3	721	0.0063	3.60	2.83	Circular Channel (pipe), 12" HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.3	284	0.0051	3.76	4.61	Circular Channel (pipe), 15" HDPE Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.9	303	0.0050	5.46	9.66	Circular Channel (pipe), 18" HDPE Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.010 PVC, smooth interior
1.2	358	0.0051	5.14	16.16	Circular Channel (pipe), 24" HDPE Diam= 24.0" Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
1.2	490	0.0050	6.67	47.16	Circular Channel (pipe), 36" HDPE Diam= 36.0" Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
0.6	307	0.0050	8.08	101.57	Circular Channel (pipe), 48" HDPE Diam= 48.0" Area= 12.6 sf Perim= 12.6' r= 1.00' n= 0.013 Corrugated PE, smooth interior
9.5	2,517	Total			

Subcatchment 4: Trib Area 4

Hydrograph



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Type II 24-hr 100 year Rainfall=6.60"

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Summary for Subcatchment 5: Trib Area 5

Runoff = 69.58 cfs @ 11.92 hrs, Volume= 4.325 af, Depth= 6.36"

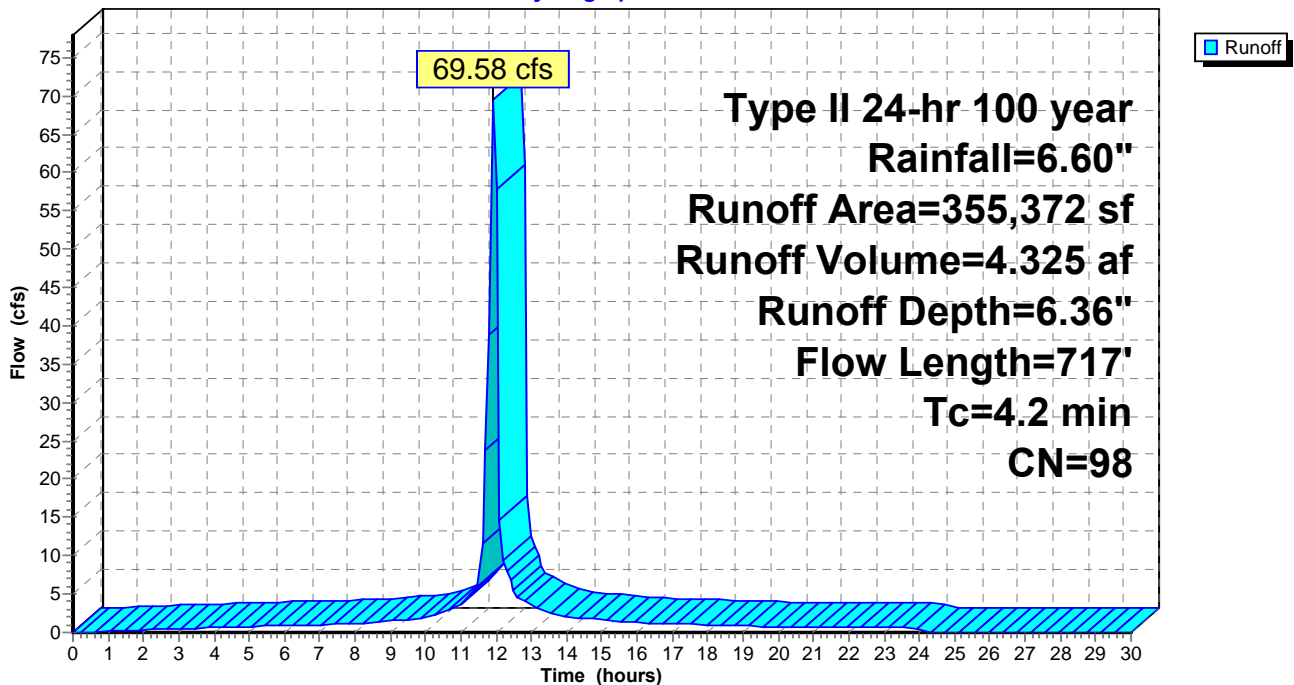
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr 100 year Rainfall=6.60"

	Area (sf)	CN	Description
*	73,450	98	BUILDING, HSG D
	281,922	98	Paved parking, HSG D
	355,372	98	Weighted Average
	355,372		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	100	0.0640	1.97		Sheet Flow, PAVEMENT Smooth surfaces n= 0.011 P2= 2.60"
0.9	134	0.0156	2.54		Shallow Concentrated Flow, PAVEMENT Paved Kv= 20.3 fps
2.5	483	0.0050	3.21	2.52	Circular Channel (pipe), 12" HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
4.2	717	Total			

Subcatchment 5: Trib Area 5

Hydrograph



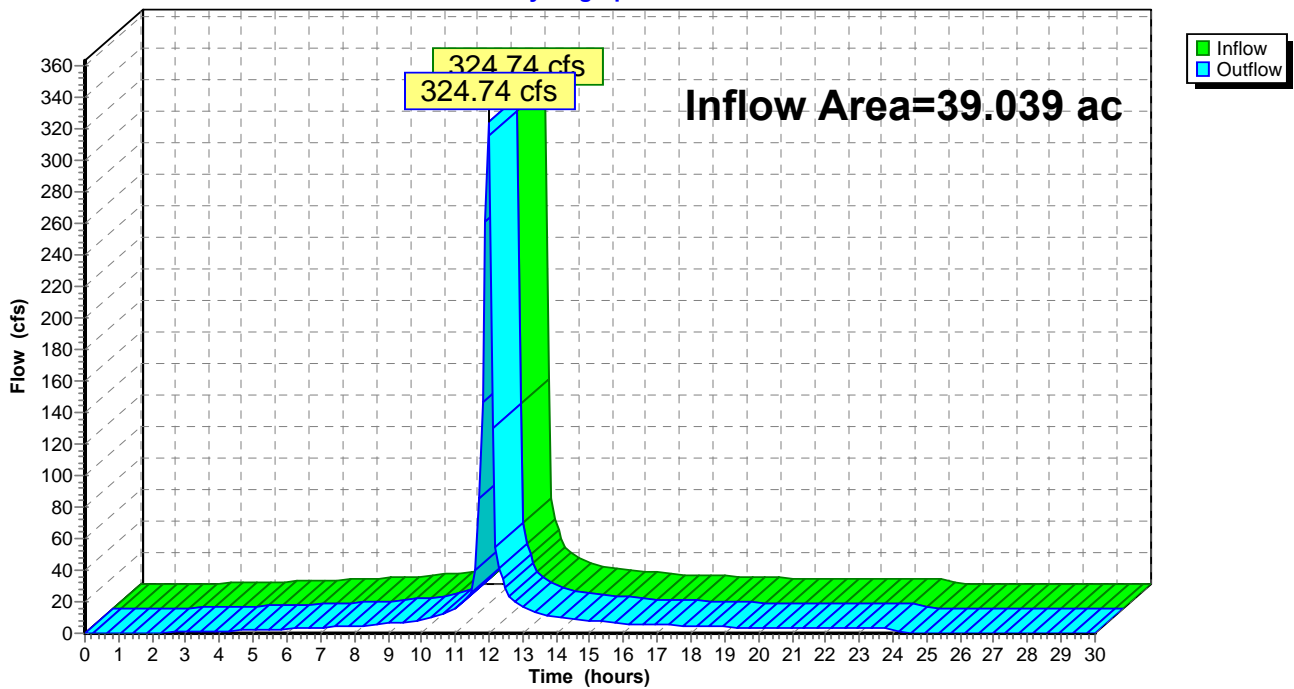
Summary for Reach R1: Harbor

Inflow Area = 39.039 ac, 73.86% Impervious, Inflow Depth = 5.90" for 100 year event
Inflow = 324.74 cfs @ 11.97 hrs, Volume= 19.181 af
Outflow = 324.74 cfs @ 11.97 hrs, Volume= 19.181 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

Reach R1: Harbor

Hydrograph



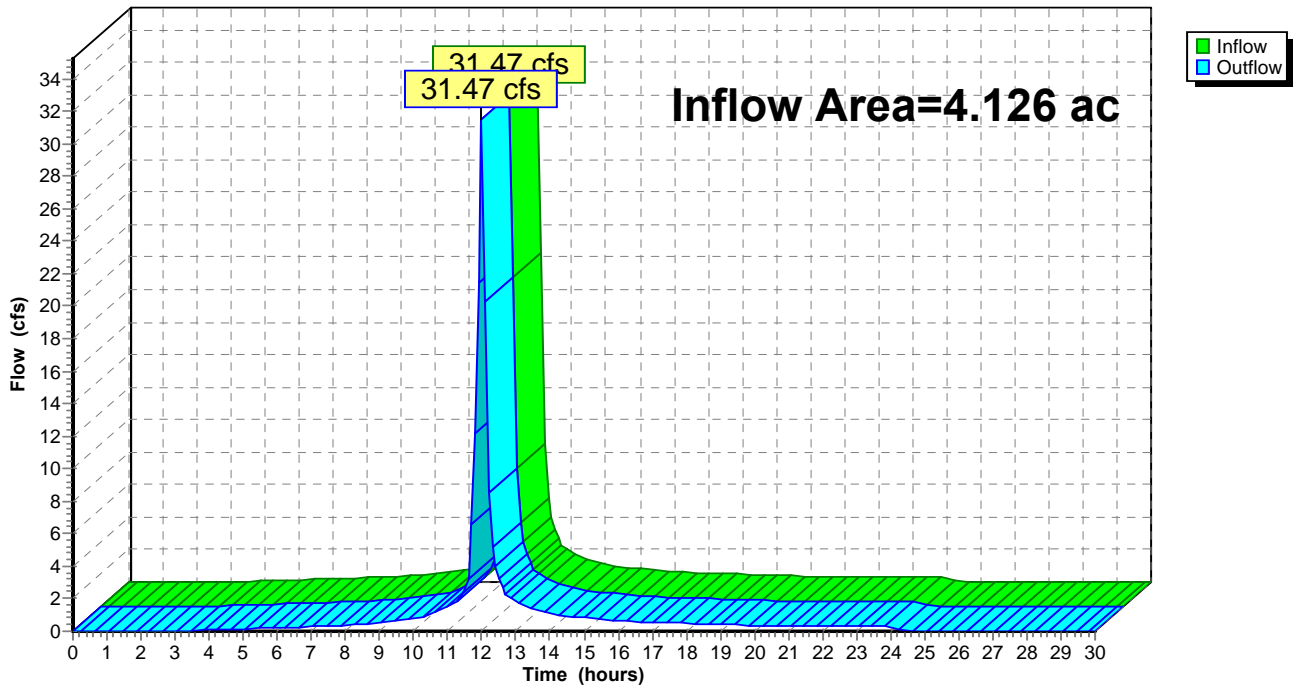
Summary for Reach R2: Mohawk River

Inflow Area = 4.126 ac, 51.77% Impervious, Inflow Depth = 5.55" for 100 year event
Inflow = 31.47 cfs @ 12.00 hrs, Volume= 1.907 af
Outflow = 31.47 cfs @ 12.00 hrs, Volume= 1.907 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

Reach R2: Mohawk River

Hydrograph



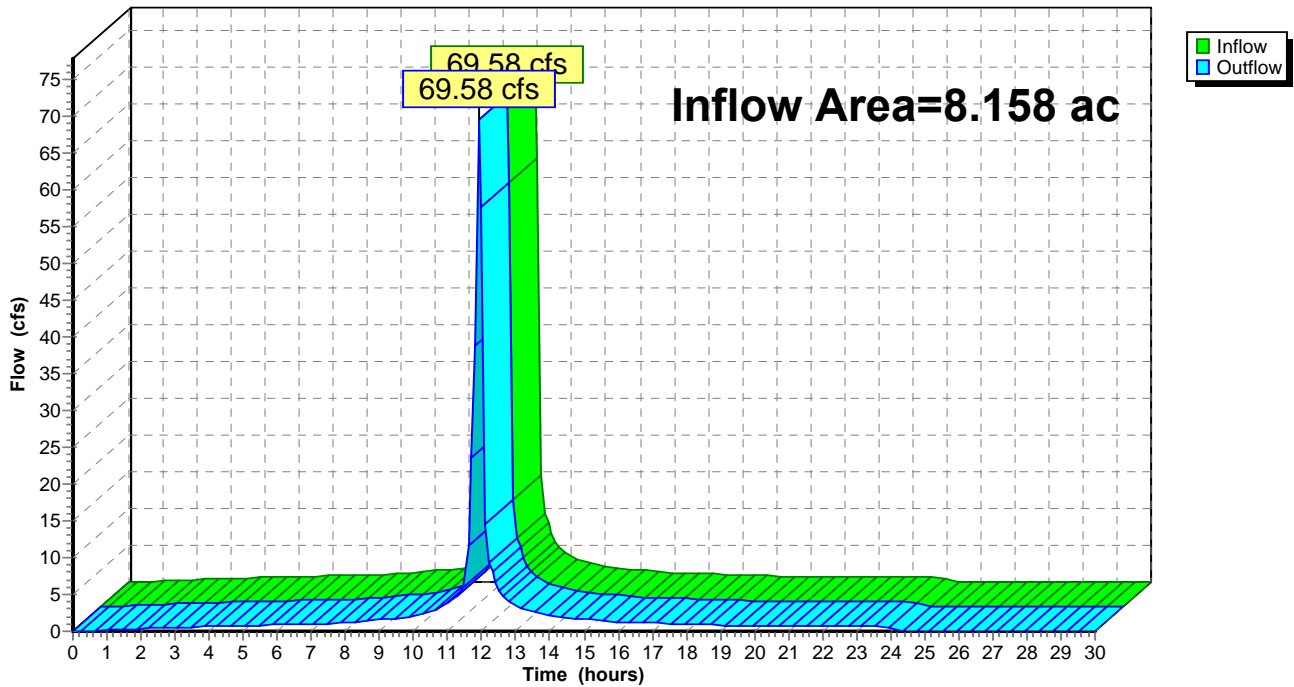
Summary for Reach R3: College Creek

Inflow Area = 8.158 ac, 100.00% Impervious, Inflow Depth = 6.36" for 100 year event
Inflow = 69.58 cfs @ 11.92 hrs, Volume= 4.325 af
Outflow = 69.58 cfs @ 11.92 hrs, Volume= 4.325 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

Reach R3: College Creek

Hydrograph



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Type II 24-hr WQv Rainfall=1.20"

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Time span=0.00-30.00 hrs, dt=0.10 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment 1: Trib Area 1

Runoff Area=585,379 sf 80.19% Impervious Runoff Depth=0.74"
Flow Length=2,723' Tc=6.9 min CN=95 Runoff=15.69 cfs 0.828 af

Subcatchment 2: Trib Area 2

Runoff Area=918,145 sf 67.77% Impervious Runoff Depth=0.61"
Flow Length=2,212' Tc=6.8 min CN=93 Runoff=20.70 cfs 1.073 af

Subcatchment 3: Trib Area 3

Runoff Area=197,032 sf 83.38% Impervious Runoff Depth=0.81"
Flow Length=1,809' Tc=6.5 min CN=96 Runoff=5.73 cfs 0.307 af

Subcatchment 4: Trib Area 4

Runoff Area=179,732 sf 51.77% Impervious Runoff Depth=0.50"
Flow Length=2,517' Tc=9.5 min CN=91 Runoff=3.07 cfs 0.173 af

Subcatchment 5: Trib Area 5

Runoff Area=355,372 sf 100.00% Impervious Runoff Depth=0.99"
Flow Length=717' Tc=4.2 min CN=98 Runoff=11.79 cfs 0.670 af

Reach R1: Harbor

Inflow=42.11 cfs 2.208 af
Outflow=42.11 cfs 2.208 af

Reach R2: Mohawk River

Inflow=3.07 cfs 0.173 af
Outflow=3.07 cfs 0.173 af

Reach R3: College Creek

Inflow=11.79 cfs 0.670 af
Outflow=11.79 cfs 0.670 af

Total Runoff Area = 51.324 ac Runoff Volume = 3.051 af Average Runoff Depth = 0.71"
23.76% Pervious = 12.196 ac 76.24% Impervious = 39.127 ac

