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September 28, 2012

Markel Underwriting Managers, Inc.
310 Highway 35 South
Red Bank, New Jersey 07701-5921

ADEC File # 100.38.217

ATTN: Pat Dunstan, RN, JD
Senior Claims Examiner

RE: Summary of Winter 2011 and March 2012 Activities
578 Canoro Road, North Pole, Alaska

Ms. Dunstan:

NORTECH *Environmental Engineering, Health & Safety* (***NORTECH***) is pleased to provide the following update on 2011 and 2012 field activities related to the ongoing release investigation at 578 Canoro Road in North Pole, Alaska (the Site). This letter report includes activities summaries and findings to date with recommendations discussed in the July 24, 2010 ADEC approved Work Plan and the February 16, 2012 estimate letter to Markel Underwriting Managers, Inc. (Markel).

Groundwater/drinking water sampling was performed on January 27 and 28, 2011, March 9, 2011, and March 23, 26, and 27, 2012. Work in January 2011 and March 2012 included free product monitoring, collecting groundwater elevational data, collecting groundwater parameters, and collecting analytical samples from twelve groundwater wells and the resident's drinking water. Work in March 2011 was limited to resampling/confirmation sampling of wells SW5 and FRW2.

Figures 1 and 2 show the Site location in North Pole, Alaska. Figure 3 shows the Site and immediately adjacent properties, including known drinking water wells in the neighborhood. Figure 3 also shows the locations of the monitoring wells and drinking water well at the Site. Figures 4 and 5 detail monitoring well locations with benzene concentrations in wells sampled during the 2011 and 2012 events. These figures also show the groundwater elevations in shallow monitoring wells during these events.

Table 1 summarizes free product observation and recovery efforts. Table 2 summarizes drinking water results since 2008. Tables 3 and 4 summarize groundwater laboratory results, as well as field duplicate quality control results for the 2011 and 2012 events, respectively. Table 5 is a summary of historical results, including these events. Copies of laboratory reports and Alaska Department of Environmental Conservation (ADEC) Laboratory Data Review Checklists for the 2011 and 2012 sample results are also attached.

Background

A more detailed history of the site activities can be found previous reports, specifically the March 16, 2007 and March 24, 2008 Characterization Reports and update letter dated June 25, 2010. The release occurred in late November 2006, when approximately 470 gallons of heating oil was inadvertently delivered (under pressure) into the Site's drinking water well. Approximately 250 to 300 gallons of fuel was reportedly recovered. A large diameter recovery well was installed adjacent to the impacted well and all contaminated soil above the groundwater smear zone was removed during recovery well excavation. A temporary holding tank and replacement water system parts were installed to provide water for the house distribution system after being cleaned, flushed and tested. Laboratory results indicated the system met ADEC drinking water standards.

NORTECH conducted initial site characterization efforts between November 2006 and March 2007 including installing seven groundwater monitoring wells. Characterization indicated the hydraulic gradient was generally west across the site, but the heating oil appeared to be moving east. A March 2008 aquifer characterization indicated petroleum migration was controlled by confining layers sloping upward towards the north and east. A well search identified six neighborhood wells located down-gradient. The wells were tested for drinking water standards with results indicating no wells were impacted by the release at 578 Canoro Road and no additional sampling was recommended.

The 2008 report indicated free product recovery efforts focus in the vicinity of SW5. In June 2008, additional shallow monitoring wells were installed east and south of the garage at the site, including three new wells on the adjacent property, 580 Orion Drive to complete the delineation of the dissolved benzene contamination. A new drinking water well was installed approximately 75 northeast of the house in 2009. The drinking water well is screened at a depth of approximately 65 feet due to frozen silt below this depth. Subsequent periodic testing confirms this well is clean.

Scope of Work and Objectives

ADEC approved a ***NORTECH*** work plan dated July 24, 2010. The work plan recommended installation of three new groundwater monitoring wells. However, the work plan was not approved until Dec 1, 2010 making it impractical to install these wells in frozen soil conditions. Instead, a round of sampling was completed in January 2011, with resampling of SW5 and FRW2 in March 2011 to confirm the results.

In February 2012, ***NORTECH*** sent Markel a letter summarizing water sampling results from 2011 and the potential factors affecting two upgradient wells SW5 and FRW2. Although the wells are a few feet apart, SW-5 (a shallow direct push well) and FRW-2 (a 4" deep well installed for product recovery) have continued divergent contaminant concentrations since FRW-2 was installed. The February 2012 Letter recommended the following activities:

- Complete a late winter 2012 groundwater sampling event of existing monitoring wells and drinking water system at the Site
- Report on the January and March 2011 and 2012 groundwater sampling events
- Discuss and recommend evaluating the SW-5/FRW-2 well sampling result divergence
- Discuss these results in the context of the long-term monitoring plan outline.

2011 And 2012 Field Activities

Drinking Water Sampling

Drinking water sampling was conducted on January 28, 2011 and March 23, 2012. One primary and one duplicate were collected during each event from the hose bib located in the utility room before the water softening and filter equipment. Samples were submitted to SGS Environmental Services for analysis by EPA Method 524.2 for volatile organic compounds (VOCs). Laboratory results are summarized in Table 2 and are discussed in more detail below

Free Product Measurements and Recovery

Each well was measured for depth to product and depth to water using an interface probe during the groundwater sampling events. No well contained appreciable free product including SW5. The historic free product data is summarized in Table 1 and discussed in more detail below.

Groundwater Sampling

In January 2011 and March 2012, analytical samples were collected from 12 monitoring wells: SW1 through SW9, DW1 and DW2. A sample was also collected during each event from product recovery well FRW2. The former drinking water well (DWW) and culvert recovery well (CRW1) were frozen during each sampling event and samples were not collected.

In March 2011, upgradient adjacent wells SW5 and FRW2 were resampled to ensure January 2011 results accurately reflected SW5 testing positive for contamination and FRW2 non-detect. During sampling, ***NORTECH*** completed a video inspection and confirmed both wells are screened at the top of the water table, representing shallow groundwater at the same elevation only a few feet apart.

The sampling methodology was the same for both events. Depth to water was measured in each well and used to evaluate the hydraulic gradient at the site. A groundwater elevation surface contour maps are included as Figure 4 (January 2011) and Figure 5 (March 2012).

The depth to water was also used to calculate the total water volume in each well. Three to five well volumes of water from each well were purged using a Geotech peristaltic pump. During purging, water quality parameters were measured using a

Horiba Multi meter sensor by filling a flow through cell connected to the peristaltic pump outlet tubing. The meter sensor was placed in the filled cell and recorded conductivity, temperature, pH, dissolved oxygen, reduction/oxidation potential, and turbidity. These parameters were recorded in the field book as each well volume was purged to determine when groundwater conditions had stabilized. In January 2011, wells SW1, SW3, SW6, and SW9 were measured before the low ambient temperature resulted in failure of the instrument. In March 2012, the water quality parameters were measured in each of the 12 wells.

As with previous sampling events, analytical samples were collected using the peristaltic pump at a reduced flow rate to prevent entrainment of bubbles or other quality control concerns. Based on the number of samples, two field duplicates were collected during each sampling event for quality control purposes. Water samples were hand delivered to the SGS Environmental Services (SGS) field office in Fairbanks, Alaska and analyzed at the SGS laboratory in Anchorage, Alaska. Laboratory analyses consisted of diesel range organics (DRO) by Method AK 102, and benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method SW8021B.

2011 And 2012 Results With Discussion

Drinking Water Sampling

In 2011 and 2012 sampling events, toluene was detected in both the primary and field duplicate samples as shown in Table 2. The toluene concentration in both years was slightly above the limit of quantitation (LOQ) and at least three orders of magnitude below the respective ADEC cleanup level. Toluene has been detected in this same concentration range previously, although toluene is no longer detected in most of the monitoring wells. The source of the toluene is not known and the concentrations are low so this is not considered a concern. The duplicate pair quality control summary indicates the samples meet the ADEC data quality objectives and no other quality control concerns were noted with the drinking water results.

The drinking water well has now been tested five times in the four years since it was installed. No evidence of contamination related to the 2006 release has been observed. Sampling is recommended as outlined in the long-term monitoring plan for the site, which includes an event with other groundwater sampling in 2013.

Free Product

No measurable product was observed in FRW2 since installation in June of 2008 and no product was recovered from this well. Historically, free product was measured in SW5, however the quantity has steadily decreased with none observed from 2009 through 2012 as observed in Table 1. Specific free product monitoring field visits were discontinued in 2009/2010. Free product monitoring should be limited to future periodic groundwater sampling events as recommended in the 2010 Long-Term Monitoring Plan.

Groundwater Elevations

Depth to groundwater was measured at each of the monitoring wells and FRW2 during groundwater sampling events. Groundwater elevation contours developed are shown in Figures 4 and 5. These contours do not include the deeper monitoring wells. CRW1 (free product collection well) is not included because it was frozen. SW1 and SW2 are also not included in the 2012 gradient calculation due to obvious frost jacking that changed the elevation of the casing.

The 2011 and 2012 groundwater elevations continue to show the groundwater surface generally sloping to the west or southwest. The total elevation difference across the site is less than 0.15 feet, resulting in a calculated hydraulic gradient of less than 0.001 feet/foot. The site location and porosity of soil observed during aquifer characterization indicate groundwater elevation is highly dependent on the Chena River water level.

As the Site is within a meander, river level changes are not expected to result in transient groundwater gradient conditions because the river would rise on each side relatively equally. The potential impact of groundwater elevation changes and resulting flow direction is expected to be minimal. The potential for vertical mixing within the groundwater has not been evaluated, but is expected to be minimal. Continued evaluation of the gradient with existing wells that appear undamaged is recommended, but a new survey is not considered necessary for wells that are currently not included in the elevation contours.

2011 and 2012 Groundwater Characterization

The analytical results for January and March 2011 are summarized in Table 3, while the analytical results for March 2012 are summarized in Table 4. A summary of the historical results for each well is presented in Table 5. The well locations and benzene concentrations for each sampling event are shown in Figures 4 and 5 along with the groundwater elevation contours. Copies of the laboratory analytical reports and the ADEC Laboratory Data Review Checklists for each groundwater sampling event are attached to this report.

Contaminant Concentrations

For the individual events, benzene and DRO are the only contaminants of concern that have been observed above the ADEC cleanup level. In January 2011 both of these contaminants of concern exceeded the ADEC cleanup level in SW5 and DRO exceeded the ADEC cleanup level in DW2. DRO was not detected in any of the other wells while benzene and other BTEX compounds were detected below the ADEC cleanup levels in most of the other monitoring wells.

As indicated above, SW5 and FRW2 were inspected and resampled in March 2011 to confirm the difference in concentration between these adjacent wells. These results are shown in the middle of Table 3 and confirmed that benzene and DRO exceeded the ADEC cleanup level in SW5, while other BTEX compounds were present below the cleanup levels. No contaminants were detected in FRW2 in either sampling event.

Results for the March 2012 event were generally lower than the 2011 event. Benzene and DRO exceeded the ADEC cleanup level in SW5. Other BTEX compounds were detected below the cleanup levels in this well and a few other wells. No contaminants of concern were detected in FRW2 in this sampling event.

In general, benzene concentrations have fallen in each well, and since 2009 the only exceedance above the ADEC cleanup level occurs in SW5. Toluene, ethylbenzene and/or total xylenes have been present in most wells at concentrations below ADEC cleanup levels and of a downward trend. In 2011, DRO exceeded cleanup levels in DW2 and SW5. In 2012, DRO exceeded the cleanup level in SW5. DRO was not detected in the remaining wells.

QA/QC Results and Discussion

Two field duplicate sample pairs were collected and submitted blind to the laboratory for the 2011 and 2012 sampling events. The primary and duplicate sample pair results were used to calculate the relative percent difference (RPD). The RPD results for each duplicate pair are shown at the bottom of the respective summary table. ADEC considers an acceptable RPD in a groundwater duplicate pair at 30 percent (%) or less. In the event a compound was not detected in either sample, the RPD was not calculated. Non-detect results were reviewed to verify a comparable order of magnitude.

In 2011, both duplicate pairs from the monitoring wells met RPD goals with each calculable RPD at less than 3%. Both duplicate pairs from the monitoring wells in 2012 also had RPDs less than 3%, meeting the ADEC goals. RPDs for the 2011 and 2012 drinking water pairs were between 12% and 15%, also meeting the RPD goals.

NORTECH also reviewed the laboratory reports for other quality control issues using the ADEC Laboratory Data Review Checklists. A review of the reports did not identify any concerns that affect data usability as described in this report. These checklists are included as attachments with the respective laboratory reports.

Contaminant Trends

The historical data summary in Table 5 is organized by well and each well is discussed below. The wells are listed in alphanumeric order in Table 5 and grouped by area here to facilitate understanding of the site.

Source Area

The source area consists of the area on the east of the house between the release location SW5 to the northwest. Wells tested in this area include the former drinking water well (DWW, the release location), CRW1 (a shallow product recovery well), DW2 and FRW2 (deep monitoring and product recovery wells), and SW5 and SW6 (shallow monitoring wells).

- **CRW1**: This well was installed in December 2006 to collect product expected to float vertically to the groundwater surface. Ice was observed in 2011 and 2012 and not sampled. Historical data in Table 5 indicates no BTEX at this location. DRO was observed in 2007 and 2008 below ADEC cleanup limits. Product was never measured or recovered, indicating that product did not float to the top of the groundwater in this location.
- **DW2**: The 2008 aquifer study indicated petroleum contaminants migrated through the screened depth of this deep well to the groundwater surface. Ethylbenzene and xylenes have steadily decreased from the 2007 installation through 2012 and have not been measured above ADEC cleanup levels. Since 2009, benzene and toluene have not been detected at or above the limit of quantitation (LOQ). In 2011, DRO was above the cleanup level for the first time since 2007. DRO had not been detected in 2009 or 2012, suggesting that the 2011 result may have been a laboratory error or anomaly.
- **FRW2**: The 4-inch, 35-foot deep product recovery well was installed in 2008 to recover product from multiple depths. Recoverable product was never measured. Historical contaminant concentrations have not exceeded ADEC cleanup levels. Since 2009, no contaminants were detected at or above the LOQ. Field inspection in 2011 confirmed that FRW2 is screened from the bottom to above the water table, indicating results should be similar to SW5.
- **SW5**: This well was installed as the upgradient background well, but free product was observed and small amounts recovered until late 2008. Free product has generally decreased between sampling events with none observed since 2008. Dissolved contaminant concentrations toluene, ethylbenzene, and xylenes decreased steadily since August 2008 and continue below cleanup levels. Benzene and DRO have remained above ADEC cleanup levels, but benzene has continued on a steady downward trend since November 2008. DRO levels have fluctuated since 2008, but remain well below those observed during the initial sampling event.
- **SW6**: SW6 was installed in 2008 to evaluate contaminant migration at the groundwater surface from the SW5 area. Benzene exceeded the ADEC cleanup level in late 2008 and 2009 but been steadily decreasing and dropped below the cleanup level in 2011. Detected ethylbenzene and xylenes have fluctuated within a narrow range that is several orders of magnitude below the ADEC cleanup level.

Downgradient Area

The groundwater elevation contours have generally been to the southwest or west during sampling events. Monitoring wells DW1, SW1, and SW9 are considered directly downgradient of the source area.

- **DW1**: This deep monitoring well was installed to identify contaminant migration at the release depth in the direction of the hydraulic gradient. BTEX concentrations have generally been low, if detected at all. Benzene is the only contaminant that has exceeded the ADEC cleanup level. Benzene was not

detected in 2007, slightly above the cleanup level in 2008 and 2009, dropped below the cleanup level in 2011, and returned to non-detect in 2012.

- **SW1**: This shallow well was installed to evaluate downgradient contaminant migration at the groundwater surface. Benzene not detected initially and concentrations have stayed in a relatively narrow range near the ADEC cleanup level from July 2007 through 2009. The 2011 and 2012 events show benzene decreasing below the cleanup level.
- **SW9**: This shallow well was installed in 2008 and is 65 feet farther downgradient than SW1. DRO has not been detected. Ethylbenzene and xylene concentrations have been detected well below ADEC cleanup levels. Benzene exceeded the ADEC cleanup level slightly in 2008 and have steadily decreased.

Perimeter Area

Wells SW2, SW3, SW4, SW7, and SW8 are perimeter wells and/or sentry wells around the edge of the contaminant plume. These wells are expected to have concentrations of contaminants of concern below the ADEC cleanup levels, if detected at all.

- **SW2**: This shallow monitoring well is due west of source area wells SW5 and SW6. Benzene was not detected in 2007 and then detected in 2008 and 2009 at concentrations below the ADEC cleanup level. Benzene was not detected in 2011 or 2012. No other contaminants of concern have been detected in SW2.
- **SW3**: This shallow monitoring well is northwest of the source area and is cross-gradient based on groundwater elevations. Similar to SW2, benzene was not detected in 2007 and then detected in 2008 and 2009 at concentrations below the ADEC cleanup level. Benzene was not detected in 2011 or 2012. No other contaminants of concern have been detected in SW3.
- **SW4**: This shallow monitoring well is north of the source area. Based on groundwater elevation and the sloped stratigraphic layers that moved the release east, the SW4 location is generally upgradient. DRO has not been detected. BTEX compounds were generally not detected in 2007, were detected from 2008 to 2011, and were not detected in 2012.
- **SW7**: This monitoring well was installed in 2008 to evaluate the southern edge of the plume adjacent to the house. Benzene was detected at an order of magnitude below the ADEC cleanup level in 2008. No contaminants of concern have been detected since 2009.
- **SW8**: This shallow well was installed in 2008 to evaluate the southern edge of the plume. Benzene, ethylbenzene, and xylenes were detected in 2008 below ADEC cleanup levels. Detected concentrations of individual compounds have steadily dropped since 2008 and no contaminants of concern were detected in 2012.

SW5 and FRW2 Evaluation

SW5 and FRW2 are located approximately five feet apart on the eastern side of the site. As indicated above, SW5 was expected to be an upgradient well but free product was encountered during installation. Further characterization indicated that this was due to aquifer characteristics that led the petroleum to migrate horizontally while floating to the surface from the release location. FRW2 was screened for approximately 30 feet to recover product from any contaminated depth in the SW5 area. However, free product has never been observed in FRW2 and dissolved contaminant concentrations have never exceeded the ADEC cleanup levels in FRW2.

The 2011 sampling event was the first event in which SW5 was the only well that exceeded the ADEC cleanup levels. At this time, the adjacent well (FRW2) was non-detect for all contaminants. Combined with the concentrations differences from the earlier sampling events, this data suggested that samples from these wells may have been from different elevations in the aquifer. A video inspection indicated that both wells are screened across the top of the water table and the results in both wells were confirmed by re-sampling in March 2011. The March 2012 sampling event provided further evidence of this difference of conditions.

In an effort to explain these differences, ***NORTECH*** evaluated the differences between these wells. FRW2 is deeper (~35 feet) and would be expected to provide evidence of free product over the full depth of the well. FRW2 was installed using hollow stem auger technology and has a 4" PVC casing with a manually installed sand pack, while SW5 is a ¾-inch direct-push pre-packed microwell that utilizes a fine mesh screen to hold the sand against the casing during and after installation. While both of these technologies are approved and used throughout Alaska and the world, the FRW2 technology has been the standard utilized for many decades while the SW5 technology was developed in the last 15 years.

NORTECH inspected an un-used, pre-packed microwell to see if something in the well construction could be causing the differences. This inspection showed that the screen used to hold the sand against the casing is very similar to the screen used to separate oil from water for collection in passive skimmers. In the passive skimmer, this screen is primed with oil prior to installation. After priming, the screen repels water while allowing oil to pass through and collect in the skimmer.

After review of the data from this site, ***NORTECH*** believes that SW5 does not represent the actual subsurface conditions at this location. SW5 was installed into free product at the time of construction, only a few months after the release. This would have filled the entire sand pack with petroleum and coated the screen with petroleum, reducing the potential for water to pass through the screen. While the free product depths in SW5 were initially significant, this could have been an artifact of the screen differentially preferring product at the time of installation. Since that time, the actual volume of free product measured and recovered has been small and free product has never recharged

quickly. This suggests that the free product observed in SW5 may have been limited to the free product that entered the sand pack at the time of installation and not representative of the free product depth in the ground.

Under this scenario, the dissolved contaminants observed in SW5 would be more representative of the water that is in contact with the contaminated screen and sand pack, not the conditions present in the aquifer as a whole. Over time, the oily screen would have limited the volume of water passing through the sand pack relative to the volume of water passing through the aquifer as a whole. This would result in water within the SW5 casing and sand pack having a longer contact time with the contaminants and creating higher concentrations of dissolved contaminants. Additionally, the screen provides a barrier, although limited, to transmission of aquifer water to the well during sampling. This could allow enough additional mixing so that the entire well structure is not purged prior to sampling. This would result in dissolved contaminant concentrations that are more consistent of the conditions within the previously petroleum-saturated sand pack that the surrounding aquifer.

The conventionally constructed FRW2 was installed approximately 18 months after the release. While contaminated soil was observed at the time of installation, this contamination may have already been primarily residual phase petroleum due to the volume of water that had passed through the gravel aquifer since the release. The high flow aquifer could have already spread out the limited free product that was initially present and already stripped the dissolvable component of the petroleum. The sand pack of this well is consistent with the surrounding gravel aquifer and the water in the well would rapidly equilibrate with the aquifer, providing a more representative sample to be collected from this well.

Based on these differences in construction, ***NORTECH*** believes that FRW2 is more representative of the actual aquifer conditions on the east side of the house that SW5. ***NORTECH*** recommends decommissioning SW5 through removal of the well structure. In the event that the sand pack and screen are stripped from the casing during removal, this limited amount of material is not expected to be a significant concern for the site. Replacement or other investigation of SW5 is not necessary due to the data from the aquifer characterization study and the installation of FRW2. Additionally, the SW5 data should be removed from the data set for evaluation of closure of the site.

Overall Site Conditions

The six sampling events that have been undertaken following initial well installation have been timed to encounter seasonal high water twice (July 2007 and August 2008) and seasonal low water four times (November 2008, October 2009, January 2011, and March 2012), consistent with ADEC recommended guidelines. Transient groundwater flow most likely occurs during the summer when the Chena River elevation is impacted by precipitation, raising and lowering the groundwater elevation directly with the river stage. During the winter, the water elevation generally lowers as the surrounding aquifer slowly drains.

Collected groundwater elevations support expected seasonal variations. Groundwater elevations in October 2009 were at least 1.5 feet lower than previous events. Groundwater elevation variability although not defined is expected at four or five feet with rapid changes due to the Chena River's proximity. The potential for vertical groundwater transport is considered limited due to thin lower permeability layers that controlled product migration following the initial release. While free product was able to penetrate these layers, the buoyant force of the petroleum is expected to be much greater than the vertical diffusion necessary to move benzene downward in the aquifer. The benzene seen in the deeper wells appears consistent with the horizontal migration of contaminants in water from the residual smear than vertical mixing from the surface.

The 2010 Work Plan was developed with the concept that SW5 was representative of the source area aquifer. The existing downgradient and perimeter wells provided good evidence that contaminants were not migrating off-site, but the potential risk to the nearby drinking water wells was considered significant. The additional proposed wells were intended to provide additional evidence that dissolved contaminants were not migrating from this area at locations that existing monitoring wells could not test. However, as discussed above, SW5 is no longer believed to be representative of the conditions in the source area aquifer.

The FRW2 data indicates that the free product and most of the dissolvable portions of the petroleum has already been removed from the source area. This is consistent with the other source area and downgradient well data that indicate benzene concentrations peaked in late 2007 or early 2008 with a steady decline in concentrations since that time. This is also consistent with the observed aquifer characteristics that indicating a high volume of water is moving through the area, including the initial speed with which the petroleum moved to the SW5 location and the low percentage of fines observed in the aquifer during soil borings.

Using FRW2 as representative of the conditions on the eastern side of the house, the existing data provide multiple lines of evidence that the conditions at the site are approaching that necessary for closure. The hydraulic gradient is consistent in the general flow direction of the river. DW2 is the only other well that exceeded the ADEC cleanup level for any analyte in 2011 and this result was not confirmed in 2012. Other than this anomalous result, each detected contaminant of concern shows a decreasing trend in each well. This data indicates dissolution of lighter benzene within the residual smear area is reaching a limit. The rate of biological degradation appears to exceed the pace of physical transport mechanisms moving contaminants with groundwater.

While residual phase petroleum may be present within the water column, this data shows that any remaining contamination poses little risk to human health or the environment at the site or in the surrounding area. The primary potential receptors in the area are the drinking water wells at the Site and nearby properties as shown in Figure 2. These wells are generally screened at depths of more than 40 feet below

grade, below the fuel release depth and onsite deep monitoring wells. In 2008, three downgradient residential wells within the potential contamination path were tested and petroleum contamination was not identified. Since that time, contaminant concentrations have dropped in every monitoring well at the site. The potential for contamination to impact these wells is considered minimal.

