



GROUNDWATER MONITORING PROGRAM FIVE-YEAR REVIEW

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WATERFORD-3 GROUNDWATER MONITORING PROGRAM FIVE-YEAR REVIEW

Prepared for

Entergy Operations – Waterford-3 River Road 17265 Killona, LA 70057

Prepared by

FTN Associates, Ltd. 124 West Sunbridge, Suite 3 Fayetteville, AR 72703

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1.0 INTRODUCTION

In 2007 the Nuclear Energy Institute (NEI) published its Industry Groundwater Protection Initiative (GPI) – Final Guidance Document (NEI 07-07), which describes actions to improve responses to and management of inadvertent radiological releases to groundwater and how best to communicate release information to stakeholders. Implementation of NEI 07-07 at all Entergy Nuclear, Inc. (Entergy) facilities is required by fleet procedure EN-CY-111-R5, Radiological Groundwater Monitoring Program.

An initial hydrogeologic assessment of the Entergy Waterford-3 (WF3) plant in Killona, Louisiana, was conducted in support of the pending NEI GPI program in 2006 by GZA GeoEnvironmental, Inc. (GZA) and Enercon Services, Inc. (Enercon) on behalf of Entergy Operations, Inc. (GZA and Enercon 2007). WF3 began implementation of NEI 07-07 objectives in July 2007 by installing three groundwater monitoring wells (MW-03, MW-04, and MW-05), collecting quarterly groundwater samples from those wells, and recording water level elevations for potentiometric surface mapping from five monitoring installations (the previously mentioned monitoring wells plus pre-existing basemat wells BW-01 and BW-02). Monitoring well installation and data collection were performed by FTN Associates, Ltd. (FTN). Initial NEI GPI activities and data through 2008 are presented in the initial self-assessment report of the GPI program (NEI 07-07 Objective 3.1.a) completed by GZA (2009).

Upon completion of the initial self-assessment, FTN began working with WF3 to develop and implement a site-specific Groundwater Monitoring Plan (GWMP) (FTN 2010) designed to satisfy objectives of NEI 07-07. WF3's GWMP is a dynamic document that describes the hydrogeologic site conceptual model (SCM), the groundwater monitoring network, and groundwater monitoring and investigation activities.

This document is a 5-year hydrogeologic review of the site for 2009-2013, as required by NEI 07-07 (Objective 3.1.b). Additionally, this document is intended to satisfy EN-CY-111-R5 5.15[6], which is a periodic review of site hydrogeologic studies, also required every 5 years, or more frequently under certain circumstances. The purpose of this review is to summarize activities conducted at WF3 by FTN in support of NEI 07-07 and EN-CY-111-R5

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during the reporting period, describe the current understanding of the groundwater system at the site, and make recommendations for continued improvement of the GWMP.

Section 2.0 of this report is review of the site conceptual model. Section 3.0 is an overview of the plant's current groundwater monitoring network. Section 4.0 is an overview of groundwater monitoring program activities. Section 5.0 is a discussion of noted findings during the reporting period. Section 6.0 provides recommendations for program improvements. Section 7.0 summarizes the report and presents concluding remarks. Section 8.0 is a list of selected references. When appropriate, applicable EN-CY-111-R5 or NEI 07-07 objectives are included in the text for reference. Tables, figures, and appendices are included after Section 8.0.

2.0 HYDROGEOLOGIC SITE CONCEPTUAL MODEL

The SCM is a qualitative interpretation of the groundwater system at the site that incorporates information about the site's geology, groundwater, infrastructure, and operations that influence the groundwater system. The SCM is based upon information presented in Sec. 2.4.13 of the WF3 Final Safety Analysis Report (FSAR), the initial self-assessment of the WF3 NEI GPI program (GZA 2009), the GWMP (FTN 2010), and all information included in subsequent sections of this report.

This section documents the current understanding of the hydrogeologic SCM for the shallow groundwater system beneath WF3. Shallow groundwater system is the primary focus with respect to the SCM because shallow groundwater is the most susceptible to contamination from structures, systems, and components (SSC). Although deeper aquifers of local and regional extent exist beneath the site, these units are separated from shallow groundwater by thick sequences of relatively impermeable silts and clays which make impacts to deeper aquifers from inadvertent radiological releases unlikely. Therefore, these deeper water bearing units are not described in further detail in this report. For a detailed review of the geology and groundwater at the site, refer to WF3 FSAR Sec. 2.4.13.

2.1 Shallow Groundwater Occurrence

Shallow groundwater is present across the Mississippi River deltaic plain in isolated coarse-grained Holocene point-bar deposits, distributary-channel deposits, and near-surface sands (WF3 FSAR Sec. 2.4.13.1.11). Subsurface investigations at WF3 prior to site construction concluded that shallow groundwater on site is discontinuous and not hydraulically connected to the Mississippi River (WF3 FSAR Sec. 2.4.13.1.3 and 2.4.13.3); however, data from groundwater monitoring wells installed as part of the NEI GPI indicate that a continuous shallow groundwater unit is present beneath the site and that it is hydraulically connected to the Mississippi River.

Shallow groundwater occurs at the site within two types of materials with different confining conditions: plant backfill sands where shallow groundwater occurs under unconfined conditions and surrounding native deposits where shallow groundwater occurs under confined conditions. The two types of materials are hydraulically connected, and together they are considered a single hydrogeologic unit. Further discussion supporting the hydraulic connection between these three water bodies is included in Section 5.2 of this report.

2.1.1 Shallow Groundwater in Native Deposits

Outside the area of the power block excavation, shallow groundwater occurs in native sand and gravel deposits that contain some organic debris (shells or wood fragments and peat). This unit is present at elevations between -10.35 ft and -24.78 ft (NGVD29) and ranges in thickness from 1.25 ft to at least 10 ft. This shallow groundwater unit is overlain by a sequence of low permeability silts and clays creating a confined condition. The sand and gravel deposits are continuous across the site and were observed in all logs for NEI GPI monitoring well installations, except for MW-03 where no sample was recovered from the corresponding interval, and reviewed logs for borings advanced during pre-construction investigations. At MW-12, drilling was terminated at 40 ft below ground surface (bgs), and the bottom of the sand and gravel unit was not encountered, suggesting this unit probably exceeds 10 ft in thickness.

2.1.2 Shallow Groundwater in Backfill Material

In the area excavated for construction of the power block, native deposits (including the saturated sand and gravels previously described) were removed to an elevation of -40 ft (NGVD29). Engineered sand was then used to backfill the excavation to a site grade elevation of approximately 17 ft (NGVD29) during plant construction. Shallow groundwater in plant backfill occurs under unconfined conditions and is characterized by relatively high water level elevations that are generally stable over time, which are likely due to direct recharge from the ground surface by precipitation.

2.2 Shallow Groundwater Flow

Historically, shallow groundwater flow at WF3 has been described as flowing generally south-southwest away from the Mississippi River, except during low river stages when a transient groundwater divide is created (WF3 FSAR Sec. 2.4.13.2). Water level data collected as part of NEI GPI groundwater monitoring activities indicate two general groundwater flow scenarios. In the first scenario, the elevation of the Mississippi River is higher than on-site groundwater potentiometric elevations, and hydraulic gradients direct flow across the site away from the river. In the second scenario, the highest water level elevations form a groundwater mound typically coincident with northern portions of the plant foundation excavation. This groundwater mound creates a divide where hydraulic gradients direct a portion of groundwater flow away from the mound toward the Mississippi River.

3.0 GROUNDWATER MONITORING NETWORK

The WF3 groundwater monitoring installation network is designed to provide timely detection of radiological contamination of groundwater and map groundwater flow beneath the site. The WF3 network currently consists of ten monitoring wells and two basemat wells (EN-CY-111-R5 5.6[2](f)). Three monitoring wells (MW-03, MW-04, and MW-05) and basemat wells (BW-01 and BW-02) were installed prior to the reporting period. Monitoring wells are used to collect water levels and groundwater samples while basemat wells are only used for

water level data. Figure 1 shows locations of the monitoring installations, and Table 1 contains construction details for the monitoring well network.

3.1 Monitoring Well Installations during Reporting Period

During the reporting period, FTN installed seven monitoring wells in support of the GWMP. Boring logs and well construction diagrams for these wells are included in Appendix A, and well registration forms are included in Appendix B.

3.1.1 MW-06, MW-07, MW-08, and MW-09

In October 2010, four monitoring wells (MW-06, MW-07, MW-08, and MW-09) were installed north, east, and northwest of the plant to expand groundwater flow direction mapping data points, provide water quality data, and provide perimeter detection monitoring locations for shallow groundwater (EN-CY-111-R5 5.6[1](a, c), NEI 07-07 Objective 1.3.a). No separate monitoring well installation report for this group of wells was drafted.

3.1.2 MW-10 and MW-11

In November 2012, two monitoring wells (MW-10 and MW-11) were installed in the native shallow groundwater system hydraulically downgradient from the Original Steam Generator Storage Facility (FTN 2013). These wells were installed in order to detect any inadvertent release of radiological material to groundwater from this SSC (EN-CY-111-R5 5.6[1](a, b, c), NEI 07-07 Objective 1.3.b).

3.1.3 MW-12

In December 2013, one monitoring well (MW-12) was installed in the native shallow groundwater system hydraulically downgradient from the Condensate Storage Tank (FTN 2014). This well was installed in order to detect any inadvertent release of radiological material to groundwater from this SSC (EN-CY-111-R5 5.6[1](a, b, c), NEI 07-07 Objective 1.3.b).

3.2 Drainage Ditches and Groundwater Monitoring

Drainage ditches at the site that satisfy the following conditions could be used for groundwater detection monitoring of radiological contamination:

- <u>The drainage ditch must be hydraulically connected to shallow groundwater.</u> The ditch must be located within excavation backfill sand where shallow groundwater occurs under unconfined conditions that create a relatively elevated water table surface that may be intercepted by ditches. As shown in Figure 2, shallow groundwater in native deposits occurs under confined conditions that restrict groundwater to deeper intervals below drainage ditches.
- <u>The water level elevation in the ditch must be lower than the surrounding</u> <u>groundwater elevation.</u> In order for the groundwater to enter the ditch, a hydraulic gradient from groundwater to the ditch must be present. If the water level in the ditch is higher than the surrounding groundwater, the ditch will function as a recharge source, and water from the ditch will discharge into the groundwater system.
- <u>The ditch must be hydraulically downgradient from the contamination</u>. In order to detect groundwater contamination, the ditch must be located along the groundwater flow path away from the source of contamination.
- <u>Groundwater contamination must be very shallow.</u> Water table elevations are typically slightly higher than ditch invert elevations. In order for a ditch to intercept groundwater contamination, the contamination must be near the water table surface. If the contamination occurs at depth, it may flow beneath the ditch without being detected.

4.0 GROUNDWATER MONITORING PROGRAM ACTIVITIES

Groundwater monitoring activities at WF3 typically include recording water level measurements to map groundwater flow direction and collecting groundwater samples for laboratory analysis. Groundwater sampling events are conducted on a quarterly basis in order to document seasonal variations. Table 2 summarizes groundwater monitoring activities for the NEI 07-07 program.

4.1 Monitoring Installation Inspection and Maintenance

A visual inspection of each monitoring installation is performed prior to recording water levels or collecting groundwater samples in order to ensure the installation will yield accurate information (EN-CY-111-R5 5.6[2]). In order to document inspections and deficiencies, FTN created the Groundwater Level Data Sheet for use during sampling events (Appendix C). This sheet is included in the quarterly groundwater sampling field documentation that is submitted to the site and periodically updated in the GWMP (FTN 2010). For the period of record, the following deficiencies were documented and should be addressed:

- <u>Inadequate painting of above-grade installations</u>. Bollards or well protective covers that require safety yellow paint are located at MW-03, MW-04, MW-05, and MW-06. The safety yellow is meant to make the wells more visible to operators of vehicles and machinery which helps prevent damage resulting from accidental collision.
- <u>Erosion around well installations.</u> Soil erosion has caused washout around bollards or under well pads at wells MW-04, MW-05, and MW-08. The washout makes the well pads susceptible to cracking, heaving, and separation from well (EN-CY-111-R5 5.6[2](a)(1)). Washout around the bollards could potentially render the bollards ineffective as protective barriers.

4.2 Water Level Measurements

Static water level measurements are recorded from monitoring and basemat wells in order to determine hydraulic gradients that control groundwater flow directions (EN-CY-111-R5 5.6[1](c)). For monitoring wells, water levels are collected prior to beginning groundwater sampling activities in the shortest time frame possible to avoid potential effects on hydraulic gradients caused by sampling and temporal variations in groundwater flow. For basemat wells, water level elevations are measured and reported by site personnel and do not always coincide precisely with quarterly groundwater monitoring events. Since 2007, groundwater elevations ranged from 4.15 ft (NGVD29) in MW-05 on June 21, 2011, to 14.93 ft (NGVD29) in MW-08 on June 3, 2013. Table 3 summarizes water level data, and Figure 3 and Figure 4 contain hydrographs for the 2007-2013 period. Due to a limited data set (one observation for the period of record) a hydrograph for MW-12 is not provided.

4.3 Potentiometric Surface Mapping

Potentiometric surface maps showing groundwater elevations and groundwater flow directions were constructed using water level elevation measurements collected during each quarterly groundwater sampling event during the reporting period. Potentiometric surface maps for the reporting period are presented in Appendix D. Potentiometric surface maps compiled prior to this reporting period are included in the GWMP (FTN 2010).

4.4 Groundwater Sampling

Groundwater samples are collected from monitoring wells and analyzed for selected radionuclides in order to detect potential impacts to groundwater from inadvertent leaks or spills. Samples are collected on at least a quarterly basis or more frequently if requested by site personnel (Table 2). Groundwater sampling activities conform to specifications in EN-CY-109-R4, Sampling and Analysis of Ground Water Monitoring Wells, (EN-CY-111-R5 5.8[1]) and are subject to quality assurance/quality control program discussed in the GWMP (FTN 2010).

Groundwater samples are collected using low-flow purging and sampling techniques conducted in accordance with EPA guidelines as described in FTN SOPs included in the WF3 GWMP (FTN 2010). Wells are purged prior to sampling, and field stabilization parameters are recorded at selected time intervals for each well to determine when groundwater representative of the formation is being withdrawn. Once field parameters have met stabilization criteria, samples are collected for tritium and gamma emitting isotopes listed in EN-CY-111-R5 Attachment 9.4. A summary of field parameter data since 2007 is included in Table 4, and field documentation of groundwater monitoring activities for the reporting period is included in Appendix E.

5.0 DISCUSSION

The following discussions are based on data collected during quarterly groundwater sampling events through the end of the reporting period.

5.1 Shallow Groundwater Flow

Of the 20 sets of water level measurements used to construct potentiometric surface maps for the site during the reporting period, the water level elevation of the river was higher than groundwater elevations in monitoring wells and flow was away from the river for eight sets of measurements (e.g., Figure 5). For the remaining 12 sets of measurements, a groundwater mound was present, and for a portion of the site, groundwater flow was toward the river (e.g., Figure 6). The concept of two general groundwater flow scenarios is consistent with observations of potentiometric surfaces under the NEI GPI program since the initial self assessment (GZA 2009).

5.2 Shallow Groundwater Fluctuations

Shallow groundwater at WF3 has been described as unresponsive to Mississippi River fluctuations (WF3 FSAR Sec. 2.4.13.1.3). This appears to be the case for relatively high water level elevations in plant backfill as seen in basemat wells BW-01 and BW-02, which are generally stable over time (Figures 3 and 4). Generally elevated and stable water levels in these wells are likely due to unconfined groundwater conditions in backfill material and direct recharge from the ground surface by precipitation.

MW-07 and MW-08 (Figure 1) are located in native deposits between the Mississippi River and the excavation backfill. Because water in the Mississippi River and excavation backfill is hydraulically connected to the portion of the confined sand and gravel layer between them, there appears to be some effect on water levels in these two wells from recharge by each source. MW-08 appears to be responsive to both changes of water levels in the plant backfill and to changes of stage in the Mississippi River, whereas MW-07 appears to be more strongly responsive to changes of water levels in the plant backfill (Figure 3). The degree to which recharge from each source affects water levels in these two wells is not clear.

Water levels in perimeter monitoring wells (MW-03 through MW-06 and MW-09 through MW-11) generally rise and fall in unison, providing further supporting evidence of the continuity of the sand and gravel unit across the site (Figure 4). Water level fluctuations also appear to be more closely correlated to relatively small water level changes in the saturated plant backfill than to fluctuations in the river. As shown in Figure 2, saturated backfill serves as a

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source of recharge to the confined sand and gravel unit, which forms a hydraulic connection between the Mississippi River and groundwater in the excavation backfill. Because the sides of the excavation are sloped, the excavation area decreases with lower elevations, and recharge events only slightly increase water elevations in the backfill while monitoring wells in the sand and gravel unit show a higher amplitude response.

5.3 Field Parameter Data

Groundwater sampling using low-flow purging techniques relies on stabilization of water levels and water quality parameters to determine when a well has been sufficiently purged to yield a representative groundwater sample. Field parameters are also useful for establishing site-wide groundwater quality. Water quality indicators measured at WF3 include pH, specific conductance, and temperature. Although not considered a stabilization parameter, turbidity is also measured as an indicator of well development and entrainment of solids caused by pump operation. Field parameter water quality data values for the reporting period are relatively consistent for each well.

5.4 Laboratory Analysis Results

Groundwater samples are analyzed for tritium and gamma emitters. If radiological activity is positively detected, then the sample is also analyzed for the presence of hard-to-detect radionuclides listed in EN-CY-111-R5 Attachment 9.4 (EN-CY-111-R5 5.8[2]). If activities of sample results are verified to meet or exceed associated action levels contained in EN-CY-111-R5 Attachment 9.6, then a Condition Report is generated and evaluation of investigatory and corrective actions are considered (EN-CY-111-R5 5.10[3]). Samples collected through the fourth quarter of 2011 were analyzed by the Entergy River Bend Station laboratory in St. Francisville, Louisiana. Subsequent samples have been analyzed by Pace Analytical Services, Inc., of St. Rose, Louisiana, during 2012 and the first quarter of 2013, and Teledyne Brown Engineering, Inc., of Huntsville, Alabama, beginning with the Second Quarter 2013 groundwater sampling event.

During the reporting period, WF3 requested resampling of MW-04 and MW-11 to verify detectable radiological activity in groundwater samples collected during the second quarter of 2012 and the fourth quarter of 2012, respectively. According to site personnel, there were no confirmed positive detections for radiological activity in groundwater collected from monitoring wells during the reporting period, including resampled wells.

6.0 RECOMMENDATIONS

Based on the current status of the WF3 GWMP, FTN recommends the following specific improvements:

- 1. Continue to incorporate new geologic and groundwater data into the hydrogeologic SCM.
- 2. Update the SCM in the GWMP and WF3 FSAR to incorporate the current understanding that a shallow, continuous aquifer exists at the site and appears to be hydraulically connected to saturated plant backfill and the Mississippi River (NEI 07-07 Objective 1.1.e).
- 3. Evaluate installation of water level dataloggers in monitoring wells and basemat wells in order to better elucidate the hydraulic connection between the Mississippi River, saturated backfill, and surrounding saturated native sand and gravel deposits (EN-CY-111-R5 5.6[1](c)).
- 4. Evaluate manholes, vaults, ditches, and other subsurface structures in plant backfill for use as potential groundwater sampling locations.
- 5. Evaluate the need for sentinel wells along pipelines that contain licensed material (NEI 07-07 Objective 1.3.b).
- 6. Install monitoring wells immediately hydraulically downgradient from additional SSCs inside the Secured Owner Controlled Area (SOCA) and Protected Area (PA) as needed to enhance timely detection of releases, spills, and leaks (NEI 07-07 Objective 1.3.b).
- 7. Evaluate quarterly sampling of basemat wells BW-01 and BW-02 for tritium, gamma emitters, and low-flow groundwater sampling stabilization parameters (NEI 07-07 Objective 1.3.b).

7.0 SUMMARY AND CONCLUSIONS

The following summary and conclusions are based on the 5-year hydrogeologic review of the WF3 GWMP from 2009-2013:

- 1. A shallow groundwater aquifer is continuous across the site and appears to be hydraulically connected to saturated plant backfill and the Mississippi River.
- 2. Water level changes in the Mississippi River likely affect groundwater elevations in wells between the power block and river, while water level fluctuations in perimeter wells are more correlated to minor changes in water level elevations in saturated plant backfill.
- 3. Depending on the water level elevation of the Mississippi River, groundwater flow across the site is either unidirectional away from the river or groundwater flows away from a groundwater mound generally coincident with portions of the plant excavation.
- 4. Sentinel groundwater monitoring wells are well-positioned for timely detection of inadvertent releases to groundwater from the Original Steam Generator Storage Facility (MW-10 and MW-11) and the Condensate Storage Tank (MW-12).
- 5. Groundwater monitoring wells MW-03 through MW-09 are positioned to detect inadvertent releases to groundwater before activity leaves the site.
- 6. The WF3 monitoring well network and sampling frequency should be sufficient for detection of inadvertent releases to groundwater.
- 7. Field data and water level data for the reporting period were found to be reasonable and consistent with the hydrogeologic setting.
- 8. The WF3 Groundwater Monitoring Program meets overall objectives of the NEI GPI program.

8.0 REFERENCES

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Tables

Table 1. Groundwater monitoring network installation details, Entergy Waterford-3.

Well ID	Installation Type	Date Installed	Formation Monitored	Northing (ft LA State Plane South Zone NAD83)	Easting (ft LA State Plane South Zone NAD83)	North (ft PGS)	West (ft PGS)	Ground Surface Elevation (ft NGVD29)	Borehole Depth (ft bgs)	Casing Diameter (inches)	Casing Material	WL Reference Elevation (ft NGVD29)	Top of Casing Elevation (ft NGVD29)	Approx. Stick-up Height (ft ags)	Approx. Screened Interval (ft bgs)	Approx. Top of Screened Interval (ft NGVD29)	Approx. Base of Screened Interval (ft NGVD29)	Approx. Filter Pack Interval (ft bgs)	Approx. Bentonite Seal Interval (ft bgs)	Approx. Grout Seal Interval (ft bgs)
BW-01	Basemat Well	~1984	Backfill sand	544955.99	3553653.33	n/a	n/a	17.50	57.5	4	PVC	20.66	20.66	3.2	53.5-57.5	-36.0	-40.0	52.5-57.5	51.5-52.5	0.0-51.5
BW-02	Basemat Well	~1984	Backfill sand	544872.80	3553956.07	n/a	n/a	17.50	57.5	4	PVC	20.27	20.27	2.8	53.5-57.5	-36.0	-40.0	52.5-57.5	51.5-52.5	0.0-51.5
MW-03	Monitoring Well	7/24/2007	Holocene alluvium	543952.20	3552810.27	1851.4	5816.8	14.01	35.0	2	Schedule 40 PVC	16.61	16.59	2.6	24.8-34.8	-10.7	-20.7	22.8-35.0	19.0-22.8	0.0-19.0
MW-04	Monitoring Well	7/24/2007	Holocene alluvium	543447.98	3553051.68	1347.2	5575.4	15.58	35.0	2	Schedule 40 PVC	18.34	18.31	2.7	24.8-34.8	-9.2	-19.2	22.8-35.0	19.8-22.8	0.0-19.8
MW-05	Monitoring Well	7/25/2007	Holocene alluvium	543586.91	3554294.07	1486.1	4333.0	9.65	35.0	2	Schedule 40 PVC	12.26	12.24	2.6	24.8-34.8	-15.1	-25.1	22.8-35.0	19.0-22.8	0.0-19.0
MW-06	Monitoring Well	10/5/2010	Holocene alluvium	544399.37	3554431.09	4132.9	3056.1	11.61	33.0	2	Schedule 40 PVC	14.02	14.01	2.4	22.7-32.7	-11.1	-21.1	21.0-33.0	18.0-21.0	0.0-18.0
MW-07	Monitoring Well	10/25/2010	Holocene alluvium	545122.87	3554397.70	4783.6	3374.2	16.31	38.0	2	Schedule 40 PVC	19.51	19.46	3.2	27.7-37.7	-11.4	-21.4	25.5-38.0	22.4-25.5	0.0-22.4
MW-08	Monitoring Well	10/6/2010	Holocene alluvium	545449.67	3553674.67	4796.1	4167.6	16.37	38.0	2	Schedule 40 PVC	19.88	19.84	3.5	27.7-37.7	-11.3	-21.3	25.0-38.0	22.3-25.0	0.0-22.3
MW-09	Monitoring Well	10/6/2010	Holocene alluvium	545202.96	352738.14	4197.5	4929.0	13.65	38.0	2	Schedule 40 PVC	15.88	15.87	2.2	27.7-37.7	-14.1	-24.1	21.0-38.0	18.0-21.0	0.0-18.0
MW-10	Monitoring Well	11/1/2012	Holocene alluvium	543116.44	3553144.73	2443.6	3726.3	15.96	36.0	2	Schedule 80 PVC	18.47	18.47	2.5	25.8-35.8	-9.8	-19.8	23.0-36.0	20.0-23.0	0.0-20.0
MW-11	Monitoring Well	11/1/2012	Holocene alluvium	543074.20	3553225.08	2437.6	3636.1	15.93	40.0	2	Schedule 80 PVC	18.77	18.77	2.8	25.8-35.8	-9.9	-19.9	23.0-36.0	20.0-23.0	0.0-20.0
MW-12	Monitoring Well	12/13/2013	Holocene alluvium	544174.58	3553334.61	3491.0	3972.6	15.22	40.0	2	Schedule 80 PVC	18.13	18.13	2.9	29.7-39.7	-14.5	-24.5	27.0-40.0	24.0-27.0	0.0-24.0

Notes:

NAD83: North American Datum of 1983.

NGVD29: National Geodetic Vertical Datum of 1929.

PGS: Plant Grid System.

ft bgs: Feet below ground surface. ft ags: Feet above ground surface.

n/a: Information not available.

Table 2. Tasks over time 2007-2013, Entergy Waterford-3.

Week	7/24/	2007	12/4	/2007	1/30/	/2008	5/13	/2008	8/5/2	2008	11/19	8/2008	3/9/	2009	6/16	/2009	7/21/	2009	10/12	/2009	2/22	/2010	5/11/	2010	8/23/	2010	11/16	/2010
Event	3Q			2007		2000		2000	30			2000 208		09		2003	30			2003		2010		10	3Q			<u>, 2010</u> 210
Well ID	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample
MW-01	1		1								1		1		1		1				1		1		1		1	
MW-02	1		1								1		1		1		1				1		1		1		1	
MW-03	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MW-04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MW-05 MW-06	I	I	I	I	I	I	I		I	I	I	I		I	I	I	I	I	I	I	I	I	I	I	I		1	1
MW-07																											1	1
MW-08																											1	1
MW-09																											1	1
MW-10																												
MW-11 MW-12																												
Subtotal	5	3	5	3	3	3	3	3	3	3	5	3	5	3	5	3	5	3	3	3	5	3	5	3	5	3	9	7
Equipment Blanks	n/a	0	n/a	0	n/a	1	n/a	1	n/a	1	n/a	1	n/a		n/a	1												
Duplicates	n/a	0	n/a	0	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1
Grand Total	5	3	5	3	3	5	3	5	3	5	5	5	11/a	5	17/a	5	5	5	3	5	5	5	5	5	5	5	9	9
Week	3/28/		6/21/		9/13/			3/2011	-	2012		/2012	9/6/	-	-	/2012		/2012	12/10			/2013		2013	9/9/2	-	-	/2013
Event	3/20/ 1Q			2011 211		2011	-	2011 211	3/20/ 1Q			2012		mple		2012		12012	Resa			2013		13	3Q			2013
Lvent		••		1		<u> </u>		<u> </u>				<1 <u>2</u>		Inple				.12		inple				15		15		13
Well ID	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample	Water Level	Sample
MW-01	1		1		1		1		1		1				1		1				1		1		1		1	
MW-02	1		1		1		1		1		1				1		1				1		1		1		1	
MW-03	1	1	1	1	1	1	1	1	1	1	1	1			1	1	1	1			1	1	1	1	1	1	1	1
MW-04	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1			1	1	1	1	1	1	1	1
MW-05	1	1	1	1	1	1	1	1	1	1	1	1			1	1	1	1			1	1	1	1	1	1	1	1
MW-06	1	1	1	1	1	1	1	1	1	1	1	1			1	1	1	1			1	1	1	1	1	1	1	1
MW-07	1	1	1	1	1	1	1	1	1	1	1	1			1	1	1	1			1	1	1	1	1	1	1	1
MW-08	1	1	1	1	1	1	1	1	1	1	1	1			1	1	1	1			1	1	1	1	1	1	1	1
MW-09	1	1	1	1	1	1	1	1	1	1	1	1			1	1	1	1			1	1	1	1	1	1	1	1
MW-10																	1	1			1	1	1	1	1	1	1	1
MW-11																	1	1		1	1	1	1	1	1	1	1	1
MW-12																											1	1
Subtotal	9	7	9	7	9	7	9	7	9	7	9	7	0	1	9	7	11	9	0	1	11	9	11	9	11	9	12	10
Equipment Blanks	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1
Duplicates	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1	n/a	1
Grand Total	9	9	9	9	9	9	9	9	9	9	9	9	0	3	9	9	11	11	0	3	11	11	11	11	11	11	12	12
													0		3	3												

Monitoring well had not been installed.

													Mississippi
Site ID	BW-01	BW-02	MW-03	MW-04	MW-05	MW-06	MW-07	MW-08	MW-09	MW-10	MW-11	MW-12	River
Date					I	Water Lev	vel Elevati	on (ft NG	VD29)				
7/24/2007			10.39										
7/25/2007	12.81	12.60		9.06	5.86								
7/26/2007			10.88	9.40	5.90								7.92
9/5/2007	12.26	12.17	10.54	9.76	5.44								4.43
9/25/2007	12.26	12.12	10.79	9.81	5.69								3.68
12/4/2007	11.76	11.72	9.30	9.44	4.99								2.29
1/30/2008	11.71	11.70	11.20	9.49	7.09								6.47
5/13/2008	11.61	12.10	10.49	9.43	5.82								18.21
8/5/2008	11.56	11.82	9.45	9.57	5.17								7.95
11/18/2008	11.70	11.70	9.20	9.56	4.86								
3/9/2009	11.62	11.77	9.80	9.15	6.00								
6/16/2009	11.92	11.92	9.36	9.17	4.46								16.22
7/21/2009	12.17	11.97	9.41	9.27	4.56								5.09
10/12/2009	-		11.29	9.92	6.62								8.09
2/18/2010	12.97	12.92											
2/23/2010			11.12	9.64	7.31								17.31
4/19/2010	12.77	12.37											
5/11/2010			9.51	9.24	5.06								12.79
7/15/2010	13.02	12.87											
8/23/2010			11.43	10.31	7.59								6.54
8/24/2010	13.27	13.27											
11/16/2010			10.30	10.02	5.98	9.57	13.08	12.16	11.36				3.34
11/17/2010	12.27	12.27											
3/28/2011	12.22	12.22	10.30	9.41	5.96	9.57	13.20	14.07	11.20				17.00
6/21/2011	12.55	12.59	9.71	9.07	4.15	8.57	12.78	14.13	7.86				17.14
9/13/2011	12.92	12.87	11.02	9.71	6.20	10.04	13.97	13.20	11.42				4.30
12/13/2011	11.97	12.07	9.89	9.04	4.99	8.73	12.36	12.64	9.14				14.74
3/20/2012	12.82	12.87	7.68	8.96	6.60	9.78	13.26	13.78	12.15				14.11
6/18/2012	12.65	13.27	11.00	9.38	7.23	9.96	13.53	12.66	12.29				3.76
9/18/2012	12.47	12.37	11.06	9.92	7.34	10.00	13.98	12.98	12.01				2.89
11/2/2012	12.42	12.27	10.43	9.65	5.12	9.07	12.53	11.66	9.77	8.99	9.05		2.66
2/26/2013	12.57	12.47	11.26	9.40	7.98	10.31	14.21	14.39	12.85	8.57	8.59		11.73
6/3/2013	12.92	12.82	10.53	9.42	6.36	9.78	13.96	14.93	10.72	8.57	8.64		17.00
9/10/2013	12.32	12.32	10.98	9.93	6.43	9.82	13.26	12.76	10.88	8.98	9.06		3.94
12/17/2013	12.17	12.17	10.86	9.70	6.94	9.94	12.97	12.56	12.35	8.46	8.43	10.97	5.29

Table 3. Water level elevations 2007-2013, Entergy - Waterford-3

Notes:

NGVD29: National Geodetic Vertical Datum of 1929.

Water level elevations for BW-01 and BW-02 are provided by site personnel.

River stage elevations obtained from US Army Corps of Engineers (http://rivergages.mvr.usace.army.mil/WaterControl/new/layout.cfm).

River stage elevation at WF3 is interpolated from elevations at the Bonnet Carre and Reserve gauging stations.

			Specific		
Well	Sample	pН	Conductance	Temperature	Turbidity
ID	Date	(su)	(µS/cm)	(°C)	(NTU)
	7/24/2007	6.9	3689	25.4	13
	12/4/2007	6.9	2436	19.2	0
	1/30/2008	6.6	2541	19.3	3
	5/13/2008	6.9	3043	22.9	2
	8/5/2008	6.8	3778	25.9	0
	11/18/2008	7.0	2725	19.2	9
	3/10/2009	6.9	3546	21.2	1
	6/16/2009	6.9	2510	24.6	2
	7/21/2009	6.9	3618	25.3	3
	10/12/2009	6.9	3273	24.4	1
	2/23/2010	7.0	3110	18.7	7
	5/11/2010	7.1	2675	25.6	9
MW-03	8/23/2010	6.8	3163	27.5	1
IVI VV -US	11/16/2010	6.8	3613	23.2	8
	3/28/2011	6.8	3060	24.1	17
	6/21/2011	6.9	3493	28.0	28
	9/13/2011	6.9	2908	27.6	15
	12/13/2011	6.9	2532	22.3	6
	3/21/2012	6.8	2923	18.0	9
	6/19/2012	6.6	2595	25.6	18
	9/19/2012	6.5	3247	25.3	8
	11/1/2012	7.0	3492	24.5	9
	2/27/2013	6.7	2810	20.1	5
	6/3/2013	6.8	3325	24.6	8
	9/10/2013	6.8	3113	26.3	4
	12/17/2013	NR	2782	21.2	12
	7/25/2007	6.7	6490	26.3	2
	12/4/2007	6.6	3625	18.3	0
	1/30/2008	6.5	4663	18.1	1
	5/13/2008	6.7	5200	24.5	1
	8/5/2008	6.5	5217	25.4	0
	11/18/2008	6.6	3658	19.4	10
	3/10/2009	7.0	4800	21.8	12
MW-04	5/16/2009	6.6	5386	26.0	6
	7/21/2009	6.5	4927	25.7	6
	10/12/2009	6.7	5974	25.2	0
	2/23/2010	7.3	4660	17.5	24
	5/11/2010	6.6	4931	26.1	13
	8/23/2010	6.6	5702	28.7	16
	11/16/2010	6.7	6385	22.6	4
	3/28/2011	6.5	4787	24.2	24

Table 4. Field parameter data 2007-2013, Entergy - Waterford-3.

			Specific		
Well	Sample	pН	Conductance	Temperature	Turbidity
ID	Date	(su)	(µS/cm)	(°C)	(NTU)
	6/21/2011	6.7	5155	24.2	5
	9/13/2011	6.7	5248	27.3	8
	12/13/2011	6.6	4143	21.3	3
	3/21/2012	6.5	5267	20.0	56
	6/19/2012	6.6	5695	24.1	23
MW-04	9/19/2012	6.4	5985	24.7	6
	10/31/2012	6.7	5443	24.0	9
	2/27/2013	6.5	5041	21.5	11
	6/3/2013	6.7	5817	24.0	16
	9/10/2013	6.6	4864	26.1	12
	12/17/2013	NR	5237	22.3	4
	7/25/2007	7.0	1860	26.4	71
	12/4/2007	7.1	2410	22.9	2
	1/30/2008	6.8	1352	18.9	7
	5/13/2008	7.1	3650	24.4	3
	8/5/2008	7.0	2901	25.7	0
	11/18/2008	7.2	4752	21.2	18
	3/10/2009	7.9	1591	22.7	2
	6/16/2009	7.2	1955	27.4	5
	7/21/2009	7.1	4179	27.1	9
	10/12/2009	7.1	1818	27.4	27
	2/23/2010	8.0	1529	16.6	30
	5/11/2010	7.0	4850	25.7	13
MW-05	8/23/2010	7.0	1958	29.3	16
141 44 -03	11/16/2010	7.1	6593	22.9	8
	3/29/2011	7.2	4825	22.5	14
	6/21/2011	7.2	6037	25.8	3
	9/13/2011	7.2	2662	27.8	10
	12/13/2011	7.3	5252	22.3	3
	3/21/2012	7.0	1918	20.6	3
	6/18/2012	7.1	1922	25.2	11
	9/19/2012	7.0	3234	25.1	3
	10/31/2012	7.3	5643	23.9	9
	2/27/2013	7.0	1616	19.6	15
	6/4/2013	7.1	4093	23.5	7
	9/10/2013	7.1	4228	27.6	36
	12/18/2013	NR	2358	20.2	7
	3/28/2011	7.0	2810	24.4	5
MW-06	6/21/2011	7.1	3101	27.5	4
141 44 -00	9/13/2011	7.3	3092	29.3	12
	12/13/2011	7.2	2719	22.4	0

Table 4. Field parameter data 2007-2013, Entergy - Waterford-3.

			Specific		
Well	Sample	pН	Conductance	Temperature	Turbidity
ID	Date	(su)	(µS/cm)	(°C)	(NTU)
	3/21/2012	7.0	3219	23.4	12
	6/18/2012	7.2	3159	26.8	11
	9/18/2012	7.0	3373	26.2	6
	11/2/2012	7.5	3264	23.1	17
MW-06	2/27/2013	7.0	2966	21.2	9
	6/4/2013	7.1	2793	24.5	6
	9/11/2013	7.2	3013	26.4	5
	12/18/2013	NR	2900	20.4	5
	3/28/2011	6.8	1249	25.7	37
	6/21/2011	6.9	2300	26.1	4
	9/14/2011	7.0	1562	25.6	12
	12/13/2011	6.9	1405	22.9	1
	3/20/2012	6.6	1411	25.6	21
MAN 07	6/18/2012	6.8	1340	27.4	8
MW-07	9/18/2012	6.5	1144	26.8	4
	10/31/2012	7.0	1232	24.0	6
	2/27/2013	6.6	1019	22.6	1
	6/4/2013	6.7	958	24.0	4
	9/10/2013	6.7	1002	25.8	5
	12/18/2013	NR	961	22.2	4
	3/28/2011	6.8	1065	26.7	15
	6/21/2011	6.9	1532	26.0	5
	9/14/2011	6.9	1114	26.5	9
	12/13/2011	6.8	1037	22.7	4
	3/20/2012	6.6	1559	24.0	18
MW-08	6/18/2012	6.7	1308	25.5	8
101 00 -00	9/18/2012	6.4	1412	26.7	3
	11/1/2012	6.9	1288	24.5	11
	2/27/2013	6.6	1137	21.6	1
	6/4/2013	6.8	1283	24.9	6
	9/11/2013	6.6	1059	26.2	4
	12/18/2013	NR	1052	22.6	6
	3/29/2011	6.8	1899	20.2	6
	6/21/2011	6.9	2765	23.1	3
	9/14/2011	7.1	2113	27.3	14
	12/13/2011	7.0	1984	21.3	3
MW-09	3/20/2012	6.6	2792	22.5	31
	6/18/2012	6.7	2393	24.1	11
	9/18/2012	6.5	2563	25.4	4
	11/1/2012	7.2	2681	22.7	8
	2/26/2013	7.0	2090	20.0	10

Table 4. Field parameter data 2007-2013, Entergy - Waterford-3.

			Specific		
Well	Sample	pН	Conductance	Temperature	Turbidity
ID	Date	(su)	(µS/cm)	(°C)	(NTU)
	6/4/2013	6.7	2305	24.6	2
MW-09	9/11/2013	6.9	2526	25.7	5
	12/18/2013	NR	2151	21.7	7
	11/2/2012	7.0	7048	26.0	261
	2/27/2013	6.9	5720	20.7	17
MW-10	6/3/2013	6.8	6491	24.8	3
	9/11/2013	6.8	6471	25.4	2
	12/18/2013	NR	6341	22.2	5
	11/1/2012	6.9	5057	23.2	101
	2/26/2013	6.9	5451	19.1	11
MW-11	6/3/2013	6.8	5714	26.1	8
	9/11/2013	6.7	4979	26.1	4
	12/18/2013	NR	5752	21.1	6
MW-12	12/12/2013	NR	2468	21.8	212

Table 4. Field parameter data 2007-2013, Entergy - Waterford-3.

Notes: NR: Not recorded due to instrument malfunction.

Figures

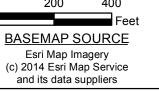
Figure 1 Entergy Waterford-3, Monitoring Well Network



Source: Esri, Digital Globe, Geo Eye, i-cubed, USDA, USGS, AEX, swisstopo, and the GIS User Community Gethfapping,PAarogrid,9GN,1 200 400 0 Groundwater Monitoring Installation ♦ Boring

- Cross Section Line A-A'
- Approximate Property Boundary

Entergy Waterford-3 Monitoring Well Network Cross Section Line A-A'





By: DWP Date: April 3, 2014 Project No. 06045-0031-002

S:\gis\06045-0031-004\mapdoc\Cross Section A-A'.mxd

Figure 2 Entergy Waterford-3, Cross Section A-A'

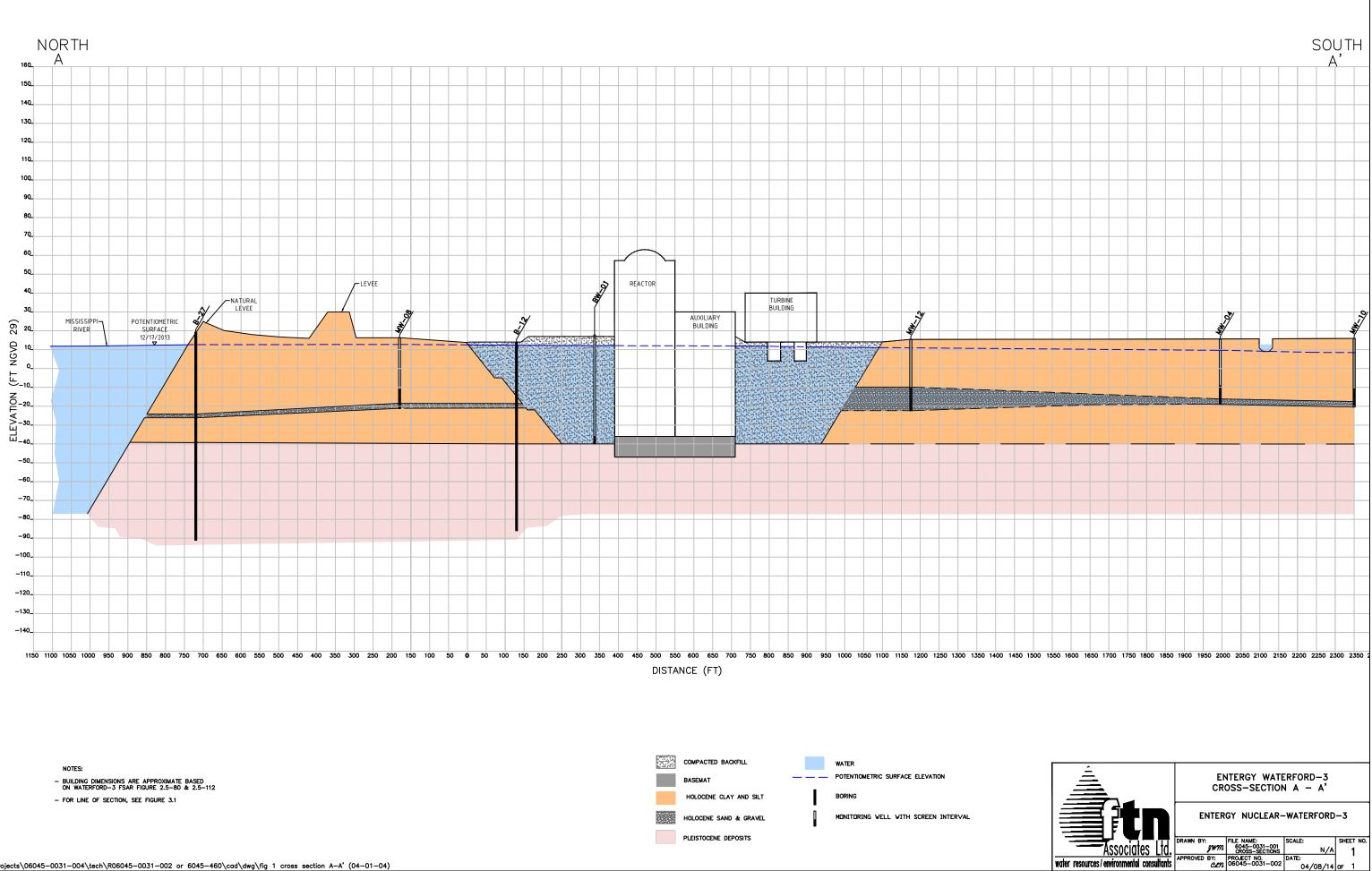
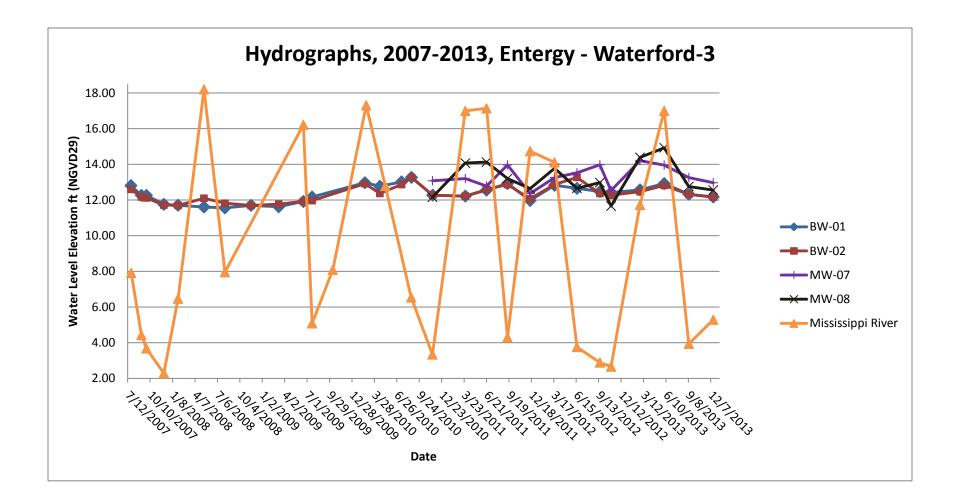


Figure 3

Hydrographs: Monitoring Wells adjacent to Mississippi River Compared to Basemat Wells and Mississippi River



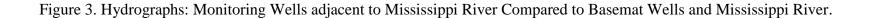


Figure 4

Hydrographs: Monitoring Wells adjacent to Mississippi River Compared to Basemat Wells and Mississippi River

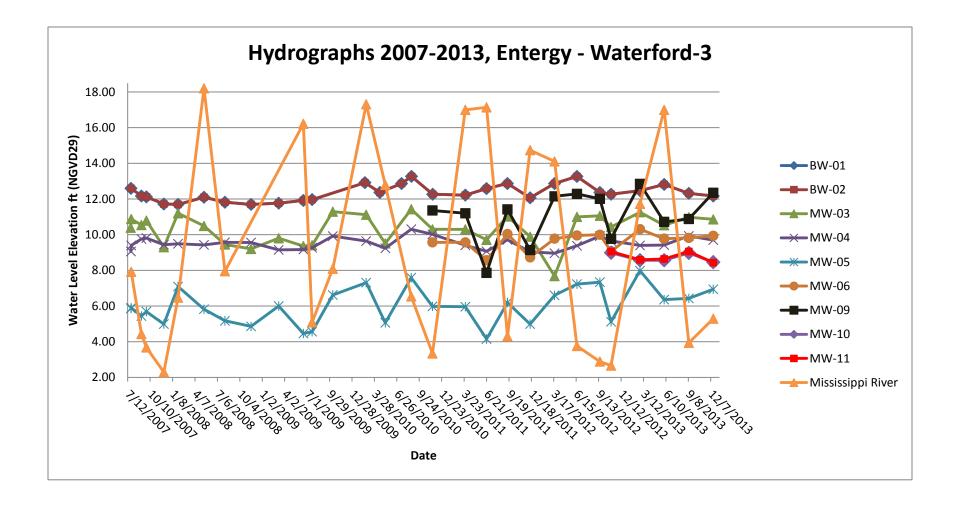
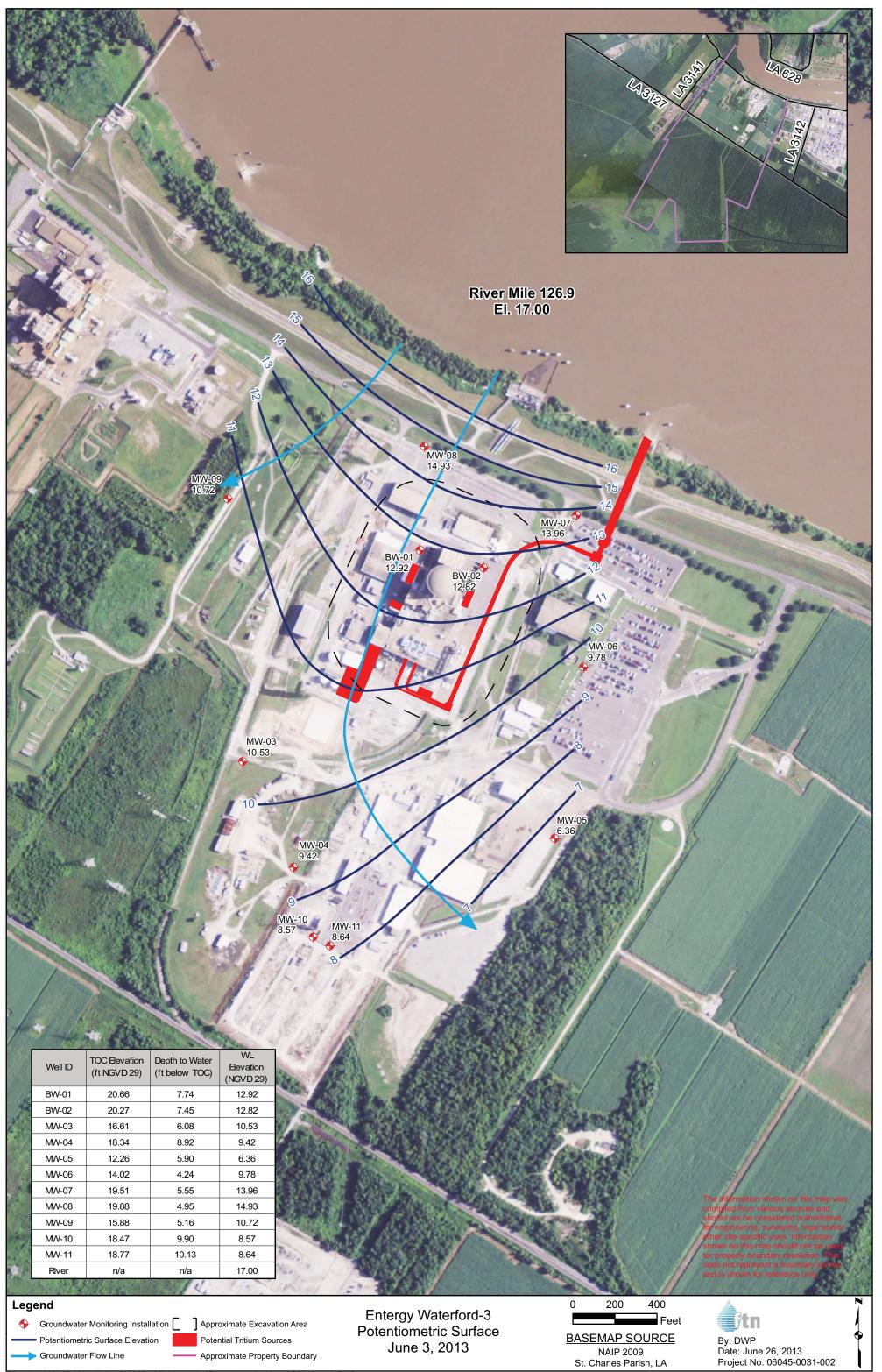


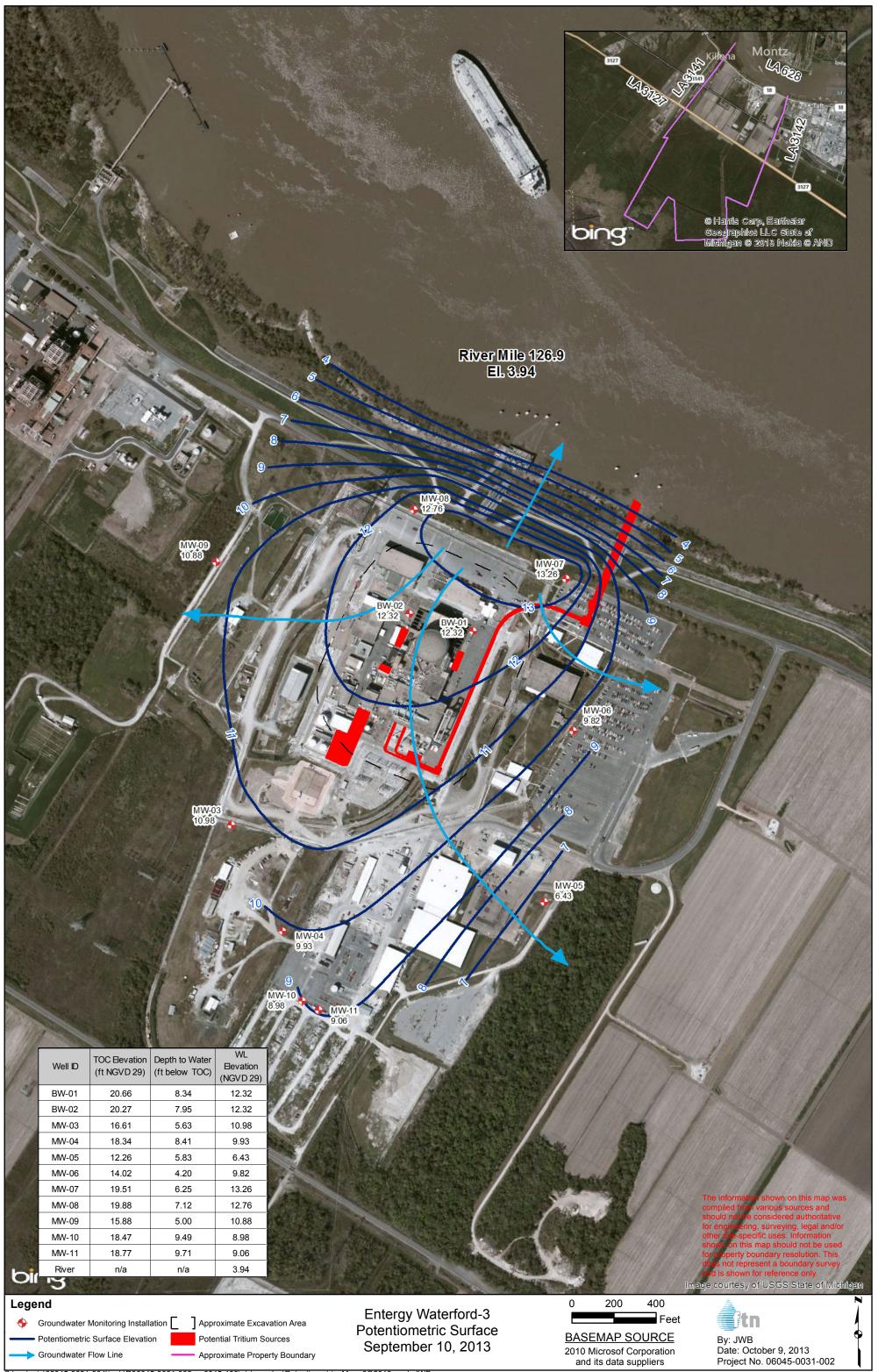
Figure 4. Hydrographs: Perimeter Monitoring Wells Compared to Basemat Wells and .Mississippi River.

Figure 5
Potentiometric Surface Map without Groundwater Divide



S:\projects\06045-0031-004\tech\6045-460\gis\mapdoc\Potentiometric_Map_2Q2013.mxd DWP

Figure 6
Potentiometric Surface Map with Groundwater Divide



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APPENDIX A

Boring Logs and Well Construction Diagrams

Associates Lta water resources / environmental consultants	PROJECT: Waterford-3 LOCATION: Killona, LA DRILLING CONTRACTOR: Tri-State Testing Services DRILLING EQUIPMENT: CME 75 DRILLING METHOD:		D6 D: D6 ING: 99.37 ft D SURFACE ELEV.: I ft	EASTING: 3554431.09 ft TOC ELEVATION: 14.01 (ft msl) DEPTH TO WATER (11/16/2010):	
LOGGED BY:	Hollow stem auger SAMPLING METHOD:	-	TARTED:	4.44 ft bgs DATE COMPLETED:	
Graphic Log	5-foot continuous sampler Description	10/5/ 2007 8	v	10/5/10 Vell truction	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	 GRAVEL with shell, light gray, loose, medium coarse, dry to moist. SAND with gravel and shell, brown, fine grained, medium dense, moist to dry. SILT, grayish brown, lean, medium stiff, some dark gray mottles and roots, moist @ 14.2 ft. gray @ 16-17.1 ft. clayey, dark gray @ 19.3 ft. with clay, soft to medium stiff, moist to wet. FAT CLAY with silt, dark gray, soft to medium stiff, moist to wet. SILT with sand (very fine grained), gray, grass and twigs, medium stiff, lean, saturated. SAND, dark gray, fine grained, medium dense, wood fragments, black granular deposits on bedding planes, saturated. SAND, dark gray (green), saturated. CLAYEY SILT, grayish brown, medium stiff, slightly plastic, moist. SAND, gray, fine grained, medium dense, saturated. CLAYEY GRAVEL, brownish gray, shell fragments, dense, fat clay matrix, coarse fragments, dark gray, medium stiff, slightly plastic, moist to wet. 	 85 95 100 100 100 100 100 100 		 PVC cap with dedicated sampling tubing vented below cap 25.7 ft of 2 in dia., Sch. 40 PVC solid riser from 3 ft of stick-up to 22.7 ft bgs Cement/bentonite grout to 18 ft bgs Bentonite pellet seal from 18 ft bgs to 21 ft bgs Silica size 10/20 filter pack from 21 ft bgs to 33 ft bgs 10 ft of 2 in dia., 0.010 in slot, Sch. 40 PVC screen 0.25 ft, 2 in dia., Sch. 40 PVC end cap Drilling terminated at 33 ft bgs 	

			PROJECT:	BORING	G ID:					
			Waterford-3	MW-	07					
	<u>-</u>		LOCATION:	WELL I	D:					
Killona, LA				MW-	MW-07					
_			DRILLING CONTRACTOR:	NORTH	ING:	EASTING:				
_	35	t n	Tri-State Testing Services	5451	22.87 ft	3554397.7 ft				
			DRILLING EQUIPMENT:	GROUN	ID SURFACE ELEV.:	TOC ELEVATION:				
	Ass	<u>ociates Lta</u>	CME 75	16.31	1 ft	19.46 (ft msl)				
<i>N</i> ater resou	irces / enviror	imental consultants	DRILLING METHOD:		DEPTH:	DEPTH TO WATER (11/16/201				
			Hollow stem auger	38 ft		6.38 ft bgs				
			SAMPLING METHOD:		TARTED:	DATE COMPLETED:				
.OGGE CLN			5-foot continuous sampler	10/5/		10/5/10				
		U								
Depth (feet)	nscs	Graphic Log	Description	REC		Vell				
ept	ő	Lo Gra	Decemption	%	Construction					
-5										
-						PVC cap with dedicated sampling tubing				
0 —			SILT, grayish brown, lean, medium stiff, some shell	_		vented below cap				
	ML	<u> </u>	fragments, moist,	100		P				
_	SP		SAND, light brown, fine to medium grained, loose, dry to moist.			30.7 ft of 2 in dia., Sch. 40				
			SILT with clay, grayish brown, medium stiff, lean, dry to	-		PVC solid riser from 3 ft of				
5 —	-		moist @ 3.5 ft. dark gray, moist.			stick-up to 27.7 ft bgs				
•	ML			100		•				
_						•				
						Cement/bentonite grout to				
~						22.4 ft bgs				
0 —			SILT with sand, gray, lean, medium coarse, wet.	100						
	SM/ML									
-	ML		SILT, dark gray, medium stiff, lean, moist.							
			SILT with clay, grayish brown, medium stiff, slightly plastic, moist to wet							
5 —	-			100						
	ML		@ 15.5 ft. dark gray, moist.							
_	-									
0 —				100						
	CL	++++	SILTY CLAY, grayish brown, slightly plastic, medium stiff to soft, wet.	100						
_	CL		CLAY, gray with brown mottles, some wood fragments, lean,			Bentonite pellet seal from				
			stiff, moist.			22.4 ft bgs to 25.5 ft bgs				
5 —	SP	/////	SAND with shell fragments, brown, loose, some wood fragments, fine to medium grained, saturated.							
			CLAY, gray with brown mottles, some wood fragments, lean,	100						
_	CL		stiff, moist.			Silica size 10/20 filter pack				
	UL					from 25.5 ft bgs to 38 ft bgs				
0 —										
0		<u>////</u>		100						
	SM		SILTY SAND, dark gray, very fine grained, loose to medium stiff, wood fragments, saturated.			10 ft of 2 in dia., 0.010 in slot,				
-	1		NO RECOVERY	_		Sch. 40 PVC screen				
~										
5 —	PT	~~~~~	WOOD FRAGMENTS AND LEAF LITTER, brown, no minera	I 75						
	SP		Amatter, saturated.	_		0.25 ft, 2 in dia., Sch. 40 PVC				
_	CL	CL granular deposits on bedding planes, saturated.				end cap				
			CLAY, gray, lean, stiff, moist.			Drilling terminated at 38 ft bgs				

		Material O							
		Waterford-3	MW-0	08					
<u>-</u>		LOCATION:	WELL ID: MW-08						
		Killona, LA							
	2	DRILLING CONTRACTOR:	NORTH	ING:	EASTING:				
		Tri-State Testing Services	5454	49.67 ft	3553674.67 ft				
		DRILLING EQUIPMENT:	GROUN	D SURFACE ELEV.:	TOC ELEVATION:				
Ass	<u>sociates Lt</u>	CME 75	16.37	′ ft	19.84 (ft msl)				
rces / enviro	onmental consultant	DRILLING METHOD:	TOTAL	DEPTH:	DEPTH TO WATER (11/16/201				
		Hollow stem auger	38 ft	bgs	7.68 ft bgs				
D BY		SAMPLING METHOD:	DATE S	TARTED:	DATE COMPLETED:				
	1	5-foot continuous sampler	10/6/	10	10/6/10				
nscs	Braphic	Description	% REC		Vell truction				
			0,						
				-					
					PVC cap with dedicated sampling tubing				
		CLAYEY SILT, brown to grayish brown, lean, medium stiff,	1		vented below cap				
			100						
ML					30.7 ft of 2 in dia., Sch. 40 PVC solid riser from 3 ft of				
					stick-up to 27.7 ft bgs				
NAL		SILT gravish brown medium stiff lean moist	100						
IVIL			-						
SM		grained, moist.			Cement/bentonite grout to				
			4		22.3 ft bgs				
		plastic, medium stiff, moist to wet.	100						
ML									
			4						
		NORECOVERY							
			20						
		CLAYEY SILT, dark grayish brown to dark gray, slightly							
ML									
			100						
SIVI		SILTY SAND, gray, medium dense, fine grained, wet.	-						
		lean, wood fragments, moist.			Bentonite pellet seal from 22.3 ft bgs to 25 ft bgs				
					22.0 h bgs to 20 h bgs				
CL			100						
					Silica size 10/20 filter pack from 25 ft bgs to 38 ft bgs				
		SILT, gray, medium stiff, lean, roots, moist	100						
ML					10 ft of 2 in dia., 0.010 in slot,				
		- • •			Sch. 40 PVC screen				
рт			4						
		smooth and rounded, saturated.	80						
SP		SAND, gray, fine to medium grained, loose to medium dense,	0		0.25 ft, 2 in dia., Sch. 40 PVC				
СН	11111		4		end cap				
0/1			-		Drilling terminated at 38 ft bgs				
OTES	-	-							
	D BY: SSS ML ML SM ML SM CL SM CL PT SP CH	SSS ML ML SM ML SM CL ML	DRILLING CONTRACTOR: Tri-State Testing Services DRILLING EQUIPMENT: CME 75 DRILLING METHOD: Additional contains D BY: SAMPLING METHOD: S-foot continuous sampler Sg Bg Sg Bg Sg Bg Sg Sg Sg Bg CLAYEY SILT, brown to grayish brown, lean, medium stiff, roots, moist Q 2 ft. some shell and gravel fragments. ML ML SM SILT, grayish brown, medium stiff, lean, moist. SANDY SILT, light grayish brown, lean medium stiff, very fine grained, moist. SM ML SILT, gray. medium stiff, moist to wet. NO RECOVERY ML SILTY SAND, gray, medium dense, fine grained, wet. SILTY SAND, gray, medium dense, fine grained, wet. SILTY SAND, gray, medium dense, fine grained, wet. SILTY SAND, gray, fine to medium gray, loose, saturated. Q 30-30.2.1. fine sand, gray, loose, saturated. Q 30-	DRILLING CONTRACTOR: NORTH Tri-State Testing Services 5454 DRILLING EQUIPMENT: GROUN CME 75 16.33 DRILLING METHOD: TOTAL Hollow stem auger 38 ft D BY: SAMPLING METHOD: D BY: CLAYEY SILT, brown to grayish brown, lean, medium stiff. ML SILT, grayish brown, medium stiff, lean, moist. 100 ML SAMD Y SILT, ilgt grayish brown to dark gray, slightly 100 ML CLAYEY SILT, dark grayish brown to dark gray, slightly 100 NO RECOVERY 20 100 100 ML SILT, gray, medium stiff, noist to wet. 100 ML <t< td=""><td>DRILLING CONTRACTOR: NORTHING: Tri-State Testing Services 546449.67 ft DRILLING COUPRENT: GROUND SURPACE ELEV: DRILLING RETHOD: 16.37 ft D BY: SAMELING METHOD: SAMELING METHOD: DATE STARTED: D BY: SAMELING METHOD: SAMELING METHOD: DATE STARTED: 10/6/10 S-foot continuous sampler 10/6/10 Start Starter SG Bg g D BY: SAMELING METHOD: SAMELING METHOD: DATE STARTED: 10/6/10 Start Starter SG Bg g D BY: SAMELING METHOD: SAMELING METHOD: DATE STARTED: 100 Start Starter ML SILT, grayish trown, medum stiff, lean, moist. ML SLT, grayish trown, medum stiff, lean, moist. ML SANDY SLT, light grayish trown to dark gray, slightly ML CLAYEY SLT, dark grayish trown to dark gray, slightly ML CLAYEY SLT, dark grayish trown to dark gray, slightly ML SLTY SAND, gray, medium derse, fine grained, wet. SILT, gray, medium stiff, lean, roots, moist</td></t<>	DRILLING CONTRACTOR: NORTHING: Tri-State Testing Services 546449.67 ft DRILLING COUPRENT: GROUND SURPACE ELEV: DRILLING RETHOD: 16.37 ft D BY: SAMELING METHOD: SAMELING METHOD: DATE STARTED: D BY: SAMELING METHOD: SAMELING METHOD: DATE STARTED: 10/6/10 S-foot continuous sampler 10/6/10 Start Starter SG Bg g D BY: SAMELING METHOD: SAMELING METHOD: DATE STARTED: 10/6/10 Start Starter SG Bg g D BY: SAMELING METHOD: SAMELING METHOD: DATE STARTED: 100 Start Starter ML SILT, grayish trown, medum stiff, lean, moist. ML SLT, grayish trown, medum stiff, lean, moist. ML SANDY SLT, light grayish trown to dark gray, slightly ML CLAYEY SLT, dark grayish trown to dark gray, slightly ML CLAYEY SLT, dark grayish trown to dark gray, slightly ML SLTY SAND, gray, medium derse, fine grained, wet. SILT, gray, medium stiff, lean, roots, moist				

			PROJECT:	BORING	G ID:					
			Waterford-3	MW-	09					
	<u>-</u>		LOCATION:	WELL ID:						
<u> </u>			Killona, LA	MW-						
			DRILLING CONTRACTOR:	NORTH	ING:	EASTING:				
	I i		Tri-State Testing Services	5452	02.96 ft	352738.14 ft				
			DRILLING EQUIPMENT:	GROUN	ID SURFACE ELEV.:	TOC ELEVATION:				
	Ass	<u>sociates Ltd</u> .	CME 75	13.6	5 ft	15.87 (ft msl)				
water resou	rces / enviro	onmental consultants	DRILLING METHOD:	TOTAL	DEPTH:	DEPTH TO WATER (11/16/2010):				
			Hollow stem auger	38 ft	bgs	4.51 ft bgs				
LOGGE	D BY.		SAMPLING METHOD:	DATE S	TARTED:	DATE COMPLETED:				
CLN			5-foot continuous sampler	10/6/	10	10/6/10				
ප් Depth (feet)	nscs	Graphic Log	Description	REC		Vell				
bept	Š	Log Gra	Description	1%	Const	truction				
-5										
-						PVC cap with dedicated sampling tubing				
0 -	GC	06/06/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0		-		vented below cap				
	-		coarse fragments, clay matrix, dry to moist. CLAYEY SILT, dark grayish brown, lean, medium stiff, dry to	90						
-	ML		moist.							
						25.7 ft of 2 in dia., Sch. 40 PVC solid riser from 3 ft of				
5 —	ML		SILT, grayish brown with brown mottles, medium stiff, lean, moist @ 6.5 ft. wet to soft.	100		stick-up to 22.7 ft bgs				
-	СН		FAT CLAY, dark gray, medium stiff, moist @ 9.5 silt.	1						
	ML		SILT, grayish brown with brown mottles, medium stiff, lean,	-		Cement/bentonite grout to 18				
10 —			moist @ 6.5 ft. wet to soft. CLAY, dark gray, lean, medium stiff to stiff, abundant wood	100		ft bgs				
			fragments, moist.							
-	CL									
	0L									
15 —				100						
	ML		CLAYEY SILT, gray, lean, medium stiff, moist.							
-			SILTY CLAY, dark gray, mdium stiff, fat, moist	1						
	СН					Bentonite pellet seal from 18				
20 —		4444	CLAY, gray with brown mottles, medium stiff to stiff, lean,	100		ft bgs to 21 ft bgs				
	<u>.</u>	\////	abundant roots, moist.							
-	CL	\////								
				_		Silica size 10/20 filter pack				
25 —	ML		SILT, gray with brown mottles, lean, medium stiff, moist to wet.	100		from 21 ft bgs to 38 ft bgs				
	SM		SILTY SAND, gray, loose, fine graned, wet							
-			SILT, gray with brown mottles, lean, medium stiff, moist to	1						
	ML		wet.			10 ft of 2 in dia., 0.010 in slot,				
30 —	SM		SILTY SAND, gray, fine grained, medium dense, small black			Sch. 40 PVC screen				
			sandy deposits, saturated. GRAVEL with silt, gray, shell fragments with silt matrix, loose	75						
-			to medium dense, abundant wood fragments, saturated.							
	GM	100000000000000000000000000000000000000								
35 —				05						
				25		0.25 ft, 2 in dia., Sch. 40 PVC				
-	СН		FAT CLAY, dark gray, medium stiff, moist.	-		end cap				
						Drilling terminated at 38 ft bgs				
۱ I	OTES		g of 8" diameter borehole.	4 11 ···						
		Well com	pletion of 2' x 2' x 4" concrete pad, 4" x 4" steel protective cover	, 4" diame	ter pipe bollards.					

