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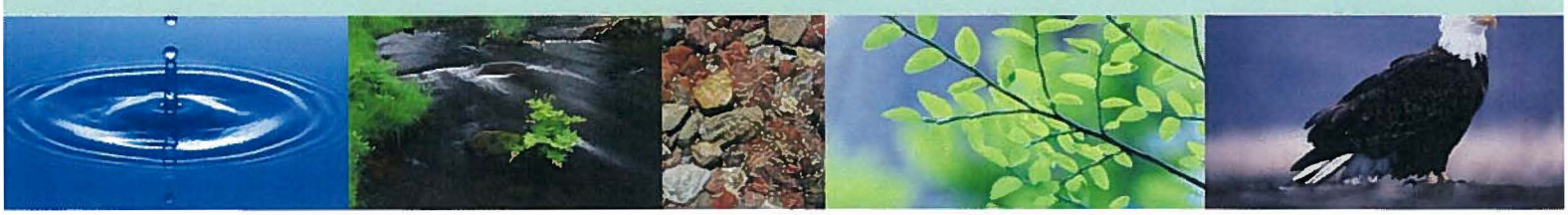
FINAL TECHNICAL MEMORANDUM FOR SECOND QUARTER GROUNDWATER SAMPLING REPORT UNDERGROUND STORAGE TANK 21 NAS PENSACOLA FL

5/1/2011

TETRA TECH

Comprehensive Long-term Environmental Action Navy

CONTRACT NUMBER N62470-08-D-1001



Technical Memorandum

Second Quarterly Groundwater Sampling Report Underground Storage Tank 21

Naval Air Station Pensacola
Pensacola, Florida

Contract Task Order JM01

May 2011

NAVFAC
Naval Facilities Engineering Command
NAVFAC SOUTHEAST

NAS Jacksonville
Jacksonville, Florida 32212-0030

FINAL

TETRA TECH NUS, Inc.

SECOND QUARTERLY GROUNDWATER MONITORING TECHNICAL MEMORANDUM FOR UNDERGROUND STORAGE TANK (UST) SITE 21

NAVAL AIR STATION PENSACOLA PENSACOLA, FLORIDA

COMPREHENSIVE LONG-TERM ENVIRONMENTAL ACTION-NAVY (CLEAN) CONTRACT

Submitted to:
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CONTRACT NUMBER N62470-08-D-1001
CONTRACT TASK ORDER JM01

MAY 2011

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ACRONYMS

AST	Aboveground Storage Tank
BOD	Biochemical oxygen demand
CLEAN	Comprehensive Long-Term Environmental Action Navy
CTO	Contract Task Order
COC	Chemicals of concern
COD	Chemical oxygen demand
DFM	Diesel Fuel Marine
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FL-PRO	Florida Petroleum Range Organics
GCTL	Groundwater Cleanup Target Level
HAS	Hollow Stem Auger
LNAPL	Light non-aqueous phase liquid
MNA	Monitored natural attenuation
MW	Monitoring Wells
NADC	Natural Attenuation Default Source Concentration
NAS	Naval Air Station
NEESA	Naval Energy and Environmental Support Activity
NTU	Nephelometric turbidity units
ORP	Oxidation/reduction potential
PAH	Polynuclear aromatic hydrocarbon
RAP	Remedial Action Plan
RBCA	Risk Based Corrective Action
RMO	Risk Management Option
SAP	Sampling and Analysis Plan
TRPH	Total recoverable petroleum hydrocarbon
Tetra Tech	Tetra Tech NUS, Inc.
µg/L	micrograms per liter
UFP	Uniform Federal Policy
UST	Underground Storage Tank
VOC	Volatile organic compound

1.0 INTRODUCTION

Tetra Tech NUS, Inc. (Tetra Tech) has prepared this technical memorandum (memo) for the Underground Storage Tank (UST) Site 21 located at Naval Air Station (NAS) Pensacola, Florida. This memo summarizes the second quarterly groundwater monitoring sampling event and evaluates the data collected in accordance with the Uniform Federal Policy (UFP) Sampling and Analysis Plan (SAP) Quarterly Groundwater Sampling UST 21, NAS Pensacola, Florida. This memo was prepared under the Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract Number N62470-08-D-1001, Contract Task Order (CTO) JM01.

2.0 SITE BACKGROUND

UST Site 21 is a former "berthing pier area" with fueling capabilities. UST Site 21 is located within the confines of NAS Pensacola and approximately ¼-mile south of Chevalier Field, as shown in Figure 1. The berthing pier area is situated along the Pensacola Bay shoreline and consists of an approximately 30-foot wide concrete loading area immediately adjacent to the pier seawall, surrounded by a large asphalt parking lot.

Previously, a 1,300,000-gallon fuel oil aboveground storage tank (AST) (No. 354) with a concrete containment wall was located adjacent to and west of the pier. The AST was removed on November 17, 1993. This AST was used to contain Navy Special Fuel Oil, Distillate Diesel Fuel Marine (DFM), and JP-5 Jet Fuel from 1926 until the mid 1980's [Naval Energy and Environmental Support Activity (NEESA), 1983]. Pipelines extended approximately 1,000 feet north from the fuel oil AST, presumably north toward the berthing pier (structure (Pier) No. 303) and possibly to other ship fueling areas. Therefore, the site extends approximately 1,000 feet north of the former AST location and interfaces with Building 707, 52, 18, and 2573.

In 1981, a leak was discovered in the fuel pipeline leading to the berthing pier. According to available information, the lines had broken during the years of usage or were penetrated while a contractor was driving piles. The soil in the area of the leak appeared soaked with fuel oil, reportedly Navy Special Fuel Oil or DFM. An unknown volume of soil was removed and properly disposed of in 1981 (NEESA, 1983).

UST Site 21 has been investigated through the Site Assessment and Remedial Action process and includes a series of sampling events conducted between 1996 and 2007. Tetra tech competed two groundwater sampling events at the site and reported concentrations of benzene, vinyl chloride, total xylenes, acenaphthene, dibenz(a,h)anthracene, 1-methylnnaphthalene, 2-methylnaphthalene, naphthalene, Total Recoverable Petroleum Hydrocarbons (TRPH), and lead at concentrations exceeding the Florida Groundwater Cleanup Target Levels (GCTLs).

The Remedial Action Plan (RAP) for IR Site 20 Berthing Pier (Pier 303), now identified as UST Site 21, stated that light non-aqueous phase liquid (LNAPL) in monitoring wells should be removed using

adsorbent socks. The adsorbent socks were to be used until LNAPL was no longer recovered. CH2M Hill Inc. implemented the RAP and began LNAPL recovery using the adsorbent socks and completed groundwater sampling events in 2007 and 2008. The adsorbent socks were reported to be ineffective since LNAPL recovery was reported at only 4 gallons in 2005 and 5 gallons in 2007. The LNAPL recovery was interrupted in late 2005 and 2006 due to Hurricane Ivan landfall. Results from groundwater sampling events at UST Site 21 indicate the presence of isopropylbenzene, vinyl chloride, acenaphthene, benzo(a)anthracene, benzo(k)fluoranthene, dibenz(a,h)anthracene, 1-methyl naphthalene, 2-methyl naphthalene, naphthalene, TRPH and lead.

Based on current site conditions and the Florida Department of Environmental Protection (FDEP) promulgation of Risk Based Corrective Action (RBCA) Risk Management Options (RMOs), the Navy has decided to initiate additional site characterization to evaluate monitored natural attenuation (MNA) as an appropriate remediation strategy for UST Site 21.

3.0 INVESTIGATION ACTIVITIES

The UST Site 21 monitoring schedule requires quarterly groundwater sampling events during the first year to characterize current site conditions and provide data to develop and evaluate remedial alternatives. The quarterly groundwater sampling events for the 2010-2011 monitoring program were scheduled for November 2010, February 2011, May 2011 and August 2011. The first quarterly sampling event was completed on November 5 to 14, 2010 and the results are described in the Technical Memorandum dated February 8, 2011 (Tetra Tech, 2011). The second quarterly monitoring sampling event was conducted from February 7 to 11, 2011. The investigation activities for this second quarter included the collection of a synoptic round of water-level measurements and LNAPL measurements, collection of groundwater samples from 21 monitoring wells for Chemicals of Concern (COCs) laboratory analysis, and collection of groundwater samples from five selected monitoring wells to be analyzed for monitored natural attenuation (MNA) parameters. Figure 2 shows the locations of the monitoring wells that are included in the quarterly monitoring plan (Tetra Tech, 2010).

The monitoring wells to be sampled were selected during a data quality objectives meeting conducted in preparation of the UFP SAP. The monitoring wells selected for quarterly monitoring include:

MW-1	MW-4	MW-9
MW-13	MW-14	MW-16
MW-17	MW-23	MW-25*
MW-37	MW-38	MW-40
MW-41*	DMW-54	DMW-55*
DMW-60	DMW-61*	DMW-62
DMW-63	DMW-64	DMW-65*

*selected monitoring wells for MNA parameters

Site-specific health and safety training for all Tetra Tech field staff was provided as part of the site mobilization and daily health and safety briefings were given prior to starting each day.

Groundwater Sampling

Twenty-one monitoring wells were sampled as part of the groundwater monitoring event. Prior to sampling, each monitoring well was purged according to the procedures outlined in the UFP SAP (Tetra Tech, 2010). Purging was done using low-flow purging techniques (discharge rate of less than 1 liter per minute) with a peristaltic pump using Teflon™ tubing dedicated to each monitoring well. Field water quality measurements were taken during well purging with a multi-parameter flowcell according to the procedure outlined in the UFP SAP (Tetra Tech, 2010). Specifically, temperature, pH, specific conductivity, turbidity, dissolved oxygen (DO), and oxidation reduction potential (ORP) measurements were observed and recorded. The YSI® 556 multi-parameter water quality meter, which was used for measuring the field parameters, except turbidity, was calibrated prior to each day's sampling. The LaMotte® 2020e was calibrated daily and used to measure turbidity. Sample log sheets and calibration sheets are included in Appendix A.

The groundwater samples were collected using the procedures specified in Florida Statute (FS) 2200, Groundwater Sampling (FDEP, 2008). After collection, the groundwater samples were placed in a cooler, chilled with ice, and shipped under chain-of-custody protocol to Empirical Laboratories of Nashville, Tennessee. The samples were analyzed for selected volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (USEPA) Method 8260B, selected polycyclic aromatics hydrocarbons (PAHs) by USEPA Method 8270C, TRPH by the Florida- Residual Petroleum (FL-PRO) Method and lead by USEPA Method 6010B. Additionally for this second quarter, groundwater samples were analyzed for selected MNA parameters including alkalinity, anions (chloride, nitrate, nitrite and sulfate), dissolved gasses (hydrogen, methane, nitrogen and carbon dioxide), both total and dissolved iron and manganese, sulfide, biochemical oxygen demand (BOD) and chemical oxygen demand (COD). Groundwater samples to be analyzed for dissolved gasses (hydrogen, methane, nitrogen and carbon dioxide) were sent to Microseeps Lab of Pittsburgh, PA. The chains of custody records and field forms for this sampling event are included in Appendix A.

LNAPL Measurement

Field activities included measuring static water levels and LNAPL thickness in the monitoring wells on March 4, 2011. The groundwater elevation survey was completed to provide information regarding groundwater flow pattern and hydraulic gradients as well as current LNAPL thicknesses. One synoptic round of water-level and LNAPL measurements was conducted at all onsite monitoring wells as close to the low tide as possible.

Groundwater elevations were determined from depth to groundwater measurements made from a top of casing notch on the north side of the monitoring well casing for each monitoring well. The groundwater

elevations were determined using a known elevation for the top of each well casing that was determined relative to an arbitrary reference point elevation of 30 feet above mean sea level. The arbitrary reference point is at the northeast corner of an existing concrete light pole at UST Site 21. Water level and LNAPL thickness measurements were recorded to the nearest 0.01 foot using a water level measuring device that was capable of recording the LNAPL and water interface.

4.0 FIELD TASK MODIFICATIONS

The Field Task Modification Request, which was submitted for the first quarterly groundwater sampling event, also affected the second quarterly groundwater sampling event. Monitoring well MW-13 was included in the UFP SAP as one of the wells to be sampled. However, during the previous field event it was discovered that the cap for monitoring well MW-13 was missing and the monitoring well had been filled with "dirt". Because monitoring well MW-13 could not be sampled monitoring well MW-10 located approximately 50 feet north of MW-13, was sampled in its place.

Additionally, a Field Task Modification Request was issued during this field event because of times at which low tide occurred. During the months of February and March 2011, low tide was predicted (http://tidesandcurrents.noaa.gov/get_predictions.shtml?year=2011&stn=2650+Pensacola) to occur predominantly during nighttime. However on March 4, 2011, two low tides were to occur at 6:37am and 5:07pm with a minimal range in tidal height. Therefore, groundwater levels were recorded centered around the slack tide period, at approximately noon.

5.0 GROUNDWATER MONITORING RESULTS

Groundwater Flow Direction and Elevation

Groundwater surface elevations for each well are listed in Table 1. The measured potentiometric surface at UST Site 21 appeared to be relatively flat with slight flow direction to the east and south toward the surrounding Pensacola Bay. Figure 3 presents the shallow groundwater elevation map with data from March 2011. Figure 4 lists the deep groundwater elevations.

The vertical groundwater gradient was estimated from the groundwater elevations measured in the shallow and deep monitoring well pairs installed at the site. The vertical gradient is determined from the difference in groundwater elevation of the adjacent deep minus the shallow monitoring wells and the vertical separation of the screened intervals of the monitoring wells (Table 2).

Table 2

March 2011 Groundwater Vertical Hydraulic Gradient
UST Site 21
Naval Air Station Pensacola
Pensacola Florida

	MW-2	DMW-54	MW-15	DMW64	MW-1	DMW-65
Relative Groundwater Elevation (ft)	19.43	19.37	19.38	22.05	19.36	16.39
Depth of Well (ft)	9	23	12	35	13	35
Vertical Distance (ft)	14		22		22	
Vertical Gradient (ft/ft)	0.0.600 downward		-0.1214 upward		0.1350 downward	

On March 4, 2011, vertical hydraulic gradients were calculated for three well pairs including MW-2 / DMW–54; MW-15 / DMW-64 and MW-1 / DMW-65. Two of the three measured vertical gradients: MW-2 / DMW-54 and MW-1 / DMW-65 were downward. During the 1st Quarter Groundwater Monitoring well pair MW-2 / DMW-54 had an upward vertical gradient and the calculated vertical gradient for well pair MW-15 / DMW-64 was downward.

LNAPL Measurement

LNAPL was identified in monitoring wells MW-2 (0.01 feet), MW -19 (0.05 feet), and MW-32 (0.01 feet), as listed in Table 1. Historically LNAPL had been reported covering a much larger area (1996 & 1997 – 12 wells; February 2005 - 18 wells; and July 2007 - 11 wells) and at much thicker levels (up to 1.42 feet).

Groundwater samples were not planned or collected in these monitoring wells (MW-2, MW-19 and MW-32), which previously contained LNAPL.

Groundwater Field Parameters Measurement

The field parameters measurements are summarized in Table 3. ORP, pH, dissolved oxygen (DO), and temperature measurements, which were collected to verify the well stabilization, were made in the field using a portable water-quality meter. During the February 2011 sampling event, ORP values across the site ranged from –398.30 millivolts (mV) to +173.10 mV. The pH values measured during the February 2010 sampling event ranged from 6.83 to 8.53. The DO concentrations ranged from 0.30 milligrams per liter (mg/L) to 8.10 mg/L in the shallow flow zone and 0.18 mg/L to 0.42 mg/L in the deeper flow zone. Groundwater temperatures during the sampling events ranged from 15.16 degrees Celsius (°C) to 23.66°C.

Groundwater Analytical Results

The results of the field parameter measurements are provided in Table 2 and the analytes with positive detections are listed in Table 4. Positive results reported below the quantitation limit but above the

method detection limit are identified with a "J". Appendix B contains the data validation report. The natural attenuation field parameters are presented in Table 3.

To determine if natural attenuation is occurring and to make scientifically valid decisions at the Site, concentrations of target analytes in the groundwater samples were compared to the following Florida Groundwater Cleanup Target Levels (GCTLs) per Chapter 62-777 Florida Administrative Case (F.A.C.), Florida Freshwater and Marine Surface Water Criteria per Chapter 62-777 F.A.C. and Florida Natural Attenuation Default Criteria (NADC) per Chapter 62-770 F.A.C. However, Florida Freshwater and Marine Surface Water Criteria are only applicable to those wells that are designated as a surface water point of compliance wells near Pensacola Bay, which for the quarterly monitoring sampling events are MW-25, MW-37, MW-38, DMW-61, DMW-60, DMW-62, DMW-63, DMW-64 and DMW-65. Acenapthene was the only constituent detected above Florida Freshwater and Marine Surface Water Criteria in the applicable wells, MW 25 and MW-37, as detailed below. Figure 5 and Figure 6 show the monitoring well locations and analyte concentrations reported for the COCs (selected VOCs, PAHs, TRPH and lead) above their GCTLs and/or NADCs.

Volatile Organic Compounds (VOCs)

The groundwater samples were analyzed for the following selected VOC analytes: 1,1,1-trichloroethane, 1,2-dichloroethene, benzene, cis-1,2-dichloroethene, isopropylbenzene, methylene chloride, tetrachloroethylene, trichloroethylene, trans-1,2-dichlorothylene, total xylenes and vinyl chloride.

Isopropylbenzene was detected above its Florida GCTL (0.8 µg/L) in four groundwater samples collected from monitoring wells: MW-4 (9.23 µg/L), MW-17 (7.44 µg/L), MW-55 (9.27 µg/L) and DMW-60 (2.32 µg/L). The detected concentrations in monitoring wells MW-4 and MW-55 also exceeded the NADC of 8 µg/L.

Vinyl chloride was detected above its Florida GCTLs (1 µg/L) in two groundwater samples collected from monitoring wells: MW-14 (4.7 µg/L) and MW-54 (2.34 µg/L). Monitoring well, MW-14, had a groundwater sample with concentrations of vinyl chloride above the Freshwater and Marine Surface Water Criteria (2.4 µg/L). This well is located adjacent to Pensacola Bay however it is located at least 200 feet from the bay and the adjacent deep monitoring well DMW-64 was not reported to contain vynal chloride above the instrument detection limit of 0.2 µg/L.

Other VOCs including benzene, cis-1,2-dichloroethene, trichloroethylene, total xylenes and trans-1,2-dichlorothylene were not detected at concentrations exceeding its Florida surface water or groundwater GCTLs .

Polycyclic Aromatic Hydrocarbon (PAHs)

The groundwater samples were analyzed for selected PAHs analytes including: 1-methylnaphthalene, 2-methylnaphthalene, acenaphthene, benzo(a)anthracene, benzo(k)flouranthene, chrysene, dibenzo(a,h)anthracene and naphthalene.

1-Methylnaphthalene was detected in groundwater samples collected from four monitoring wells, however only the groundwater sample from monitoring well DMW-55 (45 µg/L) had a concentration exceeding the Florida GCTL of 28 µg/L.

Acenaphthene was detected above the Freshwater and Marine Surface Water Criteria (3 µg/L) in groundwater samples from four monitoring wells including; MW-17 (30.4 µg/L), MW-25 (20.9 µg/L), MW-37 (40 µg/L), and DMW-55 (3.22 µg/L) of which only MW-25 and MW-37 are within 100 feet approximately from the bay. Three of those monitoring wells, MW-17, MW-25 and MW-37 had groundwater samples with acenaphthene concentrations exceeding its Florida GCTL of 20 µg/L. The groundwater sample from monitoring well MW-37, which is approximately 50 feet from Pensacola Bay, had the highest concentration (40 µg/L) of acenaphthene.

Benzo(a)anthracene was detected above its Florida GCTL (0.05 µg/L) in the groundwater sample collected from monitoring well, MW-4 (0.224 µg/L). Benzo(a)anthracene was not detected above its Florida GCTL during the first quarter sampling.

Ten of the monitoring wells sampled during this second quarterly sampling event had groundwater samples with no detected concentrations for PAHs.

Lead

Lead was detected in 6 of the groundwater samples collected from monitoring wells during the February 2011 sampling event. Lead was detected above its Florida GCTL only in the groundwater sample from monitoring well, MW-40 (24.7 µg/L; duplicate sample 24.7 µg/L). Lead was less than its Florida GCTL (15 µg/L) and Florida Freshwater and Marine Surface Water Criteria (8.5 µg/L), where applicable, in all the other monitoring wells sampled during the second quarter.

Total Recoverable Petroleum Hydrocarbons (TRPH)

TRPH was detected in groundwater samples collected from 12 monitoring wells during the February 2011 sampling event. TRPH was detected above its Florida GCTL in the groundwater sample from monitoring well MW-17 (21.9 mg/L). MW-17 is more than 300 feet from the Pensacola Bay.

MNA Analytical Results

During this second quarterly monitoring event groundwater samples from five monitoring wells (MW-25, MW-41, DMW-55, MW-61 and MW-65) were collected and analyzed for MNA parameters, which include alkalinity, anions (chloride, nitrate, nitrite and sulfate), dissolved gasses (hydrogen, methane, nitrogen and carbon dioxide), both total and dissolved iron and manganese, sulfide, biochemical oxygen demand (BOD) and chemical oxygen demand (COD). The results are included in Table 4.

Indicators of natural attenuation and the likely aerobic biodegradation of contaminants are directly related to changes in groundwater chemistry. Indicators include the biological consumption of oxygen, nitrate, and sulfate as well as the generation of byproducts such as dissolved iron, manganese, and methane; moreover, increases in total alkalinity and carbon dioxide are found. These geochemical indicators can be used to estimate the site-specific potential for the biodegradation of contaminants within the aquifer.

Carbon dioxide levels are monitored as an indicator of microbial activity. Carbon dioxide is the carbon product of biodegradation for respiration processes other than methanogenesis. Carbon dioxide concentrations ranged from 9.1 mg/L in MW-41 to 68 in DMW-65 mg/L.

Alkalinity is the amount of dissolved minerals in the groundwater. The greatest contributing factor to alkalinity levels is the reaction between carbon dioxide in the groundwater and minerals in the surrounding soil. The resulting alkalinity concentrations ranged from 101 mg/L in MW-41 to 847 mg/L in DMW-65.

Nitrite concentrations were detected below laboratory limits in the five groundwater samples analyzed, and nitrate concentrations were detected below laboratory limits in four of the five groundwater samples analyzed. The groundwater sample collected from MW-41 had a concentration of nitrate of 0.231 mg/L. Sulfate can be used as an electron acceptor after DO, nitrate, and ferric iron are consumed. Under these conditions sulfate is reduced to sulfide or sulfide compounds (such as H_2S or HS^-). The presence of higher levels of sulfate may be indicative of oxidizing conditions, the oxidation of reduced sulfides to sulfates is occurring, and conditions for aerobic biodegradation are favorable. The lowest concentration of sulfate was 0.655 mg/L (estimated) and was detected in DMW-55. The highest concentration of sulfate was 1,210 mg/L and was detected in DMW-61.

Five groundwater samples were analyzed in the laboratory for sulfide. Results from the laboratory indicate sulfide concentrations below method detection limits at one well, MW-41. The concentrations of sulfide detected at the other four wells ranged from 1.2 mg/L (estimated) in DMW-55 to 122 mg/L in DMW-61.

Monitoring of dissolved gases (methane, carbon dioxide and hydrogen) was conducted as part of the second quarter groundwater monitoring event. The analytical results for groundwater sampled are listed in Table 4. As indicated above, carbon dioxide is a byproduct of both aerobic and anaerobic degradation. Elevated levels of carbon dioxide indicate microbial activity has been stimulated. Elevated levels of methane (e.g., generally greater than 1.0 mg/L) indicate fermentation is occurring in a highly anaerobic environment. Hydrogen is the primary electron donor used in anaerobic dechlorination. Higher levels of hydrogen generally between two and eleven nanomoles (nM) are optimal for efficient reductive dechlorination. Carbon dioxide concentrations ranged from methane concentrations in the five wells sampled ranged from 5.7 ug/L in MW-41 to 1200 ug/L in DMW-55. Hydrogen concentrations ranged from 0.55 nM (estimated) in MW-41 to 18 nM in DMW-65.

6.0 RECOMMENDATIONS AND CONCLUSIONS

Based on the decision rules in the UFP SAP (Tetra Tech, 2010) four quarters of groundwater monitoring events will be conducted before recommendations and conclusions are made. A comprehensive evaluation of all data and the efficacy of MNA will be performed following the fourth monitoring event and presented in the Annual Monitoring Report.

7.0 REFERENCES

Naval Energy and Environmental Support Activity (NEESA) 1983, Initial Assessment Study of Naval Air Station Pensacola, Pensacola, Florida

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Tetra Tech NUS, Inc. (Tetra Tech), 2010, Sampling and Analysis Quarterly Groundwater Sampling Underground Storage Tank Site 21, NAS Pensacola, Pensacola, Florida, October.

Tetra Tech NUS, Inc. (Tetra Tech), 2011, Technical Memorandum First Quarterly Groundwater Sampling Report Underground Storage Tank Site 21, NAS Pensacola, Pensacola, Florida, February.

TABLES

TABLE 1
GROUNDWATER ELEVATIONS - (March 4, 2011)
MONITORING WELLS - UST SITE 21
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA
PAGE 1 OF 2

Well Designation	Top of Casing Elevation[1] (ft, MSL)	Depth to Product BTOC (ft)	Free Product Thickness (ft)	Depth to Water (ft, BTOC)	Groundwater Elevation [1][2] (ft, MSL)
MW-1	25.86	NP	NA	6.50	19.36
MW-2	28.51	9.09	0.01	9.09	19.43
MW-3	28.59	NP	NA	9.30	19.29
MW-4	28.48	NP	NA	9.10	19.38
MW-5	25.97	NP	NA	6.60	19.37
MW-6	25.11	NP	NA	5.78	19.33
MW-7	26.08	NP	NA	6.71	19.37
MW-8	27.93	NP	NA	8.56	19.37
MW-9	26.01	NP	NA	6.50	19.51
MW-10	26.88	NP	NA	7.53	19.35
MW-11	26.39	NP	NA	7.00	19.39
MW-12	28.11	NP	NA	8.69	19.42
MW-13	27.00	Filled with Dirt			
MW-14	27.87	NP	NA	8.49	19.38
MW-15	28.23	NP	NA	8.85	19.38
MW-16	28.53	NP	NA	8.90	19.63
MW-17	29.41	NP	NA	10.00	19.41
MW-18	29.38	NP	NA	9.93	19.45
MW-19	27.98	8.65	0.05	8.56	19.47
MW-20	29.42	NP	NA	9.96	19.46
MW-22	29.62	NP	NA	10.19	19.43
MW-23	28.76	NP	NA	9.41	19.35
MW-24	28.47	NP	NA	9.15	19.32
MW-25	28.37	NP	NA	8.60	19.77
MW-26	27.97	NP	NA	8.50	19.47
MW-27	29.72	UNABLE TO LOCATE			
MW-28	29.38	NP	NA	9.74	19.64
MW-29	28.28	NP	NA	8.81	19.47
MW-30	28.63	NP	NA	9.05	19.58

Notes:
[1] Elevations based upon arbitrary elevation of 30 feet above MSL assigned to the northeast corner of an existing concrete light pole.
[2] The corrected depth to groundwater = Depth to water - (free product thickness * specific gravity of 0.9 for Bunker "C" oil)._
MSL = Mean Sea Level
NP = Not Present
TOC = Below Top of Casing
NA = Not applicable

TABLE 1
GROUNDWATER ELEVATIONS - (March 4, 2011)
OPERABLE UNIT 1 PIEZOMETERS
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA
PAGE 2 OF 2

Well Designation	Top of Casing Elevation[1] (ft, MSL)	Depth to Product BTOC (ft)	Free Product Thickness (ft)	Depth to Water (ft, BTOC)	Groundwater Elevation [1][2] (ft, MSL)
MW-31	28.34	NP	NA	8.85	19.49
MW-32	28.02	8.49	0.01	8.49	19.54
MW-34	26.00	NP	NA	6.80	19.20
MW-35	28.72	NP	NA	9.28	19.44
MW-36	28.75	NP	NA	9.29	19.46
MW-37	28.00	NP	NA	8.57	19.43
MW-38	27.70	NP	NA	8.10	19.60
MW-39	26.46	NP	NA	6.75	19.71
MW-40	24.38	NP	NA	5.03	19.35
MW-41	25.36	NP	NA	5.95	19.41
MW-42	28.71	NP	NA	9.29	19.42
MW-43	28.50	NP	NA	9.05	19.45
MW-46	26.94	NP	NA	7.28	19.66
MW-47	27.55	NP	NA	8.00	19.55
MW-48	29.28	NP	NA	9.82	19.46
MW-49	28.26	NP	NA	8.83	19.43
MW-50	27.88	NP	NA	8.42	19.46
MW-51	27.69	NP	NA	8.12	19.57
MW-52	28.13	NP	NA	8.80	19.33
MW-53	27.47	Destroyed			
DMW-54	28.53	NP	NA	9.16	19.37
DMW-55	28.93	NP	NA	9.45	19.48
MW-56	28.21	NP	NA	8.88	19.33
MW-57	28.71	Unaccessible (Jeep parked on top of well)			
MW-58	28.22	NP	NA	8.90	19.32
MW-59	29.33	NP	NA	9.87	19.46
DMW-60	28.62	NP	NA	9.00	19.62
DMW-61	28.61	NP	NA	9.35	19.26
DMW-62	28.21	NP	NA	8.91	19.30
DMW-63	28.22	NP	NA	8.57	19.65
DMW-64	28.05	NP	NA	6.00	22.05
DMW-65	25.39	NP	NA	9.00	16.39

Notes:
[1] Elevations based upon arbitrary elevation of 30 feel above MSL assigned to the northeast corner of an existing concrete light pole.
[2] The corrected depth to groundwater = Depth to water - (free product thickness * specific gravity of 0.9 for Bunker "C" oil)

ft = feet
MSL = Mean Sea Level
BTOC = Below Top of Casing
NA = Not Applicable
NP = Not Present

TABLE 3
NATURAL ATTENUATION FIELD PARAMETERS - FEBRUARY 2011
UST 21
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

SHALLOW MONITORING WELLS	Units	MW-1	MW-4	MW-9	MW-10	MW-14	MW-16	MW-17	MW-23	MW-25	MW37
pH	None	7.11	7.11	6.83	7.11	7.54	7.15	7.02	7.63	7.75	7.12
Specific Conductivity	mS/cm	531	845	411	743	1091	927	1218	602	782	972
Temperature	Celsius	21.77	21.59	18.77	21.48	17.64	21.32	21.64	21.27	18.96	22.60
Turbidity	NTU	0.32	5.13	5.14	6.30	3.33	6.48	6.98	4.41	1.74	1.49
Dissolved Oxygen	mg/L	1.3	1.60	1.45	1.32	0.39	1.09	0.30	0.39	0.45	1.07
Oxidation Reduction Potential (ORP)	mV	-236.6	-233.20	-177.50	-213.30	-245.80	-253.70	-268.5	-196.10	-262.1	-271.5

SHALLOW MONITORING WELLS	Units	MW-38	MW-40	MW-41							
pH	None	7.30	7.22	7.22							
Specific Conductivity	mS/cm	356	203	296							
Temperature	Celsius	20.13	15.16	16.78							
Turbidity	NTU	0.97	19.30	8.14							
Dissolved Oxygen	mg/L	0.51	8.10	4.53							
Oxidation Reduction Potential (ORP)	mV	-220.50	26.90	173.10							

DEEP MONITORING WELLS	Units	DMW-54	DMW-55	DMW-60	DMW-61	DMW-62	DMW-63	DMW-64	DMW-65		
pH	None	7.20	7.81	7.49	8.37	8.53	7.27	7.14	8.14		
Specific Conductivity	mS/cm	546	378	10771	37035	5479	34817	31988	31543		
Temperature	Celsius	22.53	22.11	22.71	22.25	23.21	21.06	21.70	23.66		
Turbidity	NTU	1.76	2.59	0.00	0.00	2.0	0.0	0.8	1.96		
Dissolved Oxygen	mg/L	0.27	0.24	0.27	0.42	0.31	0.20	0.18	0.21		
Oxidation Reduction Potential (ORP)	mV	-262.20	-291.40	-339.80	-361.50	-364.7	-358.9	-372.7	-398.30		

NS - Not sampled, well was dry during sampling event
mg/L - milligrams per liter
mV - millivolts
mS/cm - millisiemens per centimeter
NTU = nephelometric turbidity units
*L - Limit of instrument detection range

TABLE 4
ANALYSIS SUMMARY
UST 21
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

Sample Location		MW-25	MW-41	DMW-55	DMW-61	DMW-65
Sampling ID		UST-21-MW25-0211	UST-21-MW41-0211	UST-21-MW55-0211	UST-21-MW61-0211	UST-21-MW65-0211
Collect Date		2/9/2011	2/8/2011	2/9/2011	2/9/2011	2/8/2011
	Units					
Natural Attenuation Parameters						
Dissolved iron	ug/L	30 U	30 U	30 U	30 U	30 U
Dissolved Manganese	ug/L	133.000	3 U	85.6	16.30	3230.000
Alkalinity	mg/L	333	101	186.0	764.0	847
Biochemical Oxygen Demand	mg/L	3.72	2 U	5.2	272.0	130.0
Chloride	mg/L	47.3	32.7	5.5	14600.0	12100.0
Nitrate-N	mg/L	0.033 U	0.231	0.033 U	0.033 U	0.033 U
NitrIte-N	mg/L	0.033 U	0.033 U	0.033 U	0.66 U	0.33 U
Chemical Oxygen Demand	mg/L	38.2 J	20 U	25.6	5580.0	430.0
Sulfate	mg/L	15.3	7.1	0.655 J	1210	933
Sulfide	mg/L	3.2 J	0.741 U	1.2 J	122	84.7
Nitrogen	mg/L	18	17	18.0	18	18
Hydrogen	nM	0.61	0.55 J	1.6	1.8	18
Methane	µg/L	800	5.7	1200.0	450	620
Carbon Dioxide	mg/L	32	9.1	56.0	54	68

Notes:
mg/L = milligrams per liter
U = analyte not detected above laboratory method detection limits
J = estimated concentration
NC = no criteria established for this parameter
nM = nanoMoles
µg/L = micrograms per liter

TABLE 5
ANALYSIS SUMMARY
UST 21
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

SAMPLE LOCATION	GCTL[1]	NADC[2]	Surface Water Criteria[3]	MW-1	MW-4	MW-9	MW-10
SAMPLE DESIGNATION				UST-21-MW1-0211	UST-21-MW4-0211	UST-21-MW9-0211	UST-21-MW10-0211
SAMPLE DATE				02/10/10	02/10/10	02/11/10	02/10/11
Surface Water Criteria Applicable				No	No	No	No
METALS (UG/L)							
LEAD	15	150	8.5	2.65 J	2.7 J	1.5 U	5.5
PETROLEUM HYDROCARBONS (MG/L)							
TRPH	5	50	5	0.167 U	1.86	0.167 U	0.911
POLYCYCLIC AROMATIC HYDROCARBONS (UG/L)							
1-METHYLNAPHTHALENE	28	280	95	0.05 U	1.82	0.0472 U	0.05 U
2-METHYLNAPHTHALENE	28	280	30	0.05 U	0.049 U	0.0472 U	0.05 U
ACENAPHTHENE	20	200	3	0.05 U	2.53	0.0472 U	0.05 U
BENZO(A)ANTHRACENE	0.05	5		0.05 U	***0.224***	0.0472 U	0.05 U
CHRYSENE	4.8	480		0.05 U	0.049 U	0.0472 U	0.05 U
NAPHTHALENE	14	140	26	0.05 U	0.049 U	0.0472 U	0.05 U
VOLATILES (UG/L)							
CIS-1,2-DICHLOROETHENE	70	700	NC	0.45 U	0.25 U	0.362 J	1.41
ISOPROPYLBENZENE	0.8	8	260	0.15 U	**9.23**	0.25 U	0.15 U
METHYLENE CHLORIDE	5	500		0.27 U	1.19 J	0.933 J	0.27 U
TOTAL XYLENES	20	200	370	0.22 U	0.75 U	0.75 U	0.22 U
TRANS-1,2-DICHLOROETHENE	100	1000	11000	0.53 U	0.25 U	0.467 J	0.53 U
VINYL CHLORIDE	1	100	2.4	0.2 U	0.25 U	0.365	0.932 J

EXCEEDS GCTL AND NADC

EXCEEDS GCTL ONLY

Notes:

U = Analyte was not detected above indicated detection limit.

J = estimated concentration

[1] Groundwater Cleanup Target Levels (GCTL) Florida Administrative Code Chapter 62-777

[2] Natural Attenuation Default Criteria (NADC) Florida Administrative Code Chapter 62-770

[3] Surface Water Criteria Florida Administrative Code Chapter 62-777

NC = No Criteria

The complete analytical results from the November, 2010 sampling event is included in Appendix B.

TABLE 5
ANALYSIS SUMMARY
UST 21
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

SAMPLE LOCATION	GCTL[1]	NADC[2]	Surface Water Criteria[3]	MW-14	MW-16	MW-17	MW-23	MW-25
SAMPLE DESIGNATION				UST-21-MW14-0211	UST-21-MW16-0211	UST-21-MW17-0211	UST-21-MW23-0211	UST-21-MW25-0211
SAMPLE DATE				02/10/11	02/10/11	02/10/11	02/10/11	02/09/11
Surface Water Criteria Applicable				No	No	No	No	Yes
METALS (UG/L)								
LEAD	15	150	8.5	1.5 U	1.62 J	2 U	2.31 J	1.5 U
PETROLEUM HYDROCARBONS (MG/L)								
TRPH	5	50	5	0.272 J	1.44	***21.9***	0.17 U	0.859
POLYCYCLIC AROMATIC HYDROCARBONS (UG/L)								
1-METHYLNAPHTHALENE	28	280	95	0.0481 U	0.0481 U	17.9	0.049 U	0.0481 U
2-METHYLNAPHTHALENE	28	280	30	0.0481 U	0.0481 U	0.0472 U	0.049 U	0.0481 U
ACENAPHTHENE	20	200	3	0.29	4.32	***30.4***	1.22	***20.9***
BENZO(A)ANTHRACENE	0.05	5		0.0481 U	0.0481 U	0.0472 U	0.049 U	0.0481 UJ
CHRYSENE	4.8	480		0.0481 U	0.0481 U	0.0472 U	0.049 U	0.0481 UJ
NAPHTHALENE	14	140	26	0.0481 U	0.0481 U	0.0472 U	0.049 U	0.0481 U
VOLATILES (UG/L)								
CIS-1,2-DICHLOROETHENE	70	700	NC	0.778 J	0.45 U	0.25 U	0.45 U	0.25 U
ISOPROPYLBENZENE	0.8	8	260	0.15 U	0.15 U	***7.44***	0.252 J	0.25 U
METHYLENE CHLORIDE	5	500		0.27 U	0.27 U	1.11 J	0.27 U	0.5 U
TOTAL XYLENES	20	200	370	0.22 U	0.22 U	1.6 J	0.22 U	0.75 U
TRANS-1,2-DICHLOROETHENE	100	1000	11000	0.53 U	0.53 U	0.25 U	0.53 U	0.25 U
VINYL CHLORIDE	1	100	2.4	***4.7***	0.602 J	0.25 U	0.2 U	0.25 U

EXCEEDS GCTL AND NADC

EXCEEDS GCTL ONLY

Notes:

U = Analyte was not detected above indicated detection limit.

J = estimated concentration

[1] Groundwater Cleanup Target Levels (GCTL) Florida Administrative Code Chapter 62-777

[2] Natural Attenuation Default Criteria (NADC) Florida Administrative Code Chapter 62-770

[3] Surface Water Criteria Florida Administrative Code Chapter 62-777

NC = No Criteria

The complete analytical results from the November, 2010 sampling event is included in Appe

TABLE 5
ANALYSIS SUMMARY
UST 21
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

SAMPLE LOCATION	GCTL[1]	NADC[2]	Surface Water Criteria[3]	MW-37	MW-38	MW-40		MW-41	MW-54
SAMPLE DESIGNATION				UST-21-MW37-0211	UST-21-MW38-0211	UST-21-MW40-0211	UST-21-MW40-0211-DUP	UST-21-MW41-0211	UST-21-MW54-0211
SAMPLE DATE				02/10/11	02/10/11	02/11/11	02/11/11	02/08/11	02/10/11
Surface Water Criteria Applicable				Yes	Yes	ORIGINAL (No)	DUPLICATE (No)	No	No
METALS (UG/L)									
LEAD	15	150	8.5	1.5 U	1.5 U	***24.7***	***24.7***	1.5 U	1.5 U
PETROLEUM HYDROCARBONS (MG/L)									
TRPH	5	50	5	2.42	0.16 UJ	0.16 UJ	0.157 UJ	0.167 U	0.968
POLYCYCLIC AROMATIC HYDROCARBONS (UG/L)									
1-METHYLNAPHTHALENE	28	280	95	1.63	0.0472 U	0.0534 J	0.0293 J	0.05 U	0.05 U
2-METHYLNAPHTHALENE	28	280	30	0.05 U	0.0472 U	0.0472 U	0.0262 J	0.05 U	0.05 U
ACENAPHTHENE	20	200	3	***40***	0.0472 U	0.0472 U	0.0185 U	0.05 U	0.05 U
BENZO(A)ANTHRACENE	0.05	5		0.05 U	0.0472 U	0.0472 U	0.0185 U	0.05 UJ	0.05 U
CHRYSENE	4.8	480		0.05 U	0.0472 U	0.0472 U	0.0185 U	0.05 UJ	0.05 U
NAPHTHALENE	14	140	26	0.259	0.0472 U	0.0472 U	0.0185 U	0.05 U	0.0687 J
VOLATILES (UG/L)									
CIS-1,2-DICHLOROETHENE	70	700	NC	0.45 U	0.25 U	0.25 U	0.45 U	0.25 U	5.46
ISOPROPYLBENZENE	0.8	8	260	0.506 J	0.25 U	0.25 U	0.15 U	0.25 U	0.15 U
METHYLENE CHLORIDE	5	500		0.27 U	0.932 J	0.5 U	0.796 J	0.5 U	0.27 U
TOTAL XYLENES	20	200	370	0.815 J	0.75 U	0.75 U	0.22 U	0.75 U	0.22 U
TRANS-1,2-DICHLOROETHENE	100	1000	11000	0.53 U	0.25 U	0.25 U	0.53 U	0.25 U	1.55
VINYL CHLORIDE	1	100	2.4	0.291 J	0.25 U	0.25 U	0.2 U	0.25 U	***2.34***

EXCEEDS GCTL AND NADC

EXCEEDS GCTL ONLY

Notes:

U = Analyte was not detected above indicated detection limit.

J = estimated concentration

[1] Groundwater Cleanup Target Levels (GCTL) Florida Administrative Code Chapter 62-777

[2] Natural Attenuation Default Criteria (NADC) Florida Administrative Code Chapter 62-770

[3] Surface Water Criteria Florida Administrative Code Chapter 62-777

NC = No Criteria

The complete analytical results from the November, 2010 sampling event is included in Appe

TABLE 5
ANALYSIS SUMMARY
UST 21
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

SAMPLE LOCATION	GCTL[1]	NADC[2]	Surface Water Criteria[3]	MW-55	MW-60	MW-61	MW-62	
SAMPLE DESIGNATION				UST-21-MW55-0211	UST-21-MW60-0211	UST-21-MW61-0211	UST-21-MW62-0211	UST-21-MW62-0211-DUP
SAMPLE DATE				02/09/11	02/10/11	02/09/11	02/09/11	02/09/11
Surface Water Criteria Applicable				No	Yes	Yes	ORIGINAL (Yes)	DUPLICATE (Yes)
METALS (UG/L)								
LEAD	15	150	8.5	1.5 U	1.5 U	3 U	1.5 U	1.5 U
PETROLEUM HYDROCARBONS (MG/L)								
TRPH	5	50	5	2.41	3.08	0.17 UJ	1.26	1.19
POLYCYCLIC AROMATIC HYDROCARBONS (UG/L)								
1-METHYLNAPHTHALENE	28	280	95	***45***	0.05 U	0.0556 U	0.049 U	0.0472 U
2-METHYLNAPHTHALENE	28	280	30	0.049 U	0.05 U	0.0556 U	0.049 U	0.0472 U
ACENAPHTHENE	20	200	3	3.22	0.05 U	0.0556 U	0.049 U	0.259
BENZO(A)ANTHRACENE	0.05	5		0.049 UJ	0.05 U	0.0556 UJ	0.049 U	0.0472 U
CHRYSENE	4.8	480		0.049 UJ	0.05 U	0.0556 UJ	0.049 U	0.0472 U
NAPHTHALENE	14	140	26	0.049 U	0.204	0.0556 U	0.049 U	0.0472 U
VOLATILES (UG/L)								
CIS-1,2-DICHLOROETHENE	70	700	NC	0.25 U	0.598 J	0.25 U	0.45 U	0.45 U
ISOPROPYLBENZENE	0.8	8	260	**9.27**	***2.32***	0.25 U	0.15 U	0.15 U
METHYLENE CHLORIDE	5	500		0.5 U	0.27 U	0.5 U	0.27 U	0.27 U
TOTAL XYLENES	20	200	370	0.75 U	0.355 J	0.75 U	0.22 U	0.22 U
TRANS-1,2-DICHLOROETHENE	100	1000	11000	0.25 U	0.53 U	0.25 U	0.53 U	0.53 U
VINYL CHLORIDE	1	100	2.4	0.25 U	0.476 J	0.25 U	0.2 U	0.2 U

EXCEEDS GCTL AND NADC

EXCEEDS GCTL ONLY

Notes:

U = Analyte was not detected above indicated detection limit.

J = estimated concentration

[1] Groundwater Cleanup Target Levels (GCTL) Florida Administrative Code Chapter 62-777

[2] Natural Attenuation Default Criteria (NADC) Florida Administrative Code Chapter 62-770

[3] Surface Water Criteria Florida Administrative Code Chapter 62-777

NC = No Criteria

The complete analytical results from the November, 2010 sampling event is included in Appe

TABLE 5
ANALYSIS SUMMARY
UST 21
NAVAL AIR STATION PENSACOLA
PENSACOLA, FLORIDA

SAMPLE LOCATION	GCTL[1]	NADC[2]	Surface Water Criteria[3]	MW-63	MW-64	MW-65
SAMPLE DESIGNATION				UST-21-MW63-0211	UST-21-MW64-0211	UST-21-MW65-0211
SAMPLE DATE				02/10/11	02/10/11	02/08/11
Surface Water Criteria Applicable				Yes	Yes	Yes
METALS (UG/L)						
LEAD	15	150	8.5	3 U	3 U	3 U
PETROLEUM HYDROCARBONS (MG/L)						
TRPH	5	50	5	0.179 UJ	0.167 U	0.17 U
POLYCYCLIC AROMATIC HYDROCARBONS (UG/L)						
1-METHYLNAPHTHALENE	28	280	95	0.049 U	0.049 U	0.049 U
2-METHYLNAPHTHALENE	28	280	30	0.049 U	0.049 U	0.049 U
ACENAPHTHENE	20	200	3	0.049 U	0.049 U	0.049 U
BENZO(A)ANTHRACENE	0.05	5		0.049 U	0.049 U	0.049 UJ
CHRYSENE	4.8	480		0.0597 J	0.049 U	0.049 UJ
NAPHTHALENE	14	140	26	0.049 U	0.049 U	0.049 U
VOLATILES (UG/L)						
CIS-1,2-DICHLOROETHENE	70	700	NC	0.45 U	0.45 U	0.25 U
ISOPROPYLBENZENE	0.8	8	260	0.15 U	0.15 U	0.25 U
METHYLENE CHLORIDE	5	500		0.27 U	0.27 U	0.5 U
TOTAL XYLENES	20	200	370	0.22 U	0.409 J	0.75 U
TRANS-1,2-DICHLOROETHENE	100	1000	11000	0.53 U	0.53 U	0.25 U
VINYL CHLORIDE	1	100	2.4	0.2 U	0.2 U	0.25 U

EXCEEDS GCTL AND NADC

EXCEEDS GCTL ONLY

Notes:

U = Analyte was not detected above indicated detection limit.

J = estimated concentration

[1] Groundwater Cleanup Target Levels (GCTL) Florida Administrative Code Chapter 62-777

[2] Natural Attenuation Default Criteria (NADC) Florida Administrative Code Chapter 62-770

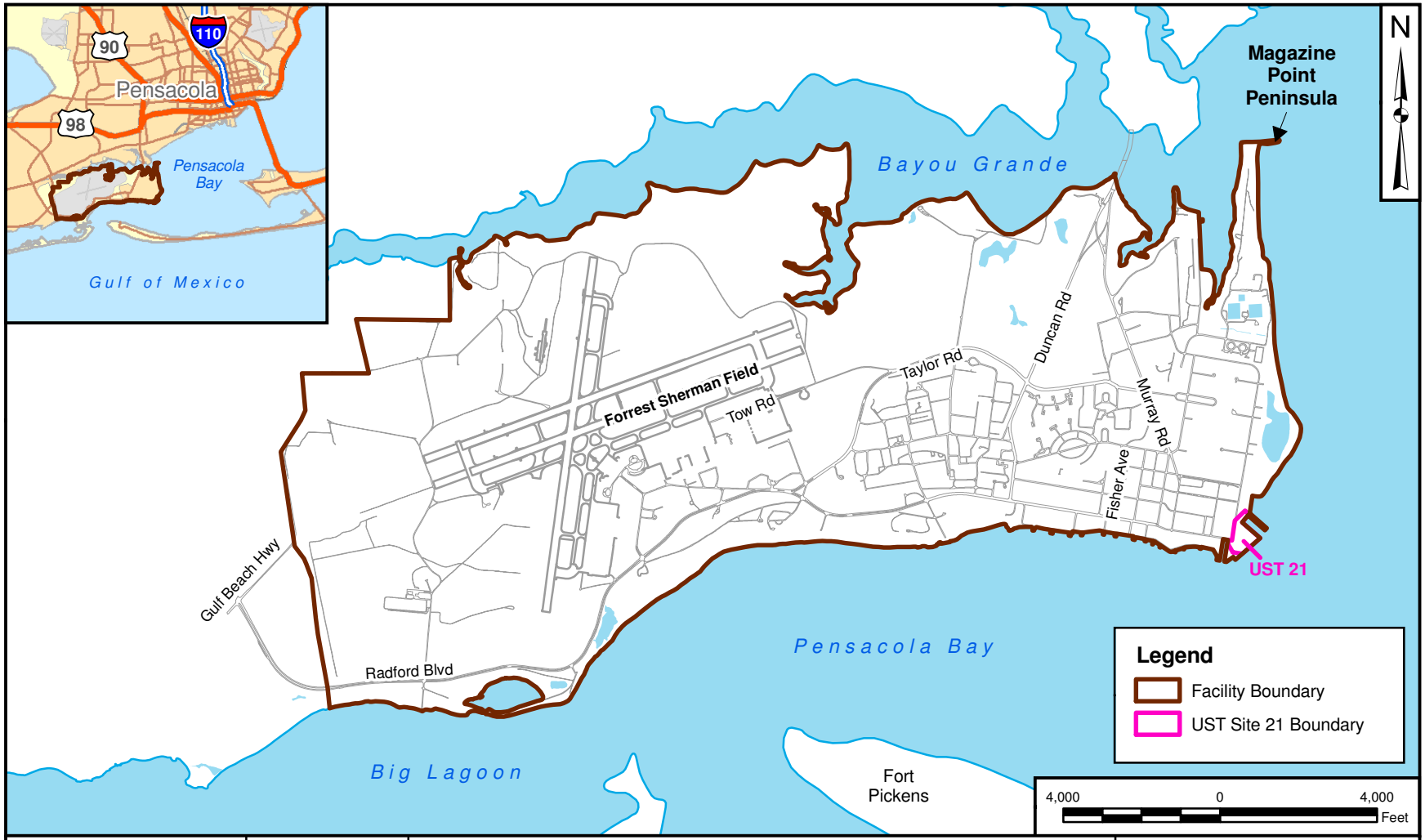
[3] Surface Water Criteria Florida Administrative Code Chapter 62-777

NC = No Criteria

The complete analytical results from the November, 2010 sampling event is included in Appe

FIGURES

PGH P:\GIS\PENSACOLA_NAS\MXD\UST21_SITE_MAP.MXD 04/04/11 SS



DRAWN BY S. STROZ	DATE 01/28/11	NAVFAC	SITE LOCATION MAP UST SITE 21 2ND QUARTERLY MONITORING REPORT NAS PENSACOLA PENSACOLA, FLORIDA
CHECKED BY Y. MARTINEZ	DATE 04/04/11		
COST/SCHED AREA			
SCALE AS NOTED			

CONTRACT NUMBER CTO JM01	
APPROVED BY ___	DATE ___
APPROVED BY ___	DATE ___
FIGURE NO. FIGURE 1	REV 0

P:\GIS\PENSACOLA_NAS\MAPDOCS\MXD\UST21_WELLS-SAMPLED.MXD 04/26/11 SS

DRAWN BY S. STROZ	DATE 01/28/11	SITE FEATURES UST SITE 21 SECOND QUARTERLY GROUNDWATER MONITORING REPORT NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NUMBER CTO JM01
CHECKED BY Y. MARTINEZ	DATE 04/26/11		APPROVED BY ___ DATE ___
COST/SCHED AREA			APPROVED BY ___ DATE ___
SCALE AS NOTED			FIGURE NO. FIGURE 2 / REV 0

P:\GIS\PENSACOLA_NAS\MAPDOCS\MXD\UST21_SHALLOW_GW_POTENTIO_R2.MXD 05/03/11 SS

DRAWN BY S. STROZ	DATE 04/29/11	SHALLOW GROUNDWATER ISOCONTOURS MARCH 4, 2011 UST SITE 21 NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NUMBER CTO JM01
CHECKED BY Y. MARTINEZ	DATE 05/03/11		APPROVED BY ___ DATE ___
COST/SCHED AREA			APPROVED BY ___ DATE ___
SCALE AS NOTED			FIGURE NO. FIGURE 3 / REV 0

P:\GIS\PENSACOLA_NAS\MAPDOCS\MXD\UST21_DEEP_WELLS.MXD 05/02/11 SS

DRAWN BY S. STROZ	DATE 04/29/11	DEEP GROUNDWATER ELEVATIONS MARCH 4, 2011 UST SITE 21 NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NUMBER CTO JM01
CHECKED BY Y. MARTINEZ	DATE 05/02/11		APPROVED BY — DATE —
COST/SCHED AREA			APPROVED BY — DATE —
SCALE AS NOTED			FIGURE NO. FIGURE 4 / REV 0

P:\GIS\PENSACOLA_NAS\MAPDOCS\MXD\UST21_GCTL_EXCEED_2ND_QUARTER_1.MXD 05/03/11 SS

Parameter	GCTL Criteria Level
Isopropylbenzene	0.8
Benzo (a) Anthracene	0.05
Vinyl Chloride	1
Acenaphthene	20
Lead	15
Methylnaphthalene	28
TRPH	5

GCTL = Groundwater Cleanup Target Level

Legend

- Monitoring Well Location
- Building
- Road
- J — Estimated Concentration

200 0 200 Feet

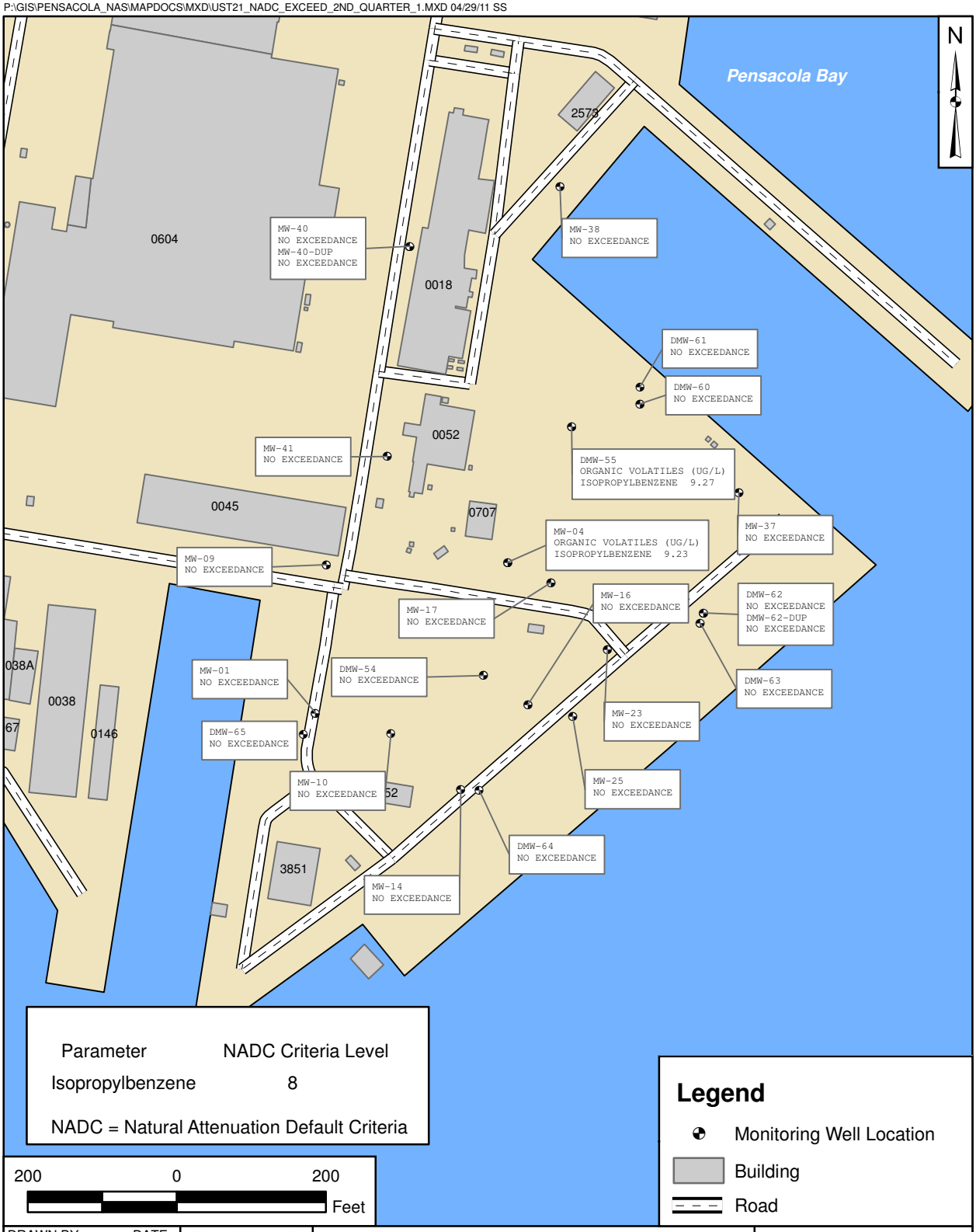
DRAWN BY S. STROZ	DATE 04/11/11
CHECKED BY Y. MARTINEZ	DATE 05/03/11
COST/SCHED AREA	
SCALE AS NOTED	

NAVFAC

GROUNDWATER SAMPLES EXCEEDING GCTL
2ND QUARTERLY GROUNDWATER
MONITORING REPORT
UST SITE 21
NAS PENSACOLA
PENSACOLA, FLORIDA

CONTRACT NUMBER CTO JM01	
APPROVED BY ___	DATE ___
APPROVED BY ___	DATE ___
FIGURE NO. FIGURE 5	REV 0

P:\GIS\PENSACOLA_NAS\MAPDOCS\MXD\UST21_NADC_EXCEED_2ND_QUARTER_1.MXD 04/29/11 SS



DRAWN BY S. STROZ	DATE 04/11/11	GROUNDWATER SAMPLES EXCEEDING NADC 2ND QUARTERLY GROUNDWATER MONITORING REPORT UST SITE 21 NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NUMBER CTO JM01
CHECKED BY Y. MARTINEZ	DATE 04/29/11		APPROVED BY — DATE —
COST/SCHED AREA			APPROVED BY — DATE —
SCALE AS NOTED			FIGURE NO. FIGURE 6 / REV 0

APPENDIX A
FIELD FORMS

Tetra Tech NUS, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

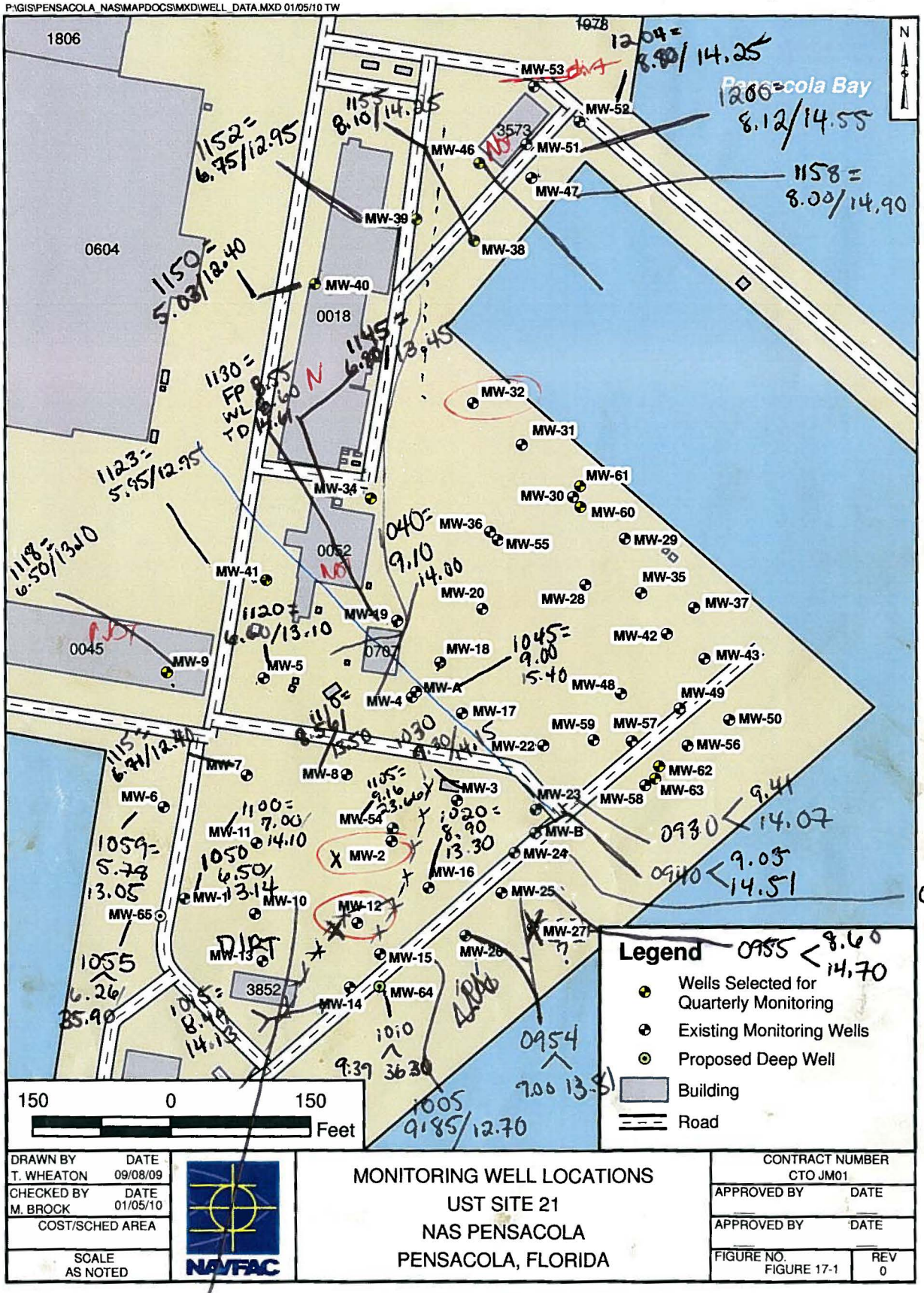
Project Name:	UST Site 21	**Project No.:**	112G02200 Task LT.FI
Location:	NAS Pensacola	**Personnel:**	Jared Shelburne, Melissa Brock & Yarissa Martinez & Larry Smith
Weather Conditions:	high 70 - Sunny	**Measuring Device:**	Water Level Indicator
Tidally Influenced:	Yes X No	**Remarks:**	Low tide @ 13:30

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth Below TOC (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
MW-1	11/13/2010	1080		13.14	6.50			
MW-2	11/13/2010	1130		8.51	9.10	9.09		
MW-3	11/13/2010	1030		14.15		9.30		
MW-4	11/13/2010	1040			14.00	9.10		
MW-5	11/13/2010	1120			13.10	6.60		
MW-6	11/13/2010	1059		13.15	13.05	5.78		
MW-7	11/13/2010	1115		12.31	12.40	6.71		
MW-8	11/13/2010	1110			13.50	8.56		UNABLE TO OPEN
MW-9	11/13/2010	1118		13.08	13.10	6.50		
MW-10	11/13/2010	1103		13.58	13.65	7.53		
MW-11	11/13/2010	1100			14.10	7.00		UNABLE TO OPEN
MW-12	11/13/2010	12:01		14.00	8.71			
MW-13	11/13/2010							FILLED WITH DIRT
MW-14	11/13/2010	11:59	1015	14.20	14.13	5.49		
MW-15	11/13/2010	11:06	1005	13.10	13.70	9.85		
MW-16	11/13/2010	1241	1000	13.55	13.30	8.90		
MW-17	11/13/2010	1050		14.25	10.00			
MW-18	11/13/2010	1052		14.18	4.93			
MW-19	11/13/2010	1130		14.60		8.60	8.55	UNABLE TO OPEN
MW-20	11/13/2010	1100		14.26	9.96			UNABLE TO OPEN
MW-21	11/13/2010	1247			10.19			
MW-22	11/13/2010	11:15	930	14.11	14.07	9.41		
MW-24	11/13/2010	11:14	950	13.91	13.90	9.15		
MW-25	11/13/2010	11:20	955	13.75	14.70	8.60		
MW-26	11/13/2010	11:25	954	15.00	13.81	9.00		
MW-27	11/13/2010							UNABLE TO LOCATE
MW-28	11/13/2010	1018	14.25	14.90	9.14			
MW-29	11/13/2010	1014		14.05	8.31			
MW-30	11/13/2010	1017		14.10	9.05			UNABLE TO OPEN
MW-31	11/13/2010	1008		8.85				UNABLE TO OPEN
MW-32	11/13/2010	1051			8.50	0.02	8.49	4.4 hc
MW-34	11/13/2010	1145		13.34	13.45	6.80		
MW-35	11/13/2010	1025	14.25		9.26			
MW-36	11/13/2010				9.29			UNABLE TO OPEN
MW-37	11/13/2010	1046		14.32	8.57			
MW-38	11/13/2010	1155		14.35	8.10			
MW-39	11/13/2010	1152		12.95		6.75		
MW-40	11/13/2010	1150		12.40		5.03		
MW-41	11/13/2010	1123		12.95		6.95		
MW-42	11/13/2010	1028		14.15	9.29			
MW-43	11/13/2010	1026		14.32	9.05			
MW-44	11/13/2010	1105		14.32	7.28			
MW-45	11/13/2010	1158		14.10		8.01		
MW-46	11/13/2010	1115		14.10	9.66			
MW-49	11/13/2010	1033		14.61	8.83			
MW-50	11/13/2010	13:00		14.60	8.51			
MW-51	11/13/2010	11:26	1200	14.55	8.12			
MW-52	11/13/2010	11:15	1204	14.25	8.80			
MW-53	11/13/2010							DESTROYED
MW-54	11/13/2010	14:44	1105	23.66	9.16			
MW-55	11/13/2010	13:58			9.75	9.42		
MW-56	11/13/2010	1055		12.29	4.85			
MW-57	11/13/2010	13:10		14.11	8.31			
MW-58	11/13/2010	1039		14.74	8.23			
MW-59	11/13/2010	1045		14.45	9.10			
MW-60	11/13/2010	1102		24.46	9.07			
MW-61	11/13/2010	1100		23.46	9.00			
MW-62	11/13/2010	1037		24.15	9.47			
MW-63	11/13/2010	11:24		34.58	9.06			
MW-64	11/13/2010	1010		36.30	9.39			
MW-65	11/13/2010	1055		35.90	10.26			
MW-A	11/13/2010	1045		13.40	9.00	8.85		
MW-B	11/13/2010	1140	1149		9.05			UNABLE TO OPEN
	11/13/2010							

3/4/2011

0900am

P:\GIS\PENSACOLA_NAS\MAPDOCS\MXD\WELL_DATA.MXD 01/05/10 TW



DRAWN BY T. WHEATON	DATE 09/08/09	MONITORING WELL LOCATIONS UST SITE 21 NAS PENSACOLA PENSACOLA, FLORIDA	CONTRACT NUMBER CTO JM01
CHECKED BY M. BROCK	DATE 01/05/10		APPROVED BY / DATE
COST/SCHED AREA			APPROVED BY / DATE
SCALE AS NOTED			FIGURE NO. FIGURE 17-1 / REV 0

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-1	SAMPLE ID:	UST-21- MW-1 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)		STATIC DEPTH TO WATER (ft)	6.75	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (13.06)FT - (6.75)FT X 0.16 gallons/foot = 1.00 (1.0) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	7.75	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	7.75	PURGING INITIATED AT:	1155	PURGING ENDED AT:		TOTAL VOLUME PURGED (gal):	

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS
								% / mg/L				ORP
1205	1.0	1.0	0.1	6.75	7.16	21.68	529	13.1 / 1.15	0.65	clear	slight odor	-225.6
1208	0.3	1.3	1	1	7.11	21.71	528	16.5 / 1.44	0.52	1	1	-231.7
1211	0.3	1.6	1	1	7.11	21.77	531	14.5 / 1.30	0.32	1	1	-236.6

STABLE

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne TtNUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne	SAMPLING INITIATED AT	1215	SAMPLING ENDED AT:	1225

PUMP OR TUBING DEPTH IN WELL (feet):	7.75	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION				INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	(#) CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21- MW-1 -0211	3 (2)	CG	40 mL	HCl			VOC	8260 B	RPPP		100	
	2	AG	1L	Ice			PAHs	8270 C	APP			
	2	AG	1L	HCl			TRPH	FLPRO				
	1	PE	250mL	HNO_3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

$\frac{100\text{ml}}{155} \cdot \frac{2}{2}$ 0.1 gal/min

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-4	SAMPLE ID:	UST-21- MW-4 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL	7 feet to 12 feet	STATIC DEPTH TO WATER (ft)	9.23	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (13.94)FT -(9.23)FT X 0.16 gallons/foot = 0.75 (0.8) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.23	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.23	PURGING INITIATED AT:	1859	PURGING ENDED AT:	1924	TOTAL VOLUME PURGED (gal):	2.2

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS
1907	0.8	0.8	0.1	9.23	7.03	21.44	862	4.6/4.41	36.1	lt black	sedum	-220.8
~~1910~~	~~0.3~~	~~1.1~~	~~TP~~								(strong)	
~~1913~~	~~0.3~~	~~1.4~~	~~TP~~									
1915	0.8	1.6	↓	↓	7.10	21.64	851	11.0/0.96	9.42	lt black	↓	-226.7
1918	0.3	1.9			7.09	21.70	847	15.9/1.41	5.79	↓		-216.1
1921	0.3	2.2			7.11	21.69	845	18.2/1.60	5.13			-233.2

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shellhorse / TtNUS	SAMPLER(S) SIGNATURE(S):	Jared Shellhorse	SAMPLING INITIATED AT	1925	SAMPLING ENDED AT:	1935
PUMP OR TUBING DEPTH IN WELL (feet):	10.23	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y N (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION								
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- MW-4 -0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		100	
	2	AG	1L	Ice			PAHs	8270 C	APP		↓	
	2	AG	1L	HCl			TRPH	FLPRO	↓		↓	
	1	PE	250mL	HNO_3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

$\frac{100 mL}{155} \approx 0.1 gal/min$

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-9	SAMPLE ID:	UST-21- MW-9 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)		STATIC DEPTH TO WATER (ft)	6.84	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (13.04)FT - (6.84)FT X 0.16 gallons/foot = 0.99 (1.0) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	7.84	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	7.84	PURGING INITIATED AT:	0551	PURGING ENDED AT:	0616	TOTAL VOLUME PURGED (gal):	1.9

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°c)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS
								9/2/MGIL				ORP
0607	1.0	1.0	0.1	6.84	6.62	18.37	392	20.58 LHS	9.39	Hyellow	slight sulfur	-23.3
0610	0.3	1.3			6.64	18.65	402	17.4 1.62	9.50			-121.9
0613	0.3	1.6			6.75	18.70	406	16.6 1.54	7.39			-169.1
0616	0.3	1.9			6.83	18.77	411	15.4 HS	5.14			-177.5

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne TTNUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne	SAMPLING INITIATED AT:	0620	SAMPLING ENDED AT:	0635
PUMP OR TUBING DEPTH IN WELL (feet):	7.84	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y N (replaced) DUPLICATE: Y (N)

SAMPLE ID CODE	SAMPLE CONTAINER SPECIFICATION # CONTAINERS	MATERIAL CODE	VOLUME	SAMPLE PRESERVATION PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/min)	
UST-21- MW-9 -0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		100	
	2	AG	1L	ice			PAHs	8270 C	APP			
	2	AG	1L	HCl			TRPH	FLPRO				
	1	PE	250mL	HNO_3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

100mL / 15s ≈ 0.1 gal/min

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-13	SAMPLE ID:	UST-21- MW-~~10~~ 13 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL	STATIC DEPTH TO WATER (ft)	PURGE PUMP TYPE OR BAILER:
2	3/16	7 feet to 12 feet	7.79	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable)

= (13.57)FT - (7.79)FT X 0.16 gallons/foot = 0.924 ~~0.9~~ TS (1.0) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gal):
8.79	8.79	1231	1247	1.6

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	% / mg/L DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1241	1.0	1.0	0.1	7.79	7.13	21.37	739	11.2 / 1.00	4.93	clear	petroleum	-213.0
1244	0.3	1.3	"	"	7.13	21.43	741	15.3 / 1.35	6.65	"	"	-211.9
1247	0.3	1.6	"	"	7.11	21.46	743	15.1 / 1.32	6.30	"	"	-213.3

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT	SAMPLING ENDED AT:
Jared Shelburne T+NUS	Jared Shelburne	1250	1300

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED Y (N) Filtration Equipment Type:	FILTER SIZE: (µm)
8.79	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21- MW-13 -0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		100	
	2	AG	1L	HCl			PAHs	8270 C	APP		1	
	2	AG	1L	HCl			TRPH	FLPRO	1		1	
	1	PE	250ml	HNO_3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

$\frac{100mL}{15s} \times \frac{2}{1} \approx 0.1\ gal/min$

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-14	SAMPLE ID:	UST-21- MW-14 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)		STATIC DEPTH TO WATER (ft)	8.76	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (14.09)FT -(8.76)FT X 0.16 gallons/foot = 0.85 (0.9) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	9.76	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	9.76	PURGING INITIATED AT:	1434	PURGING ENDED AT:	1452	TOTAL VOLUME PURGED (gal):	1.8

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	% | mg/L DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1443	0.9	0.9	0.1	8.76	7.50	17.39	1085	4.3 | 0.41	6.52	clear	petroleum	-232.6
1446	0.3	1.2	|	|	7.52	17.62	1090	4.2 | 0.40	5.27	|	(strong)	-243.3
1449	0.3	1.5	|	|	7.53	17.58	1091	4.0 | 0.38	3.39	|	|	-251.7
1452	0.3	1.8			7.54	17.64	1091	4.1 | 0.39	3.33	|	|	-245.8

STABLE

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne TtNUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne	SAMPLING INITIATED AT	1457	SAMPLING ENDED AT:	1510
PUMP OR TUBING DEPTH IN WELL (feet):	9.76	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21- MW-14 -0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		100	
	2	AG	1L	Ice			PAHs	8270 C	APP		|	
	2	AG	1L	HCl			TRPH	FLPRO	|		|	
	1	PE	250mL	HNO_3			LEAD	6010 B	|		|	

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-16	SAMPLE ID:	UST-21- MW-16 -0211	DATE: 2-10-4

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL	7 feet to 12 feet	STATIC DEPTH TO WATER (ft)	9.19	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable)

= (13.30)FT - (9.19)FT X 0.16 gallons/foot = 0.657 (0.7) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.19	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.19	PURGING INITIATED AT:	1356	PURGING ENDED AT:	1409	TOTAL VOLUME PURGED (gal):	1.3

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	%o/ mg/L DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1403	0.7	0.7	0.1	9.19	7.17	21.13	926	5.3/0.47	10.29	clear	petroleum	-225.9
1406	0.3	1.0	"	"	7.15 FD	21.17	926	7.3/0.65	7.98	"	straw	-246.6
1409	0.3	1.3	"	"	7.15	21.32	927	17.3/1.6	6.48	"	"	-253.7

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shubare TtNUS	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT	1412	SAMPLING ENDED AT:	1422
PUMP OR TUBING DEPTH IN WELL (feet):	10.19	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION				INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21- MW-16 -0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		400	
	2	AG	1L	ice			PAHs	8270 C	APP			
	2	AG	1L	HCl			TRPH	FLPRO				
	1	PE	250mL	HNO_3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

106ml / 15s ≈ 0.1 gal/min

* Note - 2nd reading for Ph is 7.15

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-17	SAMPLE ID:	UST-21- MW-17 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL	7 feet to 12 feet	STATIC DEPTH TO WATER (ft)	10.18	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14.20)FT - (10.18)FT X 0.16 gallons/foot = 0.64 (0.7) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	11.18	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	11.18	PURGING INITIATED AT:	1946	PURGING ENDED AT:	2015	TOTAL VOLUME PURGED (gal):	3.0

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS
												ORP
1953	0.7	0.7	0.1	10.18	6.96	22.60	1155	20.6/1.75	24.4	Lt. Yellow	Strong	-247.9
1956	0.3	1.0			6.97	22.42	1193	17.6/1.52	16.5	Dk. Brown	Petroleum	-256.7
1964	0.3	1.3			6.95	22.50	1202	14.0/1.20	17.6			-260.8
~~2002~~	~~TS~~											
~~2005~~	~~TS~~											
2006	0.4	2.1			7.01	21.55	1022	5.3/0.47	19.7			-247.8
2011	0.5	2.6			6.94	21.08	1154	3.6/0.32	12.2			-245.1
2015	0.4	3.0			7.02	21.64	1218	3.4	6.98			-255.5
						STABLE						

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Stellaine	SAMPLER(S) SIGNATURE(S):	Jared Stellaine T-NUS	SAMPLING INITIATED AT	2015	SAMPLING ENDED AT:	2025

PUMP OR TUBING DEPTH IN WELL (feet):	11.18	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION				INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21- MW-17 -0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		100	
	2	AG	1L	ICE			PAHs	8270 C	APP			
	2	AG	1L	HCl			TRPH	FLPRO				
	1	PE	250mL	HNO3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:
1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

100 mL ≈ 0.1 gal/min
155

Note - 2nd Ph reading = 6.97

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida
WELL NO:	MW-23	SAMPLE ID:	UST-21- MW-23 -0211
DATE:	2-10-4		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL	7 feet to 12 feet
STATIC DEPTH TO WATER (ft)	9.69	PURGE PUMP TYPE OR BAILER:	PP		

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (14.0)FT - (9.69)FT X 0.16 gallons/foot = 0.69 (0.7) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.69	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.69	PURGING INITIATED AT:	1312
PURGING ENDED AT:	1325	TOTAL VOLUME PURGED (gal):	1.3		

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS
								% / mg/L				ORP
1319	0.7	0.7	0.1	9.69	7.60	21.14	616	5.6 / 0.50	8.26	clear	faint petro	-169.4
1322	0.3	1.0			7.63	21.30	605	4.5 / 0.41	5.55			-171.1
1325	0.3	1.3	1	1	7.63	21.27	602	4.3 / 0.39	4.41	1	1	-196.1

STABLE

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jarid Shelburne TtNUS	SAMPLER(S) SIGNATURE(S):	Jarid Shelburne
SAMPLING INITIATED AT	1330	SAMPLING ENDED AT:	1340
PUMP OR TUBING DEPTH IN WELL (feet):	10.69	TUBING MATERIAL CODE:	PE
FIELD-FILTERED	Y (N)	FILTER SIZE: (µm)	
Filtration Equipment Type:			
FIELD DECONTAMINATION: PUMP	Y (N)	TUBING (Y) N (replaced)	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION							
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/min)	
UST-21-MW-23-0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		ACC	
	2	AG	1L	ice			PAHs	8270 C	APP			
	2	AG	1L	HCl			TRPH	FLPRO				
	1	PE	250mL	HNO_3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

$\frac{150\,ml}{15s} \rightarrow 0.1\,gal/min$

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida
WELL NO:	MW-25	SAMPLE ID:	UST-21- MW-25 -0211
DATE:	2-9-11		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL	7 feet to 12 feet
STATIC DEPTH TO WATER (ft)	9.33	PURGE PUMP TYPE OR BAILER:	PP		

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable)

= (13.62)FT - (9.33)FT X 0.16 gallons/foot = 0.684 (0.7) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.33	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.33	PURGING INITIATED AT:	0640
PURGING ENDED AT:	0707	TOTAL VOLUME PURGED (gal):	2.7		

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
0644	0.9	0.9	0.1	9.33	7.45	18.62	813	17.4/1.15	4.73	clear	Petro-like odor	-240.6
0652	0.3	1.2			7.54	18.76	794	17.8/1.66	4.72	clear		-253.2
0655	0.3	1.5			7.59	18.90	781	22.2/2.10	4.16	clear		-258.4
0658	0.3	1.8			7.62	18.95	782	23.0/2.11	3.66	clear		-240.9
0701	0.3	2.1			7.66	19.01	781	13.5/1.23	3.53			-262.0
0704	0.3	2.4			7.71	18.99	782	6.9/0.63	2.32			-242.8
0707	0.3	2.7			7.75	18.96	782	5.0/0.45	1.74			-262.1
					STABLE							

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne TTNUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne
SAMPLING INITIATED AT	0710	SAMPLING ENDED AT:	0845
PUMP OR TUBING DEPTH IN WELL (feet):	10.33	TUBING MATERIAL CODE:	PE
FIELD-FILTERED (Y) N	Filtration Equipment Type:	FILTER SIZE: (µm)	0.45

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- MW-25 -0211	3	CG	40 mL	HCl			VOC	8260 B	RFPP		400	
	3	AG	1 L	Ice			PAHs	8270 C	APP			
	2	AG	1 L	HCl			TRPH	FLPRO				
	1	PE	250mL	HNO_3			LEAD	6010 B				
	1	PE	250mL	HNO_3			MNA PARAMETERS					
	1	PE	250mL	HNO_3			Dissolved methane	RSK 175				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)MNA: Total and Dissolved Iron and Manganese, Dissolved gases (Methane, Nitrogen, Carbon Dioxide and Hydrogen), Anions (Nitrite, Nitrate, chloride and sulfate) BOD, COD, Sulfide and Alkalinity.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

Flow Rate = $\frac{100 ml}{155}$ ≈ 0.1 gal/min

Refer to Back

# containers	material code	volume	preservative used	intended method analysis	sampling equipment code	sample pump flow rate
1	PE ~~AG~~ JS	250 mL	ice	Anions (nitrate, nitrite, sulfate, chloride)	APP	100
1	PE ~~AG~~ JS	250 mL	ice	BOD		
1	PE	250 mL	H_2SO_4	COD		
1	PE	250 mL	zn Acetate and Sodium Hydroxide	Sulfide		
1	PE	250 mL	ice	Alkalinity		
1	CG	40 mL	ice	dissolved gases		
1	CG	15 mL	none	gases	other (bubble cell)	none

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-37	SAMPLE ID:	UST-21- MW-37 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL	5 (feet) to (feet) 15	STATIC DEPTH TO WATER (ft)	8.91	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (14.33)FT - (8.91)FT X 0.16 gallons/foot = 0.86 (0.9) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	9.91	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	9.91	PURGING INITIATED AT:	1521	PURGING ENDED AT:	1536	TOTAL VOLUME PURGED (gal):	1.5

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L) % / mg/L	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1530	0.9	0.9	0.1	8.91	7.11	22.40	933	6.0 / 0.52	1.86	clear	petroleum	-270.1
1533	0.3	1.2	1	1	7.12	22.56	975	6.5 / 0.57	2.22	1	(strong)	-272.2
1536	0.3	1.5	1	1	7.12	22.60	972	12.4 / 1.07	1.49	1	1	-271.5

STABLE

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne T+N's	SAMPLER(S) SIGNATURE(S):	Jared Shelburne	SAMPLING INITIATED AT	1540	SAMPLING ENDED AT:	1550
PUMP OR TUBING DEPTH IN WELL (feet):	9.91	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION									
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- MW-37 -0211	3	CG	40 mL	HCl			VOC	8260 B	RFPP		400	
	2	AG	1L	Ice			PAHs	8270 C	APP		1	
	2	AG	1L	HCl			TRPH	FLPRO	1		1	
	1	PE	250 mL	HNO_3			LEAD	6010 B	1		1	

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

$\frac{100 ml}{15 s} \approx 0.1$ gal/min

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-38	SAMPLE ID:	UST-21- MW-38 -0211	DATE: 7-20-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet)	to (feet)	STATIC DEPTH TO WATER (ft)	8.62	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (14.25)FT - (8.62)FT X 0.16 gallons/foot = 0.90 (0.9) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + TS gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	9.62	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	9.62	PURGING INITIATED AT:	2044	PURGING ENDED AT:	2100	TOTAL VOLUME PURGED (gal):	1.5

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
2054	0.9	0.9	0.1	8.62	7.33	19.93	361	7.5 0.71	1.59	clear	none	-208.3
2057	0.3	1.2	|	|	7.29	19.98	359	7.2 0.66	2.01	|	|	-213.5
2100	0.3	1.5	|	|	7.30	20.13	356	5.7 0.51	0.97	|	|	-220.5

STABLE

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne TTNUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne	SAMPLING INITIATED AT	2105	SAMPLING ENDED AT:	2115
PUMP OR TUBING DEPTH IN WELL (feet):	9.62	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	—

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION				INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21-	3	CG	40mL	HCl			VOC	8260 B	RFPP		400	
MW-38	2	AG	1L	Ice			PAHs	8270 C	APP		1	
-0211	2	AG	1L	HCl			TRPH	FLPRO	1		1	
	1	PE	250mL	HNO3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

100ml / 15s = 2/2 0.1 gal/min

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-40	SAMPLE ID:	UST-21- MW-40 -0211	DATE: 2/11/10

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)		STATIC DEPTH TO WATER (ft)		PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable)

= (12.10)FT - (5.05)FT X 0.16 gallons/foot = 1.13 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 1055	PURGING ENDED AT: 736	TOTAL VOLUME PURGED (gal): 4

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	% DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
707	1.2	1.2	0.1	5.05	7.28	15.47	212	82.7 8.25	20.8	clear	petr. like	9.2
711	0.4	1.6	0.1	5.06	7.29	15.54	212	81.3 8.05	19.4	clear		7.3
715	0.4	2.0	0.1	5.05	7.38	15.38	213	81.6 8.14	19.3	clear		7.8
720	0.5	2.5	0.1		7.23	15.25	201	80.8 8.12	19.8	clear		20.82
730	1.0	3.5	0.1		7.24	15.19	202	78.8 8.03	19.3	clear		24.5
735	0.3	4.0	0.1		7.22	15.16	203	80.6 8.13	19.3	clear		26.9

Stable

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT	SAMPLING ENDED AT:
Vanessa Martinez / TT		736	811

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED Y (N) Filtration Equipment Type:	FILTER SIZE: (µm)
13			

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) DUPLICATE: (Y) N GW01-0211

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21- MW-40 -0211	3 (MB) (2)	CG	40ml	HCl			VOC	8260 B	RFPP		400	
	2	AG	1L	—			PAHs	8270 C	APP			
	2	AG	1L	HCl			TRPH	FLPRO	APP			
	1	PE	250ml	HNO_3			LEAD	6010 B	APP			

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-41	SAMPLE ID:	UST-21- MW-41 -0211	DATE: 2-8-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)		STATIC DEPTH TO WATER (ft)	5.97	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (12.91)FT - (5.97)FT X 0.16 gallons/foot = 1.11 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	6.97	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	6.97	PURGING INITIATED AT:	1030	PURGING ENDED AT:	1302	TOTAL VOLUME PURGED (gal):	3.694

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1041	1.11	1.11	0.1	5.97	6.98	16.25	387	5.7/5.55	12.9	lt.yellow	none	191.7
1044	0.278	1.388	0.1	5.97	7.18	16.66	304	55.7/5.41	12.0	lt yellow	none	189.7
1047	0.278	1.666	0.1	5.97	7.20	16.85	291	53.2/5.13	11.3	lt yellow	none	187.1
1050	0.278	1.944	0.1	5.97	7.18	16.86	290	53.3/5.22	11.2	lt yellow	none	184.8
1056	0.278	2.222	0.5	5.97	7.19	16.71	287	52.2/5.07	10.45	lt yellow	none	185.0
1101	0.278	2.5	0.5	5.97	7.22	16.75	289	52.6/5.10	9.16	clear	none	174.6
1106	0.278	2.778	0.5	5.97	7.25	16.83	296	51.7/5.02	10.62	clear	none	172.0
1111	0.278	3.056	0.5	5.97	7.27	17.01	296	51.9/5.02	9.54	clear	none	166.6
1117	0.278		0.5	5.97	7.25	16.75	299	47.7/4.62	9.43	clear	none	172.5
1122	0.25	3.544		5.97	7.20	16.93	297	46.7/4.53	8.44	clear	none	163.0
1125	0.15	3.694		5.97	7.22	16.78	296	46.7/4.53	8.14	clear	none	173.1
					STABLE							

P CVP
30 2.244
25 2.494
25 2.744
25 2.994
30 3.244

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Thomas Shelburne TTNUS	SAMPLER(S) SIGNATURE(S):	Thomas Shellme	SAMPLING INITIATED AT	1133	SAMPLING ENDED AT:	1300
PUMP OR TUBING DEPTH IN WELL (feet):	6.97	TUBING MATERIAL CODE:	PE	FIELD-FILTERED (Y) N Dissolved metals Filtration Equipment Type:		FILTER SIZE: (µm)	0.45 microns

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION							
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- MW-41 -0211	3	CG	40ml	HCL			VOC	8260 B	RFPP		100	
	2	AG	1L	Ice			PAHs	8270 C	APP			
	2	AG	1L	HCL			TRPH	FLPRO				
	1	PE	250ml	HNO3			LEAD	6010 B				
	1	PE	250ml	HNO3			Total Metals	6010B				
	1	PE	250ml	HNO3			Dissolved Metals	6010B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)
Pump Rate = $\frac{100ml}{155} \times \frac{60s}{min} \times \frac{1L}{1000ml} \times \frac{1gal}{3.79L}$ = 0.106 gal/min (0.1 gal/min)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:
1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

(Refer to back of sheet)

Revision Date: February 12, 2009

1/4 WV = 1.11/4 = 0.278 gal or 3min

☆ After Reading at 1050 Pump Rate was lowered to $\frac{50ml}{155} \times \frac{60s}{min} \times \frac{1L}{1000ml} \times \frac{1gal}{3.79L}$ = 0.05 gal/mn to try to get turbidity below 10

# containers	material code	volume	preservative used	intended method analysis	sampling group code	sampling frequency
1	PE	250ml	ice	anions (nitride, nitrite, sulfate, chloride)	APP	100
1	PE	250ml	~~H2SO4~~ ice TS	BOD	APP	100
1	PE	250ml	H_2SO_4	COD	APP	100
1	PE	250ml	zinc Acetate + Sodium Hydroxide	Sulfide	APP	100
1	PE	250ml	ice	Alkalinity	APP	100

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida
WELL NO:	DMW-54	SAMPLE ID:	UST-21- DMW-54 -0211
DATE:	2-10-11		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet)	20 to (feet) 25
STATIC DEPTH TO WATER (ft)	9.36	PURGE PUMP TYPE OR BAILER:	PP		

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable)

= (23.57)FT - (9.36)FT X 0.16 gallons/foot = 2.27 (2.3) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10.36	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10.36	PURGING INITIATED AT: 1054	PURGING ENDED AT: 1129	TOTAL VOLUME PURGED (gal): 3.5

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°c)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L) 4-1 mg/L	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1117	2.3	2.3	0.1	9.36	7.19	22.41	545	9.0 | 0.78	2.45	Hyellow	Petrol	-256.7
1123	0.6	2.9	↓	↓	7.20	22.56	546	5.1 | 0.44	2.07	↓	sulfur	-265.3
1129	0.6	3.5	↓	↓	7.20	22.53	546	3.2 | 0.27	1.76	↓	↓	-262.2

STABLE

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jared Shelburne TTNUS	SAMPLER(S) SIGNATURE(S): Jared Shelburne	SAMPLING INITIATED AT: 1135	SAMPLING ENDED AT: 1145
PUMP OR TUBING DEPTH IN WELL (feet): 10.36	TUBING MATERIAL CODE: PE	FIELD-FILTERED Y (N) Filtration Equipment Type:	FILTER SIZE: (µm)

FIELD DECONTAMINATION: PUMP Y N TUBING Y N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION				INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21- DMW-54 -0211	3	CG	40mL	HCL			VOC	8260 B	RFPP		100	
	2	AG	1L	↓			PAHs	8270 C	APP		↓	
	2	AG	1L	HCL			TRPH	FLPRO	↓		↓	
	1	PE	250mL	HNO_3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

$\frac{100\ mL}{15\ s} \times \frac{2}{2} = 0.1\ gal/min$

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida
WELL NO:	DMW-55	SAMPLE ID:	UST-21- DMW-55 -0211
DATE:	2-9-11		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)	STATIC DEPTH TO WATER (ft) 9.88
PURGE PUMP TYPE OR BAILER:	PP				

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (24.89)FT - (9.88)FT X 0.16 gallons/foot = 2.4016 (2.4) ~~(2.4)~~ TS gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.88	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.88	PURGING INITIATED AT: 1146	PURGING ENDED AT: 1242
TOTAL VOLUME PURGED (gal):	5.6				

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (% / mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1210	2.4	2.4	0.1	9.88	7.86	21.81	370	16.3/1.43	13.7	clear w/	Petroleum	-275.5
1218	0.8	3.2	"	"	7.83	22.14	364	13.2/1.15	15.5	white film	(Strong)	-277.3
1226	0.8	4.0	"	"	7.80	22.06	363	4.8/0.41	9.11	yellow	"	-283.0
1234	0.8	4.8	"	"	~~7.87~~	22.11	364	3.1/0.27	5.87	"	"	-287.4
1242	0.8	5.6	"	"	7.80	22.11	378	2.8/0.24	2.59	"	"	-291.4
					7.81 ↑							

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jared Shelburne T+NUS	SAMPLER(S) SIGNATURE(S): Jared Shelburne	SAMPLING INITIATED AT 1245	SAMPLING ENDED AT: 1348
PUMP OR TUBING DEPTH IN WELL (feet): 10.88	TUBING MATERIAL CODE: PE	FIELD-FILTERED (Y) N Filtration Equipment Type:	FILTER SIZE: (µm) 0.45
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION							
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- DMW-55 -0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		100	
	2	AG	1L	Ice			PAHs	8270 C	APP			
	2	AG	1L	HCl			TRPH	FLPRO	"		"	
	1	PE	250mL	HNO_3			LEAD	6010 B	"		"	
	1	PE	250mL	HNO_3			MNA PARAMETERS Total Metals	6010B	"		"	
	1	PE	250mL	HNO_3			Dissolved Metals	6010B	"		"	

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene). MNA: Total and Dissolved Iron and Manganese, Dissolved gases (Methane, Nitrogen, Carbon Dioxide and Hydrogen), Anions (Nitrite, Nitrate, chloride and sulfate) BOD, COD, Sulfide and Alkalinity.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

100mL / 15s = 0.1 gal/min

(Refer to Back)

# containers	material code	volume	preservative used	intended method of analysis	sampling equipment code	sample pump flow rate
1	PE	250mL	ice	Anions (nitrate, nitrite, sulfate, chloride)	APP	100
1	PE	250mL	ice	BOD		
1	PE	250mL	H_2SO_4	COD		
1	PE	250mL	Zn Acetate and Sodium Hydroxide	Sulfide		
1	PE	250mL	ice	Alkalanity		
1	CG	40mL	ice	dissolved gases		
1	CG	15mL	none	gases	other (bubble cell)	none

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	DMW-60	SAMPLE ID:	UST-21- DMW-60 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)		STATIC DEPTH TO WATER (ft)	9.56	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable)

= (24.53)FT - (9.56)FT X 0.16 gallons/foot = 2.39 (2.4) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.56	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.50	PURGING INITIATED AT	0955	PURGING ENDED AT:	1031	TOTAL VOLUME PURGED (gal):	3.6

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	% / mg/L DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1019	2.4	2.4	0.1	9.56	7.47	22.57	10341	3.7 / 0.31	0.0	Hyellow	Petro	-336.4
1025	0.6	3.0	1	1	7.48	22.75	10729	3.3 / 0.28	0.17	1	sulfur	-339.8
1031	0.6	3.6	1	1	7.49	22.71	10771	3.2 / 0.27	0.0	1	1	-339.8

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne T+NUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne	SAMPLING INITIATED AT	1035	SAMPLING ENDED AT:	1045
PUMP OR TUBING DEPTH IN WELL (feet):	10.56	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING (Y) N (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION								
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- DMW-60 -0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		100	
	2	AG	1L	Ice			PAHs	8270 C	APP			
	2	AG	1L	HCL			TRPH	FLPRO				
	1	PE	250mL	HNO_3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

100 mL / 155 ≈ 0.1 gal/min

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	DMW-61	SAMPLE ID:	UST-21- DMW-61 -0211	DATE: 2-9-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)		STATIC DEPTH TO WATER (ft)	9.65	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable)

= (33.29)FT - (9.65)FT X 0.16 gallons/foot = 3.78 (3.8) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.65	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.65	PURGING INITIATED AT:	0912	PURGING ENDED AT:	1010	TOTAL VOLUME PURGED (gal):	5.8

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	%/(mg/L) DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
0950	3.8	3.8	0.1	9.65	8.36	22.14	37097	18.5 / 1.41	1.07	clear+	Sulfur	-363.0
1000	1.0	4.8	"	"	8.36	22.20	37065	7.9 / 0.60	0.00	Light black	"	-359.4
1010	1.0	5.8	"	"	8.37	22.25	37035	5.4 / 0.42	0.00	"	"	-361.5

STABLE

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne / TtNUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne	SAMPLING INITIATED AT	1015	SAMPLING ENDED AT:	1120
PUMP OR TUBING DEPTH IN WELL (feet):	10.65	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y / N; Filtration Equipment Type:		FILTER SIZE: (µm)	0.45
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y ~~N~~ (N (replaced))		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION				INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21- DMW-61 -0211	3	CG	40ml	HCl			VOC	8260 B	RFPP		100	
	2	AG	1 L	ice			PAHs	8270 C	APP			
	2	AG	1L	HCl			TRPH	FLPRO				
	1	PE	250mL	HNO_3			LEAD	6010 B				
	1	PE	250mL	HNO_3			MNA PARAMETERS (Total Metals Dissolved Metals)	SOM 6010B				
	1	PE	250mL	HNO_3								

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene) MNA: Total and Dissolved Iron and Manganese, Dissolved gases (Methane, Nitrogen, Carbon Dioxide and Hydrogen), Anions (Nitrite, Nitrate, chloride and sulfate) BOD, COD, Sulfide and Alkalinity.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

100ml / 15s ≈ 0.1 gal/min

(Refer to Back)

# containers	material code	volume	preservative used	intended method analysis	sampling equipment code	sample pump flow rat
1	PE	250mL	ice	Anions (nitrate, nitrite, sulfate, chloride)	APP	100
1	PE	250mL	ice	BOD		
1	PE	250mL	H_2SO_4	COD		
1	PE	250mL	Zn Acetate and Sodium Hydroxide	Sulfide		
1	PE	250mL	ice	Alkalinity		
1	CG	40mL	ice	dissolved gases		
1	CG	15mL	none	gases	other (bubblecell)	none

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	DMW-62	SAMPLE ID:	UST-21- DMW-62 -0211	DATE: 2-9-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)		STATIC DEPTH TO WATER (ft)	9.23	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (24.71)FT - (9.23)FT X 0.16 gallons/foot = 2.47 (2.5) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.23	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.23	PURGING INITIATED AT:	1604	PURGING ENDED AT:	1649	TOTAL VOLUME PURGED (gal):	4.6

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	% / mg/L DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1629	2.5	2.5	0.1	9.23	8.41	23.19	4969	8.3/0.70	3.46	H. Black	Slight Sulfur	-355.3
1636	0.7	3.2			8.47	23.19	5246	4.1/0.40	2.94			-361.0
1642	0.7	3.9			8.50	23.25	5383	4.3/0.34	2.69			-364.8
1649	0.7	4.6			8.53	23.21	5479	3.7/0.31	1.97			-364.7

STABLE

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016
PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne T+NUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne	SAMPLING INITIATED AT	1655	SAMPLING ENDED AT:	1800

PUMP OR TUBING DEPTH IN WELL (feet):	10.23	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: (Y) N GW02-021[illegible]1

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION				INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21- DMW-62 -0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		100	
	2	AG	1L	ice			PAHs	8270 C	APP			
	2	AG	1L	HCl			TRPH	FLPRO				
	1	PE	250mL	HNO_3			LEAD	6010 B				
	1	PE	250mL	HNO_3								
	1	PE	250mL	HNO_3								

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:
1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

$\frac{100mL}{15s} \approx 0.1$ gal/min

★ Field Dup!