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Type II 24-hr WQv Rainfall=1.20"

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Summary for Subcatchment 1: Trib Area 1

Runoff = 15.69 cfs @ 11.98 hrs, Volume= 0.828 af, Depth= 0.74"

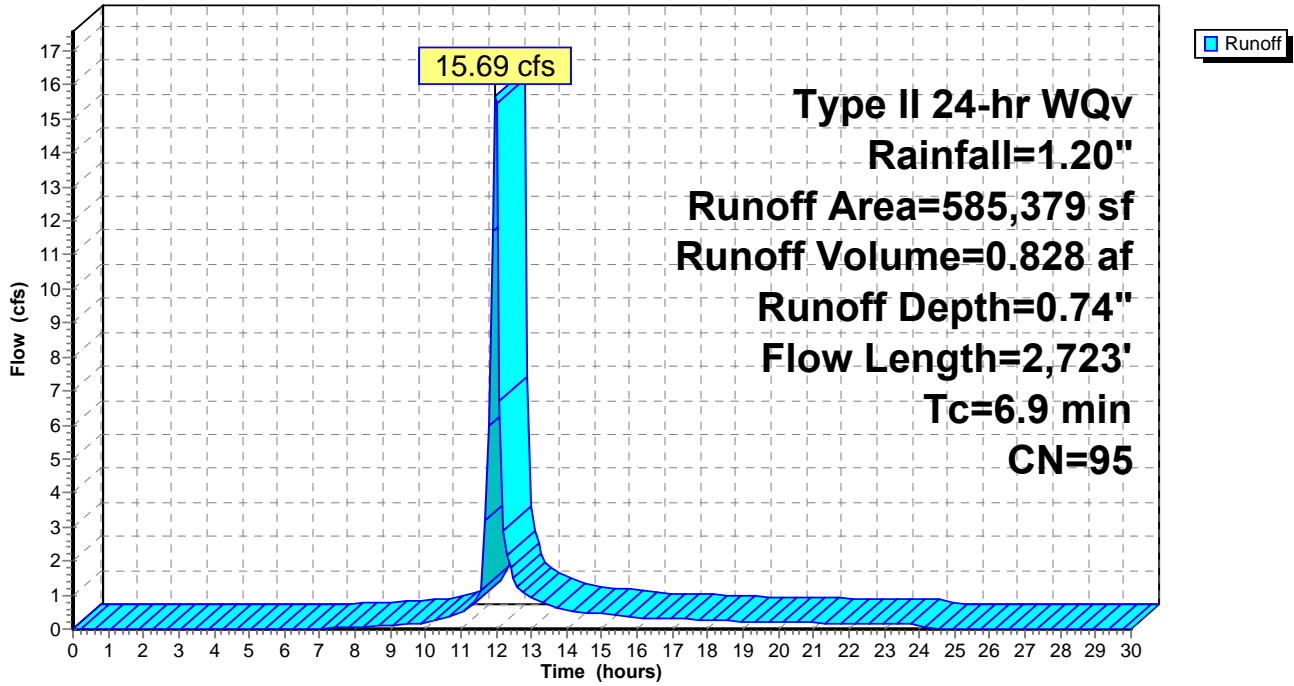
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr WQv Rainfall=1.20"

	Area (sf)	CN	Description
*	166,024	98	BUILDING, HSG D
	303,407	98	Paved parking, HSG D
	115,948	84	50-75% Grass cover, Fair, HSG D
	585,379	95	Weighted Average
	115,948		Pervious Area
	469,431		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	150	0.1330	2.87		Sheet Flow, ROOF Smooth surfaces n= 0.011 P2= 2.60"
0.2	63	0.0200	4.90	1.71	Circular Channel (pipe), ROOF DRAIN Diam= 8.0" Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
0.6	153	0.0051	4.21	3.31	Circular Channel (pipe), 12" HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.010 PVC, smooth interior
0.6	226	0.0157	6.60	8.09	Circular Channel (pipe), 15" HDPE Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.9	310	0.0052	5.57	9.85	Circular Channel (pipe), 18" HDPE Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.010 PVC, smooth interior
2.3	1,035	0.0067	7.66	24.07	Circular Channel (pipe), 24" HDPE Diam= 24.0" Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.010 PVC, smooth interior
1.1	516	0.0050	7.68	37.70	Circular Channel (pipe), 30" HDPE Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.010 PVC, smooth interior
0.3	270	0.0319	16.85	119.13	Circular Channel (pipe), 36" HDPE Diam= 36.0" Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
6.9	2,723	Total			

Subcatchment 1: Trib Area 1

Hydrograph



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Type II 24-hr WQv Rainfall=1.20"

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Summary for Subcatchment 2: Trib Area 2

Runoff = 20.70 cfs @ 11.98 hrs, Volume= 1.073 af, Depth= 0.61"

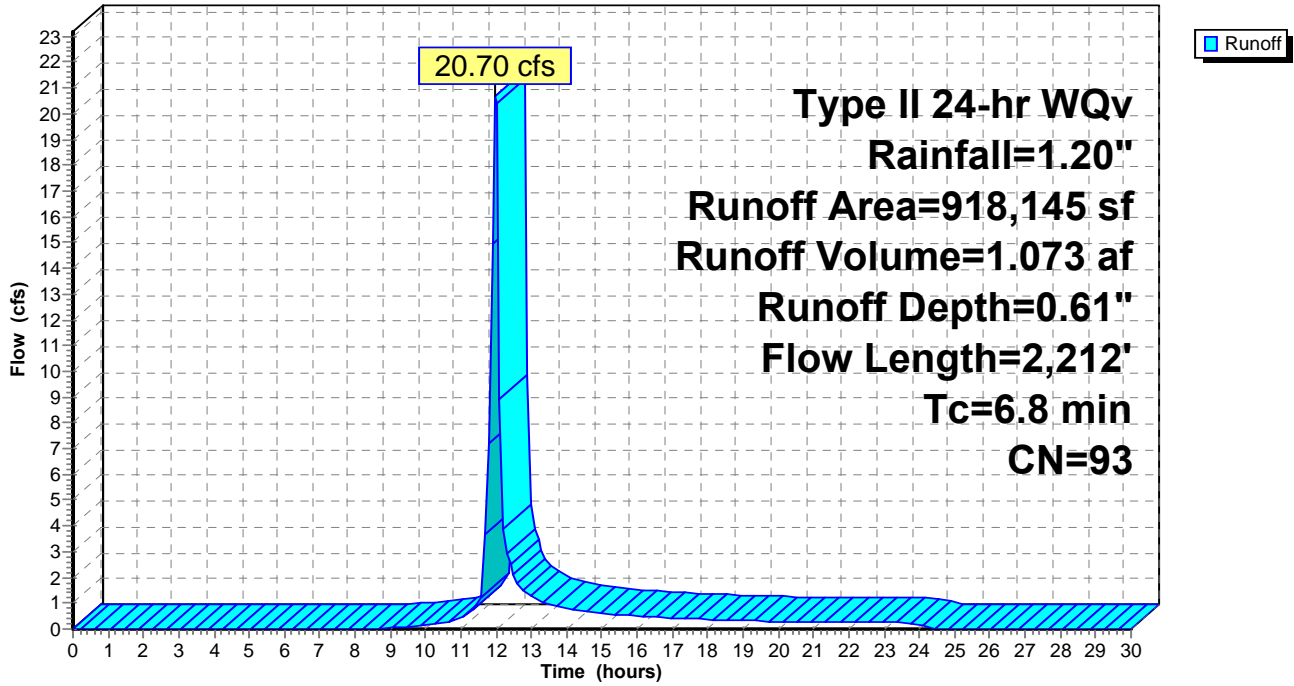
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr WQv Rainfall=1.20"

	Area (sf)	CN	Description
*	233,398	98	BUILDING, HSG D
	388,841	98	Paved parking, HSG D
	295,906	84	50-75% Grass cover, Fair, HSG D
	918,145	93	Weighted Average
	295,906		Pervious Area
	622,239		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0180	1.19		Sheet Flow, ASPHALT Smooth surfaces n= 0.011 P2= 2.60"
0.5	83	0.0040	2.59	0.90	Circular Channel (pipe), 8" HDPE Diam= 8.0" Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.011 PVC, smooth interior
0.2	26	0.0040	2.87	2.25	Circular Channel (pipe), 12" HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.7	175	0.0040	4.33	5.31	Circular Channel (pipe), 15" HDPE Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.010 PVC, smooth interior
1.3	372	0.0040	4.89	8.64	Circular Channel (pipe), 18" HDPE Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.010 PVC, smooth interior
1.4	578	0.0040	6.87	33.72	Circular Channel (pipe), 30" HDPE Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.010 PVC, smooth interior
0.6	274	0.0090	7.93	38.91	Circular Channel (pipe), 30" HDPE Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.013 Corrugated PE, smooth interior
0.7	604	0.0236	14.50	102.46	Circular Channel (pipe), 36" HDPE Diam= 36.0" Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
6.8	2,212	Total			

Subcatchment 2: Trib Area 2

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Type II 24-hr WQv Rainfall=1.20"

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Summary for Subcatchment 3: Trib Area 3

Runoff = 5.73 cfs @ 11.97 hrs, Volume= 0.307 af, Depth= 0.81"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr WQv Rainfall=1.20"

Area (sf)	CN	Description
* 40,917	98	BUILDING, HSG D
123,374	98	Paved parking, HSG D
32,741	84	50-75% Grass cover, Fair, HSG D
197,032	96	Weighted Average
32,741		Pervious Area
164,291		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	100	0.3000	3.66		Sheet Flow, ROOF Smooth surfaces n= 0.011 P2= 2.60"
0.6	83	0.0040	2.19	0.76	Circular Channel (pipe), 8" HDPE Diam= 8.0" Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior
0.2	26	0.0040	2.87	2.25	Circular Channel (pipe), 12 HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.0	201	0.0040	3.33	4.09	Circular Channel (pipe), 15" HDPE Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
1.6	372	0.0040	3.76	6.64	Circular Channel (pipe), 18" HDPE Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
2.3	852	0.0056	6.25	30.69	Circular Channel (pipe), 30" HDPE Diam= 30.0" Area= 4.9 sf Perim= 7.9' r= 0.63' n= 0.013 Corrugated PE, smooth interior
0.3	175	0.0081	9.41	90.55	Circular Channel (pipe), 42" HDPE Diam= 42.0" Area= 9.6 sf Perim= 11.0' r= 0.88' n= 0.013 Corrugated PE, smooth interior
6.5	1,809	Total			

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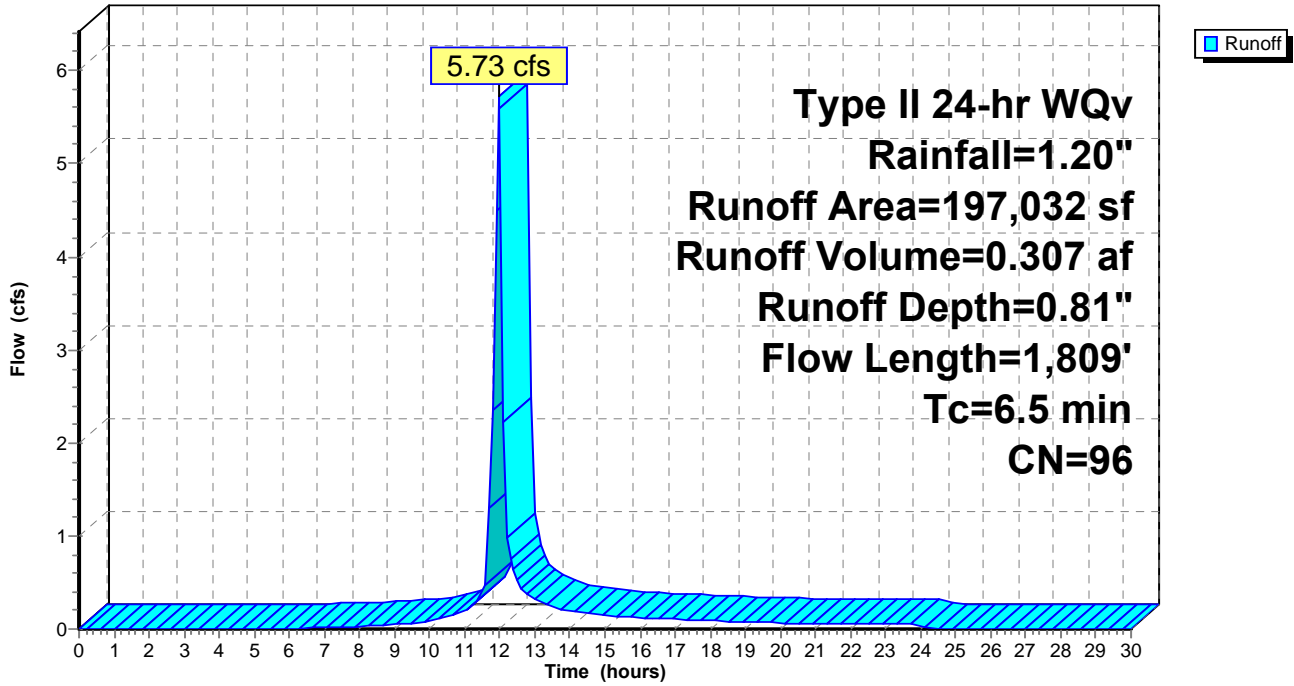
Type II 24-hr WQv Rainfall=1.20"

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Subcatchment 3: Trib Area 3

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Type II 24-hr WQv Rainfall=1.20"

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Summary for Subcatchment 4: Trib Area 4

Runoff = 3.07 cfs @ 12.01 hrs, Volume= 0.173 af, Depth= 0.50"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr WQv Rainfall=1.20"

Area (sf)	CN	Description
*	0	98 BUILDING, HSG D
93,055	98	Paved parking, HSG D
86,677	84	50-75% Grass cover, Fair, HSG D
179,732	91	Weighted Average
86,677		Pervious Area
93,055		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	54	0.0120	0.89		Sheet Flow, ASPHALT Smooth surfaces n= 0.011 P2= 2.60"
3.3	721	0.0063	3.60	2.83	Circular Channel (pipe), 12" HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
1.3	284	0.0051	3.76	4.61	Circular Channel (pipe), 15" HDPE Diam= 15.0" Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.9	303	0.0050	5.46	9.66	Circular Channel (pipe), 18" HDPE Diam= 18.0" Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.010 PVC, smooth interior
1.2	358	0.0051	5.14	16.16	Circular Channel (pipe), 24" HDPE Diam= 24.0" Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
1.2	490	0.0050	6.67	47.16	Circular Channel (pipe), 36" HDPE Diam= 36.0" Area= 7.1 sf Perim= 9.4' r= 0.75' n= 0.013 Corrugated PE, smooth interior
0.6	307	0.0050	8.08	101.57	Circular Channel (pipe), 48" HDPE Diam= 48.0" Area= 12.6 sf Perim= 12.6' r= 1.00' n= 0.013 Corrugated PE, smooth interior
9.5	2,517	Total			