Associates Ltd water resources / environmental consultants			PROJECT: Waterford-3 OSGSF Wells LOCATION: Killona, LA DRILLING CONTRACTOR: Pro Serve, Inc. / Walker Hill Environmental, Inc. DRILLING EQUIPMENT: GAPVAX MV-56/Geoprobe 7822DT DRILLING METHOD: Hydrovac/H.S.A.	5431 GROUN 15.96	10 D: 10 ING: (LA State Plane S.) 16.44 ft (NAD 83) ID SURFACE ELEV.: 5 ft (NGVD 29) DEPTH:			
LOGGE	D BY:		SAMPLING METHOD:	-	TARTED:	DATE COMPLETED:		
CLN		1	2" diameter direct push technology sampler with sleeve	10/31	1/2012	11/1/2012		
ch Depth (feet)	NSCS	Graphic Log	Description	% REC		'ell ruction		
0 -	GC		GRAVEL, shell fragments in clay matrix, light gray, dense, moist, black fabric liner at base. CLAY, gray, lean, medium stiff, moist			2.5 ft. of protective aluminum stick-up PVC cap with dedicated sampling tubing vented below cap		
5 — - 10 —	CL		NO RECOVERY	0		28.3 ft of 2 in dia., Sch. 80 PVC solid riser from 2.5 ft of stick-up to 25.75 ft bgs		
- 15 — -	CL		CLAY, gray, lean, medium stiff, moist.	0 80 70		Cement/bentonite grout to 20 ft bgs		
20 —	ML CL		CLAYEY SILT, grayish brown, lean, medium stiff, organics, moist. CLAY, gray, lean, medium stiff, moist @ 22.5 brown mottling, some organics.	90		Bentonite pellet seal from 20 ft bgs to 23 ft bgs		
25 —			CLAY, gray, fat, medium stiff, moist	90		Silica size 20/40 filter pack from 23 ft bgs to 36 ft bgs		
30 —	CH		SILT with clay, gray, lean, medium stiff, moist @ 32 ft. wet.	100		10 ft of 2 in dia., 0.010 in slot, Sch. 80 PVC screen		
35 —	GC CH	196627930 196627930 19777777	GRAVEL, shell fragments in clay matrix, gray, loose, fragments < 1" dia., saturated. CLAY, gray, fat, medium stiff, moist.	100		0.25 ft, 2 in dia., Sch. 80 PVC end cap Drilling terminated at 36 ft bgs		
40 N	IOTES:	•	tion of 3' x 3' x 4" concrete pad, 6" x 6" aluminum protective cove ng of 8" diameter borehole.	er, four 4"	diameter pipe bollards.			

Associates Ltd water resources / environmental consultants			Waterford-3 OSGSF Wells LOCATION: Killona, LA DRILLING CONTRACTOR: Pro Serve, Inc. / Walker Hill Environmental, Inc. DRILLING EQUIPMENT: GAPVAX MV-56/Geoprobe 7822DT DRILLING METHOD: Hydrovac/H.S.A. SAMPLING METHOD: 2" diameter direct push technology sampler with sleeve Description	WELL II MW-' NORTHI 5430' GROUN 15.93 TOTAL 40 ft DATE S	MW-11 WELL ID: MW-11 NORTHING: (LA State Plane S.) 543074.20 ft (NAD 83) 3553225.08 ft (NAI GROUND SURFACE ELEV.: 15.93 ft (NGVD 29) TOTAL DEPTH: 40 ft bgs 9.72 ft Below TOC DATE STARTED: 10/31/2012 Well Well Construction				
-5 0 5 10 15 20	FILL CL CL CH ML		FILL, compacted shell gravel. CLAY with shell fragments, gray, lean, medium stiff, moist. SILTY CLAY, gray, lean, medium stiff, minor shell fragments, moist @ 12 ft. lean to fat, no shell fragments SILTY CLAY, gray, fat, medium stiff, moist. SILTY CLAY, gray, fat, medium stiff, organic fragments (twigs), dry to moist. SILTY CLAY, gray, fat, medium stiff, moist	0 100 70 80 60		 2.8 ft. of protective aluminum stick-up PVC cap with dedicated sampling tubing vented below cap 28.6 ft of 2 in dia., Sch. 80 PVC solid riser from 2.8 ft of stick-up to 25.75 ft bgs Cement/bentonite grout to 20 ft bgs Bentonite pellet seal from 20 ft bgs to 23 ft bgs 			
25 - 30 - 35 - 40	СН GC CH		 @ 24 ft. some organic fragments @ 32 ft. wet, soft GRAVEL with clay, gray, loose, shell fragments <1" dia., saturated. SILTY CLAY, gray, fat, soft, wet @ 36 ft. medium stiff, moist. 	70 60 80		Silica size 20/40 filter pack from 23 ft bgs to 36 ft bgs 10 ft of 2 in dia., 0.010 in slot, Sch. 80 PVC screen 0.25 ft, 2 in dia., Sch. 80 PVC end cap Drilling terminated at 40 ft bgs			

water resour OGGE CLN		edun Bociates Ltd., Inmental consultants	PROJECT: Entergy - Waterford 3 LOCATION: Killona, LA DRILLING CONTRACTOR: Pro-Serve, Inc./Walker-Hill Environmental DRILLING EQUIPMENT: GapVax Hydrovac HV-56/Geoprobe 7822DT DRILLING METHOD: Hydrovac/Direct push technology with rotary augerhead SAMPLING METHOD: 4', 3" dia. direct push technology sampling rod with sleeve Description	MW-12 WELL ID: MW-12 NORTHING: (LA State Plane) 544174.58 ft (NAD83) 3553334.61 ft (NAD83) GROUND SURFACE ELEV.: 15.22 ft (NGVD29) 18.13 ft (NGVD29) TOTAL DEPTH BGS: 40 ft 7.16 ft (12/17/13) DATE STARTED: 12/12/13 U Vell S Construction				
-10 - 0 - 10 - 20 - 30 -	ML CL ML SM SP		NO RECOVERY - Excavated with hydrovac SILT, grayish brown, lean, medium stiff, moist @ 12 ft. gray @ 23 ft. with clay CLAY, gray, lean, medium stiff, moist SILT with clay, grayish brown with some orange mottling, lean, medium stiff, moist SILT with clay, grayish brown with some orange mottling, lean, medium stiff, moist SILTY SAND, brown, fine, loose to medium dense, wet SAND, gray, fine, loose to medium dense, wet	0 100 100 100 70 100 100		 2.9 ft of protective steel stick-up Vented cap Cement/bentonite grout from ground surface to 24 ft bgs Bentonite pellet seal from 24 ft to 27 ft bgs Silica size 20/40 and native sand filter pack from 27 ft to 40 ft bgs 32.6 ft of 2 in dia., Sch. 80 PVC solid riser to 2.9 ft above ground surface 10 ft of 2 in dia., 0.010 in slot, Sch. 80 PVC screen 0.3 ft, 2 in dia., Sch. 80 PVC end cap 		
40 NOTES	SP	hole diameter	SAND - Sampler was sandlocked and sampling was discontinued. Based on soil cuttings and driller's observations, remaining interval is sand.	0 0 PT rotary	augering.	Augering terminated at 40 ft bgs.		

APPENDIX B

Well Registration Forms

TAC		٧	ATER R	TRANSPORTATION AND I ESOURCE SCTION TION SHC. FORM (DOT		
PLEASE PRINTIN INK OR TYPE WI	HEN COMPLETING THIS FORM	A			ï	Tri-State Trading C
1. USE F WELL (Check Ap						Ini-State Testing Services, Inc.
JOMESTIC	🗌 RIG SUPPLY 🐘 🖄 MON	IITORING			COVERY	LICENSE NUMBER WWC- 544
🔲 HEAT PUMP HOLE		BANDONED PIL	OT HOLE	OTHER(Please Specify)		Den Milling 10/19/10
2. WELL OWNER Ent	ergy Waterford I	PHONE	(504)	739-6481	y)	Authorized Signature Date
3. WELL OWNER'S ADDRES	s 17265 River Rd. 1	Killor	a, L	A. 70057		MAIL ORIGINAL TO: LOUISIANA DEPARTMENT OF
4. OWNER'S WELL NUMBER	R OR NAME (if any) M W	6		C		TRANSPORTATION AND DEVELOPMENT ATTN.: CHIEF - WATER RESOURCES SECTION
5 DATE COMPLETED 10	-7-10 DEPTH OF HOLE	33	FT. [DEPTH OF WELL 33 +	J FT.	P.O. BOX 94245 BATON ROUGE, LA 70804-9245
6 STATIC WATER LEVEL	24 FT. BELOW G	ROUND SURFA	CE MI	EASURED ON 10-7-10		(225) 274-4172
7. CASING Z IN				Z G (Date)		FOR OFFICE USE ONLY
14 12 3	,			!! !!?	_	PARISH WELL NO.
8. SCREEN IN.	3				FT.	
9. CEMENTED FROM	FT. TO GROUND SURFACE, USING			THOD LIN	gravity Method	
10. LOCATION OF WELL: PA	ARISH St. Charles	WELL	IS NEAR,	(Town or City)		
APPROXIMATELY	MILES FROM HYW 310	11+ Riv	IPF R	J. (South)		
		(Cross	roads, Railroa	d, Any Landmark, etc.)		Geologic Use of Well
	(Please draw sketch on	back of Original)				
II. REMARKS:	Jell has 3'	Stick	Up			SECTION TOWNSHIP RANGE
2. DRILLER'S LOG (Description	ion and color of cuttings, such as shale, sand	l, etc. in feet)				ELEV. QUAD. NO.
FROM TO	DESCRIPTION	FROM	TO	DESCRIPTION		
01	Brown Sandy Silt					INPUT BY: DATE:
KI 72 KI						INSPECTED BY: DATE:
	lackish Gray Clay					REMARKS:
L L	Jith Some Silt					FOR MONITOR/PIEZO/RECOVERY WELLS ONLY
						LATITUDE
						SECTION TOWNSHIP RANGE
						RG RS ROE
w	* 1 / m				5	ELEV. QUAD. NO.
13? FOR HEAT PUMP ONLY:			NUMBER OF	-		SITE ADDRESS 17265 River Road
14. ABANDONMENT INFORMA	TION: DOES THE NEW WELL REPLACE AN			is 🗆 no 🗶		
5. NAME OF PERSON WHO	DRILLED THE WELL: David	MCC	ray			Killona, LH. 10051
(REV. 7/93)			- OW	NER'S COPY	·	

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT WATER RESOURCE CTION WATER WELL REGISTRATION SHO. FORM (DOTD-GW-1S)

1

EASE PRINT IN INK OR TYPE WHEN COMPLETING THIS FORM				Tri-State Testing Services
1. USE OF WELL (Check Appropriate Box)				Name of Water Well Contractor
	MONITORING			LICENSE NUMBER WWC-544
		рігот но		26 8 Mar 10/19
			(Please Specify)) 739-6481	Authorized Signature Date
2. WELL OWNER Entergy Woterford J	PHO	NE (3 ≈ 4	1 A. 70057	MAIL ORIGINAL TO:
B. WELL OWNER'S ADDRESS 17265 River	MW	7	ha, Ch. 70037	LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
4. OWNER'S WELL NUMBER OR NAME (if any)		/	2 3	ATTN.: CHIEF - WATER RESOURCES SECTION P.O. BOX 94245
5. DATE COMPLETED $10 - 7 - 10$ DEPTH OF HOLE	30	FT.	DEPTH OF WELL FT.	BATON ROUGE, LA 70804-9245
STATIC WATER LEVEL Z Z FT. BELOW	N GROUND SU	RFACE	MEASURED ON(Date)	(225) 274-4172
. casing <u>2</u> in <u>D</u> metal 🖄 plastic		R LEN	IGTH FT.	FOR OFFICE USE ONLY PARISH WELL NO.
SCREEN IN METAL X PLASTIC			DT SIZE / 010'' LENGTH FT.	
CEMENTED FROM FT. TO GROUND SURFACE, USI	lG .		PUMP DOWN OR GRAVITY METHOD GRAVITY	IDENTIFICATION NUMBER
C+ CI In	1. N. N.			
. LOCATION OF WELL: PARISH St. Charle	and the second sec	- 2	(Town or City)	REVISED COORDINATES
APPROXIMATELY MILES FROM HYW	V. C. I	LIV CI	ailroad, Any Landmark, etc.)	
N 8 8	100	JSSI 0205, H	anoau, Any Lanomain, etc.)	Geologic Use of Well
(Please draw skete	and the second sec			SECTION TOWNSHIP RANGE
. REMARKS: Well has 3	DTC V	Kup		
DRILLER'S LOG (Description and color of cuttings, such as shale,	sand, etc. in fee	et)		ELEV, QUAD. NO.
FROM TO DESCRIPTION	FROM	T0.	DESCRIPTION	
OI Brown Scholy Silt	20		18 J.	INPUT BY: DATE:
1 38 Blackish Gray Clay		V		INSPECTED BY: DATE:
1 30 Machisk Gray (184	~ ~	<u> </u>		REMARKS:
with Some Silt				FOR MONITOR/PIEZO/RECOVERY WELLS ONL
	1.8			LATITUDE
2 				291961 SECTION TOWNSHIP BANGE
				SECTION TOWNSHIP RANGE
				ELEV. QUAD. NO.
FOR HEAT PUMP ONLY: AVG. DEPTH	FT.	NUMBE	R OF HOLESN/#	1631 LOZA
	AN EXISTING		YES 🔲 NO 🖾	SITE ADDRESS: 17265 River Roi
ABANDONMENT INFORMATION DOES THE NEW WELL REPLACE				
ABANDONMENT INFORMATION: DOES THE NEW WELL REPLACE	A 6	Cr		Killona, LA 70057

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT WATER RESOURCE (CTION WATER WELL REGISTRATION SHC. FORM (DOTD-GW-1S)

WATER	WELL REGISTRATION SHOUP	ORM (DOID-GW-15)	
EASE PRINT IN INK OR TYPE WHEN COMPLETING THIS FORM		п	Ta'schule Telle Samer
1. USE OF WELL (Check Appropriate Box)			Name of Water Well Contractor
		RECOVERY	LICENSE NUMBER WWC-544
	IDONED PILOT HOLE	(Diagon Specify)	DDD. M. have 10/17/10
2. WELL OWNER Entergy Waterford III	PHONE (504) 739-64	8	Authorized Signature Date
3. WELL OWNER'S ADDRESS 17265 River Roo	d Killone, LA. 70	5057	MAIL ORIGINAL TO:
4. OWNER'S WELL NUMBER OR NAME (if any)	<u> 8 </u>		TRANSPORTATION AND DEVELOPMENT ATTN.: CHIEF - WATER RESOURCES SECTION
5. DATE COMPLETED 0-7-10 DEPTH OF HOLE 38	FT. DEPTH OF WELL	38 +3 FT.	P.O. BOX 94245 BATON ROUGE, LA 70804-9245
5. STATIC WATER LEVEL 23 FT. BELOW GROU	IND SURFACE MEASURED ON 10	- 7-10	(225) 274-4172
7. CASING 🔔 IN 🗆 METAL 🖄 PLASTIC 🗌		(Date)	FOR OFFICE USE ONLY
0			PARISH WELL NO.
E. CEMENTED FROM FT. TO GROUND SURFACE, USING	PUMP DOWN OR METHOD	GRAVITY METHOD	
D. LOCATION OF WELL: PARISH St. Charles	WELL IS NEAR, Killong	METHOD	0
	(Town	or City)	REVISED COORDINATES
APPROXIMATELY MILES FROM FTY W 319	(Crossroads, Railroad, Any Landmark, etc.)	(south)	
			Geologic Use of Well
REMARKS: WPIL has 3'S+	kor Original)	×	SECTION TOWNSHIP RANGE
DRILLER'S LOG (Description and color of cuttings, such as shale, sand, et			
	ROM TO DESCRIP	TION	ELEV. QUAD. NO.
O I Brown Sandy Silt			INPUT BY: DATE:
			INSPECTED BY: DATE:
1 38 Blackish Gray Clay			REMARKS:
with Some Silt			FOR MONITOR/PIEZO/RECOVERY WELLS ONLY
			LATITUDE
3			SECTION TOWNSHIP BANGE
FOR HEAT PUMP ONLY: AVG. DEPTH	FT. NUMBER OF HOLES		1637 202A
. ABANDONMENT INFORMATION: DOES THE NEW WELL REPLACE, AN EXIS			SITE ADDRESS: 17265 River Road
NAME OF PERSON WHO DRILLED THE WELL:	McCray		Nillona, LA 10051
(REV. 7/93)	OWNER'S COPY	11	

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LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT WATER RESOURCE CTION ----

1.16

		C			WATE	OF TRANSPORTATION AND DEVELOP R RESOURCE TRATION SHOFORM (DOTD-GW-1S	
PLEASE	PRINT IN I	K OR TYPE	WHEN COMPLETING THIS FORM				Tri-State Testing Services Inc
1. U	ISE OF WE	LL (Check A	oppropriate Box)				Name of Water Well Contractor
_ L [STIC	RIG SUPPLY	ITORING			LICENSE NUMBER WWC-544
[HEAT	PUMP HOLE		BANDONED	PILOT HO	LE OTHER (Please Specify)	2 20 Willing 10/13/10
2. V	VELL ÖWN	ER Ent	ergy Woterford II	РНО	NE (50)	4) 739-6481	Authorized Signature Date
3. V	VELL OWN	er's addre	ss 17265 River Ro	JKI	llon	a, LA . 70057	MAIL ORIGINAL TO: LOUISIANA DEPARTMENT OF
4. 0	WNER'S V	VELL NUMB	ER OR NAME (if any)	MU	<u>P (</u>		TRANSPORTATION AND DEVELOPMENT ATTN.: CHIEF - WATER RESOURCES SECTION
5. D	ATE COMP		DEPTH OF HOLE	38	FT.	DEPTH OF WELL 3873 FT.	P.O. BOX 94245 BATON ROUGE, LA 70804-9245
6. S	TATIC WA	TER LEVEL	FT. BELOW G	ROUND SUI	RFACE	MEASURED ON $10 - 7 - 10$ (Date)	(225) 274-4172
7. C	ASING	2_ IN.	🗆 METAL 🛛 🕅 PLASTIC		r Len	идтн <u>26</u> гт.	FOR OFFICE USE ONLY PARISH WELL NO.
8. S	CREEN _	2 IN.	🗆 METAL 🕺 PLASTIC		r slo		
9. C	EMENTED	FROM	FT. TO GROUND SURFACE, USING		X	PUMP DOWN OR GRAVITY METHOD METHOD	
10. L	OCATION (OF WELL:	PARISH St. Charles	WE	LL IS NE	AR. Killona	
	PPROXIMA		MILES FROM HYW 31	41+	Rus	(Town or City)	
				(Cri	ossroads, R	ailroad, Any Landmark, etc.)	Geologic Use of Well
5C - 4		1	(Please draw sketch on	back of Origin	nal)		
11. R	EMARKS:		well has	3'	51	ickup	
12. D	RILLER'S	LOG (Descri	ption and color of cuttings, such as shale, san	l, etc. in fee	it)	· · · · · · · · · · · · · · · · · · ·	
-	FROM	TO	DESCRIPTION	FROM	TO	DESCRIPTION	
	0		Prown Sandy Silt				INPUT BY: DATE:
	1	38	Blackich Guny Clay				INSPECTED BY: DATE:
	1		the chi				REMARKS:
ł			WITH SOME DIT				FOR MONITOR/PIEZO/RECOVERY WELLS ONLY
	11 - E						$\begin{array}{c c} \text{LATITUDE} & \text{LONGITUDE} \\ \hline 299764 & -904743 \end{array}$
							SECTION TOWNSHIP RANGE
	-				1		
13. FC	DR HEAT	PUMP ONL	Y: AVG. DEPTHN/N	FT.	NUMBE	R OF HOLES N/A	1365 202A
6 T			iation: does the new well replace an				SITE ADDRESS: 17265 River Road
			O DRILLED THE WELL David	t .	CI		Killona, LA 70057
	EV 7/93)					OWNER'S COPY	

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LOUISIANA DEPARTMENT OF NATURAL RESOURCES OFFICE OF CONSERVATION, ENVIRONMENTAL DIVISION WATER WELL REGISTRATION SHORT FORM (DNR-GW-1S)

MAIL ORIGINAL TO: Louisiana Dept. of Natural Resources Attn: Ground Water Resources P.O. Box 94275 Baton Rouge, LA 70804-9275 (225) 342-8244 Ph. (225) 242-3505 Fax

1	USE OF WELL (Check appropriate box):	8. DRIL	LER'S LOG	
1.		(Desc	ription and color	of cuttings, such as shale, sand, etc. in feet below ground surface)
	Domestic Rig Supply Monitoring Piezometer Recovery Heat Pump Hole Heat Pump Supply	FROM	то	DESCRIPTION
	Relief Abandoned Pilot Hole	0	2	Gravel
2.	WELL OWNER: Entergy Operations – Waterford 3	2	31	Gray Clay
<u>.</u>	Phone: <u>(504) 464-3267</u>	31	34	Gray Silt
3.	WELL OWNER'S ADDRESS: 17265 River Road	34	35	Gravel
	Killona, LA 70057	35	36	Gray Clay
4.	OWNER'S WELL NUMBER OR NAME:MW-10			
	Serial Number (Rig Supply Only):			
5.	WELL INFORMATION:	9. FOR	HEAT PUMP	DNLY: Avg. Depth: ft. # of Holes:
	Date completed: 11-1-12			
	Depth of Hole:36ft. below ground surface	10. DOE	S THE NEW W	ELL REPLACE AN EXISTING WELL?
	Depth of Well:35ft.			I WHO DRILLED THE WELL:
	Static water level: <u>10</u> ft. below ground surface		Dennis Herrer	a
	Date Measured: <u>11-1-12</u>			vas done and completed in accordance with Rules and
	Casing: <u>2</u> in. Metal Plastic Other Length: <u>28</u> ft.			of Louisiana, including Chapter XII of Title 51, Publi
	Screen: <u>2</u> in. Metal Plastic Other Slot size: 0.010 in.			, if applicable, on: <u>11-1-12</u> (Date)
	Length: <u>10</u> ft. Cemented from: <u>20</u> ft. to ground surface			vironmental, Inc. (Name of Water Well Contractor),
	Using: 🔀 Pump down Method 🔲 Gravity Method		. WWC	
6.	LOCATION OF WELL:			
	GPS Coordinates:	Authorized	Signature:	Kintyd. Pm Date: 12-3-12
	Latitude: <u>29 ° 59 '26</u> " Longitude.: <u>90 °28 '23</u> "	L		
	Parish:St. Charles		PARISH	
	Physical Address: 17265 River Road, Killona, LA	FOR OFFICE USE ONLY		
	Well is Near,Killona Approximately1 miles from	SE C		
	(Crossroads, Railroad, any Landmark, etc.) west of the intersection of	L S	TOWNS	
	Hwy 18 and Highway 3142	HC	1 2	S 2 0 E 0 0 0 0 2 0 2 A
	(Attach a map or sketch or registered plat if Rig Supply with form)	OF		BY: DATE:
7.	REMARKS: Casing extends 3 feet above ground surface	OR I		Y: DATE:
			REMARKS:	

LOUISIANA DEPARTMENT OF NATURAL RESOURCES OFFICE OF CONSERVATION, ENVIRONMENTAL DIVISION WATER WELL REGISTRATION SHORT FORM (DNR-GW-1S)

MAIL ORIGINAL TO: Louisiana Dept. of Natural Resources Attn: Ground Water Resources P.O. Box 94275 Baton Rouge, LA 70804-9275 (225) 342-8244 Ph. (225) 242-3505 Fax

1.	USE OF WELL (Check appropriate box):	8. DRIL	LER'S LOG	
	Domestic Rig Supply Monitoring Piezometer Recovery Heat Pump Hole Heat Pump Supply	(Desc FROM	ription and color o TO	of cuttings, such as shale, sand, etc. in feet below ground surface) DESCRIPTION
	Relief Abandoned Pilot Hole Other (please specify)	0	2	Fill
2	WELL OWNER: Entergy Operations – Waterford 3	2	18	Gray Silty Clay
	Phone: (504) 464-3267	18	19	Brown Silt
3.	WELL OWNER'S ADDRESS: 17265 River Road	19	33	Gray silty Clay
	Killona, LA 70057	33	36	Gravel
4.	OWNER'S WELL NUMBER OR NAME: MW-11	36	40	Gray silty Clay
	Serial Number (Rig Supply Only):			
5.	WELL INFORMATION:	9. FOR	HEAT PUMP (DNLY: Avg. Depth: ft. # of Holes:
	Date completed: <u>11-1-12</u> Depth of Hole: 40 ft. below ground surface	10 DOF	S THF NFW W	ELL REPLACE AN EXISTING WELL?
	Depth of Hole: 40 ft. below ground surface Depth of Well: 35 ft.			
	Static water level: 10 ft. below ground surface		1E OF PERSON Dennis Herr <u>er</u>	WHO DRILLED THE WELL:
	Date Measured: 11-1-12			Anna ann an ann an ann ann ann ann ann a
	Casing: $2in$. \square Metal \square Plastic \square Other Length: 28 ft.			vas done and completed in accordance with Rules and
	Screen: 2in. Metal Plastic Other Slot size: 0.010 in.	: 0		of Louisiana, including Chapter XII of Title 51, Public
	Length: <u>10</u> ft. Cemented from: <u>20</u> ft. to ground surface			, if applicable, on: <u>11-1-12</u> (Date)
	Using: Pump down Method Gravity Method			vironmental, Inc(Name of Water Well Contractor),
6.		License No	. WWC	574
-	GPS Coordinates:	Authorized	Signature:	Buty. Fra Date: 12-3-12
	Latitude: <u>29 ° 59 ′ 26</u> " Longitude.: <u>90 ° 28 ′ 22 "</u>			J.J.
	Parish: St. Charles		PARISH	WELL NO. GEOLOGIC UNIT
	Physical Address: 17265 River Road, Killona, LA	NEY		LATITUDE LONGITUDE SECTION
	Well is Near, Killona Approximately 1 miles from			LATITUDE LONGITUDE SECTION
	(Crossroads, Railroad, any Landmark, etc.) west of the intersection of	l sn	TOWNSI	
	Hwy 18 and Highway 3142	EC	1 2	S 2 0 E 0 0 0 0 2 0 2 A
	(Attach a map or sketch or registered plat if Rig Supply with form)	OF		BY: DATE:
7.	REMARKS : <u>Casing extends 3 feet above ground surface</u>	FOR OFFICE USE ONLY		Y: DATE:

MAIL ORIGINAL TO: Louisiana Dept. of Natural Resources Attn: Ground Water Resources P.O. Box 94275 Baton Rouge, LA 70804-9275 (225) 342-8244 Ph. (225) 242-3505 Fax

LOUISIANA DEPARTMENT OF NATURAL RESOURCES OFFICE OF CONSERVATION, ENVIRONMENTAL DIVISION WATER WELL REGISTRATION SHORT FORM (DNR-GW-1S)

ONLINE ACCESS: 1) Go to http://sonris.com/ 2) Click on Data Access in the left hand panel. 3) Under the section labeled Conservation, click on Ground Water Information.

1.	USE OF WELL (Cheo	ck appropriate box):	
	Domestic	Rig Supply	Monitoring
	Piezometer	Heat Pump Hole	Heat Pump Supply
	Recovery	Relief	Abandoned Pilot Hole
	Other (please s	specify)	
2.	WELL OWNER:	Entergy Operation	ons – Waterford 3
	Phone: <u>(504)</u>	464-3267	
3.	WELL OWNER'S AD	DRESS: 17265 R	iver Road
		Killona,	LA 70057
4.	OWNER'S WELL NU	IMBER OR NAME:	MW-12
	Serial Number (Rig	Supply Only):	
5.	WELL INFORMATIO	N:	
	Date completed:	12-13-13	
	Depth of Hole:	40 ft. belov	v ground surface
	Depth of Well:	<u>40</u> ft.	
	Static water level:	<u>NR</u> ft. be	low ground surface
	Date Measured:		
			ther Length: <u>33</u> ft.
			ther Slot size: <u>0.010</u> in.
	Length: <u>10</u> ft.	Cemented from:	<u>ft. to ground surface</u>

Using: Pump down Method Gravity Method

6. LOCATION OF WELL:

Latitude: ______ * 59 ' 38 " Longitude: 90 ° 28 ′ 21 " Parish: St. Charles Physical Address: 17265 River Road, Killona, LA Well is Near, Killona Approximately 1 miles from

(Crossroads, Railroad, any Landmark, etc.) west of the intersection of Hwy 18 and Hwy 3142

(Attach a map or sketch or registered plat if Rig Supply to registration)

	FOR MONITOR/PIEZO/RECOVERY WELLS ONLY																		
s	SECTION			TOWNSHIP				RANGE			ELEVATION			QUAD NO.					
0	2	6		1	2	s		2	0	E		0	0	0	0	2	0	2	Α

7. **REMARKS**: Casing extends 3 feet above ground surface

8. DRILLER'S LOG:

(Description and color of cuttings, such as shale, sand, etc. in feet below ground surface)

FROM	то	DESCRIPTION
0	30	Clay
30	40	Sand

9. FOR HEAT PUMP ONLY: Avg. Depth: _____ ft. # of Holes:

10. DOES THE NEW WELL REPLACE AN EXISTING WELL? Yes No If yes, has owner been informed of state regulations requiring plugging of abandoned wells? Yes No

11. NAME OF PERSON WHO DRILLED THE WELL: Dennis Herrera

I certify that this work was done and completed in accordance with Rules and Regulations of the State of Louisiana, including Chapter XII of Title 51, Public Health – Sanitary Code, if applicable, on: <u>12-13-13</u> (Date) by: <u>Walker-Hill Environmental, Inc. (Name of Water Well Contractor)</u>, License No. WWC-574

Authorized Signature: 7 Date: 12-23-13

717	PARISH	WELL NO.	
R OFFICE USE ON			SECTION QUAD NO.
FOF	INSPECTED BY: REMARKS:		 DATE:

APPENDIX C

Groundwater Level Data Sheet



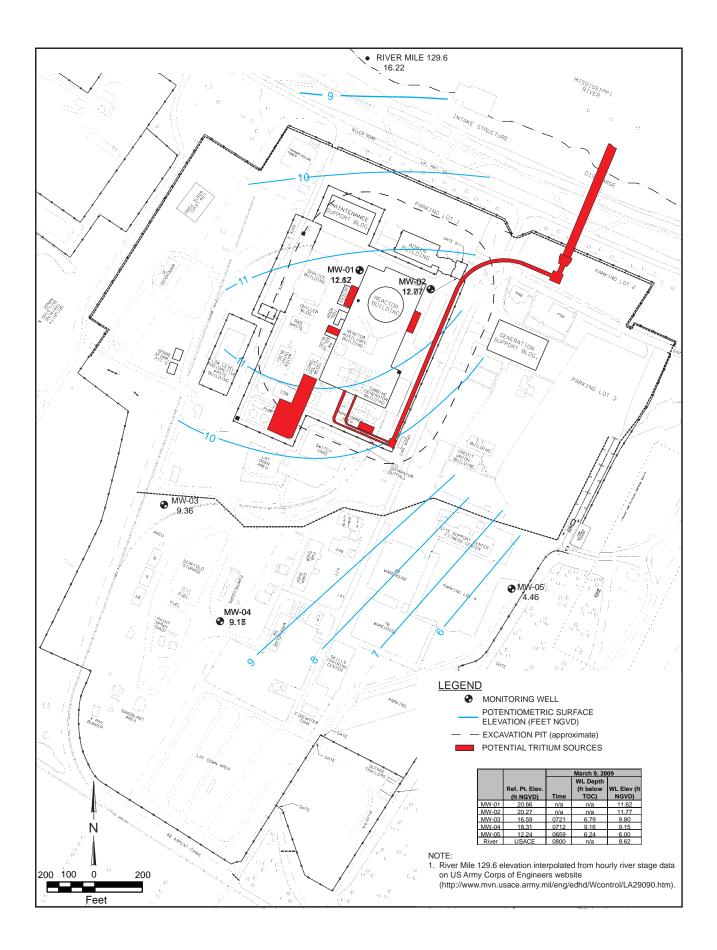
Groundwater Level Data Sheet

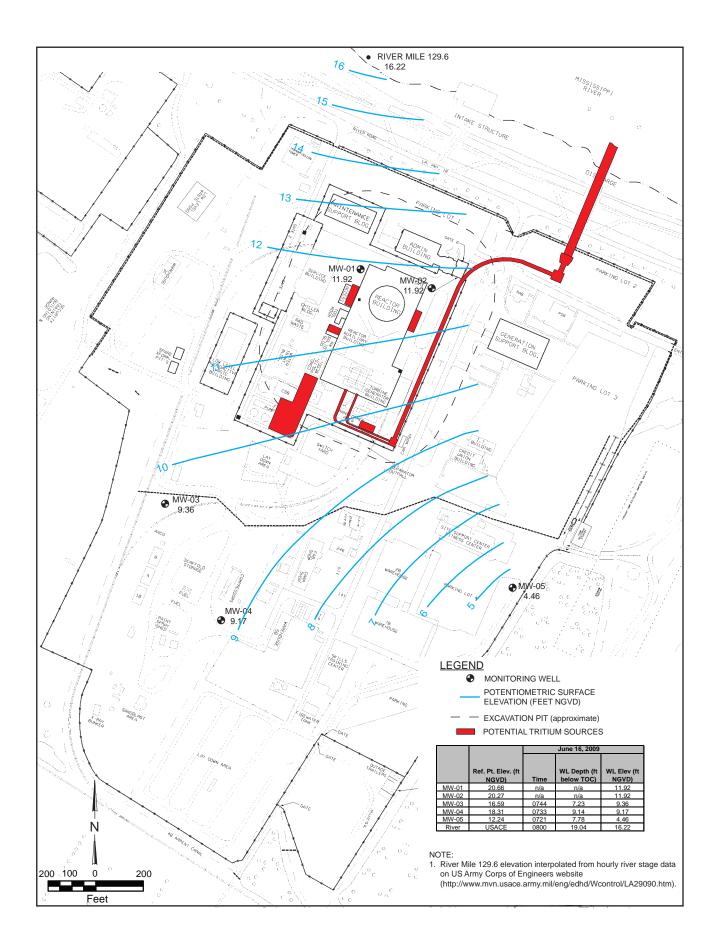
Project Nam	e:	Pro	ject Number:		Investiga	ator:	Page of
Weather Con	nditions:	Mea	asuring Device:				
Well ID	Date	Time	Depth to Water (feet below RP)			Damages/Repairs	
				Damaged bo Damaged ec Damaged w Damaged w Damaged bo Damaged w Damaged w Damaged bo Damaged bo	uipment ell pad/casing ollards quipment ell pad/casing ollards quipment	Damaged TOC Damaged lock Un-kept vegetation Damaged TOC Damaged lock Un-kept vegetation Damaged lock Un-kept vegetation Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record Lacks visibility Lacks access See gw sample record Lacks visibility Lacks access See gw sample record
				Damaged be Damaged ec Damaged w Damaged be Damaged ec Damaged w Damaged w Damaged be Damaged be Damaged be	uipment ell pad/casing ollards uipment ell pad/casing ollards uipment	Damaged TOC Damaged lock Un-kept vegetation Un-kept vegetation	Lacks visibility Lacks access See gw sample record Lacks visibility Lacks access See gw sample record Lacks visibility Lacks access See gw sample record
				Damaged be Damaged ec Damaged w Damaged w Damaged be Damaged w Damaged w Damaged w	uipment ell pad/casing ollards uipment ell pad/casing ollards	Damaged TOC Damaged lock Un-kept vegetation Damaged TOC Damaged lock Un-kept vegetation Damaged lock Un-kept vegetation Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record Lacks visibility Lacks access See gw sample record Lacks visibility Lacks access See gw sample record
				Damaged w Damaged w Damaged be Damaged dec Damaged w Damaged w Damaged be Damaged w Damaged w Damaged w Damaged w	ell pad/casing ollards quipment ell pad/casing ollards quipment ell pad/casing ollards	Damaged TOC Damaged lock Un-kept vegetation Damaged TOC Damaged TOC Damaged lock Un-kept vegetation Damaged TOC Damaged TOC Damaged TOC Damaged TOC Damaged lock	See gw sample record Lacks visibility Lacks access
				Damaged be Damaged ec Damaged w Damaged be Damaged be	ell pad/casing ollards quipment ell pad/casing ollards quipment ell pad/casing ollards	Un-kept vegetation Damaged TOC Damaged lock Un-kept vegetation Damaged TOC Damaged lock Un-kept vegetation Damaged TOC Damaged TOC Damaged lock Un-kept vegetation Un-kept vegetation Un-kept vegetation	See gw sample record Lacks visibility Lacks access See gw sample record Lacks visibility Lacks access See gw sample record Lacks visibility Lacks access See gw sample record

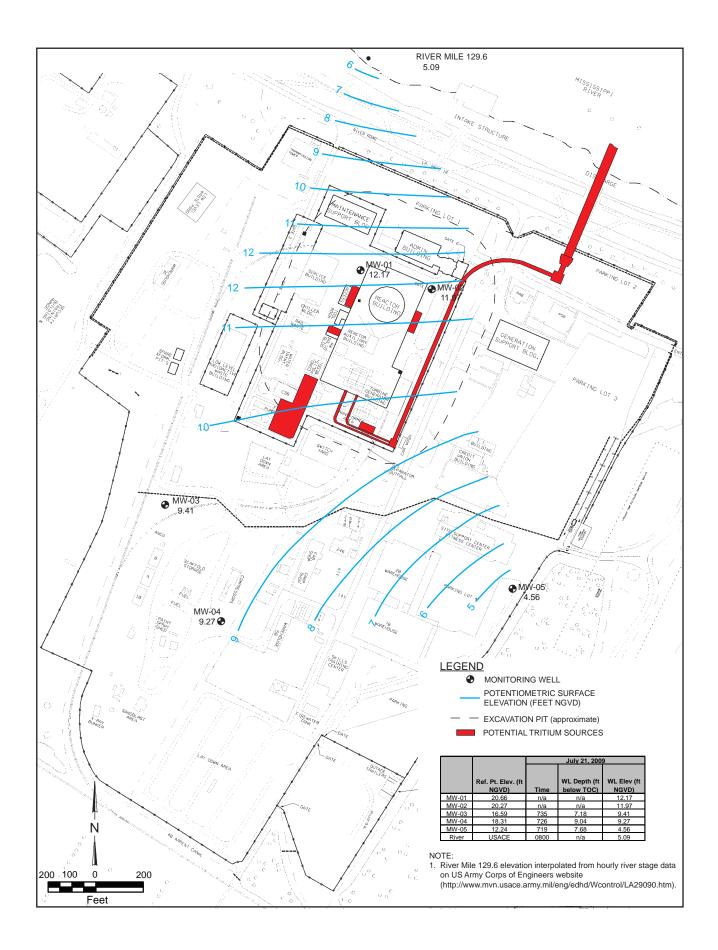
Notes: RP = Reference Point TOC = Top of Casing gw = groundwater

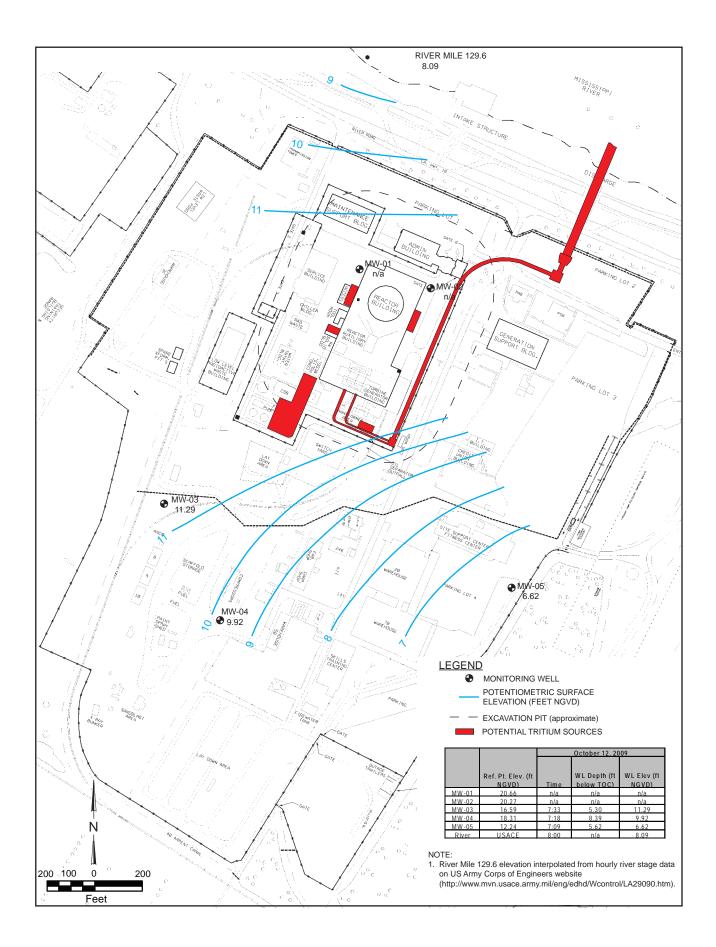
APPENDIX D

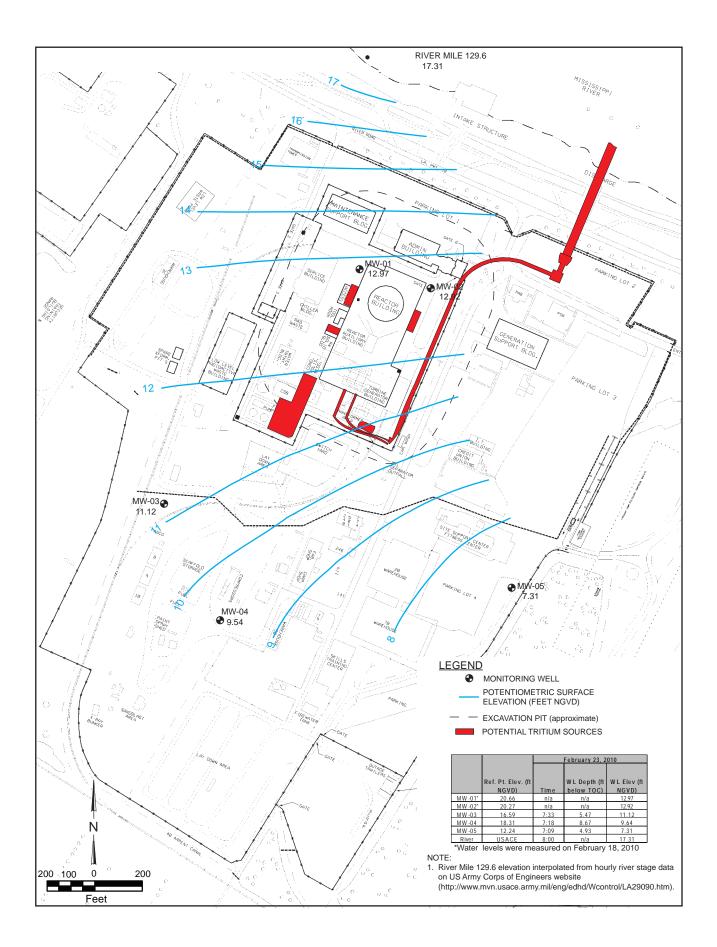
Potentiometric Surface Maps

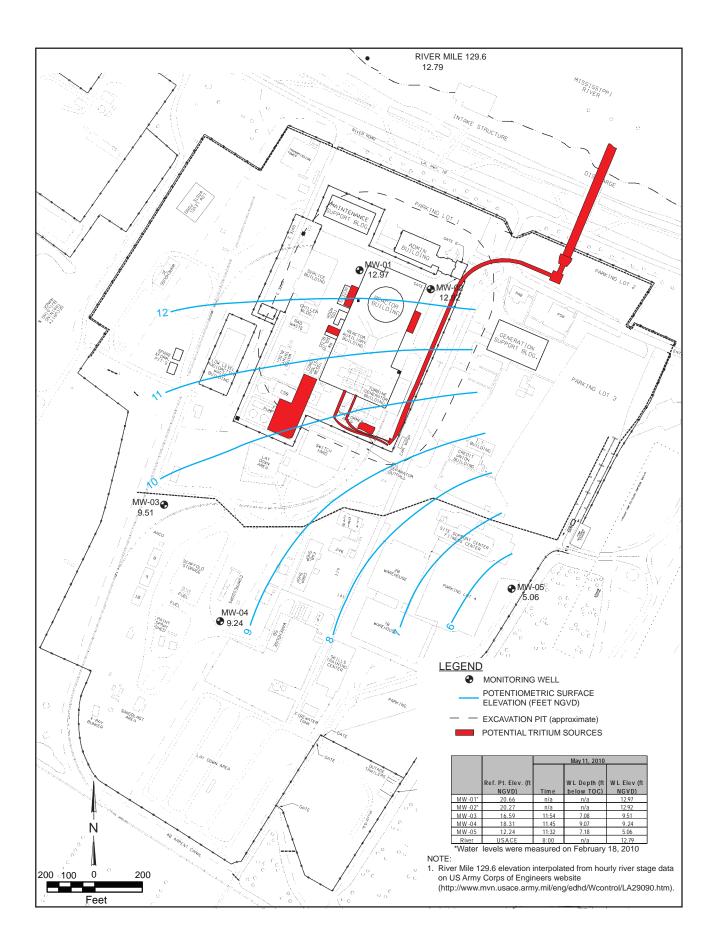


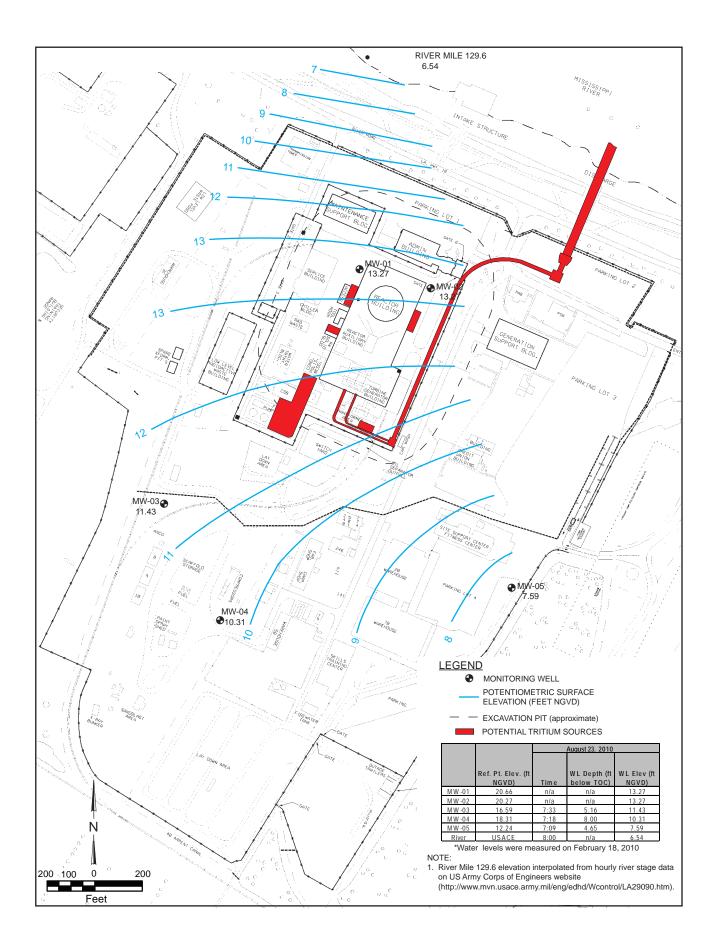






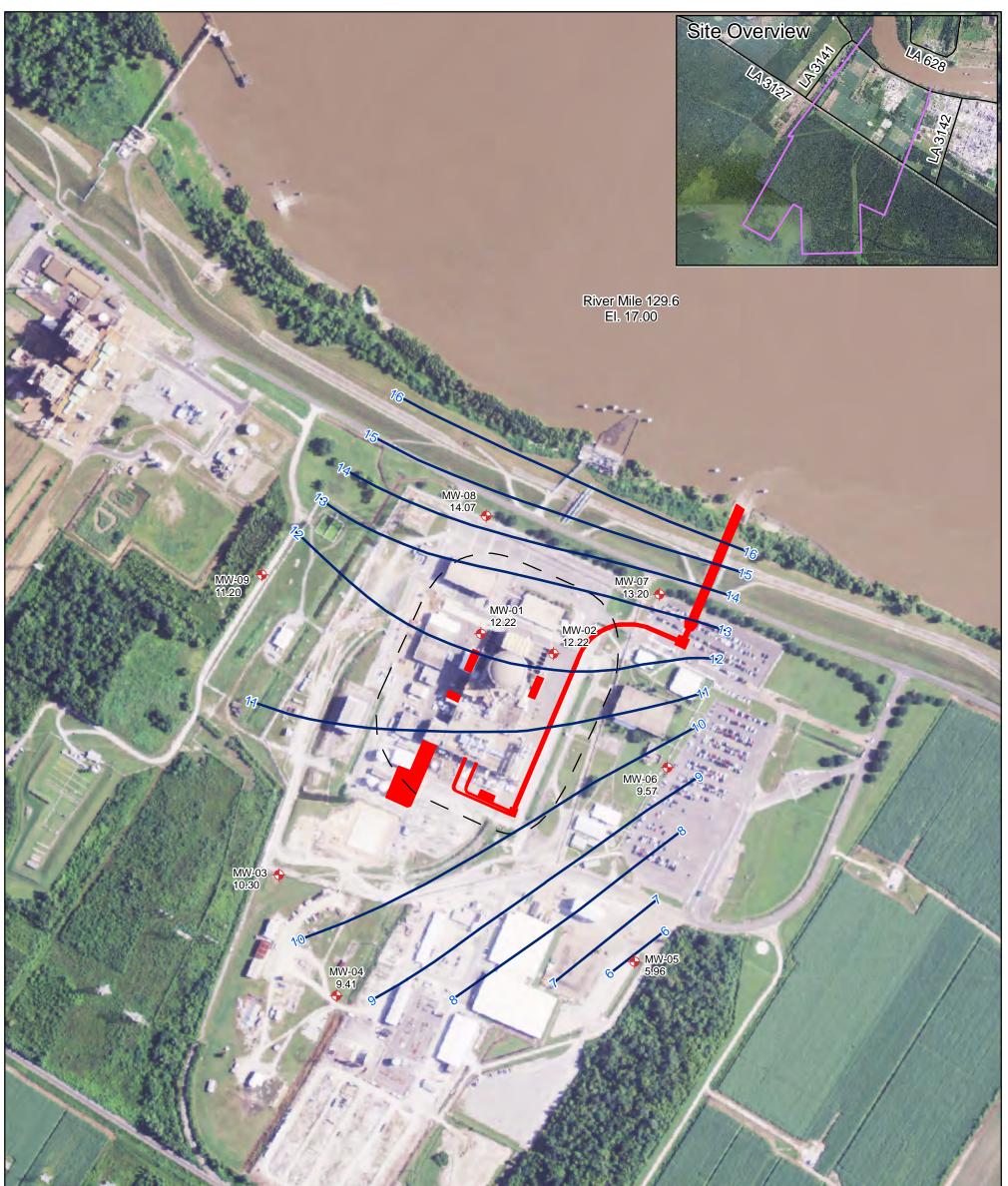




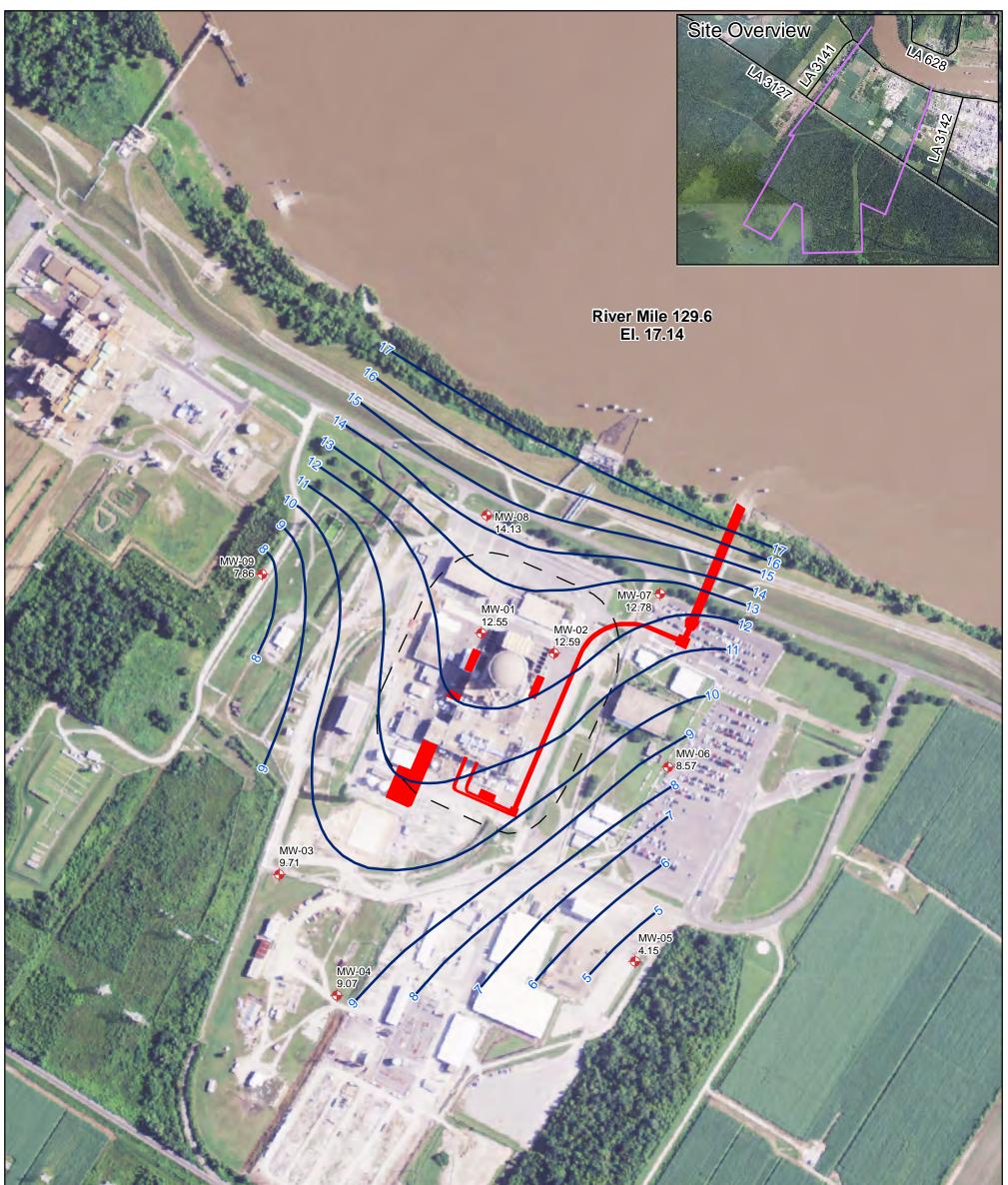




	AND SERVICE	A. A. LANDA		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A A REAL AND		Stor J
all de			a de	aller /	1 183.254		R.
S	1.18			A A			
		November	16-17, 2010	Attant of the second			A La
	Ref. Pt. Elev.	WL Depth (ft	WL Elev (ft	Sector Land			0.000
	(ft NGVD)	below TOC)	NGVD)	al de la company	101 ALE	18.20	and the r
MW-01	20.66	n/a	12.27	2.10 6 1987		NO DE	100
MW-02	20.27	n/a	12.27	S 82 - 188		Contraction of the	8.79
MW-03	16.59	6.28	10.31				
MW-04	18.31	8.29	10.02	1 Strates Line		State Fin	
MW-05	12.24	6.26	5.98			STRUCTURE OF	3
MW-06	14.01	4.44	9.57	1969			
MW-07	19.46	6.38	13.08	Alter and		A State	
MW-08	19.84	7.68	12.16	ALTER		AND AND	ŝ
MW-09	15.87	4.51	11.36	Contraction of			
River	USACE	n/a	3.34	and the for			
					Entergy Waterford 3		
Legend					Entergy Waterford-3		
🔶 Mon	itoring Well	С 7	Approximate Ex	cavation Area	Potentiometric Surface		
	entiometric Surface	e Elevation	Potential Tritium		BASEMAP SOURCE NAIP 2009	0 000	
			Approximate Pro	operty Boundary	St. Charles Parish, LA	0 200	



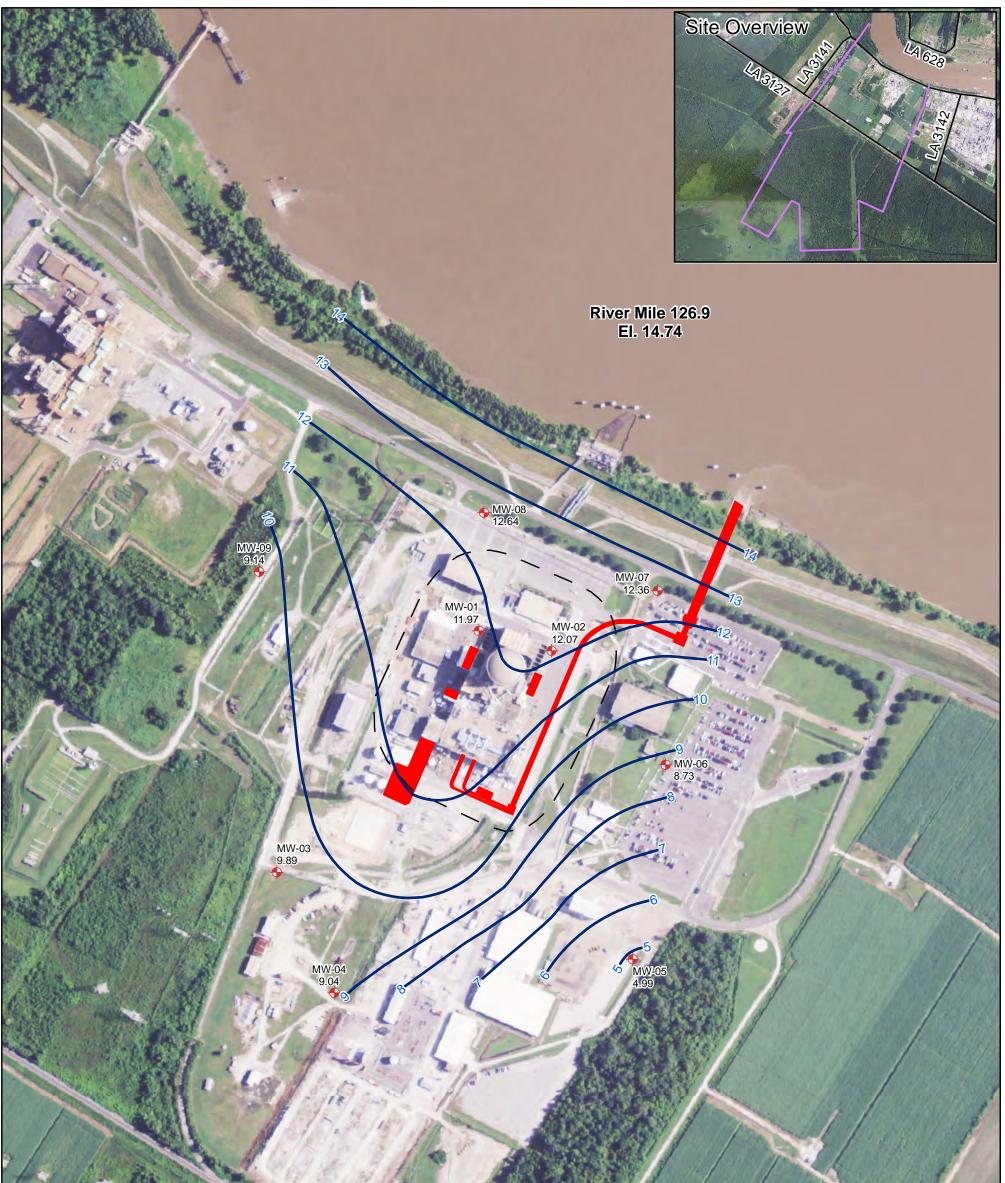
	Ref. Pt. Elev. (ft NGVD 29)	WL Depth (ft below TOC)	WL Elev (ft NGVD 29)	
MW-01	20.66	n/a	12.22	
MW-02	20.27	n/a	12.22	
MW-03	16.61	6.31	10.30	
MW-04	18.34	8.93	9.41	
MW-05	12.26	6.30	5.96	
MW-06	14.02	4.45	9.57	The information shown on this ma
MW-07	19.51	6.31	13.20	compiled from various sources and should not be considered authority
MW-08	19.88	5.81	14.07	for engineering, surveying, legal a other site-specific uses. Information
MW-09	15.88	4.68	11.20	shown on this map should not be a for property boundary resolution.
River	USACE	n/a	17.00	does not represent a boundary su and is shown for reforence only.
	d oundwater Monitoring otentiometric Surface		Potential Tritic	Excavation Area im Sources Property Boundary Exc. Charles Parish, LA Excavation Area BASEMAP SOURCE NAIP 2009 0 200 400 800 Base August 3, 2011 Project No. 6045-460



	1218	June 2	1, 2011	
	Ref. Pt. Elev. (ft NGVD)	WL Depth (ft below TOC)	WL Elev (ft NGVD)	
MW-01	20.66	n/a	12.55	
MW-02	20.27	n/a	12.59	
MW-03	16.61	6.90	9.71	
MW-04	18.34	9.27	9.07	
MW-05	12.26	8.11	4.15	
MW-06	14.02	5.45	8.57	The information shown on this ma
MW-07	19.51	6.73	12.78	compiled from various sources and should not be considered authorit
MW-08	19.88	5.75	14.13	for engineering, surveying, legal a other site-specific uses. Informati
MW-09	15.88	8.02	7.86	shown on this map should not be for property boundary resolution.
River	USACE	n/a	17.14	does not represent a boundary su and is shown for reference only.
	d oundwater Monitoring tentiometric Surface		Potential Triti	Excavation Area um Sources BASEMAP SOURCE Property Boundary St. Charles Parish, LA Excavation Area Determined and the second state of the second s



4 h			3	SALAR REAL AND / //
Well ID	Ref. Pt. Elev. (ft NGVD)	September WL Depth (ft below TOC)		
MW-01	20.66		12.92	
MW-02	20.27		12.87	
MW-03	16.61	5.59	11.02	
MW-04	18.34	8.63	9.71	
MW-05	12.26	6.06	6.20	The information shown on thi compiled from various source
MW-06	14.02	3.98	10.04	should not be considered aut
MW-07	19.51	5.54	13.97	for engineering, surveying, le
MW-08	19.88	6.68	13.20	other site-specific uses. Infor shown on this map should no
MW-09	15.88	4.46	11.42	for property boundary resolution
River	USACE	n/a	4.30	does not represent a bounda and is shown for reference of
	Nonitoring Installati	Poten	oximate Excava tial Tritium Sou oximate Propert	BASEMAP SOURCE By: SE NAIP 2009 0 200 400 800 Date: October 12, 20'



		N.			
Well ID	Ref. Pt. Elev. (ft NGVD)	December WL Depth (ft below TOC)	13 ,2011 WL Elev (ft NGVD)		
MW-01	20.66	8.69	11.97		
MW-02	20.27	8.20	12.07		
MW-03	16.61	6.72	9.89		
	1W-04 18.34 9.30 9.04				
MW-05	12.26	7.27	4.99		
MW-06	14.02	5.29	8.73		
MW-07 MW-08	19.51 19.88	7.15 7.24	12.36 12.64		
MW-09	15.88	6.74	9.14		
River	USACE	n/a	14.74	Disk / And And	
Legend		_	_	Entergy Waterford-3	0 200 400 Feet
	ndwater Monitorii ntiometric Surface		Potentia	te Excavation Area Potentiometric Surface ritium Sources December 13, 2011 te Property Boundary	BASEMAP SOURCE NAIP 2009 St. Charles Parish, LA



Well ID	TOC Elevation	Depth to Water	WL Elevation			\mathbf{A}
	(ft NAVD 88)	(ft below TOC)	(NAVD 88)			11
MW-01	20.66	7.84	12.82			1
MW-02	20.27	7.40	12.87			DA. F. M. Shire
MW-03	16.61	8.93	7.68			
MW-04	18.34	9.38	8.96			
MW-05	12.26	5.66	6.60			Ball and a shift
MW-06	14.02	4.24	9.78			rmation shown on this map d from various sources and
MW-07	19.51	6.25	13.26		should r	not be considered aut <mark>hori</mark> tati
MW-08	19.88	6.10	13.78		other sit	neering, surveying, legal and e-specific uses. Information
MW-09	15.88	3.73	12.15		for prope	on this map shou <mark>ld not</mark> be us erty boundary <mark>resolutio</mark> n. Thi
River	USACE	n/a	14.11		does no and is sl	t represent a boundary surve hown for ref <mark>erence only</mark> .
.egend			_	Entergy Waterford-3	0 200 400	Itn
	dwater Monitoring tiometric Surface		Potential Tritiu	Excavation Area Potentiometric Surface Im Sources March 30, 2012 Property Boundary		SEM te: March 30, 2012 oject No. 6045-460

