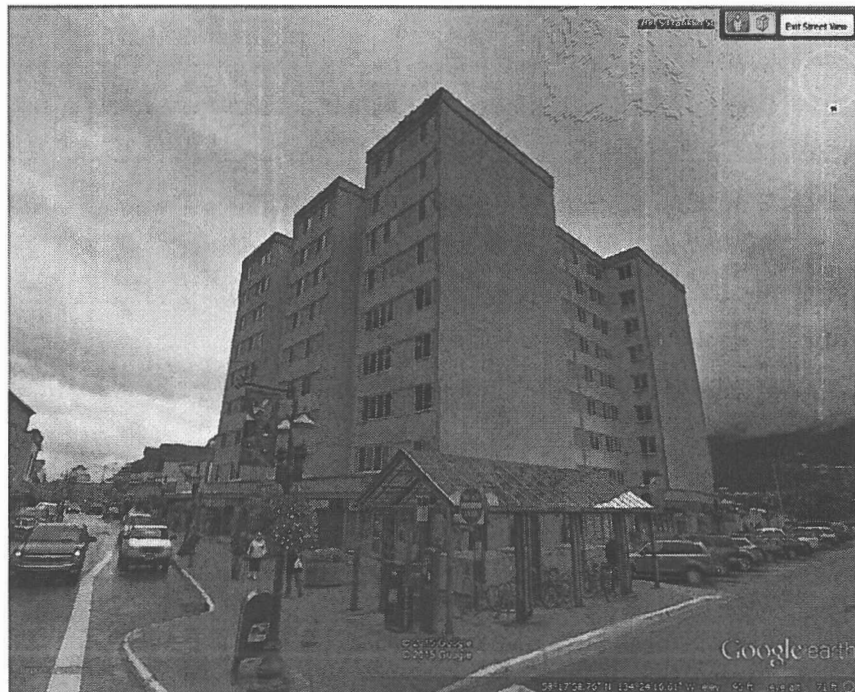


**SITE ASSESSMENT AND UST CLOSURE REPORT  
MARINE VIEW BUILDING  
230 SOUTH FRANKLIN STREET  
JUNEAU, ALASKA**

**APRIL 22, 2015**



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### ACRONYMS AND ABBREVIATIONS

AAC:	Alaska Administrative Code
ACH:	Air Changes per Hour
ADEC:	Alaska Department of Environmental Conservation
ARES:	Alaska Resources and Environmental Services, LLC
AST:	Aboveground Storage Tank
bgs:	Below Ground Surface
BTEX:	Benzene, Toluene, Ethylbenzene, Xylenes
CAP:	Corrective Action Plan
CFM:	Cubic Feet per Minute
CSM:	Conceptual Site Model
COC:	Contaminants of Concern
CY:	Cubic Yards
DRO:	Diesel Range Organics
Sq ft:	Square Feet
GRO:	Gasoline Range Organics
mg/Kg:	Milligrams per Kilogram
mg/L:	Milligrams per Liter
PAH:	Polycyclic Aromatic Hydrocarbons
PID:	Photoionization Detector
ppb:	Parts Per Billion
ppm:	Parts Per Million
RRO:	Residual Range Organics
UST:	Underground Storage Tank
VOC:	Volatile Organic Compounds



## **1.0 EXECUTIVE SUMMARY**

**NORTECH** was retained to conduct site assessment work during the closure of two underground storage tanks (USTs) servicing the Marine View Building, 230 South Franklin St in Juneau, Alaska. In addition, **NORTECH** conducted air sampling and monitoring in support of confined space entry work by the UST Closure contractor, Gene Cheeseman of Cheeseman Construction, Closure license #505.

The two USTs, identified in a November 2014 Phase I Environmental Site Assessment by Green Environmental Management, are steel constructed, and hold diesel fuel. One of the USTs contains 15,000 gallons of heating oil (diesel) for the Marine View Building's heating system, the other UST is a 675 gallon tank that supplies diesel for the building's back-up generator. The 675 gallon tank is considered a "regulated" UST under State of Alaska Department of Environmental Conservation (ADEC) and US EPA regulations. The 675 gallon tank had not been formally registered until the process of closure had been started.

The closure of the site included the excavation, removal, cutting and cleaning of the 675 gallon tank and the purging, cleaning, and filling with a sand/cement slurry of the 15,000 gallon UST. Afterwards the area was backfilled, concrete poured, and finishing work performed to return the site to original condition. All excavation and tank closure work was performed by Gene Cheeseman of Cheeseman Construction.

The 675 gallon tank was not yet registered as a regulated tank, however the appropriate paperwork was submitted, along with notification of closure for the tank, as required by the 18 AAC 78 guidelines. This tank was excavated and removed, following these same guidelines. The steel tank was found to have several corrosion holes along the bottom. All the associated piping was capped or removed where possible, and inspected before closure. Some oiled soils around the fill pipe and service lines indicate that a line leak may also have occurred. This material was removed, where possible, and a total of about 14 tons of diesel contaminated materials associated with the UST have been removed from the site.

Cheeseman Construction purged the 15,000 gallon tank of flammable vapors using an eductor type air mover, cut an entry hole into the tank, and with **NORTECH** monitoring internal atmospheric conditions, entered the tank in Level B protective gear. While in the tank, Cheeseman cleaned the tank of all sludge and oily residue, cut two holes through the bottom of the UST for soils inspection, and closed the tank in place by filling with a sand/cement slurry.

Soils were field screened during excavation, as well as conducting post excavation conformation sampling. A total of 13 soil samples were submitted for analysis to SGS in Anchorage, Alaska. Laboratory and field screening results indicate that some soils have been impacted by tank operation activities, and it appears that the smaller UST has leaked, and there is also some evidence that there was a service piping failure. A total of about 14 tons of material has been removed from the site, and an unknown quantity of diesel contaminated soils remain in place at the site, with depth and proximity to existing structures limiting soil removal.

## **2.0 BACKGROUND**

### **2.1 Site Location and Description**

The Marine View Building (the site) is located at 230 South Franklin Street in the city of Juneau, Alaska (latitude and longitude 58° 17'58" N, 134° 24'17" W). The building is a nine story concrete and steel structure with mixed use commercial/government and residential apartments and an associated two-level parking garage to the west, the ground floor of which is sub-grade.



The tanks were located in the 12 foot gap between the two buildings. A steel and glass overhang, integral to the Marine View Building, covers the gap. The entire area is covered in six inches of reinforced concrete. South Franklin Street forms the eastern boundary of the property, Marine Way the western boundary, and Ferry Way to the north. Other businesses are located just to the south. The property is approximately 0.46 acres and was originally constructed in 1974. The tanks are located between the building's west side and the adjacent parking garage. An aerial view can be found in Figure 2 of Appendix A.

#### *Site Climate*

Juneau has a maritime climate (Koppen Cfb) marked by relatively long and cold winters and mild summers. The area receives an average of 230 days and 62.17 inches of precipitation annually. High and low temperatures are ameliorated by the proximity to the Pacific Ocean. The average annual temperature is 43 degrees Fahrenheit.

#### *Site Geology and Groundwater*

Soils encountered during operations were backfill materials from a local source (possibly mine tailings), consisting of fine to medium silty sands along with 3 to 12 inch angular mining waste rock. The subject site was once the shoreline, but was filled in with waste rock from the defunct AJ Mine during the early 1900s, with ship docks along Gastineau Channel approximately 240 feet from the site. The site is approximately 41 ft. above mean sea level, with the bottom of the 15,000 gallon tank approximately 30 ft. above mean sea level. Tides in the Gastineau Channel range from a low of -4.2' to a high of 19.9' above mean sea level. Any subsurface water in this area is tidally influenced. No subsurface water was encountered during site activities.

## **2.2 Site History**

No prior contamination has been reported at this site.

## **2.3 Prior Site Activities**

No prior site activities have been documented at this site.

## **3.0 SCOPE OF WORK**

**NORTECH** was contracted to conduct site assessment activities in support of the tank closure. Site activities were performed in accordance with the *ADEC May 2010 Field Sampling Guidance (FSG)* and the *ADEC November 2002 Underground Storage Tank Procedures Manual*. **NORTECH** also provided Health and Safety services, such as writing a Health and Safety Plan, confined space entry permitting and oversight, with associated air monitoring.

Cheeseman Construction performed the excavation and removal/in-place closure of the two USTs, concrete removal, backfill the excavation, as well as any and all finishing work. Inspection of all pipe fittings, supply and return lines, and fill and vent ports were also conducted during site activities. All activities were conducted under the supervision of a Certified UST Closure Worker, Gene Cheeseman, license #655 (formerly #505), as required by 18 AAC 78.

## **4.0 FIELD ACTIVITIES**

Mr. Jason Ginter of **NORTECH** was present at the site on March 24 and 25, 2015 to conduct site assessment during tank closure activities, provide Health and Safety oversight, including confined space entry permitting and air monitoring. The USTs are located between the parking garage and the nine story apartment complex/office building, below a six inch concrete walkway, and below a steel and glass awning the covers the 12 feet between the



two buildings. Samples were screened using the headspace method with the use of Photoionization Detector (PID) and also by the hot water sheen test.

Cheeseman started breaking concrete with a jack hammer around the fill pipe of the 675 gallon tank to expose piping, service lines, and the top of the tank. The awning from the Marine View building extends over the work area, limiting the use of larger heavy equipment (as seen in Photo 1 and Photo 5). Below the concrete walkway, sandy soils in the vicinity of the fill piping were wet and had a strong fuel odor. The soils extended down to about three feet below grade, where another concrete slab overlays the tanks (see Photo 4). Soils around the tanks consist of what appears to be old mine tailings comprised of 3 to 12 inch angular waste rock with some fine silty sands. Excavation continued with a small excavator until the 675 gallon tank was exposed and removed. Contaminated soils from between the two concrete slabs was removed as contaminated material. Field screening work also showed contaminated soils around the 675 gallon UST, these were also removed where practical. In all, a total of about 14 tons of oily dirt were removed from the site, and are stored at Cheeseman's equipment yard in supersacks awaiting acceptance and approval for out of state disposal. The material has subsequently been shipped via Alaska Marine Lines for disposal by NRC Alaska at Emerald Recycling's (EPA Id # WA7690000000) Seattle, WA facility.

The 15,000 gallon tank is situated just north of the 675 gallon tank, with about two feet between them. The dimensions of this tank is such that it is positioned between the foundations of the Marine View Building and the Parking Garage with little room between, and an awning that overhangs the length of the work area. Therefore, this tank was closed in-place with a sand slurry and concrete mix. Excavation continued until a depth was reached that allowed for an area large enough to be cut out on the exposed side of the tank for the purpose of entering the tank for cleaning.

The tank cleaning task was considered a confined space entry and followed the appropriate safety protocols, with oversight by a qualified confined space entry worker and confined space entry permit. Initial readings at the fill port were 278 ppm on the PID and 0% LEL (lower explosive limit). Air was forced into the tank via the fill port using an eductor type air mover and exhausted out the vent port (which was modified to vent away from the Marine View Building) to reduce volatile vapors within the tank. Subsequent air monitoring after 30 hours of purging the tank had a PID reading of 58 ppm and 0% LEL.

A confined space permit was completed, procedures for entry reviewed with all pertinent personnel, and emergency procedures and equipment put in place and a personnel retrieval system set up. Level B personal protective equipment was employed for tank entry, consisting of supplied air respirators, chemically resistant saranex/poly-coated Tyvek coveralls and steel toe rubber outer boots. Once all safety protocols were in place, an entry way was cut out from the side of the tank with the use of reciprocating saw. Once cut, cleanup procedures ensued, entailing the transfer of residual waste sludge and hot water washing the interior of the tank. Waste water was collected and containerized upon completion, two drums of sludge and one drum, of rinsate were collected and disposed of by Cheeseman Construction using their Smart Ash incinerator. Air monitoring during cleaning procedures was conducted to insure safe work conditions. After cleaning, a sand/cement slurry was pumped into the tank for in-place closure. A concrete mix was used to top off the remaining space of the tank the sand slurry could not.

Thirteen samples (eleven samples and two duplicates, one for each tank area) were collected for confirmation analysis and submitted to SGS Anchorage under appropriate chain of custody procedures for the following analysis:



- Diesel Range Organics (DRO) by AK102.
- Residual Range Organics (RRO) by AK103
- Gasoline Range Organics (GRO) by AK101
- BTEX by SW8021B

Ten per cent (10%) of these samples were analyzed for Polynuclear Aromatic Hydrocarbons (PAH) by SW8270C, with one sample from each tank area chosen.

Field screening results and inspection of all the tank fittings and piping indicate that soils have been impacted by diesel from tank operations. Upon exposure of the tanks, rust was observed to have compromised the smaller tank to where several holes are present (see Photo 7). The service lines for the larger tank ran over the top of the smaller tank, and appeared to have leaked, affecting the soils between the two concrete slabs (the sidewalk, and a pad poured directly over the tanks during original installation as backfill). All lines were capped or removed before backfilling or abandoned by in-place closure.

## 5.0 METHODOLOGY

Environmental field work was completed in accordance with the ADEC November 2002 *Underground Storage Tanks Procedures Manual*. All activities were conducted under the supervision of a qualified UST Closure Worker, Gene Cheeseman, #505.

### 5.1 Contaminants of Potential Concern and Pertinent Cleanup Levels

The contaminants of concern for this site are based on the known contents of the tanks (Diesel fuel) and require laboratory analysis as outlined in Table 2A of the *Underground Storage Tanks Procedures Manual*. The table lists Gasoline Range Organics (GRO), Residual Range Organics (RRO), BTEX, and Polynuclear Aromatic Hydrocarbons, as well as Diesel Range Organics (DRO) as analytes to be tested. This was confirmed during the Closure Notice acceptance by ADEC.

The ADEC Method Two cleanup levels for soil are typically used as cleanup goals for sites managed through the ADEC Contaminated Sites Program. ADEC has developed the Method Two cleanup levels to be protective of human health and the environment under the wide range of conditions found in Alaska. Method Two soil cleanup levels for migration to groundwater in an Over 40 Inch Zone are being used to evaluate soil conditions at this Site and summarized in Table 1 below.

**Table 1**  
**ADEC Method Two Cleanup Level**  
*Petroleum Fractions and VOCs*

<i>Contaminant of Concern</i>	<i>Migration to Groundwater Concentration in Soil (mg/kg)</i>
DRO	230
GRO	300
RRO	11000
Benzene	0.025
Toluene	6.5
Ethylbenzene	6.9
Total Xylenes	63



## 5.2 Field Screening Equipment and Methods

**NORTECH** utilizes the headspace method of field screening in accordance with the sampling frequency established in the ADEC *May 2010 Draft Field Sampling Guidance*, as well as screening methods outlined in the *Underground Storage Tanks Procedures Manual*.

Field screening samples are collected using clean or disposable sampling tools in a sufficient quantity to partially fill (30-50%) a clean zip lock bag (a minimum of 8 ounces of soil). If necessary, the samples are heated to a minimum temperature of 40° F. The sample bags are then sealed, agitated, labeled, and set aside to develop headspace vapors for a minimum of ten minutes prior to screening with a Gas Alert Micro 5 photoionization detector (PID). A PID analyzes vapors for volatile organic compounds (VOCs). After headspace development, the bags are again agitated, and the PID probe is inserted into a small opening in the bag to draw headspace vapors from the center of the space above the soil. **NORTECH** records the highest PID reading from each sample in the project field logbook.

**NORTECH** also uses the hot water sheen test (also known as Hydrothermally Induced Iridescent Optrosopy) to corroborate and supplement the PID results and visual and olfactory observations of specific soils. The general methodology is to partially fill a small stainless steel bowl with suspect soil and slowly add hot water to the bowl and note any sheen that appears on the water surface. Then the water and soil are agitated and the surface is evaluated again. The bowl is then decontaminated for reuse. This procedure is fairly subjective, but is a reasonable indicator of the presence or absence of petroleum contamination.

## 5.3 Laboratory Sample Collection

**NORTECH** collected all laboratory soil samples in general accordance with the ADEC *May 2010 Draft Field Sample Guidance* document (adopted by reference for sampling guidance, 18 AAC 78 regulations).

Soil samples were collected using disposable equipment such as scoops or spoons, gloves, and Ziploc bags. After collection, samples were assigned a unique identification number and placed into laboratory certified clean sample jars and then placed into a cooler with ice and a temperature blank for transportation under chain-of-custody to SGS Anchorage. A minimum of one duplicate sample was collected for each ten samples submitted to SGS Anchorage. Samples were shipped to SGS Anchorage for analysis for the following:

- Diesel Range Organics (DRO) by AK102.
- Residual Range Organics (RRO) by AK103
- Gasoline Range Organics (GRO) by AK101
- BTEX by SW8021B

In addition, ten per cent of these samples (two samples) were analyzed for PAHs by SW8270.

## 6.0 RESULTS AND DISCUSSION

Thirteen samples (eleven samples and two duplicates) were collected and submitted to SGS Laboratories in Anchorage under appropriate chain of custody procedures. The sampling was conducted in accordance with the ADEC *May 2010 Draft Field Sampling Guidance* (FSG) and November 2002 *Underground Storage Tanks Procedures Manual*. The soil sampling results are summarized in the sections below, with the full laboratory report in Appendix C. DRO is the primary contaminant of concern for this site, based on site history and the known contents of the tank. Results for DRO range from a low of 158 mg/Kg to a high of 12,000 mg/Kg. BTEX components, GRO, and RRO analysis for all samples are below ADEC cleanup criteria, while CZ-11 (the duplicate for CZ-10) has a concentration of 11.2 mg/Kg for 1-methylnaphthalene (a



PAH) that exceeds the cleanup criteria of 6.2 mg/Kg. No other PAHs were detected above ADEC action levels. A summary of all tabulated results can be seen in Appendix G.

#### 6.1 675 Gallon UST

Five of the seven samples in relation to the 675 gallon tank exceeded the ADEC cleanup criteria for DRO, while all other analytes are below the laboratory limits of quantitation or below the cleanup criteria for all samples. CZ-03 and CZ-04 are below cleanup criteria for DRO, but laboratory analysis shows contaminants are still present. The highest result is CZ-02 (12,000 ppm) which is between the slabs of concrete, with the next highest under the fill port (CZ-01). These soils have been removed from the site and are stored in supersacks awaiting final shipping and disposal at Cheeseman's equipment yard, therefore CZ-01 and CZ-02 can be used to characterize removed soils.

The ADEC maximum allowable concentration for DRO impacted soils is 12,500 mg/kg. Field observations note the soils were wet and had a high odor starting at 12 inches below the ground surface (bgs). Upon excavation of the tank, a closer inspection revealed several holes. Large rock, 3"-12" mine waste rock, surrounded the tank and underneath, with silty sands in the interstitial space. Contamination is prevalent on the north and east sides of the tank, as well as underneath the tank and was found in the soils between slabs of concrete. Further soil removal was not feasible given the location under the steel and glass awning, between two buildings, and the depth of contaminated materials. A summary of the laboratory results for the 675 gallon UST is presented below.



**Table 2**  
**Marine View Building 675 gallon UST Closure Laboratory Analytical Results**

Sample ID	ADEC	CZ-01*	CZ-02*	CZ-03	CZ-04	CZ-05	CZ-06	CZ-07**	CZ-08**
<b>Description</b>	Cleanup Level	under 675 gal. fill	between slabs, piping	East Side, bottom, fill end	MVB side, 7ft bgs.	Parking Lot side 6.5 ft bgs	West side, 6.5 ft bgs	Bottom Center, 7.2 ft bgs	dup of CZ07
<b>Sample Collection Date</b>		3/24/15	3/24/15	3/24/15	3/25/15	3/25/15	3/25/15	3/25/15	3/25/15
<b>Analyte</b>		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Petroleum Fractions</b>									
DRO	250	8480	12000	197	158	1010	6080	7790	4970
GRO	300	18.7	36.8	2.16J	1.47u	1.13J	23.2	43.2	44.5
RRO	11000	566	469	123	62.5	151	239	510	329
<b>VOCs</b>									
Benzene	0.025	0.007U	0.007U	0.008U	0.007U	0.006U	0.007U	0.008U	0.008U
Toluene	6.5	0.0330	0.0261	0.0175J	0.0228J	0.0128J	0.0181J	0.0235J	0.0317J
Ethylbenzene	6.9	0.014U	0.0332	0.0165U	0.0147U	0.0126U	0.0175J	0.0463	0.0434
o-Xylene		0.1760	0.2220	0.0165U	0.0147U	0.0126U	0.396	0.935	0.296
P & M Xylene		0.1310	0.0568	0.033U	0.0293U	0.0252U	0.0819	0.269	0.322
Total Xylenes	63	0.3070	0.2788	0.0495U	0.0440U	0.0378U	0.4779	1.2040	0.6180

# U	Analyte not detected at the listed limit of quantitation (LOQ)
Shade	Analyte detected in concentration below the ADEC Cleanup level
Bold	Analyte detected in concentration exceeding the ADEC Cleanup level
CZ-01*	This material has been removed
CZ-07**	Denotes field duplicate pair

## 6.2 15,000 Gallon UST

Of the four samples for the 15,000 gallon UST, three are above the ADEC cleanup criteria for DRO, with the fourth (CZ-13) being not much below the criteria. In addition, 1-Methylnaphthalene (PAH compound) is above the ADEC cleanup criteria for soils. All other analytes are in concentrations below ADEC cleanup levels. This tank was left in-place due to the close proximity of the building foundations and the limited overhead work space created by the awning, not allowing for larger equipment access. Therefore, the condition of the tank exterior and welds were not noted. The ¼ inch steel tank appeared in good condition via internal inspection. The highest concentration was found at the vent port end of the tank (7500 mg/kg), at depths that would indicate the contaminated materials were likely from the smaller tank leaking. As with the other tank, this area could not be further evaluated.



**Table 3**  
**Marine View Building 15K UST Closure Laboratory Analytical Results**

Sample ID	ADEC	CZ-09	CZ-10**	CZ-11**	CZ-12	CZ-13
<b>Description</b>	Cleanup Level	15K tank, vent end, 11 ft bgs	15K tank, vent end, 7 ft bgs	dup of CZ-10	15K tank, fill end, 14' bgs	15K tank, center, 14' bgs
<b>Sample Collection Date</b>		3/26/15	3/26/15	3/26/15	3/26/15	3/26/15
<b>Analyte</b>	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Petroleum Fractions</b>						
DRO	250	259	7500	7410	1260	221
GRO	300	2.06J	37.3	57.8	1.69J	0.706J
RRO	11000	103	255	268	70.7	173
<b>VOCs</b>						
Benzene	0.025	0.007U	0.005U	0.005U	0.005U	0.005U
Toluene	6.5	0.0708	0.0338	0.0423	0.0200J	0.0112J
Ethylbenzene	6.9	0.0147U	0.0459	0.0830	0.0112U	0.0098U
o-Xylene		0.0326	0.530	0.651	0.0112U	0.0098U
P & M Xylene		0.0294U	0.538	0.738	0.0223U	0.0196U
Total Xylenes	63	0.0620	1.0680	1.3890	0.0335U	0.0294U

# U	Analyte not detected at the listed limit of quantitation (LOQ)
Shade	Analyte detected in concentration below the ADEC Cleanup level
Bold	Analyte detected in concentration exceeding the ADEC Cleanup level
CZ-11**	Duplicate pair

### 6.3 Data Quality Assurance/Quality Control

Data quality objectives for tank closures are outlined in the *UST Procedures Manual, Guidance for Treatment of Petroleum-Contaminated Soil and Water and Standard Sampling Procedures*. A duplicate sample for each matrix is to be submitted for laboratory analysis at a minimum frequency of 10% of the total amount of samples taken. In addition, the laboratory performs other data quality assurance/quality control measures to insure that results are of sufficient quality and as an indicator that instruments are functioning properly. A laboratory data review checklist can be found in Appendix D, and summarizes the data quality for this site.

Data quality for this site has been influenced by the high concentrations of DRO found in the soils. Surrogate recoveries are outside of acceptable limits, caused by high dilutions and matrix interferences. High concentrations also greatly influence quality control samples due to the variability within the soils. When comparing the duplicate pairs of samples for this site, the Relative Percent Difference (RPD) for DRO and RRO is outside acceptance criteria (<20% RPD) for the CZ-07/CZ-08 pair (44.2% and 43.1%), while the RPD for the CZ-10/CZ-11 pair are well within criteria (1.2% RPD and 5.0% RPD) for DRO and RRO respectively.

Blank Spikes, Matrix Spikes, and Laboratory Control Samples performed by the laboratory are well within recovery and RPD criteria. Surrogate recoveries for samples that were not diluted or contained matrix interferences are within range. Therefore, the data produced can still be used as a basis for the further evaluation of site conditions.



## 7.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations have been developed for this site:

- Cheeseman Construction closed the two USTs located at the site. The smaller, regulated tank has been removed. The larger tank was cut, cleaned, and closed in place by filling with a sand/cement slurry.
- The steel tank and piping removed from this site were cleaned and taken to Skookum Recycling for disposal.
- Sorbent pads used to clean the tanks and associated slurry were burned by Cheeseman Construction using their Smart Ash incinerator.
- All copper service lines were removed. Steel vent piping was removed where possible, piping left in place was filled with grout.
- The smaller tank was found to have corrosion holes, and the service lines for the larger tank appear to have leaked between the surface concrete slab, and the slab located at roughly three feet deep.
- About 14 tons of material has been removed from the site and shipped via Alaska Marine Lines to NRC Alaska's Emerald Recycling disposal facility in Seattle, Washington.
- An unknown quantity of diesel contaminated soils remain at depths ranging from about six feet to 14 feet below grade, as documented by laboratory sampling.
- Further delineation sampling or removal of this material is not practical due to site conditions.
- Groundwater/Surface water was not encountered during site work. The subject area is tidally influenced.
- While above Method Two cleanup limits, soils remaining at the site are still well below the maximum allowable concentrations, as set forth by ADEC, of 12,500 mg/kg.