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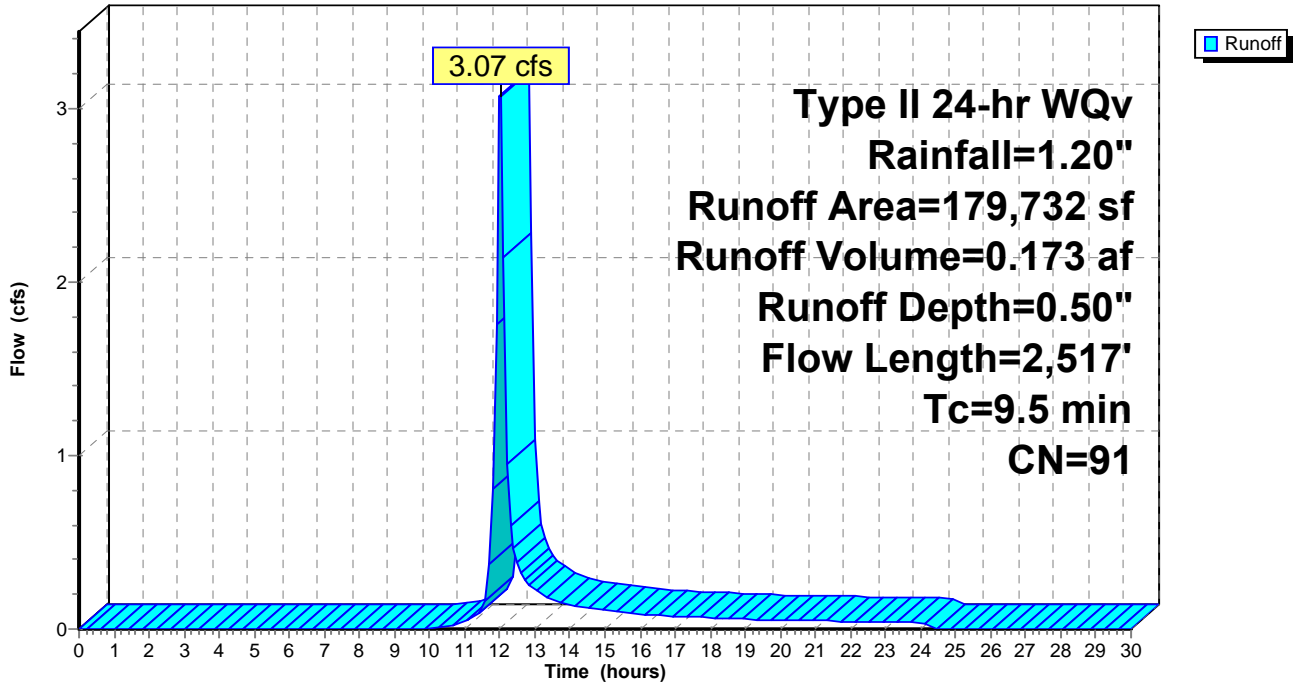
Type II 24-hr WQv Rainfall=1.20"

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Subcatchment 4: Trib Area 4

Hydrograph



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Type II 24-hr WQv Rainfall=1.20"

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Summary for Subcatchment 5: Trib Area 5

Runoff = 11.79 cfs @ 11.93 hrs, Volume= 0.670 af, Depth= 0.99"

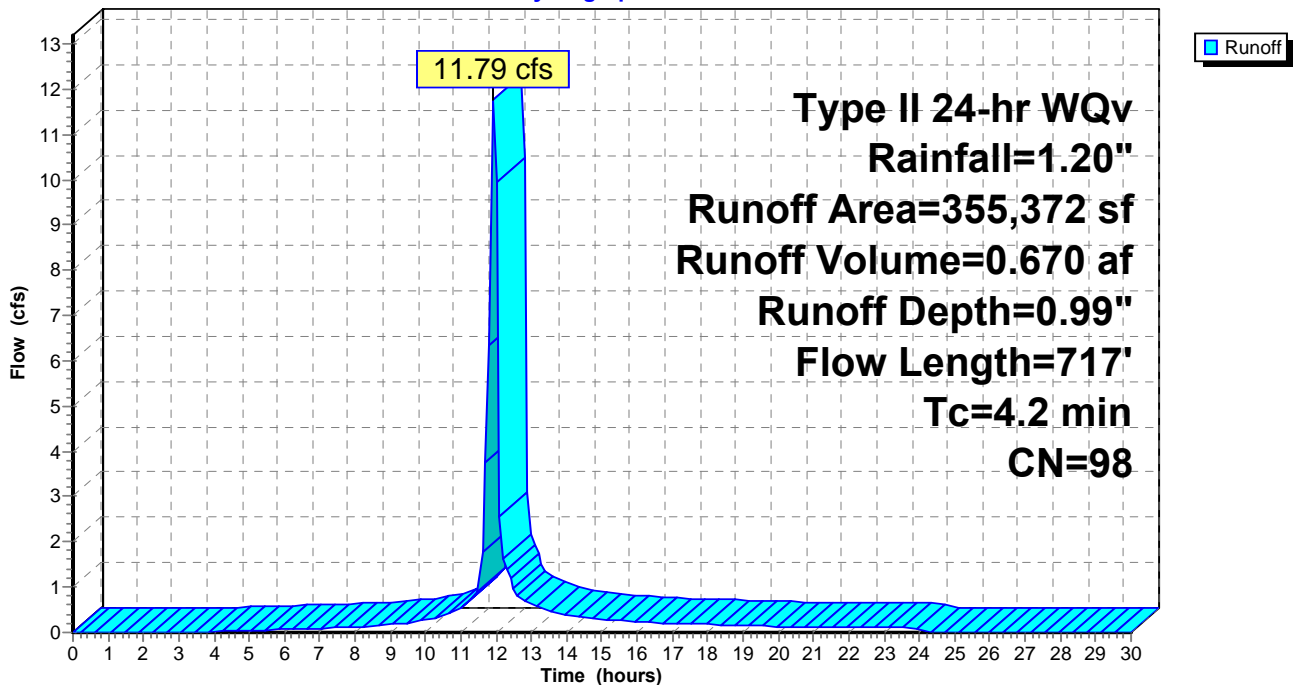
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs
Type II 24-hr WQv Rainfall=1.20"

Area (sf)	CN	Description
* 73,450	98	BUILDING, HSG D
281,922	98	Paved parking, HSG D
355,372	98	Weighted Average
355,372		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.8	100	0.0640	1.97		Sheet Flow, PAVEMENT Smooth surfaces n= 0.011 P2= 2.60"
0.9	134	0.0156	2.54		Shallow Concentrated Flow, PAVEMENT Paved Kv= 20.3 fps
2.5	483	0.0050	3.21	2.52	Circular Channel (pipe), 12" HDPE Diam= 12.0" Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
4.2	717	Total			

Subcatchment 5: Trib Area 5

Hydrograph



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Type II 24-hr WQv Rainfall=1.20"

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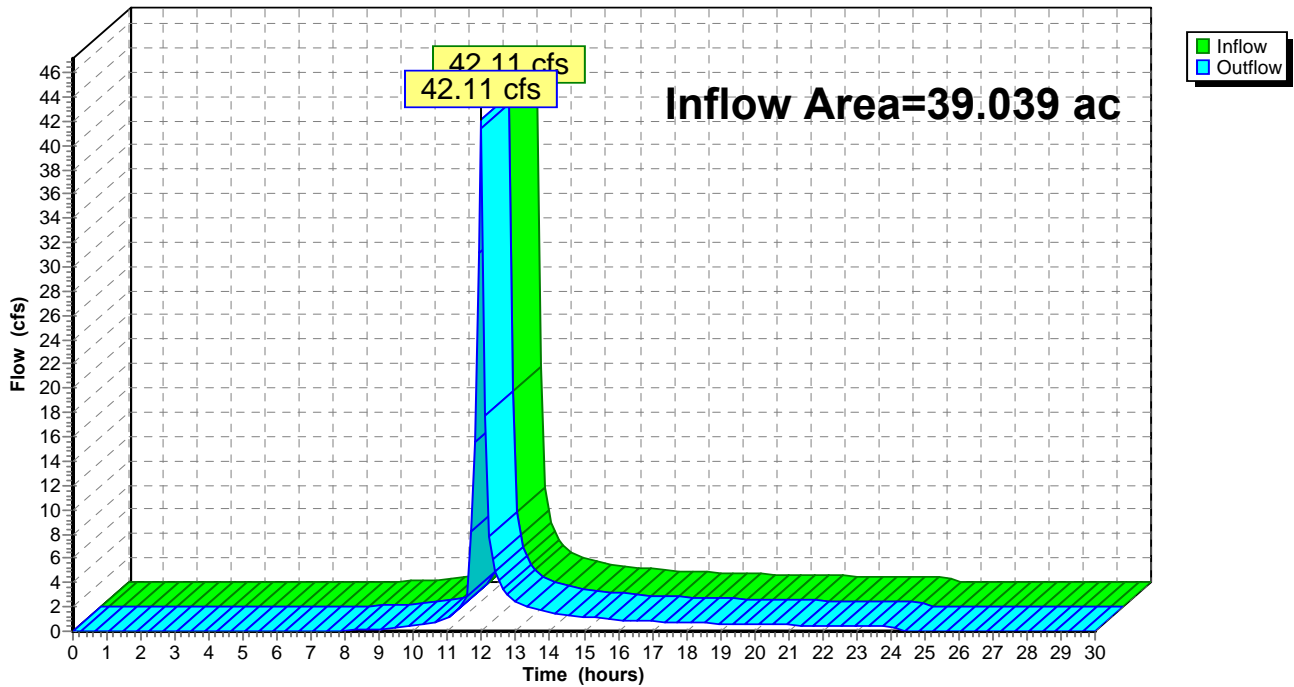
Summary for Reach R1: Harbor

Inflow Area = 39.039 ac, 73.86% Impervious, Inflow Depth = 0.68" for WQv event
Inflow = 42.11 cfs @ 11.98 hrs, Volume= 2.208 af
Outflow = 42.11 cfs @ 11.98 hrs, Volume= 2.208 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

Reach R1: Harbor

Hydrograph



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Type II 24-hr WQv Rainfall=1.20"

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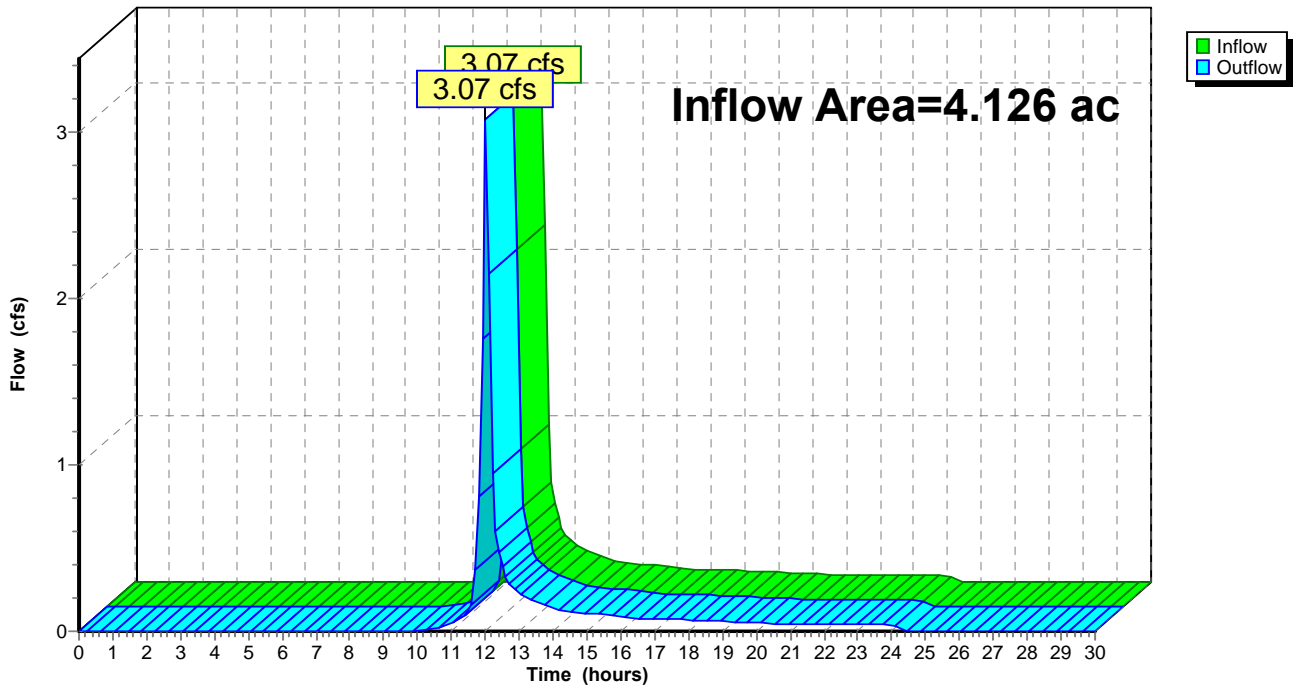
Summary for Reach R2: Mohawk River

Inflow Area = 4.126 ac, 51.77% Impervious, Inflow Depth = 0.50" for WQv event
Inflow = 3.07 cfs @ 12.01 hrs, Volume= 0.173 af
Outflow = 3.07 cfs @ 12.01 hrs, Volume= 0.173 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

Reach R2: Mohawk River

Hydrograph



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Type II 24-hr WQv Rainfall=1.20"

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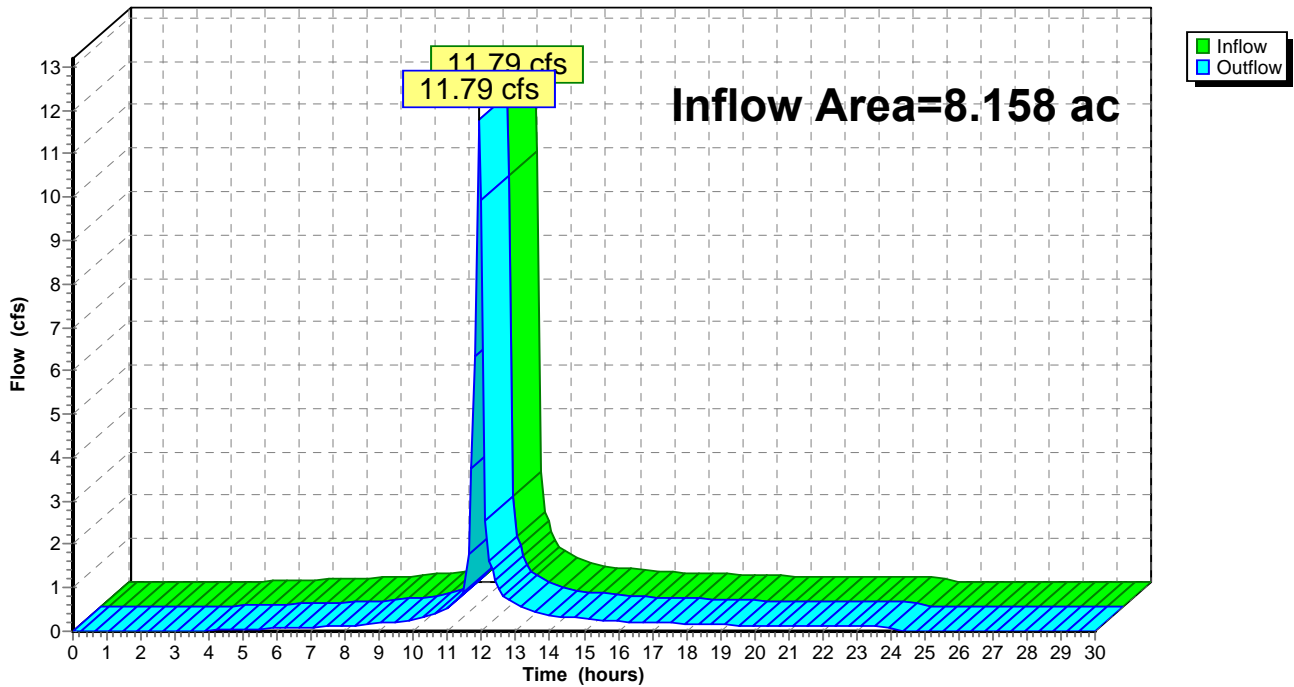
Summary for Reach R3: College Creek

Inflow Area = 8.158 ac, 100.00% Impervious, Inflow Depth = 0.99" for WQv event
Inflow = 11.79 cfs @ 11.93 hrs, Volume= 0.670 af
Outflow = 11.79 cfs @ 11.93 hrs, Volume= 0.670 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.10 hrs

Reach R3: College Creek

Hydrograph



**THE FOLLOWING, IS THE CALCULATION FOR PIPES FLOWING
FULL AS STATED IN THE CHEZY-MANNING FORMULA, WHERE:
TRIBUTARY AREA**

Qp = PROJECTED DISCHARGE IN C.F.S.
 Q MAX = DISCHARGE FOR PIPE FLOWING FULL IN C.F.S.
 n = COEFFICIENT OF ROUGHNESS
 A = CROSS SECTIONAL AREA OF FLOW IN SQUARE FEET
 R = HYDRAULIC RADIUS IN FT.