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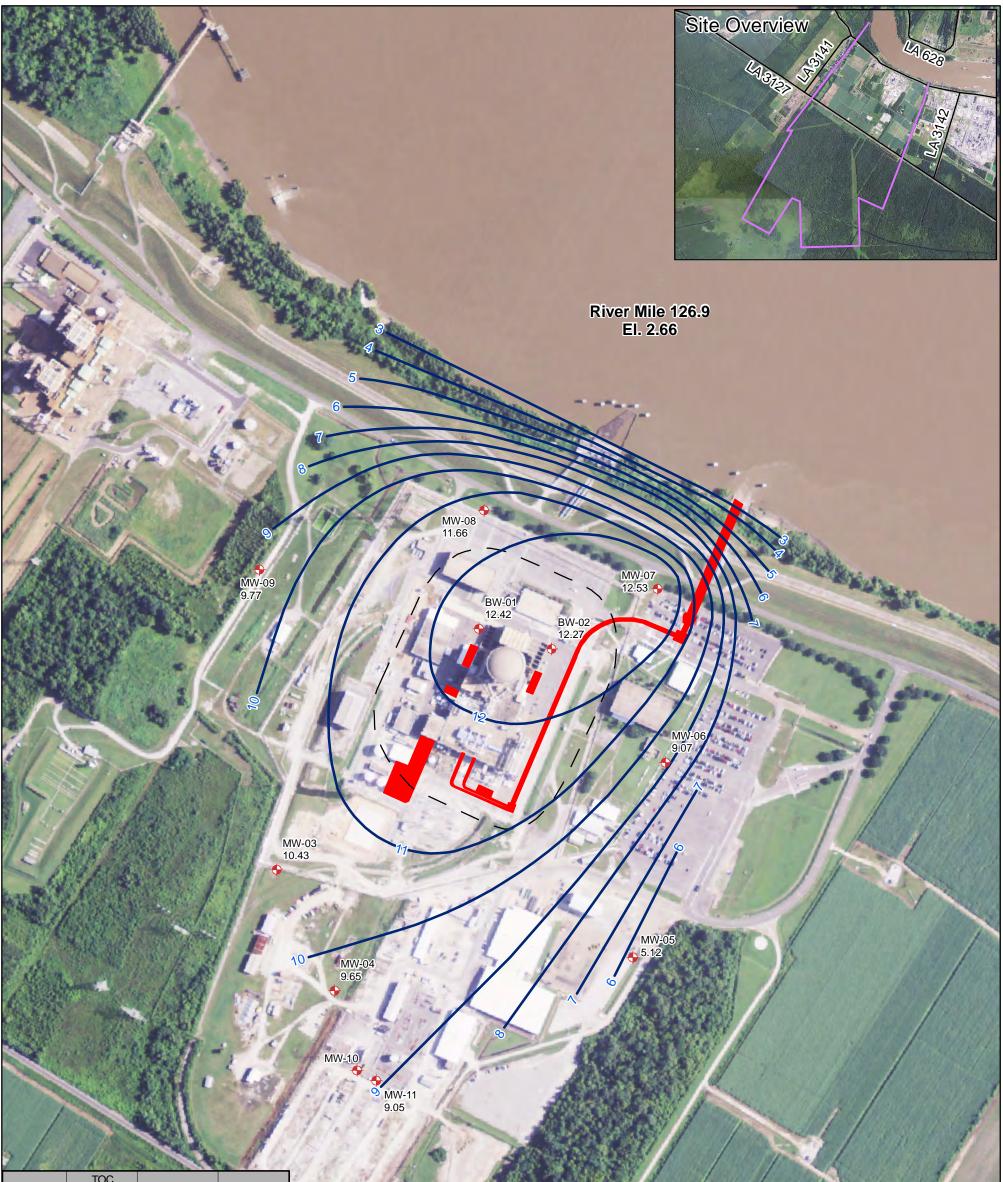
Well ID	TOC Elevation (ft NAVD 88)	Depth to Water (ft below TOC)	WL Elevation (ft NAVD 88)		Se /	
MW-01	20.66	8.01	12.65			and the state of the
MW-02	20.27	7.00	13.27			
MW-03	16.61	5.61	11.00			
MW-04	18.34	8.96	9.38			
MW-05	12.26	5.03	7.23			11111111111111111111
MW-06	14.02	4.06	9.96			The information shown on this map
MW-07	19.51	5.98	13.53			compiled from various sources and should not be considered authoritat
MW-08	19.88	7.22	12.66			for engineering, surveying, legal an other site-specific uses. Information
MW-09	15.88	3.59	12.29			shown on this map should not be us for property boundary resolution. The
River	USACE	n/a	3.76			does not represent a boundary surv and is shown for reference only.
jend				Entergy Waterford-3	0 200 400 Feet	itn
 Groundwater Monitoring Installation [] Approximate Excavation Area Potentiometric Surface Elevation Potential Tritium Sources Approximate Property Boundary 				June 18, 2012	BASEMAP SOURCE NAIP 2009 St. Charles Parish, LA	By: JWB Date: July 1, 2012 Project No. 6045-460

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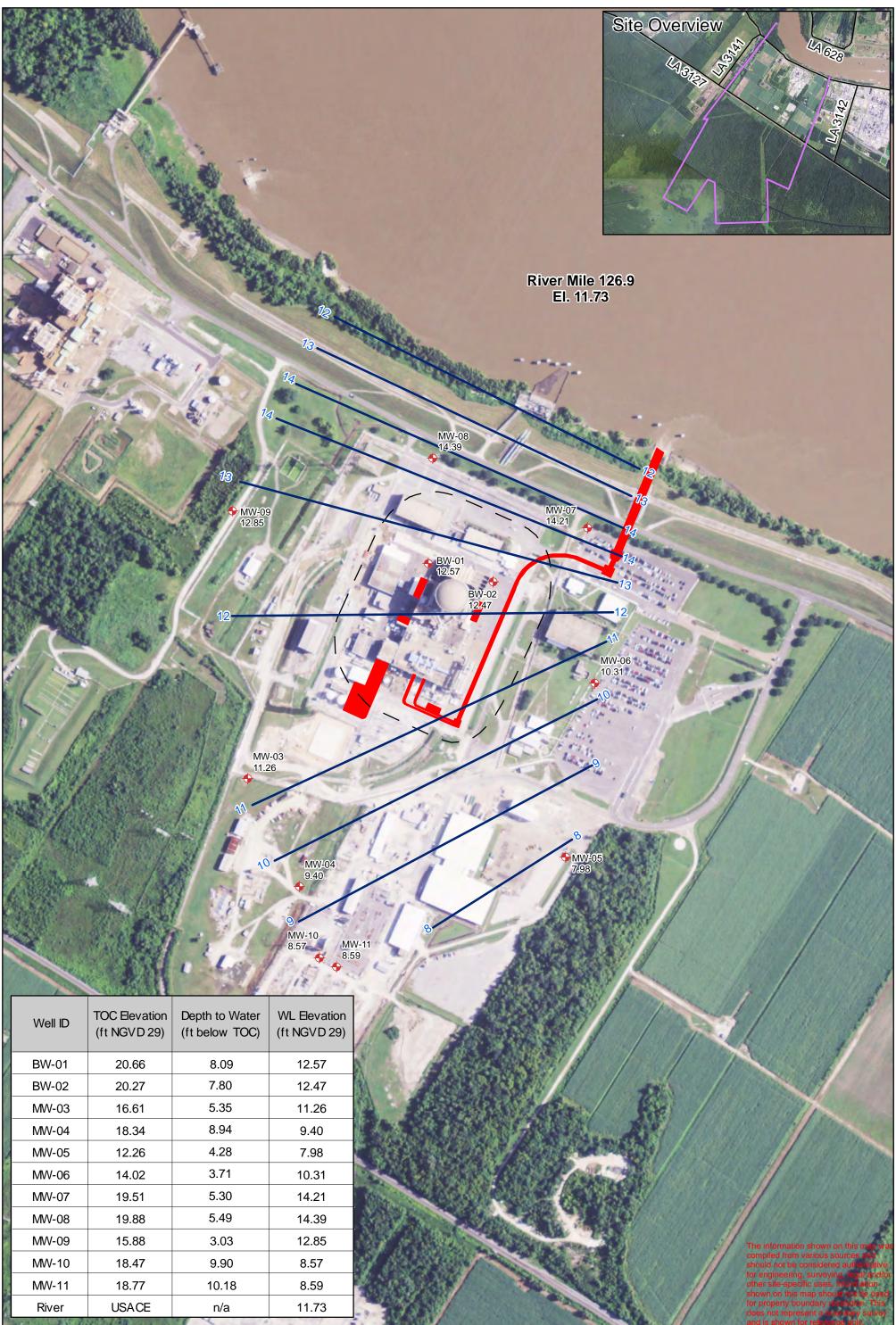
Well ID	TOC Elevation (ft NGVD 88)	Depth to Water (ft below TOC)	WL Elevation (NGVD 88)	Charles Sol		
MW-01	20.66	8.19	12.47		BURNON / PARA	
MW-02	20.27	7.90	12.37		24/1	
MW-03	16.61	5.55	11.06			
MW-04	18.34	8.42	9.92		Statistics 1	
MW-05	12.26	4.92	7.34			151950025877
MW-06	14.02	4.02	10.00			The information shown on this ma compiled from various sources an
MW-07	19.51	5.53	13.98			should not be considered authorit
MW-08	19.88	6.90	12.98			for engineering, surveying, legal a other site-specific uses. Information
MW-09	15.88	3.87	12.01			shown on this map should not be for property boundary resolution.
River	USACE	n/a	2.89			does not represent a boundary su and is shown for reference only.
	dwater Monitoring	g Installation	Potential Tri		0 200 400 Feet BASEMAP SOURCE NAIP 2009 St. Charles Parish, LA	By: SEM Date: Nov. 8, 2012 Project No. 6045-460

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Well ID	TOC Elevation (ft NGVD 29)	Depth to Water (ft below TOC)			
BW-01	20.66	8.24	12.42		
BW-02	20.27	8.00	12.27		
MW-03	16.61	6.18	10.43		
MW-04	18.34	8.69	9.65		
MW-05	12.26	7.14	5.12		
MW-06	14.02	4.95	9.07		
MW-07	19.51	6.98	12.53		
MW-08	19.88	8.22	11.66		
MW-09	15.88	6.11	9.77		The information shown on this map w
MW-10*	18.47	n/a	n/a		compiled from various sources and should not be considered authoritativ
MW-11	18.77	9.72	9.05		for engineering, surveying, legal and/ other site-specific uses. Information-
River	USACE	n/a	2.66		shown on this map should not be use for property boundary resolution. This
Water Leve	I Not Equilibrate	ed.			does not represent a boundary surve and is shown for reference only.
Legend				Entergy Waterford-3	0 200 400 Feet
1 C C C C C C C C C C C C C C C C C C C	dwater Monitoring iometric Surface		Approximate Exp Potential Tritium Approximate Pro	Sources November 2, 2012	BASEMAP SOURCEBy:SEMNAIP 2009Date:Jan. 28, 2013St. Charles Parish, LAProject No. 6045-460

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BW-01	20.66	8.09	12.57
BW-02	20.27	7.80	12.47
MW-03	16.61	5.35	11.26
MW-04	18.34	8.94	9.40
MW-05	12.26	4.28	7.98
MW-06	14.02	3.71	10.31
MW-07	19.51	5.30	14.21
MW-08	19.88	5.49	14.39
MW-09	15.88	3.03	12.85
MW-10	18.47	9.90	8.57
MW-11	18.77	10.18	8.59
River	USACE	n/a	11.73

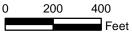
Legend



Potentiometric Surface Elevation

Approximate Excavation Area

Potential Tritium Sources Approximate Property Boundary Entergy Waterford-3 Potentiometric Surface February 26, 2013

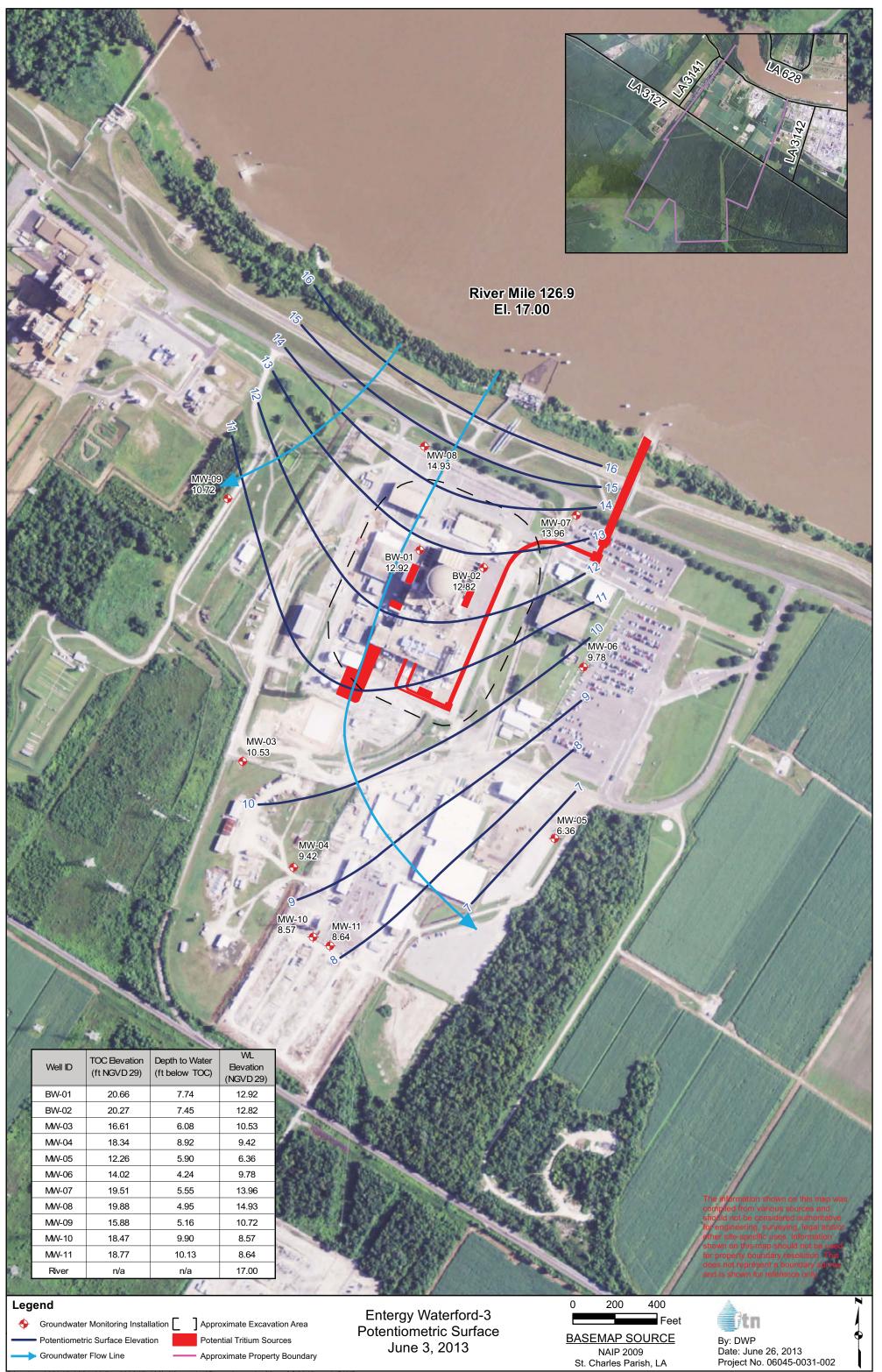


BASEMAP SOURCE NAIP 2009 St. Charles Parish, LA

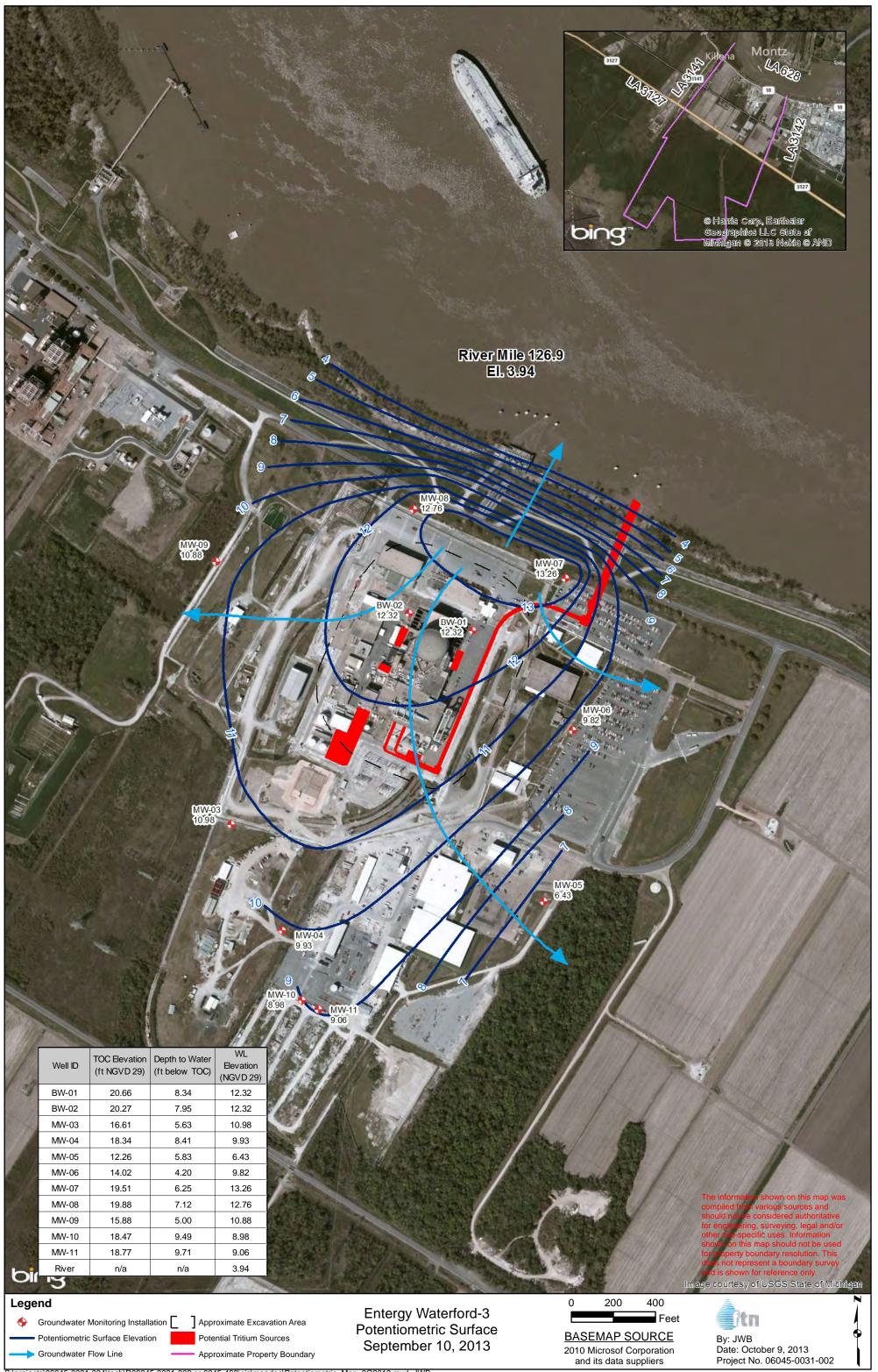


By: KLM Date: March 12, 2013 Project No. 06045-0031-002

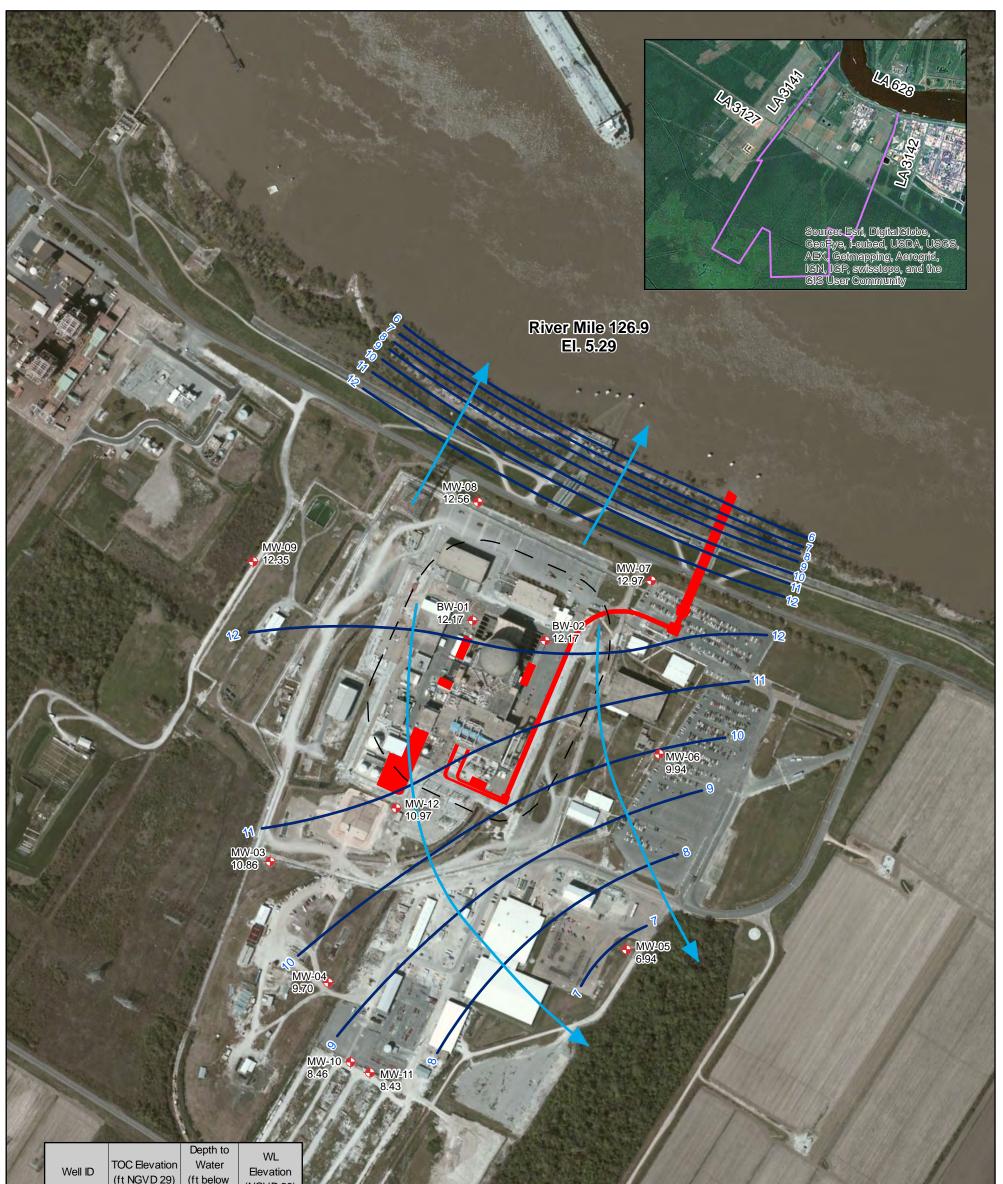
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S:\projects\06045-0031-004\tech\6045-460\gis\mapdoc\Potentiometric_Map_2Q2013.mxd DWP



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		(ft NGVD 29)	(ft below TOC)	(NGVD 29)		and the second		1 Aller Market
2 dail 1	BW-01	20.66	8.49	12.17				PH H
	BW-02	20.27	8.10	12.17		TO ANTEN TA LA		aller water and the
(A)	MW-03	16.61	5.75	10.86	Carles States	a training of the		
	MW-04	18.34	8.64	9.70				
all h	MW-05	12.26	5.32	6.94	7 Adda Artis		San and I	AND A MANNER
Zech	MW-06	14.02	4.08	9.94			Contra Contra	The state of the s
A. Car	MW-07	19.51	6.54	12.97	Real And Aller			and the second
	MW-08	19.88	7.32	12.56				The information shown on this map was compled from various sources and
and the second	MW-09	15.88	3.53	12.35		The second states		should not be considered authoritative for engineering, surveying, legal and/or
	MW-10	18.47	10.01	8.46				other site-specific uses. Information shown on this map should not be used
100	MW-11	18.77	10.34	8.43		All and a		for property boundary resolution. This
4	MW-12	18.13	7.16	10.97		all a second		does not represent a boundary survey and is shown for reference only.
The seal	River	n/a	n/a	5.29	1 1 1 10 10 10	Source: Esri, DigitalGlobe	. GeolEve. Laubed. USDA. USGS.	AEX, Getmapping, Aerogrid, IGN, IGP,
at the				and the	A PARA	swisstopo, and the GIS Us	ser Community	
Leger		Ionitoring Installati	on [] Ar	oproximate Exc	votion Aroa	Waterford-3 netric Surface	0 200 400	(tn
	Groundwater F		—— Ap	otential Tritium S	Decemb	per 17, 2013	BASEMAP SOURCE 2010 Microsof Corporation and its data suppliers	By: JWB Date: February 7, 2014 Project No. 06045-0031-002

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APPENDIX E

Field Documentation

Daily Log

Site Location:	Waterford - 3	Date: 3/10/09
Project Number:	6045-183	Page / of /
0630	- Leave Hotel	
0700		
0705	- Ralley actives po site + difference	act W.L. Masviemits
	- JUB + CLN accive on site + st - Ralney accives on site + deliver Bottles for sampling	·)
0730	-JUB Calibrates SONDE + Turs M	
	ALDRAALS SOLUL & TURS M	actor .
- 0800 -	start sampling	
0735 -	- Pull samely at Museras	
	- Pull sample at MW-03 Pull Dup at MW-03 (MW-03)	
09.45 -	- Pull sample at MW-04	
1045	- Pull sample of MW-05	······
1115 -	- sample Equipment Blank - EB.	
1140	- JWB FULN OFF Site	
	- JWS FCCIO OFF SITE	
		·
	······································	

Form SOP 120-2 – Daily Log – Revision 1



FTN Associates Calibration Form

Date/Time:	3/10/09 0800
Prepared By:	JUN
Location:	Waterford -7
Project #:	6045-183

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
mini-sonde	4	- pH	7	su	20,02	7.00	Y (N)		
<u>4</u> a		- рН	4	su	30,00	3.95	(Y) N	4,00	
		рН	10	su		~	Y N		
		- Cond	0	uS/cm		0	Y (N)		
		- Cond	447-	uS/cm	26.02	437	(\mathbf{Y}) N	447	
'	\vee	DC		mm/Hg		mg/l	Y N	mg/i	
		- Temp		Degrees C	19,89	20.0	ΥŴ	N/A	
							Y N		
LaMote							Y N		-
2020		TURS	200	NTU		210	N 🕅	200	
		· I	ನೆಂ			18	() N	20	
		tt	0,0	(ر		0.00	ΥŴ	•T	
							ΥN		
							ΥN		
							ΥN		

Notes:

pH Calibration (pH Method: EPA 150.1)

Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

Temperature Calibration: No calibration is necessary. Simply record temperature of standard using thermometer while in calibration cup.

Then record hydrolab temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Facility: Waterford - 3	Site ID: MW -03	Sampler: JUS /(LN
Project Number: 6045-183	Date: 3/10/09	Sampler Organization:

Site Description

Weather: Sunny	Air	Гетр (°F): ~ 65°	Wind: No	JE		
Site type: / ﷺ Monitoring Well	Extraction Well	Well casing material:	Well diameter	inches	2	Well
Production Well Irrigation Well	 Borehole Spring 		Total depth from TOC	fcet	37,5	locked?
☐ Other: Damages/repairs needed:	1 0	☐ Iron ☐ Other:	TOC below/above ground	feet	~251	

Water Level Data

	asuring point description: Mark/notch on TOC		Water level meter: Heron Dipper-T 🛛 Slope Water Level Indicator 🗇 Other:								
□ North rim of □ Other:		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks				
Time	24-hour	0721	0753	0865	0833	0915					
Depth to Water	feet	10.79	6,79	207	7.2.7	7.47					
Product	LNAPL/DNAPL	A755	0758	<u></u>		7115					
Prod. thickness	feet			····	· · · · · · · · · · · · · · · · · · ·						

Field Data

Field data meters: B Hydrolab MiniSonde							Pump description: Peristaltic Bladder (dedicated / portable) Submersible			table)	Bailer description: ☐ Disposable polyethylene ☐ Disposable Teflon ☐ Disposable PVC	
Purge depth	feet	Sobas	Well	goes dry	during	purging	and the second s		No		I.	
Casing vol.	gallons	1						1		(inches	$(3)^2] = 0.0$)408
Time	24-hour	0803	0866		7	0815		0821		582.9	0832	Remarks
Purge vol.	gallons	0		0,3	0.4		0,6	0.7	0.9	112	1,3	
Purge rate	mL/min	150	150	150	150	150	150	150	150	150	150	
pH	su	7.16	7,06	6.82		····	6,70		6.92	6.92	6.92	
Temp.	°C							2097	21,08	21.16	21.17	
Spec. cond.	μS/cm						2768	3269	3521		3546	
D.O.	mg/L		~~~			-	~				<u> </u>	
ORP	mV)	/	~							
Turbidity	ntu	0.70	2.2	3,8	2.6	216	2,4	0,40		0.95	0.80	
Color/tint						~ ~ ~					0.00	
Odor		NONE										······

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-03_	3/10/09	0835	4	R	2XIL Plastic (CAMMA) KACH
<u>mw-030</u>	3/10/09	0840	4	Ø	2×16 Glass (Tritium) each
Sampler's Name (pri	nt): Jacok	D Boh	chman	Samp	oler Signature: FachBud

Facility: (SMSRA) WARAGERD - 3	Site ID: MW-04	Sampler: JUS /(LN
Project Number: 6045-783	Date: 3 linkog	Sampler Organization: FTN

Site Description

Weather: Fashey	Ai	r Temp (°F): 705	Wind: C	ALT		
Site type: AMonitoring Well	Extraction Well	Well casing material:	Well diameter	inches	2	Well
Production Well Irrigation Well	Borehole Spring	Steel	Total depth from TOC	fect	37.40	locked? □ Yes
🗆 Other:	⊔ opring	□ Iron □ Other:	TOC below/above ground	feet	2,44	X'No
Damages/repairs needed:	Nint		· · · · · · · · · · · · · · · · · · ·	I	<u>] ** ' (</u>]	

Water Level Data

Measuring point description: Mark/notch on TOC		Water level	Water level meter: KHeron Dipper-T 🗆 Slope Water Level Indicator 🗇 Other:									
□ North rim of □ Other:		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks					
Time	24-hour	0712	0925	13437	0942	1007						
Depth to Water	feet	9.16	9.10	9,95	10,47	10,90	······································					
Product	LNAPL/DNAPL	*		<u> </u>	10791	10/10						
Prod. thickness	feet	P aramanta 1 Matalahata (ara ara ara ara)										

Field Data

Field data meters: X Hydrolab MiniSonde X LaMotte 2020 Turbidimeter I Hydrolab DataSonde I Hach 2100P Turbidimeter I Other: I Other:								Pump description: ▲ Peristaltic □ Bladder (dedicated / portable) □ Submersible			table)	Bailer description: ☐ Disposable polyethylene ☐ Disposable Teflon ☐ Disposable PVC		
Purge depth	feet	30 by	Well	goes dry	during	purging:								
Casing vol.	gallons	0) (inches	$()^{2} \cdot 0$	0408		
Time	24-hour	69.31	09341		T		<u></u>				<u>/ </u>	Remarks		
Purge vol.	gallons	0,1	0.2	0.3	0.4									
Purge rate	mL/min	140	140	150	150									
pН	su	6,95	6.98	6.98	6.96									
Temp.	°C	21.79	21.66	21.79		1						· · · · · · · · · · · · · · · · · · ·		
Spec. cond.	µS/cm	4791	4801		4800									
D.O.	mg/L													
ORP	mV						\							
Turbidity	ntu	16	13	i2			····· :							
Color/tint	Clear	-		/ large	north	estates								
Odor	NONE	->	****		1/200 11						·			

Sample Data

Sample ID	Date		# Containers	 Remarks
mw-04	3/10/09	0945	4	 2×11 Camma (Plastic)
				2× A Tritism (6/253)
, <u> </u>	<u> </u>	<u> </u>		 \

Sampler's Name (print):	Jacob Brickiman	Sampler Signature: For State and State	٦

Facility: ENTRACH LATACARD 3	Site ID: MIN-05	Sampler: CLN/TWB	
Project Number: 1045-183	Date: 3/10/09	Sampler Organization:	ļ

Site Description

Weather: Forcy	Air	Temp (°F): 70,	Wind: C1	4:17		
Site type: X Monitoring Well	□ Extraction Well	Well casing material:	Well diameter	inches	2	Well
Production Well Irrigation Well	□ Borehole □ Spring	C Steel	Total depth from TOC	feet	37.66	locked?
🗆 Other:		□ Iron □ Other:	TOC below/above ground	feet	2.66	\square No
Damages/repairs needed:	NUNE			I	4 <u> </u>	

Water Level Data

Measuring point description: X Mark/notch on TOC		Water level	Water level meter: X Heron Dipper-T 🛛 Slope Water Level Indicator 🗇 Other:								
□ North rim of		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks				
Time	24-hour	0659	1620	1036	1142	1108					
Depth to Water	feet	6.24	6.18	6.149	6,49	6.54					
Product	LNAPL/DNAPL	•		<u>(</u>		<u>) C · Q</u>					
Prod. thickness	feet	•••••••••••••••••••••••••••••••••••••••									

Field Data

Field data me ↓ Hydrolat □ Hydrolat ↓ □ Other:	MiniSond	e íD	LaMotte Hach 21 Other:	e 2020 ⁻ 100P Tu	Furbidin rbidime	neter ter	X	p descri Peristalt Bladder Submers	ic (dedica	ted / por	table)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth	feet	30 bgs	Well	goes dry	during	purging:	D Y	es X	No			
Casing vol.	gallons					depth to				(inches	$()^{2}$] • 0.	0408
Time	24-hour	1025	1028		1034					<u>ì </u>	<u></u>	Remarks
Purge vol.	gallons	0.0	· · · · · · · · · · · · · · · · · · ·	0,3	0.4	1 mg	016					I COMMINS
Purge rate	mL/min	120	120	120	120	120	120		<u> </u>			
pН	su	7.91	7.12	7.91	7.88		7.89					
Temp.	°C	23.05		22.80	1	22.59						
Spec. cond.	μS/cm	1607	1596	1593			1591					
D.O.	mg/L		<u> </u>		1.401	1. 11	1571					
ORP	mV	*****										
Turbidity	ntu	0,90	1.1	2,3	1,6	17	1.5		l			
Color/tint		clear	->	1/2 /	<u> </u>	<u> </u>	<u> </u>					
Odor		NONE		>								

Sample Data

Sample ID	Date	Time		# Filtered	Remarks
MW-05	3/10/09	1645	2.{		8x1L Glasstritium)
				7	2×16 Plastic (GAMMA)
Sampler's Name (pr	int):				

Compler's Name (unint)						
Sampler's Name (print):	11/11/11	1	Convertes O'	/' A		
	1178118	$-\mathbf{k} + i\mathbf{k} + \mathbf{k} + \mathbf{k}$	Sampler Signature:	1	X /	
heavy service and the service		N V V e V	prot orginitate:	11.11	11 1-	
					£	

Facility: Waterford - 3	Site ID: SER-1	Sampler: $T_{\lambda} R_{\lambda} (1/\lambda)$
Project Number: 6045 - 183	Date: 3/10/09	Sampler Organization: FTN

Site Description

Weather: Sunny	Air Te	emp (°F): 75°	Wind: 5	-10	
Site type: (C Extraction Well	Well casing material:	Well diameter	inches	 Well
Production Well Irrigation Well	□ Borehole □ Spring	Steel Iron	Total depth from TOC	feet	locked?
☐ Other: Damages/repairs needed:	e opring	□ Other:	TOC below/above ground	fect	□ No

Water Level Data

Measuring point description: Ark/notch on TOC North rim of TOC Other:		Water level	meter: 🛛 Heron	Dipper-T 🗆 S	lope Water Le	evel Indicator	Other:
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time	24-hour						
Depth to Water	feet						······································
Product	LNAPL/DNAPL				·····		
Prod. thickness	feet						

Field Data

	eters: b MiniSonde b DataSonde		ich 21(l'urbidin rbidime			p descri Peristali Bladder Submer	tic (dedica	ited / por	table)	Bailer description: □ Disposable polyethylene □ Disposable Teflon □ Disposable PVC
Purge depth	feet	1	Nell g	oes dry	during	purging		′es 🗋				
Casing vol.	gallons) (inches	$(1^{2})^{2}$	0408
Time	24-hour				ſ					T	<u> </u>	
Purge vol.	gallons								+			Remarks
Purge rate	mL/min		Fal	Nom	ent	Blan	(1			
pН	su		- q	1	sed	sta	•	Listil	1	G		
Temp.	°C				- Gren	F I	Used		estic	For	-	
Spec. cond.	μS/cm			here	LS.		USeo Wa	1		-terb	L	
D.O.	mg/L			1) 5 1 (ppeC	<u> </u>	467 /	evel.	Meter		
ORP	mV					(
Turbidity	ntu											
Color/tint												······································
Odor												

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
EB-1	3/10/01	1115	4		2×16 Glass (tritium)
					2X/L Plastic (CAMMA
·····			·····		

Sampler's Name (print): Jacob	Brichman	Sampler Signature:	J. A BALL	
			_ and I want	

Form SOP 120-3 - Sampling Record - Revision 1

.



	Project Nan						Project Numb	er		Projec	et Mana	ager (P	Print)					Page of
3/10/09	EN	TERGY	Waterfield -	. 7			6045-1	TI .		B	in the	for all	-					Page of
Laboratory Name				itted b	y:						P	aramet	ers (M	ethod N	Jumber	.)		Lab Turn-Around Time
ENTERG	SY_RIL	IER BEN	VO FTN	Asso	ciate	s I	td		-			anunot						
							Drive, Suite	3										24 Hours
							72703	-t	-					1				48 Hours
Phone: ()							Fax (479) 5	71-3338	14 mm	- And								
								1							-			7 Days
Sampler Signature((s)			rded B	-			1		-				-				Other:
Sed B.	chran	10		Tac	06	B	lichma	n		19.20		2				519		Due: _/_/
			MPLE DESCRIP	TION							110	ŝ						
				M	latrix'	k		Met		4	1	2						Laboratory Notes
Field Sample Nur	mber	Date (mm/dd/yy)	Time (hh:mm)	W	S	0	Number of Containers	Comp	Grab	L	1 C)		-				Laboratory Notes
MW-03		3/10/09	0855	X			4	1	~	X	~	-5	12					
MW -031	n	2110/09	0840	X			4		X	X	X							
MW-04		3/10/09	0945	X			4 -	in and	X	X	S	-						
MW-05		2/10/09	10115	X	-		Cr	man and	X	$\langle \rangle$	S							
EB-1		3/10/09	1115	X	- 1		4	1	S	X	~							
								1										
													-					
				-		W	= Water S = S		Other		-		1		1			
				* Ma					d By (Sig	motura			Prin	t Name				Date Time
Relinquished By (S		Print 1	S Brichn	m	1	Date		1	D A SIE		21		100-	- na	-1	0	534	31 1 1 110
Relinquished By (S		Print 1			-	Date	Contraction of the local division of the loc		d By Lal		y (Signa	ature)	Prir	it Name	ele Mi	av en		Date Time
Sampler Remarks				-			1	Labora	ory Rem	arks:								L'
Sampler Kemarks																		
													and the second second			CONTRACT CALLER		

The and the second and

Daily Log

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Site Location: Water Port 3	Date: 6-16-09
Project Number: 604 5-183	Page 1 of
0715- arrived on site	
- bejan taking water levels	
Rodney	
cell = 985 - 665 - 0166	
	- HF Scientific Tusid. ty
0805 - start sampling mw-c	23
1225 - Finish sampling - take	Equipment Blank
12-10 - Jus & JK UOTE Jite	2
	-
Equipment Blank:	
we used Great Value dis.	Hiller 120
poly tubing silicone tubi	tilled water with
meter Water was numped!	ng and the nator level
The parastaltic pump	the bottles through
the parismance points	~
1.5	STELT 1 11 1-
	FINOX. We substituted Lianing
Lig	
\sim	1th Borger, CPhesohote + Chibnie F.

Form SOP 120-2 – Daily Log – Revision 1

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FTN Associates Calibration Form

Date/Time:	6-16-09/0753
Prepared By:	JJR
Location:	Naterhold 3, MW. 03
Project #:	6045-183

Instrument Type		Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
tydrolah	FTN#4	pН	7	su	28.11	7.13	Y N	7.00	
MINISON 40		pН	4	su	4.16	28.08	Ý N	4.00	
		PH	10	SU			YN		
		Cond	0	uS/cm	-	0	Y N	0	
		Cond	1413	uS/cm	28.68	1501	Y N	1412	1
	1	-DO-		mm/Hg		mg/l	YN	mg/l	•
		Temp	~29	Degrees C	28.59	-	YN	N/A	141
							YN		
HE		Toth	1000	NTU	_	1010	Y N	1003	is in
Scientific		11	10.0	4.5		9,83	𝒮 N	10,53	L
		14	0.02	C.c.	1	0.05	(Y)N	0,00	
							YN	Cre	
							Y N		
							Y N		
							Y N		

Notes:

pH Calibration (pH Method: EPA 150.1)

Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

Temperature Calibration: No calibration is necessary. Simply record temperature of standard using thermometer while in calibration cup.

Then record hydrolab temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Facility: Waterford 3	Site ID: MW-03	Sampler: JWB, JJR
oject Number: 6045-183	Date: 6/176/09	Sampler Organization: FTN

Site Description

Weather: Clear, Supry	Air Temp (°F): 82	Wind: Co	alm					
ite type: ▷ Monitoring Well □ Extract	ion Well Well casing materia	l: Well diameter	inches	2	Well			
□ Production Well □ Borehole		Total depth from TOC	feet	35	35 Iocked? 35 I Yes 2.5 □ No			
□ Irrigation Well □ Spring □ Other:	\Box Iron \Box Other:	□ Iron □ Other: TOC below/above ground	feet	2.5				

Water Level Data

Measuring point		Water level	meter: 🗆 Heron	Dipper-T	Slope Water L	evel Indicator	Other: Kech (100')
Mark/notch		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time	24-hour	0744	0801	ARIL	0829	0900	
Depth to Water	feet	7,23	7.22	7.55	7.58	7.63	
Product	LNAPL/DNAPL	6/16/09	->	1.12		1.0.5	
Prod. thickness	feet						

Field Data

Field data meters: Image: Mydrolab MiniSonde Image: Hydrolab DataSonde Image: Hydrolab DataSonde						p descrij Peristalt Bladder Submers	ic (dedicate	ed / porta	able)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC		
Purge depth	feet	30	Well g	goes dry	during	purging	: 🗆 Y	es 🔽	No			
Casing vol.	gallons	4.9	= [tota	l depth	(feet) -	depth to			well ID	(inches)	²]•0.	0408
Time	24-hour	0805	0808	0812	0816	0820	6824	0828				Remarks
Purge vol.	gallons			0.3	0.45		0.7	0,8				
Purge rate	mL/min	200	155	110	110	110	110	110				
pН	su	6.77	5 5 0 5	6,81	6.84	6.86	6.86					
Temp.	°C	25.49				24.82						
Spec. cond.	μS/cm	2503	2504			2514		2510				
D.O.	mg/L	-	-	-	-	-	-	-		-		
ORP	mV	-	L	-	-	-	-	-				
Turbidity	ntu	2.86	3,13	2.48	2,97	1.67	1.59	1,84			*****	
Color/tint		clear	1	7								
Odor		NONE		>								

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-03	6/16/09	0830	4	-	2XIL Alastik (Gamma)
					2x12 Glass (Trition)

Sampler's Name (print): Jacob Bockman

3

Sampler Signature:

Facility: Waterford 3	Site ID: MW-04	Sampler: JWB, JJR
oject Number: 6045-183	Date: 6-16-09	Sampler Organization: FTN

Site Description

Weather: Sunmy	Air	Temp (°F): 85	Wind: 5-	Wind: 5-15mpc				
Site type: Monitoring Well	□ Extraction Well	Well casing material:	Well diameter	inches	9	Well		
□ Production Well	Borehole	□ Steel	Total depth from TOC	feet	75	locked?		
 Irrigation Well Other: 	□ Spring	□ Iron □ Other:	TOC below/above ground	feet	3725	□ No		
Damages/repairs needed:	hone							

Water Level Data

Measuring point		Water level meter: 🗆 Heron Dipper-T 🗆 Slope Water Level Indicator 🔏 Other: Kak									
 ➢ Mark/notch of □ North rim of □ Other: 		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks				
Time	24-hour	0733	0912	0923	1012	1122					
Depth to Water	feet	9.14	9.04	9,87	10:42	10:72					
Product	LNAPL/DNAPL										
Prod. thickness	feet										

Field Data

Field data me Hydrolab Hydrolab Other:	MiniSonde	e 🗆 I	LaMotte Hach 21	100P Tur	rbidimet	ter			ic (dedicat	ted / por		🗆 Dispo			
Purge depth	feet	30	Other:			purging:		Submers					osable PVC		-
Casing vol.	gallons	4.6								(inches	$(s)^2] = 0.0$)408	1005	1009	1
Time	24-hour	0915	0919		1	1	T	1	6947		19956	1000	Remarks		-
Purge vol.	gallons	0,1					0.5		0.7		0,9	1.0	1.1	1.2	
Purge rate	mL/min		100	100	100	100	100	100	100	100	100	100	100	100	-
pH	su	6.50	6.48	6.50		6,50					6-48	6.52	6.53	6.56	
Temp.	°C		24,99					1			25,00				-
Spec. cond.	μS/cm		4598	4602	1000			4826	4908		589.2		5297	5347	A
D.O.	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	1
ORP	mV	-	-	-	-	-	-	-	-	-	-	-	- 1	-	-
Turbidity	ntu	17.56	21.57	912	11.59	12.39	15.85	19,22	12.24	17.7	10.807	- 5.98	4,21	10,98	-
Color/tint		Clour	_			cubtes			1	-			- une (1-10	1
Odor	1	NONE			Perce										1

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-04	6/16/09	1015	4	-	12 Plastic 12 (Gamma).
MW -04D	6/16/09	1020	4	-	(2 Gloss IL (Tation))

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Sampler's Name (print): Jacob Brickman

Sampler Signature: 508 GE hu

Facility: Waterford 3	Site ID: MW-05	Sampler: JWB JJR
oject Number: 6045-183	Date: 6-16-09	Sampler Organization: $\overline{-TN}$

Site Description

Weather: Sunwy	Air	· Temp (°F): 89°	Wind: 5	-10		
Site type:	□ Extraction Well	Well casing material:	Well diameter	inches	2	Well
□ Production Well	Borehole	□ Steel	Total depth from TOC	feet	33	locked?
 Irrigation Well Other: 	□ Spring	□ Iron □ Other:	TOC below/above ground	feet	2.5	□ No
Damages/repairs needed:	hore			-		

Water Level Data

Measuring point		Water level	meter: 🗆 Heron	Dipper-T	Slope Water L	evel Indicator 🖒	Other: Keck
Mark/notch North rim of Other:		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time	24-hour	0731	1136	1149	1153		
Depth to Water	feet	7.78	7,73	8.02	8.02		
Product	LNAPL/DNAPL						
Prod. thickness	feet						

Field Data

Hydrolat	eld data metersy Hydrolab MiniSonde Hydrolab DataSonde Hydrolab DataSonde Other: Other:						o descri Peristalt Bladder Submers	ic (dedica	ted / portab	le)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC	
Purge depth	feet	30				purging:	ΠY	es 🗴	No			
Casing vol.	gallons	4,8	= [tota	l depth	(feet) -	depth to	water (feet)] •	[well ID	$O(\text{inches})^2$	• 0.	0408
Time	24-hour	1140	1144	1148	1152		~					Remarks
Purge vol.	gallons	0,0	6,1	6.2	0.3	(0,	D					
Purge rate	mL/min	434	ID	110	110							
pH	su	7.24	7.20	7,19	718	-						
Temp.	°C	29,07	27.53		27.39			1				
Spec. cond.	µS/cm	1941	1959	1958	1955							
D.O.	mg/L	5	-	-	-							
ORP	mV	~	-	4	1				F G			
Turbidity	ntu	12.76	6.88	8.65	4.51							
Color/tint		Cleur	-	>			22.2					
Odor		NONF	-	>	1							

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks	
MW-05	6/16/04	1155	4	-	2× 12 Plastic (Gamma)	
EB-1	6/16/09	1230	4	-	2x 16 Gloss (Trition	

Sampler's Name (print): Jacob Brickman

Sampler Signature:



Tojer Value Project Number Project Number Project Number Page		Project Name					Project Num	her		Proi	ect Ma	anger (Drint)					
Laboratory Name Submitted by: Parameters (Method Number) Lab Turn-Around Time FTN Associates, Ltd. 124 W. Subridge Drive, Suite 3 Parameters (Method Number) Lab Turn-Around Time Phone: () FTN Associates, Ltd. 124 W. Subridge Drive, Suite 3 Parameters (Method Number) Lab Turn-Around Time Sampler Signature(s) Recorded By (Print) Recorded By (Print) Image: Content of the second se		liptorfiel	- 3															Dage 1 of 1
First Associates, Ltd. 124 W. Sunbridge Drive, Suite 3 Fayetteville, AR 72703 (479) 571-3338 Parameters (Method Number) Lab Turn-Around Time [24 Hours] Sampler Signature(s) Recorded By (Print) Matrix* Method Containers Method Sampler Signature(s) Recorded By (Signature) Matrix* Mumber of Containers Method Field Sample Number Date (mm/dd/yy) Time (thrmm) Matrix* Mumber of Containers Method Mumber of (mm/dd/yy) Time (thrmm) Matrix* Mumber of Containers Method Method Method Mumber of (mm/dd/yy) Time (thrmm) Matrix* Mumber of Containers Method Method Method Method Mumber of (mm/dd/yy) Time (thrmm) Matrix* Mumber of Containers Method Method Method Method Mumber of (mm/dd/yy) Time (thrmm) Matrix* Mumber of Containers Method Method <th>Laboratory Name</th> <th></th> <th>Sul</th> <th>omitted</th> <th>by:</th> <th></th> <th>100910</th> <th>-1-1-5</th> <th></th> <th>1</th> <th>UB.</th> <th>We</th> <th>St</th> <th></th> <th></th> <th></th> <th></th> <th>rage OI</th>	Laboratory Name		Sul	omitted	by:		100910	-1-1-5		1	UB.	We	St					rage OI
124 W. Subbridge Drive, Suite 3 Fayetteville, AR 72703 (479) 571-3334 · Fax (479) 571-3338	Ealor.	1 Datechar	5-1								1	arame	ters ()	Aethod	Numbe			L.L.T. A LT.
124 W. Sunbridge Drive, Suite 3 Fayetteville, AR 72703 (479) 571-3334 • Fax (479) 571-3338	Enterof	y marinora	FT	N Ass	sociat	es. 1	Ltd.		1	-	1			T	Tumbe		-	Lab Turn-Around Time
Phone: () Fayetteville, AR. 72703 (479) 571-3334 · Fax (479) 571-3338 Image: Contract of the second by (Print) Image: Contract of the second by (Print) Sampler Signature(s) Recorded By (Print) Image: Contract of the second by (Print) Field Sample Number Date Time Method Image: Contract of the second by (Print) Image: Contrest of the secon			12	4 W. S	Sunbr	idge	Drive Suit	e 3			1	2	-			1		24 Hours
Phone: () (479) 571-3334 · Fax (479) 571-3338 Sampler Signature(s) Recorded By (Print) SAMPLE DESCRIPTION Field Sample Number Date Matrix* W W S O Comp Graph Comp Matrix* W W S O Comp Graph Comp Graph Comp Matrix* W W S O Comp Graph Comp Graph Comp Matrix* W W S O Comp Graph Comp Graph Comp Matrix* V W S O Comp Comp Comp			Fa	vettev	ille /	AR	72703				1 -						10	24 110uis
Sampler Signature(s) Recorded By (Print) Matrix* Method Image: Control of the co	Phone: ()		(47	79) 57	1-333	4.	Fax (470)	571 222	0			-				1		48 Hours
SAMPLE DESCRIPTION Matrix* Method Method Image: Containers Method Image: Containers Method Image: Containers Method Image: Containers Image: Containers Method Image: Containers Method Image: Containers Method Image: Containers Image: Containers Method Image: Containers Image: Cont	(11) 371-3334 * Tax (47)							571-555	0								1	
SAMPLE DESCRIPTION Field Sample Number Date Matrix* Mumber of Containers Method Image: Containers Image: Containers <th< th=""><th>Sampler Signature(s)</th><th></th><th>Rec</th><th>corded I</th><th>By (Pri</th><th>nt)</th><th>1</th><th></th><th>- fritter</th><th></th><th>1</th><th></th><th></th><th>1</th><th></th><th></th><th>1</th><th>7 Days</th></th<>	Sampler Signature(s)		Rec	corded I	By (Pri	nt)	1		- fritter		1			1			1	7 Days
SAMPLE DESCRIPTION Field Sample Number Date (mm/dd/yy) Matrix* Mumber of Containers Method Method Image: Comp of Containers Ima	- c 21	10	Lamest State			a land	1			14)					1	5113	
SAMPLE DESCRIPTION Field Sample Number Date (mm/dd/yy) Matrix* Number of Containers Method Method Itaboratory Notes Multical Matrix* Number of Containers Method Organ Grab Itaboratory Notes Multical Multical Multical Matrix* Number of Containers Method Itaboratory Notes Multical Multical Matrix* Number of Containers Method Itaboratory Notes Itaboratory Notes Multical	200 000	MAAA AND	The start of the	Jaco	2.2.1	3 (ic kmar	-		Summer	5		1					
Field Sample Number Date (mm/dd/yy) Time (hh:mm) W S O Number of Containers Comp Grab I		S	AMPLE DESCRI	PTION	ant a					23	2						0	Duc/_/
Field Sample Number Date (mm/dd/yy) Time (hh:mm) W S O Number of Containers Comp Grab I	State Land Street		A setter of	TN	Matrix	*		Met	had	-	3		1			1	- and the	
(mm/dd/yy) (hh:mm) " 3 0 Containers	Field Sample Numb		Time				Number of		T	Li	18:00							
Monormal Monormal <td< td=""><th></th><td>(mm/dd/yy)</td><td>(hh:mm)</td><td>VV</td><td>5</td><td>0</td><td></td><td>Comp</td><td>Grab</td><td>1</td><td>1.0</td><td></td><td></td><td></td><td></td><td></td><td></td><td>Laboratory Notes</td></td<>		(mm/dd/yy)	(hh:mm)	VV	5	0		Comp	Grab	1	1.0							Laboratory Notes
Monor Monor <th< th=""><th></th><th>6/11/109</th><th></th><th>X</th><th></th><th>1</th><th>1 ET</th><th>the second</th><th>X</th><th>X</th><th>X</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<>		6/11/109		X		1	1 ET	the second	X	X	X							
Market By (Signature) Print Name Date Time Received By Laboratory (Signature) Print Name Date Time	MW-04	(1	1015	X	and all		Lin	11.5	X	×	X	-						
F6 I	M62-045) (1)	1020	X		ant	14	1	×	×	X	12:21						
Image: Second	MW-05	1 A	11555	X			W.	the second	X	X	X	ter.	-	12				
Relinquished By (Signature) Print Name Date Time Received By (Signature) Print Name Date Time Relinquished By (Signature) Print Name Date Time Received By (Signature) Print Name Date Time Relinquished By (Signature) Print Name Date Time Received By Laboratory (Signature) Print Name Date Time	EB-1		1230	X			-4-1	0	X	X	X							
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Sampler Remarks Laboratory Remarks:					1.15		1	127	~	14	(
	Sampler Remarks							Laborato	ory Rema	rks:		-	-	-				
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Daily Log

Site Location: Water Ford 3, ENtry	Date: Page	7/2//C	19
T:10 JWB EIF arrive on Site. Take water appr medsu at MW-5 (7:19). MW-4 (MW-3 (7:35)	vmont 1:30),		
7:40 Slavi Calibrating @ MW-3 Wait for contact from Entergy 1	Persone	J. WIBOT	
9.10 Begin sampling @ MW-3			
9:50 Begin Sampling @MW-4 * es Equiliprium	abiishii	ng well	
10:08 Take Samples From MW-4.			
1125 i Take Sumple from MW-5 1130 " Take Sumple from MW-5D			
-1220: Take Equipment Blank w/ Silicone & Rely Husing and Veck 20 Water Level Acter Sof of Wal-Mart Abita Springs Dishilled H20:			
12:23 Leave the site and traver River Bend,	1 10		

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Form SOP 120-2 - Daily Log - Revision 1

Facility: ENtergy WaterFord 3	Site ID: MM-5	Sampler: J.W.B/	ETH
oject Number: 6045 - 460	Date: 7/21 09	Sampler Organization	: FTN ASSOC.

Site Description

Weather: Sugar	Air T	'emp (°F): 270°	Wind: 5	-10 10	1-	
Site type:	Extraction Well	Well casing material:	Well diameter	inches	2	Well
Production Well		Steel	Total depth from TOC	feet	25	locked? XYes
 Irrigation Well Other: 	□ Spring	□ Iron □ Other:	TOC below/above ground	feet	feet $\sqrt{2}$	
Damages/repairs needed:	NONE					

Water Level Data

	Measuring point description: Mark/notch on TOC North rim of TOC Other:		Water level meter: 🗆 Heron Dipper-T 🔅 Slope Water Level Indicator 😥 Other: 1/2014 20									
🗆 North rim of			Pre-purge confirmation	During purging	Purge end	After sampling	Remarks					
Time	24-hour	7:35	8.04	8:57	9:06	9.25						
Depth to Water	feet	7.18	1.12	7.62	762	TIA						
Product	LNAPL/DNAPL	·····			<u>i. V. k-</u>	<u> `'\#</u>						
Prod. thickness	feet											

Field Data

Field data meters: X Hydrolab MiniSonde □ LaMotte 2020 Turbidimeter □ Hydrolab DataSonde □ Hach 2100P Turbidimeter □ Other: ↓ XOther:						Pump description: Peristaltic Bladder (dedicated / portable) Submersible				Bailer description: ☐ Disposable polyethylene ☐ Disposable Teflon ☐ Disposable PVC				
Purge depth	feet	30				purging:	: O Y	es 🔀	Ňo					
Casing vol.	gallons	4.2	= [tota	l depth	(feet) –	depth to	water ([feet)] •	[well ID	(inches	$)^{2}$]•0.0	408	9:00	906
Time	24-hour	8:13	8:18	1	8:26	1	1	· · · · · · · · · · · · · · · · · · ·	8:45			8 57	Remark	
Purge vol.	gallons	0.0	0.4	0.45	05	07	0.85	0,9	10	1.3	1.5	1.75	20	2.3
Purge rate	mL/min	95	95	95	95	95	95						95	
pН	su	6.92	6.91	6.93	6.93	6.95	6.94	6.93	6.91	1,93	6.96	95	6.96	6.93
Temp.	°C	25.89	2532	-	2482								2490	25.26
Spec. cond.	μS/cm	2613	3553	3561		3589				3598	3595	3598	2408	3618
D.O.	mg/L													<u> </u>
ORP	mV			, in the second s										
Turbidity	ntu	17.13	5.67	4.6	3.58	3.01	224	293			2:79	2.62	2.55	3.33
Color/tint		clear	TVON								<u></u>	~ * 10	1000	
Odor			, ,		*****									

Sample ID	Date	Time	# Containers	# Filtered	Remarks
<u>MW-3</u>	72109	9:10	4	Street and a state of the state	2 XIL Plastic (Gamma)
					2 XIL Grass (Tritium)
·					

Sampler Signature: Start August M
Sumptor Signature. L. ALT MARKARDEN
, , , ,
Form SOP 120-3 – Sampling Record – Revision 1

Facility: ENTERAY WATER FORD 3	Site ID: MW-H	Sampler: IWBEH
oject Number: 6045-460	Date: 72109	Sampler Organization: FTW ASSOC.

Site Description

Weather: Sunny	Air 1	° (°F): √80	Wind: 5	C= j0 ~	-pl-	
Site type: Monitoring Well	Extraction Well	Well casing material:	Well diameter	inches	2	Well
Production Well		Steel	Total depth from TOC	feet	35	locked? ₩Yes
 Irrigation Well Other: 	□ Spring	☐ Iron □ Other:	TOC below/above ground	feet 23		ΪNο
Damages/repairs needed:	NONE	•	San 197 ⁹⁹		1	L

Water Level Data

Measuring point		Water level	Water level meter: Heron Dipper-T Slope Water Level Indicator									
	Mark/notch on TOC North rim of TOC Other:		Pre-purge confirmation	During purging	Purge end	After sampling	Remarks					
Time	24-hour	0726	9:49	0:01	10:08	10.34						
Depth to Water	feet	9.04	9.04	902	9.91	10.45						
Product	LNAPL/DNAPL				······································							
Prod. thickness	feet											

Field Data

Field data me								descrip				Bailer description:
[X Hydrolat	MiniSond		LaMotte				1	eristalti				🗆 Disposable polyethylene
□ Hydrolab DataSonde □ Hach 2100P Turbidimeter □ Other: ○ Other: ○ Other: ○ Other: ○ Other: ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○										ted / por	table)	🛙 Disposable Teflon
□ Other:	1	<u> </u>						ubmers	ible			Disposable PVC
Purge depth	feet	30	Well g	goes dry	during	ourging:	[] Y	es 🕅	No			
Casing vol.	gallons	3.9	= [tota	l depth	(feet) –	depth to	water ([eet)] • [well ID	(inches	$)^{2}] \bullet 0.$	0408
Time	24-hour	9.56	9:59	10.04	10:07		•					Remarks
Purge vol.	gallons	0.1	0.15		0.75							
Purge rate	mL/min	105 -	~>	160	100					-		······································
pH	su	642	1.51	661	652							
Temp.	°C	25.71	25.50			*						
Spec. cond.	μS/cm		4920									
D.O.	mg/L											
ORP	mV											·····
Turbidity	ntu	467	713	545	582							
Color/tint		CKAV	Ivov	·····								
Odor												******

Sample Data

Sample ID	Date		# Containers	# Filtered	Remarks
MM-4	7/21/09	10.08	3		2 XIL Tritium
· · · ·					1. XIL Gammina
					V

Sampler's Name (print):	Emily	Hollingsworth	Sampler Signature:	E. Hallu	AUER	th	
	J	· · · · J · · ·		(1 22	

Facility: Entergy Waterford 3	Site ID: MW-5	Sampler:	EH
.oject Number: (2015-460	Date: 7/2) (9	Sampler Organization:	TN. Assoc

Site Description

Weather: 870	Air Te	emp (°F): 87°	Wind: 5	-10 m	o.H.	
Site type:	Extraction Well	Well casing material:	Well diameter	inches	2	Well
 Production Well Irrigation Well 	🛛 Borehole	🖞 Steel	Total depth from TOC	feet	35	locked?
□ Other:	Spring	☐ Iron □ Other:	TOC below/above/ground	feet 4	N3	ĺ ĺ Ď No
Damages/repairs needed:	MOORE NONE			<u>. </u>		

Water Level Data

Measuring point		Water level	meter: 🛛 Heron	Dipper-T	Slope Water L	evel Indicator	VOther: KPCK 201
Mark/notch		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time	24-hour	70008	10121	1100	116	11209	
Depth to Water	feet	7.68	7.68	8.00	8,02	8.03	
Product	LNAPL/DNAPL						
Prod. thickness	feet						

Field Data

Field data me ∦ Hydrolab □ Hydrolab □ Other:	e 2020 7 00P Tu 上下 _<	rbidime		Pump description: Bailer description: ✓ Peristaltic □ Disposable poly □ Bladder (dedicated / portable) □ Disposable Tef □ Submersible □ Disposable PV0								
Purge depth	feet	30				purging:	ΟY	es 🕅	No			
Casing vol.	gallons	4.1	= [tota	ıl depth	(feet) -	depth to	water (feet)] • [[well ID	(inches)	²] • 0.	0408
Time	24-hour	1051	1051	1100	1104	1107	1141	1115				Remarks
Purge vol.	gallons	0,2	0,4	0.5	0,6	10.7	0.8	0,9				
Purge rate	mL/min	300	140	140	140	140	140	140			······	
pH	su	744	2,21	7,17	7,13			7.12				
Temp.	°С	1	26,34			2616		27,11				
Spec. cond.	μS/cm	2127	2262			4177						
D.O.	mg/L			****		- C.C J.	<u></u>					
ORP	mV	e.mou		معيدى	antine .		- Millioner	fegnise ⁴				
Turbidity	ntu	5178	5,85	9.32	8.90	13,47	1075	8.97				· · · · · · · · · · · · · · · · · · ·
Color/tint			-71		r.Hicula		······	- <u>6</u> -2-41[·····
Odor		NON	interna a	• / / = k								

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-5	7/21/09	1125	4	Canada	2x12 Gamma /2x11 Tothing
MW-5D		1130	4	-40000A	D. plicate
EB-1	< <	1220	4	للعظمتمن	Equipment Blank
					/ /

Sampler's Name (print): Jacob Brokman Sampler Signature: Sof Brokman

Page of	Lab Tum-Around Time	C 24 Hours		□ 7 Days □ Other:	Due:/_/_	Laboratory Notes								Date Time		-	
Project Manager (Print) BOV WPS4	Parameters (Method Number)			241	- MV	чу Ч								ture) Print Name	Print Name		
100		te 3	571-3338	Minegouerth S		Method Comp Grab	XX	× ×	$\mathbf{\hat{X}}$				 oil O = Other	Received By (Signature)	Labor	Laboratory Remarks:	
Project Number	by:	FIN Associates, Ltd. 124 W. Sunbridge Drive, Suite 3	rayeueviile, AK 72703 (479) 571-3334 • Fax (479) 571-3338	Recorded By (Print) EMMINY HOW WORKS HOURS		Matrix* Matrix Santa Containers	L	5	2	7	4		trix: W = Water S = Soil	Date Time	Date Time		
Date 721/09 ENALYON NOTEVION 3	Submitted	FTN Ass 124 W. S	(479) 57	5	SAMPLE DESCRIPTION	Time W	A:10 X	ioog X	1125 X	ii 30 X	×.		* Matrix:	lame RILKMAN	lame		
ALYON WO)			miny & thereigh		Date (mm/dd/yy)	07/21/09				>			re) Print Name	rc) Print Name		
Date 7/21/09 Fro	ENTRYQU		Phone: ()	Sampler Signature(s) Emily & Hollingsuest		Field Sample Number	MNN-3	NW -4	2-MM		1-51-			Relinquished By (Signature)	Relinquished By (Signature)	Sampler Remarks	

Revision Date 11/22/02

Daily Log

•

Site Location: ONTHER WATTERD 3	Date: 10/12/09
Project Number: 6045-460	Page / of (
CLORAR GOD, WARMING, CALM	
0735 BEGIN SETTING UP ON HW-03 FOR GW	
0745 ROBIES LEBLANE DELIVERS SAMPLE FOR	πιβ. ΟίΓει.Ο
0015 BEAM GW JANUAR AF MW-03	······
0840 COLLEGY AW SAMLE MW-03	
OALO REDING ON SAMPLING AT MW-04	
1005 COLLEGE GLU SAMPLE MW-04	
1100 BEEN ON SWALL AT MW-05	
	(A. Rue AD-
MU-050 GIVEN THME OF 1105.	(00/02/772)
1200 PRIME FEUPrent BLANK SAPLE EB-1.	1/5/1/
"ALWART SAY" BRAND DISPUCTO WARMY,	DI ADT DETA
TAMINOTED WASTA WHEN PERM PROSE IN	POTOR DECON
SILCONE TURPUL BIPEORY INTO SAMPLE	
1230 CLN GE STRE.	congrades.
20	
· · · · · · · · · · · · · · · · · · ·	

Form SOP 120-2 - Daily Log - Revision 1



FTN Associates Calibration Form

Date/Time:	10/12/09 - 0610
Prepared By:	cw
Location:	ellert, iA
Project #:	6045-460

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
MOLELAS	4	рН	7	su	21.90	7.08	Ŵ N	7.00	
HADLELAS MINISCADE		pН	4	su	21.75	90.9	(Ŷ) N	4.00	
49		pН	10	su			YN		
		Cond	0	uS/cm	21,75	0	(Y) N	0	
		Cond	1413	uS/cm	21-73	1556	(Y) N	1413	
		DO		mm/Hg		mg/i	YN	mg/l	
		Temp		Degrees C	~	21.75	YN	N/A	FATTRY CARBRAD
							Y N		
							Y N		
LAtom	2020	THURSDAY	0	NTU	m/a	O.QC	YN	0.00	
TUNIDIMETER		и	20	NTU	nka	16	(Y)N	19	
		¢1	200	NN	nla	250	YN	250	
					1		Y N		
							YN		
							ΥN		

Notes:

pH Calibration (pH Method: EPA 150.1)

Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

Temperature Calibration: No calibration is necessary. Simply record temperature of standard using thermometer while in calibration cup.