Although the work plan for 2010 was not completed as approved due to the 2011 observations, the groundwater sampling events have been on schedule and more complete (all wells and DRO testing) than outlined in the long-term monitoring program outline from 2010 that is attached. Under this outline, the event planned for 2012 (or early 2013) could be reduced to 2 deep and 4 shallow wells for BTEX only. Since the evaluation of the data without SW5 indicates that the site may be ready for closure after one more sampling event, ***NORTECH*** recommends that the 2012/2013 winter sampling event include the full set of existing wells to provide the highest quality evidence that the site is ready for closure. The report for 2012/2013 activities should be submitted to ADEC for review and approval of activities that include:

- Decommissioning of SW5
- Sampling of the other remaining wells
- Identification of criteria that will permit:
    - Other wells may be decommissioned
    - The site may be closed

Conclusions and Recommendations

The site has been extensively characterized with monitoring wells less than 75 feet apart in most cases. Many intermediate areas were assessed using GPR, soil borings, and electrical conductivity measurements. The additional monitoring wells approved in the 2010 work plan were not installed in 2010 due to the onset of winter. The 2011 and 2012 groundwater monitoring results suggest that these wells are not necessary due to changes in the conditions at the site and problems with one of the existing monitoring wells. Based on this data, ***NORTECH*** has the following conclusions and recommendations for the site:

<u>On-Site Drinking Water Well Testing</u>

- Drinking water results indicate that contaminants from the release have not impacted the new drinking water well
- Annual testing of the drinking well is recommended for 2013
- The details of future testing should be as described in the 2010 LTMP outline

<u>Free Product Monitoring and Recovery</u>

- The total amount of product recovered from SW5 has been less than 0.1 gallons with none recovered since August 2008
- Any product remaining appears to be residual and not recoverable

- Periodic free product monitoring has been discontinued unless other site work is being performed
- Future testing should be as described in the 2010 LTMP outline

Groundwater Elevations

- Additional elevation monitoring is not necessary outside sampling events
- Periodic trimming of casings may be necessary due to frost jacking
- The gradient at the site is clearly established and re-surveying of casing elevations is not recommended
- Wells with trimmed casings should be removed from the water table surface elevation contour map

Groundwater Characterization

- Groundwater sampling data from 2007 through 2012 shows a significant decline in contaminant concentrations across the Site
- Perimeter and downgradient wells met the ADEC cleanup levels in 2011 and 2012
- Source area well DW2 exceeded the ADEC cleanup level for DRO in 2011
    - DRO was below the cleanup level in 2008, 2009, and the elevated result was not confirmed in 2012
    - Other detected contaminants of concern has steadily decreased since the well was installed
    - This DRO results is believed to be an anomaly and does not represent a change in conditions at DW2
- Source area well SW5 has exceeded the ADEC cleanup level for benzene and DRO since installation
    - Concentrations of these contaminants are generally decreasing
    - Contaminants have rarely been detected in the adjacent FRW2
    - FRW2 is believed to be more representative of conditions at this location that SW5 based on the following observations:
        - Both are screened and sampled at the surface of the water table
        - SW5 is a pre-packed microwell that was installed into free product
        - The screen of the SW5 is believed to have trapped petroleum in the sand pack resulting in the continued contaminant concentration discrepancy between SW5 and FRW2
    - Decommissioning of SW5 is recommended
    - FRW2 should be used instead of SW5 to evaluate the long-term trends and potential closure of the site
- One additional sampling event of all existing wells is recommended for the November 2012 to March 2013 timeframe
- Conditions and criteria for the potential decommissioning and closure of the site should be detailed

Contaminant Migration and Potential Receptor

- Three downgradient residential wells within the potential contamination path were tested in 2008
- Contaminant concentrations across the site were highest during this time period
- Concentrations at the site have steadily dropped since that testing event
- The potential for contamination to impact these wells is considered minimal
- No additional off-site testing is recommended

Project Management Recommendations

- Submit this report to ADEC to document 2011 and 2012 activities and recommendations for 2013
- Teleconference/meet with Markel and ADEC to discuss site conditions, historic trends, SW5 / FRW2 divergence, and recommended activities.
- Develop 2013 work plan and long-term monitoring program to meet ADEC requirements for closure

Please contact Peter Beardsley, the Site Project Manager at your earliest convenience if you have any questions about the data presented in the report or the site in general.

Sincerely,
NORTECH

Susan L. Vogt, CPESC, CISEC
Senior Professional

Peter Beardsley, PE
Principal, Environmental Engineer

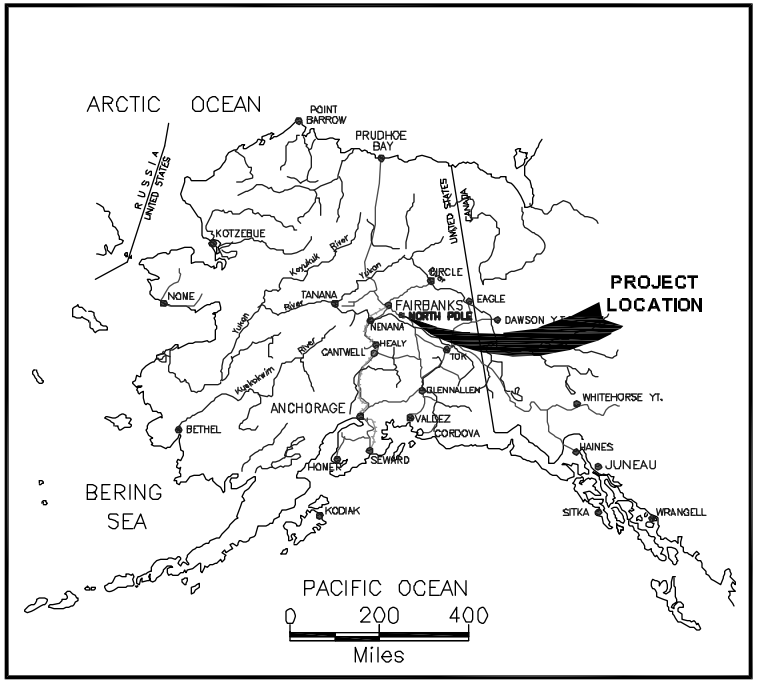
Attachments:

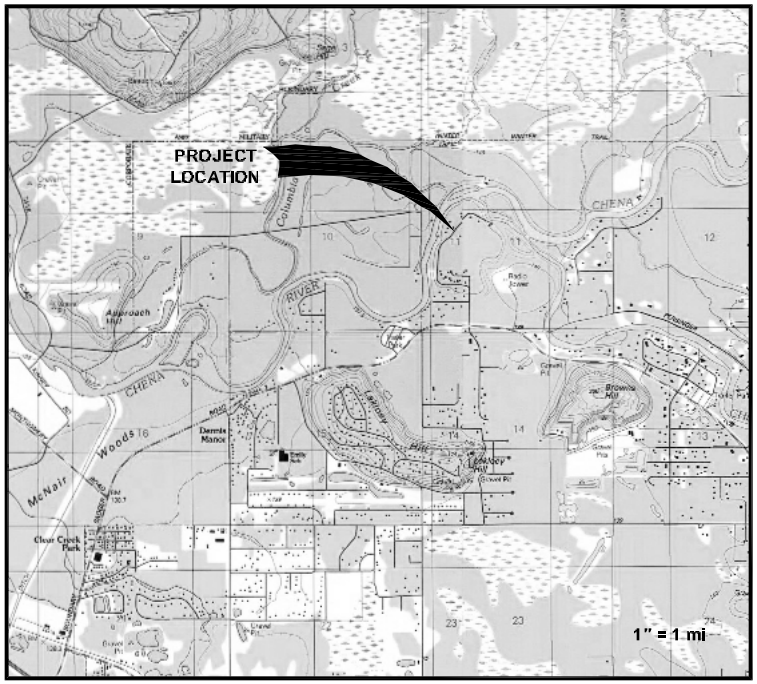
Figure 1	Vicinity Map
Figure 2	Site Location Map
Figure 3	Site Map
Figure 4	Groundwater Elevations and Benzene Results – January 2011
Figure 5	Groundwater Elevations and Benzene Results – March 2012
Table 1	Free Product Measurements and Recovery Data
Table 2	Drinking Water Results – Current and Historic
Table 3	Groundwater Results – January 2011
Table 4	Groundwater Results – March 2012
Table 5	Groundwater Results – Historical Summary

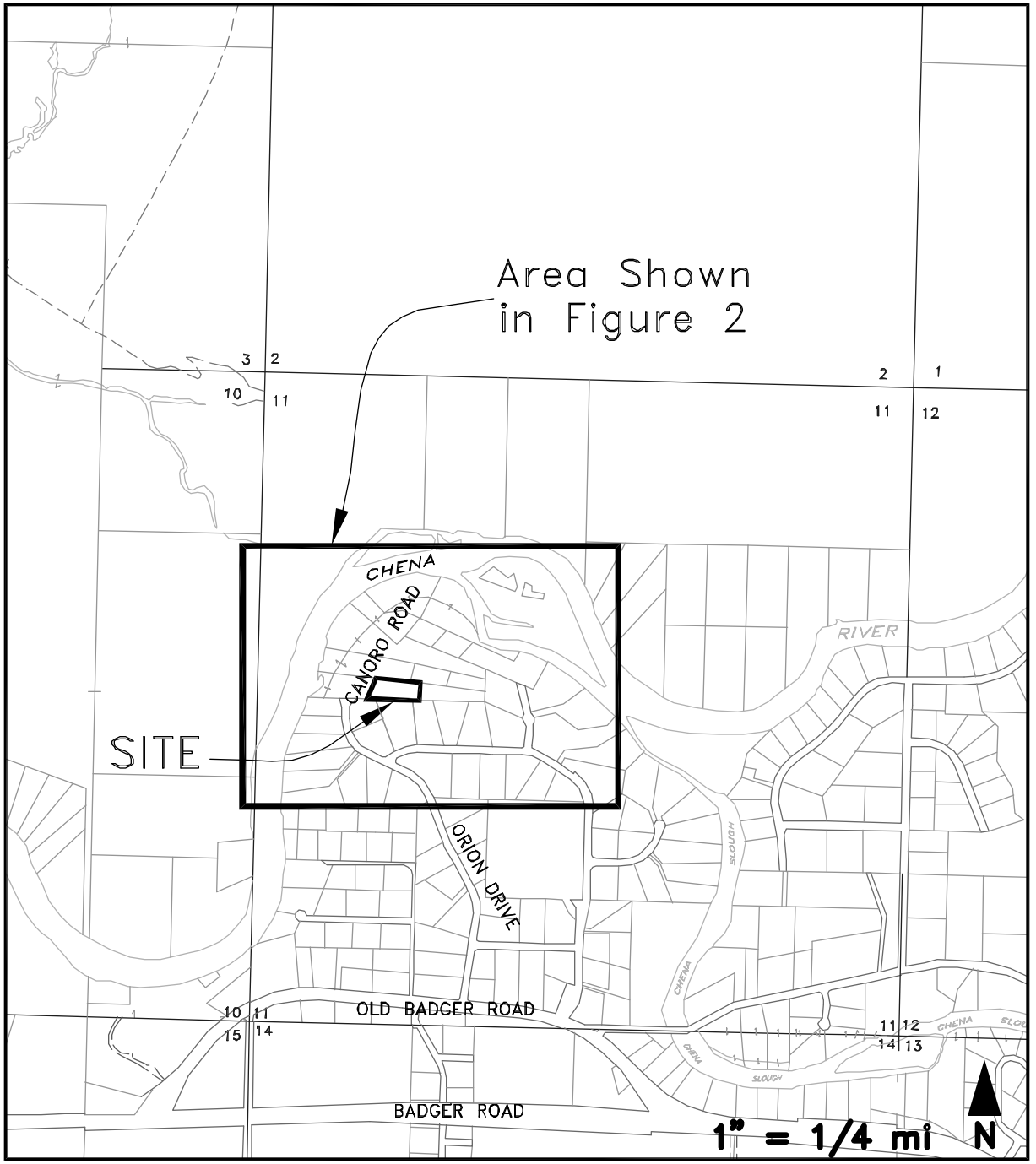
Long Term Monitoring Plan Outline (2010)

Laboratory Reports and Lab Quality Checklists

Figures







NORTECH
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3105 Lakeshore Dr. Anch, Alaska 99517 Ph: 907-222-2445
5438 Shaune Dr, Suite B, Juneau, AK 99801 Ph: 907-586-6813

Location Map
578 Canoro Road
North Pole, Alaska

DATE: 09/26/12	SCALE: As Shown
DESIGN: PLB	PROJECT: 06-1080
DRAWN: PLB	DWG: 061080g(01)

FIGURE 1

NORTECH
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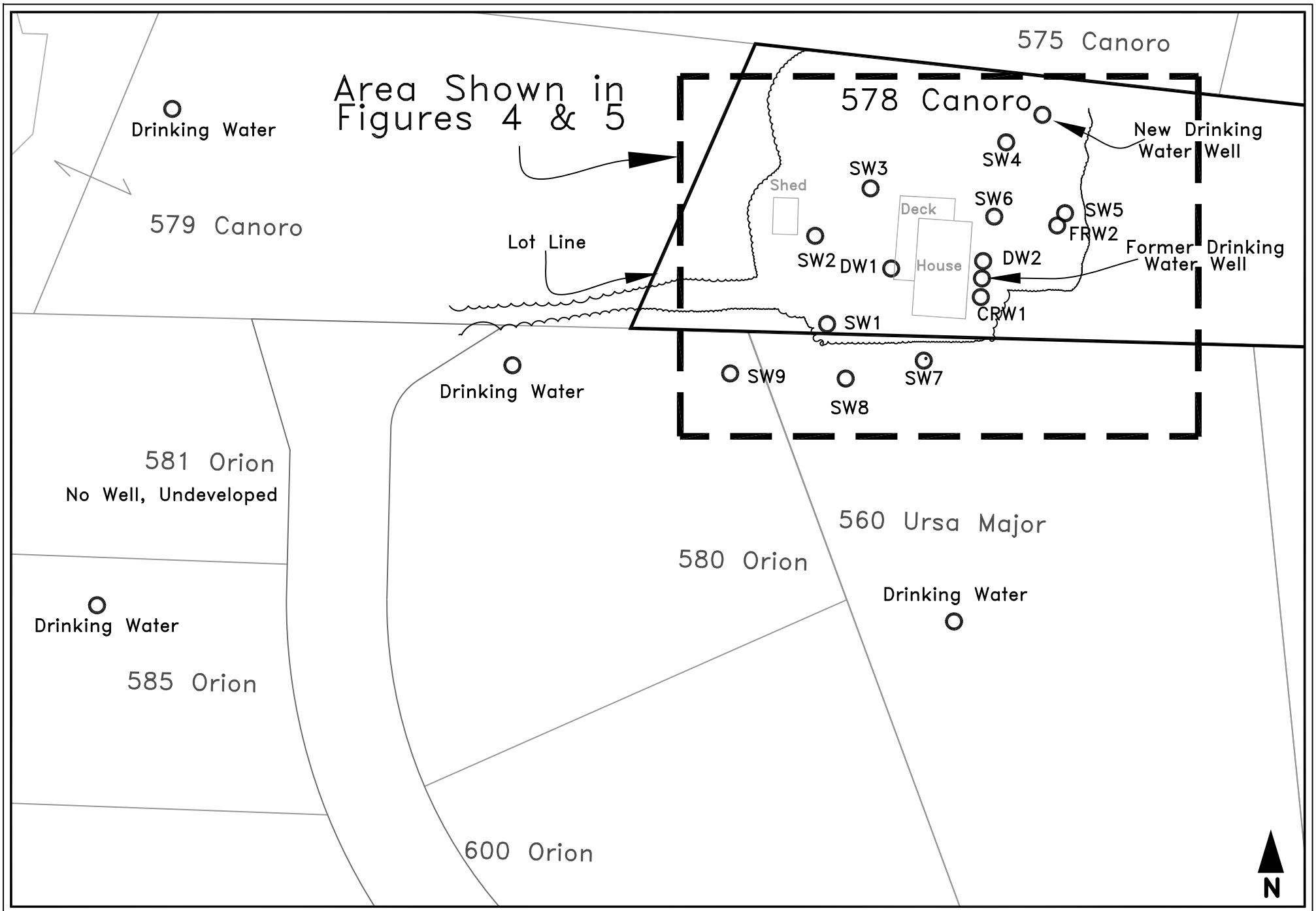
Vicinity Map
578 Canoro Road
North Pole, Alaska

DATE: 09/27/12	SCALE: 1" = 300'
DESIGN: PLB	PROJECT: 06-1080
DRAWN: PLB	DWG: 061080g(02)

FIGURE 2



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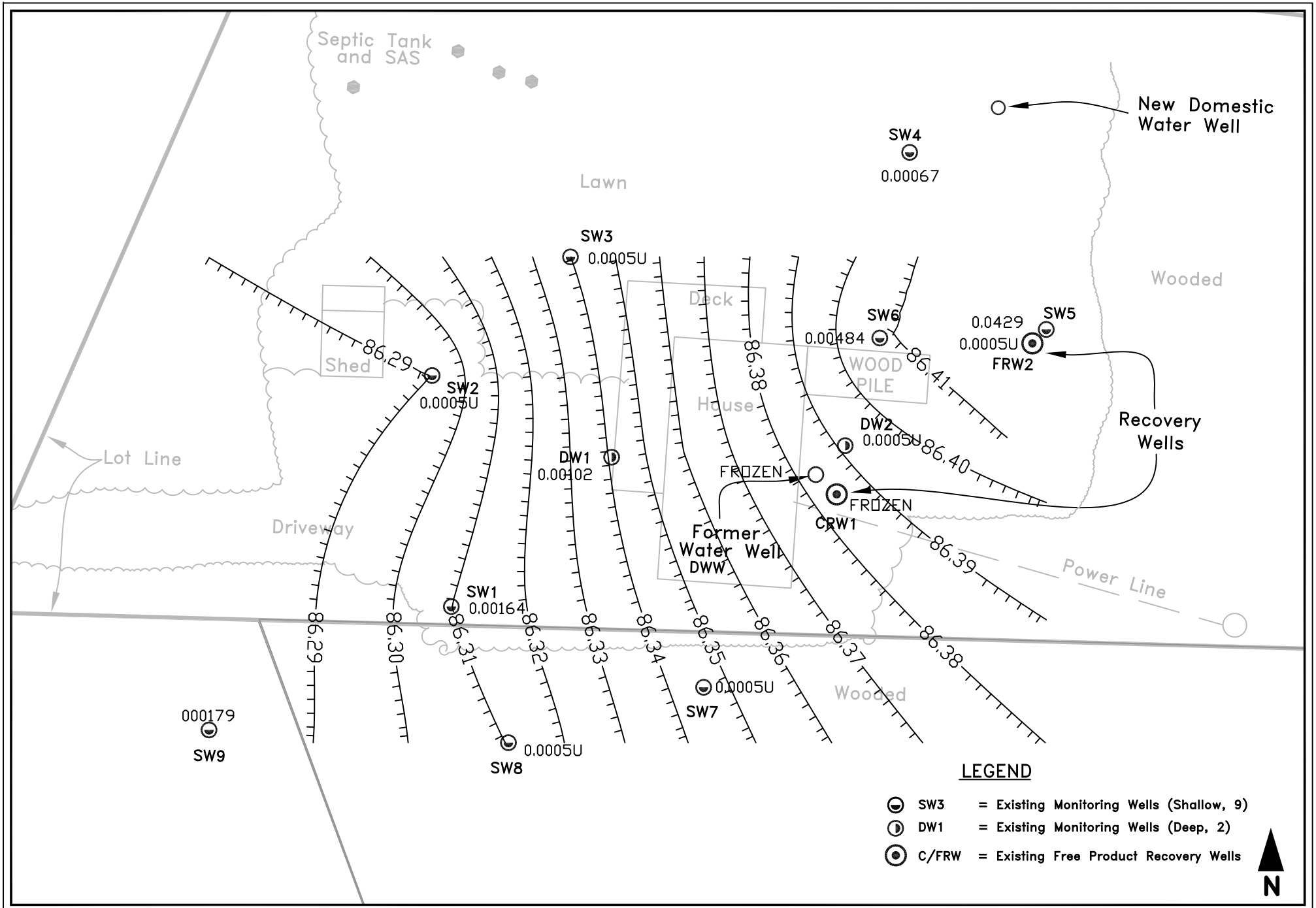
Nearby Properties and Drinking Water Wells
578 Canoro Road
North Pole, Alaska

DATE: 09/27/12	SCALE: 1" = 75'
DESIGN: PLB	PROJECT: 06-1080
DRAWN: PLB	DWG: 061080g(03)

FIGURE 3



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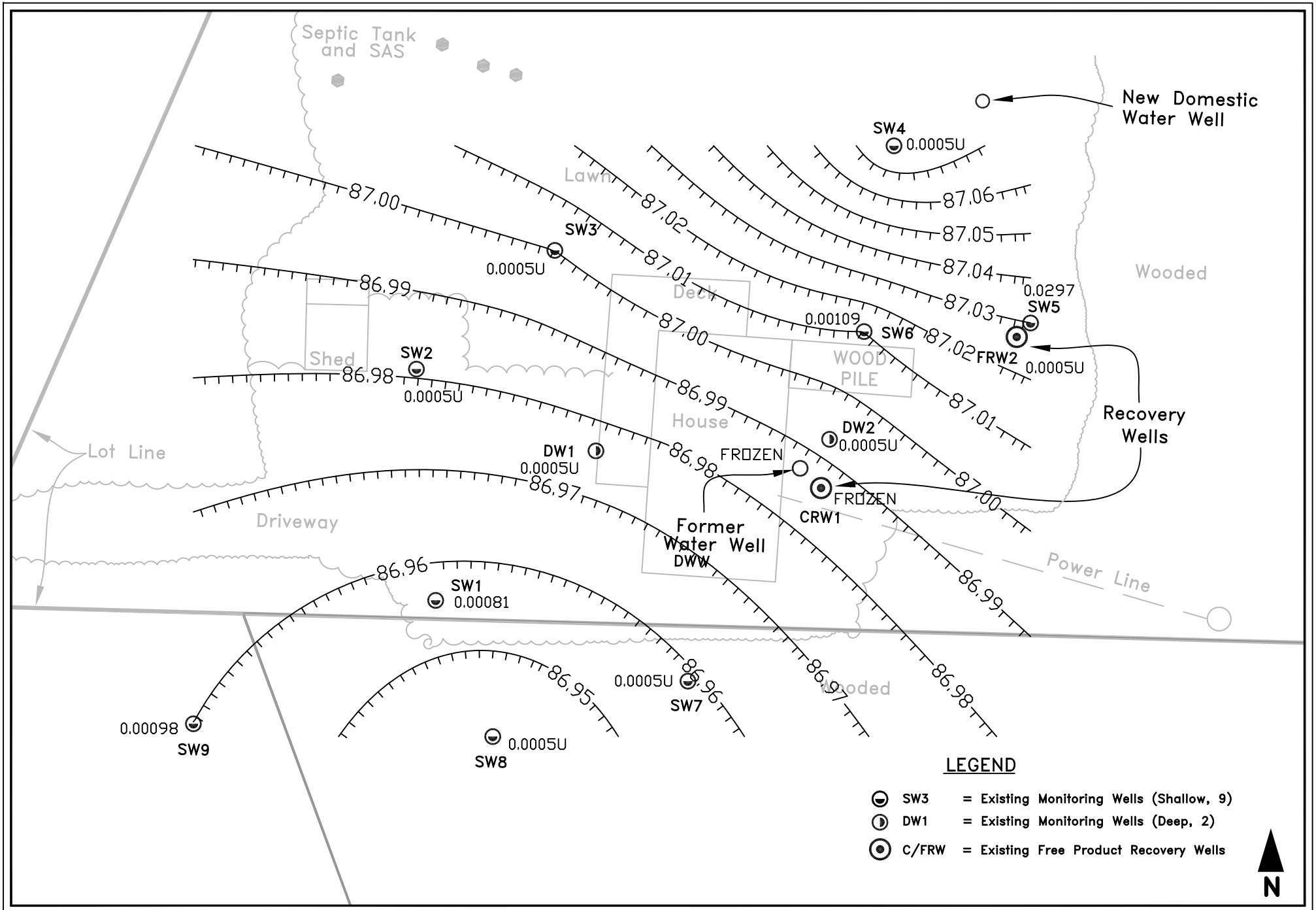
Groundwater Elevations and Benzene Results - 01/27/11
578 Canoro Road
North Pole, Alaska

DATE: 09/28/12	SCALE: 1" = 30'
DESIGN: PLB	PROJECT: 06-1080
DRAWN: PLB	DWG: 061080g(04)

FIGURE 4



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3105 Lakeshore Dr. Anch, Alaska 99517 Ph: 907-222-2445
5438 Shaune Dr, Suite B, Juneau, AK 99801 Ph: 907-586-6813

Groundwater Elevation and Benzene Results - 03/27/12
578 Canoro Road
North Pole, Alaska

DATE: 09/28/12	SCALE: 1" = 30'
DESIGN: PLB	PROJECT: 06-1080
DRAWN: PLB	DWG: 061080g(05)

FIGURE 5

Tables

Table 1
Free Product Measurements and Recovery Data - 2008 through 2012

Date	Well	Depth to Product	Depth to Water	Product Thickness	Product Volume	Recovered Product
	Units	feet	feet	feet	gallons	gallons
6/3/2008	SW5	13.49	14.28	0.790	0.018	0.018
6/25/2008	FRW2	-	13.60	sheen	NR	NR
6/25/2008	SW5	13.32	14.75	1.430	0.033	0.033
7/10/2008	FRW2	-	13.50	NP	NR	NR
7/10/2008	SW5	13.15	14.06	0.910	0.021	0.021
8/6/2008	FRW2	-	9.59	sheen	NR	NR
8/6/2008	SW5	9.30	9.82	0.520	0.012	0.012
8/16/2008	FRW2	-	10.99	sheen	NR	NR
8/16/2008	SW5	10.88	11.32	0.440	0.010	0.010
9/18/2008	FRW2	-	12.72	NP	NR	NR
9/18/2008	SW5	12.48	12.49	0.010	NR	NR
11/11/2008	FRW2	-	11.65	NP	NR	NR
11/11/2008	SW5	11.41	11.43	0.020	NR	NR
10/27/2009	FRW2	-	13.97	NP	NR	NR
10/27/2009	SW5	-	14.24	NP	NR	NR
1/27/2011	FRW2	-	12.21	NP	NR	NR
1/27/2011	SW5	-	13.81	NP	NR	NR
3/25/2012	FRW2	-	13.90	NP	NR	NR
3/25/2012	SW5	-	13.18	NP	NR	NR
				Total Product Recovered:		**0.094**

Notes:

Depths are measured from the top of casing

NP No product

NR No Recovery

Table 2
March 2012 and Historical Drinking Water Results - Detected Analytes

Sampling Date	Sample ID	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Chloro-methane
	Units	mg/L	mg/L	mg/L	mg/L	mg/L
	ADEC Limit	0.005	1.0	0.7	10	0.066
3/8/2008	BALL-DWW-1	0.0005U	0.0005U	0.0005U	0.001U	0.0005U
3/8/2008	BALL-DWW-2*	0.0005U	0.0005U	0.0005U	0.001U	0.0005U
4/8/2008	[BALL-]DW-01	0.000440J	0.00183J	0.000150J	0.000800J	0.0005U
4/8/2008	[BALL-]DW-02*	0.00063	0.00268	0.000210J	0.000940J	0.000220J
6/3/2008	BALL-DWW1	0.0005U	0.0005U	0.0005U	0.001U	0.0005U
6/3/2008	BALL-DWW2*	0.0005U	0.0005U	0.0005U	0.001U	0.0005U
9/18/2008	BALL-DWW1	0.0005U	0.0005U	0.0005U	0.001U	0.0005U
9/18/2008	BALL-DWW2*	0.0005U	0.0005U	0.0005U	0.001U	0.0005U
1/28/2011	IN1	0.0005U	0.00082	0.0005U	0.001U	0.0005U
1/28/2011	IN2*	0.0005U	0.00071	0.0005U	0.001U	0.0005U
3/23/2012	NDW1	0.0005U	0.00059	0.0005U	0.001U	NA
3/23/2012	NDW2*	0.0005U	0.00067	0.0005U	0.001U	NA