S = SLOPE IN FT./FT.
 Vm = VELOCITY OF PIPE FLOWING FULL IN FT./SEC.
 D = PIPE DIAMETER IN INCHES
 Vp = PROJECTED VELOCITY IN FT./SEC.

LOCATION	Qp	Q MAX	n	A	R	S	Vm	D
CB#1-CB#2	2.54	3.30	0.010	0.785	0.250	0.0050	4.2	12
CB#2-CB#3	4.02	5.98	0.010	1.227	0.313	0.0050	4.9	15
CB#3-CB#4	5.57	15.18	0.010	1.227	0.313	0.0322	12.4	15
CB#4-CB#5	6.35	9.32	0.010	1.766	0.375	0.0046	5.3	18
CB#5-CB#6	7.91	9.01	0.010	1.766	0.375	0.0043	5.1	18
CB#6-CB#7	9.43	10.64	0.010	1.766	0.375	0.0060	6.0	18
CB#7-CB#8	9.70	11.08	0.010	1.766	0.375	0.0065	6.3	18
CB#60-CB#8	0.98	4.46	0.010	0.785	0.250	0.0091	5.7	12
CB#8-CB#9	11.04	20.24	0.010	3.140	0.500	0.0047	6.4	24
CB#9-CB#10	12.12	20.03	0.010	3.140	0.500	0.0046	6.4	24
CB#10-CB#11	13.48	20.88	0.010	3.140	0.500	0.0050	6.7	24
CB#11-CB#12	15.54	20.88	0.010	3.140	0.500	0.0050	6.7	24
CB#12-CB#13	18.28	20.88	0.010	3.140	0.500	0.0050	6.7	24
CB#13-CB#14	20.73	20.88	0.010	3.140	0.500	0.0050	6.7	24
CB#14-CB#15	23.71	25.57	0.010	3.140	0.500	0.0075	8.1	24
CB#15-STORM MH #1	26.03	29.53	0.010	3.140	0.500	0.0100	9.4	24
CB#16-CB#17	1.99	3.30	0.010	0.785	0.250	0.0050	4.2	12
CB#17-CB#18	4.47	5.98	0.010	1.227	0.313	0.0050	4.9	15
CB#18-CB#19	6.73	7.08	0.010	1.227	0.313	0.0070	5.8	15
CB#19-STORM MH#2	10.18	10.19	0.010	1.227	0.313	0.0145	8.3	15
STORM MH#2-STORM MH#5	10.18	10.22	0.010	1.227	0.313	0.0146	8.3	15
STORM MH#5-STORM MH#1	10.18	12.86	0.010	1.227	0.313	0.0231	10.5	15
STORM MH#1-ST MH10	36.21	37.80	0.010	4.906	0.625	0.0050	7.7	30
STORM MH#10-ST MH11	36.21	37.80	0.010	4.906	0.625	0.0050	7.7	30
ST MH11-DS#1	36.21	37.80	0.010	4.906	0.625	0.0050	7.7	30

CB #1

**POST DEVELOPMENT
25 YEAR STORM**

PAVED AREA (ACRES)	0.57
GRASS AREA (ACRES)	0.12
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	2.54
Accumulative Qpost (CFS)	2.54

CB #2

**POST DEVELOPMENT
25 YEAR STORM**

PAVED AREA (ACRES)	0.33
GRASS AREA (ACRES)	0.07
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	1.47
Accumulative Qpost (CFS)	4.02

CB #3

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.35
GRASS AREA (ACRES)	0.03
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	1.55
Accumulative Qpost (CFS)	5.57

CB #4

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.17
GRASS AREA (ACRES)	0.12
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	0.78
Accumulative Qpost (CFS)	6.35

CB #5

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.34
GRASS AREA (ACRES)	0.28
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	1.57
Accumulative Qpost (CFS)	7.91

CB #6

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.34
GRASS AREA (ACRES)	0.06
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	1.51
Accumulative Qpost (CFS)	9.43

CB #7

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.06
GRASS AREA (ACRES)	0.03
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	0.27
Accumulative Qpost (CFS)	9.70

CB #60

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.22
GRASS AREA (ACRES)	0.05
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	0.98
Accumulative Qpost (CFS)	0.98

CB #8

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.08
GRASS AREA (ACRES)	0.02
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	0.36
Accumulative Qpost (CFS)	11.04

CB #9

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.23
GRASS AREA (ACRES)	0.26
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	1.08
Accumulative Qpost (CFS)	12.12

CB #10

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.30
GRASS AREA (ACRES)	0.14
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	1.36
Accumulative Qpost (CFS)	13.48

CB #11

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.46
GRASS AREA (ACRES)	0.14
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	2.06
Accumulative Qpost (CFS)	15.54

CB #12

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.61
GRASS AREA (ACRES)	0.23
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	2.75
Accumulative Qpost (CFS)	18.28

CB #13

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.55
GRASS AREA (ACRES)	0.07
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	2.44
Accumulative Qpost (CFS)	20.73

CB #14

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.67
GRASS AREA (ACRES)	0.11
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	2.98
Accumulative Qpost (CFS)	23.71

CB #15

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.52
GRASS AREA (ACRES)	0.11
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	2.32
Accumulative Qpost (CFS)	26.03

CB #16

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.45
GRASS AREA (ACRES)	0.03
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	1.99
Accumulative Qpost (CFS)	1.99

CB #17

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.56
GRASS AREA (ACRES)	0.05
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	2.48
Accumulative Qpost (CFS)	4.47

CB #18

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.51
GRASS AREA (ACRES)	0.04
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	2.26
Accumulative Qpost (CFS)	6.73

CB #19

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.78
GRASS AREA (ACRES)	0.04
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	3.45
Accumulative Qpost (CFS)	10.18

STORM MH#2

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.00
GRASS AREA (ACRES)	0.00
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	0.00
Accumulative Qpost (CFS)	10.18

STORM MH#5

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.00
GRASS AREA (ACRES)	0.00
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	0.00
Accumulative Qpost (CFS)	10.18

STORM MH#1

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.00
GRASS AREA (ACRES)	0.00
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	0.00
Accumulative Qpost (CFS)	36.21

**THE FOLLOWING, IS THE CALCULATION FOR PIPES FLOWING
FULL AS STATED IN THE CHEZY-MANNING FORMULA, WHERE:
TRIBUTARY AREA**

Qp = PROJECTED DISCHARGE IN C.F.S.
Q MAX = DISCHARGE FOR PIPE FLOWING FULL IN C.F.S.
n = COEFFICIENT OF ROUGHNESS
A = CROSS SECTIONAL AREA OF FLOW IN SQUARE FEET
R = HYDRAULIC RADIUS IN FT.

S = SLOPE IN FT./FT.
Vm = VELOCITY OF PIPE FLOWING FULL IN FT./SEC.
D = PIPE DIAMETER IN INCHES
Vp = PROJECTED VELOCITY IN FT./SEC.

LOCATION	Qp	Q MAX	n	A	R	S	Vm	D
PORP MH E-MH#835	38.88	46.11	0.011	4.906	0.625	0.0090	9.4	30
PORP CB 10-MH#835	25.80	34.37	0.011	4.906	0.625	0.0050	7.0	30
MH#835-STORM MH 4	64.64	68.36	0.011	7.065	0.750	0.0075	9.7	36
STORM MH 4 - DS#2	64.64	74.89	0.011	7.065	0.750	0.0090	10.6	36
CB#55 - DS#2	1.37	3.00	0.011	0.785	0.250	0.0050	3.8	12
DS#2-Dynamic Sep #2	66.01	68.36	0.011	7.065	0.750	0.0075	9.7	36

PROP MH E

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	8.71
GRASS AREA (ACRES)	1.93
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	38.88
Accumulative Qpost (CFS)	38.88

PROB CB 10

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	5.58
GRASS AREA (ACRES)	4.86
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	25.80
Accumulative Qpost (CFS)	25.80

MH#835

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	14.28
GRASS AREA (ACRES)	6.79
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	64.64
Accumulative Qpost (CFS)	64.64

STORM MH 4

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.00
GRASS AREA (ACRES)	0.00
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	0.00
Accumulative Qpost (CFS)	64.64

CB#55

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.30
GRASS AREA (ACRES)	0.18
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	1.37
Accumulative Qpost (CFS)	1.37

DS#2

**POST DEVELOPMENT
25 YEAR STORM**

PAVED (roof) AREA (ACRES)	0.00
GRASS AREA (ACRES)	0.00
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	0.00
Accumulative Qpost (CFS)	66.01

**THE FOLLOWING, IS THE CALCULATION FOR PIPES FLOWING
FULL AS STATED IN THE CHEZY-MANNING FORMULA, WHERE:
TRIBUTARY AREA**

Qp = PROJECTED DISCHARGE IN C.F.S.
 Q MAX = DISCHARGE FOR PIPE FLOWING FULL IN C.F.S.
 n = COEFFICIENT OF ROUGHNESS
 A = CROSS SECTIONAL AREA OF FLOW IN SQUARE FEET
 R = HYDRAULIC RADIUS IN FT.

S = SLOPE IN FT./FT.
 Vm = VELOCITY OF PIPE FLOWING FULL IN FT./SEC.
 D = PIPE DIAMETER IN INCHES
 Vp = PROJECTED VELOCITY IN FT./SEC.

LOCATION	Qp	Q MAX	n	A	R	S	Vm	D
CB#56-CB#57	4.33	6.66	0.011	1.227	0.313	0.0075	5.4	15
CB#57-CB#58	8.33	10.45	0.011	1.766	0.375	0.0070	5.9	18
CB#58-CB#59	11.97	12.49	0.011	1.766	0.375	0.0100	7.1	18
CB#67-CB#66	1.68	3.00	0.011	0.785	0.250	0.0050	3.8	12
CB#66-CB#65	3.23	5.44	0.011	1.227	0.313	0.0050	4.4	15
CB#65-CB#59	4.92	5.96	0.011	1.227	0.313	0.0060	4.9	15
CB#59-DS#3	16.88	34.37	0.011	4.906	0.625	0.0050	7.0	30

CB#56

**POST DEVELOPMENT
25 YEAR STORM**

PAVED AREA (ACRES)	0.97
GRASS AREA (ACRES)	0.20
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	4.33
Accumulative Qpost (CFS)	4.33

CB#57

**POST DEVELOPMENT
25 YEAR STORM**

PAVED AREA (ACRES)	0.90
GRASS AREA (ACRES)	0.14
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	4.00
Accumulative Qpost (CFS)	8.33

CB#58

**POST DEVELOPMENT
25 YEAR STORM**

PAVED AREA (ACRES)	0.82
GRASS AREA (ACRES)	0.08
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	3.64
Accumulative Qpost (CFS)	11.97

CB#67

**POST DEVELOPMENT
25 YEAR STORM**

PAVED AREA (ACRES)	0.38
GRASS AREA (ACRES)	0.00
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	1.68
Accumulative Qpost (CFS)	1.68

CB#66

**POST DEVELOPMENT
25 YEAR STORM**

PAVED AREA (ACRES)	0.35
GRASS AREA (ACRES)	0.04
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	1.55
Accumulative Qpost (CFS)	3.23

CB#65

**POST DEVELOPMENT
25 YEAR STORM**

PAVED AREA (ACRES)	0.38
GRASS AREA (ACRES)	0.05
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	1.69
Accumulative Qpost (CFS)	4.92

CB#59

**POST DEVELOPMENT
25 YEAR STORM**

PAVED AREA (ACRES)	0.27
GRASS AREA (ACRES)	0.05
C-paved	0.90
C-GRASS	0.05
DURATION (MINUTES)	10
INTENSITY (INCHES/HR)	4.90
Qpost (CFS)	1.20
Accumulative Qpost (CFS)	#REF!

COMPUTATION OF WATER QUALITY VOLUME (WQ_v) OF ENTIRE SITE

Impervious Area (Acres)	39.130	
I (Impervious Cover)	76.23%	
R _v = 0.05+0.009I	0.74	Minimum R _v = 0.20
P	1.2	
A (site area in acres)	51.330	
WQ _v (1A) = [(P)(R _v)(A)]/12 (in acre-feet)	3.778	

INFERRED COMPUTATION OF TREATED WATER QUALITY VOLUME (WQ_v) OF ENTIRE SITE

Based upon 87.3% of flow based upon WQ_{vF} 3.298

COMPUTATION OF RR_v OF ENTIRE SITE

A_{ic} - Total Impervious Area -(Acres)	39.13	
I (Impervious Cover)	76.23%	
R _v = 0.95	0.95	
P	1.2	
A (site area in acres)	51.33	
S (Hydrologic Group Specific Reduction Factor)	0.30	Hydrologic Class C Soil
A_i (Impervious cover targeted for runoff reduction)	11.74	
RR _v = [(P)(R _v)(A _i)]/12 (in acre-feet)	1.115	

Appendix H

Recovery Well System Cost Estimate

COST ESTIMATE
ALCO
Groundwater Recovery System
Parcel B

Item	Unit cost	Unit	Quantity	Cost
General and Site Preparation				
Mobilization	\$5,000.00	ls	1	\$5,000
Recover Well Installation				
Auger Drilling (per day)	\$2,750.00	day	2	\$5,500
10-inch PVC Riser w/backfill	\$30.00	ft	20	\$600
10-inch PVC Screen (0.020 slot x 10')	\$40.00	ft	10	\$400
Pitless adapter	\$350.00	ea	1	\$350
1-inch discharge tubing	\$2.50	ft	230	\$575
Submersible Pump	\$2,000.00	ls	1	\$2,000
Belt Skimmer System	\$7,500.00	ls	1	\$7,500
System Controls	\$2,500.00	ls	1	\$2,500
Recovery Well Subtotal				\$24,425
Construction				
Excavation (trench for 1-inch pipe)	\$45.00	ft	230	\$10,350
Backfill (pipe bedding, assumes 1 ft)	\$25.00	cy	30	\$750
Site Restoration	\$5,000.00	ea	1	\$5,000
Electrical	\$5,000.00	ea	1	\$5,000
Construction Subtotal				\$21,100
CAMP Monitoring	\$1,000.00	wk	3	\$3,000
CAMP Subtotal				\$3,000
Subtotal				\$48,525
Contingency (15%)				\$7,279
*Total Estimated Cost				\$55,804

Appendix I

Oil Water Separator Cost Estimate

ALCO-Maxon Site - Parcel B, BCP Site No. C447043
Site Management Plan Response - Corrective Measures Investigation Report
City of Schenectady, Schenectady County, New York
Oil/ Water Separator Cost Estimate

October 29, 2021
B&L JN 1368.001.005

Item No.	Description	Qty.	Unit	Unit Cost	Ext. Cost
203.02	Unclassified Excavation and Disposal (120'x80'x30')	10,667	CY	\$ 30	\$ 320,000
552.13	Temporary Steel Sheeting (400'x90')	36,000	SF	\$ 25	\$ 900,000
	Oil/Water Separator (60,000 Gal.)	6		\$ 233,835	\$ 1,403,010.72
Excavation and Sheeting Subtotal					\$ 2,623,011

Oil/Water Separators



From: Marshal Engleka
Inside Sales Representative
Highland Tank
One Highland Road
Stoystown, PA 15563
Email: mengleka@highlandtank.com
Phone: 814-893-6655

Subject: Quote Proposal
* Budget Quote*
Project Name: Amphitheater
Customer Name: Barton and Loguidice
Customer PO#:
Drawing #:



count on our products

trust in our people

Oil/Water Separators

Highland Tank OIL/WATER SEPARATOR QUOTATION

TO: BARTON AND LOGUIDICE
10 AIRLINE DR

ALBANY NY 12205
Attention: BRITTANY SCHAUB
Phone: 518-218-1801
Email: bshaub@bartonandloguidice.com

Payment Terms: All orders subject to credit approval by Highland Tank.
Orders over \$100,000: 25% due at time of order; 65% due on completion of manufacturing; 10% Net 30, for approved accounts.
Orders under \$100,000: Net 30 days, for approved accounts.
5% discount for full pmt at time of order.(Excludes frt, sls tax & CC pmnts)
All first-time orders under \$5,000 require payment at order placement.
Estimated Delivery: TBD
from date of receipt of approved drawing.