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	DMW-63	SAMPLE ID:	UST-21- DMW-63 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet)	to (feet)	STATIC DEPTH TO WATER (ft)	9.37	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (34.55)FT - (9.37)FT X 0.16 gallons/foot = 4.03 (4.1) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.37	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.37	PURGING INITIATED AT:	0634	PURGING ENDED AT:	0748	TOTAL VOLUME PURGED (gal):	7.4

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
0715	4.1	4.1	0.1	9.37	7.26	20.47	5.2/0.41	3.4/0.27	0.20	lt. yellow/sulfur		-344.7
0726	1.1	5.2	"	"	7.26	20.87	34876	3.3/0.27	0.0	+ black		-349.1
0737	1.1	6.3	"	"	7.27	20.89	34865	3.0/0.24	0.0	"	"	-361.5
0748	1.1	7.4	"	"	7.27	21.06	34817	2.6/0.20	0.0	"	"	-358.9

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne TtNUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne	SAMPLING INITIATED AT	0755	SAMPLING ENDED AT:	0805

PUMP OR TUBING DEPTH IN WELL (feet):	10.37	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:	FILTER SIZE: (µm)

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21- DMW-63 -0211	3	~~PP~~ CG	40mL	HCl			VOC	8260 B	RFPP		400	
	2	AG	1L	Ice			PAHs	8270 C	APP			
	2	AG	1L	HCl			TRPH	FLPRO				
	1	PE	250mL	HNO_3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

100 ml / 155 × 2/2 = 0.1 gal/min

* Note - 2nd Reading D.O. is 3.7/0.29

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	DMW-64	SAMPLE ID:	UST-21- DMW-64 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet)	to (feet)	STATIC DEPTH TO WATER (ft)	9.27	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (36.21)FT - (9.27)FT X 0.16 gallons/foot = 4.310 (4.3) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.27	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.27	PURGING INITIATED AT:	0822	PURGING ENDED AT:	0927	TOTAL VOLUME PURGED (gal):	6.5

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L) P/C / mg/L	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
0905	4.3	4.3	0.1	9.27	7.13	21.59	319.22	2.6 / 0.20	1.79	straw yellow	Sulfur	-370.3
0916	1.1	5.4	1	1	7.13	21.60	319.69	2.4 / 0.19	1.58	+ black	1	-371.7
0927	1.1	6.5	1	1	7.14	21.70	319.88	2.3 / 0.18	0.84	1	1	-372.7

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne T+NUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne	SAMPLING INITIATED AT	0935	SAMPLING ENDED AT:	0945
PUMP OR TUBING DEPTH IN WELL (feet):	10.27	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING (Y) N (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21- DMW-64 -0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		400	
	2	AG	1L	ICE			PAHs	8270 C	APP		1	
	2	AG	1L	HCl			TRPH	FLPRO	1		1	
	1	PE	250mL	HNO_3			LEAD	6010 B	1		1	

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

$\frac{100ml}{15s} \times \frac{2}{1} = 0.1$ gal/min

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida
WELL NO:	DMW-65	SAMPLE ID:	UST-21- DMW-65 - 0211
DATE:	2-8-11		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) 25 to (feet) 35	STATIC DEPTH TO WATER (ft) 6.40	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (35.91)FT - (6.40)FT X 0.16 gallons/foot = 4.7276 (4.8) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 7.40	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 7.40	PURGING INITIATED AT: 1350	PURGING ENDED AT: 1502	TOTAL VOLUME PURGED (gal): 7.2	

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°c)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1436	4.8	4.8	0.10	6.40	8.16	23.71	31645	7.5/0.58	4.77	H. yellow	Water & fuel	-399.4
1450	1.2	6.0	0.10	6.40	8.14	23.77	31591	3.7/0.28	1.62	H. yellow	Petro	-400.4
1502	1.2	7.2	0.10	6.40	8.14	23.66	31543	2.8/0.21	1.96	H. yellow	Petro	-398.3

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jared Shelburne TtNUS	SAMPLER(S) SIGNATURE(S): Jared Shelburne	SAMPLING INITIATED AT 1502	SAMPLING ENDED AT: 1610
PUMP OR TUBING DEPTH IN WELL (feet): 7.40	TUBING MATERIAL CODE: PE	FIELD-FILTERED (Y) N Filtration Equipment Type:	FILTER SIZE: (µm) 0.45
FIELD DECONTAMINATION: PUMP Y (N)	TUBING (Y) N (replaced)	DUPLICATE: Y (N)	

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- DMW-65 - 0211	3	CG	40ml	HCl			VOC	8260 B	RFPP		100	
	2	AG	1L	ice			PAHs	8270 C	APP			
	2	AG	1L	HCl			TRPH	FLPRO	APP			
	1	PE	250ml	HNO_3			LEAD	6010 B	APP			
	1	PE	250ml	HNO_3			MNA PARAMETERS		APP			
	1	PE	250ml	HNO_3					APP			

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)MNA: Total and Dissolved Iron and Manganese, Dissolved gases (Methane, Nitrogen, Carbon Dioxide and Hydrogen), Anions (Nitrite, Nitrate, chloride and sulfate) BOD, COD, Sulfide and Alkalinity.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

$$\frac{60ml}{15s} \times \frac{60s}{1\,min} \times \frac{1L}{1000ml} \times \frac{1gal}{3.79L} =$$

$$\rightarrow \frac{100ml}{15s} \times \frac{60s}{1\,min} \times \frac{1L}{1000ml} \times \frac{1gal}{3.79L} \approx 0.105\,gal/min \quad (0.1\,gal/min)$$

$1/4\,WV = \frac{4.7276}{4} = 1.1819$ (12 min)

# of containers	material code	volume	preservative used	intended method analysis	sampling equip. code	sampling flow rate
1	PE	250ml	ice	anions (nitrate, nitrite, sulfate, chloride)	APP	100
1			ice	BOD		
1			H_2SO_4	COD		
1			zinc Acetate + sodium hydroxide	Sulfide		
1			ice	Alkalanity		

EQUIPMENT CALIBRATION LOG

Tetra Tech NUS, Inc.

PROJECT NAME : UST Site 21

INSTRUMENT NAME/MODEL: LaMotte 2020e

SITE NAME: NAS Pensacola

MANUFACTURER: LaMotte

PROJECT No.: 112G02200 Task LT.FI

SERIAL NUMBER: ME 14449

Date of Calibration	Instrument I.D. Number PINE	Person Performing Calibration	1 NTU		10 NTU		Remarks and Comments	
			Pre-calibration	Post-calibration	Pre-calibration	Post-calibration		
2-8-11		TJS	1.01	0.95	9.65	9.89		
				1.04		9.63		EOD Calib. ✓
2-9-11		TJS	1.03	1.03	9.78	10.34		
				2.30		10.72		midday Calib. ✓ (Recalibrate)
			~~1.66~~ 1.22	1.01	7.23	10.01		
				0.57		9.40		EOD Calib. ✓
2-10-11		TJS	~~1.1~~ 1.21	1.03	7.10	10.00		
				1.50		9.74		EOD Calib ✓
2-11-11		TJS	1.43	1.04	7.71	9.77		
			1	1.51		9.56		EOD

CALIBRATION STANDARDS INFORMATION

Solution	Lot #	Batch	Expiration Date
10 NTU			
1 NTU			

EQUIPMENT CALIBRATION LOG

Tetra Tech NUS, Inc.

PROJECT NAME : UST Site 21

SITE NAME: NAS Pensacola

PROJECT No.: 112G02200 Task LT.FI

INSTRUMENT NAME/MODEL: YSI - 556 MPS

MANUFACTURER: YSI Incorporated

SERIAL NUMBER: 07F100621

Date of Calibration	Instrument I.D. Number PINE	Person Performing Calibration	Conductivity (1000) Pre•Post calibration	ORP (240) Pre•Post calibration	pH7 Pre•Post calibration	pH10 Pre•Post calibration	Calibration Standard (Lot No.)	Remarks and Comments
2-9-11		TJS	1003/1000	274.4/240.00	~~6.45/7.02~~ 7.29/6.95	9.57/10.00	See Below	Cold weather may play role in calibration readings. Rental company provided calibration sheet w/calibration info (2-3-11)
							See Below	
							See Below	
			983		7.95	10.64		EOD Calibration
2-9-11		TJS	1012/1000	234.3/240.00	6.91/7.00	9.79/10.02		
			972		7.94	11.19		EOD Calibration
2-10-11		TJS	972/1000	217.4/240	7.52/7.00	10.37/10.0		
			1153		7.30	10.04		EOD Calib.
2-11-11		TJS	1011/1000	464.3/240.6	7.07/7.00	9.81/9.99		
			1110		6.65	[illegible]		EOD Calibration

CALIBRATION STANDARDS INFORMATION 10.11

Solution	Lot #	Expiration Date
ORP	7922	4-27-2011
Conductivity	8446	10-29-2011
pH 7	8437	10-26-2011
pH 10	8035	06-01-2011
pH 4	8454	11-1-11
ORP	62H87	NOV 2017

pH 4

3.49/3.93

3.92/3.95

3.87/3.98

4.80/4.08

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-1	SAMPLE ID:	UST-21- MW-1 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)		STATIC DEPTH TO WATER (ft)	6.75	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (13.06)FT - (6.75)FT X 0.16 gallons/foot = 1.00 (1.0) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	7.75	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	7.75	PURGING INITIATED AT:	1155	PURGING ENDED AT:		TOTAL VOLUME PURGED (gal):	

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DO (mg/L) DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1205	1.0	1.0	0.1	6.75	7.11	21.68	529	13.1 / 1.15	0.65	clear	slight sulfur	-225.6
1209	0.3	1.3	1	1	7.11	21.71	528	16.5 / 1.44	0.52	1	1	-231.7
1214	0.3	1.6	1	1	7.11	21.77	531	14.5 / 1.30	0.32	1	1	-236.6

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne TetraTech	SAMPLER(S) SIGNATURE(S):	Jared Shellm	SAMPLING INITIATED AT	1215	SAMPLING ENDED AT:	1225
PUMP OR TUBING DEPTH IN WELL (feet):	7.75	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION								
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- MW-1 -0211	3	CG	40 mL	HCl			VOC	8260 B	RPPP		300	
	2	AG	1 L	ice			PAHs	8270 C	APP			
	2	AG	1 L	HCl			TRPH	FLPRO				
	1	PE	250 mL	HNO3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

$\frac{100\text{ml}}{155} \times 2 \approx 0.1$ gal/min

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-4	SAMPLE ID:	UST-21- MW-4 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL	7 feet to 12 feet	STATIC DEPTH TO WATER (ft)	9.23	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (13.94)FT - (9.23)FT X 0.16 gallons/foot = 0.75 (0.8) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.23	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.23	PURGING INITIATED AT:	1859	PURGING ENDED AT:	1924	TOTAL VOLUME PURGED (gal):	2.2

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS
1907	0.8	0.8	0.1	9.23	7.03	21.44	862	4.6 / 1.41	26.1	lt brown	petroleum staining	-220.8
~~1910~~	~~0.3~~	~~1.1~~	~~TP~~									
~~1913~~	~~0.3~~	~~1.4~~	~~TB~~									
1915	0.8	1.6	"	"	7.10	21.64	851	11.0 / 0.96	9.42	lt brown	"	-226.7
1918	0.3	1.9	"	"	7.09	21.70	847	15.9 / 1.41	5.79	"	"	-216.1
1921	0.3	2.2	"	"	7.11	21.69	845	18.2 / 1.60	5.13	"	"	-233.2

STABLE

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shellhorse / TTNUS	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT	1925	SAMPLING ENDED AT:	1935
PUMP OR TUBING DEPTH IN WELL (feet):	10.23	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y N (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21-	3	CG	40mL	HCl			VOC	8260 B	RFPP		100	
MW-4	2	AG	1L	ICE			PAHs	8270 C	APP			
-0211	2	AG	1L	HCl			TRPH	FLPRO				
	1	PE	250mL	HNO_3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

$\frac{100 mL}{155} \approx 0.1 gal/min$

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida
WELL NO:	MW-13	SAMPLE ID:	UST-21- MW~~-13~~-10 -0211
DATE:	2-10-11		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL	7 feet to 12 feet
STATIC DEPTH TO WATER (ft)	7.79	PURGE PUMP TYPE OR BAILER:	PP		

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (13.57)FT -(7.79)FT X 0.16 gallons/foot = 0.924 ~~0.9~~ TS (1.0) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	8.79	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	8.79	PURGING INITIATED AT:	1231
PURGING ENDED AT:	1247	TOTAL VOLUME PURGED (gal):	1.6		

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	% / mg/L DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1241	1.0	1.0	0.1	7.79	7.13	21.37	739	11.2 / 1.00	4.93	clear	petroleum	-213.0
1244	0.3	1.3	1	1	7.13	21.43	741	15.3 / 1.35	6.65	1	1	-211.9
1247	0.3	1.6	1	1	7.11	21.46	743	15.1 / 1.32	6.30	1	1	-213.3

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne T+NUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne
SAMPLING INITIATED AT	1250	SAMPLING ENDED AT:	1300
PUMP OR TUBING DEPTH IN WELL (feet):	8.79	TUBING MATERIAL CODE:	PE
FIELD-FILTERED	Y (N)	Filtration Equipment Type:	
FILTER SIZE: (µm)			
FIELD DECONTAMINATION: PUMP	Y (N)	TUBING (N)	N (replaced)
DUPLICATE:	Y (N)		

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- MW-13 -0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		100	
	2	AG	1L	HCl			PAHs	8270 C	APP		1	
	2	AG	1L	HCl			TRPH	FLPRO	1		1	
	1	PE	250ml	HNO_3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:
1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

100mL / 15s × 2 = 0.19 gal/min

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida
WELL NO:	MW-14	SAMPLE ID:	UST-21- MW-14 -0211
DATE:	2-10-11		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)	
STATIC DEPTH TO WATER (ft)	8.76	PURGE PUMP TYPE OR BAILER:	PP		

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (14.09)FT -(8.76)FT X 0.16 gallons/foot = 0.185 (0.9) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	9.76	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	9.76	PURGING INITIATED AT:	1434
PURGING ENDED AT:	1452	TOTAL VOLUME PURGED (gal):	1.8		

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	% / mg/L DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1443	0.9	0.9	0.1	8.76	7.50	17.39	1085	4.3 / 0.41	6.52	clear	petroleum	-232.6
1446	0.3	1.2	"	"	7.52	17.62	1090	4.2 / 0.40	5.17	"	(strong)	-243.3
1449	0.3	1.5	"	"	7.53	17.58	1091	4.0 / 0.38	3.39	"	"	-252.7
1452	0.3	1.8	"	"	7.54	17.64	1091	4.1 / 0.39	3.33	"	"	-245.8

STABLE

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne TTNUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne
SAMPLING INITIATED AT	1457	SAMPLING ENDED AT:	1510
PUMP OR TUBING DEPTH IN WELL (feet):	9.76	TUBING MATERIAL CODE:	PE
FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	
FIELD DECONTAMINATION: PUMP Y (N)	TUBING (Y) N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION				INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21- MW-14 -0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		100	
	2	AG	1L	ice			PAHs	8270 C	APP		"	
	2	AG	1L	HCl			TRPH	FLPRO	"		"	
	1	PE	250mL	HNO_3			LEAD	6010 B	"		"	

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-16	SAMPLE ID:	UST-21- MW-16 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL	7 feet to 12 feet	STATIC DEPTH TO WATER (ft)	9.19	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (13.30)FT - (9.19)FT X 0.16 gallons/foot = 0.657 (0.7) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.19	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.19	PURGING INITIATED AT:	1356	PURGING ENDED AT:	1409	TOTAL VOLUME PURGED (gal):	1.3

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	%/mg/l DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1403	0.7	0.7	0.1	9.19	7.17	21.13	926	5.3/0.47	10.29	clear	petroleum	-225.9
1406	0.3	1.0	"	"	7.15 FD	21.17	926	7.3/0.65	7.98	"	strong	-246.6
1409	0.3	1.3	"	"	7.15	21.32	927	12.3/1.09	6.48	"	"	-253.7

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Stidvare TTNUS	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT	1412	SAMPLING ENDED AT:	1422
PUMP OR TUBING DEPTH IN WELL (feet):	10.19	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION								
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21-MW-16-0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		400	
	2	AG	1L	ICE			PAHs	8270 C	APP			
	2	AG	1L	HCl			TRPH	FLPRO				
	1	PE	250mL	HNO_3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:
1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

106ml / 15s ≈ 0.1 gal/min

• Note - 2nd reading for Ph is 7.15

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-17	SAMPLE ID:	UST-21- MW-17 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL	7 feet to 12 feet	STATIC DEPTH TO WATER (ft)	10.18	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable)

= (14.20)FT - (10.18)FT X 0.16 gallons/foot = 0.64 (0.7) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	11.18	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	11.18	PURGING INITIATED AT:	1946	PURGING ENDED AT:	2015	TOTAL VOLUME PURGED (gal):	3.0

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS
												ORP
1953	0.7	0.7	0.1	10.18	6.96	22.60	1155	20.6/1.78	24.4	lt yellow	strong	-247.9
1956	0.3	1.0			6.97	22.42	1193	1.76/1.52	16.5	↓ black	petroleum	-250.7
1964	0.3	1.3			6.95	22.50	1202	14.0/1.20	17.6			-260.8
~~2002~~	T3											
~~2005~~	T3											
2006	0.4	2.1			7.01	21.55	1022	5.3/0.47	19.7			-247.8
2011	0.5	2.6			6.94	21.68	1154	3.6/0.32	12.2			-245.1
2015	0.4	3.0			7.02	21.64	1216	3.4	10.9			-265.5
						STABLE						

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Stellane	SAMPLER(S) SIGNATURE(S):	Jared Stellane T1NUS	SAMPLING INITIATED AT	2014	SAMPLING ENDED AT:	2025
PUMP OR TUBING DEPTH IN WELL (feet):	11.18	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION								
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- MW-17 -0211	3	CG	40mL	HCl			VOC	8260 B	PFPP		100	
	2	AG	1L	ICE			PAHs	8270 C	APP			
	2	AG	1L	HCl			TRPH	FLPRO				
	1	PE	250mL	HNO_3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

100 mL / 155 ≈ 0.1 gal/min

Note - 2nd Ph reading = 6.97

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-23	SAMPLE ID:	UST-21- MW-23 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL	7 feet to 12 feet	STATIC DEPTH TO WATER (ft)	9.69	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (14.0)FT - (9.69)FT X 0.16 gallons/foot = 0.69 (0.7) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.69	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.69	PURGING INITIATED AT:	1312	PURGING ENDED AT:	1325	TOTAL VOLUME PURGED (gal):	1.3

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS
								% / mg/L				ORP
1314	0.7	0.7	0.1	9.69	7.66	21.14	616	5.6 / 0.50	8.26	clear	slight odor	-161.4
1322	0.3	1.0			7.63	21.30	605	4.5 / 0.41	5.55			-147.1
1325	0.3	1.3			7.63	21.27	602	4.3 / 0.39	4.41			-146.1
					STABLE							

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne TTNUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne	SAMPLING INITIATED AT	1330	SAMPLING ENDED AT:	1340
PUMP OR TUBING DEPTH IN WELL (feet):	10.69	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION								
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21-MW-23-0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		100	
	2	AG	1L	ICE			PAHs	8270 C	APP		1	
	2	AG	1L	HCl			TRPH	FLPRO				
	1	PE	250mL	HNO_3			LEAD	6010 B	1		1	

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

150 ml / 15s = 2 0.1 gal / min

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida
WELL NO:	MW-25	SAMPLE ID:	UST-21- MW-25 -0211
DATE:	2-9-11		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL	7 feet to 12 feet
STATIC DEPTH TO WATER (ft)	9.33	PURGE PUMP TYPE OR BAILER:	PP		

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable)

= (13.62)FT - (9.33)FT X 0.16 gallons/foot = 0.684 (0.7) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.33	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.33	PURGING INITIATED AT:	0640
PURGING ENDED AT:	0707	TOTAL VOLUME PURGED (gal):	2.7		

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L) % / mg/L	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
0644	0.9	0.9	0.1	9.33	7.45	18.62	813	12.4 / 1.15	4.73	clear	Petro smell	-240.6
0652	0.3	1.2			7.54	18.76	794	17.8 / 1.66	4.72	clear		-253.2
0655	0.3	1.5			7.59	18.90	781	22.2 / 2.10	4.16	clear		-258.4
0658	0.3	1.8			7.62	18.95	782	23.0 / 2.11	3.66	clear		-240.9
0701	0.3	2.1			7.66	19.01	781	13.5 / 1.23	3.53			-262.0
0704	0.3	2.4			7.71	18.99	782	6.9 / 0.63	2.32			-242.8
0707	0.3	2.7			7.75	18.96	782	5.0 / 0.45	1.74			-262.1
					STABLE							

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne TtNUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne
SAMPLING INITIATED AT	0710	SAMPLING ENDED AT:	0845
PUMP OR TUBING DEPTH IN WELL (feet):	10.33	TUBING MATERIAL CODE:	PE
FIELD-FILTERED (Y) N Filtration Equipment Type:		FILTER SIZE: (µm)	0.45

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- MW-25 -0211	3	CG	40 mL	HCl			VOC	8260 B	RFPP		100	
	3	AG	1 L	Ice			PAHs	8270 C	APP			
	2	AG	1 L	HCl			TRPH	FLPRO				
	1	PE	250mL	HNO3			LEAD	6010 B				
	1	PE	250mL	HNO3			MNA PARAMETERS	RSK-175 METHANE, ETHANE, ETHENE				
	1	PE	250mL	HNO3				6010B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)MNA: Total and Dissolved Iron and Manganese, Dissolved gases (Methane, Nitrogen, Carbon Dioxide and Hydrogen), Anions (Nitrite, Nitrate, chloride and sulfate) BOD, COD, Sulfide and Alkalinity.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

Flow Rate = $\frac{100 ml}{155}$ ≈ 0.1 gal/min

Refer to Back

# containers	material code	volume	preservative used	intended method analysis	sampling equipment code	sample pump flow rate
1	PE ~~AG~~ JS	250mL	ice	Anions (nitrate, nitrite, sulfate, chloride)	APP	100
1	PE ~~AG~~ JS	250mL	ice	BOD		
1	PE	250mL	H_2SO_4	COD		
1	PE	250mL	zn Acetate and Sodium Hydroxide	Sulfide		
1	PE	250mL	ice	Alkalinity		
1	CG	40mL	ice	dissolved gases		
1	CG	15mL	none	gases	other (bubble cell)	none

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-37	SAMPLE ID:	UST-21- MW-37 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL	STATIC DEPTH TO WATER (ft)	PURGE PUMP TYPE OR BAILER:
2	3/16	5 (feet) to (feet) 15	8.91	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable)

= (14.33)FT - (8.91)FT X 0.16 gallons/foot = 0.86 (0.9) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gal):
9.91	9.91	1521	1536	1.5

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	% / mg/L DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1530	0.9	0.9	0.1	8.91	7.11	22.40	983	6.0/0.52	1.86	clear	petroleum (strong)	-270.1
1533	0.3	1.2	1	1	7.12	22.56	975	6.5/0.57	2.22	1	1	-272.2
1536	0.3	1.5	1	1	7.12	22.60	972	12.4/1.07	1.49	1	1	-271.5

STABLE

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT	SAMPLING ENDED AT:
Jared Shelburne TtNUS	Jared Shelburne	1540	1550

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED Y (N) Filtration Equipment Type:	FILTER SIZE: (µm)
9.91	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION								
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- MW-37 -0211	3	CG	40 mL	HCl			VOC	8260 B	RFPP		400	
	2	AG	1L	Ice			PAHs	8270 C	APP		1	
	2	AG	1L	HCl			TRPH	FLPRO	1		1	
	1	PE	250 mL	HNO_3			LEAD	6010 B	1		1	

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

$\frac{100 ml}{15 s} = 0.1$ gal/min

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-38	SAMPLE ID:	UST-21- MW-38 -0211	DATE: 7-10-14

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)		STATIC DEPTH TO WATER (ft)	8.62	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (14.25)FT - (8.62)FT X 0.16 gallons/foot = 0.90 (0.9) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + TS gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	9.62	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	9.62	PURGING INITIATED AT:	2044	PURGING ENDED AT:	2100	TOTAL VOLUME PURGED (gal):	1.5

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
2054	0.9	0.9	0.1	8.62	7.33	19.93	361	7.58	1.71	1.59	clear	none	-208.3
2057	0.3	1.2	"	"	7.29	19.90	359	7.20	0.66	2.01	"	"	-213.5
2100	0.3	1.5	"	"	7.30	20.13	356	5.71	0.51	0.97	"	"	-220.5

STABLE

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Darrell Shelburne TTNUS	SAMPLER(S) SIGNATURE(S):	Darrell Shelburne	SAMPLING INITIATED AT:	2105	SAMPLING ENDED AT:	2115
PUMP OR TUBING DEPTH IN WELL (feet):	9.62	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION				INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21- MW-38 -0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		400	
	2	AG	1L	Ice			PAHs	8270 C	APP		1	
	2	AG	1L	HCl			TRPH	FLPRO	1		1	
	1	PE	250mL	HNO3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

100 ml / 15 s = 2/3 0.1 gal/min

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-40	SAMPLE ID:	UST-21- MW-40 -0211	DATE: 5/11/10

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)	STATIC DEPTH TO WATER (ft)	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable)

= (12.)FT - (5.)FT X 0.16 gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 1055	PURGING ENDED AT:	TOTAL VOLUME PURGED (gal):

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	% DISSOLVED OXYGEN	mg/L DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1057	1.2	1.2	0.1		7.28	15.47	212	82.7	8.25	20.8	clear	petr. like	9.2
1111	0.4	1.6	0.1		7.29	15.54	212	81.3	8.05	19.4	clear		7.3
1115	0.4	2.0	0.1		7.38	15.38	213	81.6	8.14	19.8	clear		7.8
1120	0.5	2.5	0.1		7.23	15.25	201	80.8	8.12	19.8	clear		20.82
1130	1.0	3.5	0.1		7.24	15.19	202	79.8	8.03	19.3	clear		24.5
1135	0.5	4.0	0.1		7.22	15.16	203	80.6	8.10	19.3	clear		26.9

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT 736	SAMPLING ENDED AT: 811
Vanessa Martinez / T			

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED Y (N) Filtration Equipment Type:	FILTER SIZE: (µm)
13			

FIELD DECONTAMINATION: PUMP Y N TUBING Y N (replaced) DUPLICATE: Y (N) GW01-021111

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION								
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- MW-40 -0211	3	AG					VOC	8260 B				
	2						PAHs	8270 C				
	2						TRPH	FLPRO				
	1						LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	MW-41	SAMPLE ID:	UST-21- MW-41 -0211	DATE: 2-8-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)		STATIC DEPTH TO WATER (ft)	5.97	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (12.91)FT -(5.97)FT X 0.16 gallons/foot = 1.11 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	6.97	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	6.97	PURGING INITIATED AT:	1030	PURGING ENDED AT:	1302	TOTAL VOLUME PURGED (gal):	3.694

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1041	1.11	1.11	0.1	5.97	6.98	16.25	387	54.7/5.85	12.9	H.yellow	none	191.7
1044	0.278	1.388	0.1	5.97	7.18	16.66	304	55.7/5.41	12.0	H yellow	none	189.7
1047	0.278	1.666	0.1	5.97	7.20	16.85	291	53.2/5.13	11.3	H yellow	none	187.1
1050	0.278	1.944	0.1	5.97	7.18	16.86	290	53.3/5.22	11.2	H yellow	none	184.8
1056	0	[illegible]	0.5	5.97	7.19	16.71	287	52.2/5.07	10.45	H yellow	none	185.0
1101	[illegible]	[illegible]	[illegible]	5.97	7.22	16.75	289	52.6/5.10	9.16	clear	none	174.6
1106	[illegible]	[illegible]	[illegible]	5.97	7.25	16.83	296	51.7/5.02	10.62	clear	none	172.0
1111	[illegible]	[illegible]	[illegible]	5.97	7.27	17.01	296	51.9/5.02	9.54	clear	none	166.6
1117	[illegible]		[illegible]	5.97	7.25	16.75	299	47.7/4.62	9.43	clear	none	172.5
1122	0.25	3.544		5.97	7.20	16.93	297	46.7/4.53	8.44	clear	none	163.0
1125	0.15	3.694		5.97	7.27	16.78	296	46.7/4.53	8.14	clear	none	173.1
					STABLE							

P CVp
30 2.244
.25 2.494
.25 2.744
.25 2.994
.30 3.294

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Thomas Shelburne TTNUS	SAMPLER(S) SIGNATURE(S):	Thomas Shellme	SAMPLING INITIATED AT	1133	SAMPLING ENDED AT:	1300
PUMP OR TUBING DEPTH IN WELL (feet):	6.97	TUBING MATERIAL CODE:	PE	FIELD-FILTERED (Y) N Dissolved metals Filtration Equipment Type:		FILTER SIZE: (µm)	0.45 microns
FIELD DECONTAMINATION: PUMP Y (N)		TUBING (Y) N (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION								
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- MW-41 -0211	3	CG	40ml	HCL			VOC	8260 B	RFPP		100	
	2	AG	1L	ICE			PAHs	8270 C	APP			
	2	AG	1L	HCL			TRPH	FLPRO				
	1	PE	250ml	HNO3			LEAD	6010 B				
	1	PE	250ml	HNO3			Total Metals	6010B				
	1	PE	250ml	HNO3			Dissolved Metals	6010B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

Pump Rate = $\frac{100ml}{155} \times \frac{60s}{min} \times \frac{1L}{1000ml} \times \frac{1gal}{3.79L} = 0.106$ gal/min (0.1 gal/min)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:
1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

(Refer to back of sheet)

Revision Date: February 12, 2009

1/4 WV = 1.11/4 = 0.278 gal or 3min

★ After Reading at 1050 Pump Rate was lowered to

$\frac{50ml}{155} \times \frac{60s}{min} \times \frac{1L}{1000ml} \times \frac{1gal}{3.79L} = 0.05$ gal/min to try to get turbidity below 10

# containers	material code	volume	preservative used	intended method analysis	sampling group code	sample packing
1	PE	250ml	ice	anions (nitride, nitrite, sulfate, chloride)	APP	100
1	PE	250ml	~~H_2SO_4~~ ice TS	BOD	APP	100
1	PE	250ml	H_2SO_4	COD	APP	100
1	PE	250ml	zinc Acetate + Sodium Hydroxide	Sulfide	APP	100
1	PE	250ml	ice	Alkalinity	APP	100

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	DMW-54	SAMPLE ID:	UST-21- DMW-54 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet)	20 to (feet) 25	STATIC DEPTH TO WATER (ft)	9.36	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable)

= (23.57)FT - (9.36)FT X 0.16 gallons/foot = 2.27 (2.3) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.36	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.36	PURGING INITIATED AT:	1054	PURGING ENDED AT:	1129	TOTAL VOLUME PURGED (gal):	3.5

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1117	2.3	2.3	0.1	9.36	7.19	22.41	545	9.9 / 0.78	2.45	Hyellow	petrol	-256.7
1123	0.6	2.9	1	1	7.20	22.56	546	5.1 / 0.44	2.07	1	sulfur	-265.3
1129	0.6	3.5	1	1	7.20	22.53	546	3.2 / 0.27	1.76	1	1	-262.2

STABLE

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne TTNUS	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT	1135	SAMPLING ENDED AT:	1145
PUMP OR TUBING DEPTH IN WELL (feet):	10.36	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	

FIELD DECONTAMINATION: PUMP Y N TUBING Y N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION				INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21- DMW-54 -0211	3	CG	40mL	HCL			VOC	8260 B	RFPP		100	
	2	AG	1L	ICE			PAHs	8270 C	APP		1	
	2	AG	1L	HCL			TRPH	FLPRO	1		1	
	1	PE	250mL	HNO_3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

$\frac{100\ mL}{15\ s} \times \frac{2}{2} = 0.1\ gal/min$

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida
WELL NO:	DMW-55	SAMPLE ID:	UST-21- DMW-55 -0211
DATE:	2-9-11		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)	
STATIC DEPTH TO WATER (ft)	9.88	PURGE PUMP TYPE OR BAILER:	PP		

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (24.89)FT -(9.88)FT X 0.16 gallons/foot = 2.4016 (2.4) ~~(24)~~ TS gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.88	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.88	PURGING INITIATED AT: 1146	PURGING ENDED AT: 1242
TOTAL VOLUME PURGED (gal):	5.6				

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L) (%/mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1210	2.4	2.4	0.1	9.88	7.86	21.81	370	16.3/1.43	13.7	clear w/l	Petroleum	-275.8
1218	0.8	3.2	|	|	7.83	22.14	364	13.2/1.15	15.5	white film	(Strong)	-277.3
1226	0.8	4.0	|	|	7.80	22.06	363	4.8/0.41	9.11	yellow	|	-283.0
1234	0.8	4.8	|	|	~~7.80~~	22.11	364	3.1/0.27	5.87	|	|	-287.4
1242	0.8	5.6			7.80	22.11	378	2.8/0.24	2.59	|	|	-291.4
					7.81 ↑							

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jared Shelburne T+NUS	SAMPLER(S) SIGNATURE(S): Jared Shelburne	SAMPLING INITIATED AT: 1245	SAMPLING ENDED AT: 1340
PUMP OR TUBING DEPTH IN WELL (feet): 10.88	TUBING MATERIAL CODE: PE	FIELD-FILTERED (Y) N Filtration Equipment Type:	FILTER SIZE: (µm) 0.45

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y N (replaced) DUPLICATE: Y N

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION				INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21- DMW-55 -0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		100	
	2	AG	1L	Ice			PAHs	8270 C	APP		|	
	2	AG	1L	HCl			TRPH	FLPRO	|		|	
	1	PE	250mL	HNO_3			LEAD	6010 B	|		|	
	1	PE	250mL	HNO_3			total MNA PARAMETERS	Metals 6010B	|		|	
	1	PE	250mL	HNO_3			Dissolved MNA Metals	6010B	|		|	

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene). MNA: Total and Dissolved Iron and Manganese, Dissolved gases (Methane, Nitrogen, Carbon Dioxide and Hydrogen), Anions (Nitrite, Nitrate, chloride and sulfate) BOD, COD, Sulfide and Alkalinity.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

100mL / 155 ≈ 0.1 gal/min

(Refer to Back)

# containers	material code	volume	preservative used	intended method of analysis	sampling equipment code	sample pump flow rate
1	PE	250mL	ice	Anions (nitrate, nitrite, sulfate, chloride)	APP	100
1	PE	250mL	ice	BOD		
1	PE	250mL	H_2SO_4	COD		
1	PE	250mL	Zn Acetate and Sodium Hydroxide	Sulfide		
1	PE	250mL	ice	Alkalunity		
1	CG	40mL	ice	dissolved gases		
1	CG	15mL	none	gases	other (bubble cell)	none

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	DMW-60	SAMPLE ID:	UST-21- DMW-60 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)		STATIC DEPTH TO WATER (ft)	9.56	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (24.53)FT - (9.56)FT X 0.16 gallons/foot = 2.39 (2.4) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.56	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.56	PURGING INITIATED AT	0955	PURGING ENDED AT:	1031	TOTAL VOLUME PURGED (gal):	3.6

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L) % / mg/L	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1019	2.4	2.4	0.1	9.56	7.47	22.57	10341	3.7 / 0.31	0.0	Hyell@	Petro +	-336.4
1025	0.6	3.0	"	"	7.48	22.75	10729	3.3 / 0.28	0.17	"	sulfur	-339.8
1031	0.6	3.6	"	"	7.49	22.71	10771	3.2 / 0.27	0.0	"	"	-339.8

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne T+NUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne	SAMPLING INITIATED AT	1035	SAMPLING ENDED AT:	1045
PUMP OR TUBING DEPTH IN WELL (feet):	10.56	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE ID CODE	SAMPLE CONTAINER SPECIFICATION # CONTAINERS	MATERIAL CODE	VOLUME	SAMPLE PRESERVATION PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- DMW-60 -0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		100	
	2	AG	1L	Ice			PAHs	8270 C	APP		"	
	2	AG	1L	HCL			TRPH	FLPRO	"		"	
	1	PE	250mL	HNO3			LEAD	6010 B	"		"	

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

100 mL / 155 ≈ 0.1 gal/min

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	DMW-61	SAMPLE ID:	UST-21- DMW-61 -0211	DATE: 2-9-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)		STATIC DEPTH TO WATER (ft)	9.65	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (33.29)FT - (9.65)FT X 0.16 gallons/foot = 3.78 (3.8) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.65	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.65	PURGING INITIATED AT:	0912	PURGING ENDED AT:	1010	TOTAL VOLUME PURGED (gal):	5.8

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	% (mg/L) DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
0950	3.8	3.8	0.1	9.65	8.36	22.14	37097	18.5 1.41	1.07	clear+	Sulfur	-363.0
1000	1.0	4.8	"	"	8.36	22.20	37065	7.9 0.60	0.00	1 slt black	"	-359.4
1010	1.0	5.8	"	"	8.37	22.25	37035	5.4 0.42	0.00	"	"	-361.5

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne TtNUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne	SAMPLING INITIATED AT	1015	SAMPLING ENDED AT:	1120
PUMP OR TUBING DEPTH IN WELL (feet):	10.65	TUBING MATERIAL CODE:	PE	FIELD-FILTERED (Y) N Filtration Equipment Type:		FILTER SIZE: (µm)	0.45

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y ~~N~~ (N (replaced)) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION				INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21- DMW-61 -0211	3	CG	40ml	HCl			VOC	8260 B	RFPP		100	
	2	AG	1L	Ice			PAHs	8270 C	APP			
	2	AG	1L	HCl			TRPH	FLPRO				
	1	PE	250mL	HNO_3			LEAD	6010 B				
	1	PE	250mL	HNO_3			MNA PARAMETERS (Total Metals)					
	1	PE	250mL	HNO_3			Dissolved Metals	6010B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene) MNA: Total and Dissolved Iron and Manganese, Dissolved gases (Methane, Nitrogen, Carbon Dioxide and Hydrogen), Anions (Nitrite, Nitrate, chloride and sulfate) BOD, COD, Sulfide and Alkalinity.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

100ml / 15s ≈ 0.1 gal/min

(Refer to Back)

# containers	material code	volume	preservative used	intended method analysis	sampling equipment code	sample pump flow rat
1	PE	250mL	ice	Anions (nitrate, nitrite, sulfate, chloride)	APP	100
1	PE	250mL	ice	BOD		
1	PE	250mL	H_2SO_4	COD		
1	PE	250mL	Zn Acetate and Sodium Hydroxide	Sulfide		
1	PE	250mL	ice	Alkalinity		
1	CG	40mL	ice	dissolved gases		
1	CG	15mL	none	gases	other (bubblecell)	none

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida
WELL NO:	DMW-62	SAMPLE ID:	UST-21- DMW-62 -0211
DATE:	2-9-11		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)	STATIC DEPTH TO WATER (ft) 9.23	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (24.71)FT - (9.23)FT X 0.16 gallons/foot = 2.47 (2.5) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10.23	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10.23	PURGING INITIATED AT: 1604	PURGING ENDED AT: 1649	TOTAL VOLUME PURGED (gal): 4.6

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	% / mg/L DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
1629	2.5	2.5	0.1	9.23	8.41	23.19	4969	8.3/0.70	3.46	H. Black	Slight Sulfur	-355.3
1636	0.7	3.2	"	"	8.47	23.19	5246	4.0/0.40	2.94			-361.0
1642	0.7	3.9	"	"	8.50	23.25	5383	4.3/0.34	2.69			-364.8
1649	0.7	4.6			8.53	23.21	5479	3.7/0.31	1.97			-364.7
					STABLE							

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Jared Shelburne T+N's	SAMPLER(S) SIGNATURE(S): Jared Shelburne	SAMPLING INITIATED AT 1655	SAMPLING ENDED AT: 1806
PUMP OR TUBING DEPTH IN WELL (feet): 10.23	TUBING MATERIAL CODE: PE	FIELD-FILTERED Y (N) Filtration Equipment Type:	FILTER SIZE: (µm)
FIELD DECONTAMINATION: PUMP Y (N)	TUBING (Y) N (replaced)	DUPLICATE: (Y) N GW02-02[illegible]1	

SAMPLE CONTAINER SPECIFICATION			SAMPLE PRESERVATION				INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph						
UST-21- DMW-62 -0211	3	CG	40ml	HCl			VOC	8260 B	RFPP		400	
	2	AG	1L	ice			PAHs	8270 C	APP			
	2	AG	1L	HCl			TRPH	FLPRO				
	1	PE	250ml	HNO_3			LEAD	6010 B				
	1	PE	250ml	HNO_3								
	1	PE	250ml	HNO_3								

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:
1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

$\frac{100ml}{15s} \approx 0.1$ gal/min

★ Field Dup!

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	DMW-63	SAMPLE ID:	UST-21- DMW-63 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)		STATIC DEPTH TO WATER (ft)	9.37	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (34.55)FT - (9.37)FT X 0.16 gallons/foot = 4.03 (4.1) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.37	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.37	PURGING INITIATED AT:	0634	PURGING ENDED AT:	0748	TOTAL VOLUME PURGED (gal):	7.4

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	% / mg/L DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
0715	4.1	4.1	0.1	9.37	7.26	20.47	5.2	0.41 / 34.00	0.28	lt. yellow	Sulfur	-344.7
0726	1.1	5.2	"	"	7.26	20.87	34.75	3.7 / 0.29	0.0	+ black	"	-349.1
0737	1.1	6.3	"	"	7.27	20.84	34865	3.0 / 0.24	0.0	"	"	-361.5
0748	1.1	7.4	"	"	7.27	21.06	34817	2.6 / 0.20	0.0	"	"	-358.9

STABLE

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne TtNUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne	SAMPLING INITIATED AT	0755	SAMPLING ENDED AT:	0805
PUMP OR TUBING DEPTH IN WELL (feet):	10.37	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION								
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- DMW-63 -0211	3	~~PP~~ CG	40mL	HCl			VOC	8260 B	RFPP		400	
	2	AG	1L	Ice			PAHs	8270 C	APP		"	
	2	AG	1L	HCl			TRPH	FLPRO	"		"	
	1	PE	250mL	HNO_3			LEAD	6010 B	"		"	

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

$\frac{100\text{ml}}{155} \frac{2}{2}$ 0.1 gal/min

Note - 2nd Reading D.O. is 3.7/0.29

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	DMW-64	SAMPLE ID:	UST-21- DMW-64 -0211	DATE: 2-10-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)		STATIC DEPTH TO WATER (ft)	9.27	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable)

= (36.21)FT - (9.27)FT X 0.16 gallons/foot = 4.310 (4.3) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.27	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.27	PURGING INITIATED AT:	0822	PURGING ENDED AT:	0927	TOTAL VOLUME PURGED (gal):	6.5

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°c)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L) °c / mg/L	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS ORP
0905	4.3	4.3	0.1	9.27	7.13	21.59	319.22	2.6/0.20	1.79	lt yellow	Sulfur	-370.3
0916	1.1	5.4	1	1	7.13	21.60	319.69	2.4/0.19	1.50	+ black	1	-371.7
0927	1.1	6.5	1	1	7.14	21.70	319.88	2.3/0.18	0.184	1	1	-372.7

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne T+N	SAMPLER(S) SIGNATURE(S):	Jared Shelburne	SAMPLING INITIATED AT	0935	SAMPLING ENDED AT:	0945
PUMP OR TUBING DEPTH IN WELL (feet):	10.27	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION								
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- DMW-64 -0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		400	
	2	AG	1L	ICE			PAHs	8270 C	APP		1	
	2	AG	1L	HCl			TRPH	FLPRO	1		1	
	1	PE	250mL	HNO3			LEAD	6010 B	1		1	

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

100ml / 15s × 2/2 = 0.1 gal/min

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida	
WELL NO:	DMW-65	SAMPLE ID:	UST-21- DMW-65 - 0211	DATE: 2-8-11

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet)	25 to (feet) 35	STATIC DEPTH TO WATER (ft)	6.40	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable) = (35.91)FT - (6.40)FT X 0.16 gallons/foot = 4.7226 (4.8) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable) = ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	7.40	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	7.40	PURGING INITIATED AT:	1350	PURGING ENDED AT:	1502	TOTAL VOLUME PURGED (gal):	7.2

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS
1435	4.8	4.8	0.10	6.40	8.16	23.71	31645	7.5/0.58	4.77	H. yellow	Petrol & sulfur	-399.4
1450	1.2	6.0	0.10	6.40	8.14	23.77	31591	3.17/0.28	1.62	H. yellow & black	Petrol & sulfur	-400.4
1502	1.2	7.2	0.10	6.40	8.14	23.66	31543	2.58/0.21	1.96	H. yellow & black	Petrol & sulfur	-398.3

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne T+NUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne	SAMPLING INITIATED AT	1502	SAMPLING ENDED AT:	1610

PUMP OR TUBING DEPTH IN WELL (feet):	7.40	TUBING MATERIAL CODE:	PE	FIELD-FILTERED Y (N) N Filtration Equipment Type:		FILTER SIZE: (µm)	0.45

FIELD DECONTAMINATION: PUMP Y (N) TUBING (Y) N (replaced) DUPLICATE: Y (N)

SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/ min)	
UST-21- DMW-65 - 0211	3	CG	40ml	HCl			VOC	8260 B	RFPP		100	
	2	AG	1L	ice			PAHs	8270 C	APP			
	2	AG	1L	HCl			TRPH	FLPRO	APP			
	1	PE	250ml	HNO_3			LEAD	6010 B	APP			
	1	PE	250ml	HNO_3			MNA PARAMETERS		APP			
	1	PE	250ml	HNO_3					APP			

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)MNA: Total and Dissolved Iron and Manganese, Dissolved gases (Methane, Nitrogen, Carbon Dioxide and Hydrogen), Anions (Nitrite, Nitrate, chloride and sulfate) BOD, COD, Sulfide and Alkalinity.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:

1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) **pH:** ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, + 0.2 mg/L or + 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

Revision Date: February 12, 2009

$$\frac{60ml}{15s} \times \frac{60s}{1\,min} \times \frac{1L}{1000ml} \times \frac{1gal}{3.79L} =$$

$$\rightarrow \frac{100ml}{15s} \times \frac{60s}{1\,min} \times \frac{1L}{1000ml} \times \frac{1gal}{3.79L} = 0.105\,gal/min \quad (0.1\,gal/min)$$

$1/4\,WV = \frac{4.7226}{4} = 1.1819$ (12 min)

# of containers	material code	volume	preservative used	intended method analysis	sampling equip. code	sampling flow rate
1	PE	250ml	ice	anions (nitrate, nitrite, sulfate, chloride)	APP	100
1			ice	BOD		
1			H_2SO_4	COD		
1			zinc Acetate + sodium hydroxide	Sulfide		
1			ice	Alkalanity		

EQUIPMENT CALIBRATION LOG

Tetra Tech NUS, Inc.

PROJECT NAME : UST Site 21

SITE NAME: NAS Pensacola

PROJECT No.: 112G02200 Task LT.FI

INSTRUMENT NAME/MODEL: LaMotte 2020e

MANUFACTURER: LaMotte

SERIAL NUMBER: ME 14449

Date of Calibration	Instrument I.D. Number PINE	Person Performing Calibration	1 NTU		10 NTU		Remarks and Comments	
			Pre-calibration	Post-calibration	Pre-calibration	Post-calibration		
2-8-11		TJS	1.01	0.95	9.65	9.89		
				1.04		9.63		EOD Calib. ✓
2-9-11		TJS	1.03	1.03	9.78	10.34		
				2.30		10.72		midday Calib. ✓ (Recalibrate)
			~~2.66~~ 1.7					
			1.22	1.01	7.23	10.01		
				0.57		9.40		EOD Calib ✓
2-10-11		TJS	~~2.44~~ 1.3					
			1.21	1.03	7.10	10.00		
				1.50		9.74		EOD Calib ✓
2-11-11		TJS	1.43	1.04	7.71	9.77		
			1	1.51		9.56		EOD

CALIBRATION STANDARDS INFORMATION

Solution	Lot #	Batch	Expiration Date	
10 NTU				
1 NTU				

Tetra Tech NUS, Inc.

EQUIPMENT CALIBRATION LOG

PROJECT NAME : UST Site 21

SITE NAME: NAS Pensacola

PROJECT No.: 112G02200 Task LT.FI

INSTRUMENT NAME/MODEL: YSI - 556 MPS

MANUFACTURER: YSI Incorporated

SERIAL NUMBER: 07F100621

240

Date of Calibration	Instrument I.D. Number PINE	Person Performing Calibration	Conductivity (1000) Pre•Post calibration	ORP Pre•Post calibration	pH7 Pre•Post calibration	pH10 Pre•Post calibration	Calibration Standard (Lot No.)	Remarks and Comments
2-8-11		TJS	1003/1000	274.4/240.00	~~6.45/7.00~~ 7.29/6.95	9.57/10.00	See Below	Cold weather may play role in calibration readings. Rental company provided calibration sheet w/calibration info (2-3-11)
			983		7.95	10.64		EOD calibration ✓
2-9-11		TJS	1012/1000	234.3/240.0	6.91/7.00	9.79/10.02		
			972		7.94	11.19		EOD Calibration ✓
2-10-11		TJS	972/1000	217.9/240	7.52/7.00	10.37/10.0		
			1153		7.30	10.04		EOD Calib. ✓
2-11-11		TJS	1061/1000	464.3/240.0	7.07/7.00	9.87/9.97		
			1110		6.65	~~10.11~~		EOD Calibration

CALIBRATION STANDARDS INFORMATION 10:11

Solution	Lot #	Expiration Date
ORP	7922	4-27-2011
Conductivity	8446	10-29-2011
pH 7	8437	10-26-2011
pH 10	8035	06-01-2011
PH 4	8454	11-1-11
ORP	62H87	NOV 2017

PH 4

3.49/3.93

3.92/3.95

3.67/3.98

4.80/4.08

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	UST Site 21	SITE LOCATION	NAS Pensacola, Pensacola, Florida
WELL NO:	MW-9	SAMPLE ID:	UST-21- MW-9 -0211
DATE:	2-10-11		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL (feet) to (feet)	STATIC DEPTH TO WATER (ft) 6.84
PURGE PUMP TYPE OR BAILER:	PP				

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY

(only fill out if applicable)

= (13.04)FT - (6.84)FT X 0.16 gallons/foot = 0.99 (1.0) gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME

(only fill out if applicable)

= ( )gallons + (gallons/ft X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	7.84	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	7.84	PURGING INITIATED AT: 0551	PURGING ENDED AT: 0616
TOTAL VOLUME PURGED (gal):	1.9				

TIME	VOLUME PURGED (gal)	COMUL. VOLUME PURGED (gal)	PURGED RATE (gal)	DEPTH TO WATER (ft)	Ph	TEMP (°C)	COND (µS/cm)	DISSOLVED OXYGEN (mg/L)	TURBIDITY (NTUs)	COLOR	ODOR	COMMENTS
								6/2/MS/IL				ORP
0607	1.0	1.0	0.1	6.84	6.62	18.37	392	20 18 1.85	9.39	Yellow	Slight Sulfur	-23.3
0610	0.3	1.3			6.64	18.65	402	17.4 1.62	9.50			-21.9
0613	0.3	1.6			6.75	18.70	406	16.6 1.54	7.39			-169.1
0616	0.3	1.9			6.83	18.77	411	15.4 1.43	5.14			-177.5

STABLE

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Jared Shelburne TtNUS	SAMPLER(S) SIGNATURE(S):	Jared Shelburne
SAMPLING INITIATED AT:	0620	SAMPLING ENDED AT:	0635
PUMP OR TUBING DEPTH IN WELL (feet):	7.84	TUBING MATERIAL CODE:	PE
FIELD-FILTERED Y (N) Filtration Equipment Type:		FILTER SIZE: (µm)	
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE ID CODE	SAMPLE CONTAINER SPECIFICATION: # CONTAINERS	MATERIAL CODE	VOLUME	SAMPLE PRESERVATION: PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL Ph	INTENDED ANALYSIS / METHOD		SAMPLING EQUIPMENT CODE		SAMPLE PUMP FLOW RATE (mL/min)	
UST-21- MW-9 -0211	3	CG	40mL	HCl			VOC	8260 B	RFPP		600	
	2	AG	1L	Ice			PAHs	8270 C	APP			
	2	AG	1L	HCl			TRPH	FLPRO				
	1	AG/PE	250mL	HNO3			LEAD	6010 B				

REMARKS: Select VOCs (1,1,1-Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1,2,Dichloroethene, Total Xylenes, Trichloroethylene, Isopropylbenzene, Methylene Chloride, Tetrachloroethylene, Trans-1,2-Dichloroethene, Vinyl chloride) & Select PAHs (Naphthalene, Chrysene, 1-Methylnaphthalene, Naphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES:

1. Therabove do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3) pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

100mL / 15s ≈ 0.1 gal/min

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER JM0101 | PAGE 1 OF 1

PROJECT NO:	SITE NAME:	PROJECT MANAGER AND PHONE NUMBER	LABORATORY NAME AND CONTACT:
112602200	UST 21	Gary Walker (850) 385-9899	Empirical Lab / Kim Kostzer
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER	ADDRESS
Jared Shelton		Yaussa Martinez (787) 300-9119	621 Mainstream Dr. Suite 270
		CARRIER/WAYBILL NUMBER	CITY, STATE
		874847555070	Nashville TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: BOD	Anions	Alkalinity	COD	Temp				COMMENTS
						P	Ice									
2/8	1133	UST 21-MW~~05~~41-0211	GW	G	4	P	Ice	1	1	1	1					
2/8	1502	UST 21-MW65-0211	GW	G	4	P	HNO	1	1	1	1					
2/8		TEMP BLANK	-	G	1	P	H_2SO_4					1				

1. RELINQUISHED BY	DATE 2/8/11	TIME 1640	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: BOD & Anions are 48hrs to analysis !!!

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

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FORM NO. TtNUS-001

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER JM01-02 | PAGE 1 OF 1

PROJECT NO: 112G02200	SITE NAME: UST 21	PROJECT MANAGER AND PHONE NUMBER: Barry Walker (850) 385-9899	LABORATORY NAME AND CONTACT: Empirical Lab / Kim KOSTZER
SAMPLERS (SIGNATURE): Jared Shellhouse		FIELD OPERATIONS LEADER AND PHONE NUMBER: Yaressa Martinez (787) 300-9119	ADDRESS: 621 Mainstream Dr Suite 270
		CARRIER/WAYBILL NUMBER: 874845550581	CITY, STATE: Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE (YEAR 2011)	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: TRPH (FL PRO)	PAH Low Level 8270C	Select VOC 8260	Metals (Pb, Fe & Mn)	Total metals	Dissolved Metals	Anions	BOD	COD	Sulfide	Alkalinity	COMMENTS
		CONTAINER TYPE PLASTIC (P) or GLASS (G)				G	G	G	P	P	P	P	P				
		PRESERVATIVE USED: ICE				HCL	-	HCL	1:1 HNO3	HNO3	HNO3	H2SO4					
2/8	1133	UST21-MW41-0211	GW	G	11	2	2	3	1	1	1	0	0	0	1	0	upgradient well
2/8	1502	UST 21-MW65-0211	GW	G	11	2	2	3	1	1	1	0	0	0	1	0	
2/9	0710	UST 21-MW25-0211	GW	G	15	2	2	3	1	1	1	1	1	1	1	1	
2/9	1015	UST 21-MW1d-0211	GW	G	15	2	2	3	1	1	1	1	1	1	1	1	
2/9	1245	UST21-MW55-0211	GW	G	15	2	2	3	1	1	1	1	1	1	1	1	Strong odor Previous detection of free pro
2/8	1133	TRIP BLANK 9282			2	—		2	—								
		TEMP BLANK			3												

3 coolers

1. RELINQUISHED BY	DATE 2/9/11	TIME 1500	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: Select VOC's (Tetrachloroethylene, Trans 1,2 Dichloroethene, Vinyl Chloride, 1,1,1 Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1-2 Dichloroethene, Total Xylene, Trichloroethylene, Isopropyl Benzene, Methylene Chloride)

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99 FORM NO. TtNUS-001

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER JMA1-03 | PAGE 1 OF 1

PROJECT NO: 112G02200	SITE NAME: UST 21	PROJECT MANAGER AND PHONE NUMBER Gerry Walker (850)	LABORATORY NAME AND CONTACT: Microseeps
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER Yarissa Martinez (787)300-9119	ADDRESS 220 Williams Pkt Way
		CARRIER/WAYBILL NUMBER 8735 9615 6805	CITY, STATE Pittsburgh, PA 15238

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE (YEAR 2011)	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS (Methane, Ethane, Ethene) Dissolved Gases RSK-175	TYPE OF ANALYSIS Hydrogen Dissolved Gases RSK-175	COMMENTS
						G	-	-		
2/8	1133	UST21-MW41-0211	GW	G	2	1		1		
2/8	1502	UST21-MW65-0211	GW	G	2	1		1		
2/9	0710	UST21-MW25-0211	GW	G	2	1		1		
2/9	1015	UST21-MW61-0211	GW	G	2	1		1		
2/9	1245	UST21-MW55-0211	GW	G	2	1		1		

1. RELINQUISHED BY	DATE 2/9/11	TIME 1445	1. RECEIVED BY	DATE	TIME
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME
COMMENTS					

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

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FORM NO. TtNUS-001

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER Jm01-04 | PAGE 2 OF 2

PROJECT NO:	SITE NAME:	PROJECT MANAGER AND PHONE NUMBER	LABORATORY NAME AND CONTACT:
112602200	UST21-Pensacola	Gerry Walker (850)385-9895	Empirical Lab (Kim Kostzer)
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER	ADDRESS
Jared Shellhorn		Vanessa Martinez (787)300-9119	621 Mainstream Dr Suite 270
		CARRIER/WAYBILL NUMBER	CITY, STATE
		874847555243	Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)									
						PRESERVATIVE USED			HCl	HCl					
						TYPE OF ANALYSIS	TRPH (SW 9071)	8260	8270C	8270C SIM PAH	select metals (6010B)	HNO_3			COMMENTS
2/10	1540	UST21-MW37-0211	GW	G	8		2	3	2	1					
2/9	1655	TRIP BLANK 9253			2			2							
		TEMP BLANKS			6										

* 6 coolers

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	2/10/11	1705	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS
* Select analysis as previous COC = SAP

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

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FORM NO. TtNUS-001

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER JMA-04 | PAGE 1 OF 2

PROJECT NO:	SITE NAME:	PROJECT MANAGER AND PHONE NUMBER	LABORATORY NAME AND CONTACT:
112602200	UST 21 Pensacola	Garry Walker (850) 385-9899	Empirical Lab / Kim Kostzer
SAMPLERS (SIGNATURE)		**FIELD OPERATIONS LEADER AND PHONE NUMBER**	**ADDRESS**
Jared Shellman		Yarissa Martinez (850) 385-9899	621 Mainstream Dr. Suite 270
		CARRIER/WAYBILL NUMBER	**CITY, STATE**
		8748 4755 5243	Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	G	G	G	P					
						PRESERVATIVE USED	HCL	-	HCL	HNO_3					
						TYPE OF ANALYSIS	TRPH (418.1)	Select PAH Analysis 8270C	Select VOCs 8260	Select Metals 6010B					COMMENTS
2/10	0755	UST21-MW63-0211	GW	G	8		2	2	3	1					
2/10	0935	UST21-MW64-0211	GW	G	8		2	2	3	1					
2/10	1035	UST21-MW60-0211	GW	G	8		2	2	3	1					
2/10	1135	UST21-MW54-0211	GW	G	8		2	2	3	1					
2/10	1215	UST21-MW01-0211	GW	G	8		2	2	3	1					
2/10	1250	UST21-MW10-0211	GW	G	8		2	2	3	1					
2/10	1330	UST21-MW23-0211	GW	G	8		2	2	3	1					
2/9	1655	UST21-MW62-0211	GW	G	8		2	2	3	1					
2/9	1655	UST21-MW62-0211MS	GW	G	8		2	2	3	1					
2/9	1655	UST21-MW62-0211MSD	GW	G	8		2	2	3	1					
2/9	1655	GW02-020911	GW	G	8		2	2	3	1					
2/10	1412	UST21-MW16-0211	GW	G	8		2	2	3	1					
2/10	1457	UST21-MW14-0211	GW	G	8		2	2	3	1					

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	2/10/11	1705	1. RECEIVED BY		
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: Select analysis as previous COC and approved SAP

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

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FORM NO. TtNUS-001

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER ~~2734~~ JM01-05 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02200	UST21	G. Walker	850-385-9899	Empirical
SAMPLERS (SIGNATURE)		**FIELD OPERATIONS LEADER**	**PHONE NUMBER**	**ADDRESS**
		Y. Martinez	Same	621 Mainstream Dr STE 270
		CARRIER/WAYBILL NUMBER		**CITY, STATE**
				Nashville TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE (YEAR 2011)	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: VOC 8260	PAH 8270	6010B, Pb, Fe, Mn only	FL-PRO	COMMENTS
												HCL	G	P	
												ice	G	G	
													HNO3	HCl	
—	—	TripBlank #9281	—	—	—	QC	G	2			✓				
2/10	2105	UST-21-MW-38-0211	—	—	—	GW	G	8			✓	✓	✓	✓	
2/10	1925	UST-21-MW-04-0211	—	—	—	GW	G	8			✓	✓	✓	✓	
2/11	0736	UST-21-MW-40-0211	—	—	—	GW	G	7			✓	✓	✓	✓	
2/11	1624	UST-21-RB-0211	—	—	—	QC	G	6			✓	✓	✓	✓	
2/10	0620	UST-21-09-0211	—	—	—	GW	G	8			✓	✓	✓	✓	
2/10	2018	UST-21-17-0211	—	—	—	GW	G	8			✓	✓	✓	✓	
2/11	0736	GW01-021111	—	—	—	GW	G	7			✓	✓	✓	✓	*This is the correct time
		Temp Blanks						3							
			* 3 Coolers												

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	2/11/11	1710	1. RECEIVED BY		
2. RELINQUISHED BY			2. RECEIVED BY		
3. RELINQUISHED BY			3. RECEIVED BY		

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

755 5243

Form ID No. 0215

Sender's Copy

5-8551-9

87)3009119

350) 385-9899

GOVT

TE 2

Dept./Floor/Suite/Room

IP 32309-2748

L Field Work

615 345-1115

4a Express Package Service

* To most locations. **Packages up to 150 lbs.**

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.*
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service

** To most locations. **Packages over 150 lbs.**

- [ ] FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. — CALL 1.800.332.0807 — FedEx 1Day Freight Booking No.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

5 Packaging

* Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak and FedEx Large Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

6 Special Handling and Delivery Signature Options

- [ ] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods?

One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [ ] Cargo Aircraft Only

e 270

r/Suite/Room

- [ ] HOLD Weekday — FedEx location address REQUIRED. NOT available for FedEx First Overnight.
- [ ] HOLD Saturday — FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

ZIP 37228

0433255761

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

- [X] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. ____ Exp. Date ____

Total Packages	Total Weight	Total Declared Value†
6	____ lbs.	$ ____ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

605

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PENSACOLA, FL 32505

Location: PNSCE
Device ID: PNSCE-POS1
Employee: 789450
Transaction: 760109878O4

PRIORITY OVERNIGHT
879847555243 317.85 lb (S) 259.
795536480230
795536480241
795536480252
795536480263
795536480274

Scheduled Delivery Date 02/11/2011

Shipment subtotal: 259.2

Total Due: 259.2

FedEx Express **US Airbill**

FedEx Tracking Number: 8748 4755 5081

Form ID No. 0215 — **Sender's Copy**

From *Please print and press hard.*

Date: 2/9/11 — Sender's FedEx Account Number: SENDER'S FEDEX ACCOUNT NUMBER ONLY 1525-8551-9

Sender's Name: Yarissa Martinez — Phone: 781 300 9119

Company: TETRA TECH NUS INC — GOVT

Address: 1558 VILLAGE SQUARE BLVD STE 2 — Dept./Floor/Suite/Room

City: TALLAHASSEE — State: FL — ZIP: 32309-2748

Your Internal Billing Reference (First 24 characters will appear on invoice.): 112602200 OPTIONAL Field

To

Recipient's Name: Sample Receiving — Phone: (615) 345-1115

Company: Empirical Laboratories

Address: 621 Mainstream Dr. Suite 270 — Dept./Floor/Suite/Room
We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address: Use this line for the HOLD location address or for continuation of your shipping address.

City: Nashville — State: TN — ZIP: 37228

HOLD Weekday: FedEx location address REQUIRED. NOT available for FedEx First Overnight.

HOLD Saturday: FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

0433255761

4a Express Package Service * To most locations. — *Packages up to 150 lbs.*

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.*
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service ** To most locations. — *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. — CALL 1.800.332.0807 — FedEx 1Day Freight Booking No.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak and FedEx Large Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

6 Special Handling and Delivery Signature Options

- [ ] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx Express Saver, or FedEx 3Day Freight.

Signature options:
- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

- [X] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. ____ Exp. Date ____

Total Packages	Total Weight	Total Declared Value†
3	150 lbs.	$ ____ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

605

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FedEx Express **US Airbill**

FedEx Tracking Number: 8735 9615 6805

Form ID No. 0200 — **Sender's Copy**

From *Please print and press hard.*

Date: 2/9/11 — Sender's FedEx Account Number: SENDER'S FEDEX ACCOUNT NUMBER ONLY 1525-8551-9

Sender's Name: Yarissa Martinez — Phone: 781-300-9119

Company: Tetra Tech

Address: 1558 Village Square Blvd — Dept./Floor/Suite/Room: Suite 2

City: Tallahassee — State: FL — ZIP: 32309

2 **Your Internal Billing Reference** (First 24 characters will appear on invoice.): 112602200 OPTIONAL Field Event

3 **To**

Recipient's Name: Sample Receiving — Phone: (412) 826-5245

Company: MICROSEEPS

Address: 220 William Pitts Way — Dept./Floor/Suite/Room
We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address: Use this line for the HOLD location address or for continuation of your shipping address.

City: Pittsburgh — State: PA — ZIP: 15238

HOLD Weekday: FedEx location address REQUIRED. NOT available for FedEx First Overnight.

HOLD Saturday: FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

4a Express Package Service * To most locations. — *Packages up to 150 lbs.*

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.*
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service ** To most locations. — *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. — CALL 1.800.332.0807 — FedEx 1Day Freight Booking No.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak and FedEx Large Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [X] Other

6 Special Handling and Delivery Signature Options

- [ ] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx Express Saver, or FedEx 3Day Freight.

Signature options:
- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
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Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

- [X] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. ____ Exp. Date ____

Total Packages	Total Weight	Total Declared Value†
1	2 lbs.	$ ____ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

606

FedEx

5903 N W ST
PENSACOLA, FL 32505

on: PNSCE
ID: PNSCE-POS1
ee: 789450
ction: 76010829585

ITY OVERNIGHT
36156805 4.00 lb (S) 4.65

uled Delivery Date 02/10/2011
ITY OVERNIGHT
47555081 150.75 lb (M) 123.12
36456111
36456122

uled Delivery Date 02/10/2011

Shipment subtotal: 127.77

Total Due: 127.77

FedEx Account: 127.77
*****5519

M = Weight entered manually
S = Weight read from scale
T = Taxable item

t to additional charges. See FedEx Service Guide
ex.com for details. All merchandise sales final.

Visit us at: fedex.com
Or call 1.800.GoFedEx
1.800.463.3339

February 9, 2011 3:27:46 PM

FedEx Express **US Airbill**

FedEx Tracking Number 8748 4755 5070

SPH31

Form ID No. 0215 **Sender's Copy**

Please print and press hard.

2-8-11 Sender's FedEx Account Number SENDER'S FEDEX [illegible] ONLY 1525-8551-9

Sender's Name DISTRIBUTION Phone (787) 300-9119 (850) 385-9899

Company TETRA TECH NUS INC GOVT

Address 1558 VILLAGE SQUARE BLVD STE 2 Dept./Floor/Suite/Room

City TALLAHASSEE State FL ZIP 32309-2748

Internal Billing Reference 1126102200 OPTIONAL Field Event

Your Name Sample Receiving Phone (615) 345-1115

Company ~~Tetra~~ Empirical Laboratory

Address 621 Mainstream Dr. Suite 270 Dept./Floor/Suite/Room

HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

City Nashville State TN ZIP 37228

0433255761

4a Express Package Service * To most locations. Packages up to 150 lbs.

- [x] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.*
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service ** To most locations. Packages over 150 lbs.

- [ ] FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. CALL 1.800.332.0807 FedEx 1Day Freight Booking No.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak* Includes FedEx Small Pak and FedEx Large Pak.
- [ ] FedEx Box
- [ ] FedEx Tube
- [x] Other

6 Special Handling and Delivery Signature Options

- [ ] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx Express Saver, or FedEx 3Day Freight.
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Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [ ] Cargo Aircraft Only

7 Payment Bill to:

- [x] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

Enter FedEx Acct. No. or Credit Card No. below.

FedEx Acct. No. / Credit Card No. Exp. Date

Total Packages 1 Total Weight 22 lbs. Total Declared Value† $ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability.

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Or let our pros pack for you with FedEx Office℠ Pack & Ship.

FedEx

5903 N W ST
PENSACOLA, FL 32505

Location: PNSCE
Device ID: PNSCE-POS2
Employee: 11351
Transaction: 76010737671

PRIORITY OVERNIGHT
874847555070 22.00 lb (M) 20.

Scheduled Delivery Date 02/09/2011

Shipment subtotal: 20.

Total Due: 20.

FedEx Account: 20.
*****5519

M = Weight entered manually
S = Weight read from scale
T = Taxable item

Subject to additional charges. See FedEx Service Gui
at fedex.com for details. All merchandise sales fina

Visit us at: fedex.com
Or call 1.800.GoFedEx
1.800.463.3339

February 8, 2011 5:34:20 PM

FedEx

5903 N W ST
PENSACOLA, FL 32505

Location: PNSCE
Device ID: PNSCE-POS1
Employee: 789450
Transaction: 76010829585

PRIORITY OVERNIGHT
873596156805 4.00 lb (S) 4.65

Scheduled Delivery Date 02/10/2011
PRIORITY OVERNIGHT
874847555081 150.75 lb (M) 123.12
795536456111
795536456122

Scheduled Delivery Date 02/10/2011

Shipment subtotal: 127.77

Total Due: 127.77

FedEx Account: 127.77
*****5519

M = Weight entered manually
S = Weight read from scale
T = Taxable item

Subject to additional charges. See FedEx Service Guide at fedex.com for details. All merchandise sales final.

Visit us at: fedex.com
Or call 1.800.GoFedEx
1.800.463.3339

February 9, 2011 3:27:46 PM

US Airbill

FedEx Tracking Number 8748 4755 5070

Form ID No. 0215

Sender's Copy

...d press hard.

Sender's FedEx Account Number 1525-8551-9

Phone (787) 300-9119

TRIBUTION

Phone (850) 385-9899

RA TECH NUS INC GOVT

8 VILLAGE SQUARE BLVD STE 2

Dept./Floor/Suite/Room

HASSEE State FL ZIP 32309-2748

...ling Reference ...r on invoice. 112602200 Field Event

...mple Receiving

~~Attn:~~ Empirical Laboratory

21 Mainstream Dr. Suite 270

Phone (615) 345-1115

...boxes or P.O. ZIP codes. Dept./Floor/Suite/Room

...D location address or for continuation of your shipping address.

...nville State TN ZIP 37228

0433255761

...earn to pack like a pro at fedex.com/packaging
...let our pros pack for you with FedEx Office℠ Pack & Ship.

4a Express Package Service * To most locations. *Packages up to 150 lbs.*

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
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- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
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5 Packaging * Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak and FedEx Large Pak.
- [ ] FedEx Box
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- [ ] Yes — Shipper's Declaration not required.
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- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. Exp. Date

Total Packages	Total Weight	Total Declared Value†
1	22 lbs.	$ .00

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FedEx

5903 N W ST
PENSACOLA, FL 32505

Location: PNSCE
Device ID: PNSCE-POS2
Employee: 11351
Transaction: 76010737671

PRIORITY OVERNIGHT
874847555070 22.00 lb (M) 20.50

Scheduled Delivery Date 02/09/2011

Shipment subtotal: 20.50

Total Due: 20.50

FedEx Account: 20.50
*****5519

M = Weight entered manually
S = Weight read from scale
T = Taxable item

Subject to additional charges. See FedEx Service Guide at fedex.com for details. All merchandise sales final.

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Or call 1.800.GoFedEx
1.800.463.3339

February 8, 2011 5:34:20 PM

Location UST 21 Date 2/7/11

Project / Client NAVY 1126-02200

weather. cloudy, windy ~45°,

1130 EST Jared Shelburne TtNUS and Amber Igoe TtNUS left Tallahassee

~~1349~~ 1449 JS, AI arrived on site to survey in new wells mw-64 and mw-65. Health and Safety meeting conducted.

Station	ID	BS	HI	FS	Station	Elevation
mw-1 25.96		4.48		4.95	mw-65	25.~~96~~ 91
mw-65		4.~~48~~ 52		4.48	mw-1	
		9.44		9.43		
				misc 0.01		

Station	ID	BS	HI	FS	Station	Elevation
mw-14 27.82		5.23		5.05	mw-64	28.05
mw-64		5.11		5.~~13~~ 18	mw-14	27.82
		10.38		10.~~34~~ 23		

Location UST 21 Date ~~2/7/11~~ 2/8/11

Project / Client NAVY 1126022200

ID	Comments
mw-54	No socks, tubing 20-25' screen TD 25.5 24 may ~~29~~ 97
mw-2	uss Jack williams written in the concrete PVC cap broken, no socks
mw-A	no tubing, no sock
mw-4	" "
mw-18	29.38' elev 4.141 screened TD 14.5' 24 Oct 96 installed dedicated tubing
mw-20	No locking cover SOUC
mw-55	TD 13.5' Screen 3-13'

Location UST 21 Date 2/7/11

Project / Client NAVY 1126 022 00

ID	Comments
mw-36	Sock
mw-38	10/21/08 installed
	Dedicated tubing
mw-47	TD 15.5'
	screen 5-15'
	TOC 27.55'
	15 may 97 Install
	Dedicated Tubing
mw-51	Dedicated Tubing
mw-52	no tubing or sock
mw-53	No locking cover
	filled w/ dirt
	Dedicated tubing
mw-46	no tubing, no sock
mw-39	" "
mw-40	" "
mw-14	Sock
mw-11	Dedicated Tubing
mw-5	" "
mw-9	10/21/08
	Dedicated Tubing

Location UST 21 Date 2/7/11

Project / Client NAVY 1126 022 00

ID	Comments
mw-7	TD 13.5'
	screen N/A
	TOC 26.08
	22 Aug 96
	Dedicated Tubing ~~Dedicated tubing~~
mw-6	Dedicated Tubing
mw-10	TD 14.5
	screen 4-14'
	TOC 26.90'
	27 Aug 96.
	Dedicated Tubing
mw-11	Appears to have
	sock cant open
mw-1	Dedicated Tubing
mw-65	No tubing, no sock
mw-13	No bolted cap
	filled w/ dirt
	Dedicated tubing
mw-14	" "
mw-64	no tubing or sock

Location UST 21 Date 2/7/11

Project / Client NAVY 1120-0220

ID	Comments
mw-15	TD 14.5' Screen 4-14' TOC 28.23' 23 OCT 96 Dedicated Tubing
mw-12	" "
mw-26	" "
mw-25	no tubing or sock
mw-8	" "
mw-23	TD 15.5' Screen 5-15' TOC 28.76' 30 Jan 97 tubing

1640 leave base to head to Fed Ex

1708 arrive @ Fed Ex

1735 arrive @ hotel EOD

Location UST 21 Date 2/8/11

Project / Client NAVY 1120-0220

Weather: Sunny, windy 25°

0730 AI checked out of hotel

0738 AI, JS arrived @ UST 21 Health and Safety briefing conducted. AI, JS continue to ~~locate~~ AI located and open monitor wells

ID	Comments
mw-3	Dedicated Tubing
mw-16	" "
mw-24	No tubing, no sock
mw-27 ?	
mw-22	Dedicated tubing
mw-17	" "
mw-59	" "
mw-58	TD 15' Screen 4.5-14.5 TOC 28.22' 29 May 97 Dedicated tubing
mw-63	" "
mw-62	" "

Location UST 21 Date 2/8/11

Project / Client NAVY 112G0220

ID	Comment
~~mw-57~~	~~Dedicated Tubing~~
mw-56	" "
mw-49	" "
mw-50	" "
mw-43	~~" "~~ ~~no tubing~~
	TD 15.5'
	Screen 5-15'
	Toc 28'
	25 Mar 97
	Dedicated Tubing
mw-42	" "
	TD 15.5'
	Screen 5-15'
	Toc 29.28
	15 May 97
	dedicated tubing
mw-35	" "
	Screen 5-15'
mw-24	TD 15.5
	Toc 29.38
	25 Feb 97

Location UST 21 Date 2/8/11

Project / Client NAVY 112G 0220

ID	Comment
mw-29	TD 15.5'
	Screen 5-15'
	Toc 28.28
	25 Feb 97
	Dedicated tubing
mw-60	" "
mw-30	Appears to have sock
	Cannot open
mw-61	Dedicated tubing
mw-31	sock
mw-32	sock
	petroleum odor

0859 JS Calibrating Groundwater Parameter Equipment

556 YSI Serial # 07F100621

Lamotte Turbidity Serial # ME14449

TENUS Equipment Cal Logs

FOEP Gw Sampling Logs

TENUS SAP work Permits

Location UST 21 Date 2/8/11

Project / Client NAVY 112G02200

0936 Yarissa Martinez TTNUS arrives on site

1030 Jared Shelburne began purging mw-41, MNA parameters will be collected on this well. AJ ym broke out cooler kits.

1133 Collected sample UST21-MW41-0211 for Anions, Sulfide, BOD, COD, Total Metals (Fe, Mn) Dissolved Metals, Alkalinity, Metals, TRPH and PAH Low Level

1227 Started collecting process for dissolved hydrogen with a flow of 150 ml/min

1252 Collected the dissolved hydrogen 15ml

1312 Lunch break

1342 Back from lunch

1345 Setting up in DMW-65

1351 Started purging well

1502 Collected sample UST21-MW65-0211

1539 Started process for dissolved hydrogen at 150 ml/min

Location UST 21 Date 2/8/2011

Project / Client Navy 112G02200

1604 Collected air sample for dissolved hydrogen

1605 Moved to MW-25. Dedicated tubing was hidden.

1645 Decided to leave the field to buy supplies and ship the groundwater samples for BOD/COD/Alkalinity and Sulfides because of the short time for analysis of BOD & Sulfides (48 hrs). Contacted Empirical Lab and told them about the shipment.

1715 At Walmart buying supplies to open up the other wells

1800 End of day at BOQ

Note: During check-in, the asked for orders.

2-5-11

Location UST 21 Date 2-9-11

Project / Client Navy 112G02200

Weather: Cloudy, Windy high = 54°, 43° at dawn
Personnel: Jared Shelburne (JS) & Javiessa Martinez (jym)

600	Calibrating equipment
630	At MW-25
640	Started purging well
710	Collected sample UST 21-MW 25-0211 to be analyzed for TRPH, Lead, Select VOCs & PAH and MNA Parameters
747	Started the bubbler after injecting 20ml of ambient air through a flow of 150 ml/min
812	While collecting the 1ml to check, the stopper came undone
817	Restarted the process with 150 ml/min flow and 20ml of ambient air
842	Collected the sample for dissolved hydrogen.
900	Moved to MW 61
912	Started Purging MW 61
1015	Collected sample UST 21 - MW 61-0211
1052	Started the process with the bubbler at 150ml/m flow

Location UST 21 Date 2-9-11

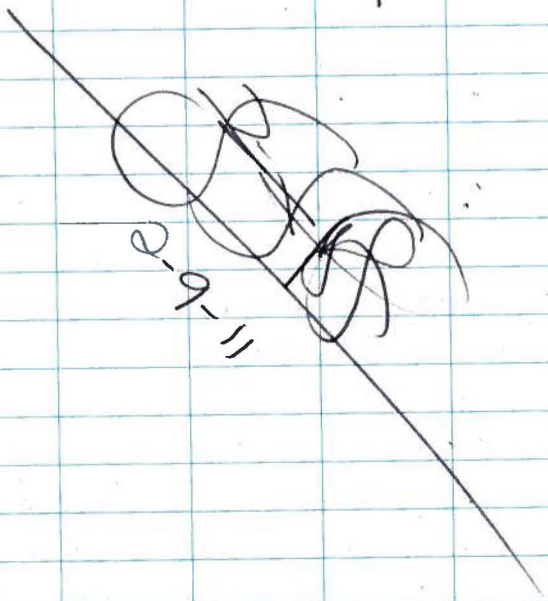
Project / Client Navy 112G02200

1130	At MW55. No free product detected
1146	Started purging UST21 MW55
1150	Called the office because we need additional tubbing talked to Melissa
1245	Collected UST 18-MW55-0211
1318	Started the process for dissolved gasses at 150 ml/min
1343	Collected sample and decon the bubbler.
1500	Left the site for FedEx
1600	Sent 3 coolers to Empirical lab and 1 small cooler to Micro-seeps, At the site.
1610	Started purging MW 62
1645	Collected UST 21-MW 62-0211, UST 21-MW62-0211 MS, UST 21-MW62-0211 MSD & GW02-020911. While sampling started to rain, but it was minimal.

Location UST 21 Date 2/9/11

Project / Client Navy 112602200

1725	Heavy raining started
1745	Left the site because of rain.
1800	At Walmart picking up an extra cooler, rain gear and warmer gloves.
1845	End of day



Location UST 21 - Pensacola Date 2/10/11

Project / Client Navy 112602200

Weather: Cloudy high of 49°, 32° @ dawn

Personnel: Jared Shelburne (JS) + Yanissa Martinez (YM)

0610	Met at the parking, Calibrated equipment
0630	At the site - UST 21
0634	Started purging MW-63
0755	Collected UST21-mw63-0211
0810	at DMW64
0935	Collected UST21-mw64-0211
0950	Moved to DMW60
1035	Collected UST21-mw60-0211
1049	Moved to DMW-54
1054	Started Purging DMW54 Empirical lab requested the COC/tracking number of yesterday's shipment because of weather Fedex is having problems delivering. They asked whether they should run the analysis for BOD and nitrites if holding time exceeds. Kelly Carper (TTMS) via email, responded

Location UST 21 Date 2/10/2011

Project / Client Navy 112G02200

that the analysis shouldn't be run if the holding time is exceeded. Also analysis for alkalinity will be added to empirical scope of work according to approved SAP.

1135 Collected sample UST21-mw34-0211
1145 moved to MW01
1155 started purging mw01
1215 collected UST21-MW01-0210
1225 moved to MW10, which is the well replacing MW13
1231 started purging MW10
1250 collected sample UST21mw10-0211
1300 moved to MW23
1330 collected sample UST21-mw23-0211
1350 moved to MW16
1412 collected sample UST21-mw16-0211
1420 moved to MW14
1434 started purging MW14
1457 collected UST21-mw14-0211

Location UST 21 Date 2/10/11

Project / Client Navy 112G02200

1459 ~~collected~~ Moved to MW37
1520 started purging MW37
1540 collected UST21-mw37-0211
1610 left for FedEx and pack coolers
1715 at FedEx Shipping 6 coolers
1845 Back at the site @ MW-04
1859 Purging started at mw-04
1925 Collected UST21-MW04-0211
1948 Moved to MW17
2018 Collected UST21-mw17-0211
2040 moved to MW38
2105 collected UST21-MW38-0211
2130 at BOP End of Day

2/10/11

Location UST21 - Pensacola Date 2/11/10

Project / Client Navy 112G02200

Weather High of 51° · calm @ 32°

Personnel: Jared Shulbank (JS) & Yarissa Martinez (ym)

530 Checked out of Gateway Inn

541 at the site at MW-09

551 started purging MW09

602 low tide @ -0.23

620 collected UST21-MW09-0211 (JS)
ym doing water levels

710 moved to MW40

While JS collected water levels

736 collected UST21-MW40-0211 and
GW01-021111

820 Measuring water levels

850 left the site towards
Tallahassee

Location Date

Project / Client

APPENDIX B

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**G. WALKER**	**DATE:**	**March 29, 2011**
FROM:	**MEGAN CARSON**	**COPIES:**	**DV FILE**

SUBJECT: **DATA VALIDATION- METHANE, CARBON DIOXIDE, HYDROGEN, AND NITROGEN**
CTO JM01, NAS PENSACOLA
SDG P1102086

SAMPLES: **5/Waters/**

UST21-MW25-0211	UST21-MW41-0211	UST21-MW55-0211
UST21-MW61-0211	UST21-MW65-0211	

OVERVIEW

The sample set for CTO JM01 NAS Pensacola, SDG P1102086 consists of five (5) aqueous samples. This SDG contained no field duplicate pairs.

All samples were analyzed for methane, carbon dioxide, hydrogen, and nitrogen. The samples were collected by TetraTech NUS from February 8th and 9th, 2011 and analyzed by Microseeps Inc. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using method analytical and reporting protocol. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibrations
* • Laboratory Method Blank Analyses
* • Laboratory Control Sample Results
* • Matrix Spike/ Matrix Spike Duplicate Results
* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B. The text of this report is formatted to address only gross non-compliances resulting in the rejection of data and elimination of false positives.

Dissolved Gases:

All sample results were within quality control limits.

Additional Comments:

Positive results between less than the reporting limit but greater than the method detection were qualified as estimated (J).