Then record hydrolab temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

acility: WARRACKO-3	Site ID: $MW - 3$	Sampler: CLN
roject Number: 6045 - 460	Date: 10/12/09	Sampler Organization:

Site Description

Weather: CLORA	Ai	r Temp (°F): 705	Wind: CA	ch		
Site type: Monitoring Well	□ Extraction Well	Well casing material:	Well diameter	inches	Z	Well
Production Well	D Production Well D Borehole		Total depth from TOC	feet	37-51	locked?
 Irrigation Well Other: 	□ Spring	☐ Iron □ Other:	TOC below/above)ground	feet	ə.51	□ No
Damages/repairs needed:	NOME			£	<u> </u>	

Water Level Data

Measuring point	description:	Water level meter: 🕅 Heron Dipper-T 🛛 Slope Water Level Indicator 🗆 Other:									
□ North rim of		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks				
Time	24-hour	0733	6909	0827	0839	0908					
Depth to Water	feet	5.30	5.30	5774	5.72	5.72					
Product	LNAPL/DNAPL			······································							
Prod. thickness	feet										

Field Data

() AHydrolab	Field data meters: XLaMotte 2020 Turbidimeter Hydrolab MiniSonde Hach 2100P Turbidimeter Other: Other:						Pump description: Peristaltic Bladder (dedicated / portable) Submersible			able)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC	
Purge depth	feet	~30	Well g	oes dry	during	purging:	ΟY	es X	No			
Casing vol.	gallons	5.3	= [tota	l depth	(feet) –	depth to	water (feet)] • [well ID	(inches)	²]•0.	0408
Time	24-hour	0816	0819	0823	0828	0831	0834	7580				Remarks
Purge vol.	gallons							1.25			· · · · · · · · · · · · · · · · · · ·	
Purge rate	mL/min	160	/60	160	120	120	120	120				
pН	su	6.81	6.82		6,83	6.85	6.88	6,85				· · · · · · · · · · · · · · · · · · ·
Temp.	°C	24.19										
Spec. cond.	μS/cm	32,70	3237-	3240	3.248	3280	3272	3273				······································
D.O.	mg/L					¥¥						······································
ORP	mV		·								·····	-
Turbidity	ntu	1.5		0.85	·	0.50		0.75				
Color/tint		CLEY		\geq				- <u>*</u> 2				
Odor		NON		\geq								

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
<u>MW-3</u>	10/12/09	0840	4	Ø	2×16 PUSTIC (CRMMA)
		_		(2×11 GLARS (HATNA)
:					

Sampler's Name (print): CUPTIS MAN Sampler Signature: CTYL

Facility: WATEHFORD-3	Site ID: MW-4	Sampler: CLN	
roject Number: 6045-460	Date: 10/12/09	Sampler Organization:	Fm

Site Description

Weather: 5UNNY	Air T	emp (°F); <i>EU</i> 5	Wind: C	ALM		
Site type: X Monitoring Well	Extraction Well	Well casing material:	Well diameter	inches	2	Well
□ Production Well □ Irrigation Well		Steel	Total depth from TOC	feet	32.49	locked? XYes
🗌 Other:	LI Spring	□ Iron □ Other:	TOC below above ground	feet	2.49	🗆 No
Damages/repairs needed:	NOME		······	1	1	

Water Level Data

Measuring point	description:	Water level	nieter: XHeron	Dipper-T	Slope Water L	evel Indicator (] Other:
□ North rim of □ Other:		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time	24-hour	0718	0921	0930	1004	10.25	
Depth to Water	feet	8.39	8.31	0938	999	994	
Product	LNAPL/DNAPL						
Prod. thickness	feet				·		

Field Data

Field data meters: X Hydrolab MiniSonde X LaMotte 2020 Turbidimeter Image: Hydrolab DataSonde Image: Hach 2100P Turbidimeter Image: Other: Image: Other:						Pump description: X Peristaltic □ Bladder (dedicated / portable) □ Submersible			table)	Bailer description: □ Disposable polyethylene □ Disposable Teflon □ Disposable PVC			
Purge depth	feet	W32	Well g	goes dry	during	purging	: 🗆 Y	'es 🕅	No			_	
Casing vol.	gallons	4.7								(inches	$)^{2}$]•0.0	408	
Time	24-hour	09.25	0929	0933	0937	0946	0943	1947	1951	0987.	1000	1004	Remarks
Purge vol.	gallons				×	<u> </u>			<u>~ (* (</u>	01510	7.000	1.5	
Purge rate	mL/min	180	160	100	100	100	90	90	90	90	90	90	
pH	su	6.59		6.66	······································	6.68			·······	6.72	· · · · · · · · · · · · · · · · · · ·	6-72	
Temp.	°C	24.60	24.79	24.98	24.73		24,81	25.11	30-19	2513	25.11	25.22	
Spec. cond.	μS/cm	5435	5475	56.08	5667	5706	5745	5947	5940	5961	5979	5974	
D.O.	mg/L			<u></u>	2.007	<u> 7 00</u>		<u></u>	2110	5.01	<u>, , , , , , , , , , , , , , , , , , , </u>		
ORP	mV												
Turbidity	ntu	4.2	•	5,4	·	1.5		0.55		4.6	~~	0.00	
Color/tint		CLEX		<i>-</i>				<u>v,,,,,,</u>	,	1.0		0.00	
Odor		NUN		>									

Sample ID	Date			# Filtered	Remarks
MW-4	10/12/09	1005	- 4	Ø	2×16 GLASS (AFATUR)
	, ,				2×16 PLASTIC (GAMAA)

Sampler's Name (print);	0			
bumpier b munic (print).		K Int. in 1	Sampler Signature:	
	$(U \mu D f)$			1
			1 0	1

Facility: WAPERFORD - 3	Site ID: MW-5	Sampler: CLN
Project Number: 6045 - 460	Date: 10/12/09	Sampler Organization:

Site Description

Weather:	Air 1	Temp (°F):	Wind:			
Site type: Monitoring Well	Extraction Well	Well casing material:	Well diameter	inches	2	Well
Production Well	🛛 Borehole	Steel	Total depth from TOC	feet	37-66	locked? XYes
□ Irrigation Well · · □ Other:	Spring	☐ Iron ☐ Other:	TOC below/above ground	feet	7.6b	`□ No
Damages/repairs needed:	NONE					

,

,

Water Level Data

Measuring point		Water level i	Water level meter: Heron Dipper-T 🛛 Slope Water Level Indicator 🖓 Other:									
X Mark/notch o ☐ North rim of ☐ Other:		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks					
Time	24-hour	0709	1045	10 56	1059	1154						
Depth to Water	feet	5-62	5.64	5,99	5.93	5.80						
Product	LNAPL/DNAPL											
Prod. thickness	feet	·······										

Field Data

Field data me XHydrolab	MiniSonde				urbidim bidimet		XŶ □ E	descri eristalt ladder ubmers	ic (dedicat	ted / por	table)	Bailer description: ☐ Disposable polyethylene ☐ Disposable Teflon ☐ Disposable PVC
Purge depth	feet	~32	Well g	oes dry	during p	ourging:	□ Y	es 🕅	Ņo			
Casing vol.	gallons	5,2	= [tota	l depth	(feet) – c	lepth to	water (f	eet)] •	[well ID	(inches) ²]•0.0)408
Time	24-hour	1050	1034	1057								Remarks
Purge vol.	gallons											
Purge rate	mL/min	160	160	140								
pН	su	7.15	7,13	7.13								
Temp.	°C	28.52	27.77	27.78								
Spec. cond.	μS/cm	1824	1802	1818								
D.O.	mg/L											
ORP	mV											
Turbidity	ntu	39		27								
Color/tint		cia	¥e —⇒	>								
Odor		NUM	×	*								

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-5	10/12/09	1100	4	Ø	
MU-SD	i K	1105	4	đ	DUPUCARE.
EB-1	ei	1200	4	ð	EQUIPMENT BLAND
		•		· · · ·	

Sampler's Name (print): CUPRS MAN Sampler Signature:

an and a set of the	- manufacture to an a south a same of	a real of the reader of the property of	has been could be starses i have	a the and the second share and	- The is always in .
itn		\bigcirc			\bigcirc
=itn					J

山

Date	Projec	t Name		-			Project Num	her		Proj	ect Mar	0.00m (T	Derive ()					T	_
10/12/09	ER	TERCH WA	AVFERD	3			6045-	460										Page of	
Laboratory Name		"Contraction of the second		Submitte	l by:		10010	100		a	OB	NES	1					rage OI	
ENTERRY	-									100	р	aramet	ers (M	ethod	Numbe	27)		Loh Turn Annual T	
				FTN As	socia	tes.	Ltd.				T	aramet			Tunio		T	Lab Turn-Around Ti	me
RIVER B	SEAD						Drive, Suit	e 3					-		1			24 Hours	
				Fayetter	ville.	AR	72703										-	24110013	
Phone: ()				(479) 5	71-33	34 .	Fax (479) :	571 2229	,	2								48 Hours	
			1	() 5	1 35	54	1 an (473).	571-5550	,	19-11							1 - 3		
Sampler Signature(s)			Recorded	By (P	rint)										2/2	1	7 Days	
ant-	AL		1				inn			2	-			-				Other:	
	1		and the second	CUP	")	N	inn	Barrie		5	X		1				1	Due: _/_/	
		SA	MPLE DES	CRIPTION	1					F	AMMAR								_
					Matrix	(*		Met	hod	Z	X				18				
Field Sample Nur	nber	Date	Time		S	0	Number of	Comp	Grab	F	N.				1			Laboratory Notes	
341. 7	100	(mm/dd/yy)	(hh:m		-		Containers	comp	0.00	1	-								
MW-3	-	10/12/09	084	11			4		X	X	X								
MW-4		н	100	5 X		-	4		X	X	X								
MW-5		84	1100	X			4		X	X	X								
MW-50		1,	110	FX			4		X	X	X								
EB-1		\$1	1200	X			4		X	X	X								
							-												-
			Q		-	3.0													-
														-		1			-
																			-
15				1.1.1															-
				* M	atrix:	W =	Water $S = S_{0}$	oil $O = C$	Other										-
Relinquished By (Sig	gnature)	Print N	lame		T	Date	Time	Received	By (Sign	nature)			Print	Name				Date Time	_
Cut o	L	. CLA	TS NU	n		12/0		BTO	uch	iuture)	534	C	3	Tranc	Mi	hur	0	12/03/ 1550	
Relinquished By (Sig	gnature)	Print N	lame	1.		Date	Time	Received	By Labo	oratory	(Signat	ure)	Print	Name	200			Date Time	-
Sampler Remarks								-		_									
Sampler Kemarks								Laborato	ry Remai	rks:									
							198												
CARLES OF THE PARTY OF THE PART	-											- Training							

Daily	Log
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Site Loc	ation: propries informers 3	Date: 2/23/20
rioject f	Jumber: 6045 - 460	Page ; of /
O'LASA	ST ST Inde de	······
0.000	x, Wroy	
1100	Che a SINT BOUN SUND.	Proc habit ALD
	CH SAMPLING AT MW-05	
	BEAM WLS	
	SATUE MW-03	····
1335	SATTLE MW-04 COLLERT DUA	PUCANO OF MU-04
1530	(nw-040) Gum nov 7= 1345	>
1630	SANCE MW-05	
16.50	PHINE BEAPART BURK SAVIE	1-1-01
	Chi OPE SITE.	
	······································	
······		



FTN Associates Calibration Form

Date/Time: <u>2/19/20/6</u>	
Prepared By: ThR / ETH	
Location: OFFICE	
Project #:	W-3

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
Hydrolab	4	pН	7	su	13.51	6.44	ΩN	7.01	
minisonde		pН	4	su	13,96	5,12	Ø N	3,99	
ya			10	su					
		Cond	0	uS/cm	an a	20	Ω N	Ø	
		Cond	1413	uS/cm	17.59	154759-	ØΝ	1409	
				mm/Hg		mg/l	Y N	mg//	
	UU	. Temp		Degrees C	23.76	23.75	Y N	N/A	
							Y N		
LaMotte		Turs		WTU		\bigcirc	YN	0	
20/20						17	ØN	19	
		J			-	240		200	
							Y N		
							Y N		
							YN		
							Y N		

Notes:

pH Calibration (pH Method: EPA 150.1)

Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

Temperature Calibration: No calibration is necessary. Simply record temperature of standard using thermometer while in calibration cup.

Then record hydrolab temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Facility: ENERCEY MANNERSOND 3	Site ID: MW -03	Sampler: CLN	
oject Number: 6045 -460	Date: 2/23/200	Sampler Organization:	FW

Site Description

Site type:	1				Wind: ~5 mph NOFM				
Monitoring Well Extraction Well	Well casing material:	Well diameter	inches	2	Well				
□ Production Well □ Borehole	Steel	Total depth from TOC	feet	37.66	locked? ∡ĭYes				
□ Irrigation Well □ Spring □ Other:	□ Iron □ Other:	TOC below/above ground	feet	216	No 🗌				

Water Level Data

Measuring point description: XMark/notch on TOC		Water level	meter: 🗆 Heron	Dipper-T 🗆 S	Slope Water Lo	evel Indicator	Other: Keck
\square North rim of \square Other:		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	A fter sampling	Remarks
Time	24-hour	1125	1144	1200	1233	1255	
Depth to Water	feet	5.47	5.47	5.85	5.57	6.03	
Product	LNAPL/DNAPL	·······				<u></u>	
Prod. thickness	feet						

Field Data

Field data me Hydrolat	o MiniSonde	e Ö	LaMotte Hach 21 Other:	e 2020 T 00P Tu	Turbidim rbidime	neter ter		p descrij Peristalt 3ladder Submers	ic (dedicat	ed / por	table)	Bailer description: □ Disposable polyethylene □ Disposable Teflon □ Disposable PVC
Purge depth	feet	30 20,5	Well g	oes dry	during	purging	ΟY	es X	No			
Casing vol.	gallons			= [total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • ()408
Time	24-hour	1155	1159									Remarks
Purge vol.	gallons							1091	1021	1770	2	
Purge rate	mL/min	110	110	/10	110	110	110	110	110	110	10	
pН	su	7.35	7,59	7.57		6.86		6.91	6.95	6.99	6.99	
Temp.	°C	16.90	17,44				18.14	18.51	18.54	18.79	18.72	······································
Spec. cond.	μS/cm		2440							3112	3//6	
D.O.	mg/L			×			<u>v. 7 (-</u>	2414	200-7	2.10		
ORP	mV	·										······································
Turbidity	ntu	84	1. ⁴⁵ /10.42 (10.11	12		8.6		67		*****	7.1	
Color/tint		Cuer	$\mathcal{L} \rightarrow$			X¥		_ <			_/ • (
Odor		NON	~~~>									

Sample ID	Date	Time		# Filtered	Remarks			
MW-03	2/23/210	1235		Ø	2×11 CUAS (trutter)			
			•	(J WIL PLASTIC (GAMAA)			
·								

Sampler's Name (print):	CUMIS	NUNN	Sampler Signatu	ire: G	172	
				~		

Facility: ENTYLOY WATERFOLD 3	Site ID: MW-UY	Sampler: CLN
oject Number: 6045 - 460	Date: 2/23/9010	Sampler Organization: FTN

Site Description

Well casing material:	117.51.1	T	- TT	
XIPVC	Well diameter	inches	2	Well
	Total depth from TOC	feet	37.49	locked?
$\Box \text{ Other:}$	TOC below/above ground	feet	3.49	🗆 No
	□ Steel □ Iron	□ Steel Total depth from TOC	□ Steel Total depth from TOC feet □ Iron TOCL (1)	□ Steel Total depth from TOC feet 37.47

Water Level Data

Measuring point	description:	Water level	meter: 🗆 Heron	Dipper-T 🗆 🗄	Slope Water L	evel Indicator	X Other: Kerk
□ North rim of □ Other:		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	A fter sampling	Remarks
Time	24-hour	11.15	1310	1375	1723	1455	
Depth to Water	feet	8.67	8,54	9.02	9.56	9.93	
Product	LNAPL/DNAPL	Manager and Party and Party			17.90	1.1.5	
Prod. thickness	feet						·

Field Data

Field data me X Hydrolal □ Hydrolal □ Other:	b MiniSond	e D	LaMotte Hach 21 Other:	e 2020 1 00P Tu	Furbidin rbidime	neter ter	Pump des XPerist	taltic ler (dedica	ited / portable)	Bailer description: ☐ Disposable polyethylene ☐ Disposable Teflon ☐ Disposable PVC
Purge depth	feet	30 /25	Well	goes dry	during	purging:	🛛 Yes 👌	XÎ No		
Casing vol.	gallons	<u>-</u>							$O(\text{inches})^2] \cdot 0$.0408
Time	24-hour	1300	1324		1331			1		Remarks
Purge vol.	gallons		<u></u>		0,25					
Purge rate	mL/min	150	120	120	120					
рН	su	7.43	7.31		7.28					
Temp.	°C	···	17.62							
Spec. cond.	μS/cm	4650	1		1			·		
D.O.	mg/L				1000					
ORP	mV									
Turbidity	ntu	24	بتاسين	A	24				1	
Color/tint			9h-	\$	¥ <u>-</u> I					
Odor		Non	$ \rightarrow $							

Sample ID	Date		# Containers	# Filtered	Remarks
MW-04	2/23/20:0	1735	4	/	2 XIL GLASS (TRATION)
MW-040	2/27/2010	1345	4		+ N R PUTTL (GMMA)
					DVALICARE, SAR D

Conserlants Manage (and a)	A /		······································	
Sampler's Name (print)	(1)	Comular Charter	a manute st	
		Sampler Signature:		
		1		

Facility: ENTRey internets 3	Site ID: MW-05	Sampler: Fm
oject Number: 6045 - 460	Date: 2/23/2010	Sampler Organization: ここん

Site Description

Weather: PARry	eccupy A	Air Temp (°F): 505	Wind: B	ferry		
Site type: X Monitoring Well	□ Extraction Well	Well casing material:	Well diameter	inches	2	Well
☐ Production Well □ Borehole		Steel	Total depth from TOC	feet	37.66	locked? XYes
□ Other:	□ Spring	□ Iron □ Other:	TOC below/above ground	feet	2,66	□ No
Damages/repairs needed:			A			

Water Level Data

Measuring point description: XMark/notch on TOC North rim of TOC Other:		Water level meter: Heron Dipper-T Slope Water Level Indicator Other:								
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks			
Time	24-hour	1057	1512	1522	1529	16/2				
Depth to Water	feet	4.93	4.94	502	5.16	5.18				
Product	LNAPL/DNAPL			/						
Prod. thickness	feet									

Field Data

Field data meters: XLaMotte 2020 Turbidimeter Hydrolab MiniSonde LaMotte 2020 Turbidimeter Hydrolab DataSonde Hach 2100P Turbidimeter Other: Other:						Pump description: X Peristaltic Bladder (dedicated / portable) Submersible				Bailer description: □ Disposable polyethylene □ Disposable Teflon □ Disposable PVC		
Purge depth	feet	30 kars	Well g	Well goes dry during purging:				□Yes XNo				
Casing vol.	gallons			= [total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • 0.0408								
Time	24-hour	1515			{ ····							Remarks
Purge vol.	gallons	/			0.25							
Purge rate	mL/min	160	120	120	120					-		
pН	su		2.07		8.0Y							
Temp.	°C	16,91	16.81									
Spec. cond.	μS/cm		1527									
D.O.	mg/L		~	<u></u>	<u> </u>			•				
ORP	mV		-									
Turbidity	ntu	.70		******	30							
Color/tint			<i>L−</i> >									
Odor		NON										

Sample ID	Date	1 1	# Containers	# Filtered	Remarks
	2/23/2010		4	$\square \emptyset$	2×11 PLASTIC (GAMAA)
	• 7			7	2 NIL GLASS - (HEITTLAN)
<u>}</u>	ļ				

				~ 1	
Sampler's Name (print):	DIM- I III I		11 - 1		
bampier 5 manie (print).	CVPAN NICHAN	Sampler Signature;	P. C.	11	
		S.S.M.M.O.	un /		

Facility: EARNOY WARMFORD 3	Site ID: EB-0]	Sampler: CLN
Sject Number: 6045 - 460	Date: 2/23/2010	Sampler Organization: Fr

Site Description

	CLEVOY Air	Temp (°F): 505	Wind: \mathcal{B}	60024	
Site type: □ Monitoring Well	Extraction Well	Well casing material:	Well diameter	inches	Well
Production Well Irrigation Well		🗋 Steel	Total depth from TOC	feet	□ Yes
□ Inigation wen	□ Spring	☐ Iron □ Other:	TOC below/above ground	feet	🗆 No

Water Level Data

Measuring point description: Mark/notch on TOC North rim of TOC Other: 		Water level meter: Heron Dipper-T Slope Water Level Indicator Other:							
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks		
Time	24-hour	h/e -							
Depth to Water	feet								
Product	LNAPL/DNAPL	V	3						
Prod. thickness	feet								

Field Data

Field data meters: □ LaMotte 2020 Turbidimeter □ Hydrolab MiniSonde □ LaMotte 2020 Turbidimeter □ Hydrolab DataSonde □ Hach 2100P Turbidimeter □ Other: □ Other:					Pump description:				table)	Bailer description: ☐ Disposable polyethylene ☐ Disposable Teflon ☐ Disposable PVC			
Purge depth	feet		Well g	oes dry	during	purging	: D Y	'es (1	٧o		···	
Casing vol.	gallons		= [tota	l depth	(feet) -	depth to	water (feet)]	• ['	well ID	(inches	$)^{2}$] • 0.0	408
Time	24-hour	DEC	horsh		I	oren	l				ppe.		Remarks
Purge vol.	gallons	PLAC		-10	NON		Monen		01			PBNTM	
Purge rate	mL/min	Grace		1	DISTU		WAR		+		C IN		BLANAC
pН	su	VIA	Mr		US A				- 1	1		werry	13 m / V V V
Temp.	°C	ino	SAN			Ang		с. <u> </u>	1	10 10 00	<u> </u>	× 47 67	
Spec. cond.	μS/cm					<u> </u>				·			
D.O.	mg/L												
ORP	mV												· · · · · · · · · · · · · · · · · · ·
Turbidity	ntu								╡				
Color/tint							***	L					
Odor									-				

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
EB-01	2/23/2010	16:30	4	Ø	2×16 GLASS (TRATION)
				1	2 X/L PLASTIC (GAMMA)

Sampler's Name (print):	CULTIS	NUNN	Sampler

Signature: C:----

FIELD SUPPLIES AND EQUIPMENT PROJECT WORKSHEET

PROJECT NUMBER: <u>6045-466</u>

DATE(S): 2/23/2010 TO 2/23/2010

FTN RENTAL	UNIT	Day 1	Day 2	Day 3	Day 4	Day 5	Week 1	
		Units	Units	Units	Units	Units	Units	Total Units
Peristaltic Pump	day	í						(
Submersible pump	day							
Hydrolab	day	/				· · · · · · · · · · · · · · · · · · ·		1
Hydrolab	week							
Meters	day							1
Geoprobe, augers	day							
PPE	day							
GPS	day							
Other	day/week							
	1							
FIELD SUPPLIES	UNIT	Day 1	Day 2	Day 3	Day 4	Day 5		Total Units
FIELD SUPPLIES Silicone tubing	UNIT ft	Day 1	Day 2	Day 3	Day 4	Day 5		Total Units
and the second		5	Day 2	Day 3	Day 4	Day 5		5
Silicone tubing	ft		Day 2	Day 3	Day 4	Day 5		
Silicone tubing Polyethylene tubing	ft ft	5	Day 2	Day 3	Day 4	Day 5		5
Silicone tubing Polyethylene tubing Vinyl tubing	ft ft ft	5	Day 2	Day 3	Day 4	Day 5		5
Silicone tubing Polyethylene tubing Vinyl tubing Disposable bailers	ft ft ft ea	5	Day 2	Day 3	Day 4	Day 5		5
Silicone tubing Polyethylene tubing Vinyl tubing Disposable bailers 0.45 micron filters	ft ft ft ea ea	5	Day 2	Day 3	Day 4	Day 5		5
Silicone tubing Polyethylene tubing Vinyl tubing Disposable bailers 0.45 micron filters Tyvek suit	ft ft ft ea ea ea	5 115 1 1	Day 2	Day 3	Day 4	Day 5		5
Silicone tubing Polyethylene tubing Vinyl tubing Disposable bailers 0.45 micron filters Tyvek suit field notebook	ftftfteaeaeaeaea	5 115	Day 2	Day 3	Day 4	Day 5		5

NOTES:

Revision Date: 08/20/03

.

Daily Log

1

Site Location: (2-3 Date: 5/11/10 Project Number: 6045-466 Page of / t 1130 - JWB Arrives on site Starts Taking water level meas. 1140 - Meets w/ Rodney. rate / Try to calibrate soude, but - Calib 1200 Unsucces 5-ful 1245 Sample MW-07 1350 - Sample MW-04 Sample 1535 MW-05 1540 MW -650 Sample E 1620 off site 1700 - JUB



FTN Associates Calibration Form

	Date/Time:	5/11/10	
F	repared By:	JUB	
	Location:	W-3	
	Project #:	6045-460	
	Post Calibration		

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
Hydrolas		pН	7	su	28.86	6.79	YN		
Mini Sonde		pН	4	SU	31.05	4.05	YAD		
		- pH		SU			YN		
		Cond	0	uS/cm	30.21	Ð	YO		
		Cond		uS/cm	28.95	452	YN		
		-00		mm/Hg		mg/l		mg/l	_
J		Temp		Degrees C	29.42	30	YN	N/A	
							Y N		
							ΥN		
			-				Y N		
	1						Y N		
							Y N		
			_				YN		
							YN		
				2			YN		

Notes:

pH Calibration (pH Method: EPA 150.1)

Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

Temperature Calibration: No calibration is necessary. Simply record temperature of standard using thermometer while in calibration cup.

Then record hydrolab temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

			1478
	Groundwater Sampling	Record	da.
Facility: [A] - 3	Site ID: Mr.J-03	Sampler: JUB	
roject Number: 6045-460	Date: 5/11/10	Sampler Organization:	FTN

Site Description

Weather: Sunny	Air 7	Temp (°F): 75	Wind: 5	5-10
Site type: /	Extraction Well	Well casing material:	Well diameter	inches 2 Well
D Production Well	□ Borehole	🗆 Steel	Total depth from TOC	feet 35 locked?
 Irrigation Well Other: 	□ Spring	□ Iron □ Other:	TOC below/above ground	feet -2 No
Damages/repairs needed:				
	NONE			

Water Level Data

	Aeasuring point description:		Water level meter: □ Heron Dipper-T □ Slope Water Level Indicator						
Mark/notch on TOC North rim of TOC Other: 		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks		
Time	24-hour	1154	1225	1237	1245	1313			
Depth to Water	feet	7.08	7.05	7.27	7.45	7.54			
Product	LNAPL/DNAPL	5/11/0	-7						
Prod. thickness	feet								

Field Data

Field data me	eters:						Pump	descri	ption:			Bailer description:		
A Hydrolat	MiniSonde	e 🖸	LaMotte	2020 1	urbidim	eter	₽	eristalt	ic			□ Disposable polyethylene		
🛛 🛛 Hydrolab	DataSonde	• 🗆	Hach 21	00P Tu	rbidimete	er	□ Bladder (dedicated / portable)					□ Disposable Teflon		
□ Other:		y I	Other:	+FSC	icntik	ic.		ubmers	sible			Disposable PVC		
Purge depth	feet	30	Well g	oes dry	during p	urging:	□ Y	es X	No					
Casing vol.	gallons		= [tota	l depth	(feet) – d	lepth to	water (f	eet)] •	[well ID	$(inches)^2$	• 0.	0408		
Time	24-hour	1230	1235	1240	1245	-						Remarks		
Purge vol.	gallons	0.2	0.3	0,4	0.5									
Purge rate	mL/min	110	ilo	110	110						1			
pH	su	7.06	7108	7.08	7.09									
Temp.	°C	26.27												
Spec. cond.	μS/cm	2663		2667	2675	6.000						· · · · · · · · · · · · · · · · · · ·		
D.O.	mg/L	-	-	-	-									
ORP	mV	-	-	-	~									
Turbidity	ntu	28	15	8.5	8.9				-					
Color/tint		clear	~-7						· · · · ·					
Odor		NONE	-7											

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-03	5/11/10	1245	4	-	2x12 GAMMA
	-				2x12 Trifism
	1	1. C. 1.			
					211

Sampler's Name (print): Jacos Brichman

Sampler Signature:	Sampler	Signature:	519
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Brille

Facility: W-3	Site ID: MW - 74	Sampler: JLB	
roject Number: 6045-460	Date: 5/11/6	Sampler Organization: FTW	

Site Description

Weather: SUNNY		Air Temp (°F): 🔊	Wind: 5 -	10		
Site type: Monitoring Well	Extraction Well	Well casing material:	Well diameter	inches	2	Well
Production Well	□ Borehole	□ Steel	Total depth from TOC	feet	35	locked?
 Irrigation Well Other: 	□ Spring	□ Iron □ Other:	TOC below/above ground	feet	~2	🗆 No
Damages/repairs needed:	Nowe					

Water Level Data

Measuring point		Water level	Water level meter: \Box Heron Dipper-T \Box Slope Water Level Indicator \boxtimes Other: Vicc									
X Mark/notch on TOC North rim of TOC Other: 		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks					
Time	24-hour	1145	1326	1343	1345	1420						
Depth to Water	feet	9.07	8.95	9,89	10,20	10.39						
Product	LNAPL/DNAPL	5/11/10.	7									
Prod. thickness	feet											

Field Data

Field data me	ters:			-			Pum	o descri	ntion	1111		Bailer description:		
⊮ Hydrolab			LaMotte	e 2020 T	urbidim	eter		Peristalt				□ Disposable polyethylene		
\square Hydrolab				00P Tu						ted / porta	able)	\Box Disposable Teflon		
□ Other:	orunno	.01		Submers		iou / poru	.010)	□ Disposable PVC						
Purge depth	feet	20	Well	goes dry	during	purging:	ΠY	es. D	X o					
Casing vol.	gallons		= [tota	l depth	(feet) -	depth to	water (feet)] •	[well ID	(inches)	²]•0.	0408		
Time	24-hour	1330	1335	1240	1345							Remarks		
Purge vol.	gallons	0.0	0.2	0.3	0.4									
Purge rate	mL/min	136	116	110	110									
pH	su	6.55	6.65	6,67	6.59					1				
Temp.	°C	25,77		25.17										
Spec. cond.	μS/cm	4132			4931							×		
D.O.	mg/L		1	-	-									
ORP	mV	-	-	-	-	1.000								
Turbidity	ntu	16	16	12	13				2					
Color/tint		clear	-7	W/ PA	died	ate								
Odor		NONE	-7											

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-04	5/11/16	1350	4	-	2 CAMMA
,				1. — · · ·	2 Fritium
	1.			11.0	

Sampler's Name (print): Jacob Brickman

÷

Sampler Signature: Joh Bu

Facility: 12-3	Site ID: MW-05	Sampler: JUB	
roject Number: 6045-6460	Date: 5/11/10	Sampler Organization:	

Site Description

Weather: Summ	Air	Temp (°F): 000	Wind: 10 -	Wind: 10 - 15			
Site type:	□ Extraction Well	Well casing material:	Well diameter	inches	2	Well	
□ Production Well	Borehole		Total depth from TOC	feet	35	locked?	
 □ Irrigation Well □ Other: 	□ Spring	□ Iron □ Other:	TOC below/above ground	feet .	12	□ No	
Damages/repairs needed:	Nore						

Water Level Data

Measuring point		Water level meter: 🗆 Heron Dipper-T 🗆 Slope Water Level Indicator 📮 Other: Keck									
Mark/notch of North rim of Other:		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks				
Time	24-hour	1132	1432	1442	1530	1621					
Depth to Water	feet	7:18	7.14	7.49	7.55	7.61					
Product	LNAPL/DNAPL	5/11/10 -	7			1.1.1					
Prod. thickness	feet	11410	·	1		1					

Field Data

Field data me	ters:						Pum	p descri	ption:		1	Bailer de	escription:		
Hydrolat	MiniSonde	e 🛛	LaMotte	2020 1	Turbidin	neter		Peristalt	•				osable polyethylene		
🗌 🗆 Hydrolat			Hach 21				□ Bladder (dedicated / portable)					□ Disposable Teflon			
□ Other:			Other:					\Box Submersible					□ Disposable PVC		
Purge depth	feet	36	Well g	oes dry	during	purging	: D Y	les 🕅	No						
Casing vol.	gallons		= [tota	l depth	(feet) –	depth to	water ((feet)] •	[well ID	(inches	$)^{2}$]•0.0	408			
Time	24-hour	1440	1445	1450	1455	1501	1505	1518	1515	1520	1525	1530	Remarks		
Purge vol.	gallons	0.1	0.2	0.3	0.4	0.5	Oit	0.7	8,8	6.9	1.0	1.1	- Fee		
Purge rate	mL/min	120	120	120	120	120	126		120	120	120	120			
pH	su	7,21	7.20	6,82	6.99	6,95	7,00	7.06	7.02						
Temp.	°C	26,48	26,11			26,13	-	-	26.16		2615				
Spec. cond.	µS/cm	2045	2062	-		5787						4850			
D.O.	mg/L	-	-	1	-	-	-	-	-	-	-	-			
ORP	mV	-	-	-		-	1	-	-	-	-	-			
Turbidity	ntu	24	20	19	16	10	19	8,6	15	14	14	13			
Color/tint		clear		Partic	late						-(
Odor		NONE													

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-05	5/11/10	1535	4	-	2 GAMMA 12Tritim
MW-05D	U	1540	4		Oup licate

Sampler's Name (print): Jacob Brichman Sampler Signature: JAD Brich

Facility: W-3	Site ID: EB-1	Sampler:	
roject Number: 6045	Date:	Sampler Organization:	

Site Description

Weather:	Air Tem	Air Temp (°F):			Wind:		
Site type: □ Monitoring Well □ E	traction Well	Well casing material:	Well diameter		inches	Well	
□ Production Well □ Borehole		□ Steel	Total depth from	m TOC	feet	locked?	
□ Irrigation Well □ S □ Other:	bring	□ Iron □ Other:	TOC below/above ground		feet	🗆 🗆 No	

Water Level Data

Measuring point description: Mark/notch on TOC North rim of TOC Other: 		Water level meter: Heron Dipper-T Slope Water Level Indicator Other:								
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks			
Time	24-hour									
Depth to Water	feet									
Product	LNAPL/DNAPL		5							
Prod. thickness	feet									

Field Data

Field data me	eters:					Pum	o descri	ption:		Bailer description:
🗌 🛛 Hydrolał	MiniSonde	□ LaMotte	2020 T	urbidim	neter		Peristalt	•		□ Disposable polyethylene
	DataSonde	□ Hach 21							ed / portable)	\Box Disposable Teflon
□ Other: □ Other:							Submers		eu (portuole)	\Box Disposable PVC
Purge depth	feet		during	purging:	and the second s	es 🗆				
Casing vol.	gallons								$(inches)^2] \cdot 0$	0400
-		- [101a	i depui	(1001)		water (leet)]•		(inches)]•0	.0408
Time	24-hour							1		Remarks
Purge vol.	gallons	Equip	west	Blan	k d	Lim	Daris	talfic		
Purge rate	mL/min	Pund		Aly	tub.1.	0 0.	I.L.	meter		
pH	su	Suba	racd	1.		X	D.T.	hate	-	
Temp.	°C		45 Sa-		111	for 1a	1	reter		
Spec. cond.	μS/cm	0.10	/ 64	1			-0 p	21.57		
D.O.	mg/L					1.1				
ORP	mV									1
Turbidity	ntu									
Color/tint										
Odor										

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
EB-1	5/11/10	1620	4	-	2 GAMMA /2Trithe

Sampler's Name (print):

Sampler Signature:

0
Itn

Date 5/11/10	Project Name						Project Numb				ct Man			-				Page of
5/11/0	At W	- 2		Submitted l		_	60415-	160		L	ROB	1	= 5					
Laboratory Name				Submitted	by:						Р	aramet	ters (M	ethod N	lumber	-)		Lab Turn-Around Time
RBS L.	45			FTN Ass	ociates	s, L												
							ge Drive, Suite 3											24 Hours
				Fayettevi														48 Hours
Phone: () (479) 571-3334 • Fa						Fax (479) 5	71-3338	5)	L								
Sampler Signature(c)			Recorded B	U (Drint	•)				R	X							🗌 7 Days
1 2 0	· · · · · · · · · · · · · · · · · · ·									- >	2							Other:
Sacolo	ich mar			Jarob	DAG	-Vi	man			1	N							Due://
		SA	MPLE DES			_				T	Y							NORMAL
Eista German M		Date	Time	a second	1atrix*		Number of	Met		K	0							Laboration Net
Field Sample Nur		Date nm/dd/yy)	(hh:mn		S	0	Containers	Comp	Grab	le `								Laboratory Notes
MW-05		/11/10	1535	- N. /			4		X	X	X		ļ					
MW-05			1540				4/		X	X	X	-						
M12 -04	/		1350				4		×	X	X							
MW - 03			12419	5 X			4/		×	X	X							
EB-01		J	1620	> 1			4		X	X	X							
																		4
													1					
				* Ma	atrix: \	<i>N</i> =	Water $S = S$											
Relinquished By (Si	ignature)	Print N	Name Brich	/		ate	Time	Receive	d By (Sig	nature)	052	6	Prin	t Name	Mi	hur	A	Date Time 5-12-10 0 8/9
Relinquished By (Si	ignature)	Print N				ate	Time	Receive	d By Lab	orator			Prin	t Name		,		Date Time
Sampler Remarks							1	Laborate	TV Rem	arks	_	-	-					
Sampler Kemarks								Lauorati	ny item	AI N.J.								
								and the second sec				in the second	-					

Daily Log

Site Location: $\mathcal{W} - 3$ Date: 8/23/10 Project Number: 6045-460 Page (of) 1050 - JWB Arrives on site start taking Water Levels - Meet w/ Rodency and receive bottles 1115 - Start sumpling it MW-03 1250 - Sample at MW-04 1920 - Stopked and Made Ouplicate - Equipment Blank was made with store bought DI using peristaltic pump w/ heron Dipper T Water Level meter 1510 1530 Jul off site

Form SOP 120-2 - Daily Log - Revision 1

Facility: W-3	Site ID: (Ny.) - 3	Sampler: JUS
oject Number: 6045-460	Date: 8/23/10	Sampler Organization: FTV

Site Description

Weather: Sonny	Air T	emp (°F): 95°	Wind O. 5	`-@D	MPL	
Site type:	Extraction Well	Well casing material:	Well diameter	inches	2	Well
 Production Well Irrigation Well 	 Borehole Spring 		Total depth from TOC	feet	35	locked? XYes
Other:	u sping	□ Iron □ Other:	TOC below/above ground	feet	22	🗆 No
Damages/repairs needed:	NONE					

Water Level Data

	Measuring point description:		Water level meter: X Heron Dipper-T 🛛 Slope Water Level Indicator 🖓 Other:									
□ North rim of TOC □ Other:		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks					
Time	24-hour	1118	1127	1139	1151	1220						
Depth to Water	feet	SJK	5.13	5,50	5.52	5.57	······					
Product	LNAPL/DNAPL				<u></u>							
Prod. thickness	feet					-						

Field Data

Field data meters: X Hydrolab MiniSonde □ LaMotte 2020 Turbidimeter I Hydrolab DataSonde □ Hach 2100P Turbidimeter I Other: ☑ Other: HE Scientific							Pump descr Peristal Bladder	tic (dedicate	ed / portable)	Bailer description: ☐ Disposable polyethylene ☐ Disposable Teflon ☐ Disposable PVC
Purge depth	feet	30				purging:	🗆 Yes 😡	·····		
Casing vol.	gallons								$(inches)^2$]•0.	0408
Time	24-hour	1130	1	1140	1145				<u> </u>	Remarks
Purge vol.	gallons	0,1	0.3	0.4	0.5	-		1		
Purge rate	mL/min	120	110	110	110					
pН	su	6.73		635	1					
Temp.	°C			27.29						
Spec. cond.	μS/cm	1	3133	· ·	3163			1		
D.O.	mg/L		c							
ORP	mV	6.em	e	(upone	ļ					
Turbidity	ntu	1.59	458	1.56	1.15		······			
Color/tint		NONE								
Odor		NONE								

Sample Data

Sample ID	Date			# Filtered	Remarks
MW-3	8/23/10	1150	EJ	فحتفيه	2XIL CAMMA 2XIL Trithin-
	+				
) <u> </u>					

Commission Marine (and the second sec	0				
Sampler's Name (print):			Complar Gianopurat		li li	
[- 101 (A. 1 -	DEIC KMAR	Sampler Signature:	~ · \	An and the second secon	,
	<u> </u>	- JOIL VOVUN	1 0		100	**************************************

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Form SOP 120-3 - Sampling Record - Revision 1

Facility: $W - 3$	Site ID: My J-4	Sampler: Swa	
oject Number: 6045-460	Date: 5123/10	Sampler Organization: FTN	

Site Description

Weather: SUNNY	Air	Гетр (°F): 60°	Wind:	ـــــــــــــــــــــــــــــــــــــ		
Site type: Monitoring Well	□ Extraction Well	Well casing material:	Well diameter	inches	2	Well
Production Well		🖸 Steel	Total depth from TOC	feet	35	locked?
 Irrigation Well Other: 	□ Spring	□ Iron □ Other:	TOC below/above ground	feet 🦯	2.5	O No
Damages/repairs needed:	Nong			1		1

Water Level Data

Measuring point description: Mark/notch on TOC North rim of TOC Other:		Water level meter: 🗡 Heron Dipper-T 🛛 Slope Water Level Indicator 🖓 Other:									
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	A fter sampling	Remarks				
Time	24-hour	1111	1231	1242	1256	1336					
Depth to Water	feet	X.W	7.98	8.73	8,89	4.03					
Product	LNAPL/DNAPL	`									
Prod. thickness	feet										

Field Data

i≸∕Hydrolat									otion: c (dedica ible	ted / port	able)	Bailer description: ☐ Disposable polyethylene ☐ Disposable Teflon ☐ Disposable PVC
Purge depth	feet	30	Well	'ell goes dry during purging: 🛛 Yes 🕅								
Casing vol.	gallons		= [tota	[total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • 0.04								0408
Time	24-hour	1238	+	}	1250	1						Remarks
Purge vol.	gallons	0.1		0.3		0.5						
Purge rate	mL/min	120		1	116	110						
pН	รบ	6,54			6.58	1						
Temp.	°C	27.75	27.98	30.14	28.82	28,68						
Spec. cond.	μS/cm					5702						····
D.O.	mg/L											
ORP	mV	۵۰	6	dener		~						
Turbidity	ntu	17,97	28.80	21.03	13,20	15.62	,					
Color/tint		Clear			- frank - Lo			•••••				
Odor		NON	500	re a	ed a	ctic	late					

Sample Data

Sample ID	Date	Time		# Filtered	Remarks
MW-04	8/25/10	1255	4		2 Trition & 2CAMA
\			·		

	جيتهم	· · · · · · · · · · · · · · · · · · ·			
Sampler's Name (print):	r e				Ø
oumpion of tunic (printy, c) a cas		Sampler Signature	"Se al	\ 2	Ŷ
		1C.V.Man		2 10	The manufacture and the second second

Facility: W-3	Site ID: MW -5	Sampler: JANS
oject Number: 6045-46-6	Date: 8/23/10	Sampler Organization: FTM

Site Description

Weather: Sunny	Air	Temp (°F): 1050	Wind: -	~	eet 35			
Site type:	Extraction Well	Well casing material:	Well diameter	inches		Well		
		Steel	Total depth from TOC	feet	35	locked? - & Yes		
	□ Spring	☐ Iron □ Other:	TOC below/above ground	feet		O No.		
Damages/repairs needed:	NONE		da	I	- i	I		

Water Level Data

Measuring point description: XMark/notch on TOC North rim of TOC Other:		Water level meter: CHeron Dipper-T 🛛 Slope Water Level Indicator 🖓 Other:								
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks			
Time	24-hour	1100	1350	1402	1410	1507				
Depth to Water	feet	4,65	4.66	4.89	4.41	494				
Product	LNAPL/DNAPL	<u> </u>				1, 1, 20				
Prod. thickness	feet									

Field Data

K Hydrola	FT ZUERT C						ØXPer □ Bla	escription: istaltic dder (dedic mersible	ated / portable	Bailer description □ Disposable po □ Disposable To □ Disposable P	lyethylene eflon
Purge depth	feet	30	Well	goes dry	during	purging:	🛛 Yes	XN0			
Casing vol.	gallons			al depth		0.0408					
Time	24-hour	1355	T	1404	1408		Ì		Ţ	Rema	ks
Purge vol.	gallons	0.0	0,1	6.2	0.3						
Purge rate	nıL/min	100	100	100	100						
pН	su	7,00	698		6.97						
Temp.	°C		28.97	29.18						······································	
Spec. cond.	μS/cm	2004	1465	19174							
D.O.	mg/L	6	inter a		<u> </u>						
ORP	mV	L	سمما	A							
Turbidity	ntu	15.78	2315	1512	16.41						
Color/tint		Cleve	•								
Odor		NON									·····

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-5	8/23/10	1415	4		2 Tritium 12 GAMMA
$M\omega - 100$	ļ	1416			Duplicate
Mw -101		1510	J	source	MW-101 - Equiparet Blan
Sampler's Name (prin	nt): Jacol	s Brie	kman		ler Signature: 51 br

Form SOP 120-3 - Sampling Record - Revision 1



Date	Project N	lame						Project Num	ber		Proje	ect Man	ager (I	Print)					
8/23/10	12-	-3						E045				300				-			Page of
Laboratory Name					Submitted	by:			100				2 6	no la	21				
												Р	aramet	ters (M	ethod 1	Number	r)		Lab Turn-Around Time
RBS	Las	orato	sy	1 1 2 3	FTN As												ŕ		
			1					Drive, Suit	e 3										24 Hours
					Fayettev	ille,	AR	72703			-		-						-
Phone: ()					(479) 57	1-33	34 •	Fax (479) 5	71-3338	3									48 Hours
			_					1							1				7 Days
Sampler Signature(s))				Recorded	By (Pr	rint)								1.57				
Saw B	cland				The	1_	Ro	Ichman				the second							Other:
	C / 197 0	a mont					-	it our wro			5	MM							Due: _/_/_
			SA	MPLE DES							>	A							NORMAI
Field Sample Num	har	Da		T		Matrix	Sec.		Met	hod	1-5	A	leght is	- 51 - 1					
r leid Sample Rum	ibei	(mm/d		Time (hh:m		S	0	Number of Containers	Comp	Grab	1	5			-				Laboratory Notes
MW-03		2/23		1150		1		4		V	X	1							
				1254		-		1	1	×	×	5							
MW-04 MW-05				1415	X					X	>	~				-			
MW-100		1		14/10	- ×					Y	×	2	-						
MW-101		,1	1 has	1510						V	Y	5							
			127-	1 der		12							-						
		-																	*
													1		1.5				
					* M	atrix:	W =	Water $S = S$	oil $O = O$	Other									
Relinquished By (Sig	gnature)		Print N	Name R	interner		Date	Time 0715	Received	d By (Sig	print Name 0534 8.T. Michae				lind	_	Date Time		
Relinquished By (Sig	gnature)		Print N	and the second se		2.2	Date	Time	Received					Print	Name				Date Time
Sampler Remarks	1		1					1	Laborato	ory Rema	rks:				and the second				
stable to the																			
							-										1		

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P. 4. 4. 4

FIELD SUPPLIES AND EQUIPMENT PROJECT WORKSHEET

PROJECT NUMBER: $\frac{6045 - 460}{100}$

DATE(S): Aug 23 00 2010

FTN RENTAL	UNIT	Day 1	Day 2	Day 3	Day 4	Day 5		Week 1	
		Units	Units	Units	Units	Units		Units	Total Units
Peristaltic Pump	day								~
Submersible pump	day								ļ
Hydrolab	day								
Hydrolab	week								-
Meters	day								
Geoprobe, augers	day								
PPE	day								
GPS	day								
Other	day/week								
FIELD SUPPLIES	UNIT	Day I	Day 2	Day 3	Day 4	Day 5			Total Units
Silicone tubing	ft	5		1					~
Polyethylene tubing	ft	91							
Vinyl tubing	ft						140		
Disposable bailers	ea								
0.45 micron filters	ea								
Tyvek suit	ea								
field notebook	ea					.2007.0			
misc. supplies	day					NUTTO			

NOTES:

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Revision Date: 08/20/03

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Form SOP 120-2 - Dai
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it debiced taby in Miss weta levil & cach will ad intelly taby weta levil & cach will ad intelly taby by rine & Dece wate level coupled by rine & Dece wate - dischap to grownt scoply - rin Jappla recady to Equipment blank. My - 101 to Seeply - rin Jappla recady of with perfahrer wate out of gallan wate with perfahrer water and of gallan in all water as blank water level metar in all samples & river bead lab - in hopped all samples & river bead lab	Site Location: Entern W-J Project Number: 6045-460 0645 - arrived an site O MW-S - called Radney - Said he would met here shirth -began calibration - s sa sheet. 0700 - Rodney met and provided sample boetly - trouble with Survey of Kyl shills all shift changed a
inst of distilled var plant in 17-10 > See Coc	Date: 11-16-10 Page 1 of

Daily Log

1.1.1



FTN Associates Calibration Form

Date/Time:	10650
Prepared By:	JUN
Location:	Waterbid 3 - MW-5
Project #:	

		Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
Hydrolak Minwah	45796	pH	7	su	17,53	7.07	(Y) N	7.00	Comments
		pН	4	su	17.79	3.95	Y N	4.00	
		-pH	10	SU			YN	1.00	
		Cond	0	uS/cm	-	0.6	N N	0.0	
		Cond	447	uS/cm	17.73	419.4	Y N	4463	
		DO		mm/Hg		mg/l	YN		
		Temp	18	Degrees C	_	17.86	YN	mg/l	
							YN		
			1				YN		
							YN		
							Y N		
							YN		
				1			YN		
							Y N		
							YN		

Notes:

pH Calibration (pH Method: EPA 150.1)

Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

Temperature Calibration: No calibration is necessary. Simply record temperature of standard using thermometer while in calibration cup.

Then record hydrolab temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Facility: W-J	Site ID: MW - 3	Sampler: JJR
oject Number: 6045-460	Date: 11-1 6 - 10	Sampler Organization: FTM

Site Description

Ai	ir Temp (°F): 697° -	Wind:	be be	121	
Extraction Well	Well casing material:	Well diameter	inches	2	Well
□ Borehole	□ Steel	Total depth from TOC	feet		locked?
□ Spring	□ Iron □ Other:	TOC below/above ground	feet		\square No
101					
	 Extraction Well Borehole Spring 	 □ Extraction Well □ Borehole □ Spring □ Iron 	Extraction WellWell casing material: PVCWell diameterBoreholeSteelTotal depth from TOCSpringIronTOC below/above ground	Extraction WellWell casing material: PVCWell diameterinchesBoreholeSteelTotal depth from TOCfeetSpringIronOther:TOC below/above groundfeet	Extraction Well Well casing material: Well diameter inches Inches Borehole Steel Total depth from TOC feet Iron Other: TOC below/above ground feet

Water Level Data

Measuring point		Water level	meter: 🗆 Heron	Dipper-T □	Slope Water I	Level Indicator	Other: Solowe
Mark/notch of North rim of Other:		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time	24-hour	0756	1137	1153	1157	1256	
Depth to Water	feet	6.08	6.36	6.67	6.70	6.83	
Product	LNAPL/DNAPL						
Prod. thickness	feet		1				

Field Data

Field data me Hydrolat	o MiniSond	e 🗆		00P TI	Turbidin Irbidime W		□ Bla	escription: istaltic dder (dedic mersible	ated / portable)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth	feet		Well	goes dry	during	purging:	🗆 Yes	D No		
Casing vol.	gallons	1.7.1	= [tota	al depth	(feet) -	depth to	water (fee	t)] • [well II	$D (inches)^2] = 0$.0408
Time	24-hour	1144	1148	1150	1156			1000		Remarks
Purge vol.	gallons	1			~0.5					
Purge rate	mL/min	135	135	135	135	-				
pН	su	6.82	6.81	6.80	6.81					
Temp.	°C	2356	23.23	23.40	2324					
Spec. cond.	µS/cm	3580	3604	3610	3617					
D.O.	mg/L	-	-	-	-	-				
ORP	mV	-	+	-	-	-				
Turbidity	ntu	17.70	7.47	7.31	7.91					
Color/tint		clear -	> -	• •	3 -	•				
Odor		none	+ -	. .	9 -	3				

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-3	11-16-10	1200	4	-	2 Gamma / 2 Tritium
MW-100	11-16-10	1220	4	-	Dunhat

Sampler's Name (print): Jinyay

Rose

Sampler Signature: h:

1

r

Facility: W-J	Site ID: MW - Y	Sampler: $\mathcal{TT}_{\mathcal{R}}$
oject Number: 6045 - 460	Date: 11-16-10	Sampler Organization: FTN

Site Description

Weather: Mosth Cloudy		Air Temp (°F): 68	Wind: Jre	rizy		
Site type: Monitoring Well	□ Extraction Well	Well casing material:	Well diameter	inches	2	Well
□ Production Well □ Borehole	□ Borehole	□ Steel	Total depth from TOC	feet	locked?	
□ Irrigation Well □ Other: Damages/repairs needed: //	□ Spring	□ Iron □ Other:	TOC below/above ground	feet		🗆 No

Water Level Data

Measuring point description:		Water level meter: Heron Dipper-T Slope Water Level Indicator Other: Shall								
□ North rim of □ Other:		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks			
Time	24-hour	0749	1001	1034	1050	1129				
Depth to Water	feet	8.29	8.44	9.21	9.37	9.76				
Product	LNAPL/DNAPL									
Prod. thickness	feet				-					

Field Data

Field data meters: LaMotte 2020 Turbidimeter Hydrolab MiniSonde LaMotte 2020 Turbidimeter Hydrolab DataSonde Hach 2100P Turbidimeter Other: Cother: Machine The					p description: Peristaltic Bladder (dedi Submersible	cated / portable)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC			
Purge depth	feet		Well	goes dry	during	purging	: 🗆 Y	es No		· · · · · · · · · · · · · · · · · · ·
Casing vol.	gallons		= [tota	al depth	(feet) -	depth to	water (feet)] • [well	ID $(inches)^2$] = 0.	.0408
Time	24-hour	1025	1609	1033	1	1	1045	1049		Remarks
Purge vol.	gallons							~0,7		
Purge rate	mL/min	110	100	100	85	85	80	80		
pH	su	6.73	6.61	6.70	6.68	671	6.75	6.73		
Temp.	°C	22.57	20.46	22.53	22.70	22.73	22.75	22.58		
Spec. cond.	μS/cm	5938	6153	6205	6276	6311	6346	6385		1
D.O.	mg/L	-	-	~	-	1				
ORP	mV	~	~	1	-					1
Turbidity	ntu	12,23	8.13	4.86	4.53	7.88	4.00	4.03	-	
Color/tint		clear		- 6		9 -	> -	>		
Odor		hone			÷ _		- •	3		

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-4	11-16-10	1055	4		2 Tritium / 2 Gampa

Sampler's Name (print): Jimmy Roger

Sampler Signature:

Form SOP 120-3 - Sampling Record - Revision 1

E

Facility: $W-3$	Site ID: MW-5	Sampler: JJR
oject Number: 6045 - 460	Date: 11- 16-16	Sampler Organization: FTN

Site Description

Weather: Mostly Clo	Air Air	Temp (°F): 68	Wind: mee	lerate	9441	
Site type: Monitoring Well	Extraction Well	Well casing material:	Well diameter	inches	2	Well
□ Production Well	Borehole		Total depth from TOC	feet		locked?
 Irrigation Well Other: 	□ Spring	□ Iron □ Other:	TOC below/above ground	feet		□ No
Damages/repairs needed:						
	none					

Water Level Data

Measuring point description: Mark/notch on TOC North rim of TOC Other:		Water level meter: Heron Dipper-T Slope Water Level Indicator Other: Soland									
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks				
Time	24-hour	0735	0850	0904	0911	1011					
Depth to Water	feet	6.26	6.26	6.47	6.48	654					
Product	LNAPL/DNAPL										
Prod. thickness	feet										

Field Data

Field data meters: A Hydrolab MiniSonde Hydrolab DataSonde Other: Other:				Pump description: Peristaltic Bladder (dedicated / portable) Submersible			d / portable)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC			
Purge depth	feet		Well	goes dry	during	purging:	ΩY	es 🗙 N	0		
Casing vol.	gallons		= [tota	al depth	(feet) -	depth to	water (feet)] = [v	well ID ($(inches)^2$] • ().0408
Time	24-hour	0554	0858	0902	0906	0910					Remarks
Purge vol.	gallons					-02-	1				
Purge rate	mL/min	120	100	100	100	100					
pН	su	6.50	6.98	7.07	7.00	7.08					
Temp.	°C	22.79	22.77			22.94					
Spec. cond.	µS/cm	6683	6700	6660	6635	6598				2012	
D.O.	mg/L	1.1-1		-	-	-					
ORP	mV	-	-	-	-						
Turbidity	ntu	1315	8.19	7.14	6.83	7.59					slipht yellowith color
Color/tint		clear-	7 -		4 -	>		1			observed as sareh her
Odor		none-		s -	P -	2					Were Filling

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-5	11-16-10	0915	\$ 5	-	2 titium 2 Garrol 1 other
· · · · ·					

Sampler's Name (print): Jimmy Rogers

Sampler Signature:

Form SOP 120-3 - Sampling Record - Revision 1

23

Facility: W-3	Site ID: MW-6	Sampler: JJR
oject Number: 6045-460	Date: 11-16-10	Sampler Organization: FTN

Site Description

Veather: Mostly Sunny	Air Temp (°F): 70 °	Wind: sh	Wind: shill becare				
ite type: Monitoring Well	Well casing material:		inches	2	Well		
□ Production Well □ Borehole	□ Steel	Total depth from TOC	feet		locked'		
□ Irrigation Well □ Spring □ Other:	□ Iron □ Other:	TOC below/above ground	feet		□ No		

Water Level Data

Measuring point description: Mark/notch on TOC North rim of TOC Other:		Water level meter: 🗆 Heron Dipper-T 🗆 Slope Water Level Indicator 🔊 Other: Soliant									
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks				
Time	24-hour	0804	1302	1312	1718	1400					
Depth to Water	feet	4.44	4.60	5.32	5.41	5.67					
Product	LNAPL/DNAPL		-								
Prod. thickness	feet	1									

Field Data

Field data meters: Image: Hydrolab MiniSonde Image: LaMotte 2020 Turbidimeter Image: Hydrolab DataSonde Image: Hach 2100P Turbidimeter Image: Other: Image: Other: Image: Other: Image: Other: Image: Purge depth feet					rbidimeter	Pump description:	ited / portable)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth	feet	1			during purging:			
Casing vol.	gallons		= [tota	al depth	(feet) - depth to	.0408		
Time	24-hour	1305	1309	1313	1317			Remarks
Purge vol.	gallons				~0.5			Set to I alice
Purge rate	mL/min	125	95	95	85			K lopa puc
pH	su	7.14	6.34	7.03	7.07			Cally a male
Temp.	°C	23.17	22.99		22.83			threadd end.
Spec. cond.	µS/cm	3790	3 899	3825	3731			Cap with to bey
D.O.	mg/L	-	-	-	-			just sets over
ORP	mV	-	-	-	-			but does not
Turbidity	ntu	14.25	8.10	6.95	5.15			fit shusty
Color/tint		clear -		э .	3			
Odor	1	None -	, ,	3 -	->			

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-6	11-16-16	1320	4		2 Gumme 1 2 torthan
			1		1

Jimpy Rogen

Sampler's Name (print):

Sampler Signature:

Form SOP 120-3 - Sampling Record - Revision 1

4

Facility: W-3	Site ID: MW- 7	Sampler: J.T.
oject Number: 6045-466	Date: 11-16-16	Sampler Organization: FTN

Site Description

Weather: parth Jun	A A	ir Temp (°F): 68°	Wind: br	2124		
Site type: Monitoring Well	□ Extraction Well	Well casing material:	Well diameter	inches	2	Well
□ Production Well	□ Borehole	□ Steel	Total depth from TOC	feet		locked?
 Irrigation Well Other: 	□ Spring	□ Iron □ Other:	TOC below/above ground	feet		□ No
Damages/repairs needed:	one					

Water Level Data

Measuring point description: Mark/notch on TOC North rim of TOC Other:		Water level meter: Heron Dipper-T Slope Water Level Indicator Other:								
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks			
Time	24-hour	0814	1410	1418	1429	1506				
Depth to Water	feet	6.38	6.51	7.05	7.21	7.28				
Product	LNAPL/DNAPL									
Prod. thickness	feet									

Field Data

Field data meters: Image: LaMotte 2020 Turbidimeter Image: Hydrolab MiniSonde Image: LaMotte 2020 Turbidimeter Image: Hydrolab DataSonde Image: Hach 2100P Turbidimeter Image: Other: Image: MiniSonde Image: Hydrolab DataSonde Image: Hach 2100P Turbidimeter Image: Other: Image: MiniSonde Image: Hydrolab DataSonde Image: Hach 2100P Turbidimeter Image: Other: Image: MiniSonde Image: Hydrolab DataSonde Image: Hach 2100P Turbidimeter Image: Other: Image: MiniSonde Image: Hydrolab DataSonde Image: Hach 2100P Turbidimeter Image: Other: Image: MiniSonde Image: Hydrolab DataSonde Image: Hach 2100P Turbidimeter Image: Other: Image: MiniSonde Image: Hydrolab DataSonde Image: Hach 2100P Turbidimeter Image: Other: Image: MiniSonde Image: Other					Pump description: Peristaltic Bladder (dedicated / portable) Submersible				ble)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC		
Purge depth	feet		Well	goes dry	during	purging:						
Casing vol.	gallons		= [tota	= [total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • 0.0							0408	
Time	24-hour	1412		1430	1						-	Remarks
Purge vol.	gallons											
Purge rate	mL/min	115	100	100	100	100						
pH	su	6.68	675	6.75	6.72	6.76						
Temp.	°C	24.01	23.98	23.93		23.95						
Spec. cond.	µS/cm	1809	1885	1929	1961	1976						
D.O.	mg/L	-	•	-	-	-						
ORP	mV	-		1	-	-						
Turbidity	ntu	7.91	5.25	4.44	4.77	4.65						
Color/tint		clear_			3 -	>						
Odor	1000	hom -		e _	+ -					i = 0.5		

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-7	11-16-10	1430	4	-	2 Gamma / 2 Trition

Sampler's Name (print): Jing Rogers

Sampler Signature:

Form SOP 120-3 - Sampling Record - Revision 1

Facility: W-3	Site ID: MW- 8	Sampler: TTR
oject Number: 6045-460	Date: /1-16-16	Sampler Organization: FTM

Site Description

Weather: mosth Juhm	Air	Temp (°F): 681	Wind: J/	the brent	7	
Site type: Monitoring Well	□ Extraction Well	Well casing material:	Well diameter	inches	2	Well
□ Production Well	□ Borehole	□ Steel	Total depth from TOC	feet		locked'
 Irrigation Well Other: 	□ Spring	□ Iron □ Other:	TOC below/above ground	feet		🗆 No
Other: Damages/repairs needed:	Non	□ Other:	TOC below/above ground	feet		

Water Level Data

Measuring point description: Mark/notch on TOC North rim of TOC Other:		Water level meter: Heron Dipper-T Slope Water Level Indicator Other: Chart								
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks			
Time	24-hour	0825	1525	1536	1542	1617				
Depth to Water	feet	7.68	7.80	8.03	8.08	8.11				
Product	LNAPL/DNAPL					all				
Prod. thickness	feet			/						

Field Data

Field data me	o MiniSond	e 🗆	Hach 2	100P Tu	Furbidimeter rbidimeter	Pump descriptio	dicated / portable)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC				
Purge depth	feet		Well	goes dry	during purging							
Casing vol.	gallons		= [tota	al depth	(feet) - depth to	0408						
Time	24-hour	1539	1573	1577	1541			Remarks				
Purge vol.	gallons			1	~0.5							
Purge rate	mL/min	140	110	110	110							
pH	su	6.84	6.71	6.72	6.71							
Temp.	°C	23.56	23.76	23.60	27.56							
Spec. cond.	µS/cm	1387	1393		1410							
D.O.	mg/L	-	-	-	-							
ORP	mV	-	-	-	-							
Turbidity	ntu	46.16	7.86	6.45	5.83							
Color/tint		clear-		, _	7							
Odor		none	-	· ·	5							

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-8	11-16-10	1545	4	~	2 Gamma 12 tritium

Sampler's Name (print): Jimmy Rogers

Sampler Signature:

Form SOP 120-3 – Sampling Record – Revision 1

22

Facility: W-3	Site ID: MW - 9	Sampler: JJR	
oject Number: 6045-460	Date: 11-16-16	Sampler Organization:	

Site Description

W-11 41		1	A COMPANY OF A COMPANY
Well diameter	inches	2	Well
Fotal depth from TOC	feet		locked?
FOC below/above ground	feet		🗆 No
00	below/above ground	below/above ground feet	below/above ground feet

Water Level Data

Measuring point		Water level	Water level meter: Heron Dipper-T Slope Water Level Indicator Other: So finite											
Mark/notch of North rim of Other:		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks							
Time	24-hour	0832	625	1635	1647	1715								
Depth to Water	feet	4.51	4.49	4.55	4.54	456								
Product	LNAPL/DNAPL				1									
Prod. thickness	feet													

Field Data

Field data me Hydrolal	MiniSond	e 🗆		00P Tu	Furbidimeter Irbidimeter	0	mp descripti Peristaltic Bladder (d Submersib	ledicated / p	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC	
Purge depth	feet		Well g	goes dry	during purgi	ng: 🗆	Yes N	0		
Casing vol.	gallons				(feet) - depth	0408				
Time	24-hour	1630	1634	1639	1642					Remarks
Purge vol.	gallons				20.5					
Purge rate	mL/min	125	125	135	125					
pH	su	6.81	6.73	6.75	6.75					
Temp.	°C	21.78	21.61	21.68	21.81					
Spec. cond.	µS/cm	2442	2475	2481	2467					
D.O.	mg/L	-	-	-	-					
ORP	mV	-	-	-	-					
Turbidity	ntu	18.44	8.80	7.10	7.12					
Color/tint		clear -		· ·						
Odor		none-	3 -	7 -	-			,		

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-9	11-16-10	1645	4		2 samma /2 tritium
MW-101	17-16-10	1715	4	-	Field Blank Equipment Blank

Sampler's Name (print): Jimmy

	1			
. 1	r az	P	1	

Sampler Signature: they /op

Form SOP 120-3 - Sampling Record - Revision 1



Date	Project N	ame					× 1	Project Num	ber		Proi	ect Mar	120er (Drint)						
11-17-10	W-3							6045-	- 410			060							Page d	of
Laboratory Name					Submit	ted by	/:	1	- 4-		P	~ ~ ~ ~	- 63				-		I age	<u>л_</u>
DOCI	1											I	arame	ters (M	lethod]	Numbe	T)		Lab Turn-A	round Time
RBS Lab	oratory				FTN A												Í	T		round Thire
								e, Suite 1					1						24 Hour	s
				Sale of the				72704												
Phone: ()					(479)	571-	3334	• Fax (479)	571-333	3						1			48 Hour	S
Sampler Signature(s	.)				Decend	a J Day	(D : .)									in			7 Days	
						,								1. 34	a la constante					
Ching 1	374				JI.	mm	y /1	ogen,		-		-	1						Other:	
			SA	MPLE DES				-			1010	Gamma	the						Due.	_/_/
F.110 1.11						Ma	trix*		Met	hod		2	0							
Field Sample Num	iber	(mm	Date /dd/yy)	Time (hh:mi		W	s o	Number of Containers	Comp	Grab	F	Õ	1						Laborato	ry Notes
MW-5			16-10	0915	-	X		5		X	X	×	X							
MW-4			1	1055		X		4		X	×	x								
MW-3				1200		×		4		X	X	X								
MW-100				1220	>	X		4		N	X	x								
MW-6				1320	7	X		4		X	x	×								
MUN-7		-		1430	7 7	×		4		X	x	×								
MW-8				1543	- >	×		4		X	×	X								
MW-9				1645	- >	×		4		x	x	X			1					
MW-101		5		1715		X		4		X	x	X								
		-	1															· ·		
					*	Matri	ix: W	= Water $S = S$	soil $O = ($	Other									2	
Relinquished By (Sig	gnature)		Print N	lame			Date		Received					Print	Name	6 /			Date	Time
Relinquished By (Sig	mature)		Print N	ame Ro.	ica)	-	11-17 Date		Received	HALL -	Soh	MG	1	Nr	1-44	V KO	bus	302	11/12/10	0405
	inature)		1 mar	ame			Date		Received	і Бу Lab	oratory	(Signat	ure)	Print	Name				Date	Time
Sampler Remarks						-			Laborato	ry Rema	rks:									
Contraction of the second second								the second second	1.	100										

Daily Log

()

Site Location: W3 Date: 23Mar 11 Project Number: 6046-460 Page of 0730 - Arrived ansite, located MW-5 p called Redney began to prepp calibrate. 0420 Water Levels OTT-(++) Sample Order PO DTW/TUG 3 0840 MW-05 0900 W-DL 4 MW-0 0911 6 0911 Dup DI 0932 1-08 NAW-DCI 0949 5 69 EB 720 Departed Site Jammell 0705 Arrived On sile 1030 departed Site

Form SOP 120-2 – Daily Log – Revision 1



FTN Associates Calibration Form

Date/Time:	28 Mar 11 0750
Prepared By:	PWP
Location:	W3
Project #:	6049-460

Instrument Type Ir		Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Commente
151 556 M	PS	рН	7	su	19.52	711	Y N	1,00	Comments
		pН	4	su	19.56	3.94	Y N	4.00	
		рН	10	su	100	~	YN	7:00	
		Cond	0	uS/cm	1	h.	YN		
		Cond	447	uS/cm	19.77	475		447	
		DO		mm/Hg		mg/l	YN	mg/l	
		Temp		Degrees C			Y N	N/A	
							YN		
HEScientific	81.	Turb	ENP DIDOO	NTU	NA	1025	Y N Y N	990,7	
			10			10.10	(Y) N	0.97	
			0007	X		0,19	Y N	0,08	
							YN		
							Y N	1.1.1.1	
							Y N		

Notes:

pH Calibration (pH Method: EPA 150.1)

Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

Temperature Calibration: No calibration is necessary. Simply record temperature of standard using thermometer while in calibration cup.