RE: AMPHITHEATER
SCHENECTADY NY
HTC 60000 SW HIGHGUARD

Freight to: BARTON AND LOGUIDICE

SCHENECTADY NY 12008


QTY	DESCRIPTION	UNIT PRICE	AMOUNT
1	Model HTC 60000 Gallon HighGuard Oil/Water Separator Application: Underground Type: SINGLE WALL Material: Mild Carbon Steel Diameter: 13'0" Length: 60'6" Steel Thickness Per UL 58 Standard. Flow Rate: 6000 GPM Inlet: 24"FLG 150# RFSO, Outlet: 24"FLG 150# RFSO Oil Pump Out Mount: 4"FLG-RFSO Level Sensor Mount: 2"FLG-RFSO Vent Size: 4" FTG Exterior Coating: HIGHGUARD		
1	HighGuard Packet w/10-yr warranty/installation/maint instructions		
1	Exterior Paint Touch Up Kit		
1	Interior Coating - Polyurethane - 60000 Gallon		
1	Interior Paint Touch Up Kit		
2	Round Manway - 24" Dia. w/ 38" High Bolt On Extension *There will be an adder per foot for Manway Extension beyond 38" Shown. Two Confirmed Elevations Are Required For Proper Manway Bolt On Extensions, Other Riser Pipes and Level Monitoring Sensor Lengths: (1) Grade Elevation and (2) Inlet Invert Elevation. Highland Tank is "NOT" Responsible For Improper Extension Lengths If Improper Elevations Are Supplied.** Includes: 4" FNPT For Gauge with Plug 2" FNPT For Vent NeoCork Gaskets,		

Quote No. 509862 Date 10/14/2021
Quoted by:
Marshal Engleka
mengleka@highlandtank.com
One Highland Road
Stoystown PA 15563
PH: 814-893-5701 FAX: 814-893-6126

Prices quoted valid for 20 days.
Representative:
DAN DOWD
ddowd@highlandtank.com
958 19TH ST
WATERVLIET NY 12189
Phone: 518-817-5890

Description, prices and conditions accepted. Please return signed copy when placing order.

Accepted by: _____ Date: ____/____/____
Per Highland Tank Standard Terms and Conditions: www.HighlandTank.com/Terms/TermsConditionsALL.pdf

 www.highlandtank.com

Highland Tank OIL/WATER SEPARATOR QUOTATION

TO: BARTON AND LOGUIDICE
10 AIRLINE DR

ALBANY NY 12205
Attention: BRITTANY SCHAUB
Phone: 518-218-1801
Email: bshaub@bartonandloguidice.com

Payment Terms: All orders subject to credit approval by Highland Tank.
Orders over \$100,000: 25% due at time of order; 65% due on completion of manufacturing; 10% Net 30, for approved accounts.
Orders under \$100,000: Net 30 days, for approved accounts.
5% discount for full pmt at time of order.(Excludes frt, sls tax & CC pmts)
All first-time orders under \$5,000 require payment at order placement.
Estimated Delivery: TBD
from date of receipt of approved drawing.

RE: AMPHITHEATER
SCHENECTADY NY
HTC 60000 SW HIGHGUARD

Freight to: BARTON AND LOGUIDICE

SCHENECTADY NY 12008

QTY	DESCRIPTION	UNIT PRICE	AMOUNT
	Nuts, Bolts, Washers For Each Manway		
1	Parallel Corrugated Plate Coalescer, Corella PVC Plate (Installed) 3" Plate Spacing 106" W x 106" H x 36" D (140) Plates Required (28) Each Section 20-1/2" x 36"		
1	Removable Petroscreen Cartridge Coalescer (Installed) OAD: 106" W x 106" H x 6" D (5) Petroscreen Coalescing Media Packs 106" H x 20-7/8" W x 6"Th		
1	Pull Rod For Petro Screen Cartridge Removal		
1	Pump Out Pipe - 4" MNPT x FNPT		
1	Level Sensor Pipe - 2" MNPT x FNPT		
	FREIGHT TBD		
	Sales Tax		17,321.12
	Net Price		233,835.12
	Customers should always check with the local authorities having jurisdiction for code compliance.		

Quote No. 509862 Date 10/14/2021

Prices quoted valid for 20 days.

Quoted by:
Marshal Engleka
mengleka@highlandtank.com
One Highland Road
Stoystown PA 15563
PH: 814-893-5701 FAX: 814-893-6126

Representative:
DAN DOWD
ddowd@highlandtank.com
958 19TH ST
WATERVLIET NY 12189
Phone: 518-817-5890

Description, prices and conditions accepted. Please return signed copy when placing order.



Accepted by: _____ Date: ____/____/____

Per Highland Tank Standard Terms and Conditions: www.HighlandTank.com/Terms/TermsConditionsALL.pdf

GENERAL SPECIFICATIONS

NO. REQ'D:
 CAPACITY: 60,000 GALLONS
 TYPE: HTC, HIGHGUARD, DW TYPE I 360
 MATERIAL: MILD CARBON STEEL
 FLOW RATE: 6000 GPM
 GAUGE: BASED ON 60" MAX BURIAL DEPTH

	INNER	OUTER
SHELL-	3/8"	1/4"
HEADS-	3/8"	1/4"

SURFACE PREP:
 SSPC NO.6 BLAST ALL EXTERIOR SURFACES
 SSPC NO.10 BLAST ALL INTERIOR SURFACES

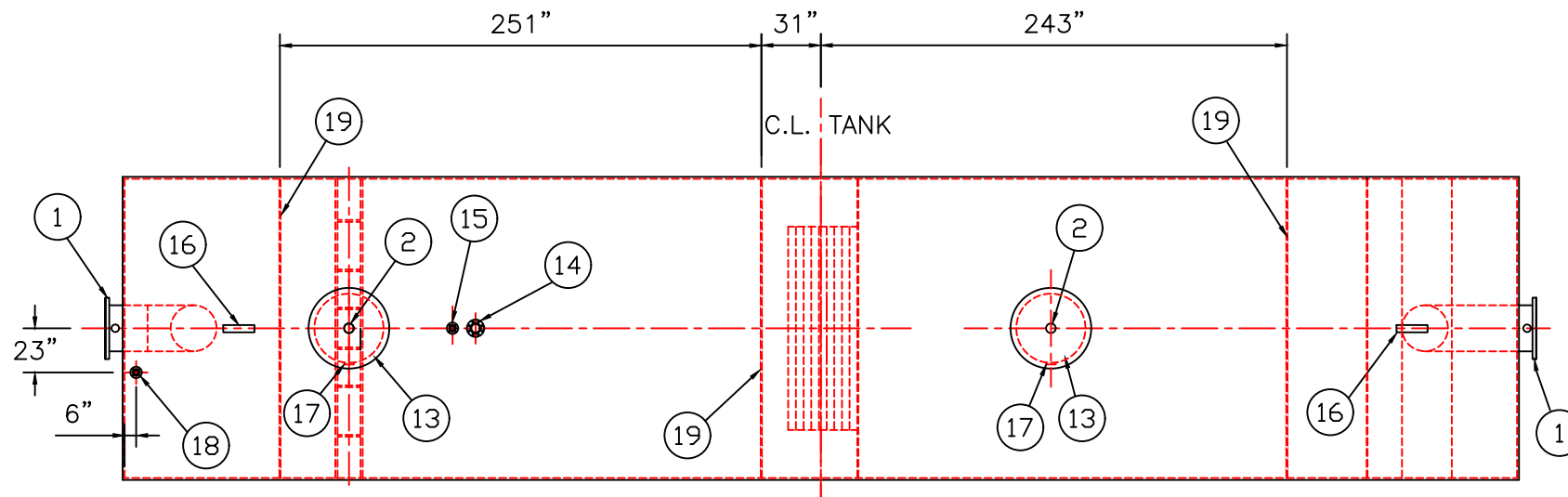
COATING:	MATERIAL	THICKNESS
EXTERIOR-	HIGHGUARD	(75 MILS)
INTERIOR-	CHEMLINE 4200 PW	(15 MILS)

CONSTRUCTION : LAP FIT & WELD ALL EXTERIOR SEAMS
 OPERATING PRESSURE : ATMOSPHERIC

NOTES

1. POLYURETHANE HIGHGUARD TANK IS NOT APPROVED FOR THE STORAGE OF HEATED PRODUCTS.
2. ALL VENT PIPING BY INSTALLER.
3. 15000 VOLT SPARK TEST PROVIDED AT FACTORY.

C.L. STIFFENER RINGS (3) REQUIRED



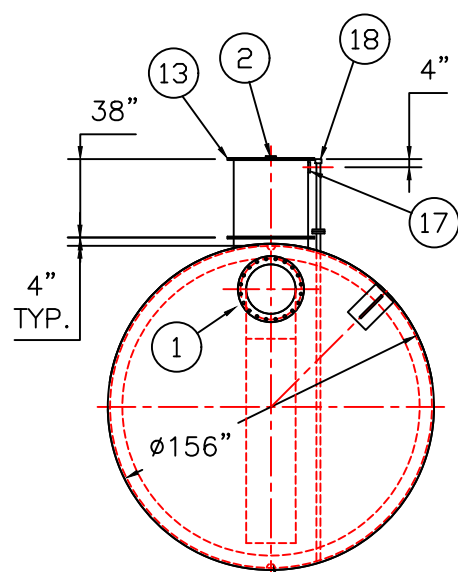
PLAN

PROVIDED EQUIPMENT

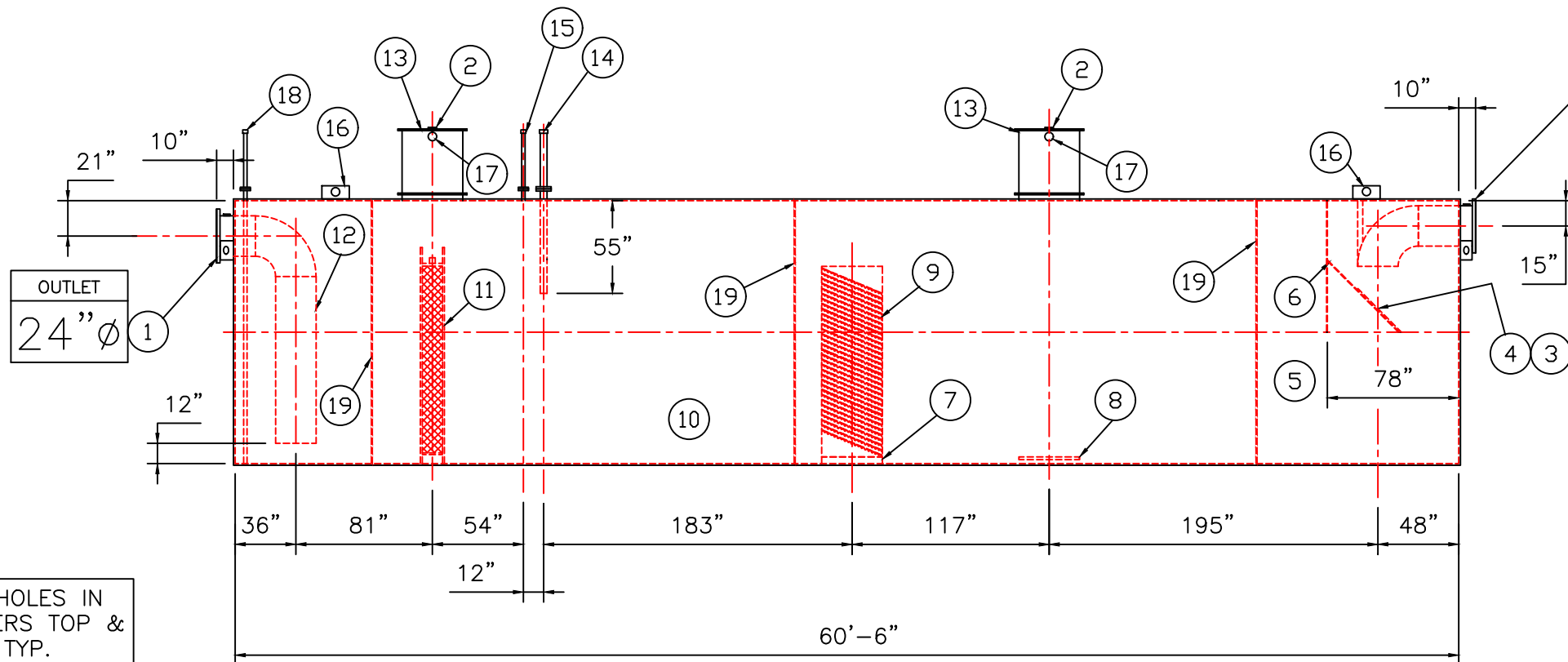
1. 150# R.F.S.O. FLANGE W/ 2" NPT FOR VENT
2. 4" FTG. FOR GAUGE WITH PLUG
3. VELOCITY HEAD DIFFUSION BAFFLE
4. WEAR PLATE
5. SEDIMENT CHAMBER
6. UNDERFLOW BAFFLE
7. SLUDGE BAFFLE
8. STRIKER PLATES
9. PARALLEL CORRUGATED PLATE COALESCER. CORELLA PVC PLATES (3" PLATE SPACING)
10. OIL/WATER SEPARATOR CHAMBER
11. 12" THICK PETROSCREEN COALESCER MATERIAL INSTALLED W/ PULL ROD SHIPPED LOOSE
12. STEEL OUTLET DOWNCOMER
13. 36" MANWAY WITH BOLT-ON EXTENSION SHIPPED LOOSE
14. 4" 150# R.F.S.O. FLANGE FOR OIL PUMPOUT W/ INTERNAL PVC PIPE INSTALLED & RISER PIPE SHIPPED LOOSE
15. 2" 150# R.F.S.O. FLANGE FOR LEVEL SENSOR WITH RISER PIPE SHIPPED LOOSE
16. LIFTING LUG
17. 4" FTG. FOR VENT
18. 2" 150# R.F.S.O. FLANGE FOR LEAK DETECTION W/ RISER PIPE
19. 6"x1/2" STIFFENER RING

ANCILLARY PROVIDED EQUIPMENT

- (4) 36" NEO-CORK MANWAY GASKETS
- (4) SETS OF NUTS/BOLTS/WASHERS FOR 36" MANWAY
- (2) 2" NEOPRENE FLANGE GASKETS
- (2) SETS OF NUTS/BOLTS/WASHERS FOR 2" FLANGE
- (1) 4" NEOPRENE FLANGE GASKET
- (1) SET OF NUTS/BOLTS/WASHERS FOR 4" FLANGE



END VIEW



ELEVATION

MOUSE HOLES IN STIFFENERS TOP & BOTTOM TYP.

INLET
24" Ø

OUTLET
24" Ø

REVISIONS



Highland Tank

U.S. Patent #4,722,800 Canadian Patent # 1,296,263
 #6,606,224 # 2,389,065

60000 GALLON OIL WATER SEPARATOR
 HTC, DW TYPE I 360, HIGHGUARD

CUSTOMER:
 PROJECT:
 QUOTE NO: CHK'D BY:

SCALE: 1/8"=1'-0" DATE: 11-11-13 DWG. BY: REM DWG. NO.: 60000HGDWHTCHDS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
 TOLERANCES ARE + OR - 1"

NOTE :
 ALL RIGHTS RESERVED. THIS DRAWING OR ANY PART THEREOF MUST NOT BE REPRODUCED IN ANY FORM WITHOUT THE WRITTEN PERMISSION OF HIGHLAND TANK.
 HIGHLAND TANK SHALL BE RESPONSIBLE ONLY FOR ITEMS INDICATED ON THIS FABRICATION DRAWING UNLESS OTHERWISE NOTED. CUSTOMER IS RESPONSIBLE FOR VERIFYING CORRECTNESS OF SIZE / LOCATION OF FITTINGS , ACCESSORIES & COATINGS SHOWN ON THIS DRAWING



oil/water separation

cylindrical underground**HT-2040**

PRODUCT DETAILS

Highland Tank cylindrical underground oil/water separators are typically installed in industrial areas and receive oil wastewater generated during processes such as bulk petroleum storage and handling, aircraft and vehicle fueling, maintenance, washing and environmental remediation of petroleum contaminated sites.