## 8.0 LIMITATIONS AND NOTIFICATION

While **NORTECH** believes that the activities and methods described in this work plan are appropriate, reasonable alternative field procedures may be utilized to perform the activities necessary under this contract. Alternative procedures may be necessary based on changes that have occurred on the site, unforeseen site conditions, and/or changes in ADEC requirements. If necessary, alternative methodology utilized by **NORTECH** will be appropriate, safe, within industry standards, and approved by ADEC as necessary

## 9.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

The following Environmental Professionals have overseen and performed the QA/QC activities of the Site work.

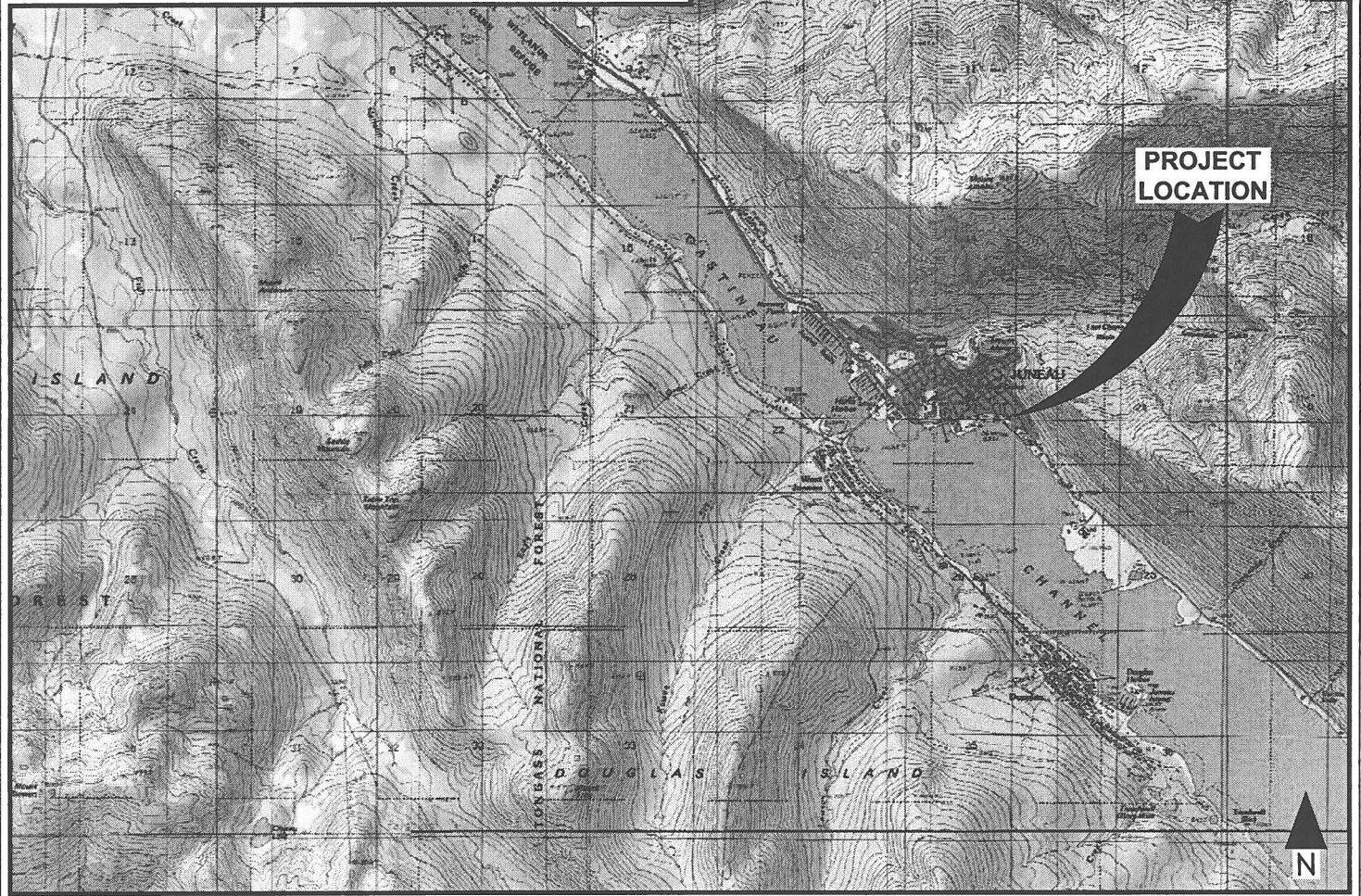
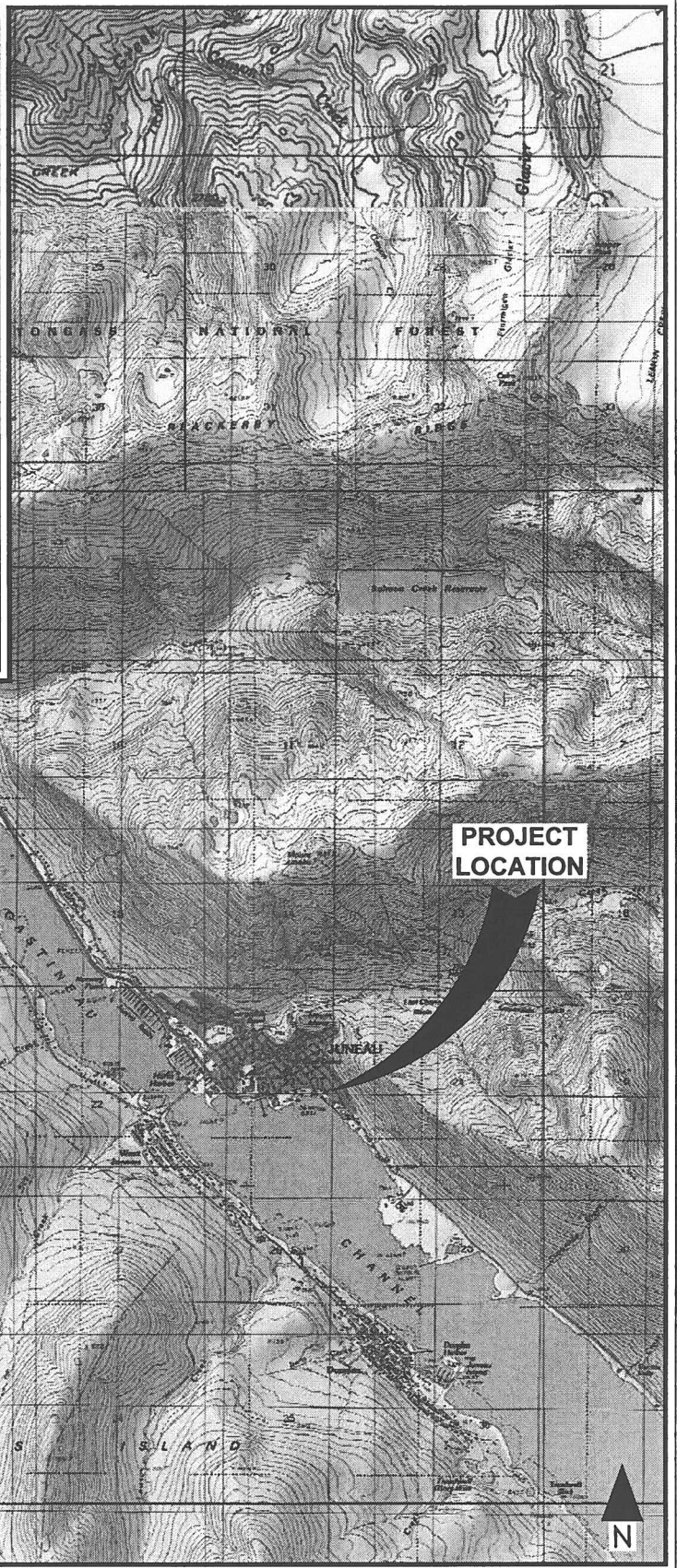
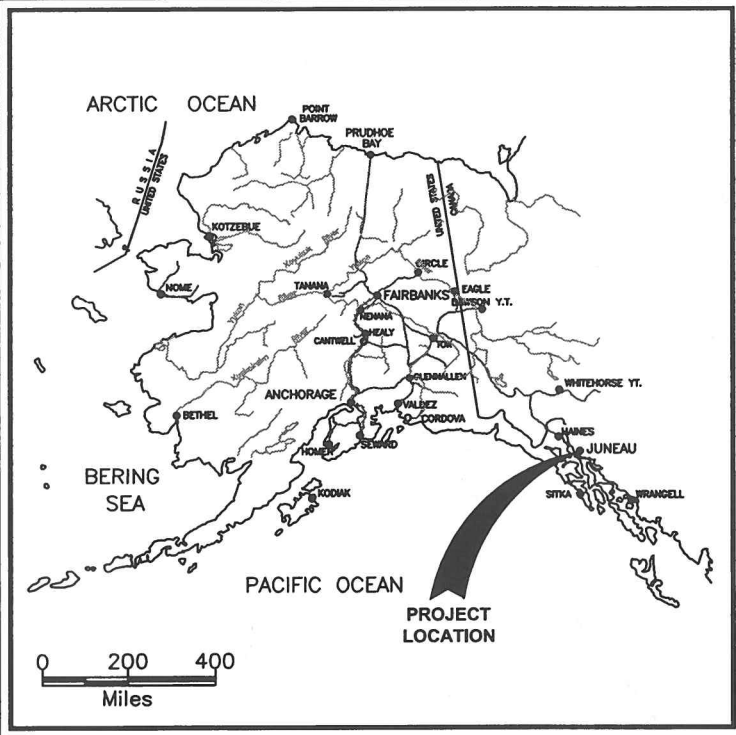
Sincerely,  
**NORTECH**

Dumitru Radu  
Environmental Scientist

Jason Ginter, PMP,  
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# Appendix A Figures



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 2400 College Road, Fairbanks, AK. 99709, 907-452-5688  
 3105 Lakeshore Dr. Ste.A106, Anchorage, AK. 99517 907-222-2445  
 5438 Shaune Dr. Ste.B, Juneau, AK. 99801 907-586-6813  
 1623 Mill Bay Road Ste.#5, Kodiak, AK. 99615 907-942-7700

Location Map  
 Marine View Center UST Closure  
 230 South Franklin Street  
 Juneau, Alaska

SCALE: 1"=1 mile	FIGURE:
DESIGN: JJG	1
DRAWN: CMR	
PROJECT NO: 15-1057	
DWG: 151057a(01)	
DATE: 4/17/2015	



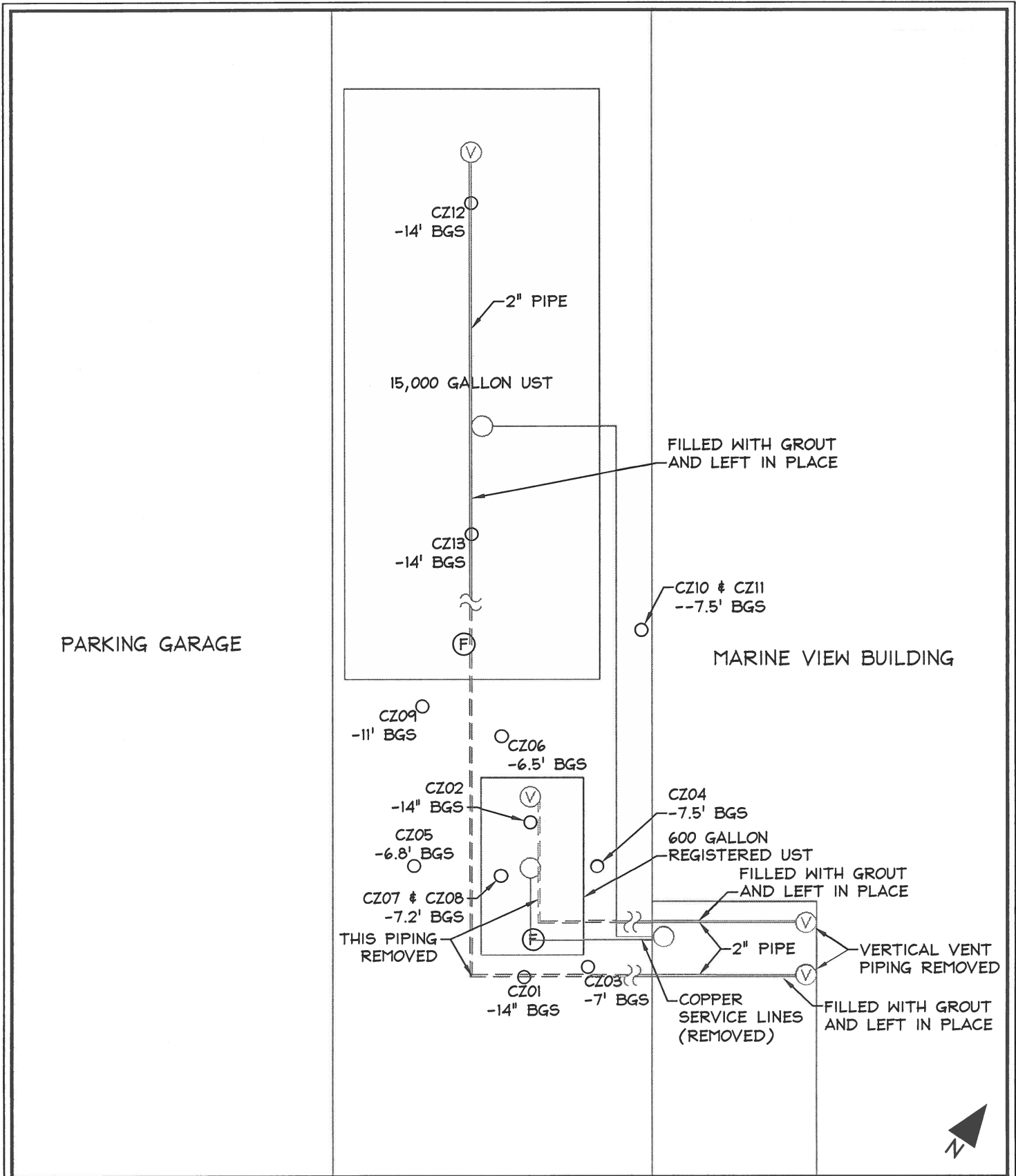
GASTINEAU CHANNEL



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 5438 Shaune Dr., Juneau, AK. 99801 907-586-6813  
 1623 Mill Bay Road, Kodiak, AK. 99615 907-942-7700

Vicinity Map  
 Marine View Center UST Closure  
 230 South Franklin Street  
 Juneau, Alaska

SCALE: 1" = 300'	FIGURE:
DESIGN: JJG	2
DRAWN: CMR	
PROJECT NO: 15-1057	
DWG: 151057a(02)	
DATE: 4/17/2015	



SUSTAINABLE ENVIRONMENT, ENERGY, HEALTH & SAFETY  
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 5438 Shaune Dr., Juneau, AK. 99801 907-586-6813  
 1623 Mill Bay Road, Kodiak, AK. 99615 907-942-7700

Site Map  
 Marine View Center UST Closure  
 230 South Franklin Street  
 Juneau, Alaska

SCALE: 1" = 5'	FIGURE: 3
DESIGN: JJG	
DRAWN: CMR	
PROJECT NO: 15-1057	
DWG: 151057a(03)	
DATE: 11/2/2015	

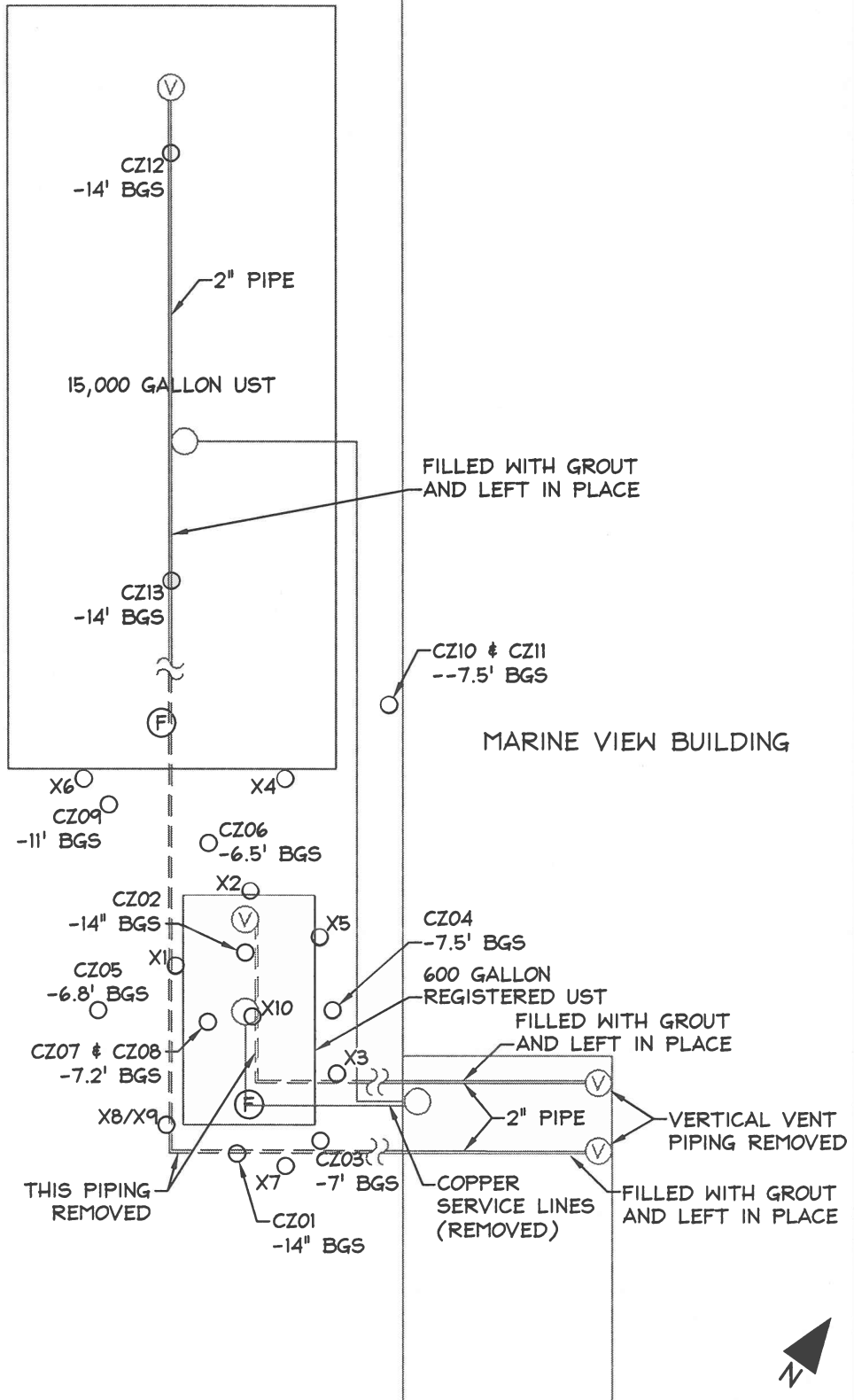
**PID Field Screening Results**

Sample	Depth	Results
X1	1'	78
X2	1'	84
X3	1'	112
X4	3'	145
X5	18"	62
X6	5'	84
X7	4'	42
X8	4'	75
X9	6'	62
X10	7'	22
CZ01	14"	125
CZ02	14"	138
CZ03	7'	17
CZ04	7.5'	3.2
CZ05	6.8'	44
CZ06	6.5'	81
CZ07	7.2'	110
CZ09	11'	31
CZ10	7.5'	130
CZ12	14'	38
CZ13	14'	12

PARKING GARAGE

**LEGEND**

SAMPLE LOCATION



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 5438 Shaune Dr., Juneau, AK. 99801 907-586-6813  
 1623 Mill Bay Road, Kodiak, AK. 99615 907-942-7700

Sample Locations and Results  
 Marine View Center UST Closure  
 230 South Franklin Street  
 Juneau, Alaska

SCALE: 1" = 5'	FIGURE: 4
DESIGN: JJG	
DRAWN: CMR	
PROJECT NO: 15-1057	
DWG: 151057a(04)	
DATE: 11/25/2015	





# Appendix B Photo Pages



**Photo 1:** View of the tank area looking generally south. The awning and parking lot proximity limited site access to larger equipment.



**Photo 2:** Seen are the fill pipe for the 675 gallon UST and other piping that runs along the walkway within the site.



**Photo 3:** The 675 gallon tank starts to get exposed. Note other utility piping beside fill pipe.



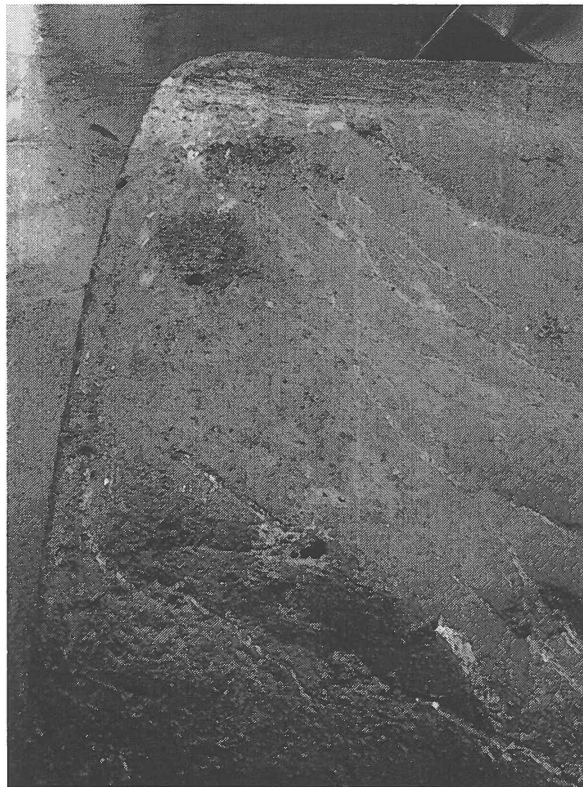
**Photo 4:** The second concrete slab is seen approximately two feet below the existing slab



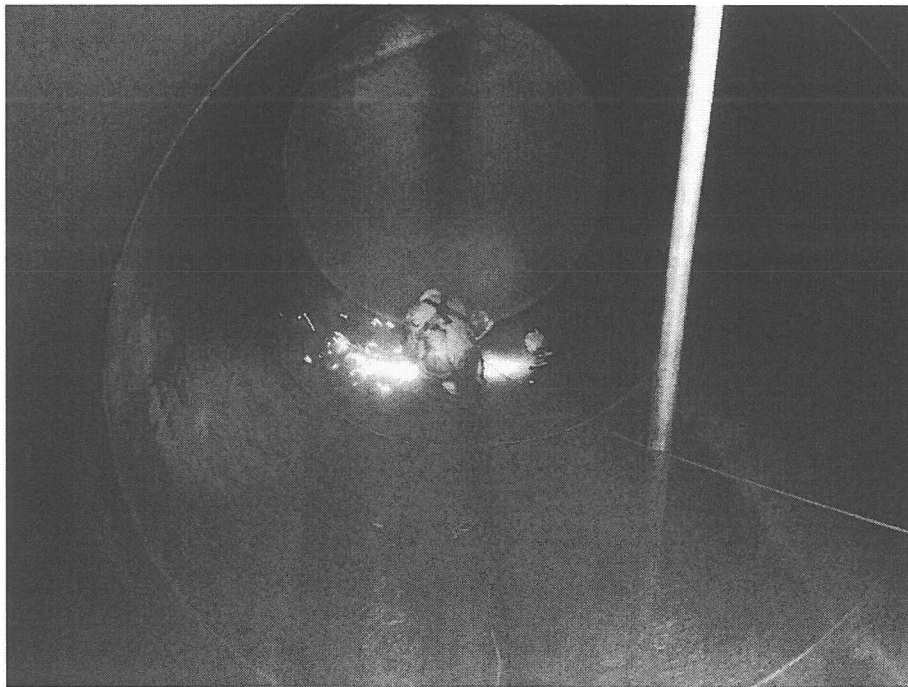
*Photo 5: Low clearance for equipment posed an additional challenge for site work.*



*Photo 6: The 675 gallon tank has been moved from under the existing utility line and is ready to be pulled out.*



**Photo 7:** Several holes are seen in the removed tank.



**Photo 8:** A member of Cheeseman Construction cuts a hole in the bottom of the 15,000 gallon tank for sampling purposes. The hole was cut after the tank was cleaned of sludge.



Site Assessment and Closure Report  
Marine View Building, Juneau, AK  
April 2015

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# Appendix C

## Laboratory Report



Laboratory Report of Analysis

To: Nortech  
3105 Lakeshore Drive #A106  
Anchorage, AK 99517  
(907)222-2445

Report Number: **1151155**

Client Project: **Marine View Bldg**

Dear Dumitru Radu,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Victoria at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,  
SGS North America Inc.

Victoria Pennick  
Project Manager  
Victoria.Pennick@sgs.com

Date

Print Date: 04/14/2015 8:41:57AM

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## Case Narrative

SGS Client: **Nortech**  
SGS Project: **1151155**  
Project Name/Site: **Marine View Bldg**  
Project Contact: **Dumitru Radu**

Refer to sample receipt form for information on sample condition.