To: G Walker
SDG: P1102086
Date: 3/29/2011

EXECUTIVE SUMMARY

Laboratory Performance Issues: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for organic Data Validation (10/1999) and the Department of Defense (DoD) Quality Systems Manual (QSM) (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Megan Carson
Chemist/Data Validator

TetraTech NUS

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

PROJ_NO: 02200	NSAMPLE	UST21-MW25-0211			UST21-MW41-0211			UST21-MW55-0211			UST21-MW61-0211		
SDG: P1102086	LAB_ID	P1102086-03A			P1102086-01A			P1102086-05A			P1102086-04A		
FRACTION: OVG	SAMP_DATE	2/9/2011			2/8/2011			2/9/2011			2/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
METHANE		800			5.7			1200			450		

PROJ_NO: 02200	NSAMPLE	UST21-MW65-0211		
SDG: P1102086	LAB_ID	P1102086-02A		
FRACTION: OVG	SAMP_DATE	2/8/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
METHANE		620		

PROJ_NO: 02200	NSAMPLE	UST21-MW25-0211						UST21-MW41-0211					
SDG: P1102086	LAB_ID	P1102086-03A						P1102086-01A					
FRACTION: MISC	SAMP_DATE	2/9/2011						2/8/2011					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			NM			MG/L			NM		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DIOXIDE		32						9.1					
HYDROGEN					0.61						0.55	J	P
NITROGEN		18						17					

PROJ_NO: 02200	NSAMPLE	UST21-MW55-0211						UST21-MW61-0211					
SDG: P1102086	LAB_ID	P1102086-05A						P1102086-04A					
FRACTION: MISC	SAMP_DATE	2/9/2011						2/9/2011					
MEDIA: WATER	QC_TYPE	NM						NM					
	UNITS	MG/L			NM			MG/L			NM		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DIOXIDE		56						54					
HYDROGEN					1.6						1.8		
NITROGEN		18						18					

PROJ_NO: 02200	NSAMPLE	UST21-MW65-0211					
SDG: P1102086	LAB_ID	P1102086-02A					
FRACTION: MISC	SAMP_DATE	2/8/2011					
MEDIA: WATER	QC_TYPE	NM					
	UNITS	MG/L			NM		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DIOXIDE		68					
HYDROGEN					18		
NITROGEN		18					

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

U.S. EPA - CLP

1

OTHER ANALYSIS DATA SHEET

EPASampleNo: UST21-MW25-0211

Lab Name: Microseeps, Inc Contract: 112G02200

Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Matrix (soil / water): Vapor Lab Sample ID: P1102086-03A

Level (low/med): Date Received: 2/10/2011

% Solids:

Concentration Units :

CAS No.	Analyte	Concentration	Units	C	Q	M
1333-74-0	Hydrogen	0.610	nM			
124-38-9	Carbon dioxide	32.0	mg/L			
7727-37-9	Nitrogen	18.0	mg/L			
74-82-8	Methane	800	ug/L			

U.S. EPA - CLP

1

OTHER ANALYSIS DATA SHEET

EPASampleNo: UST21-MW41-0211

Lab Name: Microseeps, Inc Contract: 112G02200

Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Matrix (soil / water): Vapor Lab Sample ID: P1102086-01A

Level (low/med): Date Received: 2/10/2011

% Solids:

Concentration Units :

CAS No.	Analyte	Concentration	Units	C	Q	M
1333-74-0	Hydrogen	0.550	nM	J		
124-38-9	Carbon dioxide	9.10	mg/L			
7727-37-9	Nitrogen	17.0	mg/L			
74-82-8	Methane	5.70	ug/L			

U.S. EPA - CLP

1

OTHER ANALYSIS DATA SHEET

EPASampleNo: UST21-MW55-0211

Lab Name: Microseeps, Inc Contract: 112G02200

Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Matrix (soil / water): Vapor Lab Sample ID: P1102086-05A

Level (low/med): Date Received: 2/10/2011

% Solids:

Concentration Units :

CAS No.	Analyte	Concentration	Units	C	Q	M
1333-74-0	Hydrogen	1.60	nM			
124-38-9	Carbon dioxide	56.0	mg/L			
7727-37-9	Nitrogen	18.0	mg/L			
74-82-8	Methane	1200	ug/L			

U.S. EPA - CLP

1

OTHER ANALYSIS DATA SHEET

EPASampleNo: UST21-MW61-0211

Lab Name: Microseeps, Inc Contract: 112G02200

Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Matrix (soil / water): Vapor Lab Sample ID: P1102086-04A

Level (low/med): Date Received: 2/10/2011

% Solids:

Concentration Units :

CAS No.	Analyte	Concentration	Units	C	Q	M
1333-74-0	Hydrogen	1.80	nM			
124-38-9	Carbon dioxide	54.0	mg/L			
7727-37-9	Nitrogen	18.0	mg/L			
74-82-8	Methane	450	ug/L			

U.S. EPA - CLP

I

OTHER ANALYSIS DATA SHEET

EPASampleNo: UST21-MW65-0211

Lab Name: Microseeps, Inc Contract: 112G02200

Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Matrix (soil / water): Vapor Lab Sample ID: P1102086-02A

Level (low/med): Date Received: 2/10/2011

% Solids:

Concentration Units :

CAS No.	Analyte	Concentration	Units	C	Q	M
1333-74-0	Hydrogen	18.0	nM			
124-38-9	Carbon dioxide	68.0	mg/L			
7727-37-9	Nitrogen	18.0	mg/L			
74-82-8	Methane	620	ug/L			

APPENDIX C

SUPPORT DOCUMENTATION

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER JM01-03 P1102086 | PAGE 1 OF 1

PROJECT NO:	SITE NAME:	PROJECT MANAGER AND PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02200	UST 21	Kerry Walker (850)	Microseeps
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER: Yarissa Martinez (787)300-9119	ADDRESS: 220 Williams Rd Uky
		CARRIER/WAYBILL NUMBER: 8735 9615 6805	CITY, STATE: Pittsburgh, PA 15238

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: Dissolved Gases RSK 175	TYPE OF ANALYSIS: Dissolved Gases RSK 175	COMMENTS
						G	-			
2/8	1133	UST21-MW41-0211	GW	G	2			1	1	
2/8	1502	UST21-MW65-0211	GW	G	2			1	1	
2/9	0710	UST21-MW25-0211	GW	G	2			1	1	
2/9	1015	UST21-MW61-0211	GW	G	2			1	1	
2/9	1245	UST21-MW55-0211	GW	G	2			1	1	

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	2/9/11	1445	1. RECEIVED BY	2/10	AM
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 3/99

FORM NO. TINUS-001

P1102086

CASE NARRATIVE
Client: TetraTech NUS, Inc.
Project Number: NAS Pensacola
SDG: UST21-MW25-0211
Microseeps Project No.: P1102086

Sample Receipt

Microseeps, Inc. received the sample shipment on 2/10/2011. The samples were received in good condition, properly preserved and within the correct temperature range. A summary of the field identifications and Microseeps identifications is presented below

Field Identifications	Lab Identifications
UST21-MW41-0211	P1102086-01
UST21-MW65-0211	P1102086-02
UST21-MW25-0211	P1102086-03
UST21-MW61-0211	P1102086-04
UST21-MW55-0211	P1102086-05

A copy of all communications concerning this project has been enclosed.

Sample Analyses

The sample analyses were performed in accordance with Microseeps routine Standard Operating procedures. There were no unusual observances noted during the analysis of this sample.

HOLD TIM

SDG P1102086

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CO2	MG/L	UST21-MW41-0211	P1102086-01A	NM	02/08/2011	02/17/2011	02/17/2011	9	0	9
CO2	MG/L	UST21-MW55-0211	P1102086-05A	NM	02/09/2011	02/17/2011	02/17/2011	8	0	8
CO2	MG/L	UST21-MW61-0211	P1102086-04A	NM	02/09/2011	02/17/2011	02/17/2011	8	0	8
CO2	MG/L	UST21-MW65-0211	P1102086-02A	NM	02/08/2011	02/17/2011	02/17/2011	9	0	9
CO2	MG/L	UST21-MW25-0211	P1102086-03A	NM	02/09/2011	02/17/2011	02/17/2011	8	0	8
H2	NM	UST21-MW65-0211	P1102086-02A	NM	02/08/2011	02/17/2011	02/17/2011	9	0	9
H2	NM	UST21-MW25-0211	P1102086-03A	NM	02/09/2011	02/17/2011	02/17/2011	8	0	8
H2	NM	UST21-MW41-0211	P1102086-01A	NM	02/08/2011	02/17/2011	02/17/2011	9	0	9
H2	NM	UST21-MW55-0211	P1102086-05A	NM	02/09/2011	02/17/2011	02/17/2011	8	0	8
H2	NM	UST21-MW61-0211	P1102086-04A	NM	02/09/2011	02/17/2011	02/17/2011	8	0	8
N2	MG/L	UST21-MW65-0211	P1102086-02A	NM	02/08/2011	02/17/2011	02/17/2011	9	0	9
N2	MG/L	UST21-MW25-0211	P1102086-03A	NM	02/09/2011	02/17/2011	02/17/2011	8	0	8
N2	MG/L	UST21-MW41-0211	P1102086-01A	NM	02/08/2011	02/17/2011	02/17/2011	9	0	9
N2	MG/L	UST21-MW55-0211	P1102086-05A	NM	02/09/2011	02/17/2011	02/17/2011	8	0	8
N2	MG/L	UST21-MW61-0211	P1102086-04A	NM	02/09/2011	02/17/2011	02/17/2011	8	0	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
METH	UG/L	UST21-MW41-0211	P1102086-01A	NM	02/08/2011	02/17/2011	02/17/2011	9	0	9
METH	UG/L	UST21-MW55-0211	P1102086-05A	NM	02/09/2011	02/17/2011	02/17/2011	8	0	8
METH	UG/L	UST21-MW61-0211	P1102086-04A	NM	02/09/2011	02/17/2011	02/17/2011	8	0	8
METH	UG/L	UST21-MW65-0211	P1102086-02A	NM	02/08/2011	02/17/2011	02/17/2011	9	0	9
METH	UG/L	UST21-MW25-0211	P1102086-03A	NM	02/09/2011	02/17/2011	02/17/2011	8	0	8

U.S. EPA - CLP
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Microseeps, Inc Contract: 112G02200
Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Initial Calibration Source: Matheson
Continuing Calibration Source:

Concentration Units: mg/L

Analyte	Initial Calibration True	Found	%R	Continuing Calibration True	Found	%R	Found	%R	M
Methane	5.08	5.46	107						
Carbon dioxide	184	183	99.4						
Methane	917	929	101						
Nitrogen	0.93	0.94	101						

Lab Name: Microseeps, Inc Contract: 112G02200

Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Initial Calibration Source:

Continuing Calibration Source: Scott

Concentration Units: mg/L

Analyte	Initial Calibration True	Found	%R	Continuing Calibration True	Found	%R	Found	%R	M
Hydrogen				9.60	8.88	92.5			
Methane				1.02	1.04	102			
Carbon dioxide				36.75	34.38	93.6			
Methane				183	184	100			
Nitrogen				0.19	0.20	105			

Lab Name: Microseeps, Inc Contract: 112G02200

Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Preparation blank Matrix (soil/water) Vapor

Preparation Blank Concentration Units ug/L

Analyte	Init Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Preparation Blank	C	M
Methane	0.015	U	0.015	U	0.015	U			0.015	U	

Lab Name: Microseeps, Inc Contract: 112G02200

Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Preparation blank Matrix (soil/water) Vapor

Preparation Blank Concentration Units mg/L

Analyte	Init Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Preparation Blank	C	M
Carbon dioxide	5.00	U	5.00	U	5.00	U			5.00	U	
Nitrogen	0.40	U	0.40	U	0.40	U			0.40	U	

U.S. EPA - CLP
6
DUPLICATES

EPA Sample No.

Lab Name: Microseeps, Inc Contract: 112G02200 LCS

Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Matrix (soil/water): Vapor Level (low/med):

% Solids for Sample: % Solids for Duplicate:

Concentration Units : ug/L

Analyte	Control Limit	Sample	C	Duplicate	C	RPD	Q	M
Methane	0-20	15.88		15.93		0.31		

EPA Sample No.

Lab Name: Microseeps, Inc Contract: 112G02200 LCS

Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Matrix (soil/water): Vapor Level (low/med):

% Solids for Sample: % Solids for Duplicate:

Concentration Units : mg/L

Analyte	Control Limit	Sample	C	Duplicate	C	RPD	Q	M
Carbon dioxide	0-20	182.2		182.8		0.33		

LABORATORY CONTROL SAMPLE

Lab Name: Microseeps, Inc Contract: 112G02200

Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Solid LCS Source:

Aqueous LCS Source: Scott

Analyte	Aqueous				Solid (mg/Kg)					
	Units	True	Found	%R	True	Found	C	Limits		%R
Methane	ug/L	15.46	15.88	103						

LABORATORY CONTROL SAMPLE

Lab Name: Microseeps, Inc Contract: 112G02200

Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Solid LCS Source:

Aqueous LCS Source: Scott

Analyte	Aqueous				Solid (mg/Kg)					
	Units	True	Found	%R	True	Found	C	Limits		%R
Carbon dioxide	mg/L	182.63	182.2	99.8						

U.S. EPA - CLP
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Microseeps, Inc Contract: 112G02200

Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Initial Calibration Source: Matheson

Continuing Calibration Source:

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R	True	Found	%R	Found	%R	M
Hydrogen	48.11	48.87	102						

U.S. EPA - CLP
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Microseeps, Inc Contract: 112G02200
Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Initial Calibration Source:
Continuing Calibration Source: Scott

Concentration Units: mg/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R	True	Found	%R	Found	%R	M
Hydrogen				12.03	11.95	99.3			
Methane				1.27	1.26	99.2			
Carbon dioxide				45.93	41.52	90.4			
Nitrogen				0.23	0.23	100			
Methane				229	227	99.1			

Lab Name: Microseeps, Inc Contract: 112G02200

Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Preparation blank Matrix (soil/water) Vapor

Preparation Blank Concentration Units nM

Analyte	Init Calib. Blank	C	Continuing Calibration Blank 1	C	2	C	3	C	Preparation Blank	C	M
Hydrogen	0.600	U	0.600	U	0.600	U			0.600	U	

U.S. EPA - CLP
6
DUPLICATES

EPA Sample No.

Lab Name: Microseeps, Inc Contract: 112G02200 LCS

Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Matrix (soil/water): Vapor Level (low/med):

% Solids for Sample: % Solids for Duplicate:

Concentration Units : nM

Analyte	Control Limit	Sample	C	Duplicate	C	RPD	Q	M
Hydrogen	0-20	48.20		48.45		0.52		

LABORATORY CONTROL SAMPLE

Lab Name: Microseeps, Inc Contract: 112G02200

Lab Code: P1102086 Case No.: NAS Pennsacola SAS No.: SDG No.: UST21-MW25-02

Solid LCS Source:

Aqueous LCS Source: Scott

Analyte	Aqueous				Solid (mg/Kg)					
	Units	True	Found	%R	True	Found	C	Limits		%R
Hydrogen	nM	48.91	48.20	98.5						

Client Name: Tetra Tech NUS, Inc.
Contact: Amy Thomson
Address: Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220-2745

Page: Page 7 of 9
Lab Proj #: P1102086
Report Date: 02/22/11
Client Proj Name: NAS Pensacola
Client Proj #: 112G02200 JM01-03 UST21

Prep Method: Light Hydrocarbons (C1-C4) by Bubblestrip
Analysis Method: Light Hydrocarbons (C1-C4) by Bubblestrip

M110219004-MB

	Result		TrueSpikeConc.	RDL	%Recovery	Ctl Limits
Methane	< 0.015	ug/L		0.015		- NA

M110219004-LCS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Methane	16.000	ug/L	15.46	103.00	80 - 120

M110219004-LCSD

	Result		TrueSpikeConc.	%Recovery	Ctl Limits	RPD	RPD Ctl Limits
Methane	16.000	ug/L	15.46	103.00	80 - 120	0.00	0 - 20

Outlined Results indicate results outside of Control limits

PA02-00538

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: Tetra Tech NUS, Inc.
Contact: Amy Thomson
Address: Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220-2745

Page: Page 8 of 9
Lab Proj #: P1102086
Report Date: 02/22/11
Client Proj Name: NAS Pensacola
Client Proj #: 112G02200 JM01-03 UST21

Prep Method: Permanent Gases by Bubble Strip

Analysis Method: Permanent Gases by Bubble Strip

M110219006-MB

	Result		TrueSpikeConc.	RDL	%Recovery	Ctl Limits
Carbon dioxide	< 5.00	mg/L		5.00		- NA
Nitrogen	< 0.40	mg/L		0.40		- NA

M110219006-LCS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Carbon dioxide	180.00	mg/L	182.63	99.00	80 - 120

M110219006-LCSD

	Result		TrueSpikeConc.	%Recovery	Ctl Limits	RPD	RPD Ctl Limits
Carbon dioxide	180.00	mg/L	182.63	99.00	80 - 120	0.00	0 - 20

Outlined Results indicate results outside of Control limits

PA02-00538

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Client Name: Tetra Tech NUS, Inc.
Contact: Amy Thomson
Address: Foster Plaza 7
661 Andersen Drive
Pittsburgh, PA 15220-2745

Page: Page 9 of 9
Lab Proj #: P1102086
Report Date: 02/22/11
Client Proj Name: NAS Pensacola
Client Proj #: 112G02200 JM01-03 UST21

Prep Method: Hydrogen by Bubble Strip
Analysis Method: Hydrogen by Bubble Strip

M110221039-MB

	Result		TrueSpikeConc.	RDL	%Recovery	Ctl Limits
Hydrogen	< 0.600	nM		0.600		- NA

M110221039-LCS

	Result		TrueSpikeConc.	%Recovery	Ctl Limits
Hydrogen	48.000	nM	48.91	98.00	80 - 120

M110221039-LCSD

	Result		TrueSpikeConc.	%Recovery	Ctl Limits	RPD	RPD Ctl Limits
Hydrogen	48.000	nM	48.91	98.00	80 - 120	0.00	0 - 20

Outlined Results indicate results outside of Control limits

PA02-00538

Data Qualifiers: J - estimated value, U - Non detect, R - Poor surrogate recovery, M - Recovery/RPD poor for MS/MSD, SAMP/DUP, B - detected in blank, S - field sample as received did not meet NELAC sample acceptance criteria, L - Subcontracted Lab used, N - NELAC certified analysis

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **G. WALKER** **DATE:** **March 30, 2011**

FROM: **MEGAN CARSON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION- ALKALINITY, BOD, COD, CHLORIDE, NITRATE-N, NITRITE-N, AND SULFATE**
CTO JM01, NAS PENSACOLA
SDG CTOJM01_005

SAMPLES: **2/Waters/**

UST21-MW41-0211 UST21-MW65-0211

OVERVIEW

The sample set for CTO JM01 NAS Pensacola, SDG CTOJM01_005 consists of two (2) aqueous samples. This SDG contained no field duplicate pairs.

All samples were analyzed for alkalinity, biochemical oxygen demand (BOD), chemical oxygen demand (COD), chloride, nitrate-N, nitrite-N, and sulfate. The samples were collected by TetraTech NUS from February 8th, 2011 and analyzed by Empirical Laboratories, LLC. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using EPA methods 110.1, 410.4, SW-846 method 9056, and Standard method SM2320B analytical and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibrations
* • Laboratory Method Blank Analyses
* • Laboratory Control Sample Results
* • Matrix Spike/ Matrix Spike Duplicate Results
* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B. The text of this report is formatted to address only gross non-compliances resulting in the rejection of data and elimination of false positives.

Miscellaneous:

All sample results were within quality control limits.

Additional Comments:

Positive results between less than the reporting limit but greater than the method detection were qualified as estimated (J).

Sample UST21-MW65-0211 was analyzed at dilutions for COD (5X), chloride (100X), nitrite (10X), and sulfate (10X).

To: G Walker
SDG: CTOJM01_005
Date: 3/30/2011

EXECUTIVE SUMMARY

Laboratory Performance Issues: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Inorganic Data Validation (10/2004) and the Department of Defense (DoD) Quality Systems Manual (QSM) (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.

Megan Carson
Tetra Tech NUS
Megan Carson
Chemist/Data Validator

TetraTech NUS

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

PROJ_NO: 02200	NSAMPLE	UST21-MW41-0211			UST21-MW65-0211		
SDG: CTOJM01_005	LAB_ID	1102074-01			1102074-02		
FRACTION: MISC	SAMP_DATE	2/8/2011			2/8/2011		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		101			847		
BIOCHEMICAL OXYGEN DEMAND		2	U		130		
CHEMICAL OXYGEN DEMAND		20	U		430		
CHLORIDE		32.7			12100		
NITRATE-N		0.231			0.033	U	
NITRITE-N		0.033	U		0.33	U	
SULFATE		7.1			933		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

ANALYSIS DATA SHEET

UST21-MW41-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/08/11 11:33
% Solids: 0.00

SDG: CTOJM01_005
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102074-01
Received: 02/09/11 08:45

CAS NO.	Analyte	Conc. (mg/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand		2.00	2.00	1	U	SM5210B	1B09013	02/14/11 23:10
NA	Chemical Oxygen Demand		20.0	60.0	1	U	E410.4	1B11020	02/11/11 18:12
16887-00-6	Chloride	32.7	0.170	1.00	1	M	SW9056	1B13003	02/14/11 02:24
14797-55-8	Nitrate as N	0.231	0.0330	0.200	1		SW9056	1B09003	02/09/11 16:12
11-43-9	Alkalinity, Total (as CACO3)	101	1.00	1.00	1		SM2320B	1B14027	02/15/11 14:24
14797-65-0	Nitrite as N		0.0330	0.200	1	U	SW9056	1B09003	02/09/11 16:12
14808-79-8	Sulfate as SO4	7.10	0.330	2.00	1		SW9056	1B09003	02/09/11 16:12

ANALYSIS DATA SHEET

UST21-MW65-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/08/11 15:02
% Solids: 0.00

SDG: CTOJM01_005
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102074-02
Received: 02/09/11 08:45

CAS NO.	Analyte	Conc. (mg/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand	130	50.0	50.0	1		SM5210B	1B09013	02/14/11 23:10
NA	Chemical Oxygen Demand	430	100	300	5	D	E410.4	1B11020	02/11/11 18:14
16887-00-6	Chloride	12100	17.0	100	100	M D	SW9056	1B13003	02/14/11 02:42
14797-55-8	Nitrate as N		0.0330	0.200	1	U	SW9056	1B09003	02/09/11 16:29
11-43-9	Alkalinity, Total (as CACO3)	847	1.00	1.00	1		SM2320B	1B14027	02/15/11 14:32
14797-65-0	Nitrite as N		0.330	2.00	10	U	SW9056	1B09003	02/09/11 16:46
14808-79-8	Sulfate as SO4	933	3.30	20.0	10	D	SW9056	1B09003	02/09/11 16:46

APPENDIX C

SUPPORT DOCUMENTATION

Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

Wet Chemistry:
1102074-01 and -02 are qualified with an M for Chloride to indicate that the RL was raised due to interference.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER JM01 01 | PAGE 1 OF 1

PROJECT NO: 112602200	SITE NAME: UST 21	PROJECT MANAGER AND PHONE NUMBER: Gerry Walker (850) 385-9899	LABORATORY NAME AND CONTACT: Empirical Lab / Kim Kostzer
SAMPLERS (SIGNATURE): Jared Shellman		FIELD OPERATIONS LEADER AND PHONE NUMBER: Yarissa Martinez (787) 300-9119	ADDRESS: 621 Mainstream Dr. Suite 270
		CARRIER/WAYBILL NUMBER: 8748 4755 5070	CITY, STATE: Nashville TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: BOD	Anions	Alkalinity	COD	Temp				COMMENTS
						P										
						P	ice									
						P	ice									
						P	H_2SO_4									
2/8	1133	UST 21-MW~~05~~41-0211	GW	G	4			1	1	1	1					1102074-01
2/8	1502	UST 21-MW65-0211	GW	G	4			1	1	1	1					-02
2/8		TEMP BLANK	-	G	1						1					

1. RELINQUISHED BY	DATE 2/8/11	TIME 1640	1. RECEIVED BY	DATE 2-9-11	TIME 08:30
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: BOD & Anions are 48hrs to analysis !!!

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99
FORM NO. TtNUS-001

CTOJM01_005

8

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1102074 Number of Coolers: 1 of 1

Client: Tetra Tech NUS Inc Project: UST21

Date/Time Received: 2-9-11 8:30 Date cooler(s) opened: 2-9-11

Opened By (print): Chris Donlon (signature): Chris Donlon

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 5070

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-8-11 Seal Initials: JL

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.3 °C Correction Factor: -0.3 °C Final Value: 2.0 °C

Dates samples were logged-in: 2-9-11

9. Initial this form to acknowledge login of sample(s): (Name): Chris Donlon (Initial): CD

10. Were all bottle lids intact and sealed tightly?	(Yes)	No	N/A
11. Did all bottles arrive unbroken?	(Yes)	No	N/A
12. Was all required bottle label information complete?	(Yes)	No	N/A
13. Did all bottle labels agree with custody papers?	(Yes)	No	N/A
14. Were correct containers used for the analyses indicated?	(Yes)	No	N/A
15. Were preservative levels correct in all applicable sample containers?	(Yes)	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	(N/A)
17. Was sufficient amount of sample sent for the analyses required?	(Yes)	No	N/A
18. Was headspace present in any included VOA vials?	Yes	No	(N/A)

If Non-Conformance issues were present, list by sample ID: _____

ph <2 for COD

HOLDTIM

SDG CTOJM01_00

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
ALK	MG/L	UST21-MW65-0211	1102074-02	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
ALK	MG/L	UST21-MW41-0211	1102074-01	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
CL	MG/L	UST21-MW65-0211	1102074-02RE2	NM	02/08/2011	02/13/2011	02/14/2011	5	1	6
CL	MG/L	UST21-MW41-0211	1102074-01RE1	NM	02/08/2011	02/13/2011	02/14/2011	5	1	6
COD	MG/L	UST21-MW65-0211	1102074-02	NM	02/08/2011	02/11/2011	02/11/2011	3	0	3
COD	MG/L	UST21-MW41-0211	1102074-01	NM	02/08/2011	02/11/2011	02/11/2011	3	0	3
NTA	MG/L	UST21-MW65-0211	1102074-02	NM	02/08/2011	02/09/2011	02/09/2011	1	0	1
NTA	MG/L	UST21-MW41-0211	1102074-01	NM	02/08/2011	02/09/2011	02/09/2011	1	0	1
NTI	MG/L	UST21-MW65-0211	1102074-02RE1	NM	02/08/2011	02/09/2011	02/09/2011	1	0	1
NTI	MG/L	UST21-MW41-0211	1102074-01	NM	02/08/2011	02/09/2011	02/09/2011	1	0	1
30 BOD SAL	MG/L	UST21-MW65-0211	1102074-02	NM	02/08/2011	02/09/2011	02/14/2011	1	5	6
BOD SAL	MG/L	UST21-MW41-0211	1102074-01	NM	02/08/2011	02/09/2011	02/14/2011	1	5	6
SO4	MG/L	UST21-MW65-0211	1102074-02RE1	NM	02/08/2011	02/09/2011	02/09/2011	1	0	1
SO4	MG/L	UST21-MW41-0211	1102074-01	NM	02/08/2011	02/09/2011	02/09/2011	1	0	1

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC **SDG:** CTOJM01_005

Client: Tetra Tech NUS, Inc. (T010) **Project:** CTO JM01 NAS Pensacola_2010

Matrix: Water **Instrument:** WC-IC

Analyte	MDL	MRL	Units	Method
Chloride	0.170	0.500	mg/L	SW9056
Nitrate as N	0.0330	0.200	mg/L	SW9056
Nitrite as N	0.0330	0.200	mg/L	SW9056
Sulfate as SO4	0.330	2.00	mg/L	SW9056

PREPARATION BATCH SUMMARY

SW9056

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_005

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Batch: 1B09003 Batch Matrix: Water Preparation: WC_PREP_ANIONS_W

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW41-0211	1102074-01	02/09/11 10:09	5.00	5.00
UST21-MW41-0211	1102074-01	02/09/11 10:09	5.00	5.00
UST21-MW65-0211	1102074-02	02/09/11 10:09	5.00	5.00
UST21-MW65-0211	1102074-02RE1	02/09/11 10:09	5.00	5.00
Blank	1B09003-BLK1	02/09/11 10:09	5.00	5.00
LCS	1B09003-BS1	02/09/11 10:09	5.00	5.00

PREPARATION BATCH SUMMARY

SW9056

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_005

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Batch: 1B13003 Batch Matrix: Water Preparation: WC_PREP_ANIONS_W

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW41-0211	1102074-01RE1	02/13/11 21:30	5.00	5.00
UST21-MW65-0211	1102074-02RE2	02/13/11 21:30	5.00	5.00
Blank	1B13003-BLK1	02/13/11 21:30	5.00	5.00
LCS	1B13003-BS1	02/13/11 21:30	5.00	5.00

METHOD BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Batch: 1B09003

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B09003-BLK1	Nitrate as N	0.00	0.0330	0.200	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.200	mg/L	U	SW9056
	Sulfate as SO4	0.00	0.330	2.00	mg/L	U	SW9056

METHOD BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010

Batch: 1B13003

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B13003-BLK1	Chloride	0.0670	0.170	0.500	mg/L	U	SW9056

LCS / LCS DUPLICATE RECOVERY

SW9056

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_005
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B09003	Laboratory ID:	1B09003-BS1
Preparation:	WC_PREP_ANIONS_W	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Nitrate as N	3.616	3.745	104	80 - 120
Nitrite as N	4.864	4.377	90.0	80 - 120
Sulfate as SO4	24.00	25.83	108	80 - 120

LCS / LCS DUPLICATE RECOVERY

SW9056

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_005
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B13003	Laboratory ID:	1B13003-BS1
Preparation:	WC_PREP_ANIONS_W	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Chloride	4.800	5.294	110	80 - 120

ANALYSIS SEQUENCE SUMMARY

SW9056

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_005
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	0J29503	Instrument:	WC-IC
Calibration:	0295001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	0J29503-CAL1	102110curve-057	10/21/10 10:28
Cal Standard	0J29503-CAL2	102110curve-058	10/21/10 10:45
Cal Standard	0J29503-CAL3	102110curve-059	10/21/10 11:02
Cal Standard	0J29503-CAL4	102110curve-060	10/21/10 11:20
Cal Standard	0J29503-CAL5	102110curve-061	10/21/10 11:37
Cal Standard	0J29503-CAL6	102110curve-062	10/21/10 11:55
Cal Standard	0J29503-CAL7	102110curve-063	10/21/10 12:12
Cal Standard	0J29503-CAL8	102110curve-064	10/21/10 12:29
Initial Cal Check	0J29503-ICV1	102110curve-065	10/21/10 12:47
Initial Cal Blank	0J29503-ICB1	102110curve-066	10/21/10 13:04
Instrument RL Check	0J29503-CRL2	102110curve-068	10/21/10 13:39

INITIAL AND CONTINUING CALIBRATION CHECK

SW9056

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-IC

SDG: CTOJM01_005
Project: CTO JM01 NAS Pensacola 2010
Calibration: 0295001
Sequence: 0J29503

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
0J29503-ICV1	Chloride	4.800	4.639	96.6	mg/L	+/- 10.00%
	Nitrate as N	3.616	3.531	97.6	mg/L	+/- 10.00%
	Nitrite as N	4.864	4.529	93.1	mg/L	+/- 10.00%
	Sulfate as SO4	24.00	23.53	98.0	mg/L	+/- 10.00%

CRDL STANDARD

SW9056

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Instrument ID: WC-IC

Calibration: 0295001

Sequence: 0J29503

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
0J29503-CRL2	Chloride	1.000	0.8730	87.3	mg/L	75 - 125
	Nitrate as N	0.1000	0.09500	95.0	mg/L	75 - 125
	Nitrite as N	0.1000	0.1060	106	mg/L	75 - 125
	Sulfate as SO4	1.000	1.023	102	mg/L	75 - 125

BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Sequence: 0J29503
Calibration: 0295001
Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
0J29503-ICB1	Chloride	0.01700	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.000	0.0330	0.200	mg/L	U	SW9056
	Nitrite as N	0.000	0.0330	0.200	mg/L	U	SW9056
	Sulfate as SO4	0.08000	0.330	2.00	mg/L	U	SW9056

ANALYSIS SEQUENCE SUMMARY

SW9056

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_005
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B04408	Instrument:	WC-IC
Calibration:	0295001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1B04408-CCV1	020911-002	02/09/11 10:41
Calibration Blank	1B04408-CCB1	020911-003	02/09/11 10:58
Instrument RL Check	1B04408-CRL1	020911-004	02/09/11 11:16
LCS	1B09003-BS1	020911-005	02/09/11 11:33
Blank	1B09003-BLK1	020911-006	02/09/11 11:50
Calibration Check	1B04408-CCV2	020911-012	02/09/11 13:35
Calibration Blank	1B04408-CCB2	020911-013	02/09/11 13:52
UST21-MW41-0211	1102074-01	020911-021	02/09/11 16:12
UST21-MW65-0211	1102074-02	020911-022	02/09/11 16:29
UST21-MW65-0211	1102074-02RE1	020911-023	02/09/11 16:46
Calibration Check	1B04408-CCV3	020911-024	02/09/11 17:04
Calibration Blank	1B04408-CCB3	020911-025	02/09/11 17:21

INITIAL AND CONTINUING CALIBRATION CHECK

SW9056

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-IC

SDG: CTOJM01_005
Project: CTO JM01 NAS Pensacola_2010
Calibration: 0295001
Sequence: 1B04408

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1B04408-CCV1	Nitrate as N	2.500	2.598	104	mg/L	+/- 10.00%
	Nitrite as N	2.500	2.336	93.4	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.75	107	mg/L	+/- 10.00%
1B04408-CCV2	Nitrate as N	2.500	2.620	105	mg/L	+/- 10.00%
	Nitrite as N	2.500	2.390	95.6	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.96	108	mg/L	+/- 10.00%
1B04408-CCV3	Nitrate as N	2.500	2.626	105	mg/L	+/- 10.00%
	Nitrite as N	2.500	2.379	95.2	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.98	108	mg/L	+/- 10.00%

CRDL STANDARD

SW9056

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola 2010

Instrument ID: WC-IC

Calibration: 0295001

Sequence: 1B04408

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
1B04408-CRL1	Nitrate as N	0.1000	0.08900	89.0	mg/L	75 - 125
	Nitrite as N	0.1000	0.09600	96.0	mg/L	75 - 125
	Sulfate as SO4	1.000	1.094	109	mg/L	75 - 125

BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Sequence: 1B04408
Calibration: 0295001
Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B04408-CCB1	Nitrate as N	0.00	0.0330	0.200	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.200	mg/L	U	SW9056
	Sulfate as SO4	0.0870	0.330	2.00	mg/L	U	SW9056
1B04408-CCB2	Nitrate as N	0.00	0.0330	0.200	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.200	mg/L	U	SW9056
	Sulfate as SO4	0.00	0.330	2.00	mg/L	U	SW9056
1B04408-CCB3	Nitrate as N	0.0180	0.0330	0.200	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.200	mg/L	U	SW9056
	Sulfate as SO4	0.139	0.330	2.00	mg/L	U	SW9056

ANALYSIS SEQUENCE SUMMARY

SW9056

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola 2010

Sequence: 1B04604

Instrument: WC-IC

Calibration: 0295001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1B04604-CCV1	021311-002	02/13/11 21:46
Calibration Blank	1B04604-CCB1	021311-003	02/13/11 22:03
Instrument RL Check	1B04604-CRL1	021311-004	02/13/11 22:20
LCS	1B13003-BS1	021311-005	02/13/11 22:38
Blank	1B13003-BLK1	021311-006	02/13/11 22:55
Calibration Check	1B04604-CCV2	021311-014	02/14/11 01:15
Calibration Blank	1B04604-CCB2	021311-015	02/14/11 01:32
UST21-MW41-0211	1102074-01RE1	021311-018	02/14/11 02:24
UST21-MW65-0211	1102074-02RE2	021311-019	02/14/11 02:42
Calibration Check	1B04604-CCV3	021311-020	02/14/11 02:59
Calibration Blank	1B04604-CCB3	021311-021	02/14/11 03:16

INITIAL AND CONTINUING CALIBRATION CHECK

SW9056

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-IC

SDG: CTOJM01_005
Project: CTO JM01 NAS Pensacola_2010
Calibration: 0295001
Sequence: 1B04604

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1B04604-CCV1	Chloride	25.00	26.58	106	mg/L	+/- 10.00%
1B04604-CCV2	Chloride	25.00	26.63	107	mg/L	+/- 10.00%
1B04604-CCV3	Chloride	25.00	26.65	107	mg/L	+/- 10.00%

CRDL STANDARD

SW9056

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Instrument ID: WC-IC

Calibration: 0295001

Sequence: 1B04604

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
1B04604-CRL1	Chloride	1.000	0.9410	94.1	mg/L	75 - 125

BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B04604
Calibration: 0295001
Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B04604-CCB1	Chloride	0.0490	0.170	0.500	mg/L	U	SW9056
1B04604-CCB2	Chloride	0.0560	0.170	0.500	mg/L	U	SW9056
1B04604-CCB3	Chloride	-0.0200	0.170	0.500	mg/L	U	SW9056

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC **SDG:** CTOJM01_005

Client: Tetra Tech NUS, Inc. (T010) **Project:** CTO JM01 NAS Pensacola 2010

Matrix: Water **Instrument:** WC-Gensys

Analyte	MDL	MRL	Units	Method
Chemical Oxygen Demand	20.0	60.0	mg/L	E410.4

PREPARATION BATCH SUMMARY

E410.4

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_005

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Batch: 1B11020 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW41-0211	1102074-01	02/11/11 11:45	2.50	2.50
UST21-MW65-0211	1102074-02	02/11/11 11:45	2.50	2.50
Blank	1B11020-BLK1	02/11/11 11:45	2.50	2.50
LCS	1B11020-BS1	02/11/11 11:45	2.50	2.50
UST21-MW41-0211	1B11020-MS1	02/11/11 11:45	1.75	2.50
UST21-MW41-0211	1B11020-MSD1	02/11/11 11:45	1.75	2.50

METHOD BLANKS

E410.4

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Batch: 1B11020

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B11020-BLK1	Chemical Oxygen Demand	0.528	20.0	60.0	mg/L	U	E410.4

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

E410.4

UST21-MW41-0211

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Matrix: Water

Batch: 1B11020

% Solids:

Source Sample Name: **1102074-01**

ANALYTE	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC.	Q	QC LIMITS REC.
Chemical Oxygen Demand	342.9	ND	341.6	99.6		75 - 125

ANALYTE	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Chemical Oxygen Demand	342.9	348.7	102	2.07		20	75 - 125

LCS / LCS DUPLICATE RECOVERY

E410.4

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_005
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B11020	Laboratory ID:	1B11020-BS1
Preparation:	pNone	Initial/Final:	2.5 mL / 2.5 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Chemical Oxygen Demand	86.00	75.86	88.2	80 - 120

ANALYSIS SEQUENCE SUMMARY

E410.4

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 0K32310
Instrument: WC-Gensys
Calibration: 0323003

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	0K32310-CAL2	111810copy-003	11/18/10 20:25
Cal Standard	0K32310-CAL1	111810copy-002	11/18/10 20:25
Cal Standard	0K32310-CAL4	111810copy-005	11/18/10 20:26
Cal Standard	0K32310-CAL3	111810copy-004	11/18/10 20:26
Cal Standard	0K32310-CAL5	111810copy-006	11/18/10 20:27
Cal Standard	0K32310-CAL7	111810copy-008	11/18/10 20:28
Cal Standard	0K32310-CAL6	111810copy-007	11/18/10 20:28
Initial Cal Blank	0K32310-ICB1	111810copy-010	11/18/10 20:32
Initial Cal Check	0K32310-ICV1		11/18/11 20:32

ANALYSIS SEQUENCE SUMMARY

E410.4

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_005
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B04220	Instrument:	WC-Gensys
Calibration:	0323003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1B04220-CCV1	021111-002	02/11/11 18:00
Calibration Blank	1B04220-CCB1	021111-003	02/11/11 18:00
LCS	1B11020-BS1	021111-004	02/11/11 18:01
Blank	1B11020-BLK1	021111-005	02/11/11 18:01
Calibration Check	1B04220-CCV2	021111-014	02/11/11 18:06
Calibration Blank	1B04220-CCB2	021111-015	02/11/11 18:06
Calibration Check	1B04220-CCV3		02/11/11 18:11
UST21-MW41-0211	1102074-01		02/11/11 18:12
Calibration Blank	1B04220-CCB3		02/11/11 18:12
UST21-MW41-0211	1B11020-MSD1		02/11/11 18:13
UST21-MW41-0211	1B11020-MS1		02/11/11 18:13
UST21-MW65-0211	1102074-02		02/11/11 18:14
Calibration Check	1B04220-CCV4		02/11/11 18:14
Calibration Blank	1B04220-CCB4		02/11/11 18:15

INITIAL AND CONTINUING CALIBRATION CHECK

E410.4

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-Gensys

SDG: CTOJM01_005
Project: CTO JM01 NAS Pensacola_2010
Calibration: 0323003
Sequence: 0K32310

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
0K32310-ICV1	Chemical Oxygen Demand	139.0	143.7	103	mg/L	+/- 10.00%

BLANKS
E410.4

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Sequence: 0K32310
Calibration: 0323003
Instrument ID: WC-Gensys

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
0K32310-ICB1	Chemical Oxygen Demand	-1.983	20.0	60.0	mg/L	U	E410.4

INITIAL AND CONTINUING CALIBRATION CHECK

E410.4

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-Gensys

SDG: CTOJM01_005
Project: CTO JM01 NAS Pensacola_2010
Calibration: 0323003
Sequence: 1B04220

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1B04220-CCV1	Chemical Oxygen Demand	100.0	95.95	95.9	mg/L	+/- 10.00%
1B04220-CCV2	Chemical Oxygen Demand	400.0	402.3	101	mg/L	+/- 10.00%
1B04220-CCV3	Chemical Oxygen Demand	100.0	95.90	95.9	mg/L	+/- 10.00%
1B04220-CCV4	Chemical Oxygen Demand	400.0	404.8	101	mg/L	+/- 10.00%

BLANKS
E410.4

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Sequence: 1B04220
Calibration: 0323003
Instrument ID: WC-Gensys

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B04220-CCB1	Chemical Oxygen Demand	-4.49	20.0	60.0	mg/L	U	E410.4
1B04220-CCB2	Chemical Oxygen Demand	3.04	20.0	60.0	mg/L	U	E410.4
1B04220-CCB3	Chemical Oxygen Demand	-2.00	20.0	60.0	mg/L	U	E410.4
1B04220-CCB4	Chemical Oxygen Demand	-4.50	20.0	60.0	mg/L	U	E410.4

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC **SDG:** CTOJM01_005

Client: Tetra Tech NUS, Inc. (T010) **Project:** CTO JM01 NAS Pensacola_2010

Matrix: Water **Instrument:**

Analyte	MDL	MRL	Units	Method
Alkalinity, Total (as CACO3)	1.00	1.00	mg/L	SM2320B
Biochemical Oxygen Demand	2.00	2.00	mg/L	SM5210B

PREPARATION BATCH SUMMARY

SM5210B

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_005

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Batch: 1B09013 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW41-0211	1102074-01	02/09/11 13:52	250.00	250.00
UST21-MW65-0211	1102074-02	02/09/11 13:52	10.00	250.00
Blank	1B09013-BLK1	02/09/11 13:52	250.00	250.00
LCS	1B09013-BS1	02/09/11 13:52	5.00	250.00

ANALYSIS SEQUENCE SUMMARY

SM5210B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Sequence:

Instrument:

Calibration:

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
LCS	1B09013-BS1		02/14/11 23:10
Blank	1B09013-BLK1		02/14/11 23:10

METHOD BLANKS

SM5210B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Batch: 1B09013

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B09013-BLK1	Biochemical Oxygen Demand	-0.330	2.00	2.00	mg/L	U	SM5210B

LCS / LCS DUPLICATE RECOVERY

SM5210B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_005
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B09013	Laboratory ID:	1B09013-BS1
Preparation:	pNone	Initial/Final:	5 mL / 250 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Biochemical Oxygen Demand	198.0	207.5	105	85 - 115

PREPARATION BATCH SUMMARY

SM2320B

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_005

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Batch: 1B14027 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW41-0211	1102074-01	02/15/11 08:00	25.00	25.00
UST21-MW65-0211	1102074-02	02/15/11 08:00	25.00	25.00
Blank	1B14027-BLK1	02/15/11 08:00	25.00	25.00
LCS	1B14027-BS1	02/15/11 08:00	25.00	25.00

ANALYSIS SEQUENCE SUMMARY

SM2320B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_005

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Sequence:

Instrument:

Calibration:

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Blank	1B14027-BLK1	021511-004	02/15/11 12:10
LCS	1B14027-BS1	021511-003	02/15/11 13:35

METHOD BLANKS
SM2320B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_005
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010

Batch: 1B14027

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B14027-BLK1	Alkalinity, Total (as CACO3)	0.00	1.00	1.00	mg/L	U	SM2320B

LCS / LCS DUPLICATE RECOVERY

SM2320B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_005
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B14027	Laboratory ID:	1B14027-BS1
Preparation:	pNone	Initial/Final:	25 mL / 25 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Alkalinity, Total.(as CACO3)	200.0	208.3	104	80 - 120

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **G. WALKER** **DATE:** **MARCH 30, 2011**

FROM: **A. COGNETTI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION- SELECT VOC/SELECT PAH/PET**
CTO JM01, NAS PENSACOLA
SAMPLE DELIVERY GROUP (SDG) – CTOJM01_006

SAMPLES: 6/Aqueous/Select VOC

Trip Blank 9282	UST21-MW25-0211	UST21-MW41-0211
UST21-MW55-0211	UST21-MW61-0211	UST21-MW65-0211

5/Aqueous/Select PAH/PET

UST21-MW25-0211	UST21-MW41-0211	UST21-MW55-0211
UST21-MW61-0211	UST21-MW65-0211	

OVERVIEW

The sample set for CTO JM01 NAS PENSACOLA, SDG CTOJM01_006 consists of five (5) aqueous environmental samples and a trip blank analyzed for select Volatile Organic Compounds (VOCs). The select VOCs were benzene, 1,2-dichloroethane, cis- 1,2-dichloroethene, trans- 1,2-dichloroethene, isopropylbenzene, methylene chloride, tetrachloroethene, 1,1,1-trichloroethane, trichloroethene, vinyl chloride and total xylenes. The five (5) aqueous environmental samples were also analyzed for select Polycyclic Aromatic Hydrocarbons (PAH and petroleum range organics (PET). The select PAHs were acenaphthene, benzo(a)anthracene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, 1-methylnaphthalene, 2-methylnaphthalene and naphthalene.

The samples were collected by Tetra Tech on February 8 and 9, 2011 and analyzed by Empirical Laboratories, LLC. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using SW-846 Methods 8260B, 8270C and FL-PRO analysis and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

*	• Data Completeness
*	• Holding Times
*	• GC/MS Tuning
	• Initial and Continuing Calibration
*	• Laboratory Method Blank
	• Surrogate Recoveries
*	• Blank Spike/Blank Spike Duplicate Results
*	• Matrix Spike/Matrix Spike Duplicate Results
*	• Internal Standard Recoveries
*	• Compound Identification
*	• Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

VOC

The continuing calibration percent difference (%D) for 1,2-dichloroethane was greater than the 20% quality control limit on February 15, 2011 @ 9:18 on instrument MS-VOA4. The nondetected 1, 2-dichloroethane results were qualified as estimated (UJ) in all samples.

PAH

The continuing calibration %Ds for benzo(a)anthracene and chrysene were greater than the 20% quality control limit on February 21, 2011 @ 16:47 on instrument MS-BNA4. The nondetected benzo(a)anthracene and chrysene results were qualified as estimated (UJ) in all samples.

PET

The percent recovery (%R) of surrogate o-terphenyl was less than the lower quality control limit in the PET fraction for sample UST21-MW61-0211 (74.7% versus a lower limit of 82%). The nondetected TPH result in sample UST21-MW61-0211 was qualified as estimated (UJ).

ADDITIONAL COMMENTS

All samples had laboratory reported Method Detection Limits (MDL) for the dibenzo(a,h)anthracene greater than the Project Action Limit (PAL) of 0.005 ug/L listed in the Sampling and Analysis Plan (SAP). The SAP had noted that the laboratory MDL was greater than the PAL and no action was taken for this issue.

Nondetected results were reported to the method detection limit (MDL).

The laboratory reported 1,2-dichloroethane even though this compound was not requested on the chain of custody and in the project SAP. All results were nondetected. No action was taken.

Total 1,2-dichloroethene was identified in the SAP and on the chain of custody. Because both cis and trans-1,2-dichloroethene were reported, a total 1,2-dichloroethene result can be calculated, if necessary. No action was required.

EXECUTIVE SUMMARY

Laboratory Performance Issues: The continuing calibration %Ds for 1,2-dichloroethane, benzo(a)anthracene and chrysene exceeded quality control limits. TPH surrogate recovery was low in sample UST21-MW61-0211.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech NUS
Ann Cognetti
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02200	NSAMPLE	Trip Blank 9282	UST21-MW25-0211	UST21-MW41-0211	UST21-MW55-0211
SDG: CTOJM01_006	LAB_ID	1102098-11	1102098-05	1102098-01	1102098-09
FRACTION: OV	SAMP_DATE	2/8/2011	2/9/2011	2/8/2011	2/9/2011
MEDIA: WATER	QC_TYPE	NM	NM	NM	NM
	UNITS	UG/L	UG/L	UG/L	UG/L
	PCT_SOLIDS	0.0	0.0	0.0	0.0
	DUP_OF				

PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE	0.25	U		0.25	U		0.25	U		0.25	U	
1,2-DICHLOROETHANE	0.25	UJ	C	0.25	UJ	C	0.25	UJ	C	0.25	UJ	C
BENZENE	0.25	U		0.25	U		0.25	U		0.25	U	
CIS-1,2-DICHLOROETHENE	0.25	U		0.25	U		0.25	U		0.25	U	
ISOPROPYLBENZENE	0.25	U		0.25	U		0.25	U		9.27		
METHYLENE CHLORIDE	0.5	U		0.5	U		0.5	U		0.5	U	
TETRACHLOROETHENE	0.25	U		0.25	U		0.25	U		0.25	U	
TOTAL XYLENES	0.75	U		0.75	U		0.75	U		0.75	U	
TRANS-1,2-DICHLOROETHENE	0.25	U		0.25	U		0.25	U		0.25	U	
TRICHLOROETHENE	0.25	U		0.25	U		0.25	U		0.25	U	
VINYL CHLORIDE	0.25	U		0.25	U		0.25	U		0.25	U	

PROJ_NO: 02200	NSAMPLE	UST21-MW61-0211	UST21-MW65-0211
SDG: CTOJM01_006	LAB_ID	1102098-07	1102098-03
FRACTION: OV	SAMP_DATE	2/9/2011	2/8/2011
MEDIA: WATER	QC_TYPE	NM	NM
	UNITS	UG/L	UG/L
	PCT_SOLIDS	0.0	0.0
	DUP_OF		

PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE	0.25	U		0.25	U	
1,2-DICHLOROETHANE	0.25	UJ	C	0.25	UJ	C
BENZENE	0.25	U		0.25	U	
CIS-1,2-DICHLOROETHENE	0.25	U		0.25	U	
ISOPROPYLBENZENE	0.25	U		0.25	U	
METHYLENE CHLORIDE	0.5	U		0.5	U	
TETRACHLOROETHENE	0.25	U		0.25	U	
TOTAL XYLENES	0.75	U		0.75	U	
TRANS-1,2-DICHLOROETHENE	0.25	U		0.25	U	
TRICHLOROETHENE	0.25	U		0.25	U	
VINYL CHLORIDE	0.25	U		0.25	U	

PROJ_NO: 02200	NSAMPLE	UST21-MW25-0211			UST21-MW41-0211			UST21-MW55-0211			UST21-MW61-0211		
SDG: CTOJM01_006	LAB_ID	1102098-05			1102098-01			1102098-09			1102098-07		
FRACTION: PAH	SAMP_DATE	2/9/2011			2/8/2011			2/9/2011			2/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1-METHYLNAPHTHALENE		0.0481	U		0.05	U		45			0.0556	U	
2-METHYLNAPHTHALENE		0.0481	U		0.05	U		0.049	U		0.0556	U	
ACENAPHTHENE		20.9			0.05	U		3.22			0.0556	U	
BENZO(A)ANTHRACENE		0.0481	UJ	C	0.05	UJ	C	0.049	UJ	C	0.0556	UJ	C
BENZO(K)FLUORANTHENE		0.0481	U		0.05	U		0.049	U		0.0556	U	
CHRYSENE		0.0481	UJ	C	0.05	UJ	C	0.049	UJ	C	0.0556	UJ	C
DIBENZO(A,H)ANTHRACENE		0.0481	U		0.05	U		0.049	U		0.0556	U	
NAPHTHALENE		0.0481	U		0.05	U		0.049	U		0.0556	U	

PROJ_NO: 02200	NSAMPLE	UST21-MW65-0211
SDG: CTOJM01_006	LAB_ID	1102098-03
FRACTION: PAH	SAMP_DATE	2/8/2011
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
1-METHYLNAPHTHALENE	0.049	U	
2-METHYLNAPHTHALENE	0.049	U	
ACENAPHTHENE	0.049	U	
BENZO(A)ANTHRACENE	0.049	UJ	C
BENZO(K)FLUORANTHENE	0.049	U	
CHRYSENE	0.049	UJ	C
DIBENZO(A,H)ANTHRACENE	0.049	U	
NAPHTHALENE	0.049	U	

PROJ_NO: 02200	NSAMPLE	UST21-MW25-0211			UST21-MW41-0211			UST21-MW55-0211			UST21-MW61-0211		
SDG: CTOJM01_006	LAB_ID	1102098-05			1102098-01			1102098-09			1102098-07		
FRACTION: PET	SAMP_DATE	2/9/2011			2/8/2011			2/9/2011			2/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C08-C40)		0.859			0.167	U		2.41			0.17	U	

PROJ_NO: 02200	NSAMPLE	UST21-MW65-0211		
SDG: CTOJM01_006	LAB_ID	1102098-03		
FRACTION: PET	SAMP_DATE	2/8/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	MG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TPH (C08-C40)		0.17	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

ANALYSIS DATA SHEET

Trip Blank 9282

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water	Laboratory ID:	1102098-11	File ID:	0209811.D
Sampled:	02/08/11 11:33	Prepared:	02/15/11 00:00	Analyzed:	02/15/11 12:33
Solids:		Preparation:	5030B	Dilution:	1

Batch: 1B15006 Sequence: 1B04705 Calibration: 1039001 Instrument: MS-VOA4

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.250	1.00	U
107-06-2	1,2-Dichloroethane		0.250	1.00	X, U
156-59-2	cis-1,2-Dichloroethene		0.250	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	1.00	U
98-82-8	Isopropylbenzene		0.250	1.00	U
75-09-2	Methylene chloride		0.500	2.00	U
127-18-4	Tetrachloroethene		0.250	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	1.00	U
79-01-6	Trichloroethene		0.250	1.00	U
75-01-4	Vinyl chloride		0.250	1.00	U
1330-20-7	Xylenes (total)		0.750	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.60	102	75 - 120	
Dibromofluoromethane	30.00	30.98	103	85 - 115	
1,2-Dichloroethane-d4	30.00	29.58	98.6	70 - 120	
Toluene-d8	30.00	28.20	94.0	85 - 120	

ANALYSIS DATA SHEET

UST21-MW25-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water	Laboratory ID:	1102098-05	File ID:	0209805.D
Sampled:	02/09/11 07:10	Prepared:	02/15/11 00:00	Analyzed:	02/15/11 15:33
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B15006	Sequence:	1B04705	Calibration:	1039001
Instrument:	MS-VOA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.250	1.00	U
107-06-2	1,2-Dichloroethane		0.250	1.00	X, U
156-59-2	cis-1,2-Dichloroethene		0.250	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	1.00	U
98-82-8	Isopropylbenzene		0.250	1.00	U
75-09-2	Methylene chloride		0.500	2.00	U
127-18-4	Tetrachloroethene		0.250	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	1.00	U
79-01-6	Trichloroethene		0.250	1.00	U
75-01-4	Vinyl chloride		0.250	1.00	U
1330-20-7	Xylenes (total)		0.750	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	32.45	108	75 - 120	
Dibromofluoromethane	30.00	32.48	108	85 - 115	
1,2-Dichloroethane-d4	30.00	30.40	101	70 - 120	
Toluene-d8	30.00	28.91	96.4	85 - 120	

ANALYSIS DATA SHEET

UST21-MW41-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Water	Laboratory ID:	1102098-01	File ID:	0209801.D
Sampled:	02/08/11 11:33	Prepared:	02/15/11 00:00	Analyzed:	02/15/11 14:33
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B15006	Sequence:	1B04705	Calibration:	1039001
Instrument:	MS-VOA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.250	1.00	U
107-06-2	1,2-Dichloroethane		0.250	1.00	X, U
156-59-2	cis-1,2-Dichloroethene		0.250	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	1.00	U
98-82-8	Isopropylbenzene		0.250	1.00	U
75-09-2	Methylene chloride		0.500	2.00	U
127-18-4	Tetrachloroethene		0.250	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	1.00	U
79-01-6	Trichloroethene		0.250	1.00	U
75-01-4	Vinyl chloride		0.250	1.00	U
1330-20-7	Xylenes (total)		0.750	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	29.45	98.2	75 - 120	
Dibromofluoromethane	30.00	34.00	113	85 - 115	
1,2-Dichloroethane-d4	30.00	30.81	103	70 - 120	
Toluene-d8	30.00	28.19	94.0	85 - 120	

ANALYSIS DATA SHEET

UST21-MW55-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Water	Laboratory ID:	1102098-09	File ID:	0209809.D
Sampled:	02/09/11 12:45	Prepared:	02/15/11 00:00	Analyzed:	02/15/11 16:32
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B15006	Sequence:	1B04705	Calibration:	1039001
Instrument:	MS-VOA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.250	1.00	U
107-06-2	1,2-Dichloroethane		0.250	1.00	X, U
156-59-2	cis-1,2-Dichloroethene		0.250	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	1.00	U
98-82-8	Isopropylbenzene	9.27	0.250	1.00	
75-09-2	Methylene chloride		0.500	2.00	U
127-18-4	Tetrachloroethene		0.250	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	1.00	U
79-01-6	Trichloroethene		0.250	1.00	U
75-01-4	Vinyl chloride		0.250	1.00	U
1330-20-7	Xylenes (total)		0.750	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	29.07	96.9	75 - 120	
Dibromofluoromethane	30.00	32.93	110	85 - 115	
1,2-Dichloroethane-d4	30.00	29.56	98.5	70 - 120	
Toluene-d8	30.00	27.60	92.0	85 - 120	

ANALYSIS DATA SHEET

UST21-MW61-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water	Laboratory ID:	1102098-07	File ID:	0209807.D
Sampled:	02/09/11 10:15	Prepared:	02/15/11 00:00	Analyzed:	02/15/11 16:02
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B15006	Sequence:	1B04705	Calibration:	1039001
Instrument:	MS-VOA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.250	1.00	U
107-06-2	1,2-Dichloroethane		0.250	1.00	X, U
156-59-2	cis-1,2-Dichloroethene		0.250	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	1.00	U
98-82-8	Isopropylbenzene		0.250	1.00	U
75-09-2	Methylene chloride		0.500	2.00	U
127-18-4	Tetrachloroethene		0.250	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	1.00	U
79-01-6	Trichloroethene		0.250	1.00	U
75-01-4	Vinyl chloride		0.250	1.00	U
1330-20-7	Xylenes (total)		0.750	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.50	105	75 - 120	
Dibromofluoromethane	30.00	32.75	109	85 - 115	
1,2-Dichloroethane-d4	30.00	32.09	107	70 - 120	
Toluene-d8	30.00	29.18	97.3	85 - 120	

ANALYSIS DATA SHEET

UST21-MW65-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Water	Laboratory ID:	1102098-03	File ID:	0209803.D
Sampled:	02/08/11 15:02	Prepared:	02/15/11 00:00	Analyzed:	02/15/11 15:03
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B15006	Sequence:	1B04705	Calibration:	1039001
Instrument:	MS-VOA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.250	1.00	U
107-06-2	1,2-Dichloroethane		0.250	1.00	X, U
156-59-2	cis-1,2-Dichloroethene		0.250	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	1.00	U
98-82-8	Isopropylbenzene		0.250	1.00	U
75-09-2	Methylene chloride		0.500	2.00	U
127-18-4	Tetrachloroethene		0.250	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	1.00	U
79-01-6	Trichloroethene		0.250	1.00	U
75-01-4	Vinyl chloride		0.250	1.00	U
1330-20-7	Xylenes (total)		0.750	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.66	102	75 - 120	
Dibromofluoromethane	30.00	33.33	111	85 - 115	
1,2-Dichloroethane-d4	30.00	29.78	99.3	70 - 120	
Toluene-d8	30.00	29.24	97.5	85 - 120	

ANALYSIS DATA SHEET

UST21-MW25-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Water	Laboratory ID:	1102098-05	File ID:	0209805.D
Sampled:	02/09/11 07:10	Prepared:	02/14/11 12:30	Analyzed:	02/21/11 23:58
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B12010	Sequence:	1B05309	Calibration:	1048001
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene	20.9	0.0481	0.192	
56-55-3	Benzo(a)anthracene		0.0481	0.192	X, U
207-08-9	Benzo(k)fluoranthene		0.0481	0.192	U
218-01-9	Chrysene		0.0481	0.192	X, U
53-70-3	Dibenz(a,h)anthracene		0.0481	0.192	U
90-12-0	1-Methylnaphthalene		0.0481	0.192	U
91-57-6	2-Methylnaphthalene		0.0481	0.192	U
91-20-3	Naphthalene		0.0481	0.192	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	48.08	28.95	60.2	34 - 167	
Terphenyl-d14	48.08	32.67	67.9	34 - 167	

ANALYSIS DATA SHEET

UST21-MW41-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Water	Laboratory ID:	1102098-01	File ID:	0209801.D
Sampled:	02/08/11 11:33	Prepared:	02/14/11 12:30	Analyzed:	02/21/11 23:04
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B12010	Sequence:	1B05309	Calibration:	1048001
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0500	0.200	U
56-55-3	Benzo(a)anthracene		0.0500	0.200	X, U
207-08-9	Benzo(k)fluoranthene		0.0500	0.200	U
218-01-9	Chrysene		0.0500	0.200	X, U
53-70-3	Dibenz(a,h)anthracene		0.0500	0.200	U
90-12-0	1-Methylnaphthalene		0.0500	0.200	U
91-57-6	2-Methylnaphthalene		0.0500	0.200	U
91-20-3	Naphthalene		0.0500	0.200	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	25.12	50.2	34 - 167	
Terphenyl-d14	50.00	32.91	65.8	34 - 167	

ANALYSIS DATA SHEET

UST21-MW55-0211

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Matrix: Water Laboratory ID: 1102098-09 File ID: 0209809.D

Sampled: 02/09/11 12:45 Prepared: 02/14/11 12:30 Analyzed: 02/22/11 00:51

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 1B12010 Sequence: 1B05309 Calibration: 1048001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene	3.22	0.0490	0.196	
56-55-3	Benzo(a)anthracene		0.0490	0.196	X, U
207-08-9	Benzo(k)fluoranthene		0.0490	0.196	U
218-01-9	Chrysene		0.0490	0.196	X, U
53-70-3	Dibenz(a,h)anthracene		0.0490	0.196	U
90-12-0	1-Methylnaphthalene	45.0	0.0490	0.196	
91-57-6	2-Methylnaphthalene		0.0490	0.196	U
91-20-3	Naphthalene		0.0490	0.196	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	49.02	29.28	59.7	34 - 167	
Terphenyl-d14	49.02	44.22	90.2	34 - 167	

ANALYSIS DATA SHEET

UST21-MW61-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Water	Laboratory ID:	1102098-07	File ID:	0209807.D
Sampled:	02/09/11 10:15	Prepared:	02/14/11 12:30	Analyzed:	02/22/11 00:25
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B12010	Sequence:	1B05309	Calibration:	1048001
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0556	0.222	U
56-55-3	Benzo(a)anthracene		0.0556	0.222	X, U
207-08-9	Benzo(k)fluoranthene		0.0556	0.222	U
218-01-9	Chrysene		0.0556	0.222	X, U
53-70-3	Dibenz(a,h)anthracene		0.0556	0.222	U
90-12-0	1-Methylnaphthalene		0.0556	0.222	U
91-57-6	2-Methylnaphthalene		0.0556	0.222	U
91-20-3	Naphthalene		0.0556	0.222	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	55.56	29.03	52.3	34 - 167	
Terphenyl-d14	55.56	36.82	66.3	34 - 167	

ANALYSIS DATA SHEET

UST21-MW65-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_006	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola 2010	
Matrix:	Water	Laboratory ID:	1102098-03	File ID:	0209803.D
Sampled:	02/08/11 15:02	Prepared:	02/14/11 12:30	Analyzed:	02/21/11 23:31
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B12010	Sequence:	1B05309	Calibration:	1048001
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0490	0.196	U
56-55-3	Benzo(a)anthracene		0.0490	0.196	X, U
207-08-9	Benzo(k)fluoranthene		0.0490	0.196	U
218-01-9	Chrysene		0.0490	0.196	X, U
53-70-3	Dibenz(a,h)anthracene		0.0490	0.196	U
90-12-0	1-Methylnaphthalene		0.0490	0.196	U
91-57-6	2-Methylnaphthalene		0.0490	0.196	U
91-20-3	Naphthalene		0.0490	0.196	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	49.02	19.02	38.8	34 - 167	
Terphenyl-d14	49.02	37.95	77.4	34 - 167	

ANALYSIS DATA SHEET

UST21-MW25-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Water	Laboratory ID:	1102098-05	File ID:	008F0801.D
Sampled:	02/09/11 07:10	Prepared:	02/14/11 15:05	Analyzed:	02/16/11 17:33
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B12009	Sequence:	1B04806	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics	0.859	0.170	0.680	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.03684	73.7	50 - 150	
o-Terphenyl	0.05000	0.04561	91.2	82 - 142	

ANALYSIS DATA SHEET

UST21-MW41-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Water	Laboratory ID:	1102098-01	File ID:	006F0601.D
Sampled:	02/08/11 11:33	Prepared:	02/14/11 15:05	Analyzed:	02/16/11 16:08
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B12009	Sequence:	1B04806	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics		0.167	0.667	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04902	0.03452	70.4	50 - 150	
o-Terphenyl	0.04902	0.04105	83.7	82 - 142	

ANALYSIS DATA SHEET

UST21-MW55-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_006	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola 2010	
Matrix:	Water	Laboratory ID:	1102098-09	File ID:	010F1001.D
Sampled:	02/09/11 12:45	Prepared:	02/14/11 15:05	Analyzed:	02/16/11 18:58
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B12009	Sequence:	1B04806	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics	2.41	0.189	0.756	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05556	0.04334	78.0	50 - 150	
o-Terphenyl	0.05556	0.04976	89.6	82 - 142	

ANALYSIS DATA SHEET

UST21-MW61-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_006	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola_2010	
Matrix:	Water	Laboratory ID:	1102098-07	File ID:	009F0901.D
Sampled:	02/09/11 10:15	Prepared:	02/14/11 15:05	Analyzed:	02/16/11 18:15
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B12009	Sequence:	1B04806	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics		0.170	0.680	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.03525	70.5	50 - 150	
o-Terphenyl	0.05000	0.03737	74.7	82 - 142	*

ANALYSIS DATA SHEET

UST21-MW65-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Water	Laboratory ID:	1102098-03	File ID:	007F0701.D
Sampled:	02/08/11 15:02	Prepared:	02/14/11 15:05	Analyzed:	02/16/11 16:51
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B12009	Sequence:	1B04806	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics		0.170	0.680	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.03492	69.8	50 - 150	
o-Terphenyl	0.05000	0.04171	83.4	82 - 142	

APPENDIX C

SUPPORT DOCUMENTATION

Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
The continuing calibration verification 1B04705-CCV1 exceeded criteria with a positive bias for 1,2-Dichloroethane.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270C:
The continuing calibration verification 1B05309-CCV1 exceeded criteria with a positive bias for Benzo(a)anthracene and Chrysene.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

FLPRO:
The surrogate o-Terphenyl exceeded criteria with a negative bias in sample 1102098-07.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW6010C:
No anomalies or deviations are noted.

Wet Chemistry:
Samples 1102098-05, -07, and -09 are qualified with an M for Chloride to indicate that the RL was raised due to interference.

The continuing calibration blank 1B04809-CCB2 has a positive result for Chloride.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER JM01-02 | PAGE 1 OF 1

PROJECT NO: 112G02200	SITE NAME: UST 21	PROJECT MANAGER AND PHONE NUMBER: Barry Walker (850) 385-9899	LABORATORY NAME AND CONTACT: Empirical Lab / Kim KOSTZER
SAMPLERS (SIGNATURE): Jared Shellman		FIELD OPERATIONS LEADER AND PHONE NUMBER: Vanessa Martinez (787)300-9119	ADDRESS: 621 Mainstream Dr Suite 270
		CARRIER/WAYBILL NUMBER: 874845550581	CITY, STATE: Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: TRPH (FL PRO)	PAH Low Level Select VOC 8270C	Metals (Pb, Fe, Mn) 6000 8260	Total metals	Dissolved Metals E.M. HNO_3	Anions	BOD	COD	Sulfide	Alkalinity	COMMENTS
					CONTAINER TYPE PLASTIC (P) or GLASS (G)	G	G	G	P	P	P	P	P			
					PRESERVATIVE USED: ICE		HCL	HCL	HNO_3	HNO_3		H_2SO_4				
2/8	1133	UST 21-MW41-0211	GW	G	11	2	2	3	1	1	1	0	0	0	1	0	ungradient well
2/8	1502	UST 21-MW65-0211	GW	G	11	2	2	3	1	1	1	0	0	0	1	0	
2/9	0710	UST 21-MW25-0211	GW	G	15	2	2	3	1	1	1	1	1	1	1	1	
2/9	1015	UST 21-MW1d-0211	GW	G	15	2	2	3	1	1	1	1	1	1	1	1	
2/9	1245	UST21-MW55-0211	GW	G	15	2	2	3	1	1	1	1	1	1	1	1	strong odor Previous detection of free prod.
2/8	1133	TRIP BLANK 9282			2	—		2	—								
		TEMP BLANK			3												

11020498

-01,02
-03,04
-05,06
-07,08
-09,10
-11

12-12-11

* 3 coolers *

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	2/9/11	1500	1. RECEIVED BY	2-10-11	11:45
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: Tetrachloroethylene, Trans 1,2 Dichloroethene, Vinyl Chloride)
Select VOC's (1,1,1 Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1-2 Dichloroethene, Total Xylene, Trichloroethylene, Isopropyl Benzene, Methylene Chloride)

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 3/99 FORM NO. TtNUS-001

Select PAH - Naphthalene, Phenanthrene, 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k) fluoranthene

9

CTOJM01_006 Summ Package

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 110205 Number of Coolers: 1 of 3

Client: TetraTech NUS INC Project: 112G02200

Date/Time Received: 2.10.11 11:45 Date cooler(s) opened: 2.10.11

Opened By (print): Russ Townsend (signature): Russ Townsend

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 5081

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-9-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 0.7 °C Correction Factor: -0.3 °C Final Value: 0.4 °C

Dates samples were logged-in: 2-14-11

9. Initial this form to acknowledge login of sample(s): (Name): Chris Dell (Initial): CD

10. Were all bottle lids intact and sealed tightly?	(Yes)	No	N/A
11. Did all bottles arrive unbroken?	(Yes)	No	N/A
12. Was all required bottle label information complete?	(Yes)	No	N/A
13. Did all bottle labels agree with custody papers?	(Yes)	No	N/A
14. Were correct containers used for the analyses indicated?	(Yes)	No	N/A
15. Were preservative levels correct in all applicable sample containers?	(Yes)	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	(N/A)
17. Was sufficient amount of sample sent for the analyses required?	(Yes)	No	N/A
18. Was headspace present in any included VOA vials?	Yes	No	(N/A)

If Non-Conformance issues were present, list by sample ID: _____

ph < 2 for all metals, COD, & TPhos

ph > 9 for all Sulfides

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 110288 Number of Coolers: 2 of 3

Client: Tetra Tech NUS INC Project: 112G02200

Date/Time Received: 2.10.11 11:45 Date cooler(s) opened: 2.10.11

Opened By (print): Russ Townsend (signature): Russ Townsend

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 6122

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-9-11 Seal Initials: _____

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 3.3 °C Correction Factor: -0.3 °C Final Value: 3.0 °C

Dates samples were logged-in: SEE 1 OF 3

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly?	(Yes)	No	N/A
11. Did all bottles arrive unbroken?	(Yes)	No	N/A
12. Was all required bottle label information complete?	(Yes)	No	N/A
13. Did all bottle labels agree with custody papers?	(Yes)	No	N/A
14. Were correct containers used for the analyses indicated?	(Yes)	No	N/A
15. Were preservative levels correct in all applicable sample containers?	(Yes)	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	(N/A)
17. Was sufficient amount of sample sent for the analyses required?	(Yes)	No	N/A
18. Was headspace present in any included VOA vials?	Yes	No	(N/A)

If Non-Conformance issues were present, list by sample ID: _____

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1102098 Number of Coolers: 3 of 3

Client: TetraTech NUS INC. Project: 112G02200

Date/Time Received: 2.10.11 11:45 Date cooler(s) opened: 2.10.11

Opened By (print): Russ Townsend (signature): Russ Townsend

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 6111

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-9-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival? ..... (Yes) No N/A

4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... (Yes) No N/A

5. Were custody papers filled out properly (ink, signed, etc.)? ..... (Yes) No N/A

6. Did you sign custody papers in the appropriate place for acceptance? ..... (Yes) No N/A

7. Was project identifiable from custody papers? ..... (Yes) No N/A

8. If required, was enough ice present in the cooler(s)? ..... (Yes) No N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.3 °C Correction Factor: -0.3 °C Final Value: 2.0 °C

Dates samples were logged-in: See 1 of 3

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly? ..... (Yes) No N/A

11. Did all bottles arrive unbroken? ..... (Yes) No N/A

12. Was all required bottle label information complete? ..... (Yes) No N/A

13. Did all bottle labels agree with custody papers? ..... (Yes) No N/A

14. Were correct containers used for the analyses indicated? ..... (Yes) No N/A

15. Were preservative levels correct in all applicable sample containers? ..... (Yes) No N/A

16. Was residual chlorine present in any applicable sample containers? ..... Yes No (N/A)

17. Was sufficient amount of sample sent for the analyses required? ..... (Yes) No N/A

18. Was headspace present in any included VOA vials? ..... Yes (No) N/A

If Non-Conformance issues were present, list by sample ID: _____

HOLDING TIME SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
UST21-MW41-0211	02/08/11 11:33	02/10/11 11:45	02/15/11 00:00	N/A	14.00	02/15/11 14:33	7.13	14.00	
UST21-MW65-0211	02/08/11 15:02	02/10/11 11:45	02/15/11 00:00	N/A	14.00	02/15/11 15:03	7.00	14.00	
UST21-MW25-0211	02/09/11 07:10	02/10/11 11:45	02/15/11 00:00	N/A	14.00	02/15/11 15:33	6.35	14.00	
UST21-MW61-0211	02/09/11 10:15	02/10/11 11:45	02/15/11 00:00	N/A	14.00	02/15/11 16:02	6.24	14.00	
UST21-MW55-0211	02/09/11 12:45	02/10/11 11:45	02/15/11 00:00	N/A	14.00	02/15/11 16:32	6.16	14.00	
Trip Blank 9282	02/08/11 11:33	02/10/11 11:45	02/15/11 00:00	N/A	14.00	02/15/11 12:33	7.04	14.00	

HOLDING TIME SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
UST21-MW41-0211	02/08/11 11:33	02/10/11 11:45	02/14/11 12:30	6.04	7.00	02/21/11 23:04	7.44	40.00	
UST21-MW65-0211	02/08/11 15:02	02/10/11 11:45	02/14/11 12:30	5.89	7.00	02/21/11 23:31	7.46	40.00	
UST21-MW25-0211	02/09/11 07:10	02/10/11 11:45	02/14/11 12:30	5.22	7.00	02/21/11 23:58	7.48	40.00	
UST21-MW61-0211	02/09/11 10:15	02/10/11 11:45	02/14/11 12:30	5.09	7.00	02/22/11 00:25	7.50	40.00	
UST21-MW55-0211	02/09/11 12:45	02/10/11 11:45	02/14/11 12:30	4.99	7.00	02/22/11 00:51	7.51	40.00	

HOLDING TIME SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
UST21-MW41-0211	02/08/11 11:33	02/10/11 11:45	02/14/11 15:05	6.15	7.00	02/16/11 16:08	2.04	40.00	
UST21-MW65-0211	02/08/11 15:02	02/10/11 11:45	02/14/11 15:05	6.00	7.00	02/16/11 16:51	2.07	40.00	
UST21-MW25-0211	02/09/11 07:10	02/10/11 11:45	02/14/11 15:05	5.33	7.00	02/16/11 17:33	2.10	40.00	
UST21-MW61-0211	02/09/11 10:15	02/10/11 11:45	02/14/11 15:05	5.20	7.00	02/16/11 18:15	2.13	40.00	
UST21-MW55-0211	02/09/11 12:45	02/10/11 11:45	02/14/11 15:05	5.10	7.00	02/16/11 18:58	2.16	40.00	

SDG CTOJM01_006

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST21-MW23-0211	1102113-07	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST21-MW37-0211	1102113-12	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST-21-MW-38-0211	1102133-02	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
M	UG/L	UST-21-MW-40-0211	1102133-04	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
M	UG/L	UST21-MW54-0211	1102113-04	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW16-0211	1102113-10	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW60-0211	1102113-03	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW63-0211	1102113-01RE1	NM	02/10/2011	02/17/2011	02/23/2011	7	6	13
M	UG/L	UST21-MW61-0211	1102098-07RE1	NM	02/09/2011	02/17/2011	02/23/2011	8	6	14
M	UG/L	UST21-MW62-0211	1102113-08	NM	02/09/2011	02/22/2011	02/23/2011	13	1	14
M	UG/L	UST21-MW63-0211	1102113-01	NM	02/10/2011	02/17/2011	02/22/2011	7	5	12
M	UG/L	UST21-MW64-0211	1102113-02	NM	02/10/2011	02/17/2011	02/22/2011	7	5	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
M	UG/L	UST21-MW65-0211	1102098-03RE1	NM	02/08/2011	02/17/2011	02/23/2011	9	6	15
M	UG/L	UST-21-RB-0211	1102133-05	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST-21-09-0211	1102133-06	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	GW02-020911	1102113-09	NM	02/09/2011	02/22/2011	02/23/2011	13	1	14
M	UG/L	UST21-MW14-0211	1102113-11	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW64-0211	1102113-02RE1	NM	02/10/2011	02/17/2011	02/23/2011	7	6	13
M	UG/L	UST21-MW10-0211	1102113-06	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	GW01-021111	1102133-08	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW01-0211	1102113-05	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST-21-17-0211	1102133-07	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
M	UG/L	UST-21-MW-04-0211	1102133-03	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
MF	UG/L	UST21-MW25-0211	1102098-06	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW41-0211	1102098-02	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
MF	UG/L	UST21-MW55-0211	1102098-10	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW61-0211	1102098-08	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW65-0211	1102098-04	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
ALK	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
ALK	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
ALK	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
BOD	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
BOD	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
BOD	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
CL	MG/L	UST21-MW61-0211	1102098-07RE2	NM	02/09/2011	02/17/2011	02/17/2011	8	0	8
CL	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
CL	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
COD	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
COD	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
COD	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
NTA	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTA	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTA	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTI	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTI	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTI	MG/L	UST21-MW61-0211	1102098-07RE1	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SO4	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
SO4	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
SO4	MG/L	UST21-MW61-0211	1102098-07RE1	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
SUL	MG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
SUL	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
SUL	MG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
SUL	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
SUL	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
OV	UG/L	UST-21-MW-40-0211	1102133-04	NM	02/11/2011	02/17/2011	02/18/2011	6	1	7
OV	UG/L	UST-21-MW-38-0211	1102133-02	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
OV	UG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
OV	UG/L	UST21-MW54-0211	1102113-04	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6
OV	UG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
OV	UG/L	UST21-MW60-0211	1102113-03	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6
OV	UG/L	UST-21-RB-0211	1102133-05	NM	02/11/2011	02/17/2011	02/18/2011	6	1	7
OV	UG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
OV	UG/L	UST21-MW37-0211	1102113-12	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
OV	UG/L	UST21-MW63-0211	1102113-01	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	UST21-MW01-0211	1102113-05	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6
OV	UG/L	UST21-MW62-0211	1102113-08	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
OV	UG/L	UST21-MW64-0211	1102113-02	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6
OV	UG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
OV	UG/L	UST21-MW23-0211	1102113-07	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
OV	UG/L	UST21-MW16-0211	1102113-10	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
OV	UG/L	UST21-MW14-0211	1102113-11	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
OV	UG/L	UST-21-MW-04-0211	1102133-03	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
OV	UG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
OV	UG/L	UST-21-17-0211	1102133-07	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
OV	UG/L	UST-21-09-0211	1102133-06	NM	02/11/2011	02/17/2011	02/18/2011	6	1	7
OV	UG/L	TRIP BLANK 9283	1102113-13	NM	02/11/2011	02/16/2011	02/16/2011	5	0	5
OV	UG/L	Trip Blank 9282	1102098-11	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
OV	UG/L	TRIP BLANK # 9281	1102133-01	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
OV	UG/L	GW02-020911	1102113-09	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
OV	UG/L	GW01-021111	1102133-08	NM	02/11/2011	02/17/2011	02/18/2011	6	1	7
OV	UG/L	UST21-MW10-0211	1102113-06	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6
SIM	UG/L	GW02-020911	1102113-09	NM	02/09/2011	02/15/2011	02/22/2011	6	7	13

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	UG/L	GW01-021111	1102133-08	NM	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST-21-MW-40-0211	1102133-04	NM	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST-21-MW-40-0211	1102133-04	SUR	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/14/2011	02/21/2011	6	7	13
SIM	UG/L	UST21-MW41-0211	1102098-01	SUR	02/08/2011	02/14/2011	02/21/2011	6	7	13
SIM	UG/L	UST21-MW54-0211	1102113-04	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW54-0211	1102113-04	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/14/2011	02/22/2011	5	8	13
SIM	UG/L	UST21-MW55-0211	1102098-09	SUR	02/09/2011	02/14/2011	02/22/2011	5	8	13
SIM	UG/L	UST21-MW60-0211	1102113-03	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST-21-MW-38-0211	1102133-02	SUR	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/14/2011	02/22/2011	5	8	13
SIM	UG/L	UST21-MW60-0211	1102113-03	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW62-0211	1102113-08	NM	02/09/2011	02/15/2011	02/22/2011	6	7	13
SIM	UG/L	UST21-MW62-0211	1102113-08	SUR	02/09/2011	02/15/2011	02/22/2011	6	7	13
SIM	UG/L	UST21-MW63-0211	1102113-01	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW63-0211	1102113-01	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW64-0211	1102113-02	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	UG/L	UST21-MW64-0211	1102113-02	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/14/2011	02/21/2011	6	7	13
SIM	UG/L	UST21-MW65-0211	1102098-03	SUR	02/08/2011	02/14/2011	02/21/2011	6	7	13
SIM	UG/L	UST-21-RB-0211	1102133-05	NM	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST-21-RB-0211	1102133-05	SUR	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	GW01-021111	1102133-08	SUR	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST21-MW01-0211	1102113-05	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW61-0211	1102098-07	SUR	02/09/2011	02/14/2011	02/22/2011	5	8	13
SIM	UG/L	UST-21-MW-38-0211	1102133-02	NM	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	GW02-020911	1102113-09	SUR	02/09/2011	02/15/2011	02/22/2011	6	7	13
SIM	UG/L	UST-21-09-0211	1102133-06	NM	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST-21-09-0211	1102133-06	SUR	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST-21-17-0211	1102133-07	SUR	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	UST21-MW01-0211	1102113-05	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST-21-MW-04-0211	1102133-03	NM	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	UST-21-MW-04-0211	1102133-03	SUR	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	UST21-MW10-0211	1102113-06	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW10-0211	1102113-06	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	UG/L	UST21-MW37-0211	1102113-12	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST-21-17-0211	1102133-07	NM	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	UST21-MW37-0211	1102113-12RE1	NM	02/10/2011	02/15/2011	02/24/2011	5	9	14
SIM	UG/L	UST21-MW14-0211	1102113-11	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW37-0211	1102113-12	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW25-0211	1102098-05	SUR	02/09/2011	02/14/2011	02/21/2011	5	7	12
SIM	UG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/14/2011	02/21/2011	5	7	12
SIM	UG/L	UST21-MW23-0211	1102113-07	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW23-0211	1102113-07	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW16-0211	1102113-10	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW16-0211	1102113-10	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW14-0211	1102113-11	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
TPH	MG/L	UST21-MW64-0211	1102113-02	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
TPH	MG/L	UST-21-MW-40-0211	1102133-04	NM	02/11/2011	02/16/2011	02/18/2011	5	2	7
TPH	MG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/14/2011	02/16/2011	6	2	8
TPH	MG/L	UST21-MW54-0211	1102113-04	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
TPH	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/14/2011	02/16/2011	5	2	7
TPH	MG/L	UST21-MW60-0211	1102113-03	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TPH	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/14/2011	02/16/2011	5	2	7
TPH	MG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/14/2011	02/16/2011	6	2	8
TPH	MG/L	UST21-MW63-0211	1102113-01	NM	02/10/2011	02/14/2011	02/16/2011	4	2	6
TPH	MG/L	UST-21-MW-38-0211	1102133-02	NM	02/10/2011	02/16/2011	02/18/2011	6	2	8
TPH	MG/L	UST-21-RB-0211	1102133-05	NM	02/11/2011	02/16/2011	02/18/2011	5	2	7
TPH	MG/L	UST21-MW62-0211	1102113-08	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
TPH	MG/L	UST21-MW37-0211	1102113-12	NM	02/10/2011	02/16/2011	02/18/2011	6	2	8
TPH	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/14/2011	02/16/2011	5	2	7
TPH	MG/L	UST21-MW23-0211	1102113-07	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
TPH	MG/L	UST21-MW16-0211	1102113-10	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
TPH	MG/L	UST21-MW14-0211	1102113-11	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
TPH	MG/L	UST21-MW10-0211	1102113-06	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
TPH	MG/L	UST-21-MW-04-0211	1102133-03	NM	02/10/2011	02/16/2011	02/18/2011	6	2	8
TPH	MG/L	UST21-MW01-0211	1102113-05	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
TPH	MG/L	UST-21-17-0211	1102133-07	NM	02/10/2011	02/16/2011	02/18/2011	6	2	8
TPH	MG/L	UST-21-09-0211	1102133-06	NM	02/11/2011	02/16/2011	02/18/2011	5	2	7
TPH	MG/L	GW01-021111	1102133-08	NM	02/11/2011	02/16/2011	02/18/2011	5	2	7
TPH	MG/L	GW02-020911	1102113-09	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B03901	Instrument:	MS-VOA4
Calibration:	1039001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1B03901-TUN1	0207TU1.D	02/07/11 07:00
Cal Standard	1B03901-CAL1	0207CAL1.D	02/07/11 07:30
Cal Standard	1B03901-CAL2	0207CAL2.D	02/07/11 07:59
Cal Standard	1B03901-CAL3	0207CAL3.D	02/07/11 08:29
Cal Standard	1B03901-CAL4	0207CAL4.D	02/07/11 08:59
Cal Standard	1B03901-CAL5	0207CAL5.D	02/07/11 09:29
Cal Standard	1B03901-CAL6	0207CAL6.D	02/07/11 09:58
Cal Standard	1B03901-CAL7	0207CAL7.D	02/07/11 10:28
Cal Standard	1B03901-CAL8	0207CAL8.D	02/07/11 10:58
Cal Standard	1B03901-CAL9	0207CAL9.D	02/07/11 11:27
Initial Cal Check	1B03901-ICV1	0207ICV1.D	02/07/11 11:57

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Lab File ID:	0207TU1.D	Injection Date:	02/07/11
Instrument ID:	MS-VOA4	Injection Time:	07:00
Sequence:	1B03901	Lab Sample ID:	1B03901-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	18.9	PASS
75	30 - 60% of 95	43.4	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	7.08	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	76.7	PASS
175	5 - 9% of 174	7.96	PASS
176	95 - 101% of 174	97.6	PASS
177	5 - 9% of 176	6.59	PASS

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Calibration: 1039001
Instrument: MS-VOA4
Matrix: Water
Calibration Date: 2/7/2011 7:30:41AM

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	6.348042E-02	8.759215	4.83825	0.6050106			15	
Acrolein	0.0399263	6.691411	4.695889	0.5531169			15	
Acrylonitrile	7.454851E-02	8.711723	5.439889	0.5153655			15	
Benzene	0.8183504	5.572691	11.37744	0.1289322			15	
Bromobenzene	0.7130765	5.196317	16.62456	1.955286E-02			15	
Bromochloromethane	0.1506323	10.27461	8.500111	0.2479724			15	
Tert-Amyl Methyl Ether	0.6603901	16.08493	11.77413	8.136586E-02	0.9997032		0.995	
Bromodichloromethane	0.3027916	7.799062	12.50144	7.484039E-02			15	
Bromoform	0.5699803	11.84824	15.93444	0.0262941			SPCC (0.1)	
Bromomethane	0.1299074	20.38406	3.964	0.7064521	0.9983959		0.995	
Bromofluorobenzene	0.957387	2.621998	16.47022	2.732607E-02			15	
n-Butylbenzene	1.217717	6.214575	17.71833	1.370785E-02			15	
2-Butanone	0.0859897	20.60077	7.865625	0.5470501	0.9974979		0.995	
sec-Butylbenzene	1.6733	6.555521	17.30422	5.481704E-03			15	
tert-Butylbenzene	1.187017	4.74989	17.15178	2.582753E-02			15	
Carbon disulfide	0.7469286	5.919231	5.862778	0.440633			15	
Carbon tetrachloride	0.2803579	8.360972	11.31178	0.1285976			15	
Chlorobenzene	1.569517	8.202246	15.53778	2.079923E-02			SPCC (0.3)	
Chloroethane	0.1568842	10.20786	4.106444	0.5837799			15	
Chloroform	0.4305875	6.299133	8.627111	0.3043567			CCC (20)	
2-Chloroethyl vinyl ether	0.1331637	8.077245	13.148	5.826453E-02			15	
Chloromethane	0.1946412	10.2938	3.400889	0.9415026			SPCC (0.1)	
1-Chlorohexane	1.35518	13.27346	15.50156	2.818818E-02			15	
2-Chlorotoluene	1.424715	7.937675	16.83056	1.239489E-02			15	
4-Chlorotoluene	1.457508	8.654439	16.88667	1.961681E-02			15	
Cyclohexane	0.2724139	6.070048	11.16256	9.157351E-02			15	
Dibromochloromethane	0.7402924	9.101033	14.52556	2.965746E-02			15	
1,2-Dibromo-3-chloropropane	0.1405829	15.73538	18.02822	2.127093E-02	0.9995964		0.995	
1,2-Dibromoethane (EDB)	0.6476013	7.740743	14.76	3.456003E-02			15	
Dibromomethane	0.1687338	6.803459	12.30767	7.306886E-02			15	
1,2-Dichlorobenzene	1.071477	4.931397	17.68856	5.171756E-03			15	
1,3-Dichlorobenzene	1.109664	7.765275	17.37756	2.411992E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Calibration: 1039001
Instrument: MS-VOA4
Matrix: Water
Calibration Date: 2/7/2011 7:30:41AM

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.185544	8.618759	17.42233	1.642186E-02			15	
Dichlorodifluoromethane	0.222674	6.545885	3.215556	0.8959896	0.9995739		0.995	
1,1-Dichloroethane	0.4081297	7.150762	7.000111	0.3331365			SPCC (0.1)	
1,2-Dichloroethane	0.2844065	7.905266	10.354	0.1944757			15	
1,1-Dichloroethene	0.2163828	6.456213	5.364222	0.4507894			CCC (20)	
cis-1,2-Dichloroethene	0.2711242	4.789396	8.171444	0.3160574			15	
trans-1,2-Dichloroethene	0.2561505	7.739406	6.552	0.4156797			15	
1,2-Dichloroethene (total)	0.2636373	5.754159	0	0			15	
1,2-Dichloropropane	0.2147841	6.014639	12.37556	6.213964E-02			CCC (20)	
1,3-Dichloropropane	0.8727974	6.276488	14.29856	3.394906E-02			15	
2,2-Dichloropropane	0.313679	7.502355	8.822333	0.2473015			15	
1,1-Dichloropropene	0.2975675	6.332644	11.03133	0.1343592			15	
cis-1,3-Dichloropropene	0.3476874	8.122396	13.38378	4.350229E-02			15	
trans-1,3-Dichloropropene	0.8140528	9.161065	13.89211	5.186918E-02			15	
Diisopropyl Ether	0.7940902	5.899205	7.926	0.2693061			15	
Ethylbenzene	2.362031	9.458271	15.69978	3.074885E-02			CCC (20)	
Ethyl tert-Butyl Ether	0.6441145	7.522742	8.861667	0.2891787			15	
Ethyl Methacrylate	0.6516305	13.77595	14.37756	3.478868E-02			15	
Hexachlorobutadiene	0.2884888	12.88731	19.38244	1.708899E-02			15	
2-Hexanone	0.3128498	13.7275	14.48856	9.348562E-02			15	
Iodomethane	0.3031321	27.28541	5.409222	0.5303687	0.9980688		0.995	
Isopropylbenzene	1.87632	9.265289	16.43856	2.487316E-02			15	
p-Isopropyltoluene	1.319723	8.148758	17.42456	3.065426E-03			15	
Methylene chloride	0.3495467	33.6408	5.562556	0.4271772	0.9989096		0.995	
Methyl Acetate	0.175471	14.23463	5.605444	0.4972246			15	
Methylcyclohexane	0.2128165	6.316372	13.12722	3.972675E-02			15	
Naphthalene	1.354318	8.829272	19.35422	1.667645E-02			15	
Methyl Methacrylate	0.168473	9.252076	12.81587	4.721109E-02			15	
4-Methyl-2-pentanone	0.1734344	5.979284	13.54967	9.661555E-02			15	
Methyl t-Butyl Ether	0.5847072	6.482375	6.761333	0.4204904			15	
n-Propylbenzene	2.077827	6.638009	16.75511	2.126317E-02			15	
Styrene	1.58216	9.16915	16.11311	2.672767E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Calibration:	1039001	Instrument:	MS-VOA4
Matrix:	Water	Calibration Date:	2/7/2011 7:30:41AM

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1,2,2-Tetrachloroethane	0.5617003	5.691063	16.17989	9.733366E-03			SPCC (0.3)	
1,1,1,2-Tetrachloroethane	0.6203306	7.021629	15.47844	2.186932E-02			15	
tert-Butyl alcohol NOT TC	1.732758E-02	10.08898	5.375222	0.4514074			15	
Tetrachloroethene	0.7377491	7.192229	14.94178	2.707858E-02			15	
Toluene	1.341681	6.690052	14.22067	4.147638E-02			CCC (20)	
1,2,3-Trichlorobenzene	0.5885341	9.48889	19.56233	8.612995E-04			15	
1,2,4-Trichlorobenzene	0.6548499	8.023626	19.12722	1.896605E-02			15	
1,1,2-Trichloroethane	0.4819472	8.349452	14.03789	4.770722E-02			15	
1,1,1-Trichloroethane	0.3182995	7.871372	10.60056	0.193781			15	
Tetrahydrofuran	5.399268E-02	8.459851	9.46525	0.3380589			15	
Trichloroethene	0.2365637	5.829828	12.45456	8.455537E-02			15	
Trichlorofluoromethane	0.3726959	4.731481	4.709	0.5566022			15	
1,2,3-Trichloropropane	0.1879384	9.896004	16.285	1.047502E-02			15	
1,3,5-Trimethylbenzene	1.460301	7.356123	16.95344	0.0313921			15	
1,2,4-Trimethylbenzene	1.5051	6.027629	17.22744	0.0244513			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.232144	5.599071	5.630444	0.4391774			15	
Vinyl chloride	0.1667217	8.727087	3.568333	0.8590323			CCC (20)	
m,p-Xylene	1.800979	12.33127	15.85878	2.719885E-02			15	
o-Xylene	1.868187	9.917691	16.169	2.421734E-02			15	
Vinyl acetate	0.236171	15.03677	7.247875	0.2722697	0.9995625		0.995	
Xylenes (total)	1.823382	11.39571	0	0			15	
Dibromofluoromethane	0.3249097	1.278704	8.904444	0.2859415			15	
1,2-Dichloroethane-d4	6.571543E-02	3.64755	10.14467	0.2284643			15	
Toluene-d8	2.437291	2.571323	14.14733	0.023144			15	
tert-Amyl alcohol NOT TC	1.040837E-02	22.10921	9.9325	0.3054316	0.9981958		0.995	
tert-Amyl ethyl ether	0.4986224	6.228662	13.043	0.0452972			15	