The effluent from oil/water separators is typically discharged to either a storm or sanitary sewer system.

Our high-efficiency oil/water separators are recommended for a wide range of industrial applications, such as:

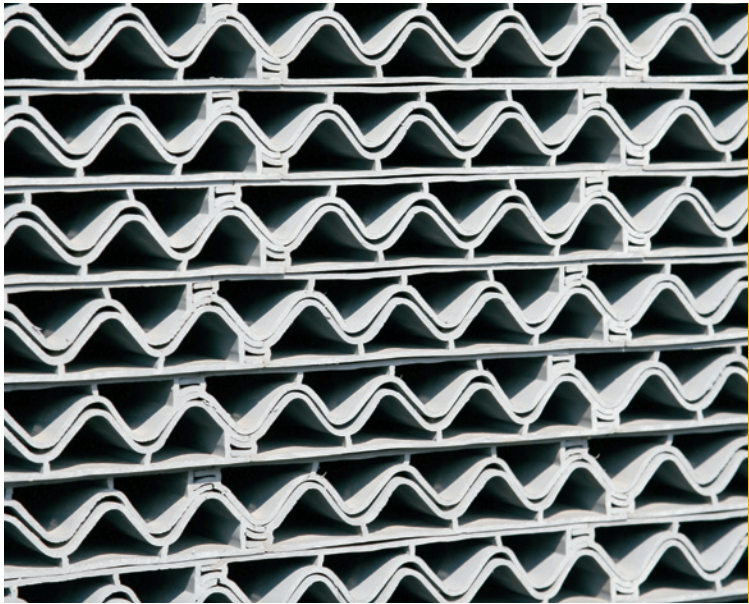
- » Airports & Aircraft Services
- » Electric Utilities & Power Plants
- » Environmental Remediation
- » Industrial Facilities
- » Military & Government Facilities
- » Municipalities
- » Petroleum Production & Marketing Facilities
- » Railroad Yards
- » Transportation Companies

They are also located in vehicle service areas associated with each of these facilities:

- » Fueling Facilities
- » Repair & Maintenance Shops
- » Wash Areas

Highland oil/water separators set the standard for reliability. Our separators are highly efficient - treating wastewater under a wide range of conditions.

Unlike other oil/water separators, they are easy to install, operate and maintain.



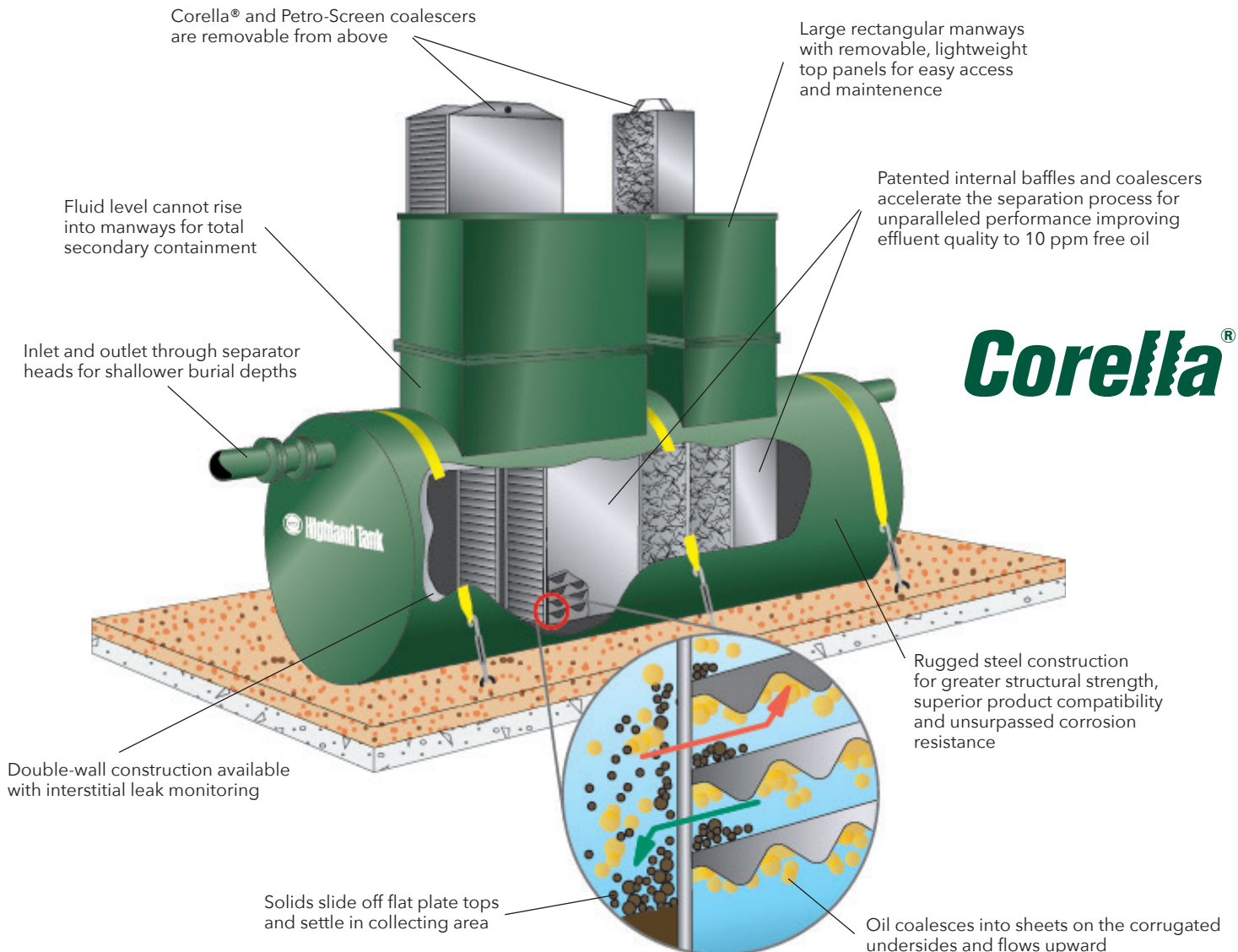
Corella® The Newest Advancement in Oil/Water Separation Technology

The Corella® Coalescer is a removable, inclined parallel, flat/corrugated plate coalescer that enhances separation of both oil and solids from all strata of the wastewater stream. It is individually engineered to specific application and job-site requirements to maximize utility.

◀ Patented Corella® technology

Corella® | cleaner. safer. smarter.

UL-2215 LISTED





Highland Tank Oil/Water Separators are listed and approved under one or more of the following patents and approvals:

Underwriters' Laboratories, Inc. UL-SU2215

U.S. Patents - 4,722,800; 5,520,825 & 6,605,224

Canadian Patents - 1,325,179; 1,296,263 & 2,389,065

City of New York, Board of Standards and Appeals under Calendar Number 1215-88-SA

Massachusetts Board of State Examiners of Plumber and Gas Fitters

Approval Code P1-0594-25

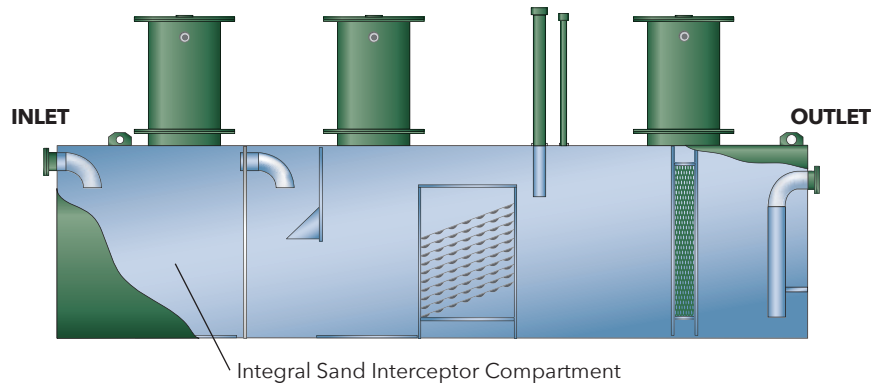
Evaluated to DIN Parts 4 & 5,
DIN 38-409 Part 18

pre-engineered design options

G

Series - G Oil/Water Separators

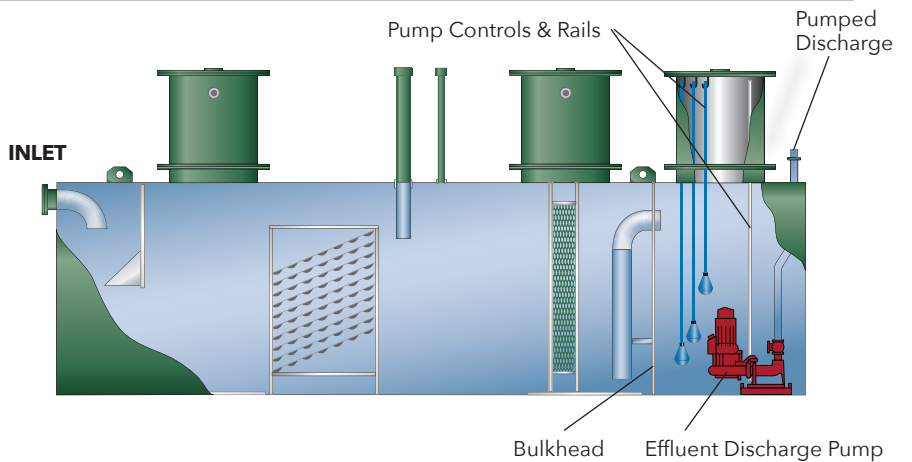
Feature an integral sand interceptor compartment to permit sand and gravel to settle out before the wastewater enters the separation chamber.



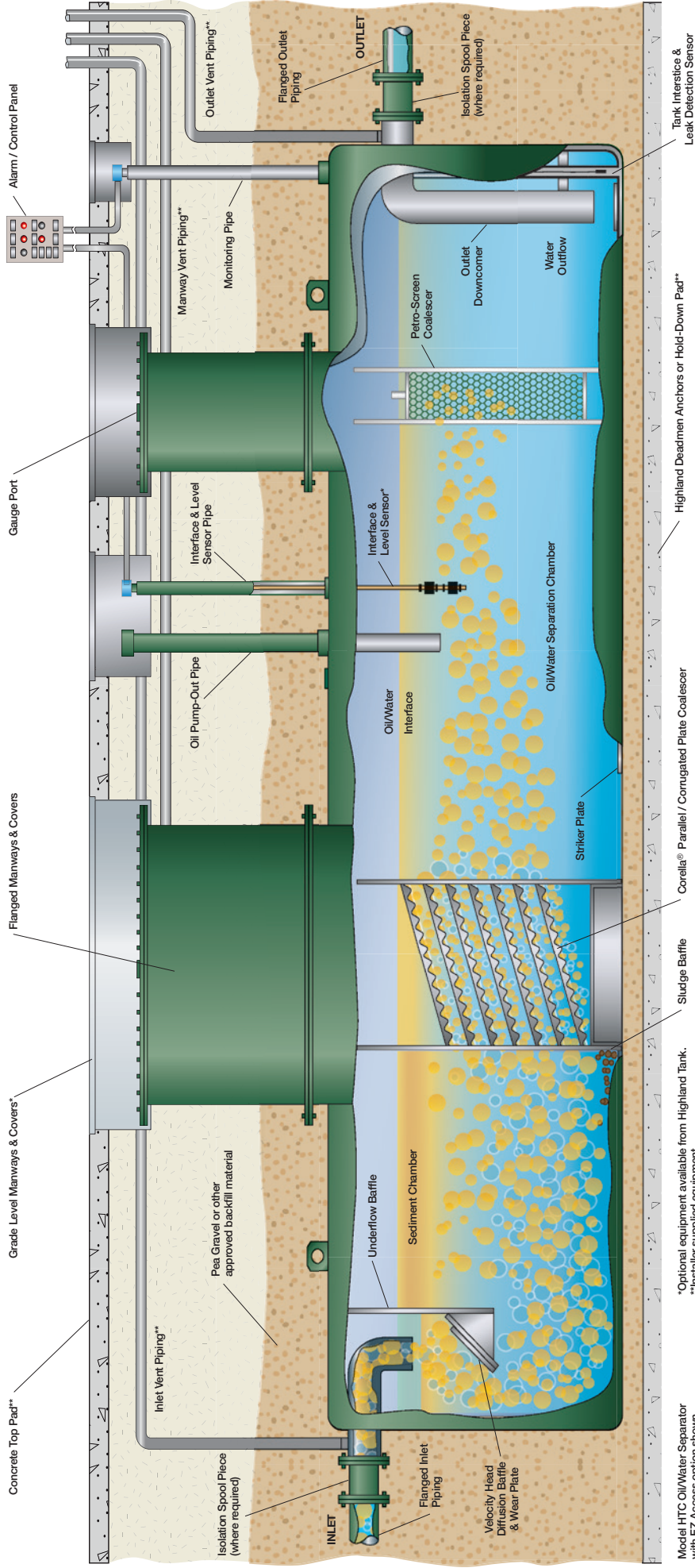
J

Series - J Oil/Water Separators

Feature an integral effluent pump-out compartment with level controls to operate a pump at prescribed levels. The pumped effluent can then be routed through Highland's Advanced Hydrocarbon Filtration System to further improve performance.



cylindrical oil/water separator



Model HTC Oil/Water Separator with EZ Access option shown.

*Optional equipment available from Highland Tank.
**Installer supplied equipment

How it Works

Highland Tank's patented oil/water separators are stationary wastewater treatment tanks filled with water.

They contain specially designed internal baffles and coalescers to accelerate the separation process.

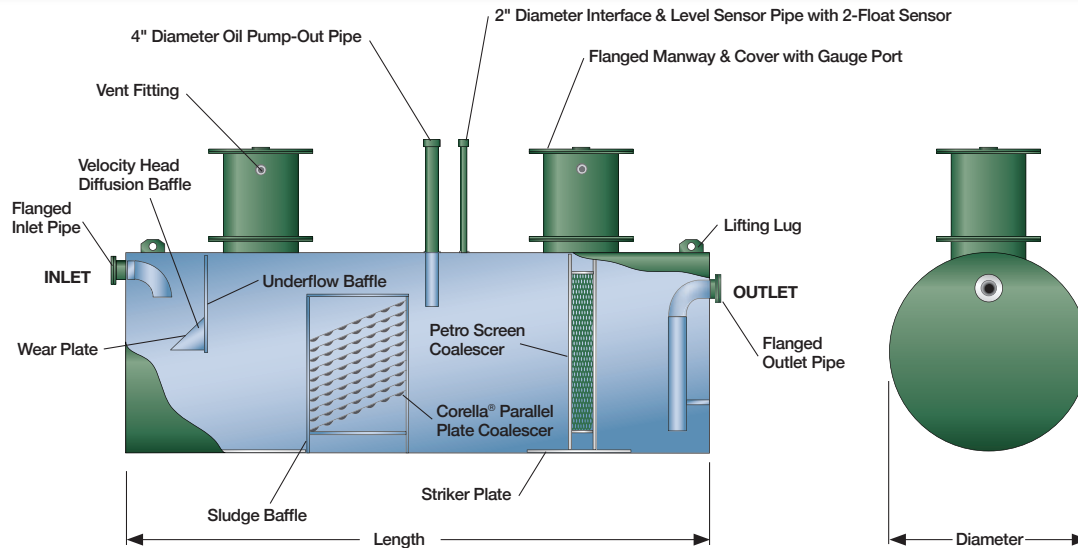
The tank is designed to allow convenient access for inspection and maintenance from above. Inlet flow is directed against the velocity head diffusion baffle to reduce flow turbulence and to distribute the flow evenly over the separator's cross-sectional area.