### **CZ-01 (1151155001) PS**

AK102 - 5a-Androstane (surrogate) recovery is outside QC criteria (0%) due to sample dilution (20x).

### **CZ-02 (1151155002) PS**

AK101 - 4-Bromofluorobenzene (surrogate) recovery does not meet QC criteria (182%) due to matrix interference.

AK102 - 5a-Androstane (surrogate) recovery is outside QC criteria (0%) due to sample dilution (20x).

### **CZ-06 (1151155006) PS**

AK102 - 5a-Androstane (surrogate) recovery is outside QC criteria (0%) due to sample dilution (20x).

### **CZ-07 (1151155007) PS**

AK101 - 4-Bromofluorobenzene (surrogate) recovery does not meet QC criteria (190%) due to matrix interference.

AK102 - 5a-Androstane (surrogate) recovery is outside QC criteria (0%) due to sample dilution (20x).

8270D SIM - LOQs are elevated due to sample dilution. Sample analyzed at a dilution due to matrix interference with internal standards.

8270D SIM - 2-fluorobiphenyl and terphenyl-d14 (surrogate; 556/142%) recoveries are outside of QC criteria due to sample dilution (20x).

8270D SIM - The results for benzo[k]fluoranthene and benzo[b]fluoranthene are reported under benzo[b]fluoranthene due to co-elution.

### **CZ-08 (1151155008) PS**

AK101 - 4-Bromofluorobenzene (surrogate) recovery does not meet QC criteria (188%) due to matrix interference.

AK102 - 5a-Androstane (surrogate) recovery is outside QC criteria (0%) due to sample dilution (20x).

### **CZ-10 (1151155010) PS**

AK101 - 4-Bromofluorobenzene (surrogate) recovery does not meet QC criteria (308%) due to matrix interference.

AK102 - 5a-Androstane (surrogate) recovery is outside QC criteria (0%) due to sample dilution (20x).

### **CZ-11 (1151155011) PS**

AK101 - 4-Bromofluorobenzene (surrogate) recovery does not meet QC criteria (399%) due to matrix interference.

AK102 - 5a-Androstane (surrogate) recovery is outside QC criteria (0%) due to sample dilution (20x).

8270D SIM - LOQs are elevated due to sample dilution. Sample analyzed at a dilution due to matrix interference with internal standards.

8270D SIM - 2-fluorobiphenyl and terphenyl-d14 (surrogate; 572/142%) recoveries are outside of QC criteria due to sample dilution (20x).

8270D SIM - The results for benzo[k]fluoranthene and benzo[b]fluoranthene are reported under benzo[b]fluoranthene due to co-elution.

### **1151155007MS (1259152) MS**

8270D SIM - The results for benzo[k]fluoranthene and benzo[b]fluoranthene are reported under benzo[b]fluoranthene due to co-elution.

8270D SIM - 2-fluorobiphenyl and terphenyl-d14 (surrogate) recoveries are outside of QC criteria due to sample dilution (20x).

8270D SIM - LOQs are elevated due to sample dilution. Sample analyzed at a dilution due to matrix interference with internal standards.

8270D SIM - MS recoveries for several compounds are outside of QC criteria due to matrix interference. Refer to LCS for accuracy.

### **1151155007MSD (1259153) MSD**

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## Case Narrative

SGS Client: **Nortech**  
SGS Project: **1151155**  
Project Name/Site: **Marine View Bldg**  
Project Contact: **Dumitru Radu**

8270D SIM - The results for benzo[k]fluoranthene and benzo[b]fluoranthene are reported under benzo[b]fluoranthene due to co-elution.  
8270D SIM - 2-fluorobiphenyl and terphenyl-d14 (surrogate) recoveries for the MS/MSD are outside of QC criteria due to sample dilution.  
8270D SIM - LOQs are elevated due to sample dilution. Sample analyzed at a dilution due to matrix interference with internal standards.  
8270D SIM - MSD recoveries for several compounds are outside of QC criteria due to matrix interference. Refer to LCS for accuracy.  
8270D SIM - MS/MSD RPD for acenaphthene and 2-methylnaphthalene do not meet QC criteria. Results for these analytes are considered estimated in the original sample (CZ-07).

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

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### Report of Manual Integrations

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Analytical Batch</u>	<u>Analyte</u>	<u>Reason</u>
<b>8270D SIMS (PAH)</b>				
1151155007	CZ-07	XMS8600	Dibenzo[a,h]anthracene	RP
1151155007	CZ-07	XMS8600	Fluorene	SP
1151155011	CZ-11	XMS8600	Acenaphthene	SP
1151155011	CZ-11	XMS8600	Fluorene	SP
1259152	1151155007MS	XMS8600	Benzo[g,h,i]perylene	RP
1259152	1151155007MS	XMS8600	Fluorene	SP
1259153	1151155007MSD	XMS8600	Dibenzo[a,h]anthracene	RP
1259153	1151155007MSD	XMS8600	Fluorene	SP

#### Manual Integration Reason Code Descriptions

Code	Description
O	Original Chromatogram
M	Modified Chromatogram
SS	Skimmed surrogate
BLG	Closed baseline gap
RP	Reassign peak name
PIR	Pattern integration required
IT	Included tail
SP	Split peak
RSP	Removed split peak
FPS	Forced peak start/stop
BLC	Baseline correction
PNF	Peak not found by software

All DRO/RRO analysis are integrated per SOP.

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### Laboratory Qualifiers

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. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

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 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8021B, 8082A, 8260B, 8270D, 8270D-SIM, 9040C, 9045D, 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, 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
IB	Instrument Blank
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., 1/2 of the LOQ)
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.

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### Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
CZ-01	1151155001	03/24/2015	03/30/2015	Soil/Solid (dry weight)
CZ-02	1151155002	03/24/2015	03/30/2015	Soil/Solid (dry weight)
CZ-03	1151155003	03/24/2015	03/30/2015	Soil/Solid (dry weight)
CZ-04	1151155004	03/25/2015	03/30/2015	Soil/Solid (dry weight)
CZ-05	1151155005	03/25/2015	03/30/2015	Soil/Solid (dry weight)
CZ-06	1151155006	03/25/2015	03/30/2015	Soil/Solid (dry weight)
CZ-07	1151155007	03/25/2015	03/30/2015	Soil/Solid (dry weight)
CZ-08	1151155008	03/25/2015	03/30/2015	Soil/Solid (dry weight)
CZ-09	1151155009	03/26/2015	03/30/2015	Soil/Solid (dry weight)
CZ-10	1151155010	03/26/2015	03/30/2015	Soil/Solid (dry weight)
CZ-11	1151155011	03/26/2015	03/30/2015	Soil/Solid (dry weight)
CZ-12	1151155012	03/26/2015	03/30/2015	Soil/Solid (dry weight)
CZ-13	1151155013	03/26/2015	03/30/2015	Soil/Solid (dry weight)
Trip Blank	1151155014	03/24/2015	03/30/2015	Soil/Solid (dry weight)

Method

8270D SIMS (PAH)

AK101

SW8021B

AK102

AK103

SM21 2540G

Method Description

8270 PAH SIM Semi-Volatiles GC/MS

AK101/8021 Combo. (S)

AK101/8021 Combo. (S)

Diesel/Residual Range Organics

Diesel/Residual Range Organics

Percent Solids SM2540G

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**Detectable Results Summary**

Client Sample ID: **CZ-01**  
 Lab Sample ID: 1151155001

**Semivolatile Organic Fuels**

**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	8480	mg/Kg
Residual Range Organics	566	mg/Kg
Gasoline Range Organics	18.7	mg/Kg
o-Xylene	176	ug/Kg
P & M -Xylene	131	ug/Kg
Toluene	33.0	ug/Kg

Client Sample ID: **CZ-02**  
 Lab Sample ID: 1151155002

**Semivolatile Organic Fuels**

**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	12000	mg/Kg
Residual Range Organics	469	mg/Kg
Ethylbenzene	33.2	ug/Kg
Gasoline Range Organics	36.8	mg/Kg
o-Xylene	222	ug/Kg
P & M -Xylene	223	ug/Kg
Toluene	26.1J	ug/Kg

Client Sample ID: **CZ-03**  
 Lab Sample ID: 1151155003

**Semivolatile Organic Fuels**

**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	197	mg/Kg
Residual Range Organics	123	mg/Kg
Gasoline Range Organics	2.16J	mg/Kg
Toluene	17.5J	ug/Kg

Client Sample ID: **CZ-04**  
 Lab Sample ID: 1151155004

**Semivolatile Organic Fuels**

**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	158	mg/Kg
Residual Range Organics	62.5	mg/Kg
Toluene	22.8J	ug/Kg

Client Sample ID: **CZ-05**  
 Lab Sample ID: 1151155005

**Semivolatile Organic Fuels**

**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	1010	mg/Kg
Residual Range Organics	151	mg/Kg
Gasoline Range Organics	1.13J	mg/Kg
Toluene	12.8J	ug/Kg

Client Sample ID: **CZ-06**  
 Lab Sample ID: 1151155006

**Semivolatile Organic Fuels**

**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	6080	mg/Kg
Residual Range Organics	239	mg/Kg
Ethylbenzene	17.5J	ug/Kg
Gasoline Range Organics	23.2	mg/Kg
o-Xylene	396	ug/Kg
P & M -Xylene	81.9	ug/Kg
Toluene	18.1J	ug/Kg

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**Detectable Results Summary**

Client Sample ID: **CZ-07**

Lab Sample ID: 1151155007

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	857	ug/Kg
2-Methylnaphthalene	327	ug/Kg
Acenaphthene	623	ug/Kg
Acenaphthylene	67.5J	ug/Kg
Anthracene	414	ug/Kg
Benzo(a)Anthracene	241	ug/Kg
Benzo(a)pyrene	559	ug/Kg
Benzo[b]Fluoranthene	1080	ug/Kg
Benzo[g,h,i]perylene	667	ug/Kg
Chrysene	558	ug/Kg
Dibenzo[a,h]anthracene	163	ug/Kg
Fluoranthene	159	ug/Kg
Fluorene	445	ug/Kg
Indeno[1,2,3-c,d] pyrene	532	ug/Kg
Naphthalene	451	ug/Kg
Phenanthrene	713	ug/Kg
Pyrene	487	ug/Kg
Diesel Range Organics	7790	mg/Kg
Residual Range Organics	510	mg/Kg
Ethylbenzene	46.3	ug/Kg
Gasoline Range Organics	43.2	mg/Kg
o-Xylene	935	ug/Kg
P & M -Xylene	269	ug/Kg
Toluene	23.5J	ug/Kg

**Semivolatile Organic Fuels**

**Volatile Fuels**

Client Sample ID: **CZ-08**

Lab Sample ID: 1151155008

**Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	4970	mg/Kg
Residual Range Organics	329	mg/Kg
Ethylbenzene	43.4	ug/Kg
Gasoline Range Organics	44.5	mg/Kg
o-Xylene	296	ug/Kg
P & M -Xylene	322	ug/Kg
Toluene	31.7J	ug/Kg

**Volatile Fuels**

Client Sample ID: **CZ-09**

Lab Sample ID: 1151155009

**Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	259	mg/Kg
Residual Range Organics	103	mg/Kg
Gasoline Range Organics	2.06J	mg/Kg
o-Xylene	32.6	ug/Kg
Toluene	70.8	ug/Kg

**Volatile Fuels**

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**Detectable Results Summary**

Client Sample ID: **CZ-10**  
 Lab Sample ID: 1151155010

**Semivolatile Organic Fuels**

**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	7500	mg/Kg
Residual Range Organics	255	mg/Kg
Ethylbenzene	45.9	ug/Kg
Gasoline Range Organics	37.3	mg/Kg
o-Xylene	530	ug/Kg
P & M -Xylene	538	ug/Kg
Toluene	33.8	ug/Kg

Client Sample ID: **CZ-11**  
 Lab Sample ID: 1151155011

**Polynuclear Aromatics GC/MS**

**Semivolatile Organic Fuels**

**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	11200	ug/Kg
2-Methylnaphthalene	1880	ug/Kg
Acenaphthene	875	ug/Kg
Acenaphthylene	130	ug/Kg
Anthracene	452	ug/Kg
Benzo(a)Anthracene	194	ug/Kg
Benzo[a]pyrene	169	ug/Kg
Benzo[b]Fluoranthene	383	ug/Kg
Benzo[g,h,i]perylene	202	ug/Kg
Chrysene	241	ug/Kg
Dibenzo[a,h]anthracene	39.5J	ug/Kg
Fluoranthene	470	ug/Kg
Fluorene	1060	ug/Kg
Indeno[1,2,3-c,d] pyrene	124	ug/Kg
Naphthalene	668	ug/Kg
Phenanthrene	2250	ug/Kg
Pyrene	506	ug/Kg
Diesel Range Organics	7410	mg/Kg
Residual Range Organics	268	mg/Kg
Ethylbenzene	83.0	ug/Kg
Gasoline Range Organics	57.8	mg/Kg
o-Xylene	651	ug/Kg
P & M -Xylene	738	ug/Kg
Toluene	42.3	ug/Kg

Client Sample ID: **CZ-12**  
 Lab Sample ID: 1151155012

**Semivolatile Organic Fuels**

**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	1260	mg/Kg
Residual Range Organics	70.7	mg/Kg
Gasoline Range Organics	1.69J	mg/Kg
Toluene	20.0J	ug/Kg

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### Detectable Results Summary

Client Sample ID: **CZ-13**

Lab Sample ID: 1151155013

**Semivolatile Organic Fuels**

**Volatile Fuels**

Client Sample ID: **Trip Blank**

Lab Sample ID: 1151155014

**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	221	mg/Kg
Residual Range Organics	173	mg/Kg
Gasoline Range Organics	0.706J	mg/Kg
Toluene	11.2J	ug/Kg

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Gasoline Range Organics	1.30J	mg/Kg

Print Date: 04/14/2015 8:42:02AM

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**Results of CZ-01**

Client Sample ID: **CZ-01**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155001  
Lab Project ID: 1151155

Collection Date: 03/24/15 16:40  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):89.8  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	8480	441	137	mg/Kg	20		04/07/15 17:25
<b>Surrogates</b>							
5a Androstane	0 *	50-150		%	20		04/07/15 17:25

**Batch Information**

Analytical Batch: XFC11778  
Analytical Method: AK102  
Analyst: KJO  
Analytical Date/Time: 04/07/15 17:25  
Container ID: 1151155001-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.3 g  
Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	566	88.2	27.4	mg/Kg	4		04/06/15 21:41
<b>Surrogates</b>							
n-Triacontane-d62	103	50-150		%	4		04/06/15 21:41

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK103  
Analyst: KJO  
Analytical Date/Time: 04/06/15 21:41  
Container ID: 1151155001-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.3 g  
Prep Extract Vol: 1 mL



**Results of CZ-01**

Client Sample ID: **CZ-01**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155001  
Lab Project ID: 1151155

Collection Date: 03/24/15 16:40  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):89.8  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	18.7	2.80	0.840	mg/Kg	1		04/02/15 19:32
<b>Surrogates</b>							
4-Bromofluorobenzene	142	50-150		%	1		04/02/15 19:32

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: AK101  
Analyst: CRD  
Analytical Date/Time: 04/02/15 19:32  
Container ID: 1151155001-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/24/15 16:40  
Prep Initial Wt./Vol.: 62.449 g  
Prep Extract Vol: 31.3851 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	7.00 U	14.0	4.48	ug/Kg	1		04/02/15 19:32
Ethylbenzene	14.0 U	28.0	8.73	ug/Kg	1		04/02/15 19:32
o-Xylene	176	28.0	8.73	ug/Kg	1		04/02/15 19:32
P & M -Xylene	131	56.0	16.8	ug/Kg	1		04/02/15 19:32
Toluene	33.0	28.0	8.73	ug/Kg	1		04/02/15 19:32
<b>Surrogates</b>							
1,4-Difluorobenzene	104	72-119		%	1		04/02/15 19:32

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: SW8021B  
Analyst: CRD  
Analytical Date/Time: 04/02/15 19:32  
Container ID: 1151155001-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/24/15 16:40  
Prep Initial Wt./Vol.: 62.449 g  
Prep Extract Vol: 31.3851 mL



**Results of CZ-02**

Client Sample ID: **CZ-02**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155002  
Lab Project ID: 1151155

Collection Date: 03/24/15 17:15  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):91.0  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	12000	437	136	mg/Kg	20		04/07/15 17:35
<b>Surrogates</b>							
5a Androstane	0 *	50-150		%	20		04/07/15 17:35

**Batch Information**

Analytical Batch: XFC11778  
Analytical Method: AK102  
Analyst: KJO  
Analytical Date/Time: 04/07/15 17:35  
Container ID: 1151155002-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.153 g  
Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	469	87.5	27.1	mg/Kg	4		04/06/15 21:51
<b>Surrogates</b>							
n-Triacontane-d62	98.6	50-150		%	4		04/06/15 21:51

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK103  
Analyst: KJO  
Analytical Date/Time: 04/06/15 21:51  
Container ID: 1151155002-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.153 g  
Prep Extract Vol: 1 mL



**Results of CZ-02**

Client Sample ID: **CZ-02**  
 Client Project ID: **Marine View Bldg**  
 Lab Sample ID: 1151155002  
 Lab Project ID: 1151155

Collection Date: 03/24/15 17:15  
 Received Date: 03/30/15 09:55  
 Matrix: Soil/Solid (dry weight)  
 Solids (%):91.0  
 Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	36.8	2.84	0.852	mg/Kg	1		04/02/15 19:51
<b>Surrogates</b>							
4-Bromofluorobenzene	182 *	50-150		%	1		04/02/15 19:51

**Batch Information**

Analytical Batch: VFC12336  
 Analytical Method: AK101  
 Analyst: CRD  
 Analytical Date/Time: 04/02/15 19:51  
 Container ID: 1151155002-B

Prep Batch: VXX27074  
 Prep Method: SW5035A  
 Prep Date/Time: 03/24/15 17:15  
 Prep Initial Wt./Vol.: 58.549 g  
 Prep Extract Vol: 30.2695 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	7.10 U	14.2	4.55	ug/Kg	1		04/02/15 19:51
Ethylbenzene	33.2	28.4	8.86	ug/Kg	1		04/02/15 19:51
o-Xylene	222	28.4	8.86	ug/Kg	1		04/02/15 19:51
P & M -Xylene	223	56.8	17.0	ug/Kg	1		04/02/15 19:51
Toluene	26.1 J	28.4	8.86	ug/Kg	1		04/02/15 19:51
<b>Surrogates</b>							
1,4-Difluorobenzene	95.6	72-119		%	1		04/02/15 19:51

**Batch Information**

Analytical Batch: VFC12336  
 Analytical Method: SW8021B  
 Analyst: CRD  
 Analytical Date/Time: 04/02/15 19:51  
 Container ID: 1151155002-B

Prep Batch: VXX27074  
 Prep Method: SW5035A  
 Prep Date/Time: 03/24/15 17:15  
 Prep Initial Wt./Vol.: 58.549 g  
 Prep Extract Vol: 30.2695 mL



**Results of CZ-03**

Client Sample ID: **CZ-03**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155003  
Lab Project ID: 1151155

Collection Date: 03/24/15 19:40  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):92.4  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	197	85.3	26.4	mg/Kg	4		04/06/15 22:01
<b>Surrogates</b>							
5a Androstane	82.7	50-150		%	4		04/06/15 22:01

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK102  
Analyst: KJO  
Analytical Date/Time: 04/06/15 22:01  
Container ID: 1151155003-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.457 g  
Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	123	85.3	26.4	mg/Kg	4		04/06/15 22:01
<b>Surrogates</b>							
n-Triacontane-d62	107	50-150		%	4		04/06/15 22:01

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK103  
Analyst: KJO  
Analytical Date/Time: 04/06/15 22:01  
Container ID: 1151155003-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.457 g  
Prep Extract Vol: 1 mL



Results of CZ-03

Client Sample ID: CZ-03  
Client Project ID: Marine View Bldg  
Lab Sample ID: 1151155003  
Lab Project ID: 1151155

Collection Date: 03/24/15 19:40  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):92.4  
Location:

Results by Volatile Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	2.16 J	3.30	0.989	mg/Kg	1		04/02/15 20:10
<b>Surrogates</b>							
4-Bromofluorobenzene	86.4	50-150		%	1		04/02/15 20:10

Batch Information

Analytical Batch: VFC12336  
Analytical Method: AK101  
Analyst: CRD  
Analytical Date/Time: 04/02/15 20:10  
Container ID: 1151155003-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/24/15 19:40  
Prep Initial Wt./Vol.: 46.834 g  
Prep Extract Vol: 28.5456 mL

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	8.25 U	16.5	5.28	ug/Kg	1		04/02/15 20:10
Ethylbenzene	16.5 U	33.0	10.3	ug/Kg	1		04/02/15 20:10
o-Xylene	16.5 U	33.0	10.3	ug/Kg	1		04/02/15 20:10
P & M -Xylene	33.0 U	65.9	19.8	ug/Kg	1		04/02/15 20:10
Toluene	17.5 J	33.0	10.3	ug/Kg	1		04/02/15 20:10
<b>Surrogates</b>							
1,4-Difluorobenzene	103	72-119		%	1		04/02/15 20:10

Batch Information

Analytical Batch: VFC12336  
Analytical Method: SW8021B  
Analyst: CRD  
Analytical Date/Time: 04/02/15 20:10  
Container ID: 1151155003-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/24/15 19:40  
Prep Initial Wt./Vol.: 46.834 g  
Prep Extract Vol: 28.5456 mL



**Results of CZ-04**

Client Sample ID: **CZ-04**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155004  
Lab Project ID: 1151155

Collection Date: 03/25/15 19:45  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):92.8  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	158	21.4	6.65	mg/Kg	1		04/06/15 22:11
<b>Surrogates</b>							
5a Androstane	84.3	50-150		%	1		04/06/15 22:11

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK102  
Analyst: KJO  
Analytical Date/Time: 04/06/15 22:11  
Container ID: 1151155004-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.147 g  
Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	62.5	21.4	6.65	mg/Kg	1		04/06/15 22:11
<b>Surrogates</b>							
n-Triacontane-d62	100	50-150		%	1		04/06/15 22:11

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK103  
Analyst: KJO  
Analytical Date/Time: 04/06/15 22:11  
Container ID: 1151155004-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.147 g  
Prep Extract Vol: 1 mL



**Results of CZ-04**

Client Sample ID: **CZ-04**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155004  
Lab Project ID: 1151155

Collection Date: 03/25/15 19:45  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):92.8  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.47 U	2.93	0.878	mg/Kg	1		04/02/15 21:07
<b>Surrogates</b>							
4-Bromofluorobenzene	84.3	50-150		%	1		04/02/15 21:07

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: AK101  
Analyst: CRD  
Analytical Date/Time: 04/02/15 21:07  
Container ID: 1151155004-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/25/15 19:45  
Prep Initial Wt./Vol.: 53.049 g  
Prep Extract Vol: 28.8122 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	7.30 U	14.6	4.68	ug/Kg	1		04/02/15 21:07
Ethylbenzene	14.7 U	29.3	9.13	ug/Kg	1		04/02/15 21:07
o-Xylene	14.7 U	29.3	9.13	ug/Kg	1		04/02/15 21:07
P & M -Xylene	29.3 U	58.5	17.6	ug/Kg	1		04/02/15 21:07
Toluene	22.8 J	29.3	9.13	ug/Kg	1		04/02/15 21:07
<b>Surrogates</b>							
1,4-Difluorobenzene	106	72-119		%	1		04/02/15 21:07

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: SW8021B  
Analyst: CRD  
Analytical Date/Time: 04/02/15 21:07  
Container ID: 1151155004-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/25/15 19:45  
Prep Initial Wt./Vol.: 53.049 g  
Prep Extract Vol: 28.8122 mL



**Results of CZ-05**

Client Sample ID: **CZ-05**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155005  
Lab Project ID: 1151155

Collection Date: 03/25/15 19:52  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):91.3  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	1010	86.9	26.9	mg/Kg	4		04/06/15 22:21
<b>Surrogates</b>							
5a Androstane	108	50-150		%	4		04/06/15 22:21

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK102  
Analyst: KJO  
Analytical Date/Time: 04/06/15 22:21  
Container ID: 1151155005-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.245 g  
Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	151	86.9	26.9	mg/Kg	4		04/06/15 22:21
<b>Surrogates</b>							
n-Triacontane-d62	103	50-150		%	4		04/06/15 22:21

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK103  
Analyst: KJO  
Analytical Date/Time: 04/06/15 22:21  
Container ID: 1151155005-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.245 g  
Prep Extract Vol: 1 mL



**Results of CZ-05**

Client Sample ID: **CZ-05**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155005  
Lab Project ID: 1151155

Collection Date: 03/25/15 19:52  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):91.3  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.13 J	2.52	0.756	mg/Kg	1		04/02/15 21:26
<b>Surrogates</b>							
4-Bromofluorobenzene	86	50-150		%	1		04/02/15 21:26

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: AK101  
Analyst: CRD  
Analytical Date/Time: 04/02/15 21:26  
Container ID: 1151155005-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/25/15 19:52  
Prep Initial Wt./Vol.: 66.989 g  
Prep Extract Vol: 30.8164 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	6.30 U	12.6	4.03	ug/Kg	1		04/02/15 21:26
Ethylbenzene	12.6 U	25.2	7.86	ug/Kg	1		04/02/15 21:26
o-Xylene	12.6 U	25.2	7.86	ug/Kg	1		04/02/15 21:26
P & M -Xylene	25.2 U	50.4	15.1	ug/Kg	1		04/02/15 21:26
Toluene	12.8 J	25.2	7.86	ug/Kg	1		04/02/15 21:26
<b>Surrogates</b>							
1,4-Difluorobenzene	106	72-119		%	1		04/02/15 21:26