Then record hydrolab temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:



FTN Associates Calibration Form

Date/Time:	3/28/11 0710	
Prepared By:	DWP	
Location:	W3	
Project #:	6045-460	

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	
YSI 556		рН	7	su	19.92	6.85	NN	7,00	Comments
		pН	4	su	20.01	4.16	N	4.00	
		рН	10	su	- autor	4.10	Y N	4.00	
		Cond	0	uS/cm			Y N		
1		Cond	447	uS/cm	20.39	506	YN		211-0
		DO		mm/Hg		mg/l	YN		outofranse
		Temp	~	Degrees C	20.00	20.65	ØN	mg/l	
		Cont	447	uS/Ch	4666	20.51	(Y) N	N/A 447	
HESCIENTIFICA		Tem					YN	447	~
In sound the	=/	iurb	1000	NTU		9914	Ø N	70101.7	
			10	1		9.73	(Y) N	10,07	
			0.02	Y		0,00	N N	0.00	
							YN	0.00	
							YN		
							Y N		

Notes:

pH Calibration (pH Method: EPA 150.1)

Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

Temperature Calibration: No calibration is necessary. Simply record temperature of standard using thermometer while in calibration cup.

Then record hydrolab temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or

Facility:	N3	Site ID: MW-03	Sampler: $\mathcal{D} \mathcal{W} \mathcal{P}$
oject Number:	1946-460	Date: 28mur 11	Sampler Organization: FTN

Site Description

Weather: Cloudy	Air Temp (°F): 66	Wind:	3mph
Site type: Monitoring Well	Well casing material:	Well diameter	inches 2 Well
□ Production Well □ Borehole	🛛 Steel	Total depth from TOC	feet 7.58 254 locked
□ Irrigation Well □ Spring □ Other:	□ Iron □ Other:	TOC below above ground	feet 2. No

Water Level Data

	Measuring point description: Mark/notch on TOC		Water level meter: Heron Dipper-T Slope Water Level Indicator								
North rim of TOC		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Other: 300 Hich 20 Remarks				
Time	24-hour	0911	1020	1044	1054	1127					
Depth to Water	feet	6.31	6.30	6.60	6.65	1.24					
Product	LNAPL/DNAPL	×+ ×	- Criste	VIC	0100	61.14					
Prod. thickness	feet		1								

Field Data

Field data me	eters: o MiniSond		1 - 1 4 - 44	. 2020 /	P 1 · P			p descr			Bailer description:
□ Hydrolat	DataSond SIGS6		LaMott Hach 2 Other:			$ter_{ii} #1$		Peristal Bladder Submer	(dedica	ated / portable)	 Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth	feet	2830	Well	goes dry	during	purging:		les X	No		
Casing vol.	gallons	04086								$O(\text{inches})^2$] • (0.0408
Time	24-hour	1032	i035			1044				1063	Remarks
Purge vol.	gallons		10	DAN		10.1	10.1	1-1-	1001	~1	
Purge rate	mL/min	300	90	190	120						
pН	su	657	6.78	6.81	6.82	1.82	6.83	6.83	6.83	6.83	
Temp.	°C	29.99	23.49	24,00	23.71	24,06	and the second second	23.94	24.13	24,06	
Spec. cond.	μS/cm	1467	27036	3043		3042			3065	30/22	* bubble in flow cell
D.O.	mg/L		0000		20-0		Aug	~ ~ ~	1000	0-00	
ORP	mV										
Turbidity	ntu	27.17	33.29	20,99	18.96	25,62	21.06	25.11	15.61	16.92	
Color/tint		CLEWC		2-1	7-5		2	3-9-	7	10.10	
Odor		None	9.		9-1	7	5	\$	1-	D D	

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-03	3128/11	1100	4	NO	216 Gamme 216 tritism
		-			
				1	

Sampler's Name (print): Darrell Penninsten

Sampler Signature:

millent

Form SOP 120-3 – Sampling Record – Revision 1

Facility: W3	Site ID: MW-04	Sampler: DWP
oject Number: 6046-460	Date: 3/28/11	Sampler Organization: ETN

Site Description DARWI Air Temp (°F): 70 Weather: MOSLIGCIOSUL Wind: 13mph Site type: Well casing material: Well diameter inches Well Monitoring Well Production Well □ Extraction Well PVC locked? □ Borehole □ Steel Total depth from TOC feet 37. YYes □ Irrigation Well □ Spring □ Iron TOC below/above ground No □ Other: feet □ Other: Damages/repairs needed:

Measuring point description: Mark/notch on TOC North rim of TOC Other:		Water level meter: Heron Dipper-T Slope Water Level Indicator Other:									
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks				
Time	24-hour	0906	1138	1201	1203	1241					
Depth to Water	feet	8.93	8.93	10.05	10,00	1037					
Product	LNAPL/DNAPL				-0101						
Prod. thickness	feet										

Field Data

Field data me							Pun	p descri	ption:			Bailer description:
	b MiniSond		LaMott	e 2020 "	Turbidir	neter		Peristalt				□ Disposable polyethylene
🗆 Hydrolal	o DataSond	e 🗆	Hach 2	100P Tu	rbidime	eter		Bladder	(dedica	ited / porta	ble)	□ Disposable Teflon
Other:	SI66	6 10	Other	FSch	entilly	1#1		Submer	sible			□ Disposable PVC
Purge depth	feet	300	Well	goes dry	during	purging:		Yes X	No			
Casing vol.	gallons	4:20	= [tota	al depth	(feet) -	depth to	water	(feet)] •	[well II	$(inches)^2$	1 . 0.0	0408
Time	24-hour	1148	1151	1163	1156	1158	1201			T T		Remarks
Purge vol.	gallons		1	1.32	1100		0,6					
Purge rate	mL/min	180	20		100							
pH	su	6.89	6.47	6.47	6.46	650	6.51					
Temp.	°C	23.22				24.58	24.21					
Spec. cond.	µS/cm	4540				4219						
D.O.	mg/L		- Ite	1.1.1	1	441	1.01	1				
ORP	mV											
Turbidity	ntu	37.15	24,26	26,93	23.42	26.XX	24.20					
Color/tint			ders-		27	=	->					
Odor		Clevr		2-1	21	20-	2					

Sample Data

Date	Time	# Containers	# Filtered	Remarks
3128/11	1205	4		216 gamm 216 Enition

Sampler's Name (print):

Darrell feministen

Sampler Signature:

millant

Form SOP 120-3 – Sampling Record – Revision 1

Facility: J 3 oject Number:		Site ID: M	1.160		1			
oject Number:			100-05	Sampler:	Dwr			
		Date: 317	9/11	Sampler Orga	anization:	TN		
Site Description		1	mp					
Weather: partly cloudy	Air Ter	mp (°F): /	66		Wind:	3mp	h	
Site type: Monitoring Well	Vell	Well casing	material:	Well diameter		inches	2	Well
□ Production Well □ Borehole □ Irrigation Well □ Spring		Steel		Total depth fi	feet	37.59	locked?	
□ Irrigation Well □ Spring □ Other:		\Box Iron \Box Other:		TOC below/a	feet	2.59	🗆 No	
Damages/repairs needed:							Prol	
Water Level Data		and the second					14	erk.
Measuring point description: Water Mark/notch on TOC	r level mete	er: 🗆 Heron I	Dipper-T	Slope Water Level Indicator A Other: Seotech				
□ North rim of TOC Pre-1		Pre-purge Dur confirmation purg			After samplin	g	Rema	rks

□ Other:		initial	confirmation	purging	end	sampling	Remarks
Time	24-hour 31281	840	844	906	921	961	
Depth to Water	feet	6.30	6:39	6.66	6.67	673	
Product	LNAPL/DNAPL			VIUG		6.15	
Prod. thickness	feet						

Field Data

Field data me	eters:						Pun	np descr	intion.			Bailer de	ecription		
🗆 Hydrolat	MiniSond	e 🗆	LaMott	e 2020 '	Furbidir	neter	Peristaltic					Bailer description:			
□ Hydrolat	DataSond	e 🗆	Hach 2	100P Tu	rbidime	ter	8	Bladder (dedicated / portable)					□ Disposable Teflon		
Other:	51-52		Other:	HES	tent	He		Submer	sible				osable PV		
Purge depth	feet	30	Well	goes dry	during	purging	: 0	Yes 🗆	No						
Casing vol.	gallons	4,67	= [tot	al depth	(feet) -	depth to	o water	(feet)] •	[well II) (inches	$(s)^2] = 0.0$	0408			
Time	24-hour	850	854	857		901	903	906	908	910	913	915	Remark	S	
Purge vol.	gallons						103	100	100		112	1.2	917	0120	
Purge rate	mL/min	140	101											0,556	
pH	su	1,30	7.28	7.77	7,26	7.25	7,24	724	723	723	7.23	7.22	722	7.22	
Temp.	°C	22.33	20,15	22,20	2218		22.40	22.43	2245	22.44	22.53		2 2214	22,58	
Spec. cond.	μS/cm	4337	4391	4432	4542	1 . 1	4699	4757	4792				4827	4806	
D.O.	mg/L				12.10		10.1		11.0	0.1	10-1	9000	iond	- 000	
ORP	mV					1.0						1			
Turbidity	ntu	15.33	1.37	18.92	16:72	21.36	15:75	1324	HUX	1913	DLI	NUU	1217	12 87	
Color/tint		ger-	5-	× -	0-	-	2~	4-4	5-	7 <	25	2	100 1	1210	
Odor		Nint	25	3-	4-4	2-	7_	2-	5-	S-	5-5	2-		~	

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-05	3120/11	0923	4	Wo	216 Britwin 216 Stamma
EDDI	329/11	1000	4	ND	SAA

Sampler's Name (print): Darley Penniaston

Sampler Signature:) mill Per

Form SOP 120-3 - Sampling Record - Revision 1

Facility: W3	Site ID: MW-DG	Sampler: DWP	
oject Number: 6045-460	Date: 3/28/11	Sampler Organization: FTM	

Site Description

Weather:	O LU Air T	`emp (°F): 73	Wind: C	Imph	
Site type: Monitoring Well	Extraction Well	Well casing material:	Well diameter	inches	a Well
 Production Well Irrigation Well 	□ Borehole	🖸 Steel	Total depth from TOC	feet	6,40 locked?
\Box Other:	□ Spring	□ Iron □ Other:	TOC below above ground	feet 🧙	U DNO

Measuring point description: Mark/notch on TOC		Water level	Hother peok Ch				
□ North rim of □ Other:		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time	24-hour	0914	a1302	1317	1322	1262	After DUP
Depth to Water	feet	AB310W	8 1	A	9	1000	1471
Product	LNAPL/DNAPL	4,45	4.44	5,58	Stab	500	18
Prod. thickness	feet				2.00	2,1-1	6.10

Field Data

Field data me Hydrolat Hydrolat Other:	o MiniSond DataSond	e 🗆	Hach 2	100P Tu	Turbidin Irbidime		A	p description Peristaltic Bladder (dedi Submersible	cated / portable)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth	feet	28				purging:		Yes XNo		
Casing vol.	gallons	4.66							ID $(inches)^2$] = 0.	.0408
Time	24-hour	1306			133	137	1319	1322		Remarks
Purge vol.	gallons			PI	.v.r		12.	075		
Purge rate	mL/min	120		140		130		AD		Ania 13/2mallasia
pH	su	7,73	7.14	2.05	7.01	707	702	7.03		Below 130 mallming
Temp.	°C	24,92	F1 \1 (2 \. (A)	24.21			24.58	24,29		In mp word sop
Spec. cond.	μS/cm	2960.			2830	2024	2810	2810		
D.O.	mg/L	000		<u></u>		0001	~010			1
ORP	mV						-		19.2	
Turbidity	ntu	6,56	1215	7.00	4.45	577	153	4,56		
Color/tint		CIPIS	1-	7 0	2 0		110			
Odor		NONE	4-	9-	2	5	2	37		

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
NONDE	3128/11	1325	4	ND	SLAL Litium, 216 gamma

) critelle consister

Sampler's Name (print):

Sampler Signature:

Form SOP 120-3 – Sampling Record – Revision 1

anell

Facility: W3	Site ID: MWO7	Sampler: DWP	
oject Number: 6046-460	Date: 3128/11	Sampler Organization: FTN	

Site Description

Weather:	Cloudy	Air	Гетр (°F):	Wind:	buno	b	
Site type: Monitoring Well		Well	Well casing material:	Well diameter	inches	Zin	
Production Well Derehold			□ Steel	Total depth from TOC	feet	41.16	locked?
\Box Other:	□ Spring		□ Iron □ Other:	TOC below above ground	feet	B.16	🗆 No

Measuring point description: Mark/notch on TOC		Water level	DOther: 300				
 North rim of Other: 		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time	24-hour	0921	1464	1507	1529	1556	
Depth to Water	feet	6.31	6.33	7.16	1.39	7.34	
Product	LNAPL/DNAPL				1.01	1.21	
Prod. thickness	feet						

Field Data

Field data meters: Hydrolab MiniSonde Hydrolab DataSonde Hydrolab DataSonde Hydrolab DataSonde Other: Other: Hydrolab DataSonde Hydrolab DataSonde Other: Hydrolab DataSonde Hach 2100P Other: Hydrolab DataSonde Hydrolab DataSonde Hydrolab DataSonde Other: Hydrolab DataSonde Hydrolab DataSon				2	Pump description: Peristaltic Bladder (dedicated / portable) Submersible					Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC				
Purge depth	feet	3.3	Well	goes dry	during	purging	: 01	Yes 📎	No			A		
Casing vol.	gallons	5.16	= [tota	al depth	(feet) -	depth to	water ((feet)] •	[well ID) (inches	$(s)^2] = 0.0$	0408		
Time	24-hour	1458		1502			The state of the s	151	1612	1617	1619		Remarks	
Purge vol.	gallons	1		pro er	1.5-5	1007	1-1-1	12.1	10.5	p	Dit	1220	1573 1	51
Purge rate	mL/min	P		[]D						-			Volume 115!	s d
pH	su	7.45	699	6.91	6.88	6.87	6.85	6.84	6.82	6.82	h.81	INA	6.812 bil	10
Temp.	°C	25.84	25.20	25.44	25.57	2575	25.63	26.56	25.54	25.77	29.88	0670	2546 20	12
Spec. cond.	μS/cm	1108	1051	1064	1073	1082	1096	1103	1125	41 1	1213	1244	1266 127	12
D.O.	mg/L					1,000			110.2	11.50	1012	10-11	120-1 121	
ORP	mV									1.				
Turbidity	ntu	8.33	21.33	11.36	13/17	14.6	15.18	19,21	7166	2529	18:73	120/1	2911 27	20
Color/tint		cleur -	3-	7 _>	7 3	2	3		Aur	DS	ID D	3307	2011 24	2
Odor		None	5-	9-	2	5-	9	9-	5		2-	6	37	

Sample Data					rgions	mesent
Sample ID	Date	Time	# Containers	# Filtered	Remarks	1.2.00.1
MW-D7	3128/11	1530	4	ND	211-Frillin 2	1L Gamma
		L.C				

Sampler's Name (print): Dor rell Penninston

Sampler Signature: 1) and Plant

Form SOP 120-3 - Sampling Record - Revision 1 X clevred 112 Way 2 Ind Gnitoun -Sampp

Facility: W3	Site ID: MW-08	Sampler: DWP	
oject Number: 6046-460	Date: 3/28/11	Sampler Organization: FTN	

Site Description

Weather: Cla	Air	Temp (°F): 7	Wind:	moh		
Site type:	l □ Extraction Well	Well casing material:	Well diameter	inches	2	Well
Production Well	□ Borehole	Steel	Total depth from TOC	feet	1147	locked? Yes
 Irrigation Well Other: 	□ Spring	□ Iron □ Other:	TOC below above ground	feet B.M		🗆 No

Measuring point description: Mark/notch on TOC North rim of TOC Other:		Water level	evel Indicator	Other: Glotich			
		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time	24-hour	1933	1629	1638	1647	FILI	
Depth to Water	feet	6.81	677	616	6.19	1133	
Product	LNAPL/DNAPL		10. /	6.1)		6.0.5	
Prod. thickness	feet						

Field Data

Field data me	eters:						Pum	p descr	intion.		1	Bailer description:			
□ Hydrolab	MiniSond	e 🗆	LaMotte	2020 1	Turbidin	neter	V	Peristal	tic			Disposable polyethylene			
□ Hydrolab DataSonde □ Hach 2100P Turbidimeter										ated / portab	lal	\Box Disposable Teflon			
□ Hydrolab DataSonde ↓ Other: \SF 556 ↓ Other: \Hereitable ↓ Otherbeitable ↓ Otherb								Submer		neu / portac		\Box Disposable PVC			
Purge depth	feet	33	1		during										
Casing vol.	gallons	5.25						feet)] •		$O(inches)^2$	= 0.0	0408			
Time	24-hour	1630			1637	and the second se		1643				Remarks			
Purge vol.	gallons	1050				100		14.1							
Purge rate	mL/min	140		100											
pН	su	6.98	0.07		6,72	674	1.75	6.75							
Temp.	°C		9 4m				26,41		P						
Spec. cond.	μS/cm	1027	20.08	495	1032			10630							
D.O.	mg/L	1000			1001				1						
ORP	mV	1.1													
Turbidity	ntu	22.61	76.35	19,95	16,98	1587	1506	10,22							
Color/tint		NEipur	Gen		2-1	D.	100	10100							
Odor			None	7-	5-3	5-	5-0	9			•				

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-08	1650€	328111	4	No	71h Sammy 216 tostium
	5		Sector Sector		

Sampler's Name (print): Dornell Pennington

Sampler Signature:

Form SOP 120-3 – Sampling Record – Revision 1

Facility:	W3		Site ID: 🎵	12-04	Sampler:	DWP		1	
oject Number:	6045-460		Date: 31)	GK/11	Sampler Orga	nization:	FTN		
Site Description				pwp					
Weather: M	Lost ly Clour	Air Air	Temp (°F):	6		Wind: 7	noh		
Site type:		action Well	Well casing	g material:	Well diamete		inches	2	Well
Production V	Vell 🗆 Bore	hole	🗆 Steel		Total depth fi	om TOC	feet	4022	locked?
□ Irrigation We	ell 🗆 Sprin	□ Iron □ Other:		TOC below/a	feet	3.22	🗆 No		
Damages/repairs	needed:								
Water Level Dat	ta							12	PULC
Measuring point	description:	Water level r	neter: 🗆 Heron	Dipper-T	□ Slope Water	· Level Indicat	or Ot	her:Sec	Jecho
Mark/notch of North rim of Other:		Pre-purge initial	Pre-purge confirmation	Pre-purge During		After samplin	g	Rema	rks
Гіте	ne 24-hour 3/28 0946			751	801	825			
Depth to Water	feet	11 64	0730	4.86	4.87	4,89			

Field Data

Prod. thickness

Product

LNAPL/DNAPL

feet

Field data me	eters:						Pum	p descr	intion:		Bailer description:			
🗆 Hydrolat	MiniSond	e 🗆	LaMott	e 2020 '	Turbidir	neter		Peristal			Disposable polyethylene			
🗆 Hydrolat	100P Tu	rbidime	ter				ted / portable)	\Box Disposable Teflon						
Other: V	St SS	Other:	4FSC1	entit	UH I		Submer		ieu / portaele)	□ Disposable PVC				
Purge depth	feet	33	Well	goes dry	during	purging	: 01	les V	No					
Casing vol.	gallons	5,42	= [tot	al depth	(feet) -	depth to	o water ((feet)] •	[well ID	$(inches)^2$] • 0	.0408			
Time	24-hour	741	744	747	749	751	753	755	757		Remarks			
Purge vol.	gallons						100	1.30	0,5					
Purge rate	mL/min	110							013					
pH	su	6.40	6.62	6.70	676	6.77	6.78	679	10.79					
Temp.	°C	19.92		19,76	19150	19.85	19.99	20:03	20.15					
Spec. cond.	µS/cm	1792	1939	1895	1901	1896	-	1999	1899					
D.O.	mg/L						189P	0	1011					
ORP	mV						- p	19						
Turbidity	ntu	9,29	6.84	7.98	4.85	6.06	4,79	643	5.97					
Color/tint		cler	7-	3_		Y	3-	3-	3					
Odor		Wine	5-	2	27-	-12	5-	5-	5					

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-09	8000	3/28/11	4	No	211 tritium 216 gamma

Darrell Pennington

Sampler's Name (print):

Sampler Signature:

)inrell Per

Form SOP 120-3 - Sampling Record - Revision 1



The second set of a completely

	ect Name				Project Num										1 1	
	13				6045-	-460	_	B	061	VPS	free	_	-	1 k		Page of
Laboratory Name		S	ubmitted by	/:												
· · · · ·	00	F	TN Asso	ciates I	Ltd.				P	aramet	ers (M	ethod N	umber	r)		Lab Turn-Around Time
K	125				bridge Drive, Suite 3											24 Hours
			ayettevill													
Phone: ()	Fax (479) :	571-3338	3									48 Hours				
								-2-	-105		-					7 Days
Sampler Signature(s)	(Print)			-	UN	T										
. tarilt	limb	-	Darre	11 pe	nningho	-		1-1	2							Other:
	SA	MPLE DESC						F	MM			-				Due://
			Ma	trix*		Met	hod	17	5							
Field Sample Number	Date (mm/dd/yy)	Time (hh:mm)	W	S O	Number of Containers	Comp	Grab	F	0					-	-	Laboratory Notes
MW-03	345/11	1100	X		4		~	/	/							
MW-04	Y	1206	X		1		\leq						-			
MW-05	349/11	1923	X				X	<	>							
MW-06	3/28/11	1325	X				52	1								
DUP MW-06		1400	X				X	~)							
MU1-07		1530	X				$\langle \rangle$	/	1							14 A.
MW-05	V	1650	X				\lesssim		/							
MW-09	3/29/11	0 500	X				X	>								
EB-01	Y	1000	X		Y		X	>	<		- 53					
			X													-
2			* Matri	ix: W =	Water $S = S$	oil $O = O$	Other	1								
Relinquished By (Signatur	ante lles.	Jame Jell Per	andon =	Date	Time	Received			24		Print	Name	- n	Ticho		Date Time
Relinquished By (Signatur	re) Print N			Date	Time	Received	By Lab	oratory	(Signat	ure)	Print	Name		ITAC	and	3/24/11 1230 Date Time
Sampler Remarks					1	T -1				1						
•					10 10 10	Laborato	ry Rema	rks:								
						5- H. K.										
														£		
THE PERSON NUMBER OF	NOTE OF TAXABLE PARTY OF TAXABLE PARTY OF TAXABLE PARTY.					and the second										

Daily Log

Site Location: Water land 3		Date: 6 21 / 1)
SUMMY, For 90 to 100 F. BVer	y, Himid. (1	Page of 1 Daha CF Sharrers
0700 EJH/INB AVVIVI M SI JWB Calls Rad nuy 9		ailer Mar MW-05
0715 Evic called & WILL 22 6746 Evic on Site	0	he missed a tim.
0840 SJH heads to MW-05 COLLECT WATER LEVEL mia	MW.OU & N Sumots	W-03 b
1000 SAMPLE MW-03		
135 Sample MWOU		
1300 Sample MW-05		
1400 Sample MW.06 collect	a duplicate samp	K MW-06-D
1435 JWB & EFN come to MU Equipment Mank	i the to part up ?	t collect an
1530 JWB/EJH/EFN OFT SITE. to avop off samples	JWB& EJH MI	ad to RBS.
	AL	
<u> </u>		

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Form SOP 120-2 - Daily Log - Revision 1



FTN Associates Calibration Form

Date/Time:	6/21/2/11	0715
Prepared By:	EIH /JWB	
Location:	WF-3	
Project #:	6045-460	

Instrument Type		Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
LYSI	ETNIFI	pH	7	ទប	29.40	592	(Y) N	50.5	
	·	pH	4	su	28.88	4.30	ŴΝ		
		<i>≁</i> pH		SU.			<u>Y</u> N	1,00	
		_Cond	0	uS/cm	Construction of the second	Sector se			*****
		Cond	Star for	uS/cm	30.02	453	Y N X	447	·
¥				mm/Hg		mg/i	Y N		
		Temp		Degrees C	30.06	30		mg/i N/A	
							YN		
HE SCIENTIER	<i>#</i> γ	two-any	0.02	NTU		0.00	Ϋ́Ν	601	······································
	·		10			10.16	Ý N	[0.0]	
107	Ant, A		1000			10215	ΘN	1005	
YST	FTN #Z	24	7	Siz	32.72	6.97	(Y) N	7.00	
		24	- Small	54	32.88	4.02	$\bigcirc N$	600	
		Cond	947	is/cm	31.60	459	(V) N	447	
					32-30	321	Y (N)	K/A	

Notes:

pH Calibration (pH Method: EPA 150.1)

Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

Temperature Calibration: No calibration is necessary. Simply record temperature of standard using thermometer while in calibration cup.

Then record hydrolab temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:



FTN Associates Calibration Form

Date/Time:	6/21/11 17/5
Prepared By:	SIT/JWB
Location:	WF3
Project #:	6045-460

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	
H HESTER		pН	7	รม	2941	7.14	(V) N	7.00	Comments
7>1	#2	pН	4	su	29.08	3.88	(V) N	4.00	
		pН	10	su		· · ·	Y N		
	······	Cond	0	uS/cm			YN		
]	Cond	447	uS/cm	28.63	477	Q N	447	,
		DO		mm/Hg		mg/l			
		Temp		Degrees C	27.03	27	Y N	M/A	
HESiennifi	#2	TLRBDTY	6.02	NITU			Y N		
		-WEAVALY				0.00	<u> N</u>	0.02	~
			10.0			10.16	<u> N</u>	0.04	
		<u> </u>	1000	· · · · · · · · · · · · · · · · · · ·		1069	<u> N</u>	009.4	
							Y N		······································
				:			Y N		
	·						Y N		
L	l	<u> </u>					Y N		

Notes:

pH Calibration (pH Method: EPA 150.1)

Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

Temperature Calibration: No calibration is necessary. Simply record temperature of standard using thermometer while in calibration cup.

Then record hydrolab temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Tacility: ENTERGY Waterford-3	Site ID: MW-03	Sampler: EJH
oject Number: 6045-460	Date: 6 21 11	Sampler Organization: FTN

Site Description

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Site Description						
Weather: SUMMY	With Shavens Air	Гетр (°F): 70°	Wind: by	REAL	to S	VOV9
Site type:	Extraction Well	Well casing material:	Well diameter	inches	2	Well
□ Production Well	Borehole	🗖 Steel	Total depth from TOC	feet	37.58	locked? (Yes)
Dewatering Well Other:	□ Spring	$\Box \text{ Iron}$	TOC below/above ground	feet	2.58	No
Damages/repairs needed	1 :					
	~ <u>~~~~</u>					

Water Level Data

Measuring point of Measuring point of Mark/notch or	1 TOĈ	Water level meter: Heron Dipper -T Keck 100' Keck 200' Solonist Interface Probe Other:								
☐ North rim of ☐ ☐ Other:	TOC	Pre-purgePre-purgeDuringPurgeAfterinitialconfirmationpurgingendsampling								
Time	24-hour	1928	0954 -	->	1000	1048				
Depth to Water	feet (0(+	1,90	7.03		7.10	7.20				
Date	mm/dd/yy	6.88								
Product/	LNAPL/DNAPL	6/21/11					· · · · · · · · · · · · · · · · · · ·			
Thickness	feet	4/LIM								

Field Data

eld data meters:					Pum	Pump description:				Bailer description:		
Hydrolab : 🗋 ا					X P	Peristaltic (dedicated) portable)			Disposable polyethylene			
	DataSonde	~ <u>k</u>	H, F. S	cientific	: Turbid	imeter	🗆 в	ladder (de	dicated	/ portab	le)	Disposable Teflon
S YSI MPS	556		Other:				$ \Box s$	ubmersibl	e	_		□ Disposable PVC
Purge depth	feet		Well g	goes dry	during	purging:	Ye	s (NO)				
Casing vol.	gallons	5.00	= [tota	ıl depth	(feet) –	depth to	water (feet)] • [w	ell ID	(inches)) ²]•0.	0408
Time	24-hour	0939	1943	1945	6949	0957	0955					Remarks
Purge vol.	gallons	0.01	0.2	035	0.65	0.4	05					
Purge rate	mL/min	100	100	501	100	100	105		•	···· ·		
pН	su	6.91	6.90	6.90	6.90	(,90	6.90					
Temp.	°C	27.50	27.97	27.82	12.28	28.11	78.01					
Spec. cond.	μS/cm	2/172	3480	3475	3470	3483	3493					
D.O.	mg/L											
ORP	mV	State and the state of the stat										
Turbidity	NTU	132.2	85 8	10.87	44.33	22.85	2752					
Color/tint		Cloud	2 OVAV	· · ·		,						
Odor			0	0								

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-03	62111	1005	4		2 11 tritum 19455).
F					7. IL Mamma (MUSTIC)
} 					
				<u> </u>	<u> </u>
Sampler's Name (pr	int): Gm	y A	Minnaur"	Samp	ler Signature: Muly - How Morth
) is			Form SOP 120-3 – Sampling Record A Revision 2

Tacility: ENTERGY Waterford-3	Site ID: MW-04	Sampler: EH
oject Number: 6045-460	Date:(, 71 11	Sampler Organization: FTN

Site Description						
Weather: SMAN	Air	Гетр (°F): 87-0	Wind: K	N. L. 7	V.	
Site type: /	Extraction Well	Well casing material:	Well diameter	inches	2	Well
Production Well	Borehole	□ Steel	Total depth from TOC	feet	37.73	loc ke d? (Yes)
 Dewatering Well Other: 	□ Spring	☐ Iron ☐ Other:	TOC below/above ground	feet	2.73	No
Damages/repairs needed:	Ma.					
	Non					

Water Level Data

water Level Dat	.a				-ر					
Measuring point of		Water level r	Water level meter: Heron Dipper -T 🖾 Keck 100' 🗆 Keck 200'							
🔄 🕅 Mark/notch or			□ Solonist Interface Probe □ Other:							
North rim of '	TOC	Pre-purge	Pre-purge	During	Purge	After	Remarks			
Other:		initial	confirmation	purging	end	sampling	Remarks			
Time	24-hour	0915	175	1123	1134	1205				
Depth to Water	feet Tol t	9.27	931	9.95	10.04	10.13				
Date	mm/dd/yy P\/(9.24								
Product/	LNAPL/DNAPL	6/21/11 -	2							
Thickness	feet	V/ V/ V								

Field Data

eld data me	ters:						Pum	p descri	ption:			Bailer description:
ا ال Hydrolab	MiniSonde			te 2020 '			X P	eristalti	dedica	ted port	able)	Disposable polyethylene
🛛 🖓 Hydrolab 🛛		ېلې پېلې	H. F. S	cientific	: Turbid	imeter		ladder (dedicate	i / portab	le)	□ Disposable Teflon
VI YSI MPS	556		Other:				\Box s	ubmersi	ble			□ Disposable PVC
Purge depth	feet		Well g	goes dry	during	purging	: Ye	s No				
Casing vol.	gallons	4.44	= [tota	ıl depth	(feet) –	depth to) water (feet)] •	[well ID	(inches)) ²]•0.	0408
Time	24-hour	1111	1114	1119	1122	1126	1129	1122				Remarks
Purge vol.	gallons	0.01	0.2	0.25	0.3	0.12	0.45	Ŭ\$				
Purge rate	mL/min	100	160	100	100	100	\Ø	100				
pH	su	668	10	6.61	6.61	4.6	6.44	6.67				
Temp.	°C	24.70	24.40	24.54	14.88	25,52	24.32	24.19				
Spec. cond.	μS/cm	5043	4849	4823	4919	5056	5015	5155				
D.O.	mg/L	manip										
ORP	mV	and a construction of the second s										
Turbidity	NTU	1676	10.09	8.31	9.07	7.3%	6.14	5.7				
Color/tint		CLEON										
Odor		Non										

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-04	42111	11245	Ц	···;r;;p;;ruite;	2 IL WHICH LALASS
·					7. 12 agrinma (pastic)
l					

Sampler's Name (print):	Emily	HOILINDAWIN TO	Sampler Signature:	mun - Mith merter
			Form SO	P 120-3 – Sampling Record – Revision 2

Form SOP 120-3 - Sampling Record - Revision 2

"acility: ENTERGY Waterford-3	Site ID: MW-05	Sampler:	z H
oject Number: 6045-460	Date: 4 2111	Sampler Organization: FTN	FTN

Site Description

ł

Weather: SUM NY	Air T	emp (°F):	Wind: PN	112	J	
Site type:)	□ Extraction Well	Well casing material:	Well diameter	inches	1 2	Well
Production Well	Borehole	□ Steel	Total depth from TOC	feet	37.59	loc ke d? (Yes)
Dewatering Well	Spring	☐ Iron ☐ Other:	TOC below/above ground	feet	2.59	No
Damages/repairs needed:						

Water Level Data

Measuring point of Mark/notch or		Water level r	neter: Heror	n Dipper -T D			
\square North rim of \square Other:		Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time	24-hour	841	1234	1253	1300	1345	
Depth to Water	feet Tar	8.11	814	8.33	8.32	8.45	
Date	mm/dd/yy pvj	8.09					
Product/ Thickness	LNAPL/DNAPL feet	4/21/11-	>			÷ *	

Field Data

eld data me	ters:						Pum	o descri	ption:			Bailer description:
ا Hydrolab ا	MiniSonde				Turbidii		X P	eristalti	c dedica	tedport	able)	□ Disposable polyethylene
🔲 🔲, Hydrolab 🛛		¥ت: ا	H. F. S	cientific	Turbid	imeter		ladder (dedicated	d / portab	le)	Disposable Teflon
'Q. YSI MPS	556		Other:					ubmersi				Disposable PVC
Purge depth	feet		Well g	ell goes dry during purging: Yes No								
Casing vol.	gallons	14.81	= [tota	ıl depth	(feet) –	depth to	water (feet)] •	[well ID	(inches	$)^{2}$]•0.	0408
Time	24-hour	1245	1250	1254	1258							Remarks
Purge vol.	gallons	0.01	0.15	0.25	0.25							
Purge rate	mL/min	1.,0	1.00	100	100							
pH	su	7.38	7.20	1.20	7.20							
Temp.	°C	26.14	25,76	2556	2STO							
Spec. cond.	μS/cm	52011	6081	6057	6037							
D.O.	mg/L											
ORP	mV											
Turbidity	NTU	10.89	2.20	2.03	2.74							
Color/tint		CLEAN	(t	e hai	IF V	(Wax	t	VIT				
Odor		Non	L	,	Į							

Sample Data

Sample ID	Date	Time		# Filtered	Remarks
MW-05	62111	1300	L	Currenterenter	7 12 thriwn
·					D-11 gamma
					j j

Sampler's Name (print): Emily Hollingsworm

cility:	MATEN FIND-3	Site ID:	MN-06	Sampler:	EUH
rroject Number:	1,045-460	Date:	612111	Sampler Organization:	FTN

Site Description

Weather: ()\UNCOSY	to Stormy.	Air Temp (°F): 40°	Wind: Wh	1el 24		
Site type:	Extraction Well	Well casing material:	Well diameter	inches	21	Well
Production Well	□ Borehole	Steel	Total depth from TOC	feet	35.40	locked? Yes
 Dewatering Well Other: 	□ Spring	\Box Iron \Box Other:	TOC below/above ground	feet	2.4	No
Damages/repairs needed:						

Water Level Da	ta			Ń	./					
Measuring point	description: n TOC	Water level 1	Water level meter: Heron Dipper -T Keck 100' Keck 200' Solonist Interface Probe Other:							
□ North rim of ⁷ □ Other:	TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks			
Time	24-hour	0245	1341	1356	1400	1445				
Depth to Water	feet TOC+	5.45	649	(0.46	6.49	1,88				
Date	mm/dd/yy PVC	5.44	U121111							
Product/ Thickness	LNAPL/DNAPL feet	6121/11	·							

ield Data												
ield data me							Pum	o descri	ption:			Bailer description:
	MiniSonde			te 2020			Peristaltic					Disposable polyethylene
" Hydrolab DataSonde T, H. F. Scientific Turbidimeter							Bladder (dedicated) portable)					Disposable Teflon
S YSI MPS	556		Other:				🗖 S	ubmers	ible			Disposable PVC
Purge depth	feet		Well	goes dry	during	purging:	Ye	s No	$\mathbf{)}$			
Casing vol.	gallons	4.89	= [tota	al depth	(feet) -	depth to	water (feet)] •	[well ID	(inches) ²]•0.	0408
Time	24-hour	1346	1350	1254	1358							Remarks
Purge vol.	gallons	0.01	0.15	0.2	0.5							
Purge rate	mL/min	100	106	100	100							
pН	su	7.16	7.14	17.13	7.13							
Temp.	°C	27.20	1753	17.53	77.54							
Spec. cond.	μS/cm	3116	304	3101	3/01							
D.O.	mg/L		ĺ									<i>(</i>
ORP	mV ·											
Turbidity	NTU	4.84	2.84	5.W	4.27							
Color/tint		CLEAN										
Odor		Now	\sim									
Sample Data												

Date	Time	# Containers	# Filtered		Remarks
		4		7 IVitu	m 12, 2 Gama IL
		4			<u> </u>
NK	1500	e/	*1210/1720007-10007#**	2	0
t): [],	191111	epuern-	Sample	er Signature: 🅢	ruly Atollpite
	621/201	6/21/2011 1400 6/21/2011 1405 14 12 1500	6/2/1201 1400 4 6/2/12011 1405 4 10 12 1500 4	6/21/2011 1400 4 - 6/21/2011 1405 4 - 10/11 1500 4 -	$\frac{1}{12112011100}$ $\frac{1}{100}$ $\frac{1}{1}$ $\frac{1}{100}$

Y	(1) (2) (2) (3)	x	-	-	(/ V MAA		u - u	T = VI	
- 7							··· /		
- 1				Form SOP	120.2	Samilie	a Decke	d Devie	inn 2
	}			LOUT POL	120-0 -	- օգաբա	ig reçor	u ICC V15	ION Z
						11 .	*		

acility: ENTERGY Waterford-3	Site ID: MW-07	Sampler: Brickman / HECHISE
Joject Number: 6045-460	Date: (21/11	Sampler Organization: FTN

Site Description						
Weather: Sunny	Air	Гетр (°F):	Wind: S	-15*		
Site type: ////////////////////////////////////	Extraction Well	Well casing material:	Well diameter	inches	2	Well
Production Well	Borehole	□ Steel	Total depth from TOC	feet	41.15	locked?
 Dewatering Well Other: 	□ Spring	☐ Iron ☐ Other:	TOC below/above ground	feet	3.15	No
Damages/repairs needed:						L

Water Level Data

Water Level Da	ta				ς.	1					
Measuring point		Water level meter: Heron Dipper -T Keck 100' Keck 200'									
Mark/notch o:		🗆 Solonist Interface Probe 🗖 Other:									
\Box North rim of ζ	ГОС	Pre-purge	Pre-purge	During	Purge	After	Remarks				
Other:		initial	confirmation	purging	end	sampling	Remarks				
Time	24-hour	0857	1251	13:05	1330	14:10					
Depth to Water	feet	6,68/6,73	6.74	7.42	7.51	1:75	······································				
Date	mm/dd/yy	6/21/11									
Product/	LNAPL/DNAPL										
Thickness	feet						:				

Field Data

ield data me									ption:			Bailer description:
🗋 Hydrolab	MiniSonde		LaMot	te 2020	Turbidii	neter	Deristaltic (dedicated) portable)				able)	Disposable polyethylene
	DataSonde	X.	H. F. Scientific Turbidimeter						dedicated	l / portab	le)	Disposable Teflon
🔯 YSI MPS	556		Other:				\Box s	ubmersi	ible			Disposable PVC
Purge depth	feet		Well g	goes dry	during	purging:	Ye	s No)			
Casing vol.	gallons	5.62	_= [tota	ıl depth	(feet) –	depth to	water (feet)] •	[well ID	(inches) ²]•0.0	9408
Time	24-hour	1251	1301	1305	1310	1315	1320	1325	1330			Remarks
Purge vol.	gallons	0.1	0.1	0.2	0.2	0.3	0.5	0.4	0.7			
Purge rate	mL/min	100	100	100	100	100	100	100	100			
pH	su	6.80	6.80	6.81	693	6-85	6.86	6.86	4.86			
Temp.	°C	25.73			25.96		25.95	25.90	26.14			
Spec. cond.	μS/cm	1199	1166	1220	1675	2233	2277	2294	2300			
D.O.	mg/L	* egyanan yangka Ta		\sim	e.15000	Sare.	~~	e	***			
ORP	mV	* 6762/e36308	-			No.	1 0.001		kontre			
Turbidity	NTU	4.90	141.3	50,94	166.5	1543	4-21	3.98	3.51			
Color/tint		,			·							
Odor	Sulfdox	de Súc	902	502	50%	502	SOZ	502	502			

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-07	6/21/2011	72SF	lif	stationary and	
I	<u> </u>	1335	(
	•				
					ž

Sampler's Name (print): ERICIVECACSE

Sampler Signature: ni Hecan

Form SOP 120-3 – Sampling Record – Revision 2

acility: ENTERGY Waterford-3	Site ID: MW-08	Sampler: JWB / EFN
roject Number: 6045-460	Date: 6/21/2011	Sampler Organization: FTN

Site Description

Weather: Gunny	Air Te	emp (°F): 중중 *	Wind: 🖉 -	-13		
Site type: 7	Extraction Well	Well casing material:	Well diameter	inches	2	Well
Production Well	□ Borehole	🛛 Steel	Total depth from TOC	feet	41.97	locked? (Yes)
 Dewatering Well Other: 	□ Spring	$\Box Iron$ $\Box Other:$	TOC below/above ground	feet	3.47	No
Damages/repairs needed:	None					

Water Level Data

Measuring point	n TOĈ	Water level meter: Heron Dipper -T Keck 100' Keck 200' Solonist Interface Probe Other:									
□ North rim of ´ □ Other:	TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks				
Time	24-hour	0924	1115	1127	1140	12:20					
Depth to Water	feet	521/575	5.77	6.01	6.06	5.81					
Date	mm/dd/yy					·····,					
Product/	LNAPL/DNAPL						· · · · · · · · · · · · · · · · · · ·				
Thickness	feet										

Field Data

ield data me	ters:						Pump desc	ription:		Bailer description:
🗋 Hydrolab						meter			ted)portable)	Disposable polyethylene
🛛 Hydrolab DataSonde 🛛 🖾 H. F. Scientific Turbidin					imeter			/ portable)	Disposable Teflon	
🕅 YSI MPS	556	<u> </u>	Other:				🛛 Submer		, ,	Disposable PVC
Purge depth	feet		Well g	goes dry	during	purging	Yes N	0)		
Casing vol.	gallons	5.91	= [tota	ıl depth	(feet) –	depth to	water (feet)]	• [well ID	$(inches)^2$]•0	.0408
Time	24-hour	1120	1123	1127	1131	1135	1139			Remarks
Purge vol.	gallons	0.1	6.1	0.2	$\hat{0}\cdot \vec{3}$	0.3	0.4			
Purge rate	mL/min	170	95	95	95	95	105			
pH	su	6.88	6.86	6.87	6.88	6.90	6.90			
Temp.	°C	25.45	25.11	26.74	26.32	24.06	26.01			·····
Spec. cond.	μS/cm	1414	1469	1446	1509	1538	1532			
D.O.	mg/L	Bretto	-8	~~	-	1	www			
ORP	mV	, et al a a a a a a a a a a a a a a a a a a	(and the second	*Cassion*	÷		*****			
Turbidity	NTU		8.54	7.87	8.43	5.82	5.04			
Color/tint							,			
Odor		Sulf	Soz	50%	502	502	SOR			

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-08	6/21/2011	1140	Luf	* manual and the second	
·	1				
1					

Sampler's Name (print): ERIC NECAISE

Sampler Signature: Free Mecani

Form SOP 120-3 – Sampling Record – Revision 2

Theility: ENTERGY Waterford-3	Site ID: MW-09	Sampler: T&B / EFD
.oject Number: 6045-460	Date: 6/2////	Sampler Organization: FTN

Site Description

Weather: 300ny		Air Temp (°F): 😤 🛇	Wind: 🛫	-15		
Site type: Monitoring Well	Extraction Well	Well casing material:	Well diameter	inches	2	Well
□ Production Well	□ Borehole	□ Steel	Total depth from TOC	feet	40.22	locked? (Yes)
Dewatering Well Other:	□ Spring	$\Box Iron$	TOC below/above ground	feet	2.22	No
Damages/repairs needed:	NONE					

Water Level Data

Measuring point of Mark/notch on		Water level r	Water level meter: Heron Dipper -T 🖾 Keck 100' Keck 200'								
□ North rim of □ □ Other:	TOC	Pre-purgePre-purgeDuringPurgeAfterinitialconfirmationpurgingendsampling									
Time	24-hour	0932	0940	0955	1035	0103					
Depth to Water	feet	801/2.02	203	8,09	8,12	8.13					
Date	mm/dd/yy										
Product/	LNAPL/DNAPL										
Thickness	feet										

Field Data

eld data me						Pump description:					Bailer description:			
	MiniSonde		LaMott	te 2020 '	Turbidir	neter	X P	eristaltic	codedica	tedport	table)	□ Dispos	able polyet	ıylene
	DataSonde	S.	H. F. S	cientific	Turbid	imeter	🗆 B	ladder (dedicated	l / portab	le)		able Teflon	
🗇 YSI MPS	556	ŕ 🔲	Other:				\Box s	ubmersi	ble			Dispos	able PVC	
Purge depth	feet		Well g	goes dry	during]	purging:	Ye	s No	\geq					
Casing vol.	gallons	5.25	= [tota	l depth	(feet) –	depth to	water (feet)] • [well ID	(inches	$)^{2}$]•0.0	408	1030	
Time	24-hour	3947	6951	0155	0454	1003	1007	KON I	1015	1017	1023	1027	Remarks	
Purge vol.	gallons	\mathcal{O}, \mathcal{I}	0,2	0.3	0.4	0.5	0.6	07	0,8	0.9	1.0		1.2	
Purge rate	mL/min	105	105	105	105	105	105	105	105	105	105	05	105	
pН	su	6.93	696	697	698	697	697	6.96	6.25	695	6.95	6.94	6.94	
Temp.	°C	2507		2497	23.77	22,49	23.a.	23,14	23.07	2368			23.12	
Spec. cond.	µS/cm	3311	2011	3637	2985	913	295Q	29.62	2878	22.48	2825	27.96	2765	
D.O.	mg/L	westorwate	-internation	. and environments	Constante		****020742	water and	ತ್ರಭಾಷಕ	Coloreda	grippi an an	متحلة عقص	ATTOMA.	
ORP	mV	anula	CHEND .	es.XXXo-	trans.	All all the second	trainty	್ಯಾಟ್	C. ,,,,,,,		CHANDER	1.000	that and	
Turbidity	NTU	33.81	19.01	9,16	1508	522	i4,70	ed 70	4.54	N.S.	4,19	2.81	3,04/	
Color/tint		Clear	بمتتالي.	27)) ()										
Odor		Solar	4	0 (-S				-						•*

Sample Data

Sample ID	Date		# Containers	# Filtered	Remarks
MW-09	6/21/11	1635	i.	and the second sec	
f	· · · ·				
)				Ŧ	

Sampler's Name (print): 🧹 Brickman Vara)

Sampler Signature:

¢

Daily Log

Site Location: Waterford 3	Date: 2/13/2011
Project Number: 6045-460	Page of
	1460 01
FD Time Dow	
MW-05 9:03 6.06	
MW-04 9:13 8.63	
MW-04 9:13 8.63 MW-03 9:24 5.59	
MW-03 7:24 5.59 MW-06 9:37 3.98	
MW-07 9:45 5.54	
MN-08 9:52 10.68	
MW-08 9:52 6.68 MW-09 10:06 4.46	
1100-07 00:00 4.46	
	Ŷ.
· .	

Form SOP 120-2 – Daily Log – Revision 1



FTN Associates Calibration Form

Date/Time:	9/13/2011 1045	
Prepared By:	EFN	
Location:	Waterford 3	
Project #:	6045-460	

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
15I#3		pН	7	su	29.94	7.08	Ŷ N	7.00	
		pН	4	su	31.77	3.94	Y N	4.00	
		pН	10	su			Y N		
		Cond		uS/cm		445	N N	447	
		DO		mm/Hg		mg/l	Y N	mg/I	
		Temp		Degrees C	33.2	33.25	Y N	N/A	
							Y N		
HFSci 2		Turbidity	1000	NTU	N/A	851.7	Y N	idon	
		Turbidity	10.0	NTU	N/A	9.70	N 🕅	10.02	
		Turbidity	0.02	NTU	N/A	0.58	Y N	0.52	
							Y N		
							Y N		
							Y N		
			1				Y N		

Notes:

pH Calibration (pH Method: EPA 150.1)

DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l. Temperature Calibration: No calibration is necessary. Simply record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target



FTN Associates Calibration Form

Date/Time:	9/14/2011	0910
Prepared By:	EFN	
Location:	Waterford 3	
Project #:	6045-460	

instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
¥5[#3		pН	7	su	27.84	6.70	Ø N	7.00	
•		pН	4	su	27.95	4.21	🕐 N	4.00	
		pН	10	su			ΥN		
		Cond		uS/cm	28.69	468	ØΝ	447	
		DO		mm/Hg		mg/l	Y N	mg/l	
		Temp		Degrees C	28-852	28.75	ΥN	N/A	
							Y N		
HE Sci#Z		Turbidity	1000	NTU	N/A	1100	Ø N	931.8	
		Turbidity	10.0	NTU	N/A	10.07	Ø N	9.54	
		Turbidity	0.02	NTU	N/A	0.00	ØΝ	0.00	
							Y N		
				<u> </u>			Y N		
							Y N		
							YN		

Notes:

pH Calibration (pH Method: EPA 150.1)

DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l. Temperature Calibration: No calibration is necessary. Simply record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target

cility: ENTERGY Waterford-3	Site ID: MW-03	Sampler: EFN	
roject Number: 6045-460	Date: 7/13	Sampler Organization: FTN	

Site Description

Weather: Sunny	Ai	ir Temp (°F): \$	Wind: (-10LI	16	
Site type:	□ Extraction Well	Well casing material:	Well diameter	inches	2	Well
□ Production Well	Borehole	□ Steel	Total depth from TOC	feet	37.58	locked? (Yes)
Dewatering WellOther:	□ Spring	\square Iron \square Other:	TOC below/above ground	feet	2.58	No
Damages/repairs needed:						

Water Level Data

Measuring point description:		Water level meter: Heron Dipper -T Keck 100' Keck 200' Solonist Interface Probe Other:									
North rim ofOther:	TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks				
Time	24-hour	5.59924	5.58 1109	11:15	1120	1140					
Depth to Water	feet	5.59	5.58	6.05	6.10	5.96					
Date	mm/dd/yy	9/13/11	9/13/11	9/13/11	2/13/11	9/13/11					
Product/ Thickness	LNAPL/DNAPL feet										

Field Data

eld data me	ters.						Dum	p description:		Bailer description:
□ Hydrolab □ Hydrolab	MiniSonde		LaMot H. F. S		Turbidi		X F		icated portable)	
X YSI MPS			Other:	erentin	, i uroid	inneter	and the second sec	ubmersible	ited / portable)	\Box Disposable PVC
Purge depth	feet	32.58	Well g	goes dry	during	purging	: Ye	s No		
Casing vol.	gallons	5.2	= [tota	al depth	(feet) -	depth to	water (feet)] • [well	ID $(inches)^2$] •	0.0408
Time	24-hour	11:09		11:12	11:13	11:15	11:16	1118		Remarks
Purge vol.	gallons	-	0.25	0.4	0.5	0.6	0.7	0.75		
Purge rate	mL/min	300	300	300	300	300	300	300		
pH	su	4.72	6.78	4.80	6.82	6.86	6.86	6.87		
Temp.	°C	27.87	27.42	27.46	27.46	27.40	27.57	27.59		
Spec. cond.	µS/cm	2860	2881	2886	2893	2901	2906	2908		
D.O.	mg/L	1	-	1	~	-				
ORP	mV	J	4	-	1	-				
Turbidity	NTU	11.63	2,41	634	10.90	6.92	7.23	14.92		
Color/tint		-	1	1	L					
Odor		~	5	1	C					

Sample Data

Sample ID	Pate	Time	# Containers	# Filtered	Remarks
MW-03	9/13/11	1120	2-H3;2-X	None	Total of 4-1L
1	1				
		ZFN			FOREFA
Sampler's Name (p	rint): Dars	ellPen	nighton	Samp	ler Signature:) and tento h

Form SOP 120-3 - Sampling Record - Revision 2

cility: ENTERGY Waterford-3	Site ID: MW-04	Sampler: EFN
roject Number: 6045-460	Date: 4/13/11	Sampler Organization: FTN

Site Description

Weather: Sunn/	Air	r Temp (°F): 85 °	Wind: 5-	10 (u)	
Site type:	□ Extraction Well	Well casing material:	Well diameter	inches	2	Well
Production Well	□ Borehole	□ Steel	Total depth from TOC	feet	37.73	locked? (Yes)
Dewatering WellOther:	□ Spring	☐ Iron □ Other:	TOC below above ground	feet	2.73	No
Damages/repairs needed:						

Water Level Data

Measuring point description:		Water level meter: Heron Dipper -T Keck 100' Keck 200' Solonist Interface Probe Other:									
North rim of 'Other:	ТОС	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks				
Time	24-hour	9:13	12:00	1210	1215	1235					
Depth to Water	feet	8.63	Che3	9.12	10.05	9,90					
Date	mm/dd/yy	9/13/11	9/13/11	9/13/11	9/13/11	9/13/11					
Product/ Thickness	LNAPL/DNAPL feet				4.210						

Field Data

eld data me Hydrolab Hydrolab YSI MPS	MiniSonde DataSonde			te 2020 cientific		meter imeter 2		p descrij Peristalti Bladder (ubmersi	dedicated	ed)portable) / portable)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth	feet	32.73	Well g	goes dry	during	purging	: Ye	s No)		
Casing vol.	gallons	47	= [tota	[total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • 0.0408							
Time	24-hour	1058	1207	1208	1209	1210	1151	1212	1213		Remarks
Purge vol.	gallons	1	-	0.1	6.2	0.3	0.4	0.5	0.75		
Purge rate	mL/min		250	250	250	250	250	250	250		
pН	su		6.76	6.74	6.74	6.72	6.13	6-73	6.74		
Temp.	°C		28.20			27.43	27.40	27.40	27.30		
Spec. cond.	μS/cm		5190	5210	5205	5223	5237	5257	5248		
D.O.	mg/L	1	-	-							
ORP	mV		1	(
Turbidity	NTU		10.38	18.22	8.83	13.09	8.88	8.41	7.74		
Color/tint											
Odor											

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-04	9/13/11	1220	(4)243;20	None	
)					
1					

Sampler's Name (print): ERICF. NECAUSE

Sampler Signature: Enir 7 The

Form SOP 120-3 - Sampling Record - Revision 2

cility: ENTERGY Waterford-3	Site ID: MW-05	Sampler: $E \models N$	
roject Number: 6045-460	Date: 9/13/11	Sampler Organization: FTN	

Site Description

Weather: Sunny		Air Temp (°F): 85°	Wind: 5	-10 0	0	
Site type: / X Monitoring Well	Extraction Well	Well casing material:	Well diameter	inches	2	Well
□ Production Well	□ Borehole	Steel	Total depth from TOC	feet	37.59	locked? (Yes)
Dewatering WellOther:	□ Spring	☐ Iron ☐ Other:	TOC below/above ground	feet	2.59	No
Damages/repairs needed:				I		

Water Level Data

Measuring point description:		Water level meter: Heron Dipper -T Keck 100' Keck 200' Solonist Interface Probe Other:									
North rim of 'Other:	TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks				
Time	24-hour	903	1410	1417	1419	1444					
Depth to Water	feet	6.06	6.08	6.65	6.67	6.40					
Date	mm/dd/yy	9/13/11	9/13/11	9/13/11	9/13/11	9/13/11					
Product/ Thickness	LNAPL/DNAPL feet		10000	- 4.21.1		11					

Field Data

	leld data meters:							o descri			Bailer description:
🔲 Hydrolab DataSonde 🛛 H. F. Scien										/ portable)	 Disposable polyethylene Disposable Teflon
🖾 YSI MPS	556 3		Other:					ubmersi		1	Disposable PVC
Purge depth	feet	32.59	Well g	oes dry	during	purging	Yes	s No			
Casing vol.	gallons	5.1	= [tota	l depth	(feet) -	depth to	water (feet)] •	[well ID	$(inches)^2$] •	0.0408
Time	24-hour	1412	1413	1414	1415	1416	1417	1418	1419		Remarks
Purge vol.	gallons	10-	0.1	6.2	0.3	6.4	0.5	0.6	8.7		
Purge rate	mL/min	250	250	250	250	250	250	200	250		
рН	su	7.42	7.29	7.26	7.22	7.21	7.20	7.19	7.17		
Temp.	°C		28.90	A-24	28.54	2784	27.72	28.02	27.79		
Spec. cond.	µS/cm	2903	2772	2738	2718	2701	2678	2653	2662		
D.O.	mg/L	1	1								
ORP	mV	-	~								
Turbidity	NTU	180.5	10.24	12.32	11.01	12.36	9.88	9.80	9.91		
Color/tint											
Odor											

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-05	9/13/11	1420	243,20	No	41L Bottles

Sampler's Name (print): ERICF. NECAISE

Sampler Signature: Eni 7. The

Form SOP 120-3 - Sampling Record - Revision 2

5

cility: ENTERGY Waterford-3	Site ID: MW-06	Sampler: EFN
roject Number: 6045-460	Date: 1/13/11	Sampler Organization: FTN

Site Description

Weather: Sunny		Air Temp	p (°F): % 5	Wind: 5-10 (W)				
Site type:	□ Extraction Well		Vell casing material:	Well diameter		inches	2	Well
□ Production Well	Borehole		Steel	Total depth from TOC		feet	35.40	loc ke d? (Yes)
Dewatering WellOther:	□ Spring		☐ Iron ☐ Other:	TOC below/at	feet	2.4	No	
Damages/repairs needed:				f				

Water Level Data

Measuring point Mark/notch c	on TOC	Water level meter: Heron Dipper -T Keck 100' Keck 200' Solonist Interface Probe Other:										
	TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks					
Time	24-hour	937	1312	1329	1355	1408						
Depth to Water	feet	398	3.95	5.27	5.98	6.10						
Date	mm/dd/yy											
Product/ Thickness	LNAPL/DNAPL feet			2								

Tield Data

eld data me Hydrolab Hydrolab YSI MPS				Turbidi Turbid			np descript Peristaltico Bladder (de Submersibl	dedicated /	Dportable) portable)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC	
Purge depth	feet	30.40	Well g	goes dry	during	purging	Ye	es No			
Casing vol.	gallons	51	= [tota	al depth	(feet) -	depth to	water	(feet)] • [w	vell ID (i	$(nches)^2] = 0$.0408
Time	24-hour	1326	1327	1328	1329	1330	(331				Remarks
Purge vol.	gallons	250	0.1	0.2	0.3	0.4	0.5	4.			
Purge rate	mL/min	250	250	250	250	250	250				
pH	su	7.62	7.43	7.37	7.32	7.29	7.25				
Temp.	°C	30.95	29.37	29.14	29.10	29.12	29.24	0			
Spec. cond.	µS/cm	3430	3368	33+2	3260	3181	3092	2			
D.O.	mg/L	1	-								
ORP	mV	1	1								
Turbidity	NTU	23,14	12.42	10.61	15.17	18.39	12.42	2			
Color/tint		1									
Odor		-	57.1								

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-06	9/13/11	1335	2-43 j 202	None	(4) Total ; 1 L Bottles
)					

Sampler's Name (print): ERIC F. NECAISE

Sampler Signature: June Decan

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		·
cility: ENTERGY Waterford-3	Site ID: MW-07	Sampler: EFW
roject Number: 6045-460	Date: 9/14/11	Sampler Organization: FTN

Site Description

Weather: Summy	Air Temp (°F): 80	Wind: 🔊	-5 4	J	
Site type: / / Monitoring Well	Well casing material:	Well diameter	inches	2	Well
□ Production Well □ Borehole □ Dewatering Well □ Spring	Steel	Total depth from TOC	feet	41.15	loc ke d? (Yes)
Other:	☐ Iron ☐ Other:	TOC below/above ground	feet	3.15	No
Damages/repairs needed:					

Water Level Data

Measuring point		Water level meter: Heron Dipper -T 🖄 Keck 100' Keck 200'										
 North rim of ' Other: 	TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks					
Time	24-hour	945	930	1007	1010	1030						
Depth to Water	feet	5.54	5.58	8.72	2.61	9.83						
Date	mm/dd/yy	9/13/11	9/14/11	9/14/11	2/14/11	9/14/11						
Product/	LNAPL/DNAPL	- <i> - - - </i>		•		· · · · · · · · · · · · · · · · · · ·						
Thickness	feet]										

Field Data

eld data me	ters:					Pum	o descri	ption:			Bailer description:	
∣ ∟ Hydrolab			LaMot	te 2020	Turbidi	meter						Disposable polyethylene
🛛 Hydrolab		X	H. F. S	I. F. Scientific Turbidimeter				Bladder (dedicated / portable)				Disposable Teflon
X YSI MPS	556#3		Other:					ubmersi				□ Disposable PVC
Purge depth	feet	36.15	Well g	Well goes dry during purging:				s (_/ No)		********	
Casing vol.	gallons	5.8	= [tota	ul depth	(feet) –	depth to	water (feet)] •	[well ID	(inches) ²]	• 0.0	0408
Time	24-hour	1002	1003	1004	1005	1004	1007	1008	1009			Remarks
Purge vol.	gallons	-	0.1	0.2	0.3	0.4	0.5	0.6	6.7			
Purge rate	mL/min	250	250	250	250	250	250	250	250			
pН	su	6.90	6.91	6.93	4.95	6.97	6.99	7.00	7.01			
Temp.	°C	25.71	25.73	25.72	25.74	25.44	25.60	25.57	25.63			
Spec. cond.	μS/cm	1237	1293	1318	1340	1407	1500	1530	1562			
D.O.	mg/L		+	~		~	-	-	-			
ORP	mV)		Ľ	-	~	~		-			
Turbidity	NTU	12.44	12.11	10.25	12.54	9,44	10.31	19.69	12.47			
Color/tint		1										
Odor		Ļ										

Sample Data

Sample ID	Date	Time	# Containers	# Filtered		Remarks	
MW-07	09/14/11	1010	216-43;216x	Non			
DUPMW-07	29/14/11	1010	RIL-H3- RILX	none			
/ 		×					
	For EF	-n/				~	1
Sampler's Name (prin	nt): Durre	1) Pen,	nhiten	Sampl	er Signature:	Scrult	ent

cility: ENTERGY Waterford-3	Site ID: MW-08	Sampler: EFN
roject Number: 6045-460	Date: 9/14/11	Sampler Organization: FTN

Site Description

Weather: 90 Sunny	Air Temp (°F): 90 •	Wind: W	ind 5	w	
Site type: / Monitoring Well D Extraction W	Well casing material:	Well diameter	inches	2	Well
□ Production Well □ Borehole □ Dewatering Well □ Spring	□ Steel	Total depth from TOC	feet	41.97	locksd? (Yes)
□ Other:	☐ Iron ☐ Other:	TOC below/above ground	feet	3.47	No
Damages/repairs needed:			L		L

Water Level Data

Measuring point Mark/notch o	on TOĈ	Water level	meter: 🗆 Heron 🗆 Solor	n Dipper -T 🎉 nist Interface Pr	Keck 100' obe D Other	□ Keck 200' r:	
□ North rim of □ Other:	ТОС	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time	24-hour	95Z	1102	1110	1114	1130	
Depth to Water	feet	6.68	6.74	7.36	7.43	7.41	
Date	mm/dd/yy	9/13/11	9/14/11	9/14/11	9/14/11	9/14/11	
Product/ Thickness	LNAPL/DNAPL feet		• • • • •		<u> </u>		

rield Data

eld data me	+														
		_						p descrij				Bailer description:			
🗌 Hydrolab			LaMot	te 2020	Turbidi	meter	X P	eristalti	dedica	ited por	Disposable polyethylene				
🛛 Hydrolab	DataSonde	凶	H. F. S	cientific	: Turbid	limeter	I D B	iladder (dedicated	1/ nortal	Disposable Teflon				
🗹 YSI MPS	556 # Z		Other:								Disposable PVC				
	1	T	γ												
Purge depth	feet	36.97	Well	goes dry	during	purging	: Ye	s (No	/						
Casing vol.	gallons	5.6	= [tota	al depth	(feet) -	depth to	water (feet)]•	well ID	(inches	$)^{2}] \cdot 0.$	0408			
Time	24-hour	1107	1108	(109	1110	1(1	1112	113				Remarks			
Purge vol.	gallons	250	0.1	0.2	0.3	6.4	0.5	0.4				· · · · · · · · · · · · · · · · · · ·			
Purge rate	mL/min	250	250	250	250	250	250	250							
pH	su	7.12	6.94	6.90	6.89	6.90	6.91	6.92							
Temp.	°C	27.58	2709	26.88		26.58		26.51							
Spec. cond.	μS/cm		1090			1104	1107	1114							
D.O.	mg/L					-									
ORP	mV	~				-									
Turbidity	NTU	35.89	26.37	14.29	17.10	1252	(3.29	9,21							
Color/tint		L	-	~											
Odor		~		~											

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
	2/14/11-	Histor			
MW.08	9/14/11	1115	21143-2160	Non	
,			,		
	- web	<u>-1-1/</u>			Forsen/
Sampler's Name (pr	rint): 1) ma	211 Pen	ainstan	Sampl	er Signature: Danell terrat

Form SOP 120-3 - Sampling Record - Revision 2

cility: ENTERGY Waterford-3	Site ID: M	W-09	Sampler: E	FN	
oject Number: 6045-460	Date: 9/	14/11		ization: FTN	
	(

Site Description

Weather: 40-	Sunny	Air Temp (°F): 90	Wind: W	- 5	mph	
Site type: Monitoring Well	Extraction Well	Well casing material:	Well diameter	inches	2	Well
Production Well	Borehole	□ Steel	Total depth from TOC	feet	40.22	loc ke d? (Yes)
Dewatering Well	Spring	☐ Iron ☐ Other:	TOC below/above ground	feet	2.22	No
Damages/repairs needed	ł:					

Water Level Data

Measuring point Mark/notch o	-	Water level	Water level meter: Heron Dipper -T Keck 100' Keck 200' Solonist Interface Probe Other:										
 North rim of ² Other: 	ГОС	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks						
Time	24-hour	1006	1146	[(54	1155	12:32							
Depth to Water	feet	4.46	4.61	4.75	4.79	4.75							
Date	mm/dd/yy	9/13/11	9/14/11	9/14/11	9/14/11	9/14/11							
Product/ Thickness	LNAPL/DNAPL feet												