In the sediment chamber, heavy solids settle out and concentrated oil rises to the surface. The oily water then passes through the Corella® Coalescer, an inclined arrangement of stacked, parallel, flat and corrugated plates.

The corrugated underside of the Corella® plates causes the oil to coalesce into sheets. The oil globules then rise to the surface of the separation chamber, where the separated oil accumulates. Any remaining solids sink to the top of the plates and slide off the plates to the solids collection area.

The effluent flows down and toward the outlet and is discharged by gravity displacement. A Petro-Screen polypropylene impingement coalescer (an encased bundle of layered oil-attracting fibers) is used to intercept droplets of oil that are too minute to be removed by the Corella® Coalescer.

Electronic oil level controls sound an alarm at high oil levels so that waste oil can be removed from the separator. Double-wall separators are monitored with electronic leak detection systems for the interstitial space.



Model HT or HTC	Flow Rate Gal/Min	Total Volume Gallons	Recommended Oil Pump-Out Gallons	Dimensions		Inlet & Outlet Diameter
				Diameter	Length	
350	35	350	70	3'-6"	6'-0"	4"
550	55	550	110	3'-6"	7'-9"	4"
1,000	100	1,000	200	4'-0"	10'-9"	6"
2,000	200	2,000	400	5'-4"	12'-0"	6"
3,000	300	3,000	600	5'-4"	18'-0"	8"
4,000	400	4,000	800	5'-4"	24'-0"	8"
5,000	500	5,000	1,000	6'-0"	23'-10"	8"
6,000	600	6,000	1,200	6'-0"	28'-8"	10"
7,000	700	7,000	1,400	7'-0"	24'-4"	10"
8,000	800	8,000	1,600	7'-0"	28'-0"	10"
9,000	900	9,000	1,800	8'-0"	24'-0"	12"
10,000	1,000	10,000	2,000	8'-0"	26'-8"	12"
12,000	1,200	12,000	2,400	8'-0"	32'-0"	12"
15,000	1,500	15,000	3,000	10'-0"	25'-6"	14"
20,000	2,000	20,000	4,000	10'-6"	31'-0"	16"
25,000	2,500	25,000	5,000	10'-6"	38'-9"	18"
30,000	3,000	30,000	6,000	10'-6"	46'-6"	20"
40,000	4,000	40,000	8,000	12'-0"	47'-3"	24"
50,000	5,000	50,000	10,000	12'-0"	59'-6"	24"
60,000	6,000	60,000	12,000	13'-0"	60'-6"	24"

Plate spacing and orientation may vary depending on site conditions. Custom sizing is available. Consult Highland Tank for Series G & J sizing information.



Highland Tank®

Stoystown, PA
One Highland Road
Stoystown, PA 15563-0338
814.893.5701

Manheim, PA
4535 Elizabethtown Road
Manheim, PA 17545-9410
717.664.0600

Watervliet, NY
958 19th Street
Watervliet, NY 12189-1752
518.273.0801

Greensboro, NC
2700 Patterson Street
Greensboro, NC 27407-2317
336.218.0801

Lebanon, PA
2225 Chestnut Street
Lebanon, PA 17042-2504
717.664.0602

Friedens, PA
1510 Stoystown Road
Friedens, PA 15541-7402
814.443.6800

Clarkston, MI
4701 White Lake Road
Clarkston, MI 48346-2554
248.625.8700

Mancelona, MI
9517 Lake Street
Mancelona, MI 49659-7968
248.625.8700



PROUDLY MADE IN AMERICA

Appendix J

Oil Sand Interceptor Cost Estimate

ALCO-Maxon Site - Parcel B, BCP Site No. C447043
Site Management Plan Response - Corrective Measures Investigation Report
City of Schenectady, Schenectady County, New York
Oil/ Sand Interceptor Cost Estimate

October 29, 2021
B&L JN 1368.001.005

Item No.	Description	Qty.	Unit	Unit Cost	Ext. Cost
203.02	Unclassified Excavation and Disposal (120'x80'x30')	10,667	CY	\$ 30	\$ 320,000
552.13	Temporary Steel Sheeting (400'x90')	36,000	SF	\$ 25	\$ 900,000
	Oil/Sand Interceptor (60,000 Gal.)	6		\$ 243,710	\$ 1,462,257.36
Excavation and Sheeting Subtotal					\$ 2,682,257

Highland Tank OIL INTERCEPTOR QUOTATION

TO: BARTON AND LOGUIDICE
10 AIRLINE DR

ALBANY NY 12205
Attention: BRITTANY SCHAUB
Phone: 518-218-1801
Email: bshaub@bartonandloguidice.com

Payment Terms: All orders subject to credit approval by Highland Tank.
Orders over \$100,000: 25% due at time of order; 65% due on completion of manufacturing; 10% Net 30, for approved accounts.
Orders under \$100,000: Net 30 days, for approved accounts.
5% discount for full pmt at time of order.(Excludes frt, sls tax & CC pmts)
All first-time orders under \$5,000 require payment at order placement.
Estimated Delivery: TBD
from date of receipt of approved drawing.

RE: AMPHITHEATER
SCHENECTADY NY
60000 SW OSI TRIPLE BASIN


Freight to: BARTON AND LOGUIDICE

SCHENECTADY NY 12008

QTY	DESCRIPTION	UNIT PRICE	AMOUNT
1	60000 Gallon Triple Basin HighGuard Oil Interceptor Application: Underground Type: SINGLE WALL Material: Mild Carbon Steel Diameter: 13'0" Length: 60'6" Steel Thickness Per UL 58 Standard. Exterior Coating: HIGHGUARD Interior Coating: Chemthane 4200 PW 15 mils		
1	HighGuard Packet w/10-yr warranty/installation/maint instructions		
1	Exterior Paint Touch Up Kit		
3	24" Diam Manway Collar with Stackable Risers 38"H Each Riser Includes: (1) 24" cover (2) 12" riser pieces (2) 6" riser pieces (1) adapter ring (1) Safety Screen (5) gaskets (1) 2" Grommet for vent		
2	12'0" Dia. Single Bulkhead (For Underground Tanks)		
3	Round Grade Level Manway - (GLM-36) 36" Diameter		
12	Deadman Steel HD Straps - 13'0" w/ Liners & Jaw-Jaw Turnbuckles "Safety Style"		
12	Concrete Deadman (CDA-45)		

Quote No. 509864 1 Date 10/14/2021
Quoted by:
Marshal Engleka
mengleka@highlandtank.com
One Highland Road
Stoystown PA 15563
PH: 814-893-5701 FAX: 814-893-6126

Prices quoted valid for 20 days.
Representative:
DAN DOWD
ddowd@highlandtank.com
958 19TH ST
WATERVLIET NY 12189
Phone: 518-817-5890

Description, prices and conditions accepted. Please return signed copy when placing order.
Accepted by: _____ Date: ____/____/____
Per Highland Tank Standard Terms and Conditions: www.HighlandTank.com/Terms/TermsConditionsALL.pdf

www.highlandtank.com

Highland Tank OIL INTERCEPTOR QUOTATION

TO: BARTON AND LOGUIDICE
10 AIRLINE DR

ALBANY NY 12205
Attention: BRITTANY SCHAUB
Phone: 518-218-1801
Email: bshaub@bartonandloguidice.com

Payment Terms: All orders subject to credit approval by Highland Tank.
Orders over \$100,000: 25% due at time of order; 65% due on completion of manufacturing; 10% Net 30, for approved accounts.
Orders under \$100,000: Net 30 days, for approved accounts.
5% discount for full pmt at time of order.(Excludes frt, sls tax & CC pmts)
All first-time orders under \$5,000 require payment at order placement.
Estimated Delivery: TBD
from date of receipt of approved drawing.

RE: AMPHITHEATER
SCHENECTADY NY
60000 SW OSI TRIPLE BASIN

Freight to: BARTON AND LOGUIDICE

SCHENECTADY NY 12008

QTY	DESCRIPTION	UNIT PRICE	AMOUNT
	FREIGHT TBD		
	Sales Tax		18,052.56
	Net Price		243,709.56
Customers should always check with the local authorities having jurisdiction for code compliance.			

Quote No. 509864 1 Date 10/14/2021

Prices quoted valid for 20 days.

Quoted by:
Marshal Engleka
mengleka@highlandtank.com
One Highland Road
Stoystown PA 15563
PH: 814-893-5701 FAX: 814-893-6126

Representative:
DAN DOWD
ddowd@highlandtank.com
958 19TH ST
WATERVLIET NY 12189
Phone: 518-817-5890

Description, prices and conditions accepted. Please return signed copy when placing order.



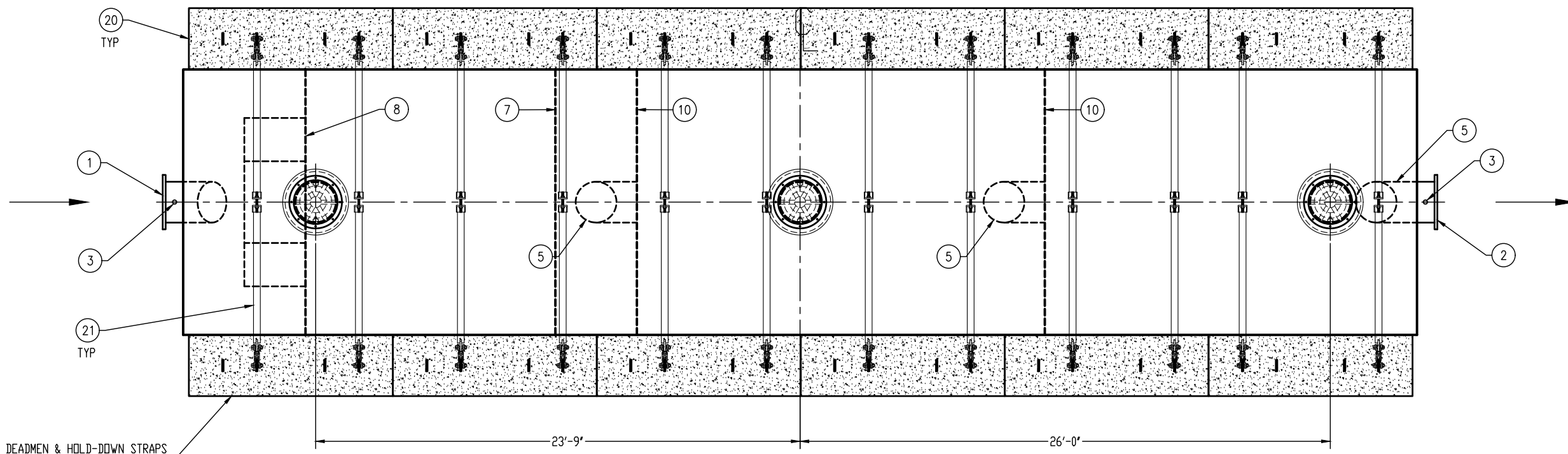
Accepted by: _____ Date: ____/____/____

Per Highland Tank Standard Terms and Conditions: www.HighlandTank.com/Terms/TermsConditionsALL.pdf

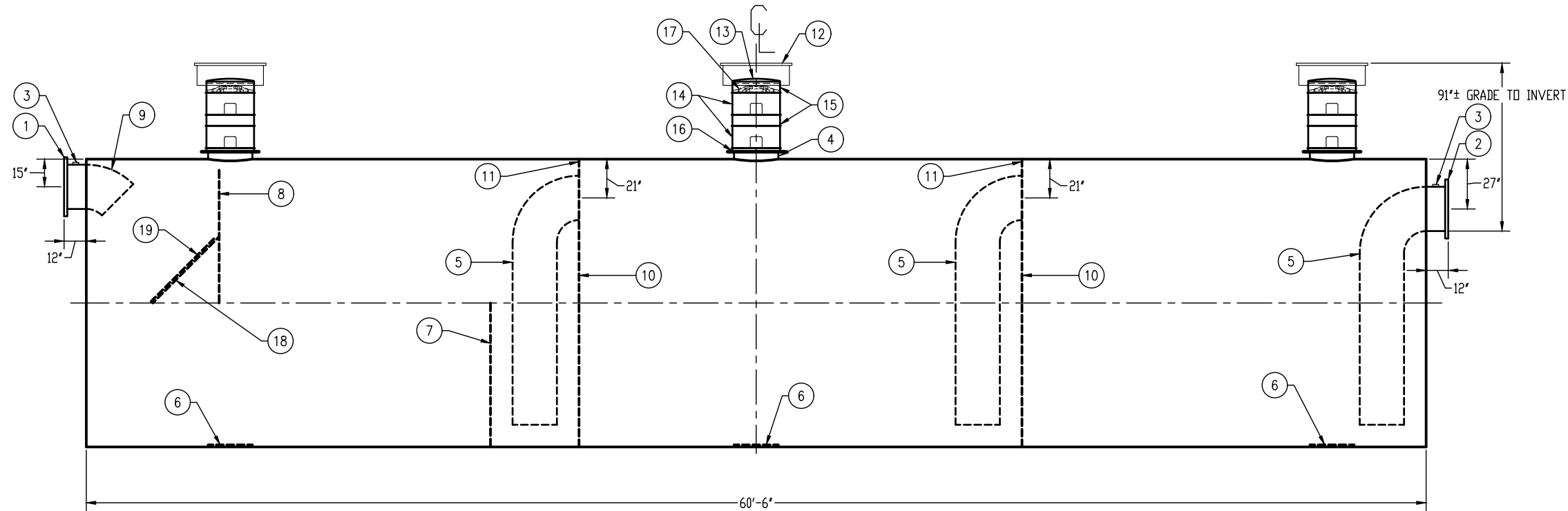
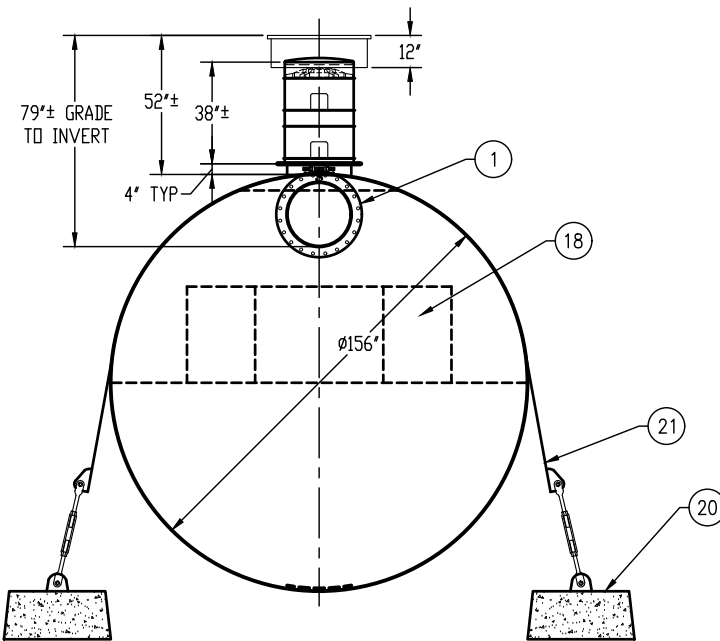
GENERAL SPECIFICATIONS

QUANTITY: ONE (1)
 MODEL: OSI-60000-3
 CAPACITY: 60,000 GALLONS
 TYPE: SINGLE WALL, HIGHGUARD, UNDERGROUND
 MATERIAL: 1/2" CARBON STEEL
 MATERIAL BASED ON 60" MAXIMUM BURIAL DEPTH
 LAP FIT AND WELD INTERIOR AND EXTERIOR SEAMS
 TANK TEST: 3-5 PSI AIR TEST
 SURFACE PREP: SSPC-SP 10 BLAST INTERIOR SURFACES
 SSPC-SP 6 BLAST EXTERIOR SURFACES
 EXT. COATING: HIGHGUARD POLYURETHANE - 75 MILS
 INT. COATING: CHEMTHANE 4200 PW (15 MILS DFT)
 OPERATING PRESSURE: ATMOSPHERIC

NOTE: OPTIONAL 2" VENTS ON MANWAY RISERS AT THE DISCRETION OF THE OWNER



APPROXIMATE LOCATIONS SHOWN FOR DEADMEN & HOLD-DOWN STRAPS
 ACTUAL LOCATIONS TO BE DETERMINED AT TIME OF INSTALLATION



CUSTOMER APPROVAL

THE CUSTOMER HAS REVIEWED THIS DRAWING AND VERIFIED THE ACCURACY OF ALL INFORMATION AND DIMENSIONS.