Notes:

U	Analyte not detected at the listed detection limit
Shade	Analyte detected in concentration below the ADEC Cleanup level
X.XX U	Analyte(s) not detected at specified limit of quantitation (LOQ)
X.XX J	Measured concentration below LOQ, value estimated by laboratory
*	Blind duplicate sample
NA	Not Analyzed

Duplicate Pair Quality Control Summaries - 2011 and 2012 Samples

Sample ID	IN1	IN2*	Average	Difference	RPD
Analyte	mg/L	mg/L	mg/L	mg/L	%
B	ND	ND	NA	NA	**NA**
T	0.00082	0.00071	0.00077	0.00011	**14.4%**
E	ND	ND	NA	NA	**NA**
X	ND	ND	NA	NA	**NA**

Sample ID	NDW1	NDW2*	Average	Difference	RPD
Analyte	mg/L	mg/L	mg/L	mg/L	%
B	ND	ND	NA	NA	**NA**
T	0.00059	0.00067	0.00063	0.00008	**12.7%**
E	ND	ND	NA	NA	**NA**
X	ND	ND	NA	NA	**NA**

Notes:

NA	The calculation is not applicable.
RPD	Relative percent difference as described in the lab data review checklist
ND	Analyte not detected

Table 3
Groundwater Results - January 27, 2011

Sample ID	Benzene	Toluene	Ethyl-benzene	Total Xylenes	DRO
Units	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Limit	0.005	1.0	0.7	10	1.5
SW1	0.00164	0.0020U	0.00762	0.0040U	0.714U
SW2	0.0005U	0.0020U	0.0020U	0.0040U	0.714U
SW3	0.0005U	0.0020U	0.0020U	0.0040U	0.714U
SW4	0.00067	0.0020U	0.002U	0.00265	0.714U
SW5	**0.0429**	0.443	0.319	1.884	**21.3**
SW6	0.00477	0.0020U	0.0536	0.0596	0.714U
SW16*	0.00484	0.0020U	0.054	0.0602	0.714U
SW7	0.0005U	0.0020U	0.0020U	0.0040U	0.714U
SW8	0.0005U	0.0020U	0.00322	0.0040U	0.714U
SW9	0.00179	0.0020U	0.0122	0.0040U	0.714U
SW19*	0.00184	0.0020U	0.0125	0.0040U	0.714U
DW1	0.00102	0.0020U	0.002U	0.00209	0.714U
DW2	0.0005U	0.0020U	0.00269	0.0079	**2.24**
DWW	Frozen no sample				
CRW1	Frozen no sample				
FRW2	0.0005U	0.0020U	0.0020U	0.0040U	0.714U

Groundwater Verification Results 3/9/2011

SW-5	**0.0218**	0.304	0.279	1.569	**9.84**
FRW2	0.0005U	0.0020U	0.0020U	0.0040U	0.800U

Notes:

DRO	Diesel range organics
U	Analyte not detected at the listed detection limit
Shade	Analyte detected in concentration below the ADEC Cleanup level
Bold	Analyte detected at concentration exceeding the ADEC Cleanup level
*	Blind duplicate of previous sample

2011 Quality Control Summary

Sample ID	SW6	SW16*	RPD	SW9	SW19*	RPD
Analyte	mg/L	mg/L	%	mg/L	mg/L	%
B	0.00477	0.00484	**1.5%**	0.00179	0.00184	**2.8%**
T	ND	ND	**NA**	ND	ND	**NA**
E	0.0536	0.054	**0.7%**	0.0122	0.0125	**2.4%**
X	0.0596	0.0602	**1.0%**	ND	ND	**NA**
DRO	ND	ND	**NA**	ND	ND	**NA**

Notes:

NA	The calculation is not applicable.
ND	Analyte not detected
RPD	Relative percent difference as described in the SSP

Table 4
Groundwater Results - March 27, 2012

Sample ID	Benzene	Toluene	Ethyl-benzene	Total Xylenes	DRO
Units	mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Limit	0.005	1.0	0.7	10	1.5
SW1	0.00081	0.0010U	0.0010U	0.0030U	0.600U
SW2	0.0005U	0.0010U	0.0010U	0.0030U	0.600U
SW3	0.0005U	0.0010U	0.0010U	0.0030U	0.600U
SW4	0.0005U	0.0010U	0.0010U	0.0030U	0.600U
SW5	**0.0297**	0.259	0.291	1.816	**2.19**
DUP2*	**0.0294**	0.257	0.288	1.804	**2.18**
SW6	0.00109	0.0010U	0.0278	0.0265	0.600U
SW7	0.0005U	0.0010U	0.0010U	0.0030U	0.600U
DUP1*	0.0050U	0.0010U	0.0010U	0.0030U	0.600U
SW8	0.0005U	0.0010U	0.0010U	0.0030U	0.600U
SW9	0.00098	0.0010U	0.00162	0.0030U	0.600U
DW1	0.0005U	0.0010U	0.0010U	0.0030U	0.600U
DW2	0.0005U	0.0010U	0.00147	0.00285	0.600U
DWW	Frozen no sample				
CRW1	Frozen no sample				
FRW2	0.0005U	0.0010U	0.0010U	0.0030U	0.600U

Notes:

DRO	Diesel range organics
U	Analyte not detected at the listed limit of quantitation (LOQ)
Shade	Analyte detected in concentration below the ADEC Cleanup level
Bold	Analyte detected at concentration exceeding the ADEC Cleanup level
TB NA	Trip blank not analyzed
*	Duplicate of previous sample

2012 Quality Control Summary

Sample ID	SW7	DUP1	RPD	SW5	DUP2	RPD
Analyte	mg/L	mg/L	%	mg/L	mg/L	%
B	ND	ND	**NA**	0.0297	0.0294	**1.0%**
T	ND	ND	**NA**	0.259	0.257	**0.8%**
E	ND	ND	**NA**	0.291	0.288	**1.0%**
X	ND	ND	**NA**	1.816	1.804	**0.7%**
DRO	ND	ND	**NA**	0.00219	0.00218	**0.5%**

Notes:

NA	The calculation is not applicable.
ND	Analyte not detected
RPD	Relative percent difference as described in the lab data review checklist

Table 5
Groundwater Results - Historical Summary

Well ID	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	DRO
Units		**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ADEC Limit		0.005	1	0.7	10	1.5
DW1	Feb-07	0.0005U	0.00245	0.002U	0.00813	0.319U
	Jul-07	0.0005U	0.002U	0.002U	0.002U	0.324U
Dup Sample	Jul-07	0.0005U	0.002U	0.002U	0.002U	0.319U
	Aug-08	**0.00741**	0.0020U	0.00794	0.0059	0.400U
	Nov-08	0.000798	0.0020U	0.00209	0.0040U	0.357U
	Oct-09	**0.00589**	0.0020U	0.0237	0.0160	0.769U
	Jan-11	0.00102	0.0020U	0.002U	0.00209	0.714U
	Mar-12	0.0005U	0.0010U	0.0010U	0.0030U	0.0006U
DW2	Feb-07	**0.117**	0.698	0.269	1.639	**15.0**
Field Duplicate	Feb-07	**0.113**	0.702	0.277	1.667	**8.6**
	Jul-07	**0.0452**	0.416	0.209	1.253	**19.3**
	Aug-08	0.00273	0.002U	0.022	0.06656	0.766
Field Duplicate	Aug-08	0.00283	0.00282	0.0202	0.06256	0.71
	Nov-08	0.0005U	0.00208	0.00752	0.01609	0.621
Field Duplicate	Nov-08	0.0005U	0.002U	0.00706	0.01548	0.637
	Oct-09	0.0005U	0.0020U	0.00518	0.0084	0.714U
Field Duplicate	Oct-09	0.0005U	0.0020U	0.00527	0.01081	0.784U
	Jan-11	0.0005U	0.0020U	0.00269	0.0079	**2.24**
	Mar-12	0.0005U	0.0010U	0.00147	0.00285	0.600U
SW1	Feb-07	0.0005U	0.002U	0.002U	0.002U	0.326U
	Jul-07	**0.00982**	0.002U	0.00864	0.0550	0.333U
	Aug-08	0.00287	0.0020U	0.00895	0.00876	0.357U
Field Duplicate	Aug-08	0.00233	0.0020U	0.00736	0.00743	0.400U
	Nov-08	**0.00938**	0.0020U	0.0296	0.0258	0.357U
Field Duplicate	Nov-08	**0.00866**	0.002U	0.0283	0.0248	0.357U
	Oct-09	0.00397	0.0020U	0.0129	0.0121	0.714U
Field Duplicate	Oct-09	**0.00504**	0.002U	0.0194	0.0176	0.784U
	Jan-11	0.00164	0.0020U	0.00762	0.0040U	0.714U
	Mar-12	0.00081	0.0010U	0.0010U	0.0030U	0.600U
SW2	Feb-07	0.0005U	0.002U	0.002U	0.002U	0.333U
	Jul-07	0.0005U	0.002U	0.002U	0.002U	0.324U
	Aug-08	0.00137	0.0020U	0.0020U	0.0040U	0.357U
	Nov-08	0.00485	0.0020U	0.0020U	0.0040U	0.357U
	Oct-09	0.00115	0.0020U	0.0020U	0.0040U	0.714U
	Jan-11	0.0005U	0.0020U	0.0020U	0.0040U	0.714U
	Mar-12	0.0005U	0.0010U	0.0010U	0.0030U	0.600U

Table 5
Groundwater Results - Historical Summary

Well ID	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	DRO
Units		**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ADEC Limit		0.005	1	0.7	10	1.5
SW3	Feb-07	0.0005U	0.002U	0.002U	0.002U	0.313U
	Jul-07	0.0005U	0.002U	0.002U	0.002U	0.313U
	Aug-08	0.000648	0.0020U	0.0020U	0.0040U	0.357U
	Nov-08	0.00327	0.0020U	0.0020U	0.0040U	0.357U
	Oct-09	0.00060	0.0020U	0.0020U	0.0040U	0.714U
	Jan-11	0.0005U	0.0020U	0.0020U	0.0040U	0.714U
	Mar-12	0.0005U	0.0010U	0.0010U	0.0030U	0.600U
SW4	Feb-07	0.0005U	0.002U	0.002U	0.00238	0.326U
	Jul-07	0.0005U	0.002U	0.002U	0.002U	0.316U
	Aug-08	0.0005U	0.0020U	0.0020U	0.0040U	0.357U
	Nov-08	0.00350	0.0020U	0.00372	0.0040U	0.357U
	Oct-09	0.00142	0.0020U	0.00393	0.00339	0.769U
	Jan-11	0.00067	0.0020U	0.002U	0.00265	0.714U
	Mar-12	0.0005U	0.0010U	0.0010U	0.0030U	0.600U
SW5	Feb-07	**0.466**	**1.670**	**0.767**	4.400	**2320**
	Jul-07	Not sampled due to free product depth (>0.03 feet)				
	Aug-08	**0.00955**	0.673	0.310	1.876	**5.70**
	Nov-08	**0.0846**	0.587	0.308	1.865	**2.08**
	Oct-09	**0.0776**	0.497	0.319	1.836	**1.75**
	Jan-11	**0.0429**	0.443	0.319	1.884	**21.3**
	Mar-11	**0.0218**	0.304	0.279	1.569	**9.84**
	Mar-12	**0.0297**	0.259	0.291	1.816	**2.19**
Field Duplicate	Mar-12	**0.0294**	0.257	0.288	1.804	**2.18**
SW6	Aug-08	0.000939	0.0020U	0.0020U	0.00581	0.400U
	Nov-08	**0.0170**	0.0020U	0.0273	0.0833	0.385U
	Oct-09	**0.00609**	0.0020U	0.0659	0.0500	0.714U
	Jan-11	0.00477	0.0020U	0.0536	0.0596	0.714U
Field Duplicate	Jan-11	0.00484	0.0020U	0.054	0.0602	0.714U
	Mar-12	0.00109	0.0010U	0.0278	0.0265	0.600U
SW7	Aug-08	0.0005U	0.0020U	0.0020U	0.0040U	0.400U
	Nov-08	0.000734	0.0020U	0.0020U	0.0040U	0.357U
	Oct-09	0.0005U	0.0020U	0.0020U	0.0040U	0.714U
	Jan-11	0.0005U	0.0020U	0.0020U	0.0040U	0.714U
	Mar-12	0.0005U	0.0010U	0.0010U	0.0030U	0.600U
Field Duplicate	Mar-12	0.0050U	0.0010U	0.0010U	0.0030U	0.600U

Table 5
Groundwater Results - Historical Summary

Well ID	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	DRO
Units		**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
ADEC Limit		0.005	1	0.7	10	1.5
SW8	Aug-08	0.0005U	0.0020U	0.0020U	0.0040U	0.400U
	Nov-08	0.00127	0.0020U	0.00897	0.00764	0.357U
	Oct-09	0.0005U	0.0020U	0.00655	0.005710	0.714U
	Jan-11	0.0005U	0.0020U	0.00322	0.0040U	0.714U
	Mar-12	0.0005U	0.0010U	0.0010U	0.0030U	0.600U
SW9	Aug-08	**0.00848**	0.0020U	0.00901	0.0523	0.513U
	Nov-08	**0.00730**	0.0020U	0.0153	0.01893	0.357U
	Oct-09	0.00353	0.0020U	0.0211	0.0135	0.769U
	Jan-11	0.00179	0.0020U	0.0122	0.0040U	0.714U
Field Duplicate	Jan-11	0.00184	0.0020U	0.0125	0.0040U	0.714U
	Mar-12	0.00098	0.0010U	0.00162	0.0030U	0.600U
CRW1	Jul-07	0.0005U	0.002U	0.002U	0.002U	1.10
	Aug-08	0.0005U	0.0020U	0.0020U	0.0040U	0.400U
	Nov-08	0.0005U	0.0020U	0.0020U	0.0040U	0.358
	Oct-09	0.0005U	0.0020U	0.0020U	0.0040U	0.400U
	Jan-11	Frozen no sample				
	Mar-12	Frozen no sample				
FRW2	Aug-08	0.0005U	0.0020U	0.0020U	0.01042	0.574
	Nov-08	0.0005U	0.0020U	0.0020U	0.0040U	0.357U
	Oct-09	0.0005U	0.0020U	0.0020U	0.01042	0.714U
	Jan-11	0.0005U	0.0020U	0.0020U	0.0040U	0.714U
	Mar-11	0.0005U	0.0020U	0.0020U	0.0040U	0.800U
	Mar-12	0.0005U	0.0010U	0.0010U	0.0030U	0.600U
DWW (Old Well)	Jul-07	0.00321	0.110	0.120	0.644	**14.4**
	Aug-08	0.00209	0.0020U	0.036	0.10545	0.658
	Nov-08	0.00154	0.0020U	0.0309	0.07455	0.860
	Oct-09	0.0005U	0.0020U	0.0124	0.02276	0.769U
	Jan-11	Frozen no sample				
	Mar-12	Frozen no sample				

Notes:

U	Analyte not detected at the listed detection limit
Shade	Analyte detected in concentration below the ADEC Cleanup level
Bold	Analyte detected in concentration exceeding the ADEC Cleanup level

When duplicate sample values are greater than primary sample values, duplicate sample values are use

Planning Outlines

Long-Term Monitoring Plan Outline

Drinking Water Sampling

- 578 Canoro Road
  - Recommended Periodic Sampling Schedule
    - 2010 – 2011: Annually
    - 2011 – 2015: Odd Numbered Years
    - 2015 to closure: Years ending with 5 and 0
  - Unscheduled Sampling Event Criteria
    - Petroleum Taste or Odor in Well
  - Contingency Plan if Results are above ADEC Drinking Water Standard
    - Notify ADEC and Owner, Resample within 5 days of receipt of result
    - Expedite Samples with 24-Hour Turnaround
    - Sample Well quarterly until it is below ADEC cleanup levels for 5 consecutive quarters
    - Provide alternative drinking water and/or treatment

- Other Residences
  - No additional testing of drinking water wells necessary
    - Sentinel well testing at same intervals as 578 Canoro Drinking Water Well
      - Recommended Periodic Sampling Schedule
        - 2010 – 2011: Annually
        - 2011 – 2015: Odd Numbered Years
        - 2015 to closure: Years ending with 5 and 0
  - Unscheduled Sampling Event Criteria
    - Petroleum Taste or Odor in Well
  - Contingency Plan if Sentinel Well Results are above ADEC Drinking Water Standard
    - Notify ADEC and Owner, Resample Sentinel Well and Drinking Water well within 14 days of receipt of result
    - Sample Sentinel Well and Drinking Water Well quarterly until both wells meet ADEC cleanup levels for five consecutive events
    - Provide alternative drinking water and/or treatment if Drinking Water Well exceeds ADEC cleanup levels

Free Product Monitoring

- Recommended Periodic Monitoring
  - Monitoring only during groundwater sampling events
- Contingency Plan if Product is Observed
  - Recover product within 48 hours of observation
  - Check again 7 days after observation, with recovery as necessary
  - If none at 7 days, check again at two weeks
  - If none at two weeks, check again at one month
  - If none at one month, discontinue
  - Notify ADEC if product is present on a weekly basis for more than 1 month

Groundwater Elevations

- Measure elevations during sampling events
  - Primary goal is to evaluate event to event elevation in each well
  - Secondary goal is gradient confirmation
  - Casing elevation survey may be necessary in next five years

Groundwater Contaminants Concentration Monitoring

- Additional Wells in 2010 for Receptor Sentry and Characterization
  - Shallow well east of SW5 for upgradient purpose
  - Shallow well within 5 feet of DW1 on west side of structure
  - Deep sentinel well (screened 35 to 40 feet) near SW9
- Contaminants of concern
  - BTEX should be tested in all sampling events
  - DRO should be discontinued after 2010 sampling event
- Sampling Event Schedule
  - 2010: All existing and new wells
  - 2011: Confirmation event in all but 2 or 3 wells based on 2010 results
  - 2012: Reduced location event, 2 deep plus 4 shallow wells
  - 2015 to closure: Reduced location events in years ending with 5 and 0
- Contingency Plan for unexpected results
  - Resample to confirm within 14 days of receipt of results
  - If confirmed, notify ADEC and resample and expand to all wells within 14 days of confirmation results
  - Re-evaluate site conditions and risk to potential receptors based on results

Laboratory Reports

Laboratory Data Review Checklist

Completed by: Susan Vogt

Title: Senior Professional Date: July 30, 2012

CS Report Name: Report Date: August 10, 2012

Consultant Firm: ***NORTECH, Inc.***

Laboratory Number: SGS Environmental Services, Inc. Name: Laboratory Report 1118061

ADEC File Number: 100.38.217 ADEC RecKey Number:

1. Laboratory
   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?
      Yes **XX** No NA (Please explain.) Comments:

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?
      Yes No NA (Please explain.) Comments:

2. Chain of Custody (COC)
   a. COC information completed, signed, and dated (including released/received by)?
      Yes **XX** No NA (Please explain.) Comments:

   b. Correct analyses requested?
      Yes **XX** No NA (Please explain.) Comments:

3. Laboratory Sample Receipt Documentation
   a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?
      Yes **XX** No NA (Please explain.) Comments:

   b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?
      Yes **XX** No NA (Please explain.) Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?
Yes **XX** No NA (Please explain.) Comments:

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?
Yes No NA (Please explain.) **XX** Comments:

No discrepancies noted.

e. Data quality or usability affected? (Please explain.)
Comments:

4. Case Narrative
a. Present and understandable?
Yes **XX** No NA (Please explain.) Comments:

1) Samples DW2 & SW5 – AK102 pattern is consistent with a weathered gasoline; and,
2) Sample SW5 – AK102 - The pattern is consistent with a weathered middle distillate.

b. Discrepancies, errors or QC failures identified by the lab?
Yes **XX** No NA (Please explain.) Comments:

Trip Blank 8260B - Sample result for dicholorodifluoromethane may be estimated due to a bias low continuing calibration verification (CCV). Sample was reanalyzed and result confirmed.

c. Were all corrective actions documented?
Yes **XX** No NA (Please explain.) Comments:

d. What is the effect on data quality/usability according to the case narrative?
Comments:

See 4b above. Result was ND – not detected at or above the limit of quantitation (LOQ).

5. Samples Results
a. Correct analyses performed/reported as requested on COC?
Yes **XX** No NA (Please explain.) Comments:

b. All applicable holding times met?
Yes **XX** No NA (Please explain.) Comments:

c. All soils reported on a dry weight basis?
Yes No NA (Please explain.) **XX** Comments:

Water samples only

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?
Yes No **XX** NA (Please explain.) Comments:

1,2,3-Trichloropropane (TCP) was ND in samples IN1, IN2 and the trip blank with an LOQ of 0.0005 milligrams per Liter (mg/L) above the ADEC cleanup level 0.00012 mg/L. The EPA health-advisory level (HAL) - 70 year lifetime of a70-kg adult, assuming consumption of 2 liters water per day is 0.040 mg/L.

e. Data quality or usability affected?
Comments:

Unknown

6. QC Samples
   a. Method Blank
      i. One method blank reported per matrix, analysis and 20 samples?
      Yes **XX** No NA (Please explain.) Comments:

      ii. All method blank results less than PQL?
      Yes No **XX** NA (Please explain.) Comments:

See 5d above - same for method blank. The method blank detection limit (DL) of and 0.000150 mg/L is also above the ADEC cleanup level.

      iii. If above PQL, what samples are affected?
      Comments:

See 5d above – samples IN1, IN2 and the trip blank

      iv. Do the affected sample(s) have data flags and if so, are the data flags clearly defined?
      Yes No **XX** NA (Please explain.) Comments:

No data flags noted

v. Data quality or usability affected? (Please explain.) Comments:

According to a May 2012 EPA fact sheet, TCP is a man-made chlorinated hydrocarbon with no maximum contaminant level (MCL) and is a dense non-aqueous phase liquid (DNAPL).

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)
Yes **XX** No NA (Please explain.) Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?
Yes No NA (Please explain.) **XX** Comments:

No metals/inorganics analyzed.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)
Yes **XX** No NA (Please explain.) Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)
Yes **XX** No NA (Please explain.) Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments:

NA

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes No NA (Please explain.) Comments:

vii. Data quality or usability affected? (Use comment box to explain.)
Comments:

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?
Yes **XX** No NA (Please explain.) Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)
Yes **XX** No NA (Please explain.) Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?
Yes No NA (Please explain.) **XX** Comments:

No failed surrogate recoveries.

iv. Data quality or usability affected? (Use the comment box to explain.)
Comments:

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): <u>Water and Soil</u>

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)
Yes **XX** No NA (Please explain.) Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)
Yes **XX** No NA (Please explain.) Comments:

iii. All results less than PQL?
Yes **XX** No NA (Please explain.) Comments:

See 5d above.

iv. If above PQL, what samples are affected?
Comments:

v. Data quality or usability affected? (Please explain.)

Comments:

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes **XX** No NA (Please explain.) Comments:

ii. Submitted blind to lab?

Yes **XX** No NA (Please explain.) Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

RPD (%) = Absolute value of: $\frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Yes **XX** No NA (Please explain.) Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

f. Decontamination or Equipment Blank (If not used explain why).

Yes No NA (Please explain.) **XX** Comments:

Not used. Dedicated or disposable sampling tubes and gloves used.

i. All results less than PQL?

Yes No NA (Please explain.) Comments:

ii. If above PQL, what samples are affected?

Comments:

iii. Data quality or usability affected? (Please explain.)

Comments:

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)
   a. Defined and appropriate?

Yes No NA (Please explain.) **XX** Comments:

No data flags/qualifiers.

SGS North America Inc.
Alaska Division
Level II Laboratory Data Report

Project:	06-1080 Canoro Rd
Client:	Nortech
SGS Work Order:	1118061

Released by:

Alaska Division Technical Director

Stephen Ede
2011.02.15
11:16:09
-09'00'

Contents (Bookmarked in PDF):

Case Narrative

Client	NORTECH	Nortech	**Printed Date/Time**	2/15/2011	10:34
Workorder	1118061	06-1080 Canoro Rd			

Sample ID	Client Sample ID

Refer to the sample receipt form for information on sample condition.

1118061014 **PS** **DW2**

AK102 - The pattern is consistent with a weathered middle distillate.

1118061015 **PS** **SW5**

AK102 - The pattern is consistent with a weathered gasoline.
AK102 - The pattern is consistent with a weathered middle distillate.

1118061017 ***TB** **Trip Blank**

8260B - Sample result for dicholorodifluoromethane may be estimated due to a bias low CCV. Sample was reanalyzed and result confirmed.

* QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Laboratory Analysis Report

Doug Dusek
Nortech
2400 College Rd.
Fairbanks, AK 99709

Work Order:	1118061
	06-1080 Canoro Rd
Client:	Nortech
Report Date:	February 15, 2011

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<http://www.sgs.com/terms_and_conditions.htm>), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6010B, 6020, 7470A, 7471B, 8021B, 8081B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, the National Environmental Laboratory Accreditation Program and other regulatory authorities. The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV	Continuing Calibration Verification
CL	Control Limit
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LOD	Limit of Detection (i.e., 2xDL)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.