INITIAL CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	MS-VOA4	Calibration:	1039001
Lab File ID:	0207ICV1.D	Calibration Date:	02/07/11 07:30
Sequence:	1B03901	Injection Date:	02/07/11
Lab Sample ID:	1B03901-ICV1	Injection Time:	11:57

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Benzene	A	100.0	104.8	0.8183504	0.8575312		4.8	20
1,2-Dichloroethane	A	100.0	104.6	0.2844065	0.2975996		4.6	20
cis-1,2-Dichloroethene	A	100.0	105.4	0.2711242	0.2857824		5.4	20
trans-1,2-Dichloroethene	A	100.0	106.7	0.2561505	0.273286		6.7	20
Isopropylbenzene	A	100.0	100.9	1.87632	1.892421		0.9	20
Methylene chloride	L	100.0	106.9	0.3495467	0.2870065		6.9	20
Tetrachloroethene	A	100.0	101.2	0.7377491	0.7469719		1.3	20
1,1,1-Trichloroethane	A	100.0	103.0	0.3182995	0.3278918		3.0	20
Trichloroethene	A	100.0	105.1	0.2365637	0.2487209		5.1	20
Vinyl chloride	A	100.0	101.8	0.1667217	0.1696555		1.8	20
Xylenes (total)	A	300.0	278.2	1.823382	1.691296		-7.2	20
Bromofluorobenzene	A	30.00	29.15	0.957387	0.9303721		-2.8	20
Dibromofluoromethane	A	30.00	29.73	0.3249097	0.3219898		-0.9	20
1,2-Dichloroethane-d4	A	30.00	31.33	6.571543E-02	6.863695E-02		4.4	20
Toluene-d8	A	30.00	28.56	2.437291	2.320547		-4.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B04705	Instrument:	MS-VOA4
Calibration:	1039001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1B04705-TUN1	0215TU1.D	02/15/11 08:49
Calibration Check	1B04705-CCV1	0215CCV1.D	02/15/11 09:18
LCS	1B15006-BS1	0215LS1.D	02/15/11 10:05
Blank	1B15006-BLK1	0215BL1.D	02/15/11 11:33
Trip Blank 9282	1102098-11	0209811.D	02/15/11 12:33
UST21-MW41-0211	1102098-01	0209801.D	02/15/11 14:33
UST21-MW65-0211	1102098-03	0209803.D	02/15/11 15:03
UST21-MW25-0211	1102098-05	0209805.D	02/15/11 15:33
UST21-MW61-0211	1102098-07	0209807.D	02/15/11 16:02
UST21-MW55-0211	1102098-09	0209809.D	02/15/11 16:32
LCS Dup	1B15006-BSD1	0215LD1.D	02/15/11 19:30

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Lab File ID:	0215TU1.D	Injection Date:	02/15/11
Instrument ID:	MS-VOA4	Injection Time:	08:49
Sequence:	1B04705	Lab Sample ID:	1B04705-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	25.7	PASS
75	30 - 60% of 95	45.5	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	7.46	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	56.5	PASS
175	5 - 9% of 174	8.02	PASS
176	95 - 101% of 174	98.8	PASS
177	5 - 9% of 176	7.13	PASS

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Instrument ID:	MS-VOA4	Calibration:	1039001
Lab File ID:	0215CCV1.D	Calibration Date:	02/07/11 07:30
Sequence:	1B04705	Injection Date:	02/15/11
Lab Sample ID:	1B04705-CCV1	Injection Time:	09:18

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Benzene	A	100.0	107.3	0.8183504	0.8782445		7.3	20
1,2-Dichloroethane	A	100.0	121.4	0.2844065	0.3452891		21.4	20 *
cis-1,2-Dichloroethene	A	100.0	108.6	0.2711242	0.2944893		8.6	20
trans-1,2-Dichloroethene	A	100.0	103.6	0.2561505	0.2654794		3.6	20
Isopropylbenzene	A	100.0	102.2	1.87632	1.917747		2.2	20
Methylene chloride	L	100.0	109.2	0.3495467	0.2931172		9.2	20
Tetrachloroethene	A	100.0	101.7	0.7377491	0.7504268		1.7	20
1,1,1-Trichloroethane	A	100.0	116.7	0.3182995	0.371482		16.7	20
Trichloroethene	A	100.0	110.0	0.2365637	0.2602251		10.0	20
Vinyl chloride	A	100.0	104.1	0.1667217	0.1736253		4.1	20
Xylenes (total)	A	300.0	286.2	1.823382	1.740817		-4.5	20
Bromofluorobenzene	A	30.00	30.03	0.957387	0.9584109		0.1	20
Dibromofluoromethane	A	30.00	30.95	0.3249097	0.33523		3.2	20
1,2-Dichloroethane-d4	A	30.00	30.66	6.571543E-02	6.715699E-02		2.2	20
Toluene-d8	A	30.00	28.91	2.437291	2.348444		-3.6	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Batch: 1B15006 Batch Matrix: Water Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW41-0211	1102098-01	02/15/11 00:00	5.00	5.00
UST21-MW65-0211	1102098-03	02/15/11 00:00	5.00	5.00
UST21-MW25-0211	1102098-05	02/15/11 00:00	5.00	5.00
UST21-MW61-0211	1102098-07	02/15/11 00:00	5.00	5.00
UST21-MW55-0211	1102098-09	02/15/11 00:00	5.00	5.00
Trip Blank 9282	1102098-11	02/15/11 00:00	5.00	5.00
Blank	1B15006-BLK1	02/15/11 00:00	5.00	5.00
LCS	1B15006-BS1	02/15/11 00:00	5.00	5.00
LCS Dup	1B15006-BSD1	02/15/11 00:00	5.00	5.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Matrix: Laboratory ID: 1B15006-BLK1 File ID: 0215BL1.D

Sampled: Prepared: Analyzed: 02/15/11 11:33

Solids: Preparation: 5030B Dilution:

Batch: 1B15006 Sequence: 1B04705 Calibration: 1039001 Instrument: MS-VOA4

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.250	1.00	U
107-06-2	1,2-Dichloroethane		0.250	1.00	X, U
156-59-2	cis-1,2-Dichloroethene		0.250	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	1.00	U
98-82-8	Isopropylbenzene		0.250	1.00	U
75-09-2	Methylene chloride		0.500	2.00	U
127-18-4	Tetrachloroethene		0.250	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	1.00	U
79-01-6	Trichloroethene		0.250	1.00	U
75-01-4	Vinyl chloride		0.250	1.00	U
1330-20-7	Xylenes (total)		0.750	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	32.50	108	75 - 120	
Dibromofluoromethane	30.00	30.35	101	85 - 115	
1,2-Dichloroethane-d4	30.00	30.41	101	70 - 120	
Toluene-d8	30.00	28.90	96.3	85 - 120	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Sequence: 1B04705
Instrument: MS-VOA4
Calibration: 1039001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1B04705-CCV1) ug/L				Lab File ID: 0215CCV1.D		Analyzed: 02/15/11 09:18		
Bromofluorobenzene	30.00	100	80 - 120	16.453	16.453	0.0000	+/-1.000	
Dibromofluoromethane	30.00	103	80 - 120	8.831	8.831	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	80 - 120	10.063	10.063	0.0000	+/-1.000	
Toluene-d8	30.00	96.4	80 - 120	14.116	14.116	0.0000	+/-1.000	
LCS (1B15006-BS1) ug/L				Lab File ID: 0215LS1.D		Analyzed: 02/15/11 10:05		
Bromofluorobenzene	30.00	101	75 - 120	16.454	16.453	0.0010	+/-1.000	
Dibromofluoromethane	30.00	96.5	85 - 115	8.91	8.831	0.0790	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	70 - 120	10.143	10.063	0.0800	+/-1.000	
Toluene-d8	30.00	94.4	85 - 120	14.137	14.116	0.0210	+/-1.000	
Blank (1B15006-BLK1) ug/L				Lab File ID: 0215BL1.D		Analyzed: 02/15/11 11:33		
Bromofluorobenzene	30.00	108	75 - 120	16.454	16.453	0.0010	+/-1.000	
Dibromofluoromethane	30.00	101	85 - 115	8.881	8.831	0.0500	+/-1.000	
1,2-Dichloroethane-d4	30.00	101	70 - 120	10.114	10.063	0.0510	+/-1.000	
Toluene-d8	30.00	96.3	85 - 120	14.127	14.116	0.0110	+/-1.000	
Trip Blank 9282 (1102098-11) ug/L				Lab File ID: 0209811.D		Analyzed: 02/15/11 12:33		
Bromofluorobenzene	30.00	102	75 - 120	16.449	16.453	-0.0040	+/-1.000	
Dibromofluoromethane	30.00	103	85 - 115	8.836	8.831	0.0050	+/-1.000	
1,2-Dichloroethane-d4	30.00	98.6	70 - 120	10.068	10.063	0.0050	+/-1.000	
Toluene-d8	30.00	94.0	85 - 120	14.121	14.116	0.0050	+/-1.000	
UST21-MW41-0211 (1102098-01) ug/L				Lab File ID: 0209801.D		Analyzed: 02/15/11 14:33		
Bromofluorobenzene	30.00	98.2	75 - 120	16.453	16.453	0.0000	+/-1.000	
Dibromofluoromethane	30.00	113	85 - 115	8.889	8.831	0.0580	+/-1.000	
1,2-Dichloroethane-d4	30.00	103	70 - 120	10.112	10.063	0.0490	+/-1.000	
Toluene-d8	30.00	94.0	85 - 120	14.136	14.116	0.0200	+/-1.000	
UST21-MW65-0211 (1102098-03) ug/L				Lab File ID: 0209803.D		Analyzed: 02/15/11 15:03		
Bromofluorobenzene	30.00	102	75 - 120	16.453	16.453	0.0000	+/-1.000	
Dibromofluoromethane	30.00	111	85 - 115	8.88	8.831	0.0490	+/-1.000	
1,2-Dichloroethane-d4	30.00	99.3	70 - 120	10.103	10.063	0.0400	+/-1.000	
Toluene-d8	30.00	97.5	85 - 120	14.126	14.116	0.0100	+/-1.000	
UST21-MW25-0211 (1102098-05) ug/L				Lab File ID: 0209805.D		Analyzed: 02/15/11 15:33		
Bromofluorobenzene	30.00	108	75 - 120	16.459	16.453	0.0060	+/-1.000	
Dibromofluoromethane	30.00	108	85 - 115	8.895	8.831	0.0640	+/-1.000	
1,2-Dichloroethane-d4	30.00	101	70 - 120	10.118	10.063	0.0550	+/-1.000	
Toluene-d8	30.00	96.4	85 - 120	14.131	14.116	0.0150	+/-1.000	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B04705
Instrument: MS-VOA4
Calibration: 1039001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
UST21-MW61-0211 (1102098-07) ug/L				Lab File ID: 0209807.D		Analyzed: 02/15/11 16:02		
Bromofluorobenzene	30.00	105	75 - 120	16.455	16.453	0.0020	+/-1.000	
Dibromofluoromethane	30.00	109	85 - 115	8.891	8.831	0.0600	+/-1.000	
1,2-Dichloroethane-d4	30.00	107	70 - 120	10.134	10.063	0.0710	+/-1.000	
Toluene-d8	30.00	97.3	85 - 120	14.137	14.116	0.0210	+/-1.000	
UST21-MW55-0211 (1102098-09) ug/L				Lab File ID: 0209809.D		Analyzed: 02/15/11 16:32		
Bromofluorobenzene	30.00	96.9	75 - 120	16.458	16.453	0.0050	+/-1.000	
Dibromofluoromethane	30.00	110	85 - 115	8.835	8.831	0.0040	+/-1.000	
1,2-Dichloroethane-d4	30.00	98.5	70 - 120	10.078	10.063	0.0150	+/-1.000	
Toluene-d8	30.00	92.0	85 - 120	14.131	14.116	0.0150	+/-1.000	
LCS Dup (1B15006-BSD1) ug/L				Lab File ID: 0215LD1.D		Analyzed: 02/15/11 19:30		
Bromofluorobenzene	30.00	102	75 - 120	16.454	16.453	0.0010	+/-1.000	
Dibromofluoromethane	30.00	103	85 - 115	8.861	8.831	0.0300	+/-1.000	
1,2-Dichloroethane-d4	30.00	96.1	70 - 120	10.094	10.063	0.0310	+/-1.000	
Toluene-d8	30.00	94.3	85 - 120	14.127	14.116	0.0110	+/-1.000	

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B15006	Laboratory ID:	1B15006-BS1
Preparation:	5030B	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Benzene	50.00	51.2	102	80 - 120
1,2-Dichloroethane	50.00	55.1	110	70 - 130
cis-1,2-Dichloroethene	50.00	51.9	104	70 - 125
trans-1,2-Dichloroethene	50.00	54.5	109	60 - 140
Isopropylbenzene	50.00	54.9	110	75 - 125
Methylene chloride	50.00	53.4	107	55 - 140
Tetrachloroethene	50.00	51.2	102	45 - 150
1,1,1-Trichloroethane	50.00	51.9	104	65 - 130
Trichloroethene	50.00	51.5	103	70 - 125
Vinyl chloride	50.00	55.2	110	50 - 145
Xylenes (total)	150.0	156	104	75 - 130

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	50.00	52.8	106	3.16	30	80 - 120
1,2-Dichloroethane	50.00	61.2	122	10.5	30	70 - 130
cis-1,2-Dichloroethene	50.00	51.9	104	0.0845	30	70 - 125
trans-1,2-Dichloroethene	50.00	52.3	105	4.21	30	60 - 140
Isopropylbenzene	50.00	57.1	114	3.99	30	75 - 125
Methylene chloride	50.00	53.6	107	0.239	30	55 - 140
Tetrachloroethene	50.00	51.8	104	1.13	30	45 - 150
1,1,1-Trichloroethane	50.00	56.4	113	8.17	30	65 - 130
Trichloroethene	50.00	55.4	111	7.44	30	70 - 125
Vinyl chloride	50.00	58.7	117	6.20	30	50 - 145
Xylenes (total)	150.0	157	104	0.101	30	75 - 130

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 1B04705

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola_2010
Instrument: MS-VOA4
Calibration: 1039001

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (1B04705-CCV1)			Lab File ID: 0215CCV1.D			Analyzed: 02/15/11 09:18			
Fluorobenzene	1101047	11.75	1304022	11.784	84	50 - 200	-0.0340	+/-0.50	
Chlorobenzene-d5	429151	15.487	481913	15.512	89	50 - 200	-0.0250	+/-0.50	
1,4-Dichlorobenzene-d4	469992	17.38	491484	17.405	96	50 - 200	-0.0250	+/-0.50	
LCS (1B15006-BS1)			Lab File ID: 0215LS1.D			Analyzed: 02/15/11 10:05			
Fluorobenzene	1224807	11.78	1101047	11.75	111	50 - 200	0.0300	+/-0.50	
Chlorobenzene-d5	454394	15.498	429151	15.487	106	50 - 200	0.0110	+/-0.50	
1,4-Dichlorobenzene-d4	525324	17.391	469992	17.38	112	50 - 200	0.0110	+/-0.50	
Blank (1B15006-BLK1)			Lab File ID: 0215BL1.D			Analyzed: 02/15/11 11:33			
Fluorobenzene	1133604	11.77	1101047	11.75	103	50 - 200	0.0200	+/-0.50	
Chlorobenzene-d5	411549	15.488	429151	15.487	96	50 - 200	0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	495010	17.381	469992	17.38	105	50 - 200	0.0010	+/-0.50	
Trip Blank 9282 (1102098-11)			Lab File ID: 0209811.D			Analyzed: 02/15/11 12:33			
Fluorobenzene	1100563	11.755	1101047	11.75	100	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5	403532	15.492	429151	15.487	94	50 - 200	0.0050	+/-0.50	
1,4-Dichlorobenzene-d4	482856	17.385	469992	17.38	103	50 - 200	0.0050	+/-0.50	
UST21-MW41-0211 (1102098-01)			Lab File ID: 0209801.D			Analyzed: 02/15/11 14:33			
Fluorobenzene	976570	11.779	1101047	11.75	89	50 - 200	0.0290	+/-0.50	
Chlorobenzene-d5	379615	15.496	429151	15.487	88	50 - 200	0.0090	+/-0.50	
1,4-Dichlorobenzene-d4	464392	17.39	469992	17.38	99	50 - 200	0.0100	+/-0.50	
UST21-MW65-0211 (1102098-03)			Lab File ID: 0209803.D			Analyzed: 02/15/11 15:03			
Fluorobenzene	996077	11.769	1101047	11.75	90	50 - 200	0.0190	+/-0.50	
Chlorobenzene-d5	384320	15.497	429151	15.487	90	50 - 200	0.0100	+/-0.50	
1,4-Dichlorobenzene-d4	471571	17.39	469992	17.38	100	50 - 200	0.0100	+/-0.50	
UST21-MW25-0211 (1102098-05)			Lab File ID: 0209805.D			Analyzed: 02/15/11 15:33			
Fluorobenzene	963339	11.784	1101047	11.75	87	50 - 200	0.0340	+/-0.50	
Chlorobenzene-d5	352819	15.492	429151	15.487	82	50 - 200	0.0050	+/-0.50	
1,4-Dichlorobenzene-d4	445793	17.386	469992	17.38	95	50 - 200	0.0060	+/-0.50	
UST21-MW61-0211 (1102098-07)			Lab File ID: 0209807.D			Analyzed: 02/15/11 16:02			
Fluorobenzene	990216	11.78	1101047	11.75	90	50 - 200	0.0300	+/-0.50	
Chlorobenzene-d5	371443	15.498	429151	15.487	87	50 - 200	0.0110	+/-0.50	
1,4-Dichlorobenzene-d4	454124	17.392	469992	17.38	97	50 - 200	0.0120	+/-0.50	
UST21-MW55-0211 (1102098-09)			Lab File ID: 0209809.D			Analyzed: 02/15/11 16:32			
Fluorobenzene	1005618	11.754	1101047	11.75	91	50 - 200	0.0040	+/-0.50	
Chlorobenzene-d5	388320	15.492	429151	15.487	90	50 - 200	0.0050	+/-0.50	
1,4-Dichlorobenzene-d4	451543	17.385	469992	17.38	96	50 - 200	0.0050	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B04705	Instrument:	MS-VOA4
		Calibration:	1039001

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (1B15006-BSD1)			Lab File ID: 0215LD1.D			Analyzed: 02/15/11 19:30			
Fluorobenzene	1042559	11.77	1101047	11.75	95	50 - 200	0.0200	+/-0.50	
Chlorobenzene-d5	401786	15.498	429151	15.487	94	50 - 200	0.0110	+/-0.50	
1,4-Dichlorobenzene-d4	469073	17.391	469992	17.38	100	50 - 200	0.0110	+/-0.50	

ANALYSIS SEQUENCE SUMMARY

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B03911	Instrument:	MS-BNA4
Calibration:	1048001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1B03911-TUN1	SEQ-TUN1.D	02/07/11 18:14
Cal Standard	1B03911-CAL1	SEQ-CAL1.D	02/07/11 18:33
Cal Standard	1B03911-CAL2	SEQ-CAL2.D	02/07/11 19:06
Cal Standard	1B03911-CAL3	SEQ-CAL3.D	02/07/11 19:39
Cal Standard	1B03911-CAL4	SEQ-CAL4.D	02/07/11 20:12
Cal Standard	1B03911-CAL5	SEQ-CAL5.D	02/07/11 20:45
Cal Standard	1B03911-CAL6	SEQ-CAL6.D	02/07/11 21:18
Cal Standard	1B03911-CAL7	SEQ-CAL7.D	02/07/11 21:51
Cal Standard	1B03911-CAL8	SEQ-CAL8.D	02/07/11 22:24
Cal Standard	1B03911-CAL9	SEQ-CAL9.D	02/07/11 22:57
Cal Standard	1B03911-CALA	SEQ-CALA.D	02/07/11 23:30
Cal Standard	1B03911-CALB	SEQ-CALB.D	02/08/11 00:03
Initial Cal Check	1B03911-ICV3	SEQ-ICV3.D	02/08/11 01:43

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Lab File ID:	SEQ-TUN1.D	Injection Date:	02/07/11
Instrument ID:	MS-BNA4	Injection Time:	18:14
Sequence:	1B03911	Lab Sample ID:	1B03911-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	50.4	PASS
68	Less than 2% of 69	1.6	PASS
69	Less than 200% of 198	48.3	PASS
70	Less than 2% of 69	0.382	PASS
127	40 - 60% of 198	54.8	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.54	PASS
275	10 - 30% of 198	26.1	PASS
365	1 - 200% of 198	3.76	PASS
441	0.001 - 100% of 443	83.9	PASS
442	40 - 200% of 198	121	PASS
443	17 - 23% of 442	19.9	PASS

INITIAL CALIBRATION DATA (Continued)

SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Calibration: 1048001
Instrument: MS-BNA4
Matrix: Water
Calibration Date: 2/7/2011 6:33:21PM

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	0.7926954	5.318234	10.39527	5.971224E-02			CCC (30)	
Acenaphthylene	1.198573	5.154891	10.18691	4.731456E-02			15	
Anthracene	1.085076	2.663468	12.29609	3.862814E-02			15	
Benzo(a)anthracene	0.6763585	8.358676	15.60309	2.142343E-02			15	
Benzo(a)pyrene	0.9878261	6.547324	18.24164	5.668756E-02			CCC (30)	
Benzo(b)fluoranthene	1.092912	10.27405	17.56236	5.894665E-02			15	
Benzo(g,h,i)perylene	0.8305083	10.43963	21.38382	7.386433E-02			15	
Benzo(k)fluoranthene	1.229142	6.280104	17.61618	6.153129E-02			15	
Chrysene	0.7213402	9.894529	15.663	4.825978E-02			15	
Dibenz(a,h)anthracene	0.7676577	16.54231	20.81327	7.143003E-02	0.9994472		0.995	
Fluoranthene	0.9866036	4.66066	13.70827	3.573892E-02			CCC (30)	
Fluorene	0.7802025	7.667299	11.03864	6.130489E-02			15	
2-Fluorobiphenyl	0.8853237	8.766314	9.524182	0.1068576			15	
Indeno(1,2,3-cd)pyrene	0.9671145	14.07617	20.77682	7.155087E-02			15	
1-Methylnaphthalene	0.8429092	6.545285	9.193818	9.234948E-02			15	
2-Methylnaphthalene	0.7808299	7.097333	9.071273	0.1155369			15	
Naphthalene	1.279867	6.104298	8.222455	7.228635E-02			15	
Phenanthrene	1.044549	2.946851	12.23027	5.301422E-02			15	
Pyrene	0.9987664	3.320125	13.98973	3.049288E-02			15	
Terphenyl-d14	0.5971292	4.255474	14.17245	0.0236856			15	
2,4,6-Tribromophenol	0.1258515	30.46799	11.34973	5.292164E-02	0.9985944		0.995	

INITIAL CALIBRATION CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	MS-BNA4	Calibration:	1048001
Lab File ID:	SEQ-ICV3.D	Calibration Date:	02/07/11 18:33
Sequence:	1B03911	Injection Date:	02/08/11
Lab Sample ID:	1B03911-ICV3	Injection Time:	01:43

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Acenaphthene	A	5.000	5.043	0.7926954	0.7995186		0.9	20
Benzo(a)anthracene	A	5.000	5.070	0.6763585	0.6858315		1.4	20
Benzo(k)fluoranthene	A	5.000	5.144	1.229142	1.264612		2.9	20
Chrysene	A	5.000	4.973	0.7213402	0.7174082		-0.5	20
Dibenz(a,h)anthracene	L	5.000	4.922	0.7676577	0.799063		-1.6	20
1-Methylnaphthalene	A	5.000	4.700	0.8429092	0.7924099		-6.0	20
2-Methylnaphthalene	A	5.000	5.839	0.7808299	0.9118984		16.8	20
Naphthalene	A	5.000	5.195	1.279867	1.329684		3.9	20
2-Fluorobiphenyl	A	5.000	4.983	0.8853237	0.8823667		-0.3	20
Terphenyl-d14	A	5.000	5.238	0.5971292	0.6255041		4.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B05309	Instrument:	MS-BNA4
Calibration:	1048001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1B05309-TUN1	SEQ-TUN1.D	02/21/11 16:26
Calibration Check	1B05309-CCV1	SEQ-CCV1.D	02/21/11 16:47
LCS	1B12010-BS1	B12010L1.D	02/21/11 22:11
Blank	1B12010-BLK1	B12010B1.D	02/21/11 22:37
UST21-MW41-0211	1102098-01	0209801.D	02/21/11 23:04
UST21-MW65-0211	1102098-03	0209803.D	02/21/11 23:31
UST21-MW25-0211	1102098-05	0209805.D	02/21/11 23:58
UST21-MW61-0211	1102098-07	0209807.D	02/22/11 00:25
UST21-MW55-0211	1102098-09	0209809.D	02/22/11 00:51

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Lab File ID:	SEQ-TUN1.D	Injection Date:	02/21/11
Instrument ID:	MS-BNA4	Injection Time:	16:26
Sequence:	1B05309	Lab Sample ID:	1B05309-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	53.5	PASS
68	Less than 2% of 69	1.44	PASS
69	Less than 200% of 198	51	PASS
70	Less than 2% of 69	0.417	PASS
127	40 - 60% of 198	55.6	PASS
197	Less than 1% of 198	0.424	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.69	PASS
275	10 - 30% of 198	28.1	PASS
365	1 - 200% of 198	4.22	PASS
441	0.001 - 100% of 443	84.3	PASS
442	40 - 200% of 198	149	PASS
443	17 - 23% of 442	19.6	PASS

CONTINUING CALIBRATION CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Instrument ID:	MS-BNA4	Calibration:	1048001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	02/07/11 18:33
Sequence:	1B05309	Injection Date:	02/21/11
Lab Sample ID:	1B05309-CCV1	Injection Time:	16:47

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acenaphthene	A	5.000	5.250	0.7926954	0.8323289		5.0	20	
Benzo(a)anthracene	A	5.000	6.431	0.6763585	0.8699181		28.6	20	*
Benzo(k)fluoranthene	A	5.000	5.442	1.229142	1.337752		8.8	20	
Chrysene	A	5.000	6.573	0.7213402	0.948245		31.5	20	*
Dibenz(a,h)anthracene	L	5.000	4.657	0.7676577	0.816892		-6.9	20	
1-Methylnaphthalene	A	5.000	5.109	0.8429092	0.8613629		2.2	20	
2-Methylnaphthalene	A	5.000	5.396	0.7808299	0.8426376		7.9	20	
Naphthalene	A	5.000	5.280	1.279867	1.351531		5.6	20	
2-Fluorobiphenyl	A	5.000	4.942	0.8853237	0.8750195		-1.2	20	
Terphenyl-d14	A	5.000	5.913	0.5971292	0.7062039		18.3	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Batch: 1B12010 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW41-0211	1102098-01	02/14/11 12:30	1,000.00	1.00
UST21-MW65-0211	1102098-03	02/14/11 12:30	1,020.00	1.00
UST21-MW25-0211	1102098-05	02/14/11 12:30	1,040.00	1.00
UST21-MW61-0211	1102098-07	02/14/11 12:30	900.00	1.00
UST21-MW55-0211	1102098-09	02/14/11 12:30	1,020.00	1.00
Blank	1B12010-BLK1	02/14/11 12:30	1,000.00	1.00
LCS	1B12010-BS1	02/14/11 12:30	1,000.00	1.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Matrix: Laboratory ID: 1B12010-BLK1 File ID: B12010B1.D

Sampled: Prepared: Analyzed: 02/21/11 22:37

Solids: Preparation: EXT_3510 Dilution:

Batch: 1B12010 Sequence: 1B05309 Calibration: 1048001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0500	0.200	U
56-55-3	Benzo(a)anthracene		0.0500	0.200	X, U
207-08-9	Benzo(k)fluoranthene		0.0500	0.200	U
218-01-9	Chrysene		0.0500	0.200	X, U
53-70-3	Dibenz(a,h)anthracene		0.0500	0.200	U
90-12-0	1-Methylnaphthalene		0.0500	0.200	U
91-57-6	2-Methylnaphthalene		0.0500	0.200	U
91-20-3	Naphthalene		0.0500	0.200	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	21.56	43.1	34 - 167	
Terphenyl-d14	50.00	43.38	86.8	34 - 167	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Sequence: 1B05309
Instrument: MS-BNA4
Calibration: 1048001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1B05309-CCV1) ug/mL				Lab File ID: SEQ-CCV1.D		Analyzed: 02/21/11 16:47		
2-Fluorobiphenyl	5.000	98.8	80 - 120	8.967	8.967	0.0000	+/-0.500	
Terphenyl-d14	5.000	118	80 - 120	13.615	13.615	0.0000	+/-0.500	
LCS (1B12010-BS1) ug/L				Lab File ID: B12010L1.D		Analyzed: 02/21/11 22:11		
2-Fluorobiphenyl	50.00	69.1	34 - 167	8.967	8.967	0.0000	+/-0.500	
Terphenyl-d14	50.00	79.8	34 - 167	13.615	13.615	0.0000	+/-0.500	
Blank (1B12010-BLK1) ug/L				Lab File ID: B12010B1.D		Analyzed: 02/21/11 22:37		
2-Fluorobiphenyl	50.00	43.1	34 - 167	8.967	8.967	0.0000	+/-0.500	
Terphenyl-d14	50.00	86.8	34 - 167	13.615	13.615	0.0000	+/-0.500	
UST21-MW41-0211 (1102098-01) ug/L				Lab File ID: 0209801.D		Analyzed: 02/21/11 23:04		
2-Fluorobiphenyl	50.00	50.2	34 - 167	8.967	8.967	0.0000	+/-0.500	
Terphenyl-d14	50.00	65.8	34 - 167	13.615	13.615	0.0000	+/-0.500	
UST21-MW65-0211 (1102098-03) ug/L				Lab File ID: 0209803.D		Analyzed: 02/21/11 23:31		
2-Fluorobiphenyl	49.02	38.8	34 - 167	8.967	8.967	0.0000	+/-0.500	
Terphenyl-d14	49.02	77.4	34 - 167	13.624	13.615	0.0090	+/-0.500	
UST21-MW25-0211 (1102098-05) ug/L				Lab File ID: 0209805.D		Analyzed: 02/21/11 23:58		
2-Fluorobiphenyl	48.08	60.2	34 - 167	8.976	8.967	0.0090	+/-0.500	
Terphenyl-d14	48.08	67.9	34 - 167	13.624	13.615	0.0090	+/-0.500	
UST21-MW61-0211 (1102098-07) ug/L				Lab File ID: 0209807.D		Analyzed: 02/22/11 00:25		
2-Fluorobiphenyl	55.56	52.3	34 - 167	8.976	8.967	0.0090	+/-0.500	
Terphenyl-d14	55.56	66.3	34 - 167	13.624	13.615	0.0090	+/-0.500	
UST21-MW55-0211 (1102098-09) ug/L				Lab File ID: 0209809.D		Analyzed: 02/22/11 00:51		
2-Fluorobiphenyl	49.02	59.7	34 - 167	8.976	8.967	0.0090	+/-0.500	
Terphenyl-d14	49.02	90.2	34 - 167	13.634	13.615	0.0190	+/-0.500	

LCS / LCS DUPLICATE RECOVERY

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B12010	Laboratory ID:	1B12010-BS1
Preparation:	EXT_3510	Initial/Final:	1000 mL / 1 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Acenaphthene	1.000	0.8041	80.4	41 - 132
Benzo(a)anthracene	1.000	0.9582	95.8	58 - 141
Benzo(k)fluoranthene	1.000	0.9212	92.1	49 - 165
Chrysene	1.000	1.121	112	51 - 155
Dibenz(a,h)anthracene	1.000	0.7223	72.2	28 - 153
1-Methylnaphthalene	1.000	0.6002	60.0	35 - 131
2-Methylnaphthalene	1.000	0.6292	62.9	36 - 121
Naphthalene	1.000	0.7462	74.6	39 - 125

INTERNAL STANDARD AREA AND RT SUMMARY
SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B05309
Instrument: MS-BNA4
Calibration: 1048001

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (1B05309-CCV1)			Lab File ID: SEQ-CCV1.D			Analyzed: 02/21/11 16:47			
Phenanthrene-d10	128436	11.653	156632	12.199	82	50 - 200	-0.5460	+/-0.50	
Perylene-d12	95951	16.785	99936	18.353	96	50 - 200	-1.5680	+/-0.50	
LCS (1B12010-BS1)			Lab File ID: B12010L1.D			Analyzed: 02/21/11 22:11			
Phenanthrene-d10	109144	11.644	128436	11.653	85	50 - 200	-0.0090	+/-0.50	
Perylene-d12	80759	16.785	95951	16.785	84	50 - 200	0.0000	+/-0.50	
Blank (1B12010-BLK1)			Lab File ID: B12010B1.D			Analyzed: 02/21/11 22:37			
Phenanthrene-d10	124304	11.653	128436	11.653	97	50 - 200	0.0000	+/-0.50	
Perylene-d12	80795	16.785	95951	16.785	84	50 - 200	0.0000	+/-0.50	
UST21-MW41-0211 (1102098-01)			Lab File ID: 0209801.D			Analyzed: 02/21/11 23:04			
Phenanthrene-d10	92984	11.653	128436	11.653	72	50 - 200	0.0000	+/-0.50	
Perylene-d12	54310	16.785	95951	16.785	57	50 - 200	0.0000	+/-0.50	
UST21-MW65-0211 (1102098-03)			Lab File ID: 0209803.D			Analyzed: 02/21/11 23:31			
Phenanthrene-d10	107445	11.653	128436	11.653	84	50 - 200	0.0000	+/-0.50	
Perylene-d12	63167	16.831	95951	16.785	66	50 - 200	0.0460	+/-0.50	
UST21-MW25-0211 (1102098-05)			Lab File ID: 0209805.D			Analyzed: 02/21/11 23:58			
Phenanthrene-d10	128595	11.663	128436	11.653	100	50 - 200	0.0100	+/-0.50	
Perylene-d12	83871	16.794	95951	16.785	87	50 - 200	0.0090	+/-0.50	
UST21-MW61-0211 (1102098-07)			Lab File ID: 0209807.D			Analyzed: 02/22/11 00:25			
Phenanthrene-d10	119933	11.653	128436	11.653	93	50 - 200	0.0000	+/-0.50	
Perylene-d12	74152	16.813	95951	16.785	77	50 - 200	0.0280	+/-0.50	
UST21-MW55-0211 (1102098-09)			Lab File ID: 0209809.D			Analyzed: 02/22/11 00:51			
Phenanthrene-d10	122700	11.663	128436	11.653	96	50 - 200	0.0100	+/-0.50	
Perylene-d12	84778	16.804	95951	16.785	88	50 - 200	0.0190	+/-0.50	

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B03607	Instrument:	GL-GCFID2
Calibration:	1036001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1B03607-CAL6	003F0301.D	02/03/11 18:28
Cal Standard	1B03607-CAL5	004F0401.D	02/03/11 19:10
Cal Standard	1B03607-CAL4	005F0501.D	02/03/11 19:52
Cal Standard	1B03607-CAL3	006F0601.D	02/03/11 20:34
Cal Standard	1B03607-CAL2	007F0701.D	02/03/11 21:17
Cal Standard	1B03607-CAL1	008F0801.D	02/03/11 21:59
Initial Cal Check	1B03607-ICV1	009F0901.D	02/03/11 22:40

INITIAL CALIBRATION STANDARDS

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B03607	Instrument:	GL-GCFID2
Calibration:	1036001		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
10K0198	FLPRO CAL6 85ppm	1B03607-CAL6	003F0301.D	02/03/11 18:28
10K0199	FLPRO CAL5 850ppm	1B03607-CAL5	004F0401.D	02/03/11 19:10
10K0200	FLPRO CAL4 2550ppm	1B03607-CAL4	005F0501.D	02/03/11 19:52
10L0688	FLPRO CAL3 4250ppm	1B03607-CAL3	006F0601.D	02/03/11 20:34
10K0202	FLPRO CAL2 5950ppm	1B03607-CAL2	007F0701.D	02/03/11 21:17
10K0203	FLPRO CAL1 8500ppm	1B03607-CAL1	008F0801.D	02/03/11 21:59

INITIAL CALIBRATION DATA

FLPRO

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Calibration: 1036001
Instrument: GL-GCFID2
Matrix: Water
Calibration Dates: 2/3/11 18:28 2/3/11 21:59

Level 01= 003F0301.D
Level 02= 004F0401.D
Level 03= 005F0501.D
Level 04= 006F0601.D
Level 05= 007F0701.D
Level 06= 008F0801.D

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF	mg/L	RF
Petroleum Range Organics	85	1615.306	850	1683.465	2550	1744.911	4250	1766.437	5950	1762.933	8500	1770.768
2-Fluorobiphenyl	5	1941.6	10	1915.3	15	1951.467	25	2200.44	35	2182.086	50	2239.12
o-Terphenyl	5	2419.4	10	2262.8	15	2374.467	25	2533.24	35	2466.029	50	2556.64

INITIAL CALIBRATION DATA (Continued)

FLPRO

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Calibration: 1036001
Instrument: GL-GCFID2
Matrix: Water
Calibration Dates: 2/3/11 18:28 2/3/11 21:59

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Petroleum Range Organics	1723.97	3.613027	2.783	1.223221E-02			20	
2-Fluorobiphenyl	2071.669	7.244769	11.0885	5.505095E-02			20	
o-Terphenyl	2435.429	4.459164	16.66467	4.479577E-02			20	

INITIAL CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	009F0901.D	Calibration Date:	02/03/11 18:28
Sequence:	1B03607	Injection Date:	02/03/11
Lab Sample ID:	1B03607-ICV1	Injection Time:	22:40

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Petroleum Range Organics	A	4000	4813	1723.97	2074.555		20.3	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B04806	Instrument:	GL-GCFID2
Calibration:	1036001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1B04806-CCV1	002F0201.D	02/16/11 13:19
Blank	1B12009-BLK1	003F0301.D	02/16/11 14:01
LCS	1B12009-BS1	004F0401.D	02/16/11 14:44
LCS Dup	1B12009-BSD1	005F0501.D	02/16/11 15:26
UST21-MW41-0211	1102098-01	006F0601.D	02/16/11 16:08
UST21-MW65-0211	1102098-03	007F0701.D	02/16/11 16:51
UST21-MW25-0211	1102098-05	008F0801.D	02/16/11 17:33
UST21-MW61-0211	1102098-07	009F0901.D	02/16/11 18:15
UST21-MW55-0211	1102098-09	010F1001.D	02/16/11 18:58
Calibration Check	1B04806-CCV2	016F1601.D	02/16/11 23:11

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	002F0201.D	Calibration Date:	02/03/11 18:28
Sequence:	1B04806	Injection Date:	02/16/11
Lab Sample ID:	1B04806-CCV1	Injection Time:	13:19

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4155	1723.97	1685.394		-2.2	25
2-Fluorobiphenyl	A	25.00	24.00	2071.669	1988.72		-4.0	25
o-Terphenyl	A	25.00	24.80	2435.429	2415.56		-0.8	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	016F1601.D	Calibration Date:	02/03/11 18:28
Sequence:	1B04806	Injection Date:	02/16/11
Lab Sample ID:	1B04806-CCV2	Injection Time:	23:11

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3664	1723.97	1486.212		-13.8	25
2-Fluorobiphenyl	A	25.00	22.53	2071.669	1867.12		-9.9	25
o-Terphenyl	A	25.00	21.49	2435.429	2093.52		-14.0	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Batch: 1B12009 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW41-0211	1102098-01	02/14/11 15:05	1,020.00	2.00
UST21-MW65-0211	1102098-03	02/14/11 15:05	1,000.00	2.00
UST21-MW25-0211	1102098-05	02/14/11 15:05	1,000.00	2.00
UST21-MW61-0211	1102098-07	02/14/11 15:05	1,000.00	2.00
UST21-MW55-0211	1102098-09	02/14/11 15:05	900.00	2.00
Blank	1B12009-BLK1	02/14/11 15:05	1,000.00	2.00
LCS	1B12009-BS1	02/14/11 15:05	1,000.00	2.00
LCS Dup	1B12009-BSD1	02/14/11 15:05	1,000.00	2.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Matrix: Laboratory ID: 1B12009-BLK1 File ID: 003F0301.D

Sampled: Prepared: Analyzed: 02/16/11 14:01

Solids: Preparation: EXT_3510 Dilution:

Batch: 1B12009 Sequence: 1B04806 Calibration: 1036001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics		0.170	0.680	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.03664	73.3	50 - 150	
o-Terphenyl	0.05000	0.04209	84.2	82 - 142	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B04806
Instrument: GL-GCFID2
Calibration: 1036001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1B04806-CCV1) mg/L				Lab File ID: 002F0201.D		Analyzed: 02/16/11 13:19		
2-Fluorobiphenyl	25.00	96.0	75 - 125	11.006	11.006	0.0000	+/-0.050	
o-Terphenyl	25.00	99.2	75 - 125	16.593	16.593	0.0000	+/-0.050	
Blank (1B12009-BLK1) mg/L				Lab File ID: 003F0301.D		Analyzed: 02/16/11 14:01		
2-Fluorobiphenyl	0.05000	73.3	50 - 150	11.02	11.006	0.0140	+/-0.050	
o-Terphenyl	0.05000	84.2	82 - 142	16.593	16.593	0.0000	+/-0.050	
LCS (1B12009-BS1) mg/L				Lab File ID: 004F0401.D		Analyzed: 02/16/11 14:44		
2-Fluorobiphenyl	0.05000	82.0	50 - 150	11.013	11.006	0.0070	+/-0.050	
o-Terphenyl	0.05000	83.6	82 - 142	16.59	16.593	-0.0030	+/-0.050	
LCS Dup (1B12009-BSD1) mg/L				Lab File ID: 005F0501.D		Analyzed: 02/16/11 15:26		
2-Fluorobiphenyl	0.05000	80.7	50 - 150	11.013	11.006	0.0070	+/-0.050	
o-Terphenyl	0.05000	83.1	82 - 142	16.593	16.593	0.0000	+/-0.050	
UST21-MW41-0211 (1102098-01) mg/L				Lab File ID: 006F0601.D		Analyzed: 02/16/11 16:08		
2-Fluorobiphenyl	0.04902	70.4	50 - 150	11.02	11.006	0.0140	+/-0.050	
o-Terphenyl	0.04902	83.7	82 - 142	16.593	16.593	0.0000	+/-0.050	
UST21-MW65-0211 (1102098-03) mg/L				Lab File ID: 007F0701.D		Analyzed: 02/16/11 16:51		
2-Fluorobiphenyl	0.05000	69.8	50 - 150	11.023	11.006	0.0170	+/-0.050	
o-Terphenyl	0.05000	83.4	82 - 142	16.593	16.593	0.0000	+/-0.050	
UST21-MW25-0211 (1102098-05) mg/L				Lab File ID: 008F0801.D		Analyzed: 02/16/11 17:33		
2-Fluorobiphenyl	0.05000	73.7	50 - 150	11.01	11.006	0.0040	+/-0.050	
o-Terphenyl	0.05000	91.2	82 - 142	16.593	16.593	0.0000	+/-0.050	
UST21-MW61-0211 (1102098-07) mg/L				Lab File ID: 009F0901.D		Analyzed: 02/16/11 18:15		
2-Fluorobiphenyl	0.05000	70.5	50 - 150	11.026	11.006	0.0200	+/-0.050	
o-Terphenyl	0.05000	74.7	82 - 142	16.596	16.593	0.0030	+/-0.050	*
UST21-MW55-0211 (1102098-09) mg/L				Lab File ID: 010F1001.D		Analyzed: 02/16/11 18:58		
2-Fluorobiphenyl	0.05556	78.0	50 - 150	11.006	11.006	0.0000	+/-0.050	
o-Terphenyl	0.05556	89.6	82 - 142	16.593	16.593	0.0000	+/-0.050	
Calibration Check (1B04806-CCV2) mg/L				Lab File ID: 016F1601.D		Analyzed: 02/16/11 23:11		
2-Fluorobiphenyl	25.00	90.1	75 - 125	11.013	11.006	0.0070	+/-0.050	
o-Terphenyl	25.00	86.0	75 - 125	16.593	16.593	0.0000	+/-0.050	

LCS / LCS DUPLICATE RECOVERY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B12009	Laboratory ID:	1B12009-BS1
Preparation:	EXT_3510	Initial/Final:	1000 mL / 2 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Petroleum Range Organics	3.200	2.483	77.6	55 - 118

ANALYTE	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Petroleum Range Organics	3.200	2.457	76.8	1.08	30	55 - 118

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC **SDG:** CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) **Project:** CTO JM01 NAS Pensacola_2010

Matrix: Water **Instrument:** GL-GCFID2

Analyte	MDL	MRL	Units	Method
Petroleum Range Organics	0.170	0.680	mg/L	FLPRO

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B05006	Instrument:	MS-VOA3
Calibration:	1042001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1B05006-TUN1	0217TU1E.D	02/17/11 20:42
Calibration Check	1B05006-CCV1	0217CCVE.D	02/17/11 21:07
LCS	1B17009-BS1	0217LS1E.D	02/17/11 21:37
Blank	1B17009-BLK1	0217BL1E.D	02/17/11 23:03
TRIP BLANK # 9281	1102133-01	0213301.D	02/18/11 00:03
UST-21-RB-0211	1102133-05	0213305.D	02/18/11 01:02
UST-21-MW-38-0211	1102133-02	0213302.D	02/18/11 03:01
UST-21-MW-04-0211	1102133-03	0213303.D	02/18/11 03:31
UST-21-MW-40-0211	1102133-04	0213304.D	02/18/11 04:01
UST-21-09-0211	1102133-06	0213306.D	02/18/11 04:31
UST-21-17-0211	1102133-07	0213307.D	02/18/11 05:00
GW01-021111	1102133-08	0213308.D	02/18/11 05:30
LCS Dup	1B17009-BSD1	0217LCSDE.D	02/18/11 07:29

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Lab File ID:	0217TU1E.D	Injection Date:	02/17/11
Instrument ID:	MS-VOA3	Injection Time:	20:42
Sequence:	1B05006	Lab Sample ID:	1B05006-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	21.8	PASS
75	30 - 60% of 95	48.6	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	7.27	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	77.2	PASS
175	5 - 9% of 174	6.98	PASS
176	95 - 101% of 174	101	PASS
177	5 - 9% of 176	6.47	PASS

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	MS-VOA3	Calibration:	1042001
Lab File ID:	0217CCVE.D	Calibration Date:	02/09/11 08:01
Sequence:	1B05006	Injection Date:	02/17/11
Lab Sample ID:	1B05006-CCV1	Injection Time:	21:07

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Benzene	A	100.0	100.9	0.8877526	0.8954488		0.9	20	
1,2-Dichloroethane	A	100.0	118.4	0.3303627	0.3910799		18.4	20	
cis-1,2-Dichloroethene	A	100.0	107.6	0.2378304	0.255876		7.6	20	
trans-1,2-Dichloroethene	A	100.0	107.7	0.2137549	0.2302172		7.7	20	
Isopropylbenzene	A	100.0	98.17	1.931811	1.896472		-1.8	20	
Methylene chloride	A	100.0	104.2	0.2430347	0.2531541		4.2	20	
Tetrachloroethene	A	100.0	100.2	0.5803178	0.5816275		0.2	20	
1,1,1-Trichloroethane	A	100.0	122.6	0.3181209	0.3901613		22.6	20	*
Trichloroethene	A	100.0	109.5	0.2462319	0.269638		9.5	20	
Vinyl chloride	A	100.0	108.7	0.211655	0.2301574		8.7	20	
Xylenes (total)	A	300.0	266.0	1.933	1.756857		-9.1	20	
Bromofluorobenzene	A	30.00	29.63	0.9432064	0.9316679		-1.2	20	
Dibromofluoromethane	A	30.00	31.40	0.2525351	0.2643502		4.7	20	
1,2-Dichloroethane-d4	A	30.00	31.00	5.392485E-02	5.571815E-02		3.3	20	
Toluene-d8	A	30.00	28.64	2.159642	2.06182		-4.5	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Batch: 1B17009 Batch Matrix: Water Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
TRIP BLANK # 9281	1102133-01	02/17/11 11:15	5.00	5.00
UST-21-MW-38-0211	1102133-02	02/17/11 11:15	5.00	5.00
UST-21-MW-04-0211	1102133-03	02/17/11 11:15	5.00	5.00
UST-21-MW-40-0211	1102133-04	02/17/11 11:15	5.00	5.00
UST-21-RB-0211	1102133-05	02/17/11 11:15	5.00	5.00
UST-21-09-0211	1102133-06	02/17/11 11:15	5.00	5.00
UST-21-17-0211	1102133-07	02/17/11 11:15	5.00	5.00
GW01-021111	1102133-08	02/17/11 11:15	5.00	5.00
Blank	1B17009-BLK1	02/17/11 11:15	5.00	5.00
LCS	1B17009-BS1	02/17/11 11:15	5.00	5.00
LCS Dup	1B17009-BSD1	02/17/11 11:15	5.00	5.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Matrix: Laboratory ID: 1B17009-BLK1 File ID: 0217BL1E.D

Sampled: Prepared: Analyzed: 02/17/11 23:03

Solids: Preparation: 5030B Dilution:

Batch: 1B17009 Sequence: 1B05006 Calibration: 1042001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
107-06-2	1,2-Dichloroethane		0.220	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	1.00	U
98-82-8	Isopropylbenzene		0.150	1.00	U
75-09-2	Methylene chloride		0.270	2.00	U
127-18-4	Tetrachloroethene		0.170	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	1.00	X, U
79-01-6	Trichloroethene		0.250	1.00	U
75-01-4	Vinyl chloride		0.200	1.00	U
1330-20-7	Xylenes (total)		0.220	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.00	103	75 - 120	
Dibromofluoromethane	30.00	31.09	104	85 - 115	
1,2-Dichloroethane-d4	30.00	30.19	101	70 - 120	
Toluene-d8	30.00	29.52	98.4	85 - 120	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B05006
Instrument: MS-VOA3
Calibration: 1042001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1B05006-CCV1) ug/L				Lab File ID: 0217CCVE.D		Analyzed: 02/17/11 21:07		
Bromofluorobenzene	30.00	98.8	80 - 120	16.983	16.983	0.0000	+/-1.000	
Dibromofluoromethane	30.00	105	80 - 120	9.926	9.926	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	103	80 - 120	11.003	11.003	0.0000	+/-1.000	
Toluene-d8	30.00	95.5	80 - 120	14.635	14.635	0.0000	+/-1.000	
LCS (1B17009-BS1) ug/L				Lab File ID: 0217LS1E.D		Analyzed: 02/17/11 21:37		
Bromofluorobenzene	30.00	101	75 - 120	16.983	16.983	0.0000	+/-1.000	
Dibromofluoromethane	30.00	104	85 - 115	9.92	9.926	-0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	70 - 120	11.003	11.003	0.0000	+/-1.000	
Toluene-d8	30.00	99.8	85 - 120	14.635	14.635	0.0000	+/-1.000	
Blank (1B17009-BLK1) ug/L				Lab File ID: 0217BL1E.D		Analyzed: 02/17/11 23:03		
Bromofluorobenzene	30.00	103	75 - 120	16.977	16.983	-0.0060	+/-1.000	
Dibromofluoromethane	30.00	104	85 - 115	9.92	9.926	-0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	101	70 - 120	10.997	11.003	-0.0060	+/-1.000	
Toluene-d8	30.00	98.4	85 - 120	14.635	14.635	0.0000	+/-1.000	
TRIP BLANK # 9281 (1102133-01) ug/L				Lab File ID: 0213301.D		Analyzed: 02/18/11 00:03		
Bromofluorobenzene	30.00	103	75 - 120	16.977	16.983	-0.0060	+/-1.000	
Dibromofluoromethane	30.00	108	85 - 115	9.926	9.926	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	104	70 - 120	10.997	11.003	-0.0060	+/-1.000	
Toluene-d8	30.00	99.6	85 - 120	14.635	14.635	0.0000	+/-1.000	
UST-21-RB-0211 (1102133-05) ug/L				Lab File ID: 0213305.D		Analyzed: 02/18/11 01:02		
Bromofluorobenzene	30.00	104	75 - 120	16.977	16.983	-0.0060	+/-1.000	
Dibromofluoromethane	30.00	107	85 - 115	9.92	9.926	-0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	99.7	70 - 120	11.003	11.003	0.0000	+/-1.000	
Toluene-d8	30.00	98.1	85 - 120	14.635	14.635	0.0000	+/-1.000	
UST-21-MW-38-0211 (1102133-02) ug/L				Lab File ID: 0213302.D		Analyzed: 02/18/11 03:01		
Bromofluorobenzene	30.00	101	75 - 120	16.977	16.983	-0.0060	+/-1.000	
Dibromofluoromethane	30.00	105	85 - 115	9.926	9.926	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	70 - 120	10.997	11.003	-0.0060	+/-1.000	
Toluene-d8	30.00	98.4	85 - 120	14.635	14.635	0.0000	+/-1.000	
UST-21-MW-04-0211 (1102133-03) ug/L				Lab File ID: 0213303.D		Analyzed: 02/18/11 03:31		
Bromofluorobenzene	30.00	105	75 - 120	16.977	16.983	-0.0060	+/-1.000	
Dibromofluoromethane	30.00	108	85 - 115	9.926	9.926	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	99.9	70 - 120	10.997	11.003	-0.0060	+/-1.000	
Toluene-d8	30.00	95.5	85 - 120	14.635	14.635	0.0000	+/-1.000	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B05006
Instrument: MS-VOA3
Calibration: 1042001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
UST-21-MW-40-0211 (1102133-04) ug/L				Lab File ID: 0213304.D		Analyzed: 02/18/11 04:01		
Bromofluorobenzene	30.00	105	75 - 120	16.977	16.983	-0.0060	+/-1.000	
Dibromofluoromethane	30.00	106	85 - 115	9.92	9.926	-0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	106	70 - 120	10.997	11.003	-0.0060	+/-1.000	
Toluene-d8	30.00	99.9	85 - 120	14.634	14.635	-0.0010	+/-1.000	
UST-21-09-0211 (1102133-06) ug/L				Lab File ID: 0213306.D		Analyzed: 02/18/11 04:31		
Bromofluorobenzene	30.00	105	75 - 120	16.977	16.983	-0.0060	+/-1.000	
Dibromofluoromethane	30.00	108	85 - 115	9.92	9.926	-0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	97.6	70 - 120	10.997	11.003	-0.0060	+/-1.000	
Toluene-d8	30.00	99.1	85 - 120	14.634	14.635	-0.0010	+/-1.000	
UST-21-17-0211 (1102133-07) ug/L				Lab File ID: 0213307.D		Analyzed: 02/18/11 05:00		
Bromofluorobenzene	30.00	104	75 - 120	16.977	16.983	-0.0060	+/-1.000	
Dibromofluoromethane	30.00	106	85 - 115	9.926	9.926	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	97.8	70 - 120	11.003	11.003	0.0000	+/-1.000	
Toluene-d8	30.00	97.8	85 - 120	14.635	14.635	0.0000	+/-1.000	
GW01-021111 (1102133-08) ug/L				Lab File ID: 0213308.D		Analyzed: 02/18/11 05:30		
Bromofluorobenzene	30.00	104	75 - 120	16.977	16.983	-0.0060	+/-1.000	
Dibromofluoromethane	30.00	103	85 - 115	9.926	9.926	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	70 - 120	10.997	11.003	-0.0060	+/-1.000	
Toluene-d8	30.00	99.7	85 - 120	14.635	14.635	0.0000	+/-1.000	
LCS Dup (1B17009-BSD1) ug/L				Lab File ID: 0217LCSDE.D		Analyzed: 02/18/11 07:29		
Bromofluorobenzene	30.00	103	75 - 120	16.977	16.983	-0.0060	+/-1.000	
Dibromofluoromethane	30.00	103	85 - 115	9.92	9.926	-0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	70 - 120	10.99	11.003	-0.0130	+/-1.000	
Toluene-d8	30.00	98.0	85 - 120	14.628	14.635	-0.0070	+/-1.000	

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B17009	Laboratory ID:	1B17009-BS1
Preparation:	5030B	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Benzene	50.00	52.9	106	80 - 120
1,2-Dichloroethane	50.00	58.6	117	70 - 130
cis-1,2-Dichloroethene	50.00	52.7	105	70 - 125
trans-1,2-Dichloroethene	50.00	54.6	109	60 - 140
Isopropylbenzene	50.00	57.2	114	75 - 125
Methylene chloride	50.00	51.9	104	55 - 140
Tetrachloroethene	50.00	53.8	108	45 - 150
1,1,1-Trichloroethane	50.00	61.0	122	65 - 130
Trichloroethene	50.00	56.3	113	70 - 125
Vinyl chloride	50.00	59.9	120	50 - 145
Xylenes (total)	150.0	151	100	75 - 130

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	50.00	51.9	104	1.79	30	80 - 120
1,2-Dichloroethane	50.00	61.1	122	4.14	30	70 - 130
cis-1,2-Dichloroethene	50.00	52.0	104	1.30	30	70 - 125
trans-1,2-Dichloroethene	50.00	54.1	108	0.780	30	60 - 140
Isopropylbenzene	50.00	57.7	115	0.929	30	75 - 125
Methylene chloride	50.00	52.8	106	1.58	30	55 - 140
Tetrachloroethene	50.00	52.8	106	1.91	30	45 - 150
1,1,1-Trichloroethane	50.00	60.0	120	1.65	30	65 - 130
Trichloroethene	50.00	56.7	113	0.744	30	70 - 125
Vinyl chloride	50.00	56.5	113	5.70	30	50 - 145
Xylenes (total)	150.0	153	102	1.19	30	75 - 130

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B05006
Instrument: MS-VOA3
Calibration: 1042001

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (1B05006-CCV1)			Lab File ID: 0217CCVE.D			Analyzed: 02/17/11 21:07			
Fluorobenzene	1063298	12.372	1314641	12.359	81	50 - 200	0.0130	+/-0.50	
Chlorobenzene-d5	577401	16.003	660505	15.997	87	50 - 200	0.0060	+/-0.50	
1,4-Dichlorobenzene-d4	638877	17.981	723449	17.974	88	50 - 200	0.0070	+/-0.50	
LCS (1B17009-BS1)			Lab File ID: 0217LS1E.D			Analyzed: 02/17/11 21:37			
Fluorobenzene	1095166	12.371	1063298	12.372	103	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	563138	16.003	577401	16.003	98	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	636330	17.98	638877	17.981	100	50 - 200	-0.0010	+/-0.50	
Blank (1B17009-BLK1)			Lab File ID: 0217BL1E.D			Analyzed: 02/17/11 23:03			
Fluorobenzene	1019789	12.372	1063298	12.372	96	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	521947	16.004	577401	16.003	90	50 - 200	0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	596546	17.981	638877	17.981	93	50 - 200	0.0000	+/-0.50	
TRIP BLANK # 9281 (1102133-01)			Lab File ID: 0213301.D			Analyzed: 02/18/11 00:03			
Fluorobenzene	987545	12.371	1063298	12.372	93	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	506922	16.003	577401	16.003	88	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	600300	17.981	638877	17.981	94	50 - 200	0.0000	+/-0.50	
UST-21-RB-0211 (1102133-05)			Lab File ID: 0213305.D			Analyzed: 02/18/11 01:02			
Fluorobenzene	965295	12.372	1063298	12.372	91	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	501591	16.003	577401	16.003	87	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	570612	17.981	638877	17.981	89	50 - 200	0.0000	+/-0.50	
UST-21-MW-38-0211 (1102133-02)			Lab File ID: 0213302.D			Analyzed: 02/18/11 03:01			
Fluorobenzene	964596	12.372	1063298	12.372	91	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	493517	16.003	577401	16.003	85	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	557715	17.981	638877	17.981	87	50 - 200	0.0000	+/-0.50	
UST-21-MW-04-0211 (1102133-03)			Lab File ID: 0213303.D			Analyzed: 02/18/11 03:31			
Fluorobenzene	909457	12.371	1063298	12.372	86	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	473314	16.003	577401	16.003	82	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	549857	17.981	638877	17.981	86	50 - 200	0.0000	+/-0.50	
UST-21-MW-40-0211 (1102133-04)			Lab File ID: 0213304.D			Analyzed: 02/18/11 04:01			
Fluorobenzene	984175	12.371	1063298	12.372	93	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	498942	16.003	577401	16.003	86	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	588474	17.98	638877	17.981	92	50 - 200	-0.0010	+/-0.50	
UST-21-09-0211 (1102133-06)			Lab File ID: 0213306.D			Analyzed: 02/18/11 04:31			
Fluorobenzene	952320	12.371	1063298	12.372	90	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	491083	16.003	577401	16.003	85	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	560217	17.98	638877	17.981	88	50 - 200	-0.0010	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B05006	Instrument:	MS-VOA3
		Calibration:	1042001

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
UST-21-17-0211 (1102133-07)			Lab File ID: 0213307.D			Analyzed: 02/18/11 05:00			
Fluorobenzene	952954	12.372	1063298	12.372	90	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	485577	16.003	577401	16.003	84	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	564665	17.981	638877	17.981	88	50 - 200	0.0000	+/-0.50	
GW01-021111 (1102133-08)			Lab File ID: 0213308.D			Analyzed: 02/18/11 05:30			
Fluorobenzene	1063955	12.371	1063298	12.372	100	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	539074	16.003	577401	16.003	93	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	618777	17.981	638877	17.981	97	50 - 200	0.0000	+/-0.50	
LCS Dup (1B17009-BSD1)			Lab File ID: 0217LCSDE.D			Analyzed: 02/18/11 07:29			
Fluorobenzene	1022568	12.365	1063298	12.372	96	50 - 200	-0.0070	+/-0.50	
Chlorobenzene-d5	528445	16.003	577401	16.003	92	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	610248	17.98	638877	17.981	96	50 - 200	-0.0010	+/-0.50	

ANALYSIS SEQUENCE SUMMARY

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1C06115	Instrument:	MS-BNA4
Calibration:	1061004		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1C06115-TUN1	SEQ-TUN1.D	02/28/11 19:40
Cal Standard	1C06115-CAL1	SEQ-CAL1.D	02/28/11 19:58
Cal Standard	1C06115-CAL2	SEQ-CAL2.D	02/28/11 20:24
Cal Standard	1C06115-CAL3	SEQ-CAL3.D	02/28/11 20:50
Cal Standard	1C06115-CAL4	SEQ-CAL4.D	02/28/11 21:16
Cal Standard	1C06115-CAL5	SEQ-CAL5.D	02/28/11 21:42
Cal Standard	1C06115-CAL6	SEQ-CAL6.D	02/28/11 22:08
Cal Standard	1C06115-CAL7	SEQ-CAL7.D	02/28/11 22:35
Cal Standard	1C06115-CAL8	SEQ-CAL8.D	02/28/11 23:01
MS Tune	1C06115-TUN2	SEQ-TUN1.D	03/01/11 12:01
Initial Cal Check	1C06115-ICV1	SEQ-ICV1.D	03/01/11 12:19

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Lab File ID:	SEQ-TUN1.D	Injection Date:	02/28/11
Instrument ID:	MS-BNA4	Injection Time:	19:40
Sequence:	1C06115	Lab Sample ID:	1C06115-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	54	PASS
68	Less than 2% of 69	1.39	PASS
69	Less than 200% of 198	52.7	PASS
70	Less than 2% of 69	0.407	PASS
127	40 - 60% of 198	57.4	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.79	PASS
275	10 - 30% of 198	25.3	PASS
365	1 - 200% of 198	3.37	PASS
441	0.001 - 100% of 443	81.8	PASS
442	40 - 200% of 198	103	PASS
443	17 - 23% of 442	20.3	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Lab File ID:	SEQ-TUN1.D	Injection Date:	03/01/11
Instrument ID:	MS-BNA4	Injection Time:	12:01
Sequence:	1C06115	Lab Sample ID:	1C06115-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	52.6	PASS
68	Less than 2% of 69	1.55	PASS
69	Less than 200% of 198	50.4	PASS
70	Less than 2% of 69	0.486	PASS
127	40 - 60% of 198	56.1	PASS
197	Less than 1% of 198	1	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	7.03	PASS
275	10 - 30% of 198	25.6	PASS
365	1 - 200% of 198	3.45	PASS
441	0.001 - 100% of 443	82.1	PASS
442	40 - 200% of 198	103	PASS
443	17 - 23% of 442	19.8	PASS

INITIAL CALIBRATION DATA (Continued)

SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Calibration: 1061004
Instrument: MS-BNA4
Matrix: Water
Calibration Date: 2/28/2011 7:58:20PM

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	0.8277096	5.964029	9.633875	8.915397E-02			CCC (30)	
Acenaphthylene	1.235702	11.26304	9.425	6.665902E-02			15	
Anthracene	1.13295	3.786272	11.52837	6.266625E-02			15	
Benzo(a)anthracene	0.8691476	15.11626	14.71213	5.462316E-02	0.9952477		0.995	
Benzo(a)pyrene	1.056815	4.183578	16.4705	5.396188E-02			CCC (30)	
Benzo(b)fluoranthene	1.338014	9.966544	16.07662	5.173099E-02			15	
Benzo(g,h,i)perylene	0.9482109	13.88728	18.45625	7.723512E-02			15	
Benzo(k)fluoranthene	1.2951	6.235241	16.108	5.845528E-02			15	
Chrysene	0.8791148	11.31297	14.76	4.591394E-02			15	
Dibenz(a,h)anthracene	0.8237431	7.540873	18.024	5.675539E-02			15	
Fluoranthene	1.197097	5.749219	12.9345	5.235663E-02			CCC (30)	
Fluorene	0.7884623	4.944379	10.27338	6.435991E-02			15	
2-Fluorobiphenyl	0.8894126	7.367129	8.767375	5.071162E-02			15	
Indeno(1,2,3-cd)pyrene	1.067942	5.744412	18.02163	5.897508E-02			15	
1-Methylnaphthalene	0.8735331	12.15937	8.4405	5.284201E-02			15	
2-Methylnaphthalene	0.8753044	13.10583	8.321125	5.827663E-02			15	
Naphthalene	1.363682	13.39317	7.482125	3.967633E-02			15	
Phenanthrene	1.17432	1.744274	11.461	5.511778E-02			15	
Pyrene	1.206692	5.463181	13.21437	5.315315E-02			15	
Terphenyl-d14	0.7416898	8.59253	13.40512	3.369558E-02			15	
2,4,6-Tribromophenol	0.1674143	4.178063	10.5764	9.131494E-02			15	
1,4-Dichlorobenzene-d4							15	

INITIAL CALIBRATION CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	MS-BNA4	Calibration:	1061004
Lab File ID:	SEQ-ICV1.D	Calibration Date:	02/28/11 19:58
Sequence:	1C06115	Injection Date:	03/01/11
Lab Sample ID:	1C06115-ICV1	Injection Time:	12:19

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Acenaphthene	A	5.000	5.234	0.8277096	0.8665216		4.7	20
Benzo(a)anthracene	L	5.000	4.970	0.8691476	0.9136814		-0.6	20
Benzo(k)fluoranthene	A	5.000	5.796	1.2951	1.501354		15.9	20
Chrysene	A	5.000	5.406	0.8791148	0.9505258		8.1	20
Dibenz(a,h)anthracene	A	5.000	4.789	0.8237431	0.7889492		-4.2	20
1-Methylnaphthalene	A	5.000	5.030	0.8735331	0.8786867		0.6	20
2-Methylnaphthalene	A	5.000	5.052	0.8753044	0.88448		1.0	20
Naphthalene	A	5.000	5.217	1.363682	1.422778		4.3	20
2-Fluorobiphenyl	A	5.000	5.477	0.8894126	0.974327		9.5	20
Terphenyl-d14	A	5.000	5.816	0.7416898	0.8626973		16.3	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1C06213	Instrument:	MS-BNA4
Calibration:	1061004		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1C06213-TUN1	SEQ-TUN3.D	03/02/11 12:54
Calibration Check	1C06213-CCV1	SEQ-CCV3.D	03/02/11 13:13
Blank	1B15023-BLK1	B15023B1.D	03/02/11 14:35
LCS	1B15023-BS1	B15023L1.D	03/02/11 15:03
LCS Dup	1B15023-BSD1	B15023L2.D	03/02/11 15:30
UST-21-MW-38-0211	1102133-02	0213302.D	03/02/11 15:58
UST-21-MW-04-0211	1102133-03	0213303.D	03/02/11 16:25
UST-21-MW-40-0211	1102133-04	0213304.D	03/02/11 16:52
UST-21-RB-0211	1102133-05	0213305.D	03/02/11 17:19
UST-21-09-0211	1102133-06	0213306.D	03/02/11 17:46
UST-21-17-0211	1102133-07	0213307.D	03/02/11 18:13
GW01-021111	1102133-08	0213308.D	03/02/11 18:40

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Lab File ID:	SEQ-TUN3.D	Injection Date:	03/02/11
Instrument ID:	MS-BNA4	Injection Time:	12:54
Sequence:	1C06213	Lab Sample ID:	1C06213-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	56.2	PASS
68	Less than 2% of 69	1.48	PASS
69	Less than 200% of 198	55	PASS
70	Less than 2% of 69	0.451	PASS
127	40 - 60% of 198	59.1	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.9	PASS
275	10 - 30% of 198	25.4	PASS
365	1 - 200% of 198	3.32	PASS
441	0.001 - 100% of 443	81.7	PASS
442	40 - 200% of 198	99.1	PASS
443	17 - 23% of 442	20.9	PASS

CONTINUING CALIBRATION CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Instrument ID:	MS-BNA4	Calibration:	1061004
Lab File ID:	SEQ-CCV3.D	Calibration Date:	02/28/11 19:58
Sequence:	1C06213	Injection Date:	03/02/11
Lab Sample ID:	1C06213-CCV1	Injection Time:	13:13

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	5.000	5.268	0.8277096	0.8720707		5.4	20
Benzo(a)anthracene	L	5.000	4.675	0.8691476	0.8570854		-6.5	20
Benzo(k)fluoranthene	A	5.000	5.519	1.2951	1.429537		10.4	20
Chrysene	A	5.000	5.098	0.8791148	0.8964421		2.0	20
Dibenz(a,h)anthracene	A	5.000	4.213	0.8237431	0.6940418		-15.7	20
1-Methylnaphthalene	A	5.000	4.976	0.8735331	0.8693391		-0.5	20
2-Methylnaphthalene	A	5.000	5.492	0.8753044	0.9615405		9.9	20
Naphthalene	A	5.000	5.709	1.363682	1.557068		14.2	20
2-Fluorobiphenyl	A	5.000	5.870	0.8894126	1.04422		17.4	20
Terphenyl-d14	A	5.000	5.471	0.7416898	0.8115043		9.4	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Batch: 1B15023 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST-21-MW-38-0211	1102133-02	02/16/11 16:33	1,060.00	1.00
UST-21-MW-04-0211	1102133-03	02/16/11 16:33	1,020.00	1.00
UST-21-MW-40-0211	1102133-04	02/16/11 16:33	1,060.00	1.00
UST-21-RB-0211	1102133-05	02/16/11 16:33	1,000.00	1.00
UST-21-09-0211	1102133-06	02/16/11 16:33	1,060.00	1.00
UST-21-17-0211	1102133-07	02/16/11 16:33	1,060.00	1.00
GW01-021111	1102133-08	02/16/11 16:33	1,080.00	1.00
Blank	1B15023-BLK1	02/16/11 16:33	1,000.00	1.00
LCS	1B15023-BS1	02/16/11 16:33	1,000.00	1.00
LCS Dup	1B15023-BSD1	02/16/11 16:33	1,000.00	1.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Matrix: Laboratory ID: 1B15023-BLK1 File ID: B15023B1.D

Sampled: Prepared: Analyzed: 03/02/11 14:35

Solids: Preparation: EXT_3510 Dilution:

Batch: 1B15023 Sequence: 1C06213 Calibration: 1061004 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0200	0.100	U
56-55-3	Benzo(a)anthracene		0.0200	0.100	U
207-08-9	Benzo(k)fluoranthene		0.0200	0.100	U
218-01-9	Chrysene		0.0200	0.100	U
53-70-3	Dibenz(a,h)anthracene		0.0200	0.100	U
90-12-0	1-Methylnaphthalene		0.0200	0.100	U
91-57-6	2-Methylnaphthalene		0.0200	0.100	U
91-20-3	Naphthalene		0.0200	0.100	Q, U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	35.96	71.9	34 - 167	
Terphenyl-d14	50.00	38.35	76.7	34 - 167	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1C06213
Instrument: MS-BNA4
Calibration: 1061004

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1C06213-CCV1) ug/mL				Lab File ID: SEQ-CCV3.D		Analyzed: 03/02/11 13:13		
2-Fluorobiphenyl	5.000	117	80 - 120	8.764	8.764	0.0000	+/-0.500	
Terphenyl-d14	5.000	109	80 - 120	13.403	13.403	0.0000	+/-0.500	
Blank (1B15023-BLK1) ug/L				Lab File ID: B15023B1.D		Analyzed: 03/02/11 14:35		
2-Fluorobiphenyl	50.00	71.9	34 - 167	8.764	8.764	0.0000	+/-0.500	
Terphenyl-d14	50.00	76.7	34 - 167	13.412	13.403	0.0090	+/-0.500	
LCS (1B15023-BS1) ug/L				Lab File ID: B15023L1.D		Analyzed: 03/02/11 15:03		
2-Fluorobiphenyl	50.00	63.9	34 - 167	8.764	8.764	0.0000	+/-0.500	
Terphenyl-d14	50.00	64.3	34 - 167	13.402	13.403	-0.0010	+/-0.500	
LCS Dup (1B15023-BSD1) ug/L				Lab File ID: B15023L2.D		Analyzed: 03/02/11 15:30		
2-Fluorobiphenyl	50.00	86.3	34 - 167	8.773	8.764	0.0090	+/-0.500	
Terphenyl-d14	50.00	63.4	34 - 167	13.403	13.403	0.0000	+/-0.500	
UST-21-MW-38-0211 (1102133-02) ug/L				Lab File ID: 0213302.D		Analyzed: 03/02/11 15:58		
2-Fluorobiphenyl	47.17	66.6	34 - 167	8.764	8.764	0.0000	+/-0.500	
Terphenyl-d14	47.17	49.3	34 - 167	13.403	13.403	0.0000	+/-0.500	
UST-21-MW-04-0211 (1102133-03) ug/L				Lab File ID: 0213303.D		Analyzed: 03/02/11 16:25		
2-Fluorobiphenyl	49.02	64.0	34 - 167	8.773	8.764	0.0090	+/-0.500	
Terphenyl-d14	49.02	37.7	34 - 167	13.412	13.403	0.0090	+/-0.500	
UST-21-MW-40-0211 (1102133-04) ug/L				Lab File ID: 0213304.D		Analyzed: 03/02/11 16:52		
2-Fluorobiphenyl	47.17	71.2	34 - 167	8.764	8.764	0.0000	+/-0.500	
Terphenyl-d14	47.17	87.6	34 - 167	13.412	13.403	0.0090	+/-0.500	
UST-21-RB-0211 (1102133-05) ug/L				Lab File ID: 0213305.D		Analyzed: 03/02/11 17:19		
2-Fluorobiphenyl	50.00	69.9	34 - 167	8.773	8.764	0.0090	+/-0.500	
Terphenyl-d14	50.00	82.7	34 - 167	13.412	13.403	0.0090	+/-0.500	
UST-21-09-0211 (1102133-06) ug/L				Lab File ID: 0213306.D		Analyzed: 03/02/11 17:46		
2-Fluorobiphenyl	47.17	70.9	34 - 167	8.764	8.764	0.0000	+/-0.500	
Terphenyl-d14	47.17	85.4	34 - 167	13.412	13.403	0.0090	+/-0.500	
UST-21-17-0211 (1102133-07) ug/L				Lab File ID: 0213307.D		Analyzed: 03/02/11 18:13		
2-Fluorobiphenyl	47.17	68.1	34 - 167	8.782	8.764	0.0180	+/-0.500	
Terphenyl-d14	47.17	84.9	34 - 167	13.458	13.403	0.0550	+/-0.500	
GW01-021111 (1102133-08) ug/L				Lab File ID: 0213308.D		Analyzed: 03/02/11 18:40		
2-Fluorobiphenyl	46.30	72.2	34 - 167	8.773	8.764	0.0090	+/-0.500	
Terphenyl-d14	46.30	78.0	34 - 167	13.412	13.403	0.0090	+/-0.500	

LCS / LCS DUPLICATE RECOVERY

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B15023	Laboratory ID:	1B15023-BS1
Preparation:	EXT_3510	Initial/Final:	1000 mL / 1 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Acenaphthene	1.000	0.7203	72.0	41 - 132
Benzo(a)anthracene	1.000	1.038	104	58 - 141
Benzo(k)fluoranthene	1.000	0.7692	76.9	49 - 165
Chrysene	1.000	0.8969	89.7	51 - 155
Dibenz(a,h)anthracene	1.000	0.5598	56.0	28 - 153
1-Methylnaphthalene	1.000	0.6948	69.5	35 - 131
2-Methylnaphthalene	1.000	0.6812	68.1	36 - 121
Naphthalene	1.000	0.6511	65.1	39 - 125

ANALYTE	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Acenaphthene	1.000	0.9092	90.9	23.2	30	41 - 132
Benzo(a)anthracene	1.000	0.8925	89.2	15.0	30	58 - 141
Benzo(k)fluoranthene	1.000	0.8723	87.2	12.6	30	49 - 165
Chrysene	1.000	0.8074	80.7	10.5	30	51 - 155
Dibenz(a,h)anthracene	1.000	0.4166	41.7	29.3	30	28 - 153
1-Methylnaphthalene	1.000	0.8988	89.9	25.6	30	35 - 131
2-Methylnaphthalene	1.000	0.8933	89.3	26.9	30	36 - 121
Naphthalene	1.000	0.8861	88.6	30.6 *	30	39 - 125

INTERNAL STANDARD AREA AND RT SUMMARY
SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1C06213
Instrument: MS-BNA4
Calibration: 1061004

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (1C06213-CCV1)			Lab File ID: SEQ-CCV3.D			Analyzed: 03/02/11 13:13			
Phenanthrene-d10	135306	11.432	106904	11.432	127	50 - 200	0.0000	+/-0.50	
Perylene-d12	76785	16.536	80420	16.536	95	50 - 200	0.0000	+/-0.50	
Blank (1B15023-BLK1)			Lab File ID: B15023B1.D			Analyzed: 03/02/11 14:35			
Phenanthrene-d10	146400	11.432	135306	11.432	108	50 - 200	0.0000	+/-0.50	
Perylene-d12	73014	16.545	76785	16.536	95	50 - 200	0.0090	+/-0.50	
LCS (1B15023-BS1)			Lab File ID: B15023L1.D			Analyzed: 03/02/11 15:03			
Phenanthrene-d10	155176	11.432	135306	11.432	115	50 - 200	0.0000	+/-0.50	
Perylene-d12	118823	16.535	76785	16.536	155	50 - 200	-0.0010	+/-0.50	
LCS Dup (1B15023-BSD1)			Lab File ID: B15023L2.D			Analyzed: 03/02/11 15:30			
Phenanthrene-d10	138564	11.432	135306	11.432	102	50 - 200	0.0000	+/-0.50	
Perylene-d12	75555	16.535	76785	16.536	98	50 - 200	-0.0010	+/-0.50	
UST-21-MW-38-0211 (1102133-02)			Lab File ID: 0213302.D			Analyzed: 03/02/11 15:58			
Phenanthrene-d10	139702	11.432	135306	11.432	103	50 - 200	0.0000	+/-0.50	
Perylene-d12	71132	16.545	76785	16.536	93	50 - 200	0.0090	+/-0.50	
UST-21-MW-04-0211 (1102133-03)			Lab File ID: 0213303.D			Analyzed: 03/02/11 16:25			
Phenanthrene-d10	143441	11.432	135306	11.432	106	50 - 200	0.0000	+/-0.50	
Perylene-d12	93513	16.535	76785	16.536	122	50 - 200	-0.0010	+/-0.50	
UST-21-MW-40-0211 (1102133-04)			Lab File ID: 0213304.D			Analyzed: 03/02/11 16:52			
Phenanthrene-d10	146037	11.432	135306	11.432	108	50 - 200	0.0000	+/-0.50	
Perylene-d12	84428	16.545	76785	16.536	110	50 - 200	0.0090	+/-0.50	
UST-21-RB-0211 (1102133-05)			Lab File ID: 0213305.D			Analyzed: 03/02/11 17:19			
Phenanthrene-d10	148520	11.432	135306	11.432	110	50 - 200	0.0000	+/-0.50	
Perylene-d12	102983	16.545	76785	16.536	134	50 - 200	0.0090	+/-0.50	
UST-21-09-0211 (1102133-06)			Lab File ID: 0213306.D			Analyzed: 03/02/11 17:46			
Phenanthrene-d10	155870	11.432	135306	11.432	115	50 - 200	0.0000	+/-0.50	
Perylene-d12	90601	16.545	76785	16.536	118	50 - 200	0.0090	+/-0.50	
UST-21-17-0211 (1102133-07)			Lab File ID: 0213307.D			Analyzed: 03/02/11 18:13			
Phenanthrene-d10	145701	11.487	135306	11.432	108	50 - 200	0.0550	+/-0.50	
Perylene-d12	79391	16.572	76785	16.536	103	50 - 200	0.0360	+/-0.50	
GW01-021111 (1102133-08)			Lab File ID: 0213308.D			Analyzed: 03/02/11 18:40			
Phenanthrene-d10	135714	11.432	135306	11.432	100	50 - 200	0.0000	+/-0.50	
Perylene-d12	85437	16.545	76785	16.536	111	50 - 200	0.0090	+/-0.50	

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B03607	Instrument:	GL-GCFID2
Calibration:	1036001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1B03607-CAL6	003F0301.D	02/03/11 18:28
Cal Standard	1B03607-CAL5	004F0401.D	02/03/11 19:10
Cal Standard	1B03607-CAL4	005F0501.D	02/03/11 19:52
Cal Standard	1B03607-CAL3	006F0601.D	02/03/11 20:34
Cal Standard	1B03607-CAL2	007F0701.D	02/03/11 21:17
Cal Standard	1B03607-CAL1	008F0801.D	02/03/11 21:59
Initial Cal Check	1B03607-ICV1	009F0901.D	02/03/11 22:40

INITIAL CALIBRATION STANDARDS

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B03607	Instrument:	GL-GCFID2
Calibration:	1036001		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
10K0198	FLPRO CAL6 85ppm	1B03607-CAL6	003F0301.D	02/03/11 18:28
10K0199	FLPRO CAL5 850ppm	1B03607-CAL5	004F0401.D	02/03/11 19:10
10K0200	FLPRO CAL4 2550ppm	1B03607-CAL4	005F0501.D	02/03/11 19:52
10L0688	FLPRO CAL3 4250ppm	1B03607-CAL3	006F0601.D	02/03/11 20:34
10K0202	FLPRO CAL2 5950ppm	1B03607-CAL2	007F0701.D	02/03/11 21:17
10K0203	FLPRO CAL1 8500ppm	1B03607-CAL1	008F0801.D	02/03/11 21:59

INITIAL CALIBRATION DATA (Continued)

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Calibration:	1036001	Instrument:	GL-GCFID2
Matrix:	Water	Calibration Date:	2/3/2011 6:28:31PM

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Petroleum Range Organics	1723.97	3.613027	2.783	1.223221E-02			20	
2-Fluorobiphenyl	2071.669	7.244769	11.0885	5.505095E-02			20	
o-Terphenyl	2435.429	4.459164	16.66467	4.479577E-02			20	

INITIAL CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	009F0901.D	Calibration Date:	02/03/11 18:28
Sequence:	1B03607	Injection Date:	02/03/11
Lab Sample ID:	1B03607-ICV1	Injection Time:	22:40

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Petroleum Range Organics	A	4000	4813	1723.97	2074.555		20.3	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B04907	Instrument:	GL-GCFID2
Calibration:	1036001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1B04907-CCV1	002F0201.D	02/17/11 11:50
Calibration Check	1B04907-CCV2	007F0701.D	02/17/11 15:21
Blank	1B16007-BLK1	008F0801.D	02/17/11 16:04
LCS	1B16007-BS1	009F0901.D	02/17/11 16:46
Calibration Check	1B04907-CCV3	021F2101.D	02/18/11 01:13
UST-21-MW-38-0211	1102133-02	024F2401.D	02/18/11 03:21
UST-21-MW-04-0211	1102133-03	025F2501.D	02/18/11 04:03
UST-21-MW-40-0211	1102133-04	026F2601.D	02/18/11 04:45
UST-21-RB-0211	1102133-05	027F2701.D	02/18/11 05:27
UST-21-09-0211	1102133-06	028F2801.D	02/18/11 06:10
GW01-021111	1102133-08	030F3001.D	02/18/11 07:34
Calibration Check	1B04907-CCV4	031F3101.D	02/18/11 08:16

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	002F0201.D	Calibration Date:	02/03/11 18:28
Sequence:	1B04907	Injection Date:	02/17/11
Lab Sample ID:	1B04907-CCV1	Injection Time:	11:50

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3992	1723.97	1619.365		-6.1	25
2-Fluorobiphenyl	A	25.00	24.19	2071.669	2004.32		-3.3	25
o-Terphenyl	A	25.00	23.29	2435.429	2269.28		-6.8	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	007F0701.D	Calibration Date:	02/03/11 18:28
Sequence:	1B04907	Injection Date:	02/17/11
Lab Sample ID:	1B04907-CCV2	Injection Time:	15:21

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3798	1723.97	1540.64		-10.6	25
2-Fluorobiphenyl	A	25.00	23.32	2071.669	1932.72		-6.7	25
o-Terphenyl	A	25.00	22.65	2435.429	2206.92		-9.4	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	021F2101.D	Calibration Date:	02/03/11 18:28
Sequence:	1B04907	Injection Date:	02/18/11
Lab Sample ID:	1B04907-CCV3	Injection Time:	01:13

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4361	1723.97	1769.067		2.6	25
2-Fluorobiphenyl	A	25.00	27.32	2071.669	2263.72		9.3	25
o-Terphenyl	A	25.00	26.09	2435.429	2541.64		4.4	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	031F3101.D	Calibration Date:	02/03/11 18:28
Sequence:	1B04907	Injection Date:	02/18/11
Lab Sample ID:	1B04907-CCV4	Injection Time:	08:16

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3933	1723.97	1595.223		-7.5	25
2-Fluorobiphenyl	A	25.00	21.98	2071.669	1821.48		-12.1	25
o-Terphenyl	A	25.00	23.42	2435.429	2281.72		-6.3	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Sequence:	1B05208	Instrument:	GL-GCFID2
Calibration:	1036001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1B05208-CCV1	002F0201.D	02/18/11 11:24
UST-21-17-0211	1102133-07	003F0301.D	02/18/11 12:06
Calibration Check	1B05208-CCV2	010F1001.D	02/18/11 17:03

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	002F0201.D	Calibration Date:	02/03/11 18:28
Sequence:	1B05208	Injection Date:	02/18/11
Lab Sample ID:	1B05208-CCV1	Injection Time:	11:24

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4036	1723.97	1637.152		-5.0	25
2-Fluorobiphenyl	A	25.00	23.01	2071.669	1906.88		-8.0	25
o-Terphenyl	A	25.00	23.67	2435.429	2306.12		-5.3	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	010F1001.D	Calibration Date:	02/03/11 18:28
Sequence:	1B05208	Injection Date:	02/18/11
Lab Sample ID:	1B05208-CCV2	Injection Time:	17:03

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4445	1723.97	1803.115		4.6	25
2-Fluorobiphenyl	A	25.00	25.24	2071.669	2091.4		1.0	25
o-Terphenyl	A	25.00	26.74	2435.429	2605.2		7.0	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Batch: 1B16007 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST-21-MW-38-0211	1102133-02	02/16/11 13:37	1,060.00	2.00
UST-21-MW-04-0211	1102133-03	02/16/11 13:37	1,000.00	2.00
UST-21-MW-40-0211	1102133-04	02/16/11 13:37	1,060.00	2.00
UST-21-RB-0211	1102133-05	02/16/11 13:37	800.00	2.00
UST-21-09-0211	1102133-06	02/16/11 13:37	1,020.00	2.00
UST-21-17-0211	1102133-07	02/16/11 13:37	800.00	2.00
GW01-021111	1102133-08	02/16/11 13:37	1,080.00	2.00
Blank	1B16007-BLK1	02/16/11 13:37	1,000.00	2.00
LCS	1B16007-BS1	02/16/11 13:37	1,000.00	2.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Matrix: Laboratory ID: 1B16007-BLK1 File ID: 008F0801.D

Sampled: Prepared: Analyzed: 02/17/11 16:04

Solids: Preparation: EXT_3510 Dilution:

Batch: 1B16007 Sequence: 1B04907 Calibration: 1036001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics		0.170	0.680	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.03139	62.8	50 - 150	
o-Terphenyl	0.05000	0.04209	84.2	82 - 142	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Sequence: 1B04907
Instrument: GL-GCFID2
Calibration: 1036001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1B04907-CCV1) mg/L				Lab File ID: 002F0201.D		Analyzed: 02/17/11 11:50		
2-Fluorobiphenyl	25.00	96.8	75 - 125	11.02	11.02	0.0000	+/-0.050	
o-Terphenyl	25.00	93.2	75 - 125	16.6	16.6	0.0000	+/-0.050	
Calibration Check (1B04907-CCV2) mg/L				Lab File ID: 007F0701.D		Analyzed: 02/17/11 15:21		
2-Fluorobiphenyl	25.00	93.3	75 - 125	11.013	11.02	-0.0070	+/-0.050	
o-Terphenyl	25.00	90.6	75 - 125	16.593	16.6	-0.0070	+/-0.050	
Blank (1B16007-BLK1) mg/L				Lab File ID: 008F0801.D		Analyzed: 02/17/11 16:04		
2-Fluorobiphenyl	0.05000	62.8	50 - 150	11.033	11.02	0.0130	+/-0.050	
o-Terphenyl	0.05000	84.2	82 - 142	16.6	16.6	0.0000	+/-0.050	
LCS (1B16007-BS1) mg/L				Lab File ID: 009F0901.D		Analyzed: 02/17/11 16:46		
2-Fluorobiphenyl	0.05000	87.9	50 - 150	11.013	11.02	-0.0070	+/-0.050	
o-Terphenyl	0.05000	88.5	82 - 142	16.59	16.6	-0.0100	+/-0.050	
Calibration Check (1B04907-CCV3) mg/L				Lab File ID: 021F2101.D		Analyzed: 02/18/11 01:13		
2-Fluorobiphenyl	25.00	109	75 - 125	11.003	11.02	-0.0170	+/-0.050	
o-Terphenyl	25.00	104	75 - 125	16.59	16.6	-0.0100	+/-0.050	
UST-21-MW-38-0211 (1102133-02) mg/L				Lab File ID: 024F2401.D		Analyzed: 02/18/11 03:21		
2-Fluorobiphenyl	0.04717	73.1	50 - 150	11.02	11.02	0.0000	+/-0.050	
o-Terphenyl	0.04717	80.6	82 - 142	16.593	16.6	-0.0070	+/-0.050	*
UST-21-MW-04-0211 (1102133-03) mg/L				Lab File ID: 025F2501.D		Analyzed: 02/18/11 04:03		
2-Fluorobiphenyl	0.05000	77.4	50 - 150	11	11.02	-0.0200	+/-0.050	
o-Terphenyl	0.05000	87.0	82 - 142	16.59	16.6	-0.0100	+/-0.050	
UST-21-MW-40-0211 (1102133-04) mg/L				Lab File ID: 026F2601.D		Analyzed: 02/18/11 04:45		
2-Fluorobiphenyl	0.04717	56.5	50 - 150	11.033	11.02	0.0130	+/-0.050	
o-Terphenyl	0.04717	68.8	82 - 142	16.593	16.6	-0.0070	+/-0.050	*
UST-21-RB-0211 (1102133-05) mg/L				Lab File ID: 027F2701.D		Analyzed: 02/18/11 05:27		
2-Fluorobiphenyl	0.06250	69.6	50 - 150	11.023	11.02	0.0030	+/-0.050	
o-Terphenyl	0.06250	90.5	82 - 142	16.593	16.6	-0.0070	+/-0.050	
UST-21-09-0211 (1102133-06) mg/L				Lab File ID: 028F2801.D		Analyzed: 02/18/11 06:10		
2-Fluorobiphenyl	0.04902	63.7	50 - 150	11.03	11.02	0.0100	+/-0.050	
o-Terphenyl	0.04902	86.8	82 - 142	16.593	16.6	-0.0070	+/-0.050	
GW01-021111 (1102133-08) mg/L				Lab File ID: 030F3001.D		Analyzed: 02/18/11 07:34		
2-Fluorobiphenyl	0.04630	58.2	50 - 150	11.046	11.02	0.0260	+/-0.050	
o-Terphenyl	0.04630	67.3	82 - 142	16.6	16.6	0.0000	+/-0.050	*

SURROGATE STANDARD RECOVERY AND RT SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B04907	Instrument:	GL-GCFID2
		Calibration:	1036001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1B04907-CCV4) mg/L				Lab File ID: 031F3101.D		Analyzed: 02/18/11 08:16		
2-Fluorobiphenyl	25.00	87.9	75 - 125	11.01	11.02	-0.0100	+/-0.050	
o-Terphenyl	25.00	93.7	75 - 125	16.59	16.6	-0.0100	+/-0.050	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B05208
Instrument: GL-GCFID2
Calibration: 1036001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1B05208-CCV1) mg/L				Lab File ID: 002F0201.D		Analyzed: 02/18/11 11:24		
2-Fluorobiphenyl	25.00	92.0	75 - 125	11.013	11.013	0.0000	+/-0.050	
o-Terphenyl	25.00	94.7	75 - 125	16.59	16.59	0.0000	+/-0.050	
UST-21-17-0211 (1102133-07) mg/L				Lab File ID: 003F0301.D		Analyzed: 02/18/11 12:06		
2-Fluorobiphenyl	0.06250	115	50 - 150	11.003	11.013	-0.0100	+/-0.050	
o-Terphenyl	0.06250	86.2	82 - 142	16.593	16.59	0.0030	+/-0.050	
Calibration Check (1B05208-CCV2) mg/L				Lab File ID: 010F1001.D		Analyzed: 02/18/11 17:03		
2-Fluorobiphenyl	25.00	101	75 - 125	11.006	11.013	-0.0070	+/-0.050	
o-Terphenyl	25.00	107	75 - 125	16.59	16.59	0.0000	+/-0.050	

LCS / LCS DUPLICATE RECOVERY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B16007	Laboratory ID:	1B16007-BS1
Preparation:	EXT_3510	Initial/Final:	1000 mL / 2 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Petroleum Range Organics	3.200	2.578	80.6	55 - 118

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC **SDG:** CTOJM01_008

Client: Tetra Tech NUS, Inc. (T010) **Project:** CTO JM01 NAS Pensacola_2010

Matrix: Water **Instrument:** GL-GCFID2

Analyte	MDL	MRL	Units	Method
Petroleum Range Organics	0.170	0.680	mg/L	FLPRO

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **G. WALKER** **DATE:** **MARCH 30, 2011**

FROM: **A. COGNETTI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION- SELECT VOC/SELECT PAH/PET**
CTO JM01, NAS PENSACOLA
SAMPLE DELIVERY GROUP (SDG) – CTOJM01_007

SAMPLES: 13/Aqueous/Select VOC

GW02-020911	Trip Blank 9283	UST21-MW01-0211
UST21-MW10-0211	UST21-MW14-0211	UST21-MW16-0211
UST21-MW23-0211	UST21-MW37-0211	UST21-MW54-0211
UST21-MW60-0211	UST21-MW62-0211	UST21-MW63-0211
UST21-MW64-0211		

12/Aqueous/Select PAH/PET

GW02-020911	UST21-MW01-0211	UST21-MW10-0211
UST21-MW14-0211	UST21-MW16-0211	UST21-MW23-0211
UST21-MW37-0211	UST21-MW54-0211	UST21-MW60-0211
UST21-MW62-0211	UST21-MW63-0211	UST21-MW64-0211

OVERVIEW

The sample set for CTO JM01 NAS PENSACOLA, SDG CTOJM01_007 consists of twelve (12) aqueous environmental samples and a trip blank analyzed for select Volatile Organic Compounds (VOCs). The select VOCs were benzene, 1,2-dichloroethane, cis- 1,2-dichloroethene, trans- 1,2-dichloroethene, isopropylbenzene, methylene chloride, tetrachloroethene, 1,1,1-trichloroethane, trichloroethene, vinyl chloride and total xylenes. The twelve (12) aqueous environmental samples were also analyzed for select Polycyclic Aromatic Hydrocarbons (PAH and petroleum range organics (PET). The select PAHs were acenaphthene, benzo(a)anthracene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, 1-methylnaphthalene, 2-methylnaphthalene and naphthalene. There is one field duplicate pair contained within this SDG: GW02-020911/UST21-MW62-0211.