[™]ield Data

□ Hydrolab □ Hydrolab	Iydrolab MiniSondeLaMotte 2020 TurbidimeterIydrolab DataSondeImage: H. F. Scientific Turbidimeter						D Pe		dedica ledicate	ited⊅por d / portab		Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC		
Purge depth	feet	35.22	Well g	goes dry	during	purging:	Yes	(No)				<u> </u>		
Casing vol.	gallons	5.6	= [tota	l depth	(feet) –	depth to	water (f	eet)] • [well ID	(inches	$)^{2}$] • 0.(0408		
Time	24-hour	 151	1152	153	1154	1155						Remarks		
Purge vol.	gallons	-	-		t	с								
Purge rate	mL/min	250	250	250	256	250								
pН	su	7.11	7.07	7.04	7.06	7.06								
Temp.	°C	29.30	27.93	27.50	27.38	27.31								
Spec. cond.	μS/cm	2210	2140	2116	2111	2113								
D.O.	mg/L	~	1											
ORP	mV	*	ں											
Turbidity	NTU	19.53	20.36	13.28	19.74	13.71								
Color/tint		4												
Odor		<u> </u>												

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarl	<s< th=""></s<>
MW-09	9/14/11	1200	2-16 H-3;24-Lo	K NO	1 Gal samples filled	w/2000m
EBMW09	9/14/11	1240.	2-12 H3 21L0	۲D		1
, L	1 1	l.,				
	tonth	- <u>/\/</u>			FOR EFN	$ \rightarrow $
Sampler's Name (prin	1t): D.C.	MUN Pr	alay 20m	Samp	ler Signature: Danker	Treat

itn																	
	t Name	~				Project Num											
Laboratory Name	fer ford	3	0.1			6045-4	160 BOBWEST Page						Page of				
Laboratory NameSubmitted by:RBSFTN Associates, Ltd.124 W. Sunbridge Drive, Suite Fayetteville, AR 72703Phone: ()(479) 571-3334 • Fax (479) 5								2	R	H	aramet	ters (M	ethod	Numbe	r)		Lab Turn-Around Time 24 Hours 48 Hours
							,	1	in							7 Days	
Sampler Signature(s)	e(s) Recorded By (Print)								00							Other:	
P		SAMPLE DE	SCRIPT	ION					1								Due://
				Mat	rix*		Met	hod									
Field Sample Number	Date (mm/dd/yy)	Tim (hh:m		WS	0	Number of Containers	Comp	Grab									Laboratory Notes
MW-03	9/13/11	11:2	0	x		4		X	X	×				-			
MW-04	9/13/11	12:2	20	X		4		X	×	×							
MW-05	9/13/10	14:2	0	X		4		X	X	×							
MW-06	9/13/11	13:3	5	X		4		X	×	X							
AW-07	9/14/11	10:1	0	x		4		X	X	×							
DUPMW.07	9/14/11	10:1	D	X		4		×	×	X							
MW-08	9/14/11	11:10	5	×		4		X	×	×				2			
mw-09	9/14/11	12:0	0	X		4		X	X	X							
EBMW-09	9/14/11	12:40	0	X		4		X	X	×							
									X								
						Water $S = S$	oil $O = O$	Other									
Relinquished By (Signature	m Er	RICF.N	ECA	1509	Date	Time 1/604	Received						Name		ur	0	9/14/111 Time
Relinquished By (Signature) Print Name Date						Time	Received	d By Lab	orator	(Signa	ture)	Print	Name				Date Time
Sampler Remarks							Laborato	ory Rema	rks:			L					
		CONTRACTOR OF THE OWNER OF THE OWNER	and a state of the second s	100 100 000 000 000 000 000 000 000 000	A STREET, STRE	ADDRESS ADDRES	CONTRACTOR NO.		A CONTRACTOR OF	CONTRACTOR OF THE OWNER.	Starts on Coldinary of the	-	CONSTRUCTION OF	CANCEL SECTION CONCERNS	CONSCRETE ON OTHER		A REAL PROPERTY AND A REAL PROPERTY A REAL PROPERTY AND A REAL PRO

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Daily	
Log	

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	727	10.04	- M W - 05
	05.6	C1:OI	100 - 04
	6.72	10:25	MW-03
	5 29	10:35	MW-04
	2.15	84:01	MW O7
	7 24	10:53	MW-08
	1. 74	H:00	MW-09
	nou)	4 ma	T D
Darra I of I		0-41-54	Project Number: 1/145-460
Date 12/12/11		wford.3	Site Location: Wake

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Form SOP 120-2 - Daily Log - Revision 1



FTN Associates Calibration Form

12/13/11	1200
EFN	
W-3	:
6045-460)
	12/13/11 EFN W-3 6045-460

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
		pН	7	su	19.26	6.18	Ø N	7.00	
¥SI	#2	pН	4	su	18.93	4.01	Φ N	4.00	······
t	+	pН	10	su			Y N		·····
		Cond		uS/cm	18.90	515	Ø N	447	······································
		DO		mm/Hg		mg/i	Y N	mg/i	
		Temp		Degrees C			Y N	N/A	······································
							Y N		
HESCI	#2	Turbidity	1000	NTU	N/A	949.7 9.04		1000	
<u> </u>		Turbidity	10.0	NTU	N/A	9.01	ΘN	(6.0	· · · · · · · · · · · · · · · · · · ·
		Turbidity	0.02	NTU	N/A	0.00	Ô N	0.0	
							YN		~~
L			<u> </u>				YN		······
							ΥN		
[]			<u> </u>				Y N		

Notes:

pH Calibration (pH Method: EPA 150.1)

DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

Temperature Calibration: No calibration is necessary. Simply record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rcp1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target

vility: ENTERGY Waterford-3	Site ID: MW-03	Sampler: EFN
oject Number: 6045-460	Date: 12/13/11	Sampler Organization: FTN

Site Description

Weather:	Sunny	Air Temp (°F): 57	Wind: 5	-101	E)	
Site type:	/ Extraction Well	Well casing material:	Well diameter	inches	2	Well
Production Well	Borehole	Steel	Total depth from TOC	feet	37.58	locked?
Dewatering WellOther:	□ Spring	☐ Iron ☐ Other:	TOC below above ground	feet	2.58	(Yes) No
Damages/repairs need	_			۱I		<u>. </u>
	NONE					

Water Level Data

Measuring point	n TOĈ	Water level :	meter: 🗆 Hero	n Dipper -T 🗅 nist Interface Pr	Keck 100' [obe [] Other:] Keck 200'	
□ North rim of □ Other:	TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time	24-hour	1025	1538	1542	1545	1615	
Depth to Water	feet	6.72	6.71	7.27	(.31)	2.02	
Date	mm/dd/yy	12/13/11	12/13/11	(2/13/11	12/13/11	12/13/11	
Product/ Thickness	LNAPL/DNAPL feet						

Field Data

eld data me I Hydrolab Hydrolab X YSI MPS	MiniSonde DataSonde 556 母こ		H. F. S Other:	cientific		imeter 12		p descrij eristalti ladder (ubmersi	c dedicate	ated) por d / portat	table) ble)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth	feet	32.58				purging:			/			
Casing vol.	gallons	5.03	= [tota	al depth	(feet) -	depth to	water (feet)] •	[well ID	(inches	$()^2] \cdot 0.$	0408
Time	24-hour	1540	1541	1542	1543							Remarks
Purge vol.	gallons	0	6.1	0.2	2.3							
Purge rate	mL/min	300	300	300	300							
pН	su	6.86	6.86	6.86	6.87							
Temp.	°C	22.34	22.33	22.30								
Spec. cond.	μS/cm	1			2532							
D.O.	mg/L	1										
ORP	mV	~				ľ						
Turbidity	NTU	1.14	3.23	4.53	6.43							······································
Color/tint												
Odor												

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-03			2-1643;2-16K		Total of 4-12164
Dup MW-03	12/13/11	16:00	2-16/4-3:2/10		Total of 4-14ter
2 L					

		Sampler's Name (pr	$(int): \subseteq \mathbf{FLC}$	Necaise	Sa
--	--	--------------------	---------------------------------	---------	----

ampler Signature: Sin Necani

cility: ENTERGY Waterford-3	Site ID: MW-04	Sampler: EFN
oject Number: 6045-460	Date: 12/13/11	Sampler Organization: FTN

Site Description

Weather: Sunny	Air Temp (°F): 57	Wind: 5-	10 (E)	
Site type: Monitoring Well Extraction We	Well casing material:	Well diameter	inches	2	Well
Production Well Borehole	□ Steel	Total depth from TOC	feet	37.73	locked? (Yes)
Dewatering Well Spring	$\Box \text{ Iron}$	TOC below/above ground	feet	2.73	No
Damages/repairs needed:					L
NONE		······································			

Water Level Data

Measuring point Mark/notch o		Water level :	meter: 🗆 Heror 🗆 Solon	n Dipper -T 🛛 🖾	Keck 100' [obe 🗆 Other	☐ Keck 200'	
$\Box \text{North rim of} \\ \Box \text{Other:} \\ \\ \Box \text{Other:} \\ \\ \Box \text{Other:} \\ \\ \Box \text{Other:} \\ \\ \\ \Box \text{Other:} \\ \\ \\ \\ \Box \text{Other:} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time	24-hour	1017	1630	1638	1639	+658/658	
Depth to Water	feet	9.30	9.30	10.44	10.8	11.78	
Date	mm/dd/yy	12/13/11	12/13/11	12/13/11	12/13/11	12/13/11	
Product/ Thickness	LNAPL/DNAPL feet	1		<u> </u>			

Field Data

□ Hydrolab MiniSonde □ LaMotte 2020 Turbidimeter □ Hydrolab DataSonde □ H. F. Scientific Turbidimeter ☑ YSI MPS 556 # 2 □ Other: # 2						⊠ P □ B	□ Bladder (dedicated / portable) □ Submersible				Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC		
Purge depth	feet	32,73	Well g	goes dry	during	purging	: Ye	s (No)				
Casing vol.	gallons	4.64	= [tota	al depth	(feet) -	depth to	water (feet)] • [well ID	(inches)) ²]•0.	0408	
Time	24-hour	1634	1635	1636	1637	1638	1439	K4				Remarks	
Purge vol.	gallons	0	0.1	0.2	0.3	0.4	0.5						
Purge rate	mL/min	300	300	300	300	300	300						
pH	su	6.72			6.61	6.63	4.44						
Temp.	°C	2014	20,94	21.03	21.14	21.26						2.	
Spec. cond.	μS/cm	4420	4230	4190		4133	4143						
D.O.	mg/L	~	~									· ·	
ORP	mV	ų	-										
Turbidity	NTU	9.32	4.50	1.43	3.15	0.63	3.02						
Color/tint													
Odor													

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-04	1.2/13/11	1640	2-16 H-3;2164		Total of 4-12 bottles
· · · · · · · · · · · · · · · · · · ·					
/ 1					

Sampler's Name (print): ERIC NGCAISE

Sampler Signature: Sun Jecuni

cility: ENTERGY Waterford-3	Site ID: MW-05	Sampler: EFN
oject Number: 6045-460	Date: 12/13/11	Sampler Organization: FTN

Site Description

1

Weather: Sunny	Air T	emp (°F): 570	Wind: 5 -	10 (E	=)	
Site type:	Extraction Well	Well casing material:	Well diameter	inches	2	Well
□ Production Well □ Dewatering Well	□ Borehole □ Spring		Total depth from TOC	feet	37.59	locked? (Yes)
Other:		☐ Iron ☐ Other:	TOC below/above ground	feet	2.59	No
Damages/repairs needed:						
	NONE					

Water Level Data

Measuring point Mark/notch o	n TOĈ	Water level meter: Heron Dipper -T Keck 100' Keck 200' Solonist Interface Probe Other:										
 North rim of Other: 	TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks					
Time	24-hour	1004	17:05	17:10	17:12	1730						
Depth to Water	feet	7.27	7.29	8.02	8.12	8.24						
Date	mm/dd/yy	12/13/11	12/13/11	(2/13/11	12/13/11	12/13/11						
Product/ Thickness	LNAPL/DNAPL feet				(- / () ()	16/13/11						

^{rc}ield Data

	MiniSonde DataSonde	凶	LaMotte 2020 Turbidimeter H. F. Scientific Turbidimeter Other: 样こ				p descri Peristalti Bladder (ubmersi	c dedicate	ated)por d / portab	table) ile)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC	
Purge depth	feet	39.51	Well g	goes dry	purging:	Ye	s No)	7			A	
Casing vol.	gallons	4.95	= [tota	[total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • 0.0408								
Time	24-hour	1708	1		1	Ţ				1		Remarks
Purge vol.	gallons	0.0	0.1	0.1	0.2							
Purge rate	mL/min	300	300	300	300							
pH	su	7.31	7.26	7.25	7.25							
Temp.	°C	21.94	22.24	22.28	22.34							
Spec. cond.	μS/cm	5105		5249								
D.O.	mg/L			-	-							
ORP	mV	-	<u>~</u>	-	÷							
Turbidity	NTU	5.98	0.61	3.90	2.65							
Color/tint		L		-								
Odor		÷										

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-05	12/13/11	1715	2-1643;2162		Total of 4 1-lifer bufflor
EBMW-05	12/13/11	1740	,		
/ L					

Sampler's Name (print): ERIC Necaise

Sampler Signature: Emil 7- Necami

cility: ENTERGY Waterford-3	Site ID: MW-06	Sampler: $E \neq N$
roject Number: 6045-460	Date: 12/13/11	Sampler Organization: FTN

Site Description

9

Weather: Sum	✓ Air Te	emp (°F): 60	Wind: (a	5-15	ET	
Site type:	/	Well casing material:	Well diameter	inches	2	Well
□ Production Well □ Dewatering Well	□ Borehole	Steel	Total depth from TOC	feet	35.40	locked? (Yes)
Other:	Spring	☐ Iron ☐ ☐ Other:	TOC below/above ground	feet	2.4	No
Damages/repairs needed:			.	<u>ا</u> ــــــــــــــــــــــــــــــــــــ		L
N	DNE					

Water Level Data

Measuring point description:		Water level meter: Heron Dipper -T Keck 100' Keck 200' Solonist Interface Probe Other:										
 North rim of ' Other: 	ТОС	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks					
Time	24-hour	1035	1502	1509	1512	1522						
Depth to Water	feet	5.29	5.23	6.83	7.22	8.19						
Date	mm/dd/yy	12/13/11	12/13/11	12/13/1	12/13/11	12/13/11						
Product/ Thickness	LNAPL/DNAPL feet	· / ·!			1-1-2/10							

Field Data

				Pump description: Peristaltic (dedicated) Bladder (dedicated / pc Submersible	Bailer description:				
Purge depth	feet	30,4	·····	zoes dry	during	purging:	Yes No		Disposable PVC
Casing vol.	gallons	4,91					water (feet)] • [well ID (inc	$(hes)^2 1 \cdot 0$	0408
Time	24-hour	1506	1407	1 100	1409	1910			Remarks
Purge vol.	gallons	3000		0.2	0.3	0.4			
Purge rate	mL/min	300	300	306	300	320			
pH	su	7.22	7.19	7.19	719	7,19			
Temp.	°C	22.39	22.41	22.44	22.42	22.44			
Spec. cond.	μS/cm	2890	2742		2718				
D.O.	mg/L	~	~	~	~	· · · · ·			
ORP	mV	~	-	**	-				
Turbidity	NTU	3.39	11.11	0.08	0.00	0.20			
Color/tint		~							
Odor		ر ب							

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-06	12/13/11		2.11 H-3 ;2164	free	Total of 4 1:6 Bottles
·					

Sampler's Name (print): ERIC Necque

Sampler Signature: & 7

Form SOP 120-3 - Sampling Record - Revision 2

Tacility: ENTERGY Waterford-3	Site ID: MW-07	Sampler: EFN
oject Number: 6045-460	Date: $\frac{12}{13}/11$	Sampler Organization: FTN

Site Description

Weather:	Sunn	1	Air Temp (°F): 60	Wind: 14	> - 15	TES	
Site type:	/ □	Extraction Well	Well casing material:	Well diameter	inches	2	Well
Production Well		□ Steel	Total depth from TOC	feet	41.15	locked? (Yes)	
□ Dewatering Well □ Spring □ Other:	Spring	☐ Iron ☐ Other:	TOC below above ground	feet	3.15		
Damages/repairs nee	ded: NO1	VE			I		L

Water Level Data

Measuring point description:		Water level	meter: 🗆 Heror 🗆 Solon	1 Dipper - T 🛛 🖄	Keck 100' Cobe Dother:	Geck 200'	
North rim ofOther:	TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time	24-hour	1048	1333	1413	1415	1432	
Depth to Water	feet	7.15	7.15	9.52	9.56	9.61	
Date	mm/dd/yy	12/13/11	112/13/11	12/13/11	12/13/11	12/13/11	
Product/ Thickness	LNAPL/DNAPL feet						

Field Data

eld data me	tara													
		_	• • •					p descrij				Bailer description:		
🗋 Hydrolab				te 2020			X F	X Peristaltic (dedicated) portable) Disposable polyethyle						
🛛 Hydrolab		K	🖾 H. F. Scientific Turbidimeter				ΠE	ladder (dedicated	d / portab	le)	□ Disposable Teflon		
VI VSI MPS	556世2		Other:		12			ubmersi	hle	a, berrao		\square Disposable PVC		
	1	<u></u>												
·	Purge depth feet 3615 Well goes dry during purging: Yes No													
Casing vol.	gallons	5.60	$\leq (\omega) = [\text{total depth (feet)} - \text{depth to water (feet)}] \cdot [\text{well ID (inches)}^2] \cdot 0.0408$											
Time	24-hour	1408	1409	1410	1411	1412	1413	1414				Remarks		
Purge vol.	gallons	0.0	0.1	0.2	0.3	0.4	1).5	0.4						
Purge rate	mL/min	300	300	300	300	300	300	300				· · · · · · · · · · · · · · · · · · ·		
pН	su	6.84	6.85	6.85	6.84	6.87	6.89	6.88						
Temp.	°C	22.88	22.88	22.90	22.89	22.86	22.83	22.85						
Spec. cond.	μS/cm	(006	1093	1153	1200	1300	1357	1405						
D.O.	mg/L	~										-		
ORP	mV	~												
Turbidity	NTU	2.67	0.19	0.23	0.00	0.10	1.05	1.27						
Color/tint														
Odor														

Sample Data

Sample ID			# Containers	# Filtered	Remarks
MW-07		1416.			Total of 4 1-Liter bottles
·			,		
./ 		<u> </u>			

Sampler's Name (print): ERIC NEC 415E

Sampler Signature: Eni, Mecause

cility: ENTERGY Waterford-3	Site ID: MW-08	Sampler: EFN
oject Number: 6045-460	Date: $(2/3/1)$	Sampler Organization: FTN

Site Description

Weather: Sunny	Air	Гетр (°F): <i>QO</i>	Wind: 10	-15	TE)	
Site type: /	Extraction Well	Well casing material:	Well diameter	inches	2	Well
□ Production Well □ Dewatering Well	BoreholeSpring		Total depth from TOC	feet	41.97	locked? (Yes)
□ Other:		☐ Iron ☐ Other:	TOC below above ground	feet	3.47	No
Damages/repairs needed:	YONE			I		I.,
I	NONE					

Water Level Data

Measuring point Z-Mark/notch o	n TOĈ	Water level	meter: 🛛 Heron 🗋 Solon	n Dipper -T 🛛 🛱 nist Interface Pr	Keck 100' [obe	☐ Keck 200' ::	
 North rim of ' Other: 	ТОС	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time	24-hour	1053	12:40	12:45	12:47	1:03	
Depth to Water	feet	7.24	7.23	7.82	2.89	8.00	
Date	mm/dd/yy	12/13/11	(2/13/11	12/13/11	12/13/11	12/13/11	
Product/ Thickness	LNAPL/DNAPL feet	£-ii					

Field Data

eld data meters: □ Hydrolab MiniSonde □ LaMotte 2020 Turbidimeter □ Hydrolab DataSonde ☑ H. F. Scientific Turbidimeter ☑ YSI MPS 556 # 2 □ Other: 5 2				imeter	Pump description: Peristaltic (dedicated portable) Bladder (dedicated / portable) Submersible			Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC		
Purge depth	feet	3697	Well g	goes dry	during	purging:	Yes No			
Casing vol.	gallons	5.70	= [tota	ıl depth	(feet) -	depth to	water (feet)] •	[well ID (ind	$(hes)^2] \bullet 0.$	0408
Time	24-hour	1242		1244	1	1246				Remarks
Purge vol.	gallons	30000	0.2	0.3	0.4	0.5				
Purge rate	mL/min	300	300	300	300	300				
pН	su	6.89	6.77	4.78	6.79	6.83				
Temp.	°C	22.83	23.01	23,05	22.97	22.71				
Spec. cond.	µS/cm	1036	1008	1019	1024	1037				
D.O.	mg/L	••••								
ORP	mV	~								
Turbidity	NTU	3.41	4.09	3.49	4.33	4.07				
Color/tint		Níq	nove	none	None	Non				
Odor		None	nove	hone	None	none				

Sample Data

Sample ID	Date		# Filtered	Remarks
MW-08		2-16H3,2110	Frances	Total of 4-1- Liter bottles
-	· ·			
				L

Sampler's Name (print): ERIC NECH-(SE

Sampler Signature: Entry Luca

cility: ENTERGY Waterford-3	Site ID: MW-09	Sampler: $E \in N$
roject Number: 6045-460	Date: $(2/13/1)$	Sampler Organization: FTN

Site Description

Weather: Sunn/	Air Te	тр (°F): ЦС	Wind: ز	5- (5(ES	
Site type: 7	Extraction Well	Well casing material:	Well diameter	inches	2	Well
□ Production Well □ □ Dewatering Well □	Borehole	□ Steel	Total depth from TOC	feet	40.22	locked? (Yes)
Other:	Spring	☐ Iron ☐ Other:	TOC below/above ground	feet	2.22	No
Damages/repairs needed:			· · · · · · · · · · · · · · · · · · ·	L		l
NO	NE					

Water Level Data

Measuring point Mark/notch o	n TOĈ	Water level	meter: 🛛 Hero	n Dipper -T 🛛 🛛 nist Interface Pr	Keck 100' Cobe Dother	Geck 200'	
□ North rim of □ Other:	TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time	24-hour	1100	1147	1153	1156	12:10	
Depth to Water	feet	1.74	6.74	ie. 85	6.94	6.85	····
Date	mm/dd/yy	12/13/11	12/13/11	12/13/11	lal'i.	12/13/11	
Product/ Thickness	LNAPL/DNAPL feet	, , , , , , , , , , , , , , , , , , ,			12/13/(1		

vield Data

	MiniSonde DataSonde	X			Turbidin Turbid			ladder (c dedica dedicate	ated)por d / portal		Bailer description: Disposable polyethylene Disposable Teflon	
Purge depth	feet	35.22		roos dur		purging		ubmersi s (No)			l	Disposable PVC	
· · · · · · · · · · · · · · · · · · ·								Yes (No) water (feet)] • [well ID (inches) ²] • 0.0408					
Casing vol.	gallons	55	$= \lfloor tota$	i depth	(feet) -	depth to	water (feet)] •	[well ID	(inches) ²]•0.	0408	
Time	24-hour	1149	1150	1151	1152	(153	1154	1155				Remarks	
Purge vol.	gallons	0.1	0.2	0.3	0.5	0.6	0.8	10		1			
Purge rate	mL/min	300	300	300	300	300	300	300	[····				
pH	su	6.94	6.94	6.96	6.96	6.94	6.94						
Temp.	°C	21.14	20,30	21.17		21.24							
Spec. cond.	μS/cm	1977	1978			1982		1984				· · · · · · · · · · · · · · · · · · ·	
D.O.	mg/L	~											
ORP	mV	-~-											
Turbidity	NTU	31.82	9.29	1.81	00.5	1.29	1.73	2.72					
Color/tint						·····							
Odor													

Sample Data

Sample ID	Date		# Filtered	Remarks
MW-09		2-1LH-3;2-10x		Total of 4-16
• •		<u>}</u>		

Sampler's Name (print):	ERIC NECAISE	Sampler Signature:	Emil	Lecarie
i u ,	UKIC NECHISE	Sampler Signature.	/ K	lecarie

Form SOP 120-3 – Sampling Record – Revision 2

<u>)</u> Th)								.)
Date 12/13/11 Laboratory Name	t Name Croy - L	Unfe	rford	3 Submitted	by:	Project Nurr 6045-	iber 46 C)	Proji B	OB	ger (Prin UE	57			Page of
R135 Phone: () Sampler Signaturg(s)]	Fayettevi (479) 571 Recorded F	unbridg lle, AR 1-3334	e Drive, Suit 72703 • Fax (479)	571-333	8	8	Ŧ					Lab Turn-Around Time 24 Hours 48 Hours 7 Days
Sampler Signature(s)	Date (mm/dd		APLE DESC Time		latrix*	ECAISE Number of Containers		hod Grab		3					Other: Due:/_/ Laboratory Notes
тш-03 Дир Мш-03 МШ-04	12/13/	13/11 16:00 X 3/11 14:46 X				4 4 4 4		X X X	X X K	X X X					
MW-05 EBMW-05 MW-06	12/13/11 17:15 x 12/13/11 17:40 & 12/13/11 15:15 X					4 4 4		× × ×	XXX	X X X					
MW-07 MW-08 MW-09	12/13/ 12/13/ 12/13/	Tu	14:11 12:51 11:54	2 K		4 4 4		<u>к</u> к	X X X	X X X					
* Matrix: W = Water S = So Relinquished By (Signature) Print Name Date Time ERIC NECHISE 12/13/11 17:50								Other d By Sig	nature)		P1	int Nam	^{IC} / P		Date Time
(Relinquished By (Signature) Sampler Remarks)	Print Na			Date		Repéive	d By Lab	oratory	y (Signatu	ne) Pi	int Nam	<u>لہ ہے ا</u> اد	lang	12/13/11 1750 Date Time

Revision Date 11/22/02

Daily Log

Site Location: Waterford 3	Date: 3/20/2002
Project Number: 6045-466	Page (of 2
Project Number: 6045 460 GOO Arrived on site Prejob Souldy M	eetin of Mar. es
8 15 Began taking for purge water 9:20 Finish recording pre purge and began purging encorrege 3:20 Left Sik as Rodney had to	s levels
1:20 Fining provide and Distance	mile hove to
and have see to an in mailed 3	ta alta ta t
3 to left sile of Palar a la	Laura Canacana al
Reczong has to	Care for personal
······································	

	······

Form SOP 120-2 - Daily Log - Revision 1

Daily Log

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Site Location: Water ford 3	Date: 3/21/12
Project Number: $\psi c \psi \zeta = \psi \psi \zeta$.	Page 2 of 2
Project Number: 6045 446. 9.30 Arrived at site after picking up DI water 8:45 Begin Calibration of Equipment 11.00 - Left site tornado watch and hun (3:10 - Begin purge Sample of MW-05 18:45 Left site after giving samples to B	at wal most
8:45 Begin Calibration of Equipment	
11.00 - left site tornado watch and hu	nch
13:10 - Begin purge sample of MW-05	
18 45. Lett site after giving sumples to B.	1. m Falgozist
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	· · · · · · · · · · · · · · · · · · ·

Form SOP 120-2 - Daily Log - Revision 1



FTN Associates Calibration Form

Date/Time:	3/20/12 9:20
Prepared By:	EFN
Location:	Waterford 3
Project #:	60 45-4180

Instrument Type	nstrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
		Cord	0	uS/cm			YN		
		Cond	1413	uS/cm	23.14	1200	(Y) N	1413	1A460/ END 8/12
YSI MPS	HI	pН	7	su	23.79	2.03	O N	7.00	1AT414 Exp 9/13
556		pН	4/10	su	25.10	9.09	Ϋ́Ν	4.00	1AI238 EVP 9/13
		DO		mm/Hg		mg/l	Y N	mg/l	
		Temp		Degrees C	23.16	23.00	N	N/A	
					$C_{\rm eff}$		YN		
HE Scientify -	tt (Turbidity	1000	NTU	N/A	99991	Y N		10903 EXP 9/13
		Turbidity	(0.0	NTU	N/A	9.92	Y N		10901 Exp 9/13
		Turbidity	0.02	NTU	N/A	0.03	Y N		Nolof Exp 11/4/4
		Turbidity		NTU	N/A		YN		

Notes:

1. Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

2. pH Calibration (pH Method EPA 150.1)

3. DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

4. Temperature Calibration: No calibration is necessary. Record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target

Form SOP 120-6 - Calibration Record-Revision 2

FTN Associates Calibration Form

m

0845 Date/Time: 3/21/12 EF Prepared By:

Watertord Location:

- 46 O (0045 Project #:

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Temp. of Reading Standard Prior to (degrees C) Calibrated	Calibrated	Post Calibration Reading	Comments
		Cond	0	uS/cm			X X		
VSI MPS		Cond	1413	uS/cm	21.75	1640	N (X)	1413	LOTIANGOI ENDS/12
556	171	Hq	7	su	22.31	6.94	N A	2.00	(07 141412 Exp9/12
		Hc	(4)10	su	33.75 4.23	4.23	N	4.00	COT 14 6 2 14 FXP 7/13
		DO		mm/Hg		ligm	X X	VBm	to be a second sec
		Temp		Degrees C	23.75	23.00	z	NIA	
みず							X X		
Scientific	オー	Turbidity	1000	NTU	N/A	1100	N (A)	1006	10903 EVP 4/13
	-	Turbidity	10.0	NTU	N/A	10.66	Y N	10.65	10.65 10901 EXP 9/13
		Turoidity	20.0	NTU	NIA	0.00	(N	20.0	0.05 NOIDY EXPIRITI
		Turbidity		NTU	NIA		Y N		

Notes:

Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.
 PH 150.1
 PH Calibration (pH Method: EPA 150.1

DO Calibration: Use 100% air saturation method. Use pressure in mn/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.
 Temperature Calibration: No calibration is necessary. Record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Form SOP 120-6 - Calibration Record-Revision 2 Percent Difference = 100 * (observed - target)/target



Groundwater Level Data Sheet

Project Na	me: Pord 3		jeet Number:				
Weather C		Me	asuring Device: $ec(c_1 \circ O)$	· · · · · · · · · · · · · · · · · · ·			
Well ID	Date	Time	Depth to Water (feet below RP)		Damages/Repairs		
Muro 3	8/20/12	0832	893	Damaged well pad/casing Damaged bollards Damaged equipment	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record	
MUSSY	3/20/12	0341	9.38	Damaged well pad/casing Damaged bollards Damaged equipment	Damaged TOC Damaged lock Un-kept vegetation	See gw sample record	
NWCS	3/2:4/2	0847	5.69	Damaged well pad/casing Damaged bollards Damaged equipment Damaged well pad/casing	Damaged TOC Damaged fock Damaged fock Un-kept vegetation Damaged TOC	See gw sample record	
Ma-04	3/20/12		4.24	Damaged wen patreasing Damaged bollards Damaged equipment Damaged well pad/casing	Damaged lock Damaged lock Un-kept vegetation Damaged TOC	Lacks access	
Also 07	STATUC	0859	6-25	Damaged bollards Damaged equipment Damaged well pad/casing	Damaged lock Un-kept vegetation Damaged TOC	Lacks access See gw sample record Lacks visibility Could be access	
MW 03	1 1	0909	610	Damaged bollards Damaged equipment Damaged well pad/casing	Damaged lock	See gw sample record Lacks visibility	
inw 09	3/20/,2	0919	3.73	Damaged bollards Damaged equipment Damaged well pad/casing Damaged bollards	Damaged lock Damaged lock Damaged TOC Damaged lock Damaged lock Damaged lock	See gw sample record Lacks visibility	
				Damaged equipment Damaged well pad/casing Damaged boltards	Damaged tock Un-kept vegetation Damaged TOC Damaged lock Damaged lock	See gw sample record Lacks visibility	
				Damaged equipment Damaged well pad/casing Damaged bollards	Un-kcpt vegetation	Lacks visibility Lacks access	
				Damaged equipment Damaged well pad/casing Damaged bollards Damaged equipment	Un-kept vegetation Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access	
				Damaged equipment Damaged well pad/casing Damaged bollards Damaged equipment	Un-kept vegetation Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access	
				Damaged well pad/casing Damaged bollurds Damaged equipment	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility	
				Damaged well path/casing Damaged bollards Damaged coupment	Damaged TOC Damaged lock Un-kept vegetation	See gw sample record	
				Damaged well pad/casing Damaged bollards Damaged equipment	Damaged TOC Damaged lock Durkept vegetation	Lacks access	

Notes: RP = Reference Point TOC = Top of Casing gw groundwater

Facility: Waterford 3	Site ID: MW03	Sampler: EFN
oject Number: 4045 - 460	Date: 3/21/12	FTN Associates, Ltd

Site Description

Weather: Overcast 1/6	ain Air Temp (°F): 680	Wind: 10-15 W
Well Locked? Yes No	Total Depth (ft) 37.58	Damage/repairs needed	:

Water Level Data

Measuring point description:		Acter Make/Mod		Serial No	Serial No. (Optional):		
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks	
Time ("24:00" hr)	0832	1715	1730	1745	1835		
Depth to Water (ft)	8.93	5.94	4.15	6.34	6.45		
Date (mm/dd/yy)	3/20/12	3/21/12	3/21/12	3121112	3/20/12		
LNAPL Thickness (ft) (If present)		1.		a free (
DNAPL Thickness (ft) (If present)		1					

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

V51 556	ment Make/Model No:Unit or Serial No: 51 554 11 $4F$ $5cienfiller$ 11						np descri Peristalt Bladder	tic	ted / portable)	Bailer description: Disposable polyethylene Disposable Teflon	
Durge denth (ft):	n.	2.5		-	1 337-11		Submer	and the second second		Disposable PVC	
Purge depth (ft):	22	19			weiig	Well goes dry during purging: 🗌 Yes 🕅 No					
Casing vol. (gal): (where applicable)					= [tota	l depth (f	eet) – der	oth to was	ter (feet)] * [well	ID $(inches)^2$] = 0.0408	
Time ("24:00" hr)	1720	1724	1728	1732	1736	1740				Remarks	
Purge vol. (gal)	0.0	0.1	0.2	6.3	0.4	0.5					
Purge rate (mL/min)	125	125	125	125	125	125	1				
pH (su)	6.94	6.91	6.36	6.81	6.82	6.84					
Temp. (°C)	17.78	17.80	77.58	1758	1792	17.98					
Spec. cond. (µS/cm)	2973			2861	2880	2923	1			Weinsteinen Aller auf der Halten Bertre erfehen in eine Bertre Bertre auf der	
D.O. (mg/L)	-	-	-	-	-			1			
ORP (mV)	~	-	-	-	-	8.47					
Turbidity (NTU)	9.23	21.23	11.5%	1047	18.43			/			
Color/tint	non	none	non	70.00	non	non		1			
Odor	non	non	non	hore	m	non			1		

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW03	3/21/12	1745	7	noru	1-500 M 11-3; 2' 750 m 0x; 4.750 m 1131
EBMW03	3/21/12	1705	2	nore	M II II

Sampler's Name (print): ERICNECAISE Sampler Signature: Guilleen

Facility: Walterford 3	Site ID: MW 04	Sampler: EFN
oject Number: 6045 - 466	Date: 3/21/12	FTN Associates, Ltd

Site Description

Type: XMonitoring Well Temporary Well Extraction Well Production Well Dewatering Well Borehole Other							
Weather: Divercast	Air Temp (°F): 75	Wind: 20 30 (SE)					
Weil Locked? 🛛 Yes 🗌 No 👘 Total Dep	oth (ft) 37 7 3 Damage/repairs need	led:					
Remarks:							

Water Level Data

Measuring point description:	Water level N K-t	el No. 4 3	Serial No. (Optional):			
North rim of TOC Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	0841	1317	1530	1535	1705	
Depth to Water (ft)	9.38	4.29	9.73	9.77	7.83	
Date (mm/dd/yy)	3/20/12	3/21/12	3/2/17-	3/21/12	3/2/1/2	
LNAPL Thickness (fl) (If present)			<u> </u>			
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

riciu Data				The second second second second							
Instrument Make/Model No: Unit or Serial No: $\sqrt{27}$ 55% H I							ip descri Peristali	*			Bailer description:
HE GOTENTIAC HE								(dedica	ted / por	table)	Disposable Teflon Disposable PVC
Purge depth (ft): 29.75					Wellg	goes dry	during j	ourging:	□ Ye	es 🖾	No
Casing vol. (gal): (where applicable)					[tota	= [total depth (feet) - depth to water (feet)] • [well ID (inches) ²] • 0.0408				ID (inches) [?] j = 0.0408	
Time ("24:00" hr)	1523	1527	1531	1535							Remarks
Purge vol. (gal)	00	0.1	p. 2-	03	\langle			· · · · · · · · · · · · · · · · · · ·			
Purge rate (mL/min)	150	150	129	125	$\overline{\}$						
pH (su)	6.57	6.50	6.48	6.51			1				
Temp. (°C)	19.44	20.21	20.14	20.00				1		······	
Spec. cond. (µS/cm)	5233	5229	5090	6767							
D.O. (mg/L)		· -	14	-							
ORP (mV)	-			- 				Κ			
Turbidity (NTU)	83.54	82.22	12.41	56.21							
Color/tint	now	Ash	eix w	Jone	÷						
Odor	hory	\$1.6° W	nom	new							

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
 MWOY	3/21/12	140	7	Noren	1-500 m 0 14-3 , 2-750 , OK; 4-750 m 0 I-51
Durnwoy	3/21/12	1540	7	non	<u>i</u> <u>ii</u> <u>ii</u>

		7
Sampler's Name (print): Chris Machine	Sampler Signature:	
	(guass	C.C.

Fracility: Waterford - 3	Site ID: Mw 05	Sampler: EFA
oject Number: 6045 - 460	Date: 3/21/12	FTN Associates, Ltd

Site Description

Type: XMonitoring Well Tempora	ry Well Extraction Well Production Well	Dewatering Well 🗌 Borchole 🗌 Other
Weather: Overcast	۸ir Temp (°F): 730	Wind: 20-30 (56)
Well Locked? 🛛 Yes 🗌 No 🛛 T	otal Depth (ft) 37.59 Damage/repairs nee	ded:
Remarks:		

Water Level Data

Measuring point description: Mark/notch on TOC		1eter Make/Mod Cに(ひつ ☆		Serial N	Serial No. (Optional):				
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge	After sampling	Remarks			
Time ("24:00" hr)	0842	13.19	13. 1.1	1416	1510				
Depth to Water (ft)	5.66	555	534	589	5.84				
Date (mm/dd/yy)	3/20/12	3/21/12	3/21/12	3/2/112	3/21/12				
LNAPL Thickness (ft) (If present)	1		1						
DNAPL Thickness (ft) (If present)									

Note: Record "S" in Remarks Column if sheen is observed

Field Data

riciu Data			-	the second second		Margar Transition					00520305277			
Instrument Make/Model No: Unit or Serial No:						Pump description:							ription	
NST 554		世	1			Į Į į	Peristal	tic			🗌 L	Disposable polyethylene		
HF Scientific		廿	l				Bladder	(dedica	ted / por	table)		Dispos	able T	eflon
			and Americanity 1712 11.				Submer	sible			1 🗌	Dispos	able P	VC
Purge depth (ft): 2	9.75				Wellg	goes dry	during p	ourging:	U Y	es 🗹	No			
Casing vol. (gal): (where applicable)					= [tota	l depth (J	eet) dep	oth to wa	ter (feet)]	* [we]	II) (inc	hes) ²	• 0,040	8
Time ("24:00" hr)	1329	1334	1337	134!	1344	1336	1396	(356	1400	1404	1408	Rei	harks	
Purge vol. (gal)	00	01	0.2	6. Š	6.5	05	0. ý	0 7	0.8	0.9	110	1.1	1.2	
Purge rate (mL/min)	100	100	160	100	790	164	100	100	(00	100	100	100	(00	
pH (su)	7.26	10	7.12	7.15	317	2.13	2.71	7.09	7.08	704	7,01	7,02	7 01	
Temp. (°C)	19.72	19.62	1924	12.31	1994.0	2.47	17.41	19.77	19.89	2013	26 31	2057	2. 3	
Spec. cond. (µS/cm)	3012	2890	27.10	2426	23:11	2.240	2098	2.038	1998	1923	140	1923	1418	
D.O. (mg/L)						1-00	-		-	~	-	-	-	
ORP (mV)	~~			-	·		-		~		-			
Turbidity (NTU)	8.24	<u>, 09</u>	1.83	1,03	: 23	0.77	42.60	113	1051	9.47	13.24	11. 21	2.56	
Color/tint	non	$P_{\mathcal{K}^{\infty}}$		away	none	Acre	fame.	por	pose	non		none	In	
Odor	June	1923au	Moni	wr.	ptu	pun	More	incon	por	hove	Ane.	None	now	

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	
MW D5	3/21/12	1420	7	irove	1.500ml H.3. 2.750mla; 4-750ml I-17/
			1		

Sampler's Name (print):	ERU NER GARS	Sampler Signature:	
Bampter 3 ranno (frint).	CURNESHIDE		<u>/</u>
		/	
		(

Facility: Witzerford 3	Site ID: MW 04	Sampler: EFN
oject Number: 6045-460	Date: 3/21/12	FTN Associates, Ltd

Site Description

Type: AMonitoring Well DTemporary Wel	I Extraction Well Production Well De	watering Well Borehole Other
Weather: Over cas (Air Temp (°F): 72°	Wind: $2c + 3c + (5e)$
Well Locked? Xes 🗌 No 🛛 Total I	Depth (ft) 35. 40 Damage/repairs neede	ed:
Remarks:		
	NATIONAL DISTORMENTS AND	

Water Level Data

Measuring point description: Mark/notch on TOC	Water level N	Aeter Make/Mod	el No.	Serial No.	. (Optional):	
North rim of TOC Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)		0900	0929	0932	10.45	Dropped
Depth to Water (ft)	4.24	4.24	5 58	5.61	4.64	1.3 ft pumpin,
Date (mm/dd/yy)	3/20/12	3/21/12	3/21/12-	3/21/12	<u> </u>	05 5102 25
LNAPL Thickness (ft) (If present)				······································		passible
DNAPL Thickness (ft) (If present)						during paring

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

rieiu Data										
	ument Make/Model No: Unit or Serial No: \sqrt{ST} MPS 55 tt $1t$ tt					Ø.	p descri Peristalt Bladder	ic	ted / portab	Bailer description: Disposable polyethylene Disposable Teflon
	·				·		Submer		ious portus	Disposable PVC
Purge depth (ft):	257				Well	goes dry	during p	urging:	🗌 Yes	X No
Casing vol. (gal): (where applicable)	-3				= [tota) depth (f	èet) – dej	ith to wat	er (feet)] • [well ID (inches) ²] • 0.0408
Time ("24-00" in)	109	\$ 713	0917	0921	0629	0529				Remarks
Purge vol. (gal)	60	Ú.1	1	0.29	0.3	0.4	\backslash –			
Purge rate (mL/min)	\$ 00	100	100	100	100	100				
pH (su)	6.90	6.95	6.98	4.98	7.00	6-18				
Temp. (°C)	24.13		2368	1		23.39				
Spec. cond. (µS/cm)			3212			3219		\backslash		
D.O. (mg/L)	· · ·	~~~	, d		-	-				
ORP (mV)	~~	~			·	-				
Turbidity (NTU)	112.7	9.12	48.05	2.44	2.18	12.24				
Color/tint	none	None	An	noru	Nore	none				
Odor	non	A OKe	/low	non		non				

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MWDG	3/21/12	0935	7	pline	1500ml H. 3, 2750mld; 4750ml F131
	. (
¥ -					

Sampler's Name (print):		/	Sampler Signature:	E	ne Y	dra.	
				\mathcal{C}^{-}			

Facility: Water for 3	Site ID: MW 07	Sampler: EEN
oject Number: $(0045 - 460)$	Date: 3/20/12	FTN Associates, Ltd

Site Description

Type: KMonitoring Well Temporary W	ell Extraction Well Production Well	Dewatering Well Borchole Other
Weather: Durcast	Air Temp (°F): 75	Wind: 20 - 25
Well Locked? 🖾 Yes 🗌 No 🛛 Total	Depth (ft) 41.19 Damage/repairs ne	eeded:
Remarks:		

Water Level Data

Measuring point description:		leter Make/Mod		Serial No	o. (Optional):	
Mark/notch on TOC	KE	CIC 100 H	3			
North rim of TOC Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" br)	0859	1340	1400	1405	1520	
Depth to Water (ft)	6.25	6.25	6.82	6.84	6.56	
Date (mm/dd/yy)	3/20/12	3/20/12	3/20/12	3/20/12	3/20/12	
LNAPL Thickness (ft) (If present)	(······································			
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

and the second

Instrument Make/Model No: Unit or Serial No: <u>VSI 594</u> <u>HE Scientific</u> <u>HE</u>							p descri Peristalt Bladder Submers	ic (dedica	ted / port	able)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft):	12.7				Wellg	oes dry	during p	ourging:	- Ye	s 🔀	No
Casing vol. (gal): (where applicable)					[tota]	itotal depth (feet) - depth to water (feet)] • [well ID (inches) ²] • 0.0408					1D (inches) ²] • 0.0408
Time ("24:00" ht)	1347	1351	1355	1359	1403	2					Remarks
Purge vol. (gal)	0.0	01	6.15	0.2	0 25	\mathbf{i}	1				
Purge rate (mL/min)	100	.75	75	75	75						
pH (su)	4.64	4.52	6.52	6.54	6.55						
Temp. (°C)	25.14	24.95	25.52	25.55	25.63		\backslash				
Spec. cond. (µS/cm)	1778	1292	1347	1332	1411		$\overline{)}$				
D.O. (mg/L)	-		-	~	~						
ORP (mV)			Ţ.	,	~						
Turbidity (N1U)	15,91	11.84	12.72	17.82	21.31			/			
Color/tint	prove	ja cruc	Aller		iline						
Odor	por	none	102	Anne	por			· · · · · · · · · · · · · · · · · · ·			

Sample Data

Ĺ	Sample Data Sample ID	Date	Time	# Containers	# Filtered	Remarks
	MW07	3/20/12	lubs	7	None	1.50 cml H. 3; 2-750 ml 2; 4-150 ml + 151
•						

Sampler's Name (print): ERIC NGCH196	
--------------------------------------	--

En Thin Sampler Signature:

Form SOP 120-3 – Sampling Record – Revision 2 $_{\rm X}$

racility: Water ford 3	Site ID: MW 08	Sampler: EFN	
oject Number: 60 45	Date: 3/20/12	FTN Associates, Ltd	İ.

Site Description

Type: XMonitoring Well Temporary Well Extraction Well Production Well Dewatering Well Borehole Other									
Weather: Duevcast	Air Temp (°F): 7 3	Wind: $20 25(5E)$							
Well Locked? 🗹 Yes 🗌 No 🛛 Total	Depth (ft) <u>41.47</u> Damage/repairs needed:	: hele app 3ft from pad							
Remarks:									
J									

Water Level Data

Measuring point description: Mark/notch on TOC	Water level N	leter Make/Mod Keck (のひ	el No. 出马	Serial No	Serial No. (Optional):		
North rim of TOC Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks	
Time ("24:00" hr)	0909	1112	1130	1152	1300		
Depth to Water (fi)	6.10	6.11	6.40	6.15	6.38		
Date (mm/dd/yy)	3/20/12	3170/12	3/20/12	3/20/12	3/20/12		
LNAPL Thickness (ft) (1f present)	1				····· /		
DNAPL Thickness (ft) (If present)]					

Note: Record "S" in Remarks Column if sheen is observed

Field Data

Pield Data		-			and the second second second second						
Instrument Make/Mod		Unit o	r Serial 1	No:			np descri				ailer description:
YSE MPS HESCIENTIC	554	<u>tt</u>	_3			74	Peristal				Disposable polyethylene
HF Sciental	40		Γ				Bladder	(dedicu	ted∄por] Disposable Teflon
and the same and the second		**************************************		-			Submer	sible			Disposable PVC
Purge depth (It):	32.7				Well g	goes dry	during p	ourging:	ΠYe	es 🗙 No	
Casing vol. (gal): (where applicable)					≔ Įtota	l depth (f	èet) – deț	oth to wa	ler (feet)]	• well ID	(inches) ²] = 0.0408
Time ("24:00" in)	1115	1119	1123	1127	1131	1135	1139	1143	1147	1151	Remarks
Purge vol. (gal)	00	i) ∳	0.25	· · · · · · · · · · · · · · · · · · ·		1	07	08	09	1.0	
Purge rate (mL/min)	150	100	100	100	100	100	100	100	100	100	$T \setminus$
pH (su)		651	6.55		6.62			6.64	6.61	6.60	
Temp. (°C)	23.64	24.02	2390	24.35	24-39	24.20	24.04	24.35	24.12	23.48	
Spec. cond. (µS/cm)	1372		í		1525			ISEY	1942	1559	
D.O. (mg/L)	~	х.		1	-	-	•				
ORP (mV)	-	~	****	-	~		~				
Turbidity (NTU)	4.17.3	8.52	8.04	18.00	913	851	4.68	5.19	12.13	18.13	
Color/tint	A 61-3	Asre	norm	nor	norm		nour	hore	nou	Arres	
Odor	none	Лоне	16.6 mg	pa one			Mary		Aure.	Nere	

Sample Data

Sample 1D	Date	Time	# Containers	# Filtered	Remarks
MW-08	3/20/12	1155	7	None	150 ml 11-3 2750 ald 4750 al Isi
	(i				
THE REPORT OF THE PARTY OF THE					

[]	Terre o (mained)	F .	NECKISE

Sampler Signature: Shar	Buch
7. 1	C.

		We wanted and a second s
The strength of the state of th	Site III ALL 20	Sampler STEAL
" "actify: Water tord "S	Site ID: AW 07	Sampler: EFA
		ETN Associates Ltd
oject Number: $\int \partial D \sqrt{\zeta} = \sqrt{2} \langle \partial f \rangle$	Date: 3/7.0/172	FTN Associates, Ltd
Kell (YV		

Site Description

Type: Monitoring Well Tem	porary Well DExtraction Well	Production Well Dewatering	Well Borehole Other
Weather: 54444	Air Temp (°F):	73"	Wind: 20-25(55)
Well Locked? 🛛 Yes 🗌 No	Total Depth (ft) 40.22	Damage/repairs needed:	
Remarks:			

Water Level Data

Measuring point description:	Water level N KECIC (0	Aeter Make/Mod	el No.		o. (Optional): てんぐ	
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	A fter sampling	Remarks
Time ("24:00" ht)	0919	0940	1000	1016	1058	
Depth to Water (Il)	373	3.73	3.86	388	387	
Date (mm/dd/yy)	3120/12	3/20/17	3120/12-	3120112	3/20/12	
LNAPL Thickness (ft) (If present)						
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod VST S76 MPS H	No:	Pump description: X Peristallic Bladder (dedicated / portable) Disposable polyethylene Disposable Teffon										
HE Scienti			<u>キー</u> 1 キー1			Submersible Disposable PVC						
Purge depth (ft): 3	2.1				Well	goes dry	during p	ourging:	ΞY	es 📈 No		
Casing vol. (gal): (where applicable)						= [total depth (feet) - depth to water (feet)] • [well 1D (inches) ²] • 0.0408						
Time (°24:00° hr)	944	548	0992	0954	1000	1001	1008	1012	1016	Remarks		
Purge vol. (gal)	0.0	02	44	ره .ن	07	07	1.0	1.2	1.4			
Purge rate (mL/min)	120	120	120	120	120	120	120	120	120			
pH (su)	12.52	6.53	6.59	6.51	642	6.64	4.45	6.62	6.61			
Temp. (°C)	22.48	22.24	22.23	22.40	22.31	22.33	22.32	28.42	2253			
Spec. cond. (µS/cm)	2747	2734	2742	2763	2781	2796	2800	2785	2192			
D.O. (mg/L)	-											
ORP (mV)	-4-											
Turbidity (NTU)	4.06	56.90	41.11	2.60	39.15	1.42	1.37	21 17	31.30			
Color/tint												
Odor												

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
Mwon	3/20/12	1020	7	line	1500 x 11.3; 2.7510 w d; 4.750 m2 I octime 131
· · · · · · · · · · · · · · · · · · ·)))

Sampler's Name (print):	ERICNECHISE	Sampler Signature: Fract Decis

Daily Log

.

Site Location: Waterford 3	Date: 6/18/12-
Project Number: $6045-460$	Page / of \geq
0100 - Left home	
1000 - Arrived on site and calibr	ald
equipment	
1030 - Began faking water levels	·/···
1115- Completed Water Terels	
1030 - Began staking water levels 1115 - Completed water levels 120 - Begin Sampline Mw-03 1830 - Finish Sampling Mw-05 and Lett	
18:30 - Finish Sampling MW-05 and Left	Site
	· · · · · · · · · · · · · · · · · · ·

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Form SOP 120-2 - Daily Log - Revision 1

Daily Log

Site Location:	Date: 6/19/12
Project Number:	Date: 6/19/12 Page Z of Z
0730 Calibrate Eguipment 0800 - Aperice on site meet Rodney 0830 - Begin Sampling Mauoul 1115 - Left Site	
0800 - ARRIVE ON Site meet Rodney	
0830 - Bein Samplin Marous	
1115 - Loff Site	

	· · · · · · · · · · · · · · · · · · ·
	<u> </u>

Form SOP 120-2 - Daily Log - Revision 1



FTN Associates Calibration Form

Date/Time:	6/19/12 0725
Prepared By:	EFN
Location:	Waterford - 3
Project #:	6045-460

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
		pН	7	su	25.69	7.07	() N	7.00	
YSF	#1	pH	4	su	25.94	4.09	(N	4.00	
		pН	10	su			YN		
		Cond	1413	uS/cm	25.41	1444	Ø N	1413	1414601 Ex 8/12
		DO		mm/Hg		mg/l	Y N	mg/l	14:100
		Temp		Degrees C			Y N	N/A	BOZS-11 EX 1/26/14
							YN		
		Turbidity	1000	NTU	N/A	883	® N	0.83	10612 EX 12/12
HF Scientitic	#2	Turbidity	10.0	NTU	N/A	4.58	Ø N	9.87	20239 Ex 2/14
1		Turbidity	0.02	NTU	N/A	1.43	(N	963.2	10605 EX 12/12
							YN		
							YN		
							YN		
							YN		

Notes:

pH Calibration (pH Method: EPA 150.1)

DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l. Temperature Calibration: No calibration is necessary. Simply record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target

Form SOP 120-6 - Calibration Record - Revision 2



FTN Associates Calibration Form

0950 Date/Time: Prepared By: Location: Project #

Cond 0 us/cm Y N YSI H Cond 1413 us/cm 29.62 1359 Ø N 1413 1AH601	Ex 8/12 Ex 12/13
pH 7 su 29.60 7.16 N 7.00 IAL 480 pH 4 10 su 25.94 4.08 N 4.00 B025-11 D0 mm/Hg mpr Y N mpr	
pH 7 su 29.40 7.16 N 7.00 IAL 480 pH (4) 10 su 25.94 4.08 N 4.00 B025-11 D0 mm/Hg mgr Y N mgr	
pH (4) 10 su 25.94 4.08 ØN 4.00 BOZ5-11 DO mm/Hg mgr Y N mgr Temp Degrees C 21.30 21.00 N mgr	
DO mm/Hg mg/ Y N mg/	
Temp Degrees C 21,20 26.0 N NIA	0.01-10
Y N	
Turbidity 0.02 NTU N/A 0.82 Y N U.32 10605 E	12/12
HFSCIENTILE # 2 Turbidity 10.0 NTU N/A 1.07 Y N 12.43 20239 E	x 2/14
	x/2/12
Turbidity NTU N/A Y N	

Notes:

1. Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

2. pH Calibration (pH Method: EPA 150.1)

3. DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

 Temperature Calibration: No calibration is necessary. Record temperature of standard using thermometer while in calibration cup. Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target

Form SOP 120-6 - Calibration Record-Revision 2



Groundwater Level Data Sheet

Project Nar Water	ford - 3	60	ject Number: 45 - 460				Page of		
Weather Co Partly C	Α	K	suring Device: ECI< 100	#3					
Well ID	ell ID Date Time Depth to Water (feet below RP)			Date Time Water (feet Damages/Repairs					
Mu-03	-03 6/18/12 1033 5.61		Damaged w Damaged b Damaged e		 Damaged TOC Damaged lock Un-kept vegetation 		Lacks visibility Lacks access See gw sample record		
mw-04	6/18/12	1042	8.96	Damaged b Damaged e	quipment	Damaged TOC Damaged lock Un-kept vegetation		Lacks visibility Lacks access See gw sample record	
M.W-05	6/18/12	1052	5.03	Damaged b Damaged e		Damaged TOC Damaged lock Un-kept vegetation Damaged TOC		Lacks visibility Lacks access See gw sample record Lacks visibility	
nu-of	6/18/12	1058	4.06	Damaged be	ollards	Damaged TOC Damaged lock Un-kept vegetation Damaged TOC		Lacks visibility Lacks access See gw sample record Lacks visibility	
NW-07	6/18/12	1105	5.98	Damaged be	ollards quipment	Damaged lock Un-kept vegetation		Lacks access See gw sample record	
NW-08	6/18/12	110	7.22	Damaged be	quipment	Damaged lock Un-kept vegetation		Lacks visibility Lacks access hole See gw sample record	
MW-09	6/18/12	1115	3.59	Damaged bo	uipment	Damaged TOC Damaged lock Un-kept vegetation		Lacks visibility Lacks access See gw sample record	
				Damaged bo	uipment	Damaged TOC Damaged lock Un-kept vegetation		Lacks visibility Lacks access See gw sample record	
				Damaged bo	uipment	Damaged TOC Damaged lock Un-kept vegetation		Lacks visibility Lacks access See gw sample record	
				Damaged bo	uipment	Damaged TOC Damaged lock Un-kept vegetation		Lacks visibility Lacks access See gw sample record	
				Damaged bo	uipment	Damaged TOC Damaged lock Un-kept vegetation		Lacks visibility Lacks access See gw sample record	
			·	Damaged we Damaged bo Damaged eq	uipment	Damaged TOC Damaged lock Un-kept vegetation		Lacks visibility Lacks access See gw sample record	
				Damaged we Damaged bo Damaged eq	llards uipment	Damaged TOC Damaged lock Un-kept vegetation		Lacks visibility Lacks access See gw sample record	
				Damaged we Damaged bo Damaged equ	llards uipment	 Damaged TOC Damaged lock Un-kept vegetation 		Lacks visibility Lacks access See gw sample record	
		1 Le Bl		Damaged we Damaged bo Damaged equ	llards	Damaged TOC Damaged lock Un-kept vegetation		Lacks visibility Lacks access See gw sample record	

RP = Reference Point TOC = Top of Casing gw = groundwater

Facility: 4045-46 Tuberford 3	Site ID: MW-03 Sampler: EFN	
Project Number: 6045-460	Date: 6/19/12	FTN Associates, Ltd

Site Description

Weather: Suntry	85	Air Temp (°F):	85	Wind: 10 mph w
Well Locked? Xes	No Total	Depth (ft) 37,58	Damage/repairs needed:	Mone

Water Level Data

Measuring point description:			eter Make		lel No. 73	Serial No	Serial No. (Optional):				
North rim of TOC	Pre-purge initial		Pre-purge confirmation		During purging	Purge end	After sampling	Remarks			
Time ("24:00" hr)	1033		0950		1000	1017	1050				
Depth to Water (ft)	5.61		5.51	C	5.97	6.04	6.09	A AND A REAL PROPERTY AND			
Date (mm/dd/yy)	6/181	12	6/19/	12	6/19/12	6/19/17	6/19/2				
LNAPL Thickness (ft) (If present)			W.								
DNAPL Thickness (ft) (If present)											

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod VSI HFGCIEN		Pump description: Q. Peristaltic Bladder (dedicated / portable) Submersible					Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC				
Purge depth (ft):	32.58	3			Wells	Well goes dry during purging: 🔲 Yes 📈 No					
Casing vol. (gal): (where applicable)		= [total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • 0.0408									
Time ("24:00" hr)	10953	0956	0959	1002	1005	11 - 0	1011	5			Remarks
Purge vol. (gal)	6.0	0.1	6.2	0.3	0.4	0.6	0.9				
Purge rate (mL/min)	150	150	150	150	150	(50	150				
pH (su)	7-08	6-68	6-64	6.63	6-64	6-64	6-63				
Temp. (°C)	25.98	25.44	25.51		2566	75.59	25.56		1		
Spec. cond. (µS/cm)	2563	and the second s	2396	2500		2583					
D.O. (mg/L)	-	-	-	-	-	-	-		1		
ORP (mV)	-	-	-	-	-	~	-		1		
Turbidity (NTU)	20.15	21.37	126.14	17.83	12.52	22.43	18.23			1	
Color/tint	4	-	7	-	-	-	-			/	\ \
Odor	-	-	-	-	-	-	4				1

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
NW.03	6/19/12	1015	br & 7	non	1-500 al H.3; 4-12 T-131; 2-1202
EBMW-03	i i i i i i i i i i i i i i i i i i i	1015	7	nore	11 11

Sampler's Name (print):	ERIC	NECAISE
Alble	ne/w	F3

Sampler Signature: Enin Vyern

Facility: Waterford 3	Site ID: MW-04 Sampler:	EFN	
Project Number: 6045-460	Date: 6/19/12		FTN Associates, Ltd

Site Description

Weather: Sunny 80	> Air Temp (%	F): 80	Wind: 10 migh W
Well Locked? Yes No	Total Depth (ft) 37.73	Damage/repairs needed:	None

Water Level Data

Measuring point description:	Water level M	leter Make/Mod	el No.	Serial No	Serial No. (Optional):			
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks		
Time ("24:00" hr)	1042	1827	0840	0853	1940			
Depth to Water (ft)	8.96	8.96	9.63	9.73	9.97			
Date (mm/dd/yy)	6/18/12	6/19/12	6/19/12	6/19/12	6/19/12	and the second		
LNAPL Thickness (ft) (If present)		1						
DNAPL Thickness (ft) (If present)		and some						

Note: Record in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod VSI HF Sciew		t	r Serial 1 1 1 2 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1			8	np descri Peristalt Bladder Submer	ic (dedica	ted / portabl	 Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft):	32.	73			Well	goes dry	during p	ourging:	Yes	No No
Casing vol. (gal): (where applicable)		JA				and the second second				vell ID (inches) ²] = 0.0408
Time ("24:00" hr)	0830	0833	0836	0839	0841	0843	0846	0849	0851	Remarks
Purge vol. (gal)	0.0	0.1		0.3	0.5	0.75	1.0	1.2	1.5	
Purge rate (mL/min)	250	250	290	290	250	290	250	250	250	
pH (su)	6.26	6-39	4.41	6.49	and the second division of the second divisio	6.58	10.61	6-61	6:60	and the second se
Temp. (°C)	24.33	24.41	24.31	24.08	The second se		24.18	24.20	24.07	
Spec. cond. (µS/cm)	5252	4274	5052	5240					5695	
D.O. (mg/L)	-	-	-	-	-	-	-	-	-	an transmit inclusion of the barrent of the barrent
ORP (mV)	-	-	-	-	-	-	-	-	-	in the second
Turbidity (NTU)	16.90	20.11	20.69	20.16	22.12	15.81	13.88	18.76	23.21	
Color/tint	-	-	-	-	-	-	-	-	-	W WW
Odor	-	-	-	-	-	-	-	-	-	

Sample Data

I-131;2-12 2-
/

Sampler's Name (print): FRICN BCA 154 Tephellenc INF3

	Λ
Sampler Signatu	re: Bon Hom
	C

Facility: Waterford 3	Site ID: MW-05	Sampler: EPN	
Project Number: 6045-460	Date: 6/18/12		FTN Associates, Ltd

Site Description

Weather: Summ	Air Temp (°F): 850	Wind: S	15
Well Locked? Yes No	Total Depth (ft) 37,59	Damage/repairs needed:	None	

Water Level Data

Measuring point description:	Water level N KEC	Acter Make/Mod	lel No. \pm 3	Serial No.	(Optional):	
□ North rim of TOC □ Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1052	1652	1705	1722	1825	
Depth to Water (ft)	6.03	5.04,	5.57	5.58	5.67,	
Date (mm/dd/yy)	6/18/12	6/18/12	6/18/12	6/18/12	6/18/12	
LNAPL Thickness (ft) (If present)	1	1111	color.	et et et e	elistic	
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod VSI IEF Scienti		Unit o	r Serial 1 # (#			40	p descri Peristalt Bladder Submer	ic (dedicat	ted / por	1		ole polyethylene
Purge depth (ft):	32,5	59			Wellg	oes dry	during p	ourging:	TYC	s ANC)	
Casing vol. (gal): (where applicable)	N/A								Faire	• [well ID	(inches) ²] •	0.0408
Time ("24:00" hr)	1652	1655	1658	1701	1704	1707	1210	1713	1716	1719	172 Rema	rks
Purge vol. (gal)	0.0				0.50		10	1.1	1.25	1.4	1.6	
Purge rate (mL/min)	200	200	200	200	200	200	200	200	200	200	200	
pH (su)	7.26	7.22	1.15	7.13	7.09	7.07	2.06	7.05	7.04	7.04	7.08	1
Temp. (°C)	26.11	25.99	25.93	25-69	25.62	25.61	25,43	25.30	25.19	25.25		
Spec. cond. (µS/cm)	2168									1918	1922	
D.O. (mg/L)	-	-	-	~	-	-	-	-	-	-	-	1
ORP (mV)	-	-	~	~	-	1	-	-	-	-	-	
Turbidity (NTU)	4.97	7.36	81.72	6.36	16.24	6.50	5.99	5.61	8.03	12.72	11.36	
Color/tint	-	-	-	0.0	1	6						
Odor	-	-	-									

Sample Data

Date T	Fime # C	Containers	# Filtered	Remarks
6/18/12/17	125 E	167	None	1-500ml H-3:4=11 I-131:2-110
6/18/12/1	725 \$	267	none	10 11
4	6/18/12 17	6/18/12 1725 6	6/18/12 1725 EN 7	6/18/12 1725 EN 7 Nore

Sampler's Name (print): FRICNECAISE

Sampler Signature: lla

Facility: Waterbord - 3	Site ID: MW-06 Sampler: EFN	
Project Number: 10045-460	Date: 6/18 (2	FTN Associates, Ltd

Site Description

Weather: Purtly C	londy Air 7	Temp (°F): 85°	Wind: SE 15
Well Locked? Yes N	o Total Depth (ft)	35.40 Damage/repairs need	ded: None

Water Level Data

Measuring point description:	Water level M	leter Make/Mod	el No. 5	Serial No	. (Optional):	
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1058	1540	1550	1600	1630	
Depth to Water (ft)	4.06	4.00,	5.56	5:87	5.93	
Date (mm/dd/yy)	6/18/12	6118117	6/1812	6/18/12	6/18/12	Constant Constant Constant
LNAPL Thickness (ft) (If present)					1	
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod VSI HF Scienfil		et	Serial 1 1 E Z	No:			p description: Peristaltic Bladder (dedica Submersible	ated / portable)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft):	30,	40			Well g	oes dry	during purging	Yes 🛛	No
Casing vol. (gal): (where applicable)	NA				= [total	depth (f	eet) - depth to wa	ater (feet)] • [wel	1 ID (inches) ²] • 0.0408
Time ("24:00" hr)	1545	1548	1551	1554	1557	1600			Remarks
Purge vol. (gal)	0.0	0.1	0.2	0.3	0.4	0.5			
Purge rate (mL/min)	250	250	250	250	250	250			
pH (su)	7.17	7.16	7.15	7.15	7.15	7.16			
Temp. (°C)	27.04	26-68	26.5	26.67	26.79	26.74			
Spec. cond. (µS/cm)			3133		3170				
D.O. (mg/L)	-	-	-	-	-	-			
ORP (mV)	-	-	(-	-	-			ana ana amin'ny faritr'i ana amin'ny faritr'i Amin'ny faritr'i Amin'ny faritr'i Amin'ny faritr'i Amin'ny faritr
Turbidity (NTU)	5.39	6.90	7.63	12.32	14.23	11.43			enderstation and second and an of the second s
Color/tint	-								
Odor	-								

Sample Data

8/12 1600	6	nove	1- Soone H3; 4-16 I-131; 1-16 X
			/ /
5	3/12 1600	8/12 1600 6	8/12 1600 6 pore

Sampler Signature: Esca Mean

Sampler's Name (print): BUC NECAISE

Facility: Waterford-3	Site ID: MW-07 Sa	ampler: EFN	dannahisan manananan araa daraa dalam adanas
Project Number: 6045-460	Date: 6/12/18		FTN Associates, Ltd

Site Description

Weather:	Partly Clo	un	Air Temp (°F):	4C	Wind: SW	-15
	Yes No		1 1 1 1	Damage/repairs needed:	None	()

Water Level Data

Measuring point description:	Water level N KECK	leter Make/Mod		Serial No. (Optional):			
□ North rim of TOC □ Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks	
Time ("24:00" hr)	1105	1431	1445	1503	1530		
Depth to Water (ft)	3.98	5.96	6.43	6.56	6.63		
Date (mm/dd/yy)	6/18/12	6/18/2	6/18/17	6/18/12	6/18/12	and an	
LNAPL Thickness (ft) (If present)	10000	1			1.11=		
DNAPL Thickness (ft) (If present)		1					

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Model No: <u>45.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4.</u> <u>4</u>						Pump description: Peristaltic Bladder (dedicated / portable) Submersible					Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC	
Purge depth (ft):	36,1	5			Wellg	oes dry	during p	urging:	ΨYe	s No		
Casing vol. (gal): (where applicable)	N/A										inches) ²] = 0.0408	
Time ("24:00" hr)	1435	1438	11441	1444	1447	1450	1453	1456	1459	1502	Remarks	
Purge vol. (gal)	0.0	0.15	0.3	0.45	0.6	0.75	0.90		1-1	1.2	1	
Purge rate (mL/min)	200	200	200	200	200	200	200	200	200	200		
pH (su)	6.83	6.81	6.80	6.79	6.78		6.79	6.78	6.79	6.80		
Temp. (°C)	26.67	27.98	28.14	28.13			27.13		27.33	27.35		
Spec. cond. (µS/cm)	[[19	1175	1184	1207			and the second se	1349	1342	1340		
D.O. (mg/L)	-	-	-	~	-	-	-	~	~	T		
ORP (mV)	-	5	-	-	+	1	-	-	-	-		
Turbidity (NTU)	7.06	7.85	12.36	22.43	13.44	15.63	11.23	12:36	10.11	7.63		
Color/tint	-	e	-	1	L	4	4	-	-	-		
Odor	L	L	-	1	~	L	-	4		-		

Sample Data

20

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MAW-07	6/18/12	1505	6	nore	1-500ml H-3; 4-12 I-131; 1-12 X

Sampler's Name (print): ERIC NECASE	Sampler Signature: En Mucan
TReblow /WF3	C Form SOP 120-3 – Sampling Record – Revision 2 (JAN 2012)

Facility: Waterford-3	Site ID: Mw-08	Sampler: EFN	
Project Number: 6045-460	Date: 6/18/12		FTN Associates, Ltd

Site Description

Type: Monitoring Well Temp	oorary Well Extraction Well Production Well Dewa	atering Well 🔲 Borehole 🗍 Other
Weather: Party Cloc	Air Temp (°F): 85	Wind: SW 15 mp L
Well Locked? Yes Do	Total Depth (ft) 41,47 Damage/repairs needed:	Hole in calvert
Remarks: Safety h	azard near well pud.	