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: SW8021B  
Analyst: CRD  
Analytical Date/Time: 04/02/15 21:26  
Container ID: 1151155005-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/25/15 19:52  
Prep Initial Wt./Vol.: 66.989 g  
Prep Extract Vol: 30.8164 mL



**Results of CZ-06**

Client Sample ID: **CZ-06**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155006  
Lab Project ID: 1151155

Collection Date: 03/25/15 19:55  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):93.5  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	6080	423	131	mg/Kg	20		04/07/15 17:45
<b>Surrogates</b>							
5a Androstane	0 *	50-150		%	20		04/07/15 17:45

**Batch Information**

Analytical Batch: XFC11778  
Analytical Method: AK102  
Analyst: KJO  
Analytical Date/Time: 04/07/15 17:45  
Container ID: 1151155006-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.353 g  
Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	239	21.1	6.55	mg/Kg	1		04/06/15 22:30
<b>Surrogates</b>							
n-Triacontane-d62	113	50-150		%	1		04/06/15 22:30

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK103  
Analyst: KJO  
Analytical Date/Time: 04/06/15 22:30  
Container ID: 1151155006-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.353 g  
Prep Extract Vol: 1 mL



**Results of CZ-06**

Client Sample ID: **CZ-06**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155006  
Lab Project ID: 1151155

Collection Date: 03/25/15 19:55  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):93.5  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	23.2	2.91	0.874	mg/Kg	1		04/02/15 21:45
<b>Surrogates</b>							
4-Bromofluorobenzene	135	50-150		%	1		04/02/15 21:45

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: AK101  
Analyst: CRD  
Analytical Date/Time: 04/02/15 21:45  
Container ID: 1151155006-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/25/15 19:55  
Prep Initial Wt./Vol.: 52.131 g  
Prep Extract Vol: 28.3945 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	7.30 U	14.6	4.66	ug/Kg	1		04/02/15 21:45
Ethylbenzene	17.5 J	29.1	9.09	ug/Kg	1		04/02/15 21:45
o-Xylene	396	29.1	9.09	ug/Kg	1		04/02/15 21:45
P & M -Xylene	81.9	58.3	17.5	ug/Kg	1		04/02/15 21:45
Toluene	18.1 J	29.1	9.09	ug/Kg	1		04/02/15 21:45
<b>Surrogates</b>							
1,4-Difluorobenzene	104	72-119		%	1		04/02/15 21:45

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: SW8021B  
Analyst: CRD  
Analytical Date/Time: 04/02/15 21:45  
Container ID: 1151155006-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/25/15 19:55  
Prep Initial Wt./Vol.: 52.131 g  
Prep Extract Vol: 28.3945 mL



**Results of CZ-07**

Client Sample ID: **CZ-07**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155007  
Lab Project ID: 1151155

Collection Date: 03/25/15 20:00  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):90.9  
Location:

**Results by Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	857		110	32.9	ug/Kg	20		04/09/15 12:06
2-Methylnaphthalene	327		110	32.9	ug/Kg	20		04/09/15 12:06
Acenaphthene	623		110	32.9	ug/Kg	20		04/09/15 12:06
Acenaphthylene	67.5	J	110	32.9	ug/Kg	20		04/09/15 12:06
Anthracene	414		110	32.9	ug/Kg	20		04/09/15 12:06
Benzo(a)Anthracene	241		110	32.9	ug/Kg	20		04/09/15 12:06
Benzo[a]pyrene	559		110	32.9	ug/Kg	20		04/09/15 12:06
Benzo[b]Fluoranthene	1080		110	32.9	ug/Kg	20		04/09/15 12:06
Benzo[g,h,i]perylene	667		110	32.9	ug/Kg	20		04/09/15 12:06
Benzo[k]fluoranthene	55.0	U	110	32.9	ug/Kg	20		04/09/15 12:06
Chrysene	558		110	32.9	ug/Kg	20		04/09/15 12:06
Dibenzo[a,h]anthracene	163		110	32.9	ug/Kg	20		04/09/15 12:06
Fluoranthene	159		110	32.9	ug/Kg	20		04/09/15 12:06
Fluorene	445		110	32.9	ug/Kg	20		04/09/15 12:06
Indeno[1,2,3-c,d] pyrene	532		110	32.9	ug/Kg	20		04/09/15 12:06
Naphthalene	451		110	32.9	ug/Kg	20		04/09/15 12:06
Phenanthrene	713		110	32.9	ug/Kg	20		04/09/15 12:06
Pyrene	487		110	32.9	ug/Kg	20		04/09/15 12:06
<b>Surrogates</b>								
2-Fluorobiphenyl	556	*	45-105		%	20		04/09/15 12:06
Terphenyl-d14	142	*	30-125		%	20		04/09/15 12:06

**Batch Information**

Analytical Batch: XMS8600  
Analytical Method: 8270D SIMS (PAH)  
Analyst: SP  
Analytical Date/Time: 04/09/15 12:06  
Container ID: 1151155007-A

Prep Batch: XXX32865  
Prep Method: SW3550C  
Prep Date/Time: 04/07/15 12:45  
Prep Initial Wt./Vol.: 22.577 g  
Prep Extract Vol: 1 mL



**Results of CZ-07**

Client Sample ID: **CZ-07**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155007  
Lab Project ID: 1151155

Collection Date: 03/25/15 20:00  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):90.9  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	7790	437	135	mg/Kg	20		04/07/15 17:55
<b>Surrogates</b>							
5a Androstane	0 *	50-150		%	20		04/07/15 17:55

**Batch Information**

Analytical Batch: XFC11778  
Analytical Method: AK102  
Analyst: KJO  
Analytical Date/Time: 04/07/15 17:55  
Container ID: 1151155007-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.208 g  
Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	510	87.4	27.1	mg/Kg	4		04/06/15 22:40
<b>Surrogates</b>							
n-Triacontane-d62	111	50-150		%	4		04/06/15 22:40

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK103  
Analyst: KJO  
Analytical Date/Time: 04/06/15 22:40  
Container ID: 1151155007-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.208 g  
Prep Extract Vol: 1 mL



Results of CZ-07

Client Sample ID: CZ-07  
Client Project ID: Marine View Bldg  
Lab Sample ID: 1151155007  
Lab Project ID: 1151155

Collection Date: 03/25/15 20:00  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):90.9  
Location:

Results by Volatile Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	43.2	3.40	1.02	mg/Kg	1		04/02/15 22:04
<b>Surrogates</b>							
4-Bromofluorobenzene	190 *	50-150		%	1		04/02/15 22:04

Batch Information

Analytical Batch: VFC12336  
Analytical Method: AK101  
Analyst: CRD  
Analytical Date/Time: 04/02/15 22:04  
Container ID: 1151155007-C

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/25/15 20:00  
Prep Initial Wt./Vol.: 47.334 g  
Prep Extract Vol: 29.2981 mL

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	8.50 U	17.0	5.45	ug/Kg	1		04/02/15 22:04
Ethylbenzene	46.3	34.0	10.6	ug/Kg	1		04/02/15 22:04
o-Xylene	935	34.0	10.6	ug/Kg	1		04/02/15 22:04
P & M -Xylene	269	68.1	20.4	ug/Kg	1		04/02/15 22:04
Toluene	23.5 J	34.0	10.6	ug/Kg	1		04/02/15 22:04
<b>Surrogates</b>							
1,4-Difluorobenzene	102	72-119		%	1		04/02/15 22:04

Batch Information

Analytical Batch: VFC12336  
Analytical Method: SW8021B  
Analyst: CRD  
Analytical Date/Time: 04/02/15 22:04  
Container ID: 1151155007-C

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/25/15 20:00  
Prep Initial Wt./Vol.: 47.334 g  
Prep Extract Vol: 29.2981 mL



Results of CZ-08

Client Sample ID: CZ-08  
Client Project ID: Marine View Bldg  
Lab Sample ID: 1151155008  
Lab Project ID: 1151155

Collection Date: 03/25/15 20:02  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):90.7  
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	4970	435	135	mg/Kg	20		04/07/15 18:05
<b>Surrogates</b>							
5a Androstane	0 *	50-150		%	20		04/07/15 18:05

Batch Information

Analytical Batch: XFC11778  
Analytical Method: AK102  
Analyst: KJO  
Analytical Date/Time: 04/07/15 18:05  
Container ID: 1151155008-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.434 g  
Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	329	86.9	26.9	mg/Kg	4		04/06/15 22:50
<b>Surrogates</b>							
n-Triacontane-d62	109	50-150		%	4		04/06/15 22:50

Batch Information

Analytical Batch: XFC11777  
Analytical Method: AK103  
Analyst: KJO  
Analytical Date/Time: 04/06/15 22:50  
Container ID: 1151155008-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.434 g  
Prep Extract Vol: 1 mL



Results of CZ-08

Client Sample ID: CZ-08
Client Project ID: Marine View Bldg
Lab Sample ID: 1151155008
Lab Project ID: 1151155

Collection Date: 03/25/15 20:02
Received Date: 03/30/15 09:55
Matrix: Soil/Solid (dry weight)
Solids (%):90.7
Location:

Results by Volatile Fuels

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Gasoline Range Organics and 4-Bromofluorobenzene.

Batch Information

Analytical Batch: VFC12336
Analytical Method: AK101
Analyst: CRD
Analytical Date/Time: 04/02/15 22:23
Container ID: 1151155008-B

Prep Batch: VXX27074
Prep Method: SW5035A
Prep Date/Time: 03/25/15 20:02
Prep Initial Wt./Vol.: 48.795 g
Prep Extract Vol: 29.5255 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Benzene, Ethylbenzene, o-Xylene, P & M -Xylene, Toluene, and 1,4-Difluorobenzene.

Batch Information

Analytical Batch: VFC12336
Analytical Method: SW8021B
Analyst: CRD
Analytical Date/Time: 04/02/15 22:23
Container ID: 1151155008-B

Prep Batch: VXX27074
Prep Method: SW5035A
Prep Date/Time: 03/25/15 20:02
Prep Initial Wt./Vol.: 48.795 g
Prep Extract Vol: 29.5255 mL



**Results of CZ-09**

Client Sample ID: CZ-09  
Client Project ID: Marine View Bldg  
Lab Sample ID: 1151155009  
Lab Project ID: 1151155

Collection Date: 03/26/15 10:30  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):92.4  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	259	21.3	6.61	mg/Kg	1		04/06/15 23:00
<b>Surrogates</b>							
5a Androstane	96.7	50-150		%	1		04/06/15 23:00

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK102  
Analyst: KJO  
Analytical Date/Time: 04/06/15 23:00  
Container ID: 1151155009-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.428 g  
Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	103	21.3	6.61	mg/Kg	1		04/06/15 23:00
<b>Surrogates</b>							
n-Triacontane-d62	106	50-150		%	1		04/06/15 23:00

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK103  
Analyst: KJO  
Analytical Date/Time: 04/06/15 23:00  
Container ID: 1151155009-A

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 10:56  
Prep Initial Wt./Vol.: 30.428 g  
Prep Extract Vol: 1 mL



Results of CZ-09

Client Sample ID: CZ-09  
Client Project ID: Marine View Bldg  
Lab Sample ID: 1151155009  
Lab Project ID: 1151155

Collection Date: 03/26/15 10:30  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):92.4  
Location:

Results by Volatile Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	2.06 J	2.94	0.881	mg/Kg	1		04/02/15 22:42
<b>Surrogates</b>							
4-Bromofluorobenzene	85	50-150		%	1		04/02/15 22:42

Batch Information

Analytical Batch: VFC12336  
Analytical Method: AK101  
Analyst: CRD  
Analytical Date/Time: 04/02/15 22:42  
Container ID: 1151155009-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/26/15 10:30  
Prep Initial Wt./Vol.: 53.466 g  
Prep Extract Vol: 29.043 mL

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	7.35 U	14.7	4.70	ug/Kg	1		04/02/15 22:42
Ethylbenzene	14.7 U	29.4	9.17	ug/Kg	1		04/02/15 22:42
o-Xylene	32.6	29.4	9.17	ug/Kg	1		04/02/15 22:42
P & M -Xylene	29.4 U	58.8	17.6	ug/Kg	1		04/02/15 22:42
Toluene	70.8	29.4	9.17	ug/Kg	1		04/02/15 22:42
<b>Surrogates</b>							
1,4-Difluorobenzene	105	72-119		%	1		04/02/15 22:42

Batch Information

Analytical Batch: VFC12336  
Analytical Method: SW8021B  
Analyst: CRD  
Analytical Date/Time: 04/02/15 22:42  
Container ID: 1151155009-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/26/15 10:30  
Prep Initial Wt./Vol.: 53.466 g  
Prep Extract Vol: 29.043 mL



Results of CZ-10

Client Sample ID: CZ-10  
Client Project ID: Marine View Bldg  
Lab Sample ID: 1151155010  
Lab Project ID: 1151155

Collection Date: 03/26/15 10:48  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):92.7  
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	7500	427	132	mg/Kg	20		04/07/15 18:15
<b>Surrogates</b>							
5a Androstane	0 *	50-150		%	20		04/07/15 18:15

Batch Information

Analytical Batch: XFC11778  
Analytical Method: AK102  
Analyst: KJO  
Analytical Date/Time: 04/07/15 18:15  
Container ID: 1151155010-A

Prep Batch: XXX32858  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 12:00  
Prep Initial Wt./Vol.: 30.297 g  
Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	255	21.4	6.62	mg/Kg	1		04/07/15 00:09
<b>Surrogates</b>							
n-Triacontane-d62	116	50-150		%	1		04/07/15 00:09

Batch Information

Analytical Batch: XFC11777  
Analytical Method: AK103  
Analyst: KJO  
Analytical Date/Time: 04/07/15 00:09  
Container ID: 1151155010-A

Prep Batch: XXX32858  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 12:00  
Prep Initial Wt./Vol.: 30.297 g  
Prep Extract Vol: 1 mL



**Results of CZ-10**

Client Sample ID: **CZ-10**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155010  
Lab Project ID: 1151155

Collection Date: 03/26/15 10:48  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):92.7  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	37.3	2.05	0.615	mg/Kg	1		04/02/15 23:01
<b>Surrogates</b>							
4-Bromofluorobenzene	308 *	50-150		%	1		04/02/15 23:01

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: AK101  
Analyst: CRD  
Analytical Date/Time: 04/02/15 23:01  
Container ID: 1151155010-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/26/15 10:48  
Prep Initial Wt./Vol.: 81.407 g  
Prep Extract Vol: 30.9411 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	5.15 U	10.3	3.28	ug/Kg	1		04/02/15 23:01
Ethylbenzene	45.9	20.5	6.40	ug/Kg	1		04/02/15 23:01
o-Xylene	530	20.5	6.40	ug/Kg	1		04/02/15 23:01
P & M -Xylene	538	41.0	12.3	ug/Kg	1		04/02/15 23:01
Toluene	33.8	20.5	6.40	ug/Kg	1		04/02/15 23:01
<b>Surrogates</b>							
1,4-Difluorobenzene	105	72-119		%	1		04/02/15 23:01

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: SW8021B  
Analyst: CRD  
Analytical Date/Time: 04/02/15 23:01  
Container ID: 1151155010-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/26/15 10:48  
Prep Initial Wt./Vol.: 81.407 g  
Prep Extract Vol: 30.9411 mL



Results of CZ-11

Client Sample ID: CZ-11
Client Project ID: Marine View Bldg
Lab Sample ID: 1151155011
Lab Project ID: 1151155

Collection Date: 03/26/15 10:50
Received Date: 03/30/15 09:55
Matrix: Soil/Solid (dry weight)
Solids (%):92.5
Location:

Results by Polynuclear Aromatics GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various PAHs and Surrogates with their respective values and limits.

Batch Information

Analytical Batch: XMS8600
Analytical Method: 8270D SIMS (PAH)
Analyst: SP
Analytical Date/Time: 04/09/15 11:50
Container ID: 1151155011-A

Prep Batch: XXX32865
Prep Method: SW3550C
Prep Date/Time: 04/07/15 12:45
Prep Initial Wt./Vol.: 22.8 g
Prep Extract Vol: 1 mL

Analytical Batch: XMS8602
Analytical Method: 8270D SIMS (PAH)
Analyst: SP
Analytical Date/Time: 04/13/15 14:27
Container ID: 1151155011-A

Prep Batch: XXX32865
Prep Method: SW3550C
Prep Date/Time: 04/07/15 12:45
Prep Initial Wt./Vol.: 22.8 g
Prep Extract Vol: 1 mL



Results of CZ-11

Client Sample ID: CZ-11  
Client Project ID: Marine View Bldg  
Lab Sample ID: 1151155011  
Lab Project ID: 1151155

Collection Date: 03/26/15 10:50  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):92.5  
Location:

Results by Semivolatile Organic Fuels

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	7410		429	133	mg/Kg	20		04/07/15 18:25
<b>Surrogates</b>								
5a Androstane	0	*	50-150		%	20		04/07/15 18:25

Batch Information

Analytical Batch: XFC11778  
Analytical Method: AK102  
Analyst: KJO  
Analytical Date/Time: 04/07/15 18:25  
Container ID: 1151155011-A

Prep Batch: XXX32858  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 12:00  
Prep Initial Wt./Vol.: 30.234 g  
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	268		21.4	6.65	mg/Kg	1		04/07/15 00:19
<b>Surrogates</b>								
n-Triacontane-d62	128		50-150		%	1		04/07/15 00:19

Batch Information

Analytical Batch: XFC11777  
Analytical Method: AK103  
Analyst: KJO  
Analytical Date/Time: 04/07/15 00:19  
Container ID: 1151155011-A

Prep Batch: XXX32858  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 12:00  
Prep Initial Wt./Vol.: 30.234 g  
Prep Extract Vol: 1 mL



**Results of CZ-11**

Client Sample ID: **CZ-11**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155011  
Lab Project ID: 1151155

Collection Date: 03/26/15 10:50  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):92.5  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	57.8	2.35	0.706	mg/Kg	1		04/02/15 23:20
<b>Surrogates</b>							
4-Bromofluorobenzene	399 *	50-150		%	1		04/02/15 23:20

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: AK101  
Analyst: CRD  
Analytical Date/Time: 04/02/15 23:20  
Container ID: 1151155011-C

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/26/15 10:50  
Prep Initial Wt./Vol.: 69.33 g  
Prep Extract Vol: 30.1757 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	5.90 U	11.8	3.76	ug/Kg	1		04/02/15 23:20
Ethylbenzene	83.0	23.5	7.34	ug/Kg	1		04/02/15 23:20
o-Xylene	651	23.5	7.34	ug/Kg	1		04/02/15 23:20
P & M -Xylene	738	47.0	14.1	ug/Kg	1		04/02/15 23:20
Toluene	42.3	23.5	7.34	ug/Kg	1		04/02/15 23:20
<b>Surrogates</b>							
1,4-Difluorobenzene	108	72-119		%	1		04/02/15 23:20

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: SW8021B  
Analyst: CRD  
Analytical Date/Time: 04/02/15 23:20  
Container ID: 1151155011-C

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/26/15 10:50  
Prep Initial Wt./Vol.: 69.33 g  
Prep Extract Vol: 30.1757 mL



**Results of CZ-12**

Client Sample ID: **CZ-12**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155012  
Lab Project ID: 1151155

Collection Date: 03/26/15 12:40  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):92.8  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	1260	85.3	26.5	mg/Kg	4		04/10/15 12:32
<b>Surrogates</b>							
5a Androstane	64.8	50-150		%	4		04/10/15 12:32

**Batch Information**

Analytical Batch: XFC11782  
Analytical Method: AK102  
Analyst: KJO  
Analytical Date/Time: 04/10/15 12:32  
Container ID: 1151155012-A

Prep Batch: XXX32866  
Prep Method: SW3550C  
Prep Date/Time: 04/07/15 16:47  
Prep Initial Wt./Vol.: 30.301 g  
Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	70.7	21.3	6.61	mg/Kg	1		04/09/15 20:54
<b>Surrogates</b>							
n-Triacontane-d62	73.6	50-150		%	1		04/09/15 20:54

**Batch Information**

Analytical Batch: XFC11780  
Analytical Method: AK103  
Analyst: KJO  
Analytical Date/Time: 04/09/15 20:54  
Container ID: 1151155012-A

Prep Batch: XXX32866  
Prep Method: SW3550C  
Prep Date/Time: 04/07/15 16:47  
Prep Initial Wt./Vol.: 30.301 g  
Prep Extract Vol: 1 mL



**Results of CZ-12**

Client Sample ID: **CZ-12**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155012  
Lab Project ID: 1151155

Collection Date: 03/26/15 12:40  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):92.8  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.69 J	2.23	0.668	mg/Kg	1		04/02/15 23:39
<b>Surrogates</b>							
4-Bromofluorobenzene	89.1	50-150		%	1		04/02/15 23:39

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: AK101  
Analyst: CRD  
Analytical Date/Time: 04/02/15 23:39  
Container ID: 1151155012-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/26/15 12:40  
Prep Initial Wt./Vol.: 73.227 g  
Prep Extract Vol: 30.2712 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	5.55 U	11.1	3.56	ug/Kg	1		04/02/15 23:39
Ethylbenzene	11.2 U	22.3	6.95	ug/Kg	1		04/02/15 23:39
o-Xylene	11.2 U	22.3	6.95	ug/Kg	1		04/02/15 23:39
P & M -Xylene	22.3 U	44.5	13.4	ug/Kg	1		04/02/15 23:39
Toluene	20.0 J	22.3	6.95	ug/Kg	1		04/02/15 23:39
<b>Surrogates</b>							
1,4-Difluorobenzene	106	72-119		%	1		04/02/15 23:39

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: SW8021B  
Analyst: CRD  
Analytical Date/Time: 04/02/15 23:39  
Container ID: 1151155012-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/26/15 12:40  
Prep Initial Wt./Vol.: 73.227 g  
Prep Extract Vol: 30.2712 mL



**Results of CZ-13**

Client Sample ID: **CZ-13**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155013  
Lab Project ID: 1151155

Collection Date: 03/26/15 12:56  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):92.1  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	221	21.6	6.71	mg/Kg	1		04/07/15 00:29
<b>Surrogates</b>							
5a Androstane	89.5	50-150		%	1		04/07/15 00:29

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK102  
Analyst: KJO  
Analytical Date/Time: 04/07/15 00:29  
Container ID: 1151155013-A

Prep Batch: XXX32858  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 12:00  
Prep Initial Wt./Vol.: 30.12 g  
Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	173	21.6	6.71	mg/Kg	1		04/07/15 00:29
<b>Surrogates</b>							
n-Triacontane-d62	126	50-150		%	1		04/07/15 00:29

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK103  
Analyst: KJO  
Analytical Date/Time: 04/07/15 00:29  
Container ID: 1151155013-A

Prep Batch: XXX32858  
Prep Method: SW3550C  
Prep Date/Time: 04/06/15 12:00  
Prep Initial Wt./Vol.: 30.12 g  
Prep Extract Vol: 1 mL



Results of CZ-13

Client Sample ID: CZ-13  
Client Project ID: Marine View Bldg  
Lab Sample ID: 1151155013  
Lab Project ID: 1151155

Collection Date: 03/26/15 12:56  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):92.1  
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.706 J	1.96	0.589	mg/Kg	1		04/02/15 23:58
<b>Surrogates</b>							
4-Bromofluorobenzene	93.7	50-150		%	1		04/02/15 23:58

Batch Information

Analytical Batch: VFC12336  
Analytical Method: AK101  
Analyst: CRD  
Analytical Date/Time: 04/02/15 23:58  
Container ID: 1151155013-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/26/15 12:56  
Prep Initial Wt./Vol.: 88.436 g  
Prep Extract Vol: 32.0026 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	4.91 U	9.82	3.14	ug/Kg	1		04/02/15 23:58
Ethylbenzene	9.80 U	19.6	6.13	ug/Kg	1		04/02/15 23:58
o-Xylene	9.80 U	19.6	6.13	ug/Kg	1		04/02/15 23:58
P & M -Xylene	19.6 U	39.3	11.8	ug/Kg	1		04/02/15 23:58
Toluene	11.2 J	19.6	6.13	ug/Kg	1		04/02/15 23:58
<b>Surrogates</b>							
1,4-Difluorobenzene	105	72-119		%	1		04/02/15 23:58

Batch Information

Analytical Batch: VFC12336  
Analytical Method: SW8021B  
Analyst: CRD  
Analytical Date/Time: 04/02/15 23:58  
Container ID: 1151155013-B

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/26/15 12:56  
Prep Initial Wt./Vol.: 88.436 g  
Prep Extract Vol: 32.0026 mL



**Results of Trip Blank**

Client Sample ID: **Trip Blank**  
Client Project ID: **Marine View Bldg**  
Lab Sample ID: 1151155014  
Lab Project ID: 1151155

Collection Date: 03/24/15 16:40  
Received Date: 03/30/15 09:55  
Matrix: Soil/Solid (dry weight)  
Solids (%):  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	1.30 J	2.56	0.769	mg/Kg	1		04/02/15 19:13
<b>Surrogates</b>							
4-Bromofluorobenzene	90.8	50-150		%	1		04/02/15 19:13

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: AK101  
Analyst: CRD  
Analytical Date/Time: 04/02/15 19:13  
Container ID: 1151155014-A

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/24/15 16:40  
Prep Initial Wt./Vol.: 48.792 g  
Prep Extract Vol: 25 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	6.40 U	12.8	4.10	ug/Kg	1		04/02/15 19:13
Ethylbenzene	12.8 U	25.6	7.99	ug/Kg	1		04/02/15 19:13
o-Xylene	12.8 U	25.6	7.99	ug/Kg	1		04/02/15 19:13
P & M -Xylene	25.6 U	51.2	15.4	ug/Kg	1		04/02/15 19:13
Toluene	12.8 U	25.6	7.99	ug/Kg	1		04/02/15 19:13
<b>Surrogates</b>							
1,4-Difluorobenzene	105	72-119		%	1		04/02/15 19:13

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: SW8021B  
Analyst: CRD  
Analytical Date/Time: 04/02/15 19:13  
Container ID: 1151155014-A

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 03/24/15 16:40  
Prep Initial Wt./Vol.: 48.792 g  
Prep Extract Vol: 25 mL



**Method Blank**

Blank ID: MB for HBN 1706258 [SPT/9559]  
Blank Lab ID: 1258781

Matrix: Soil/Solid (dry weight)

QC for Samples:

1151155001, 1151155002, 1151155003, 1151155004, 1151155005, 1151155006, 1151155007, 1151155008, 1151155009,  
1151155010, 1151155011, 1151155012, 1151155013

**Results by SM21 2540G**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Solids	100			%

**Batch Information**

Analytical Batch: SPT9559  
Analytical Method: SM21 2540G  
Instrument:  
Analyst: A.K  
Analytical Date/Time: 4/2/2015 6:26:00PM

Print Date: 04/14/2015 8:42:07AM



### Duplicate Sample Summary

Original Sample ID: 1151155001  
Duplicate Sample ID: 1258782

Analysis Date: 04/02/2015 18:26  
Matrix: Soil/Solid (dry weight)

QC for Samples:

1151155001, 1151155002, 1151155003, 1151155004, 1151155005, 1151155006, 1151155007, 1151155008,  
1151155009, 1151155010, 1151155011, 1151155012, 1151155013

### Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	89.8	89.5	%	0.30	(< 15 )

### Batch Information

Analytical Batch: SPT9559  
Analytical Method: SM21 2540G  
Instrument:  
Analyst: A.K

Print Date: 04/14/2015 8:42:09AM

SGS North America Inc.