The samples were collected by Tetra Tech on February 9, 10, and 11 2011 and analyzed by Empirical Laboratories, LLC. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using SW-846 Methods 8260B, 8270C and FL-PRO analysis and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • GC/MS Tuning
• Initial and Continuing Calibration
* • Laboratory Method Blank
• Surrogate Recoveries
* • Blank Spike/Blank Spike Duplicate Results
* • Matrix Spike/Matrix Spike Duplicate Results
* • Internal Standard Recoveries
* • Compound Identification

* • Field Duplicate Precision
* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

VOC

The continuing calibration percent difference (%D) for 1,1,1-trichloroethane was greater than the 20% quality control limit on February 16, 2011 @ 9:04 on instrument MS-VOA3. The nondetected 1,1,1-trichloroethane results in the affected samples UST21-MW63-0211, UST21-MW64-0211, UST21-MW60-0211, UST21-MW54-0211, UST21-MW01-0211 and UST21-MW10-0211 were qualified as estimated (UJ).

PAH

The continuing calibration %D for benzo(f)fluoranthene was greater than the 20% quality control limit on February 22, 2011 @ 3:55 on instrument MS-BNA4. The nondetected benzo(k)fluoranthene results in the affected samples UST21-MW63-0211, UST21-MW64-0211, UST21-MW60-0211, UST21-MW54-0211, UST21-MW01-0211 and UST21-MW62-0211 were qualified as estimated (UJ).

The continuing calibration %D for dibenzo(a,h)anthracene was greater than the 20% quality control limit on February 22, 2011 @ 18:04. The nondetected dibenzo(a,h)anthrcene results in the affected samples UST21-MW10-0211, UST21-GW23-0211, GW02-020911, UST21-MW16-0211, UST21-MW14-0211 and UST21-MW37-0211 were qualified as estimated (UJ).

PET

The percent recovery (%R) of surrogate o-terphenyl was less than the lower quality control limit but greater than 10% in samples UST21-MW63-0211 (79.9% versus a lower limit of 82%) and UST21-MW14-0211 (75% versus a lower limit of 82). The positive and nondetected TPH results in samples UST21-MW63-0211 and UST21-MW14-0211 were qualified as estimated (J) and (UJ), respectively.

ADDITIONAL COMMENTS

The %R of base/neutral surrogate 2-fluorobiphenyl was less than the lower quality control limit in sample UST21-MW64-0211 (26.8% versus a lower limit of 34%). No action was taken on this noncompliance.

All samples had laboratory reported Method Detection Limits (MDL) for the dibenzo(a,h)anthracene greater than the Project Action Limit (PAL) of 0.005 ug/L listed in the Sampling and Analysis Plan (SAP). The SAP had noted that the laboratory MDL was greater than the PAL and no action was taken for this issue.

Sample UST21-MW37-0211 was diluted 10X in order to obtain a concentration of acenaphthene within instrument calibration range.

The laboratory reported 1,2-dichloroethane even though this compound was not requested on the chain of custody and in the project SAP. All results were nondetected. No action was taken.

Total 1,2-dichloroethene was identified in the SAP and on the chain of custody. Because both cis and trans-1,2-dichloroethene were reported, a total 1,2-dichloroethene result can be calculated, if necessary. No action was required.

Nondetected results were reported to the method detection limit (MDL).

EXECUTIVE SUMMARY

Laboratory Performance Issues: The continuing calibration %Ds for 1,1,1-trichloroethane, benzo(k)fluoranthene and dibenzo(a,h)anthracene exceeded quality control limits. The TPH surrogate recovery was low in samples UST21-MW63-0211 and UST21-MW14-0211.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech NUS
Ann Cognetti
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02200	NSAMPLE	GW02-020911			TRIP BLANK 9283			UST21-MW01-0211			UST21-MW10-0211		
SDG: CTOJM01_007	LAB_ID	1102113-09			1102113-13			1102113-05			1102113-06		
FRACTION: OV	SAMP_DATE	2/9/2011			2/11/2011			2/10/2011			2/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.29	U		0.29	U		0.29	UJ	C	0.29	UJ	C
1,2-DICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
BENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
CIS-1,2-DICHLOROETHENE		0.45	U		0.45	U		0.45	U		1.41		
ISOPROPYLBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
METHYLENE CHLORIDE		0.27	U		0.27	U		0.27	U		0.27	U	
TETRACHLOROETHENE		0.17	U		0.17	U		0.17	U		0.17	U	
TOTAL XYLENES		0.22	U		0.22	U		0.22	U		0.22	U	
TRANS-1,2-DICHLOROETHENE		0.53	U		0.53	U		0.53	U		0.53	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		0.2	U		0.2	U		0.2	U		0.932	J	P

PROJ_NO: 02200	NSAMPLE	UST21-MW14-0211			UST21-MW16-0211			UST21-MW23-0211			UST21-MW37-0211		
SDG: CTOJM01_007	LAB_ID	1102113-11			1102113-10			1102113-07			1102113-12		
FRACTION: OV	SAMP_DATE	2/10/2011			2/10/2011			2/10/2011			2/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
BENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
CIS-1,2-DICHLOROETHENE		0.778	J	P	0.45	U		0.45	U		0.45	U	
ISOPROPYLBENZENE		0.15	U		0.15	U		0.252	J	P	0.506	J	P
METHYLENE CHLORIDE		0.27	U		0.27	U		0.27	U		0.27	U	
TETRACHLOROETHENE		0.17	U		0.17	U		0.17	U		0.17	U	
TOTAL XYLENES		0.22	U		0.22	U		0.22	U		0.815	J	P
TRANS-1,2-DICHLOROETHENE		0.53	U		0.53	U		0.53	U		0.53	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		4.7			0.602	J	P	0.2	U		0.291	J	P

PROJ_NO: 02200	NSAMPLE	UST21-MW54-0211			UST21-MW60-0211			UST21-MW62-0211			UST21-MW63-0211		
SDG: CTOJM01_007	LAB_ID	1102113-04			1102113-03			1102113-08			1102113-01		
FRACTION: OV	SAMP_DATE	2/10/2011			2/10/2011			2/9/2011			2/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.29	UJ	C	0.29	UJ	C	0.29	U		0.29	UJ	C
1,2-DICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
BENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
CIS-1,2-DICHLOROETHENE		5.46			0.598	J	P	0.45	U		0.45	U	
ISOPROPYLBENZENE		0.15	U		2.32			0.15	U		0.15	U	
METHYLENE CHLORIDE		0.27	U		0.27	U		0.27	U		0.27	U	
TETRACHLOROETHENE		0.17	U		0.17	U		0.17	U		0.17	U	
TOTAL XYLENES		0.22	U		0.355	J	P	0.22	U		0.22	U	
TRANS-1,2-DICHLOROETHENE		1.55			0.53	U		0.53	U		0.53	U	
TRICHLOROETHENE		0.5	U		0.5	U		0.5	U		0.5	U	
VINYL CHLORIDE		2.34			0.476	J	P	0.2	U		0.2	U	

PROJ_NO: 02200	NSAMPLE	UST21-MW64-0211
SDG: CTOJM01_007	LAB_ID	1102113-02
FRACTION: OV	SAMP_DATE	2/10/2011
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE	0.29	UJ	C
1,2-DICHLOROETHANE	0.22	U	
BENZENE	0.14	U	
CIS-1,2-DICHLOROETHENE	0.45	U	
ISOPROPYLBENZENE	0.15	U	
METHYLENE CHLORIDE	0.27	U	
TETRACHLOROETHENE	0.17	U	
TOTAL XYLENES	0.409	J	P
TRANS-1,2-DICHLOROETHENE	0.53	U	
TRICHLOROETHENE	0.5	U	
VINYL CHLORIDE	0.2	U	

PROJ_NO: 02200	NSAMPLE	GW02-020911			UST21-MW01-0211			UST21-MW10-0211			UST21-MW14-0211		
SDG: CTOJM01_007	LAB_ID	1102113-09			1102113-05			1102113-06			1102113-11		
FRACTION: PAH	SAMP_DATE	2/9/2011			2/10/2011			2/10/2011			2/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1-METHYLNAPHTHALENE		0.0472	U		0.05	U		0.05	U		0.0481	U	
2-METHYLNAPHTHALENE		0.0472	U		0.05	U		0.05	U		0.0481	U	
ACENAPHTHENE		0.259			0.05	U		0.05	U		0.29		
BENZO(A)ANTHRACENE		0.0472	U		0.05	U		0.05	U		0.0481	U	
BENZO(K)FLUORANTHENE		0.0472	U		0.05	UJ	C	0.05	U		0.0481	U	
CHRYSENE		0.0472	U		0.05	U		0.05	U		0.0481	U	
DIBENZO(A,H)ANTHRACENE		0.0472	UJ	C	0.05	U		0.05	UJ	C	0.0481	UJ	C
NAPHTHALENE		0.0472	U		0.05	U		0.05	U		0.0481	U	

PROJ_NO: 02200	NSAMPLE	UST21-MW16-0211			UST21-MW23-0211			UST21-MW37-0211			UST21-MW37-0211-DL		
SDG: CTOJM01_007	LAB_ID	1102113-10			1102113-07			1102113-12			1102113-12RE1		
FRACTION: PAH	SAMP_DATE	2/10/2011			2/10/2011			2/10/2011			2/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1-METHYLNAPHTHALENE		0.0481	U		0.049	U		1.63					
2-METHYLNAPHTHALENE		0.0481	U		0.049	U		0.05	U				
ACENAPHTHENE		4.32			1.22						40		
BENZO(A)ANTHRACENE		0.0481	U		0.049	U		0.05	U				
BENZO(K)FLUORANTHENE		0.0481	U		0.049	U		0.05	U				
CHRYSENE		0.0481	U		0.049	U		0.05	U				
DIBENZO(A,H)ANTHRACENE		0.0481	UJ	C	0.049	UJ	C	0.05	UJ	C			
NAPHTHALENE		0.0481	U		0.049	U		0.259					

PROJ_NO: 02200	NSAMPLE	UST21-MW54-0211			UST21-MW60-0211			UST21-MW62-0211			UST21-MW63-0211		
SDG: CTOJM01_007	LAB_ID	1102113-04			1102113-03			1102113-08			1102113-01		
FRACTION: PAH	SAMP_DATE	2/10/2011			2/10/2011			2/9/2011			2/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1-METHYLNAPHTHALENE		0.05	U		0.05	U		0.049	U		0.049	U	
2-METHYLNAPHTHALENE		0.05	U		0.05	U		0.049	U		0.049	U	
ACENAPHTHENE		0.05	U		0.05	U		0.049	U		0.049	U	
BENZO(A)ANTHRACENE		0.05	U		0.05	U		0.049	U		0.049	U	
BENZO(K)FLUORANTHENE		0.05	UJ	C	0.05	UJ	C	0.049	UJ	C	0.049	UJ	C
CHRYSENE		0.05	U		0.05	U		0.049	U		0.0597	J	P
DIBENZO(A,H)ANTHRACENE		0.05	U		0.05	U		0.049	U		0.049	U	
NAPHTHALENE		0.0687	J	P	0.204			0.049	U		0.049	U	

PROJ_NO: 02200	NSAMPLE	UST21-MW64-0211
SDG: CTOJM01_007	LAB_ID	1102113-02
FRACTION: PAH	SAMP_DATE	2/10/2011
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
1-METHYLNAPHTHALENE	0.049	U	
2-METHYLNAPHTHALENE	0.049	U	
ACENAPHTHENE	0.049	U	
BENZO(A)ANTHRACENE	0.049	U	
BENZO(K)FLUORANTHENE	0.049	UJ	C
CHRYSENE	0.049	U	
DIBENZO(A,H)ANTHRACENE	0.049	U	
NAPHTHALENE	0.049	U	

PROJ_NO: 02200	NSAMPLE	GW02-020911			UST21-MW01-0211			UST21-MW10-0211			UST21-MW14-0211		
SDG: CTOJM01_007	LAB_ID	1102113-09			1102113-05			1102113-06			1102113-11		
FRACTION: PET	SAMP_DATE	2/9/2011			2/10/2011			2/10/2011			2/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C08-C40)		1.19			0.167	U		0.911			0.272	J	PR

PROJ_NO: 02200	NSAMPLE	UST21-MW16-0211			UST21-MW23-0211			UST21-MW37-0211			UST21-MW54-0211		
SDG: CTOJM01_007	LAB_ID	1102113-10			1102113-07			1102113-12			1102113-04		
FRACTION: PET	SAMP_DATE	2/10/2011			2/10/2011			2/10/2011			2/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C08-C40)		1.44			0.17	U		2.42			0.968		

PROJ_NO: 02200	NSAMPLE	UST21-MW60-0211			UST21-MW62-0211			UST21-MW63-0211			UST21-MW64-0211		
SDG: CTOJM01_007	LAB_ID	1102113-03			1102113-08			1102113-01			1102113-02		
FRACTION: PET	SAMP_DATE	2/10/2011			2/9/2011			2/10/2011			2/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C08-C40)		3.08			1.26			0.179	UJ	R	0.167	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

ANALYSIS DATA SHEET

GW02-020911

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Matrix: Ground Water Laboratory ID: 1102113-09 File ID: 0211309.D

Sampled: 02/09/11 16:55 Prepared: 02/16/11 00:00 Analyzed: 02/17/11 01:52

Solids: Preparation: 5030B Dilution: 1

Batch: 1B16009 Sequence: 1B05007 Calibration: 1042001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
107-06-2	1,2-Dichloroethane		0.220	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.450	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.530	1.00	U
98-82-8	Isopropylbenzene		0.150	1.00	U
75-09-2	Methylene chloride		0.270	2.00	U
127-18-4	Tetrachloroethene		0.170	1.00	U
71-55-6	1,1,1-Trichloroethane		0.290	1.00	U
79-01-6	Trichloroethene		0.500	1.00	U
75-01-4	Vinyl chloride		0.200	1.00	U
1330-20-7	Xylenes (total)		0.220	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.15	104	75 - 120	
Dibromofluoromethane	30.00	31.61	105	85 - 115	
1,2-Dichloroethane-d4	30.00	29.66	98.9	70 - 120	
Toluene-d8	30.00	29.44	98.1	85 - 120	

ANALYSIS DATA SHEET

TRIP BLANK 9283

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Matrix: Water Laboratory ID: 1102113-13 File ID: 0211313.D

Sampled: 02/11/11 00:00 Prepared: 02/16/11 00:00 Analyzed: 02/16/11 23:23

Solids: Preparation: 5030B Dilution: 1

Batch: 1B16009 Sequence: 1B05007 Calibration: 1042001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
107-06-2	1,2-Dichloroethane		0.220	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.450	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.530	1.00	U
98-82-8	Isopropylbenzene		0.150	1.00	U
75-09-2	Methylene chloride		0.270	2.00	U
127-18-4	Tetrachloroethene		0.170	1.00	U
71-55-6	1,1,1-Trichloroethane		0.290	1.00	U
79-01-6	Trichloroethene		0.500	1.00	U
75-01-4	Vinyl chloride		0.200	1.00	U
1330-20-7	Xylenes (total)		0.220	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.94	103	75 - 120	
Dibromofluoromethane	30.00	31.63	105	85 - 115	
1,2-Dichloroethane-d4	30.00	30.03	100	70 - 120	
Toluene-d8	30.00	29.93	99.8	85 - 120	

ANALYSIS DATA SHEET

UST21-MW01-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102113-05	File ID:	0211305.D
Sampled:	02/10/11 12:15	Prepared:	02/16/11 00:00	Analyzed:	02/16/11 17:58
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B16004	Sequence:	1B04812	Calibration:	1042001
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
107-06-2	1,2-Dichloroethane		0.220	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.450	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.530	1.00	U
98-82-8	Isopropylbenzene		0.150	1.00	U
75-09-2	Methylene chloride		0.270	2.00	U
127-18-4	Tetrachloroethene		0.170	1.00	U
71-55-6	1,1,1-Trichloroethane		0.290	1.00	X U
79-01-6	Trichloroethene		0.500	1.00	U
75-01-4	Vinyl chloride		0.200	1.00	U
1330-20-7	Xylenes (total)		0.220	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	29.96	99.9	75 - 120	
Dibromofluoromethane	30.00	32.57	109	85 - 115	
1,2-Dichloroethane-d4	30.00	30.67	102	70 - 120	
Toluene-d8	30.00	28.86	96.2	85 - 120	

ANALYSIS DATA SHEET

UST21-MW10-0211

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Matrix: Ground Water Laboratory ID: 1102113-06 File ID: 0211306.D

Sampled: 02/10/11 12:50 Prepared: 02/16/11 00:00 Analyzed: 02/16/11 18:28

Solids: Preparation: 5030B Dilution: 1

Batch: 1B16004 Sequence: 1B04812 Calibration: 1042001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
107-06-2	1,2-Dichloroethane		0.220	1.00	U
156-59-2	cis-1,2-Dichloroethene	1.41	0.450	1.00	
156-60-5	trans-1,2-Dichloroethene		0.530	1.00	U
98-82-8	Isopropylbenzene		0.150	1.00	U
75-09-2	Methylene chloride		0.270	2.00	U
127-18-4	Tetrachloroethene		0.170	1.00	U
71-55-6	1,1,1-Trichloroethane		0.290	1.00	X U
79-01-6	Trichloroethene		0.500	1.00	U
75-01-4	Vinyl chloride	0.932	0.200	1.00	I
1330-20-7	Xylenes (total)		0.220	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.30	104	75 - 120	
Dibromofluoromethane	30.00	31.75	106	85 - 115	
1,2-Dichloroethane-d4	30.00	29.32	97.7	70 - 120	
Toluene-d8	30.00	29.86	99.5	85 - 120	

ANALYSIS DATA SHEET

UST21-MW14-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102113-11	File ID:	0211311.D
Sampled:	02/10/11 14:57	Prepared:	02/16/11 00:00	Analyzed:	02/17/11 02:51
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B16009	Sequence:	1B05007	Calibration:	1042001
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
107-06-2	1,2-Dichloroethane		0.220	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.778	0.450	1.00	I
156-60-5	trans-1,2-Dichloroethene		0.530	1.00	U
98-82-8	Isopropylbenzene		0.150	1.00	U
75-09-2	Methylene chloride		0.270	2.00	U
127-18-4	Tetrachloroethene		0.170	1.00	U
71-55-6	1,1,1-Trichloroethane		0.290	1.00	U
79-01-6	Trichloroethene		0.500	1.00	U
75-01-4	Vinyl chloride	4.70	0.200	1.00	
1330-20-7	Xylenes (total)		0.220	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.82	103	75 - 120	
Dibromofluoromethane	30.00	32.28	108	85 - 115	
1,2-Dichloroethane-d4	30.00	30.69	102	70 - 120	
Toluene-d8	30.00	29.49	98.3	85 - 120	

ANALYSIS DATA SHEET

UST21-MW16-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102113-10	File ID:	0211310.D
Sampled:	02/10/11 14:12	Prepared:	02/16/11 00:00	Analyzed:	02/17/11 02:21
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B16009	Sequence:	1B05007	Calibration:	1042001
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
107-06-2	1,2-Dichloroethane		0.220	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.450	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.530	1.00	U
98-82-8	Isopropylbenzene		0.150	1.00	U
75-09-2	Methylene chloride		0.270	2.00	U
127-18-4	Tetrachloroethene		0.170	1.00	U
71-55-6	1,1,1-Trichloroethane		0.290	1.00	U
79-01-6	Trichloroethene		0.500	1.00	U
75-01-4	Vinyl chloride	0.602	0.200	1.00	I
1330-20-7	Xylenes (total)		0.220	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.09	104	75 - 120	
Dibromofluoromethane	30.00	32.84	109	85 - 115	
1,2-Dichloroethane-d4	30.00	31.16	104	70 - 120	
Toluene-d8	30.00	29.93	99.8	85 - 120	

ANALYSIS DATA SHEET

UST21-MW23-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_007	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola_2010	
Matrix:	Ground Water	Laboratory ID:	1102113-07	File ID:	0211307.D
Sampled:	02/10/11 13:30	Prepared:	02/16/11 00:00	Analyzed:	02/17/11 00:52
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B16009	Sequence:	1B05007	Calibration:	1042001
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
107-06-2	1,2-Dichloroethane		0.220	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.450	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.530	1.00	U
98-82-8	Isopropylbenzene	0.252	0.150	1.00	I
75-09-2	Methylene chloride		0.270	2.00	U
127-18-4	Tetrachloroethene		0.170	1.00	U
71-55-6	1,1,1-Trichloroethane		0.290	1.00	U
79-01-6	Trichloroethene		0.500	1.00	U
75-01-4	Vinyl chloride		0.200	1.00	U
1330-20-7	Xylenes (total)		0.220	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.71	106	75 - 120	
Dibromofluoromethane	30.00	32.37	108	85 - 115	
1,2-Dichloroethane-d4	30.00	29.34	97.8	70 - 120	
Toluene-d8	30.00	29.54	98.5	85 - 120	

ANALYSIS DATA SHEET

UST21-MW37-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_007	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola 2010	
Matrix:	Ground Water	Laboratory ID:	1102113-12	File ID:	0211312.D
Sampled:	02/10/11 15:40	Prepared:	02/16/11 00:00	Analyzed:	02/17/11 03:21
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B16009	Sequence:	1B05007	Calibration:	1042001
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
107-06-2	1,2-Dichloroethane		0.220	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.450	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.530	1.00	U
98-82-8	Isopropylbenzene	0.506	0.150	1.00	I
75-09-2	Methylene chloride		0.270	2.00	U
127-18-4	Tetrachloroethene		0.170	1.00	U
71-55-6	1,1,1-Trichloroethane		0.290	1.00	U
79-01-6	Trichloroethene		0.500	1.00	U
75-01-4	Vinyl chloride	0.291	0.200	1.00	I
1330-20-7	Xylenes (total)	0.815	0.220	1.00	I

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.86	103	75 - 120	
Dibromofluoromethane	30.00	31.15	104	85 - 115	
1,2-Dichloroethane-d4	30.00	30.71	102	70 - 120	
Toluene-d8	30.00	29.36	97.9	85 - 120	

ANALYSIS DATA SHEET

UST21-MW54-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_007	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola 2010	
Matrix:	Ground Water	Laboratory ID:	1102113-04	File ID:	0211304.D
Sampled:	02/10/11 11:35	Prepared:	02/16/11 00:00	Analyzed:	02/16/11 17:28
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B16004	Sequence:	1B04812	Calibration:	1042001
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
107-06-2	1,2-Dichloroethane		0.220	1.00	U
156-59-2	cis-1,2-Dichloroethene	5.46	0.450	1.00	
156-60-5	trans-1,2-Dichloroethene	1.55	0.530	1.00	
98-82-8	Isopropylbenzene		0.150	1.00	U
75-09-2	Methylene chloride		0.270	2.00	U
127-18-4	Tetrachloroethene		0.170	1.00	U
71-55-6	1,1,1-Trichloroethane		0.290	1.00	X U
79-01-6	Trichloroethene		0.500	1.00	U
75-01-4	Vinyl chloride	2.34	0.200	1.00	
1330-20-7	Xylenes (total)		0.220	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.42	105	75 - 120	
Dibromofluoromethane	30.00	31.85	106	85 - 115	
1,2-Dichloroethane-d4	30.00	29.74	99.1	70 - 120	
Toluene-d8	30.00	30.55	102	85 - 120	

ANALYSIS DATA SHEET

UST21-MW60-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102113-03	File ID:	0211303.D
Sampled:	02/10/11 10:35	Prepared:	02/16/11 00:00	Analyzed:	02/16/11 16:58
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B16004	Sequence:	1B04812	Calibration:	1042001
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
107-06-2	1,2-Dichloroethane		0.220	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.598	0.450	1.00	I
156-60-5	trans-1,2-Dichloroethene		0.530	1.00	U
98-82-8	Isopropylbenzene	2.32	0.150	1.00	
75-09-2	Methylene chloride		0.270	2.00	U
127-18-4	Tetrachloroethene		0.170	1.00	U
71-55-6	1,1,1-Trichloroethane		0.290	1.00	X U
79-01-6	Trichloroethene		0.500	1.00	U
75-01-4	Vinyl chloride	0.476	0.200	1.00	I
1330-20-7	Xylenes (total)	0.355	0.220	1.00	I

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.59	102	75 - 120	
Dibromofluoromethane	30.00	31.29	104	85 - 115	
1,2-Dichloroethane-d4	30.00	30.79	103	70 - 120	
Toluene-d8	30.00	29.32	97.7	85 - 120	

ANALYSIS DATA SHEET

UST21-MW62-0211

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Matrix: Ground Water Laboratory ID: 1102113-08 File ID: 0211308.D

Sampled: 02/09/11 16:55 Prepared: 02/16/11 00:00 Analyzed: 02/17/11 01:22

Solids: Preparation: 5030B Dilution: 1

Batch: 1B16009 Sequence: 1B05007 Calibration: 1042001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
107-06-2	1,2-Dichloroethane		0.220	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.450	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.530	1.00	U
98-82-8	Isopropylbenzene		0.150	1.00	U
75-09-2	Methylene chloride		0.270	2.00	U
127-18-4	Tetrachloroethene		0.170	1.00	U
71-55-6	1,1,1-Trichloroethane		0.290	1.00	U
79-01-6	Trichloroethene		0.500	1.00	U
75-01-4	Vinyl chloride		0.200	1.00	U
1330-20-7	Xylenes (total)		0.220	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.99	103	75 - 120	
Dibromofluoromethane	30.00	32.22	107	85 - 115	
1,2-Dichloroethane-d4	30.00	30.93	103	70 - 120	
Toluene-d8	30.00	30.25	101	85 - 120	

ANALYSIS DATA SHEET

UST21-MW63-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_007	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola 2010	
Matrix:	Ground Water	Laboratory ID:	1102113-01	File ID:	0211301.D
Sampled:	02/10/11 07:55	Prepared:	02/16/11 00:00	Analyzed:	02/16/11 15:59
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B16004	Sequence:	1B04812	Calibration:	1042001
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
107-06-2	1,2-Dichloroethane		0.220	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.450	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.530	1.00	U
98-82-8	Isopropylbenzene		0.150	1.00	U
75-09-2	Methylene chloride		0.270	2.00	U
127-18-4	Tetrachloroethene		0.170	1.00	U
71-55-6	1,1,1-Trichloroethane		0.290	1.00	X U
79-01-6	Trichloroethene		0.500	1.00	U
75-01-4	Vinyl chloride		0.200	1.00	U
1330-20-7	Xylenes (total)		0.220	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.56	105	75 - 120	
Dibromofluoromethane	30.00	31.85	106	85 - 115	
1,2-Dichloroethane-d4	30.00	30.46	102	70 - 120	
Toluene-d8	30.00	30.01	100	85 - 120	

ANALYSIS DATA SHEET

UST21-MW64-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102113-02	File ID:	0211302.D
Sampled:	02/10/11 09:35	Prepared:	02/16/11 00:00	Analyzed:	02/16/11 16:29
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B16004	Sequence:	1B04812	Calibration:	1042001
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
107-06-2	1,2-Dichloroethane		0.220	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.450	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.530	1.00	U
98-82-8	Isopropylbenzene		0.150	1.00	U
75-09-2	Methylene chloride		0.270	2.00	U
127-18-4	Tetrachloroethene		0.170	1.00	U
71-55-6	1,1,1-Trichloroethane		0.290	1.00	X U
79-01-6	Trichloroethene		0.500	1.00	U
75-01-4	Vinyl chloride		0.200	1.00	U
1330-20-7	Xylenes (total)	0.409	0.220	1.00	I

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.09	104	75 - 120	
Dibromofluoromethane	30.00	32.22	107	85 - 115	
1,2-Dichloroethane-d4	30.00	30.29	101	70 - 120	
Toluene-d8	30.00	29.53	98.4	85 - 120	

ANALYSIS DATA SHEET

GW02-020911

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Matrix: Ground Water Laboratory ID: 1102113-09 File ID: 0211309.D

Sampled: 02/09/11 16:55 Prepared: 02/15/11 16:46 Analyzed: 02/22/11 20:21

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 1B14025 Sequence: 1B05515 Calibration: 1048001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene	0.259	0.0472	0.189	
56-55-3	Benzo(a)anthracene		0.0472	0.189	U
207-08-9	Benzo(k)fluoranthene		0.0472	0.189	U
218-01-9	Chrysene		0.0472	0.189	U
53-70-3	Dibenz(a,h)anthracene		0.0472	0.189	Y U
90-12-0	1-Methylnaphthalene		0.0472	0.189	U
91-57-6	2-Methylnaphthalene		0.0472	0.189	U
91-20-3	Naphthalene		0.0472	0.189	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	47.17	31.38	66.5	34 - 167	
Terphenyl-d14	47.17	38.92	82.5	34 - 167	

ANALYSIS DATA SHEET

UST21-MW01-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102113-05	File ID:	0211305.D
Sampled:	02/10/11 12:15	Prepared:	02/15/11 16:46	Analyzed:	02/22/11 12:50
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B14025	Sequence:	1B05408	Calibration:	1048001
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0500	0.200	U
56-55-3	Benzo(a)anthracene		0.0500	0.200	U
207-08-9	Benzo(k)fluoranthene		0.0500	0.200	X U
218-01-9	Chrysene		0.0500	0.200	U
53-70-3	Dibenz(a,h)anthracene		0.0500	0.200	U
90-12-0	1-Methylnaphthalene		0.0500	0.200	U
91-57-6	2-Methylnaphthalene		0.0500	0.200	U
91-20-3	Naphthalene		0.0500	0.200	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	25.37	50.7	34 - 167	
Terphenyl-d14	50.00	55.05	110	34 - 167	

ANALYSIS DATA SHEET

UST21-MW10-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102113-06	File ID:	0211306.D
Sampled:	02/10/11 12:50	Prepared:	02/15/11 16:46	Analyzed:	02/22/11 19:28
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B14025	Sequence:	1B05515	Calibration:	1048001
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0500	0.200	U
56-55-3	Benzo(a)anthracene		0.0500	0.200	U
207-08-9	Benzo(k)fluoranthene		0.0500	0.200	U
218-01-9	Chrysene		0.0500	0.200	U
53-70-3	Dibenz(a,h)anthracene		0.0500	0.200	Y U
90-12-0	1-Methylnaphthalene		0.0500	0.200	U
91-57-6	2-Methylnaphthalene		0.0500	0.200	U
91-20-3	Naphthalene		0.0500	0.200	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	20.61	41.2	34 - 167	
Terphenyl-d14	50.00	45.55	91.1	34 - 167	

ANALYSIS DATA SHEET

UST21-MW14-0211

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Matrix: Ground Water Laboratory ID: 1102113-11 File ID: 0211311.D

Sampled: 02/10/11 14:57 Prepared: 02/15/11 16:46 Analyzed: 02/22/11 21:13

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 1B14025 Sequence: 1B05515 Calibration: 1048001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene	0.290	0.0481	0.192	
56-55-3	Benzo(a)anthracene		0.0481	0.192	U
207-08-9	Benzo(k)fluoranthene		0.0481	0.192	U
218-01-9	Chrysene		0.0481	0.192	U
53-70-3	Dibenz(a,h)anthracene		0.0481	0.192	Y U
90-12-0	1-Methylnaphthalene		0.0481	0.192	U
91-57-6	2-Methylnaphthalene		0.0481	0.192	U
91-20-3	Naphthalene		0.0481	0.192	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	48.08	33.71	70.1	34 - 167	
Terphenyl-d14	48.08	48.80	102	34 - 167	

ANALYSIS DATA SHEET

UST21-MW16-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_007	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola 2010	
Matrix:	Ground Water	Laboratory ID:	1102113-10	File ID:	0211310.D
Sampled:	02/10/11 14:12	Prepared:	02/15/11 16:46	Analyzed:	02/22/11 20:47
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B14025	Sequence:	1B05515	Calibration:	1048001
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene	4.32	0.0481	0.192	
56-55-3	Benzo(a)anthracene		0.0481	0.192	U
207-08-9	Benzo(k)fluoranthene		0.0481	0.192	U
218-01-9	Chrysene		0.0481	0.192	U
53-70-3	Dibenz(a,h)anthracene		0.0481	0.192	Y U
90-12-0	1-Methylnaphthalene		0.0481	0.192	U
91-57-6	2-Methylnaphthalene		0.0481	0.192	U
91-20-3	Naphthalene		0.0481	0.192	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	48.08	31.82	66.2	34 - 167	
Terphenyl-d14	48.08	50.17	104	34 - 167	

ANALYSIS DATA SHEET

UST21-MW23-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_007	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola 2010	
Matrix:	Ground Water	Laboratory ID:	1102113-07	File ID:	0211307.D
Sampled:	02/10/11 13:30	Prepared:	02/15/11 16:46	Analyzed:	02/22/11 19:54
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B14025	Sequence:	1B05515	Calibration:	1048001
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene	1.22	0.0490	0.196	
56-55-3	Benzo(a)anthracene		0.0490	0.196	U
207-08-9	Benzo(k)fluoranthene		0.0490	0.196	U
218-01-9	Chrysene		0.0490	0.196	U
53-70-3	Dibenz(a,h)anthracene		0.0490	0.196	Y U
90-12-0	1-Methylnaphthalene		0.0490	0.196	U
91-57-6	2-Methylnaphthalene		0.0490	0.196	U
91-20-3	Naphthalene		0.0490	0.196	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	49.02	33.47	68.3	34 - 167	
Terphenyl-d14	49.02	53.10	108	34 - 167	

ANALYSIS DATA SHEET

UST21-MW37-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102113-12	File ID:	0211312.D
Sampled:	02/10/11 15:40	Prepared:	02/15/11 16:46	Analyzed:	02/22/11 21:40
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B14025	Sequence:	1B05515	Calibration:	1048001
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene	67.3	0.0500	0.200	L
56-55-3	Benzo(a)anthracene		0.0500	0.200	U
207-08-9	Benzo(k)fluoranthene		0.0500	0.200	U
218-01-9	Chrysene		0.0500	0.200	U
53-70-3	Dibenz(a,h)anthracene		0.0500	0.200	Y U
90-12-0	1-Methylnaphthalene	1.63	0.0500	0.200	
91-57-6	2-Methylnaphthalene		0.0500	0.200	U
91-20-3	Naphthalene	0.259	0.0500	0.200	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	34.09	68.2	34 - 167	
Terphenyl-d14	50.00	31.44	62.9	34 - 167	

ANALYSIS DATA SHEET

UST21-MW37-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_007	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola 2010	
Matrix:	Ground Water	Laboratory ID:	1102113-12RE1	File ID:	0211312D.D
Sampled:	02/10/11 15:40	Prepared:	02/15/11 16:46	Analyzed:	02/24/11 14:37
Solids:		Preparation:	EXT_3510	Dilution:	10
Batch:	1B14025	Sequence:	1B05520	Calibration:	1048001
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene	40.0	0.500	2.00	
56-55-3	Benzo(a)anthracene		0.500	2.00	U
207-08-9	Benzo(k)fluoranthene		0.500	2.00	U
218-01-9	Chrysene		0.500	2.00	U
53-70-3	Dibenz(a,h)anthracene		0.500	2.00	U
90-12-0	1-Methylnaphthalene	0.667	0.500	2.00	I
91-57-6	2-Methylnaphthalene		0.500	2.00	U
91-20-3	Naphthalene		0.500	2.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	19.91	39.8	34 - 167	
Terphenyl-d14	50.00	18.81	37.6	34 - 167	

ANALYSIS DATA SHEET

UST21-MW54-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_007	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola 2010	
Matrix:	Ground Water	Laboratory ID:	1102113-04	File ID:	0211304.D
Sampled:	02/10/11 11:35	Prepared:	02/15/11 16:46	Analyzed:	02/22/11 12:23
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B14025	Sequence:	1B05408	Calibration:	1048001
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0500	0.200	U
56-55-3	Benzo(a)anthracene		0.0500	0.200	U
207-08-9	Benzo(k)fluoranthene		0.0500	0.200	X U
218-01-9	Chrysene		0.0500	0.200	U
53-70-3	Dibenz(a,h)anthracene		0.0500	0.200	U
90-12-0	1-Methylnaphthalene		0.0500	0.200	U
91-57-6	2-Methylnaphthalene		0.0500	0.200	U
91-20-3	Naphthalene	0.0687	0.0500	0.200	I

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	26.20	52.4	34 - 167	
Terphenyl-d14	50.00	44.44	88.9	34 - 167	

ANALYSIS DATA SHEET

UST21-MW60-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_007	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola 2010	
Matrix:	Ground Water	Laboratory ID:	1102113-03	File ID:	0211303.D
Sampled:	02/10/11 10:35	Prepared:	02/15/11 16:46	Analyzed:	02/22/11 11:29
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B14025	Sequence:	1B05408	Calibration:	1048001
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0500	0.200	U
56-55-3	Benzo(a)anthracene		0.0500	0.200	U
207-08-9	Benzo(k)fluoranthene		0.0500	0.200	X U
218-01-9	Chrysene		0.0500	0.200	U
53-70-3	Dibenz(a,h)anthracene		0.0500	0.200	U
90-12-0	1-Methylnaphthalene		0.0500	0.200	U
91-57-6	2-Methylnaphthalene		0.0500	0.200	U
91-20-3	Naphthalene	0.204	0.0500	0.200	

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	25.62	51.2	34 - 167	
Terphenyl-d14	50.00	30.33	60.7	34 - 167	

ANALYSIS DATA SHEET

UST21-MW62-0211

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Matrix: Ground Water Laboratory ID: 1102113-08 File ID: 0211308.D

Sampled: 02/09/11 16:55 Prepared: 02/15/11 16:46 Analyzed: 02/22/11 13:17

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 1B14025 Sequence: 1B05408 Calibration: 1048001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0490	0.196	U
56-55-3	Benzo(a)anthracene		0.0490	0.196	U
207-08-9	Benzo(k)fluoranthene		0.0490	0.196	X U
218-01-9	Chrysene		0.0490	0.196	U
53-70-3	Dibenz(a,h)anthracene		0.0490	0.196	U
90-12-0	1-Methylnaphthalene		0.0490	0.196	U
91-57-6	2-Methylnaphthalene		0.0490	0.196	U
91-20-3	Naphthalene		0.0490	0.196	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	49.02	28.21	57.5	34 - 167	
Terphenyl-d14	49.02	50.83	104	34 - 167	

ANALYSIS DATA SHEET

UST21-MW63-0211

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Matrix: Ground Water Laboratory ID: 1102113-01 File ID: 0211301.D

Sampled: 02/10/11 07:55 Prepared: 02/15/11 16:46 Analyzed: 02/22/11 10:35

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 1B14025 Sequence: 1B05408 Calibration: 1048001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0490	0.196	U
56-55-3	Benzo(a)anthracene		0.0490	0.196	U
207-08-9	Benzo(k)fluoranthene		0.0490	0.196	X U
218-01-9	Chrysene	0.0597	0.0490	0.196	I
53-70-3	Dibenz(a,h)anthracene		0.0490	0.196	U
90-12-0	1-Methylnaphthalene		0.0490	0.196	U
91-57-6	2-Methylnaphthalene		0.0490	0.196	U
91-20-3	Naphthalene		0.0490	0.196	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	49.02	27.94	57.0	34 - 167	
Terphenyl-d14	49.02	34.58	70.5	34 - 167	

ANALYSIS DATA SHEET

UST21-MW64-0211

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Matrix: Ground Water Laboratory ID: 1102113-02 File ID: 0211302.D

Sampled: 02/10/11 09:35 Prepared: 02/15/11 16:46 Analyzed: 02/22/11 11:02

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 1B14025 Sequence: 1B05408 Calibration: 1048001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0490	0.196	U
56-55-3	Benzo(a)anthracene		0.0490	0.196	U
207-08-9	Benzo(k)fluoranthene		0.0490	0.196	X U
218-01-9	Chrysene		0.0490	0.196	U
53-70-3	Dibenz(a,h)anthracene		0.0490	0.196	U
90-12-0	1-Methylnaphthalene		0.0490	0.196	U
91-57-6	2-Methylnaphthalene		0.0490	0.196	U
91-20-3	Naphthalene		0.0490	0.196	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	49.02	13.15	26.8	34 - 167	*
Terphenyl-d14	49.02	31.46	64.2	34 - 167	

ANALYSIS DATA SHEET

GW02-020911

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Ground Water	Laboratory ID:	1102113-09	File ID:	017F1701.D
Sampled:	02/09/11 16:55	Prepared:	02/16/11 13:37	Analyzed:	02/17/11 22:24
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B16007	Sequence:	1B04907	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics	1.19	0.160	0.642	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04717	0.02824	59.9	50 - 150	
o-Terphenyl	0.04717	0.03899	82.7	82 - 142	

ANALYSIS DATA SHEET

UST21-MW01-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Ground Water	Laboratory ID:	1102113-05	File ID:	013F1301.D
Sampled:	02/10/11 12:15	Prepared:	02/16/11 13:37	Analyzed:	02/17/11 19:35
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B16007	Sequence:	1B04907	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics		0.167	0.667	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04902	0.03395	69.3	50 - 150	
o-Terphenyl	0.04902	0.04050	82.6	82 - 142	

ANALYSIS DATA SHEET

UST21-MW10-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102113-06	File ID:	007F0701.D
Sampled:	02/10/11 12:50	Prepared:	02/17/11 15:00	Analyzed:	02/18/11 14:56
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B17008	Sequence:	1B05208	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics	0.911	0.170	0.680	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.03950	79.0	50 - 150	
o-Terphenyl	0.05000	0.04660	93.2	82 - 142	

ANALYSIS DATA SHEET

UST21-MW14-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_007	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola 2010	
Matrix:	Ground Water	Laboratory ID:	1102113-11	File ID:	019F1901.D
Sampled:	02/10/11 14:57	Prepared:	02/16/11 13:37	Analyzed:	02/17/11 23:49
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B16007	Sequence:	1B04907	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics	0.272	0.163	0.654	I

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04808	0.02818	58.6	50 - 150	
o-Terphenyl	0.04808	0.03605	75.0	82 - 142	*

ANALYSIS DATA SHEET

UST21-MW16-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102113-10	File ID:	018F1801.D
Sampled:	02/10/11 14:12	Prepared:	02/16/11 13:37	Analyzed:	02/17/11 23:06
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B16007	Sequence:	1B04907	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics	1.44	0.163	0.654	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04808	0.03925	81.6	50 - 150	
o-Terphenyl	0.04808	0.04440	92.4	82 - 142	

ANALYSIS DATA SHEET

UST21-MW23-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102113-07	File ID:	008F0801.D
Sampled:	02/10/11 13:30	Prepared:	02/17/11 15:00	Analyzed:	02/18/11 15:38
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B17008	Sequence:	1B05208	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics		0.170	0.680	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.04310	86.2	50 - 150	
o-Terphenyl	0.05000	0.04545	90.9	82 - 142	

ANALYSIS DATA SHEET

UST21-MW37-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102113-12	File ID:	020F2001.D
Sampled:	02/10/11 15:40	Prepared:	02/16/11 13:37	Analyzed:	02/18/11 00:31
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B16007	Sequence:	1B04907	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics	2.42	0.163	0.654	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04808	0.04463	92.8	50 - 150	
o-Terphenyl	0.04808	0.04402	91.6	82 - 142	

ANALYSIS DATA SHEET

UST21-MW54-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_007	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola 2010	
Matrix:	Ground Water	Laboratory ID:	1102113-04	File ID:	012F1201.D
Sampled:	02/10/11 11:35	Prepared:	02/16/11 13:37	Analyzed:	02/17/11 18:53
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B16007	Sequence:	1B04907	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics	0.968	0.170	0.680	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.03631	72.6	50 - 150	
o-Terphenyl	0.05000	0.04334	86.7	82 - 142	

ANALYSIS DATA SHEET

UST21-MW60-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Ground Water	Laboratory ID:	1102113-03	File ID:	011F1101.D
Sampled:	02/10/11 10:35	Prepared:	02/16/11 13:37	Analyzed:	02/17/11 18:11
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B16007	Sequence:	1B04907	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics	3.08	0.170	0.680	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.03678	73.6	50 - 150	
o-Terphenyl	0.05000	0.04244	84.9	82 - 142	

ANALYSIS DATA SHEET

UST21-MW62-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102113-08	File ID:	014F1401.D
Sampled:	02/09/11 16:55	Prepared:	02/16/11 13:37	Analyzed:	02/17/11 20:18
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B16007	Sequence:	1B04907	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics	1.26	0.170	0.680	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.03482	69.6	50 - 150	
o-Terphenyl	0.05000	0.04469	89.4	82 - 142	

ANALYSIS DATA SHEET

UST21-MW63-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102113-01	File ID:	011F1101.D
Sampled:	02/10/11 07:55	Prepared:	02/14/11 15:05	Analyzed:	02/16/11 19:40
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B12009	Sequence:	1B04806	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics		0.179	0.716	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05263	0.03887	73.9	50 - 150	
o-Terphenyl	0.05263	0.04206	79.9	82 - 142	*

ANALYSIS DATA SHEET

UST21-MW64-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102113-02	File ID:	010F1001.D
Sampled:	02/10/11 09:35	Prepared:	02/16/11 13:37	Analyzed:	02/17/11 17:28
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B16007	Sequence:	1B04907	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics		0.167	0.667	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04902	0.03563	72.7	50 - 150	
o-Terphenyl	0.04902	0.04158	84.8	82 - 142	

APPENDIX C

SUPPORT DOCUMENTATION

Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision
Data package revised to include U qualifiers for 1B16004-BLK1 and 1B16009-BLK1 for SW8260B.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
The continuing calibration verification 1B04812-CCV1 exceeded criteria with a positive bias for 1,1,1-Trichloroethane.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270C:
The continuing calibration verifications exceeded criteria in 1B05408-CCV1 with a

positive bias for Benzo(k)fluoranthene and in 1B05515-CV1 with a negative bias for Dibenz(a,h)anthracene.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW6010C:
No anomalies or deviations are noted.

FLPRO:
The surrogate o-Terphenyl exceeded criteria with a negative bias in samples 1102113-01 and -11.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER Jma-04 | PAGE 1 OF 2

PROJECT NO: 112602200	SITE NAME: UST 21 Pensacola	PROJECT MANAGER AND PHONE NUMBER Garry Walker (850) 385-9899	LABORATORY NAME AND CONTACT: Empirical Lab / Kim Kostzer
SAMPLERS (SIGNATURE) Jared Shellman		FIELD OPERATIONS LEADER AND PHONE NUMBER Yanissa Martinez (850) 385-9899	ADDRESS 621 Mainstream Dr. Suite 270
		CARRIER/WAYBILL NUMBER 8748 4755 5243	CITY, STATE Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G G P
PRESERVATIVE USED: HCl – HCl HNO3

DATE (YEAR 2011)	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	TYPE OF ANALYSIS: TRPH (418.1)	Select BTEX (8021B)	Select VOCs (8260B)	Select Metals (6010B)	COMMENTS
2/10	0755	UST21-MW63-0211	GW	G	8	2	2	3	1	1102113-01
2/10	0935	UST21-MW64-0211	GW	G	8	2	2	3	1	-02
2/10	1035	UST21-MW60-0211	GW	G	8	2	2	3	1	-03
2/10	1135	UST21-MW54-0211	GW	G	8	2	2	3	1	-04
2/10	1215	UST21-MW01-0211	GW	G	8	2	2	3	1	-05
2/10	1250	UST21-MW10-0211	GW	G	8	2	2	3	1	-06
2/10	1330	UST21-MW23-0211	GW	G	8	2	2	3	1	-07
2/9	1655	UST21-MW62-0211	GW	G	8	2	2	3	1	-08
2/9	1655	UST21-MW62-0211MS	GW	G	8	2	2	3	1	
2/9	1655	UST21-MW62-0211MSD	GW	G	8	2	2	3	1	
2/9	1655	GW02-020911	GW	G	8	2	2	3	1	-09
2/10	1412	UST21-MW16-0211	GW	G	8	2	2	3	1	-10
2/10	1457	UST21-MW14-0211	GW	G	8	2	2	3	1	-11

CO 2-13-11 H020

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	2/10/11	1705	1. RECEIVED BY		
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	2.0°C DATE 2-11-11	TIME 08:45
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: Select analytes as previous COC and approved SAP (6 coolers !!!)

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99
FORM NO. TtNUS-001

CTOJM01_007 Summ Package

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TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER JM01-04 | PAGE 2 OF 2

PROJECT NO: 112602200	SITE NAME: UST 21-Pensacola	PROJECT MANAGER AND PHONE NUMBER Gerry Walker (850)385-9899	LABORATORY NAME AND CONTACT: Empirical Lab (Kim Kostzer)
SAMPLERS (SIGNATURE) Jared Shellhorn		FIELD OPERATIONS LEADER AND PHONE NUMBER Vanessa Martinez (787)350-9119	ADDRESS 621 Mainstream Dr Suite 270
		CARRIER/WAYBILL NUMBER 874847552 43	CITY, STATE Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: TRPH (SW846)	BTEX 8260B	SEMIVOC 8270C	PAH 8270C	Select Metals (6010B)	COMMENTS
						G	HCL	G	G	G	P		
2/10	1540	UST21-MW37-0211	GW	G	8			2	3	2	1		1102173-12
2/9	1155	TRIP BLANK 92553			2				2				-13
		TEMP BLANKS			6								

* 6 coolers

1. RELINQUISHED BY	DATE 2/10/11	TIME 1705	1. RECEIVED BY	2.0°C	DATE 2-11-11	TIME 08:45
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY		DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY		DATE	TIME

COMMENTS: Select analysis as previous COC + SAP

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99
FORM NO. TtNUS-001

10

CTOJM01_007 Summ Package

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 102113 Number of Coolers: 1 of 6

Client: Tetra Tech NUS, Inc Project: USI 21 Pensacola

Date/Time Received: 2-11-11 / 08:45 Date cooler(s) opened: 2-11-11

Opened By (print): Chris Donald (signature): _____

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 0230

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-10-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.3 °C Correction Factor: -0.3 °C Final Value: 2.0 °C

Dates samples were logged-in: 2-13-11

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly?	(Yes)	No	N/A
11. Did all bottles arrive unbroken?	(Yes)	No	N/A
12. Was all required bottle label information complete?	(Yes)	No	N/A
13. Did all bottle labels agree with custody papers?	(Yes)	No	N/A
14. Were correct containers used for the analyses indicated?	(Yes)	No	N/A
15. Were preservative levels correct in all applicable sample containers?	(Yes)	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	(N/A)
17. Was sufficient amount of sample sent for the analyses required?	(Yes)	No	N/A
18. Was headspace present in any included VOA vials?	Yes	(No)	N/A

If Non-Conformance issues were present, list by sample ID: _____

- Housed TPS
- pH<2 for all EPRO & Metals samples

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: N02113 Number of Coolers: 2 of 6

Client: Tetra Tech NUS Inc Project: US 21 Pensacola

Date/Time Received: 2-14-11 / 08:45 Date cooler(s) opened: 2-14-11

Opened By (print): Chris Donald (signature): Chris Donald

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 0274

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-10-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 3.4 °C Correction Factor: -0.3 °C Final Value: 3.1 °C

Dates samples were logged-in: 2-13-11

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly?	Yes	No	N/A
11. Did all bottles arrive unbroken?	Yes	No	N/A
12. Was all required bottle label information complete?	Yes	No	N/A
13. Did all bottle labels agree with custody papers?	Yes	No	N/A
14. Were correct containers used for the analyses indicated?	Yes	No	N/A
15. Were preservative levels correct in all applicable sample containers?	Yes	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	N/A
17. Was sufficient amount of sample sent for the analyses required?	Yes	No	N/A
18. Was headspace present in any included VOA vials?	Yes	No	N/A

If Non-Conformance issues were present, list by sample ID: _____

SCC 1 of 6

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1102113 Number of Coolers: 3 of 6

Client: Tetra Tech NUS Inc Project: US 21 Pensacola

Date/Time Received: 2-14-11 / 08:45 Date cooler(s) opened: 2-14-11

Opened By (print): Chris Donald (signature): Chris Donald

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 0241

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-10-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.1 °C Correction Factor: -0.3 °C Final Value: 1.8 °C

Dates samples were logged-in: 2-13-11

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly?	Yes	No	N/A
11. Did all bottles arrive unbroken?	Yes	No	N/A
12. Was all required bottle label information complete?	Yes	No	N/A
13. Did all bottle labels agree with custody papers?	Yes	No	N/A
14. Were correct containers used for the analyses indicated?	Yes	No	N/A
15. Were preservative levels correct in all applicable sample containers?	Yes	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	N/A
17. Was sufficient amount of sample sent for the analyses required?	Yes	No	N/A
18. Was headspace present in any included VOA vials?	Yes	No	N/A

If Non-Conformance issues were present, list by sample ID: _____

SCC 1 of 6

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 102113 Number of Coolers: 4 of 6

Client: Tetra Tech NUS Inc Project: US 21 Pensacola

Date/Time Received: 2-14-11 / 08:45 Date cooler(s) opened: 2-14-11

Opened By (print): Chris Donaldson (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 0252

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-10-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.8 °C Correction Factor: -0.3 °C Final Value: 2.5 °C

Dates samples were logged-in: 2-13-11

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly?	Yes	No	N/A
11. Did all bottles arrive unbroken?	Yes	No	N/A
12. Was all required bottle label information complete?	Yes	No	N/A
13. Did all bottle labels agree with custody papers?	Yes	No	N/A
14. Were correct containers used for the analyses indicated?	Yes	No	N/A
15. Were preservative levels correct in all applicable sample containers?	Yes	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	N/A
17. Was sufficient amount of sample sent for the analyses required?	Yes	No	N/A
18. Was headspace present in any included VOA vials?	Yes	No	N/A

If Non-Conformance issues were present, list by sample ID: _____

Sc 1 of 6

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1102113 Number of Coolers: 5 of 6

Client: Tetra Tech NUS Inc Project: US 21 Pensacola

Date/Time Received: 2-14-11 / 08:45 Date cooler(s) opened: 2-14-11

Opened By (print): Chris Donald (signature):

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other:

If applicable, enter airbill number here: 0263

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-10-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.7 °C Correction Factor: -0.3 °C Final Value: 2.2 °C

Dates samples were logged-in: 2-13-11

9. Initial this form to acknowledge login of sample(s): (Name): (Initial):

10. Were all bottle lids intact and sealed tightly?	Yes	No	N/A
11. Did all bottles arrive unbroken?	Yes	No	N/A
12. Was all required bottle label information complete?	Yes	No	N/A
13. Did all bottle labels agree with custody papers?	Yes	No	N/A
14. Were correct containers used for the analyses indicated?	Yes	No	N/A
15. Were preservative levels correct in all applicable sample containers?	Yes	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	N/A
17. Was sufficient amount of sample sent for the analyses required?	Yes	No	N/A
18. Was headspace present in any included VOA vials?	Yes	No	N/A

If Non-Conformance issues were present, list by sample ID:

Sic 1 of 6

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 102113 Number of Coolers: 6 of 6

Client: Tetra Tech NUS, Inc Project: US 21 Pensacola

Date/Time Received: 2-14-11 / 08:45 Date cooler(s) opened: 2-14-11

Opened By (print): Chris Donald (signature): Chris Donald

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 5243

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-10-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.6 °C Correction Factor: -0.3 °C Final Value: 2.3 °C

Dates samples were logged-in: 2-13-11

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly?	Yes	No	N/A
11. Did all bottles arrive unbroken?	Yes	No	N/A
12. Was all required bottle label information complete?	Yes	No	N/A
13. Did all bottle labels agree with custody papers?	Yes	No	N/A
14. Were correct containers used for the analyses indicated?	Yes	No	N/A
15. Were preservative levels correct in all applicable sample containers?	Yes	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	N/A
17. Was sufficient amount of sample sent for the analyses required?	Yes	No	N/A
18. Was headspace present in any included VOA vials?	Yes	No	N/A

If Non-Conformance issues were present, list by sample ID: _____

SCL 10F 6

HOLDTIME

SDG CTOJM01_006

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST21-MW23-0211	1102113-07	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST21-MW37-0211	1102113-12	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST-21-MW-38-0211	1102133-02	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
M	UG/L	UST-21-MW-40-0211	1102133-04	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
M	UG/L	UST21-MW54-0211	1102113-04	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW16-0211	1102113-10	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW60-0211	1102113-03	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW63-0211	1102113-01RE1	NM	02/10/2011	02/17/2011	02/23/2011	7	6	13
M	UG/L	UST21-MW61-0211	1102098-07RE1	NM	02/09/2011	02/17/2011	02/23/2011	8	6	14
M	UG/L	UST21-MW62-0211	1102113-08	NM	02/09/2011	02/22/2011	02/23/2011	13	1	14
M	UG/L	UST21-MW63-0211	1102113-01	NM	02/10/2011	02/17/2011	02/22/2011	7	5	12
M	UG/L	UST21-MW64-0211	1102113-02	NM	02/10/2011	02/17/2011	02/22/2011	7	5	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
M	UG/L	UST21-MW65-0211	1102098-03RE1	NM	02/08/2011	02/17/2011	02/23/2011	9	6	15
M	UG/L	UST-21-RB-0211	1102133-05	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST-21-09-0211	1102133-06	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	GW02-020911	1102113-09	NM	02/09/2011	02/22/2011	02/23/2011	13	1	14
M	UG/L	UST21-MW14-0211	1102113-11	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW64-0211	1102113-02RE1	NM	02/10/2011	02/17/2011	02/23/2011	7	6	13
M	UG/L	UST21-MW10-0211	1102113-06	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	GW01-021111	1102133-08	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW01-0211	1102113-05	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST-21-17-0211	1102133-07	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
M	UG/L	UST-21-MW-04-0211	1102133-03	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
MF	UG/L	UST21-MW25-0211	1102098-06	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW41-0211	1102098-02	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
MF	UG/L	UST21-MW55-0211	1102098-10	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW61-0211	1102098-08	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW65-0211	1102098-04	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
ALK	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
ALK	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
ALK	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
BOD	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
BOD	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
BOD	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
CL	MG/L	UST21-MW61-0211	1102098-07RE2	NM	02/09/2011	02/17/2011	02/17/2011	8	0	8
CL	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
CL	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
COD	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
COD	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
COD	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
NTA	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTA	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTA	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTI	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTI	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTI	MG/L	UST21-MW61-0211	1102098-07RE1	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SO4	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
SO4	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
SO4	MG/L	UST21-MW61-0211	1102098-07RE1	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
SUL	MG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
SUL	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
SUL	MG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
SUL	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
SUL	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
OV	UG/L	UST-21-MW-40-0211	1102133-04	NM	02/11/2011	02/17/2011	02/18/2011	6	1	7
OV	UG/L	UST-21-MW-38-0211	1102133-02	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
OV	UG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
OV	UG/L	UST21-MW54-0211	1102113-04	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6
OV	UG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
OV	UG/L	UST21-MW60-0211	1102113-03	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6
OV	UG/L	UST-21-RB-0211	1102133-05	NM	02/11/2011	02/17/2011	02/18/2011	6	1	7
OV	UG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
OV	UG/L	UST21-MW37-0211	1102113-12	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
OV	UG/L	UST21-MW63-0211	1102113-01	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	UST21-MW01-0211	1102113-05	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6
OV	UG/L	UST21-MW62-0211	1102113-08	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
OV	UG/L	UST21-MW64-0211	1102113-02	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6
OV	UG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
OV	UG/L	UST21-MW23-0211	1102113-07	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
OV	UG/L	UST21-MW16-0211	1102113-10	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
OV	UG/L	UST21-MW14-0211	1102113-11	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
OV	UG/L	UST-21-MW-04-0211	1102133-03	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
OV	UG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
OV	UG/L	UST-21-17-0211	1102133-07	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
OV	UG/L	UST-21-09-0211	1102133-06	NM	02/11/2011	02/17/2011	02/18/2011	6	1	7
OV	UG/L	TRIP BLANK 9283	1102113-13	NM	02/11/2011	02/16/2011	02/16/2011	5	0	5
OV	UG/L	Trip Blank 9282	1102098-11	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
OV	UG/L	TRIP BLANK # 9281	1102133-01	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
OV	UG/L	GW02-020911	1102113-09	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
OV	UG/L	GW01-021111	1102133-08	NM	02/11/2011	02/17/2011	02/18/2011	6	1	7
OV	UG/L	UST21-MW10-0211	1102113-06	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6
SIM	UG/L	GW02-020911	1102113-09	NM	02/09/2011	02/15/2011	02/22/2011	6	7	13

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	UG/L	GW01-021111	1102133-08	NM	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST-21-MW-40-0211	1102133-04	NM	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST-21-MW-40-0211	1102133-04	SUR	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/14/2011	02/21/2011	6	7	13
SIM	UG/L	UST21-MW41-0211	1102098-01	SUR	02/08/2011	02/14/2011	02/21/2011	6	7	13
SIM	UG/L	UST21-MW54-0211	1102113-04	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW54-0211	1102113-04	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/14/2011	02/22/2011	5	8	13
SIM	UG/L	UST21-MW55-0211	1102098-09	SUR	02/09/2011	02/14/2011	02/22/2011	5	8	13
SIM	UG/L	UST21-MW60-0211	1102113-03	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST-21-MW-38-0211	1102133-02	SUR	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/14/2011	02/22/2011	5	8	13
SIM	UG/L	UST21-MW60-0211	1102113-03	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW62-0211	1102113-08	NM	02/09/2011	02/15/2011	02/22/2011	6	7	13
SIM	UG/L	UST21-MW62-0211	1102113-08	SUR	02/09/2011	02/15/2011	02/22/2011	6	7	13
SIM	UG/L	UST21-MW63-0211	1102113-01	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW63-0211	1102113-01	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW64-0211	1102113-02	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	UG/L	UST21-MW64-0211	1102113-02	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/14/2011	02/21/2011	6	7	13
SIM	UG/L	UST21-MW65-0211	1102098-03	SUR	02/08/2011	02/14/2011	02/21/2011	6	7	13
SIM	UG/L	UST-21-RB-0211	1102133-05	NM	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST-21-RB-0211	1102133-05	SUR	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	GW01-021111	1102133-08	SUR	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST21-MW01-0211	1102113-05	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW61-0211	1102098-07	SUR	02/09/2011	02/14/2011	02/22/2011	5	8	13
SIM	UG/L	UST-21-MW-38-0211	1102133-02	NM	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	GW02-020911	1102113-09	SUR	02/09/2011	02/15/2011	02/22/2011	6	7	13
SIM	UG/L	UST-21-09-0211	1102133-06	NM	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST-21-09-0211	1102133-06	SUR	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST-21-17-0211	1102133-07	SUR	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	UST21-MW01-0211	1102113-05	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST-21-MW-04-0211	1102133-03	NM	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	UST-21-MW-04-0211	1102133-03	SUR	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	UST21-MW10-0211	1102113-06	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW10-0211	1102113-06	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	UG/L	UST21-MW37-0211	1102113-12	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST-21-17-0211	1102133-07	NM	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	UST21-MW37-0211	1102113-12RE1	NM	02/10/2011	02/15/2011	02/24/2011	5	9	14
SIM	UG/L	UST21-MW14-0211	1102113-11	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW37-0211	1102113-12	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW25-0211	1102098-05	SUR	02/09/2011	02/14/2011	02/21/2011	5	7	12
SIM	UG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/14/2011	02/21/2011	5	7	12
SIM	UG/L	UST21-MW23-0211	1102113-07	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW23-0211	1102113-07	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW16-0211	1102113-10	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW16-0211	1102113-10	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW14-0211	1102113-11	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
TPH	MG/L	UST21-MW64-0211	1102113-02	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
TPH	MG/L	UST-21-MW-40-0211	1102133-04	NM	02/11/2011	02/16/2011	02/18/2011	5	2	7
TPH	MG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/14/2011	02/16/2011	6	2	8
TPH	MG/L	UST21-MW54-0211	1102113-04	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
TPH	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/14/2011	02/16/2011	5	2	7
TPH	MG/L	UST21-MW60-0211	1102113-03	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TPH	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/14/2011	02/16/2011	5	2	7
TPH	MG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/14/2011	02/16/2011	6	2	8
TPH	MG/L	UST21-MW63-0211	1102113-01	NM	02/10/2011	02/14/2011	02/16/2011	4	2	6
TPH	MG/L	UST-21-MW-38-0211	1102133-02	NM	02/10/2011	02/16/2011	02/18/2011	6	2	8
TPH	MG/L	UST-21-RB-0211	1102133-05	NM	02/11/2011	02/16/2011	02/18/2011	5	2	7
TPH	MG/L	UST21-MW62-0211	1102113-08	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
TPH	MG/L	UST21-MW37-0211	1102113-12	NM	02/10/2011	02/16/2011	02/18/2011	6	2	8
TPH	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/14/2011	02/16/2011	5	2	7
TPH	MG/L	UST21-MW23-0211	1102113-07	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
TPH	MG/L	UST21-MW16-0211	1102113-10	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
TPH	MG/L	UST21-MW14-0211	1102113-11	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
TPH	MG/L	UST21-MW10-0211	1102113-06	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
TPH	MG/L	UST-21-MW-04-0211	1102133-03	NM	02/10/2011	02/16/2011	02/18/2011	6	2	8
TPH	MG/L	UST21-MW01-0211	1102113-05	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
TPH	MG/L	UST-21-17-0211	1102133-07	NM	02/10/2011	02/16/2011	02/18/2011	6	2	8
TPH	MG/L	UST-21-09-0211	1102133-06	NM	02/11/2011	02/16/2011	02/18/2011	5	2	7
TPH	MG/L	GW01-021111	1102133-08	NM	02/11/2011	02/16/2011	02/18/2011	5	2	7
TPH	MG/L	GW02-020911	1102113-09	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8

HOLDING TIME SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
UST21-MW63-0211	02/10/11 07:55	02/11/11 08:45	02/16/11 00:00	N/A	14.00	02/16/11 15:59	6.38	14.00	
UST21-MW64-0211	02/10/11 09:35	02/11/11 08:45	02/16/11 00:00	N/A	14.00	02/16/11 16:29	6.33	14.00	
UST21-MW60-0211	02/10/11 10:35	02/11/11 08:45	02/16/11 00:00	N/A	14.00	02/16/11 16:58	6.31	14.00	
UST21-MW54-0211	02/10/11 11:35	02/11/11 08:45	02/16/11 00:00	N/A	14.00	02/16/11 17:28	6.29	14.00	
UST21-MW01-0211	02/10/11 12:15	02/11/11 08:45	02/16/11 00:00	N/A	14.00	02/16/11 17:58	6.28	14.00	
UST21-MW10-0211	02/10/11 12:50	02/11/11 08:45	02/16/11 00:00	N/A	14.00	02/16/11 18:28	6.28	14.00	
UST21-MW23-0211	02/10/11 13:30	02/11/11 08:45	02/16/11 00:00	N/A	14.00	02/17/11 00:52	6.52	14.00	
UST21-MW62-0211	02/09/11 16:55	02/11/11 08:45	02/16/11 00:00	N/A	14.00	02/17/11 01:22	7.39	14.00	
GW02-020911	02/09/11 16:55	02/11/11 08:45	02/16/11 00:00	N/A	14.00	02/17/11 01:52	7.41	14.00	
UST21-MW16-0211	02/10/11 14:12	02/11/11 08:45	02/16/11 00:00	N/A	14.00	02/17/11 02:21	6.55	14.00	
UST21-MW14-0211	02/10/11 14:57	02/11/11 08:45	02/16/11 00:00	N/A	14.00	02/17/11 02:51	6.54	14.00	
UST21-MW37-0211	02/10/11 15:40	02/11/11 08:45	02/16/11 00:00	N/A	14.00	02/17/11 03:21	6.53	14.00	
TRIP BLANK 9283	02/11/11 00:00	02/11/11 08:45	02/16/11 00:00	N/A	14.00	02/16/11 23:23	5.97	14.00	

HOLDING TIME SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
UST21-MW63-0211	02/10/11 07:55	02/11/11 08:45	02/15/11 16:46	5.41	7.00	02/22/11 10:35	6.74	40.00	
UST21-MW64-0211	02/10/11 09:35	02/11/11 08:45	02/15/11 16:46	5.34	7.00	02/22/11 11:02	6.76	40.00	
UST21-MW60-0211	02/10/11 10:35	02/11/11 08:45	02/15/11 16:46	5.30	7.00	02/22/11 11:29	6.78	40.00	
UST21-MW54-0211	02/10/11 11:35	02/11/11 08:45	02/15/11 16:46	5.26	7.00	02/22/11 12:23	6.82	40.00	
UST21-MW01-0211	02/10/11 12:15	02/11/11 08:45	02/15/11 16:46	5.23	7.00	02/22/11 12:50	6.84	40.00	
UST21-MW10-0211	02/10/11 12:50	02/11/11 08:45	02/15/11 16:46	5.21	7.00	02/22/11 19:28	7.11	40.00	
UST21-MW23-0211	02/10/11 13:30	02/11/11 08:45	02/15/11 16:46	5.18	7.00	02/22/11 19:54	7.13	40.00	
UST21-MW62-0211	02/09/11 16:55	02/11/11 08:45	02/15/11 16:46	6.04	7.00	02/22/11 13:17	6.85	40.00	
GW02-020911	02/09/11 16:55	02/11/11 08:45	02/15/11 16:46	6.04	7.00	02/22/11 20:21	7.15	40.00	
UST21-MW16-0211	02/10/11 14:12	02/11/11 08:45	02/15/11 16:46	5.15	7.00	02/22/11 20:47	7.17	40.00	
UST21-MW14-0211	02/10/11 14:57	02/11/11 08:45	02/15/11 16:46	5.12	7.00	02/22/11 21:13	7.19	40.00	
UST21-MW37-0211	02/10/11 15:40	02/11/11 08:45	02/15/11 16:46	5.09	7.00	02/22/11 21:40	7.20	40.00	
UST21-MW37-0211	02/10/11 15:40	02/11/11 08:45	02/15/11 16:46	5.09	7.00	02/24/11 14:37	8.91	40.00	

HOLDING TIME SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTOJM01 NAS Pensacola 2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
UST21-MW63-0211	02/10/11 07:55	02/11/11 08:45	02/14/11 15:05	4.34	7.00	02/16/11 19:40	2.19	40.00	
UST21-MW64-0211	02/10/11 09:35	02/11/11 08:45	02/16/11 13:37	6.21	7.00	02/17/11 17:28	1.16	40.00	
UST21-MW60-0211	02/10/11 10:35	02/11/11 08:45	02/16/11 13:37	6.17	7.00	02/17/11 18:11	1.19	40.00	
UST21-MW54-0211	02/10/11 11:35	02/11/11 08:45	02/16/11 13:37	6.13	7.00	02/17/11 18:53	1.22	40.00	
UST21-MW01-0211	02/10/11 12:15	02/11/11 08:45	02/16/11 13:37	6.10	7.00	02/17/11 19:35	1.25	40.00	
UST21-MW10-0211	02/10/11 12:50	02/11/11 08:45	02/17/11 15:00	7.13	7.00	02/18/11 14:56	1.00	40.00	
UST21-MW23-0211	02/10/11 13:30	02/11/11 08:45	02/17/11 15:00	7.10	7.00	02/18/11 15:38	1.03	40.00	
UST21-MW62-0211	02/09/11 16:55	02/11/11 08:45	02/16/11 13:37	6.90	7.00	02/17/11 20:18	1.28	40.00	
GW02-020911	02/09/11 16:55	02/11/11 08:45	02/16/11 13:37	6.90	7.00	02/17/11 22:24	1.37	40.00	
UST21-MW16-0211	02/10/11 14:12	02/11/11 08:45	02/16/11 13:37	6.02	7.00	02/17/11 23:06	1.40	40.00	
UST21-MW14-0211	02/10/11 14:57	02/11/11 08:45	02/16/11 13:37	5.99	7.00	02/17/11 23:49	1.43	40.00	
UST21-MW37-0211	02/10/11 15:40	02/11/11 08:45	02/16/11 13:37	5.96	7.00	02/18/11 00:31	1.45	40.00	

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Sequence: 1B04204

Calibration: 1042001

SDG: CTOJM01_007

Project: CTO JM01 NAS Pensacola 2010

Instrument: MS-VOA3

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1B04204-TUN1	0209TU1.D	02/09/11 07:36
Cal Standard	1B04204-CAL1	0209CAL1.D	02/09/11 08:01
Cal Standard	1B04204-CAL2	0209CAL2.D	02/09/11 08:31
Cal Standard	1B04204-CAL3	0209CAL3.D	02/09/11 09:01
Cal Standard	1B04204-CAL4	0209CAL4.D	02/09/11 09:31
Cal Standard	1B04204-CAL5	0209CAL5.D	02/09/11 10:01
Cal Standard	1B04204-CAL6	0209CAL6.D	02/09/11 10:30
Cal Standard	1B04204-CAL7	0209CAL7.D	02/09/11 11:00
Cal Standard	1B04204-CAL8	0209CAL8.D	02/09/11 11:30
Cal Standard	1B04204-CAL9	0209CAL9.D	02/09/11 12:00
Initial Cal Check	1B04204-ICV1	0209ICV1.D	02/09/11 12:30

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Lab File ID:	0209TU1.D	Injection Date:	02/09/11
Instrument ID:	MS-VOA3	Injection Time:	07:36
Sequence:	1B04204	Lab Sample ID:	1B04204-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	18.8	PASS
75	30 - 60% of 95	45.9	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.87	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	92.7	PASS
175	5 - 9% of 174	7.25	PASS
176	95 - 101% of 174	100	PASS
177	5 - 9% of 176	6.27	PASS

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Calibration: 1042001
Instrument: MS-VOA3
Matrix: Water
Calibration Date: 2/9/2011 8:01:52AM

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	6.734143E-02	4.131886	5.272857	0.1204455			15	
Acrolein NOT TC	2.782683E-02	29.73532	5.112667	7.753974E-02	0.9993957		0.995	
Acrylonitrile	8.996425E-02	3.703462	5.939	7.312255E-02			15	
Benzene	0.8877526	6.724026	11.99533	2.484545E-02			15	
Bromobenzene	0.658417	6.565181	17.135	2.232344E-02			15	
Bromochloromethane	0.1221319	8.014157	9.435667	4.957178E-02			15	
Tert-Amyl Methyl Ether	0.7866563	28.95886	12.35033	2.602954E-02	0.999865		0.995	
Bromodichloromethane	0.2617577	11.6682	13.01144	1.351069E-02			15	
Bromoform	0.2222152	38.32122	16.42833	2.210761E-02	0.9968521		SPCC (0.1)	
Bromomethane	0.134767	17.95102	4.303	7.115313E-02	0.9986444		0.995	
Bromofluorobenzene	0.9432064	4.141834	16.96967	9.33719E-03			15	
n-Butylbenzene	1.373729	10.74547	18.31367	9.119014E-03			15	
2-Butanone	0.1029735	11.26933	8.704167	0.2876742			15	
sec-Butylbenzene	1.78503	8.794839	17.86833	8.658072E-03			15	
tert-Butylbenzene	1.508831	11.07756	17.99367	4.489641E-03			15	
Carbon disulfide	0.6389933	6.986358	6.467667	9.799745E-02			15	
Carbon tetrachloride	0.2178602	18.32864	11.952	0.0271791	0.9966548		0.995	
Chlorobenzene	1.436424	10.55311	16.022	1.374265E-02			SPCC (0.3)	
Chloroethane	0.1259794	7.710992	4.464333	8.993927E-02			15	
Chloroform	0.4027485	5.782466	9.585667	3.428825E-02			CCC (20)	
2-Chloroethyl vinyl ether	0.1750304	6.523102	13.61756	4.415385E-02			15	
Chloromethane	0.2467998	4.887919	3.656	8.056094E-02			SPCC (0.1)	
1-Chlorohexane	1.167282	13.78944	15.985	1.315906E-02			15	
2-Chlorotoluene	1.557085	8.347254	17.35333	6.828885E-03			15	
4-Chlorotoluene	1.615142	9.996862	17.41433	1.315012E-02			15	
Cyclohexane	0.3419423	5.528723	11.84133	5.030834E-02			15	
Dibromochloromethane	0.3561249	23.7061	15.00533	1.372953E-02	0.9986537		0.995	
1,2-Dibromo-3-chloropropane	0.1049106	25.64299	18.65733	2.335638E-02	0.9982178		0.995	
1,2-Dibromoethane (EDB)	0.4787408	5.397178	15.23767	1.253351E-02			15	
Dibromomethane	0.155373	4.148513	12.83	2.483071E-02			15	
1,2-Dichlorobenzene	1.083088	7.010621	18.285	8.946731E-03			15	
1,3-Dichlorobenzene	1.123795	10.89399	17.944	1.601189E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Calibration: 1042001
Instrument: MS-VOA3
Matrix: Water
Calibration Date: 2/9/2011 8:01:52AM

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.153886	8.916754	17.993	1.058319E-02			15	
Dichlorodifluoromethane	0.1736804	12.6814	3.449667	0.0911626			15	
1,1-Dichloroethane	0.4157175	5.684783	7.742	5.272704E-02			SPCC (0.1)	
1,2-Dichloroethane	0.3303627	5.286019	11.13189	3.819698E-02			15	
1,1-Dichloroethene	0.1766574	5.439883	5.899556	6.016249E-02			CCC (20)	
cis-1,2-Dichloroethene	0.2378304	5.961484	9.068667	7.826884E-02			15	
trans-1,2-Dichloroethene	0.2137549	5.616217	7.240333	7.187083E-02			15	
1,2-Dichloroethene (total)	0.2257926	5.66826	0	0			15	
1,2-Dichloropropane	0.2562795	4.808453	12.895	2.236072E-02			CCC (20)	
1,3-Dichloropropane	0.7476228	6.565771	14.762	1.645115E-02			15	
2,2-Dichloropropane	0.3047453	7.536233	9.817	6.765373E-02			15	
1,1-Dichloropropene	0.3077578	6.277739	11.69733	3.520369E-02			15	
cis-1,3-Dichloropropene	0.3687261	6.715723	13.85867	2.725416E-02			15	
trans-1,3-Dichloropropene	0.6343731	7.849772	14.353	2.839321E-02			15	
Diisopropyl Ether	0.8328406	6.498419	8.845667	4.787607E-02			15	
Ethylbenzene	2.356804	14.6307	16.18733	2.521386E-02			CCC (20)	
Ethyl tert-Butyl Ether	0.6967914	8.80672	9.904556	4.608595E-02			15	
Ethyl Methacrylate	0.5504545	13.59658	14.83656	5.480763E-02			15	
Hexachlorobutadiene	0.3096349	16.75068	20.199	1.725689E-02	0.9992167		0.995	
2-Hexanone	0.3159287	19.62314	14.95788	0.1536743	0.9985677		0.995	
Iodomethane	0.2812665	19.26399	5.943	0.102056	0.9996984		0.995	
Isopropylbenzene	1.931811	13.91947	16.94	1.393468E-02			15	
p-Isopropyltoluene	1.341973	7.51519	17.70033	1.045186E-02			15	
Methylene chloride	0.2430347	7.249268	6.115889	6.876087E-02			15	
Methyl Acetate	0.1690587	5.282551	6.153333	0.1019137			15	
Methylcyclohexane	0.2740638	7.278646	13.64433	2.119816E-02			15	
Naphthalene	1.637823	5.048973	20.15867	1.530895E-02			15	
Methyl Methacrylate	0.2153219	10.65267	13.299	6.891426E-02			15	
4-Methyl-2-pentanone	0.2213585	14.68593	14.01325	5.837834E-02			15	
Methyl t-Butyl Ether	0.5783993	5.415197	7.494	8.264436E-02			15	
n-Propylbenzene	2.265422	12.4461	17.27367	1.504421E-02			15	
Styrene	1.55917	8.296739	16.606	2.160731E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Calibration: 1042001
Instrument: MS-VOA3
Matrix: Water
Calibration Date: 2/9/2011 8:01:52AM

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1,2,2-Tetrachloroethane	0.5234688	3.543321	16.66756	6.055184E-03			SPCC (0.3)	
1,1,1,2-Tetrachloroethane	0.3922633	14.19435	15.965	1.611869E-02			15	
tert-Butyl alcohol	1.806783E-02	13.17667	5.901556	8.978124E-02			15	
Tetrachloroethene	0.5803178	9.212702	15.42567	1.615863E-02			15	
Toluene	1.266817	9.153244	14.69622	1.173103E-02			CCC (20)	
1,2,3-Trichlorobenzene	0.6692996	9.814259	20.39467	2.147976E-02			15	
1,2,4-Trichlorobenzene	0.7430317	10.34887	19.89633	1.991692E-02			15	
1,1,2-Trichloroethane	0.3774056	6.376428	14.50167	8.979918E-03			15	
1,1,1-Trichloroethane	0.3181209	9.211913	11.33911	4.512402E-02			15	
Tetrahydrofuran	6.750291E-02	15.92611	10.47212	0.1226981	0.9994273		0.995	
Trichloroethene	0.2462319	6.256117	12.97667	2.763548E-02			15	
Trichlorofluoromethane	0.3227014	7.743543	5.156222	6.336786E-02			15	
1,2,3-Trichloropropane	0.1759719	4.977682	16.77467	1.222676E-02			15	
1,3,5-Trimethylbenzene	1.631362	9.359366	17.476	2.218609E-02			15	
1,2,4-Trimethylbenzene	1.6879	8.163573	17.77867	7.414698E-03			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.1765655	7.73711	6.211	8.515101E-02			15	
Vinyl chloride	0.211655	4.326316	3.853889	5.652913E-02			CCC (20)	
m,p-Xylene	1.94475	11.82239	16.344	2.217847E-02			15	
o-Xylene	2.049863	12.57041	16.66062	1.171739E-02			15	
Vinyl acetate	0.238094	16.4196	8.031333	0.1635173	0.9997745		0.995	
Xylenes (total)	1.933	14.44837	0	0			15	
Dibromofluoromethane	0.2525351	1.358663	9.895667	6.587298E-02			15	
1,2-Dichloroethane-d4	5.392485E-02	1.948573	10.978	4.105036E-02			15	
Toluene-d8	2.159642	3.19565	14.62256	6.619058E-03			15	
tert-Amyl alcohol	1.100569E-02	26.54099	10.834	5.509799E-02	0.9993611		0.995	
tert-Amyl ethyl ether	0.6344248	6.268733	13.53989	1.578894E-02			15	

INITIAL CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Instrument ID:	MS-VOA3	Calibration:	1042001
Lab File ID:	0209ICV1.D	Calibration Date:	02/09/11 08:01
Sequence:	1B04204	Injection Date:	02/09/11
Lab Sample ID:	1B04204-ICV1	Injection Time:	12:30

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Benzene	A	100.0	98.61	0.8877526	0.8754519		-1.4	20
1,2-Dichloroethane	A	100.0	101.2	0.3303627	0.3342831		1.2	20
cis-1,2-Dichloroethene	A	100.0	98.74	0.2378304	0.2348456		-1.3	20
trans-1,2-Dichloroethene	A	100.0	102.4	0.2137549	0.2188265		2.4	20
Isopropylbenzene	A	100.0	97.29	1.931811	1.879531		-2.7	20
Methylene chloride	A	100.0	97.27	0.2430347	0.2363881		-2.7	20
Tetrachloroethene	A	100.0	97.25	0.5803178	0.5643474		-2.8	20
1,1,1-Trichloroethane	A	100.0	106.3	0.3181209	0.3380254		6.3	20
Trichloroethene	A	100.0	100.0	0.2462319	0.246225		-0.003	20
Vinyl chloride	A	100.0	109.1	0.211655	0.2309513		9.1	20
Xylenes (total)	A	300.0	251.0	1.933	1.658029		-14.2	20
Bromofluorobenzene	A	30.00	29.31	0.9432064	0.9214516		-2.3	20
Dibromofluoromethane	A	30.00	29.50	0.2525351	0.248311		-1.7	20
1,2-Dichloroethane-d4	A	30.00	31.00	5.392485E-02	5.571539E-02		3.3	20
Toluene-d8	A	30.00	29.76	2.159642	2.142179		-0.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B04812
Instrument: MS-VOA3
Calibration: 1042001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1B04812-TUN1	0216TU1.D	02/16/11 08:39
Calibration Check	1B04812-CCV1	0216CCV1.D	02/16/11 09:04
LCS	1B16004-BS1	0216LS1.D	02/16/11 09:34
Blank	1B16004-BLK1	0216BL1.D	02/16/11 11:01
UST21-MW63-0211	1102113-01	0211301.D	02/16/11 15:59
UST21-MW64-0211	1102113-02	0211302.D	02/16/11 16:29
UST21-MW60-0211	1102113-03	0211303.D	02/16/11 16:58
UST21-MW54-0211	1102113-04	0211304.D	02/16/11 17:28
UST21-MW01-0211	1102113-05	0211305.D	02/16/11 17:58
UST21-MW10-0211	1102113-06	0211306.D	02/16/11 18:28

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Lab File ID:	0216TU1.D	Injection Date:	02/16/11
Instrument ID:	MS-VOA3	Injection Time:	08:39
Sequence:	1B04812	Lab Sample ID:	1B04812-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	22.3	PASS
75	30 - 60% of 95	51.4	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.92	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	78.4	PASS
175	5 - 9% of 174	7.6	PASS
176	95 - 101% of 174	95.6	PASS
177	5 - 9% of 176	7.36	PASS

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Instrument ID:	MS-VOA3	Calibration:	1042001
Lab File ID:	0216CCV1.D	Calibration Date:	02/09/11 08:01
Sequence:	1B04812	Injection Date:	02/16/11
Lab Sample ID:	1B04812-CCV1	Injection Time:	09:04

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Benzene	A	100.0	102.4	0.8877526	0.909326		2.4	20	
1,2-Dichloroethane	A	100.0	117.6	0.3303627	0.388695		17.7	20	
cis-1,2-Dichloroethene	A	100.0	107.3	0.2378304	0.2551945		7.3	20	
trans-1,2-Dichloroethene	A	100.0	106.3	0.2137549	0.2272514		6.3	20	
Isopropylbenzene	A	100.0	99.93	1.931811	1.930384		-0.07	20	
Methylene chloride	A	100.0	104.7	0.2430347	0.2545154		4.7	20	
Tetrachloroethene	A	100.0	102.4	0.5803178	0.5943702		2.4	20	
1,1,1-Trichloroethane	A	100.0	121.3	0.3181209	0.3858014		21.3	20	*
Trichloroethene	A	100.0	109.4	0.2462319	0.2695127		9.5	20	
Vinyl chloride	A	100.0	112.8	0.211655	0.2388254		12.8	20	
Xylenes (total)	A	300.0	267.7	1.933	1.768157		-8.5	20	
Bromofluorobenzene	A	30.00	29.54	0.9432064	0.9287852		-1.5	20	
Dibromofluoromethane	A	30.00	30.64	0.2525351	0.2579643		2.1	20	
1,2-Dichloroethane-d4	A	30.00	30.07	5.392485E-02	5.405323E-02		0.2	20	
Toluene-d8	A	30.00	28.74	2.159642	2.069293		-4.2	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Batch: 1B16004 Batch Matrix: Water Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW63-0211	1102113-01	02/16/11 00:00	5.00	5.00
UST21-MW64-0211	1102113-02	02/16/11 00:00	5.00	5.00
UST21-MW60-0211	1102113-03	02/16/11 00:00	5.00	5.00
UST21-MW54-0211	1102113-04	02/16/11 00:00	5.00	5.00
UST21-MW01-0211	1102113-05	02/16/11 00:00	5.00	5.00
UST21-MW10-0211	1102113-06	02/16/11 00:00	5.00	5.00
Blank	1B16004-BLK1	02/16/11 00:00	5.00	5.00
LCS	1B16004-BS1	02/16/11 00:00	5.00	5.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Matrix: Laboratory ID: 1B16004-BLK1 File ID: 0216BL1.D

Sampled: Prepared: Analyzed: 02/16/11 11:01

Solids: Preparation: 5030B Dilution:

Batch: 1B16004 Sequence: 1B04812 Calibration: 1042001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.250	1.00	U
107-06-2	1,2-Dichloroethane		0.250	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	1.00	U
98-82-8	Isopropylbenzene		0.250	1.00	U
75-09-2	Methylene chloride		0.500	2.00	U
127-18-4	Tetrachloroethene		0.250	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	1.00	X, U
79-01-6	Trichloroethene		0.250	1.00	U
75-01-4	Vinyl chloride		0.250	1.00	U
1330-20-7	Xylenes (total)		0.750	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.26	104	75 - 120	
Dibromofluoromethane	30.00	30.76	103	85 - 115	
1,2-Dichloroethane-d4	30.00	29.80	99.3	70 - 120	
Toluene-d8	30.00	30.74	102	85 - 120	

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B05007	Instrument:	MS-VOA3
Calibration:	1042001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1B05007-TUN1	0216TU1E.D	02/16/11 20:32
Calibration Check	1B05007-CCV1	0216CCV1E.D	02/16/11 20:57
LCS	1B16009-BS1	0216LS1E.D	02/16/11 21:26
Blank	1B16009-BLK1	0216BL1E.D	02/16/11 22:53
TRIP BLANK 9283	1102113-13	0211313.D	02/16/11 23:23
UST21-MW23-0211	1102113-07	0211307.D	02/17/11 00:52
UST21-MW62-0211	1102113-08	0211308.D	02/17/11 01:22
GW02-020911	1102113-09	0211309.D	02/17/11 01:52
UST21-MW16-0211	1102113-10	0211310.D	02/17/11 02:21
UST21-MW14-0211	1102113-11	0211311.D	02/17/11 02:51
UST21-MW37-0211	1102113-12	0211312.D	02/17/11 03:21
UST21-MW62-0211	1B16009-MS1	0211308M.D	02/17/11 06:49
UST21-MW62-0211	1B16009-MSD1	0211308S.D	02/17/11 07:19

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Lab File ID:	0216TU1E.D	Injection Date:	02/16/11
Instrument ID:	MS-VOA3	Injection Time:	20:32
Sequence:	1B05007	Lab Sample ID:	1B05007-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	22.4	PASS
75	30 - 60% of 95	50.7	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	7.34	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	72.9	PASS
175	5 - 9% of 174	7.3	PASS
176	95 - 101% of 174	98.4	PASS
177	5 - 9% of 176	7.35	PASS

CONTINUING CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	MS-VOA3	Calibration:	1042001
Lab File ID:	0216CCV1E.D	Calibration Date:	02/09/11 08:01
Sequence:	1B05007	Injection Date:	02/16/11
Lab Sample ID:	1B05007-CCV1	Injection Time:	20:57

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Benzene	A	100.0	95.17	0.8877526	0.8449177		-4.8	20
1,2-Dichloroethane	A	100.0	112.3	0.3303627	0.3711454		12.3	20
cis-1,2-Dichloroethene	A	100.0	100.0	0.2378304	0.2378796		0.02	20
trans-1,2-Dichloroethene	A	100.0	102.3	0.2137549	0.218733		2.3	20
Isopropylbenzene	A	100.0	96.58	1.931811	1.865703		-3.4	20
Methylene chloride	A	100.0	99.96	0.2430347	0.2429484		-0.04	20
Tetrachloroethene	A	100.0	97.26	0.5803178	0.5644107		-2.7	20
1,1,1-Trichloroethane	A	100.0	118.7	0.3181209	0.3776372		18.7	20
Trichloroethene	A	100.0	106.0	0.2462319	0.2611433		6.1	20
Vinyl chloride	A	100.0	109.2	0.211655	0.2310917		9.2	20
Xylenes (total)	A	300.0	255.2	1.933	1.685265		-12.8	20
Bromofluorobenzene	A	30.00	30.00	0.9432064	0.9431754		-0.003	20
Dibromofluoromethane	A	30.00	30.08	0.2525351	0.2531903		0.3	20
1,2-Dichloroethane-d4	A	30.00	30.95	5.392485E-02	5.562487E-02		3.2	20
Toluene-d8	A	30.00	28.53	2.159642	2.053555		-4.9	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Batch: 1B16009 Batch Matrix: Water Preparation: 5030B