SGS North America Inc. | Environmental Division 200 West Potter Drive Anchorage AK 99518 t(907)562.2343 f(907)561 5301
www.ussgs.com Member of SGS Group

Detectable Results Summary

Print Date: 2/15/2011 10:34 am

Client Sample ID: **SW9**
SGS Ref. #: 1118061001

Parameter	Result	Units
Volatile Fuels Department		
Benzene	1.79	ug/L
Ethylbenzene	12.2	ug/L

Client Sample ID: **SW19**
SGS Ref. #: 1118061002

Parameter	Result	Units
Volatile Fuels Department		
Benzene	1.84	ug/L
Ethylbenzene	12.5	ug/L

Client Sample ID: **SW6**
SGS Ref. #: 1118061003

Parameter	Result	Units
Volatile Fuels Department		
Benzene	4.77	ug/L
Ethylbenzene	53.6	ug/L
P & M -Xylene	59.6	ug/L

Client Sample ID: **SW16**
SGS Ref. #: 1118061004

Parameter	Result	Units
Volatile Fuels Department		
Benzene	4.84	ug/L
Ethylbenzene	54.0	ug/L
P & M -Xylene	60.2	ug/L

Client Sample ID: **IN1**
SGS Ref. #: 1118061005

Parameter	Result	Units
Volatile Gas Chromatography/Mass Spectroscopy		
Toluene	0.820	ug/L

Client Sample ID: **IN2**
SGS Ref. #: 1118061006

Parameter	Result	Units
Volatile Gas Chromatography/Mass Spectroscopy		
Toluene	0.710	ug/L

Client Sample ID: **SW1**
SGS Ref. #: 1118061007

Parameter	Result	Units
Volatile Fuels Department		
Benzene	1.64	ug/L
Ethylbenzene	7.62	ug/L

Detectable Results Summary

Print Date: 2/15/2011 10:34 am

Client Sample ID: **DW1**
SGS Ref. #: 1118061009

Parameter	Result	Units
Volatile Fuels Department		
Benzene	1.02	ug/L
P & M -Xylene	2.09	ug/L

Client Sample ID: **SW8**
SGS Ref. #: 1118061011

Parameter	Result	Units
Volatile Fuels Department		
Ethylbenzene	3.22	ug/L

Client Sample ID: **SW4**
SGS Ref. #: 1118061013

Parameter	Result	Units
Volatile Fuels Department		
Benzene	0.670	ug/L
P & M -Xylene	2.65	ug/L

Client Sample ID: **DW2**
SGS Ref. #: 1118061014

Parameter	Result	Units
Volatile Fuels Department		
Ethylbenzene	2.69	ug/L
o-Xylene	3.15	ug/L
P & M -Xylene	4.75	ug/L
Semivolatile Organic Fuels Department		
Diesel Range Organics	2.24	mg/L

Client Sample ID: **SW5**
SGS Ref. #: 1118061015

Parameter	Result	Units
Volatile Fuels Department		
Benzene	42.9	ug/L
Toluene	443	ug/L
Ethylbenzene	319	ug/L
o-Xylene	634	ug/L
P & M -Xylene	1250	ug/L
Semivolatile Organic Fuels Department		
Diesel Range Organics	21.3	mg/L

SGS Ref.#	1118061001		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/27/2011 13:20
Client Sample ID	SW9	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	1.79	0.500	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Ethylbenzene	12.2	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Toluene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Surrogates									
1,4-Difluorobenzene <surr>	91.1		%	SW8021B	A	80-120	02/02/11	02/02/11	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.714	mg/L	AK102	D		02/02/11	02/09/11	HM
Surrogates									
5a Androstane <surr>	63		%	AK102	D	50-150	02/02/11	02/09/11	HM

SGS Ref.#	1118061002		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/27/2011 13:30
Client Sample ID	SW19	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	1.84	0.500	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Ethylbenzene	12.5	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Toluene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Surrogates									
1,4-Difluorobenzene <surr>	90.9		%	SW8021B	A	80-120	02/02/11	02/02/11	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.714	mg/L	AK102	D		02/02/11	02/09/11	HM
Surrogates									
5a Androstane <surr>	65.2		%	AK102	D	50-150	02/02/11	02/09/11	HM

SGS Ref.#	1118061003		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/27/2011 15:00
Client Sample ID	SW6	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	4.77	0.500	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Ethylbenzene	53.6	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
P & M -Xylene	59.6	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Toluene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Surrogates									
1,4-Difluorobenzene <surr>	99		%	SW8021B	A	80-120	02/02/11	02/02/11	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.714	mg/L	AK102	D		02/02/11	02/09/11	HM
Surrogates									
5a Androstane <surr>	63.3		%	AK102	D	50-150	02/02/11	02/09/11	HM

SGS Ref.#	1118061004		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/27/2011 11:20
Client Sample ID	SW16	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	4.84	0.500	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Ethylbenzene	54.0	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
P & M -Xylene	60.2	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Toluene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Surrogates									
1,4-Difluorobenzene <surr>	99.2		%	SW8021B	A	80-120	02/02/11	02/02/11	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.714	mg/L	AK102	D		02/02/11	02/09/11	HM
Surrogates									
5a Androstane <surr>	63.6		%	AK102	D	50-150	02/02/11	02/09/11	HM

SGS Ref.#	1118061005		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/28/2011 12:15
Client Sample ID	IN1	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Gas Chromatography/Mass Spectroscopy									
1,1,1,2-Tetrachloroethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,1,1-Trichloroethane	ND	0.500	ug/L	EPA 524.2	A	(<200)	02/09/11	02/09/11	JDB
1,1,2,2-Tetrachloroethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,1,2-Trichloroethane	ND	0.500	ug/L	EPA 524.2	A	(<5)	02/09/11	02/09/11	JDB
1,1-Dichloroethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,1-Dichloroethene	ND	0.500	ug/L	EPA 524.2	A	(<7)	02/09/11	02/09/11	JDB
1,1-Dichloropropene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,2,3-Trichlorobenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,2,3-Trichloropropane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,2,4-Trichlorobenzene	ND	0.500	ug/L	EPA 524.2	A	(<70)	02/09/11	02/09/11	JDB
1,2,4-Trimethylbenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,2-Dibromo-3-chloropropane	ND	2.00	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,2-Dibromoethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,2-Dichlorobenzene	ND	0.500	ug/L	EPA 524.2	A	(<600)	02/09/11	02/09/11	JDB
1,2-Dichloroethane	ND	0.500	ug/L	EPA 524.2	A	(<5)	02/09/11	02/09/11	JDB
1,2-Dichloropropane	ND	0.500	ug/L	EPA 524.2	A	(<5)	02/09/11	02/09/11	JDB
1,3,5-Trimethylbenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,3-Dichlorobenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,3-Dichloropropane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,4-Dichlorobenzene	ND	0.500	ug/L	EPA 524.2	A	(<75)	02/09/11	02/09/11	JDB
2,2-Dichloropropane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
2-Chlorotoluene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
4-Chlorotoluene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
4-Isopropyltoluene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Benzene	ND	0.500	ug/L	EPA 524.2	A	(<5)	02/09/11	02/09/11	JDB
Bromobenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Bromochloromethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Bromodichloromethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB

SGS Ref.#	1118061005		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/28/2011 12:15
Client Sample ID	IN1	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Gas Chromatography/Mass Spectroscopy									
Bromoform	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Bromomethane	ND	2.00	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Carbon tetrachloride	ND	0.500	ug/L	EPA 524.2	A	(<5)	02/09/11	02/09/11	JDB
Chlorobenzene	ND	0.500	ug/L	EPA 524.2	A	(<100)	02/09/11	02/09/11	JDB
Chloroethane	ND	1.00	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Chloroform	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Chloromethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
cis-1,2-Dichloroethene	ND	0.500	ug/L	EPA 524.2	A	(<70)	02/09/11	02/09/11	JDB
cis-1,3-Dichloropropene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Dibromochloromethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Dibromomethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Dichlorodifluoromethane	ND	0.500	ug/L	EPA 524.2	C		02/10/11	02/11/11	SCL
Ethylbenzene	ND	0.500	ug/L	EPA 524.2	A	(<700)	02/09/11	02/09/11	JDB
Hexachlorobutadiene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Isopropylbenzene (Cumene)	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Methylene chloride	ND	0.500	ug/L	EPA 524.2	A	(<5)	02/09/11	02/09/11	JDB
Methyl-t-butyl ether	ND	1.00	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Naphthalene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
n-Butylbenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
n-Propylbenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
o-Xylene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
P & M -Xylene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
sec-Butylbenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Styrene	ND	0.500	ug/L	EPA 524.2	A	(<100)	02/09/11	02/09/11	JDB
tert-Butylbenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Tetrachloroethene	ND	0.500	ug/L	EPA 524.2	A	(<5)	02/09/11	02/09/11	JDB
Toluene	0.820	0.500	ug/L	EPA 524.2	A	(<1000)	02/09/11	02/09/11	JDB
Total Trihalomethanes	ND	2.00	ug/L	EPA 524.2	A	(<80)	02/09/11	02/09/11	JDB
trans-1,2-Dichloroethene	ND	0.500	ug/L	EPA 524.2	A	(<100)	02/09/11	02/09/11	JDB
trans-1,3-Dichloropropene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB

SGS Ref.#	1118061005		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/28/2011 12:15
Client Sample ID	IN1	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Gas Chromatography/Mass Spectroscopy									
Trichloroethene	ND	0.500	ug/L	EPA 524.2	A	(<5)	02/09/11	02/09/11	JDB
Trichlorofluoromethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Vinyl chloride	ND	0.400	ug/L	EPA 524.2	A	(<2)	02/09/11	02/09/11	JDB
Xylenes (total)	ND	1.00	ug/L	EPA 524.2	A	(<10000)	02/09/11	02/09/11	JDB
Surrogates									
1,2-Dichloroethane-D4 <surr>	105		%	EPA 524.2	A	70-130	02/09/11	02/09/11	JDB
4-Bromofluorobenzene <surr>	96.9		%	EPA 524.2	A	70-130	02/09/11	02/09/11	JDB
Toluene-d8 <surr>	99.7		%	EPA 524.2	A	70-130	02/09/11	02/09/11	JDB

SGS Ref.#	1118061006		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/28/2011 12:45
Client Sample ID	IN2	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Gas Chromatography/Mass Spectroscopy									
1,1,1,2-Tetrachloroethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,1,1-Trichloroethane	ND	0.500	ug/L	EPA 524.2	A	(<200)	02/09/11	02/09/11	JDB
1,1,2,2-Tetrachloroethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,1,2-Trichloroethane	ND	0.500	ug/L	EPA 524.2	A	(<5)	02/09/11	02/09/11	JDB
1,1-Dichloroethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,1-Dichloroethene	ND	0.500	ug/L	EPA 524.2	A	(<7)	02/09/11	02/09/11	JDB
1,1-Dichloropropene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,2,3-Trichlorobenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,2,3-Trichloropropane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,2,4-Trichlorobenzene	ND	0.500	ug/L	EPA 524.2	A	(<70)	02/09/11	02/09/11	JDB
1,2,4-Trimethylbenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,2-Dibromo-3-chloropropane	ND	2.00	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,2-Dibromoethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,2-Dichlorobenzene	ND	0.500	ug/L	EPA 524.2	A	(<600)	02/09/11	02/09/11	JDB
1,2-Dichloroethane	ND	0.500	ug/L	EPA 524.2	A	(<5)	02/09/11	02/09/11	JDB
1,2-Dichloropropane	ND	0.500	ug/L	EPA 524.2	A	(<5)	02/09/11	02/09/11	JDB
1,3,5-Trimethylbenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,3-Dichlorobenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,3-Dichloropropane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
1,4-Dichlorobenzene	ND	0.500	ug/L	EPA 524.2	A	(<75)	02/09/11	02/09/11	JDB
2,2-Dichloropropane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
2-Chlorotoluene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
4-Chlorotoluene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
4-Isopropyltoluene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Benzene	ND	0.500	ug/L	EPA 524.2	A	(<5)	02/09/11	02/09/11	JDB
Bromobenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Bromochloromethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Bromodichloromethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB

SGS Ref.#	1118061006		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/28/2011 12:45
Client Sample ID	IN2	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Gas Chromatography/Mass Spectroscopy									
Bromoform	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Bromomethane	ND	2.00	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Carbon tetrachloride	ND	0.500	ug/L	EPA 524.2	A	(<5)	02/09/11	02/09/11	JDB
Chlorobenzene	ND	0.500	ug/L	EPA 524.2	A	(<100)	02/09/11	02/09/11	JDB
Chloroethane	ND	1.00	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Chloroform	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Chloromethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
cis-1,2-Dichloroethene	ND	0.500	ug/L	EPA 524.2	A	(<70)	02/09/11	02/09/11	JDB
cis-1,3-Dichloropropene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Dibromochloromethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Dibromomethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Dichlorodifluoromethane	ND	0.500	ug/L	EPA 524.2	B		02/10/11	02/11/11	SCL
Ethylbenzene	ND	0.500	ug/L	EPA 524.2	A	(<700)	02/09/11	02/09/11	JDB
Hexachlorobutadiene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Isopropylbenzene (Cumene)	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Methylene chloride	ND	0.500	ug/L	EPA 524.2	A	(<5)	02/09/11	02/09/11	JDB
Methyl-t-butyl ether	ND	1.00	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Naphthalene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
n-Butylbenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
n-Propylbenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
o-Xylene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
P & M -Xylene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
sec-Butylbenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Styrene	ND	0.500	ug/L	EPA 524.2	A	(<100)	02/09/11	02/09/11	JDB
tert-Butylbenzene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Tetrachloroethene	ND	0.500	ug/L	EPA 524.2	A	(<5)	02/09/11	02/09/11	JDB
Toluene	0.710	0.500	ug/L	EPA 524.2	A	(<1000)	02/09/11	02/09/11	JDB
Total Trihalomethanes	ND	2.00	ug/L	EPA 524.2	A	(<80)	02/09/11	02/09/11	JDB
trans-1,2-Dichloroethene	ND	0.500	ug/L	EPA 524.2	A	(<100)	02/09/11	02/09/11	JDB
trans-1,3-Dichloropropene	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB

SGS Ref.#	1118061006		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/28/2011 12:45
Client Sample ID	IN2	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Gas Chromatography/Mass Spectroscopy									
Trichloroethene	ND	0.500	ug/L	EPA 524.2	A	(<5)	02/09/11	02/09/11	JDB
Trichlorofluoromethane	ND	0.500	ug/L	EPA 524.2	A		02/09/11	02/09/11	JDB
Vinyl chloride	ND	0.400	ug/L	EPA 524.2	A	(<2)	02/09/11	02/09/11	JDB
Xylenes (total)	ND	1.00	ug/L	EPA 524.2	A	(<10000)	02/09/11	02/09/11	JDB
Surrogates									
1,2-Dichloroethane-D4 <surr>	105		%	EPA 524.2	A	70-130	02/09/11	02/09/11	JDB
4-Bromofluorobenzene <surr>	97.6		%	EPA 524.2	A	70-130	02/09/11	02/09/11	JDB
Toluene-d8 <surr>	99.1		%	EPA 524.2	A	70-130	02/09/11	02/09/11	JDB

SGS Ref.#	1118061007		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/27/2011 11:50
Client Sample ID	SW1	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	1.64	0.500	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Ethylbenzene	7.62	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Toluene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Surrogates									
1,4-Difluorobenzene <surr>	92.9		%	SW8021B	A	80-120	02/02/11	02/02/11	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.714	mg/L	AK102	D		02/02/11	02/09/11	HM
Surrogates									
5a Androstane <surr>	58.6		%	AK102	D	50-150	02/02/11	02/09/11	HM

SGS Ref.#	1118061008		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/27/2011 9:30
Client Sample ID	SW2	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Toluene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Surrogates									
1,4-Difluorobenzene <surr>	93.4		%	SW8021B	A	80-120	02/02/11	02/02/11	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.714	mg/L	AK102	D		02/02/11	02/09/11	HM
Surrogates									
5a Androstane <surr>	61.6		%	AK102	D	50-150	02/02/11	02/09/11	HM

SGS Ref.#	1118061009		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/27/2011 8:40
Client Sample ID	DW1	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	1.02	0.500	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
P & M -Xylene	2.09	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Toluene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Surrogates									
1,4-Difluorobenzene <surr>	91.4		%	SW8021B	A	80-120	02/02/11	02/02/11	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.714	mg/L	AK102	D		02/02/11	02/09/11	HM
Surrogates									
5a Androstane <surr>	65.1		%	AK102	D	50-150	02/02/11	02/09/11	HM

SGS Ref.#	1118061010		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/27/2011 9:25
Client Sample ID	SW3	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Toluene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Surrogates									
1,4-Difluorobenzene <surr>	93.4		%	SW8021B	A	80-120	02/02/11	02/02/11	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.769	mg/L	AK102	D		02/02/11	02/09/11	HM
Surrogates									
5a Androstane <surr>	64.8		%	AK102	D	50-150	02/02/11	02/09/11	HM

SGS Ref.#	1118061011		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/27/2011 10:08
Client Sample ID	SW8	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Ethylbenzene	3.22	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Toluene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Surrogates									
1,4-Difluorobenzene <surr>	93.1		%	SW8021B	A	80-120	02/02/11	02/02/11	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.714	mg/L	AK102	D		02/02/11	02/09/11	HM
Surrogates									
5a Androstane <surr>	65.4		%	AK102	D	50-150	02/02/11	02/09/11	HM

SGS Ref.#	1118061012		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/27/2011 10:50
Client Sample ID	SW7	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Toluene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Surrogates									
1,4-Difluorobenzene <surr>	93.2		%	SW8021B	A	80-120	02/02/11	02/02/11	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.714	mg/L	AK102	D		02/02/11	02/09/11	HM
Surrogates									
5a Androstane <surr>	60.8		%	AK102	D	50-150	02/02/11	02/09/11	HM

SGS Ref.#	1118061013		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/27/2011 14:41
Client Sample ID	SW4	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	0.670	0.500	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
P & M -Xylene	2.65	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Toluene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Surrogates									
1,4-Difluorobenzene <surr>	92.3		%	SW8021B	A	80-120	02/02/11	02/02/11	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.714	mg/L	AK102	D		02/02/11	02/09/11	HM
Surrogates									
5a Androstane <surr>	59.1		%	AK102	D	50-150	02/02/11	02/09/11	HM

SGS Ref.#	1118061014		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/27/2011 14:05
Client Sample ID	DW2	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

AK102 - The pattern is consistent with a weathered middle distillate.

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Ethylbenzene	2.69	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
o-Xylene	3.15	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
P & M -Xylene	4.75	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Toluene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Surrogates									
1,4-Difluorobenzene <surr>	97.3		%	SW8021B	A	80-120	02/02/11	02/02/11	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	2.24	0.741	mg/L	AK102	D		02/02/11	02/09/11	HM
Surrogates									
5a Androstane <surr>	57.4		%	AK102	D	50-150	02/02/11	02/09/11	HM

SGS Ref.#	1118061015		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/28/2011 10:15
Client Sample ID	SW5	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

AK102 - The pattern is consistent with a weathered gasoline.

AK102 - The pattern is consistent with a weathered middle distillate.

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	42.9	5.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Ethylbenzene	319	20.0	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
o-Xylene	634	20.0	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
P & M -Xylene	1250	20.0	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Toluene	443	20.0	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Surrogates									
1,4-Difluorobenzene <surr>	97.6		%	SW8021B	A	80-120	02/02/11	02/02/11	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	21.3	0.714	mg/L	AK102	D		02/02/11	02/09/11	HM
Surrogates									
5a Androstane <surr>	64.4		%	AK102	D	50-150	02/02/11	02/09/11	HM

SGS Ref.#	1118061016		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/28/2011 11:15
Client Sample ID	FRW2	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Toluene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Surrogates									
1,4-Difluorobenzene <surr>	93.2		%	SW8021B	A	80-120	02/02/11	02/02/11	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.714	mg/L	AK102	D		02/02/11	02/09/11	HM
Surrogates									
5a Androstane <surr>	61.4		%	AK102	D	50-150	02/02/11	02/09/11	HM

SGS Ref.#	1118061017		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/27/2011 10:08
Client Sample ID	Trip Blank	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

8260B - Sample result for dicholorodifluoromethane may be estimated due to a bias low CCV. Sample was reanalyzed and result confirmed.

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Toluene	ND	2.00	ug/L	SW8021B	A		02/02/11	02/02/11	EAB
Surrogates									
1,4-Difluorobenzene <surr>	93.2		%	SW8021B	A	80-120	02/02/11	02/02/11	EAB
Volatile Gas Chromatography/Mass Spectroscopy									
1,1,1,2-Tetrachloroethane	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
1,1,1-Trichloroethane	ND	0.500	ug/L	EPA 524.2	B	(<200)	02/09/11	02/09/11	JDB
1,1,2,2-Tetrachloroethane	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
1,1,2-Trichloroethane	ND	0.500	ug/L	EPA 524.2	B	(<5)	02/09/11	02/09/11	JDB
1,1-Dichloroethane	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
1,1-Dichloroethene	ND	0.500	ug/L	EPA 524.2	B	(<7)	02/09/11	02/09/11	JDB
1,1-Dichloropropene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
1,2,3-Trichlorobenzene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
1,2,3-Trichloropropane	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
1,2,4-Trichlorobenzene	ND	0.500	ug/L	EPA 524.2	B	(<70)	02/09/11	02/09/11	JDB
1,2,4-Trimethylbenzene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
1,2-Dibromo-3-chloropropane	ND	2.00	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
1,2-Dibromoethane	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
1,2-Dichlorobenzene	ND	0.500	ug/L	EPA 524.2	B	(<600)	02/09/11	02/09/11	JDB
1,2-Dichloroethane	ND	0.500	ug/L	EPA 524.2	B	(<5)	02/09/11	02/09/11	JDB
1,2-Dichloropropane	ND	0.500	ug/L	EPA 524.2	B	(<5)	02/09/11	02/09/11	JDB

SGS Ref.#	1118061017		
Client Name	Nortech	**Printed Date/Time**	02/15/2011 10:34
Project Name/#	06-1080 Canoro Rd	**Collected Date/Time**	01/27/2011 10:08
Client Sample ID	Trip Blank	**Received Date/Time**	01/29/2011 10:00
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Gas Chromatography/Mass Spectroscopy									
1,3,5-Trimethylbenzene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
1,3-Dichlorobenzene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
1,3-Dichloropropane	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
1,4-Dichlorobenzene	ND	0.500	ug/L	EPA 524.2	B	(<75)	02/09/11	02/09/11	JDB
2,2-Dichloropropane	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
2-Chlorotoluene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
4-Chlorotoluene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
4-Isopropyltoluene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Benzene	ND	0.500	ug/L	EPA 524.2	B	(<5)	02/09/11	02/09/11	JDB
Bromobenzene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Bromochloromethane	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Bromodichloromethane	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Bromoform	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Bromomethane	ND	2.00	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Carbon tetrachloride	ND	0.500	ug/L	EPA 524.2	B	(<5)	02/09/11	02/09/11	JDB
Chlorobenzene	ND	0.500	ug/L	EPA 524.2	B	(<100)	02/09/11	02/09/11	JDB
Chloroethane	ND	1.00	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Chloroform	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Chloromethane	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
cis-1,2-Dichloroethene	ND	0.500	ug/L	EPA 524.2	B	(<70)	02/09/11	02/09/11	JDB
cis-1,3-Dichloropropene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Dibromochloromethane	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Dibromomethane	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Dichlorodifluoromethane	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Ethylbenzene	ND	0.500	ug/L	EPA 524.2	B	(<700)	02/09/11	02/09/11	JDB
Hexachlorobutadiene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Isopropylbenzene (Cumene)	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Methylene chloride	ND	0.500	ug/L	EPA 524.2	B	(<5)	02/09/11	02/09/11	JDB
Methyl-t-butyl ether	ND	1.00	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Naphthalene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB

SGS Ref.#	1118061017
Client Name	Nortech
Project Name/#	06-1080 Canoro Rd
Client Sample ID	Trip Blank
Matrix	Water (Surface, Eff., Ground)

Printed Date/Time	02/15/2011 10:34
Collected Date/Time	01/27/2011 10:08
Received Date/Time	01/29/2011 10:00
Technical Director	**Stephen C. Ede**

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Gas Chromatography/Mass Spectroscopy									
n-Butylbenzene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
n-Propylbenzene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
o-Xylene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
P & M -Xylene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
sec-Butylbenzene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Styrene	ND	0.500	ug/L	EPA 524.2	B	(<100)	02/09/11	02/09/11	JDB
tert-Butylbenzene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Tetrachloroethene	ND	0.500	ug/L	EPA 524.2	B	(<5)	02/09/11	02/09/11	JDB
Toluene	ND	0.500	ug/L	EPA 524.2	B	(<1000)	02/09/11	02/09/11	JDB
Total Trihalomethanes	ND	2.00	ug/L	EPA 524.2	B	(<80)	02/09/11	02/09/11	JDB
trans-1,2-Dichloroethene	ND	0.500	ug/L	EPA 524.2	B	(<100)	02/09/11	02/09/11	JDB
trans-1,3-Dichloropropene	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Trichloroethene	ND	0.500	ug/L	EPA 524.2	B	(<5)	02/09/11	02/09/11	JDB
Trichlorofluoromethane	ND	0.500	ug/L	EPA 524.2	B		02/09/11	02/09/11	JDB
Vinyl chloride	ND	0.400	ug/L	EPA 524.2	B	(<2)	02/09/11	02/09/11	JDB
Xylenes (total)	ND	1.00	ug/L	EPA 524.2	B	(<10000)	02/09/11	02/09/11	JDB
Surrogates									
1,2-Dichloroethane-D4 <surr>	105		%	EPA 524.2	B	70-130	02/09/11	02/09/11	JDB
4-Bromofluorobenzene <surr>	97.1		%	EPA 524.2	B	70-130	02/09/11	02/09/11	JDB
Toluene-d8 <surr>	99.3		%	EPA 524.2	B	70-130	02/09/11	02/09/11	JDB

SGS Ref.#	1012792	Method Blank	**Printed Date/Time**	02/15/2011 10:34
Client Name	Nortech		**Prep Batch**	XXX24367
Project Name/#	06-1080 Canoro Rd		**Method**	SW3520C
Matrix	Water (Surface, Eff., Ground)		**Date**	02/02/2011

QC results affect the following production samples:

1118061001, 1118061002, 1118061003, 1118061004, 1118061007, 1118061008, 1118061009, 1118061010, 1118061011, 1118061012, 1118061013, 1118061014, 1118061015, 1118061016

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Semivolatile Organic Fuels Department					
Diesel Range Organics	ND	0.800	0.250	mg/L	02/09/11
Surrogates					
5a Androstane <surr>	63.8	60-120		%	02/09/11
Batch XFC9719					
Method AK102					
Instrument HP 7890A FID SV E F					

SGS Ref.#	1012799	Method Blank	**Printed Date/Time**	02/15/2011 10:34
Client Name	Nortech		**Prep Batch**	VXX21868
Project Name/#	06-1080 Canoro Rd		**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)		**Date**	02/02/2011

QC results affect the following production samples:

1118061001, 1118061002, 1118061003, 1118061004, 1118061007, 1118061008, 1118061009, 1118061010, 1118061011, 1118061012, 1118061013, 1118061014, 1118061015, 1118061016, 1118061017