200 West Potter Drive Anchorage, AK 95518  
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**Method Blank**

Blank ID: MB for HBN 1706260 [VXX/27074]  
Blank Lab ID: 1258788

Matrix: Soil/Solid (dry weight)

QC for Samples:

1151155001, 1151155002, 1151155003, 1151155004, 1151155005, 1151155006, 1151155007, 1151155008, 1151155009,  
1151155010, 1151155011, 1151155012, 1151155013, 1151155014

**Results by AK101**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	0.788J	2.50	0.750	mg/Kg
<b>Surrogates</b>				
4-Bromofluorobenzene	88.6	50-150		%

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: AK101  
Instrument: Agilent 7890 PID/FID  
Analyst: CRD  
Analytical Date/Time: 4/2/2015 2:05:00PM

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 4/2/2015 8:00:00AM  
Prep Initial Wt./Vol.: 50 g  
Prep Extract Vol: 25 mL

Print Date: 04/14/2015 8:42:11AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1151155 [VXX27074]  
 Blank Spike Lab ID: 1258791  
 Date Analyzed: 04/02/2015 15:03

Spike Duplicate ID: LCSD for HBN 1151155 [VXX27074]  
 Spike Duplicate Lab ID: 1258792  
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1151155001, 1151155002, 1151155003, 1151155004, 1151155005, 1151155006, 1151155007, 1151155008, 1151155009, 1151155010, 1151155011, 1151155012, 1151155013, 1151155014

## Results by AK101

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	10.0	9.77	98	10.0	9.71	97	( 60-120 )	0.59	(< 20 )
<b>Surrogates</b>									
4-Bromofluorobenzene	1.25	90.8	91	1.25	91.7	92	( 50-150 )	1.00	

## Batch Information

Analytical Batch: VFC12336  
 Analytical Method: AK101  
 Instrument: Agilent 7890 PID/FID  
 Analyst: CRD

Prep Batch: VXX27074  
 Prep Method: SW5035A  
 Prep Date/Time: 04/02/2015 08:00  
 Spike Init Wt./Vol.: 10.0 mg/Kg Extract Vol: 25 mL  
 Dupe Init Wt./Vol.: 10.0 mg/Kg Extract Vol: 25 mL

Print Date: 04/14/2015 8:42:13AM



**Method Blank**

Blank ID: MB for HBN 1706260 [VXX/27074]  
Blank Lab ID: 1258788

Matrix: Soil/Solid (dry weight)

QC for Samples:

1151155001, 1151155002, 1151155003, 1151155004, 1151155005, 1151155006, 1151155007, 1151155008, 1151155009,  
1151155010, 1151155011, 1151155012, 1151155013, 1151155014

**Results by SW8021B**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Benzene	6.25U	12.5	4.00	ug/Kg
Ethylbenzene	12.5U	25.0	7.80	ug/Kg
o-Xylene	12.5U	25.0	7.80	ug/Kg
P & M -Xylene	25.0U	50.0	15.0	ug/Kg
Toluene	12.5U	25.0	7.80	ug/Kg
<b>Surrogates</b>				
1,4-Difluorobenzene	96.9	72-119		%

**Batch Information**

Analytical Batch: VFC12336  
Analytical Method: SW8021B  
Instrument: Agilent 7890 PID/FID  
Analyst: CRD  
Analytical Date/Time: 4/2/2015 2:05:00PM

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 4/2/2015 8:00:00AM  
Prep Initial Wt./Vol.: 50 g  
Prep Extract Vol: 25 mL

Print Date: 04/14/2015 8:42:15AM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1151155 [VXX27074]  
Blank Spike Lab ID: 1258789  
Date Analyzed: 04/02/2015 14:24

Spike Duplicate ID: LCSD for HBN 1151155 [VXX27074]  
Spike Duplicate Lab ID: 1258790  
Matrix: Soil/Solid (dry weight)

QC for Samples: 1151155001, 1151155002, 1151155003, 1151155004, 1151155005, 1151155006, 1151155007, 1151155008, 1151155009, 1151155010, 1151155011, 1151155012, 1151155013, 1151155014

### Results by SW8021B

Parameter	Blank Spike (ug/Kg)			Spike Duplicate (ug/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	1250	1320	106	1250	1370	109	( 75-125 )	3.20	(< 20 )
Ethylbenzene	1250	1250	100	1250	1280	103	( 75-125 )	2.50	(< 20 )
o-Xylene	1250	1230	98	1250	1270	102	( 75-125 )	3.30	(< 20 )
P & M -Xylene	2500	2490	100	2500	2560	102	( 80-125 )	2.80	(< 20 )
Toluene	1250	1280	102	1250	1320	105	( 70-125 )	3.10	(< 20 )

### Surrogates

1,4-Difluorobenzene	1250	101	101	1250	102	102	( 72-119 )	1.80	
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### Batch Information

Analytical Batch: VFC12336  
Analytical Method: SW8021B  
Instrument: Agilent 7890 PID/FID  
Analyst: CRD

Prep Batch: VXX27074  
Prep Method: SW5035A  
Prep Date/Time: 04/02/2015 08:00  
Spike Init Wt./Vol.: 1250 ug/Kg Extract Vol: 25 mL  
Dupe Init Wt./Vol.: 1250 ug/Kg Extract Vol: 25 mL

Print Date: 04/14/2015 8:42:17AM



### Matrix Spike Summary

Original Sample ID: 1157722035  
MS Sample ID: 1258793 MS  
MSD Sample ID: 1258794 MSD

Analysis Date: 04/02/2015 15:42  
Analysis Date: 04/02/2015 16:20  
Analysis Date: 04/02/2015 16:40  
Matrix: Soil/Solid (dry weight)

QC for Samples: 1151155001, 1151155002, 1151155003, 1151155004, 1151155005, 1151155006, 1151155007, 1151155008, 1151155009, 1151155010, 1151155011, 1151155012, 1151155013, 1151155014

### Results by SW8021B

Parameter	Sample	Matrix Spike (ug/Kg)			Spike Duplicate (ug/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	14.4U	2399	2601	109	2399	2530	106	75-125	2.70	(< 20)
Ethylbenzene	29.9J	2399	2458	101	2399	2422	100	75-125	1.30	(< 20)
o-Xylene	79.9	2399	2434	98	2399	2399	97	75-125	1.70	(< 20)
P & M -Xylene	116	4785	4976	102	4785	4881	100	80-125	1.90	(< 20)
Toluene	28.8U	2399	2494	104	2399	2446	102	70-125	1.90	(< 20)
<b>Surrogates</b>										
1,4-Difluorobenzene		2399	2446	102	2399	2387	100	72-119	2.20	

### Batch Information

Analytical Batch: VFC12336  
Analytical Method: SW8021B  
Instrument: Agilent 7890 PID/FID  
Analyst: CRD  
Analytical Date/Time: 4/2/2015 4:20:00PM

Prep Batch: VXX27074  
Prep Method: AK101 Extraction (S)  
Prep Date/Time: 4/2/2015 8:00:00AM  
Prep Initial Wt./Vol.: 31.16g  
Prep Extract Vol: 25.00mL

Print Date: 04/14/2015 8:42:18AM



**Method Blank**

Blank ID: MB for HBN 1706288 [XXX/32856]  
Blank Lab ID: 1258918

Matrix: Soil/Solid (dry weight)

QC for Samples:

1151155001, 1151155002, 1151155003, 1151155004, 1151155005, 1151155006, 1151155007, 1151155008, 1151155009

**Results by AK102**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	7.03J	20.0	6.20	mg/Kg
<b>Surrogates</b>				
5a Androstane	78.2	60-120		%

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK102  
Instrument: HP 6890 Series II FID SV D R  
Analyst: KJO  
Analytical Date/Time: 4/6/2015 7:23:00PM

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 4/6/2015 10:56:06AM  
Prep Initial Wt./Vol.: 30 g  
Prep Extract Vol: 1 mL

Print Date: 04/14/2015 8:42:19AM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1151155 [XXX32856]  
 Blank Spike Lab ID: 1258919  
 Date Analyzed: 04/06/2015 19:32

Spike Duplicate ID: LCSD for HBN 1151155  
 [XXX32856]  
 Spike Duplicate Lab ID: 1258920  
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1151155001, 1151155002, 1151155003, 1151155004, 1151155005, 1151155006, 1151155007,  
 1151155008, 1151155009

### Results by AK102

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	167	124	75	* 167	135	81	( 75-125 )	8.20	(< 20 )
<b>Surrogates</b>									
5a Androstane	3.33	83.4	83	3.33	91.8	92	( 60-120 )	9.70	

### Batch Information

Analytical Batch: XFC11777  
 Analytical Method: AK102  
 Instrument: HP 6890 Series II FID SV D R  
 Analyst: KJO

Prep Batch: XXX32856  
 Prep Method: SW3550C  
 Prep Date/Time: 04/06/2015 10:56  
 Spike Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL  
 Dupe Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL

\* with proper rounding, the % recovery is within QC limits.

Print Date: 04/14/2015 8:42:21AM



**Method Blank**

Blank ID: MB for HBN 1706288 [XXX/32856]  
Blank Lab ID: 1258918

Matrix: Soil/Solid (dry weight)

QC for Samples:

1151155001, 1151155002, 1151155003, 1151155004, 1151155005, 1151155006, 1151155007, 1151155008, 1151155009

**Results by AK103**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Residual Range Organics	9.72J	20.0	6.20	mg/Kg
<b>Surrogates</b>				
n-Triacontane-d62	103	60-120		%

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK103  
Instrument: HP 6890 Series II FID SV D R  
Analyst: KJO  
Analytical Date/Time: 4/6/2015 7:23:00PM

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 4/6/2015 10:56:06AM  
Prep Initial Wt./Vol.: 30 g  
Prep Extract Vol: 1 mL

Print Date: 04/14/2015 8:42:23AM



**Blank Spike Summary**

Blank Spike ID: LCS for HBN 1151155 [XXX32856]  
Blank Spike Lab ID: 1258919  
Date Analyzed: 04/06/2015 19:32

Spike Duplicate ID: LCSD for HBN 1151155 [XXX32856]  
Spike Duplicate Lab ID: 1258920  
Matrix: Soil/Solid (dry weight)

QC for Samples: 1151155001, 1151155002, 1151155003, 1151155004, 1151155005, 1151155006, 1151155007, 1151155008, 1151155009

**Results by AK103**

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Residual Range Organics	167	124	74	167	141	85	( 60-120 )	13.00	(< 20 )
<b>Surrogates</b>									
n-Triacontane-d62	3.33	88.9	89	3.33	97.5	98	( 60-120 )	9.20	

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK103  
Instrument: HP 6890 Series II FID SV D R  
Analyst: KJO

Prep Batch: XXX32856  
Prep Method: SW3550C  
Prep Date/Time: 04/06/2015 10:56  
Spike Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL  
Dupe Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL

Print Date: 04/14/2015 8:42:24AM

## Method Blank

Blank ID: MB for HBN 1706299 [XXX/32858]  
Blank Lab ID: 1258967

Matrix: Soil/Solid (dry weight)

QC for Samples:  
1151155010, 1151155011, 1151155013

## Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	10.0U	20.0	6.20	mg/Kg
<b>Surrogates</b>				
5a Androstane	73.1	60-120		%

## Batch Information

Analytical Batch: XFC11777  
Analytical Method: AK102  
Instrument: HP 6890 Series II FID SV D R  
Analyst: KJO  
Analytical Date/Time: 4/6/2015 11:39:00PM

Prep Batch: XXX32858  
Prep Method: SW3550C  
Prep Date/Time: 4/6/2015 12:00:06PM  
Prep Initial Wt./Vol.: 30 g  
Prep Extract Vol: 1 mL

Print Date: 04/14/2015 8:42:25AM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1151155 [XXX32858]  
Blank Spike Lab ID: 1258968  
Date Analyzed: 04/06/2015 23:49

Spike Duplicate ID: LCSD for HBN 1151155  
[XXX32858]  
Spike Duplicate Lab ID: 1258969  
Matrix: Soil/Solid (dry weight)

QC for Samples: 1151155010, 1151155011, 1151155013

### Results by AK102

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	167	151	91	167	145	87	( 75-125 )	4.10	(< 20 )
<b>Surrogates</b>									
5a Androstane	3.33	103	103	3.33	99.7	100	( 60-120 )	3.60	

### Batch Information

Analytical Batch: **XFC11777**  
Analytical Method: **AK102**  
Instrument: **HP 6890 Series II FID SV D R**  
Analyst: **KJO**

Prep Batch: **XXX32858**  
Prep Method: **SW3550C**  
Prep Date/Time: **04/06/2015 12:00**  
Spike Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL  
Dupe Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL

Print Date: 04/14/2015 8:42:26AM



**Method Blank**

Blank ID: MB for HBN 1706299 [XXX/32858]  
Blank Lab ID: 1258967

Matrix: Soil/Solid (dry weight)

QC for Samples:  
1151155010, 1151155011, 1151155013

**Results by AK103**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Residual Range Organics	6.95J	20.0	6.20	mg/Kg
<b>Surrogates</b>				
n-Triacontane-d62	90.4	60-120		%

**Batch Information**

Analytical Batch: XFC11777  
Analytical Method: AK103  
Instrument: HP 6890 Series II FID SV D R  
Analyst: KJO  
Analytical Date/Time: 4/6/2015 11:39:00PM

Prep Batch: XXX32858  
Prep Method: SW3550C  
Prep Date/Time: 4/6/2015 12:00:06PM  
Prep Initial Wt./Vol.: 30 g  
Prep Extract Vol: 1 mL

Print Date: 04/14/2015 8:42:28AM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1151155 [XXX32858]  
 Blank Spike Lab ID: 1258968  
 Date Analyzed: 04/06/2015 23:49

Spike Duplicate ID: LCSD for HBN 1151155  
 [XXX32858]  
 Spike Duplicate Lab ID: 1258969  
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1151155010, 1151155011, 1151155013

### Results by AK103

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Residual Range Organics	167	149	90	167	148	89	( 60-120 )	0.95	(< 20 )
<b>Surrogates</b>									
n-Triacontane-d62	3.33	110	110	3.33	111	111	( 60-120 )	0.79	

### Batch Information

Analytical Batch: **XFC11777**  
 Analytical Method: **AK103**  
 Instrument: **HP 6890 Series II FID SV D R**  
 Analyst: **KJO**

Prep Batch: **XXX32858**  
 Prep Method: **SW3550C**  
 Prep Date/Time: **04/06/2015 12:00**  
 Spike Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL  
 Dupe Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL

Print Date: 04/14/2015 8:42:30AM



### Method Blank

Blank ID: MB for HBN 1706343 [XXX/32865]

Blank Lab ID: 1259150

QC for Samples:

1151155007, 1151155011

Matrix: Soil/Solid (dry weight)

### Results by 8270D SIMS (PAH)

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
1-Methylnaphthalene	2.50U	5.00	1.50	ug/Kg
2-Methylnaphthalene	2.50U	5.00	1.50	ug/Kg
Acenaphthene	2.50U	5.00	1.50	ug/Kg
Acenaphthylene	2.50U	5.00	1.50	ug/Kg
Anthracene	2.50U	5.00	1.50	ug/Kg
Benzo(a)Anthracene	2.50U	5.00	1.50	ug/Kg
Benzo[a]pyrene	2.50U	5.00	1.50	ug/Kg
Benzo[b]Fluoranthene	2.50U	5.00	1.50	ug/Kg
Benzo[g,h,i]perylene	2.50U	5.00	1.50	ug/Kg
Benzo[k]fluoranthene	2.50U	5.00	1.50	ug/Kg
Chrysene	2.50U	5.00	1.50	ug/Kg
Dibenzo[a,h]anthracene	2.50U	5.00	1.50	ug/Kg
Fluoranthene	2.50U	5.00	1.50	ug/Kg
Fluorene	2.50U	5.00	1.50	ug/Kg
Indeno[1,2,3-c,d] pyrene	2.50U	5.00	1.50	ug/Kg
Naphthalene	2.50U	5.00	1.50	ug/Kg
Phenanthrene	2.50U	5.00	1.50	ug/Kg
Pyrene	2.50U	5.00	1.50	ug/Kg
<b>Surrogates</b>				
2-Fluorobiphenyl	72.9	45-105		%
Terphenyl-d14	98.1	30-125		%

### Batch Information

Analytical Batch: XMS8592

Analytical Method: 8270D SIMS (PAH)

Instrument: HP 6890/5973 MS SVQA

Analyst: SP

Analytical Date/Time: 4/8/2015 9:30:00PM

Prep Batch: XXX32865

Prep Method: SW3550C

Prep Date/Time: 4/7/2015 12:45:33PM

Prep Initial Wt./Vol.: 22.5 g

Prep Extract Vol: 1 mL

Print Date: 04/14/2015 8:42:32AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1151155 [XXX32865]

Blank Spike Lab ID: 1259151

Date Analyzed: 04/08/2015 21:47

Matrix: Soil/Solid (dry weight)

QC for Samples: 1151155007, 1151155011

## Results by 8270D SIMS (PAH)

Parameter	Blank Spike (ug/Kg)			CL
	Spike	Result	Rec (%)	
1-Methylnaphthalene	22.2	15.0	68	( 44-107 )
2-Methylnaphthalene	22.2	13.8	62	( 45-105 )
Acenaphthene	22.2	15.1	68	( 45-110 )
Acenaphthylene	22.2	14.9	67	( 45-105 )
Anthracene	22.2	15.4	69	( 55-105 )
Benzo(a)Anthracene	22.2	18.6	84	( 50-110 )
Benzo[a]pyrene	22.2	16.0	72	( 50-110 )
Benzo[b]Fluoranthene	22.2	17.8	80	( 45-115 )
Benzo[g,h,i]perylene	22.2	16.5	74	( 40-125 )
Benzo[k]fluoranthene	22.2	17.4	79	( 45-125 )
Chrysene	22.2	18.5	83	( 55-110 )
Dibenzo[a,h]anthracene	22.2	17.3	78	( 40-125 )
Fluoranthene	22.2	19.1	86	( 55-115 )
Fluorene	22.2	15.2	69	( 50-110 )
Indeno[1,2,3-c,d] pyrene	22.2	17.2	77	( 40-120 )
Naphthalene	22.2	13.9	62	( 40-105 )
Phenanthrene	22.2	16.5	74	( 50-110 )
Pyrene	22.2	18.1	82	( 45-125 )
<b>Surrogates</b>				
2-Fluorobiphenyl	22.2	76.8	77	( 45-105 )
Terphenyl-d14	22.2	102	102	( 30-125 )

## Batch Information

Analytical Batch: XMS8592

Analytical Method: 8270D SIMS (PAH)

Instrument: HP 6890/5973 MS SVQA

Analyst: SP

Prep Batch: XXX32865

Prep Method: SW3550C

Prep Date/Time: 04/07/2015 12:45

Spike Init Wt./Vol.: 22.2 ug/Kg Extract Vol: 1 mL

Dupe Init Wt./Vol.: Extract Vol:



**Matrix Spike Summary**

Original Sample ID: 1151155007  
 MS Sample ID: 1259152 MS  
 MSD Sample ID: 1259153 MSD

Analysis Date: 04/09/2015 12:06  
 Analysis Date: 04/09/2015 12:23  
 Analysis Date: 04/09/2015 12:40  
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1151155007, 1151155011

**Results by 8270D SIMS (PAH)**

Parameter	Sample	Matrix Spike (ug/Kg)			Spike Duplicate (ug/Kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1-Methylnaphthalene	857	24.2	586	-1120 *	24.2	790	-281 *	44-107	29.50	(< 30)
2-Methylnaphthalene	327	24.2	160	-694 *	24.2	229	-408 *	45-105	35.70	* (< 30)
Acenaphthene	623	24.2	502	-502 *	24.2	694	294 *	45-110	32.20	* (< 30)
Acenaphthylene	67.5J	24.2	70.2J	11 *	24.2	88.2J	86	45-105	22.70	(< 30)
Anthracene	414	24.2	364	-203 *	24.2	488	310 *	55-105	29.10	(< 30)
Benzo(a)Anthracene	241	24.2	237	-20 *	24.2	286	185 *	50-110	19.00	(< 30)
Benzo[a]pyrene	559	24.2	492	-280 *	24.2	590	127 *	50-110	18.20	(< 30)
Benzo[b]Fluoranthene	1080	24.2	922	-634 *	24.2	1111	129 *	45-115	18.20	(< 30)
Benzo[g,h,i]perylene	667	24.2	580	-358 *	24.2	707	170 *	40-125	19.80	(< 30)
Benzo[k]fluoranthene	55.0U	24.2	55.0U	0 *	24.2	55.0U	0 *	45-125	0.00	(< 30)
Chrysene	558	24.2	487	-293 *	24.2	602	181 *	55-110	21.00	(< 30)
Dibenzo[a,h]anthracene	163	24.2	155	-35 *	24.2	189	109	40-125	20.20	(< 30)
Fluoranthene	159	24.2	157	-7 *	24.2	165	24 *	55-115	4.70	(< 30)
Fluorene	445	24.2	338	-440 *	24.2	436	-39 *	50-110	25.10	(< 30)
Indeno[1,2,3-c,d] pyrene	532	24.2	460	-300 *	24.2	553	86	40-120	18.40	(< 30)
Naphthalene	451	24.2	358	-385 *	24.2	471	83	40-105	27.30	(< 30)
Phenanthrene	713	24.2	525	-781 *	24.2	705	-37 *	50-110	29.30	(< 30)
Pyrene	487	24.2	447	-169 *	24.2	534	193 *	45-125	17.80	(< 30)
<b>Surrogates</b>										
2-Fluorobiphenyl		24.2	119	490 *	24.2	171	706 *	45-105	36.00	
Terphenyl-d14		24.2	33.6	139 *	24.2	42.0	174 *	30-125	22.60	

**Batch Information**

Analytical Batch: XMS8600  
 Analytical Method: 8270D SIMS (PAH)  
 Instrument: HP 6890/5973 MS SVQA  
 Analyst: SP  
 Analytical Date/Time: 4/9/2015 12:23:00PM

Prep Batch: XXX32865  
 Prep Method: Sonication Extraction Soil 8270 PAH SIM  
 Prep Date/Time: 4/7/2015 12:45:33PM  
 Prep Initial Wt./Vol.: 22.73g  
 Prep Extract Vol: 1.00mL

Print Date: 04/14/2015 8:42:35AM



**Method Blank**

Blank ID: MB for HBN 1706351 [XXX/32866]  
Blank Lab ID: 1259187

Matrix: Soil/Solid (dry weight)

QC for Samples:  
1151155012

**Results by AK102**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	10.0U	20.0	6.20	mg/Kg
<b>Surrogates</b>				
5a Androstane	72.7	60-120		%

**Batch Information**

Analytical Batch: XFC11780  
Analytical Method: AK102  
Instrument: HP 7890A FID SV E F  
Analyst: KJO  
Analytical Date/Time: 4/9/2015 7:53:00PM

Prep Batch: XXX32866  
Prep Method: SW3550C  
Prep Date/Time: 4/7/2015 4:47:01PM  
Prep Initial Wt./Vol.: 30 g  
Prep Extract Vol: 1 mL

Print Date: 04/14/2015 8:42:36AM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1151155 [XXX32866]  
 Blank Spike Lab ID: 1259188  
 Date Analyzed: 04/09/2015 20:14

Spike Duplicate ID: LCSD for HBN 1151155  
 [XXX32866]  
 Spike Duplicate Lab ID: 1259189  
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1151155012