Water Level Data

Measuring point description:	Water level 1	Aeter Make/Mod	el No. H 3	Serial No	Serial No. (Optional):			
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks		
Time ("24:00" hr)	1110	1315	1328	1340	1420			
Depth to Water (ft)	7.22	7.22	7.62	7.64	7.73			
Date (mm/dd/yy)	6/18/12	6/18/12	6/18/12	6/18/17	26/18/12			
LNAPL Thickness (ft) (If present)					- CI - I			
DNAPL Thickness (ft) (If present)								

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod V5I HF3CL	el No:	Unit or	When cash in a state of the state	No:			p descri Peristalt Bladder Submers	ic (dedicat	ed / por	table)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft):	36.9	4			Well g	goes dry	during p	ourging:	[]Y	es 🕅	No
Casing vol. (gal): (where applicable)	N/A				= [tota	depth (fo	eet) – der	oth to wat	er (feet)]	• [well	I ID (inches) ²] • 0.0408
Time ("24:00" hr)	1311	1320	1323	1326	1329	1331	1334	1337	1340		Remarks
Purge vol. (gal)	0.0	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6		2
Purge rate (mL/min)	250	250	250	250	250	250	250	250	6.5	P	
pH (su)	6.82	6.21	6.65	1.61	12.71	6.72	674	6.74			
Temp. (°C)	25.81	25.85	25.61	25.29	25.51	25.51	25.65	25.42		Y	
Spec. cond. (µS/cm)	1118	1(10		1213	1261	1290		1313			
D.O. (mg/L)	-	-	-	-	1	-	-				
ORP (mV)	-	-	-	-	-	-	-				
Turbidity (NTU)	10.40	10.45	6.65	11.87	9.83	7.67	8.69	7.66	8.43		
Color/tint	-	-	-	-	n	-	~	t	r		
Odor	-	-	-	-	-	-	-	-	-		

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW.08	6/18/12	1345	6	None	

Sampler's Name (print):	FRICNECAISE	Sam
7 Lillen	-IWF3	

mpler Signature:

Gur Herry

Facility: Waterford 3	Site ID: MW-09	Sampler: EFN	
Project Number: $6045 - 460$	Date: 6/18/12	FTN Associates, 1	.td

Site Description

	tion Well Production Well Dewatering Well Borehole Other	
Weather: Partly Cloudy Air To	Semp (°F): \$ 0 ° Wind: \$ 500 - 1 0 \$ 500	
Well Locked? Ves No Total Depth (ft)_	40122 Damage/repairs needed: NONE	
Remarks:		

Water Level Data

Measuring point description:	Water level N KECK	leter Make/Mod	· · · · ·	Serial No	. (Optional):	
Dorth rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1115	1121	1134	1143	13/0	
Depth to Water (ft)	357	3.57	3.73,	3.78	3.89	
Date (mm/dd/yy)	6/18/12	6/18/12	6/18/12	6/15/12	- 6/18/12	
LNAPL Thickness (ft) (If present)		, , ,			ı	
DNAPL Thickness (ft) (If present)	L					

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mode VST HFSCientef			r Serial I 1 1 Z	No:			p descri Peristalt Bladder Submer	ic (dedicat	ed / porta	ble)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft):	35	5.22			Well g	goes dry	during p	ourging:	T Yes	Ø	No
Casing vol. (gal): (where applicable)	N	1A			= [tota	l depth (f	eet) - dej	oth to wat	er (feet)] •	[well]	(ID (inches) ²] • 0.0408
Time ("24:00" hr)	1121	1124	1127	1130	1133	1136	1139	1142	-		Remarks
Purge vol. (gal)	0.0	0.2	04	0.6	0.8	10	1.2	1.4			
Purge rate (mL/min)	250	250	250	250	250	250	250	250			
pH (su)	6.51	6.59	6.62	6.66	671	6.73	6.75	674			
Temp. (°C)	24.91		24.47		1						
Spec. cond. (µS/cm)	2334							2393			
D.O. (mg/L)	-				17 ~ ~	~	-	-			
ORP (mV)	-	-			-	-	~~	-			
Turbidity (NTU)	10.23	8.95	5.9%	5.27	6-42	4.96	2.18	11.13			
Color/tint	-	-			-		-	~			
Odor		-	+		-		-				

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-09	6/18/17	1245	6	none	1-500m H-3; 4-16 I-131; 1-100
· · · · · · · · · · · · · · · · · · ·	Ç 5				

Sampler's Name (print):	ERIC NECHISE	Sampler Signature: Failfern'
Thalan	lut3	Form SOP 120-3 – Sampling Record – Revision 2 (JAN 2012)



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:	Section B Required Pr	roject In							_	e Inform	_								_				P	ige:		•	k	
empany: ENTERGY WATERFORD 3	Report To	Rod	ney [eBlanc	2			_	Attenti			AME																
ddress: 17265 River Road	Copy To:								Comp	any Nar	me								R	EGUL	ATORY	/ AGE	NCY					
Killona, LA 70057									Addres	55.									1	NP	DES	٢	GROU	ND W	ATER	T DR	INKING WAT	TER
mai To riebian@entergy.com	Purchase On	rder No	2						Pace C Refere										1	- US	т	r	RCRA			r	OTHER	
hone: (504) 464-3267 Fax:	Project Nam	18:							Pace P Manag	Project	Ci	indy C	laves	sen (5	604) 3	05-36	26	-		Site L	ecation					///////		
Requested Due Date/TAT: 15 WORKING DAYS	Project Numi	iber:	-						-	rofile #:				-							STATE				-			
											-	-					Re	que	sted A	nalysia		×1	7N)		VII			
Section D Valid Matrix Co	les	2		1								_				NA	Т	T	П	TT		T		Τ				
Required Client Information MATRIX CRIMING WATER	CODE DW WT	to left)	(dWC		COLL	ECTED					P	resen	ative	s		ř.	-				-			-				
WATER WATER WATER PRODUCT SOLISOLD OL OL OL OL OL OL OL OL OL OL OL OL OL	WW P SL CL WP AR OT TS	K CODE (see valid codes	TYPE (G=GRAB C=COMP)		POSITE	COMP	OSITE	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	erved				ol		/sis Teet &	BETA								Residual Chlorine (Y/N)		•	
# 2 日 二		MATRIX	SAMPLE					AMPLE	OF CO	Unpreserved	HNO ₄	HCI	NaOH	Methanol	Other	Analysi	GROSS	1-131	TRITIUM						esidu	-	_	
1 NW#9		-	Ô	DATE GAS		DATE	TIME 1145		* 7	5	TI	_	ZZ	2 2	0			T		+	+	+	\vdash	+	۳ ۳	Pace	Project No	bJ Lab I.D.
2 MW #B		T	C	4,01	Ka ka	-	1345	+	1-	1	1	_		+	Η	t	#	li	K+			+		+	-			
3 MW # 7		01	C	Glia	12		1505		1		li	_		+	\square		+					+		+	-			
A MW # 6		br	G	418	2		160		+	# 1	1			+	Η			1	H					+	1			
3 MW # 5	4	br			12		172					2		+			1	11	H			1						
· MW # 5 duplicat	e	br	6	6/10/	17		1725			111	N N	2					1	T						1	-			
· MW# 4 PHL G/19			G								T						1	Π										
																												· · ·
· MW#3 PAR 4/18	112	or	G	-					1	11						l l												*
10																												
11																												1
12			1																									
ADDITIONAL COMMENTS		<u> </u>		HED BY /	FFILIATK	NN .	DAT			TIME				ACCE	PTED	BYAA	- TRAN	TION			DATE		TIME				PLE CONDITIO	ONS
NW#9 me 1- I-135 botth	broken	E	id	lecon	IFI	N	6/15	12	1	\$30	01	P	L	4	6	2	46	refe	TA	4	190	21	130	N	1	20		
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						-					-	-							(1		1	-			
							-	-	-		+	-			-		-			+		+		+				
					220000000																	_				8	7	5
						LER NAM																			0.4	8 2	Custody Sealed Cooler (Y/N)	ples inta- (Y/N)
						PRINT Nar	ne of SAM	PLER:		RIC		-		-	-	-	0.17			1	1	_		-	Temp In	Received on (Y/N)	stody	
						SIGNATUR	RE of SAM	PLER:	9	nu	Y	uc	in				UAT	E Sign	n:6	119	11.	2			F	Re l	30	San



CHAIN-OF-CUSTODY / Analytical Request Document

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

	Client Information:	Section B Required Pr	roject In							Invoic	_	mation:													Pag	96 :		đ	1	
Company: Address:	ENTERGY WATERFORD 3 17265 River Road	Report To:	Rod	ney	LeBlanc					Atlent			AME																	
		Copy To:						_			pany N	ame:	_								REG	ULAT	ORY	AGEN	ICY					
F	Killona, LA 70057									Addre		-									Г	NPDE	S	G	ROUN	D WA	ATER	T DR	NKING WAT	TER
Email To:	(interfection all interfection	Purchase Or	_	1						Pace (Refere	ance:	_									r	UST		r P	RCRA			Γ (OTHER	
Phone	(504) 464-3267 Fax	Project Nam								Manag			indy (Olave	esen ((504)	305-	3626			s	ite Loc	ation							
Requeste	d Due Date/TAT: 15 WORKING DAYS	Project Num	ber							Pace	Profile											S 7	ATE;	-		_	-			
			_	_	-	_			_	_	-	_	_						Requ	ested	Anal	yals F	iltere	d (YIN	4}					
	Section D Valid Matrix Co Required Client Information MATRIX	CODE	to iem)	6		COLL	ECTED					P	reser	vativ	es		T'IN													
	DINNO WATER WATER WASTE WATER PROJECT SCUSCUD CL CAMPLE ID WIFE	DW WT WW P SL OL WP AR	(dee valid codes t	(G#GRAB C#COMP)	CON	APOSITE	COME	OSITE GRA9	AT COLLECTION	0							-										(N/A)			
ITEM #	SAMPLE ID AR (A-Z, 0-91/-) Other Sample IDs MUST BE UNIQUE	OT TS	MATRIX CODE (SAMPLE TYPE (G"	DATE	TIME	DATE	TIME	SAMPLE TEMP AT C	# OF CONTAINERS	Unpreserved	H ₂ SO ₄ HNO ₂	HCI	NaOH	Na ₂ S ₂ O ₃	Other	Analysis Test		GROSS BETA	TRITIUM							Residual Chlorine (Y/N)	Pace	Project No	o/Lab LD.
1	MW # 4		от	-	6/19		UNIC	085	_	7	5	2	-	-	-	-		-		1-	ł	+	+		+	+	-			
2	MW#3				4A			1015				3	_			1		-	-	1-	F					1				
, 3	EB(Equipr Blank)		OT	G	6/19	1/12		1015			5							-	2		FI									
4										1	1																			
5																														
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11 12			+	+	-	-	-	-			+	++	+	H		+		\vdash		+			+	\mathbf{H}	+	-	+			
ist	ADDITIONAL CONNENT'S		REL	ACUIS	HED BY f	AFFILIATE))N	DAT	E.		TIME		-		ACC	EPT	C BY	AFR	IATIO	•		DA	TE		IME		-	SAMP	LE CONDITIO	NS
		E	210	N	ECA	9E 1	FTN	419	liz	10	050	0	P	2	Der	C	1/2	_				419	1/12	10	50	1				
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	n na se a			-		_		-	-		-	-		_			-	-						1		1			-	
L.						SAMP	LERNAN	IE AND S	GNA	URE																	o	a los	(N)	ntact
							PRINT Na	me of SAM	PLER	+	-R	rc/	VE	FC	AI	50	y					:					Temp in	Received on (Y/N)	Custody Sealed Cooler (Y/N)	ples inta (Y/N)
							SIGNATU	RE of SAM	PLER	3	1/2	a)	A	14	in				MATE S		61	19/	12	2			,e	Rece	Cust	Sav

N

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

MW-04 RESAMPLE

Daily Log

Waterford - 3 Site Location: Date: 9/6/12 Project Number: Page / of 1 ny 5 prien odin 30-1 Samples Se qui phren NEA 40 been 14 10 1030-Ten ø m pline 1045new bine well MW-07 tu in 1055-Sife 00



FTN Associates Calibration Form

Date/Time:	916/12	0900	_
Prepared By:	EEN		
Location:	Waterton	d-3	_
Project #:			

Instrument Type	instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
		pН	7	su	23.72	7.24	ΈN	7.00	246244 Ex 3/14
		рН	4	su	22.93	4.07	(N	4.00	1AI238 Ex 9/13
VSI	#1	pН	10	su			Y N	1	
		Cond	1413	uS/cm	23.42	1223	Ô N	1413	144601 EX 8/12
		DO		mm/Hg		mg/l	Y N	mg/l	
		Temp		Degrees C			Y N	N/A	
							Y N		
	· · · · ·	Turbidity	1000	NTU	N/A	762.6	N 🕅	998.0	Lot 10932 Ex 9/13
It & Scientific	出し	Turbidity	10.0	NTU	N/A	14.34	ØΝ	12.25	LOT 20239 EX2/N
		Turbidity	0.02	NTU	N/A	3.75	(N	0.01	Cot 10901 Ex 9/13
							YN	A	
							YN		
							Y N		
	1						YN		

Notes:

pH Calibration (pH Method: EPA 150.1)

DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

Temperature Calibration: No calibration is necessary. Simply record temperature of standard using thermometer while in calibration cup.

Then record sonce temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target

Facility: Waterford-3	Site ID: MW-04	Sampler:	TFN	
roject Number: 6045-460	Date: 9/6/12			FTN Associates, Ltd

Site Description

Weather:	Air Temp (°F)	: 800	Wind:	North-Smpi
Well Locked? XYes I No	Total Depth (ft) 37.73	Damage/repairs nee	eded:	

Water Level Data

Measuring point description: Mark/notch on TOC		Aeter Make/Mode		Serial No.	(Optional):	
☐ North rim of TOC □ Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	-	0940	1005	1015		
Depth to Water (ft)		9.46	10.03	10.06		
Date (mm/dd/yy)		9/6/12	9/6/12	916/17		
LNAPL Thickness (ft) (If present)			1.1.	1.1.0		
DNAPL Thickness (ft) (If present)	-					

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod	lal No:	Unito	Serial 1	No:		Dum	p descri	ntion			Paile	r description:	
VST_	ICI 140.		4 1	NO.			Peristalt					Disposable poly	ethylene
HESCIEN	F.C.		17			_	Bladder		ted / por	table)		Disposable Tefle	
	I COL		-0				Submer		iou por			Disposable PVC	
Purge depth (ft):	32	.73)		Well g	goes dry	during p	ourging:	T Ye	es 🗹	No		
Casing vol. (gal): (where applicable)	4	.6			= [tota]	depth (fo	eet) – dep	oth to wai	ter (feet)]	• [well	ID (inc	hes) ²] • 0.0408	
Time ("24:00" hr)	0941	0944	0947	0950	0953	0956	6959	IDOZ	1065	1008	1001	Remarks 101	1/1017
Purge vol. (gal)	0.0	0.15	0.3	0.45	0.6	0.75	0.9	1.0	1.2	1.3	1.5	1-6	11.75
Purge rate (mL/min)	100	100	100	100	160	100	100	100	160	100	100	100	100
pH (su)	6.99	6.98	6.99	7.02	7.08	7.06	7.06	7.06		7.09	2.07	7.04	7.04
Temp. (°C)	24.97	24.52	24.44	24.84	24.88	24.90	24.74	24.98	25.31	25.21	25.17	25.03	25.13
Spec. cond. (µS/cm)	4646	4701	4805	4910	5125	5145	5237	5315	5376	5434	5448	5451	5446
D.O. (mg/L)	-	1											
ORP (mV)	-	-						- C		1			
Turbidity (NTU)	5.26	1.37	0.36	0.00	0.00	18.87	0.99	1.25	0.03	0.35	2.00	2.32	1.36
Color/tint	none	none	~	-	~	-		-		~	-	-	-
Odor	none	none	+	-	-	-	-	-	1	*	-	-	-

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
ma-04	9/6/12	1020	2	none	2-160
EBMW-04	2/6/12	1040	2	none	11

Sampler's Name (print): FRIC NECAISE

Sampler Signature: Butte

Form SOP 120-3 - Sampling Record - Revision 2 (JAN 2012)



and an a start of the start of

Date	Project 1	Name	1					Project Num	ber		Proje	ct Man	ager (P	rint)			/		Page / c	f_/
Laboratory Name				Submi								P	aramet	ers (M	ethod	Numbe	r)	- 1	Lab Turn-A	round Time
Phone: ()	R	135		Fayer	W. S ttevi	unbr lle, /	ridge AR	Drive, Suit 72703 Fax (479) 5		3	_						2		24 Hour 48 Hour	S
Sampler Signature		F.						ph eff.	1		8			-					The provide the provided at t	
		SA	MPLE DE	SCRIPT		(*		L Mail	- 1										
Field Sample Nu	mber	Date (mm/dd/yy)	Tim (hh:m		W	latrix S	0	Number of Containers	Meth Comp	Grab									Laborato	ry Notes
MW BU		-9/6/12	10		K			2		×	×									
E 13 M W- 1	546	.*1	10	hef 21	X			2		×	×									
					× .	5														
													-							
		-																		
		1	-		* Mo	trive	W -	Water $S = S$		Other										
Relinquished By (S	Signature)	Print N	Vame				Date	Time	Receive		mature)			Prin	it Nam	e		-	Date	Time
Relinquished By (S		Print N				1	Date	Time	Receive	d By Lat	oorator	y (Signa	ature)	Prir	t Nam	e			Date	Time
Sampler Remarks						1			Laborato	ory Rema	arks:		÷							

You want a state

where the has been should be a service of the service of

Daily Log

Site Location: Westerford - 3 Date: 9/19/12 Project Number: 6045-460 Page / of Z-0900 - Arrived on site Calibrate Equipment 0920 - Wating on Rodney for Prejob Brief 1000 - Finish Prevob Safety - Londod Semple battles - ITrifium 4- I-131 2-2: Dup # Mw.9 1730 - Left site

Form SOP 120-2 - Daily Log - Revision 1

Daily Log

Site Location: Waterford - 3 Date: 9/19/12 Page 2 of Z Safety meeting Project Number: 6045-460 0820 - Arrived on site for Prejop 0900 - Bec MW-05 MW-03 Proceed Sampling 1345to warehouse hake copies 1400 le 51 samples at Pace 1420-4 1430 -Pace vi t tv

Form SOP 120-2 - Daily Log - Revision 1



FTN Associates Calibration Form

Date/Time:	9/18/12 0910
Prepared By:	EFN
Location:	WATERFORD - 3
Project #:	6045-460

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
VSI	七(Cond	0	uS/cm			Y N		
t		Cond	1413	uS/cm	22.75	1187	(DN	1413	LOT IAHGOI Ex 8/12
		pН	7	su	22.94	7.32	(N	7.00	LOT ZACZ44 EN 3/14
		pH	(4) 10	su	22.59	4.03	(N	4.00	LOT IAT238 Ex 9/13
		DO		mm/Hg		mg/l	Y N	mg/l	Contract Carry Carry
		Temp		Degrees C	22.73	23.0	N	N/A	
						1	YN		
		Turbidity	0.02	NTU	N/A	0.00	Y N	0.03	LOT 10901 Ex 9/13.
NESCUENTE	#2	Turbidity	16.0	NTU	N/A	15.30	(Y) N	9.67	LOT 20239 Ex 2/14
		Turbidity	1000	NTU	N/A	71100	YN	285.4	LOT 10932 Ex 9/13
		Turbidity		NTU	N/A		Y N		

Notes

1. Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

2. pH Calibration (pH Method: EPA 150.1)

3. DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

4. Temperature Calibration: No calibration is necessary. Record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

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The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target

Form SOP 120-6 - Calibration Record-Revision 2



FTN Associates Calibration Form

Date/Time:	2/19/12 0830
Prepared By:	Stratez EEN
Location:	Waterford 3
Project #:	6045-460

nstrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
		Cond	0	uS/cm			Y N		
157	#1	Cond	1413	uS/cm	22.93	1383	(Y) N	1413	LOT 144601 EXSIE
		pН	7	su	3.12	7.20	(N	7.00	LOT 2ACZ44 EX 3/14
		pН	4/10	su	22.87	4.06	() N	4.00	LOT (AT 238 Ex 9/1
		DO		mm/Hg		mg/i	Y N	mg/l	
Thermometer		Temp		Degrees C	22.93	23.0	N	N/A	
	-						Y N		-
		Turbidity		NTU	N/A	147.6	(Y) N	1006	Lot 10932 Ex 9/13
HEBLICHT	#2	Turbidity		NTU	N/A	16.46	N N	9.76	LOT 20239 Ex 2/1-
		Turbidity		NTU	N/A	0.13	(B) N	0.01	Lot 10901 Ex 3/13
		Turbidity		NTU	N/A		YN		

Notes:

1. Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

2. pH Calibration (pH Method: EPA 150.1)

3. DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

4. Temperature Calibration: No calibration is necessary. Record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target

Form SOP 120-6 - Calibration Record-Revision 2



Groundwater Level Data Sheet

rroject Na			ject Number:				
Wat	evford -	3	6045-460		E	RIC NECAISE	Page of
Weather C	onditions:	Me	asuring Device:				
2.11	Cloudy						
rarry	cloury		LECK 100	# 3	L	·····	
Well ID	Date	Time	Time Depth to Water (feet below RP)				
MW-05	W-05 4/18/12 420 4.92		4.92	Damaged w Damaged b Damaged e		Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
nu-04	11	1010	8.42		vell pad/casing ollards	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
MW-03	11	1020	5.55		vell pad/casing ollards	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
mw-06	Ц	10:28	4.02	Damaged w Damaged b Damaged e		Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
MW-07	L	1035	5.53	Damaged b Damaged e		Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
mw-08	11	1045	4.90	Damaged w Damaged b Damaged ed		Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
Mw - 09	11	(051	3.87	Damaged be		Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
				Damaged w Damaged be Damaged ed		 Damaged TOC Damaged lock Un-kept vegetation 	Lacks visibility Lacks access See gw sample record
				Damaged w	ell pad/casing ollards	Damaged TOC Damaged lock	Lacks visibility
				Damaged ed Damaged w Damaged bo	ell pad/casing	Un-kept vegetation Damaged TOC Damaged lock	See gw sample record Lacks visibility Lacks access
				Damaged ed	uipment ell pad/casing	Un-kept vegetation Damaged TOC	See gw sample record
				Damaged bo	ollards juipment ell pad/casing	Damaged lock Un-kept vegetation Damaged TOC	Lacks access See gw sample record Lacks visibility
				Damaged w	ollards	Damaged lock	Lacks access
				Damaged we	ell pad/casing ollards	Damaged TOC Damaged lock	Lacks visibility Lacks access
				Damaged eq Damaged we Damaged bo	ell pad/casing	Un-kept vegetation Damaged TOC Damaged lock	See gw sample record Lacks visibility Lacks access
				Damaged eq	uipment ell pad/casing	Un-kept vegetation	See gw sample record
				Damaged bo		 Damaged lock Un-kept vegetation 	Lacks access Sec gw sample recon

Notes: RP - Reference Point TOC - Top of Casing gw = groundwater

"acility: Waterford - 3	Site ID: Mw-03	Sampler: ERIC NECHESE
roject Number: 6045.460	Date: 2/12/12	FTN Associates, Ltd

Site Description

Weather: Sunny	Air Temp (°F):	85	Wind: N - 5-10
Well Locked? Yes No	Total Depth (ft) 37,58	Damage/repairs needed:	Nore

Water Level Data

Measuring point description:		Aeter Make/Mod		Serial No	. (Optional):	
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1020	110	1226	1239	1310	 101 VERDARCONSTANTONS
Depth to Water (ft)	5.55.	5.49	5.97	5.96	10.08	
Datc (mm/dd/yy)	9/18/12	9/10/17	2/19/12	9/19/12	9/19/12	
LNAPL Thickness (ft) (If present)		- un				
DNAPL Thickness (ft) (If present)		1				

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod YSI HE Scientil		3	r Serial ± 1 ± 2	No:			p descri Peristalt Bladder Submers	ic (dedica	ted / portable	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft): 32.	58		A NUMBER OF TAXABLE		Wellg	oes dry	during p	ourging:	Yes [the second se
0 1 1 1	1/4									vell ID (inches) ²] = 0.0408
Time ("24.00" hr)	1213	1216	1219	1224	1225	1228	1231	1234	1237	Remarks
Purge vol. (gal)	0.0	0.1	0.2	0.4	0.5	06	0.75	0.8	1.0	
Purge rate (mL/min)	150	150	190	150	150	150	150	150	150	
pH (su)	7.48	6.91	6.82	6.65	6.56		6.46		6.47	
Temp. (°C)	26.92	25.95	25.42	25.38	25.35	25.26	25.27	25.26	25:30	
Spec. cond. (µS/cm)		2936							3247	
D.O. (mg/L)	-	-	~	-	-	-	-	-	-	
ORP (mV)	-	-	-	-	-	~	-	-	~	
Turbidity (NTU)	21,51	2.49	7.01	7.78	7.42	5.21	3.50	4.25	8.41	
Color/tint	-	-	~	-	-					
Odor	-	-	-	-			1			-

Sample Data

Sample ID	Date	Time	# Containers	# Filtered		Remarks	
MW-03	9/19/11	1240	7	none	1-500 ml 1	4.3: 4/1 2-13	1: 2500 alox
Durma 03	alight2	1320-	-7-	-nor	V'	1 11	2 11
EB MW-03	9/19/12	1320	7	none	6	44	11

Sampler's Name (print): ERIC NECAISE

Sampler Signature: Eurofice

Facility: Waterford - 3	Site ID: MW-04	Sampler: EFN	
- roject Number:	Date: 9/19/12		FTN Associates, Ltd

Site Description

Weather: Sunny	Air Temp (°F):	803	Wind: N- 5-10
Well Locked? Xes 🗌 No	Total Depth (ft) 37.73	Damage/repairs needed:	none

Water Level Data

Measuring point description:		eter Make/Mod		Serial No.	(Optional):	
North rim of TOC Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1010	1050	1105	1110	1200	and dependent of the second second second
Depth to Water (ft)	8.42	8.43	9.41	9.57	10,02	
Date (mm/dd/yy)	9/18/12	9/19/12	9/19/12	9/19/12	9/19/12	
LNAPL Thickness (ft) (If present)	1.1.1.2	1 1 ma	- Here		1.16.	
DNAPL Thickness (ft) (If present)		1				

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Moo YSI HEScienti(Scientific #Z.				p descript Peristaltic Bladder (Submersi	dedicate	d / portabl	le)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC		
Purge depth (ft): 3	2,73				Well g	oes dry	during pu	rging:	Yes	IXI	No
G 1 1 / 1	asing vol. (gal):									vell I	D (inches) ²] • 0.0408
Time ("24:00" hr)	1055	1058	1161	110-1	1107	1110					Remarks
Purge vol. (gal)	0.0	0.15	1	0.4	0.5	0.6					
Purge rate (mL/min)	100	100	100	100	100	100					
pH (su)	17.21	6.70	651	6.45	1.40	6.41					
Temp. (°C)	25.15	24.68		24.79		24.73					
Spec. cond. (µS/cm)	6150	1		5860		5985	-				
D.O. (mg/L)		~	210	~	-	-					
ORP (mV)		~		-	-	-					
Turbidity (NTU)	11,19	583	2.80	2.58	3.44	6.16					
Color/tint						gr. C.					
Odor											

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
maroy	9/19/12	1115	7	None	1-500ml H-3; 4-12 I-131; 2 500mlx

Sampler's Name (print).	ERIC	N	FEALST

Sampler Signature:

Bintler

acility: Weiter ford - 3	Site ID: MW-05	Sampler: EFN	
10ject Number: 6045-460	Date: 9/19/12		FTN Associates, Ltd

Site Description

Weather: Sunny	Air Temp (°F):	75	Wind: N	5-10
Well Locked? Yes No	Total Depth (ft) 37.59	Damage/repairs needed:	none	

Water Level Data

Measuring point description:		Leter Make/Mod	lel No. 3	Serial No	Serial No. (Optional):			
☐ North rim of TOC ☐ Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks		
Time ("24:00" hr)	0920	0825	0920	0942	1035			
Depth to Water (ft)	4.92	5.04	5.38	531	5.40			
Date (mm/dd/yy)	7/18/12	2/19/12	9/19/12	9/19/12	9/19/12			
LNAPL Thickness (ft) (If present)	(141.4	1	te residu for second and the second		- t - t			
DNAPL Thickness (ft) (If present)		1						

Note: Record "S" in Remarks Column if sheen is observed

Field Data

Instrument Make/Moo 451 HF Screwhit		<u> </u>				Pump description: Peristaltic Bladder (dedicated / portable) Submersible					Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC		
Purge depth (ft):	57.3				Well goes dry during purging: I Yes X No								
Casing vol. (gal): (where applicable)					= [tota]	= [total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • 0.0408						8	
Time ("24:00" hr)	0905	0903	211	919	0217	0920	0923	0926	0929	0932	10935 R	emarks ;	18/0941
Purge vol. (gal)	0.0	0.2	0.4	0.5	0.7	0.9	1.0	1.2	1.4	1.6	1.7	1.8	2.0
Purge rate (mL/min)	150	150	150	150	150	150	150	150	150	150	150	150	150
pH (su)	7.40	7.30	7.23	7.15	2.08	6.99	6.97	6.95	6.94	6.93	6.95	6.96	6.98
Temp. (°C)	24.61	24.84	24.78	24.83		and the second se	2.483				25.06	and the second second second second	25.11
Spec. cond. (µS/cm)	4294	4325				3650	1				3220		3234
D.O. (mg/L)	-	-	~	-	-	-	-	~	-	-	-		-
ORP (mV)	-	-	-	-	-		*		-	-	-	-	-
Turbidity (NTU)	4.52	2.43	382	7.49	3.13	2.43	2.52	2.73	7.14	5.62	6.18	4.12	322
Color/tint	-												
Odor	~												

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-05	9/19/12	0945	7	none	1-500 ml H-3; 41L I-131; 2500ml X

Sampler's Name (print):	ERICN	ECAISE
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Sampler	Signature	En	u X	eco

Form SOP 120-3 - Sampling Record - Revision 2 (JAN 2012)

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acility: Water Gord - 3	Site ID: MW-06	Sampler: EFN	
roject Number: 6045 - 460	Date: 9/18/12		FTN Associates, Ltd

Site Description

Weather: Parth Cloudy	Air Temp (°F)	: 85	Wind: W-5
Well Locked? Yrs I No	Total Depth (ft) 35,40	Damage/repairs needed:	hone

Water Level Data

Measuring point description:		ECK 100		Serial No	. (Optional):	
□ North rim of TOC □ Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1028	1805	1615	1630	1715	
Depth to Water (ft)	4.02	3.98,	4.32	5.3.1	5.61	and the second s
Date (mm/dd/yy)	9/18/12	a/18/12	9/18/12	9/18/12	9/18/12	
LNAPL Thickness (ft) (If present)		t to the	- tol co	- el alt	1 - 1 - 1	
DNAPL Thickness (ft) (If present)	-	1				

Note: Record "S" in Remarks Column if sheen is observed

Field Data

protection and the second seco			THE OWNER WHEN THE PARTY	Contraction of the local division of the loc	and the second second second		-					
HE Scienticu		Unit or Serial No:				Bailer description:						
HT LIERFICIE		1	Image: How Submersible						ed / portable)	le) Disposable Teflon Disposable PVC		
Purge depth (ft):	30,4		Well goes dry during purging: 🔲 Yes 🙀 No						No			
Casing vol. (gal): (where applicable)	NA				= [total	depth (f	oth (feet) – depth to water (fcet)] • [well ID (inches) ²] • 0.0408					
Time ("24:00" hr)	1610	1613	1616	1619	1622	1625	1628			Remarks		
Purge vol. (gal)	0.0	6. i	0.2	0.3	0.4	0.5	0.75					
Purge rate (mL/min)	150	190	150	150	150	150	150					
pH (su)	2.07	2.03	2.01	6.98	6.97	6.98	6.96					
Temp. (°C)	26.12	26.34	26.23	26.34		26.30						
Spec. cond. (µS/cm)	3349	3351	3361	3371	3382	3375	3373					
D.O. (mg/L)	-	-	-	-	-	~	-					
ORP (mV)	-	-	~	-	~	-	-					
Turbidity (NTU)	6.58	6.09	7.42	2.91	12.24	13.82	6.19			9		
Color/tint	-		-					N				
Odor	-											

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-06	9/18/12	1630	7	non	1-500ml H-3; 4-16 I-131; 2 500 ald
			1		
	1				

Sampler's Name (print). TRIC NECAISE	Sampler Signature.	Ein?	Lecen
		C	C

acility: Waterford - 3	Site ID: MW -07	Sampler: FEN	
- roject Number: 4045 - 460	Date: 9/18/12		FTN Associates, Ltd

Site Description

Weather: Partly Cloudy	Air Temp (°F)	89	Wind:	N-Smph
Well Locked? Ves I No	Total Depth (ft) 41.15	Damage/repairs needed:	none	

Water Level Data

Measuring point description:		leter Make/Mod Cに 100 出		Serial No.	Serial No. (Optional):			
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks		
Time ("24:00" hr)	1035	1445	1502	1512	1600			
Depth to Water (ft)	5.53	5.55	6,5	6.42	6.58			
Date (mm/dd/yy)	9/18/12	2/18/12	the state of the s	9/18/12	9/18/12			
LNAPL Thickness (ft) (If present)	t t	- et	- iliolis					
DNAPL Thickness (ft) (If present)								

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

		the second second second	10.0		-					A CONTRACTOR OF A CONTRACTOR O
Instrument Make/Model No: VSI HE Scientifica H V						Pump description: Peristaltic Bladder (dedicated / portable) Submersible			Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC	
Purge depth (ft):	36,15					Well goes dry during purging: 🔲 Yes 📈 No				
Casing vol. (gal): (where applicable)	NA	-	= [total depth (feet) - depth to water (feet)] • [well ID (inches) ²] • 0.0408					well ID (inches) ²] = 0.0408		
Time ("24:00" hr)	1447	1450	1453	1454	1459	1902	1505	1508	1511	Remarks
Purge vol. (gal)	0.0	0.1	0.25	030.3	0.5	0.4		0.8	0.9	
Purge rate (mL/min)	129	125	125	125	125	125	125	129	125	
pH (su)	7.57	4.96	6.75	6.10	6,60	4.48	6.48	6.48		
Temp. (°C)	27.28	27.25	27.33	27.18	26.85	26.74	26.80		26.78	
Spec. cond. (µS/cm)	1179	1140	1139	1141	1140	1146	1143	1146		
D.O. (mg/L)	-	-	-	-	-	-	-	-	-	
ORP (mV)	-	*	-	-		-	-	-	-	
Turbidity (NTU)	4.47	5.03	6.12	3.23	11.18	5.31	5.62	5.11	4.12	
Color/tint	none	none	None	none	none	nou	nou	Ame	nove	
Odor	nou	inne	none	none			nou	home	none	

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-07	9/18/12	1515	7	None	1-500 ml H-3; 412 I-131; 2 50000 X
	1.			4	
				_	

Sampler's Name (print): ERIC NECATSE

Sampler Signature: Fine Meccuin

"acility: Waterford - 3	Site ID: MW-08	Sampler: EFW	
roject Number: 6045 460	Date: 9/18/12		FTN Associates, Ltd

Site Description

Weather: Partly Ciouch	Air Temp (°F)	85	Wind: N - S
		Damage/repairs needed:	houl

Water Level Data

Measuring point description:		leter Make/Mod		Serial No	. (Optional):	
□ North rim of TOC □ Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	10.45	1255	1310	1324	1405	
Depth to Water (ft)	6.90	6.92	7.28	730	7.32	
Date (mm/dd/yy)	9/18/12	9/18/12	9/18/12	9/18/12	9/18/12	
LNAPL Thickness (ft) (If present)					112	
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Model No: Unit or Serial No: VSI # 1 HFScientific # Z						X	p descri Peristalt Bladder Submer	ic (dedica	ted / porta	Bailer description: Disposable polyethylene able) Disposable Teflon Disposable PVC
Purge depth (ft):	36,97				Well goes dry during purging: TYes					s No
Casing vol. (gal): (where applicable)	NA				= [total	depth (fo	eet) - dep	oth to wa	ter (feet)]	• [well ID (inches) ²] • 0.0408
Time ("24:00" hr)	1300	1303	1304	1309	1312	1315	1318	1321	1323	Remarks
Purge vol. (gal)	0.0	0.2		0.6	0.8	1.0	1.2	1.4	1.4	
Purge rate (mL/min)	150	150	150	190	150	150	150	150	150	
pH (su)	7.28	4.94	6:65	6.59	6.45	6.37	6.37	6.37	4.38	
Temp. (°C)	26.84	27.31	27.34	27.16				26.70	26.72	
Spec. cond. (µS/cm)	1218	1205	209	1227	1272	1368	1407		1412	
D.O. (mg/L)	~	-	-	-	-	-	-	-	-	
ORP (mV)	1	-	-	-	~	-	-	~	-	
Turbidity (NTU)	4.70	11.74	8.23	6.12	8.17	12.41	5.27	3.02	2.82	
Color/tint	none	none	noue	nove	none	~	-	-	-	
Odor	now	none	nove	how	-	-	-	L	-	

Sample Data

Date	Time	# Containers	# Filtered	Remarks
9/18/12	1325	7	Abre	1-500ml H-3; 416 - I-131; 2500ml 2
				1 1
	21.1	21.1 122	21.1 122	ali 1. 122 e 7 1.

Sampler's Name (print).	ERIC A	ECX	USE
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Sampler Signature: Ener fins

Form SOP 120-3 - Sampling Record - Revision 2 (JAN 2012)

acility: Waster ford - 3	Site ID: MW-0 7	Sampler: EFN	
. roject Number: 6045 460	Date: 9/18/12		FTN Associates, Ltd

Site Description

Weather: Party Cloudy	A	Air Temp (°F):	500	Wind: None	
Well Locked? Yes No	Total Depth (ft) 40,22	Damage/repairs need		

Water Level Data

Measuring point description: Mark/notch on TOC	Water level M.	leter Make/Mod		Serial No.	(Optional):	
□ North rim of TOC □ Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24.00" hr)	1051	1054	1112	1117	1240	
Depth to Water (ft)	3.87	3,87	3.91	9.95	3.98	
Date (mm/dd/yy)	9/18/12	9/18/12	9/15/12	9/18/12	9/18/12	
LNAPL Thickness (ft) (If present)	1.4.	the e		4.01-51	-1-1-	
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed

Field Data

Instrument Make/Mod UFScienti		H	r Serial 1 1 Z	No:		B	p descri Peristali Bladder Submer	tic (dedicated /	portable)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft):	35.2	2		_	Well	joes dry	during p	ourging:	Yes X	No
Casing vol. (gal): (where applicable)	NJA						The Contract of the State of the		- Aller	ID (inches) ²] • 0.0408
Time ("24:00" hr)	1055	1058	1101	1104	1107	1110	1113	1116		Remarks
Purge vol. (gal)	0.0	0.2	0.2	0.6	0.8	1.0	1.2	1.4		()
Purge rate (mL/min)	150	150	150	150	150	150	150	150		
pH (su)	6.35	6.47	6.49	6.52	6.54	6.55		6.53		
Temp. (°C)		25:25	25.37	25.31	and the second se	25.43		25.36		
Spec. cond. (µS/cm)	2480	2527	2533	2541	the second s	2559		and the second		
D.O. (mg/L)	-	~	-	~		-	-	-		
ORP (mV)	-	~	-	-	-	-	-	-		
Turbidity (NTU)	6.15	6.80	7.14	2.92	4.43	8.16	7.24	4.12		
Color/tint	110200	Am	non	None		non	non	Ron		and the process of an and a second
Odor	non	non	non		nou	none	non	por		

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
Mai-09	9/18/12	1120	7	nome	1-500ml H.3; 416 I-131; 2500ml K
Dupmw-07	111	1155	7	4 one	11 14 14

Sampler's Name (print): ERIC NECALSE	Sampler Signature: Sind	scan .
	P	

Daily Log

Site Location: Enlergy Waterford 3 Project Number: 6045-460	Date: 10/31/12
Project Number: 6045-460	Page / of 5
0	
10915 - Arrived on site - Calibrate 1000 - Sampling MW-05 1035 - Finish Purging MW-05 - no b 1615 - Finish Sampling MW-04 Project 60451-463 1715 Left MW-11	Figur prient
1000 - Sampling MW-03	o o a press
1035 - Finish Purring MW-05 - no b	ottles
1615 - Finish Sumpling MW-04	move to Developm
Project 60451-463	, ,
1715 Left MW-11	
1900 - Left site	
· · ·	and the second
·	

Daily Log

Site Location: Waterford - 3 Date: 11/1/12 Project Number: 6045.460 Page Z of 3 0645 - Arrived on site 0705 - Started with well development on MW-11 1145 - Left mw-11 - Tranfer samples from Rodne 1215 - Lunch 1245 - MW-03 - Samphas 1450 - Drop off PRC.P samples at 1600 - MW-08, 1900 - Leave site

Daily Log

Site Location: Waterford - 3	Date: 11/2/12
Project Number: 6045 - 463	Page 3 of 3
5715- ARRIVE on site	
0730 Begin taking water Jevels	
0840 - Completed Water Levels	
0200 Begin purging (Sampling MW-06	
1010 - Finished sampling MW-06	
1030 - Left site for tubing supplies 1100 - Areived back at min-10 For purgi	
110 - Areived back at mw-10 For purgs	mg.
1205- Began purgine Murio	-
110 - Arewed back at mw-10 For purge 1120 - Began purgine MW-10 1203 - Completed Purgine MW-10 1220 - Begin Sampling MW-10 1330 - Completed Sample MW-10 1350 Leave Site	·········
1330 - Completed, Sample Mai - 10	
1350 Leave Site	
	the second s
1	



2160 Date/Time: 10/31/12 FIN Prepared By:

AND ruch Enkvgy Location:

005 (POUS Project #:

Instrument Type	Instrument	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibrated	Calibrated	Post Calibration Reading	Comments
		Cond	0	uS/cm			N X		
		Cond	1413	uS/cm	16.07	(325	NG	1413	Int MICNEY EX 12/17
19T	4(Hd	. 2	SU	14.25	6.98	N	7.00	Lot 2AC 244 Ex 3/14
		Hd	4/10	su	16.49	it.14	N	00.4	LOT 2ACS47 EK3/1+
		DO		mm/Hg		Vôw	X N	Vâm	
		Temp		Degrees C	0.11	(6.53	N	NIA	
							X N		
HESCIPHING	42	Turbidity	(000	NTU	NIA	602.2	N	1073	Let 10932 Ex9/13
		Turbidity	(0.0)	NTU	NIA	15.82	N (A)	12-04	
		Turbidity	70.0	NTU	NIA	7.72	N Q	11.0	(0901 Ex 9/13
		Turbidity		NTU	NIA		Y N		
Comments:									

Notes

1. Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

2. pH Calibration (pH Method: EPA 150.1)

DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.
 Temperature Calibration: No calibration is necessary. Record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target

Form SOP 120-6 - Calibration Record-Revision 2



Date/Time:	11/1/1	2	07	30
Prepared By:	EFR) *		
Location:	Wate	rford	- 3	_
Project #:	1004	5-46	0	

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
		Cond	0	uS/cm			Y N		
		Cond	1413	uS/cm	17.93	1487	TY N	1413	LOT IAKOGA EXIL/12
VSF	#1.	pН	7	SU	18.21	7.04	(N	7.00	2AC 244 5x 3/1
		pH	4/10	su	18.07	4.11	Y N	4.00	2AC547 Ex 3/
		DO		mm/Hg		mg/l	Y N	mg/l	
		Temp	4	Degrees C	18.0	18.11	N	N/A	
HEGuenale	12						Y N		
		Turbidity	1000	NTU	N/A	912.2	YN	1013	10932 Ex 9/13
		Turbidity	10.0	NTU	N/A	8-73	YN	10.18	10931 Er 9/13
		Turbidity	0.02	NTU	N/A	0.23	YN	0.01	10901 Ex 2/13
		Turbidity		NTU	N/A		Y N		the first state of the state of
Comments:	and the second second	TUDICITY		NIU	N/A		T N		

Notes

1. Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

2. pH Calibration (pH Method: EPA 150.1)

3. DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

4. Temperature Calibration: No calibration is necessary. Record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard ceviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target

Form SOP 120-6 - Calibration Record-Revision 2



Date/Time:	11/2/12 0845
Prepared By:	EFN
Location:	Water ford - 3
Project #:	6045-460

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibi	rated	Post Calibration Reading	Com	nents
		pH	7	su	17.34	707	X	N	7.00	LOT ZAC 24	4 Ex 3/17
		pH	4	su	17.43	4.13	(Y)	N	4.00	ZACSU	
YSI	tt (pH	10	su			Y	N			
		Cond	0	uS/cm			Y	N		1	
		Cond	1413	uS/cm	18.23	1426	Ø	N	1413	LOT TAKOG	4 Exm/18
		DO		mm/Hg		mg/l	Y	N	mg/l		
		Temp		Degrees C	18.0	18.17	Y	N	N/A		
							Y	N			
							Y	N			
HEF Scientelly	4Z	Turp	1000	NTH	NA	876.3	X	N	1017	1093Z	Ex 9/13
		Turb	10.0	NTU	NA	12.14	(V)	N	10.82	10931	Ex 9/13
		Turb	0.02	NTU	NA	0.01	Ø	N	002	10901	EV 9/13
	1						Y	N			
							Y	N			
							Y	N			

Notes:

pH Calibration (pH Method: EPA 150.1)

Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

Temperature Calibration: No calibration is necessary. Simply record temperature of standard using thermometer while in calibration cup.

Then record hydrolab temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target



Groundwater Level Data Sheet

Project Nan 6045			oject Number:	Investi	EFN	Page of
Weather Co		Me	easuring Device:			
Well ID	Date	Time	Depth to Water (feet below RP)		Damages/Repairs	
MW-09	11/2/12	0735	6.11	Damaged well pad/casing Damaged bollards Damaged equipment	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility
MW-08	10	0745	8.22	Damaged well pad/casing Damaged bollards Damaged equipment	Damaged TOC	Lacks visibility Lacks access See gw sample record
mw-07	(c	0755	6.98	Damaged well pad/casing Damaged bollards Damaged equipment		Lacks visibility Lacks access See gw sample record
MW-06	ci.	0 8 05	4.95	Damaged well pad/casing Damaged bollards Damaged equipment	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
MW-05	0	0000	7.14	Damaged well pad/casing Damaged bollards Damaged equipment	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
MW-04	(1	0815	8.69	Damaged well pad/casing Damaged bollards Damaged equipment		Lacks visibility Lacks access See gw sample record
MW-03	<i>i</i> D	0825	6.18	Damaged well pad/casing Damaged bollards Damaged equipment	and a second sec	Lacks visibility Lacks access See gw sample record
MW-10	1 4	0835	9.48	Damaged well pad/casing Damaged bollards Damaged equipment		Lacks visibility Lacks access See gw sample record
mw-1	1/	6340	9.72	Damaged well pad/casing Damaged bollards Damaged equipment		Lacks visibility Lacks access See gw sample record
				Damaged well pad/casing Damaged bollards Damaged equipment		Lacks visibility Lacks access See gw sample record
				Damaged well pad/casing Damaged bollards Damaged equipment	Damaged lock	Lacks visibility Lacks access Scc gw sample record
				Damaged well pad/casing Damaged bollards Damaged equipment	Damaged lock Un-kept vegetation	Locks visibility Lacks access See gw sample record
		_		Damaged well pad/casing Damaged bollards Damaged equipment		Lacks visibility Lacks access See gw sample record
				Damaged well pad/casing Damaged bollards Damaged equipment	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
				 Damaged well pad/casing Damaged bollards Damaged equipment 	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record

Notes: RP - Reference Point TOC - Top of Casing gw - groundwater

Facility:	Wate	r-ford	- 3		Site IL	in/1/	-03	Sampl	er: ER	IC NE	
roject Number: 60	045.	460			Date:	1/1/	12				FTN Associates, Lto
Site Description											The second s
Type: Monitoring	Well T	emporar	y Well [Extract	ion Well	Prode	uction We	il 🗍 De			
Weather: July	W			Air Te	emp (°F)	: 7	80		V	Vind: 5- 9	SmpL.
Well Locked?	No	To	otal Dep	th (ft) 3	7.58	Dam	age/repai	rs neede	d: Balle	erds need	painting
Remarks:											1 2
			-	-							
Water Level Data											
Measuring point desc				evel Met		/Model	No.		Serial No	. (Optional):	
Mark/notch on To		-		ECK		_	3				
□ North rim of TOC □ Other:	<i>.</i>		Pre-pu initia	-	Pre-pur onfirma		During		Purge	After	Remarks
Time ("24:00" hr)			6820	the sum of the local division of the local d	and the second second	other Designation of the local division of t	purging	a summer of the local division of the local		sampling	
Depth to Water (ft)		-	618		130		1315		329	14.25	
Date (mm/dd/yy)			1/2/12		1/11	2 4	11.1	2 4	1.62	4.65	
LNAPL Thickness (fi	t) (If presen	()	Udll L		411	6	11/1/1	ell	11110	11/1/12	
DNAPL Thickness (f	t) (If preser	nt)									
Note: Record "S" in Rema	rks Column	if sheen is	s observed	i		10 100					
Field Data											
nstrument Make/Mod	del No:	Unit o	r Serial	No:		Pur	np descri	iption:		Bailer d	escription:
YSI	1		+1				Peristal			Dis	posable polyethylene
HEScien	tites	+	2						ted / portal		posable Teflon
Auron donth (A):	32.5	5			I w u		Submer	No. of Concession, name		and the second division of the second divisio	posable PVC
Purge depth (ft): Casing vol. (gal):		D					during p				
where applicable)	MA				= [tota	l depth (feet) - dej	pth to wa	ter (feet)] =	[well ID (inches	s) ²] • 0.0408
Time ("24:00" hr)	1301	1301	1307	1310	1313	1316	1319	1322	1325		Remarks
Purge vol (gal)	0.0	0-1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	_	
Purge rate (mL/min)	150	150	150	150	150	150	190	150	150		
oH (su)	7.74	7.27	7.29	7.20	7.11	7.08	7.05	7.01	7.02		
Cemp. (°C)	25.26	24.62	24.67	24.64	24.65	24,57	24.48				
pec. cond. (µS/cm)	3199	3095	3109	3263	3306	3390	3496	3492	3492		
D.O. (mg/L)	-	-	-		-	-	-	-	-		
DRP (mV)	-	-	-	*	-	-	-		-		
urbidity (NTU)	12.34	il.21	981	17.22	14.11	8.26	7.19	6.18	9.47		
Color/tint	1	- 1		-	-		-	- U	-		
)dor	5	4	-	v	6		e	e	5		
ample Data											
Sample ID	Date	Т	ime	# Con	tainers	# F	iltered			Remarks	
MW-03	ulila	-	330	1		-	12 11 / Mar 1 / Mar 1	1- 1000	04.3.2		4-12-136
	11/11/1		110	/			UMC	· /vviv	101)	1.16 2 .1
				-		1				1	the second second second
ampler's Name (print): FR	IC N	re ca	154			Sampl	ler Signa	ture:	in Dece	~

the second se	Valber	fort	3		Site ID:	mw-o.y	Samp	ler: EF	N	
roject Number:	045	460			Date: 1	0/31/12				FTN Associates, Ltd
Site Description										
Type: Monitoring		emporar	Wall	Extract	ion Wall	Deaduction W		unatonina W.		7 Other
		emporar	y wen [75°				
20	inny	l T	. 1.D	-	emp (°F):			the second se	ind: W-5	
Well Locked?			otal Dep	th (ft)_3	+,+5	Damage/rep	airs neede	ed: Boll	ards nee	ed printing
Remarks:										
							-	-		
Water Level Data										
Measuring point desc			Water l		er Make/M			Serial No.	(Optional):	
Mark/notch on To		-			ck 100					
Other:	2		Pre-pu		Pre-purge		-	Purge	After	Remarks
Time ("24:00" hr)			initia		confirmatic		and the second s	end	sampling	
			0815	-	1448	1459		502	1605	
Depth to Water (ft)			8,69		8.68	9.74	1	0.14	11.28	
Date (mm/dd/yy) LNAPL Thickness (fl	110		11/2/12		10/31/12	- 10/31	112 1	0/31/12	10/31/12	
DNAPL Thickness (f										
Note: Record "S" in Rema			observed	1						
Field Data				-						
Instrument Make/Moo YST	del No:	Unit o	r Serial	No:		Pump desc				escription:
HF Scient	1.	-H	z			Perista		ted / manufacture		osable polyethylene
off Steered	cher C		~					ated / portab		osable Teflon osable PVC
Purge depth (ft):	32.7	1	- In factoria		Well go	es dry during	a second s	Yes	and the second s	osable i ve
Casing vol. (gal):	3201								72	
(where applicable)	_				= [tota] d	lepth (feet) - d	epth to wa	ter (feet)] = [well ID (inches)	2] = 0.0408
Time ("24:00" hr)	1450	1453	1456	1459	1502				R	lemarks
Purge vol. (gal)	0.0	0 15	0.30	0.45	0 60					
Purge rate (mL/min)	200	200	200	200	200					
pH (su)	6.99	6.83	6.70	627	6.74					
Temp. (°C)	24.57	24.00								
Spec. cond. (µS/em)	the second se	5282	6358	5412			-			
D.O. (mg/L)	5 30 -	-	-	-			-			
ORP (mV)	-	-			-				*/	
Furbidity (NTU)	20.72	IT av	-	12 72	810					
Color/tint	00.12	15.38	8.14	9.73	8.68		-			
and the second se	-	-	-	-	-		-			
Odor	-	-	-		-					
ample Data										
Sample ID	Date	T	ime	# Con	tainers	# Filtered			Remarks	
the second s	11	1.	105	# Con	amers		1.00		TAXABLE INCOME.	
T V T	10/31/1		-	(norme	1-500	ml H-3,	EILUX,	4-16 1-131
Juppin-04	1.	15	35	7		inne	1		11	11
			-	-			1			
									1	
ampler's Name (print). E	RICI	VEC	HSt		Sam	oler Signa	ature: E	in The	and

Facility: 10	cuter fo	1	2		Site II	: Mw-	15	Sampl	er E	FN	
roject Number:	6045		2		Date:	10/3	il.a	Jampr		TN	FTN Associates, Ltd
Toject Humber	401	140			Date.	10/3	112				1 114 A330014103, Lto
Site Description	0										
Type: Monitoring	Well T	emporary	Well [Extract	ion Well	Produ	ction We		watcring We	ell 🗌 Borehole	Other
Weather: Sunn				1	emp (°F):					1	0-5 mph
Well Locked? Y	es 🗆 No	To	otal Dep	th (ft) 3		Dama	ge/repair	rs neede	d: Bolla	rds need	painting and
Remarks:							<u> </u>		Eros	ion near	pad.
Water Level Data											
Measuring point des	cription:	1	Water le	vel Met	er Make	Model 1	No		Serial No.	(Optional):	
XMark/notch on T	OC				K 100		3		Seria Pro	(optional).	
North rim of TO	C		Pre-pu	rge	Pre-pur	ge	During		Purge	After	Remarks
Other:			initia		onfirma		purging	the second s	3 gnd	sampling	
Time ("24:00" hr)			0810		1000		102	1.	424	1424	
Depth to Water (ft)			7.14		7.08		7.62		64	7.64	
Date (mm/dd/yy) LNAPL Thickness (f	1) (16		11/4/2	1	10/31/1	2	10/31	112 10	31/12		
DNAPL Thickness (1											
Note: Record "S" in Rema			s observed								
Field Data Instrument Make/Mo	dal No:	Unito	r Scrial	NIai		Dur				Dailand	a a ministra me
			A	INO:			p descri Peristali				escription: posable polyethylene
HE Scienfil	#2						ted / portab		posable Teflon		
	HE Scientific #2					Submersible Disposable					
Purge depth (ft):	32.57				Well goes dry during purging: Yes X No						
Casing vol. (gal): (where applicable)	N/A				= [tota	l depth (f	reet) - der	pth to wa	ter (feet)] = [well ID (inches) ²] = 0.0408
Time ("24:00" hr)	1012	1015	1018	1021	1024	1027	1030	1033		• 1	Remarks
Purge vol. (gal)	0.0	0.15	0.30	0.15	0.60	075	D.9	1.05			
Purge rate (mL/min)	200	200	200	200	200	200	200	200			
oH (su)	6.67	7.27	1.30	7.31	7.31	7.31	7.30				
Temp. (°C)	23.91	24.01	23.99	24.16	23.34	23.42	23.96	23.94			
Spec. cond. (µS/cm)					5401	5675	5683	5643			
D.O. (mg/L)	-	1	-	-	-	-	-	-			
ORP (mV)	-	-	-		-	-	-	-			
urbidity (NTU)	9.00	640	7.38	16.6-2	8.27	10.32	8.41	7.17			
Color/tint		14	1			10.10					
Odor											and the second sec
ample Data											
Sample ID	Date	Т	'ime	# Con	tainers	# F	iltered			Remarks	
MW-05	10/31/1		390	1			one.	1-500	.04.3	2-160	and the second division in the second division division in the second division di division division division division divis
	inter la					10	A A	1-100	1	AIGH	/

Sampler's Name (print): ERIC NECH (58

Sampler Signature: Lin Macin

	1	17	T		-			-		1	
noility:			d-3		Site ID	- 7		Samp	ler: El	EN	
oject Number: 6	045-4	160			Date:	11/2	-/12				FTN Associates, Ltd
Site Description				_							
Type: Monitoring V	Vell	emporar	y Well	TExtract	ion Well	Prod	uction Well		ewatering We	Il Borehole	Other
Weather: Foggy				1	mp (°F):	_	00			Vind: Non	
Well Locked? Ve	s 🗌 No	T	otal Dep	(h (ft) }			age/repair	s need			
Remarks:											
Anarytin - Analytical - Analyti		and the second second	-								in the second
Water Level Data				1							
Measuring point descu	ription:		Water le	vel Met	er Make/	Model	No.		Serial No	(Optional):	
Mark/notch on TC		-			100	-					
North rim of TOC			Pre-pu initia		Pre-purg		During purging		Purge end	After sampling	Remarks
Time ("24:00" hr)			080	a sum of the local division of the local div	0900		0912		0920	1010	
Depth to Water (ft)			4.9		7.97		5.89		6.21	6.52	
Date (mm/dd/yy)			11/2/	12/1		2	11/2/1		12/12	11/2/12	
LNAPL Thickness (ft)					1-1-		1 -1		1-1-2-		
DNAPL Thickness (ft Note: Record "S" in Reman			s observed				-				
	Ko Corumn	in sheen i	3 00301 100								
Field Data	1.57										
instrument Make/Mod	el No:	Unit	Erial	No:			mp descrip Peristalti				escription: osable polyethylene
HE Scienti	fic	-	# 2	-		Ē			ated / portal		osable Teflon
	-			De			Submers				osable PVC
Purge depth (ft): Casing vol. (gal):	30:10			-	Well g	goes dr	y during p	urging	: _ Yes	I No	
where applicable)	MA				= [total	depth	(feet) - dep	th to wa	ater (feet)] •	well ID (inches)	²] = 0.0408
Fime ("24.00" hr)	0205	0900	0911	0914	0917	012	0			F	Remarks
Purge vol. (gal)	0.0	01	0.2	0.3	0 34	0.4					
Purge rate (mL/min)	175	175	175	125	125	125					
oH (su)	7.97	7.64	-	7.48	7.47	7.48	7		·		
Femp. (°C)	22.51		-23.00	23.12		23.11					
Spec. cond. (µS/cm)	3249	3265	3272	3277	3271	3260	1				
D.O. (mg/L)	5	-	-	-	-	-					
DRP (mV)	-	-		-	-	-		1			
Turbidity (NTU)	15.26	11.27	17.74	19.18	16.73	17.01					
Color/tint Ddor	1	-		-		-		-			
					-			_		a terrest	
ample Data			_								
Sample ID	Date		Гime	# Con	tainers	#1	Filtered			Remarks	
nul-06	1/2/12	20	920	7		M	love	1-50	0 ml (4.3	12-12x	; 4-16 I-13,
	11								1		/
nella des des content										· A	
ampler's Name (print	ER	10 1	VEC	tise			Sample	er Sign	nature:	mille	cc.