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Fuels Department					
Surrogates					
4-Bromofluorobenzene <surr>	99.1	50-150		%	02/02/11
Batch VFC10384					
Method AK101					
Instrument HP 5890 Series II PID+FID VCA					
Benzene	ND	0.500	0.150	ug/L	02/02/11
Ethylbenzene	ND	2.00	0.620	ug/L	02/02/11
o-Xylene	ND	2.00	0.620	ug/L	02/02/11
P & M -Xylene	ND	2.00	0.620	ug/L	02/02/11
Toluene	ND	2.00	0.620	ug/L	02/02/11
Surrogates					
1,4-Difluorobenzene <surr>	93.2	80-120		%	02/02/11
Batch VFC10384					
Method SW8021B					
Instrument HP 5890 Series II PID+FID VCA					

SGS Ref.#	1013414	Method Blank	**Printed Date/Time**		02/15/2011 10:34
Client Name	Nortech		**Prep**	**Batch**	VXX21882
Project Name/#	06-1080 Canoro Rd			**Method**	SW5030B
Matrix	Drinking Water			**Date**	02/09/2011

QC results affect the following production samples:

1118061005, 1118061006, 1118061017

Parameter	Results	LOQ/CL	DL	Units	Analysis Date

Volatile Gas Chromatography/Mass Spectroscopy

SGS Ref.#	1013414	Method Blank	**Printed Date/Time**	02/15/2011	10:34
Client Name	Nortech		**Prep Batch**	VXX21882	
Project Name/#	06-1080 Canoro Rd		**Method**	SW5030B	
Matrix	Drinking Water		**Date**	02/09/2011	

Volatile Gas Chromatography/Mass Spectroscopy

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
1,1,1,2-Tetrachloroethane	ND	0.500	0.150	ug/L	02/09/11
1,1,1-Trichloroethane	ND	0.500	0.150	ug/L	02/09/11
1,1,2,2-Tetrachloroethane	ND	0.500	0.150	ug/L	02/09/11
1,1,2-Trichloroethane	ND	0.500	0.150	ug/L	02/09/11
1,1-Dichloroethane	ND	0.500	0.150	ug/L	02/09/11
1,1-Dichloroethene	ND	0.500	0.150	ug/L	02/09/11
1,1-Dichloropropene	ND	0.500	0.150	ug/L	02/09/11
1,2,3-Trichlorobenzene	ND	0.500	0.150	ug/L	02/09/11
1,2,3-Trichloropropane	ND	0.500	0.180	ug/L	02/09/11
1,2,4-Trichlorobenzene	ND	0.500	0.150	ug/L	02/09/11
1,2,4-Trimethylbenzene	ND	0.500	0.150	ug/L	02/09/11
1,2-Dibromo-3-chloropropane	ND	2.00	0.620	ug/L	02/09/11
1,2-Dibromoethane	ND	0.500	0.150	ug/L	02/09/11
1,2-Dichlorobenzene	ND	0.500	0.150	ug/L	02/09/11
1,2-Dichloroethane	ND	0.500	0.150	ug/L	02/09/11
1,2-Dichloropropane	ND	0.500	0.150	ug/L	02/09/11
1,3,5-Trimethylbenzene	ND	0.500	0.150	ug/L	02/09/11
1,3-Dichlorobenzene	ND	0.500	0.150	ug/L	02/09/11
1,3-Dichloropropane	ND	0.500	0.150	ug/L	02/09/11
1,4-Dichlorobenzene	ND	0.500	0.150	ug/L	02/09/11
2,2-Dichloropropane	ND	0.500	0.150	ug/L	02/09/11
2-Chlorotoluene	ND	0.500	0.150	ug/L	02/09/11
4-Chlorotoluene	ND	0.500	0.150	ug/L	02/09/11
4-Isopropyltoluene	ND	0.500	0.150	ug/L	02/09/11
Benzene	ND	0.500	0.150	ug/L	02/09/11
Bromobenzene	ND	0.500	0.150	ug/L	02/09/11
Bromochloromethane	ND	0.500	0.150	ug/L	02/09/11
Bromodichloromethane	ND	0.500	0.150	ug/L	02/09/11
Bromoform	ND	0.500	0.150	ug/L	02/09/11
Bromomethane	ND	2.00	0.620	ug/L	02/09/11
Carbon tetrachloride	ND	0.500	0.150	ug/L	02/09/11
Chlorobenzene	ND	0.500	0.150	ug/L	02/09/11
Chloroethane	ND	1.00	0.310	ug/L	02/09/11
Chloroform	ND	0.500	0.150	ug/L	02/09/11
Chloromethane	ND	0.500	0.150	ug/L	02/09/11
cis-1,2-Dichloroethene	ND	0.500	0.150	ug/L	02/09/11
cis-1,3-Dichloropropene	ND	0.500	0.150	ug/L	02/09/11
Dibromochloromethane	ND	0.500	0.150	ug/L	02/09/11
Dibromomethane	ND	0.500	0.150	ug/L	02/09/11

SGS Ref.#	1013414	Method Blank	**Printed Date/Time**	02/15/2011	10:34
Client Name	Nortech		**Prep Batch**	VXX21882	
Project Name/#	06-1080 Canoro Rd		**Method**	SW5030B	
Matrix	Drinking Water		**Date**	02/09/2011	

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy					
Dichlorodifluoromethane	ND	0.500	0.150	ug/L	02/09/11
Ethylbenzene	ND	0.500	0.150	ug/L	02/09/11
Hexachlorobutadiene	ND	0.500	0.150	ug/L	02/09/11
Isopropylbenzene (Cumene)	ND	0.500	0.150	ug/L	02/09/11
Methylene chloride	ND	0.500	0.150	ug/L	02/09/11
Methyl-t-butyl ether	ND	1.00	0.500	ug/L	02/09/11
Naphthalene	ND	0.500	0.150	ug/L	02/09/11
n-Butylbenzene	ND	0.500	0.150	ug/L	02/09/11
n-Propylbenzene	ND	0.500	0.150	ug/L	02/09/11
o-Xylene	ND	0.500	0.150	ug/L	02/09/11
P & M -Xylene	ND	0.500	0.180	ug/L	02/09/11
sec-Butylbenzene	ND	0.500	0.150	ug/L	02/09/11
Styrene	ND	0.500	0.150	ug/L	02/09/11
tert-Butylbenzene	ND	0.500	0.150	ug/L	02/09/11
Tetrachloroethene	ND	0.500	0.150	ug/L	02/09/11
Toluene	ND	0.500	0.150	ug/L	02/09/11
trans-1,2-Dichloroethene	ND	0.500	0.150	ug/L	02/09/11
trans-1,3-Dichloropropene	ND	0.500	0.150	ug/L	02/09/11
Trichloroethene	ND	0.500	0.150	ug/L	02/09/11
Trichlorofluoromethane	ND	0.500	0.150	ug/L	02/09/11
Vinyl chloride	ND	0.400	0.120	ug/L	02/09/11
Surrogates					
1,2-Dichloroethane-D4 <surr>	104	70-130		%	02/09/11
4-Bromofluorobenzene <surr>	97.5	70-130		%	02/09/11
Toluene-d8 <surr>	99.1	70-130		%	02/09/11

Batch VMS11902
Method EPA 524.2
Instrument HP 5890 Series II MS3 VNA

SGS Ref.#	1013564	Method Blank	**Printed Date/Time**		02/15/2011 10:34
Client Name	Nortech		**Prep**	**Batch**	VXX21886
Project Name/#	06-1080 Canoro Rd			**Method**	SW5030B
Matrix	Drinking Water			**Date**	02/10/2011

QC results affect the following production samples:

1118061005, 1118061006

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy					
Dichlorodifluoromethane	ND	0.500	0.150	ug/L	02/10/11
Surrogates					
1,2-Dichloroethane-D4 <surr>	102	70-130		%	02/10/11
4-Bromofluorobenzene <surr>	98.2	70-130		%	02/10/11
Toluene-d8 <surr>	100	70-130		%	02/10/11

Batch VMS11905
Method EPA 524.2
Instrument HP 5890 Series II MS3 VNA

SGS Ref.#	1012793	Lab Control Sample	**Printed Date/Time**	02/15/2011	10:34
	1012794	Lab Control Sample Duplicate	**Prep Batch**	XXX24367	
Client Name	Nortech		**Method**	SW3520C	
Project Name/#	06-1080 Canoro Rd		**Date**	02/02/2011	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1118061001, 1118061002, 1118061003, 1118061004, 1118061007, 1118061008, 1118061009, 1118061010, 1118061011, 1118061012, 1118061013, 1118061014, 1118061015, 1118061016

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department								
Diesel Range Organics	LCS	15.5	77	(75-125)			20 mg/L	02/09/2011
	LCSD	15.8	79		2	(< 20)	20 mg/L	02/09/2011
Surrogates								
5a Androstane <surr>	LCS		66	(60-120)				02/09/2011
	LCSD		68		3			02/09/2011

Batch XFC9719
Method AK102
Instrument HP 7890A FID SV E F

SGS Ref.#	1012800	Lab Control Sample	**Printed Date/Time**	02/15/2011	10:34
	1012801	Lab Control Sample Duplicate	**Prep Batch**	VXX21868	
Client Name	Nortech		**Method**	SW5030B	
Project Name/#	06-1080 Canoro Rd		**Date**	02/02/2011	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1118061001, 1118061002, 1118061003, 1118061004, 1118061007, 1118061008, 1118061009, 1118061010, 1118061011, 1118061012, 1118061013, 1118061014, 1118061015, 1118061016, 1118061017

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Fuels Department								
Benzene	LCS	98.6	99	(80-120)			100 ug/L	02/02/2011
	LCSD	95.3	95		3	(< 20)	100 ug/L	02/02/2011
Ethylbenzene	LCS	99.6	100	(87-125)			100 ug/L	02/02/2011
	LCSD	95.8	96		4	(< 20)	100 ug/L	02/02/2011
o-Xylene	LCS	99.0	99	(85-120)			100 ug/L	02/02/2011
	LCSD	95.3	95		4	(< 20)	100 ug/L	02/02/2011
P & M -Xylene	LCS	198	99	(87-125)			200 ug/L	02/02/2011
	LCSD	190	95		4	(< 20)	200 ug/L	02/02/2011
Toluene	LCS	100	100	(80-120)			100 ug/L	02/02/2011
	LCSD	96.9	97		4	(< 20)	100 ug/L	02/02/2011
Surrogates								
1,4-Difluorobenzene <surr>	LCS		99	(80-120)				02/02/2011
	LCSD		99		0			02/02/2011

Batch	VFC10384
Method	SW8021B
Instrument	HP 5890 Series II PID+FID VCA

SGS Ref.#	1013415	Lab Control Sample	**Printed Date/Time**	02/15/2011	10:34
	1013416	Lab Control Sample Duplicate	**Prep Batch**	VXX21882	
Client Name	Nortech		**Method**	SW5030B	
Project Name/#	06-1080 Canoro Rd		**Date**	02/09/2011	
Matrix	Drinking Water				

QC results affect the following production samples:

1118061005, 1118061006, 1118061017

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date

Volatile Gas Chromatography/Mass Spectroscopy

SGS Ref.#	1013415	Lab Control Sample	**Printed Date/Time**	02/15/2011	10:34
	1013416	Lab Control Sample Duplicate	**Prep Batch**	VXX21882	
Client Name	Nortech		**Method**	SW5030B	
Project Name/#	06-1080 Canoro Rd		**Date**	02/09/2011	
Matrix	Drinking Water				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
1,1,1,2-Tetrachloroethane	LCS	32.9	110	(70-130)			30 ug/L	02/09/2011
	LCSD	31.7	106		4	(< 30)	30 ug/L	02/09/2011
1,1,1-Trichloroethane	LCS	33.1	110	(70-130)			30 ug/L	02/09/2011
	LCSD	32.1	107		3	(< 30)	30 ug/L	02/09/2011
1,1,2,2-Tetrachloroethane	LCS	33.1	110	(70-130)			30 ug/L	02/09/2011
	LCSD	31.8	106		4	(< 30)	30 ug/L	02/09/2011
1,1,2-Trichloroethane	LCS	32.9	110	(70-130)			30 ug/L	02/09/2011
	LCSD	31.6	105		4	(< 30)	30 ug/L	02/09/2011
1,1-Dichloroethane	LCS	33.7	112	(70-130)			30 ug/L	02/09/2011
	LCSD	33.0	110		2	(< 30)	30 ug/L	02/09/2011
1,1-Dichloroethene	LCS	36.8	123	(70-130)			30 ug/L	02/09/2011
	LCSD	35.7	119		3	(< 30)	30 ug/L	02/09/2011
1,1-Dichloropropene	LCS	38.0	127	(70-130)			30 ug/L	02/09/2011
	LCSD	37.0	123		3	(< 30)	30 ug/L	02/09/2011
1,2,3-Trichlorobenzene	LCS	34.5	115	(70-130)			30 ug/L	02/09/2011
	LCSD	33.6	112		2	(< 30)	30 ug/L	02/09/2011
1,2,3-Trichloropropane	LCS	34.1	114	(70-130)			30 ug/L	02/09/2011
	LCSD	32.4	108		5	(< 30)	30 ug/L	02/09/2011
1,2,4-Trichlorobenzene	LCS	33.9	113	(70-130)			30 ug/L	02/09/2011
	LCSD	33.7	112		1	(< 30)	30 ug/L	02/09/2011
1,2,4-Trimethylbenzene	LCS	35.8	119	(70-130)			30 ug/L	02/09/2011
	LCSD	35.3	118		2	(< 30)	30 ug/L	02/09/2011
1,2-Dibromo-3-chloropropane	LCS	33.9	113	(70-130)			30 ug/L	02/09/2011
	LCSD	33.2	111		2	(< 30)	30 ug/L	02/09/2011
1,2-Dibromoethane	LCS	34.8	116	(70-130)			30 ug/L	02/09/2011
	LCSD	33.4	111		4	(< 30)	30 ug/L	02/09/2011
1,2-Dichlorobenzene	LCS	32.2	107	(70-130)			30 ug/L	02/09/2011
	LCSD	31.5	105		2	(< 30)	30 ug/L	02/09/2011

SGS Ref.#	1013415	Lab Control Sample	**Printed Date/Time**	02/15/2011	10:34
	1013416	Lab Control Sample Duplicate	**Prep Batch**	VXX21882	
Client Name	Nortech		**Method**	SW5030B	
Project Name/#	06-1080 Canoro Rd		**Date**	02/09/2011	
Matrix	Drinking Water				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
1,2-Dichloroethane	LCS	33.6	112	(70-130)			30 ug/L	02/09/2011
	LCSD	31.8	106		6	(< 30)	30 ug/L	02/09/2011
1,2-Dichloropropane	LCS	33.8	113	(70-130)			30 ug/L	02/09/2011
	LCSD	33.2	111		2	(< 30)	30 ug/L	02/09/2011
1,3,5-Trimethylbenzene	LCS	36.1	120	(70-130)			30 ug/L	02/09/2011
	LCSD	35.7	119		1	(< 30)	30 ug/L	02/09/2011
1,3-Dichlorobenzene	LCS	33.1	110	(70-130)			30 ug/L	02/09/2011
	LCSD	32.3	108		2	(< 30)	30 ug/L	02/09/2011
1,3-Dichloropropane	LCS	33.1	110	(70-130)			30 ug/L	02/09/2011
	LCSD	31.8	106		4	(< 30)	30 ug/L	02/09/2011
1,4-Dichlorobenzene	LCS	33.0	110	(70-130)			30 ug/L	02/09/2011
	LCSD	32.6	109		1	(< 30)	30 ug/L	02/09/2011
2,2-Dichloropropane	LCS	34.0	113	(70-130)			30 ug/L	02/09/2011
	LCSD	33.4	111		2	(< 30)	30 ug/L	02/09/2011
2-Chlorotoluene	LCS	34.0	113	(70-130)			30 ug/L	02/09/2011
	LCSD	33.3	111		2	(< 30)	30 ug/L	02/09/2011
4-Chlorotoluene	LCS	34.4	115	(70-130)			30 ug/L	02/09/2011
	LCSD	33.9	113		1	(< 30)	30 ug/L	02/09/2011
4-Isopropyltoluene	LCS	32.7	109	(70-130)			30 ug/L	02/09/2011
	LCSD	32.3	108		1	(< 30)	30 ug/L	02/09/2011
Benzene	LCS	34.5	115	(70-130)			30 ug/L	02/09/2011
	LCSD	33.1	110		4	(< 30)	30 ug/L	02/09/2011
Bromobenzene	LCS	32.8	109	(70-130)			30 ug/L	02/09/2011
	LCSD	31.9	106		3	(< 30)	30 ug/L	02/09/2011
Bromochloromethane	LCS	34.5	115	(70-130)			30 ug/L	02/09/2011
	LCSD	32.9	110		5	(< 30)	30 ug/L	02/09/2011
Bromodichloromethane	LCS	33.1	110	(70-130)			30 ug/L	02/09/2011

SGS Ref.#	1013415	Lab Control Sample	**Printed Date/Time**	02/15/2011	10:34
	1013416	Lab Control Sample Duplicate	**Prep Batch**	VXX21882	
Client Name	Nortech		**Method**	SW5030B	
Project Name/#	06-1080 Canoro Rd		**Date**	02/09/2011	
Matrix	Drinking Water				

Parameter		QC Results	Pct Recov		LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy									
	LCSD	32.0	107			3	(< 30)	30 ug/L	02/09/2011
Bromoform	LCS	33.7	112		(70-130)			30 ug/L	02/09/2011
	LCSD	32.5	108			4	(< 30)	30 ug/L	02/09/2011
Bromomethane	LCS	29.6	99		(70-130)			30 ug/L	02/09/2011
	LCSD	31.8	106			7	(< 30)	30 ug/L	02/09/2011
Carbon tetrachloride	LCS	33.9	113		(70-130)			30 ug/L	02/09/2011
	LCSD	32.9	110			3	(< 30)	30 ug/L	02/09/2011
Chlorobenzene	LCS	33.8	113		(70-130)			30 ug/L	02/09/2011
	LCSD	32.5	108			4	(< 30)	30 ug/L	02/09/2011
Chloroethane	LCS	29.5	98		(70-130)			30 ug/L	02/09/2011
	LCSD	29.4	98			0	(< 30)	30 ug/L	02/09/2011
Chloroform	LCS	34.5	115		(70-130)			30 ug/L	02/09/2011
	LCSD	33.3	111			4	(< 30)	30 ug/L	02/09/2011
Chloromethane	LCS	24.9	83		(70-130)			30 ug/L	02/09/2011
	LCSD	25.0	83			0	(< 30)	30 ug/L	02/09/2011
cis-1,2-Dichloroethene	LCS	34.3	114		(70-130)			30 ug/L	02/09/2011
	LCSD	33.4	111			3	(< 30)	30 ug/L	02/09/2011
cis-1,3-Dichloropropene	LCS	33.3	111		(70-130)			30 ug/L	02/09/2011
	LCSD	32.3	108			3	(< 30)	30 ug/L	02/09/2011
Dibromochloromethane	LCS	33.3	111		(70-130)			30 ug/L	02/09/2011
	LCSD	32.0	107			4	(< 30)	30 ug/L	02/09/2011
Dibromomethane	LCS	33.8	113		(70-130)			30 ug/L	02/09/2011
	LCSD	32.5	108			4	(< 30)	30 ug/L	02/09/2011
Dichlorodifluoromethane	LCS	18.2	61	*	(70-130)			30 ug/L	02/09/2011
	LCSD	18.5	62	*		1	(< 30)	30 ug/L	02/09/2011
Ethylbenzene	LCS	35.4	118		(70-130)			30 ug/L	02/09/2011
	LCSD	34.0	113			4	(< 30)	30 ug/L	02/09/2011

SGS Ref.#	1013415	Lab Control Sample	**Printed Date/Time**	02/15/2011	10:34
	1013416	Lab Control Sample Duplicate	**Prep Batch**	VXX21882	
Client Name	Nortech		**Method**	SW5030B	
Project Name/#	06-1080 Canoro Rd		**Date**	02/09/2011	
Matrix	Drinking Water				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
Hexachlorobutadiene	LCS	36.7	122	(70-130)			30 ug/L	02/09/2011
	LCSD	36.5	122		0	(< 30)	30 ug/L	02/09/2011
Isopropylbenzene (Cumene)	LCS	33.5	112	(70-130)			30 ug/L	02/09/2011
	LCSD	32.3	108		4	(< 30)	30 ug/L	02/09/2011
Methylene chloride	LCS	33.0	110	(70-130)			30 ug/L	02/09/2011
	LCSD	32.3	108		2	(< 30)	30 ug/L	02/09/2011
Methyl-t-butyl ether	LCS	50.7	113	(70-130)			45 ug/L	02/09/2011
	LCSD	49.3	110		3	(< 30)	45 ug/L	02/09/2011
Naphthalene	LCS	34.3	114	(70-130)			30 ug/L	02/09/2011
	LCSD	33.0	110		4	(< 30)	30 ug/L	02/09/2011
n-Butylbenzene	LCS	33.1	110	(70-130)			30 ug/L	02/09/2011
	LCSD	32.6	109		2	(< 30)	30 ug/L	02/09/2011
n-Propylbenzene	LCS	35.9	120	(70-130)			30 ug/L	02/09/2011
	LCSD	35.5	118		1	(< 30)	30 ug/L	02/09/2011
o-Xylene	LCS	36.4	121	(70-130)			30 ug/L	02/09/2011
	LCSD	35.3	118		3	(< 30)	30 ug/L	02/09/2011
P & M -Xylene	LCS	72.1	120	(70-130)			60 ug/L	02/09/2011
	LCSD	69.5	116		4	(< 30)	60 ug/L	02/09/2011
sec-Butylbenzene	LCS	32.8	109	(70-130)			30 ug/L	02/09/2011
	LCSD	32.4	108		1	(< 30)	30 ug/L	02/09/2011
Styrene	LCS	33.0	110	(70-130)			30 ug/L	02/09/2011
	LCSD	31.9	106		4	(< 30)	30 ug/L	02/09/2011
tert-Butylbenzene	LCS	32.2	107	(70-130)			30 ug/L	02/09/2011
	LCSD	31.6	105		2	(< 30)	30 ug/L	02/09/2011
Tetrachloroethene	LCS	37.4	125	(70-130)			30 ug/L	02/09/2011
	LCSD	36.1	120		4	(< 30)	30 ug/L	02/09/2011
Toluene	LCS	33.1	110	(70-130)			30 ug/L	02/09/2011
	LCSD	31.9	106		4	(< 30)	30 ug/L	02/09/2011

SGS Ref.#	1013415	Lab Control Sample	**Printed Date/Time**	02/15/2011	10:34
	1013416	Lab Control Sample Duplicate	**Prep Batch**	VXX21882	
Client Name	Nortech		**Method**	SW5030B	
Project Name/#	06-1080 Canoro Rd		**Date**	02/09/2011	
Matrix	Drinking Water				

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
trans-1,2-Dichloroethene	LCS	35.2	117	(70-130)			30 ug/L	02/09/2011
	LCSD	34.4	115		2	(< 30)	30 ug/L	02/09/2011
trans-1,3-Dichloropropene	LCS	33.0	110	(70-130)			30 ug/L	02/09/2011
	LCSD	32.1	107		3	(< 30)	30 ug/L	02/09/2011
Trichloroethene	LCS	34.8	116	(70-130)			30 ug/L	02/09/2011
	LCSD	33.7	112		3	(< 30)	30 ug/L	02/09/2011
Trichlorofluoromethane	LCS	31.4	105	(70-130)			30 ug/L	02/09/2011
	LCSD	31.1	104		1	(< 30)	30 ug/L	02/09/2011
Vinyl chloride	LCS	28.4	95	(70-130)			30 ug/L	02/09/2011
	LCSD	29.2	97		3	(< 30)	30 ug/L	02/09/2011
Surrogates								
1,2-Dichloroethane-D4 <surr>	LCS		103	(70-130)				02/09/2011
	LCSD		101		3			02/09/2011
4-Bromofluorobenzene <surr>	LCS		98	(70-130)				02/09/2011
	LCSD		98		0			02/09/2011
Toluene-d8 <surr>	LCS		100	(70-130)				02/09/2011
	LCSD		100		0			02/09/2011

Batch VMS11902
Method EPA 524.2
Instrument HP 5890 Series II MS3 VNA

SGS Ref.#	1013565	Lab Control Sample	**Printed Date/Time**	02/15/2011	10:34
	1013566	Lab Control Sample Duplicate	**Prep Batch**	VXX21886	
Client Name	Nortech		**Method**	SW5030B	
Project Name/#	06-1080 Canoro Rd		**Date**	02/10/2011	
Matrix	Drinking Water				

QC results affect the following production samples:

1118061005, 1118061006

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
Dichlorodifluoromethane	LCS	25.1	84	(70-130)			30 ug/L	02/10/2011
	LCSD	24.5	82		2	(< 30)	30 ug/L	02/10/2011
Surrogates								
1,2-Dichloroethane-D4 <surr>	LCS		100	(70-130)				02/10/2011
	LCSD		98		2			02/10/2011
4-Bromofluorobenzene <surr>	LCS		98	(70-130)				02/10/2011
	LCSD		98		0			02/10/2011
Toluene-d8 <surr>	LCS		99	(70-130)				02/10/2011
	LCSD		100		1			02/10/2011

Batch VMS11905
Method EPA 524.2
Instrument HP 5890 Series II MS3 VNA

SGS

SGS En CHAI 1118061 s Inc. RD

(1)

CLIENT: Nortech

CONTACT: Doug Dusek PHONE NO: 452-5648

PROJECT: 06-1080 SITE/PWSID#: Lenore Rd

REPORTS TO: Doug Dusek EMAIL: ddusek@nortechengr.com

INVOICE TO: Nortech QUOTE #:

P.O. #:

SGS Reference #:

page 1 of 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX/ MATRIX CODE	# CONTAINERS	SAMPLE TYPE C= COMP G= GRAB MI= Multi Incremental Samples	Preservatives Used	Analysis Required (3) BTEX 8021	AK102 DRO	EPA 524.2	REMARKS/ LOC ID
1 A-E	SW9	1/27/11	1:20p	W	5			X	X		
2	SW19	1/27/11	1:30pm	W	5			X	X		
3	SW6	1/27/11	3:00pm	W	5			X	X		
4	SW16	1/27/11	11:20a	W	5			X	X		
5 A-C	IN1	1/26/11	12:15p	W	3					X	
6	IN2	1/26/11	12:45p	W	3					X	
7 A-E	SW1	1/27/11	11:50a	W	5			X	X	X4 NO	
8	~~SW~~ SW2	1/27/11	4:30a	W	5			X	X		
9	DW1	1/27/11	4:40a	W	5			X	X		
10	SW3	1/27/11	9:25a	W	5			X	X		