SIGNED: _____

DATE: _____

NOTE: ALL RIGHTS RESERVED. THIS DRAWING, OR ANY PART THEREOF, MUST NOT BE REPRODUCED IN ANY FORM WITHOUT WRITTEN PERMISSION FROM HIGHLAND TANK. UNLESS OTHERWISE NOTED, HIGHLAND TANK SHALL BE RESPONSIBLE ONLY FOR ITEMS INDICATED ON THIS FABRICATION DRAWING. THE CUSTOMER IS RESPONSIBLE FOR VERIFYING THE CORRECTNESS OF THE TYPE, SIZE, AND LOCATION OF ALL FITTINGS, ACCESSORIES, AND COATINGS SHOWN ON THIS DRAWING.

PROVIDED EQUIPMENT

1. 24"Ø-150# RFSO FLANGE - INLET
2. 24"Ø-150# RFSO FLANGE - OUTLET
3. 2" HC - VENT
4. 24"Ø MANWAY FOR STACKABLE RISER
5. 24"Ø SCH 40 TRANSFER PIPE
6. STRIKER PLATE
7. SLUDGE BAFFLE - 1/2"
8. UNDERFLOW BAFFLE - 1/2"
9. 24"Ø 45° DIFFUSION ELBOW
10. FULL BULKHEAD - 1/2"
11. 2" OPENING FOR AIR CIRCULATION
12. 36"Ø GRADE-LEVEL MANWAY - SHIPPED LOOSE
13. 24"Ø PVC COVER

PROVIDED EQUIPMENT

- (CONTINUED)
14. (2) 24"Ø x 12" STACKABLE RISER - ALL STACKABLE RISER COMPONENTS ARE PRE-ASSEMBLED AND COMPLETE MANWAY RISER IS SHIPPED LOOSE
 15. (2) 24"Ø x 6" STACKABLE RISER
 16. STACKABLE RISER ADAPTER RING & GASKET
 17. STACKABLE RISER SAFETY SCREEN
 18. DIFFUSION BAFFLE - 1/4"
 19. 48" x 48" WEAR PLATE - 1/4"
 20. (12) CDA-45 CONCRETE DEADMAN
 21. (12) 13'-0" STEEL SAFETY DEADMAN HOLD-DOWN STRAPS WITH TURNBUCKLES AND LINERS



Highland Tank®

OIL/SAND INTERCEPTOR
 60,000 GALLON TRIPLE-BASIN

CUSTOMER: _____

PROJECT: _____

QUOTE NO.: _____

SCALE: _____

DATE: 2/15/18

DWG. BY: MGS

DWG. NO.: _____

ORDER: _____

DIMENSION TOLERANCE: ± 1"

OSI-60000-3



oil/water separation

oil/sand interceptors

HT-2509

PRODUCT DETAILS

Highland Tank's Oil/Sand Interceptor (OSI) is a wastewater treatment tank designed to intercept and collect sand, grit, free-oil and grease (hydrocarbons and other petroleum products) and prevent their entry into the sanitary sewer system.

Designed to accept gravity flow, the interceptor's large volume allows for a lengthy retention time for sand, grit, free oil and grease to separate from the water due to their differences in specific gravity.

The interceptor contains one to four compartments (basins) where oil separates and floats to the surface, while sand and grit settle to the bottom sludge baffle.

The clearer water beneath flows downward to the outlet downcomer where it is discharged from the quiescent section of the interceptor.

OSI sizing and construction conforms to recognized plumbing codes and meets or exceeds many municipal industrial sewer pretreatment regulations.

They are available in double-wall construction for those states and counties where underground oil/water separators and interceptors are considered to be "commercial underground storage tanks."

These lighter-than-concrete interceptors can be sized for greater volumes and

retention time. Unlike many competitive concrete units, they are watertight and pressure or vacuum testable in both the factory and the field.

We offer an extensive range of standard sizes and capacities with complete accessory packages, including leak and level sensors, alarm/control panels, influent, effluent and oil pump systems.

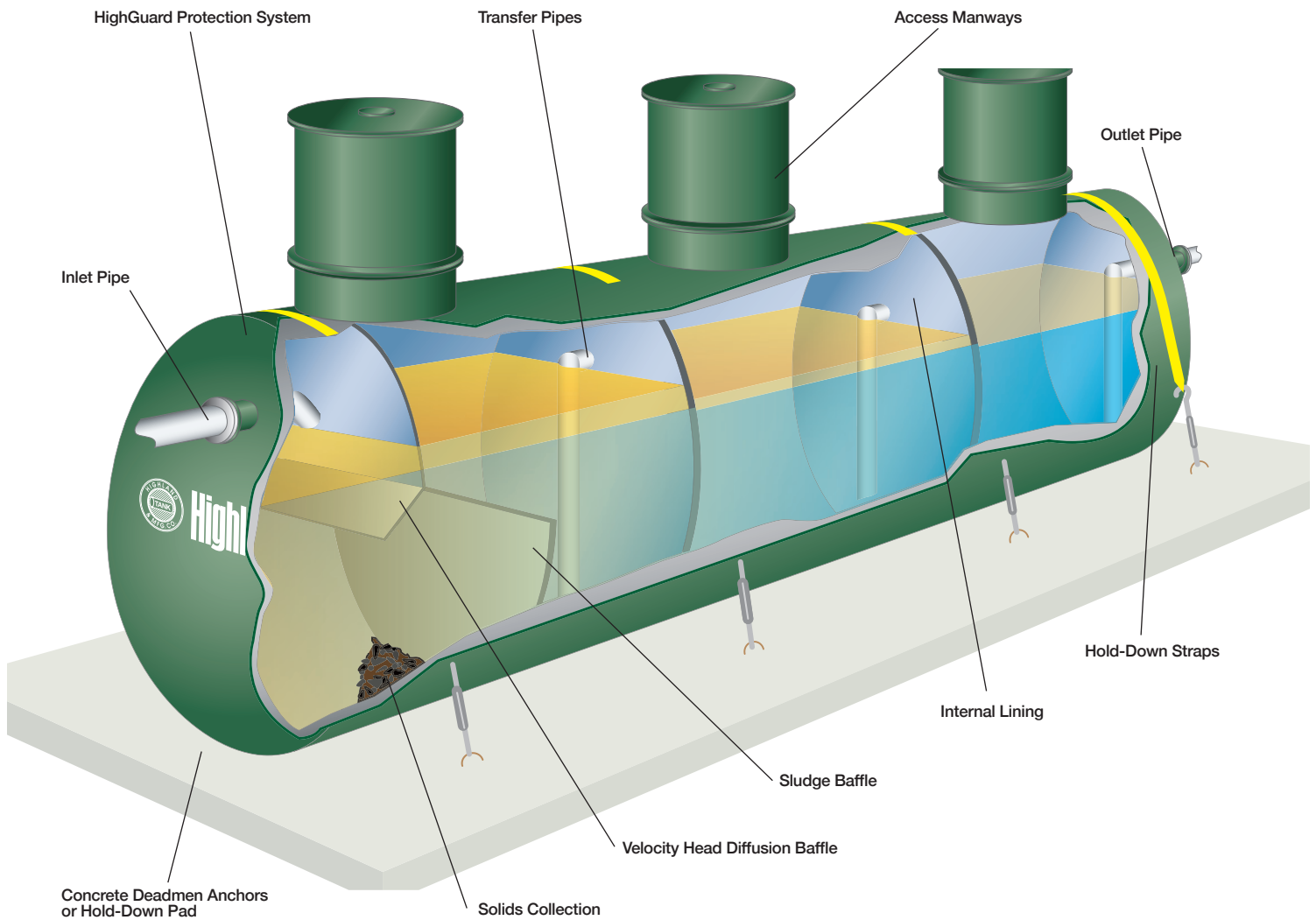
Variations in capacity, arrangement, dimensions and pipe penetration locations can be made to fit your specific requirements.



Code-Compliant Design, Dependability and Durability

Oil/sand interceptors are required in all facilities that conduct washing, servicing, repairing, maintenance or storage of motor vehicles - including car washes, commercial vehicle garages, repair facilities, service stations and similar sites where oil or flammable liquid may be introduced into the sewer system.

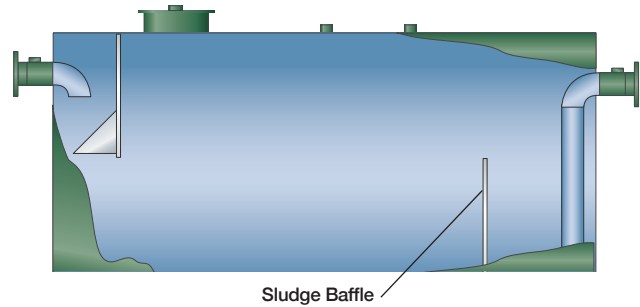
dependable, durable design



S

Single Basin Interceptors

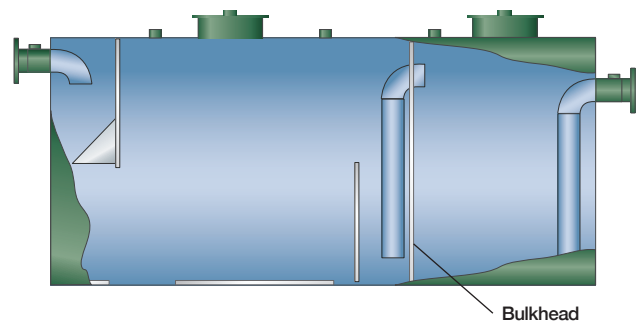
Single Basin Interceptors have a single collection chamber and sludge baffle to remove sand, grit, grease and free oil. This is our simple oil/sand "knock-out" design.



D

Double Basin Interceptors

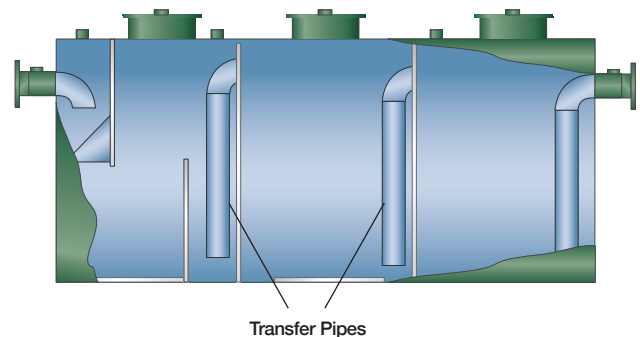
Double Basin Interceptors have two collection chambers and a sludge baffle. They are commonly used in car wash and commercial or municipal vehicle washing applications for oil and sand removal prior to discharge to a recycle wash system. An optional overflow bypass directs excess flow to an auxiliary retention area.



T

Triple Basin Interceptors*

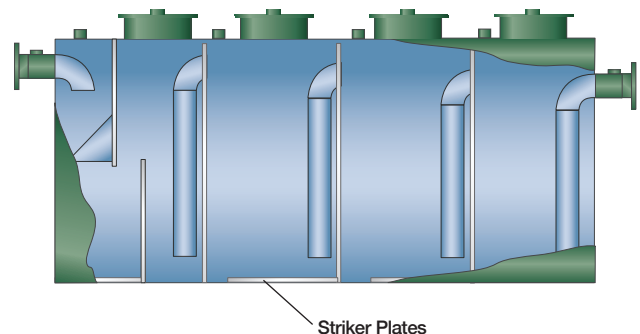
Triple Basin Interceptors* have three collection chambers and a sludge baffle. Our most popular and versatile design has a variety of applications, such as car washes and commercial garages. Floatables, oil, sand and other sediments are trapped in the first compartment and any remaining oil is trapped in the second compartment. The third chamber can be equipped with an effluent pump system when used in conjunction with Highland Tank's HighCycle Washwater Recycle System.

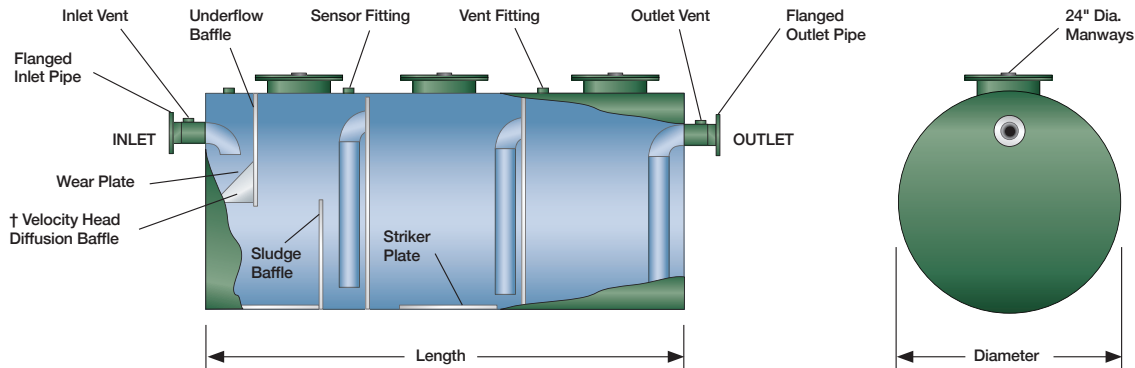


Q

Quad Basin Interceptors

Quad Basin Interceptors have four collection chambers and a sludge baffle. In addition to their use at large commercial vehicle washes, they are commonly used at construction sites for oil, dirt and debris removal during site dewatering operations to comply with strict stormwater regulations.





Model OSI	Flow Rate Gal/Min	Total Volume Gallons	Recommended Oil Pump-Out Gallons	Dimensions		Inlet & Outlet Diameter
				Diameter	Length	
*350	35	350	88	3'-6"	5'-0"	4"
**550	55	550	138	3'-6"	7'-9"	4"
750	75	750	188	3'-6"	10'-9"	6"
1,000	100	1,000	250	4'-0"	10'-9"	6"
1,500	150	1,500	375	5'-4"	9'-0"	6"
2,000	200	2,000	500	5'-4"	12'-0"	6"
3,000	300	3,000	750	5'-4"	18'-0"	8"
4,000	400	4,000	1,000	5'-4"	24'-0"	8"
5,000	500	5,000	1,250	6'-0"	23'-10"	8"
6,000	600	6,000	1,500	6'-0"	28'-8"	10"
7,000	700	7,000	1,750	7'-0"	24'-4"	10"
8,000	800	8,000	2,000	7'-0"	28'-0"	10"
9,000	900	9,000	2,250	8'-0"	24'-0"	12"
10,000	1,000	10,000	2,500	8'-0"	26'-8"	12"
12,000	1,200	12,000	3,000	8'-0"	32'-0"	12"
15,000	1,500	15,000	3,750	10'-0"	25'-6"	14"
20,000	2,000	20,000	5,000	10'-6"	31'-0"	16"
25,000	2,500	25,000	6,250	10'-6"	38'-9"	18"
30,000	3,000	30,000	7,500	10'-6"	46'-6"	20"
40,000	4,000	40,000	10,000	12'-0"	47'-3"	24"
50,000	5,000	50,000	12,500	12'-0"	59'-0"	24"
60,000	6,000	60,000	15,000	13'-0"	60'-6"	24"

Note: NPT available for 4-6" inlet and outlet; 8" and larger will be flanged connections. Optional sampling/monitoring ports available.

*Available as single and double basin ONLY. Double basin dimensions will vary. Check with Highland Tank.

**Double basin and triple basin dimensions will vary. Check with Highland Tank.

† Not available on all sizes, contact Highland Tank for more information.



Highland Tank®

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One Highland Road
Stoystown, PA 15563-0338
814.893.5701

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4535 Elizabethtown Road
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