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW23-0211	1102113-07	02/16/11 00:00	5.00	5.00
UST21-MW62-0211	1102113-08	02/16/11 00:00	5.00	5.00
GW02-020911	1102113-09	02/16/11 00:00	5.00	5.00
UST21-MW16-0211	1102113-10	02/16/11 00:00	5.00	5.00
UST21-MW14-0211	1102113-11	02/16/11 00:00	5.00	5.00
UST21-MW37-0211	1102113-12	02/16/11 00:00	5.00	5.00
TRIP BLANK 9283	1102113-13	02/16/11 00:00	5.00	5.00
Blank	1B16009-BLK1	02/16/11 00:00	5.00	5.00
LCS	1B16009-BS1	02/16/11 00:00	5.00	5.00
UST21-MW62-0211	1B16009-MS1	02/16/11 00:00	5.00	5.00
UST21-MW62-0211	1B16009-MSD1	02/16/11 00:00	5.00	5.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Matrix: Laboratory ID: 1B16009-BLK1 File ID: 0216BL1E.D

Sampled: Prepared: Analyzed: 02/16/11 22:53

Solids: Preparation: 5030B Dilution:

Batch: 1B16009 Sequence: 1B05007 Calibration: 1042001 Instrument: MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.250	1.00	U
107-06-2	1,2-Dichloroethane		0.250	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	1.00	U
98-82-8	Isopropylbenzene		0.250	1.00	U
75-09-2	Methylene chloride		0.500	2.00	U
127-18-4	Tetrachloroethene		0.250	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	1.00	U
79-01-6	Trichloroethene		0.250	1.00	U
75-01-4	Vinyl chloride		0.250	1.00	U
1330-20-7	Xylenes (total)		0.750	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	32.21	107	75 - 120	
Dibromofluoromethane	30.00	31.26	104	85 - 115	
1,2-Dichloroethane-d4	30.00	31.28	104	70 - 120	
Toluene-d8	30.00	30.49	102	85 - 120	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Sequence: 1B04812
Instrument: MS-VOA3
Calibration: 1042001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1B04812-CCV1) ug/L				Lab File ID: 0216CCV1.D		Analyzed: 02/16/11 09:04		
Bromofluorobenzene	30.00	98.5	80 - 120	16.971	16.971	0.0000	+/-1.000	
Dibromofluoromethane	30.00	102	80 - 120	9.908	9.908	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	100	80 - 120	10.991	10.991	0.0000	+/-1.000	
Toluene-d8	30.00	95.8	80 - 120	14.629	14.629	0.0000	+/-1.000	
LCS (1B16004-BS1) ug/L				Lab File ID: 0216LS1.D		Analyzed: 02/16/11 09:34		
Bromofluorobenzene	30.00	99.8	75 - 120	16.971	16.971	0.0000	+/-1.000	
Dibromofluoromethane	30.00	104	85 - 115	9.908	9.908	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	99.0	70 - 120	10.984	10.991	-0.0070	+/-1.000	
Toluene-d8	30.00	98.1	85 - 120	14.628	14.629	-0.0010	+/-1.000	
Blank (1B16004-BLK1) ug/L				Lab File ID: 0216BL1.D		Analyzed: 02/16/11 11:01		
Bromofluorobenzene	30.00	104	75 - 120	16.971	16.971	0.0000	+/-1.000	
Dibromofluoromethane	30.00	103	85 - 115	9.896	9.908	-0.0120	+/-1.000	
1,2-Dichloroethane-d4	30.00	99.3	70 - 120	10.991	10.991	0.0000	+/-1.000	
Toluene-d8	30.00	102	85 - 120	14.629	14.629	0.0000	+/-1.000	
UST21-MW63-0211 (1102113-01) ug/L				Lab File ID: 0211301.D		Analyzed: 02/16/11 15:59		
Bromofluorobenzene	30.00	105	75 - 120	16.977	16.971	0.0060	+/-1.000	
Dibromofluoromethane	30.00	106	85 - 115	9.92	9.908	0.0120	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	70 - 120	10.991	10.991	0.0000	+/-1.000	
Toluene-d8	30.00	100	85 - 120	14.629	14.629	0.0000	+/-1.000	
UST21-MW64-0211 (1102113-02) ug/L				Lab File ID: 0211302.D		Analyzed: 02/16/11 16:29		
Bromofluorobenzene	30.00	104	75 - 120	16.977	16.971	0.0060	+/-1.000	
Dibromofluoromethane	30.00	107	85 - 115	9.914	9.908	0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	101	70 - 120	10.991	10.991	0.0000	+/-1.000	
Toluene-d8	30.00	98.4	85 - 120	14.629	14.629	0.0000	+/-1.000	
UST21-MW60-0211 (1102113-03) ug/L				Lab File ID: 0211303.D		Analyzed: 02/16/11 16:58		
Bromofluorobenzene	30.00	102	75 - 120	16.977	16.971	0.0060	+/-1.000	
Dibromofluoromethane	30.00	104	85 - 115	9.914	9.908	0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	103	70 - 120	11.003	10.991	0.0120	+/-1.000	
Toluene-d8	30.00	97.7	85 - 120	14.628	14.629	-0.0010	+/-1.000	
UST21-MW54-0211 (1102113-04) ug/L				Lab File ID: 0211304.D		Analyzed: 02/16/11 17:28		
Bromofluorobenzene	30.00	105	75 - 120	16.977	16.971	0.0060	+/-1.000	
Dibromofluoromethane	30.00	106	85 - 115	9.914	9.908	0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	99.1	70 - 120	10.99	10.991	-0.0010	+/-1.000	
Toluene-d8	30.00	102	85 - 120	14.635	14.629	0.0060	+/-1.000	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 1B04812

SDG: CTOJM01_007
Project: CTO JM01 NAS Pensacola_2010
Instrument: MS-VOA3
Calibration: 1042001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
UST21-MW01-0211 (1102113-05) ug/L				Lab File ID: 0211305.D		Analyzed: 02/16/11 17:58		
Bromofluorobenzene	30.00	99.9	75 - 120	16.977	16.971	0.0060	+/-1.000	
Dibromofluoromethane	30.00	109	85 - 115	9.92	9.908	0.0120	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	70 - 120	10.991	10.991	0.0000	+/-1.000	
Toluene-d8	30.00	96.2	85 - 120	14.629	14.629	0.0000	+/-1.000	
UST21-MW10-0211 (1102113-06) ug/L				Lab File ID: 0211306.D		Analyzed: 02/16/11 18:28		
Bromofluorobenzene	30.00	104	75 - 120	16.977	16.971	0.0060	+/-1.000	
Dibromofluoromethane	30.00	106	85 - 115	9.92	9.908	0.0120	+/-1.000	
1,2-Dichloroethane-d4	30.00	97.7	70 - 120	10.997	10.991	0.0060	+/-1.000	
Toluene-d8	30.00	99.5	85 - 120	14.629	14.629	0.0000	+/-1.000	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Sequence: 1B05007
Instrument: MS-VOA3
Calibration: 1042001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1B05007-CCV1) ug/L				Lab File ID: 0216CCV1E.D		Analyzed: 02/16/11 20:57		
Bromofluorobenzene	30.00	100	80 - 120	16.977	16.977	0.0000	+/-1.000	
Dibromofluoromethane	30.00	100	80 - 120	9.92	9.92	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	103	80 - 120	10.997	10.997	0.0000	+/-1.000	
Toluene-d8	30.00	95.1	80 - 120	14.635	14.635	0.0000	+/-1.000	
LCS (1B16009-BS1) ug/L				Lab File ID: 0216LS1E.D		Analyzed: 02/16/11 21:26		
Bromofluorobenzene	30.00	101	75 - 120	16.977	16.977	0.0000	+/-1.000	
Dibromofluoromethane	30.00	104	85 - 115	9.908	9.92	-0.0120	+/-1.000	
1,2-Dichloroethane-d4	30.00	101	70 - 120	10.991	10.997	-0.0060	+/-1.000	
Toluene-d8	30.00	97.7	85 - 120	14.629	14.635	-0.0060	+/-1.000	
Blank (1B16009-BLK1) ug/L				Lab File ID: 0216BL1E.D		Analyzed: 02/16/11 22:53		
Bromofluorobenzene	30.00	107	75 - 120	16.977	16.977	0.0000	+/-1.000	
Dibromofluoromethane	30.00	104	85 - 115	9.914	9.92	-0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	104	70 - 120	10.991	10.997	-0.0060	+/-1.000	
Toluene-d8	30.00	102	85 - 120	14.629	14.635	-0.0060	+/-1.000	
TRIP BLANK 9283 (1102113-13) ug/L				Lab File ID: 0211313.D		Analyzed: 02/16/11 23:23		
Bromofluorobenzene	30.00	103	75 - 120	16.977	16.977	0.0000	+/-1.000	
Dibromofluoromethane	30.00	105	85 - 115	9.908	9.92	-0.0120	+/-1.000	
1,2-Dichloroethane-d4	30.00	100	70 - 120	10.991	10.997	-0.0060	+/-1.000	
Toluene-d8	30.00	99.8	85 - 120	14.629	14.635	-0.0060	+/-1.000	
UST21-MW23-0211 (1102113-07) ug/L				Lab File ID: 0211307.D		Analyzed: 02/17/11 00:52		
Bromofluorobenzene	30.00	106	75 - 120	16.977	16.977	0.0000	+/-1.000	
Dibromofluoromethane	30.00	108	85 - 115	9.926	9.92	0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	97.8	70 - 120	10.997	10.997	0.0000	+/-1.000	
Toluene-d8	30.00	98.5	85 - 120	14.628	14.635	-0.0070	+/-1.000	
UST21-MW62-0211 (1102113-08) ug/L				Lab File ID: 0211308.D		Analyzed: 02/17/11 01:22		
Bromofluorobenzene	30.00	103	75 - 120	16.977	16.977	0.0000	+/-1.000	
Dibromofluoromethane	30.00	107	85 - 115	9.914	9.92	-0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	103	70 - 120	10.997	10.997	0.0000	+/-1.000	
Toluene-d8	30.00	101	85 - 120	14.635	14.635	0.0000	+/-1.000	
GW02-020911 (1102113-09) ug/L				Lab File ID: 0211309.D		Analyzed: 02/17/11 01:52		
Bromofluorobenzene	30.00	104	75 - 120	16.977	16.977	0.0000	+/-1.000	
Dibromofluoromethane	30.00	105	85 - 115	9.914	9.92	-0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	98.9	70 - 120	10.997	10.997	0.0000	+/-1.000	
Toluene-d8	30.00	98.1	85 - 120	14.629	14.635	-0.0060	+/-1.000	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Sequence: 1B05007
Instrument: MS-VOA3
Calibration: 1042001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
UST21-MW16-0211 (1102113-10) ug/L				Lab File ID: 0211310.D		Analyzed: 02/17/11 02:21		
Bromofluorobenzene	30.00	104	75 - 120	16.977	16.977	0.0000	+/-1.000	
Dibromofluoromethane	30.00	109	85 - 115	9.908	9.92	-0.0120	+/-1.000	
1,2-Dichloroethane-d4	30.00	104	70 - 120	10.991	10.997	-0.0060	+/-1.000	
Toluene-d8	30.00	99.8	85 - 120	14.629	14.635	-0.0060	+/-1.000	
UST21-MW14-0211 (1102113-11) ug/L				Lab File ID: 0211311.D		Analyzed: 02/17/11 02:51		
Bromofluorobenzene	30.00	103	75 - 120	16.977	16.977	0.0000	+/-1.000	
Dibromofluoromethane	30.00	108	85 - 115	9.914	9.92	-0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	70 - 120	10.997	10.997	0.0000	+/-1.000	
Toluene-d8	30.00	98.3	85 - 120	14.635	14.635	0.0000	+/-1.000	
UST21-MW37-0211 (1102113-12) ug/L				Lab File ID: 0211312.D		Analyzed: 02/17/11 03:21		
Bromofluorobenzene	30.00	103	75 - 120	16.977	16.977	0.0000	+/-1.000	
Dibromofluoromethane	30.00	104	85 - 115	9.92	9.92	0.0000	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	70 - 120	10.997	10.997	0.0000	+/-1.000	
Toluene-d8	30.00	97.9	85 - 120	14.629	14.635	-0.0060	+/-1.000	
Matrix Spike (1B16009-MS1) ug/L				Lab File ID: 0211308M.D		Analyzed: 02/17/11 06:49		
Bromofluorobenzene	30.00	102	75 - 120	16.977	16.977	0.0000	+/-1.000	
Dibromofluoromethane	30.00	105	85 - 115	9.914	9.92	-0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	97.0	70 - 120	10.991	10.997	-0.0060	+/-1.000	
Toluene-d8	30.00	101	85 - 120	14.629	14.635	-0.0060	+/-1.000	
Matrix Spike Dup (1B16009-MSD1) ug/L				Lab File ID: 0211308S.D		Analyzed: 02/17/11 07:19		
Bromofluorobenzene	30.00	99.3	75 - 120	16.977	16.977	0.0000	+/-1.000	
Dibromofluoromethane	30.00	103	85 - 115	9.914	9.92	-0.0060	+/-1.000	
1,2-Dichloroethane-d4	30.00	102	70 - 120	10.991	10.997	-0.0060	+/-1.000	
Toluene-d8	30.00	99.5	85 - 120	14.635	14.635	0.0000	+/-1.000	

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B16004	Laboratory ID:	1B16004-BS1
Preparation:	5030B	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Benzene	50.00	51.3	103	80 - 120
1,2-Dichloroethane	50.00	60.1	120	70 - 130
cis-1,2-Dichloroethene	50.00	55.1	110	70 - 125
trans-1,2-Dichloroethene	50.00	54.6	109	60 - 140
Isopropylbenzene	50.00	56.1	112	75 - 125
Methylene chloride	50.00	54.0	108	55 - 140
Tetrachloroethene	50.00	51.8	104	45 - 150
1,1,1-Trichloroethane	50.00	58.5	117	65 - 130
Trichloroethene	50.00	56.4	113	70 - 125
Vinyl chloride	50.00	58.6	117	50 - 145
Xylenes (total)	150.0	152	102	75 - 130

LCS / LCS DUPLICATE RECOVERY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B16009	Laboratory ID:	1B16009-BS1
Preparation:	5030B	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Benzene	50.00	51.5	103	80 - 120
1,2-Dichloroethane	50.00	58.3	117	70 - 130
cis-1,2-Dichloroethene	50.00	52.1	104	70 - 125
trans-1,2-Dichloroethene	50.00	54.3	109	60 - 140
Isopropylbenzene	50.00	56.6	113	75 - 125
Methylene chloride	50.00	52.3	105	55 - 140
Tetrachloroethene	50.00	52.4	105	45 - 150
1,1,1-Trichloroethane	50.00	59.5	119	65 - 130
Trichloroethene	50.00	55.3	111	70 - 125
Vinyl chloride	50.00	58.3	117	50 - 145
Xylenes (total)	150.0	150	99.8	75 - 130

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW8260B

UST21-MW62-0211

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola 2010

Matrix: Water

Batch: 1B16009

% Solids:

Source Sample Name: **1102113-08**

ANALYTE	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC.	Q	QC LIMITS REC.
Benzene	50.00	ND	48.9	97.9		80 - 120
1,2-Dichloroethane	50.00	ND	55.6	111		70 - 130
cis-1,2-Dichloroethene	50.00	ND	51.1	102		70 - 125
trans-1,2-Dichloroethene	50.00	ND	51.4	103		60 - 140
Isopropylbenzene	50.00	ND	53.2	106		75 - 125
Methylene chloride	50.00	ND	51.2	102		55 - 140
Tetrachloroethene	50.00	ND	48.5	97.0		45 - 150
1,1,1-Trichloroethane	50.00	ND	52.7	105		65 - 130
Trichloroethene	50.00	ND	51.7	103		70 - 125
Vinyl chloride	50.00	ND	53.8	108		50 - 145
Xylenes (total)	150.0	ND	143	95.2		75 - 130

ANALYTE	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Benzene	50.00	48.9	97.8	0.0270		30	80 - 120
1,2-Dichloroethane	50.00	53.2	106	4.34		30	70 - 130
cis-1,2-Dichloroethene	50.00	49.4	98.7	3.51		30	70 - 125
trans-1,2-Dichloroethene	50.00	50.5	101	1.82		30	60 - 140
Isopropylbenzene	50.00	52.3	105	1.70		30	75 - 125
Methylene chloride	50.00	50.0	100	2.26		30	55 - 140
Tetrachloroethene	50.00	48.8	97.7	0.688		30	45 - 150
1,1,1-Trichloroethane	50.00	54.1	108	2.66		30	65 - 130
Trichloroethene	50.00	51.1	102	1.02		30	70 - 125
Vinyl chloride	50.00	52.7	105	2.08		30	50 - 145
Xylenes (total)	150.0	141	94.3	0.999		30	75 - 130

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Sequence: 1B04812
Instrument: MS-VOA3
Calibration: 1042001

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (1B04812-CCV1)			Lab File ID: 0216CCV1.D			Analyzed: 02/16/11 09:04			
Fluorobenzene	1153807	12.366	1314641	12.359	88	50 - 200	0.0070	+/-0.50	
Chlorobenzene-d5	609775	15.997	660505	15.997	92	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	663055	17.975	723449	17.974	92	50 - 200	0.0010	+/-0.50	
LCS (1B16004-BS1)			Lab File ID: 0216LS1.D			Analyzed: 02/16/11 09:34			
Fluorobenzene	1155896	12.359	1153807	12.366	100	50 - 200	-0.0070	+/-0.50	
Chlorobenzene-d5	596380	15.997	609775	15.997	98	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	667130	17.974	663055	17.975	101	50 - 200	-0.0010	+/-0.50	
Blank (1B16004-BLK1)			Lab File ID: 0216BL1.D			Analyzed: 02/16/11 11:01			
Fluorobenzene	1152185	12.366	1153807	12.366	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	561509	15.997	609775	15.997	92	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	644591	17.975	663055	17.975	97	50 - 200	0.0000	+/-0.50	
UST21-MW63-0211 (1102113-01)			Lab File ID: 0211301.D			Analyzed: 02/16/11 15:59			
Fluorobenzene	1088349	12.372	1153807	12.366	94	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5	544471	16.003	609775	15.997	89	50 - 200	0.0060	+/-0.50	
1,4-Dichlorobenzene-d4	641869	17.981	663055	17.975	97	50 - 200	0.0060	+/-0.50	
UST21-MW64-0211 (1102113-02)			Lab File ID: 0211302.D			Analyzed: 02/16/11 16:29			
Fluorobenzene	1113473	12.371	1153807	12.366	97	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5	556824	16.003	609775	15.997	91	50 - 200	0.0060	+/-0.50	
1,4-Dichlorobenzene-d4	633555	17.981	663055	17.975	96	50 - 200	0.0060	+/-0.50	
UST21-MW60-0211 (1102113-03)			Lab File ID: 0211303.D			Analyzed: 02/16/11 16:58			
Fluorobenzene	1097297	12.365	1153807	12.366	95	50 - 200	-0.0010	+/-0.50	
Chlorobenzene-d5	547829	16.003	609775	15.997	90	50 - 200	0.0060	+/-0.50	
1,4-Dichlorobenzene-d4	640105	17.981	663055	17.975	97	50 - 200	0.0060	+/-0.50	
UST21-MW54-0211 (1102113-04)			Lab File ID: 0211304.D			Analyzed: 02/16/11 17:28			
Fluorobenzene	1084091	12.371	1153807	12.366	94	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5	541624	16.003	609775	15.997	89	50 - 200	0.0060	+/-0.50	
1,4-Dichlorobenzene-d4	632877	17.98	663055	17.975	95	50 - 200	0.0050	+/-0.50	
UST21-MW01-0211 (1102113-05)			Lab File ID: 0211305.D			Analyzed: 02/16/11 17:58			
Fluorobenzene	1053717	12.366	1153807	12.366	91	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	552672	16.004	609775	15.997	91	50 - 200	0.0070	+/-0.50	
1,4-Dichlorobenzene-d4	622302	17.981	663055	17.975	94	50 - 200	0.0060	+/-0.50	
UST21-MW10-0211 (1102113-06)			Lab File ID: 0211306.D			Analyzed: 02/16/11 18:28			
Fluorobenzene	1080355	12.366	1153807	12.366	94	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	537048	16.004	609775	15.997	88	50 - 200	0.0070	+/-0.50	
1,4-Dichlorobenzene-d4	628703	17.981	663055	17.975	95	50 - 200	0.0060	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Sequence: 1B05007

SDG: CTOJM01_007
Project: CTO JM01 NAS Pensacola_2010
Instrument: MS-VOA3
Calibration: 1042001

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (1B05007-CCV1)			Lab File ID: 0216CCV1E.D			Analyzed: 02/16/11 20:57			
Fluorobenzene	1113297	12.371	1314641	12.359	85	50 - 200	0.0120	+/-0.50	
Chlorobenzene-d5	597963	16.003	660505	15.997	91	50 - 200	0.0060	+/-0.50	
1,4-Dichlorobenzene-d4	671974	17.981	723449	17.974	93	50 - 200	0.0070	+/-0.50	
LCS (1B16009-BS1)			Lab File ID: 0216LS1E.D			Analyzed: 02/16/11 21:26			
Fluorobenzene	1119280	12.365	1113297	12.371	101	50 - 200	-0.0060	+/-0.50	
Chlorobenzene-d5	577901	16.003	597963	16.003	97	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	670415	17.981	671974	17.981	100	50 - 200	0.0000	+/-0.50	
Blank (1B16009-BLK1)			Lab File ID: 0216BL1E.D			Analyzed: 02/16/11 22:53			
Fluorobenzene	1059423	12.366	1113297	12.371	95	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5	519717	15.997	597963	16.003	87	50 - 200	-0.0060	+/-0.50	
1,4-Dichlorobenzene-d4	611381	17.981	671974	17.981	91	50 - 200	0.0000	+/-0.50	
TRIP BLANK 9283 (1102113-13)			Lab File ID: 0211313.D			Analyzed: 02/16/11 23:23			
Fluorobenzene	1061395	12.366	1113297	12.371	95	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5	536322	16.003	597963	16.003	90	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	628808	17.981	671974	17.981	94	50 - 200	0.0000	+/-0.50	
UST21-MW23-0211 (1102113-07)			Lab File ID: 0211307.D			Analyzed: 02/17/11 00:52			
Fluorobenzene	1029275	12.365	1113297	12.371	92	50 - 200	-0.0060	+/-0.50	
Chlorobenzene-d5	517841	16.003	597963	16.003	87	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	609034	17.981	671974	17.981	91	50 - 200	0.0000	+/-0.50	
UST21-MW62-0211 (1102113-08)			Lab File ID: 0211308.D			Analyzed: 02/17/11 01:22			
Fluorobenzene	1040710	12.372	1113297	12.371	93	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5	524773	16.003	597963	16.003	88	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	610684	17.981	671974	17.981	91	50 - 200	0.0000	+/-0.50	
GW02-020911 (1102113-09)			Lab File ID: 0211309.D			Analyzed: 02/17/11 01:52			
Fluorobenzene	1052085	12.372	1113297	12.371	95	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5	526799	16.004	597963	16.003	88	50 - 200	0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	612382	17.981	671974	17.981	91	50 - 200	0.0000	+/-0.50	
UST21-MW16-0211 (1102113-10)			Lab File ID: 0211310.D			Analyzed: 02/17/11 02:21			
Fluorobenzene	1009643	12.366	1113297	12.371	91	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5	513464	16.004	597963	16.003	86	50 - 200	0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	597802	17.981	671974	17.981	89	50 - 200	0.0000	+/-0.50	
UST21-MW14-0211 (1102113-11)			Lab File ID: 0211311.D			Analyzed: 02/17/11 02:51			
Fluorobenzene	1040071	12.371	1113297	12.371	93	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5	532057	16.003	597963	16.003	89	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	620448	17.981	671974	17.981	92	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B05007
Instrument: MS-VOA3
Calibration: 1042001

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
UST21-MW37-0211 (1102113-12)			Lab File ID: 0211312.D			Analyzed: 02/17/11 03:21			
Fluorobenzene	1045414	12.366	1113297	12.371	94	50 - 200	-0.0050	+/-0.50	
Chlorobenzene-d5	535011	16.004	597963	16.003	89	50 - 200	0.0010	+/-0.50	
1,4-Dichlorobenzene-d4	625998	17.981	671974	17.981	93	50 - 200	0.0000	+/-0.50	
Matrix Spike (1B16009-MS1)			Lab File ID: 0211308M.D			Analyzed: 02/17/11 06:49			
Fluorobenzene	1151630	12.372	1113297	12.371	103	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5	586440	16.003	597963	16.003	98	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	669201	17.981	671974	17.981	100	50 - 200	0.0000	+/-0.50	
Matrix Spike Dup (1B16009-MSD1)			Lab File ID: 0211308S.D			Analyzed: 02/17/11 07:19			
Fluorobenzene	1175832	12.372	1113297	12.371	106	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5	604739	16.003	597963	16.003	101	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4	678865	17.981	671974	17.981	101	50 - 200	0.0000	+/-0.50	

ANALYSIS SEQUENCE SUMMARY

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B03911	Instrument:	MS-BNA4
Calibration:	1048001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1B03911-TUN1	SEQ-TUN1.D	02/07/11 18:14
Cal Standard	1B03911-CAL1	SEQ-CAL1.D	02/07/11 18:33
Cal Standard	1B03911-CAL2	SEQ-CAL2.D	02/07/11 19:06
Cal Standard	1B03911-CAL3	SEQ-CAL3.D	02/07/11 19:39
Cal Standard	1B03911-CAL4	SEQ-CAL4.D	02/07/11 20:12
Cal Standard	1B03911-CAL5	SEQ-CAL5.D	02/07/11 20:45
Cal Standard	1B03911-CAL6	SEQ-CAL6.D	02/07/11 21:18
Cal Standard	1B03911-CAL7	SEQ-CAL7.D	02/07/11 21:51
Cal Standard	1B03911-CAL8	SEQ-CAL8.D	02/07/11 22:24
Cal Standard	1B03911-CAL9	SEQ-CAL9.D	02/07/11 22:57
Cal Standard	1B03911-CALA	SEQ-CALA.D	02/07/11 23:30
Cal Standard	1B03911-CALB	SEQ-CALB.D	02/08/11 00:03
Initial Cal Check	1B03911-ICV3	SEQ-ICV3.D	02/08/11 01:43

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Lab File ID:	SEQ-TUN1.D	Injection Date:	02/07/11
Instrument ID:	MS-BNA4	Injection Time:	18:14
Sequence:	1B03911	Lab Sample ID:	1B03911-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	50.4	PASS
68	Less than 2% of 69	1.6	PASS
69	Less than 200% of 198	48.3	PASS
70	Less than 2% of 69	0.382	PASS
127	40 - 60% of 198	54.8	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.54	PASS
275	10 - 30% of 198	26.1	PASS
365	1 - 200% of 198	3.76	PASS
441	0.001 - 100% of 443	83.9	PASS
442	40 - 200% of 198	121	PASS
443	17 - 23% of 442	19.9	PASS

INITIAL CALIBRATION DATA (Continued)

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Calibration:	1048001	Instrument:	MS-BNA4
Matrix:	Water	Calibration Date:	2/7/2011 6:33:21PM

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	0.7926954	5.318234	10.39527	5.971224E-02			CCC (30)	
Acenaphthylene	1.198573	5.154891	10.18691	4.731456E-02			15	
Anthracene	1.085076	2.663468	12.29609	3.862814E-02			15	
Benzo(a)anthracene	0.6763585	8.358676	15.60309	2.142343E-02			15	
Benzo(a)pyrene	0.9878261	6.547324	18.24164	5.668756E-02			CCC (30)	
Benzo(b)fluoranthene	1.092912	10.27405	17.56236	5.894665E-02			15	
Benzo(g,h,i)perylene	0.8305083	10.43963	21.38382	7.386433E-02			15	
Benzo(k)fluoranthene	1.229142	6.280104	17.61618	6.153129E-02			15	
Chrysene	0.7213402	9.894529	15.663	4.825978E-02			15	
Dibenz(a,h)anthracene	0.7676577	16.54231	20.81327	7.143003E-02	0.9994472		0.995	
Fluoranthene	0.9866036	4.66066	13.70827	3.573892E-02			CCC (30)	
Fluorene	0.7802025	7.667299	11.03864	6.130489E-02			15	
2-Fluorobiphenyl	0.8853237	8.766314	9.524182	0.1068576			15	
Indeno(1,2,3-cd)pyrene	0.9671145	14.07617	20.77682	7.155087E-02			15	
1-Methylnaphthalene	0.8429092	6.545285	9.193818	9.234948E-02			15	
2-Methylnaphthalene	0.7808299	7.097333	9.071273	0.1155369			15	
Naphthalene	1.279867	6.104298	8.222455	7.228635E-02			15	
Phenanthrene	1.044549	2.946851	12.23027	5.301422E-02			15	
Pyrene	0.9987664	3.320125	13.98973	3.049288E-02			15	
Terphenyl-d14	0.5971292	4.255474	14.17245	0.0236856			15	
2,4,6-Tribromophenol	0.1258515	30.46799	11.34973	5.292164E-02	0.9985944		0.995	

INITIAL CALIBRATION CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Instrument ID:	MS-BNA4	Calibration:	1048001
Lab File ID:	SEQ-ICV3.D	Calibration Date:	02/07/11 18:33
Sequence:	1B03911	Injection Date:	02/08/11
Lab Sample ID:	1B03911-ICV3	Injection Time:	01:43

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Acenaphthene	A	5.000	5.043	0.7926954	0.7995186		0.9	20
Benzo(a)anthracene	A	5.000	5.070	0.6763585	0.6858315		1.4	20
Benzo(k)fluoranthene	A	5.000	5.144	1.229142	1.264612		2.9	20
Chrysene	A	5.000	4.973	0.7213402	0.7174082		-0.5	20
Dibenz(a,h)anthracene	L	5.000	4.922	0.7676577	0.799063		-1.6	20
1-Methylnaphthalene	A	5.000	4.700	0.8429092	0.7924099		-6.0	20
2-Methylnaphthalene	A	5.000	5.839	0.7808299	0.9118984		16.8	20
Naphthalene	A	5.000	5.195	1.279867	1.329684		3.9	20
2-Fluorobiphenyl	A	5.000	4.983	0.8853237	0.8823667		-0.3	20
Terphenyl-d14	A	5.000	5.238	0.5971292	0.6255041		4.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Sequence:	1B05408	Instrument:	MS-BNA4
Calibration:	1048001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1B05408-TUN1	SEQ-TUN2.D	02/22/11 03:35
Calibration Check	1B05408-CCV1	SEQ-CCV2.D	02/22/11 03:55
LCS	1B14025-BS1	B14025L1.D	02/22/11 09:41
UST21-MW63-0211	1102113-01	0211301.D	02/22/11 10:35
UST21-MW64-0211	1102113-02	0211302.D	02/22/11 11:02
UST21-MW60-0211	1102113-03	0211303.D	02/22/11 11:29
UST21-MW54-0211	1102113-04	0211304.D	02/22/11 12:23
UST21-MW01-0211	1102113-05	0211305.D	02/22/11 12:50
UST21-MW62-0211	1102113-08	0211308.D	02/22/11 13:17
UST21-MW62-0211	1B14025-MS1	0211308M.D	02/22/11 13:44
UST21-MW62-0211	1B14025-MSD1	0211308S.D	02/22/11 14:13

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Lab File ID:	SEQ-TUN2.D	Injection Date:	02/22/11
Instrument ID:	MS-BNA4	Injection Time:	03:35
Sequence:	1B05408	Lab Sample ID:	1B05408-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	45.2	PASS
68	Less than 2% of 69	1.41	PASS
69	Less than 200% of 198	45.1	PASS
70	Less than 2% of 69	0.484	PASS
127	40 - 60% of 198	53.9	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.71	PASS
275	10 - 30% of 198	26.7	PASS
365	1 - 200% of 198	3.64	PASS
441	0.001 - 100% of 443	83.5	PASS
442	40 - 200% of 198	119	PASS
443	17 - 23% of 442	19.9	PASS

CONTINUING CALIBRATION CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Instrument ID:	MS-BNA4	Calibration:	1048001
Lab File ID:	SEQ-CCV2.D	Calibration Date:	02/07/11 18:33
Sequence:	1B05408	Injection Date:	02/22/11
Lab Sample ID:	1B05408-CCV1	Injection Time:	03:55

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acenaphthene	A	5.000	4.593	0.7926954	0.7282128		-8.1	20	
Benzo(a)anthracene	A	5.000	5.803	0.6763585	0.7850107		16.1	20	
Benzo(k)fluoranthene	A	5.000	6.032	1.229142	1.482746		20.6	20	*
Chrysene	A	5.000	5.638	0.7213402	0.8134364		12.8	20	
Dibenz(a,h)anthracene	L	5.000	4.384	0.7676577	0.7662452		-12.3	20	
1-Methylnaphthalene	A	5.000	4.560	0.8429092	0.768796		-8.8	20	
2-Methylnaphthalene	A	5.000	4.434	0.7808299	0.6924709		-11.3	20	
Naphthalene	A	5.000	4.577	1.279867	1.171638		-8.5	20	
2-Fluorobiphenyl	A	5.000	4.444	0.8853237	0.7869501		-11.1	20	
Terphenyl-d14	A	5.000	5.535	0.5971292	0.6610139		10.7	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B05515
Instrument: MS-BNA4
Calibration: 1048001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1B05515-TUN1	SEQ-TUN1.D	02/22/11 17:44
Calibration Check	1B05515-CCV1	SEQ-CCV1.D	02/22/11 18:04
Blank	1B14025-BLK1	B1425B1R.D	02/22/11 19:01
UST21-MW10-0211	1102113-06	0211306.D	02/22/11 19:28
UST21-MW23-0211	1102113-07	0211307.D	02/22/11 19:54
GW02-020911	1102113-09	0211309.D	02/22/11 20:21
UST21-MW16-0211	1102113-10	0211310.D	02/22/11 20:47
UST21-MW14-0211	1102113-11	0211311.D	02/22/11 21:13
UST21-MW37-0211	1102113-12	0211312.D	02/22/11 21:40

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Lab File ID:	SEQ-TUN1.D	Injection Date:	02/22/11
Instrument ID:	MS-BNA4	Injection Time:	17:44
Sequence:	1B05515	Lab Sample ID:	1B05515-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	52.2	PASS
68	Less than 2% of 69	1.49	PASS
69	Less than 200% of 198	50.4	PASS
70	Less than 2% of 69	0.556	PASS
127	40 - 60% of 198	54.4	PASS
197	Less than 1% of 198	0.0439	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.62	PASS
275	10 - 30% of 198	27.8	PASS
365	1 - 200% of 198	4.21	PASS
441	0.001 - 100% of 443	83.3	PASS
442	40 - 200% of 198	164	PASS
443	17 - 23% of 442	19.8	PASS

CONTINUING CALIBRATION CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Instrument ID:	MS-BNA4	Calibration:	1048001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	02/07/11 18:33
Sequence:	1B05515	Injection Date:	02/22/11
Lab Sample ID:	1B05515-CCV1	Injection Time:	18:04

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acenaphthene	A	5.000	4.807	0.7926954	0.7621658		-3.9	20	
Benzo(a)anthracene	A	5.000	4.813	0.6763585	0.6511255		-3.7	20	
Benzo(k)fluoranthene	A	5.000	5.156	1.229142	1.267458		3.1	20	
Chrysene	A	5.000	4.308	0.7213402	0.621439		-13.8	20	
Dibenz(a,h)anthracene	L	5.000	3.974	0.7676577	0.6904572		-20.5	20	*
1-Methylnaphthalene	A	5.000	4.120	0.8429092	0.6946062		-17.6	20	
2-Methylnaphthalene	A	5.000	4.178	0.7808299	0.6524557		-16.4	20	
Naphthalene	A	5.000	4.653	1.279867	1.19115		-6.9	20	
2-Fluorobiphenyl	A	5.000	4.470	0.8853237	0.7913928		-10.6	20	
Terphenyl-d14	A	5.000	5.296	0.5971292	0.6324444		5.9	20	

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Batch: 1B14025 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW63-0211	1102113-01	02/15/11 16:46	1,020.00	1.00
UST21-MW64-0211	1102113-02	02/15/11 16:46	1,020.00	1.00
UST21-MW60-0211	1102113-03	02/15/11 16:46	1,000.00	1.00
UST21-MW54-0211	1102113-04	02/15/11 16:46	1,000.00	1.00
UST21-MW01-0211	1102113-05	02/15/11 16:46	1,000.00	1.00
UST21-MW10-0211	1102113-06	02/15/11 16:46	1,000.00	1.00
UST21-MW23-0211	1102113-07	02/15/11 16:46	1,020.00	1.00
UST21-MW62-0211	1102113-08	02/15/11 16:46	1,020.00	1.00
GW02-020911	1102113-09	02/15/11 16:46	1,060.00	1.00
UST21-MW16-0211	1102113-10	02/15/11 16:46	1,040.00	1.00
UST21-MW14-0211	1102113-11	02/15/11 16:46	1,040.00	1.00
UST21-MW37-0211	1102113-12	02/15/11 16:46	1,000.00	1.00
UST21-MW37-0211	1102113-12RE1	02/15/11 16:46	1,000.00	1.00
Blank	1B14025-BLK1	02/15/11 16:46	1,000.00	1.00
LCS	1B14025-BS1	02/15/11 16:46	1,040.00	1.00
UST21-MW62-0211	1B14025-MS1	02/15/11 16:46	900.00	1.00
UST21-MW62-0211	1B14025-MSD1	02/15/11 16:46	1,000.00	1.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Matrix: Laboratory ID: 1B14025-BLK1 File ID: B1425B1R.D

Sampled: Prepared: Analyzed: 02/22/11 19:01

Solids: Preparation: EXT_3510 Dilution:

Batch: 1B14025 Sequence: 1B05515 Calibration: 1048001 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0500	0.200	U
56-55-3	Benzo(a)anthracene		0.0500	0.200	U
207-08-9	Benzo(k)fluoranthene		0.0500	0.200	U
218-01-9	Chrysene		0.0500	0.200	U
53-70-3	Dibenz(a,h)anthracene		0.0500	0.200	YU
90-12-0	1-Methylnaphthalene		0.0500	0.200	U
91-57-6	2-Methylnaphthalene		0.0500	0.200	U
91-20-3	Naphthalene		0.0500	0.200	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	38.62	77.2	34 - 167	
Terphenyl-d14	50.00	45.62	91.2	34 - 167	

ANALYSIS SEQUENCE SUMMARY

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B05520	Instrument:	MS-BNA4
Calibration:	1048001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1B05520-TUN1	SEQ-TUN1.D	02/24/11 10:18
Calibration Check	1B05520-CCV1	SEQ-CCV1.D	02/24/11 10:37
UST21-MW37-0211	1102113-12RE1	0211312D.D	02/24/11 14:37

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Lab File ID:	SEQ-TUN1.D	Injection Date:	02/24/11
Instrument ID:	MS-BNA4	Injection Time:	10:18
Sequence:	1B05520	Lab Sample ID:	1B05520-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30 - 60% of 198	49.4	PASS
68	Less than 2% of 69	1.55	PASS
69	Less than 200% of 198	49.3	PASS
70	Less than 2% of 69	0.456	PASS
127	40 - 60% of 198	54.8	PASS
197	Less than 1% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.78	PASS
275	10 - 30% of 198	26.6	PASS
365	1 - 200% of 198	3.64	PASS
441	0.001 - 100% of 443	85.6	PASS
442	40 - 200% of 198	120	PASS
443	17 - 23% of 442	19.1	PASS

CONTINUING CALIBRATION CHECK

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Instrument ID:	MS-BNA4	Calibration:	1048001
Lab File ID:	SEQ-CCV1.D	Calibration Date:	02/07/11 18:33
Sequence:	1B05520	Injection Date:	02/24/11
Lab Sample ID:	1B05520-CCV1	Injection Time:	10:37

		CONC. (ug/mL)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acenaphthene	A	5.000	4.477	0.7926954	0.7097452		-10.5	20
Benzo(a)anthracene	A	5.000	5.488	0.6763585	0.7424345		9.8	20
Benzo(k)fluoranthene	A	5.000	5.984	1.229142	1.471104		19.7	20
Chrysene	A	5.000	5.263	0.7213402	0.759339		5.3	20
Dibenz(a,h)anthracene	L	5.000	5.322	0.7676577	0.9400955		6.4	20
1-Methylnaphthalene	A	5.000	4.416	0.8429092	0.7444242		-11.7	20
2-Methylnaphthalene	A	5.000	4.188	0.7808299	0.6539563		-16.2	20
Naphthalene	A	5.000	4.200	1.279867	1.075038		-16.0	20
2-Fluorobiphenyl	A	5.000	4.188	0.8853237	0.7415734		-16.2	20
Terphenyl-d14	A	5.000	5.271	0.5971292	0.6294796		5.4	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Sequence: 1B05408
Instrument: MS-BNA4
Calibration: 1048001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1B05408-CCV1) ug/mL				Lab File ID: SEQ-CCV2.D		Analyzed: 02/22/11 03:55		
2-Fluorobiphenyl	5.000	88.9	80 - 120	8.967	8.967	0.0000	+/-0.500	
Terphenyl-d14	5.000	111	80 - 120	13.615	13.615	0.0000	+/-0.500	
LCS (1B14025-BS1) ug/L				Lab File ID: B14025L1.D		Analyzed: 02/22/11 09:41		
2-Fluorobiphenyl	48.08	70.9	34 - 167	8.985	8.967	0.0180	+/-0.500	
Terphenyl-d14	48.08	112	34 - 167	13.624	13.615	0.0090	+/-0.500	
UST21-MW63-0211 (1102113-01) ug/L				Lab File ID: 0211301.D		Analyzed: 02/22/11 10:35		
2-Fluorobiphenyl	49.02	57.0	34 - 167	8.985	8.967	0.0180	+/-0.500	
Terphenyl-d14	49.02	70.5	34 - 167	13.624	13.615	0.0090	+/-0.500	
UST21-MW64-0211 (1102113-02) ug/L				Lab File ID: 0211302.D		Analyzed: 02/22/11 11:02		
2-Fluorobiphenyl	49.02	26.8	34 - 167	8.985	8.967	0.0180	+/-0.500	*
Terphenyl-d14	49.02	64.2	34 - 167	13.643	13.615	0.0280	+/-0.500	
UST21-MW60-0211 (1102113-03) ug/L				Lab File ID: 0211303.D		Analyzed: 02/22/11 11:29		
2-Fluorobiphenyl	50.00	51.2	34 - 167	8.985	8.967	0.0180	+/-0.500	
Terphenyl-d14	50.00	60.7	34 - 167	13.661	13.615	0.0460	+/-0.500	
UST21-MW54-0211 (1102113-04) ug/L				Lab File ID: 0211304.D		Analyzed: 02/22/11 12:23		
2-Fluorobiphenyl	50.00	52.4	34 - 167	8.985	8.967	0.0180	+/-0.500	
Terphenyl-d14	50.00	88.9	34 - 167	13.624	13.615	0.0090	+/-0.500	
UST21-MW01-0211 (1102113-05) ug/L				Lab File ID: 0211305.D		Analyzed: 02/22/11 12:50		
2-Fluorobiphenyl	50.00	50.7	34 - 167	8.995	8.967	0.0280	+/-0.500	
Terphenyl-d14	50.00	110	34 - 167	13.633	13.615	0.0180	+/-0.500	
UST21-MW62-0211 (1102113-08) ug/L				Lab File ID: 0211308.D		Analyzed: 02/22/11 13:17		
2-Fluorobiphenyl	49.02	57.5	34 - 167	8.985	8.967	0.0180	+/-0.500	
Terphenyl-d14	49.02	104	34 - 167	13.652	13.615	0.0370	+/-0.500	
Matrix Spike (1B14025-MS1) ug/L				Lab File ID: 0211308M.D		Analyzed: 02/22/11 13:44		
2-Fluorobiphenyl	55.56	63.5	34 - 167	8.985	8.967	0.0180	+/-0.500	
Terphenyl-d14	55.56	89.4	34 - 167	13.643	13.615	0.0280	+/-0.500	
Matrix Spike Dup (1B14025-MSD1) ug/L				Lab File ID: 0211308S.D		Analyzed: 02/22/11 14:13		
2-Fluorobiphenyl	50.00	63.0	34 - 167	8.985	8.967	0.0180	+/-0.500	
Terphenyl-d14	50.00	72.8	34 - 167	13.643	13.615	0.0280	+/-0.500	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Sequence: 1B05515
Instrument: MS-BNA4
Calibration: 1048001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1B05515-CCV1) ug/mL				Lab File ID: SEQ-CCV1.D		Analyzed: 02/22/11 18:04		
2-Fluorobiphenyl	5.000	89.4	80 - 120	8.976	8.976	0.0000	+/-0.500	
Terphenyl-d14	5.000	106	80 - 120	13.606	13.606	0.0000	+/-0.500	
Blank (1B14025-BLK1) ug/L				Lab File ID: B1425B1R.D		Analyzed: 02/22/11 19:01		
2-Fluorobiphenyl	50.00	77.2	34 - 167	8.967	8.976	-0.0090	+/-0.500	
Terphenyl-d14	50.00	91.2	34 - 167	13.615	13.606	0.0090	+/-0.500	
UST21-MW10-0211 (1102113-06) ug/L				Lab File ID: 0211306.D		Analyzed: 02/22/11 19:28		
2-Fluorobiphenyl	50.00	41.2	34 - 167	8.976	8.976	0.0000	+/-0.500	
Terphenyl-d14	50.00	91.1	34 - 167	13.624	13.606	0.0180	+/-0.500	
UST21-MW23-0211 (1102113-07) ug/L				Lab File ID: 0211307.D		Analyzed: 02/22/11 19:54		
2-Fluorobiphenyl	49.02	68.3	34 - 167	8.967	8.976	-0.0090	+/-0.500	
Terphenyl-d14	49.02	108	34 - 167	13.615	13.606	0.0090	+/-0.500	
GW02-020911 (1102113-09) ug/L				Lab File ID: 0211309.D		Analyzed: 02/22/11 20:21		
2-Fluorobiphenyl	47.17	66.5	34 - 167	8.976	8.976	0.0000	+/-0.500	
Terphenyl-d14	47.17	82.5	34 - 167	13.643	13.606	0.0370	+/-0.500	
UST21-MW16-0211 (1102113-10) ug/L				Lab File ID: 0211310.D		Analyzed: 02/22/11 20:47		
2-Fluorobiphenyl	48.08	66.2	34 - 167	8.976	8.976	0.0000	+/-0.500	
Terphenyl-d14	48.08	104	34 - 167	13.624	13.606	0.0180	+/-0.500	
UST21-MW14-0211 (1102113-11) ug/L				Lab File ID: 0211311.D		Analyzed: 02/22/11 21:13		
2-Fluorobiphenyl	48.08	70.1	34 - 167	8.976	8.976	0.0000	+/-0.500	
Terphenyl-d14	48.08	102	34 - 167	13.624	13.606	0.0180	+/-0.500	
UST21-MW37-0211 (1102113-12) ug/L				Lab File ID: 0211312.D		Analyzed: 02/22/11 21:40		
2-Fluorobiphenyl	50.00	68.2	34 - 167	8.985	8.976	0.0090	+/-0.500	
Terphenyl-d14	50.00	62.9	34 - 167	13.633	13.606	0.0270	+/-0.500	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Sequence: 1B05520

SDG: CTOJM01_007

Project: CTO JM01 NAS Pensacola_2010

Instrument: MS-BNA4

Calibration: 1048001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1B05520-CCV1) ug/mL				Lab File ID: SEQ-CCV1.D		Analyzed: 02/24/11 10:37		
2-Fluorobiphenyl	5.000	83.8	80 - 120	8.967	8.967	0.0000	+/-0.500	
Terphenyl-d14	5.000	105	80 - 120	13.596	13.596	0.0000	+/-0.500	
UST21-MW37-0211 (1102113-12RE1) ug/L				Lab File ID: 0211312D.D		Analyzed: 02/24/11 14:37		
2-Fluorobiphenyl	50.00	39.8	34 - 167	8.976	8.967	0.0090	+/-0.500	
Terphenyl-d14	50.00	37.6	34 - 167	13.596	13.596	0.0000	+/-0.500	

LCS / LCS DUPLICATE RECOVERY

SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B14025	Laboratory ID:	1B14025-BS1
Preparation:	EXT_3510	Initial/Final:	1040 mL / 1 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Acenaphthene	0.9615	0.6834	71.1	41 - 132
Benzo(a)anthracene	0.9615	0.9149	95.1	58 - 141
Benzo(k)fluoranthene	0.9615	1.224	127	49 - 165
Chrysene	0.9615	1.457	152	51 - 155
Dibenz(a,h)anthracene	0.9615	0.7617	79.2	28 - 153
1-Methylnaphthalene	0.9615	0.7955	82.7	35 - 131
2-Methylnaphthalene	0.9615	0.9326	97.0	36 - 121
Naphthalene	0.9615	0.7900	82.2	39 - 125

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW8270C

UST21-MW62-0211

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola 2010

Matrix: Water

Batch: 1B14025

% Solids:

Source Sample Name: **1102113-08**

ANALYTE	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC.	Q	QC LIMITS REC.
Acenaphthene	1.111	ND	1.021	91.9		41 - 132
Benzo(a)anthracene	1.111	ND	1.397	126		58 - 141
Benzo(k)fluoranthene	1.111	ND	1.103	99.3		49 - 165
Chrysene	1.111	ND	1.340	121		51 - 155
Dibenz(a,h)anthracene	1.111	ND	0.6949	62.5		28 - 153
1-Methylnaphthalene	1.111	ND	0.5398	48.6		35 - 131
2-Methylnaphthalene	1.111	ND	0.7674	69.1		36 - 121
Naphthalene	1.111	ND	0.7559	68.0		39 - 125

ANALYTE	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Acenaphthene	1.000	1.019	102	0.218		30	41 - 132
Benzo(a)anthracene	1.000	1.174	117	17.4		30	58 - 141
Benzo(k)fluoranthene	1.000	0.8865	88.6	21.8		30	49 - 165
Chrysene	1.000	1.043	104	24.9		30	51 - 155
Dibenz(a,h)anthracene	1.000	0.5947	59.5	15.5		30	28 - 153
1-Methylnaphthalene	1.000	0.5147	51.5	4.77		30	35 - 131
2-Methylnaphthalene	1.000	0.6661	66.6	14.1		30	36 - 121
Naphthalene	1.000	0.6602	66.0	13.5		30	39 - 125

INTERNAL STANDARD AREA AND RT SUMMARY
SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B05408
Instrument: MS-BNA4
Calibration: 1048001

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (1B05408-CCV1)			Lab File ID: SEQ-CCV2.D			Analyzed: 02/22/11 03:55			
Phenanthrene-d10	142315	11.653	156632	12.199	91	50 - 200	-0.5460	+/-0.50	
Perylene-d12	101153	16.785	99936	18.353	101	50 - 200	-1.5680	+/-0.50	
LCS (1B14025-BS1)			Lab File ID: B14025L1.D			Analyzed: 02/22/11 09:41			
Phenanthrene-d10	112684	11.672	142315	11.653	79	50 - 200	0.0190	+/-0.50	
Perylene-d12	83877	16.822	101153	16.785	83	50 - 200	0.0370	+/-0.50	
UST21-MW63-0211 (1102113-01)			Lab File ID: 0211301.D			Analyzed: 02/22/11 10:35			
Phenanthrene-d10	108759	11.672	142315	11.653	76	50 - 200	0.0190	+/-0.50	
Perylene-d12	71268	16.813	101153	16.785	70	50 - 200	0.0280	+/-0.50	
UST21-MW64-0211 (1102113-02)			Lab File ID: 0211302.D			Analyzed: 02/22/11 11:02			
Phenanthrene-d10	115503	11.672	142315	11.653	81	50 - 200	0.0190	+/-0.50	
Perylene-d12	93972	16.859	101153	16.785	93	50 - 200	0.0740	+/-0.50	
UST21-MW60-0211 (1102113-03)			Lab File ID: 0211303.D			Analyzed: 02/22/11 11:29			
Phenanthrene-d10	124389	11.681	142315	11.653	87	50 - 200	0.0280	+/-0.50	
Perylene-d12	75782	16.832	101153	16.785	75	50 - 200	0.0470	+/-0.50	
UST21-MW54-0211 (1102113-04)			Lab File ID: 0211304.D			Analyzed: 02/22/11 12:23			
Phenanthrene-d10	100120	11.672	142315	11.653	70	50 - 200	0.0190	+/-0.50	
Perylene-d12	71869	16.813	101153	16.785	71	50 - 200	0.0280	+/-0.50	
UST21-MW01-0211 (1102113-05)			Lab File ID: 0211305.D			Analyzed: 02/22/11 12:50			
Phenanthrene-d10	102581	11.681	142315	11.653	72	50 - 200	0.0280	+/-0.50	
Perylene-d12	56794	16.831	101153	16.785	56	50 - 200	0.0460	+/-0.50	
UST21-MW62-0211 (1102113-08)			Lab File ID: 0211308.D			Analyzed: 02/22/11 13:17			
Phenanthrene-d10	122495	11.672	142315	11.653	86	50 - 200	0.0190	+/-0.50	
Perylene-d12	92417	16.841	101153	16.785	91	50 - 200	0.0560	+/-0.50	
Matrix Spike (1B14025-MS1)			Lab File ID: 0211308M.D			Analyzed: 02/22/11 13:44			
Phenanthrene-d10	98024	11.672	142315	11.653	69	50 - 200	0.0190	+/-0.50	
Perylene-d12	77099	16.831	101153	16.785	76	50 - 200	0.0460	+/-0.50	
Matrix Spike Dup (1B14025-MSD1)			Lab File ID: 0211308S.D			Analyzed: 02/22/11 14:13			
Phenanthrene-d10	100590	11.672	142315	11.653	71	50 - 200	0.0190	+/-0.50	
Perylene-d12	69404	16.85	101153	16.785	69	50 - 200	0.0650	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW8270C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B05515
Instrument: MS-BNA4
Calibration: 1048001

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (1B05515-CCV1)			Lab File ID: SEQ-CCV1.D			Analyzed: 02/22/11 18:04			
Phenanthrene-d10	174551	11.644	156632	12.199	111	50 - 200	-0.5550	+/-0.50	
Perylene-d12	95559	16.794	99936	18.353	96	50 - 200	-1.5590	+/-0.50	
Blank (1B14025-BLK1)			Lab File ID: B1425B1R.D			Analyzed: 02/22/11 19:01			
Phenanthrene-d10	118868	11.653	174551	11.644	68	50 - 200	0.0090	+/-0.50	
Perylene-d12	54114	16.794	95559	16.794	57	50 - 200	0.0000	+/-0.50	
UST21-MW10-0211 (1102113-06)			Lab File ID: 0211306.D			Analyzed: 02/22/11 19:28			
Phenanthrene-d10	146260	11.663	174551	11.644	84	50 - 200	0.0190	+/-0.50	
Perylene-d12	108430	16.803	95559	16.794	113	50 - 200	0.0090	+/-0.50	
UST21-MW23-0211 (1102113-07)			Lab File ID: 0211307.D			Analyzed: 02/22/11 19:54			
Phenanthrene-d10	131892	11.653	174551	11.644	76	50 - 200	0.0090	+/-0.50	
Perylene-d12	80150	16.794	95559	16.794	84	50 - 200	0.0000	+/-0.50	
GW02-020911 (1102113-09)			Lab File ID: 0211309.D			Analyzed: 02/22/11 20:21			
Phenanthrene-d10	136643	11.672	174551	11.644	78	50 - 200	0.0280	+/-0.50	
Perylene-d12	79810	16.813	95559	16.794	84	50 - 200	0.0190	+/-0.50	
UST21-MW16-0211 (1102113-10)			Lab File ID: 0211310.D			Analyzed: 02/22/11 20:47			
Phenanthrene-d10	129495	11.663	174551	11.644	74	50 - 200	0.0190	+/-0.50	
Perylene-d12	96709	16.803	95559	16.794	101	50 - 200	0.0090	+/-0.50	
UST21-MW14-0211 (1102113-11)			Lab File ID: 0211311.D			Analyzed: 02/22/11 21:13			
Phenanthrene-d10	140452	11.663	174551	11.644	80	50 - 200	0.0190	+/-0.50	
Perylene-d12	92894	16.794	95559	16.794	97	50 - 200	0.0000	+/-0.50	
UST21-MW37-0211 (1102113-12)			Lab File ID: 0211312.D			Analyzed: 02/22/11 21:40			
Phenanthrene-d10	128081	11.672	174551	11.644	73	50 - 200	0.0280	+/-0.50	
Perylene-d12	69514	16.804	95559	16.794	73	50 - 200	0.0100	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
SW8270C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B05520	Instrument:	MS-BNA4
		Calibration:	1048001

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (1B05520-CCV1)			Lab File ID: SEQ-CCV1.D			Analyzed: 02/24/11 10:37			
Phenanthrene-d10	157709	11.635	156632	12.199	101	50 - 200	-0.5640	+/-0.50	
Perylene-d12	106199	16.776	99936	18.353	106	50 - 200	-1.5770	+/-0.50	
UST21-MW37-0211 (1102113-12RE1)			Lab File ID: 0211312D.D			Analyzed: 02/24/11 14:37			
Phenanthrene-d10	216291	11.635	157709	11.635	137	50 - 200	0.0000	+/-0.50	
Perylene-d12	159294	16.776	106199	16.776	150	50 - 200	0.0000	+/-0.50	

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B03607	Instrument:	GL-GCFID2
Calibration:	1036001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1B03607-CAL6	003F0301.D	02/03/11 18:28
Cal Standard	1B03607-CAL5	004F0401.D	02/03/11 19:10
Cal Standard	1B03607-CAL4	005F0501.D	02/03/11 19:52
Cal Standard	1B03607-CAL3	006F0601.D	02/03/11 20:34
Cal Standard	1B03607-CAL2	007F0701.D	02/03/11 21:17
Cal Standard	1B03607-CAL1	008F0801.D	02/03/11 21:59
Initial Cal Check	1B03607-ICV1	009F0901.D	02/03/11 22:40

INITIAL CALIBRATION STANDARDS

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B03607	Instrument:	GL-GCFID2
Calibration:	1036001		

Standard ID	Description	Lab Sample ID	Lab File ID	Analysis Date/Time
10K0198	FLPRO CAL6 85ppm	1B03607-CAL6	003F0301.D	02/03/11 18:28
10K0199	FLPRO CAL5 850ppm	1B03607-CAL5	004F0401.D	02/03/11 19:10
10K0200	FLPRO CAL4 2550ppm	1B03607-CAL4	005F0501.D	02/03/11 19:52
10L0688	FLPRO CAL3 4250ppm	1B03607-CAL3	006F0601.D	02/03/11 20:34
10K0202	FLPRO CAL2 5950ppm	1B03607-CAL2	007F0701.D	02/03/11 21:17
10K0203	FLPRO CAL1 8500ppm	1B03607-CAL1	008F0801.D	02/03/11 21:59

INITIAL CALIBRATION DATA (Continued)

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Calibration:	1036001	Instrument:	GL-GCFID2
Matrix:	Water	Calibration Date:	2/3/2011 6:28:31PM

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Petroleum Range Organics	1723.97	3.613027	2.783	1.223221E-02			20	
2-Fluorobiphenyl	2071.669	7.244769	11.0885	5.505095E-02			20	
o-Terphenyl	2435.429	4.459164	16.66467	4.479577E-02			20	

INITIAL CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	009F0901.D	Calibration Date:	02/03/11 18:28
Sequence:	1B03607	Injection Date:	02/03/11
Lab Sample ID:	1B03607-ICV1	Injection Time:	22:40

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Petroleum Range Organics	A	4000	4813	1723.97	2074.555		20.3	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B04806	Instrument:	GL-GCFID2
Calibration:	1036001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1B04806-CCV1	002F0201.D	02/16/11 13:19
Blank	1B12009-BLK1	003F0301.D	02/16/11 14:01
LCS	1B12009-BS1	004F0401.D	02/16/11 14:44
LCS Dup	1B12009-BSD1	005F0501.D	02/16/11 15:26
UST21-MW63-0211	1102113-01	011F1101.D	02/16/11 19:40
Calibration Check	1B04806-CCV2	016F1601.D	02/16/11 23:11

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	002F0201.D	Calibration Date:	02/03/11 18:28
Sequence:	1B04806	Injection Date:	02/16/11
Lab Sample ID:	1B04806-CCV1	Injection Time:	13:19

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4155	1723.97	1685.394		-2.2	25
2-Fluorobiphenyl	A	25.00	24.00	2071.669	1988.72		-4.0	25
o-Terphenyl	A	25.00	24.80	2435.429	2415.56		-0.8	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	016F1601.D	Calibration Date:	02/03/11 18:28
Sequence:	1B04806	Injection Date:	02/16/11
Lab Sample ID:	1B04806-CCV2	Injection Time:	23:11

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3664	1723.97	1486.212		-13.8	25
2-Fluorobiphenyl	A	25.00	22.53	2071.669	1867.12		-9.9	25
o-Terphenyl	A	25.00	21.49	2435.429	2093.52		-14.0	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Batch: 1B12009 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW63-0211	1102113-01	02/14/11 15:05	950.00	2.00
Blank	1B12009-BLK1	02/14/11 15:05	1,000.00	2.00
LCS	1B12009-BS1	02/14/11 15:05	1,000.00	2.00
LCS Dup	1B12009-BSD1	02/14/11 15:05	1,000.00	2.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Matrix: Laboratory ID: 1B12009-BLK1 File ID: 003F0301.D

Sampled: Prepared: Analyzed: 02/16/11 14:01

Solids: Preparation: EXT_3510 Dilution:

Batch: 1B12009 Sequence: 1B04806 Calibration: 1036001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics		0.170	0.680	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.03664	73.3	50 - 150	
o-Terphenyl	0.05000	0.04209	84.2	82 - 142	

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B04907	Instrument:	GL-GCFID2
Calibration:	1036001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1B04907-CCV1	002F0201.D	02/17/11 11:50
Calibration Check	1B04907-CCV2	007F0701.D	02/17/11 15:21
Blank	1B16007-BLK1	008F0801.D	02/17/11 16:04
LCS	1B16007-BS1	009F0901.D	02/17/11 16:46
UST21-MW64-0211	1102113-02	010F1001.D	02/17/11 17:28
UST21-MW60-0211	1102113-03	011F1101.D	02/17/11 18:11
UST21-MW54-0211	1102113-04	012F1201.D	02/17/11 18:53
UST21-MW01-0211	1102113-05	013F1301.D	02/17/11 19:35
UST21-MW62-0211	1102113-08	014F1401.D	02/17/11 20:18
UST21-MW62-0211	1B16007-MS1	015F1501.D	02/17/11 21:00
UST21-MW62-0211	1B16007-MSD1	016F1601.D	02/17/11 21:42
GW02-020911	1102113-09	017F1701.D	02/17/11 22:24
UST21-MW16-0211	1102113-10	018F1801.D	02/17/11 23:06
UST21-MW14-0211	1102113-11	019F1901.D	02/17/11 23:49
UST21-MW37-0211	1102113-12	020F2001.D	02/18/11 00:31
Calibration Check	1B04907-CCV3	021F2101.D	02/18/11 01:13

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	002F0201.D	Calibration Date:	02/03/11 18:28
Sequence:	1B04907	Injection Date:	02/17/11
Lab Sample ID:	1B04907-CCV1	Injection Time:	11:50

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3992	1723.97	1619.365		-6.1	25
2-Fluorobiphenyl	A	25.00	24.19	2071.669	2004.32		-3.3	25
o-Terphenyl	A	25.00	23.29	2435.429	2269.28		-6.8	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	007F0701.D	Calibration Date:	02/03/11 18:28
Sequence:	1B04907	Injection Date:	02/17/11
Lab Sample ID:	1B04907-CCV2	Injection Time:	15:21

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	3798	1723.97	1540.64		-10.6	25
2-Fluorobiphenyl	A	25.00	23.32	2071.669	1932.72		-6.7	25
o-Terphenyl	A	25.00	22.65	2435.429	2206.92		-9.4	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	021F2101.D	Calibration Date:	02/03/11 18:28
Sequence:	1B04907	Injection Date:	02/18/11
Lab Sample ID:	1B04907-CCV3	Injection Time:	01:13

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4361	1723.97	1769.067		2.6	25
2-Fluorobiphenyl	A	25.00	27.32	2071.669	2263.72		9.3	25
o-Terphenyl	A	25.00	26.09	2435.429	2541.64		4.4	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Batch: 1B16007 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW64-0211	1102113-02	02/16/11 13:37	1,020.00	2.00
UST21-MW60-0211	1102113-03	02/16/11 13:37	1,000.00	2.00
UST21-MW54-0211	1102113-04	02/16/11 13:37	1,000.00	2.00
UST21-MW01-0211	1102113-05	02/16/11 13:37	1,020.00	2.00
UST21-MW62-0211	1102113-08	02/16/11 13:37	1,000.00	2.00
GW02-020911	1102113-09	02/16/11 13:37	1,060.00	2.00
UST21-MW16-0211	1102113-10	02/16/11 13:37	1,040.00	2.00
UST21-MW14-0211	1102113-11	02/16/11 13:37	1,040.00	2.00
UST21-MW37-0211	1102113-12	02/16/11 13:37	1,040.00	2.00
Blank	1B16007-BLK1	02/16/11 13:37	1,000.00	2.00
LCS	1B16007-BS1	02/16/11 13:37	1,000.00	2.00
UST21-MW62-0211	1B16007-MS1	02/16/11 13:37	1,080.00	2.00
UST21-MW62-0211	1B16007-MSD1	02/16/11 13:37	1,000.00	2.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Matrix: Laboratory ID: 1B16007-BLK1 File ID: 008F0801.D

Sampled: Prepared: Analyzed: 02/17/11 16:04

Solids: Preparation: EXT_3510 Dilution:

Batch: 1B16007 Sequence: 1B04907 Calibration: 1036001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics		0.170	0.680	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.03139	62.8	50 - 150	
o-Terphenyl	0.05000	0.04209	84.2	82 - 142	

ANALYSIS SEQUENCE SUMMARY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B05208	Instrument:	GL-GCFID2
Calibration:	1036001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1B05208-CCV1	002F0201.D	02/18/11 11:24
Blank	1B17008-BLK1	004F0401.D	02/18/11 12:48
LCS	1B17008-BS1	005F0501.D	02/18/11 13:31
LCS Dup	1B17008-BSD1	006F0601.D	02/18/11 14:13
UST21-MW10-0211	1102113-06	007F0701.D	02/18/11 14:56
UST21-MW23-0211	1102113-07	008F0801.D	02/18/11 15:38
Calibration Check	1B05208-CCV2	010F1001.D	02/18/11 17:03

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	002F0201.D	Calibration Date:	02/03/11 18:28
Sequence:	1B05208	Injection Date:	02/18/11
Lab Sample ID:	1B05208-CCV1	Injection Time:	11:24

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4036	1723.97	1637.152		-5.0	25
2-Fluorobiphenyl	A	25.00	23.01	2071.669	1906.88		-8.0	25
o-Terphenyl	A	25.00	23.67	2435.429	2306.12		-5.3	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION CHECK

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	GL-GCFID2	Calibration:	1036001
Lab File ID:	010F1001.D	Calibration Date:	02/03/11 18:28
Sequence:	1B05208	Injection Date:	02/18/11
Lab Sample ID:	1B05208-CCV2	Injection Time:	17:03

		CONC. (mg/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Petroleum Range Organics	A	4250	4445	1723.97	1803.115		4.6	25
2-Fluorobiphenyl	A	25.00	25.24	2071.669	2091.4		1.0	25
o-Terphenyl	A	25.00	26.74	2435.429	2605.2		7.0	25

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

PREPARATION BATCH SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Batch: 1B17008 Batch Matrix: Water Preparation: EXT_3510

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW10-0211	1102113-06	02/17/11 15:00	1,000.00	2.00
UST21-MW23-0211	1102113-07	02/17/11 15:00	1,000.00	2.00
Blank	1B17008-BLK1	02/17/11 15:00	1,000.00	2.00
LCS	1B17008-BS1	02/17/11 15:00	1,000.00	2.00
LCS Dup	1B17008-BSD1	02/17/11 15:00	1,000.00	2.00

ANALYSIS DATA SHEET

Blank

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Matrix: Laboratory ID: 1B17008-BLK1 File ID: 004F0401.D

Sampled: Prepared: Analyzed: 02/18/11 12:48

Solids: Preparation: EXT_3510 Dilution:

Batch: 1B17008 Sequence: 1B05208 Calibration: 1036001 Instrument: GL-GCFID2

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics		0.170	0.680	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.03709	74.2	50 - 150	
o-Terphenyl	0.05000	0.04538	90.8	82 - 142	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B04806
Instrument: GL-GCFID2
Calibration: 1036001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1B04806-CCV1) mg/L				Lab File ID: 002F0201.D		Analyzed: 02/16/11 13:19		
2-Fluorobiphenyl	25.00	96.0	75 - 125	11.006	11.006	0.0000	+/-0.050	
o-Terphenyl	25.00	99.2	75 - 125	16.593	16.593	0.0000	+/-0.050	
Blank (1B12009-BLK1) mg/L				Lab File ID: 003F0301.D		Analyzed: 02/16/11 14:01		
2-Fluorobiphenyl	0.05000	73.3	50 - 150	11.02	11.006	0.0140	+/-0.050	
o-Terphenyl	0.05000	84.2	82 - 142	16.593	16.593	0.0000	+/-0.050	
LCS (1B12009-BS1) mg/L				Lab File ID: 004F0401.D		Analyzed: 02/16/11 14:44		
2-Fluorobiphenyl	0.05000	82.0	50 - 150	11.013	11.006	0.0070	+/-0.050	
o-Terphenyl	0.05000	83.6	82 - 142	16.59	16.593	-0.0030	+/-0.050	
LCS Dup (1B12009-BSD1) mg/L				Lab File ID: 005F0501.D		Analyzed: 02/16/11 15:26		
2-Fluorobiphenyl	0.05000	80.7	50 - 150	11.013	11.006	0.0070	+/-0.050	
o-Terphenyl	0.05000	83.1	82 - 142	16.593	16.593	0.0000	+/-0.050	
UST21-MW63-0211 (1102113-01) mg/L				Lab File ID: 011F1101.D		Analyzed: 02/16/11 19:40		
2-Fluorobiphenyl	0.05263	73.9	50 - 150	11.026	11.006	0.0200	+/-0.050	
o-Terphenyl	0.05263	79.9	82 - 142	16.596	16.593	0.0030	+/-0.050	*
Calibration Check (1B04806-CCV2) mg/L				Lab File ID: 016F1601.D		Analyzed: 02/16/11 23:11		
2-Fluorobiphenyl	25.00	90.1	75 - 125	11.013	11.006	0.0070	+/-0.050	
o-Terphenyl	25.00	86.0	75 - 125	16.593	16.593	0.0000	+/-0.050	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Sequence: 1B04907
Instrument: GL-GCFID2
Calibration: 1036001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1B04907-CCV1) mg/L				Lab File ID: 002F0201.D		Analyzed: 02/17/11 11:50		
2-Fluorobiphenyl	25.00	96.8	75 - 125	11.02	11.02	0.0000	+/-0.050	
o-Terphenyl	25.00	93.2	75 - 125	16.6	16.6	0.0000	+/-0.050	
Calibration Check (1B04907-CCV2) mg/L				Lab File ID: 007F0701.D		Analyzed: 02/17/11 15:21		
2-Fluorobiphenyl	25.00	93.3	75 - 125	11.013	11.02	-0.0070	+/-0.050	
o-Terphenyl	25.00	90.6	75 - 125	16.593	16.6	-0.0070	+/-0.050	
Blank (1B16007-BLK1) mg/L				Lab File ID: 008F0801.D		Analyzed: 02/17/11 16:04		
2-Fluorobiphenyl	0.05000	62.8	50 - 150	11.033	11.02	0.0130	+/-0.050	
o-Terphenyl	0.05000	84.2	82 - 142	16.6	16.6	0.0000	+/-0.050	
LCS (1B16007-BS1) mg/L				Lab File ID: 009F0901.D		Analyzed: 02/17/11 16:46		
2-Fluorobiphenyl	0.05000	87.9	50 - 150	11.013	11.02	-0.0070	+/-0.050	
o-Terphenyl	0.05000	88.5	82 - 142	16.59	16.6	-0.0100	+/-0.050	
UST21-MW64-0211 (1102113-02) mg/L				Lab File ID: 010F1001.D		Analyzed: 02/17/11 17:28		
2-Fluorobiphenyl	0.04902	72.7	50 - 150	11.026	11.02	0.0060	+/-0.050	
o-Terphenyl	0.04902	84.8	82 - 142	16.593	16.6	-0.0070	+/-0.050	
UST21-MW60-0211 (1102113-03) mg/L				Lab File ID: 011F1101.D		Analyzed: 02/17/11 18:11		
2-Fluorobiphenyl	0.05000	73.6	50 - 150	11.006	11.02	-0.0140	+/-0.050	
o-Terphenyl	0.05000	84.9	82 - 142	16.593	16.6	-0.0070	+/-0.050	
UST21-MW54-0211 (1102113-04) mg/L				Lab File ID: 012F1201.D		Analyzed: 02/17/11 18:53		
2-Fluorobiphenyl	0.05000	72.6	50 - 150	11.006	11.02	-0.0140	+/-0.050	
o-Terphenyl	0.05000	86.7	82 - 142	16.59	16.6	-0.0100	+/-0.050	
UST21-MW01-0211 (1102113-05) mg/L				Lab File ID: 013F1301.D		Analyzed: 02/17/11 19:35		
2-Fluorobiphenyl	0.04902	69.3	50 - 150	11.03	11.02	0.0100	+/-0.050	
o-Terphenyl	0.04902	82.6	82 - 142	16.6	16.6	0.0000	+/-0.050	
UST21-MW62-0211 (1102113-08) mg/L				Lab File ID: 014F1401.D		Analyzed: 02/17/11 20:18		
2-Fluorobiphenyl	0.05000	69.6	50 - 150	11.013	11.02	-0.0070	+/-0.050	
o-Terphenyl	0.05000	89.4	82 - 142	16.59	16.6	-0.0100	+/-0.050	
Matrix Spike (1B16007-MS1) mg/L				Lab File ID: 015F1501.D		Analyzed: 02/17/11 21:00		
2-Fluorobiphenyl	0.04630	82.3	50 - 150	11.006	11.02	-0.0140	+/-0.050	
o-Terphenyl	0.04630	82.2	82 - 142	16.593	16.6	-0.0070	+/-0.050	
Matrix Spike Dup (1B16007-MSD1) mg/L				Lab File ID: 016F1601.D		Analyzed: 02/17/11 21:42		
2-Fluorobiphenyl	0.05000	91.4	50 - 150	11.01	11.02	-0.0100	+/-0.050	
o-Terphenyl	0.05000	92.5	82 - 142	16.593	16.6	-0.0070	+/-0.050	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Sequence: 1B04907
Instrument: GL-GCFID2
Calibration: 1036001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
GW02-020911 (1102113-09) mg/L				Lab File ID: 017F1701.D		Analyzed: 02/17/11 22:24		
2-Fluorobiphenyl	0.04717	59.9	50 - 150	11.01	11.02	-0.0100	+/-0.050	
o-Terphenyl	0.04717	82.7	82 - 142	16.59	16.6	-0.0100	+/-0.050	
UST21-MW16-0211 (1102113-10) mg/L				Lab File ID: 018F1801.D		Analyzed: 02/17/11 23:06		
2-Fluorobiphenyl	0.04808	81.6	50 - 150	11.003	11.02	-0.0170	+/-0.050	
o-Terphenyl	0.04808	92.4	82 - 142	16.586	16.6	-0.0140	+/-0.050	
UST21-MW14-0211 (1102113-11) mg/L				Lab File ID: 019F1901.D		Analyzed: 02/17/11 23:49		
2-Fluorobiphenyl	0.04808	58.6	50 - 150	11.02	11.02	0.0000	+/-0.050	
o-Terphenyl	0.04808	75.0	82 - 142	16.59	16.6	-0.0100	+/-0.050	*
UST21-MW37-0211 (1102113-12) mg/L				Lab File ID: 020F2001.D		Analyzed: 02/18/11 00:31		
2-Fluorobiphenyl	0.04808	92.8	50 - 150	11	11.02	-0.0200	+/-0.050	
o-Terphenyl	0.04808	91.6	82 - 142	16.59	16.6	-0.0100	+/-0.050	
Calibration Check (1B04907-CCV3) mg/L				Lab File ID: 021F2101.D		Analyzed: 02/18/11 01:13		
2-Fluorobiphenyl	25.00	109	75 - 125	11.003	11.02	-0.0170	+/-0.050	
o-Terphenyl	25.00	104	75 - 125	16.59	16.6	-0.0100	+/-0.050	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B05208
Instrument: GL-GCFID2
Calibration: 1036001

Surrogate Compound	Spike Level	% Recovery	Recovery Limits	RT	CCV RT	RT Diff	RT Diff Limit	Q
Calibration Check (1B05208-CCV1) mg/L				Lab File ID: 002F0201.D		Analyzed: 02/18/11 11:24		
2-Fluorobiphenyl	25.00	92.0	75 - 125	11.013	11.013	0.0000	+/-0.050	
o-Terphenyl	25.00	94.7	75 - 125	16.59	16.59	0.0000	+/-0.050	
Blank (1B17008-BLK1) mg/L				Lab File ID: 004F0401.D		Analyzed: 02/18/11 12:48		
2-Fluorobiphenyl	0.05000	74.2	50 - 150	11.04	11.013	0.0270	+/-0.050	
o-Terphenyl	0.05000	90.8	82 - 142	16.603	16.59	0.0130	+/-0.050	
LCS (1B17008-BS1) mg/L				Lab File ID: 005F0501.D		Analyzed: 02/18/11 13:31		
2-Fluorobiphenyl	0.05000	93.4	50 - 150	11.01	11.013	-0.0030	+/-0.050	
o-Terphenyl	0.05000	96.0	82 - 142	16.586	16.59	-0.0040	+/-0.050	
LCS Dup (1B17008-BSD1) mg/L				Lab File ID: 006F0601.D		Analyzed: 02/18/11 14:13		
2-Fluorobiphenyl	0.05000	79.8	50 - 150	11.013	11.013	0.0000	+/-0.050	
o-Terphenyl	0.05000	97.4	82 - 142	16.586	16.59	-0.0040	+/-0.050	
UST21-MW10-0211 (1102113-06) mg/L				Lab File ID: 007F0701.D		Analyzed: 02/18/11 14:56		
2-Fluorobiphenyl	0.05000	79.0	50 - 150	11.006	11.013	-0.0070	+/-0.050	
o-Terphenyl	0.05000	93.2	82 - 142	16.586	16.59	-0.0040	+/-0.050	
UST21-MW23-0211 (1102113-07) mg/L				Lab File ID: 008F0801.D		Analyzed: 02/18/11 15:38		
2-Fluorobiphenyl	0.05000	86.2	50 - 150	11.026	11.013	0.0130	+/-0.050	
o-Terphenyl	0.05000	90.9	82 - 142	16.59	16.59	0.0000	+/-0.050	
Calibration Check (1B05208-CCV2) mg/L				Lab File ID: 010F1001.D		Analyzed: 02/18/11 17:03		
2-Fluorobiphenyl	25.00	101	75 - 125	11.006	11.013	-0.0070	+/-0.050	
o-Terphenyl	25.00	107	75 - 125	16.59	16.59	0.0000	+/-0.050	

LCS / LCS DUPLICATE RECOVERY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B12009	Laboratory ID:	1B12009-BS1
Preparation:	EXT_3510	Initial/Final:	1000 mL / 2 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Petroleum Range Organics	3.200	2.483	77.6	55 - 118

ANALYTE	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Petroleum Range Organics	3.200	2.457	76.8	1.08	30	55 - 118

LCS / LCS DUPLICATE RECOVERY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Water		
Batch:	1B16007	Laboratory ID:	1B16007-BS1
Preparation:	EXT_3510	Initial/Final:	1000 mL / 2 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Petroleum Range Organics	3.200	2.578	80.6	55 - 118

LCS / LCS DUPLICATE RECOVERY

FLPRO

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B17008	Laboratory ID:	1B17008-BS1
Preparation:	EXT_3510	Initial/Final:	1000 mL / 2 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Petroleum Range Organics	3.200	2.844	88.9	55 - 118

ANALYTE	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Petroleum Range Organics	3.200	2.952	92.3	3.74	30	55 - 118

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

FLPRO

UST21-MW62-0211

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola 2010

Matrix: Water

Batch: 1B16007

% Solids:

Source Sample Name: **1102113-08**

ANALYTE	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC.	Q	QC LIMITS REC.
Petroleum Range Organics	2.963	1.264	3.825	86.4		55 - 118

ANALYTE	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Petroleum Range Organics	3.200	4.183	91.2	8.96		30	55 - 118

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC **SDG:** CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) **Project:** CTO JM01 NAS Pensacola_2010

Matrix: Water **Instrument:** GL-GCFID2

Analyte	MDL	MRL	Units	Method
Petroleum Range Organics	0.170	0.680	mg/L	FLPRO

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **G. WALKER** **DATE:** **March 30, 2011**

FROM: **MEGAN CARSON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION- IRON, LEAD, AND MANGANESE**
CTO JM01, NAS PENSACOLA
SDG CTOJM01_007

SAMPLES: **12/Waters/**

GW02-020911	UST21-MW01-0211	UST21-MW10-0211
UST21-MW14-0211	UST21-MW16-0211	UST21-MW23-0211
UST21-MW37-0211	UST21-MW54-0211	UST21-MW60-0211
UST21-MW62-0211	UST21-MW63-0211	UST21-MW64-0211

OVERVIEW

The sample set for CTO JM01 NAS Pensacola, SDG CTOJM01_007 consists of twelve (12) aqueous samples. This SDG contained one field duplicate pair: GW02-020911/UST21-MW62-0211.

All samples were analyzed for lead, iron, and manganese. The samples were collected by TetraTech NUS from February 9th and 10th, 2011 and analyzed by Empirical Laboratories, LLC. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using EPA SW846 method 6010B analytical and reporting protocol. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibrations
* • Laboratory Method Blank Analyses
* • Interferent Standard Results
* • Laboratory Control Sample Results
* • Matrix Spike/ Matrix Spike Duplicate Results
* • Field Duplicate Precision
* • Serial Dilution Results
* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B. The text of this report is formatted to address only gross non-compliances resulting in the rejection of data and elimination of false positives.

Metals:

All sample results were within quality control limits.

Additional Comments:

Positive results between less than the reporting limit but greater than the method detection were qualified as estimated (J).

To: G Walker
SDG: CTOJM01_007
Date: 3/30/2011

Samples UST21-MW63-0211 and UST21-MW64-0211 were analyzed at a 2X dilution for lead. The non-detected sample result was reported at an elevated MDL.

EXECUTIVE SUMMARY

Laboratory Performance Issues: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Inorganic Data Validation (10/2004) and the Department of Defense (DoD) Quality Systems Manual (QSM) (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.

Megan Carson

Tetra Tech NUS
Megan Carson
Chemist/Data Validator

TetraTech NUS

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

PROJ_NO: 02200	NSAMPLE	GW02-020911			UST21-MW01-0211			UST21-MW10-0211			UST21-MW14-0211		
SDG: CTOJM01_007	LAB_ID	1102113-09			1102113-05			1102113-06			1102113-11		
FRACTION: M	SAMP_DATE	2/9/2011			2/10/2011			2/10/2011			2/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
IRON		482			136			1830			380		
LEAD		1.5	U		2.65	J	P	5.5			1.5	U	
MANGANESE		128			14.3	J	P	524			56.8		

PROJ_NO: 02200	NSAMPLE	UST21-MW16-0211			UST21-MW23-0211			UST21-MW37-0211			UST21-MW54-0211		
SDG: CTOJM01_007	LAB_ID	1102113-10			1102113-07			1102113-12			1102113-04		
FRACTION: M	SAMP_DATE	2/10/2011			2/10/2011			2/10/2011			2/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
IRON		385			512			111			90.7	J	P
LEAD		1.62	J	P	2.31	J	P	1.5	U		1.5	U	
MANGANESE		196			20.1			175			34		

PROJ_NO: 02200	NSAMPLE	UST21-MW60-0211			UST21-MW62-0211			UST21-MW63-0211			UST21-MW64-0211		
SDG: CTOJM01_007	LAB_ID	1102113-03			1102113-08			1102113-01			1102113-02		
FRACTION: M	SAMP_DATE	2/10/2011			2/9/2011			2/10/2011			2/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
IRON		30	U		505			30	U		30	U	
LEAD		1.5	U		1.5	U		3	U		3	U	
MANGANESE		56.1			123			3	U		1260		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

ANALYSIS DATA SHEET

GW02-020911

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/09/11 16:55
% Solids: 0.00

SDG: CTOJM01_007
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102113-09
Received: 02/11/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	482	30.0	100	1		SW6010C	1B22001	02/23/11 18:47
7439-92-1	Lead		1.50	3.00	1	U	SW6010C	1B22001	02/23/11 18:47
7439-96-5	Manganese	128	3.00	15.0	1		SW6010C	1B22001	02/23/11 18:47

ANALYSIS DATA SHEET

UST21-MW01-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/10/11 12:15
% Solids: 0.00

SDG: CTOJM01_007
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102113-05
Received: 02/11/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	136	30.0	100	1		SW6010C	1B22001	02/23/11 18:08
7439-92-1	Lead	2.65	1.50	3.00	1	1	SW6010C	1B22001	02/23/11 18:08
7439-96-5	Manganese	14.3	3.00	15.0	1	1	SW6010C	1B22001	02/23/11 18:08

ANALYSIS DATA SHEET

UST21-MW10-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/10/11 12:50
% Solids: 0.00

SDG: CTOJM01_007
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102113-06
Received: 02/11/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	1830	30.0	100	1		SW6010C	1B22001	02/23/11 18:13
7439-92-1	Lead	5.50	1.50	3.00	1		SW6010C	1B22001	02/23/11 18:13
7439-96-5	Manganese	524	3.00	15.0	1		SW6010C	1B22001	02/23/11 18:13

ANALYSIS DATA SHEET

UST21-MW14-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/10/11 14:57
% Solids: 0.00

SDG: CTOJM01_007
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102113-11
Received: 02/11/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	380	30.0	100	1		SW6010C	1B22001	02/23/11 18:56
7439-92-1	Lead		1.50	3.00	1	U	SW6010C	1B22001	02/23/11 18:56
7439-96-5	Manganese	56.8	3.00	15.0	1		SW6010C	1B22001	02/23/11 18:56

ANALYSIS DATA SHEET

UST21-MW16-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/10/11 14:12
% Solids: 0.00

SDG: CTOJM01_007
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102113-10
Received: 02/11/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	385	30.0	100	1		SW6010C	1B22001	02/23/11 18:51
7439-92-1	Lead	1.62	1.50	3.00	1	1	SW6010C	1B22001	02/23/11 18:51
7439-96-5	Manganese	196	3.00	15.0	1		SW6010C	1B22001	02/23/11 18:51

ANALYSIS DATA SHEET

UST21-MW23-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/10/11 13:30
% Solids: 0.00

SDG: CTOJM01_007
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102113-07
Received: 02/11/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	512	30.0	100	1		SW6010C	1B22001	02/23/11 18:17
7439-92-1	Lead	2.31	1.50	3.00	1	1	SW6010C	1B22001	02/23/11 18:17
7439-96-5	Manganese	20.1	3.00	15.0	1		SW6010C	1B22001	02/23/11 18:17

ANALYSIS DATA SHEET

UST21-MW37-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/10/11 15:40
% Solids: 0.00

SDG: CTOJM01_007
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102113-12
Received: 02/11/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	111	30.0	100	1		SW6010C	1B22001	02/23/11 19:01
7439-92-1	Lead		1.50	3.00	1	U	SW6010C	1B22001	02/23/11 19:01
7439-96-5	Manganese	175	3.00	15.0	1		SW6010C	1B22001	02/23/11 19:01

ANALYSIS DATA SHEET

UST21-MW54-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/10/11 11:35
% Solids: 0.00

SDG: CTOJM01_007
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102113-04
Received: 02/11/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	90.7	30.0	100	1	1	SW6010C	1B22001	02/23/11 18:03
7439-92-1	Lead		1.50	3.00	1	U	SW6010C	1B22001	02/23/11 18:03
7439-96-5	Manganese	34.0	3.00	15.0	1		SW6010C	1B22001	02/23/11 18:03

ANALYSIS DATA SHEET

UST21-MW60-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/10/11 10:35
% Solids: 0.00

SDG: CTOJM01_007
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102113-03
Received: 02/11/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron		30.0	100	1	U	SW6010C	1B22001	02/23/11 17:59
7439-92-1	Lead		1.50	3.00	1	U	SW6010C	1B22001	02/23/11 17:59
7439-96-5	Manganese	56.1	3.00	15.0	1		SW6010C	1B22001	02/23/11 17:59

ANALYSIS DATA SHEET

UST21-MW62-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/09/11 16:55
% Solids: 0.00

SDG: CTOJM01_007
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102113-08
Received: 02/11/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	505	30.0	100	1		SW6010C	1B22001	02/23/11 18:22
7439-92-1	Lead		1.50	3.00	1	U	SW6010C	1B22001	02/23/11 18:22
7439-96-5	Manganese	123	3.00	15.0	1		SW6010C	1B22001	02/23/11 18:22

ANALYSIS DATA SHEET

UST21-MW63-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/10/11 07:55
% Solids: 0.00

SDG: CTOJM01_007
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102113-01
Received: 02/11/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron		30.0	100	1	U	SW6010C	1B17003	02/22/11 14:01
7439-92-1	Lead		3.00	6.00	2	U	SW6010C	1B17003	02/23/11 22:14
7439-96-5	Manganese		3.00	15.0	1	U	SW6010C	1B17003	02/22/11 14:01

ANALYSIS DATA SHEET

UST21-MW64-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/10/11 09:35
% Solids: 0.00

SDG: CTOJM01_007
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102113-02
Received: 02/11/11 08:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron		30.0	100	1	U	SW6010C	1B17003	02/22/11 14:06
7439-92-1	Lead		3.00	6.00	2	U	SW6010C	1B17003	02/23/11 22:19
7439-96-5	Manganese	1260	3.00	15.0	1		SW6010C	1B17003	02/22/11 14:06

APPENDIX C

SUPPORT DOCUMENTATION

Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision
Data package revised to include U qualifiers for 1B16004-BLK1 and 1B16009-BLK1 for SW8260B.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
The continuing calibration verification 1B04812-CCV1 exceeded criteria with a positive bias for 1,1,1-Trichloroethane.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270C:
The continuing calibration verifications exceeded criteria in 1B05408-CCV1 with a

positive bias for Benzo(k)fluoranthene and in 1B05515-CV1 with a negative bias for Dibenz(a,h)anthracene.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW6010C:
No anomalies or deviations are noted.

FLPRO:
The surrogate o-Terphenyl exceeded criteria with a negative bias in samples 1102113-01 and -11.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER Jma-04 | PAGE 1 OF 2

PROJECT NO:	SITE NAME:	PROJECT MANAGER AND PHONE NUMBER	LABORATORY NAME AND CONTACT:
112602200	UST 21 Pensacola	Garry Walker (850) 385-9899	Empirical Lab / Kim Kostzer
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER	ADDRESS
Jared Shellman		Yarissa Martinez (850) 385-9899	621 Mainstream Dr. Suite 270
		CARRIER/WAYBILL NUMBER	CITY, STATE
		8748 4755 5243	Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE (YEAR 2011)	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: TRPH (418.1)	DRO (Solvent Extract) 8015B	VOCs 8260B	Select Metals 6010B	COMMENTS
						G	HCl					CP 2-13-11 H2O
2/10	0755	UST21-MW63-0211	GW	G	8			2	2	3	1	1102113-01
2/10	0935	UST21-MW64-0211	GW	G	8			2	2	3	1	-02
2/10	1035	UST21-MW60-0211	GW	G	8			2	2	3	1	-03
2/10	1135	UST21-MW54-0211	GW	G	8			2	2	3	1	-04
2/10	1215	UST21-MW01-0211	GW	G	8			2	2	3	1	-05
2/10	1250	UST21-MW10-0211	GW	G	8			2	2	3	1	-06
2/10	1330	UST21-MW23-0211	GW	G	8			2	2	3	1	-07
2/9	1655	UST21-MW62-0211	GW	G	8			2	2	3	1	-08
2/9	1655	UST21-MW62-0211MS	GW	G	8			2	2	3	1	
2/9	1655	~~UST21-MW62-0211MSD~~	GW	G	8			2	2	3	1	
2/9	1655	GW02-020911	GW	G	8			2	2	3	1	-09
2/10	1412	UST21-MW16-0211	GW	G	8			2	2	3	1	-10
2/10	1457	~~UST21~~-MW14-0211	GW	G	8			2	2	3	1	-11

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	2/10/11	1705	1. RECEIVED BY	2.0°C	2-11-11 08:45
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS: Select analysis as previous COC and approved SAP (Leaders !!!