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
	1/28/11	3:30p	1-28-11 1530
Relinquished By: (2)	Date	Time	Received By:
	1-28-11	1550	
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:
			1/28/11 1000

(4)

DOD Project? YES NO

Cooler ID _____

Special Deliverable Requirements:

Requested Turnaround Time and-or Special Instructions:

ID 205 ID 204

C#1 TB = 3.1°C C#2 TB = 2.1°C

Samples Received Cold? YES NO

Cooler TB

Temperature °C: _____ . _____

Chain of Custody Seal: (Circle)

INTACT BROKEN (ABSENT)

SGS

SGS E 1118061 es Inc.
CHA CORD

Locations Nationwide
• Alaska • Maryland
• New Jersey • New York
• North Carolina • Ohio
• West Virginia
www.us.sgs.com

(1)

CLIENT: Nortech
CONTACT: Doug Dusek PHONE NO: 452-5689
PROJECT: 06-1080 SITE/PWSID#: Canaro rd
REPORTS TO: Doug Dusek EMAIL: ddusek@nortechengr.com
INVOICE TO: QUOTE #:
P.O. #:

SGS Reference #:

page 2 of 2

(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX/ MATRIX CODE	# CONTAINERS	SAMPLE TYPE C= COMP G= GRAB MI= Multi Incremental Samples	Preservatives Used	Analysis Required (3) BTEX 8021	AK102 DRO	REMARKS/ LOC ID
(11) AE	~~DW8~~ SW8	1/29/11	10:08a	W	5			X	X	
(12)	SW7	1/29/11	10:50a	W	5			X	X	
(13)	SW4	1/29/11	2:41p	W	5			X	X	
(14)	DW2	1/29/11	2:05p	W	5			X	X	
(15)	SW5	1/28/11	10:15a	W	5			X	X	
(16) ↓	FRW2	1/28/11	11:15a	W	5			X	X	
(17) AE										

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
	1/28/11	3:30p	1-28-11 1530
Relinquished By: (2)	Date	Time	Received By:
	1-28-11	1550	
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:
			1/29/11 1000

(4)

DOD Project? YES NO
Cooler ID _____

Special Deliverable Requirements:

Requested Turnaround Time and-or Special Instructions:

C#1 (3.1) C#2 (2.1)

Samples Received Cold? YES NO
Cooler TB
Temperature °C: _____ . _____

Chain of Custody Seal: (Circle)
INTACT BROKEN (ABSENT)

❑ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
❑ 550 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

SGS

1118061

SAMPLE RECEIPT FORM

Review Criteria:	Condition:	Comments/Action Taken:
Were **custody seals** intact? Note # & location, if applicable. COC accompanied samples?	Yes No (N/A) (Yes) No N/A	
Temperature blank compliant* (i.e., 0-6°C after correction factor)? * ***Note: Exemption permitted for chilled samples collected less than 8 hours ago.*** Cooler ID: 1 @ 3.1 w/ Therm.ID: 205 Cooler ID: 2 @ 2.1 w/ Therm.ID: 204 Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ ***Note: If non-compliant, use form FS-0029 to document affected samples/analyses.*** If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled." **If temperature(s) <0°C, were all sample containers ice free?**	(Yes) No N/A Yes No (N/A)	
Delivery method (specify all that apply): (Client) USPS Alert Courier Road Runner AK Air Lynden Carlile ERA PenAir FedEx UPS NAC Other:	Note airbill/tracking # See Attached or N/A	
→ For samples received with payment, note amount ($) and cash / check / CC (circle one). N/A → For samples received in FBKS, ANCH staff will verify all criteria are reviewed. SRF Initiated by: JP N/A		
Do samples **match COC*** (i.e., sample IDs, dates/times collected)? * ***Note: Exemption permitted if collection times differ by less than an hour; in which case, the times on the COC will be used.*** Are analyses requested unambiguous?	(Yes) No N/A (Yes) No N/A	
Were samples in **good condition** (no leaks/cracks/breakage)? Packing material used (specify all that apply): Bubble Wrap Separate plastic bags Vermiculite Other:	(Yes) No N/A	
Were all VOA vials **free of headspace** (i.e., bubbles ≤6 mm)? Were all soil VOAs **field extracted** with MeOH+BFB? Were the bottles provided by SGS? (Note apparent exceptions.)	(Yes) No N/A Yes No (N/A)	
Were **proper containers** (type/mass/volume/preservative*) used? * ***Note: Exemption permitted for waters to be analyzed for metals.*** Were **Trip Blanks** (i.e., VOAs, LL-Hg) in cooler with samples?	(Yes) No N/A (Yes) No N/A	
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was **pH verified and compliant**? If pH was adjusted, were bottles flagged (i.e., stickers)? ***Refer to attached bottle sheet (form F066) for documentation.***	(Yes) No N/A Yes No (N/A)	
For **RUSH** or **SHORT HOLD TIME** samples, were the COC & this SRF flagged, bottles flagged (e.g., stickers) and lab notified?	Yes No (N/A)	
For client requested, **site-specific QC** (e.g., MS/MSD/DUP), were bottles flagged (e.g., stickers) and numbered accordingly?	Yes No (N/A)	
For **special handling** (e.g., "MI" or foreign soils, lab filter, limited volume, Ref Lab), were bottles/paperwork flagged (e.g., sticker)?	Yes No (N/A)	
Was the WO# recorded in Front Counter/Sample Receiving log? **For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?**	(Yes) No N/A Yes No (N/A)	SRF Completed by: Bottle Sheet by: PM = N/A
Was **PEER REVIEW** of sample numbering completed (i.e., compare WO# on containers to COC, container ID on containers to COC, unique lab ID on each container?)	(Yes) No N/A	Peer Reviewed by: NA Metrics: 1114
Additional notes (if applicable):		

F004r25_SampleReceiptForm_revised_07302010

SGS

SGS WO#

SAMPLE RECEIPT FORM FOR TRANSFERS

Note: This form is to be completed by Anchorage Sample Receiving staff for all shipments received at SGS-Anchorage from SGS-Fairbanks.

Were samples received numbered with all criteria on Sample Receipt Form F0004 documented by Fairbanks Sample Receiving staff? If "No," ***Anchorage Sample Receiving staff must complete the receiving process & document pH verification, sample condition, etc. on the SRF initiated by Fairbanks staff*** (attached).	Yes (No) N/A	Use space below for additional notes…

Review Criteria:	Condition:	Comments/Action Taken:
Were **custody seals** intact? Note # & location: COC accompanied samples?	(Yes) No N/A (Yes) No N/A	Fil Beads
Temperature blank compliant (i.e., 0-6°C after correction factor)? Cooler ID: 1 @ 0.4 w/ Therm.ID: 920 Cooler ID: 2 @ 0.9 w/ Therm.ID: 920 Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ ***Note: If non-compliant, use form FS-0029 to document affected samples/analyses.*** If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP** will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled." **If temperature(s) <0°C, were all containers ice free?**	(Yes) No N/A Yes No (N/A)	
Delivery method: (Lynden) Other:		
Completed by:		

WO# (7 digits)	Sample # - Sample #	Container ID - Container ID	Matrix	QC	Preservative (CHECKED)	TEST GROUP	PRINT LABELS	Notes: ANOMALIES - *e.g., preservative added* or SPECIAL HANDLING - *e.g., Multi-Incremental (MI), Field Filter (FF), Lab Filter (LF), use "same jar as" (SJA) for QC, 2xMeOH, bubbles, etc.*
SAMPLE ID			TYPE		CONTAINERS	ANALYSIS		Type comments below:
1118061	001 004	A C	1 Water		HCl * VOA or LL-Hg *	W_GRO/VOA		
1118061	001 004	D E	1 Water		HCl (pH <2)	W_DRO_LowVolume		
1118061	005 006	A C	1 Water		HCl * VOA or LL-Hg *	W_GRO/VOA		
1118061	007 016	A C	1 Water		HCl * VOA or LL-Hg *	W_GRO/VOA		
1118061	007 016	D E	1 Water		HCl (pH <2)	W_DRO_LowVolume		
1118061	017 017	A C	1 Water	Trip Blank	HCl * VOA or LL-Hg *	W_GRO/VOA		

Laboratory Data Review Checklist

Completed by: Susan Vogt

Title: Senior Professional Date: July 30, 2012

CS Report Name: Report Date: August 10, 2012

Consultant Firm: ***NORTECH, Inc.***

Laboratory Number: SGS Environmental Services, Inc. Name: Laboratory Report 1118169

ADEC File Number: 100.38.217 ADEC RecKey Number:

1. Laboratory
   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?
      Yes **XX** No NA (Please explain.) Comments:

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?
      Yes No NA (Please explain.) Comments:

2. Chain of Custody (COC)
   a. COC information completed, signed, and dated (including released/received by)?
      Yes **XX** No NA (Please explain.) Comments:

   b. Correct analyses requested?
      Yes **XX** No NA (Please explain.) Comments:

3. Laboratory Sample Receipt Documentation
   a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?
      Yes **XX** No NA (Please explain.) Comments:

   b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?
      Yes **XX** No NA (Please explain.) Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?
Yes **XX** No NA (Please explain.) Comments:

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?
Yes No NA (Please explain.) **XX** Comments:

No discrepancies noted.

e. Data quality or usability affected? (Please explain.)
Comments:

4. Case Narrative
   a. Present and understandable?
   Yes **XX** No NA (Please explain.) Comments:

Sample SW5 – AK102 pattern is consistent with a weathered middle distillate and gasoline.

   b. Discrepancies, errors or QC failures identified by the lab?
   Yes No **XX** NA (Please explain.) Comments:

   c. Were all corrective actions documented?
   Yes No NA (Please explain.) **XX** Comments:

No discrepancies, errors, or QC failures identified by the lab

   d. What is the effect on data quality/usability according to the case narrative?
   Comments:

5. Samples Results
   a. Correct analyses performed/reported as requested on COC?
   Yes **XX** No NA (Please explain.) Comments:

b. All applicable holding times met?

Yes **XX** No NA (Please explain.) Comments:

c. All soils reported on a dry weight basis?

Yes No NA (Please explain.) **XX** Comments:

Water samples only

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

Yes **XX** No NA (Please explain.) Comments:

e. Data quality or usability affected?

Comments:

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes **XX** No NA (Please explain.) Comments:

ii. All method blank results less than PQL?

Yes **XX** No NA (Please explain.) Comments:

The method blank diesel range organics (DRO) result was 0.319J milligrams per liter (mg/L) above the detection limit of 0.250 mg/L, but below the PQL of 0.800 mg/L.

iii. If above PQL, what samples are affected?

Comments:

Method blank results affected the two lab samples analyzed.

iv. Do the affected sample(s) have data flags and if so, are the data flags clearly defined?

Yes No NA (Please explain.) **XX** Comments:

Data flag noted on method blank only.

v. Data quality or usability affected? (Please explain.) Comments:

No – below the PQL

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)
Yes **XX** No NA (Please explain.) Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?
Yes No NA (Please explain.) **XX** Comments:

No metals/inorganics analyzed.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)
Yes **XX** No NA (Please explain.) Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)
Yes **XX** No NA (Please explain.) Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments:

NA

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes No NA (Please explain.) Comments:

vii. Data quality or usability affected? (Use comment box to explain.)
Comments:

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?
Yes **XX** No NA (Please explain.) Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)
Yes **XX** No NA (Please explain.) Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?
Yes No NA (Please explain.) **XX** Comments:

No failed surrogate recoveries.

iv. Data quality or usability affected? (Use the comment box to explain.)
Comments:

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): <u>Water and Soil</u>

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)
Yes No **XX** NA (Please explain.) Comments:

This was a resample of two wells from January 2011 to determine the general validity of the January results; no trip blank was analyzed in part to reduce project costs.

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)
Yes **XX** No NA (Please explain.) Comments:

iii. All results less than PQL?
Yes **XX** No NA (Please explain.) Comments:

See 5d above.

iv. If above PQL, what samples are affected?
Comments:

v. Data quality or usability affected? (Please explain.)

Comments:

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes **XX** No NA (Please explain.) Comments:

ii. Submitted blind to lab?

Yes **XX** No NA (Please explain.) Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

RPD (%) = Absolute value of: $\frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Yes **XX** No NA (Please explain.) Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

f. Decontamination or Equipment Blank (If not used explain why).

Yes No NA (Please explain.) **XX** Comments:

Not used. Dedicated or disposable sampling tubes and gloves used.

i. All results less than PQL?

Yes No NA (Please explain.) Comments:

ii. If above PQL, what samples are affected?

Comments:

iii. Data quality or usability affected? (Please explain.)

Comments:

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)
   a. Defined and appropriate?
      Yes No NA (Please explain.) **XX** Comments:

No data flags/qualifiers.

SGS North America Inc.
Alaska Division
Level II Laboratory Data Report

Project:	Canoro
Client:	Nortech
SGS Work Order:	1118169

Released by:

Alaska Division Technical Director

Stephen Ede
2011.03.22
14:54:09
-08'00'

Contents (Bookmarked in PDF):

Case Narrative

Client	NORTECH	Nortech	**Printed Date/Time**	3/22/2011	13:17
Workorder	1118169	Canoro			

Sample ID	Client Sample ID

Refer to the sample receipt form for information on sample condition.

1118169002 **PS** **SW-S**

AK102 - The pattern is consistent with a weathered middle distillate and gasoline.

* QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Laboratory Analysis Report

Doug Dusek
Nortech
2400 College Rd.
Fairbanks, AK 99709

Work Order:	1118169
	Canoro
Client:	Nortech
Report Date:	March 22, 2011

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<http://www.sgs.com/terms_and_conditions.htm>), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6010B, 6020, 7470A, 7471B, 8021B, 8081B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, the National Environmental Laboratory Accreditation Program and other regulatory authorities. The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV	Continuing Calibration Verification
CL	Control Limit
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LOD	Limit of Detection (i.e., 2xDL)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.

SGS North America Inc. | Environmental Division 200 West Potter Drive Anchorage AK 99518 t(907)562.2343 f(907)561.5301
www.us.sgs.com Member of SGS Group

Detectable Results Summary

Print Date: 3/22/2011 1:17 pm

Client Sample ID: **SW-S**

SGS Ref. #: 1118169002

Parameter	Result	Units
Volatile Fuels Department		
Benzene	21.8	ug/L
Toluene	304	ug/L
Ethylbenzene	279	ug/L
o-Xylene	529	ug/L
P & M -Xylene	1040	ug/L
Semivolatile Organic Fuels Department		
Diesel Range Organics	9.84	mg/L

SGS Ref.#	1118169001		
Client Name	Nortech	**Printed Date/Time**	03/22/2011 13:17
Project Name/#	Canoro	**Collected Date/Time**	03/09/2011 15:30
Client Sample ID	FD	**Received Date/Time**	03/12/2011 10:50
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	A		03/15/11	03/15/11	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		03/15/11	03/15/11	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		03/15/11	03/15/11	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		03/15/11	03/15/11	HM
Toluene	ND	2.00	ug/L	SW8021B	A		03/15/11	03/15/11	HM
Surrogates									
1,4-Difluorobenzene <surr>	97		%	SW8021B	A	80-120	03/15/11	03/15/11	HM
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.800	mg/L	AK102	D		03/15/11	03/18/11	LCE
Surrogates									
5a Androstane <surr>	83.2		%	AK102	D	50-150	03/15/11	03/18/11	LCE

SGS Ref.#	1118169002		
Client Name	Nortech	**Printed Date/Time**	03/22/2011 13:17
Project Name/#	Canoro	**Collected Date/Time**	03/09/2011 16:00
Client Sample ID	SW-S	**Received Date/Time**	03/12/2011 10:50
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

AK102 - The pattern is consistent with a weathered middle distillate and gasoline.

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	21.8	0.500	ug/L	SW8021B	A		03/15/11	03/15/11	HM
Ethylbenzene	279	20.0	ug/L	SW8021B	A		03/15/11	03/15/11	HM
o-Xylene	529	20.0	ug/L	SW8021B	A		03/15/11	03/15/11	HM
P & M -Xylene	1040	20.0	ug/L	SW8021B	A		03/15/11	03/15/11	HM
Toluene	304	20.0	ug/L	SW8021B	A		03/15/11	03/15/11	HM
Surrogates									
1,4-Difluorobenzene <surr>	105		%	SW8021B	A	80-120	03/15/11	03/15/11	HM
Semivolatile Organic Fuels Department									
Diesel Range Organics	9.84	0.800	mg/L	AK102	D		03/15/11	03/18/11	LCE
Surrogates									
5a Androstane <surr>	82.2		%	AK102	D	50-150	03/15/11	03/18/11	LCE

SGS Ref.#	1016548	Method Blank	**Printed Date/Time**	03/22/2011 13:17
Client Name	Nortech		**Prep Batch**	VXX21944
Project Name/#	Canoro		**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)		**Date**	03/15/2011

QC results affect the following production samples:

1118169001, 1118169002

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Fuels Department					
Benzene	ND	0.500	0.150	ug/L	03/15/11
Ethylbenzene	ND	2.00	0.620	ug/L	03/15/11
o-Xylene	ND	2.00	0.620	ug/L	03/15/11
P & M -Xylene	ND	2.00	0.620	ug/L	03/15/11
Toluene	ND	2.00	0.620	ug/L	03/15/11
Surrogates					
1,4-Difluorobenzene <surr>	96.2	80-120		%	03/15/11
Batch	VFC10407				
Method	SW8021B				
Instrument	HP 5890 Series II PID+FID VCA				

SGS Ref.#	1016559	Method Blank	**Printed Date/Time**	03/22/2011 13:17
Client Name	Nortech		**Prep Batch**	XXX24476
Project Name/#	Canoro		**Method**	SW3520C
Matrix	Water (Surface, Eff., Ground)		**Date**	03/15/2011

QC results affect the following production samples:

1118169001, 1118169002

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Semivolatile Organic Fuels Department					
Diesel Range Organics	0.319J	0.800	0.250	mg/L	03/18/11
Surrogates					
5a Androstane <surr>	82.6	60-120		%	03/18/11

Batch XFC9742
Method AK102
Instrument HP 7890A FID SV E F

SGS Ref.#	1016549	Lab Control Sample	**Printed Date/Time**	03/22/2011	13:17
	1016550	Lab Control Sample Duplicate	**Prep Batch**	VXX21944	
Client Name	Nortech		**Method**	SW5030B	
Project Name/#	Canoro		**Date**	03/15/2011	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1118169001, 1118169002

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Fuels Department								
Benzene	LCS	106	106	(80-120)			100 ug/L	03/15/2011
	LCSD	107	107		0	(< 20)	100 ug/L	03/15/2011
Ethylbenzene	LCS	109	109	(87-125)			100 ug/L	03/15/2011
	LCSD	110	110		1	(< 20)	100 ug/L	03/15/2011
o-Xylene	LCS	100	100	(85-120)			100 ug/L	03/15/2011
	LCSD	102	102		1	(< 20)	100 ug/L	03/15/2011
P & M -Xylene	LCS	204	102	(87-125)			200 ug/L	03/15/2011
	LCSD	205	102		1	(< 20)	200 ug/L	03/15/2011
Toluene	LCS	103	103	(80-120)			100 ug/L	03/15/2011
	LCSD	105	105		1	(< 20)	100 ug/L	03/15/2011
Surrogates								
1,4-Difluorobenzene <surr>	LCS		103	(80-120)				03/15/2011
	LCSD		103		0			03/15/2011

Batch VFC10407
Method SW8021B
Instrument HP 5890 Series II PID+FID VCA

SGS Ref.#	1016560	Lab Control Sample	**Printed Date/Time**	03/22/2011	13:17
	1016561	Lab Control Sample Duplicate	**Prep Batch**	XXX24476	
Client Name	Nortech		**Method**	SW3520C	
Project Name/#	Canoro		**Date**	03/15/2011	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1118169001, 1118169002

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department								
Diesel Range Organics	LCS	19.9	100	(75-125)			20 mg/L	03/18/2011
	LCSD	19.0	95		5	(< 20)	20 mg/L	03/18/2011
Surrogates								
5a Androstane <surr>	LCS		84	(60-120)				03/18/2011
	LCSD		83		1			03/18/2011

Batch	XFC9742	
Method	AK102	
Instrument	HP 7890A	FID SV E F

SGS

SGS CHAIN 1118169 RD

(1)

CLIENT: CANORO ROAD

CONTACT: DOUG DUSEK PHONE NO: 452-3688

PROJECT NAME: CANORO PROJECT/ PWSID/ PERMIT# :

REPORTS TO: DOUG DUSEK EMAIL: ddusek@NORTACHENGR.COM

INVOICE TO: DOUG QUOTE #:

P.O. #: 05-1036

SGS Reference #:

page 1 of 1

(2)

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX/ MATRIX CODE	# CONTAINERS	SAMPLE TYPE C= COMP G= GRAB MI= Multi Incremental Samples	Preservatives Used	Analysis Required (3) 8021 BTEX	AK 102 DRO	REMARKS/ LOC ID
(1) A-E	FP	3/9/11	3:30	W		G		✓	✓	
(2) ↓	GW-5	3/9/11	4:00	W		G		✓	✓	
	NO TRIP									
	NO DUP									

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
Alex Bowen	3/10/11	5:00pm.	3-10-11 1700
Relinquished By: (2)	Date	Time	Received By:
	3-11-11	1500	
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:
			3/12/11 1080

(4)

DOD Project? YES NO

Cooler ID _____

Data Deliverable Requirements:

Requested Turnaround Time and-or Special Instructions:

Temperature Blank °C: 5.1°C

ID 200 or Ambient [ ]

(See attached Sample Receipt Form)

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

(See attached Sample Receipt Form)

SGS

1118169

SAMPLE RECEIPT FORM

Review Criteria:	Condition:	Comments/Action Taken:
Were **custody seals** intact? Note # & location, if applicable. COC accompanied samples?	Yes No (N/A) (Yes) No N/A	
Temperature blank compliant* (i.e., 0-6°C after correction factor)? * *Note: Exemption permitted for chilled samples collected less than 8 hours ago.* Cooler ID: 1 @ 5.1 w/ Therm.ID: 200 Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ *Note: If non-compliant, use form FS-0029 to document affected samples/analyses.* If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled." **If temperature(s) <0°C, were all sample containers ice free?**	(Yes) No N/A Yes No (N/A)	
Delivery method (specify all that apply): (Client) USPS Alert Courier Road Runner AK Air Lynden Carlile ERA PenAir FedEx UPS NAC Other:	Note airbill/tracking # See Attached (or N/A)	
→ For samples received with payment, note amount ($) and cash / check / CC (circle one). (N/A) → For samples received in FBKS, ANCH staff will verify all criteria are reviewed.	SRF Initiated by: JP N/A	
Do samples **match COC*** (i.e., sample IDs, dates/times collected)? * *Note: Exemption permitted if collection times differ by less than an hour; in which case, the times on the COC will be used.* Are analyses requested unambiguous?	(Yes) No N/A (Yes) No N/A	
Were samples in **good condition** (no leaks/cracks/breakage)? Packing material used (specify all that apply): Bubble Wrap Separate plastic bags Vermiculite Other: cubios	(Yes) No N/A	
Were all VOA vials **free of headspace** (i.e., bubbles ≤6 mm)? Were all soil VOAs **field extracted** with MeOH+BFB? Were the bottles provided by SGS? (Note apparent exceptions.)	(Yes) No N/A Yes No (N/A)	
Were **proper containers** (type/mass/volume/preservative*) used? * *Note: Exemption permitted for waters to be analyzed for metals.* Were **Trip Blanks** (i.e., VOAs, LL-Hg) in cooler with samples?	(Yes) No N/A Yes No (N/A)	client did not want trip Blanks -JABD-
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was **pH verified and compliant**? If pH was adjusted, were bottles flagged (i.e., stickers)? *Refer to attached bottle sheet (form F066) for documentation.*	(Yes) No N/A Yes No (N/A)	
For **RUSH** or **SHORT HOLD TIME** samples, were the COC & this SRF flagged, bottles flagged (e.g., stickers) and lab notified?	Yes No (N/A)	
For client requested, **site-specific QC** (e.g., MS/MSD/DUP), were bottles flagged (e.g., stickers) and numbered accordingly?	Yes No (N/A)	
For **special handling** (e.g., "MI" or foreign soils, lab filter, limited volume, Ref Lab), were bottles/paperwork flagged (e.g., sticker)?	Yes No (N/A)	
Was the WO# recorded in Front Counter/Sample Receiving log? **For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?**	Yes No (N/A) Yes No (N/A)	SRF Completed by: Bottle Sheet by: PM = N/A
Was **PEER REVIEW** of sample numbering completed (i.e., compare WO# on containers to COC, container ID on containers to COC, unique lab ID on each container?)	Yes No N/A	Peer Reviewed by: Metrics:
Additional notes (if applicable):		

SGS

1118169

SAMPLE RECEIPT FORM FOR TRANSFERS

Note: This form is to be completed by Anchorage Sample Receiving staff for all shipments received at SGS-Anchorage from SGS-Fairbanks.

Were samples received numbered with all criteria on Sample Receipt Form F0004 documented by Fairbanks Sample Receiving staff? If "No," ***Anchorage Sample Receiving staff must complete the receiving process & document pH verification, sample condition, etc. on the SRF initiated by Fairbanks staff*** (attached).	Yes (No) N/A	Use space below for additional notes…

Review Criteria:	Condition:	Comments/Action Taken:
Were **custody seals** intact? Note # & location:	(Yes) No N/A	H/B
COC accompanied samples?	(Yes) No N/A	
Temperature blank compliant (i.e., 0-6°C after correction factor)?	(Yes) No N/A	
Cooler ID: i @ 4.4 w/ Therm.ID: 201 Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____		
Note: If non-compliant, use form FS-0029 to document affected samples/analyses. If samples are received <u>without</u> a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP** will be noted to the right. In cases where neither a temp blank <u>nor</u> cooler temp can be obtained, note "ambient" or "chilled."		
If temperature(s) <0°C, were all containers ice free?	Yes No (N/A)	
Delivery method: (Lynden) Other:		
Completed by:		

WO# (7 digits)	Sample # - Sample #	Container ID - Container ID	Matrix	QC	Preservative (CHECKED)	TEST GROUP	PRINT LABELS	Notes: ANOMALIES - *e.g., preservative added* or SPECIAL HANDLING - *e.g., Multi-Incremental (MI), Field Filter (FF), Lab Filter (LF), use "same jar as" (SJA) for QC, 2xMeOH, bubbles, etc.*
SAMPLE ID			TYPE		CONTAINERS	ANALYSIS		Type comments below:
1118169	001 - 002	A - C	1 Water		HCl * VOA or LL-Hg *	W_GRO/VOA		
1118169	001 - 002	D - E	1 Water		HCl (pH <2)	W_DRO_1L		

Laboratory Data Review Checklist

Completed by: Susan Vogt

Title: Senior Professional Date: July 27, 2012

CS Report Name: Report Date: August 10, 2012

Consultant Firm: ***NORTECH, Inc.***

Laboratory Number: SGS Environmental Services, Inc. Name: Laboratory Report 1127645

ADEC File Number: 100.38.217 ADEC RecKey Number:

1. Laboratory
   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?
      Yes **XX** No NA (Please explain.) Comments:

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?
      Yes No NA (Please explain.) Comments:

2. Chain of Custody (COC)
   a. COC information completed, signed, and dated (including released/received by)?
      Yes **XX** No NA (Please explain.) Comments:

   b. Correct analyses requested?
      Yes **XX** No NA (Please explain.) Comments:

3. Laboratory Sample Receipt Documentation
   a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?
      Yes **XX** No NA (Please explain.) Comments:

      The SGS field office in Fairbanks noted on the sample receipt form (SRF) "several containers had ice @FBX SGS delivery. They are marked "ICE" with red marker. Please document the exact containers @ login." The Anchorage lab did not note any bottles with ice and recorded the coolers temperatures at 2.6 and 2.1 ^{o} C.