## Results by AK102

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	167	167	100	167	167	100	( 75-125 )	0.30	(< 20 )
<b>Surrogates</b>									
5a Androstane	3.33	75.2	75	3.33	74.8	75	( 60-120 )	0.61	

## Batch Information

Analytical Batch: XFC11780  
 Analytical Method: AK102  
 Instrument: HP 7890A FID SV E F  
 Analyst: KJO

Prep Batch: XXX32866  
 Prep Method: SW3550C  
 Prep Date/Time: 04/07/2015 16:47  
 Spike Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL  
 Dupe Init Wt./Vol.: 167 mg/Kg Extract Vol: 1 mL

Print Date: 04/14/2015 8:42:38AM



**Method Blank**

Blank ID: MB for HBN 1706351 [XXX/32866]  
Blank Lab ID: 1259187

Matrix: Soil/Solid (dry weight)

QC for Samples:  
1151155012

**Results by AK103**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Residual Range Organics	10.0U	20.0	6.20	mg/Kg
<b>Surrogates</b>				
n-Triacontane-d62	74.7	60-120		%

**Batch Information**

Analytical Batch: XFC11780  
Analytical Method: AK103  
Instrument: HP 7890A FID SV E F  
Analyst: KJO  
Analytical Date/Time: 4/9/2015 7:53:00PM

Prep Batch: XXX32866  
Prep Method: SW3550C  
Prep Date/Time: 4/7/2015 4:47:01PM  
Prep Initial Wt./Vol.: 30 g  
Prep Extract Vol: 1 mL

Print Date: 04/14/2015 8:42:39AM

### Blank Spike Summary

Blank Spike ID: LCS for HBN 1151155 [XXX32866]  
 Blank Spike Lab ID: 1259188  
 Date Analyzed: 04/09/2015 20:14

Spike Duplicate ID: LCSD for HBN 1151155  
 [XXX32866]  
 Spike Duplicate Lab ID: 1259189  
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1151155012

### Results by AK103

Parameter	Blank Spike (mg/Kg)			Spike Duplicate (mg/Kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Residual Range Organics	167	153	92	167	154	92	( 60-120 )	0.35	(< 20 )
<b>Surrogates</b>									
n-Triacontane-d62	3.33	69.8	70	3.33	71.6	72	( 60-120 )	2.60	

### Batch Information

Analytical Batch: **XFC11780**  
 Analytical Method: **AK103**  
 Instrument: **HP 7890A**    **FID SV E F**  
 Analyst: **KJO**

Prep Batch: **XXX32866**  
 Prep Method: **SW3550C**  
 Prep Date/Time: **04/07/2015 16:47**  
 Spike Init Wt./Vol.: 167 mg/Kg    Extract Vol: 1 mL  
 Dupe Init Wt./Vol.: 167 mg/Kg    Extract Vol: 1 mL

1151155



CHAIN OF CUSTODY RECORD

Reference #:

CLIENT: Nortech  
 CONTACT: Dumitru Radu PHONE NO: 907-980-9936  
 PROJECT: Marine View Bldg SITE/PWSID#: \_\_\_\_\_  
 REPORTS TO: D. Radu E-MAIL: [dradu@nortechengr.com](mailto:dradu@nortechengr.com)  
 J. Ginter [jginter@nortechengr.com](mailto:jginter@nortechengr.com)  
 INVOICE Nortech Fairbanks QUOTE 15-1057  
 P.O. #: \_\_\_\_\_

page 1 of 2

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX/ MATRIX CODE	#	C O N T A I N E R S	Preserv Used SAMPLE TYPE C = COMP G = GRAB MI = Mult Increment Samples	METH		REMARKS/ LOC ID
								GRO & BTEX	DRO & PPO	
① A-B	CZ-01	3/24/2015	1640	soils	2	G	X	X		
② A-B	CZ-02	3/24/2015	1715	soils	2	G	X	X		
③ A-B	CZ-03	3/24/2015	1940	soils	2	G	X	X		
④ A-B	CZ-04	3/25/2015	1945	soils	2	G	X	X		
⑤ A-B	CZ-05	3/25/2015	1952	soils	2	G	X	X		
⑥ A-B	CZ-06	3/25/2015	1955	soils	2	G	X	X		
⑦ A-C	CZ-07	3/25/2015	2000	soils	3	G	X	X	X	
⑧ A-B	CZ-08	3/25/2015	2002	soils	2	G	X	X		
⑨ A-B	CZ-09	3/26/2015	1030	soils	2	G	X	X		
⑩ A-B	CZ-10	3/26/2015	1048	soils	2	G	X	X		

Collected/Relinquished By: (1) *[Signature]* Received By: \_\_\_\_\_  
 Relinquished By: (2) \_\_\_\_\_ Received By: \_\_\_\_\_  
 Relinquished By: (3) \_\_\_\_\_ Received By: \_\_\_\_\_  
 Relinquished By: (4) *[Signature]* Received For Laboratory By: *[Signature]*

DOD Project? YES \_\_\_\_\_ Special Deliverable Requirements: \_\_\_\_\_  
 Cooler ID \_\_\_\_\_  
 Requested Turnaround Time and/or Special Instructions: *Standard*

Samples Received Cold? YES NO Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT  
 Cooler *(TB)*  
 Temperature *°C 5.9 / 41.2* *1 F, 15*







## Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1151155001-A	No Preservative Required	OK			
1151155001-B	Methanol field pres. 4 C	OK			
1151155002-A	No Preservative Required	OK			
1151155002-B	Methanol field pres. 4 C	OK			
1151155003-A	No Preservative Required	OK			
1151155003-B	Methanol field pres. 4 C	OK			
1151155004-A	No Preservative Required	OK			
1151155004-B	Methanol field pres. 4 C	OK			
1151155005-A	No Preservative Required	OK			
1151155005-B	Methanol field pres. 4 C	OK			
1151155006-A	No Preservative Required	OK			
1151155006-B	Methanol field pres. 4 C	OK			
1151155007-A	No Preservative Required	OK			
1151155007-B	No Preservative Required	OK			
1151155007-C	Methanol field pres. 4 C	OK			
1151155008-A	No Preservative Required	OK			
1151155008-B	Methanol field pres. 4 C	OK			
1151155009-A	No Preservative Required	OK			
1151155009-B	Methanol field pres. 4 C	OK			
1151155010-A	No Preservative Required	OK			
1151155010-B	Methanol field pres. 4 C	OK			
1151155011-A	No Preservative Required	OK			
1151155011-B	No Preservative Required	OK			
1151155011-C	Methanol field pres. 4 C	OK			
1151155012-A	No Preservative Required	OK			
1151155012-B	Methanol field pres. 4 C	OK			
1151155013-A	No Preservative Required	OK			
1151155013-B	Methanol field pres. 4 C	OK			
1151155014-A	No Preservative Required	OK			

### Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

BU - The container was received with headspace greater than 6mm.



# **Appendix D**

## **Laboratory Data Review Checklist**

## Laboratory Data Review Checklist

Completed by:	Dumitru Radu		
Title:	Environmental Scientist	Date:	Apr 17, 2015
CS Report Name:	Marine View Building	Report Date:	Apr 14, 2015
Consultant Firm:	Nortech		
Laboratory Name:	SGS Alaska	Laboratory Report Number:	1150902
ADEC File Number:		ADEC RecKey Number:	

### 1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes     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:

samples were not transferred to another laboratory.

### 2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

Yes     No     NA (Please explain)    Comments:

b. Correct analyses requested?

Yes     No     NA (Please explain)    Comments:

### 3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt ( $4^{\circ} \pm 2^{\circ} \text{C}$ )?

Yes     No     NA (Please explain)    Comments:

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

Yes       No       NA (Please explain)      Comments:

GRO & RRO sample jars preserved with methanol.

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

Yes       No       NA (Please explain)      Comments:

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

Yes       No       NA (Please explain)      Comments:

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

Comments:

Data quality or usability not affected

#### 4. Case Narrative

a. Present and understandable?

Yes       No       NA (Please explain)      Comments:

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

Yes       No       NA (Please explain)      Comments:

Surrogate recoveries for several samples were outside acceptance criteria due to dilutions, matrix interference or co-elutions.

c. Were all corrective actions documented?

Yes       No       NA (Please explain)      Comments:

Results reported under one analyte due to co-elutions.

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

Comments:

Data quality/usability not affected.

5. Samples Results

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

Yes     No     NA (Please explain)    Comments:

b. All applicable holding times met?

Yes     No     NA (Please explain)    Comments:

c. All soils reported on a dry weight basis?

Yes     No     NA (Please explain)    Comments:

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

Yes     No     NA (Please explain)    Comments:

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

Comments:

No

6. QC Samples

a. Method Blank

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

Yes     No     NA (Please explain)    Comments:

ii. All method blank results less than PQL?

Yes     No     NA (Please explain)    Comments:

iii. If above PQL, what samples are affected?

Comments:

iv. Do the affected sample(s) have data flags? 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     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)    Comments:

Analysis not requested

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     NA (Please explain)    Comments:

Samples that required dilutions or have matrix interferences have %R outside of acceptance criteria.

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/DMSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes     No     NA (Please explain)    Comments:

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

Comments:

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined?

Yes     No     NA (Please explain)    Comments:

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

data quality/usability not affected

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses - field, QC and laboratory samples?

Yes     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     No     NA (Please explain)    Comments:

Discrepancies as noted by lab in attached lab report.

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)    Comments:

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

Comments:

Data quality/usability not affected

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     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     No     NA (Please explain.)    Comments:

only one cooler used to transport all samples.

iii. All results less than PQL?

Yes     No     NA (Please explain.)

Comments:

iv. If above PQL, what samples are affected?

Comments:

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

Comments:

Data quality/usability not affected.

e. Field Duplicate

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

Yes     No     NA (Please explain)

Comments:

ii. Submitted blind to lab?

Yes     No     NA (Please explain.)

Comments:

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

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

Where  $R_1$  = Sample Concentration

$R_2$  = Field Duplicate Concentration

Yes     No     NA (Please explain)

Comments:

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

Yes     No     NA (Please explain)

Comments:

Data quality/usability not affected.

f. Decontamination or Equipment Blank (if applicable)

Yes     No     NA (Please explain)

Comments:

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)

Comments:

Reset Form



# Appendix E

## Conceptual Site Model

## Human Health Conceptual Site Model Scoping Form

**Site Name:**

**File Number:**

**Completed by:**

**Introduction**

The form should be used to reach agreement with the Alaska Department of Environmental Conservation (DEC) about which exposure pathways should be further investigated during site characterization. From this information, summary text about the CSM and a graphic depicting exposure pathways should be submitted with the site characterization work plan and updated as needed in later reports.

*General Instructions: Follow the italicized instructions in each section below.*

**1. General Information:**

**Sources** *(check potential sources at the site)*

<input checked="" type="checkbox"/> USTs	<input type="checkbox"/> Vehicles
<input type="checkbox"/> ASTs	<input type="checkbox"/> Landfills
<input type="checkbox"/> Dispensers/fuel loading racks	<input type="checkbox"/> Transformers
<input type="checkbox"/> Drums	<input type="checkbox"/> Other: <input type="text"/>

**Release Mechanisms** *(check potential release mechanisms at the site)*

<input checked="" type="checkbox"/> Spills	<input type="checkbox"/> Direct discharge
<input checked="" type="checkbox"/> Leaks	<input type="checkbox"/> Burning
	<input type="checkbox"/> Other: <input type="text"/>

**Impacted Media** *(check potentially-impacted media at the site)*

<input checked="" type="checkbox"/> Surface soil (0-2 feet bgs*)	<input type="checkbox"/> Groundwater
<input checked="" type="checkbox"/> Subsurface soil (>2 feet bgs)	<input type="checkbox"/> Surface water
<input type="checkbox"/> Air	<input type="checkbox"/> Biota
<input type="checkbox"/> Sediment	<input type="checkbox"/> Other: <input type="text"/>

**Receptors** *(check receptors that could be affected by contamination at the site)*

<input checked="" type="checkbox"/> Residents (adult or child)	<input checked="" type="checkbox"/> Site visitor
<input checked="" type="checkbox"/> Commercial or industrial worker	<input checked="" type="checkbox"/> Trespasser
<input checked="" type="checkbox"/> Construction worker	<input checked="" type="checkbox"/> Recreational user
<input type="checkbox"/> Subsistence harvester (i.e. gathers wild foods)	<input type="checkbox"/> Farmer
<input type="checkbox"/> Subsistence consumer (i.e. eats wild foods)	<input type="checkbox"/> Other: <input type="text"/>

\* bgs - below ground surface

**2. Exposure Pathways:** *(The answers to the following questions will identify complete exposure pathways at the site. Check each box where the answer to the question is "yes".)*

a) Direct Contact -

1. Incidental Soil Ingestion

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface?  
(Contamination at deeper depths may require evaluation on a site-specific basis.)

*If the box is checked, label this pathway complete:*

Complete

Comments:

2. Dermal Absorption of Contaminants from Soil

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface?  
(Contamination at deeper depths may require evaluation on a site specific basis.)

Can the soil contaminants permeate the skin (see Appendix B in the guidance document)?

*If both boxes are checked, label this pathway complete:*

Complete

Comments:

Diesel, 1-Methynaphthalene

b) Ingestion -

1. Ingestion of Groundwater

Have contaminants been detected or are they expected to be detected in the groundwater, or are contaminants expected to migrate to groundwater in the future?

Could the potentially affected groundwater be used as a current or future drinking water source? Please note, only leave the box unchecked if DEC has determined the groundwater is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.350.

*If both boxes are checked, label this pathway complete:*

Incomplete

Comments:

## 2. Ingestion of Surface Water

Have contaminants been detected or are they expected to be detected in surface water, or are contaminants expected to migrate to surface water in the future?

Could potentially affected surface water bodies be used, currently or in the future, as a drinking water source? Consider both public water systems and private use (i.e., during residential, recreational or subsistence activities).

*If both boxes are checked, label this pathway complete:*

Incomplete

Comments:

Close proximity to Gastineau Channel. Site was built on original shoreline.

## 3. Ingestion of Wild and Farmed Foods

Is the site in an area that is used or reasonably could be used for hunting, fishing, or harvesting of wild or farmed foods?

Do the site contaminants have the potential to bioaccumulate (see Appendix C in the guidance document)?

Are site contaminants located where they would have the potential to be taken up into biota? (i.e. soil within the root zone for plants or burrowing depth for animals, in groundwater that could be connected to surface water, etc.)

*If all of the boxes are checked, label this pathway complete:*

Incomplete

Comments:

### c) Inhalation-

#### 1. Inhalation of Outdoor Air

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.)

Are the contaminants in soil volatile (see Appendix D in the guidance document)?

*If both boxes are checked, label this pathway complete:*

Incomplete

Comments:

Diesel fuel

2. Inhalation of Indoor Air

Are occupied buildings on the site or reasonably expected to be occupied or placed on the site in an area that could be affected by contaminant vapors? (within 30 horizontal or vertical feet of petroleum contaminated soil or groundwater; within 100 feet of non-petroleum contaminated soil or groundwater; or subject to "preferential pathways," which promote easy airflow like utility conduits or rock fractures)

Are volatile compounds present in soil or groundwater (see Appendix D in the guidance document)?

*If both boxes are checked, label this pathway complete:*

Comments:

Diesel fuel
-------------

**3. Additional Exposure Pathways:** *(Although there are no definitive questions provided in this section, these exposure pathways should also be considered at each site. Use the guidelines provided below to determine if further evaluation of each pathway is warranted.)*

**Dermal Exposure to Contaminants in Groundwater and Surface Water**

Dermal exposure to contaminants in groundwater and surface water may be a complete pathway if:

- Climate permits recreational use of waters for swimming.
- Climate permits exposure to groundwater during activities, such as construction.
- Groundwater or surface water is used for household purposes, such as bathing or cleaning.

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are assumed to be protective of this pathway.

*Check the box if further evaluation of this pathway is needed:*

Comments:

**Inhalation of Volatile Compounds in Tap Water**

Inhalation of volatile compounds in tap water may be a complete pathway if:

- The contaminated water is used for indoor household purposes such as showering, laundering, and dish washing.
- The contaminants of concern are volatile (common volatile contaminants are listed in Appendix D in the guidance document.)

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are assumed to be protective of this pathway.

*Check the box if further evaluation of this pathway is needed:*

Comments:

Residential/Commercial structure with supplied drinking water

## Inhalation of Fugitive Dust

Inhalation of fugitive dust may be a complete pathway if:

- Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- Dust particles are less than 10 micrometers (Particulate Matter - PM<sub>10</sub>). Particles of this size are called respirable particles and can reach the pulmonary parts of the lungs when inhaled.
- Chromium is present in soil that can be dispersed as dust particles of any size.

Generally, DEC direct contact soil cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway because it is assumed most dust particles are incidentally ingested instead of inhaled to the lower lungs. The inhalation pathway only needs to be evaluated when very small dust particles are present (e.g., along a dirt roadway or where dusts are a nuisance). This is not true in the case of chromium. Site specific cleanup levels will need to be calculated in the event that inhalation of dust containing chromium is a complete pathway at a site.

*Check the box if further evaluation of this pathway is needed:*

Comments:

## Direct Contact with Sediment

This pathway involves people's hands being exposed to sediment, such as during some recreational, subsistence, or industrial activity. People then incidentally ingest sediment from normal hand-to-mouth activities. In addition, dermal absorption of contaminants may be of concern if the the contaminants are able to permeate the skin (see Appendix B in the guidance document). This type of exposure should be investigated if:

- Climate permits recreational activities around sediment.
- The community has identified subsistence or recreational activities that would result in exposure to the sediment, such as clam digging.

Generally, DEC direct contact soil cleanup levels in 18 AAC 75, Table B1, are assumed to be protective of direct contact with sediment.

*Check the box if further evaluation of this pathway is needed:*

Comments:

**4. Other Comments** *(Provide other comments as necessary to support the information provided in this form.)*

Site is a Residential/Commercial apartment building that is expected to remain as such, now and in the future. Site access is limited due to awning overhang and distance between Marine View Building and adjacent Parking Garage. Concrete overlays the area of the former tanks, limiting direct exposure to soils.



# **Appendix F**

## **ADEC Correspondence**

**(Closure Notice, Post-Closure Notice, SARI Form)**



ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
U·N·D·E·R·G·R·O·U·N·D·S·T·O·R·A·G·E·T·A·N·K·S



INTENT-TO-CLOSE OR CHANGE-IN-SERVICE

The ADEC notice of *Intent-to-Close or Change-in-Service* (Form 18-0504) is required when decommissioning an underground storage tank (UST) system, or changing its use to a non-regulated substance (including heating oil), in accordance with Title 18 Alaska Administrative Code (AAC) 78, *Underground Storage Tanks*. Notification is due at least 15 days, but no more than 60 days, prior to beginning the closure and site assessment work.

ADEC FACILITY # N/A	EXPECTED DATE OF CLOSURE OR CHANGE-IN-SERVICE 26 MAR 2015
FACILITY NAME MARINE VIEW CENTER	FACILITY OWNER Robins Hotteep partnership
PHYSICAL LOCATION (DO NOT USE PO BOX) 230 S Franklin	MAILING ADDRESS 240 Boyer Ave East Ste 2
CITY STATE ZIP Juneau AK 99801	CITY STATE ZIP SEATTLE WA 98112

The State of Alaska requires anyone who supervises the *closure or change-in-service* of a UST system to be a state-certified UST Decommissioner, in accordance with 18 AAC 78.400.

Name of person certified to perform UST work: UST Worker License # Expiration Date:

Gene Cheeseman / Susan VOGT 505 / 574

The State of Alaska requires anyone who performs the site characterization, site assessment and release investigation to be a *Qualified Person* in accordance with 18 AAC 78.090.

Name of Qualified Person Company  
Jason Ginter NORTECH, Inc

Checklist [Note: *Closure* means to remove, or make inert, any part of a UST system, so that it can no longer receive, store or issue petroleum products (18 AAC 78.085(c)). A *Change-in-Service* means to remove all products, and fully clean the UST system, to continue to use it for a non-regulated substance (18 AAC 78.085(d)).]

Have you notified local fire department of your intent to close or change the service of the UST system(s)?

Method of closure:  Removal  Inert-in-Place or  Change-in-Service to:

Is there evidence of a release, leak or spill at this site? NO

Disposal of tank/piping/equipment  Recycle Company: Skookum Recycling  
 Landfill Location:

Disposal location of free fluids, petroleum products and/or sludges: Petro Marine / (CB) HHW collection

CLOSURE OR CHANGE-IN-SERVICE FOR:				Product	Volume	DATE LAST USED	TANK AGE
ADEC TANK #	Tank & Piping <input checked="" type="checkbox"/>	Tank Only <input checked="" type="checkbox"/>	Piping Only <input checked="" type="checkbox"/>				
N/A				DIESEL	600	3/20/15	~15
UST IS NOT REGISTERED							

The Owner/Operator is required to complete and sign the *Post-Closure Form #18-0505* within 30 days of the closure. The Owner/Operator is required to complete and sign the *Site Assessment and Release Investigation Summary Report Form #18-0508*, within 60 days of the closure work. Submit both documents to the ADEC UST Office.

CERTIFIED BY:  OWNER  OPERATOR  OTHER:

(Print name) Jason Ginter (Title) consultant to owner (Phone) 907 586 6813

(Signature) [Signature] (Date) 18 Mar 2015 (Fax) 907 586 6819

RETURN THIS SIGNED FORM TO: ADEC UST OFFICE 555 CORDOVA STREET ANCHORAGE, ALASKA 99501-2617

QUESTIONS? CALL: 907-269-7679 OR 907-269-7886 FAX: 907-269-7687

OR GO TO OUR WEB PAGE AT: HTTP://WWW.DEC.STATE.AK.US/SPAR/IPP/TANKS.HTM



**UNDERGROUND STORAGE TANK  
ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION**



**REGISTRATION  
For Installation, Repair, Upgrade or Reconfiguration**

- This form must be filled out if you installed a new UST system, or if you repaired, upgraded, or reconfigured an existing UST.
- Please fill out all sections. Sections 1-8 (Pages 1-2) must be filled out and signed by the Owner or Operator of the UST. Sections 9-12 (Pages 3-4) must be filled out and signed by the Certified Installer who performed the work. All four pages must be submitted together.
- You must submit this completed form, along with all applicable registration fees, to ADEC within 30 days after purchasing, installing or placing into service.
- Prior to completing this form, you must have already submitted to ADEC a signed "Intent to Install or Reconfiguration" Form 18-0507, between 15 and 60 days prior to beginning of tank work.

- Registration Fee Information**
- Annual Registration Fee is required for each tank at this facility, except for State and Federal USTs are exempt.
  - Tank fee is \$50.00 per tank per year for upgraded tanks. Fees are due 30 days after installation or December 31 of the year proceeding registration, which ever is sooner.
  - If a new or existing UST is not upgraded spill and overfill prevention and corrosion protection, additional statutory fees apply. Call ADEC for more information at 1-800-478-4974.
  - A late fee penalty of \$10.00 per day will be assessed for each day the registration fee is over due.

**Facility Information:**

Is facility already registered with ADEC? (Circle one) YES  NO

If yes, ADEC Facility ID#: NA

Make sure you use ADEC Tank ID numbering system.

Not sure? Please contact ADEC at 907-269-7679 or 907-269-7886.

**SECTIONS 1-8 TO BE FILLED OUT BY OWNER OR OPERATOR**

**1. OWNERSHIP OF TANKS**

Name Robbins-Hotchkiss Partnership

Mailing Address 2410 Boyer Ave East Suite 1

City Seattle State WA ZIP 98112

Owner Phone 907 463 3062 Fax \_\_\_\_\_

**2. LOCATION OF FACILITY** (No PO Boxes please)

Name Marine Vibe Center

Physical Address 220 S Franklin

City Juneau State AK ZIP 99801

Facility Phone 907 463 3062 Fax \_\_\_\_\_

**2A. INVOICE MAILING ADDRESS** (if different from Ownership Address)

Name \_\_\_\_\_

Mailing Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_

Fax \_\_\_\_\_

**Return Completed and Signed Form to:**

ADEC, Storage Tank Prog  
555 Cordova Street  
Anchorage, AK 99501  
Fax 907-269-7687

If you have questions, please contact ADEC at:  
907-269-7679 or 907 269-7886,  
or visit our web page at  
<http://www.dec.state.ak.us/spar/ipp/tanks.htm>

**SECTIONS 1-8 TO BE FILLED OUT BY OWNER OR OPERATOR**

**3. TYPE OF OWNER (Check one)**

- Federal Gov't     Commercial  
 State Gov't     Private  
 Local Gov't

**4. INDIAN LANDS**

Tribe or Nation: \_\_\_\_\_

- Tanks are located on land within an Indian Reservation or other trust lands.  
 Tanks are owned by Native American Nation, Tribe, or Individual.