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99
FORM NO. TtNUS-001

CTOJM01_007

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TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER JM01-04 | PAGE 2 OF 2

PROJECT NO:	SITE NAME:	PROJECT MANAGER AND PHONE NUMBER	LABORATORY NAME AND CONTACT:
112602200	UST 21-Pensacola	Gerry Walker (850)385-9899	Empirical Lab (Kim Kostzer)
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER AND PHONE NUMBER	ADDRESS
Jared Shellhouse		Vanessa Martinez (787)3009119	621 Mainstream Dr Suite 270
		CARRIER/WAYBILL NUMBER	CITY, STATE
		874847552 43	Nashville, TN 37228

STANDARD TAT [X]
RUSH TAT [ ]
[ ] 24 hr. [ ] 48 hr. [ ] 72 hr. [ ] 7 day [ ] 14 day

DATE YEAR 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	G	G	G	P					COMMENTS
						PRESERVATIVE USED	HCL	HCL		HNO3					
						TYPE OF ANALYSIS	TRPH (9 PPD) SGT-HEM	8260	8270C	Select Metals (6010B)					
2/10	1540	UST21-MW37-0211	GW	G	8		2	3	2	(1)					1102113-12
2/11	1655	TRIP BLANK 92553			2			2							-13
		TEMP BLANKS			6										
		* 6 COOLERS													

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	2/10/11	1705	1. RECEIVED BY	2.0°C	2-11-11	08:45
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY		DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY		DATE	TIME

COMMENTS * Select analysis as previous COC + SAP

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

3/99
FORM NO. TtNUS-001

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CTOJM01_007

UST2/MW10-0211

Sample Name: 1102113-06 Acquired: 2/23/2011 18:13:06 Type: Unk
Method: DuoEnviroMethodNEW(v1987) Mode: CONC Corr. Factor: 1.000000
User: rburr Custom ID1: Custom ID2: Custom ID3:
Comment: TETRA

Elem	Ag3280	Al3961	As1890	B_2496	Ba2335	Be3130	Bi2230	Ca317
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppm
Avg	**-.09926**	**414.68**	**2.7532**	**123.58**	**148.00**	**.00579**	**-.53649**	**92.18**
Stddev	.07203	2.78	1.0576	1.32	.30	.00895	.99658	.81
%RSD	72.569	.67033	38.413	1.0647	.20149	154.67	185.76	.8802
#1	-.18026	415.29	1.7489	122.14	148.10	.01178	-.15813	91.50
#2	-.07512	411.65	3.8570	124.72	147.66	-.00450	-1.6668	91.95
#3	-.04240	417.11	2.6538	123.88	148.23	.01009	.21551	93.081

Elem	Cd2144	Cd2288	Co2286	Cr2677	Cu2199	Cu3247	Fe2611	K_766
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppm
Avg	**.11590**	**.72397**	**.22504**	**.63920**	**2.371**	**3.7654**	**1834.3**	**8.950**
Stddev	.06128	.05281	.05838	.08936	.678	.0694	17.1	.085
%RSD	52.869	7.2948	25.942	13.980	28.61	1.8438	.93346	.95986
#1	.04535	.78420	.17618	.53959	1.670	3.6886	1819.6	8.868
#2	.15582	.70208	.20925	.66570	2.420	3.7838	1830.3	8.942
#3	.14654	.68562	.28969	.71232	3.024	3.8237	1853.1	9.040

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se196
Units	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppb
Avg	**20.682**	**524.38**	**.76881**	**27.314**	**1.0588**	**5.4955**	**-.88344**	**.7702**
Stddev	.173	2.61	.22356	.230	.3090	.9424	.21701	.5254
%RSD	.83764	.49707	29.079	.84086	29.184	17.149	24.564	68.222
#1	20.527	521.67	.94372	27.078	.99075	6.1302	-.67840	.2121
#2	20.651	526.86	.84578	27.327	.78953	4.4126	-.86122	1.255
#3	20.869	524.60	.51693	27.537	1.3962	5.9435	-1.1107	.8430

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**-.18395**	**458.7**	**7.3880**	**.38200**	**1.2285**	**136.08**
Stddev	.44226	3.3	.0726	.60999	.1107	.83
%RSD	240.42	.7093	.98236	159.68	9.0122	.60644
#1	-.54384	456.1	7.4028	1.0658	1.1156	136.22
#2	-.31779	457.7	7.3091	-.10613	1.2331	135.19
#3	.30977	462.4	7.4520	.18631	1.3369	136.82

Reported as 1830 ug/L

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 102113 Number of Coolers: 1 of 6

Client: Tetra Tech NUS, Inc Project: US 21 Pensacola

Date/Time Received: 2-11-11 / 08:45 Date cooler(s) opened: 2-11-11

Opened By (print): Chris Donald (signature): _____

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 0230

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-10-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.3 °C Correction Factor: -0.3 °C Final Value: 2.0 °C

Dates samples were logged-in: 2-13-11

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly?	(Yes)	No	N/A
11. Did all bottles arrive unbroken?	(Yes)	No	N/A
12. Was all required bottle label information complete?	(Yes)	No	N/A
13. Did all bottle labels agree with custody papers?	(Yes)	No	N/A
14. Were correct containers used for the analyses indicated?	(Yes)	No	N/A
15. Were preservative levels correct in all applicable sample containers?	(Yes)	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	(N/A)
17. Was sufficient amount of sample sent for the analyses required?	(Yes)	No	N/A
18. Was headspace present in any included VOA vials?	Yes	(No)	N/A

If Non-Conformance issues were present, list by sample ID: _____

- Housed TVS
- pH<2 for all EPRO & Metals samples

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 102113 Number of Coolers: 2 of 6

Client: Tetra Tech NUS Inc Project: US 21 Pensacola

Date/Time Received: 2-14-11 / 08:45 Date cooler(s) opened: 2-14-11

Opened By (print): Chris Donald (signature): Chris Donald

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 0274

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-10-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 3.4 °C Correction Factor: -0.3 °C Final Value: 3.1 °C

Dates samples were logged-in: 2-13-11

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly?	Yes	No	N/A
11. Did all bottles arrive unbroken?	Yes	No	N/A
12. Was all required bottle label information complete?	Yes	No	N/A
13. Did all bottle labels agree with custody papers?	Yes	No	N/A
14. Were correct containers used for the analyses indicated?	Yes	No	N/A
15. Were preservative levels correct in all applicable sample containers?	Yes	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	N/A
17. Was sufficient amount of sample sent for the analyses required?	Yes	No	N/A
18. Was headspace present in any included VOA vials?	Yes	No	N/A

If Non-Conformance issues were present, list by sample ID: _____

SCC 1 of 6

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1102113 Number of Coolers: 3 of 6

Client: Tetra Tech NUS Inc Project: US 21 Pensacola

Date/Time Received: 2-14-11 / 08:45 Date cooler(s) opened: 2-14-11

Opened By (print): Chris Donald (signature): Chris Donald

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 0241

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-10-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.1 °C Correction Factor: -0.3 °C Final Value: 1.8 °C

Dates samples were logged-in: 2-13-11

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly?	Yes	No	N/A
11. Did all bottles arrive unbroken?	Yes	No	N/A
12. Was all required bottle label information complete?	Yes	No	N/A
13. Did all bottle labels agree with custody papers?	Yes	No	N/A
14. Were correct containers used for the analyses indicated?	Yes	No	N/A
15. Were preservative levels correct in all applicable sample containers?	Yes	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	N/A
17. Was sufficient amount of sample sent for the analyses required?	Yes	No	N/A
18. Was headspace present in any included VOA vials?	Yes	No	N/A

If Non-Conformance issues were present, list by sample ID: _____

SCC 1 of 6

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1102113 Number of Coolers: 4 of 6

Client: Tetra Tech NUS Inc Project: US121 Pensacola

Date/Time Received: 2-14-11 / 08:45 Date cooler(s) opened: 2-14-11

Opened By (print): Chris Donald (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 0252

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-10-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.8 °C Correction Factor: -0.3 °C Final Value: 2.5 °C

Dates samples were logged-in: 2-13-11

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly?	Yes	No	N/A
11. Did all bottles arrive unbroken?	Yes	No	N/A
12. Was all required bottle label information complete?	Yes	No	N/A
13. Did all bottle labels agree with custody papers?	Yes	No	N/A
14. Were correct containers used for the analyses indicated?	Yes	No	N/A
15. Were preservative levels correct in all applicable sample containers?	Yes	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	N/A
17. Was sufficient amount of sample sent for the analyses required?	Yes	No	N/A
18. Was headspace present in any included VOA vials?	Yes	No	N/A

If Non-Conformance issues were present, list by sample ID: _____

Sec 1 of 6

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1102113 Number of Coolers: 5 of 6

Client: Tetra Tech NUS Inc Project: US 21 Pensacola

Date/Time Received: 2-14-11 / 08:45 Date cooler(s) opened: 2-14-11

Opened By (print): Chris Donald (signature):

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other:

If applicable, enter airbill number here: 0263

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-10-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.7 °C Correction Factor: -0.3 °C Final Value: 2.2 °C

Dates samples were logged-in: 2-13-11

9. Initial this form to acknowledge login of sample(s): (Name): (Initial):

10. Were all bottle lids intact and sealed tightly?	Yes	No	N/A
11. Did all bottles arrive unbroken?	Yes	No	N/A
12. Was all required bottle label information complete?	Yes	No	N/A
13. Did all bottle labels agree with custody papers?	Yes	No	N/A
14. Were correct containers used for the analyses indicated?	Yes	No	N/A
15. Were preservative levels correct in all applicable sample containers?	Yes	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	N/A
17. Was sufficient amount of sample sent for the analyses required?	Yes	No	N/A
18. Was headspace present in any included VOA vials?	Yes	No	N/A

If Non-Conformance issues were present, list by sample ID:

Sic 1 of 6

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 410213 Number of Coolers: 6 of 6

Client: Tetra Tech NUS Inc Project: US 21 Pensacola

Date/Time Received: 2-11-11 / 08:45 Date cooler(s) opened: 2-11-11

Opened By (print): Chris Donald (signature): Chris Donald

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 5243

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-10-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival? ..... (Yes) No N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... (Yes) No N/A
5. Were custody papers filled out properly (ink, signed, etc.)? ..... (Yes) No N/A
6. Did you sign custody papers in the appropriate place for acceptance? ..... (Yes) No N/A
7. Was project identifiable from custody papers? ..... (Yes) No N/A
8. If required, was enough ice present in the cooler(s)? ..... (Yes) No N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.6 °C Correction Factor: -0.3 °C Final Value: 2.3 °C

Dates samples were logged-in: 2-13-11

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly? ..... Yes No N/A
11. Did all bottles arrive unbroken? ..... Yes No N/A
12. Was all required bottle label information complete? ..... Yes No N/A
13. Did all bottle labels agree with custody papers? ..... Yes No N/A
14. Were correct containers used for the analyses indicated? ..... Yes No N/A
15. Were preservative levels correct in all applicable sample containers? ..... Yes No N/A
16. Was residual chlorine present in any applicable sample containers? ..... Yes No N/A
17. Was sufficient amount of sample sent for the analyses required? ..... Yes No N/A
18. Was headspace present in any included VOA vials? ..... Yes No N/A

If Non-Conformance issues were present, list by sample ID: _____

SCL 10F 6

SDG CTOJM01_006

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST21-MW23-0211	1102113-07	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST21-MW37-0211	1102113-12	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST-21-MW-38-0211	1102133-02	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
M	UG/L	UST-21-MW-40-0211	1102133-04	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
M	UG/L	UST21-MW54-0211	1102113-04	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW16-0211	1102113-10	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW60-0211	1102113-03	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW63-0211	1102113-01RE1	NM	02/10/2011	02/17/2011	02/23/2011	7	6	13
M	UG/L	UST21-MW61-0211	1102098-07RE1	NM	02/09/2011	02/17/2011	02/23/2011	8	6	14
M	UG/L	UST21-MW62-0211	1102113-08	NM	02/09/2011	02/22/2011	02/23/2011	13	1	14
M	UG/L	UST21-MW63-0211	1102113-01	NM	02/10/2011	02/17/2011	02/22/2011	7	5	12
M	UG/L	UST21-MW64-0211	1102113-02	NM	02/10/2011	02/17/2011	02/22/2011	7	5	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
M	UG/L	UST21-MW65-0211	1102098-03RE1	NM	02/08/2011	02/17/2011	02/23/2011	9	6	15
M	UG/L	UST-21-RB-0211	1102133-05	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST-21-09-0211	1102133-06	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	GW02-020911	1102113-09	NM	02/09/2011	02/22/2011	02/23/2011	13	1	14
M	UG/L	UST21-MW14-0211	1102113-11	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW64-0211	1102113-02RE1	NM	02/10/2011	02/17/2011	02/23/2011	7	6	13
M	UG/L	UST21-MW10-0211	1102113-06	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	GW01-021111	1102133-08	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW01-0211	1102113-05	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST-21-17-0211	1102133-07	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
M	UG/L	UST-21-MW-04-0211	1102133-03	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
MF	UG/L	UST21-MW25-0211	1102098-06	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW41-0211	1102098-02	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
MF	UG/L	UST21-MW55-0211	1102098-10	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW61-0211	1102098-08	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW65-0211	1102098-04	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
ALK	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
ALK	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
ALK	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
BOD	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
BOD	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
BOD	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
CL	MG/L	UST21-MW61-0211	1102098-07RE2	NM	02/09/2011	02/17/2011	02/17/2011	8	0	8
CL	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
CL	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
COD	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
COD	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
COD	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
NTA	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTA	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTA	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTI	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTI	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTI	MG/L	UST21-MW61-0211	1102098-07RE1	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC **SDG:** CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) **Project:** CTO JM01 NAS Pensacola_2010

Matrix: Water **Instrument:** ME-ICP

Analyte	MDL	MRL	Units	Method
Iron	30.0	100	ug/L	SW6010C
Lead	1.50	3.00	ug/L	SW6010C
Manganese	3.00	15.0	ug/L	SW6010C

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_007

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	Ag
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0002980	0.0000000	0.0000080	0.0003250	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000140	0.0287450	0.0000000

Comments:

FORM XA-IN

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_007

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		As	B	Ba	Be	Cd
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_007

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Co	Cr	Cu	K	Mn
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0000000	0.0000000	0.0022600	0.0000000	0.0000990
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_007

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Mo	Na	Ni	Pb	Sb
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	-0.0026440	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_007

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Se	Sn	Ti	Tl	V
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000360
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000300

Comments:

FORM XA-IN

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_007

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for: Zn				
Iron	261.1	0.0000000				
Lead	220.3	0.0000000				
Manganese	257.6	0.0000000				

Comments:

FORM XA-IN

ICP-AES AND ICP-MS LINEAR RANGES (QUARTERLY)

Lab Name: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010) SDG: CTOJM01_007

Project: CTO JM01 NAS Pensacola 2010

ICP Instrument ID: ME-ICP Date: 09/11/2009

Analyte	Integ. Time (Sec.)	Concentration ug/L	M
Iron	15	500000	P
Lead	15	10000	P
Manganese	15	10000	P

PREPARATION BATCH SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Batch: 1B22001 Batch Matrix: Water Preparation: MET_3005A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW60-0211	1102113-03	02/22/11 07:36	50.00	50.00
UST21-MW54-0211	1102113-04	02/22/11 07:36	50.00	50.00
UST21-MW01-0211	1102113-05	02/22/11 07:36	50.00	50.00
UST21-MW10-0211	1102113-06	02/22/11 07:36	50.00	50.00
UST21-MW23-0211	1102113-07	02/22/11 07:36	50.00	50.00
UST21-MW62-0211	1102113-08	02/22/11 07:36	50.00	50.00
GW02-020911	1102113-09	02/22/11 07:36	50.00	50.00
UST21-MW16-0211	1102113-10	02/22/11 07:36	50.00	50.00
UST21-MW14-0211	1102113-11	02/22/11 07:36	50.00	50.00
UST21-MW37-0211	1102113-12	02/22/11 07:36	50.00	50.00
Blank	1B22001-BLK1	02/22/11 07:36	50.00	50.00
LCS	1B22001-BS1	02/22/11 07:36	50.00	50.00
UST21-MW62-0211	1B22001-DUP1	02/22/11 07:36	50.00	50.00
UST21-MW62-0211	1B22001-MS1	02/22/11 07:36	50.00	50.00
UST21-MW62-0211	1B22001-MSD1	02/22/11 07:36	50.00	50.00
UST21-MW62-0211	1B22001-PS1	02/22/11 07:36	20.00	20.00

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW6010C

UST21-MW62-0211

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Matrix: Water

Batch: 1B22001

% Solids:

Source Sample Name: **1102113-08**

ANALYTE	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC.	Q	QC LIMITS REC.
Iron	1000	505.5	1498	99.2		80 - 120
Lead	250.0	ND	253.8	102		80 - 120
Manganese	500.0	123.0	616.0	98.6		80 - 120

ANALYTE	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC. #	% RPD	Q	QC LIMITS RPD	QC LIMITS REC.
Iron	1000	1521	102	1.54		20	80 - 120
Lead	250.0	257.0	103	1.24		20	80 - 120
Manganese	500.0	618.8	99.2	0.449		20	80 - 120

POST DIGEST SPIKE SAMPLE RECOVERY

SW6010C

UST21-MW62-0211

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Matrix: Water

Batch: 1B22001

Preparation: MET_3005A

SDG: CTOJM01_007

Project: CTO JM01 NAS Pensacola_2010

Laboratory ID: 1B22001-PS1

Lab Source ID: 1102113-08

Initial/Final: 20 mL / 20 mL

Analyte	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R	Control Limit %R
Iron	1531	505.5	1000	103	80 - 120
Lead	257.0	ND	250.0	103	80 - 120
Manganese	635.6	123.0	500.0	103	80 - 120

LCS / LCS DUPLICATE RECOVERY

SW6010C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Water		
Batch:	1B22001	Laboratory ID:	1B22001-BS1
Preparation:	MET_3005A	Initial/Final:	50 mL / 50 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Iron	1000	1081	108	80 - 120
Lead	250.0	262.2	105	80 - 120
Manganese	500.0	522.6	105	80 - 120

PREPARATION BATCH SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Batch: 1B17003 Batch Matrix: Water Preparation: MET_3005A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW63-0211	1102113-01	02/17/11 08:12	50.00	50.00
UST21-MW63-0211	1102113-01RE1	02/17/11 08:12	50.00	50.00
UST21-MW64-0211	1102113-02	02/17/11 08:12	50.00	50.00
UST21-MW64-0211	1102113-02RE1	02/17/11 08:12	50.00	50.00
Blank	1B17003-BLK1	02/17/11 08:13	50.00	50.00
LCS	1B17003-BS1	02/17/11 08:13	50.00	50.00

LCS / LCS DUPLICATE RECOVERY

SW6010C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B17003	Laboratory ID:	1B17003-BS1
Preparation:	MET_3005A	Initial/Final:	50 mL / 50 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Iron	1000	1059	106	80 - 120
Lead	250.0	262.3	105	80 - 120
Manganese	500.0	531.6	106	80 - 120

SERIAL DILUTION

SW6010C

UST21-MW62-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sequence: 1B05510
Preparation: MET_3005A

SDG: CTOJM01_007
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1B22001-DUP1
Lab Source ID: 1102113-08
Initial/Final: 50 / 50

Analyte	Initial Sample Result (I) ug/L	Serial Dilution Result (S) ug/L	% Difference	Q	Method	QC Limits % Difference
Iron	505.48	504.35	-0.224		SW6010C	10.00
Lead	ND	ND			SW6010C	10.00
Manganese	123.04	128.41	4.36		SW6010C	10.00

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Sequence:	1B05405	Instrument:	ME-ICP
Calibration:	1054001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1B05405-CAL1	022211A-001	02/22/11 09:31
Cal Standard	1B05405-CAL2	022211A-002	02/22/11 09:36
Cal Standard	1B05405-CAL3	022211A-003	02/22/11 09:41
Cal Standard	1B05405-CAL4	022211A-004	02/22/11 09:45
Cal Standard	1B05405-CAL5	022211A-005	02/22/11 09:50
Cal Standard	1B05405-CAL6	022211A-006	02/22/11 09:55
Initial Cal Check	1B05405-ICV1	022211B-001	02/22/11 10:52
Initial Cal Blank	1B05405-ICB1	022211B-002	02/22/11 10:59
Instrument RL Check	1B05405-CRL1	022211B-003	02/22/11 11:04
Interference Check A	1B05405-IFA1	022211B-005	02/22/11 11:14
Interference Check B	1B05405-IFB1	022211B-006	02/22/11 11:19
Calibration Check	1B05405-CCV1	022211B-008	02/22/11 11:31
Calibration Blank	1B05405-CCB1	022211B-009	02/22/11 11:38
Blank	1B17003-BLK1	022211B-010	02/22/11 11:43
LCS	1B17003-BS1	022211B-011	02/22/11 11:47
Calibration Check	1B05405-CCV2	022211C-001	02/22/11 13:40
Calibration Blank	1B05405-CCB2	022211C-002	02/22/11 13:47
UST21-MW63-0211	1102113-01	022211C-005	02/22/11 14:01
UST21-MW64-0211	1102113-02	022211C-006	02/22/11 14:06
Calibration Check	1B05405-CCV3	022211C-013	02/22/11 14:39
Calibration Blank	1B05405-CCB3	022211C-014	02/22/11 14:46

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM01_007
Project: CTO JM01 NAS Pensacola_2010
Calibration: 1054001
Sequence: 1B05405

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1B05405-ICV1	Iron	10000	10020	100	ug/L	+/- 10.00%
	Lead	1000	975.1	97.5	ug/L	+/- 10.00%
	Manganese	1000	1034	103	ug/L	+/- 10.00%
1B05405-CCV1	Iron	10000	9872	98.7	ug/L	+/- 10.00%
	Lead	1000	971.7	97.2	ug/L	+/- 10.00%
	Manganese	1000	1024	102	ug/L	+/- 10.00%
1B05405-CCV2	Iron	10000	9739	97.4	ug/L	+/- 10.00%
	Lead	1000	973.6	97.4	ug/L	+/- 10.00%
	Manganese	1000	970.5	97.1	ug/L	+/- 10.00%
1B05405-CCV3	Iron	10000	10320	103	ug/L	+/- 10.00%
	Lead	1000	1006	101	ug/L	+/- 10.00%
	Manganese	1000	963.4	96.3	ug/L	+/- 10.00%

CRDL STANDARD

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola 2010

Instrument ID: ME-ICP

Calibration: 1054001

Sequence: 1B05405

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
1B05405-CRL1	Iron	60.00	61.86	103	ug/L	80 - 120
	Lead	3.000	3.067	102	ug/L	80 - 120
	Manganese	6.000	6.635	111	ug/L	80 - 120

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B05405
Calibration: 1054001

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B05405-ICB1	Iron	3.448	30.0	100	ug/L	U	SW6010C
	Lead	-0.2775	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.1088	3.00	15.0	ug/L	U	SW6010C
1B05405-CCB1	Iron	1.86	30.0	100	ug/L	U	SW6010C
	Lead	0.522	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.0456	3.00	15.0	ug/L	U	SW6010C
1B17003-BLK1	Iron	-0.190	30.0	100	ug/L	U	SW6010C
	Lead	-0.517	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.0296	3.00	15.0	ug/L	U	SW6010C
1B05405-CCB2	Iron	2.45	30.0	100	ug/L	U	SW6010C
	Lead	-0.215	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.165	3.00	15.0	ug/L	U	SW6010C
1B05405-CCB3	Iron	0.404	30.0	100	ug/L	U	SW6010C
	Lead	-0.648	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.128	3.00	15.0	ug/L	U	SW6010C

ICP INTERFERENCE CHECK SAMPLE

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Instrument ID: ME-ICP

Calibration: 1054001

Sequence: 1B05405

Lab Sample ID	Analyte	True	Found	%R	Units
1B05405-IFA1	Iron	200000	193,420.00	96.7	ug/L
	Lead		9.49		ug/L
	Manganese		3.85		ug/L
1B05405-IFB1	Iron	200000	180,570.00	90.3	ug/L
	Lead	50.00	55.11	110	ug/L
	Manganese	500.0	446.45	89.3	ug/L

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Sequence:	1B05510	Instrument:	ME-ICP
Calibration:	1055007		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1B05510-CAL1	022311A-001	02/23/11 12:02
Cal Standard	1B05510-CAL2	022311A-002	02/23/11 12:07
Cal Standard	1B05510-CAL3	022311A-003	02/23/11 12:12
Cal Standard	1B05510-CAL4	022311A-004	02/23/11 12:16
Cal Standard	1B05510-CAL5	022311A-005	02/23/11 12:21
Cal Standard	1B05510-CAL6	022311A-006	02/23/11 12:26
Initial Cal Check	1B05510-ICV1	022311B-001	02/23/11 13:35
Initial Cal Blank	1B05510-ICB1	022311B-002	02/23/11 13:42
Instrument RL Check	1B05510-CRL1	022311B-003	02/23/11 13:47
Instrument RL Check	1B05510-CRL2	022311B-005	02/23/11 13:57
Interference Check A	1B05510-IFA1	022311B-006	02/23/11 14:02
Interference Check B	1B05510-IFB1	022311B-007	02/23/11 14:08
Calibration Check	1B05510-CCV1	022311B-009	02/23/11 14:19
Calibration Blank	1B05510-CCB1	022311B-010	02/23/11 14:26
Calibration Check	1B05510-CCV4	022311B-048	02/23/11 17:36
Calibration Blank	1B05510-CCB4	022311B-049	02/23/11 17:43
Blank	1B22001-BLK1	022311B-050	02/23/11 17:48
LCS	1B22001-BS1	022311B-051	02/23/11 17:52
UST21-MW60-0211	1102113-03	022311B-052	02/23/11 17:59
UST21-MW54-0211	1102113-04	022311B-053	02/23/11 18:03
UST21-MW01-0211	1102113-05	022311B-054	02/23/11 18:08
UST21-MW10-0211	1102113-06	022311B-055	02/23/11 18:13
UST21-MW23-0211	1102113-07	022311B-056	02/23/11 18:17
UST21-MW62-0211	1102113-08	022311B-057	02/23/11 18:22
UST21-MW62-0211	1B22001-MS1	022311B-058	02/23/11 18:27
UST21-MW62-0211	1B22001-MSD1	022311B-059	02/23/11 18:31
UST21-MW62-0211	1B22001-PS1	022311B-060	02/23/11 18:36
UST21-MW62-0211	1B22001-DUP1	022311B-061	02/23/11 18:42
GW02-020911	1102113-09	022311B-062	02/23/11 18:47
UST21-MW16-0211	1102113-10	022311B-063	02/23/11 18:51
UST21-MW14-0211	1102113-11	022311B-064	02/23/11 18:56
UST21-MW37-0211	1102113-12	022311B-065	02/23/11 19:01

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_007
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B05510	Instrument:	ME-ICP
Calibration:	1055007		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1B05510-CCV5	022311B-066	02/23/11 19:07
Calibration Blank	1B05510-CCB5	022311B-067	02/23/11 19:14
Calibration Check	1B05510-CCV7	022311B-097	02/23/11 21:43
Calibration Blank	1B05510-CCB7	022311B-098	02/23/11 21:50
UST21-MW63-0211	1102113-01RE1	022311B-101	02/23/11 22:14
UST21-MW64-0211	1102113-02RE1	022311B-102	02/23/11 22:19
Calibration Check	1B05510-CCV8	022311B-104	02/23/11 22:29
Calibration Blank	1B05510-CCB8	022311B-105	02/23/11 22:36

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM01_007
Project: CTO JM01 NAS Pensacola 2010
Calibration: 1055007
Sequence: 1B05510

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1B05510-ICV1	Iron	10000	10040	100	ug/L	+/- 10.00%
	Lead	1000	984.3	98.4	ug/L	+/- 10.00%
	Manganese	1000	1050	105	ug/L	+/- 10.00%
1B05510-CCV1	Iron	10000	9806	98.1	ug/L	+/- 10.00%
	Lead	1000	965.8	96.6	ug/L	+/- 10.00%
	Manganese	1000	1034	103	ug/L	+/- 10.00%
1B05510-CCV4	Iron	10000	10450	105	ug/L	+/- 10.00%
	Lead	1000	980.1	98.0	ug/L	+/- 10.00%
	Manganese	1000	1003	100	ug/L	+/- 10.00%
1B05510-CCV5	Iron	10000	9767	97.7	ug/L	+/- 10.00%
	Lead	1000	968.2	96.8	ug/L	+/- 10.00%
	Manganese	1000	1045	105	ug/L	+/- 10.00%
1B05510-CCV7	Iron	10000	9838	98.4	ug/L	+/- 10.00%
	Lead	1000	978.5	97.8	ug/L	+/- 10.00%
	Manganese	1000	1002	100	ug/L	+/- 10.00%
1B05510-CCV8	Iron	10000	9770	97.7	ug/L	+/- 10.00%
	Lead	1000	987.5	98.8	ug/L	+/- 10.00%
	Manganese	1000	990.1	99.0	ug/L	+/- 10.00%

CRDL STANDARD

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola 2010

Instrument ID: ME-ICP

Calibration: 1055007

Sequence: 1B05510

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
1B05510-CRL1	Iron	60.00	62.38	104	ug/L	80 - 120
	Manganese	6.000	6.470	108	ug/L	80 - 120
1B05510-CRL2	Lead	3.000	3.002	100	ug/L	80 - 120

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_007
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B05510
Calibration: 1055007

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B05510-ICB1	Iron	1.619	30.0	100	ug/L	U	SW6010C
	Lead	-0.02376	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.04948	3.00	15.0	ug/L	U	SW6010C
1B05510-CCB1	Iron	1.13	30.0	100	ug/L	U	SW6010C
	Lead	-0.0108	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.0862	3.00	15.0	ug/L	U	SW6010C
1B05510-CCB4	Iron	-0.940	30.0	100	ug/L	U	SW6010C
	Lead	0.910	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.0827	3.00	15.0	ug/L	U	SW6010C
1B22001-BLK1	Iron	0.154	30.0	100	ug/L	U	SW6010C
	Lead	0.524	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.0259	3.00	15.0	ug/L	U	SW6010C
1B05510-CCB5	Iron	1.07	30.0	100	ug/L	U	SW6010C
	Lead	0.641	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.125	3.00	15.0	ug/L	U	SW6010C
1B05510-CCB7	Iron	-0.621	30.0	100	ug/L	U	SW6010C
	Lead	0.981	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.0451	3.00	15.0	ug/L	U	SW6010C
1B05510-CCB8	Iron	-1.28	30.0	100	ug/L	U	SW6010C
	Lead	1.38	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.214	3.00	15.0	ug/L	U	SW6010C

ICP INTERFERENCE CHECK SAMPLE

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_007

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Instrument ID: ME-ICP

Calibration: 1055007

Sequence: 1B05510

Lab Sample ID	Analyte	True	Found	%R	Units
1B05510-IFA1	Iron	200000	193,310.00	96.7	ug/L
	Lead		5.85		ug/L
	Manganese		4.27		ug/L
1B05510-IFB1	Iron	200000	180,900.00	90.4	ug/L
	Lead	50.00	55.08	110	ug/L
	Manganese	500.0	463.96	92.8	ug/L

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **G. WALKER** **DATE:** **MARCH 30, 2011**

FROM: **A. COGNETTI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION- SELECT VOC/SELECT PAH/PET**
CTO JM01, NAS PENSACOLA
SAMPLE DELIVERY GROUP (SDG) – CTOJM01_008

SAMPLES: 8/Aqueous/Select VOC

GW01-021111	Trip Blank #9281	UST-21-09-0211
UST-21-17-0211	UST-210MW-04-0211	UST-21-MW-38-0211
UST-21-MW-40-0211	UST-21-RB-0211	

7/Aqueous/Select PAH/PET

GW01-021111	UST-21-09-0211	UST-21-17-0211
UST-210MW-04-0211	UST-21-MW-38-0211	UST-21-MW-40-0211
UST-21-RB-0211		

OVERVIEW

The sample set for CTO JM01 NAS PENSACOLA, SDG CTOJM01_008 consists of six (6) aqueous environmental samples, a rinsate blank and a trip blank analyzed for select Volatile Organic Compounds (VOCs). The select VOCs were benzene, 1,2-dichloroethane, cis- 1,2-dichloroethene, trans- 1,2-dichloroethene, isopropylbenzene, methylene chloride, tetrachloroethene, 1,1,1-trichloroethane, trichloroethene, vinyl chloride and total xylenes. The six (6) aqueous environmental samples and rinsate blank were also analyzed for select Polycyclic Aromatic Hydrocarbons (PAH and petroleum range organics (PET). The select PAHs were acenaphthene, benzo(a)anthracene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, 1-methylnaphthalene, 2-methylnaphthalene and naphthalene. There is one (1) field duplicate pair contained within this SDG: GW01-021111/UST-21-MW-40-0211.

The samples were collected by Tetra Tech on February 10 and 11, 2011 and analyzed by Empirical Laboratories, LLC. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using SW-846 Methods 8260B, 8270C and FL-PRO analysis and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • GC/MS Tuning
• Initial and Continuing Calibration
* • Laboratory Method Blank
• Surrogate Recoveries
* • Blank Spike/Blank Spike Duplicate Results
* • Matrix Spike/Matrix Spike Duplicate Results
* • Internal Standard Recoveries
* • Compound Identification
* • Field Duplicate Precision
* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

VOC

The continuing calibration percent difference (%D) for 1,1,1-trichloroethane was greater than the 20% quality control limit on February 17, 2011 @ 21:07 on instrument MS-VOA3. The nondetected 1,1,1-trichloroethane results were qualified as estimated (UJ) in all samples.

PET

The percent recovery (%R) of surrogate o-terphenyl was less than the lower quality control limit but greater than 10% in samples UST-21-MW-38-0211 (80.6% versus a lower limit of 82%), UST-21-MW-40-0211 (68.8% versus a lower limit of 82%) and GW01-021111 (67.3% versus a lower limit of 82%). The nondetected TPH results in samples UST-21-MW-38-0211, UST-21-MW-40-0211 and GW01-021111 were qualified as estimated (UJ).

ADDITIONAL COMMENTS

The rinsate blank, UST-21-RB-0211, contained methylene chloride.

Contaminant	Maximum Concentration (ug/L)
Methylene Chloride	19.5

No action was taken on the positive methylene chloride results in the sample because of rinsate blank contamination.

The laboratory control sample (LCS) associated with batch 1B15023 had a relative percent difference (RPD) for naphthalene greater than the quality control limit (30.6% versus quality control of 30%). The percent recovery of naphthalene in the LCS and LCS duplicate were within quality control limits. No action was required on the nondetected naphthalene results.

Sample UST-21-17-0211 was diluted 2X in the PET fraction.

All samples had laboratory reported Method Detection Limits (MDL) for the dibenzo(a,h)anthracene greater than the Project Action Limit (PAL) of 0.005 ug/L listed in the Sampling and Analysis Plan (SAP). The SAP had noted that the laboratory MDL was greater than the PAL and no action was taken for this issue.

The laboratory reported 1,2-dichloroethane even though this compound was not requested on the chain of custody and in the project SAP. All results were nondetected. No action was taken.

Total 1,2-dichloroethene was identified in the SAP and on the chain of custody. Because both cis and trans-1,2-dichloroethene were reported, a total 1,2-dichloroethene result can be calculated, if necessary. No action was required.

Nondetected results were reported to the method detection limit (MDL).

EXECUTIVE SUMMARY

Laboratory Performance Issues: The continuing calibration %Ds for 1,1,1-trichloroethane, exceeded quality control limits. The TPH surrogate recovery was low in several samples.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99) and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (April 2009). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech NUS
Ann Cognetti
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02200	NSAMPLE	GW01-021111			TRIP BLANK # 9281			UST-21-09-0211			UST-21-17-0211		
SDG: CTOJM01_008	LAB_ID	1102133-08			1102133-01			1102133-06			1102133-07		
FRACTION: OV	SAMP_DATE	2/11/2011			2/10/2011			2/11/2011			2/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.29	UJ	C	0.25	UJ	C	0.25	UJ	C	0.25	UJ	C
1,2-DICHLOROETHANE		0.22	U		0.25	U		0.25	U		0.25	U	
BENZENE		0.14	U		0.25	U		0.25	U		0.25	U	
CIS-1,2-DICHLOROETHENE		0.45	U		0.25	U		0.362	J	P	0.25	U	
ISOPROPYLBENZENE		0.15	U		0.25	U		0.25	U		7.44		
METHYLENE CHLORIDE		0.796	J	P	0.5	U		0.933	J	P	1.11	J	P
TETRACHLOROETHENE		0.17	U		0.25	U		0.25	U		0.25	U	
TOTAL XYLENES		0.22	U		0.75	U		0.75	U		1.6	J	P
TRANS-1,2-DICHLOROETHENE		0.53	U		0.25	U		0.467	J	P	0.25	U	
TRICHLOROETHENE		0.5	U		0.25	U		0.25	U		0.25	U	
VINYL CHLORIDE		0.2	U		0.25	U		0.365			0.25	U	

PROJ_NO: 02200	NSAMPLE	UST-21-MW-04-0211			UST-21-MW-38-0211			UST-21-MW-40-0211			UST-21-RB-0211		
SDG: CTOJM01_008	LAB_ID	1102133-03			1102133-02			1102133-04			1102133-05		
FRACTION: OV	SAMP_DATE	2/10/2011			2/10/2011			2/11/2011			2/11/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.25	UJ	C	0.25	UJ	C	0.25	UJ	C	0.25	UJ	C
1,2-DICHLOROETHANE		0.25	U		0.25	U		0.25	U		0.25	U	
BENZENE		0.25	U		0.25	U		0.25	U		0.25	U	
CIS-1,2-DICHLOROETHENE		0.25	U		0.25	U		0.25	U		0.25	U	
ISOPROPYLBENZENE		9.23			0.25	U		0.25	U		0.25	U	
METHYLENE CHLORIDE		1.19	J	P	0.932	J	P	0.5	U		19.5		
TETRACHLOROETHENE		0.25	U		0.25	U		0.25	U		0.25	U	
TOTAL XYLENES		0.75	U		0.75	U		0.75	U		0.75	U	
TRANS-1,2-DICHLOROETHENE		0.25	U		0.25	U		0.25	U		0.25	U	
TRICHLOROETHENE		0.25	U		0.25	U		0.25	U		0.25	U	
VINYL CHLORIDE		0.25	U		0.25	U		0.25	U		0.25	U	

PROJ_NO: 02200	NSAMPLE	GW01-021111			UST-21-09-0211			UST-21-17-0211			UST-21-MW-04-0211		
SDG: CTOJM01_008	LAB_ID	1102133-08			1102133-06			1102133-07			1102133-03		
FRACTION: PAH	SAMP_DATE	2/11/2011			2/11/2011			2/10/2011			2/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												

PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1-METHYLNAPHTHALENE	0.0293	J	P	0.0472	U		17.9			1.82		
2-METHYLNAPHTHALENE	0.0262	J	P	0.0472	U		0.0472	U		0.049	U	
ACENAPHTHENE	0.0185	U		0.0472	U		30.4			2.53		
BENZO(A)ANTHRACENE	0.0185	U		0.0472	U		0.0472	U		0.224		
BENZO(K)FLUORANTHENE	0.0185	U		0.0472	U		0.0472	U		0.049	U	
CHRYSENE	0.0185	U		0.0472	U		0.0472	U		0.049	U	
DIBENZO(A,H)ANTHRACENE	0.0185	U		0.0472	U		0.0472	U		0.049	U	
NAPHTHALENE	0.0185	U		0.0472	U		0.0472	U		0.049	U	

PROJ_NO: 02200	NSAMPLE	UST-21-MW-38-0211			UST-21-MW-40-0211			UST-21-RB-0211		
SDG: CTOJM01_008	LAB_ID	1102133-02			1102133-04			1102133-05		
FRACTION: PAH	SAMP_DATE	2/10/2011			2/11/2011			2/11/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1-METHYLNAPHTHALENE		0.0472	U		0.0534	J	P	0.05	U	
2-METHYLNAPHTHALENE		0.0472	U		0.0472	U		0.05	U	
ACENAPHTHENE		0.0472	U		0.0472	U		0.05	U	
BENZO(A)ANTHRACENE		0.0472	U		0.0472	U		0.05	U	
BENZO(K)FLUORANTHENE		0.0472	U		0.0472	U		0.05	U	
CHRYSENE		0.0472	U		0.0472	U		0.05	U	
DIBENZO(A,H)ANTHRACENE		0.0472	U		0.0472	U		0.05	U	
NAPHTHALENE		0.0472	U		0.0472	U		0.05	U	

PROJ_NO: 02200	NSAMPLE	GW01-021111			UST-21-09-0211			UST-21-17-0211			UST-21-MW-04-0211		
SDG: CTOJM01_008	LAB_ID	1102133-08			1102133-06			1102133-07			1102133-03		
FRACTION: PET	SAMP_DATE	2/11/2011			2/11/2011			2/10/2011			2/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C08-C40)		0.157	UJ	R	0.167	U		21.9			1.86		

PROJ_NO: 02200	NSAMPLE	UST-21-MW-38-0211			UST-21-MW-40-0211			UST-21-RB-0211		
SDG: CTOJM01_008	LAB_ID	1102133-02			1102133-04			1102133-05		
FRACTION: PET	SAMP_DATE	2/10/2011			2/11/2011			2/11/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C08-C40)		0.16	UJ	R	0.16	UJ	R	0.212	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

ANALYSIS DATA SHEET

GW01-021111

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_008	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola_2010	
Matrix:	Ground Water	Laboratory ID:	1102133-08	File ID:	0213308.D
Sampled:	02/11/11 07:36	Prepared:	02/17/11 11:15	Analyzed:	02/18/11 05:30
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B17009	Sequence:	1B05006	Calibration:	1042001	Instrument:	MS-VOA3

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.140	1.00	U
107-06-2	1,2-Dichloroethane		0.220	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.450	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.530	1.00	U
98-82-8	Isopropylbenzene		0.150	1.00	U
75-09-2	Methylene chloride	0.796	0.270	2.00	I
127-18-4	Tetrachloroethene		0.170	1.00	U
71-55-6	1,1,1-Trichloroethane		0.290	1.00	X U
79-01-6	Trichloroethene		0.500	1.00	U
75-01-4	Vinyl chloride		0.200	1.00	U
1330-20-7	Xylenes (total)		0.220	1.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.07	104	75 - 120	
Dibromofluoromethane	30.00	30.94	103	85 - 115	
1,2-Dichloroethane-d4	30.00	30.48	102	70 - 120	
Toluene-d8	30.00	29.90	99.7	85 - 120	

ANALYSIS DATA SHEET

UST-21-09-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_008	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola 2010	
Matrix:	Ground Water	Laboratory ID:	1102133-06	File ID:	0213306.D
Sampled:	02/11/11 06:20	Prepared:	02/17/11 11:15	Analyzed:	02/18/11 04:31
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B17009	Sequence:	1B05006	Calibration:	1042001
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.250	1.00	U
107-06-2	1,2-Dichloroethane		0.250	1.00	U
156-59-2	cis-1,2-Dichloroethene	0.362	0.250	1.00	I
156-60-5	trans-1,2-Dichloroethene	0.467	0.250	1.00	I
98-82-8	Isopropylbenzene		0.250	1.00	U
75-09-2	Methylene chloride	0.933	0.500	2.00	I
127-18-4	Tetrachloroethene		0.250	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	1.00	X U
79-01-6	Trichloroethene		0.250	1.00	U
75-01-4	Vinyl chloride	0.365	0.250	1.00	I
1330-20-7	Xylenes (total)		0.750	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.61	105	75 - 120	
Dibromofluoromethane	30.00	32.26	108	85 - 115	
1,2-Dichloroethane-d4	30.00	29.29	97.6	70 - 120	
Toluene-d8	30.00	29.73	99.1	85 - 120	

ANALYSIS DATA SHEET

UST-21-17-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_008	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola 2010	
Matrix:	Ground Water	Laboratory ID:	1102133-07	File ID:	0213307.D
Sampled:	02/10/11 20:18	Prepared:	02/17/11 11:15	Analyzed:	02/18/11 05:00
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B17009	Sequence:	1B05006	Calibration:	1042001
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.250	1.00	U
107-06-2	1,2-Dichloroethane		0.250	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	1.00	U
98-82-8	Isopropylbenzene	7.44	0.250	1.00	
75-09-2	Methylene chloride	1.11	0.500	2.00	I
127-18-4	Tetrachloroethene		0.250	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	1.00	X U
79-01-6	Trichloroethene		0.250	1.00	U
75-01-4	Vinyl chloride		0.250	1.00	U
1330-20-7	Xylenes (total)	1.60	0.750	3.00	I

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.07	104	75 - 120	
Dibromofluoromethane	30.00	31.87	106	85 - 115	
1,2-Dichloroethane-d4	30.00	29.33	97.8	70 - 120	
Toluene-d8	30.00	29.33	97.8	85 - 120	

ANALYSIS DATA SHEET

TRIP BLANK # 9281

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Water	Laboratory ID:	1102133-01	File ID:	0213301.D
Sampled:	02/10/11 00:00	Prepared:	02/17/11 11:15	Analyzed:	02/18/11 00:03
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B17009	Sequence:	1B05006	Calibration:	1042001
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.250	1.00	U
107-06-2	1,2-Dichloroethane		0.250	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	1.00	U
98-82-8	Isopropylbenzene		0.250	1.00	U
75-09-2	Methylene chloride		0.500	2.00	U
127-18-4	Tetrachloroethene		0.250	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	1.00	X U
79-01-6	Trichloroethene		0.250	1.00	U
75-01-4	Vinyl chloride		0.250	1.00	U
1330-20-7	Xylenes (total)		0.750	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.00	103	75 - 120	
Dibromofluoromethane	30.00	32.47	108	85 - 115	
1,2-Dichloroethane-d4	30.00	31.29	104	70 - 120	
Toluene-d8	30.00	29.88	99.6	85 - 120	

ANALYSIS DATA SHEET

UST-21-MW-04-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Ground Water	Laboratory ID:	1102133-03	File ID:	0213303.D
Sampled:	02/10/11 19:25	Prepared:	02/17/11 11:15	Analyzed:	02/18/11 03:31
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B17009	Sequence:	1B05006	Calibration:	1042001
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.250	1.00	U
107-06-2	1,2-Dichloroethane		0.250	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	1.00	U
98-82-8	Isopropylbenzene	9.23	0.250	1.00	
75-09-2	Methylene chloride	1.19	0.500	2.00	I
127-18-4	Tetrachloroethene		0.250	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	1.00	X U
79-01-6	Trichloroethene		0.250	1.00	U
75-01-4	Vinyl chloride		0.250	1.00	U
1330-20-7	Xylenes (total)		0.750	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.43	105	75 - 120	
Dibromofluoromethane	30.00	32.50	108	85 - 115	
1,2-Dichloroethane-d4	30.00	29.98	99.9	70 - 120	
Toluene-d8	30.00	28.66	95.5	85 - 120	

ANALYSIS DATA SHEET

UST-21-MW-38-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_008	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola 2010	
Matrix:	Ground Water	Laboratory ID:	1102133-02	File ID:	0213302.D
Sampled:	02/10/11 21:05	Prepared:	02/17/11 11:15	Analyzed:	02/18/11 03:01
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B17009	Sequence:	1B05006	Calibration:	1042001
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.250	1.00	U
107-06-2	1,2-Dichloroethane		0.250	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	1.00	U
98-82-8	Isopropylbenzene		0.250	1.00	U
75-09-2	Methylene chloride	0.932	0.500	2.00	I
127-18-4	Tetrachloroethene		0.250	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	1.00	X U
79-01-6	Trichloroethene		0.250	1.00	U
75-01-4	Vinyl chloride		0.250	1.00	U
1330-20-7	Xylenes (total)		0.750	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	30.36	101	75 - 120	
Dibromofluoromethane	30.00	31.57	105	85 - 115	
1,2-Dichloroethane-d4	30.00	30.66	102	70 - 120	
Toluene-d8	30.00	29.51	98.4	85 - 120	

ANALYSIS DATA SHEET

UST-21-MW-40-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Ground Water	Laboratory ID:	1102133-04	File ID:	0213304.D
Sampled:	02/11/11 07:36	Prepared:	02/17/11 11:15	Analyzed:	02/18/11 04:01
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B17009	Sequence:	1B05006	Calibration:	1042001
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.250	1.00	U
107-06-2	1,2-Dichloroethane		0.250	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	1.00	U
98-82-8	Isopropylbenzene		0.250	1.00	U
75-09-2	Methylene chloride		0.500	2.00	U
127-18-4	Tetrachloroethene		0.250	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	1.00	X U
79-01-6	Trichloroethene		0.250	1.00	U
75-01-4	Vinyl chloride		0.250	1.00	U
1330-20-7	Xylenes (total)		0.750	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.50	105	75 - 120	
Dibromofluoromethane	30.00	31.90	106	85 - 115	
1,2-Dichloroethane-d4	30.00	31.67	106	70 - 120	
Toluene-d8	30.00	29.98	99.9	85 - 120	

ANALYSIS DATA SHEET

UST-21-RB-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Water	Laboratory ID:	1102133-05	File ID:	0213305.D
Sampled:	02/11/11 16:24	Prepared:	02/17/11 11:15	Analyzed:	02/18/11 01:02
Solids:		Preparation:	5030B	Dilution:	1
Batch:	1B17009	Sequence:	1B05006	Calibration:	1042001
Instrument:	MS-VOA3				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
71-43-2	Benzene		0.250	1.00	U
107-06-2	1,2-Dichloroethane		0.250	1.00	U
156-59-2	cis-1,2-Dichloroethene		0.250	1.00	U
156-60-5	trans-1,2-Dichloroethene		0.250	1.00	U
98-82-8	Isopropylbenzene		0.250	1.00	U
75-09-2	Methylene chloride	19.5	0.500	2.00	
127-18-4	Tetrachloroethene		0.250	1.00	U
71-55-6	1,1,1-Trichloroethane		0.250	1.00	X U
79-01-6	Trichloroethene		0.250	1.00	U
75-01-4	Vinyl chloride		0.250	1.00	U
1330-20-7	Xylenes (total)		0.750	3.00	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Bromofluorobenzene	30.00	31.07	104	75 - 120	
Dibromofluoromethane	30.00	32.04	107	85 - 115	
1,2-Dichloroethane-d4	30.00	29.92	99.7	70 - 120	
Toluene-d8	30.00	29.42	98.1	85 - 120	

ANALYSIS DATA SHEET

GW01-021111

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Matrix: Ground Water Laboratory ID: 1102133-08 File ID: 0213308.D

Sampled: 02/11/11 07:36 Prepared: 02/16/11 16:33 Analyzed: 03/02/11 18:40

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 1B15023 Sequence: 1C06213 Calibration: 1061004 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0185	0.0926	U
56-55-3	Benzo(a)anthracene		0.0185	0.0926	U
207-08-9	Benzo(k)fluoranthene		0.0185	0.0926	U
218-01-9	Chrysene		0.0185	0.0926	U
53-70-3	Dibenz(a,h)anthracene		0.0185	0.0926	U
90-12-0	1-Methylnaphthalene	0.0293	0.0185	0.0926	I
91-57-6	2-Methylnaphthalene	0.0262	0.0185	0.0926	I
91-20-3	Naphthalene		0.0185	0.0926	Q U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	46.30	33.44	72.2	34 - 167	
Terphenyl-d14	46.30	36.12	78.0	34 - 167	

ANALYSIS DATA SHEET

UST-21-09-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_008	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola 2010	
Matrix:	Ground Water	Laboratory ID:	1102133-06	File ID:	0213306.D
Sampled:	02/11/11 06:20	Prepared:	02/16/11 16:33	Analyzed:	03/02/11 17:46
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B15023	Sequence:	1C06213	Calibration:	1061004
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0472	0.189	U
56-55-3	Benzo(a)anthracene		0.0472	0.189	U
207-08-9	Benzo(k)fluoranthene		0.0472	0.189	U
218-01-9	Chrysene		0.0472	0.189	U
53-70-3	Dibenz(a,h)anthracene		0.0472	0.189	U
90-12-0	1-Methylnaphthalene		0.0472	0.189	U
91-57-6	2-Methylnaphthalene		0.0472	0.189	U
91-20-3	Naphthalene		0.0472	0.189	Q U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	47.17	33.43	70.9	34 - 167	
Terphenyl-d14	47.17	40.28	85.4	34 - 167	

ANALYSIS DATA SHEET

UST-21-17-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_008	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola_2010	
Matrix:	Ground Water	Laboratory ID:	1102133-07	File ID:	0213307.D
Sampled:	02/10/11 20:18	Prepared:	02/16/11 16:33	Analyzed:	03/02/11 18:13
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B15023	Sequence:	1C06213	Calibration:	1061004
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene	30.4	0.0472	0.189	
56-55-3	Benzo(a)anthracene		0.0472	0.189	U
207-08-9	Benzo(k)fluoranthene		0.0472	0.189	U
218-01-9	Chrysene		0.0472	0.189	U
53-70-3	Dibenz(a,h)anthracene		0.0472	0.189	U
90-12-0	1-Methylnaphthalene	17.9	0.0472	0.189	
91-57-6	2-Methylnaphthalene		0.0472	0.189	U
91-20-3	Naphthalene		0.0472	0.189	Q U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	47.17	32.13	68.1	34 - 167	
Terphenyl-d14	47.17	40.06	84.9	34 - 167	

ANALYSIS DATA SHEET

UST-21-MW-04-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102133-03	File ID:	0213303.D
Sampled:	02/10/11 19:25	Prepared:	02/16/11 16:33	Analyzed:	03/02/11 16:25
Solids:		Preparation:	EXT_3510	Dilution:	1

Batch: 1B15023 Sequence: 1C06213 Calibration: 1061004 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene	2.53	0.0490	0.196	
56-55-3	Benzo(a)anthracene	0.224	0.0490	0.196	
207-08-9	Benzo(k)fluoranthene		0.0490	0.196	U
218-01-9	Chrysene		0.0490	0.196	U
53-70-3	Dibenz(a,h)anthracene		0.0490	0.196	U
90-12-0	1-Methylnaphthalene	1.82	0.0490	0.196	
91-57-6	2-Methylnaphthalene		0.0490	0.196	U
91-20-3	Naphthalene		0.0490	0.196	Q U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	49.02	31.38	64.0	34 - 167	
Terphenyl-d14	49.02	18.48	37.7	34 - 167	

ANALYSIS DATA SHEET

UST-21-MW-38-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102133-02	File ID:	0213302.D
Sampled:	02/10/11 21:05	Prepared:	02/16/11 16:33	Analyzed:	03/02/11 15:58
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B15023	Sequence:	1C06213	Calibration:	1061004
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0472	0.189	U
56-55-3	Benzo(a)anthracene		0.0472	0.189	U
207-08-9	Benzo(k)fluoranthene		0.0472	0.189	U
218-01-9	Chrysene		0.0472	0.189	U
53-70-3	Dibenz(a,h)anthracene		0.0472	0.189	U
90-12-0	1-Methylnaphthalene		0.0472	0.189	U
91-57-6	2-Methylnaphthalene		0.0472	0.189	U
91-20-3	Naphthalene		0.0472	0.189	Q U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	47.17	31.42	66.6	34 - 167	
Terphenyl-d14	47.17	23.26	49.3	34 - 167	

ANALYSIS DATA SHEET

UST-21-MW-40-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102133-04	File ID:	0213304.D
Sampled:	02/11/11 07:36	Prepared:	02/16/11 16:33	Analyzed:	03/02/11 16:52
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B15023	Sequence:	1C06213	Calibration:	1061004
Instrument:	MS-BNA4				

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0472	0.189	U
56-55-3	Benzo(a)anthracene		0.0472	0.189	U
207-08-9	Benzo(k)fluoranthene		0.0472	0.189	U
218-01-9	Chrysene		0.0472	0.189	U
53-70-3	Dibenz(a,h)anthracene		0.0472	0.189	U
90-12-0	1-Methylnaphthalene	0.0534	0.0472	0.189	I
91-57-6	2-Methylnaphthalene		0.0472	0.189	U
91-20-3	Naphthalene		0.0472	0.189	Q U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	47.17	33.56	71.2	34 - 167	
Terphenyl-d14	47.17	41.32	87.6	34 - 167	

ANALYSIS DATA SHEET

UST-21-RB-0211

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Matrix: Water Laboratory ID: 1102133-05 File ID: 0213305.D

Sampled: 02/11/11 16:24 Prepared: 02/16/11 16:33 Analyzed: 03/02/11 17:19

Solids: Preparation: EXT_3510 Dilution: 1

Batch: 1B15023 Sequence: 1C06213 Calibration: 1061004 Instrument: MS-BNA4

CAS NO.	COMPOUND	CONC. (ug/L)	MDL	MRL	Q
83-32-9	Acenaphthene		0.0500	0.200	U
56-55-3	Benzo(a)anthracene		0.0500	0.200	U
207-08-9	Benzo(k)fluoranthene		0.0500	0.200	U
218-01-9	Chrysene		0.0500	0.200	U
53-70-3	Dibenz(a,h)anthracene		0.0500	0.200	U
90-12-0	1-Methylnaphthalene		0.0500	0.200	U
91-57-6	2-Methylnaphthalene		0.0500	0.200	U
91-20-3	Naphthalene		0.0500	0.200	Q U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	50.00	34.95	69.9	34 - 167	
Terphenyl-d14	50.00	41.36	82.7	34 - 167	

ANALYSIS DATA SHEET

GW01-021111

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102133-08	File ID:	030F3001.D
Sampled:	02/11/11 07:36	Prepared:	02/16/11 13:37	Analyzed:	02/18/11 07:34
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B16007	Sequence:	1B04907	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics		0.157	0.630	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04630	0.02694	58.2	50 - 150	
o-Terphenyl	0.04630	0.03115	67.3	82 - 142	*

ANALYSIS DATA SHEET

UST-21-09-0211

Laboratory:	Empirical Laboratories, LLC		SDG:	CTOJM01_008	
Client:	Tetra Tech NUS, Inc. (T010)		Project:	CTO JM01 NAS Pensacola 2010	
Matrix:	Ground Water	Laboratory ID:	1102133-06	File ID:	028F2801.D
Sampled:	02/11/11 06:20	Prepared:	02/16/11 13:37	Analyzed:	02/18/11 06:10
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B16007	Sequence:	1B04907	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics		0.167	0.667	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04902	0.03121	63.7	50 - 150	
o-Terphenyl	0.04902	0.04256	86.8	82 - 142	

ANALYSIS DATA SHEET

UST-21-17-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Ground Water	Laboratory ID:	1102133-07	File ID:	003F0301.D
Sampled:	02/10/11 20:18	Prepared:	02/16/11 13:37	Analyzed:	02/18/11 12:06
Solids:		Preparation:	EXT_3510	Dilution:	2
Batch:	1B16007	Sequence:	1B05208	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics	21.9	0.425	1.70	D

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.06250	0.07209	115	50 - 150	
o-Terphenyl	0.06250	0.05388	86.2	82 - 142	

ANALYSIS DATA SHEET

UST-21-MW-04-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102133-03	File ID:	025F2501.D
Sampled:	02/10/11 19:25	Prepared:	02/16/11 13:37	Analyzed:	02/18/11 04:03
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B16007	Sequence:	1B04907	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics	1.86	0.170	0.680	

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.05000	0.03870	77.4	50 - 150	
o-Terphenyl	0.05000	0.04349	87.0	82 - 142	

ANALYSIS DATA SHEET

UST-21-MW-38-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102133-02	File ID:	024F2401.D
Sampled:	02/10/11 21:05	Prepared:	02/16/11 13:37	Analyzed:	02/18/11 03:21
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B16007	Sequence:	1B04907	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics		0.160	0.642	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04717	0.03446	73.1	50 - 150	
o-Terphenyl	0.04717	0.03801	80.6	82 - 142	*

ANALYSIS DATA SHEET

UST-21-MW-40-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Ground Water	Laboratory ID:	1102133-04	File ID:	026F2601.D
Sampled:	02/11/11 07:36	Prepared:	02/16/11 13:37	Analyzed:	02/18/11 04:45
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B16007	Sequence:	1B04907	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics		0.160	0.642	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.04717	0.02664	56.5	50 - 150	
o-Terphenyl	0.04717	0.03245	68.8	82 - 142	*

ANALYSIS DATA SHEET

UST-21-RB-0211

Laboratory:	Empirical Laboratories, LLC			SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)			Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Water	Laboratory ID:	1102133-05	File ID:	027F2701.D
Sampled:	02/11/11 16:24	Prepared:	02/16/11 13:37	Analyzed:	02/18/11 05:27
Solids:		Preparation:	EXT_3510	Dilution:	1
Batch:	1B16007	Sequence:	1B04907	Calibration:	1036001
Instrument:	GL-GCFID2				

CAS NO.	COMPOUND	CONC. (mg/L)	MDL	MRL	Q
	Petroleum Range Organics		0.212	0.850	U

SYSTEM MONITORING COMPOUND	ADDED (mg/L)	CONC (mg/L)	% REC	QC LIMITS	Q
2-Fluorobiphenyl	0.06250	0.04351	69.6	50 - 150	
o-Terphenyl	0.06250	0.05655	90.5	82 - 142	

APPENDIX C

SUPPORT DOCUMENTATION

Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
The continuing calibration verification 1B05006-CCV1 exceeded criteria with a positive bias for 1,1,1-Trichloroethane.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270C:
The batch spikes associated to batch 1B15023 exceeded relative percent difference criteria for Naphthalene.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

FLPRO:
The surrogate o-Terphenyl exceeded criteria with a negative bias in sample 1102133-02, -04, and -08. Note – recoveries were within in-house recovery limits of 30%-140%.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW6010C:
The sample 1102133-07 is qualified with an M for Lead to indicate that the MDL was raised due to interference.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER ~~2734~~ JM01-05 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02200	UST21	G. Walker	850-385-9849	Empirical
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER: Y. Martinez	PHONE NUMBER: same	ADDRESS: 621 Mainstream Dr STE 270
		CARRIER/WAYBILL NUMBER		CITY, STATE: Nashville TN 37228

STANDARD TAT ☒
RUSH TAT ☐ ☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: VOC 8260	PAH 8270	6010B, Pb, Fe, Mn only	FL-PRO					COMMENTS
															HCl	G	G	P	G
																Ice		HNO3	HCl
—	—	TripBlank#9281	—	—	—	QC	G	2			✓								1102134
2/10	2105	UST-21-MW-38-0211	—	—	—	GW	G	8			✓	✓	✓	✓					-02
2/10	1925	UST-21-MW-04-0211	—	—	—	GW	G	8			✓	✓	✓	✓					-03
2/11	0736	UST-21-MW-40-0211	—	—	—	GW	G	7			✓	✓	✓	✓					-04
2/11	1624	UST-21-RB-0211	—	—	—	QC	G	6			✓	✓	✓	✓					-05
2/10	0620	UST-21-09-0211	—	—	—	GW	G	8			✓	✓	✓	✓					-06
2/10	2018	UST-21-17-0211	—	—	—	GW	G	8			✓	✓	✓	✓					-07
2/11	0736	GW01-021111	—	—	—	GW	G	7			✓	✓	✓	✓					*This is the correct time -08
		Temp Blanks						3											
			# 3 Coolers																

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	2/11/11	1710	1. RECEIVED BY 3.1°C	2-12-11	09:00
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY) 4/02R
FORM NO. TtNUS-001

9

CTOJM01_008 Summ Package

CP 2-15-11

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 10213 #3 Number of Coolers: 1 of 4

Client: Tetra Tech NUS, Inc Project: UST 21

Date/Time Received: 2-12-11/09:00 Date cooler(s) opened: 2-12-11 CP 2-12-11

Opened By (print): Chris Dang (signature):

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 9834

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-11-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 3.4 °C Correction Factor: -0.3 °C Final Value: 3.1 °C

Dates samples were logged-in: 2-14-11

9. Initial this form to acknowledge login of sample(s): (Name): (Initial): CP

10. Were all bottle lids intact and sealed tightly?	(Yes)	No	N/A
11. Did all bottles arrive unbroken?	(Yes)	No	N/A
12. Was all required bottle label information complete?	Yes	(No)	N/A
13. Did all bottle labels agree with custody papers?	(Yes)	No	N/A
14. Were correct containers used for the analyses indicated?	(Yes)	No	N/A
15. Were preservative levels correct in all applicable sample containers?	(Yes)	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	(N/A)
17. Was sufficient amount of sample sent for the analyses required?	(Yes)	No	N/A
18. Was headspace present in any included VOA vials?	Yes	(No)	N/A

1 FLOPPO missing LABEL

If Non-Conformance issues were present, list by sample ID: _____

ph 12 for all FL/Pos of Metals

CD 2-15-11

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1102153 Number of Coolers: 2 of 4

Client: TetraTech NUS INC Project: UST21

Date/Time Received: 2-12-11 09:00 Date cooler(s) opened: 2-12-11 2-12-11

Opened By (print): Russ Townsend (signature): Russ Townsend

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 2836

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-11-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.9 °C Correction Factor: -0.3 °C Final Value: 2.6 °C

Dates samples were logged-in:

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly?	(Yes)	No	N/A
11. Did all bottles arrive unbroken?	(Yes)	No	N/A
12. Was all required bottle label information complete?	(Yes)	No	N/A
13. Did all bottle labels agree with custody papers?	(Yes)	No	N/A
14. Were correct containers used for the analyses indicated?	(Yes)	No	N/A
15. Were preservative levels correct in all applicable sample containers?	(Yes)	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	(N/A)
17. Was sufficient amount of sample sent for the analyses required?	(Yes)	No	N/A
18. Was headspace present in any included VOA vials?	Yes	(No)	N/A

If Non-Conformance issues were present, list by sample ID: _____

SCL 1 of 4

LP 2-15-11

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1102133 Number of Coolers: 3 of 4

Client: TetraTech NUS Inc Project: UST 21

Date/Time Received: 2-12-11 09:00 Date cooler(s) opened: 2-12-11

Opened By (print): Russ Townsend (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 9834

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-11-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.6 °C Correction Factor: -0.3 °C Final Value: 2.3 °C

Dates samples were logged-in:

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly?	(Yes)	No	N/A
11. Did all bottles arrive unbroken?	(Yes)	No	N/A
12. Was all required bottle label information complete?	(Yes)	No	N/A
13. Did all bottle labels agree with custody papers?	(Yes)	No	N/A
14. Were correct containers used for the analyses indicated?	(Yes)	No	N/A
15. Were preservative levels correct in all applicable sample containers?	(Yes)	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	(N/A)
17. Was sufficient amount of sample sent for the analyses required?	(Yes)	No	N/A
18. Was headspace present in any included VOA vials?	Yes	(No)	N/A

If Non-Conformance issues were present, list by sample ID: _____

See 1 of 4

CP 2-15-11

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1102133 & 3 Number of Coolers: 4 of 4

Client: Tetra Tech NUS Inc Project: UST 21

Date/Time Received: 2.12.11 09:00 Date cooler(s) opened: 2.12.11

Opened By (print): Russ Townsend (signature): Russ Townsend

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 9960

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-11-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.8 °C Correction Factor: -0.3 °C Final Value: 2.5 °C

Dates samples were logged-in:

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly?	(Yes)	No	N/A
11. Did all bottles arrive unbroken?	(Yes)	No	N/A
12. Was all required bottle label information complete?	(Yes)	No	N/A
13. Did all bottle labels agree with custody papers?	(Yes)	No	N/A
14. Were correct containers used for the analyses indicated?	(Yes)	No	N/A
15. Were preservative levels correct in all applicable sample containers?	(Yes)	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	(N/A)
17. Was sufficient amount of sample sent for the analyses required?	(Yes)	No	N/A
18. Was headspace present in any included VOA vials?	Yes	(No)	N/A

If Non-Conformance issues were present, list by sample ID: _____

SCC 1 of 4

HOLDING TIME SUMMARY

SW8260B

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
TRIP BLANK # 9281	02/10/11 00:00	02/12/11 09:00	02/17/11 11:15	N/A	14.00	02/18/11 00:03	8.04	14.00	
UST-21-MW-38-0211	02/10/11 21:05	02/12/11 09:00	02/17/11 11:15	N/A	14.00	02/18/11 03:01	7.29	14.00	
UST-21-MW-04-0211	02/10/11 19:25	02/12/11 09:00	02/17/11 11:15	N/A	14.00	02/18/11 03:31	7.38	14.00	
UST-21-MW-40-0211	02/11/11 07:36	02/12/11 09:00	02/17/11 11:15	N/A	14.00	02/18/11 04:01	6.89	14.00	
UST-21-RB-0211	02/11/11 16:24	02/12/11 09:00	02/17/11 11:15	N/A	14.00	02/18/11 01:02	6.40	14.00	
UST-21-09-0211	02/11/11 06:20	02/12/11 09:00	02/17/11 11:15	N/A	14.00	02/18/11 04:31	6.97	14.00	
UST-21-17-0211	02/10/11 20:18	02/12/11 09:00	02/17/11 11:15	N/A	14.00	02/18/11 05:00	7.40	14.00	
GW01-021111	02/11/11 07:36	02/12/11 09:00	02/17/11 11:15	N/A	14.00	02/18/11 05:30	6.95	14.00	

HOLDING TIME SUMMARY

SW8270C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
UST-21-MW-38-0211	02/10/11 21:05	02/12/11 09:00	02/16/11 16:33	5.85	7.00	03/02/11 15:58	13.98	40.00	
UST-21-MW-04-0211	02/10/11 19:25	02/12/11 09:00	02/16/11 16:33	5.92	7.00	03/02/11 16:25	13.99	40.00	
UST-21-MW-40-0211	02/11/11 07:36	02/12/11 09:00	02/16/11 16:33	5.41	7.00	03/02/11 16:52	14.01	40.00	
UST-21-RB-0211	02/11/11 16:24	02/12/11 09:00	02/16/11 16:33	5.05	7.00	03/02/11 17:19	14.03	40.00	
UST-21-09-0211	02/11/11 06:20	02/12/11 09:00	02/16/11 16:33	5.47	7.00	03/02/11 17:46	14.05	40.00	
UST-21-17-0211	02/10/11 20:18	02/12/11 09:00	02/16/11 16:33	5.89	7.00	03/02/11 18:13	14.07	40.00	
GW01-021111	02/11/11 07:36	02/12/11 09:00	02/16/11 16:33	5.41	7.00	03/02/11 18:40	14.09	40.00	

HOLDING TIME SUMMARY

FLPRO

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
UST-21-MW-38-0211	02/10/11 21:05	02/12/11 09:00	02/16/11 13:37	5.73	7.00	02/18/11 03:21	1.57	40.00	
UST-21-MW-04-0211	02/10/11 19:25	02/12/11 09:00	02/16/11 13:37	5.80	7.00	02/18/11 04:03	1.60	40.00	
UST-21-MW-40-0211	02/11/11 07:36	02/12/11 09:00	02/16/11 13:37	5.29	7.00	02/18/11 04:45	1.63	40.00	
UST-21-RB-0211	02/11/11 16:24	02/12/11 09:00	02/16/11 13:37	4.93	7.00	02/18/11 05:27	1.66	40.00	
UST-21-09-0211	02/11/11 06:20	02/12/11 09:00	02/16/11 13:37	5.35	7.00	02/18/11 06:10	1.69	40.00	
UST-21-17-0211	02/10/11 20:18	02/12/11 09:00	02/16/11 13:37	5.76	7.00	02/18/11 12:06	1.94	40.00	
GW01-021111	02/11/11 07:36	02/12/11 09:00	02/16/11 13:37	5.29	7.00	02/18/11 07:34	1.75	40.00	

HOLDTIME

SDG CTOJM01_006

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST21-MW23-0211	1102113-07	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST21-MW37-0211	1102113-12	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST-21-MW-38-0211	1102133-02	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
M	UG/L	UST-21-MW-40-0211	1102133-04	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
M	UG/L	UST21-MW54-0211	1102113-04	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW16-0211	1102113-10	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW60-0211	1102113-03	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW63-0211	1102113-01RE1	NM	02/10/2011	02/17/2011	02/23/2011	7	6	13
M	UG/L	UST21-MW61-0211	1102098-07RE1	NM	02/09/2011	02/17/2011	02/23/2011	8	6	14
M	UG/L	UST21-MW62-0211	1102113-08	NM	02/09/2011	02/22/2011	02/23/2011	13	1	14
M	UG/L	UST21-MW63-0211	1102113-01	NM	02/10/2011	02/17/2011	02/22/2011	7	5	12
M	UG/L	UST21-MW64-0211	1102113-02	NM	02/10/2011	02/17/2011	02/22/2011	7	5	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
M	UG/L	UST21-MW65-0211	1102098-03RE1	NM	02/08/2011	02/17/2011	02/23/2011	9	6	15
M	UG/L	UST-21-RB-0211	1102133-05	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST-21-09-0211	1102133-06	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	GW02-020911	1102113-09	NM	02/09/2011	02/22/2011	02/23/2011	13	1	14
M	UG/L	UST21-MW14-0211	1102113-11	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW64-0211	1102113-02RE1	NM	02/10/2011	02/17/2011	02/23/2011	7	6	13
M	UG/L	UST21-MW10-0211	1102113-06	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	GW01-021111	1102133-08	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW01-0211	1102113-05	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST-21-17-0211	1102133-07	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
M	UG/L	UST-21-MW-04-0211	1102133-03	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
MF	UG/L	UST21-MW25-0211	1102098-06	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW41-0211	1102098-02	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
MF	UG/L	UST21-MW55-0211	1102098-10	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW61-0211	1102098-08	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW65-0211	1102098-04	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
ALK	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
ALK	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
ALK	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
BOD	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
BOD	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
BOD	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
CL	MG/L	UST21-MW61-0211	1102098-07RE2	NM	02/09/2011	02/17/2011	02/17/2011	8	0	8
CL	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
CL	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
COD	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
COD	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
COD	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
NTA	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTA	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTA	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTI	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTI	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTI	MG/L	UST21-MW61-0211	1102098-07RE1	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SO4	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
SO4	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
SO4	MG/L	UST21-MW61-0211	1102098-07RE1	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
SUL	MG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
SUL	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
SUL	MG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
SUL	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
SUL	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
OV	UG/L	UST-21-MW-40-0211	1102133-04	NM	02/11/2011	02/17/2011	02/18/2011	6	1	7
OV	UG/L	UST-21-MW-38-0211	1102133-02	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
OV	UG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
OV	UG/L	UST21-MW54-0211	1102113-04	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6
OV	UG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
OV	UG/L	UST21-MW60-0211	1102113-03	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6
OV	UG/L	UST-21-RB-0211	1102133-05	NM	02/11/2011	02/17/2011	02/18/2011	6	1	7
OV	UG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
OV	UG/L	UST21-MW37-0211	1102113-12	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
OV	UG/L	UST21-MW63-0211	1102113-01	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	UST21-MW01-0211	1102113-05	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6
OV	UG/L	UST21-MW62-0211	1102113-08	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
OV	UG/L	UST21-MW64-0211	1102113-02	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6
OV	UG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
OV	UG/L	UST21-MW23-0211	1102113-07	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
OV	UG/L	UST21-MW16-0211	1102113-10	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
OV	UG/L	UST21-MW14-0211	1102113-11	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
OV	UG/L	UST-21-MW-04-0211	1102133-03	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
OV	UG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
OV	UG/L	UST-21-17-0211	1102133-07	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
OV	UG/L	UST-21-09-0211	1102133-06	NM	02/11/2011	02/17/2011	02/18/2011	6	1	7
OV	UG/L	TRIP BLANK 9283	1102113-13	NM	02/11/2011	02/16/2011	02/16/2011	5	0	5
OV	UG/L	Trip Blank 9282	1102098-11	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
OV	UG/L	TRIP BLANK # 9281	1102133-01	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
OV	UG/L	GW02-020911	1102113-09	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
OV	UG/L	GW01-021111	1102133-08	NM	02/11/2011	02/17/2011	02/18/2011	6	1	7
OV	UG/L	UST21-MW10-0211	1102113-06	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6
SIM	UG/L	GW02-020911	1102113-09	NM	02/09/2011	02/15/2011	02/22/2011	6	7	13

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	UG/L	GW01-021111	1102133-08	NM	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST-21-MW-40-0211	1102133-04	NM	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST-21-MW-40-0211	1102133-04	SUR	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/14/2011	02/21/2011	6	7	13
SIM	UG/L	UST21-MW41-0211	1102098-01	SUR	02/08/2011	02/14/2011	02/21/2011	6	7	13
SIM	UG/L	UST21-MW54-0211	1102113-04	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW54-0211	1102113-04	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/14/2011	02/22/2011	5	8	13
SIM	UG/L	UST21-MW55-0211	1102098-09	SUR	02/09/2011	02/14/2011	02/22/2011	5	8	13
SIM	UG/L	UST21-MW60-0211	1102113-03	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST-21-MW-38-0211	1102133-02	SUR	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/14/2011	02/22/2011	5	8	13
SIM	UG/L	UST21-MW60-0211	1102113-03	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW62-0211	1102113-08	NM	02/09/2011	02/15/2011	02/22/2011	6	7	13
SIM	UG/L	UST21-MW62-0211	1102113-08	SUR	02/09/2011	02/15/2011	02/22/2011	6	7	13
SIM	UG/L	UST21-MW63-0211	1102113-01	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW63-0211	1102113-01	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW64-0211	1102113-02	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	UG/L	UST21-MW64-0211	1102113-02	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/14/2011	02/21/2011	6	7	13
SIM	UG/L	UST21-MW65-0211	1102098-03	SUR	02/08/2011	02/14/2011	02/21/2011	6	7	13
SIM	UG/L	UST-21-RB-0211	1102133-05	NM	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST-21-RB-0211	1102133-05	SUR	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	GW01-021111	1102133-08	SUR	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST21-MW01-0211	1102113-05	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW61-0211	1102098-07	SUR	02/09/2011	02/14/2011	02/22/2011	5	8	13
SIM	UG/L	UST-21-MW-38-0211	1102133-02	NM	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	GW02-020911	1102113-09	SUR	02/09/2011	02/15/2011	02/22/2011	6	7	13
SIM	UG/L	UST-21-09-0211	1102133-06	NM	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST-21-09-0211	1102133-06	SUR	02/11/2011	02/16/2011	03/02/2011	5	14	19
SIM	UG/L	UST-21-17-0211	1102133-07	SUR	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	UST21-MW01-0211	1102113-05	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST-21-MW-04-0211	1102133-03	NM	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	UST-21-MW-04-0211	1102133-03	SUR	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	UST21-MW10-0211	1102113-06	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW10-0211	1102113-06	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SIM	UG/L	UST21-MW37-0211	1102113-12	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST-21-17-0211	1102133-07	NM	02/10/2011	02/16/2011	03/02/2011	6	14	20
SIM	UG/L	UST21-MW37-0211	1102113-12RE1	NM	02/10/2011	02/15/2011	02/24/2011	5	9	14
SIM	UG/L	UST21-MW14-0211	1102113-11	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW37-0211	1102113-12	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW25-0211	1102098-05	SUR	02/09/2011	02/14/2011	02/21/2011	5	7	12
SIM	UG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/14/2011	02/21/2011	5	7	12
SIM	UG/L	UST21-MW23-0211	1102113-07	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW23-0211	1102113-07	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW16-0211	1102113-10	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW16-0211	1102113-10	NM	02/10/2011	02/15/2011	02/22/2011	5	7	12
SIM	UG/L	UST21-MW14-0211	1102113-11	SUR	02/10/2011	02/15/2011	02/22/2011	5	7	12
TPH	MG/L	UST21-MW64-0211	1102113-02	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
TPH	MG/L	UST-21-MW-40-0211	1102133-04	NM	02/11/2011	02/16/2011	02/18/2011	5	2	7
TPH	MG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/14/2011	02/16/2011	6	2	8
TPH	MG/L	UST21-MW54-0211	1102113-04	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
TPH	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/14/2011	02/16/2011	5	2	7
TPH	MG/L	UST21-MW60-0211	1102113-03	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TPH	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/14/2011	02/16/2011	5	2	7
TPH	MG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/14/2011	02/16/2011	6	2	8
TPH	MG/L	UST21-MW63-0211	1102113-01	NM	02/10/2011	02/14/2011	02/16/2011	4	2	6
TPH	MG/L	UST-21-MW-38-0211	1102133-02	NM	02/10/2011	02/16/2011	02/18/2011	6	2	8
TPH	MG/L	UST-21-RB-0211	1102133-05	NM	02/11/2011	02/16/2011	02/18/2011	5	2	7
TPH	MG/L	UST21-MW62-0211	1102113-08	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
TPH	MG/L	UST21-MW37-0211	1102113-12	NM	02/10/2011	02/16/2011	02/18/2011	6	2	8
TPH	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/14/2011	02/16/2011	5	2	7
TPH	MG/L	UST21-MW23-0211	1102113-07	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
TPH	MG/L	UST21-MW16-0211	1102113-10	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
TPH	MG/L	UST21-MW14-0211	1102113-11	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
TPH	MG/L	UST21-MW10-0211	1102113-06	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
TPH	MG/L	UST-21-MW-04-0211	1102133-03	NM	02/10/2011	02/16/2011	02/18/2011	6	2	8
TPH	MG/L	UST21-MW01-0211	1102113-05	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
TPH	MG/L	UST-21-17-0211	1102133-07	NM	02/10/2011	02/16/2011	02/18/2011	6	2	8
TPH	MG/L	UST-21-09-0211	1102133-06	NM	02/11/2011	02/16/2011	02/18/2011	5	2	7
TPH	MG/L	GW01-021111	1102133-08	NM	02/11/2011	02/16/2011	02/18/2011	5	2	7
TPH	MG/L	GW02-020911	1102113-09	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8

ANALYSIS SEQUENCE SUMMARY

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B04204	Instrument:	MS-VOA3
Calibration:	1042001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	1B04204-TUN1	0209TU1.D	02/09/11 07:36
Cal Standard	1B04204-CAL1	0209CAL1.D	02/09/11 08:01
Cal Standard	1B04204-CAL2	0209CAL2.D	02/09/11 08:31
Cal Standard	1B04204-CAL3	0209CAL3.D	02/09/11 09:01
Cal Standard	1B04204-CAL4	0209CAL4.D	02/09/11 09:31
Cal Standard	1B04204-CAL5	0209CAL5.D	02/09/11 10:01
Cal Standard	1B04204-CAL6	0209CAL6.D	02/09/11 10:30
Cal Standard	1B04204-CAL7	0209CAL7.D	02/09/11 11:00
Cal Standard	1B04204-CAL8	0209CAL8.D	02/09/11 11:30
Cal Standard	1B04204-CAL9	0209CAL9.D	02/09/11 12:00
Initial Cal Check	1B04204-ICV1	0209ICV1.D	02/09/11 12:30

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Lab File ID:	0209TU1.D	Injection Date:	02/09/11
Instrument ID:	MS-VOA3	Injection Time:	07:36
Sequence:	1B04204	Lab Sample ID:	1B04204-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15 - 40% of 95	18.8	PASS
75	30 - 60% of 95	45.9	PASS
95	Base peak, 100% relative abundance	100	PASS
96	5 - 9% of 95	6.87	PASS
173	Less than 2% of 174	0	PASS
174	50 - 200% of 95	92.7	PASS
175	5 - 9% of 174	7.25	PASS
176	95 - 101% of 174	100	PASS
177	5 - 9% of 176	6.27	PASS

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Calibration: 1042001
Instrument: MS-VOA3
Matrix: Water
Calibration Date: 2/9/2011 8:01:52AM

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	6.734143E-02	4.131886	5.272857	0.1204455			15	
Acrolein NOT TC	2.782683E-02	29.73532	5.112667	7.753974E-02	0.9993957		0.995	
Acrylonitrile	8.996425E-02	3.703462	5.939	7.312255E-02			15	
Benzene	0.8877526	6.724026	11.99533	2.484545E-02			15	
Bromobenzene	0.658417	6.565181	17.135	2.232344E-02			15	
Bromochloromethane	0.1221319	8.014157	9.435667	4.957178E-02			15	
Tert-Amyl Methyl Ether	0.7866563	28.95886	12.35033	2.602954E-02	0.999865		0.995	
Bromodichloromethane	0.2617577	11.6682	13.01144	1.351069E-02			15	
Bromoform	0.2222152	38.32122	16.42833	2.210761E-02	0.9968521		SPCC (0.1)	
Bromomethane	0.134767	17.95102	4.303	7.115313E-02	0.9986444		0.995	
Bromofluorobenzene	0.9432064	4.141834	16.96967	9.33719E-03			15	
n-Butylbenzene	1.373729	10.74547	18.31367	9.119014E-03			15	
2-Butanone	0.1029735	11.26933	8.704167	0.2876742			15	
sec-Butylbenzene	1.78503	8.794839	17.86833	8.658072E-03			15	
tert-Butylbenzene	1.508831	11.07756	17.99367	4.489641E-03			15	
Carbon disulfide	0.6389933	6.986358	6.467667	9.799745E-02			15	
Carbon tetrachloride	0.2178602	18.32864	11.952	0.0271791	0.9966548		0.995	
Chlorobenzene	1.436424	10.55311	16.022	1.374265E-02			SPCC (0.3)	
Chloroethane	0.1259794	7.710992	4.464333	8.993927E-02			15	
Chloroform	0.4027485	5.782466	9.585667	3.428825E-02			CCC (20)	
2-Chloroethyl vinyl ether	0.1750304	6.523102	13.61756	4.415385E-02			15	
Chloromethane	0.2467998	4.887919	3.656	8.056094E-02			SPCC (0.1)	
1-Chlorohexane	1.167282	13.78944	15.985	1.315906E-02			15	
2-Chlorotoluene	1.557085	8.347254	17.35333	6.828885E-03			15	
4-Chlorotoluene	1.615142	9.996862	17.41433	1.315012E-02			15	
Cyclohexane	0.3419423	5.528723	11.84133	5.030834E-02			15	
Dibromochloromethane	0.3561249	23.7061	15.00533	1.372953E-02	0.9986537		0.995	
1,2-Dibromo-3-chloropropane	0.1049106	25.64299	18.65733	2.335638E-02	0.9982178		0.995	
1,2-Dibromoethane (EDB)	0.4787408	5.397178	15.23767	1.253351E-02			15	
Dibromomethane	0.155373	4.148513	12.83	2.483071E-02			15	
1,2-Dichlorobenzene	1.083088	7.010621	18.285	8.946731E-03			15	
1,3-Dichlorobenzene	1.123795	10.89399	17.944	1.601189E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Calibration:	1042001	Instrument:	MS-VOA3
Matrix:	Water	Calibration Date:	2/9/2011 8:01:52AM

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Dichlorobenzene	1.153886	8.916754	17.993	1.058319E-02			15	
Dichlorodifluoromethane	0.1736804	12.6814	3.449667	0.0911626			15	
1,1-Dichloroethane	0.4157175	5.684783	7.742	5.272704E-02			SPCC (0.1)	
1,2-Dichloroethane	0.3303627	5.286019	11.13189	3.819698E-02			15	
1,1-Dichloroethene	0.1766574	5.439883	5.899556	6.016249E-02			CCC (20)	
cis-1,2-Dichloroethene	0.2378304	5.961484	9.068667	7.826884E-02			15	
trans-1,2-Dichloroethene	0.2137549	5.616217	7.240333	7.187083E-02			15	
1,2-Dichloroethene (total)	0.2257926	5.66826	0	0			15	
1,2-Dichloropropane	0.2562795	4.808453	12.895	2.236072E-02			CCC (20)	
1,3-Dichloropropane	0.7476228	6.565771	14.762	1.645115E-02			15	
2,2-Dichloropropane	0.3047453	7.536233	9.817	6.765373E-02			15	
1,1-Dichloropropene	0.3077578	6.277739	11.69733	3.520369E-02			15	
cis-1,3-Dichloropropene	0.3687261	6.715723	13.85867	2.725416E-02			15	
trans-1,3-Dichloropropene	0.6343731	7.849772	14.353	2.839321E-02			15	
Diisopropyl Ether	0.8328406	6.498419	8.845667	4.787607E-02			15	
Ethylbenzene	2.356804	14.6307	16.18733	2.521386E-02			CCC (20)	
Ethyl tert-Butyl Ether	0.6967914	8.80672	9.904556	4.608595E-02			15	
Ethyl Methacrylate	0.5504545	13.59658	14.83656	5.480763E-02			15	
Hexachlorobutadiene	0.3096349	16.75068	20.199	1.725689E-02	0.9992167		0.995	
2-Hexanone	0.3159287	19.62314	14.95788	0.1536743	0.9985677		0.995	
Iodomethane	0.2812665	19.26399	5.943	0.102056	0.9996984		0.995	
Isopropylbenzene	1.931811	13.91947	16.94	1.393468E-02			15	
p-Isopropyltoluene	1.341973	7.51519	17.70033	1.045186E-02			15	
Methylene chloride	0.2430347	7.249268	6.115889	6.876087E-02			15	
Methyl Acetate	0.1690587	5.282551	6.153333	0.1019137			15	
Methylcyclohexane	0.2740638	7.278646	13.64433	2.119816E-02			15	
Naphthalene	1.637823	5.048973	20.15867	1.530895E-02			15	
Methyl Methacrylate	0.2153219	10.65267	13.299	6.891426E-02			15	
4-Methyl-2-pentanone	0.2213585	14.68593	14.01325	5.837834E-02			15	
Methyl t-Butyl Ether	0.5783993	5.415197	7.494	8.264436E-02			15	
n-Propylbenzene	2.265422	12.4461	17.27367	1.504421E-02			15	
Styrene	1.55917	8.296739	16.606	2.160731E-02			15	

INITIAL CALIBRATION DATA (Continued)

SW8260B

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Calibration: 1042001
Instrument: MS-VOA3
Matrix: Water
Calibration Date: 2/9/2011 8:01:52AM

Compound	Mean RF	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,1,2,2-Tetrachloroethane	0.5234688	3.543321	16.66756	6.055184E-03			SPCC (0.3)	
1,1,1,2-Tetrachloroethane	0.3922633	14.19435	15.965	1.611869E-02			15	
tert-Butyl alcohol NOT TC	1.806783E-02	13.17667	5.901556	8.978124E-02			15	
Tetrachloroethene	0.5803178	9.212702	15.42567	1.615863E-02			15	
Toluene	1.266817	9.153244	14.69622	1.173103E-02			CCC (20)	
1,2,3-Trichlorobenzene	0.6692996	9.814259	20.39467	2.147976E-02			15	
1,2,4-Trichlorobenzene	0.7430317	10.34887	19.89633	1.991692E-02			15	
1,1,2-Trichloroethane	0.3774056	6.376428	14.50167	8.979918E-03			15	
1,1,1-Trichloroethane	0.3181209	9.211913	11.33911	4.512402E-02			15	
Tetrahydrofuran	6.750291E-02	15.92611	10.47212	0.1226981	0.9994273		0.995	
Trichloroethene	0.2462319	6.256117	12.97667	2.763548E-02			15	
Trichlorofluoromethane	0.3227014	7.743543	5.156222	6.336786E-02			15	
1,2,3-Trichloropropane	0.1759719	4.977682	16.77467	1.222676E-02			15	
1,3,5-Trimethylbenzene	1.631362	9.359366	17.476	2.218609E-02			15	
1,2,4-Trimethylbenzene	1.6879	8.163573	17.77867	7.414698E-03			15	
1,1,2-Trichloro-1,2,2-trifluoroethane	0.1765655	7.73711	6.211	8.515101E-02			15	
Vinyl chloride	0.211655	4.326316	3.853889	5.652913E-02			CCC (20)	
m,p-Xylene	1.94475	11.82239	16.344	2.217847E-02			15	
o-Xylene	2.049863	12.57041	16.66062	1.171739E-02			15	
Vinyl acetate	0.238094	16.4196	8.031333	0.1635173	0.9997745		0.995	
Xylenes (total)	1.933	14.44837	0	0			15	
Dibromofluoromethane	0.2525351	1.358663	9.895667	6.587298E-02			15	
1,2-Dichloroethane-d4	5.392485E-02	1.948573	10.978	4.105036E-02			15	
Toluene-d8	2.159642	3.19565	14.62256	6.619058E-03			15	
tert-Amyl alcohol NOT TC	1.100569E-02	26.54099	10.834	5.509799E-02	0.9993611		0.995	
tert-Amyl ethyl ether	0.6344248	6.268733	13.53989	1.578894E-02			15	

INITIAL CALIBRATION CHECK

SW8260B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Instrument ID:	MS-VOA3	Calibration:	1042001
Lab File ID:	0209ICV1.D	Calibration Date:	02/09/11 08:01
Sequence:	1B04204	Injection Date:	02/09/11
Lab Sample ID:	1B04204-ICV1	Injection Time:	12:30

		CONC. (ug/L)		RESPONSE FACTOR			% DIFF / DRIFT	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN (#)	ICV	LIMIT (#)
Benzene	A	100.0	98.61	0.8877526	0.8754519		-1.4	20
1,2-Dichloroethane	A	100.0	101.2	0.3303627	0.3342831		1.2	20
cis-1,2-Dichloroethene	A	100.0	98.74	0.2378304	0.2348456		-1.3	20
trans-1,2-Dichloroethene	A	100.0	102.4	0.2137549	0.2188265		2.4	20
Isopropylbenzene	A	100.0	97.29	1.931811	1.879531		-2.7	20
Methylene chloride	A	100.0	97.27	0.2430347	0.2363881		-2.7	20
Tetrachloroethene	A	100.0	97.25	0.5803178	0.5643474		-2.8	20
1,1,1-Trichloroethane	A	100.0	106.3	0.3181209	0.3380254		6.3	20
Trichloroethene	A	100.0	100.0	0.2462319	0.246225		-0.003	20
Vinyl chloride	A	100.0	109.1	0.211655	0.2309513		9.1	20
Xylenes (total)	A	300.0	251.0	1.933	1.658029		-14.2	20
Bromofluorobenzene	A	30.00	29.31	0.9432064	0.9214516		-2.3	20
Dibromofluoromethane	A	30.00	29.50	0.2525351	0.248311		-1.7	20
1,2-Dichloroethane-d4	A	30.00	31.00	5.392485E-02	5.571539E-02		3.3	20
Toluene-d8	A	30.00	29.76	2.159642	2.142179		-0.8	20

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **G. WALKER** **DATE:** **March 30, 2011**

FROM: **MEGAN CARSON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION- IRON, LEAD, AND MANGANESE**
CTO JM01, NAS PENSACOLA
SDG CTOJM01_008

SAMPLES: **7/Waters/**

GW01-021111	UST-21-09-0211	UST-21-17-0211
UST-21-MW-04-0211	UST-21-MW-38-0211	UST-21-MW-40-0211
UST-21-RB-0211		

OVERVIEW

The sample set for CTO JM01 NAS Pensacola, SDG CTOJM01_008 consists of six (6) aqueous samples and one (1) rinsate blank. This SDG contained one field duplicate pair: GW01-021111/UST-21-MW-40-0211.

All samples were analyzed for lead, iron, and manganese. The samples were collected by TetraTech NUS from February 10th and 11th, 2011 and analyzed by Empirical Laboratories, LLC. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using EPA method 6010B analytical and reporting protocol. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibrations
* • Laboratory Method Blank Analyses
* • Interferent Standard Results
* • Laboratory Control Sample Results
* • Matrix Spike/ Matrix Spike Duplicate Results
* • Field Duplicate Precision
* • Serial Dilution Results
* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B. The text of this report is formatted to address only gross non-compliances resulting in the rejection of data and elimination of false positives.

Metals:

All sample results were within quality control limits.

Additional Comments:

Positive results between less than the reporting limit but greater than the method detection were qualified as estimated (J).