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes **XX** No NA (Please explain.) Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes **XX** No NA (Please explain.) Comments:

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes **XX** No NA (Please explain.) Comments:

1) On a March 29, 2012 email the Anchorage lab emailed the Fairbanks SGS office and noted the SRF For Transfers it was noted "sample 4D, client wrote "SW-7" on Lid and the label does read the correct "Dup-1". Nothing is missing for Sample 3 "SW-7 everything matches (Lid/Label) and COC. I documented the SRF saying this". Fairbanks responded with "Please use the sample label ID "DUP-1."
2) The Anchorage SRF transfer form also noted "4D broke in-house on accident 3/29/12 limited volume".

e. Data quality or usability affected? (Please explain.)

Comments:

It does not appear that the limited volume from the broken bottle affected analysis as there was no other mention in the case narrative or lab pages.

4. Case Narrative

a. Present and understandable?

Yes **XX** No NA (Please explain.) Comments:

Samples SW-5 & DUP-2 – AK102 pattern is consistent with a weathered gasoline.

b. Discrepancies, errors or QC failures identified by the lab?

Yes **XX** No NA (Please explain.) Comments:

1) Lab ID Nos. 1080528 LCS & 1080529 LCSD – 8021B lab control spike/duplicate (LCS/LCSD) relative percent difference (RPD) for all analytes do not meet (QC) quality control criteria. These analytes were not detected above the limit of quantitation (LOQ) in the associated samples.
2) Lab ID No. 1080528 LCS 8021B - LCS recovery for o-xylene does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.
3) Lab ID No. 1080536 CCV – 8021B continuing calibration verification (CCV) recoveries for xylenes do not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.
4) Lab ID Nos.1080602 LCS, 1080603 LCSD, & 1080605 CCV – 524.2 LCS (HBN 1323932 [VXX/23365), LCSD (HBN 1323932 [VXX/2336), and CCV (HBN 1323933 [VMS/12755) recoveries for 1,2-dibromo-3-chloropropane and napthalene do not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.
5) Lab ID No. 1081175 AK102 - IB recovery for 5a-androstane (surrogate) do not meet QC criteria (biased high); however the batch QC and all associated sample surrogates are within criteria.

c. Were all corrective actions documented?

Yes **XX** No NA (Please explain.) Comments:

See 4b above.

d. What is the effect on data quality/usability according to the case narrative?

Comments:

See 4b above – associated samples were not detected above the LOQ

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes **XX** No NA (Please explain.) Comments:

b. All applicable holding times met?

Yes **XX** No NA (Please explain.) Comments:

c. All soils reported on a dry weight basis?

Yes No NA (Please explain.) **XX** Comments:

No soils analyzed.

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

Yes XX No NA (Please explain.) Comments:

e. Data quality or usability affected?

Comments:

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes **XX** No NA (Please explain.) Comments:

ii. All method blank results less than PQL?

Yes **XX** No NA (Please explain.) Comments:

iii. If above PQL, what samples are affected?

Comments:

iv. Do the affected sample(s) have data flags and if so, are the data flags clearly defined?

Yes No NA (Please explain.) Comments:

v. Data quality or usability affected? (Please explain.)

Comments:

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes **XX** No NA (Please explain.) Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes No NA (Please explain.) **XX** Comments:

No metals/inorganic samples

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)
Yes No **XX** NA (Please explain.) Comments:

See 4b above.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)
Yes No **XX** NA (Please explain.) Comments:

See 4b above.

v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments:

All client samples.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes **XX** No NA (Please explain.) Comments:

In the case narrative and the LCS/LCS/CCV pages.

vii. Data quality or usability affected? (Use comment box to explain.)
Comments:

No. All client samples were below their LOQs.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?
Yes **XX** No NA (Please explain.) Comments:

See answer 4b 5) above for more detail.

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)
Yes **XX** No NA (Please explain.) Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?
Yes No NA (Please explain.) **XX** Comments:

No failed surrogates in client samples.

iv. Data quality or usability affected? (Use the comment box to explain.)
Comments:

See answer 4b 5) above.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)
Yes **XX** No NA (Please explain.) Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)
Yes **XX** No NA (Please explain.) Comments:

iii. All results less than PQL?
Yes **XX** No NA (Please explain.) Comments:

iv. If above PQL, what samples are affected?
Comments:

v. Data quality or usability affected? (Please explain.)
Comments:

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?
Yes **XX** No NA (Please explain.) Comments:

ii. Submitted blind to lab?
Yes **XX** No NA (Please explain.) Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

RPD (%) = Absolute value of: $\frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

Yes **XX** No NA (Please explain.) Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

f. Decontamination or Equipment Blank (If not used explain why).

Yes No NA (Please explain.) **XX** Comments:

Not used. Dedicated or disposable sampling tubes and gloves used.

i. All results less than PQL?

Yes No NA (Please explain.) **XX** Comments:

See 6f above.

ii. If above PQL, what samples are affected?

Comments:

iii. Data quality or usability affected? (Please explain.)

Comments:

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)
   a. Defined and appropriate?

Yes No NA (Please explain.) **XX** Comments:

No other data flags/qualifiers.

SGS North America Inc.
Alaska Division
Level II Laboratory Data Report

Project:	06-1080
Client:	Nortech
SGS Work Order:	1127645

Released by:

Alaska Division Technical Director

Stephen Ede
2012.04.06
15:24:27
-08'00'

Contents (Bookmarked in PDF):

Case Narrative

Client	NORTECH	Nortech	**Printed Date/Time**	4/6/2012	13:48
Workorder	1127645	06-1080			

Sample ID **Client Sample ID**

Refer to the sample receipt form for information on sample condition.

1127645010 **PS** **SW-5**

AK102 - The pattern is consistent with a weathered gasoline.

1127645011 **PS** **DUP-2**

AK102 - The pattern is consistent with a weathered gasoline.

1080528 ***LCS** **LCS for HBN 1323912 [VXX/23361**

8021B - LCS recovery for o-xylene does not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.
8021B - LCS/LCSD RPD for all analytes do not meet QC criteria. These analytes were not detected above the LOQ in the associated samples.

1080529 ***LCSD** **LCSD for HBN 1323912 [VXX/2336**

8021B - LCS/LCSD RPD for all analytes do not meet QC criteria. These analytes were not detected above the LOQ in the associated samples.

1080536 ***CCV2** **CCV2 for HBN 1323913 (VFC/1093**

8021B - CCV recoveries for xylenes do not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.

1080602 ***LCS** **LCS for HBN 1323932 [VXX/23365**

524.2 - LCS recoveries for 1,2-dibromo-3-chloropropane and napthalene do not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.

1080603 ***LCSD** **LCSD for HBN 1323932 [VXX/2336**

524.2 - LCSD recoveries for 1,2-dibromo-3-chloropropane and napthalene do not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.

1080605 ***CCV** **CCV for HBN 1323933 [VMS/12755**

524.2 - CCV recoveries for 1,2-dibromo-3-chloropropane and napthalene do not meet QC criteria (biased high). These analytes were not detected above the LOQ in the associated samples.

1081175 ***IB** **IB for HBN 1325659 (XFC/10325)**

AK102 - IB recovery for 5a-androstane (surrogate) do not meet QC criteria (biased high); however the batch QC and all associated sample surrogates are within criteria.

* QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Laboratory Analysis Report

Andrew Croan
Nortech
2400 College Rd
Fairbanks, AK 99709

Work Order:	1127645
	06-1080
Client:	Nortech
Report Date:	April 06, 2012

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<http://www.sgs.com/terms_and_conditions.htm>), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6010B, 6020, 7470A, 7471B, 8021B, 8081B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, the National Environmental Laboratory Accreditation Program and other regulatory authorities. The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV	Continuing Calibration Verification
CL	Control Limit
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LOD	Limit of Detection (i.e., 2xDL)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.

Detectable Results Summary

Print Date: 4/6/2012 1:48 pm

Client Sample ID: **SW-1**
SGS Ref. #: 1127645001

Volatile Fuels Department

Parameter	Result	Units
Benzene	0.810	ug/L

Client Sample ID: **SW-9**
SGS Ref. #: 1127645005

Volatile Fuels Department

Parameter	Result	Units
Benzene	0.980	ug/L
Ethylbenzene	1.62	ug/L

Client Sample ID: **SW-6**
SGS Ref. #: 1127645008

Volatile Fuels Department

Parameter	Result	Units
Benzene	1.09	ug/L
Ethylbenzene	27.8	ug/L
P & M -Xylene	26.5	ug/L

Client Sample ID: **SW-5**
SGS Ref. #: 1127645010

Volatile Fuels Department

Parameter	Result	Units
Benzene	29.7	ug/L
Toluene	259	ug/L
Ethylbenzene	291	ug/L
o-Xylene	616	ug/L
P & M -Xylene	1200	ug/L

Semivolatile Organic Fuels Department

Parameter	Result	Units
Diesel Range Organics	2.19	mg/L

Client Sample ID: **DUP-2**
SGS Ref. #: 1127645011

Volatile Fuels Department

Parameter	Result	Units
Benzene	29.4	ug/L
Toluene	257	ug/L
Ethylbenzene	288	ug/L
o-Xylene	614	ug/L
P & M -Xylene	1190	ug/L

Semivolatile Organic Fuels Department

Parameter	Result	Units
Diesel Range Organics	2.18	mg/L

Detectable Results Summary

Print Date: 4/6/2012 1:48 pm

Client Sample ID: **DW-2**
SGS Ref. #: 1127645014
Volatile Fuels Department

Parameter	Result	Units
Ethylbenzene	1.47	ug/L
P & M -Xylene	2.85	ug/L

Client Sample ID: **NDW1**
SGS Ref. #: 1127645016
VOLATILES GC/MS

Parameter	Result	Units
Toluene	0.590	ug/L

Client Sample ID: **NDW2**
SGS Ref. #: 1127645017
VOLATILES GC/MS

Parameter	Result	Units
Toluene	0.670	ug/L

SGS Ref.#	1127645001		
Client Name	Nortech	**Printed Date/Time**	04/06/2012 13:48
Project Name/#	06-1080	**Collected Date/Time**	03/26/2012 10:45
Client Sample ID	SW-1	**Received Date/Time**	03/28/2012 9:30
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	0.810	0.500	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Ethylbenzene	ND	1.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
o-Xylene	ND	1.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Toluene	ND	1.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Surrogates									
1,4-Difluorobenzene <surr>	96.9		%	SW8021B	B	77-115	03/30/12	03/30/12	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.600	mg/L	AK102	C		04/03/12	04/05/12	LCE
Surrogates									
5a Androstane <surr>	108		%	AK102	C	50-150	04/03/12	04/05/12	LCE

SGS Ref.#	1127645002		
Client Name	Nortech	**Printed Date/Time**	04/06/2012 13:48
Project Name/#	06-1080	**Collected Date/Time**	03/26/2012 11:15
Client Sample ID	SW-8	**Received Date/Time**	03/28/2012 9:30
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Ethylbenzene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
o-Xylene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Toluene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Surrogates									
1,4-Difluorobenzene <surr>	96.9		%	SW8021B	A	77-115	03/29/12	03/30/12	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.600	mg/L	AK102	D		04/03/12	04/05/12	LCE
Surrogates									
5a Androstane <surr>	110		%	AK102	D	50-150	04/03/12	04/05/12	LCE

SGS Ref.#	1127645003		
Client Name	Nortech	**Printed Date/Time**	04/06/2012 13:48
Project Name/#	06-1080	**Collected Date/Time**	03/26/2012 12:00
Client Sample ID	SW-7	**Received Date/Time**	03/28/2012 9:30
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	A		03/30/12	03/30/12	EAB
Ethylbenzene	ND	1.00	ug/L	SW8021B	A		03/30/12	03/30/12	EAB
o-Xylene	ND	1.00	ug/L	SW8021B	A		03/30/12	03/30/12	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		03/30/12	03/30/12	EAB
Toluene	ND	1.00	ug/L	SW8021B	A		03/30/12	03/30/12	EAB
Surrogates									
1,4-Difluorobenzene <surr>	97.1		%	SW8021B	A	77-115	03/30/12	03/30/12	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.600	mg/L	AK102	D		04/03/12	04/05/12	LCE
Surrogates									
5a Androstane <surr>	109		%	AK102	D	50-150	04/03/12	04/05/12	LCE

SGS Ref.#	1127645004		
Client Name	Nortech	**Printed Date/Time**	04/06/2012 13:48
Project Name/#	06-1080	**Collected Date/Time**	03/26/2012 11:30
Client Sample ID	DUP-1	**Received Date/Time**	03/28/2012 9:30
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	A		03/30/12	03/30/12	EAB
Ethylbenzene	ND	1.00	ug/L	SW8021B	A		03/30/12	03/30/12	EAB
o-Xylene	ND	1.00	ug/L	SW8021B	A		03/30/12	03/30/12	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		03/30/12	03/30/12	EAB
Toluene	ND	1.00	ug/L	SW8021B	A		03/30/12	03/30/12	EAB
Surrogates									
1,4-Difluorobenzene <surr>	95.5		%	SW8021B	A	77-115	03/30/12	03/30/12	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.600	mg/L	AK102	C		04/03/12	04/05/12	LCE
Surrogates									
5a Androstane <surr>	110		%	AK102	C	50-150	04/03/12	04/05/12	LCE

SGS Ref.#	1127645005		
Client Name	Nortech	**Printed Date/Time**	04/06/2012 13:48
Project Name/#	06-1080	**Collected Date/Time**	03/26/2012 12:30
Client Sample ID	SW-9	**Received Date/Time**	03/28/2012 9:30
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	0.980	0.500	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Ethylbenzene	1.62	1.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
o-Xylene	ND	1.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Toluene	ND	1.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Surrogates									
1,4-Difluorobenzene <surr>	96.7		%	SW8021B	B	77-115	03/30/12	03/30/12	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.600	mg/L	AK102	D		04/03/12	04/05/12	LCE
Surrogates									
5a Androstane <surr>	108		%	AK102	D	50-150	04/03/12	04/05/12	LCE

SGS Ref.#	1127645006		
Client Name	Nortech	**Printed Date/Time**	04/06/2012 13:48
Project Name/#	06-1080	**Collected Date/Time**	03/26/2012 12:55
Client Sample ID	SW-2	**Received Date/Time**	03/28/2012 9:30
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Ethylbenzene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
o-Xylene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Toluene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Surrogates									
1,4-Difluorobenzene <surr>	97.8		%	SW8021B	A	77-115	03/29/12	03/30/12	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.600	mg/L	AK102	D		04/03/12	04/05/12	LCE
Surrogates									
5a Androstane <surr>	108		%	AK102	D	50-150	04/03/12	04/05/12	LCE

SGS Ref.#	1127645007		
Client Name	Nortech	**Printed Date/Time**	04/06/2012 13:48
Project Name/#	06-1080	**Collected Date/Time**	03/26/2012 13:05
Client Sample ID	SW-3	**Received Date/Time**	03/28/2012 9:30
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Ethylbenzene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
o-Xylene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Toluene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Surrogates									
1,4-Difluorobenzene <surr>	96.5		%	SW8021B	A	77-115	03/29/12	03/30/12	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.600	mg/L	AK102	D		04/03/12	04/05/12	LCE
Surrogates									
5a Androstane <surr>	102		%	AK102	D	50-150	04/03/12	04/05/12	LCE

SGS Ref.#	1127645008		
Client Name	Nortech	**Printed Date/Time**	04/06/2012 13:48
Project Name/#	06-1080	**Collected Date/Time**	03/26/2012 13:50
Client Sample ID	SW-6	**Received Date/Time**	03/28/2012 9:30
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	1.09	0.500	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Ethylbenzene	27.8	1.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
o-Xylene	ND	1.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
P & M -Xylene	26.5	2.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Toluene	ND	1.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Surrogates									
1,4-Difluorobenzene <surr>	97.9		%	SW8021B	B	77-115	03/30/12	03/30/12	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.600	mg/L	AK102	D		04/03/12	04/05/12	LCE
Surrogates									
5a Androstane <surr>	101		%	AK102	D	50-150	04/03/12	04/05/12	LCE

SGS Ref.#	1127645009		
Client Name	Nortech	**Printed Date/Time**	04/06/2012 13:48
Project Name/#	06-1080	**Collected Date/Time**	03/26/2012 14:20
Client Sample ID	SW-4	**Received Date/Time**	03/28/2012 9:30
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Ethylbenzene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
o-Xylene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Toluene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Surrogates									
1,4-Difluorobenzene <surr>	97.2		%	SW8021B	A	77-115	03/29/12	03/30/12	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.600	mg/L	AK102	D		04/03/12	04/05/12	LCE
Surrogates									
5a Androstane <surr>	108		%	AK102	D	50-150	04/03/12	04/05/12	LCE

SGS Ref.#	1127645010		
Client Name	Nortech	**Printed Date/Time**	04/06/2012 13:48
Project Name/#	06-1080	**Collected Date/Time**	03/26/2012 14:50
Client Sample ID	SW-5	**Received Date/Time**	03/28/2012 9:30
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

AK102 - The pattern is consistent with a weathered gasoline.

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	29.7	5.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Ethylbenzene	291	10.0	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
o-Xylene	616	10.0	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
P & M -Xylene	1200	20.0	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Toluene	259	10.0	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Surrogates									
1,4-Difluorobenzene <surr>	98.6		%	SW8021B	B	77-115	03/30/12	03/30/12	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	2.19	0.600	mg/L	AK102	D		04/03/12	04/05/12	LCE
Surrogates									
5a Androstane <surr>	97.1		%	AK102	D	50-150	04/03/12	04/05/12	LCE

SGS Ref.#	1127645011		
Client Name	Nortech	**Printed Date/Time**	04/06/2012 13:48
Project Name/#	06-1080	**Collected Date/Time**	03/26/2012 14:30
Client Sample ID	DUP-2	**Received Date/Time**	03/28/2012 9:30
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

AK102 - The pattern is consistent with a weathered gasoline.

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	29.4	5.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Ethylbenzene	288	10.0	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
o-Xylene	614	10.0	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
P & M -Xylene	1190	20.0	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Toluene	257	10.0	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Surrogates									
1,4-Difluorobenzene <surr>	98.5		%	SW8021B	B	77-115	03/30/12	03/30/12	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	2.18	0.600	mg/L	AK102	D		04/03/12	04/05/12	LCE
Surrogates									
5a Androstane <surr>	105		%	AK102	D	50-150	04/03/12	04/05/12	LCE

SGS Ref.#	1127645012		
Client Name	Nortech	**Printed Date/Time**	04/06/2012 13:48
Project Name/#	06-1080	**Collected Date/Time**	03/27/2012 11:35
Client Sample ID	DW-1	**Received Date/Time**	03/28/2012 9:30
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Ethylbenzene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
o-Xylene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Toluene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Surrogates									
1,4-Difluorobenzene <surr>	96.9		%	SW8021B	A	77-115	03/29/12	03/30/12	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.600	mg/L	AK102	D		04/03/12	04/05/12	LCE
Surrogates									
5a Androstane <surr>	107		%	AK102	D	50-150	04/03/12	04/05/12	LCE

SGS Ref.#	1127645013		
Client Name	Nortech	**Printed Date/Time**	04/06/2012 13:48
Project Name/#	06-1080	**Collected Date/Time**	03/27/2012 12:15
Client Sample ID	FRW-2	**Received Date/Time**	03/28/2012 9:30
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Ethylbenzene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
o-Xylene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Toluene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Surrogates									
1,4-Difluorobenzene <surr>	98		%	SW8021B	A	77-115	03/29/12	03/30/12	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.600	mg/L	AK102	D		04/03/12	04/05/12	LCE
Surrogates									
5a Androstane <surr>	108		%	AK102	D	50-150	04/03/12	04/05/12	LCE

SGS Ref.#	1127645014		
Client Name	Nortech	**Printed Date/Time**	04/06/2012 13:48
Project Name/#	06-1080	**Collected Date/Time**	03/27/2012 13:05
Client Sample ID	DW-2	**Received Date/Time**	03/28/2012 9:30
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Ethylbenzene	1.47	1.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
o-Xylene	ND	1.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
P & M -Xylene	2.85	2.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Toluene	ND	1.00	ug/L	SW8021B	B		03/30/12	03/30/12	EAB
Surrogates									
1,4-Difluorobenzene <surr>	98.8		%	SW8021B	B	77-115	03/30/12	03/30/12	EAB
Semivolatile Organic Fuels Department									
Diesel Range Organics	ND	0.600	mg/L	AK102	D		04/03/12	04/05/12	LCE
Surrogates									
5a Androstane <surr>	108		%	AK102	D	50-150	04/03/12	04/05/12	LCE

SGS Ref.#	1127645015		
Client Name	Nortech	**Printed Date/Time**	04/06/2012 13:48
Project Name/#	06-1080	**Collected Date/Time**	03/26/2012 10:45
Client Sample ID	TB	**Received Date/Time**	03/28/2012 9:30
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Department									
Benzene	ND	0.500	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Ethylbenzene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
o-Xylene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Toluene	ND	1.00	ug/L	SW8021B	A		03/29/12	03/30/12	EAB
Surrogates									
1,4-Difluorobenzene <surr>	97.4		%	SW8021B	A	77-115	03/29/12	03/30/12	EAB

SGS Ref.#	1127645016		
Client Name	Nortech	**Printed Date/Time**	04/06/2012 13:48
Project Name/#	06-1080	**Collected Date/Time**	03/23/2012 11:00
Client Sample ID	NDW1	**Received Date/Time**	03/29/2012 9:30
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**
PWSID	0		

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
VOLATILES GC/MS									
Benzene	ND	0.500	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
Ethylbenzene	ND	0.500	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
o-Xylene	ND	0.500	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
P & M -Xylene	ND	0.500	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
Toluene	0.590	0.500	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
Xylenes (total)	ND	1.00	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
Surrogates									
1,2-Dichloroethane-D4 <surr>	109		%	EPA 524.2	A	70-130	03/30/12	03/30/12	JDH
4-Bromofluorobenzene <surr>	98.3		%	EPA 524.2	A	70-130	03/30/12	03/30/12	JDH
Toluene-d8 <surr>	101		%	EPA 524.2	A	70-130	03/30/12	03/30/12	JDH

SGS Ref.#	1127645017		
Client Name	Nortech	**Printed Date/Time**	04/06/2012 13:48
Project Name/#	06-1080	**Collected Date/Time**	03/23/2012 12:00
Client Sample ID	NDW2	**Received Date/Time**	03/29/2012 9:30
Matrix	Water (Surface, Eff., Ground)	**Technical Director**	**Stephen C. Ede**
PWSID	0		

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
VOLATILES GC/MS									
Benzene	ND	0.500	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
Ethylbenzene	ND	0.500	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
o-Xylene	ND	0.500	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
P & M -Xylene	ND	0.500	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
Toluene	0.670	0.500	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
Xylenes (total)	ND	1.00	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
Surrogates									
1,2-Dichloroethane-D4 <surr>	111		%	EPA 524.2	A	70-130	03/30/12	03/30/12	JDH
4-Bromofluorobenzene <surr>	100		%	EPA 524.2	A	70-130	03/30/12	03/30/12	JDH
Toluene-d8 <surr>	103		%	EPA 524.2	A	70-130	03/30/12	03/30/12	JDH

SGS Ref.#	1127645018
Client Name	Nortech
Project Name/#	06-1080
Client Sample ID	TB
Matrix	Water (Surface, Eff., Ground)
PWSID	0

Printed Date/Time	04/06/2012 13:48
Collected Date/Time	03/23/2012 11:00
Received Date/Time	03/29/2012 9:30
Technical Director	**Stephen C. Ede**

Sample Remarks:

Parameter	Results	LOQ	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
VOLATILES GC/MS									
Benzene	ND	0.500	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
Ethylbenzene	ND	0.500	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
o-Xylene	ND	0.500	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
P & M -Xylene	ND	0.500	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
Toluene	ND	0.500	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
Xylenes (total)	ND	1.00	ug/L	EPA 524.2	A		03/30/12	03/30/12	JDH
Surrogates									
1,2-Dichloroethane-D4 <surr>	106		%	EPA 524.2	A	70-130	03/30/12	03/30/12	JDH
4-Bromofluorobenzene <surr>	97		%	EPA 524.2	A	70-130	03/30/12	03/30/12	JDH
Toluene-d8 <surr>	101		%	EPA 524.2	A	70-130	03/30/12	03/30/12	JDH

SGS Ref.#	1080527	Method Blank	**Printed Date/Time**	04/06/2012 13:48
Client Name	Nortech		**Prep Batch**	VXX23361
Project Name/#	06-1080		**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)		**Date**	03/29/2012

QC results affect the following production samples:

1127645001, 1127645002, 1127645005, 1127645006, 1127645007, 1127645009, 1127645012, 1127645013, 1127645015