**5. TYPE OF FACILITY (Check one)**

- Gas Station     Aircraft Owner     Federal Non-Military     Contractor  
 Petroleum Distributor     Auto Dealer     Federal Military     Trucking/Transport  
 Air Taxi     Railroad     Industrial     Utilities  
 Residential     Farm/Hatchery     Other (explain) *office part blog*

**6. CONTACT PERSON IN CHARGE OF TANKS**

Name: \_\_\_\_\_ Address: \_\_\_\_\_ Phone Number: \_\_\_\_\_  
 Job Title: \_\_\_\_\_ City, State, ZIP: \_\_\_\_\_ Fax Number: \_\_\_\_\_

**7. FINANCIAL RESPONSIBILITY**

**A. I am required to have financial requirements**  
 accordance with 40 CFR 280 Subpart H. (State and  
 Federal Owners and Operators are exempt.)  
 (Please Circle One)    YES    NO

**B. I have met the financial requirements in**  
 accordance with 40 CFR 280 Subpart H.  
 (Please Circle One)    YES    NO

If answer is Yes, Proceed to 7B and 7C.  
 If No, are you a State/Federal Owner/Operator? \_\_\_\_\_

**C. I have the following coverage (Check all that apply)**

**FOR ALL OWNERS & OPERATORS**

**FOR LOCAL GOVERNMENT'S ONLY**

- Insurance     Surety Bond  
 Guarantee     Letter of Credit  
 Risk Retention Group     Trust Fund  
 Self Insurance (\$10 million net worth)     Other (Specify) \_\_\_\_\_

- Local Government Financial Test  
 Local Government Guarantee  
 Local Government Funds

**A UST System must be inspected by a certified UST Operations Inspector within three years of the date of installation and every three years thereafter. ADEC will remind the UST Owner or Operator 60-90 days prior to the inspection due date.**

**8. CERTIFICATION BY OWNER/OPERATOR**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of these individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

\_\_\_\_\_  
(Name and Title)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

**THIS FORM MUST BE FILED WITH ADEC WITHIN 30 DAYS AFTER INSTALLATION OR RETURN TO OPERATION; OR 30 DAYS AFTER ACQUISITION (18 AAC 78.015)**

**SECTIONS 9-12 TO BE FILLED OUT BY CERTIFIED WORKER**

Certified persons who perform or supervise the installation, reconfiguration, repair, or upgrade of USTs shall fill out and submit the following checklist to ADEC and the owner/operator of a UST system. (18 AAC 78.455 (a)(8))

**9. TYPE OF WORK PERFORMED** (Please circle one)

Installation     
  Reconfiguration     
  Upgrade     
  Repair     
  Amended

**10. DESCRIPTION OF UNDERGROUND STORAGE TANKS** (complete for each tank. Use the ADEC Tank ID #)

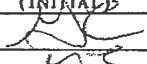
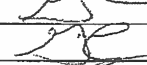
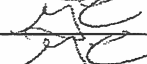

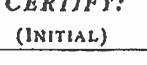
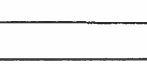
	Tank #	Tank #	Tank #	Tank #
<b>a. Date of Installation (Month/Day/Year)</b>				
<b>b. Estimated Total Capacity (Gallons)</b>				
<b>c. Special Considerations (Check all that apply)</b>				
<input type="checkbox"/> Compartmentalized Tank				
<input type="checkbox"/> Manifolder Tank				
<input type="checkbox"/> Emergency Power Generation				
<b>d. Substance currently or last stored (Check one)</b>				
<input type="checkbox"/> Gasoline				
<input type="checkbox"/> Diesel				
<input type="checkbox"/> Kerosene				
<input type="checkbox"/> Heating Oil				
<input type="checkbox"/> Used Oil				
<input type="checkbox"/> Other (Describe)				
<input type="checkbox"/> Hazardous Substance				
<b>e. Tank Materials (Check only one)</b>				
<input type="checkbox"/> Cathodically Protected Steel				
<input type="checkbox"/> Composite/Clad (Steel with Fiberglass Coating)				
<input type="checkbox"/> Fiberglass Reinforced Plastic				
<input type="checkbox"/> Steel with Polyethylene Jacket				
<input type="checkbox"/> Bare Steel or Asphalt Coated				
<input type="checkbox"/> Epoxy Coated Steel				
<input type="checkbox"/> Other (Specify)				
<b>f. Tank Construction (Check only one)</b>				
<input type="checkbox"/> Double Wall				
<input type="checkbox"/> Lined Interior				
<input type="checkbox"/> Unknown				
<input type="checkbox"/> Other (Specify)				
<b>g. Piping Materials - primary pipe (Check only one)</b>				
<input type="checkbox"/> Galvanized or Bare Steel (Specify)				
<input type="checkbox"/> Fiberglass Reinforced Plastic				
<input type="checkbox"/> Flexible Plastic				
<input type="checkbox"/> Copper				
<input type="checkbox"/> No Underground Piping				

A UST System must be inspected by a certified UST Operations Inspector within three years of the date of installation and every three years thereafter. ADEC will remind the UST Owner or Operator 60-90 days prior to the inspection due date.

**THIS FORM MUST BE FILED WITH ADEC WITHIN 30 DAYS AFTER INSTALLATION OR RETURN TO OPERATION; OR 30 DAYS AFTER ACQUISITION (18 AAC 78.015)**

## CLOSURE CHECKLIST

A certified UST worker who performs or supervises UST closure must complete and sign this checklist.

<b>I CERTIFY:</b> (INITIAL)	<b>UST SYSTEM REMOVAL</b>
	I was on the job site for all work requiring certification of permanent closure
	Contents of tank and piping were emptied
	Tank was purged of flammable vapors or the atmosphere was made inert
	UST system(s) were cleaned in accordance with API 1604
	Tanks, piping and vent lines were removed, labeled, and properly disposed
	All accessible holes were filled, plugged or capped
<b>I CERTIFY:</b> (INITIAL)	<b>TANK IN-GROUND CLOSURE</b>
	I was on the job site for all work requiring certification of permanent closure
	Contents of tank and piping were emptied
	Tank was purged of flammable vapors or the atmosphere was made inert
	UST system(s) were cleaned in accordance with API 1604
	Tank was filled with solid inert material
	Piping was removed, and all accessible holes were filled, plugged or capped
<b>I CERTIFY:</b> (INITIAL)	<b>CHANGE IN SERVICE</b>
	I was on the job site for all work requiring certification of permanent closure
	Contents of tank and piping were emptied
	Tank was purged of flammable vapors or the atmosphere was made inert
	UST system(s) were cleaned in accordance with API 1604
	UST system(s) were disconnected from regulated use
	Piping was removed from connection with regulated use
	All accessible holes except vent lines were plugged or capped
	I understand that a certified UST worker who fails to submit this portion of the form may be subject to license suspension or revocation.

I certify the information provided above is true and accurate:

ALASKA UST DECOMMISSIONER CERTIFICATION #

EXPIRATION DATE:

(Print name)

(Phone)

*Gene Cheeseman*

(Signature)

(Date)



*3-26-15*

The Owner is required to complete and sign page 1 of the *Post-Closure Form #18-0505*. The UST Decommissioner who supervised the closure signs page 2. Submit the form within 30 days of closure to the ADEC UST Office.

RETURN THIS SIGNED FORM TO: ADEC UST OFFICE 555 CORDOVA STREET ANCHORAGE, ALASKA 99501-2617  
**QUESTIONS?** CALL: 907-269-7679 OR 907-269-8149 FAX: 907-269-7687  
 OR GO TO OUR WEB PAGE AT: [HTTP://WWW.DEC.STATE.AK.US/SPAR/IPP/TANKS.HTM](http://www.dec.state.ak.us/spar/ipp/tanks.htm)



APPENDIX B



ADEC Storage Tank Program
Site Assessment & Release Investigation Summary Form

This document summarizes information from site assessments and release investigation reports that are required by Alaska's Underground Storage Tanks Regulations (18 AAC 78). It is intended to ensure minimum requirements are met when submitting full reports to ADEC. It cannot be substituted for comprehensive site assessment or release investigation reports. Site assessments (as defined in AS 46.03.450) are conducted to check for the presence or absence of petroleum contamination. If contamination of soil or groundwater is identified then a release investigation is required. Site assessments and release investigations must be conducted by a qualified impartial third party (as defined in 18 AAC 78) and in accordance with chapter two of the Underground Storage Tanks Procedures Manual (UST Manual).

How to fill out this form

Type or print in ink the requested information and sign in ink the "signature" blocks on page 7. Please attach this form to the comprehensive site assessment or release investigation report (or include it in the report introduction) and submit it to the nearest ADEC field operations office (Juneau, Anchorage, Fairbanks or Soldotna).

1. GENERAL INFORMATION

Form fields including Purpose of Site assessment/Release investigation (Closure), Owner of site (RH partnership, 2410 Boyer Ave East Suite 7, Seattle, WA 98112), Operator of site (Marine View Building, 2410 Boyer Ave East Suite 7, Seattle, WA 98112), and Location of site (Marine View Bldg, 230 S Franklin St, Juneau, AK 99801).

**Financial Assistance**                          
 Applications filed      Site assessment/      Tank cleanup      Tank upgrade      Tank closure  
 (this site only)      tightness test  
  
**Reports on file**                    
 with ADEC:      Tightness test      Closure notice      Other \_\_\_\_\_

**2. SYSTEM AND TANK STATUS**

Describe the status, size, and contents of the tanks that have been at the site:

Tank ID Number:      Tank No. 1      Tank No. \_\_\_\_      Tank No. \_\_\_\_      Tank No. \_\_\_\_      Tank No. \_\_\_\_  
  
 Tank status (check one)  
 Currently in use      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_  
 Temporarily closure      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_  
 Closed/left in place      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_  
 Closed/removed      X      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_  
 Total capacity (gallons)      675      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_  
 Contents (diesel, etc)      DIESEL      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_

**3. FIRM CONDUCTING SITE ASSESSMENT AND RELEASE INVESTIGATION**

NonTECH      907 586 6813  
 Name of firm      Phone number  
5438 Shaver Dr Ste B      Junata, AK 99801  
 Mailing address      City, State, Zip code  
Jason Ginter      Jason Ginter  
 Site assessment supervisor(s)      Person(s) collecting samples

#### 4. SITE HISTORY

Based on the best available knowledge, please check the appropriate box below:

- Y N  
  Was soil contamination observed or identified?  
  Was groundwater contamination observed or identified?  
  Did inventory control or prior tank repairs indicate a possible release?  
  Has a tank tightness test been performed on any USTs on the site?  
 N/A Have any of the facility's USTs or piping ever failed a tightness test?  
  Have there been any previous site assessments performed at this site?  
 N/A Do previous site assessments indicate any contamination has occurred?

If the answer to any of these questions is yes, please describe (or attach copy of report discussion). Give dates and circumstances, use continuation sheet if necessary:

DETAILED IN SITE ASSESSMENT REPORT

#### 5. FIELD SCREENING ANALYSIS

Date(s) of field screening: 24 & 25 March, 2015  
Temperature(s) during screening: 38-50°F  
Estimated wind speeds: 10-20 knots  
Weather (clear, raining, etc): clear

Type of field detection instrument used: P.I.D.  
Brand: Mini Rae Lite 4 gas  
Model: P6M 6202  
Date calibrated: 24 & 25 March 2015

Number of tests: 20  
Range of results: 3.2 - 145

If an instrument wasn't used, what field detection method was used? \_\_\_\_\_

Number of tests: \_\_\_\_\_  
Range of results: \_\_\_\_\_

## 6. COLLECTION OF SOIL SAMPLES

### For site assessments done for USTs remaining in place

Check the appropriate boxes below (if not applicable, leave blank):

- | Y                        | N                        |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Were samples taken from borings (or test pits) within 5 feet of the UST? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were samples collected from within 2 feet below the bottom of the UST?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Were dispensers connected to the UST system?                             |
| <input type="checkbox"/> | <input type="checkbox"/> | Were samples taken from borings (or test pits) adjacent to dispensers?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Were samples taken from borings (or test pits) adjacent to piping?       |

How many borings/pits were made? \_\_\_\_\_ How many samples were analyzed? \_\_\_\_\_

### For site assessments done at excavation and removal of USTs:

Check the appropriate boxes below (if not applicable, leave blank):

- | Y                                   | N                        |   |
|-------------------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were any areas of obvious contamination identified or observed?   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were samples taken from areas of obvious contamination?   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were at least two discrete analytical samples taken from excavated pit area?  |
| <input type="checkbox"/>            | <u>n/a</u>               | Was at least one sample taken from below each dispensing island's piping?   |
| <input type="checkbox"/>            | <u>n/a</u>               | Was at least one sample taken from the piping trench?   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were the samples referenced above collected taken from native soil within two feet below the bottom of the tank pit or dispenser/piping trench? |
| <input type="checkbox"/>            | <u>n/a</u>               | If multiple tanks were removed, were at least three samples collected?  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were additional samples collected for each 250 square feet of excavated pit over 250 square feet?   |

Number of distinct points sampled: 7 Estimated excavation's surface area: 125 ft<sup>2</sup>

### For all site assessments

Check the appropriate boxes below:

- | Y                                   | N                        |   |
|-------------------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were field duplicate samples collected and analyzed?                    |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were all samples kept at the appropriate temperature until analysis?    |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were all samples extracted & analyzed within recommended holding times? |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Did chain-of-custody/transfer logs accompany samples to laboratory?     |



**9. LABORATORY ANALYSIS OF GROUNDWATER SAMPLES**

(see Table 1 of UST Procedures Manual or Table G of 18 AAC 78.800(b))

Identify the possible contaminants at the site: DIESEL

Identify the analytical methods used to detect these contaminants in the water samples, the number of samples analyzed by each method, and the range of results for each method:

Analytical method	Number of samples	Range of results (ppm)	Location(s) of sample point with highest level of contamination
	<u>0</u>		<u>N/A</u>

**10. DISPOSAL OF MATERIALS**

Check the appropriate boxes below (if not applicable, leave blank):

- Y  N  
  Were tanks cleaned in accordance with API 2015 (Cleaning Petroleum Storage Tanks)?
- Were the tanks and piping removed and disposed in accordance with API 1604 (Removal and disposal of used petroleum Storage tanks)?

Where were the tanks and piping disposed? Skoolon Recycling

Where was the tank sludge and rinsewater disposed? CBJ HHW collection

**11. STOCKPILES**

Check the appropriate boxes below:

- Y  N  
  Is any soil stockpiled at the site?
- Are soils stockpiled in accordance with 18 AAC 78.311?

## 12. RELEASE INVESTIGATION

Check the appropriate box below:

Y     N    Was any petroleum contamination identified during site assessment?  
(Answer "yes" if any evidence a release occurred; if no, proceed to item 13)

If contamination was found, what was matrix score for site? \_\_\_\_\_  
(Attach completed matrix score sheet to this form)

When did release occur? unknown    When was release confirmed? 3/25/15  
(Date & time)    (Date & time)

When was ADEC notified? 3/25/15 0815    List ADEC staff notified: Robert Weiner  
(Date & time)    (Name)

What is status of UST that prompted the investigation?    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_     \_\_\_\_\_  
In use    Out-of-use, product still in system    Out-of-use; system empty    Permanently closed

Briefly describe ( or attach copy of report discussion) the steps taken to prevent further migration of the release and steps taken to monitor and mitigate fire and safety hazards: UST has been emptied & removed

## 13. SITE SKETCH

Sketch the site in the space below. Alternatively, attach a site map to the back of the form. The sketch (or accompanying narrative) should include the following information:

- locations of all USTs, piping, and dispensers
- distances from tanks to nearby structures
- property line locations
- location and dimensions of excavation(s)
- type of backfill used to surround system
- locations of any known historical releases
- locations of any observed contamination
- location of any boreholes and test pits
- soil types
- field screening locations and readings
- sampling locations, depths, & sample ID numbers
- water wells and monitoring wells (if present)
- depth to groundwater/seasonal high groundwater
- locations of any stockpiled soils
- north arrow
- bar scale (specify feet or meters)

For release investigations, in addition to the above information, show the groundwater gradient; surface drainages (including potential hydraulic connections with groundwater) and utility trenches.

**14. QUALITY ASSURANCE**

Check the appropriate boxes below:

- Y  N Were there deviations from Chapter 2 of the UST Procedures Manual? (Note that any deviations must be documented in a section of the comprehensive report)
- Is a field quality control summary included in the reports?
- Is a laboratory QC summary included in the report for all samples used to verify cleanup levels have been met?

**15. CERTIFICATION**

The following certification is to be signed by the assessment firm's principal investigator or Quality Assurance Officer:

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of Chapter 2 of the UST Procedures Manual.

Jason Gidter (Print name) Principal (Title)  
[Signature] (Signature) 20 April 2015 (Date)

The following certification is to be signed by the UST owner/operator (or designated representative):

I certify that I have personally examined and am familiar with the information in this and all attached documents and based on my inquiry of the individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Jason Gidter (Print name) consultant to owner (Specify if owner, operator, representative)  
[Signature] (Signature) 20 April 2015 (Date)  
5438 Shanna Dr (Street Address) Juno, AR 72801 (City, State, Zip)

**16. ATTACHMENTS**

Please check the boxes showing any comprehensive reports attached to this summary:

- Site Assessment Report (include if no release investigation is needed)
- Release Investigation Report (include if release investigation is needed)



# Appendix G

## Tabulated Data Results

**Table 2**  
**Marine View Building 675 gallon UST Closure Laboratory Analytical Results**

Sample ID	ADEC	CZ-01	CZ-02	CZ-03	CZ-04	CZ-05	CZ-06	CZ-07	CZ-08*
<b>Description</b>	Cleanup Level	under 675 gal. fill	between slabs, piping	East Side, bottom, fill end	MVB side, 7ft bgs.	Parking Lot side 6.5 ft bgs	West side, 6.5 ft bgs	Bottom Center, 7.2 ft bgs	dup of CZ07
<b>Sample Collection Date</b>		3/24/15	3/24/15	3/24/15	3/25/15	3/25/15	3/25/15	3/25/15	3/25/15
<b>Analyte</b>		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Petroleum Fractions</b>									
DRO	250	8480	12000	197	158	1010	6080	7790	4970
GRO	300	18.7	36.8	2.16J	1.47u	1.13J	23.2	43.2	44.5
RRO	11000	566	469	123	62.5	151	239	510	329
<b>VOCs</b>									
Benzene	0.025	0.007U	0.007U	0.008U	0.007U	0.006U	0.007U	0.008U	0.008U
Toluene	6.5	0.0330	0.0261	0.0175J	0.0228J	0.0128J	0.0181J	0.0235J	0.0317J
Ethylbenzene	6.9	0.014U	0.0332	0.0165U	0.0147U	0.0126U	0.0175J	0.0463	0.0434
o-Xylene		0.1760	0.2220	0.0165U	0.0147U	0.0126U	0.396	0.935	0.296
P & M Xylene		0.1310	0.0568	0.033U	0.0293U	0.0252U	0.0819	0.269	0.322
Total Xylenes	63	0.3070	0.2788	0.0495U	0.0440U	0.0378U	0.4779	1.2040	0.6180

# U	Analyte not detected at the listed limit of quantitation (LOQ)
Shade	Analyte detected in concentration below the ADEC Cleanup level
Bold	Analyte detected in concentration exceeding the ADEC Cleanup level
CZ-08*	Duplicate pair to CZ-07

**Table 3**  
**Marine View Building 15K UST Closure Laboratory Analytical Results**

Sample ID	ADEC	CZ-09	CZ-10	CZ-11**	CZ-12	CZ-13
<b>Description</b>	Cleanup Level	15K tank, 11 ft bgs	15K tank, fill end, 7 ft bgs	dup of CZ-10	15K tank, vent end	15K tank, center
<b>Sample Collection Date</b>		3/26/15	3/26/15	3/26/15	3/26/15	3/26/15
<b>Analyte</b>		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Petroleum Fractions</b>						
DRO	250	259	7500	7410	1260	221
GRO	300	2.06J	37.3	57.8	1.69J	0.706J
RRO	11000	103	255	268	70.7	173
<b>VOCs</b>						
Benzene	0.025	0.007U	0.005U	0.005U	0.005U	0.005U
Toluene	6.5	0.0708	0.0338	0.0423	0.0200J	0.0112J
Ethylbenzene	6.9	0.0147U	0.0459	0.0830	0.0112U	0.0098U
o-Xylene		0.0326	0.530	0.651	0.0112U	0.0098U
P & M Xylene		0.0294U	0.538	0.738	0.0223U	0.0196U
Total Xylenes	63	0.0620	1.0680	1.3890	0.0335U	0.0294U

# U	Analyte not detected at the listed limit of quantitation (LOQ)
Shade	Analyte detected in concentration below the ADEC Cleanup level
Bold	Analyte detected in concentration exceeding the ADEC Cleanup level
CZ-11**	Duplicate pair to CZ-10

**Table 4**  
**Marine View Building PAH Laboratory Analytical Results**

Sample ID	ADEC	CZ-07	CZ-11
Description	Cleanup Level	Bottom Center, 7.2 ft bgs	dup of CZ07
Sample Collection Date		3/25/15	3/26/15
Analyte		mg/kg	mg/kg
<b>PAHs</b>			
1-methylnaphthalene	6.2	0.857	<b>11.2</b>
2-methylnaphthalene	6.1	0.333	1.880
acenaphthene	180	0.623	0.875
acenaphthylene	180	0.068J	0.130
anthracene	3000	0.414	0.452
benzo(a)anthracene	3.6	0.241	0.194
benzo(a)pyrene	2.1	0.559	0.169
benzo(b)fluoranthene	12	1.080	0.383
benzo(g,h,i)pyrene	38700	0.667	0.202
benzo(k)fluoranthene	120	0.055U	0.054U
chrysene	360	0.558	0.241
dibenzo(a,b)anthracene	4	0.163	0.040U
fluoranthene	1400	0.159	0.470
fluorene	220	0.445	1.060
indeno(1,2,3-c,d)pyrene	41	0.532	0.124
naphthalene	20	0.451	0.668
phenanthrene	3000	0.713	2.250
pyrene	1000	0.487	0.506

# U	Analyte not detected at the listed limit of quantitation (LOQ)
Shade	Analyte detected in concentration below the ADEC Cleanup level
<b>Bold</b>	Analyte detected in concentration exceeding the ADEC Cleanup level



# Appendix G

## Tabulated Data Results

**Table 2**  
**Marine View Building 675 gallon UST Closure Laboratory Analytical Results**

Sample ID	ADEC	CZ-01	CZ-02	CZ-03	CZ-04	CZ-05	CZ-06	CZ-07	CZ-08*
<b>Description</b>	Cleanup Level	under 675 gal. fill	between slabs, piping	East Side, bottom, fill end	MVB side, 7ft bgs.	Parking Lot side 6.5 ft bgs	West side, 6.5 ft bgs	Bottom Center, 7.2 ft bgs	dup of CZ07
<b>Sample Collection Date</b>		3/24/15	3/24/15	3/24/15	3/25/15	3/25/15	3/25/15	3/25/15	3/25/15
<b>Analyte</b>		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Petroleum Fractions</b>									
DRO	250	8480	12000	197	158	1010	6080	7790	4970
GRO	300	18.7	36.8	2.16J	1.47u	1.13J	23.2	43.2	44.5
RRO	11000	566	469	123	62.5	151	239	510	329
<b>VOCs</b>									
Benzene	0.025	0.007U	0.007U	0.008U	0.007U	0.006U	0.007U	0.008U	0.008U
Toluene	6.5	0.0330	0.0261	0.0175J	0.0228J	0.0128J	0.0181J	0.0235J	0.0317J
Ethylbenzene	6.9	0.014U	0.0332	0.0165U	0.0147U	0.0126U	0.0175J	0.0463	0.0434
o-Xylene		0.1760	0.2220	0.0165U	0.0147U	0.0126U	0.396	0.935	0.296
P & M Xylene		0.1310	0.0568	0.033U	0.0293U	0.0252U	0.0819	0.269	0.322
Total Xylenes	63	0.3070	0.2788	0.0495U	0.0440U	0.0378U	0.4779	1.2040	0.6180

# U	Analyte not detected at the listed limit of quantitation (LOQ)
Shade	Analyte detected in concentration below the ADEC Cleanup level
Bold	Analyte detected in concentration exceeding the ADEC Cleanup level
CZ-08*	Duplicate pair to CZ-07

**Table 3**  
**Marine View Building 15K UST Closure Laboratory Analytical Results**

Sample ID	ADEC	CZ-09	CZ-10	CZ-11**	CZ-12	CZ-13
<b>Description</b>	Cleanup Level	15K tank, 11 ft bgs	15K tank, fill end, 7 ft bgs	dup of CZ-10	15K tank, vent end	15K tank, center
<b>Sample Collection Date</b>		3/26/15	3/26/15	3/26/15	3/26/15	3/26/15
<b>Analyte</b>		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>Petroleum Fractions</b>						
DRO	250	259	7500	7410	1260	221
GRO	300	2.06J	37.3	57.8	1.69J	0.706J
RRO	11000	103	255	268	70.7	173
<b>VOCs</b>						
Benzene	0.025	0.007U	0.005U	0.005U	0.005U	0.005U
Toluene	6.5	0.0708	0.0338	0.0423	0.0200J	0.0112J
Ethylbenzene	6.9	0.0147U	0.0459	0.0830	0.0112U	0.0098U
o-Xylene		0.0326	0.530	0.651	0.0112U	0.0098U
P & M Xylene		0.0294U	0.538	0.738	0.0223U	0.0196U
Total Xylenes	63	0.0620	1.0680	1.3890	0.0335U	0.0294U

# U	Analyte not detected at the listed limit of quantitation (LOQ)
Shade	Analyte detected in concentration below the ADEC Cleanup level
Bold	Analyte detected in concentration exceeding the ADEC Cleanup level
CZ-11**	Duplicate pair to CZ-10

**Table 4**  
**Marine View Building PAH Laboratory Analytical Results**

Sample ID	ADEC	CZ-07	CZ-11
Description	Cleanup Level	Bottom Center, 7.2 ft bgs	dup of CZ07
Sample Collection Date		3/25/15	3/26/15
Analyte		mg/kg	mg/kg
<b>PAHs</b>			
1-methylnaphthalene	6.2	0.857	<b>11.2</b>
2-methylnaphthalene	6.1	0.333	1.880
acenaphthene	180	0.623	0.875
acenaphthylene	180	0.068J	0.130
anthracene	3000	0.414	0.452
benzo(a)anthracene	3.6	0.241	0.194
benzo(a)pyrene	2.1	0.559	0.169
benzo(b)fluoranthene	12	1.080	0.383
benzo(g,h,i)pyrene	38700	0.667	0.202
benzo(k)fluoranthene	120	0.055U	0.054U
chrysene	360	0.558	0.241
dibenzo(a,b)anthracene	4	0.163	0.040U
fluoranthene	1400	0.159	0.470
fluorene	220	0.445	1.060
indeno(1,2,3-c,d)pyrene	41	0.532	0.124
naphthalene	20	0.451	0.668
phenanthrene	3000	0.713	2.250
pyrene	1000	0.487	0.506

# U	Analyte not detected at the listed limit of quantitation (LOQ)
Shade	Analyte detected in concentration below the ADEC Cleanup level
<b>Bold</b>	Analyte detected in concentration exceeding the ADEC Cleanup level



# Appendix H

## Field Notes



2

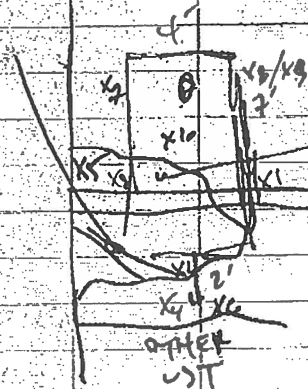
56 15-1057

3/20/11

600g tank under 4" concrete slab  
then a 2' rocky fill then more  
concrete over top of tank

PS-01 - adjacent fill pipe  
O.I. P10 / no screen

1" copper  
11-11



not high  
D.D.M.  
Dint

starting @  
12" (concrete)  
AS copper  
seawater 11-63  
P.10 x1-78 @1'

cutting pipe set back out  
point out of the way sheet  
if will be replacing

x2-94 @1'  
x3-112 @1'  
x4-145 @3'  
x5-62 @16"

tank is 3' below grade of concrete

noting

Jan 12 is between a angle in A) rock  
fill over a slope of 1/2 way

Pin

X6-8405'

X7-4204'

X8-7504'

X9-6206'

X10-2207'



10.92

G.C. No.