To: G Walker
SDG: CTOJM01_008
Date: 3/30/2011

EXECUTIVE SUMMARY

Laboratory Performance Issues: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Inorganic Data Validation (10/2004) and the Department of Defense (DoD) Quality Systems Manual (QSM) (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech NUS
Megan Carson
Chemist/Data Validator

TetraTech NUS

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	GFAA PDS - GFAA MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (e.g. base-line drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	% Difference between columns/detectors >25% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02200	NSAMPLE	GW01-021111			UST-21-09-0211			UST-21-17-0211			UST-21-MW-04-0211		
SDG: CTOJM01_008	LAB_ID	1102133-08			1102133-06			1102133-07			1102133-03		
FRACTION: M	SAMP_DATE	2/11/2011			2/11/2011			2/10/2011			2/10/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
IRON		559			1750			877			279		
LEAD		24.7			1.5	U		2	U		2.7	J	P
MANGANESE		3	U		68.6			259			58		

PROJ_NO: 02200	NSAMPLE	UST-21-MW-38-0211			UST-21-MW-40-0211			UST-21-RB-0211		
SDG: CTOJM01_008	LAB_ID	1102133-02			1102133-04			1102133-05		
FRACTION: M	SAMP_DATE	2/10/2011			2/11/2011			2/11/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
IRON		161			485			30	U	
LEAD		1.5	U		24.7			1.5	U	
MANGANESE		15.3			3	U		3	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

ANALYSIS DATA SHEET

GW01-021111

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/11/11 07:36
% Solids: 0.00

SDG: CTOJM01_008
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102133-08
Received: 02/12/11 09:00

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	559	30.0	100	1		SW6010C	1B24001	02/28/11 13:56
7439-92-1	Lead	24.7	1.50	3.00	1		SW6010C	1B24001	02/28/11 13:56
7439-96-5	Manganese		3.00	15.0	1	U	SW6010C	1B24001	02/28/11 13:56

ANALYSIS DATA SHEET

UST-21-09-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/11/11 06:20
% Solids: 0.00

SDG: CTOJM01_008
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102133-06
Received: 02/12/11 09:00

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	1750	30.0	100	1		SW6010C	1B24001	02/28/11 13:47
7439-92-1	Lead		1.50	3.00	1	U	SW6010C	1B24001	02/28/11 13:47
7439-96-5	Manganese	68.6	3.00	15.0	1		SW6010C	1B24001	02/28/11 13:47

ANALYSIS DATA SHEET

UST-21-17-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/10/11 20:18
% Solids: 0.00

SDG: CTOJM01_008
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102133-07
Received: 02/12/11 09:00

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	877	30.0	100	1		SW6010C	1B24001	02/28/11 13:51
7439-92-1	Lead		2.00	3.00	1	M U	SW6010C	1B24001	02/28/11 13:51
7439-96-5	Manganese	259	3.00	15.0	1		SW6010C	1B24001	02/28/11 13:51

ANALYSIS DATA SHEET

UST-21-MW-04-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/10/11 19:25
% Solids: 0.00

SDG: CTOJM01_008
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102133-03
Received: 02/12/11 09:00

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	279	30.0	100	1		SW6010C	1B24001	02/28/11 13:33
7439-92-1	Lead	2.70	1.50	3.00	1	1	SW6010C	1B24001	02/28/11 13:33
7439-96-5	Manganese	58.0	3.00	15.0	1		SW6010C	1B24001	02/28/11 13:33

ANALYSIS DATA SHEET

UST-21-MW-38-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/10/11 21:05
% Solids: 0.00

SDG: CTOJM01_008
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102133-02
Received: 02/12/11 09:00

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	161	30.0	100	1		SW6010C	1B24001	02/28/11 15:37
7439-92-1	Lead		1.50	3.00	1	U	SW6010C	1B24001	02/28/11 15:37
7439-96-5	Manganese	15.3	3.00	15.0	1		SW6010C	1B24001	02/28/11 15:37

ANALYSIS DATA SHEET

UST-21-MW-40-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Ground Water
Sampled: 02/11/11 07:36
% Solids: 0.00

SDG: CTOJM01_008
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102133-04
Received: 02/12/11 09:00

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	485	30.0	100	1		SW6010C	1B24001	02/28/11 13:37
7439-92-1	Lead	24.7	1.50	3.00	1		SW6010C	1B24001	02/28/11 13:37
7439-96-5	Manganese		3.00	15.0	1	U	SW6010C	1B24001	02/28/11 13:37

ANALYSIS DATA SHEET

UST-21-RB-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 02/11/11 16:24
% Solids: 0.00

SDG: CTOJM01_008
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102133-05
Received: 02/12/11 09:00

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron		30.0	100	1	U	SW6010C	1B24001	02/28/11 13:42
7439-92-1	Lead		1.50	3.00	1	U	SW6010C	1B24001	02/28/11 13:42
7439-96-5	Manganese		3.00	15.0	1	U	SW6010C	1B24001	02/28/11 13:42

APPENDIX C

SUPPORT DOCUMENTATION

Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
The continuing calibration verification 1B05006-CCV1 exceeded criteria with a positive bias for 1,1,1-Trichloroethane.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270C:
The batch spikes associated to batch 1B15023 exceeded relative percent difference criteria for Naphthalene.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

FLPRO:
The surrogate o-Terphenyl exceeded criteria with a negative bias in sample 1102133-02, -04, and -08. Note – recoveries were within in-house recovery limits of 30%-140%.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW6010C:
The sample 1102133-07 is qualified with an M for Lead to indicate that the MDL was raised due to interference.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

TETRA TECH NUS, INC. CHAIN OF CUSTODY | NUMBER ~~2734~~ JM01-05 | PAGE 1 OF 1

PROJECT NO:	FACILITY:	PROJECT MANAGER	PHONE NUMBER	LABORATORY NAME AND CONTACT:
112G02200	UST21	G. Walker	850-385-9899	Empirical
SAMPLERS (SIGNATURE)		FIELD OPERATIONS LEADER	PHONE NUMBER	ADDRESS
		Y. Martinez	same	621 Mainstream Dr STE 270
		CARRIER/WAYBILL NUMBER		CITY, STATE
				Nashville TN 37228

STANDARD TAT ~~☒~~
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

DATE YEAR 2011	TIME	SAMPLE ID	LOCATION ID	TOP DEPTH (FT)	BOTTOM DEPTH (FT)	MATRIX (GW, SO, SW, SD, QC, ETC.)	COLLECTION METHOD GRAB (G) COMP (C)	No. OF CONTAINERS	CONTAINER TYPE PLASTIC (P) or GLASS (G)	PRESERVATIVE USED	TYPE OF ANALYSIS: VOC 8260	PAH 8270	6010B, Pb, Fe, Mn only	FL-PRO					COMMENTS
									G	HCl	G	G	P	G					
										ice			HNO3	HCl					
—	—	TripBlank#9281	—	—	—	QC	G	2	✓										1102139-01
2/10	2105	UST-21-MW-38-0211	—	—	—	GW	G	8	✓	✓	✓	✓							-02
2/10	1925	UST-21-MW-04-0211	—	—	—	GW	G	8	✓	✓	✓	✓							-03
2/11	0736	UST-21-MW-40-0211	—	—	—	GW	G	7	✓	✓	✓	✓							-04
2/11	1624	UST-21-RB-0211	—	—	—	QC	G	6	✓	✓	✓	✓							-05
2/10	0620	UST-21-09-0211	—	—	—	GW	G	8	✓	✓	✓	✓							-06
2/10	2018	UST-21-17-0211	—	—	—	GW	G	8	✓	✓	✓	✓							-07
2/11	0736	GW01-021111	—	—	—	GW	G	7	✓	✓	✓	✓							*This is the correct time -08
		Temp Blanks						3											
			# 3 Coolers																

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	2/11/11	1710	1. RECEIVED BY		
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

3.1°C 2-12-11 09:00

COMMENTS

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) YELLOW (FIELD COPY) PINK (FILE COPY)

4/02R
FORM NO. TtNUS-001

CTOJM01_008

9

UST-21-09-0211

Sample Name: 1102133-06 Acquired: 2/28/2011 13:47:03 Type: Unk
Method: DuoEnviroMethodNEW(v1990) Mode: CONC Corr. Factor: 1.000000
User: rburr Custom ID1: Custom ID2: Custom ID3:
Comment: TETRA

reported as 1750ug/L

Elem	Ag3280	Al3961	As1890	B_2496	Ba2335	Be3130	Bi2230	Ca3179
Units	ppb	ppb	ppb	ppb	ppb	ppb	Cts/S	ppb
Avg	**-.02289**	**91.690**	**.43978**	**78.058**	**89.330**	**-.00369**	z *****	**56.65**
Stddev	.29487	2.703	1.4692	.233	.174	.00875	-----	.19
%RSD	1288.0	2.9484	334.08	.29862	.19494	237.17	-----	.3416
#1	-.28698	94.804	1.9729	77.964	89.225	.00016	z 151.82	56.460
#2	-.07697	89.940	.30233	77.887	89.234	.00248	z 151.06	56.84
#3	.29527	90.327	-.95588	78.323	89.531	-.01370	z 151.71	56.64

Elem	Cd2144	Cd2288	Co2286	Cr2677	Cu2199	Cu3247	Fe2611	K_7664
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppm
Avg	**.03009**	**1.3645**	**.09854**	**.59134**	**2.380**	**3.4933**	**1751.0**	**7.851**
Stddev	.06747	.0294	.17827	.08004	1.140	.1020	5.8	.030
%RSD	224.21	2.1513	180.92	13.535	47.92	2.9198	.32974	.3840
#1	-.01856	1.3755	.12488	.57571	1.443	3.3777	1750.3	7.842
#2	.00172	1.3867	.26217	.52026	2.046	3.5707	1757.1	7.826
#3	.10711	1.3312	-.09145	.67803	3.649	3.5316	1745.6	7.884

Elem	Mg2790	Mn2576	Mo2020	Na5895	Ni2316	Pb2203	Sb2068	Se196
Units	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppb
Avg	**10.548**	**68.572**	**6.0054**	**7.5260**	**.44603**	**.54257**	**.85035**	**-.5746**
Stddev	.030	.307	.1598	.0416	.23889	.83992	.65179	.8677
%RSD	.28725	.44781	2.6618	.55233	53.560	154.80	76.650	150.9
#1	10.513	68.880	5.9674	7.5288	.28714	-.04361	.46017	-.0349
#2	10.563	68.570	5.8680	7.4831	.33020	1.5048	1.6028	-.1134
#3	10.567	68.266	6.1808	7.5661	.72076	.16651	.48808	-1.575

Elem	Sn1899	Sr4215	Ti3349	Tl1908	V_2924	Zn2062
Units	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**-.69303**	**407.8**	**1.4951**	**-.13128**	**.34102**	**4.4390**
Stddev	.20929	1.0	.1009	1.2258	.05404	.0510
%RSD	30.199	.2531	6.7466	933.69	15.846	1.1489
#1	-.51704	407.6	1.5694	.96826	.39735	4.4755
#2	-.92445	407.0	1.3803	-1.4529	.28962	4.3807
#3	-.63759	409.0	1.5356	.09079	.33608	4.4608

CP 2-15-11

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 41023 #3 Number of Coolers: 1 of 4

Client: Tetra Tech NUS, Inc Project: USTAR

Date/Time Received: 2-12-11/09:00 Date cooler(s) opened: 2-12-11 CP 2-12-11

Opened By (print): Chris Dang (signature):

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 9834

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-11-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 3.4 °C Correction Factor: -0.3 °C Final Value: 3.1 °C

Dates samples were logged-in: 2-14-11

9. Initial this form to acknowledge login of sample(s): (Name): (Initial): CP

10. Were all bottle lids intact and sealed tightly?	(Yes)	No	N/A
11. Did all bottles arrive unbroken?	(Yes)	No	N/A
12. Was all required bottle label information complete?	Yes	(No)	N/A
13. Did all bottle labels agree with custody papers?	(Yes)	No	N/A
14. Were correct containers used for the analyses indicated?	(Yes)	No	N/A
15. Were preservative levels correct in all applicable sample containers?	(Yes)	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	(N/A)
17. Was sufficient amount of sample sent for the analyses required?	(Yes)	No	N/A
18. Was headspace present in any included VOA vials?	Yes	(No)	N/A

1 FLOPRO missing Label

If Non-Conformance issues were present, list by sample ID: _____

ph 12 for all FLPRO's & Metals

CD 2-15-11

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1102153 A3 Number of Coolers: 2 of 4

Client: TetraTech NUS INC Project: UST21

Date/Time Received: 2.12.11 09:00 Date cooler(s) opened: 2.12.11 2.12.11

Opened By (print): Russ Townsend (signature): Russ Townsend

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 2836

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2.11.11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.9 °C Correction Factor: -0.3 °C Final Value: 2.6 °C

Dates samples were logged-in:

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly?	(Yes)	No	N/A
11. Did all bottles arrive unbroken?	(Yes)	No	N/A
12. Was all required bottle label information complete?	(Yes)	No	N/A
13. Did all bottle labels agree with custody papers?	(Yes)	No	N/A
14. Were correct containers used for the analyses indicated?	(Yes)	No	N/A
15. Were preservative levels correct in all applicable sample containers?	(Yes)	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	(N/A)
17. Was sufficient amount of sample sent for the analyses required?	(Yes)	No	N/A
18. Was headspace present in any included VOA vials?	Yes	(No)	N/A

If Non-Conformance issues were present, list by sample ID: _____

SEE 1 OF 4

LP 2-15-11

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1102383 Number of Coolers: 3 of 4

Client: Tetra Tech NUS Inc Project: UST 21

Date/Time Received: 2-12-11 09:00 Date cooler(s) opened: 2.12.11

Opened By (print): Russ Townsend (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 9834

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-11-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.6 °C Correction Factor: -0.3 °C Final Value: 2.3 °C

Dates samples were logged-in:

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly?	(Yes)	No	N/A
11. Did all bottles arrive unbroken?	(Yes)	No	N/A
12. Was all required bottle label information complete?	(Yes)	No	N/A
13. Did all bottle labels agree with custody papers?	(Yes)	No	N/A
14. Were correct containers used for the analyses indicated?	(Yes)	No	N/A
15. Were preservative levels correct in all applicable sample containers?	(Yes)	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	(N/A)
17. Was sufficient amount of sample sent for the analyses required?	(Yes)	No	N/A
18. Was headspace present in any included VOA vials?	Yes	(No)	N/A

If Non-Conformance issues were present, list by sample ID: _____

Sec 1 of 4

CP 2-15-11

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1102133 Number of Coolers: 4 of 4

Client: Tetra Tech NUS Inc. Project: UST 21

Date/Time Received: 2.12.11 09:00 Date cooler(s) opened: 2.12.11

Opened By (print): Russ Townsend (signature): Russ Townsend

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 9960

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-11-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival? ..... (Yes) No N/A

4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... (Yes) No N/A

5. Were custody papers filled out properly (ink, signed, etc.)? ..... (Yes) No N/A

6. Did you sign custody papers in the appropriate place for acceptance? ..... (Yes) No N/A

7. Was project identifiable from custody papers? ..... (Yes) No N/A

8. If required, was enough ice present in the cooler(s)? ..... (Yes) No N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.8 °C Correction Factor: -0.3 °C Final Value: 2.5 °C

Dates samples were logged-in:

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly? ..... (Yes) No N/A

11. Did all bottles arrive unbroken? ..... (Yes) No N/A

12. Was all required bottle label information complete? ..... (Yes) No N/A

13. Did all bottle labels agree with custody papers? ..... (Yes) No N/A

14. Were correct containers used for the analyses indicated? ..... (Yes) No N/A

15. Were preservative levels correct in all applicable sample containers? ..... (Yes) No N/A

16. Was residual chlorine present in any applicable sample containers? ..... Yes No (N/A)

17. Was sufficient amount of sample sent for the analyses required? ..... (Yes) No N/A

18. Was headspace present in any included VOA vials? ..... Yes (No) N/A

If Non-Conformance issues were present, list by sample ID: _____

SCC 1 of 4

SDG CTOJM01_006

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST21-MW23-0211	1102113-07	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST21-MW37-0211	1102113-12	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST-21-MW-38-0211	1102133-02	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
M	UG/L	UST-21-MW-40-0211	1102133-04	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
M	UG/L	UST21-MW54-0211	1102113-04	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW16-0211	1102113-10	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW60-0211	1102113-03	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW63-0211	1102113-01RE1	NM	02/10/2011	02/17/2011	02/23/2011	7	6	13
M	UG/L	UST21-MW61-0211	1102098-07RE1	NM	02/09/2011	02/17/2011	02/23/2011	8	6	14
M	UG/L	UST21-MW62-0211	1102113-08	NM	02/09/2011	02/22/2011	02/23/2011	13	1	14
M	UG/L	UST21-MW63-0211	1102113-01	NM	02/10/2011	02/17/2011	02/22/2011	7	5	12
M	UG/L	UST21-MW64-0211	1102113-02	NM	02/10/2011	02/17/2011	02/22/2011	7	5	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
M	UG/L	UST21-MW65-0211	1102098-03RE1	NM	02/08/2011	02/17/2011	02/23/2011	9	6	15
M	UG/L	UST-21-RB-0211	1102133-05	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST-21-09-0211	1102133-06	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	GW02-020911	1102113-09	NM	02/09/2011	02/22/2011	02/23/2011	13	1	14
M	UG/L	UST21-MW14-0211	1102113-11	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW64-0211	1102113-02RE1	NM	02/10/2011	02/17/2011	02/23/2011	7	6	13
M	UG/L	UST21-MW10-0211	1102113-06	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	GW01-021111	1102133-08	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW01-0211	1102113-05	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST-21-17-0211	1102133-07	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
M	UG/L	UST-21-MW-04-0211	1102133-03	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
MF	UG/L	UST21-MW25-0211	1102098-06	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW41-0211	1102098-02	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
MF	UG/L	UST21-MW55-0211	1102098-10	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW61-0211	1102098-08	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW65-0211	1102098-04	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC **SDG:** CTOJM01_008

Client: Tetra Tech NUS, Inc. (T010) **Project:** CTO JM01 NAS Pensacola 2010

Matrix: Water **Instrument:** ME-ICP

Analyte	MDL	MRL	Units	Method
Iron	30.0	100	ug/L	SW6010C
Lead	1.50	3.00	ug/L	SW6010C
Manganese	3.00	15.0	ug/L	SW6010C

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_008

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	Ag
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0002980	0.0000000	0.0000080	0.0003250	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000140	0.0287450	0.0000000

Comments:

FORM XA-IN

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_008

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		As	B	Ba	Be	Cd
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_008

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Co	Cr	Cu	K	Mn
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0000000	0.0000000	0.0022600	0.0000000	0.0000990
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_008

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for: Mo	Na	Ni	Pb	Sb
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	-0.0026440	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_008

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Se	Sn	Ti	Tl	V
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000360
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000300

Comments:

FORM XA-IN

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_008

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for: Zn				
Iron	261.1	0.0000000				
Lead	220.3	0.0000000				
Manganese	257.6	0.0000000				

Comments:

FORM XA-IN

ICP-AES AND ICP-MS LINEAR RANGES (QUARTERLY)

Lab Name: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010) SDG: CTOJM01_008

Project: CTO JM01 NAS Pensacola 2010

ICP Instrument ID: ME-ICP Date: 09/11/2009

Analyte	Integ. Time (Sec.)	Concentration ug/L	M
Iron	15	500000	P
Lead	15	10000	P
Manganese	15	10000	P

PREPARATION BATCH SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_008

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Batch: 1B24001 Batch Matrix: Water Preparation: MET_3005A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST-21-MW-38-0211	1102133-02	02/24/11 07:51	50.00	50.00
UST-21-MW-04-0211	1102133-03	02/24/11 07:51	50.00	50.00
UST-21-MW-40-0211	1102133-04	02/24/11 07:51	50.00	50.00
UST-21-RB-0211	1102133-05	02/24/11 07:51	50.00	50.00
UST-21-09-0211	1102133-06	02/24/11 07:51	50.00	50.00
UST-21-17-0211	1102133-07	02/24/11 07:51	50.00	50.00
GW01-021111	1102133-08	02/24/11 07:51	50.00	50.00
Blank	1B24001-BLK1	02/24/11 07:51	50.00	50.00
LCS	1B24001-BS1	02/24/11 07:51	50.00	50.00

LCS / LCS DUPLICATE RECOVERY

SW6010C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_008
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Matrix:	Water		
Batch:	1B24001	Laboratory ID:	1B24001-BS1
Preparation:	MET_3005A	Initial/Final:	50 mL / 50 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Iron	1000	954.4	95.4	80 - 120
Lead	250.0	256.4	103	80 - 120
Manganese	500.0	507.1	101	80 - 120

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_008
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1C06007
Instrument: ME-ICP
Calibration: 1060001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1C06007-CAL1	022811A-001	02/28/11 09:43
Cal Standard	1C06007-CAL2	022811A-002	02/28/11 09:48
Cal Standard	1C06007-CAL4	022811A-003	02/28/11 09:57
Cal Standard	1C06007-CAL5	022811A-004	02/28/11 10:02
Cal Standard	1C06007-CAL6	022811A-005	02/28/11 10:07
Cal Standard	1C06007-CAL3	022811A-008	02/28/11 10:25
Initial Cal Check	1C06007-ICV1	022811B-001	02/28/11 10:57
Initial Cal Blank	1C06007-ICB1	022811B-002	02/28/11 11:05
Instrument RL Check	1C06007-CRL1	022811B-003	02/28/11 11:09
Interference Check A	1C06007-IFA1	022811B-007	02/28/11 11:31
Interference Check B	1C06007-IFB1	022811B-008	02/28/11 11:36
Calibration Check	1C06007-CCV1	022811B-010	02/28/11 11:49
Calibration Blank	1C06007-CCB1	022811B-011	02/28/11 11:56
Calibration Check	1C06007-CCV2	022811B-026	02/28/11 13:09
Calibration Blank	1C06007-CCB2	022811B-027	02/28/11 13:17
Blank	1B24001-BLK1	022811B-028	02/28/11 13:22
LCS	1B24001-BS1	022811B-029	02/28/11 13:26
UST-21-MW-04-0211	1102133-03	022811B-030	02/28/11 13:33
UST-21-MW-40-0211	1102133-04	022811B-031	02/28/11 13:37
UST-21-RB-0211	1102133-05	022811B-032	02/28/11 13:42
UST-21-09-0211	1102133-06	022811B-033	02/28/11 13:47
UST-21-17-0211	1102133-07	022811B-034	02/28/11 13:51
GW01-021111	1102133-08	022811B-035	02/28/11 13:56
Calibration Check	1C06007-CCV3	022811B-044	02/28/11 14:41
Calibration Blank	1C06007-CCB3	022811B-045	02/28/11 14:49
UST-21-MW-38-0211	1102133-02	022811C-010	02/28/11 15:37
Calibration Check	1C06007-CCV4	022811C-011	02/28/11 15:43
Calibration Blank	1C06007-CCB4	022811C-012	02/28/11 15:50

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM01_008
Project: CTO JM01 NAS Pensacola_2010
Calibration: 1060001
Sequence: 1C06007

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1C06007-ICV1	Iron	10000	10030	100	ug/L	+/- 10.00%
	Lead	1000	994.9	99.5	ug/L	+/- 10.00%
	Manganese	1000	1034	103	ug/L	+/- 10.00%
1C06007-CCV1	Iron	10000	9820	98.2	ug/L	+/- 10.00%
	Lead	1000	1017	102	ug/L	+/- 10.00%
	Manganese	1000	1026	103	ug/L	+/- 10.00%
1C06007-CCV2	Iron	10000	9593	95.9	ug/L	+/- 10.00%
	Lead	1000	1031	103	ug/L	+/- 10.00%
	Manganese	1000	1018	102	ug/L	+/- 10.00%
1C06007-CCV3	Iron	10000	9724	97.2	ug/L	+/- 10.00%
	Lead	1000	999.8	100	ug/L	+/- 10.00%
	Manganese	1000	997.1	99.7	ug/L	+/- 10.00%
1C06007-CCV4	Iron	10000	9765	97.6	ug/L	+/- 10.00%
	Lead	1000	978.2	97.8	ug/L	+/- 10.00%
	Manganese	1000	986.3	98.6	ug/L	+/- 10.00%

CRDL STANDARD

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_008

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola 2010

Instrument ID: ME-ICP

Calibration: 1060001

Sequence: 1C06007

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
1C06007-CRL1	Iron	60.00	61.91	103	ug/L	80 - 120
	Lead	3.000	2.997	99.9	ug/L	80 - 120
	Manganese	6.000	6.431	107	ug/L	80 - 120

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_008
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1C06007
Calibration: 1060001

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1C06007-ICB1	Iron	0.9209	30.0	100	ug/L	U	SW6010C
	Lead	-0.1670	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.06929	3.00	15.0	ug/L	U	SW6010C
1C06007-CCB1	Iron	21.4	30.0	100	ug/L	U	SW6010C
	Lead	-0.381	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.154	3.00	15.0	ug/L	U	SW6010C
1C06007-CCB2	Iron	2.65	30.0	100	ug/L	U	SW6010C
	Lead	0.253	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.0684	3.00	15.0	ug/L	U	SW6010C
1B24001-BLK1	Iron	0.606	30.0	100	ug/L	U	SW6010C
	Lead	-0.121	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.0439	3.00	15.0	ug/L	U	SW6010C
1C06007-CCB3	Iron	0.292	30.0	100	ug/L	U	SW6010C
	Lead	0.165	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.172	3.00	15.0	ug/L	U	SW6010C
1C06007-CCB4	Iron	0.786	30.0	100	ug/L	U	SW6010C
	Lead	-0.293	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.137	3.00	15.0	ug/L	U	SW6010C

ICP INTERFERENCE CHECK SAMPLE

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_008

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Instrument ID: ME-ICP

Calibration: 1060001

Sequence: 1C06007

Lab Sample ID	Analyte	True	Found	%R	Units
1C06007-IFA1	Iron	200000	193,550.00	96.8	ug/L
	Lead		11.17		ug/L
	Manganese		4.22		ug/L
1C06007-IFB1	Iron	200000	181,000.00	90.5	ug/L
	Lead	50.00	57.68	115	ug/L
	Manganese	500.0	444.22	88.8	ug/L

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **G. WALKER** **DATE:** **March 30, 2011**

FROM: **MEGAN CARSON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION- TOTAL LEAD, TOTAL AND DISSOLVED IRON AND MANGANESE, ALKALINITY, SULFIDE, BOD, COD, CHLORIDE, NITRATE-N, NITRITE-N, AND SULFATE.**
CTO JM01, NAS PENSACOLA
SDG CTOJM01_006

SAMPLES: **5/Waters/**

UST21-MW25-0211	UST21-MW41-0211	UST21-MW55-0211
UST21-MW61-0211	UST21-MW65-0211	

OVERVIEW

The sample set for CTO JM01 NAS Pensacola, SDG CTOJM01_006 consists of five (5) aqueous samples. This SDG contained no field duplicate pairs.

All samples were analyzed for sulfide, total lead, total and dissolved iron and manganese. Samples UST21-MW25-0211, UST21-MW55-0211, and UST21-MW61-0211 were also analyzed for alkalinity, sulfide, biochemical oxygen demand (BOD), chemical oxygen demand (COD), chloride, nitrate-N, nitrite-N, and sulfate. The samples were collected by TetraTech NUS from February 8th, and 9th, 2011 and analyzed by Empirical Laboratories, LLC. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using method analytical and reporting protocol. Metals analyses were conducted using EPA SW846 method 6010B. Anion analyses were conducted using EPA SW846 method 9056. COD analyses were conducted using EPA method 410.4. Alkalinity analyses were conducted using SM 2320B. BOD analyses were conducted using method SM 5210B. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • Initial and Continuing Calibrations
* • Laboratory Method Blank Analyses
* • Interferent Standard Results
* • Laboratory Control Sample Results
* • Matrix Spike/ Matrix Spike Duplicate Results
* • Serial Dilution Results
* • Detection Limits

The symbol (*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B. The text of this report is formatted to address only gross non-compliances resulting in the rejection of data and elimination of false positives.

Metals:

All sample results were within quality control limits.

To: G Walker
SDG: CTOJM01_006
Date: 3/30/2011

Additional Comments:

The following contaminant was detected in a calibration blank at the following maximum concentration:

Analyte	Maximum Concentration	Action Level
Chloride	0.207 mg/L	1.03 mg/L

An action level of 5X the maximum concentration has been used to evaluate the sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No validation action was taken as all samples results were greater than the blank action level.

Positive results between less than the reporting limit but greater than the method detection were qualified as estimated (J). Estimated (J) qualification codes were listed on the Form 1s but were not included in the EDD for the miscellaneous parameters. The data validator added them to the data base.

Samples UST21-MW61-0211 and UST21-MW65-0211 were analyzed at a 2X dilution for lead. The non-detected sample results were reported at an elevated MDL.

Sample UST21-MW61-0211 was analyzed at dilutions for the following analytes: COD (10X), chloride (100X), Nirtate-N (20X), and sulfate (20X).

EXECUTIVE SUMMARY

Laboratory Performance Issues: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Inorganic Data Validation (10/2004) and the Department of Defense (DoD) Quality Systems Manual (QSM) (April, 2009). The text of this report has been formulated to address only those problem areas affecting data quality.

Megan Carson
Tetra Tech NUS
Megan Carson
Chemist/Data Validator

TetraTech NUS

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	GFAA PDS - GFAA MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (e.g. base-line drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can be any number of issues; e.g. poor chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	% Difference between columns/detectors >25% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 02200	NSAMPLE	UST21-MW25-0211			UST21-MW41-0211			UST21-MW55-0211			UST21-MW61-0211		
SDG: CTOJM01_006	LAB_ID	1102098-05			1102098-01			1102098-09			1102098-07		
FRACTION: M	SAMP_DATE	2/9/2011			2/8/2011			2/9/2011			2/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
IRON		269			238			256			41.4	J	P
LEAD		1.5	U		1.5	U		1.5	U		3	U	
MANGANESE		132			3.42	J	P	87.7			15.9		

PROJ_NO: 02200	NSAMPLE	UST21-MW65-0211		
SDG: CTOJM01_006	LAB_ID	1102098-03		
FRACTION: M	SAMP_DATE	2/8/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
IRON		30	U	
LEAD		3	U	
MANGANESE		3340		

PROJ_NO: 02200	NSAMPLE	UST21-MW25-0211			UST21-MW41-0211			UST21-MW55-0211			UST21-MW61-0211		
SDG: CTOJM01_006	LAB_ID	1102098-06			1102098-02			1102098-10			1102098-08		
FRACTION: MF	SAMP_DATE	2/9/2011			2/8/2011			2/9/2011			2/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
IRON		30	U		30	U		30	U		30	U	
MANGANESE		133			3	U		85.6			16.3		

PROJ_NO: 02200	NSAMPLE	UST21-MW65-0211		
SDG: CTOJM01_006	LAB_ID	1102098-04		
FRACTION: MF	SAMP_DATE	2/8/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
IRON		30	U	
MANGANESE		3230		

PROJ_NO: 02200	NSAMPLE	UST21-MW25-0211			UST21-MW41-0211			UST21-MW55-0211			UST21-MW61-0211		
SDG: CTOJM01_006	LAB_ID	1102098-05			1102098-01			1102098-09			1102098-07		
FRACTION: MISC	SAMP_DATE	2/9/2011			2/8/2011			2/9/2011			2/9/2011		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	MG/L			MG/L			MG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY		333						186			764		
BIOCHEMICAL OXYGEN DEMAND		3.72						5.21			272		
CHEMICAL OXYGEN DEMAND		38.2	J	P				25.6	J	P	5580		
CHLORIDE		47.3						5.46			14600		
NITRATE-N		0.033	U					0.033	U		0.033	U	
NITRITE-N		0.033	U					0.033	U		0.66	U	
SULFATE		15.3						0.655	J	P	1210		
SULFIDE		3.2	J	P	0.741	U		1.2	J	P	122		

PROJ_NO: 02200	NSAMPLE	UST21-MW65-0211		
SDG: CTOJM01_006	LAB_ID	1102098-03		
FRACTION: MISC	SAMP_DATE	2/8/2011		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	MG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ALKALINITY				
BIOCHEMICAL OXYGEN DEMAND				
CHEMICAL OXYGEN DEMAND				
CHLORIDE				
NITRATE-N				
NITRITE-N				
SULFATE				
SULFIDE		84.7		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

ANALYSIS DATA SHEET

UST21-MW25-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 02/09/11 07:10
% Solids: 0.00

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102098-05
Received: 02/10/11 11:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	269	30.0	100	1		SW6010C	1B17003	02/22/11 13:00
7439-92-1	Lead		1.50	3.00	1	U	SW6010C	1B17003	02/22/11 13:00
7439-96-5	Manganese	132	3.00	15.0	1		SW6010C	1B17003	02/22/11 13:00

ANALYSIS DATA SHEET

UST21-MW41-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 02/08/11 11:33
% Solids: 0.00

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102098-01
Received: 02/10/11 11:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	238	30.0	100	1		SW6010C	1B17003	02/22/11 12:03
7439-92-1	Lead		1.50	3.00	1	U	SW6010C	1B17003	02/22/11 12:03
7439-96-5	Manganese	3.42	3.00	15.0	1	I	SW6010C	1B17003	02/22/11 12:03

ANALYSIS DATA SHEET

UST21-MW55-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 02/09/11 12:45
% Solids: 0.00

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102098-09
Received: 02/10/11 11:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	256	30.0	100	1		SW6010C	1B17003	02/22/11 13:52
7439-92-1	Lead		1.50	3.00	1	U	SW6010C	1B17003	02/22/11 13:52
7439-96-5	Manganese	87.7	3.00	15.0	1		SW6010C	1B17003	02/22/11 13:52

ANALYSIS DATA SHEET

UST21-MW61-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 02/09/11 10:15
% Solids: 0.00

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102098-07
Received: 02/10/11 11:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron	41.4	30.0	100	1	I	SW6010C	1B17003	02/22/11 13:09
7439-92-1	Lead		3.00	6.00	2	U	SW6010C	1B17003	02/23/11 22:04
7439-96-5	Manganese	15.9	3.00	15.0	1		SW6010C	1B17003	02/22/11 13:09

ANALYSIS DATA SHEET

UST21-MW65-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 02/08/11 15:02
% Solids: 0.00

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102098-03
Received: 02/10/11 11:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron		30.0	100	1	U	SW6010C	1B17003	02/22/11 12:51
7439-92-1	Lead		3.00	6.00	2	U	SW6010C	1B17003	02/23/11 21:55
7439-96-5	Manganese	3340	3.00	15.0	1		SW6010C	1B17003	02/22/11 12:51

ANALYSIS DATA SHEET

UST21-MW25-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 02/09/11 07:10
% Solids: 0.00

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102098-06
Received: 02/10/11 11:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)		30.0	100	1	U	SW6010C	1B17003	02/22/11 13:05
7439-96-5	Manganese (dissolved)	133	3.00	15.0	1		SW6010C	1B17003	02/22/11 13:05

ANALYSIS DATA SHEET

UST21-MW41-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 02/08/11 11:33
% Solids: 0.00

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102098-02
Received: 02/10/11 11:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)		30.0	100	1	U	SW6010C	1B17003	02/22/11 12:27
7439-96-5	Manganese (dissolved)		3.00	15.0	1	U	SW6010C	1B17003	02/22/11 12:27

ANALYSIS DATA SHEET

UST21-MW55-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 02/09/11 12:45
% Solids: 0.00

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102098-10
Received: 02/10/11 11:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)		30.0	100	1	U	SW6010C	1B17003	02/22/11 13:56
7439-96-5	Manganese (dissolved)	85.6	3.00	15.0	1		SW6010C	1B17003	02/22/11 13:56

ANALYSIS DATA SHEET

UST21-MW61-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 02/09/11 10:15
% Solids: 0.00

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102098-08
Received: 02/10/11 11:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)		30.0	100	1	U	SW6010C	1B17003	02/22/11 13:14
7439-96-5	Manganese (dissolved)	16.3	3.00	15.0	1		SW6010C	1B17003	02/22/11 13:14

ANALYSIS DATA SHEET

UST21-MW65-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 02/08/11 15:02
% Solids: 0.00

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102098-04
Received: 02/10/11 11:45

CAS NO.	Analyte	Conc. (ug/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
7439-89-6	Iron (dissolved)		30.0	100	1	U	SW6010C	1B17003	02/22/11 12:55
7439-96-5	Manganese (dissolved)	3230	3.00	15.0	1		SW6010C	1B17003	02/22/11 12:55

ANALYSIS DATA SHEET

UST21-MW25-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 02/09/11 07:10
% Solids: 0.00

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102098-05
Received: 02/10/11 11:45

CAS NO.	Analyte	Conc. (mg/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand	3.72	2.00	2.00	1		SM5210B	1B11035	02/10/11 14:00
18496-25-8	Sulfide	3.20	0.741	3.70	0.74	1	SM4500S2CF	1B15011	02/15/11 14:06
NA	Chemical Oxygen Demand	38.2	20.0	60.0	1	1	E410.4	1B16012	02/17/11 20:45
16887-00-6	Chloride	47.3	0.170	1.00	1	M	SW9056	1B10003	02/10/11 15:30
14797-55-8	Nitrate as N		0.0330	0.200	1	U	SW9056	1B10003	02/10/11 15:30
11-43-9	Alkalinity, Total (as CACO3)	333	1.00	1.00	1		SM2320B	1B14027	02/15/11 17:07
14797-65-0	Nitrite as N		0.0330	0.200	1	U	SW9056	1B10003	02/10/11 15:30
14808-79-8	Sulfate as SO4	15.3	0.330	2.00	1		SW9056	1B10003	02/10/11 15:30

ANALYSIS DATA SHEET

UST21-MW41-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 02/08/11 11:33
% Solids: 0.00

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102098-01
Received: 02/10/11 11:45

CAS NO.	Analyte	Conc. (mg/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
18496-25-8	Sulfide		0.741	3.70	0.74	U	SM4500S2CF	IB15011	02/15/11 14:02

ANALYSIS DATA SHEET

UST21-MW55-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 02/09/11 12:45
% Solids: 0.00

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102098-09
Received: 02/10/11 11:45

CAS NO.	Analyte	Conc. (mg/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand	5.21	3.33	3.33	1		SM5210B	1B11035	02/10/11 14:00
18496-25-8	Sulfide	1.20	0.741	3.70	0.74	1	SM4500S2CF	1B15011	02/15/11 14:08
NA	Chemical Oxygen Demand	25.6	20.0	60.0	1	1	E410.4	1B16012	02/17/11 20:47
16887-00-6	Chloride	5.46	0.170	1.00	1	M	SW9056	1B10003	02/10/11 15:48
14797-55-8	Nitrate as N		0.0330	0.200	1	U	SW9056	1B10003	02/10/11 15:48
11-43-9	Alkalinity, Total (as CACO3)	186	1.00	1.00	1		SM2320B	1B14027	02/15/11 17:51
14797-65-0	Nitrite as N		0.0330	0.200	1	U	SW9056	1B10003	02/10/11 15:48
14808-79-8	Sulfate as SO4	0.655	0.330	2.00	1	1	SW9056	1B10003	02/10/11 15:48

ANALYSIS DATA SHEET

UST21-MW61-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 02/09/11 10:15
% Solids: 0.00

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola 2010
Laboratory ID: 1102098-07
Received: 02/10/11 11:45

CAS NO.	Analyte	Conc. (mg/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
NA	Biochemical Oxygen Demand	272	50.0	50.0	1		SM5210B	1B11035	02/10/11 14:00
18496-25-8	Sulfide	122	0.741	3.70	0.74		SM4500S2CF	1B15011	02/15/11 14:07
NA	Chemical Oxygen Demand	5580	200	600	10	D	E410.4	1B16012	02/17/11 20:46
16887-00-6	Chloride	14600	17.0	100	100	M D	SW9056	1B17014	02/17/11 16:42
14797-55-8	Nitrate as N		0.0330	0.200	1	U	SW9056	1B10003	02/10/11 16:40
11-43-9	Alkalinity, Total (as CACO3)	764	1.00	1.00	1		SM2320B	1B14027	02/15/11 17:40
14797-65-0	Nitrite as N		0.660	4.00	20	U	SW9056	1B10003	02/10/11 16:57
14808-79-8	Sulfate as SO4	1210	6.60	40.0	20	D	SW9056	1B10003	02/10/11 16:57

ANALYSIS DATA SHEET

UST21-MW65-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Sampled: 02/08/11 15:02
% Solids: 0.00

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1102098-03
Received: 02/10/11 11:45

CAS NO.	Analyte	Conc. (mg/L)	MDL	RL	D.F.	Q	Method	Batch	Analyzed
18496-25-8	Sulfide	84.7	0.741	3.70	0.74		SM4500S2CF	1B15011	02/15/11 14:05

APPENDIX C

SUPPORT DOCUMENTATION

TETRA TECH NUS, INC. | CHAIN OF CUSTODY | NUMBER JM01-02 | PAGE 1 OF 1

PROJECT NO: 112G02200	SITE NAME: UST 21	PROJECT MANAGER AND PHONE NUMBER: Barry Walker (850) 385-9899	LABORATORY NAME AND CONTACT: Empirical Lab / Kim KOSTZER
SAMPLERS (SIGNATURE): Jared Shellman		FIELD OPERATIONS LEADER AND PHONE NUMBER: Yaniesa Martinez (787)300-9119	ADDRESS: 621 Mainstream Dr Suite 270
		CARRIER/WAYBILL NUMBER: 874845550581	CITY, STATE: Nashville, TN 37228

STANDARD TAT ☒
RUSH TAT ☐
☐ 24 hr. ☐ 48 hr. ☐ 72 hr. ☐ 7 day ☐ 14 day

CONTAINER TYPE PLASTIC (P) or GLASS (G): G G G P P P P P
PRESERVATIVE USED: ICE | HCL | - | HCL | HNO3 | HNO3 | HNO3 | H2SO4 | ZnAc/NaOH

TYPE OF ANALYSIS: TRPH (FL PRO) | PAH Low/Med Select VOCs 8270C | VOCs 8260 | Metals (Pb, Fe & Mn) 6000 | Total Metals | Dissolved Metals E.M. | Anions | BOD | COD | Sulfide | Alkalinity

DATE 2011	TIME	SAMPLE ID	MATRIX	GRAB (G) COMP (C)	No. OF CONTAINERS												COMMENTS
2/8	1133	UST21-MW41-0211	GW	G	11	2	2	3	1	1	1	0	0	0	1	0	upgradient well
2/8	1502	UST 21-MW65-0211	GW	G	11	2	2	3	1	1	1	0	0	0	1	0	
2/9	0710	UST 21-MW25-0211	GW	G	15	2	2	3	1	1	1	1	1	1	1		
2/9	1015	UST 21-MW1d-0211	GW	G	15	2	2	3	1	1	1	1	1	1	1		
2/9	1245	UST21-MW55-0211	GW	G	15	2	2	3	1	1	1	1	1	1	1		strong odor Previous detection of free prod.
2/8	1133	TRIP BLANK 9282			2	—		2									
		TEMP BLANK			3												

02-12-11
11020498
11020498

* 3 coolers *

	DATE	TIME		DATE	TIME
1. RELINQUISHED BY	2/9/11	1500	1. RECEIVED BY	2-10-11	1145
2. RELINQUISHED BY	DATE	TIME	2. RECEIVED BY	DATE	TIME
3. RELINQUISHED BY	DATE	TIME	3. RECEIVED BY	DATE	TIME

0.4°C

COMMENTS: Select VOCs (1,1,1 Trichloroethane, 1,2-Dichloroethene, Benzene, cis-1-2 Dichloroethene, Total Xylene, Trichloroethylene, Isopropyl Benzene, Methylene Chloride, Tetrachloroethylene, Trans 1,2 Dichloroethene, Vinyl Chloride)

-01,02 -03,04 -05,06 -07,08 -09,10 -11

DISTRIBUTION: WHITE (ACCOMPANIES SAMPLE) | YELLOW (FIELD COPY) | PINK (FILE COPY) | 3/99

FORM NO. TtNUS-001

Select PAH: Naphthalene, Fluorene, 1-Methylnaphthalene, 2-Methylnaphthalene, Acenaphthene, Benzo(a)anthracene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene

CTOJM01_006

9

Sample Delivery Group Case Narrative

Receipt Information
The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. There were no subcontracted analyses for this SDG.

Changes to the Revision
This is an original submittal of the final report package.

Analytical Information
All samples were prepped (where applicable) and analyzed within the standard allowed holding times, unless noted within the exceptions listed below. The laboratory analyzed all samples within the program and method guidelines. The following information is provided specific to individual methods:

Chromatographic Flags for Manual Integration:
The following letters are used to denote manual integrations on the laboratory's raw data in association with chromatographic integrations:

A: The peak was manually integrated as it was not integrated in the original chromatogram.
B: The peak was manually integrated due to resolution or coelution issues in the original chromatogram.
C: The peak was manually integrated to correct the baseline from the original chromatogram.
D: The peak was manually integrated to identify the correct peak as the wrong peak was identified in the original chromatogram.
E: The peak was manually integrated to include the entire peak as the original chromatogram only integrated part of the peak.

SW8260B:
The continuing calibration verification 1B04705-CCV1 exceeded criteria with a positive bias for 1,2-Dichloroethane.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW8270C:
The continuing calibration verification 1B05309-CCV1 exceeded criteria with a positive bias for Benzo(a)anthracene and Chrysene.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

FLPRO:
The surrogate o-Terphenyl exceeded criteria with a negative bias in sample 1102098-07.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

SW6010C:
No anomalies or deviations are noted.

Wet Chemistry:
Samples 1102098-05, -07, and -09 are qualified with an M for Chloride to indicate that the RL was raised due to interference.

The continuing calibration blank 1B04809-CCB2 has a positive result for Chloride.

No additional anomalies or deviations are noted and the proper data qualifiers have been applied.

UST21-MW65-0211

Sample Name: 1102098-03 Acquired: 2/22/2011 12:51:01 Type: Unk
Method: DuoEnviroMethodNEW(v1982) Mode: CONC Corr. Factor: 1.000000
User: rburr Custom ID1: Custom ID2: Custom ID3:
Comment: TETRA

Elem	Ag3280	Al3961	As1890	B_2496	Ba2335	Be3130	Bi2230
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.38616**	**162.64**	**4.5406**	**2345.2**	**231.37**	**.01398**	**.25627**
Stddev	.26396	1.12	1.5989	40.0	.84	.02139	1.3117
%RSD	68.353	.69148	35.214	1.7041	.36095	153.02	511.82
#1	.26031	163.86	5.1887	2324.1	230.93	.03816	1.7170
#2	.68949	162.40	2.7194	2320.2	230.85	-.00244	-.82070
#3	.20868	161.65	5.7137	2391.3	232.33	.00621	-.12749

Elem	Ca3179	Cd2144	Cd2288	Co2286	Cr2677	Cu2199	Cu3247
Units	ppm	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**297.48**	**-.10885**	**1.6484**	**.66231**	F **-3.5927**	F **-6.668**	F **-4.6917**
Stddev	.70	.02893	.1389	.08827	.4978	.353	.1660
%RSD	.23634	26.575	8.4272	13.328	13.856	5.300	3.5387
#1	298.27	-.13677	1.7024	.62891	-4.0656	-6.663	-4.7465
#2	297.24	-.07901	1.4906	.76240	-3.6393	-7.024	-4.823
#3	296.93	-.11076	1.7523	.59561	-3.0733	-6.318	-4.505

Elem	Fe2611	K_7664	Mg2790	Mn2576	Mo2020	Na5895	Ni2316
Units	ppb	ppm	ppm	ppb	ppb	ppm	ppb
Avg	**15.871**	F **247.26**	F **714.56**	**3340.6**	**.89589**	^ *****	**-.92450**
Stddev	.417	.99	2.41	65.2	.20458	-----	.3396
%RSD	2.6288	.40005	.33662	1.9504	22.836	-----	36.736
#1	15.551	248.23	713.06	3304.4	1.1094	^ -----	-.63565
#2	16.343	246.26	717.33	3301.6	.70153	^ -----	-1.2980
#3	15.719	247.30	713.28	3415.8	.87678	^ -----	-.83921

Elem	Pb2203	Sb2068	Se1960	Sn1899	Sr4215	Ti3349	Tl1908
Units	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Avg	**.51774**	**-.75911**	**-.46579**	**-.51677**	**4932.**	**-2.7246**	**1.9508**
Stddev	1.5493	.46314	2.2486	.11224	22.	.1839	1.8321
%RSD	299.24	61.011	482.74	21.720	.4493	6.7513	93.947
#1	1.1352	-.29528	2.1238	-.64606	4907.	-2.6164	.03617
#2	-1.2451	-.76049	-1.9236	-.46005	4940.	-2.6203	2.1273
#3	.6631	-1.2216	-1.5976	-.44421	4949.	-2.9369	3.6885

Reported as 3340ug/L

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 110205 Number of Coolers: 1 of 3

Client: Tetra Tech NUS INC Project: 112G02200

Date/Time Received: 2.10.11 11:45 Date cooler(s) opened: 2.10.11

Opened By (print): Russ Townsend (signature): [signature]

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 5081

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-9-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival?	(Yes)	No	N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler?	(Yes)	No	N/A
5. Were custody papers filled out properly (ink, signed, etc.)?	(Yes)	No	N/A
6. Did you sign custody papers in the appropriate place for acceptance?	(Yes)	No	N/A
7. Was project identifiable from custody papers?	(Yes)	No	N/A
8. If required, was enough ice present in the cooler(s)?	(Yes)	No	N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 0.7 °C Correction Factor: -0.3 °C Final Value: 0.4 °C

Dates samples were logged-in: 2-14-11

9. Initial this form to acknowledge login of sample(s): (Name): [signature] (Initial): LO

10. Were all bottle lids intact and sealed tightly?	(Yes)	No	N/A
11. Did all bottles arrive unbroken?	(Yes)	No	N/A
12. Was all required bottle label information complete?	(Yes)	No	N/A
13. Did all bottle labels agree with custody papers?	(Yes)	No	N/A
14. Were correct containers used for the analyses indicated?	(Yes)	No	N/A
15. Were preservative levels correct in all applicable sample containers?	(Yes)	No	N/A
16. Was residual chlorine present in any applicable sample containers?	Yes	No	(N/A)
17. Was sufficient amount of sample sent for the analyses required?	(Yes)	No	N/A
18. Was headspace present in any included VOA vials?	Yes	No	(N/A)

If Non-Conformance issues were present, list by sample ID: _____

ph < 2 for all metals, COD, & TKN & P
ph > 9 for all Sulfides

CTOJM01_006

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1102058 Number of Coolers: 2 of 3

Client: Tetra Tech NUS INC Project: 112G02200

Date/Time Received: 2.10.11 11:45 Date cooler(s) opened: 2.10.11

Opened By (print): Russ Townsend (signature): Russ Townsend

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 6122

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-9-11 Seal Initials: _____

3. Were custody seals unbroken and intact at the date and time of arrival? ..... (Yes) No N/A

4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... (Yes) No N/A

5. Were custody papers filled out properly (ink, signed, etc.)? ..... (Yes) No N/A

6. Did you sign custody papers in the appropriate place for acceptance? ..... (Yes) No N/A

7. Was project identifiable from custody papers? ..... (Yes) No N/A

8. If required, was enough ice present in the cooler(s)? ..... (Yes) No N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 3.3 °C Correction Factor: -0.3 °C Final Value: 3.0 °C

Dates samples were logged-in: SEE 1 OF 3

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____

10. Were all bottle lids intact and sealed tightly? ..... (Yes) No N/A

11. Did all bottles arrive unbroken? ..... (Yes) No N/A

12. Was all required bottle label information complete? ..... (Yes) No N/A

13. Did all bottle labels agree with custody papers? ..... (Yes) No N/A

14. Were correct containers used for the analyses indicated? ..... (Yes) No N/A

15. Were preservative levels correct in all applicable sample containers? ..... (Yes) No N/A

16. Was residual chlorine present in any applicable sample containers? ..... Yes No (N/A)

17. Was sufficient amount of sample sent for the analyses required? ..... (Yes) No N/A

18. Was headspace present in any included VOA vials? ..... Yes No (N/A)

If Non-Conformance issues were present, list by sample ID: _____

EMPIRICAL LABORATORIES
COOLER RECEIPT FORM

LIMS Number: 1102098 Number of Coolers: 3 of 3

Client: TetraTech NUS INC. Project: 112G02200

Date/Time Received: 2.10.11 11:45 Date cooler(s) opened: 2.10.11

Opened By (print): Russ Townsend (signature): Russ Townsend

Circle response below as appropriate

1. How did the samples arrive? (FedEx) UPS DHL Hand Delivered
EL Courier Other: _____

If applicable, enter airbill number here: 6111

2. Were custody seals on outside of cooler(s)? ..... (Yes) No

How many: 2 Seal date: 2-9-11 Seal Initials: ?

3. Were custody seals unbroken and intact at the date and time of arrival? ..... (Yes) No N/A
4. Were custody papers sealed in a plastic bag included in the sample cooler? ..... (Yes) No N/A
5. Were custody papers filled out properly (ink, signed, etc.)? ..... (Yes) No N/A
6. Did you sign custody papers in the appropriate place for acceptance? ..... (Yes) No N/A
7. Was project identifiable from custody papers? ..... (Yes) No N/A
8. If required, was enough ice present in the cooler(s)? ..... (Yes) No N/A

Type of Coolant: (WET) DRY BLUE NONE

Temperature of Samples upon Receipt: Initial Value: 2.3 °C Correction Factor: -0.3 °C Final Value: 2.0 °C

Dates samples were logged-in: SEC 1 of 3

9. Initial this form to acknowledge login of sample(s): (Name): _____ (Initial): _____
10. Were all bottle lids intact and sealed tightly? ..... (Yes) No N/A
11. Did all bottles arrive unbroken? ..... (Yes) No N/A
12. Was all required bottle label information complete? ..... (Yes) No N/A
13. Did all bottle labels agree with custody papers? ..... (Yes) No N/A
14. Were correct containers used for the analyses indicated? ..... (Yes) No N/A
15. Were preservative levels correct in all applicable sample containers? ..... (Yes) No N/A
16. Was residual chlorine present in any applicable sample containers? ..... Yes No (N/A)
17. Was sufficient amount of sample sent for the analyses required? ..... (Yes) No N/A
18. Was headspace present in any included VOA vials? ..... Yes (No) N/A

If Non-Conformance issues were present, list by sample ID: _____

CTOJM01_006

SDG CTOJM01_006

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST21-MW23-0211	1102113-07	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST21-MW37-0211	1102113-12	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST-21-MW-38-0211	1102133-02	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
M	UG/L	UST-21-MW-40-0211	1102133-04	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
M	UG/L	UST21-MW54-0211	1102113-04	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW16-0211	1102113-10	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW60-0211	1102113-03	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW63-0211	1102113-01RE1	NM	02/10/2011	02/17/2011	02/23/2011	7	6	13
M	UG/L	UST21-MW61-0211	1102098-07RE1	NM	02/09/2011	02/17/2011	02/23/2011	8	6	14
M	UG/L	UST21-MW62-0211	1102113-08	NM	02/09/2011	02/22/2011	02/23/2011	13	1	14
M	UG/L	UST21-MW63-0211	1102113-01	NM	02/10/2011	02/17/2011	02/22/2011	7	5	12
M	UG/L	UST21-MW64-0211	1102113-02	NM	02/10/2011	02/17/2011	02/22/2011	7	5	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
M	UG/L	UST21-MW65-0211	1102098-03RE1	NM	02/08/2011	02/17/2011	02/23/2011	9	6	15
M	UG/L	UST-21-RB-0211	1102133-05	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
M	UG/L	UST-21-09-0211	1102133-06	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	GW02-020911	1102113-09	NM	02/09/2011	02/22/2011	02/23/2011	13	1	14
M	UG/L	UST21-MW14-0211	1102113-11	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST21-MW64-0211	1102113-02RE1	NM	02/10/2011	02/17/2011	02/23/2011	7	6	13
M	UG/L	UST21-MW10-0211	1102113-06	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	GW01-021111	1102133-08	NM	02/11/2011	02/24/2011	02/28/2011	13	4	17
M	UG/L	UST21-MW01-0211	1102113-05	NM	02/10/2011	02/22/2011	02/23/2011	12	1	13
M	UG/L	UST-21-17-0211	1102133-07	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
M	UG/L	UST-21-MW-04-0211	1102133-03	NM	02/10/2011	02/24/2011	02/28/2011	14	4	18
MF	UG/L	UST21-MW25-0211	1102098-06	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW41-0211	1102098-02	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14
MF	UG/L	UST21-MW55-0211	1102098-10	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW61-0211	1102098-08	NM	02/09/2011	02/17/2011	02/22/2011	8	5	13
MF	UG/L	UST21-MW65-0211	1102098-04	NM	02/08/2011	02/17/2011	02/22/2011	9	5	14

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
ALK	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
ALK	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
ALK	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
BOD	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
BOD	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
BOD	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
CL	MG/L	UST21-MW61-0211	1102098-07RE2	NM	02/09/2011	02/17/2011	02/17/2011	8	0	8
CL	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
CL	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
COD	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
COD	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
COD	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/16/2011	02/17/2011	7	1	8
NTA	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTA	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTA	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTI	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTI	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
NTI	MG/L	UST21-MW61-0211	1102098-07RE1	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
SO4	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
SO4	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
SO4	MG/L	UST21-MW61-0211	1102098-07RE1	NM	02/09/2011	02/10/2011	02/10/2011	1	0	1
SUL	MG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
SUL	MG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
SUL	MG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
SUL	MG/L	UST21-MW25-0211	1102098-05	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
SUL	MG/L	UST21-MW61-0211	1102098-07	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
OV	UG/L	UST-21-MW-40-0211	1102133-04	NM	02/11/2011	02/17/2011	02/18/2011	6	1	7
OV	UG/L	UST-21-MW-38-0211	1102133-02	NM	02/10/2011	02/17/2011	02/18/2011	7	1	8
OV	UG/L	UST21-MW41-0211	1102098-01	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
OV	UG/L	UST21-MW54-0211	1102113-04	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6
OV	UG/L	UST21-MW55-0211	1102098-09	NM	02/09/2011	02/15/2011	02/15/2011	6	0	6
OV	UG/L	UST21-MW60-0211	1102113-03	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6
OV	UG/L	UST-21-RB-0211	1102133-05	NM	02/11/2011	02/17/2011	02/18/2011	6	1	7
OV	UG/L	UST21-MW65-0211	1102098-03	NM	02/08/2011	02/15/2011	02/15/2011	7	0	7
OV	UG/L	UST21-MW37-0211	1102113-12	NM	02/10/2011	02/16/2011	02/17/2011	6	1	7
OV	UG/L	UST21-MW63-0211	1102113-01	NM	02/10/2011	02/16/2011	02/16/2011	6	0	6

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC **SDG:** CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) **Project:** CTO JM01 NAS Pensacola_2010

Matrix: Water **Instrument:** ME-ICP

Analyte	MDL	MRL	Units	Method
Iron	30.0	100	ug/L	SW6010C
Iron (dissolved)	30.0	100	ug/L	SW6010C
Lead	1.50	3.00	ug/L	SW6010C
Manganese	3.00	15.0	ug/L	SW6010C
Manganese (dissolved)	3.00	15.0	ug/L	SW6010C

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_006

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Al	Ca	Fe	Mg	Ag
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0002980	0.0000000	0.0000080	0.0003250	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000140	0.0287450	0.0000000

Comments:

FORM XA-IN

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_006

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		As	B	Ba	Be	Cd
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_006

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Co	Cr	Cu	K	Mn
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0000000	0.0000000	0.0022600	0.0000000	0.0000990
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_006

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for: Mo	Na	Ni	Pb	Sb
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	-0.0026440	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Comments:

FORM XA-IN

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_006

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for:				
		Se	Sn	Ti	Tl	V
Iron	261.1	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.3	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000360
Manganese	257.6	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000300

Comments:

FORM XA-IN

USEPA - CLP

10A-IN
ICP-AES INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: Empirical Laboratories, LLC Contract: Tetra Tech NUS, Inc. (T010)

SDG No.: CTOJM01_006

ICP-AES Instrument ID: Thermo Jarrell Ashe ICAP Date: 9/11/2009

Analyte	Wave-length (nm)	Interelement Correction Factors for: Zn				
Iron	261.1	0.0000000				
Lead	220.3	0.0000000				
Manganese	257.6	0.0000000				

Comments:

FORM XA-IN

ICP-AES AND ICP-MS LINEAR RANGES (QUARTERLY)

Lab Name: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010) SDG: CTOJM01_006

Project: CTO JM01 NAS Pensacola 2010

ICP Instrument ID: ME-ICP Date: 09/11/2009

Analyte	Integ. Time (Sec.)	Concentration ug/L	M
Iron	15	500000	P
Lead	15	10000	P
Manganese	15	10000	P

PREPARATION BATCH SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Batch: 1B17003 Batch Matrix: Water Preparation: MET_3005A

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW41-0211	1102098-01	02/17/11 08:12	50.00	50.00
UST21-MW41-0211	1102098-02	02/17/11 08:12	50.00	50.00
UST21-MW65-0211	1102098-03	02/17/11 08:12	50.00	50.00
UST21-MW65-0211	1102098-03RE1	02/17/11 08:12	50.00	50.00
UST21-MW65-0211	1102098-04	02/17/11 08:12	50.00	50.00
UST21-MW25-0211	1102098-05	02/17/11 08:12	50.00	50.00
UST21-MW25-0211	1102098-06	02/17/11 08:12	50.00	50.00
UST21-MW61-0211	1102098-07	02/17/11 08:12	50.00	50.00
UST21-MW61-0211	1102098-07RE1	02/17/11 08:12	50.00	50.00
UST21-MW61-0211	1102098-08	02/17/11 08:12	50.00	50.00
UST21-MW55-0211	1102098-09	02/17/11 08:12	50.00	50.00
UST21-MW55-0211	1102098-10	02/17/11 08:12	50.00	50.00
Blank	1B17003-BLK1	02/17/11 08:13	50.00	50.00
LCS	1B17003-BS1	02/17/11 08:13	50.00	50.00
UST21-MW41-0211	1B17003-DUP1	02/17/11 08:13	50.00	50.00
UST21-MW41-0211	1B17003-DUP2	02/17/11 08:13	50.00	50.00
UST21-MW41-0211	1B17003-DUP3	02/17/11 08:13	50.00	50.00
UST21-MW41-0211	1B17003-DUP4	02/17/11 08:13	50.00	50.00
UST21-MW41-0211	1B17003-MS1	02/17/11 08:13	50.00	50.00
UST21-MW41-0211	1B17003-MS2	02/17/11 08:13	50.00	50.00
UST21-MW41-0211	1B17003-PS1	02/17/11 08:13	20.00	20.00
UST21-MW41-0211	1B17003-PS2	02/17/11 08:13	20.00	20.00

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW6010C

UST21-MW41-0211

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Matrix: Water

Batch: 1B17003

% Solids:

Source Sample Name: **1102098-01**

ANALYTE	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC.	Q	QC LIMITS REC.
Iron	1000	238.0	1255	102		80 - 120
Lead	250.0	ND	245.6	98.2		80 - 120
Manganese	500.0	3.424	522.5	104		80 - 120

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

SW6010C

UST21-MW41-0211

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Matrix: Water

Batch: 1B17003

% Solids:

Source Sample Name: **1102098-02**

ANALYTE	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC.	Q	QC LIMITS REC.
Iron (dissolved)	1000	ND	1034	103		80 - 120
Manganese (dissolved)	500.0	ND	519.8	104		80 - 120

POST DIGEST SPIKE SAMPLE RECOVERY

SW6010C

UST21-MW41-0211

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Matrix: Water
Laboratory ID: 1B17003-PS1
Batch: 1B17003
Lab Source ID: 1102098-01
Preparation: MET_3005A
Initial/Final: 20 mL / 20 mL

Analyte	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R	Control Limit %R
Iron	1244	238.0	1000	101	80 - 120
Lead	247.4	ND	250.0	98.4	80 - 120
Manganese	529.9	3.424	500.0	105	80 - 120

POST DIGEST SPIKE SAMPLE RECOVERY

SW6010C

UST21-MW41-0211

Laboratory: Empirical Laboratories, LLC

Client: Tetra Tech NUS, Inc. (T010)

Matrix: Water

Batch: 1B17003

Preparation: MET_3005A

SDG: CTOJM01_006

Project: CTO JM01 NAS Pensacola_2010

Laboratory ID: 1B17003-PS2

Lab Source ID: 1102098-02

Initial/Final: 20 mL / 20 mL

Analyte	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R	Control Limit %R
Iron (dissolved)	1047	ND	1000	103	80 - 120
Manganese (dissolved)	531.6	ND	500.0	106	80 - 120

DUPLICATES

SW6010C

UST21-MW41-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Batch: 1B17003
Preparation: MET_3005A
Source Sample Name: UST21-MW41-0211

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1B17003-DUP3
Lab Source ID: 1102098-01
Initial/Final: 50 mL / 50 mL
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/L)	DUPLICATE CONCENTRATION (ug/L)	RPD %	Q	METHOD
Iron	20	238	227.0	4.74		SW6010C
Lead	20	3.00 U	3.00 J			SW6010C
Manganese	20	3.42 I	15.0 J	6.48		SW6010C

DUPLICATES

SW6010C

UST21-MW41-0211

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Matrix: Water
Batch: 1B17003
Preparation: MET_3005A
Source Sample Name: UST21-MW41-0211

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola_2010
Laboratory ID: 1B17003-DUP4
Lab Source ID: 1102098-02
Initial/Final: 50 mL / 50 mL
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/L)	DUPLICATE CONCENTRATION (ug/L)	RPD %	Q	METHOD
Iron (dissolved)	20	100 U	100 U			SW6010C
Manganese (dissolved)	20	15.0 U	15.0 U			SW6010C

LCS / LCS DUPLICATE RECOVERY

SW6010C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B17003	Laboratory ID:	1B17003-BS1
Preparation:	MET_3005A	Initial/Final:	50 mL / 50 mL

ANALYTE	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC.	QC LIMITS REC.
Iron	1000	1059	106	80 - 120
Iron (dissolved)	1000	1059	106	80 - 120
Lead	250.0	262.3	105	80 - 120
Manganese	500.0	531.6	106	80 - 120
Manganese (dissolved)	500.0	531.6	106	80 - 120

SERIAL DILUTION

SW6010C

UST21-MW41-0211

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010

Matrix: Water
Laboratory ID: 1B17003-DUP1

Sequence: 1B05405
Lab Source ID: 1102098-01

Preparation: MET_3005A
Initial/Final: 50 / 50

Analyte	Initial Sample Result (I) ug/L	Serial Dilution Result (S) ug/L	% Difference	Q	Method	QC Limits % Difference
Iron	237.98	241.36	1.42		SW6010C	10.00
Lead	ND	ND			SW6010C	10.00
Manganese	3.424	ND			SW6010C	10.00

SERIAL DILUTION

SW6010C

UST21-MW41-0211

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Matrix: Water
Laboratory ID: 1B17003-DUP2
Sequence: 1B05405
Lab Source ID: 1102098-02
Preparation: MET_3005A
Initial/Final: 50 / 50

Analyte	Initial Sample Result (I) ug/L	Serial Dilution Result (S) ug/L	% Difference	Q	Method	QC Limits % Difference
Iron (dissolved)	ND	ND			SW6010C	10.00
Manganese (dissolved)	ND	ND			SW6010C	10.00

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B05405
Instrument: ME-ICP
Calibration: 1054001

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1B05405-CAL1	022211A-001	02/22/11 09:31
Cal Standard	1B05405-CAL2	022211A-002	02/22/11 09:36
Cal Standard	1B05405-CAL3	022211A-003	02/22/11 09:41
Cal Standard	1B05405-CAL4	022211A-004	02/22/11 09:45
Cal Standard	1B05405-CAL5	022211A-005	02/22/11 09:50
Cal Standard	1B05405-CAL6	022211A-006	02/22/11 09:55
Initial Cal Check	1B05405-ICV1	022211B-001	02/22/11 10:52
Initial Cal Blank	1B05405-ICB1	022211B-002	02/22/11 10:59
Instrument RL Check	1B05405-CRL1	022211B-003	02/22/11 11:04
Interference Check A	1B05405-IFA1	022211B-005	02/22/11 11:14
Interference Check B	1B05405-IFB1	022211B-006	02/22/11 11:19
Calibration Check	1B05405-CCV1	022211B-008	02/22/11 11:31
Calibration Blank	1B05405-CCB1	022211B-009	02/22/11 11:38
Blank	1B17003-BLK1	022211B-010	02/22/11 11:43
LCS	1B17003-BS1	022211B-011	02/22/11 11:47
UST21-MW41-0211	1102098-01	022211B-014	02/22/11 12:03
UST21-MW41-0211	1B17003-DUP3	022211B-015	02/22/11 12:08
UST21-MW41-0211	1B17003-MS1	022211B-016	02/22/11 12:12
UST21-MW41-0211	1B17003-PS1	022211B-017	02/22/11 12:17
UST21-MW41-0211	1B17003-DUP1	022211B-018	02/22/11 12:22
UST21-MW41-0211	1102098-02	022211B-019	02/22/11 12:27
UST21-MW41-0211	1B17003-DUP4	022211B-020	02/22/11 12:31
UST21-MW41-0211	1B17003-MS2	022211B-021	02/22/11 12:36
UST21-MW41-0211	1B17003-PS2	022211B-022	02/22/11 12:40
UST21-MW41-0211	1B17003-DUP2	022211B-023	02/22/11 12:46
UST21-MW65-0211	1102098-03	022211B-024	02/22/11 12:51
UST21-MW65-0211	1102098-04	022211B-025	02/22/11 12:55
UST21-MW25-0211	1102098-05	022211B-026	02/22/11 13:00
UST21-MW25-0211	1102098-06	022211B-027	02/22/11 13:05
UST21-MW61-0211	1102098-07	022211B-028	02/22/11 13:09
UST21-MW61-0211	1102098-08	022211B-029	02/22/11 13:14
Calibration Check	1B05405-CCV2	022211C-001	02/22/11 13:40

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B05405	Instrument:	ME-ICP
Calibration:	1054001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Blank	1B05405-CCB2	022211C-002	02/22/11 13:47
UST21-MW55-0211	1102098-09	022211C-003	02/22/11 13:52
UST21-MW55-0211	1102098-10	022211C-004	02/22/11 13:56
Calibration Check	1B05405-CCV3	022211C-013	02/22/11 14:39
Calibration Blank	1B05405-CCB3	022211C-014	02/22/11 14:46

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Instrument ID: ME-ICP
Calibration: 1054001
Sequence: 1B05405

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1B05405-ICV1	Iron	10000	10020	100	ug/L	+/- 10.00%
	Lead	1000	975.1	97.5	ug/L	+/- 10.00%
	Manganese	1000	1034	103	ug/L	+/- 10.00%
1B05405-CCV1	Iron	10000	9872	98.7	ug/L	+/- 10.00%
	Lead	1000	971.7	97.2	ug/L	+/- 10.00%
	Manganese	1000	1024	102	ug/L	+/- 10.00%
1B05405-CCV2	Iron	10000	9739	97.4	ug/L	+/- 10.00%
	Lead	1000	973.6	97.4	ug/L	+/- 10.00%
	Manganese	1000	970.5	97.1	ug/L	+/- 10.00%
1B05405-CCV3	Iron	10000	10320	103	ug/L	+/- 10.00%
	Lead	1000	1006	101	ug/L	+/- 10.00%
	Manganese	1000	963.4	96.3	ug/L	+/- 10.00%

CRDL STANDARD

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Instrument ID: ME-ICP

Calibration: 1054001

Sequence: 1B05405

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
1B05405-CRL1	Iron	60.00	61.86	103	ug/L	80 - 120
	Lead	3.000	3.067	102	ug/L	80 - 120
	Manganese	6.000	6.635	111	ug/L	80 - 120

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTO JM01 NAS Pensacola 2010
Sequence: 1B05405
Calibration: 1054001

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B05405-ICB1	Iron	3.448	30.0	100	ug/L	U	SW6010C
	Lead	-0.2775	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.1088	3.00	15.0	ug/L	U	SW6010C
1B05405-CCB1	Iron	1.86	30.0	100	ug/L	U	SW6010C
	Lead	0.522	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.0456	3.00	15.0	ug/L	U	SW6010C
1B17003-BLK1	Iron	-0.190	30.0	100	ug/L	U	SW6010C
	Iron (dissolved)	-0.190	30.0	100	ug/L	U	SW6010C
	Lead	-0.517	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.0296	3.00	15.0	ug/L	U	SW6010C
	Manganese (dissolved)	0.0296	3.00	15.0	ug/L	U	SW6010C
1B05405-CCB2	Iron	2.45	30.0	100	ug/L	U	SW6010C
	Lead	-0.215	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.165	3.00	15.0	ug/L	U	SW6010C
1B05405-CCB3	Iron	0.404	30.0	100	ug/L	U	SW6010C
	Lead	-0.648	1.50	3.00	ug/L	U	SW6010C
	Manganese	0.128	3.00	15.0	ug/L	U	SW6010C

ICP INTERFERENCE CHECK SAMPLE

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Instrument ID: ME-ICP

Calibration: 1054001

Sequence: 1B05405

Lab Sample ID	Analyte	True	Found	%R	Units
1B05405-IFA1	Iron	200000	193,420.00	96.7	ug/L
	Lead		9.49		ug/L
	Manganese		3.85		ug/L
1B05405-IFB1	Iron	200000	180,570.00	90.3	ug/L
	Lead	50.00	55.11	110	ug/L
	Manganese	500.0	446.45	89.3	ug/L

ANALYSIS SEQUENCE SUMMARY

SW6010C

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B05510	Instrument:	ME-ICP
Calibration:	1055007		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	1B05510-CAL1	022311A-001	02/23/11 12:02
Cal Standard	1B05510-CAL2	022311A-002	02/23/11 12:07
Cal Standard	1B05510-CAL3	022311A-003	02/23/11 12:12
Cal Standard	1B05510-CAL6	022311A-006	02/23/11 12:26
Initial Cal Check	1B05510-ICV1	022311B-001	02/23/11 13:35
Initial Cal Blank	1B05510-ICB1	022311B-002	02/23/11 13:42
Instrument RL Check	1B05510-CRL2	022311B-005	02/23/11 13:57
Interference Check A	1B05510-IFA1	022311B-006	02/23/11 14:02
Interference Check B	1B05510-IFB1	022311B-007	02/23/11 14:08
Calibration Check	1B05510-CCV1	022311B-009	02/23/11 14:19
Calibration Blank	1B05510-CCB1	022311B-010	02/23/11 14:26
Calibration Check	1B05510-CCV7	022311B-097	02/23/11 21:43
Calibration Blank	1B05510-CCB7	022311B-098	02/23/11 21:50
UST21-MW65-0211	1102098-03RE1	022311B-099	02/23/11 21:55
UST21-MW61-0211	1102098-07RE1	022311B-100	02/23/11 22:04
Calibration Check	1B05510-CCV8	022311B-104	02/23/11 22:29
Calibration Blank	1B05510-CCB8	022311B-105	02/23/11 22:36

INITIAL AND CONTINUING CALIBRATION CHECK

SW6010C

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola_2010
Calibration: 1055007
Sequence: 1B05510

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1B05510-ICV1	Lead	1000	984.3	98.4	ug/L	+/- 10.00%
1B05510-CCV1	Lead	1000	965.8	96.6	ug/L	+/- 10.00%
1B05510-CCV7	Lead	1000	978.5	97.8	ug/L	+/- 10.00%
1B05510-CCV8	Lead	1000	987.5	98.8	ug/L	+/- 10.00%

CRDL STANDARD

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola 2010

Instrument ID: ME-ICP

Calibration: 1055007

Sequence: 1B05510

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
1B05510-CRL2	Lead	3.000	3.002	100	ug/L	80 - 120

BLANKS
SW6010C

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: ME-ICP
Project: CTO JM01 NAS Pensacola 2010
Sequence: 1B05510
Calibration: 1055007

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B05510-ICB1	Lead	-0.02376	1.50	3.00	ug/L	U	SW6010C
1B05510-CCB1	Lead	-0.0108	1.50	3.00	ug/L	U	SW6010C
1B05510-CCB7	Lead	0.981	1.50	3.00	ug/L	U	SW6010C
1B05510-CCB8	Lead	1.38	1.50	3.00	ug/L	U	SW6010C

ICP INTERFERENCE CHECK SAMPLE

SW6010C

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Instrument ID: ME-ICP

Calibration: 1055007

Sequence: 1B05510

Lab Sample ID	Analyte	True	Found	%R	Units
1B05510-IFA1	Lead		5.85		ug/L
1B05510-IFB1	Lead	50.00	55.08	110	ug/L

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC **SDG:** CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) **Project:** CTO JM01 NAS Pensacola 2010

Matrix: Water **Instrument:**

Analyte	MDL	MRL	Units	Method
Alkalinity, Total (as CACO3)	1.00	1.00	mg/L	SM2320B
Sulfide	0.800	4.00	mg/L	SM4500S2CF
Biochemical Oxygen Demand	2.00	2.00	mg/L	SM5210B

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC **SDG:** CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) **Project:** CTO JM01 NAS Pensacola 2010

Matrix: Water **Instrument:** WC-Gensys

Analyte	MDL	MRL	Units	Method
Chemical Oxygen Demand	20.0	60.0	mg/L	E410.4

METHOD DETECTION AND REPORTING LIMITS

Laboratory: Empirical Laboratories, LLC **SDG:** CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) **Project:** CTO JM01 NAS Pensacola_2010

Matrix: Water **Instrument:** WC-IC

Analyte	MDL	MRL	Units	Method
Chloride	0.170	0.500	mg/L	SW9056
Nitrate as N	0.0330	0.200	mg/L	SW9056
Nitrite as N	0.0330	0.200	mg/L	SW9056
Sulfate as SO4	0.330	2.00	mg/L	SW9056

PREPARATION BATCH SUMMARY

SW9056

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Batch: 1B17014 Batch Matrix: Water Preparation: WC_PREP_ANIONS_W

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW61-0211	1102098-07RE2	02/17/11 14:01	5.00	5.00
Blank	1B17014-BLK1	02/17/11 14:11	5.00	5.00
LCS	1B17014-BS1	02/17/11 14:11	5.00	5.00

LCS / LCS DUPLICATE RECOVERY

SW9056

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B17014	Laboratory ID:	1B17014-BS1
Preparation:	WC_PREP_ANIONS_W	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Chloride	4.800	4.870	101	80 - 120

PREPARATION BATCH SUMMARY

SW9056

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Batch: 1B10003 Batch Matrix: Water Preparation: WC_PREP_ANIONS_W

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW25-0211	1102098-05	02/10/11 14:00	5.00	5.00
UST21-MW25-0211	1102098-05	02/10/11 14:00	5.00	5.00
UST21-MW61-0211	1102098-07	02/10/11 14:00	5.00	5.00
UST21-MW61-0211	1102098-07RE1	02/10/11 14:00	5.00	5.00
UST21-MW55-0211	1102098-09	02/10/11 14:00	5.00	5.00
UST21-MW55-0211	1102098-09	02/10/11 14:00	5.00	5.00
Blank	1B10003-BLK1	02/10/11 14:00	5.00	5.00
LCS	1B10003-BS1	02/10/11 14:00	5.00	5.00

LCS / LCS DUPLICATE RECOVERY

SW9056

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B10003	Laboratory ID:	1B10003-BS1
Preparation:	WC_PREP_ANIONS_W	Initial/Final:	5 mL / 5 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Chloride	4.800	5.259	110	80 - 120
Nitrate as N	3.616	3.749	104	80 - 120
Nitrite as N	4.864	4.480	92.1	80 - 120
Sulfate as SO4	24.00	25.68	107	80 - 120

ANALYSIS SEQUENCE SUMMARY

SW9056

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	0J29503	Instrument:	WC-IC
Calibration:	0295001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	0J29503-CAL1	102110curve-057	10/21/10 10:28
Cal Standard	0J29503-CAL2	102110curve-058	10/21/10 10:45
Cal Standard	0J29503-CAL3	102110curve-059	10/21/10 11:02
Cal Standard	0J29503-CAL4	102110curve-060	10/21/10 11:20
Cal Standard	0J29503-CAL5	102110curve-061	10/21/10 11:37
Cal Standard	0J29503-CAL6	102110curve-062	10/21/10 11:55
Cal Standard	0J29503-CAL7	102110curve-063	10/21/10 12:12
Cal Standard	0J29503-CAL8	102110curve-064	10/21/10 12:29
Initial Cal Check	0J29503-ICV1	102110curve-065	10/21/10 12:47
Initial Cal Blank	0J29503-ICB1	102110curve-066	10/21/10 13:04
Instrument RL Check	0J29503-CRL2	102110curve-068	10/21/10 13:39

INITIAL AND CONTINUING CALIBRATION CHECK

SW9056

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-IC

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola_2010
Calibration: 0295001
Sequence: 0J29503

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
0J29503-ICV1	Chloride	4.800	4.639	96.6	mg/L	+/- 10.00%
	Nitrate as N	3.616	3.531	97.6	mg/L	+/- 10.00%
	Nitrite as N	4.864	4.529	93.1	mg/L	+/- 10.00%
	Sulfate as SO4	24.00	23.53	98.0	mg/L	+/- 10.00%

CRDL STANDARD

SW9056

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Instrument ID: WC-IC

Calibration: 0295001

Sequence: 0J29503

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
0J29503-CRL2	Chloride	1.000	0.8730	87.3	mg/L	75 - 125
	Nitrate as N	0.1000	0.09500	95.0	mg/L	75 - 125
	Nitrite as N	0.1000	0.1060	106	mg/L	75 - 125
	Sulfate as SO4	1.000	1.023	102	mg/L	75 - 125

BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Sequence: 0J29503
Calibration: 0295001
Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
0J29503-ICB1	Chloride	0.01700	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.000	0.0330	0.200	mg/L	U	SW9056
	Nitrite as N	0.000	0.0330	0.200	mg/L	U	SW9056
	Sulfate as SO4	0.08000	0.330	2.00	mg/L	U	SW9056

ANALYSIS SEQUENCE SUMMARY

SW9056

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B04809	Instrument:	WC-IC
Calibration:	0295001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1B04809-CCV1	021011-002	02/10/11 14:03
Calibration Blank	1B04809-CCB1	021011-003	02/10/11 14:21
Instrument RL Check	1B04809-CRL1	021011-004	02/10/11 14:38
LCS	1B10003-BS1	021011-005	02/10/11 14:55
Blank	1B10003-BLK1	021011-006	02/10/11 15:13
UST21-MW25-0211	1102098-05	021011-007	02/10/11 15:30
UST21-MW55-0211	1102098-09	021011-008	02/10/11 15:48
UST21-MW61-0211	1102098-07	021011-011	02/10/11 16:40
UST21-MW61-0211	1102098-07RE1	021011-012	02/10/11 16:57
Calibration Check	1B04809-CCV2	021011-013	02/10/11 17:15
Calibration Blank	1B04809-CCB2	021011-014	02/10/11 17:32

INITIAL AND CONTINUING CALIBRATION CHECK

SW9056

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-IC

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola_2010
Calibration: 0295001
Sequence: 1B04809

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1B04809-CCV1	Chloride	25.00	26.62	106	mg/L	+/- 10.00%
	Nitrate as N	2.500	2.586	103	mg/L	+/- 10.00%
	Nitrite as N	2.500	2.398	95.9	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.52	106	mg/L	+/- 10.00%
1B04809-CCV2	Chloride	25.00	26.67	107	mg/L	+/- 10.00%
	Nitrate as N	2.500	2.610	104	mg/L	+/- 10.00%
	Nitrite as N	2.500	2.397	95.9	mg/L	+/- 10.00%
	Sulfate as SO4	25.00	26.59	106	mg/L	+/- 10.00%

CRDL STANDARD

SW9056

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola 2010

Instrument ID: WC-IC

Calibration: 0295001

Sequence: 1B04809

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
1B04809-CRL1	Chloride	1.000	0.9200	92.0	mg/L	75 - 125
	Nitrate as N	0.1000	0.1020	102	mg/L	75 - 125
	Nitrite as N	0.1000	0.1170	117	mg/L	75 - 125
	Sulfate as SO4	1.000	1.153	115	mg/L	75 - 125

METHOD BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Batch: 1B10003

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B10003-BLK1	Chloride	0.0490	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.00	0.0330	0.200	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.200	mg/L	U	SW9056
	Sulfate as SO4	0.0990	0.330	2.00	mg/L	U	SW9056

BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B04809
Calibration: 0295001
Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B04809-CCB1	Chloride	-0.00500	0.170	0.500	mg/L	U	SW9056
	Nitrate as N	0.00	0.0330	0.200	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.200	mg/L	U	SW9056
	Sulfate as SO4	0.0960	0.330	2.00	mg/L	U	SW9056
1B04809-CCB2	Chloride	0.207	0.170	0.500	mg/L	J	SW9056
	Nitrate as N	0.0150	0.0330	0.200	mg/L	U	SW9056
	Nitrite as N	0.00	0.0330	0.200	mg/L	U	SW9056
	Sulfate as SO4	0.114	0.330	2.00	mg/L	U	SW9056

ANALYSIS SEQUENCE SUMMARY

SW9056

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B05512	Instrument:	WC-IC
Calibration:	0295001		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1B05512-CCV1	021711-002	02/17/11 14:58
Calibration Blank	1B05512-CCB1	021711-003	02/17/11 15:15
Instrument RL Check	1B05512-CRL2	021711-005	02/17/11 15:50
LCS	1B17014-BS1	021711-006	02/17/11 16:07
Blank	1B17014-BLK1	021711-007	02/17/11 16:25
UST21-MW61-0211	1102098-07RE2	021711-008	02/17/11 16:42
Calibration Check	1B05512-CCV2	021711-015	02/17/11 18:44
Calibration Blank	1B05512-CCB2	021711-016	02/17/11 19:01

INITIAL AND CONTINUING CALIBRATION CHECK

SW9056

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-IC

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola_2010
Calibration: 0295001
Sequence: 1B05512

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1B05512-CCV1	Chloride	25.00	26.75	107	mg/L	+/- 10.00%
1B05512-CCV2	Chloride	25.00	26.66	107	mg/L	+/- 10.00%

CRDL STANDARD

SW9056

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Instrument ID: WC-IC

Calibration: 0295001

Sequence: 1B05512

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
1B05512-CRL2	Chloride	1.000	0.9350	93.5	mg/L	75 - 125

METHOD BLANKS

SW9056

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Batch: 1B17014

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B17014-BLK1	Chloride	-0.0210	0.170	0.500	mg/L	U	SW9056

BLANKS
SW9056

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010
Sequence: 1B05512
Calibration: 0295001
Instrument ID: WC-IC

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B05512-CCB1	Chloride	-0.0340	0.170	0.500	mg/L	U	SW9056
1B05512-CCB2	Chloride	0.0200	0.170	0.500	mg/L	U	SW9056

PREPARATION BATCH SUMMARY

E410.4

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Batch: 1B16012 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW25-0211	1102098-05	02/16/11 14:01	2.50	2.50
UST21-MW61-0211	1102098-07	02/16/11 14:01	2.50	2.50
UST21-MW55-0211	1102098-09	02/16/11 14:01	2.50	2.50
Blank	1B16012-BLK1	02/16/11 14:01	2.50	2.50
LCS	1B16012-BS1	02/16/11 14:01	2.50	2.50

LCS / LCS DUPLICATE RECOVERY

E410.4

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B16012	Laboratory ID:	1B16012-BS1
Preparation:	pNone	Initial/Final:	2.5 mL / 2.5 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Chemical Oxygen Demand	86.00	83.39	97.0	80 - 120

PREPARATION BATCH SUMMARY

SM5210B

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Batch: 1B11035 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW25-0211	1102098-05	02/10/11 14:00	250.00	250.00
UST21-MW61-0211	1102098-07	02/10/11 14:00	10.00	250.00
UST21-MW55-0211	1102098-09	02/10/11 14:00	150.00	250.00
Blank	1B11035-BLK1	02/10/11 14:00	250.00	250.00
LCS	1B11035-BS1	02/10/11 14:00	5.00	250.00

LCS / LCS DUPLICATE RECOVERY

SM5210B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B11035	Laboratory ID:	1B11035-BS1
Preparation:	pNone	Initial/Final:	5 mL / 250 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Biochemical Oxygen Demand	198.0	225.0	114	85 - 115

ANALYSIS SEQUENCE SUMMARY

SM5210B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Sequence:

Instrument:

Calibration:

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
LCS	1B11035-BS1		02/10/11 14:00
Blank	1B11035-BLK1		02/10/11 14:00

METHOD BLANKS

SM5210B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola 2010

Batch: 1B11035

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B11035-BLK1	Biochemical Oxygen Demand	0.920	2.00	2.00	mg/L	U	SM5210B

ANALYSIS SEQUENCE SUMMARY

E410.4

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Sequence:	1B04819	Instrument:	WC-Gensys
Calibration:	0294003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	1B04819-CCV1		02/17/11 20:41
Calibration Blank	1B04819-CCB1		02/17/11 20:42
LCS	1B16012-BS1	021711-004	02/17/11 20:43
Blank	1B16012-BLK1	021711-005	02/17/11 20:44
UST21-MW25-0211	1102098-05	021711-006	02/17/11 20:45
UST21-MW61-0211	1102098-07	021711-007	02/17/11 20:46
UST21-MW55-0211	1102098-09	021711-008	02/17/11 20:47
Calibration Check	1B04819-CCV2		02/17/11 20:55
Calibration Blank	1B04819-CCB2		02/17/11 20:55

METHOD BLANKS

E410.4

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Batch: 1B16012

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B16012-BLK1	Chemical Oxygen Demand	-4.49	20.0	60.0	mg/L	U	E410.4

BLANKS
E410.4

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola 2010
Sequence: 1B04819
Calibration: 0294003
Instrument ID: WC-Gensys

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B04819-CCB1	Chemical Oxygen Demand	-7.00	20.0	60.0	mg/L	U	E410.4
1B04819-CCB2	Chemical Oxygen Demand	-2.00	20.0	60.0	mg/L	U	E410.4

ANALYSIS SEQUENCE SUMMARY

E410.4

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola 2010
Sequence:	0J29413	Instrument:	WC-Gensys
Calibration:	0294003		

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	0J29413-CAL1	101910CURVE-Recal-006	10/20/10 21:11
Cal Standard	0J29413-CAL2	101910CURVE-Recal-007	10/20/10 21:12
Cal Standard	0J29413-CAL3	101910CURVE-Recal-008	10/20/10 21:13
Cal Standard	0J29413-CAL4	101910CURVE-Recal-009	10/20/10 21:14
Cal Standard	0J29413-CAL5	101910CURVE-Recal-010	10/20/10 21:15
Cal Standard	0J29413-CAL6	101910CURVE-Recal-011	10/20/10 21:16
Cal Standard	0J29413-CAL7	101910CURVE-Recal-012	10/20/10 21:17

INITIAL AND CONTINUING CALIBRATION CHECK

E410.4

Laboratory: Empirical Laboratories, LLC
Client: Tetra Tech NUS, Inc. (T010)
Instrument ID: WC-Gensys

SDG: CTOJM01_006
Project: CTO JM01 NAS Pensacola_2010
Calibration: 0294003
Sequence: 1B04819

Lab Sample ID	Analyte	True	Found	%R	Units	Control Limit
1B04819-CCV1	Chemical Oxygen Demand	100.0	101.0	101	mg/L	+/- 10.00%
1B04819-CCV2	Chemical Oxygen Demand	400.0	402.3	101	mg/L	+/- 10.00%

PREPARATION BATCH SUMMARY

SM4500S2CF

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola 2010

Batch: 1B15011 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW41-0211	1102098-01	02/15/11 12:40	270.00	200.00
UST21-MW65-0211	1102098-03	02/15/11 12:40	270.00	200.00
UST21-MW25-0211	1102098-05	02/15/11 12:40	270.00	200.00
UST21-MW61-0211	1102098-07	02/15/11 12:40	270.00	200.00
UST21-MW55-0211	1102098-09	02/15/11 12:40	270.00	200.00
Blank	1B15011-BLK1	02/15/11 12:40	250.00	200.00
LCS	1B15011-BS1	02/15/11 12:40	3.00	250.00
LCS Dup	1B15011-BSD1	02/15/11 12:40	3.00	250.00

LCS / LCS DUPLICATE RECOVERY

SM4500S2CF

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B15011	Laboratory ID:	1B15011-BS1
Preparation:	pNone	Initial/Final:	3 mL / 250 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Sulfide	1307	1067	81.6	80 - 120

ANALYTE	SPIKE ADDED (mg/L)	LCSD CONCENTRATION (mg/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Sulfide	1307	1050	80.4	1.57	20	80 - 120

ANALYSIS SEQUENCE SUMMARY

SM4500S2CF

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Sequence:

Instrument:

Calibration:

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Blank	1B15011-BLK1	021511-004	02/15/11 14:00
LCS Dup	1B15011-BSD1	021511-003	02/15/11 14:09
LCS	1B15011-BS1	021511-002	02/15/11 14:09

METHOD BLANKS
SM4500S2CF

Laboratory: Empirical Laboratories, LLC
SDG: CTOJM01_006
Client: Tetra Tech NUS, Inc. (T010)
Project: CTO JM01 NAS Pensacola_2010

Batch: 1B15011

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B15011-BLK1	Sulfide	0.00	0.800	4.00	mg/L	U	SM4500S2CF

PREPARATION BATCH SUMMARY

SM2320B

Laboratory: Empirical Laboratories, LLC SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010) Project: CTO JM01 NAS Pensacola_2010

Batch: 1B14027 Batch Matrix: Water Preparation: pNone

SAMPLE NAME	LAB SAMPLE ID	DATE PREPARED	INITIAL VOL./WEIGHT	FINAL VOL.
UST21-MW25-0211	1102098-05	02/15/11 08:00	25.00	25.00
UST21-MW61-0211	1102098-07	02/15/11 08:00	25.00	25.00
UST21-MW55-0211	1102098-09	02/15/11 08:00	25.00	25.00
Blank	1B14027-BLK1	02/15/11 08:00	25.00	25.00
LCS	1B14027-BS1	02/15/11 08:00	25.00	25.00

LCS / LCS DUPLICATE RECOVERY

SM2320B

Laboratory:	Empirical Laboratories, LLC	SDG:	CTOJM01_006
Client:	Tetra Tech NUS, Inc. (T010)	Project:	CTO JM01 NAS Pensacola_2010
Matrix:	Water		
Batch:	1B14027	Laboratory ID:	1B14027-BS1
Preparation:	pNone	Initial/Final:	25 mL / 25 mL

ANALYTE	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC.	QC LIMITS REC.
Alkalinity, Total (as CACO3)	200.0	208.3	104	80 - 120

ANALYSIS SEQUENCE SUMMARY

SM2320B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Sequence:

Instrument:

Calibration:

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Blank	1B14027-BLK1	021511-004	02/15/11 12:10
LCS	1B14027-BS1	021511-003	02/15/11 13:35

METHOD BLANKS

SM2320B

Laboratory: Empirical Laboratories, LLC

SDG: CTOJM01_006

Client: Tetra Tech NUS, Inc. (T010)

Project: CTO JM01 NAS Pensacola_2010

Batch: 1B14027

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C	Method
1B14027-BLK1	Alkalinity, Total (as CACO3)	0.00	1.00	1.00	mg/L	U	SM2320B