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Fuels Department					
Surrogates					
4-Bromofluorobenzene <surr>	114	50-150		%	03/29/12
Batch VFC10934					
Method AK101					
Instrument Agilent 7890A PID/FID					
Benzene	ND	0.500	0.150	ug/L	03/29/12
Ethylbenzene	ND	1.00	0.310	ug/L	03/29/12
o-Xylene	ND	1.00	0.310	ug/L	03/29/12
P & M -Xylene	ND	2.00	0.620	ug/L	03/29/12
Toluene	ND	1.00	0.310	ug/L	03/29/12
Surrogates					
1,4-Difluorobenzene <surr>	97.9	77-115		%	03/29/12
Batch VFC10934					
Method SW8021B					
Instrument Agilent 7890A PID/FID					

SGS Ref.#	1080589	Method Blank	**Printed Date/Time**	04/06/2012 13:48
Client Name	Nortech		**Prep Batch**	VXX23364
Project Name/#	06-1080		**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)		**Date**	03/30/2012

QC results affect the following production samples:

1127645001, 1127645003, 1127645004, 1127645005, 1127645008, 1127645010, 1127645011, 1127645014

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Fuels Department					
Surrogates					
4-Bromofluorobenzene <surr>	107	50-150		%	03/30/12
Batch VFC10935					
Method AK101					
Instrument Agilent 7890A PID/FID					
Benzene	ND	0.500	0.150	ug/L	03/30/12
Ethylbenzene	ND	1.00	0.310	ug/L	03/30/12
o-Xylene	ND	1.00	0.310	ug/L	03/30/12
P & M -Xylene	ND	2.00	0.620	ug/L	03/30/12
Toluene	ND	1.00	0.310	ug/L	03/30/12
Surrogates					
1,4-Difluorobenzene <surr>	97.2	77-115		%	03/30/12
Batch VFC10935					
Method SW8021B					
Instrument Agilent 7890A PID/FID					

SGS Ref.#	1080592	Anti-Foam Blank	**Printed Date/Time**	04/06/2012 13:48
Client Name	Nortech		**Prep Batch**	VXX23364
Project Name/#	06-1080		**Method**	SW5030B
Matrix	Water (Surface, Eff., Ground)		**Date**	03/30/2012

QC results affect the following production samples:

1127645001, 1127645003, 1127645004, 1127645005, 1127645008, 1127645010, 1127645011, 1127645014

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Fuels Department					
Surrogates					
4-Bromofluorobenzene <surr>	116			%	03/30/12
Batch VFC10935					
Method AK101					
Instrument Agilent 7890A PID/FID					
Benzene	ND	0.500	0.150	ug/L	03/30/12
Ethylbenzene	ND	1.00	0.310	ug/L	03/30/12
o-Xylene	ND	1.00	0.310	ug/L	03/30/12
P & M -Xylene	ND	2.00	0.620	ug/L	03/30/12
Toluene	ND	1.00	0.310	ug/L	03/30/12
Surrogates					
1,4-Difluorobenzene <surr>	97.9			%	03/30/12
Batch VFC10935					
Method SW8021B					
Instrument Agilent 7890A PID/FID					

SGS Ref.#	1080601	Method Blank	**Printed Date/Time**	04/06/2012 13:48
Client Name	Nortech		**Prep Batch**	VXX23365
Project Name/#	06-1080		**Method**	SW5030B
Matrix	Drinking Water		**Date**	03/30/2012

QC results affect the following production samples:
1127645016, 1127645017, 1127645018

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy					
Benzene	ND	0.500	0.150	ug/L	03/30/12
Ethylbenzene	ND	0.500	0.150	ug/L	03/30/12
o-Xylene	ND	0.500	0.150	ug/L	03/30/12
P & M -Xylene	ND	0.500	0.180	ug/L	03/30/12
Toluene	ND	0.500	0.150	ug/L	03/30/12
Surrogates					
1,2-Dichloroethane-D4 <surr>	106	70-130		%	03/30/12
4-Bromofluorobenzene <surr>	105	70-130		%	03/30/12
Toluene-d8 <surr>	101	70-130		%	03/30/12

Batch VMS12755
Method EPA 524.2
Instrument HP 5890 Series II MS1 VJA

SGS Ref.#	1080803	Method Blank	**Printed Date/Time**	04/06/2012	13:48
Client Name	Nortech		**Prep Batch**	XXX26662	
Project Name/#	06-1080		**Method**	SW3520C	
Matrix	Water (Surface, Eff., Ground)		**Date**	04/03/2012	

QC results affect the following production samples:

1127645001, 1127645002, 1127645003, 1127645004, 1127645005, 1127645006, 1127645007, 1127645008, 1127645009, 1127645010, 1127645011, 1127645012, 1127645013, 1127645014

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Semivolatile Organic Fuels Department					
Diesel Range Organics	ND	0.600	0.180	mg/L	04/05/12
Surrogates					
5a Androstane <surr>	110	60-120		%	04/05/12
Batch XFC10325					
Method AK102					
Instrument HP 7890A FID SV E F					

SGS Ref.#	1080528	Lab Control Sample	**Printed Date/Time**	04/06/2012	13:48
	1080529	Lab Control Sample Duplicate	**Prep Batch**	VXX23361	
Client Name	Nortech		**Method**	SW5030B	
Project Name/#	06-1080		**Date**	03/29/2012	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1127645001, 1127645002, 1127645005, 1127645006, 1127645007, 1127645009, 1127645012, 1127645013, 1127645015

Parameter		QC Results	Pct Recov		LCS/LCSD Limits	RPD		RPD Limits	Spiked Amount	Analysis Date
Volatile Fuels Department										
Benzene	LCS	118	118		(80-120)				100 ug/L	03/29/2012
	LCSD	93.0	93			24	*	(< 20)	100 ug/L	03/30/2012
Ethylbenzene	LCS	119	119		(75-125)				100 ug/L	03/29/2012
	LCSD	92.0	92			25	*	(< 20)	100 ug/L	03/30/2012
o-Xylene	LCS	123	123	*	(80-120)				100 ug/L	03/29/2012
	LCSD	94.6	95			26	*	(< 20)	100 ug/L	03/30/2012
P & M -Xylene	LCS	246	123		(75-130)				200 ug/L	03/29/2012
	LCSD	190	95			25	*	(< 20)	200 ug/L	03/30/2012
Toluene	LCS	117	117		(75-120)				100 ug/L	03/29/2012
	LCSD	90.6	91			25	*	(< 20)	100 ug/L	03/30/2012
Surrogates										
1,4-Difluorobenzene <surr>	LCS		102		(77-115)					03/29/2012
	LCSD		102			0				03/30/2012

Batch	VFC10934
Method	SW8021B
Instrument	Agilent 7890A PID/FID

SGS Ref.#	1080590	Lab Control Sample	**Printed Date/Time**	04/06/2012	13:48
	1080591	Lab Control Sample Duplicate	**Prep Batch**	VXX23364	
Client Name	Nortech		**Method**	SW5030B	
Project Name/#	06-1080		**Date**	03/30/2012	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1127645001, 1127645003, 1127645004, 1127645005, 1127645008, 1127645010, 1127645011, 1127645014

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Fuels Department								
Benzene	LCS	105	105	(80-120)			100 ug/L	03/30/2012
	LCSD	103	103		2	(< 20)	100 ug/L	03/30/2012
Ethylbenzene	LCS	104	104	(75-125)			100 ug/L	03/30/2012
	LCSD	103	103		1	(< 20)	100 ug/L	03/30/2012
o-Xylene	LCS	106	106	(80-120)			100 ug/L	03/30/2012
	LCSD	105	105		1	(< 20)	100 ug/L	03/30/2012
P & M -Xylene	LCS	214	107	(75-130)			200 ug/L	03/30/2012
	LCSD	212	106		1	(< 20)	200 ug/L	03/30/2012
Toluene	LCS	102	102	(75-120)			100 ug/L	03/30/2012
	LCSD	101	101		1	(< 20)	100 ug/L	03/30/2012
Surrogates								
1,4-Difluorobenzene <surr>	LCS		103	(77-115)				03/30/2012
	LCSD		102		1			03/30/2012

Batch	VFC10935
Method	SW8021B
Instrument	Agilent 7890A PID/FID

SGS Ref.#	1080602	Lab Control Sample	**Printed Date/Time**	04/06/2012	13:48
	1080603	Lab Control Sample Duplicate	**Prep Batch**	VXX23365	
Client Name	Nortech		**Method**	SW5030B	
Project Name/#	06-1080		**Date**	03/30/2012	
Matrix	Drinking Water				

QC results affect the following production samples:

1127645016, 1127645017, 1127645018

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Gas Chromatography/Mass Spectroscopy								
Benzene	LCS	28.9	96	(70-130)			30 ug/L	03/30/2012
	LCSD	30.0	100		4	(< 30)	30 ug/L	03/30/2012
Ethylbenzene	LCS	31.1	104	(70-130)			30 ug/L	03/30/2012
	LCSD	31.9	106		2	(< 30)	30 ug/L	03/30/2012
o-Xylene	LCS	30.4	101	(70-130)			30 ug/L	03/30/2012
	LCSD	30.5	102		0	(< 30)	30 ug/L	03/30/2012
P & M -Xylene	LCS	62.2	104	(70-130)			60 ug/L	03/30/2012
	LCSD	63.4	106		2	(< 30)	60 ug/L	03/30/2012
Toluene	LCS	29.0	97	(70-130)			30 ug/L	03/30/2012
	LCSD	29.6	99		2	(< 30)	30 ug/L	03/30/2012
Surrogates								
1,2-Dichloroethane-D4 <surr>	LCS		104	(70-130)				03/30/2012
	LCSD		108		4			03/30/2012
4-Bromofluorobenzene <surr>	LCS		95	(70-130)				03/30/2012
	LCSD		91		4			03/30/2012
Toluene-d8 <surr>	LCS		100	(70-130)				03/30/2012
	LCSD		101		1			03/30/2012

Batch	VMS12755
Method	EPA 524.2
Instrument	HP 5890 Series II MS1 VJA

SGS Ref.#	1080804	Lab Control Sample	**Printed Date/Time**	04/06/2012	13:48
	1080805	Lab Control Sample Duplicate	**Prep Batch**	XXX26662	
Client Name	Nortech		**Method**	SW3520C	
Project Name/#	06-1080		**Date**	04/03/2012	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1127645001, 1127645002, 1127645003, 1127645004, 1127645005, 1127645006, 1127645007, 1127645008, 1127645009, 1127645010, 1127645011, 1127645012, 1127645013, 1127645014

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Semivolatile Organic Fuels Department								
Diesel Range Organics	LCS	22.3	112	(75-125)			20 mg/L	04/05/2012
	LCSD	22.4	112		0	(< 20)	20 mg/L	04/05/2012
Surrogates								
5a Androstane <surr>	LCS		104	(60-120)				04/05/2012
	LCSD		106		2			04/05/2012

Batch	XFC10325	
Method	AK102	
Instrument	HP 7890A	FID SV E F

1127645

SGS

SGS North America Inc.
CHAIN OF CUSTODY RECORD

1127645

SGS Reference #:

page ______ of ______

CLIENT: NORTECH
CONTACT: Peter PHONE NO: 452.5688
PROJECT NAME: 578 Canoro Rd PROJECT/PWSID/PERMIT#: 06-1080
REPORTS TO: EMAIL: peter@nortechengr.com
INVOICE TO: NORTECH 2400 College Rd Fai, AK 99709 QUOTE #: P.O. #:

Preservatives Used: 4°C HCL
Analysis Required: BTEX O.nlkas wate 524.2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX/MATRIX CODE	# CONTAINERS	SAMPLE TYPE C=COMP G=GRAB MI=Multi Incremental Samples	BTEX O.nlkas wate 524.2									REMARKS/LOC ID
(16) AC	NDW1	3/23/12	1100	W	3	G	X									
(17) AC	NDW2	3/23/12	1200	W	3	G	X									
(18) AC	TB				3		X									

3-27-12

	Date	Time	
Collected/Relinquished By: (1) [signature]	3/27/12	1635	Received By: [signature] 3-27-12 1635
Relinquished By: (2) [signature]	3-28-12	1430	Received By:
Relinquished By: (3)			Received By:
Relinquished By: (4)	3/29/12	0930	Received For Laboratory By: [signature]

DOD Project? YES NO

Cooler ID ______

Data Deliverable Requirements:

Requested Turnaround Time and-or Special Instructions:

Temperature Blank °C: 5.1°C
1D1017 or Ambient [ ]
(See attached Sample Receipt Form)

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT (circled)
(See attached Sample Receipt Form)

SGS

SGS CHAIN 1127645 **D**

Locations Nationwide
- Alaska
- Maryland
- New Jersey
- New York
- North Carolina
- Indiana
- West Virginia
- Kentucky

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Page 34 of 40

(1)
CLIENT: Nortech
CONTACT: Andy Croan PHONE NO: 907-452-5688
PROJECT NAME: 06-1080 PROJECT/ PWSID/ PERMIT# :
REPORTS TO: Andy Croan EMAIL: acroan@nortechengr.com
INVOICE TO: 2400 College Rd Fairbanks, AK 99775 QUOTE #:
P.O. #:

SGS Reference #:

page 1 of 2

(2)

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX/ MATRIX CODE	# CONTAINERS	SAMPLE TYPE C= COMP G= GRAB MI= Multi Incremental Samples	Preservatives Used	Analysis Required (3) DRO/AK102	BTEX/8021	REMARKS/ LOC ID
(1) A-D -11	SW-1	3/26/12	1045	W	5	G		X	X	
(2) AE -11	SW-8		1115							
(3) AE -11	SW-7		1200							
(4) A-D -11	DUP-1		1130							
(5) AE -11	SW-9		1230							
(6) AE -11	SW-2		1255							
(7) AE -11	SW-3		1305							
(8) AE -11	SW-6		1350							
(9) AE -11	SW-4		1420							
(10) AE -11	SW-5		1450							

(5)

Collected/Relinquished By:(1)	Date 3/27/12	Time 1330	Received By: 3-27-12 1330
Relinquished By: (2)	Date 3-27-12	Time 1400	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 3/28/12	Time 0920	Received For Laboratory By:

(4)

DOD Project? YES NO

Cooler ID _____

Data Deliverable Requirements:

Requested Turnaround Time and-or Special Instructions:

Temperature Blank °C: 0.5, 4.9

ID 100 or Ambient [ ]

(See attached Sample Receipt Form)

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

(See attached Sample Receipt Form)

SGS

SG CHAI RD

1127645

Locations Nationwide
• Alaska • Maryland
• New Jersey • New York
• North Carolina • Indiana
• West Virginia • Kentucky
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(1)

CLIENT: Nortech

CONTACT: Andy Croan PHONE NO: 907 452 5688

PROJECT NAME: 06-1080 PROJECT/ PWSID/ PERMIT# :

REPORTS TO: Andy Croan EMAIL: acroan@nortechengr.com

INVOICE TO: 2400 College Rd Fairbanks AK 99775 QUOTE #: P.O. #:

SGS Reference #:

page 2 of 2

(2)

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX/ MATRIX CODE	# CONTAINERS	SAMPLE TYPE C= COMP G= GRAB MI= Multi Incremental Samples	Preservatives Used	Analysis Required (3) DRO AK102	BTEX 8021	REMARKS/ LOC ID
(11) AE -//	DUP-2	3/26/12	1430	W	5	G		X	X	
(13) AC	TB	3/26/12	—	W	3	~~G~~ C			X	
(12) AE -//	DW-1	3/27/12	1135	W	5	G		X	X	
(15) AE -//	FRW-2		1215	W	5	G		X	X	
(14) AE -//	DW-2		1305	W	5	G		X	X	

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
	3/27/12	1330	3-27-12 1333
Relinquished By: (2)	Date	Time	Received By:
	3-27-12	1408	
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received For Laboratory By:
	3DAR	0830	

(4)

DOD Project? YES NO

Cooler ID _____

Data Deliverable Requirements:

Requested Turnaround Time and-or Special Instructions:

Temperature Blank °C: 0.5, 4.9

ID 10D or Ambient [ ]

(See attached Sample Receipt Form)

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

(See attached Sample Receipt Form)

SGS

1127645

SAMI

1127645
SGS WO#

Review Criteria:	Condition:	Comments/Action Taken:
Were **custody seals** intact? Note # & location, if applicable. COC accompanied samples?	Yes No ~~N/A~~ ~~Yes~~ No N/A	
Temperature blank compliant* (i.e., 0-6°C after correction factor)? * ***Note: Exemption permitted for chilled samples collected less than 8 hours ago.*** Cooler ID: 1 @ 5.1 w/ Therm.ID: 10D Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ ***Note: If non-compliant, use form FS-0029 to document affected samples/analyses.*** If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled." **If temperature(s) <0°C, were all sample containers ice free?**	~~Yes~~ No N/A Yes No ~~N/A~~	
Delivery method (specify all that apply): ~~Client~~ USPS Alert Courier Road Runner ~~AK Air~~ Lynden Carlile ERA PenAir FedEx UPS NAC Other: → *For WO# with airbills, was the WO# & airbill info recorded in the Front Counter eLog?*	Note airbill/tracking # See Attached or N/A Yes No ~~N/A~~	
→ For samples received with payment, note amount ($) and cash / check / CC (circle one). → For samples received in FBKS, ANCH staff will verify all criteria are reviewed.		~~N/A~~ SRF Initiated by: N/A
Do samples **match COC*** (i.e., sample IDs, dates/times collected)? * ***Note: Exemption permitted if times differ <1hr; in which case, use times on COC.*** Were analyses requested unambiguous?	~~Yes~~ No N/A ~~Yes~~ No N/A	
Were samples in **good condition** (no leaks/cracks/breakage)? Packing material used (specify all that apply): Bubble Wrap Separate plastic bags Vermiculite Other: Cubies	~~Yes~~ No N/A	
Were all VOA vials **free of headspace** (i.e., bubbles ≤6 mm)? Were all soil VOAs **field extracted** with MeOH+BFB? Were the bottles provided by SGS? (Note apparent exceptions.)	Yes No N/A Yes No ~~N/A~~ ~~Yes~~ No N/A	
Were **proper containers** (type/mass/volume/preservative*) used? * ***Note: Exemption permitted for waters to be analyzed for metals.*** Were **Trip Blanks** (i.e., VOAs, LL-Hg) in cooler with samples?	~~Yes~~ No N/A ~~Yes~~ No N/A	
For **special handling** (e.g., "MI" or foreign soils, lab filter, limited volume, Ref Lab), were bottles/paperwork flagged (e.g., sticker)?	Yes No ~~N/A~~	
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was **pH verified and compliant**? If pH was adjusted, were bottles flagged (i.e., stickers)?	Yes No ~~N/A~~ Yes No ~~N/A~~	
For **RUSH/SHORT Hold Time** or **site-specific QC** (e.g., BMS/BMSD/BDUP) samples, were the COC & bottles flagged (e.g., stickers) accordingly? For RUSH/SHORT HT, was email sent?	Yes No ~~N/A~~	
For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?	Yes No N/A	SRF Completed by: PM = N/A
Was **PEER REVIEW** of ***sample numbering/labeling*** completed (i.e., compare WO# on containers to COC, unique lab ID on each container, LIMS container labels used?) Was selection of ***"Bill to"*** client **PEER REVIEW**ed?	Yes No N/A Yes No N/A	Peer Reviewed by: Metrics:

Additional notes (if applicable):

*Please add work to existing work order. -JABD-

Note to Client: *Any "no" circled above indicates non-compliance with standard procedures and may impact data quality.*

SGS

1127645

1127645
SGS WO#

SAMPLE RECEIPT FORM FOR TRANSFERS

Note: This form is to be completed by Anchorage Sample Receiving staff for all shipments received at SGS-Anchorage from SGS-Fairbanks.

Were samples received numbered with all criteria on Sample Receipt Form F0004 documented by Fairbanks Sample Receiving staff? If "No," ***Anchorage Sample Receiving staff must complete the receiving process & document pH verification, sample condition, etc. on the SRF initiated by Fairbanks staff*** (attached).	Yes (No) N/A	Use space below for additional notes…

Review Criteria:	Condition:	Comments/Action Taken:
Were **custody seals** intact? Note # & location: COC accompanied samples?	~~Yes~~ No N/A Yes No N/A	1F, 1B
Temperature blank compliant (i.e., 0-6°C after correction factor)? Cooler ID: 1 @ 1.6 w/ Therm.ID: 13 Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ ***Note: If non-compliant, use form FS-0029 to document affected samples/analyses.*** If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP** will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled." **If temperature(s) <0°C, were all containers ice free?**	Yes No N/A Yes No (N/A)	
Delivery method: (Lynden) ~~Other:~~		
Completed by:		

Hurt, Amy L (Anchorage)

From: Dawkins, Jennifer A (Anchorage)
Sent: Thursday, March 29, 2012 10:24 AM
To: Hurt, Amy L (Anchorage)
Subject: RE: 1127645

1127645

Please use the sample label ID "DUP-1".

Thanks
Jen Dawkins

From: Hurt, Amy L (Anchorage)
Sent: Thursday, March 29, 2012 10:22 AM
To: Dawkins, Jennifer A (Anchorage)
Subject: 1127645

Good Morning Jen,

WO1127645 sample 4D, Client wrote "SW-7" on Lid and the label does read the correct "Dup-1". Nothing is missing for Sample 3 "SW-7" everything matches (Lid/Label) and COC. I documented the SRF saying this

Thank you
Amy

SGS

1127645

SAMPLE RECEIPT FORM

Review Criteria:	Condition:	Comments/Action Taken:
Were **custody seals** intact? Note # & location, if applicable. COC accompanied samples?	Yes No (N/A) (Yes) No N/A	
Temperature blank compliant* (i.e., 0-6°C after correction factor)? * *Note: Exemption permitted for chilled samples collected less than 8 hours ago.* Cooler ID: 1 @ 0.5 w/ Therm.ID: 10D Cooler ID: 2 @ 4.9 w/ Therm.ID: 10D Cooler ID: ____ @ ____ w/ Therm.ID: ____ Cooler ID: ____ @ ____ w/ Therm.ID: ____ Cooler ID: ____ @ ____ w/ Therm.ID: ____ *Note: If non-compliant, use form FS-0029 to document affected samples/analyses.* If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled." **If temperature(s) <0°C, were all sample containers ice free?**	(Yes) No N/A Yes (No) N/A	
Delivery method (specify all that apply): (Client) USPS Alert Courier Road Runner AK Air Lynden Carlile ERA PenAir FedEx UPS NAC Other: → *For WO# with airbills, was the WO# & airbill info recorded in the Front Counter eLog?*	Note airbill/tracking # See Attached or N/A Yes No (N/A)	Proceed with analysis per client. See below....
→ For samples received with payment, note amount ($) and cash / check / CC (circle one). → For samples received in FBKS, ANCH staff will verify all criteria are reviewed.		(N/A) SRF Initiated by: JD N/A
Do samples **match COC*** (i.e., sample IDs, dates/times collected)? * *Note: Exemption permitted if times differ <1hr; in which case, use times on COC.* Were analyses requested unambiguous?	(Yes) No N/A (Yes) No N/A	
Were samples in **good condition** (no leaks/cracks/breakage)? Packing material used (specify all that apply): (Bubble Wrap) Separate plastic bags Vermiculite Other: Cubies	(Yes) No N/A	The following samples have limited volume:
Were all VOA vials **free of headspace** (i.e., bubbles ≤6 mm)? Were all soil VOAs **field extracted** with MeOH+BFB? Were the bottles provided by SGS? (Note apparent exceptions.)	Yes No N/A Yes No (N/A) (Yes) No N/A	- DUP-1 - SW-1 - Trip Blank
Were **proper containers** (type/mass/volume/preservative*) used? * *Note: Exemption permitted for waters to be analyzed for metals.* Were **Trip Blanks** (i.e., VOAs, LL-Hg) in cooler with samples?	(Yes) No N/A (Yes) No N/A	BTEX by 8021 Per J.D
For **special handling** (e.g., "MI" or foreign soils, lab filter, limited volume, Ref Lab), were bottles/paperwork flagged (e.g., sticker)?	Yes No (N/A)	
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was **pH verified and compliant**? If pH was adjusted, were bottles flagged (i.e., stickers)?	(Yes) No N/A Yes No (N/A)	
For **RUSH/SHORT Hold Time** or **site-specific QC** (e.g., BMS/BMSD/BDUP) samples, were the COC & bottles flagged (e.g., stickers) accordingly? For RUSH/SHORT HT, was email sent?	Yes No (N/A)	
For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?	(Yes) No N/A	SRF Completed by: PM = J. DiMarco N/A
Was **PEER REVIEW** of ***sample numbering/labeling*** completed (i.e., compare WO# on containers to COC, unique lab ID on each container, LIMS container labels used?) Was selection of ***"Bill to"*** client **PEER REVIEW**ed?	Yes (No) N/A Yes No (N/A)	Peer Reviewed by: TH 3/28 1230 Metrics:

Additional notes (if applicable):

* Several sample containers had ice @ FBX SGS delivery. They are marked "ICE" with red marker. Please document the exact containers @ login. -JABD-

Note to Client: *Any "no" circled above indicates non-compliance with standard procedures and may impact data quality.*

SGS

1127645

SAMPLE RECEIPT FORM FOR TRANSFERS

Note: This form is to be completed by Anchorage Sample Receiving staff for all shipments received at SGS-Anchorage from SGS-Fairbanks.

Were samples received numbered with all criteria on Sample Receipt Form F0004 documented by Fairbanks Sample Receiving staff? If "No," ***Anchorage Sample Receiving staff must complete the receiving process & document pH verification, sample condition, etc. on the SRF initiated by Fairbanks staff*** (attached).	Yes (No) N/A	Use space below for additional notes…

Sample (4)C,D Lid reads "~~Dup-1~~" Label reads "~~SW-7~~" x2 all 3 jars

correction Lid reads "SW-7" Label reads "Dup-1"

(4)D broke in house on accident 3 bam limited volume

Review Criteria:	Condition:	Comments/Action Taken:
Were **custody seals** intact? Note # & location:	(Yes) No N/A	1F, 1B
COC accompanied samples?	(Yes) No N/A	
Temperature blank compliant (i.e., 0-6°C after correction factor)?	(Yes) No N/A	
Cooler ID: 1 @ 2.6 w/ Therm.ID: 70		
Cooler ID: 2 @ 2.1 w/ Therm.ID: 70		
Cooler ID: _____ @ _____ w/ Therm.ID: _____		
Cooler ID: _____ @ _____ w/ Therm.ID: _____		
Cooler ID: _____ @ _____ w/ Therm.ID: _____		
Note: If non-compliant, use form FS-0029 to document affected samples/analyses. If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP** will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled." **If temperature(s) <0°C, were all containers ice free?**	Yes No (N/A)	
Delivery method: (Lynden) Other:		
Completed by:		