7.5

4

3/75 16 15-1007 0.38 Barry

0730 - nearby @ v. of 175

0830 - getting prepared for tank entry  
at 1500

1005 - AIR READING in UST is

58 ppm, 0% LEL gave green  
light for entry hole to be cut  
using reciprocating saw

## Small Tank

		PID
C201	under cover fall	125
C202	Between slabs / piping	138
C203	E. Side Bottom (fill tank)	17
C204	NWB side - 7'	3.2
C205	Parking lot side - 6.8	44
C206	W. Side - 6.5	81
C207	Bottom center - 7.2'	110
06	Duplicate of C207	—

## Big Tank

C209	<del>15K</del> 15K R side - 11'	31
C210	15K E - 7	130
C211	Duplicate of C210	—
C212	15K v. end	38
C213	15K center	12



# **Appendix I**

## **Soil Disposal Receipts**



425 Outer Springer Loop Rd, Palmer, AK, 99645  
 Phone: (907) 258-1558, Fax: (907) 746-3651

PLEASE REMIT ACH PAYMENT TO:  
 NRC Alaska, LLC  
 Bank of America Merrill Lynch  
 ABA 0210 0032 2  
 A/C# 483043670250  
 A/C Name: NRC Alaska, LLC

PLEASE REMIT CHECK PAYMENT TO:  
 NRC Alaska, LLC  
 P.O. Box 740027  
 Los Angeles, CA 90074-0027

Customer: NORTECH, INC.  
2400 COLLEGE RD  
Fairbanks, AK, 99709

Invoice Date: 31-OCT-15  
 Job Description: WASTE DISPOSAL, CONTAMINATED SOIL.

Job Location: MARINE VIEW BUILDING, JUNEAU  
Juneau, AK, 99801

Invoice #: 631471  
 NRC Job #: 98146  
 Customer PO#: 15-1057  
 Reference #: \_\_\_\_\_

Contact: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_  
 Terms: 30 NET

Job Date (s): 09/21/15

Progress Billing: No  
 Final Billing: Yes

Description(See Attached Details)	EXTENDED PRICE
DISPOSAL - INTERNAL	85.00
OTHER NRC	3,683.09
SUBCONTRACTOR	2,554.20
INVOICE SUBTOTAL	6,322.29
SALES TAX	632.22
INVOICE TOTAL	6,954.51

THANK YOU FOR YOUR BUSINESS

Currency: USD

Direct Phone: For billing questions, please contact  
 Email: Amy Durgeloh at (907) 761-6677

FED ID #: 26-0025054

A 1.5% per month finance charge will be assessed for all past due invoices to include the flat late fee amount.



INVOICE DETAILS SHEET

JOB NO 98146

INVOICE NO 631471

Page No 2/2

DISPOSAL - INTERNAL

Date	Name/Item(s)	Description	Billing Code	UOM	Qty	Rate	Amount
21-SEP-15	AD-64000 PROFILE FEE			Each	1	85.00	85.00

Sub Total 85.00

OTHER NRC

Date	Name/Item(s)	Description	Billing Code	UOM	Qty	Rate	Amount
21-SEP-15	AF-60001 ADMINISTRATIVE FEE			Each	1	65.00	65.00
21-SEP-15	AF-76000 SHIPPING CHARGE	SHIPPING DOCUMENTS		Each	1	51.53	51.53
21-SEP-15	AT-90202 TRANSPORTATION			Each	1	3,445.16	3,445.16
21-SEP-15	AT-90214 TRANSPORTATION			Each	1	71.40	71.40
21-SEP-15	AT-91002 DOC. ALT. DISPOSAL	98146A / EMERALD SERVICES		Each	1	50.00	50.00

Sub Total 3,683.09

SUBCONTRACTOR

Date	Name/Item(s)	Description	Billing Code	UOM	Qty	Rate	Amount
21-SEP-15	AD-00060 ALTERNATE DISPOSAL-1	DIESEL CONTAMINATED SOIL / 98146A		Yard	6	425.70	2,554.20

Sub Total 2,554.20

Grand Total 6,322.29

CUSTOMER NAME	NORTECH		NUMBER				
JOB NUMBER	98146		PM NAME	LEAH VIN ZANT			
JOB DESCRIPTION	WASTE DISPOSAL		JOB PO #	15-1057			
DESCRIPTION OF SERVICE	DATE	QTY.	UNIT OF MEASURE	UNIT PRICE	TOTAL AMOUNT	MANIFEST & PO #	SURC
<b>LABOR</b>							
PROJECT ADMINISTRATOR (ST)	11/05/15	1.00	HOURS	\$65.00	\$ 65.00		
<b>DISPOSAL</b>							
DIESEL CONTAMINATED SOIL	09/25/15	6.00	CY BAGS	\$425.70	\$ 2,554.20	98146A	
<b>TRANSPORTATION</b>					\$ -		
JUNEAU TO SEATTLE	09/25/15	1.00	EACH	\$3,445.16	\$ 3,445.16	AML INVOICE 375357	
SEATTLE TO TSDF	09/25/15	1.00	EACH	\$71.40	\$ 71.40		
<b>MISCELLANEOUS</b>							
ALTERNATE FACILITY PROFILE FEE	09/16/15	1.00	EACH	\$85.00	\$ 85.00		
SHIPPING - DOCUMENTS	09/21/15	1.00	EACH	\$51.53	\$ 51.53	FEDEX PO 41321	
ALTERNATE FACILITY DOCUMENTATION FEE	09/21/15	1.00	EACH	\$50.00	\$ 50.00		
					\$ 6,322.28		\$ -

## CLOSURE CHECKLIST

A certified UST worker who performs or supervises UST closure must complete and sign this checklist.

<b>I CERTIFY:</b> (INITIAL)	<b>UST SYSTEM REMOVAL</b>
[Signature]	I was on the job site for all work requiring certification of permanent closure
[Signature]	Contents of tank and piping were emptied
[Signature]	Tank was purged of flammable vapors or the atmosphere was made inert
[Signature]	UST system(s) were cleaned in accordance with API 1604
[Signature]	Tanks, piping and vent lines were removed, labeled, and properly disposed
[Signature]	All-accessible holes were filled, plugged or capped
<b>I CERTIFY:</b> (INITIAL)	<b>TANK IN-GROUND CLOSURE</b>
	I was on the job site for all work requiring certification of permanent closure
	Contents of tank and piping were emptied
	Tank was purged of flammable vapors or the atmosphere was made inert
	UST system(s) were cleaned in accordance with API 1604
	Tank was filled with solid inert material
	Piping was removed, and all accessible holes were filled, plugged or capped
<b>I CERTIFY:</b> (INITIAL)	<b>CHANGE IN SERVICE</b>
	I was on the job site for all work requiring certification of permanent closure
	Contents of tank and piping were emptied
	Tank was purged of flammable vapors or the atmosphere was made inert
	UST system(s) were cleaned in accordance with API 1604
	UST system(s) were disconnected from regulated use
	Piping was removed from connection with regulated use
	All accessible holes except vent lines were plugged or capped
	I understand that a certified UST worker who fails to submit this portion of the form may be subject to license suspension or revocation.

I certify the information provided above is true and accurate:

ALASKA UST DECOMMISSIONER CERTIFICATION #

EXPIRATION DATE:

(Print name)

(Phone)

*Gore Cheeseman*

(Signature)

(Date)

*[Signature]*

*3-26-15*

The Owner is required to complete and sign page 1 of the *Post-Closure Form #18-0505*. The UST Decommissioner who supervised the closure signs page 2. Submit the form within 30 days of closure to the ADEC UST Office.

RETURN THIS SIGNED FORM TO: ADEC UST OFFICE 555 CORDOVA STREET ANCHORAGE, ALASKA 99501-2617

**QUESTIONS?** CALL: 907-269-7679 OR 907-269-8149 FAX: 907-269-7687

OR GO TO OUR WEB PAGE AT: [HTTP://WWW.DEC.STATE.AK.US/SPAR/IPP/TANKS.HTM](http://www.dec.state.ak.us/spar/ipp/tanks.htm)



APPENDIX B



ADEC Storage Tank Program
Site Assessment & Release Investigation Summary Form

This document summarizes information from site assessments and release investigation reports that are required by Alaska's Underground Storage Tanks Regulations (18 AAC 78). It is intended to ensure minimum requirements are met when submitting full reports to ADEC. It cannot be substituted for comprehensive site assessment or release investigation reports. Site assessments (as defined in AS 46.03.450) are conducted to check for the presence or absence of petroleum contamination. If contamination of soil or groundwater is identified then a release investigation is required. Site assessments and release investigations must be conducted by a qualified impartial third party (as defined in 18 AAC 78) and in accordance with chapter two of the Underground Storage Tanks Procedures Manual (UST Manual).

How to fill out this form

Type or print in ink the requested information and sign in ink the "signature" blocks on page 7. Please attach this form to the comprehensive site assessment or release investigation report (or include it in the report introduction) and submit it to the nearest ADEC field operations office (Juneau, Anchorage, Fairbanks or Soldotna).

1. GENERAL INFORMATION

Form with handwritten entries: Purpose of Site assessment/Release investigation: Closure; Owner of site: RH Portland, Inc / Brandy James; Operator of site: Marine View Building; Location of site: Marine View Bldg, 230 S Franklin St, Juneau, AK 99801.

Financial Assistance  
Applications filed  
(this site only)

Site assessment/  
tightness test

Tank cleanup

Tank upgrade

Tank closure

Reports on file  
with ADEC:

Tightness test

Closure notice

Other \_\_\_\_\_

## 2. SYSTEM AND TANK STATUS

Describe the status, size, and contents of the tanks that have been at the site:

Tank ID Number: Tank No. 1 Tank No. \_\_\_ Tank No. \_\_\_ Tank No. \_\_\_ Tank No. \_\_\_

Tank status (check one)  
Currently in use

\_\_\_\_\_

Temporarily closure

\_\_\_\_\_

Closed/left in place

\_\_\_\_\_

Closed/removed

X \_\_\_\_\_

Total capacity (gallons)

675 \_\_\_\_\_

Contents (diesel, etc)

DIESEL \_\_\_\_\_

## 3. FIRM CONDUCTING SITE ASSESSMENT AND RELEASE INVESTIGATION

NOATECH

907 586 6813

Name of firm

Phone number

5438 Shawmut Dr Site B

Juneau, AK 99801

Mailing address

City, State, Zip code

Jason Ginter

Jason Ginter

Site assessment supervisor(s)

Person(s) collecting samples

#### 4. SITE HISTORY

Based on the best available knowledge, please check the appropriate box below:

- |                                     |                                     |  |
|-------------------------------------|-------------------------------------|--|
| Y                                   | N                                   |  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Was soil contamination observed or identified?                           |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Was groundwater contamination observed or identified?                    |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Did inventory control or prior tank repairs indicate a possible release? |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Has a tank tightness test been performed on any USTs on the site?        |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Have any of the facility's USTs or piping ever failed a tightness test?  |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Have there been any previous site assessments performed at this site?    |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Do previous site assessments indicate any contamination has occurred?    |

If the answer to any of these questions is yes, please describe (or attach copy of report discussion). Give dates and circumstances, use continuation sheet if necessary:

DETAILED IN SITE ASSESSMENT REPORT

#### 5. FIELD SCREENING ANALYSIS

Date(s) of field screening: 24 & 25 March, 2015  
Temperature(s) during screening: 38-50°F  
Estimated wind speeds: 10-20 knots  
Weather (~~clear~~, raining, etc): clear

Type of field detection instrument used: P.I.D.  
Brand: Mini Rae Lite 4 gas  
Model: PGM 6202  
Date calibrated: 24 & 25 March 2015

Number of tests: 20  
Range of results: 3.2 - 145

If an instrument wasn't used, what field detection method was used? \_\_\_\_\_

Number of tests: \_\_\_\_\_  
Range of results: \_\_\_\_\_

## 6. COLLECTION OF SOIL SAMPLES

### For site assessments done for USTs remaining in place

Check the appropriate boxes below (if not applicable, leave blank):

- | Y                        | N                        |  |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Were samples taken from borings (or test pits) within 5 feet of the UST? |
| <input type="checkbox"/> | <input type="checkbox"/> | Were samples collected from within 2 feet below the bottom of the UST?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Were dispensers connected to the UST system?                             |
| <input type="checkbox"/> | <input type="checkbox"/> | Were samples taken from borings (or test pits) adjacent to dispensers?   |
| <input type="checkbox"/> | <input type="checkbox"/> | Were samples taken from borings (or test pits) adjacent to piping?       |

How many borings/pits were made? \_\_\_\_\_ How many samples were analyzed? \_\_\_\_\_

### For site assessments done at excavation and removal of USTs:

Check the appropriate boxes below (if not applicable, leave blank):

- | Y                                   | N                        |   |
|-------------------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were any areas of obvious contamination identified or observed?   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were samples taken from areas of obvious contamination?   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were at least two discrete analytical samples taken from excavated pit area?  |
| <input type="checkbox"/>            | <u>n/a</u>               | Was at least one sample taken from below each dispensing island's piping?   |
| <input type="checkbox"/>            | <u>n/a</u>               | Was at least one sample taken from the piping trench?   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were the samples referenced above collected taken from native soil within two feet below the bottom of the tank pit or dispenser/piping trench? |
| <input type="checkbox"/>            | <u>n/a</u>               | If multiple tanks were removed, were at least three samples collected?  |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were additional samples collected for each 250 square feet of excavated pit over 250 square feet?   |

Number of distinct points sampled: 7 Estimated excavation's surface area: 120 ft<sup>2</sup>

### For all site assessments

Check the appropriate boxes below:

- | Y                                   | N                        |   |
|-------------------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were field duplicate samples collected and analyzed?                    |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were all samples kept at the appropriate temperature until analysis?    |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Were all samples extracted & analyzed within recommended holding times? |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Did chain-of-custody/transfer logs accompany samples to laboratory?     |

## 7. LABORATORY ANALYSIS OF SOIL SAMPLES

(see Table 1 of UST Procedures Manual or Table G of 18 AAC 78.800(b))

Identify the possible contaminants (gasoline, BTEX, diesel, etc.): Diesel, BTEX

Please list the analytical methods used to detect these contaminants in the soil samples, the number of samples analyzed by each method, and the range of results for each method:

Possible product	Analytical method	Number of samples	Range of results	Location(s) of sample point(s) w/ highest level of contamination
<u>Diesel</u>	<u>AK102</u>	<u>8</u>	<u>158-12,000</u>	<u>Remnant soils, C202</u>
<u>Gasoline</u>	<u>AK101</u>	<u>8</u>	<u>ND-44.5</u>	<u>C208</u>
<u>Residual</u>	<u>AK103</u>	<u>8</u>	<u>62-566</u>	<u>under fill, C201</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

## 8. GROUNDWATER INVESTIGATION

Check the appropriate boxes below:

- Y     N    Was groundwater encountered during the excavation or drilling work?  
        Were borings drilled/pits dug at least five feet below the USTs bottom?  
        Is groundwater or seasonal high water table known or suspected to exist within five feet of the bottom of the USTs?  
        Were samples taken from borings drilled/test pits dug to this water level?  
 n/a    Were all these samples analyzed within recommended holding times?

How many groundwater/saturated-soil samples were collected & analyzed? 0

How many of these samples were taken from the top 6" of water table? 0

How many field QC samples were analyzed? 1 Trip blanks    2 Duplicates    0 Decon blanks

**9. LABORATORY ANALYSIS OF GROUNDWATER SAMPLES**

(see Table I of UST Procedures Manual or Table G of 18 AAC 78.800(b))

Identify the possible contaminants at the site: DIESEL

Identify the analytical methods used to detect these contaminants in the water samples, the number of samples analyzed by each method, and the range of results for each method:

Analytical method	Number of samples	Range of results (ppm)	Location(s) of sample point with highest level of contamination
	<u>0</u>		<u>N/A</u>

**10. DISPOSAL OF MATERIALS**

Check the appropriate boxes below (if not applicable, leave blank):

- Y  N  Were tanks cleaned in accordance with API 2015 (Cleaning Petroleum Storage Tanks)?
- Were the tanks and piping removed and disposed in accordance with API 1604 (Removal and disposal of used petroleum Storage tanks)?

Where were the tanks and piping disposed? Skullon Recycling

Where was the tank sludge and rinsewater disposed? CRJ HAW collection

**11. STOCKPILES**

Check the appropriate boxes below:

- Y  N  Is any soil stockpiled at the site?
- N/A Are soils stockpiled in accordance with 18 AAC 78.311?

## 12. RELEASE INVESTIGATION

Check the appropriate box below:

Y     N  
 — Was any petroleum contamination identified during site assessment?  
(Answer "yes" if any evidence a release occurred; if no, proceed to item 13)

If contamination was found, what was matrix score for site? \_\_\_\_\_  
(Attach completed matrix score sheet to this form)

When did release occur? unknown    When was release confirmed? 3/25/15  
(Date & time)    (Date & time)

When was ADEC notified? 3/25/15 0815    List ADEC staff notified: Robert Weiner  
(Date & time)    (Name)

What is status of UST that prompted the investigation?    \_\_\_\_\_    \_\_\_\_\_    \_\_\_\_\_     \_\_\_\_\_  
In use    Out-of-use, product still in system    Out-of-use; system empty    Permanently closed

Briefly describe ( or attach copy of report discussion) the steps taken to prevent further migration of the release and steps taken to monitor and mitigate fire and safety hazards: UST has been emptied & removed

---

---

---

## 13. SITE SKETCH

Sketch the site in the space below. Alternatively, attach a site map to the back of the form. The sketch (or accompanying narrative) should include the following information:

- locations of all USTs, piping, and dispensers
- distances from tanks to nearby structures
- property line locations
- location and dimensions of excavation(s)
- type of backfill used to surround system
- locations of any known historical releases
- locations of any observed contamination
- location of any boreholes and test pits
- soil types
- field screening locations and readings
- sampling locations, depths, & sample ID numbers
- water wells and monitoring wells (if present)
- depth to groundwater/seasonal high groundwater
- locations of any stockpiled soils
- north arrow
- bar scale (specify feet or meters)

For release investigations, in addition to the above information, show the groundwater gradient; surface drainages (including potential hydraulic connections with groundwater) and utility trenches.

## 14. QUALITY ASSURANCE

Check the appropriate boxes below:

- Y N  
  Were there deviations from Chapter 2 of the UST Procedures Manual? (Note that any deviations must be documented in a section of the comprehensive report)
- Is a field quality control summary included in the reports?
- Is a laboratory QC summary included in the report for all samples used to verify cleanup levels have been met?

## 15. CERTIFICATION

The following certification is to be signed by the assessment firm's principal investigator or Quality Assurance Officer:

I certify that except as specifically noted in this report, all statements and data appearing in this report are in conformance with the provisions of Chapter 2 of the UST Procedures Manual.

Jason Gitter  
(Print name) Principal  
(Title)  
[Signature]  
(Signature) 20 April 2015  
(Date)

The following certification is to be signed by the UST owner/operator (or designated representative):

I certify that I have personally examined and am familiar with the information in this and all attached documents and based on my inquiry of the individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Jason Gitter  
(Print name) consultant to owner  
(Specify if owner, operator, representative)  
[Signature]  
(Signature) 20 April 2015  
(Date)  
5438 Shavut Dr  
(Street Address) Juno, AR 72801  
(City, State, Zip)

## 16. ATTACHMENTS

Please check the boxes showing any comprehensive reports attached to this summary:

- Site Assessment Report (include if no release investigation is needed)
- Release Investigation Report (include if release investigation is needed)



425 Outer Springer Loop Rd, Palmer, AK, 99645  
 Phone: (907) 258-1558, Fax: (907) 746-3651

PLEASE REMIT ACH PAYMENT TO:  
 NRC Alaska, LLC  
 Bank of America Merrill Lynch  
 ABA 0210 0032 2  
 A/C# 483043670250  
 A/C Name: NRC Alaska, LLC

PLEASE REMIT CHECK PAYMENT TO:  
 NRC Alaska, LLC  
 P.O. Box 740027  
 Los Angeles, CA 90074-0027

Customer: NORTECH, INC.  
 2400 COLLEGE RD  
 Fairbanks, AK, 99709

Invoice Date: 31-OCT-15  
 Job Description: WASTE DISPOSAL, CONTAMINATED SOIL.

Job Location: MARINE VIEW BUILDING, JUNEAU  
 Juneau, AK, 99801

Invoice #: 631471  
 NRC Job #: 98146  
 Customer PO#: 15-1057  
 Reference #:

Contact:  
 Phone:  
 Fax:  
 E-Mail:  
 Terms: 30 NET

Job Date (s): 09/21/15

Progress Billing: No  
 Final Billing: Yes

Description(See Attached Details)	EXTENDED PRICE
DISPOSAL - INTERNAL	85.00
OTHER NRC	3,683.09
SUBCONTRACTOR	2,554.20
THANK YOU FOR YOUR BUSINESS	
INVOICE SUBTOTAL	6,322.29
SALES TAX	632.22
INVOICE TOTAL	6,954.51

Currency: USD

Direct Phone: For billing questions, please contact  
 Email: Amy Durgeloh at (907) 761-6677

FED ID #: 26-0025054

A 1.5% per month finance charge will be assessed for all past due invoices to include the flat late fee amount.



INVOICE DETAILS SHEET

JOB NO 98146

INVOICE NO 631471

Page No 2/2

DISPOSAL - INTERNAL

Date	Name/Item(s)	Description	Billing Code	UOM	Qty	Rate	Amount
21-SEP-15	AD-64000 PROFILE FEE			Each	1	85.00	85.00

Sub Total 85.00

OTHER NRC

Date	Name/Item(s)	Description	Billing Code	UOM	Qty	Rate	Amount
21-SEP-15	AF-60001 ADMINISTRATIVE FEE			Each	1	65.00	65.00
21-SEP-15	AF-76000 SHIPPING CHARGE	SHIPPING DOCUMENTS		Each	1	51.53	51.53
21-SEP-15	AT-90202 TRANSPORTATION			Each	1	3,445.16	3,445.16
21-SEP-15	AT-90214 TRANSPORTATION			Each	1	71.40	71.40
21-SEP-15	AT-91002 DOC. ALT. DISPOSAL	98146A / EMERALD SERVICES		Each	1	50.00	50.00

Sub Total 3,683.09

SUBCONTRACTOR

Date	Name/Item(s)	Description	Billing Code	UOM	Qty	Rate	Amount
21-SEP-15	AD-00060 ALTERNATE DISPOSAL-1	DIESEL CONTAMINATED SOIL / 98146A		Yard	6	425.70	2,554.20

Sub Total 2,554.20

Grand Total 6,322.29

SKOOKUM SALES AND RECYCLING  
 PO BOX 33359  
 JUNEAU, AK 99803

# Invoice

Invoice #	Date
408	11/12/2015
Due Date	
12/12/2015	

<b>Bill To</b>
GR CHEESMAN CONSTRUCTION 3920 NORTH DOUGLAS HWY JUNEAU, AK 99801



Service Dates				Via	Terms
05/02/2015		RECYCLED MATIERIALS		SKOOKUM	Net 30
Quantity	Item Code	Description	Price Each	Amount	
1	RECYCLED FUEL...	MARINE VIEW BUILDING	0.00	0.00	
1	RECYCLED PIPE	MARINE VIEW BUILDING	0.00	0.00	

Thank you for your business.

**Total** \$0.00

Phone# 907-723-7579	Fax # 907-463-3008	June@skookumrecycling.net	www.skookumrecycling.net
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