Facility:	Vater	ford	- 3		Site ID	Mu	-7	Sample	er: (FFN		
roject Number;	6045				Date:	,	liz					FTN Associates, Ltd
	E IF	(0)				-fail						
Site Description				1000				-		1000	-	
Type: Monitoring V	Vell T	emporary	Well	Extract	ion Well [Produ	ction Wel	I De	watering V	Well D Bo	rehole [Other
Weather: Sur	int			Air Te	emp (°F):	68	/	-		Wind:	Non	u
Well Locked? Ye	s 🖞 No	To	otal Dept	h (ft) -	1.15		ge/repair	rs neede	d:			
Remarks:												
		Tollor in the	_									
Water Level Data												
Measuring point desc	ription:	1	Water le	vel Met	er Make/	Model 1	No.		Serial N	No. (Optio	nal):	
Mark/notch on TC			6	ECI	k 100	# 3					-	
North rim of TOC			Pre-pu		Pre-purg		During		Purge	Af		Remarks
Other:			initia		onfirmat		purging		end	samp		
Time ("24:00" hr)			0755		1738		1750		806	184		
Depth to Water (ft)			6.98	6	2.84		8.38		7.54	8.6	0,	
Date (mm/dd/yy) LNAPL Thickness (ft	105-000	1	1/2/12	1	0/31/1	2	10/3/1	12 10	131/12	10/3	1/12	
DNAPL Thickness (fi												
Note: Record "S" in Reman	ks Column	if sheen is	s observed	-		-					1.00	
			and a second									
Field Data				-			and the second second		-			
Instrument Make/Mod	lel No:	Unit o	r Serial	No:			np descri			B		scription:
HESCIEN	LIFIC	-	112			R	Peristalt Bladder		ted / port	able)		osable polyethylene osable Teflon
							Submers		icu / por			osable PVC
Purge depth (ft):	36.15	-			Well g	oes dry	during p		ΠYc	s No	-	
Casing vol. (gal): (where applicable)	MA				-				-			²] = 0.0408
Time ('24.00" hr)	1739	1742	445	.4110	-	-	1.0.		1803			emarks
Purge vol (gal)	00		1145	1148		1759		1000		1806		emarks
	-	0 15		045			0.90	1.0	12	1.3	-	-
Purge rate (mL/min)	200	200	200	200	200	200		200	200	200	-	
pH (su)	7.43		7.08	7.03		6.97		6.95	6.95	6.95		
Temp. (°C)			24.16				24.00					
Spec. cond. (µS/cm)	1139		1079		1088	1/13	1135	1188	1240	1232		
D.O. (mg/L)	-	-	-		-		-	-	-			
ORP (mV)	-	•	-	~	-	-	-	~	-			
Turbidity (NTU)	16.50	7.42	12.18	18 2:	11.26	5.73	4.15	9.24	8.31	6.37		
Color/tint	-	L	r	5	-		2					
Odor	3	4	L	-	*	-						
Sample Data												
Sample ID	Date	11	ime	# Con	taincrs	# F	iltered			R	emarks	
and the second se			10	7	, and a start of the start of t	-		1 54	0.		1	2. 4.11 2.10
MW-07	10/31/1	0 10	10	1		110	ny	1-20	C'm r	- Pix	-140	x; 4125-13
						-						
		1					1					

Sampler's Name (print):	ERIS NECHISE	Sampl
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ler Signature: Eric Mecani

Tacility: h	Intert	word-	3		Site ID	: Mal		Sampl	er: El	N	
roject Number:		5-46				11/1/1					FTN Associates, Lt
Site Description			V			1.10	85				
Type: Monitoring V		cmporan	Well F	TExtract	ion Wall I	Drodu	ation Wa		watering We	II D Borehole	Other
Weather: Sum		emportary	then L	10	emp (°F):					/ind: No.	
Well Locked? Ye	S TI NO	Т	tal Den	th (ft) 4			ge/repair	re neede			1.1 /
Remarks:			nai Dep	un (11)	11, 1 4	Dama	genepar	IS neede	pas	needs	dirt under
									1	-	
Water Level Data											
Measuring point desc Mark/notch on TC					ter Make/		No.		Serial No.	(Optional):	
North rim of TOC		-	Pre-pu	C IC	(00 Pre-pury		During		Purge	After	
Other:			initia		confirmat		purging		end	sampling	Remarks
Fime ("24:00" hr)			6745		1609		1625		630	1730	
Depth to Water (ft)			8.22		8.24		8.54		8.54	8.58	
Date (mm/dd/yy)			11/2/12		1/1/1				1/1/12	11/1/12	
LNAPL Thickness (ft					1						
NAPL Thickness (ft lote: Record "S" in Remar			observed					_			
field Data											
nstrument Make/Mod	lel No:	Unit o	r Serial	No:		Pun	p descri	iption:		Bailer de	escription:
YSI	-1-	+	±1		-	X	Peristal	tic		🗌 Dis	posable polyethylene
LIFF Sur	entern		12						ited / portab		posable Teflon
	And in case of the local division in which the local division in t	and the second second			A REAL PROPERTY.		Submer	sible		Dist	posable PVC
	36.97	2			Well g	and a subscription	Submers during p	And a state of the local diversity of the local diversity of the local diversity of the local diversity of the	TYes		posable PVC
Casing vol. (gal):	36.97 N/A	2				goes dry	during p	ourging:			
Casing vol. (gal): where applicable)	N/A 1610	1613	1616	1.619	= [tota	goes dry I depth (f	during p eet) – dep	purging: pth to wa	ter (feet)] = [well ID (inches	
Casing vol. (gal): where applicable) "ime ("24.00" hr)	NIA	-	1616	1619	= [tota	goes dry I depth (f	during p eet) – dep	purging: pth to wa	ter (feet)] = [well ID (inches) ²] = 0.0408
Casing vol. (gal): where applicable) Time ("24.00" hr) urge vol. (gal)	N/A 1610	1613			= [total	goes dry I depth (f	during p eet) - dep	purging: pth to wa	ter (feet)] = [well ID (inches) ²] = 0.0408
asing vol. (gal): vhere applicable) ime ("24.00" hr) urge vol. (gal) urge rate (mL/min)	N/A 1610 20	1613 0.1	0.2	03	=[total 1622 0.4 150	goes dry 1 depth (f 1625 0.5	during p eet) - dep 1627 0 6	purging: pth to wa	ter (feet)] • [well ID (inches) ²] = 0.0408
Casing vol. (gal): where applicable) Time ("24.00" hr) urge vol. (gal) urge rate (mL/min) H (su)	N/A 1610 130 130 7.80 25.04	1613 0.1 150 6.29	0.2 150 6.88 24.6	03 150 639 2460	$= [tota] \\ 1622 \\ 0.4 \\ 150 \\ 6.89 \\ 0.24.57 \\ \end{bmatrix}$	2005 dry 1 depth (f 1625 0.5 150 6.90 24.50	during p eet) - dep 1627 0 6 150 4.90 2452	burging: pth to wa 1630 0.7 150 6.92 24.56	ter (feet)] = [well ID (inches) ²] = 0.0408
Casing vol. (gal): where applicable) Time ("24.00" hr) urge vol. (gal) urge rate (mL/min) H (su) emp. (°C)	N/A 1610 100 190 7.20	1613 0.1 150 6.29 24.70 1156	0.2 150 6.88 24.6	03 150 639 2460	$= [tota] \\ 1622 \\ 0.4 \\ 150 \\ 6.89 \\ 0.24.57 \\ \end{bmatrix}$	2005 dry 1 depth (f 1625 0.5 150 6.90 24.50	during p eet) - dep 1627 0 6 150 4.90 2452	burging: pth to wa 1630 0.7 150 6.92 24.56	ter (feet)] = [well ID (inches) ²] = 0.0408
Casing vol. (gal): where applicable) "ime ("24.00" hr) urge vol. (gal) urge rate (mL/min) H (su) "emp. (°C) pcc. cond. (µS/cm) D.O. (mg/L)	N/A 1610 20 130 7.20 25.04 12.48 T	1613 0.1 150 6.29	0.2 150 6.88 24.6	03 150 639 2460	= [total 1622 0.4 150 6.89	2005 dry 1 depth (f 1625 0.5 150 6.90 24.50	during p eet) - dep 1627 0 6 150 4.90 2452	burging: pth to wa 1630 0.7 150 6.92 24.56	ter (feet)] = [well ID (inches) ²] = 0.0408
Casing vol. (gal): where applicable) Time ("24.00" hr) urge vol. (gal) urge rate (mL/min) H (su) Gemp. (°C) pcc. cond. (µS/cm) 0.0. (mg/L) RP (mV)	N/A 1610 130 7.20 25.04 12.48 -	1613 0.1 150 6.99 24.70 1156 2 2	0.2 150 6.88 24.65 1149	0 3 150 6 39 2460 1150	$= [tota] \\ 1622 \\ 0.4 \\ 150 \\ 6.89 \\ 24.57 \\ 1.82 \\ 1.82 \\ \end{bmatrix}$	goes dry 1 depth (f 1625 0.5 150 (290 24.50 (24.50 (24.50	during p (667) - dep (667) (67) (67) (67) (67) (67) (67) (67	pth to wa pth to wa 0.7 150 6.92 24.56 12.88	ter (feet)] = [well ID (inches) ²] = 0.0408
Purge depth (ft): Casing vol. (gal): where applicable) "ime ("24.00" hr) Purge vol. (gal) Purge rate (mL/min) H (su) Pemp. (°C) pcc. cond. (µS/cm) D.O. (mg/L) PRP (mV) Purbidity (NTU)	N/A 1610 130 7.20 25.04 12.48 -	1613 0.1 150 6.29 24.70 1156	0.2 150 6.88 24.65 1149	03 150 639 2460	$= [tota] \\ 1622 \\ 0.4 \\ 150 \\ 6.89 \\ 24.57 \\ 1.82 \\ 1.82 \\ \end{bmatrix}$	goes dry 1 depth (f 1625 0.5 150 (290 24.50 (24.50 (24.50	during p eet) - dep 1627 0 6 150 4.90 2452	pth to wa pth to wa 0.7 150 6.92 24.56 12.88	ter (feet)] = [well ID (inches) ²] = 0.0408
Casing vol. (gal): where applicable) Time ("24.00" hr) Purge vol. (gal) Purge rate (mL/min) H (su) Temp. (°C) pcc. cond. (µS/cm) D.O. (mg/L) PRP (mV) probability (NTU) olor/tint	N/A 1610 20 130 7.80 25.04 12.48 - 12.48 - 12.48 - - 17.84 -	1613 0.1 150 6.99 24.70 1156 2	0.2 150 6.88 24.65 1149	0 3 150 6 39 2460 1150	$= [tota] \\ 1622 \\ 0.4 \\ 150 \\ 6.89 \\ 24.57 \\ 1.82 \\ 1.82 \\ \end{bmatrix}$	goes dry 1 depth (f 1625 0.5 150 (290 24.50 (24.50 (24.50	during p (667) - dep (667) (67) (67) (67) (67) (67) (67) (67	pth to wa pth to wa 0.7 150 6.92 24.56 12.88	ter (feet)] = [well ID (inches) ²] = 0.0408
lasing vol. (gal): where applicable) ime ("24.00" hr) urge vol. (gal) urge rate (mL/min) H (su) emp. (°C) pcc. cond. (μS/cm) .O. (mg/L) RP (mV) urbidity (NTU) olor/tint	N/A 1610 130 7.20 25.04 12.48 -	1613 0.1 150 6.99 24.70 1156 2	0.2 150 6.88 24.65 1149	0 3 150 6 39 2460 1150	$= [tota] \\ 1622 \\ 0.4 \\ 150 \\ 6.89 \\ 24.57 \\ 1.82 \\ 1.82 \\ \end{bmatrix}$	goes dry 1 depth (f 1625 0.5 150 (290 24.50 (24.50 (24.50	during p (667) - dep (667) (67) (67) (67) (67) (67) (67) (67	pth to wa pth to wa 0.7 150 6.92 24.56 12.88	ter (feet)] = [well ID (inches) ²] = 0.0408
Casing vol. (gal): vhere applicable) 'ime ("24.00" hr) urge vol. (gal) urge rate (mL/min) H (su) emp. (°C) pcc. cond. (µS/cm) .O. (mg/L) RP (mV) urbidity (NTU) olor/tint dor ample Data	N/A 1610 20 130 7.80 25.04 12.48 - 12.48 - 12.48 - - 17.84 -	1613 0.1 150 6.99 24.70 1156 2	0.2 150 6.88 24.65 1149	0 3 150 6 39 2460 1150	$= [tota] \\ 1622 \\ 0.4 \\ 150 \\ 6.89 \\ 24.57 \\ 1.82 \\ 1.82 \\ \end{bmatrix}$	goes dry 1 depth (f 1625 0.5 150 (290 24.50 (24.50 (24.50	during p (667) - dep (667) (67) (67) (67) (67) (67) (67) (67	pth to wa pth to wa 0.7 150 6.92 24.56 12.88	ter (feet)] = [well ID (inches) ²] = 0.0408
Casing vol. (gal): where applicable) Time ("24.00" hr) urge vol. (gal) urge rate (mL/min) H (su) emp. (°C) pcc. cond. (µS/cm) n.O. (mg/L) RP (mV) urbidity (NTU) olor/tint dor ample Data Sample ID	N/A 1610 20 130 7.80 25.04 12.48 - 12.48 - 12.48 - - 17.84 -	1613 0.1 150 24.79 24.79 1156 ~ 12.63 ~	0.2 150 6.88 24.65 1149	0 3 150 6 59 2462 1150 12.1($= [tota] \\ 1622 \\ 0.4 \\ 150 \\ 6.89 \\ 24.57 \\ 1.82 \\ 1.82 \\ \end{bmatrix}$	goes dry 1 depth (f 1625 0.9 150 6.90 24.50 1243 1243 1243 1243	during p (667) - dep (667) (67) (67) (67) (67) (67) (67) (67	ourging: pth to wa 1630 0.7 150 6.92 12.88 11.31	ter (feet)] = [No well ID (inches) ² • 0.0408 Remarks
Casing vol. (gal): where applicable) "ime ("24.00" hr) urge vol. (gal) urge rate (mL/min) H (su) emp. (°C) pcc. cond. (µS/cm) O.O. (mg/L) RP (mV) urbidity (NTU) olor/tint dor ample Data	N/A 1610 130 7.20 25.04 12.48 	1613 0.1 150 (150 24.79 24.79 (156 ~ 12.63 ~	02 150 6.88 24.65 1149 - 13.57	03 150 659 2462 1150 12.1(= [total 1622 0.4 150 6.89 24.52 1182	goes dry 1 depth (f 1625 0.9 150 6.90 24.50 12.43 12.43 12.43 12.43 12.43 12.43 14.50 12.43 14.50	during p eet) - dep (627 0 6 (50 (4.90 24,52 1267 (4.93	ourging: pth to wa 1630 0.7 150 6.92 12.88 11.31	ter (feet)] = [No well ID (inches) ² • 0.0408 Remarks
Casing vol. (gal): where applicable) Time ("24.00" hr) Purge vol. (gal) Purge rate (mL/min) H (su) Temp. (°C) pcc. cond. (µS/cm) D.O. (mg/L) PRP (mV) PRP (m	N/A 1610 130 7.20 25.04 12.48 	1613 0.1 150 24.79 24.79 1156 ~ 12.63 ~	0 2 150 6.88 124.64 1149 - 13.57	03 150 659 2462 1150 12.1(= [total 1622 0.4 150 6.89 24.52 1182	goes dry 1 depth (f 1625 0.9 150 6.90 24.50 12.43 12.43 12.43 12.43 12.43 12.43 14.50 12.43 14.50	during p eet) - dep (627 0 6 (50 (6.90 2452 1267 1267	ourging: pth to wa 1630 0.7 150 6.92 12.88 11.31	ter (feet)] = [No well ID (inches) ² • 0.0408 Remarks
asing vol. (gal): where applicable) ime ("24.00" hr) urge vol. (gal) urge rate (mL/min) H (su) emp. (°C) pec. cond. (µS/cm) .O. (mg/L) RP (mV) urbidity (NTU) olor/tint dor ample Data Sample ID	N/A 1610 130 7.20 25.04 12.48 	1613 0.1 150 24.79 24.79 1156 ~ 12.63 ~	0 2 150 6.88 124.64 1149 - 13.57	03 150 659 2462 1150 12.1(= [total 1622 0.4 150 6.89 24.52 1182	goes dry 1 depth (f 1625 0.9 150 6.90 24.50 12.43 12.43 12.43 12.43 12.43 12.43 14.50 12.43 14.50	during p eet) - dep (627 0 6 (50 (6.90 2452 1267 1267	ourging: pth to wa 1630 0.7 150 6.92 12.88 11.31	ter (feet)] = [No well ID (inches) ² • 0.0408 Remarks
Casing vol. (gal): where applicable) Time ("24.00" hr) urge vol. (gal) urge rate (mL/min) H (su) emp. (°C) pcc. cond. (µS/cm) n.O. (mg/L) RP (mV) urbidity (NTU) olor/tint dor ample Data Sample ID	$\mathcal{N} _{\mathcal{A}}$ $\mathcal{N} _{\mathcal{A}}$ $\mathcal{V} \odot$ $\mathcal{V} \odot$ 	1613 0.1 150 24.79 24.79 1156 ~ 12.63 ~	0 2 150 6.88 24.65 1149 - 1357 1357	0 3 150 6 59 2462 1150 12.1(# Cor	= [total 1622 0.4 150 6.89 24.52 1182	goes dry 1 depth (f 1625 0.9 150 6.90 24.50 12.43 12.43 12.43 12.43 12.43 12.43 14.50 12.43 14.50	during p eet) - dep (627 0 6 (50 (6.90) 24,52 (24,52 1267 (24,52) 1267 (1267) 1267	purging: pth to wa 0.7 1630 0.7 1500 24.56 12.88 11.31 1-500	ter (feet)] = [Remarks 2-12 CC	y^{2} = 0.0408 Remarks 4-12. T 131

Tacility: U	enterf	ord	3		Site ID	: Mu	V-09	Samp	ler:		
	40-15-				Date:	11/1	112				FTN Associates, Ltd
SH D I I									A A A A A A A A A A A A A A A A A A A		
Site Description		-									
Type: Monitoring	well [] I	emporar	y Well	11			luction We			the second s	
Weather: Suhn	4		1.5		emp (°F)	-	>	_		ind: No	~
Well Locked? Ye Remarks:		10	otal Dept	th (ft)_ <u>4</u>	0.22	Dan	nage/repai	rs need	ed:		
Kemarks:											
Water Level Data											
Measuring point desc			Water le		er Make				Serial No.	(Optional):	
North rim of TOC	2		Pre-purge initial		Pre-pur onfirma	ge	e During		Purge end	After sampling	Remarks
Time ("24:00" hr)			0735		1740	>	175	4	1756	1830	
Depth to Water (ft)			6.11		6.08		6.19		6.21	6.18	
Date (mm/dd/yy)			11/2/12		11/11	12	11/1/	12	11/1/12	11/1/12	
LNAPL Thickness (ft) (If presen	(t)					1 1		1.1		
DNAPL Thickness (ft Note: Record "S" in Remar			c obcorriad								
Field Data											
Instrument Make/Mod	lel No:	Unit o	or Serial	No:			mp descri				scription:
HE Supert	ific	-	#12				Peristal Bladder Submer	(dedic	ated / portabl	le) 🗌 Disp	osable polyethylene osable Teflon osable PVC
Purge depth (ft):	75	.22		-	Well	zocs di	y during p	the second second	: Yes	and the second s	USADICI VC
Casing vol. (gal): (where applicable)	i~],									well ID (inches)	²] * 0.0408
Time ("24.00" hr)	1741	1744	1747	1750	1753	175	4			R	emarks
Purge vol. (gal)	00	0.15	0.30	0.49	0.60	0.79					
Purge rate (mL/min)	200	200	200	200	200.	200		-			
pH (su)	1.28	7.20	7.18	7.12	7,17	7.18	/	1			
Temp. (°C)	22.87	22.74	22.72			-					
Spec. cond. (µS/cm)	2621	26-11		2690	2683	-					
D.O. (mg/L)	-	-	-	-	~	-					
ORP (mV)	~	-	-	-	-	-					
Furbidity (NTU)	20.47	ilde	13.79	11.17	7.69	7.8	5			-	
Color/tint	-	-	-	- I	-	-					
Odor	5	L.	L	L	u	+					
Sample Data											
Sample ID	Date	T	Time	# Con	tainers	#	Filtered			Remarks	
MW-DG	11/1		500	1		-	low	1-50	20 ml 4-3;	HER PARTY NO. 1 INC. ADDRESS	4.1CI-131
						-		_	1		/

Sampler's Name (print): ERIC NECAISE

.

Sampler Signature: Builfera

-acility: Wa	lev fora	- 3	-		Site ID	: ma	0-10	Sample	er: EF	eN	
roject Number:	6045 1	+63			Date:	11/2/	12				FTN Associates, Ltd
Site Description											
Type: Monitoring		emporara	Well [Extract	ion Well I	Prod	uction We		vatering We		Other
Weather: Sunn		carpenni	, men L		emp (°F):						mph
Well Locked?		Te	otal Dep	1		1	age/repai	re neede		ma. Ma-a	mpn
Remarks:		11	Jui Dep			Dam	age/repai	is neede	u.		
Water Level Data											
Measuring point desc	ription:	1	Water lo	vel Met	ter Make/	Model	No.		Serial No.	(Optional):	
E Mark/notch on To	DC				100					V-1	
North rim of TOC	2		Pre-pu		Pre-pury		During		Purge	After	Remarks
Other:			initia	the same in the same is a same in the same in the same is a same in the same	confirmat		purging		end	sampling	
Time ("24.00" hr)		-	835		1220		1240		1250	1320	
Depth to Water (ft) Date (mm/dd/yy)			9.4		10 41		10.4		10,46	10.42	
LNAPL Thickness (ft) (If presen	1)	11/2	12	11/2	112	1/2/1	12 1	1/2/12	11/2/12	
DNAPL Thickness (f	t) (If presen	()									
Note: Record "S" in Remain	rks Column	if sheen is	s observed								
Field Data											
Instrument Make/Mod	del No:	Unit o	r Serial	No:		Pu	np descri	iption:		Bailer de	escription:
YST			世(<u></u>			Peristal	tic	A Second Second		osable polyethylene
HE Scienti	Erc_		#2						ted / portab		osable Teflon
Purge depth (ft):		-		ATTECTIVE	Wall		Submer during p	and plane in case	Yes	No No	osable PVC
Casing vol. (gal):		1.									2
(where applicable)	-	14			= [tota				ter (feet)] * [well ID (inches)	
Time ("24.00" ln)	1225	1228	1231	1234	1237	1240	1243		1249	F	Remarks
Purge vol. (gal)	0.0	02	0.4	0.4	0.8	1.0	1.2	1.4	1.6		
Purge rate (mL/min)	200	200	200	200	200	200		200	200		
pH (su)	7.04	7.00	6.99				6-98	6.98	7.00		
Temp. (°C)	26.32	26.11	25.95	24.03	25 68	2581	25.73		25.98		
Spec. cond. (µS/cm)	7045	7057	70-19	2036	7072	7057	7037	7040	7048		
D.O. (mg/L)	*-	-	-	-	-	- '	~		~		
ORP (mV)	*	-	-	-	-	-	-		-		
Turbidity (NTU)	353.8	304.7	261.7	185.4	107.6	143.6	172.3	1862	2613		
Color/tint	+			1	-				· · · · · ·		
Odor	-										
Sample Data											
Sample ID	Date	Г	imc	# Cot	ntainers	# H	iltered			Remarks	
MW-10	11/2/1	2 11	150	7	1	n	ores	1.900	DH-3	2-16×	: 4-16 I-131
	1								/	1	
				-		1				2	
Sampler's Name (print)- FO.	C A	EcA	152			Samn	ler Sign	ature &	in the	en (
with the second of the second	1 pres	· N	oen	130	the second second		- Samp		0	in the	

		ord - J	3			· Mu	1-11	Sampl	er: ?	EEN			
roject Number:	0045-	463	_	-	Date:	11/11	12					FTN A	Associates, L
Site Description													
Type: Monitoring V	Vall TT	amanarara	Wall	Extract	ion Well [Dead	ation We				anahala [Other	-
Weather: Sur		unporary	Well L		emp (°F):		cuon we		watering				2
	s X No	T	otal Dep	-	emp (F).		5			w mu.	5- 5	mp	n
Remarks:	5 LA NO	-				Dama	ge/repai	rs neede	a:				
		N	lew	we	11								
Water Level Data											1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Measuring point desc	ription:		Water le	vel Met	er Make/	Model 1	No.		Serial N	No. (Opti	onal):		
Mark/notch on TC				KEC	-l < 1	00	13						-
North rim of TOC			Pre-pu		Pre-purg						fter	1	Remarks
and the second se			initia		confirmat	_	the second se		end	the second data and the se	pling		
Fime ("24.00" hr)			6840		1000		103		1057		45		
Depth to Water (ft) Date (mm/dd/yy)	-		9,72		19.0	14	13.1	7 1	3.54		48	_	
NAPL Thickness (ft) (If nresen	(1)	1/2/12		1411	2	1411	12	11/1/12	/ 11	11/12	-	
NAPL Thickness (ft												-	
lote: Record "S" in Reman			observed										
leld Data													
strument Make/Mod	lel No:	Unit o	r Serial	No:	Contraction of the local division of the loc	Pun	np deseri	intion.		1	Bailer de	scriptio	n:
VSI			-1		_		Peristal						olyethylene
47 Scien	fefic		#2	_					ted / port	table)		osable	
							0.1						
1 . 2 /155		and the second second		-	Tant		Submer				and the second day of	osable I	PVC
	-				Well g		during p		_ Ye	s AN	and the second day of	osable l	PVC
asing vol. (gal):	NA					oes dry	during p	ourging:			and the second day of		
asing vol. (gal): where applicable)	-	1	10.18	1021	= [total	oes dry depth (I	during r eet) – der	ourging: oth to wa	ter (feet)]	• [well II	0 (inches)	²] = 0.04	08
asing vol. (gal): where applicable) fime ("24:00" hr)	10.12	1015	1018	1021	= [total	depth (I	during p teel) – dep	purging: pth to wa	ter (feet)]	• [well II.	(inches)		108
asing vol. (gal): where applicable) imc ("24:00" hr) urgc vol. (gal)	10.12	1015	02	0.3	= [total 1024 04	depth (I 1027 0.5	during p ieet) - dep 1030 0-6	purging: pth to wa	ter (feet)] 1036 0.8	• [well II 1039 0.9	(inches) 10 + 2 R 1.0	²] = 0.04 emarks	08) 1048 1.25
asing vol. (gal): where applicable) imc ("24:00" hr) urgc vol. (gal) urge rate (mL/min)	10.12 0 0 150	1015 0.1 150	02	0.3	= [total 1024 04 150	depth (I 1027 0.5 (50	during p eet) - dep 1030 0-6 150	00000000000000000000000000000000000000	ter (feet)] 1036 0.8 150	• [well II 1039 0.9 150	0 (inches) 10+2 R 1.0 (50	²]=0.04 temarks [.] [50	08 1048 1.25 200
asing vol. (gal): where applicable) imc ("24:00" hr) urgc vol. (gal) urge rate (mL/min) H (su)	10,12 0 0 150 7.05	1015 0.1 150 6.99	02 150 6.98	03 150 6.91	= [total 1024 04 150 6-96	depth (I 1027 0.5 150 6.94	during p icet) - dep i030 0-6 150 6.93	0.7 150 6.72	ter (feet)] 1036 0.8 150 6.95	• [well II 1039 0.9 150 6.92	$\frac{10}{1.0}$ $\frac{10}{5.0}$	² 1-0.04 emarks [.] [50 [.54	1.25 200 4.85
asing vol. (gal): where applicable) imc ("24:00" hr) urgc vol. (gal) urge rate (mL/min) H (su) emp. ("C)	10,12 00 190 7.05 22.8	1015 0.1 150 6.79 22.90	0 2 150 6.98 22.9	0.3 150 6.91 423.03	= [total 1024 0.4 150 6.96 23.01	depth (I 1027 0.5 150 6.94 22.99	during p eet) - dep 1030 0-6 150 6.23 23.00	1333 0.7 150 6.92 23.02	ter (feet)] . 1036 0.8 150 6.95 23.05	• [well II 1039 0.9 150 6.92 23.09	(inches) (inches) (10 + 2 R) (1.0) (50) (50) (2.91) (23.42)	² 1-0.04 temarks [.] [50 (.5% (23.29	1.25 200 4.85 23.18
asing vol. (gal): where applicable) imc ("24:00" hr) urge vol. (gal) urge rate (mL/min) H (su) emp. ("C) pec. cond. (μS/cm)	10,12 0 0 150 7.05	1015 0.1 150 6.79 22.90	0 2 150 6.98 22.9	0.3 150 6.91 423.03	= [total 1024 0.4 150 6.96 23.01	depth (I 1027 0.5 150 6.94 22.99	during p eet) - dep 1030 0-6 150 6.23 23.00	1333 0.7 150 6.92 23.02	ter (feet)] . 1036 0.8 150 6.95 23.05	• [well II 1039 0.9 150 6.92 23.09	(inches) (inches) (10 + 2 R) (1.0) (50) (50) (2.91) (23.42)	² 1-0.04 temarks [.] [50 (.5% (23.29	1.25 200 4.85
asing vol. (gal): where applicable) imc ("24:00" hr) urgc vol. (gal) urge rate (mL/min) H (su) emp. ("C) pec. cond. (μS/cm) .O. (mg/L)	10,12 00 190 7.05 22.8	1015 0.1 150 6.79 22.90	0 2 150 6.98 22.9	0.3 150 6.91 423.03	= [total 1024 0.4 150 6.96 23.01	depth (I 1027 0.5 150 6.94 22.99	during p eet) - dep 1030 0-6 150 6.23 23.00	1333 0.7 150 6.92 23.02	ter (feet)] . 1036 0.8 150 6.95 23.05	• [well II 1039 0.9 150 6.92 23.09 6563	(inches) (inches) (10 + 2 R) (1.0) (50) (50) (2.91) (23.42)	² 1-0.04 temarks [.] [50 (.5% (23.29	1.25 200 4.85 23.18
Casing vol. (gal): where applicable) Sime ("24:00" hr) urge vol. (gal) urge rate (mL/min) H (su) Gemp. ("C) pec. cond. (µS/cm) O. (mg/L) RP (mV)	10.12 0 0 150 7.05 22.8 7119 -	1015 0. 1 150 6.99 22.90 7163	0 2 150 6.98 22.99 7201 -	0 3 150 6.91 23.03 7169 -	= [total 1024 04 150 6.96 23.01 7161 -	coes dry depth (1 1027 0.5 (50 6.94 22.99 6855	during p icel) - dep 1030 0-6 150 6.93 23.00 6820	Durging: pth to wa 0.7 150 4.92 23.02 4741	ter (feet)] 1036 0.8 150 6.95 23.05 6670 -	• [well II 1039 0.9 150 6.92 23.09 6563 -	0 (inches) $10+2^{R}$ 1.0	²] • 0 04 emarks [.] [5 0] (, 56 [3 29 5 296 -	08 1.25 200 4.85 23.18 52.10 -
urge depth (ft): Casing vol. (gal): where applicable) "ime ("24:00" hr) urge vol. (gal) urge rate (mL/min) H (su) emp. ("C) pec. cond. (μS/cm) P.O. (mg/L) RP (mV) urbidity (NTU) olor/tint	10.12 0 0 150 7.05 22.8 7119 -	1015 0.1 150 6.99 22.90 7163 - 517.4	0 2 150 6.98 22.99 7201 -	0 3 150 6.91 23.03 7169 -	= [total 1024 0.4 150 6.96 23.01	depth (I 1027 0.5 150 6.94 22.99	during p eet) - dep 1030 0-6 150 6.93 23.00 6820	Durging: pth to wa 0.7 150 4.92 23.02 4741 -	ter (feet)] 1036 0.8 150 6.95 23.05 6670 -	• [well II 1039 0.9 150 6.92 23.09 6563 -	0 (inches) $10+2^{R}$ 1.0	²] • 0 04 emarks [.] [5 0] (, 56 [3 29 5 296 -	08 1.25 200 4.85 23.18 52.10
asing vol. (gal): where applicable) iime ("24:00" hr) urge vol. (gal) urge rate (mL/min) H (su) emp. ("C) pec. cond. (µS/cm) .O. (mg/L) RP (mV) urbidity (NTU) obor/tint	10,12 0 0 190 7.05 22.8 7119 - 648.3	1015 0. 1 150 6.99 22.90 7163	0 2 150 6.98 22.99 7201 -	C 3 150 6.91 23.03 7169 - - 370.6	=[total 1024 04 150 6.96 23.01 7161 - - 279.0 -	coes dry depth (1 1027 0.5 (50 6.94 22.99 6855 - - 263.1	during p teet) - dep 1030 0-6 150 6.93 23.00 6820 - 241.3	Durging: pth to wa 0.7 150 4.92 23.02 4741	ter (feet)] 1036 0.8 150 6.95 23.05 6670 - 124.4 -	• [well II 1039 0.9 150 6.92 23.09 6563 -	0 (inches) $10+2^{R}$ 1.0	²] • 0 04 emarks [.] [5 0] (, 56 [3 29 5 296 -	08 1.25 200 4.85 23.18 52.10 -
asing vol. (gal): /here applicable) imc ("24:00" hr) urge vol. (gal) urge rate (mL/min) H (su) emp. ("C) pec. cond. (µS/cm) .O. (mg/L) RP (mV) urbidity (NTU) plor/tint	10.12 0 0 190 7.05 22.5 7119 - - - - - - - - - - - - -	1015 0.1 150 6.99 22.90 7163 - 517.4	0 2 150 6.98 22.99 7201 -	0 3 150 6.91 23.03 7169 -	= [total 1024 04 150 6.96 23.01 7161 -	coes dry depth (1 1027 0.5 (50 6.94 22.99 6855	during p icel) - dep 1030 0-6 150 6.93 23.00 6820	Durging: pth to wa 0.7 150 4.92 23.02 4741	ter (feet)] 1036 0.8 150 6.95 23.05 6670 -	• [well II 1039 0.9 150 6.92 23.09 6563 -	0 (inches) $10+2^{R}$ 1.0	²] • 0 04 emarks [.] [5 0] (, 56 [3 29 5 296 -	08 1.25 200 4.85 23.18 72.10 -
asing vol. (gal): there applicable) imc ("24:00" hr) arge vol. (gal) arge rate (mL/min) H (su) emp. ("C) beec. cond. (µS/cm) .O. (mg/L) RP (mV) arbidity (NTU) blor/tint dor	10.12 0 0 190 7.05 22.5 7119 - - - - - - - - - - - - -	1015 0.1 150 6.99 22.90 7163 - 517.4	0 2 150 6.98 22.99 7201 -	C 3 150 6.91 23.03 7169 - - 370.6	=[total 1024 04 150 6.96 23.01 7161 - - 279.0 -	coes dry depth (1 1027 0.5 (50 6.94 22.99 6855 - - 263.1	during p teet) - dep 1030 0-6 150 6.93 23.00 6820 - 241.3	Durging: pth to wa 0.7 150 4.92 23.02 4741	ter (feet)] 1036 0.8 150 6.95 23.05 6670 - 124.4 -	• [well II 1039 0.9 150 6.92 23.09 6563 -	0 (inches) $10+2^{R}$ 1.0	²] • 0 04 emarks [.] [5 0] (, 56 [3 29 5 296 -	08 1.25 200 4.85 23.18 52.10 -
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asing vol. (gal): where applicable) imc ("24:00" hr) urge vol. (gal) urge rate (mL/min) H (su) emp. ("C) pec. cond. (µS/cm) .O. (mg/L) RP (mV) urbidity (NTU) plor/tint dor mple Data Sample ID	10,12 6 0 190 7.05 22.5 7119 - - - - Date	1015 0.1 150 6.79 22.90 7163 - 517.4 - -	0 2 150 6.98 22.9 72-1 - - 443.9 -	C 3 150 6.97 23.03 7169 - - - - -	= [total 1024 04 150 6.96 23.01 7161 - - 279.0 -	(1027) 1027) 1027) 150 150 150 150 150 150 150 150	during p icet) - dep 1030 0-6 150 6.93 23.00 6820 - 211.3 -	Durging: pth to wa 1933 0.7 150 4.92 23.02 4741 - 156.9 -	ter (feet)] 1036 0.8 150 6.95 23.05 6670 - 124.4 -	• [well II 1039 0.9 150 6.92 23.09 6563 - 100.6 - R	0 (inches) 10+2 R 1.0 (50 6.91 23.42 6054 - - - - -	² 1=0.04 emarks [.] [5:0] (08 1048 1.25 200 4.85 23.18 52.10 - - 60.46

Facility:		_			Site ID;	MW	11 cont	Samp	oler:		
roject Number:					Date:		_				FTN Associates, Lt
Site Description				-							
Type. Monitoring V		cmporar	v Well	TExtra	ction Well	Prod	uction We		Dewatering W	ell 🗌 Borchole	Other
Weather:					Temp (°F):	_				Wind:	
Well Locked?	s No	T	otal Dept		The second secon	Dam	age/repa	irs need			
Remarks:		_					-Berreha				
Water Level Data											
Measuring point desc	ription:		Water le	vel M	eter Make/	Model	No.	_	Serial No	. (Optional):	
Mark/notch on TO	OC								Solidi Pie	(optional).	
North rim of TOC	3		Pre-pu		Pre-purg	e	During	-	Purge	After	Remarks
Other:			initia	1	confirmati	on	purgin	g	end	sampling	
Fime ("24:00" hr)			_				_				
Depth to Water (ft)							-	-			
Date (mm/dd/yy) LNAPL Thickness (ft) (If prover	()									
DNAPL Thickness (fi	t) (If presen	nt)									
Note: Record "S" in Reman			s observed								
Field Data											
nstrument Make/Mod	del No:	Unit	or Serial	No		Pu	mp descr	intion		Bailor d	escription:
YSI			#(Peristal				posable polyethylene
HF Sciented	qu_		#2				Bladde	r (dedic	ated / portal	ble) 🗌 Disp	oosable Teflon
urge depth (ft):		a well for a co		and the local dive	Well g	oes dr	Submer		g: Yes		oosable PVC
Casing vol. (gal);					-					hand	21 00100
where applicable)			-	_	= [total	depth (feet) - de	pth to w	ater (feet)] •	[well ID (inches)"] = 0.0408
ime ("24.00" ln)	1051	1054								1	Remarks
urge vol. (gal)	1.40	1.59	1.70	-	-						
urge rate (mL/min)	200	200	200								
H (su)	6.85	6.84	6.85								
emp. (°C)						1					
pec. cond. (µS/cm)	5059	5039	5057		1 1 1	1					
	-	-	-		-		X				
	-	1	-	1			1				
	-										
DRP (mV) 'urbidity (NTU)	45.69	4113	101.0				1				
DRP (mV) Turbidity (NTU)	-	41.13	101.0								
DRP (mV) burbidity (NTU) bolor/tint	-		101.0								
PRP (mV) urbidity (NTU) olor/tint dor	45.69	-	101.0								
DRP (mV) urbidity (NTU) color/tint idor ample Data	45.69			# C	ontainers	#1	filtered			Remarks	
PRP (mV) urbidity (NTU) olor/tint dor ample Data Sample ID	45.69	1	Fime	# Co	ontainers		Filtered	1.60	Del a:	Remarks	
D.O. (mg/L) DRP (mV) Curbidity (NTU) Color/tint Ddor ample Data Sample ID MW ~ []	45.69	1		# Ca	ontainers		Filtered	1-500	ml 64-3;	Remarks	
ORP (mV) Surbidity (NTU) Solor/tint Odor ample Data Sample ID	45.69	1	Fime	# Ca 7	ontainers			1-500	INP 64-3;		
PRP (mV) urbidity (NTU) olor/tint dor ample Data Sample ID	45.69	1	Fime	# Ca 7	ontainers			1-500	m264-3;		
ORP (mV) Surbidity (NTU) Solor/tint Odor ample Data Sample ID	45.69 Date 1/1/	12 (Fime	7	1		ine		m2H-3;	2-1100;	+-12 I-13



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:	Section B Required Pr		ormation	e					Sectio	on C	nation													Page	I .	1		h	1	
Company: ENTERGY WATERFORD 3	Report To;	Rodr	ney Lei	Blanc			1		Attentio		_	AME	-		_	-	-	-						-	-	-		-	1	_
Address 17265 River Road	Copy To:	-			_		-		Compa	any Na	me:	-	-	-						REGU	LATO	RY A	GEN	X						
Killona, LA 70057					1				Addres	98;	_	-	-		-		-	-			NPDES	200200		OUND	WAT	ER	T DR	INKING W	ATER	
Email To rieblan@entergy.com	Purchase Or	der No.:						-	Pace Q Referen	luole		-	-				-	-		F 1	UST	r	R	CRA				OTHER		_
Phone: (504) 464-3267 Fax:	Project Nam	e: /	0.	-1.	1	10	14		Pace P Manage	roject	C	indy C	laves	sen (5	04) 3	05-36	526	-		SH	Locat		-	-	-	Ø				ma
Requested Due Date/TAT: 15 WORKING DAYS	Project Num	ber:	a	01	4	3	J	1		rofie #	-	5:	43	18	2			-			STAT		-	-	-					
		-	-					_	_	_							R	eque	botad	Analy	ais Filt	bored	(Y/N)							
Section D Valid Matrix Coo Required Client Information MATRIX Denating water	CODE DW WT	ino term	COMP)		COLLE	ECTED					P	reserv	ative	s		1	IN	IN	N							<u>M</u>				
WATER WASTE WATER	WW P	to the	8	COMPOS		COMP		NOL																						
SAMPLE ID (AZ 001.) CHER	SL OL WP AR OT	(see valid	(G=GRAB	STAR	T	ENDA	3RAB	T COLLECTION	ERS							Test									- niad	ine (Y/N)				
(A-Z, 0-9 /) ODER Sample IDs MUST BE UNIQUE	18	MATRIX CODE	SAMPLE TYPE					SAMPLE TEMP AT	OF CONTAINERS	Unpreserved	H2SU4		HO	Methanol	er	BIS	GROSS RFTA	1	TRITIUM							Residual Chlorine (Y/N)				
		W	VS I	DATE	TIME	DATE	TIME	SAI	# OF	S.	HNO ₃	PCI	Na	Mei	Other		S S	1-131	TRI							Re	Pace	Project	No./ Lab I.D	
1 MW-05		OT	G /	1 18/	1350	-	-		7	5	2						XX	K X	×											
2 MW-04			11	131 1	1535		-		7	5	2						M	4	X			-			-	_				
DUPMW-00			12	0/11/	810	-	-		7	5	1		-	-	\square	ł	2		X	-		-	-		-	+				-
· MW-11			1 10	131 1	555	-	-		1	5	-7		-	-	H	H			X	-		-	-		-	+				-
· mw-03			1 1		1700				1	2		7	+		H		e v	X	×			-	-		-	+	-			-
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ADDITIONAL COMMENTS			DUBHED	BYIAFE	UATION	•	DAT			INE				ACCER	PLED	BYIA	FPLIA	TION			DATE		THM		-		SAMP	LE CONDIT	TIONS	_
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		_			SAMPLE	RNAM	AND SI	QNATI	IRF																	-	3	8.	T	-
							e of SAM			2.1.1		07		n./ <											D, ui c		(Y/N)	Seel.	ples inta	
				T			E of SAM	100-00-0	. 52	cie.	20	in				T	DAT (MM	E Sign	ned /	1/1	/12	-	_	-	Temp in		Receive	Cuetody Coder	Sample	

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12.



CHAIN-OF-CUSTODY / Analytical Request Document

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

	Section B Required Project Information:		Section C		Page: / of /
Company: ENTERGY WATERFORD 3	Report To: Rodney LeBlanc		Attention: SAME		
Address 17265 River Road	Сару То:		Company Name:	REGULATORY AG	IFNCY
Killona, LA 70057			Address:		GROUND WATER
Email To: rleblan@entergy.com	Purchase Order No.:		Pace Quote		RCRA I OTHER
Phone: (504) 464-3267 Fax:	Project Name:	ford 3	Reference: Pace Project Cindy Olavesen (504) 30 Manager:		
Requested Due Date/TAT: 15 WORKING DAYS	Project Number: 10045 -	Caria P	Pace Profile # 5498	STATE:	
	the second			Requested Analysis Filtered (*	YTNG VIII VIII VIII VIII VIII VIII VIII VI
DRINCING WATER	CODE 19 00	COLLECTED	Preservatives	NNNN	
WATER WASTE WATER	P O COM	COMPOSITE ZO			
8CIUSOUD CIL	BL US R COLOR	ROSITE COMPOSITE O			Pace Project No./ Lab I.D.
SAMPLE ID AR	WP AR 10 C	AT CO	containers sserved 4 4 4 1 1 0 3 10 10	5	e
Semple IDs MUST BE UNIQUE	VPE 200	TEMP	VEAL	BETA	CHO
11	MATRIX MATRIX	AET	# OF CON Unpresen H ₂ SO ₄ HNO ₃ HCI NaOH Na2S ₂ O ₃ Methanol	Analysis OAMMA GROSS BET (-131 TRITIUM	qual
W	MATRIX SAMPLE	TIME DATE TIME	# OF COI Unpreser H ₂ SO ₄ HOI Na ₂ S ₂ O ₃ Methanol	Amalya GROSS E F-131 TRITIUM	Pace Project No./ Lab I.D.
1 Mul-08	OT G HIL	1630	7 5 2	XXXX	
· MW-09	10/1	1800		XXXX	
3 M40-06		920		XXXX	
MW-10 EB-MW-10		250		XXXX	
	"/2	1350	* * *	YEXX	
8					
10					
11					
12					
ADDITIONAL COMMENTS	RELINQUISHED BY FAI	FRUATION DATE	TINE ACCEPTED E	BY I AFFILIATION DATE	TIME SAMPLE CONDITIONS
	Elleferance	11110	1400 m	112-14	1400 M ON V
		11	0		
		SAMPLER NAME AND SIGNAT	TURE	I I	In "C N) N)
		PRINT Name of SAMPLER:	ELIC NECAISE		Temp in "C Received on Ic (r/N) Custody Seate Coolor (r/N) Samples inta
	-	SIGNATURE of SAMPLER	- Kulleran	DATE Signed (MM/DD/YY): 1/2/12	Temp II Temp II Custedy Cooler Y/I

"Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any involves not paid within 30 days.

F-ALL-Q-020rev.06, 2-Feb-2007

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Daily Log

Site Location:	Enfergy-1	laterford-3	Date: 12/10/12
Project Number	:		Date: 12/10/12 Page / of /
1230-	Arrive on	site and calibra satety moeting w sampling well samples and leav	6 equipment
1300 -	Prejob	satety meeting III	the Rodney
1325-	Begin	sampline well	
1500 -	These in	Sandles and least	r site
1700	1000 10	Jumpa June pour	
		-	
			a second second second second



1230 Date/Time: Prepared By: Location: Waterford -3 Project #

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Calibration Reading	Comments
		Cond	0	uS/cm		1. · · · · ·	Y N		
	1.1.10	Cond	1413	uS/cm	12.12	1380	(P) N	1413	
YSI	#1	pН	7	su	18.60	10.99	(N	7.0	
		pН	4/10	su	18.83	4.03	(N	4.0	
		DO		mm/Hg		mg/l	YN	mg/l	
		Temp		Degrees C	18.93	19.0	N	N/A	
HF							Y N		
. [.		Turbidity	6.02	NTU	N/A	0:12	X N	0.03	
Scienter	#(Turbidity	10.0	NTU	N/A	10.33	N	10.11	
		Turbidity	1000	NTU	N/A	1022	Ø N	998.1	
		Turbidity		NTU	N/A	1	YN		

Notes:

1. Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

2. pH Calibration (pH Method: EPA 150.1)

3. DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

4. Temperature Calibration: No calibration is necessary. Record temperature of standard using thermometer while in calibration cup. Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target

Puge (of 2

Project Number: $6045-460$ Date: $iL/b/iL$ FTN Ass Site Description Type: Monitoring Well Temporary Well Extraction Well Production Well Dewatering Well Borehole Other Weather: $0VlerCast$ Air Temp (°F): bcs Wind: $J-sinple$ Weather: $0VlerCast$ Air Temp (°F): bcs Wind: $J-sinple$ Well Locked? Δvs No Total Depth (ft) Damage/repairs needed: $Nork$ Measuring point description: Water level Mater Water level Mater During Purge After Remarks: Water Level Data Pre-purge Pre-purge During Purge After Re Other: initia confirmation purging end sampling Re Time (°24:00° hr) I IZ25 I400 I424 I455 Depth to Water (ft) V/a 7.97 I0.37 I0.83 I1.2/ Date (mm/dd/yy) I2/10/12	cility: Wa	cherfor	rd 3				:mw-		Sample	er: L	EFA			
Type: Monitoring Well Temporary Well Extraction Well Production Well Dewatering Well Borehole Other Weather: $0 \vee \ell r \ell \alpha \leq f$ Air Temp (°F): $0 \leq f$ Wind: $0 - f \leq m, p \perp$ Well Locked? $\Delta V \approx r \ell \alpha \leq f$ Air Temp (°F): $0 \leq f$ Wind: $0 - f \leq m, p \perp$ Remarks: Water Level Data Mark/notch on TOC Verte Level, Meter Make/Model No. Serial No. (Optional): Measuring point description: Water Level, Meter Make/Model No. Serial No. (Optional): Re Other: initia confirmation purging end After Dother: initia confirmation purging end After Depth to Water (ft) U/α . $7.2.7$ $7/4.0.37$ 0.83 $1.2.1$ Data (mm/dd/yy) $122/10/12 - 12/1$		15- 4	460			Date:	12/10	112					FTN Associa	tes, Lt
Type: Maintoring Well Temporary Well Extraction Well Production Well Dewatering Well Borehole Other Weather: $0 \vee \ell r c \Delta S \vdash$ Air Temp (°F): $0 \leq S$ Wind: $0 - S \approx \rho L$ Well Locked? $\Delta V \in r C \Delta S \vdash$ Air Temp (°F): $0 \leq S$ Wind: $0 - S \approx \rho L$ Well Locked? $\Delta V \in r C \Delta S \vdash$ No Total Depth (ft) Damage/repairs needed: $M r r L$ Remarks: Water Level Data Measuring point description: Serial No. (Optional): $(C \in C \mid L = 100 \rightarrow H = S)$ Meak/notch on TOC Pre-purge Pre-purge Purging Purge After Bother: initia confirmation purging ed Serial No. (Optional): Depth to Water (ft) U/a $7 \cdot 2 \uparrow 1 (2 \circ 1 / 2 - 1 / 2 / 2 / 1 / 2 / 2 / 1 / 2 / 2 / 1 / 2 / 2$	Description							1.1						
Weather: $0 \vee \ell r Ca5 f$ Air Temp (°F): $u \leq 1$ Wind: $W - S \ell h \rho L$ Well Locked? $Q'es \Box No$ Total Depth (ft) Damage/repairs needed: W_{PTL} Remarks: Mater Level Data Mater Level Data Serial No. (Optional): $U = 0 = 0$ BMARK/notch on TOC Pre-purge Pre-purge Purge After sampling Re Doth fr minia confirmation purging end sampling Re Depth to Water (ft) W/a $7, 27$ $I/0.37$ $I/0.37$ $I/0.24$ $I/0/24$ <		I Tam	DOPOPOL	Well E	Extractio	on Well [Produ	ction We		watering V	Vell	Borehole	Other	
Well Locked? ΔYae No Total Depth (ft) Damage/repairs needed: $M erret Remarks: Water Level Data Water level Meter Make/Model No. Serial No. (Optional): Measuring point description: Water level Meter Make/Model No. Serial No. (Optional): L \leq C \leq L \leq 100 \pm 3 Moth rim of TOC Pre-purge Pre-purge During Purge After Bother: initia confirmation purge offer ampling Re Depth to Water (ft) M/a 7, 97 10.37 10.33 11.21 Date (mn/ddyy) 12L/a f 12 = 12/a f 12 =$								1						
Remarks: Water Level Data Measuring point description: $[2]$ Mark/holden on TOC $[2]$ Serial No. (Optional): $[2]$ Mork/holden on TOC Pre-purge Purge During Purge After $[2]$ Mork/holden on TOC Pre-purge Pre-purge During Purge After sampling Re Doth to Water (ft) N/a $7, 27$ 10.37 10.27 11.21 Date (mm/dd/yy) $12.1a/12 \cdot 12/a/12 \cdot 12/$						mp (r).						10 3	enpl	
Water Level Data Measuring point description: $U \in C \in U$ Note find of NOC Serial No. (Optional): $U \in C \in U$ $U \circ O \neq f \neq 3$ Serial No. (Optional): $U \in C \in U$ Pre-purge \Box Other: $D \circ O \uparrow f \uparrow 3$ $U \circ O \neq f \neq 3$ Purge after sampling Re \Box Other: $D \circ O \uparrow f \uparrow 3$ $U \circ O \neq f \neq 3$ $U \circ O \to f \neq 3$ $U \in C \in U$ $U \circ O \neq f \neq 3$ Depth to Water (ft) W / a $Q \circ Q \uparrow 1$ $U \circ A \to A \uparrow 1$ $U \circ A \cap A \land 1$ $U \circ A \land A \to A \uparrow 1$ $U \circ A \to A$		L NO	100	ai Depu	(II)		Dama	ge/repair	is neede	u. 10	one			
Measuring point description: [2]Mark/notch on TOC []North rim of TOC []North Water (ft) []Nater rim (?24:00" hr) []Nater rim (?24:00" hr) []NAPL Thickness (ft) (If present) []North Remarks Column if sheen is observed []North remarks Column if	IIdi KS.													
Measuring point description: [2]Mark/notch on TOC []North rim of TOC []North Water (ft) []Nater rim (?24:00" hr) []Nater rim (?24:00" hr) []NAPL Thickness (ft) (If present) []North Remarks Column if sheen is observed []North remarks Column if	ater Level Data													
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Depth to Water (ft) μ/μ $q. qq$ 10.37 10.83 11.21 Date (mm/dd/yy) $12/10/12$ <				intia										
Date (mm/dd/yy) $12/10/12$ $12/10/$			-	11/0		-								_
LNAPL Thickness (ft) (If present) Image: the transmitted sector transmitted secord sector transmitted sector transmitted sector transmitted sec				NICL									2	
DNAPL Thickness (ft) (ff present) Note: Record "S" in Remarks Column if sheen is observed. Field Data Instrument Make/Model No: Unit or Serial No: Pump description: Bailer description: $f \neq G_{c_1} = h^{-1}$ $f = h^{-1}$ Baider (dedicated / portable) Disposable por Purge depth (ft): Well goes dry during purging: Yes Yes No Casing vol. (gal): $f \neq f^{-1}$ $f = f total depth (feet) - dept to water (feet)] • [well ID (inches)^2] • 0.0408 Time ("24:00" hr) I J J Z J J 3 J J J J J J J J J J J J J J J J J J$		If present)				10/10/		-1.0/1	011	2/10/11	et i	-/10/10	1	
Field Data Instrument Make/Model No: Unit or Serjal No: Pump description: Bailer description: $f = \int_{C_{c} \in w, f \in C_{c}}$ $f = \int_{T_{c}}$	APL Thickness (ft)	If present)	1.1											
Instrument Make/Model No: Unit or Serial No: Pump description: Bailer description: ff fff	e: Record "S" in Remarks	Column if s	sheen is	observed.										
Instrument Make/Model No: Unit or Serial No: Pump description: Bailer description: $f = f$ <th>Id Data</th> <th></th> <th></th> <th>1</th> <th></th>	Id Data			1										
HF Scientifie Image: Submersible Image: Submer		No: 1	Unit or	Serial)	Jo.		Pun	nn descri	intion.			Bailer d	escription.	
Purge depth (ft): Submersible Disposable PV Casing vol. (gal): (where applicable) = [total depth (feet) - depth to water (feet)] • [well ID (inches) ²] • 0.0408 Time ("24:00" hr) $1\overline{3}2\overline{7}$ $1\overline{3}3\overline{9}$ $1\overline{3}3\overline{7}$ $\overline{1}\overline{3}\overline{7}$ $\overline{1}\overline{7}\overline{7}$ $\overline{1}\overline{7}$ $\overline{1}\overline{7}$ $\overline{1}\overline{7}\overline{7}$ $\overline{1}\overline{7}\overline{7}$ $\overline{1}\overline{7}\overline{7}$ $\overline{1}\overline{7}\overline{7}$ $\overline{1}\overline{7}\overline{7}$ $\overline{1}\overline{7}\overline{7}$ $\overline{1}\overline{7}\overline{7}$ $\overline{1}\overline{7}\overline{7}$ <td>YSI</td> <td>1.0.</td> <td>-</td> <td>#1</td> <td></td> <td></td> <td>Ø</td> <td>Peristal</td> <td>tic</td> <td></td> <td></td> <td></td> <td></td> <td>ylene</td>	YSI	1.0.	-	#1			Ø	Peristal	tic					ylene
Purge depth (ft): Well goes dry during purging: Yes \square -No Casing vol. (gal): = [total depth (feet) - depth to water (feet)] • [well ID (inches) ²] • 0.0408 Time ("24:00" hr) 1327 1330 1333 1336 1337 1346 1347 1348 1357 1357 Remarks Purge vol. (gal) 0.0^{-1} 0.7 0.3^{-1} 0.4^{-1} 0.7 0.8^{-1} 0.7^{-1} 0.8^{-1} 0.9^{-1} Remarks Purge rate (mL/min) 175^{-1} 125^{-1} 1	HE Scientific	-	1	the r						ted / port	table)		posable Teflon	
Casing vol. (gal): (where applicable) = [total depth (feet) - depth to water (feet)] • [well ID (inches) ²] • 0.0408 Time ("24:00" hr) 1327 1330 1333 1336 1339 1342 1345 1357 1357 Remarks Purge vol. (gal) 0.0 0.1 0.7 0.8 0.9 Remarks Purge rate (mL/min) 125	S. 4	_	_			1			the second second	_			posable PVC	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $						Well	goes dry	during I	purging:	ΠYe	s 🖾	No		_
Purge vol. (gal) 0.0 0.1 0.2 1.3 0.4 0.5 0.6 0.7 0.8 0.9 Purge rate (mL/min) 125 <						= [tota	l depth (f	feet) – dej	pth to wa	ter (feet)]	• [well]	ID (inches	s) ²] = 0.0408	
Purge rate (mL/min) i z 5 i z	ne ("24:00" hr)	1327 1	1330	1333	1336	1339	1342	1345	1348	1351	1350	1	Remarks	
pH (su) 4.05 6.49 4.59 6.42 4.70 6.71 6.72 4.73 8.83 $4-77$ Temp. (°C) 20.21 20.66 20.51 20.45 20.17 20.20 20.30 20.33 20.44 Spec. cond. (µS/cm) 5250 5242 5227 5235 5271 5382 5465 5672 5726 D.O. (mg/L) $ -$ </td <td>ge vol. (gal)</td> <td>0.00</td> <td>-1</td> <td>0.2</td> <td>1.3</td> <td>0.4</td> <td>0.5</td> <td>0.6</td> <td>0:7</td> <td>0.8</td> <td>0.9</td> <td></td> <td></td> <td></td>	ge vol. (gal)	0.00	-1	0.2	1.3	0.4	0.5	0.6	0:7	0.8	0.9			
pH (su) 4.05 6.49 4.59 4.42 4.70 6.71 6.72 4.73 8.83 $4-77$ Temp. (°C) $Z0.21$ $Z0.26$ 20.51 20.45 20.17 20.20 20.30 20.33 20.44 Spec. cond. (µS/cm) 5250 5242 5227 5235 5271 5382 5465 5672 5726 D.O. (mg/L) $ -$ </td <td></td> <td>125 1</td> <td>125</td> <td>125</td> <td>125</td> <td>125</td> <td>125</td> <td>125</td> <td>125</td> <td>(25)</td> <td>12</td> <td>5</td> <td></td> <td></td>		125 1	125	125	125	125	125	125	125	(25)	12	5		
Temp. (°C) $Zo.2/$ $Zo.6/6$ $Zo.5/$ $Zo.45$ $Zo.17$ $Zo.20$ $Zo.30$ $Zo.33$ $Zo.44$ Spec. cond. (µS/cm) 5250 5242 5227 5235 5271 5382 5465 5480 5672 5726 D.O. (mg/L) - - - - - - - - ORP (mV) - - - - - - - - Turbidity (NTU) 3.29 $3.6($ 14.79 3.39 4.73 $6.2/$ 5.17 2.77 3.51 2.27 Color/tint - - - - - - - - Sample Data -	(su)	4.056	.49	6.59	4.42	6.70	6.71	6.72	4.7	8.83	6.	77		
Spec. cond. (μ S/cm) 5750 5747 5735 5711 5382 5465 5672 5726 D.O. (mg/L) - </td <td></td> <td>20.2/2</td> <td>20.66</td> <td>20.51</td> <td>20.45</td> <td>2017</td> <td>20.20</td> <td>20.30</td> <td>20.36</td> <td>20,33</td> <td>20.1</td> <td></td> <td></td> <td></td>		20.2/2	20.66	20.51	20.45	2017	20.20	20.30	20.36	20,33	20.1			
D.O. (mg/L)														
ORP (mV) $ -$					-		1.000	1.000	-	1.1.1.1.1.1.1.1	1			
Turbidity (NTU) 3.29 3.6(14.79 3.39 4.23 6.21 5.17 2.77 3.51 2.27 Color/tint - <td></td> <td></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>1</td> <td>-</td> <td>-</td> <td>-</td> <td></td> <td></td> <td></td>			-	-	-	-	-	1	-	-	-			
Color/tint -		3.293	3.61	14.79	3.39	4.23	6.71	517	2.77	351	2.7	7		_
Odor			-			-	-	-	-	-	-			
Sample Data		-	-	-	-	-	1	-	-	-	1			
	1.0					-	4							
Sample ID Date Time # Containers # Fintered Remarks		Deta	IT	'ima I	# Con	tainana	1 # F	ltonad	-			Domonica		
	Sample ID	Date	1	mie	# Con	amers	# F	ntered		-		Kemarks		
					-		-							
					-		-	-						
			4		-		_							
Sampler's Name (print): Sampler Signature:	npler's Name (print):				-			Samp	ler Sign	ature:				

Puge 2 of 2

voject Number: 10	fer.for 45-46	13			Site ID. Date:	: Mu.	11	Sample	er: Et	W		FTN Associates, 1
Site Description	17 (14						410					
Type: Monitoring W		magran	Well	TExtracti	on Well F	Droduc	tion Wal		watering	Well 🗌 Bo	rehole [Other
	T	anporary	wen	1	mp (°F):	_			watering	Wind:	1	
Weather: <u><i>DerCe</i></u> Well Locked? V Yes		T	otal Dept		шр (г).		ge/repain	un un ada		1	W-2	mph
Remarks:	NO		star Depi	in (ii)			ge/repan	rs neede	a. /	Vone		
Water Level Data								-			1	
Measuring point descu Mark/notch on TC			Water le	vel Mete		Model N 甘ろ	10.		Serial N	No. (Optio	nal):	
North rim of TOC		-	Pre-pu		Pre-purg		During		Purge	Af	er	
Other:			initia		onfirmat		purging		end	samp		Remarks
Time ("24:00" hr)												
Depth to Water (ft)												
Date (mm/dd/yy)												
LNAPL Thickness (ft)			10.0								-	
DNAPL Thickness (ft Note: Record "S" in Remar	and the second se	and the second se	s observed									
	as column	in Sheen i	3 00301700									
Field Data				_								
Instrument Make/Mod		Unit o	or Serial	No:			ip descri			B		scription:
HF Scient	THIC	-	#(Peristali		ted / por	table)		osable polyethyler
-111			ft 1	-			Submer		iteu / por			osable PVC
Purge depth (ft):		in the second second			Well	goes dry	Contraction of the local division of the loc		ΠYe	es XNo	CONTRACTOR OF THE OWNER.	
Casing vol. (gal): (where applicable)										* [well ID] = 0.0408
Time ("24:00" hr)	1357	1400	1403	1406	1409	1472	1415	1418	1421	1424	R	emarks
Purge vol. (gal)	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9		
Purge rate (mL/min)	:25	125	125	125	125	125	125	125	125	125	_	
pH (su)	6.76	6.74	6.71	4.71	6.69	6.70	4.49	1.67	6.67	6.66		
Temp. (°C)									20.59			
Spec. cond. (µS/cm)	5883				6369				6528			
D.O. (mg/L)	-	-	-	-	-	-	-	-	-	-		_
ORP (mV)	-	-	-	-	-	-	1	-		-		
Furbidity (NTU)	3.82	4.57	3.30	4.24	3.22	3.53	3.27	3.82	4.57	5.81		
Color/tint	-	-	1	-		1	-		-	-		
Odor	~	-		1	-	-	-	-	-	-		
Sample Data			-									
Sample ID	Date		Time	# Con	tainers	# F	iltered			Re	emarks	
1110-11	12/10	12 1	440	1		N	me	1-	Sound	2 H-	3	
Dup Maj-11	11		445	4		1			4			
EB MW-11	/1		150	~ ~ ~		1	l		4(
											1	
Sampler's Name (print	1. II	e ir	NECH	HLE			Samo	ler Sign	atura: 6	N	/	2
sampler's Name (prim	1. LI	uc.	NUCH	1 20			Samp	iei Sign	ature.	nar / f	erm	



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CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:	Section B Required Pro				1	-	1	1		Informa									_					Pag	je:	1	1	of /	-0
Company: ENTERGY WATERFORD 3	Report To:	Rodi	ney Lo	eBlanc			-	1		on:	1	ME	-																
Address: 17265 River Road	Copy To:			1				2		iny Name	e:		-						R	EGUI	ATO	RY A	GEN	CY					
Killona, LA 70057						-	1		Addres										1	N	PDES	1	G	ROUN	D WA	TER	DF	INKING W	TER
Email To: rleblan@entergy.com	Purchase Ord	ler No.:	3	-	2	-	P		Pace Qu Referen	ce:						1-			ſ	U	ST	ſ	T P	CRA			U	OTHER	
Phone: (504) 464-3267 Fax:	Project Name	-			_				Pace Pr Manage	NC .	Cin	ndy Ol	avese	en (50	4) 30	5-36	26			Site	Locat	D N							
Requested Due Date/TAT: 15 WORKING DAYS	Project Numb	ber:							Pace Pr	ofile #:			-								STA	Æ:	-	_		-			
		_	_				-	1	_	_							Rø	quest	ed Ar	nalys	is Fill	ered	(17/16)					
Section D Valid Matrix Cod Required Client Information MATRIX	CODE	(Left)	£		COLL	ECTED					Pre	eserv	atives																
DRINKING WATER WATER	DW WT	codes to	C=COMP)					z		T	T			T							H	-				1	<u></u>	and the second	
WASTE WATER PRODUCT SOL/SOLD	P SL OL	valid co		COM	POSITE	COMP END/	GRAB	TECTIC																		î			
	WP AR	(see v	(G=GRAB		-			COLL	SS																	e (Y			
(A-Z, 0-9 / ,-) OTHER	OT TS	H						PAT	CONTAINERS	TO						Se	Z									lorin			
Sample IDs MUST BE UNIQUE		8	TYPE					TEM	ONTA	eve				0		1918	BETA		-							al Ch			
** ¥ ¥		MATRIX CODE	SAMPLE					MPLE	# OF O	Unpreserved H ₂ SO ₄	HNO ₃	-	Na ₂ S ₂ C	Methanol	Other	Analysis lest	GROSS	E	TRITIUM							Residual Chlorine (Y/N)			
				DATE	TIME	DATE	TIME	SAI	#		-		Na Na	Me	Off		R R	1-131	Ĕ	-		-	-			P.	Pace	Project N	o./ Lab I.D.
1 MW-11		от	G	12/0/2	1440				17	5	2		-		_		-		4	-		-	-	-					
· Dup mull		1	1	1	1445			-	1		-		-		_	₿-	-	1	<	-	\square	-	-	-			-		
· EBMW-11		V	Y	*	1450				1	+	1		-			₿-	-	-				-	-						
*													-				-		-	-		+	-						
8																				1		1		1					
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11		-	-	-	-	-		-	_	-	-		+		-0		-		-	-		-	+	-					
12 ADDITIONAL COMMENTS		RELIN	QUISH	ED BY / /	AFFILIATI)N	DAT	ŧ	T	IME				ACCEP	TED B	YIA	FILIAT	ION			DATE		m	ME			SAMP	LE CONDITIO	INS
			15			1	11		15	2	T			3 les				fers		121			15	70			-		
Resample for Tritium	ER	101	NE	CAISE	FTI	0	2/10/1	12	15	00	14	< 11	-01	Ster	in c	1	Fri	reg	1	1-1	10/1	4			-	-	-	2	
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							E AND SIG																			9	on loe	Sealed (Y/N)	ples intact (Y/N)
					-	100000	ne of SAMF		- 4	nic	1	IEI	A	SE		-	DITC	01			1	,	_	-	Tempin	empir	eceived on loe (Y/N)	Custody S Cooler (w/N
					-	SIGNATUR	RE of SAME	PLER:	las	m.	Th	ea	i				(MM/E	Signed	1	12	110	12	2	1	F	-	Rec	Cus	Sar



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section Required	Clent Information:	Section B Required Project Inform	ation:		Section C Invoice Information:			Page:	of
Company		Report To: Rodney	LeBlanc		Attention: S/	AME	5 1 K 1		
Address:	The second second	Сору То:		127 - 14	Company Name:		REGULATORY A	GENCY	
	Killona, LA 70057			1	Address:		NPDES (GROUND WATER	DRINKING WATER
Email To:	rlebian@entergy.com	Purchase Order No.:			Pace Quole Reference:		E UST	RCRA	C OTHER
Phone:	(504) 464-3267 Fax	Project Name:	12.		Pace Project C	indy Olavesen (504) 305-3626	Site Location	Waterlast 3	
Requeste	ed Due Date/TAT: 15 WORKING DAYS	Project Number:			Pace Profile #		STATE:	LA	
						Req	Jested Analysis Filtered	(Y/N)	
	Section D Valid Matrix Conception D Valid Matrix Conception MATRIX		COLLECT	TED	P	reservatives			
	DRAING WATER WATER WATER FROLCI SQUASOLD OL SAMPLE ID AR	Concert to left Concert to left Concert to left Concert to left Concert to left Concert to left	COMPOSITE START	COMPOSITE END/GRAB	Rs	_		(N/V) er	
ITEM #	(A-Z, 0-9/) Sample IDe MUST BE UNIQUE	MATRIX CODE SAMPLE TYPE ((ATE EWB AT	# OF CONTAINERS Unpreserved H_2SO4 HNO3	HCI HCI NacA Nac25,005 Methanol Other Other Anatysis Tast GAMMA	TRITIUM	Residual Chlorine	Pace Project No./ Lab I.D.
1	DUP MW-09	OT G	0.1		7 5 2				race riojectites Lab i.b.
2	MW-08	11	1/18 1155		111		NI		
3	MW-07		9/18 1325						
4	MW-06	1	9/18 5.15						
5	MW		9/18 1630						
6	05		9/19 945						
7	na in a hill		9/19 115						
8	100-03		1/1 2.40						
•	TRMW-DZ	M	19/19 1320				44		
10						┶┷┷┹┥┝┷┷			
11									
12	ADOTTIONAL COMMENT S	RELINGUE	FRED BY / AFRICATION	DATE	TIME	ACCEPTED BY + AFFILIATIO	N DATE	TIME	SAMPLE CONDITIONS
		FRIEL	JECRISE/FT	al aliala	1420	nm11	Pr. 9-19-12	1405 L	NN
		CELLA	UECHISCH I	NIIII	11-2	Alice	000 11910	11-2 11	
						4			
			SAMPLER !	NAME AND SIGNAT	URE			ę	N) N) N) N) N)
			PRINT	Name of SAMPLER:	LAIS	NECAISE	1 7	5	(Y/N) (Y/N) der (Y/N) (Y/N)
			SIGN	ATURE of SAMPLER:	Encel	Diran DATES		Time	Received (Y) Cooler Cooler Samples

Daily Log

Site Location: Enfergy - Waterford - 3 Date: 2 13 24 Project Number: 4045-460 Page of 2 calibrate equipmin safety mitg = Begin 1115 Arrive on site Calibrate Levels water 1145 Finish Prejob 1330 mw-1 Begin Sampling MW-U 1735-Finish sampling . Sife 1800 -

Daily Log

Site Location: Water ford 3 Project Number: 6045-460 0700 ARRIVE on site for Prejob Safety meeting Calibrate equipment 0730 Setup at MW-05 and Begin Purging 1800 Complete Sumpling of MW-08 1815 Left Site
0700 Annive on site for Prejob Satety meeting Calibrate equipment 0730 Setup at MW-05 and Begin Purging 1800 Complete Scompling of MW-08 1915 Labt Ste
2alibrate equipment 0730 Setup at MW-05 and Begin Purging 1800 Complete Sampling of MW-08 1815 Lable Ste
1800 Complete Sumpling of MW-08
1800 Complete Samplin of MW-08
1815 LaCt Ste



nstrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	c	omments
		Cond	0	uS/cm			Y N			
		Cond	1413	uS/cm	17.79	1410	(N	1413	1AKO44	ELIMIZ
VSL	it l	pН	7	su	17.56	4.97	Y N	7.00	2ACZ44	Ex 3/14
(рН	(4) 10	su	16.75	4.07	(N	4.00	2AD530	Ex 4/14
		DO		mm/Hg		mg/l	Y N	mg/l		
		Temp		Degrees C	17.23	17.1	N	N/A		
							Y N			
		Turbidity	1000	NTU	N/A	873	N N	1023	20404	Ex 4/14
#FSCientific	tl	Turbidity	10.0	NTU	N/A	9.87	& N		20239	Ex2/14
		Turbidity	0.02	NTU	N/A	0.01	(Y) N	0.02	20201	Ex2/14
		Turbidity		NTU	N/A		Y N			
Comments:			0.00			0.01		0.00	90201	Cx 2/1

Notes:

1. Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

2. pH Calibration (pH Method: EPA 150.1)

3. DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

4. Temperature Calibration: No calibration is necessary. Record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target

Form SOP 120-6 - Calibration Record-Revision 2



Date/Time:	2/27/13 0700	
Prepared By:	ETN	
Location:	Water for 1 3	
Project #:	6045-460	

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
		Cond	0	uS/cm			Y N		
		Cond	1417	uS/cm	9.87	1287	(P) N	1413	IAKOGY EXALIN
YST	41	pН	7	SU	9.24	7.18	OB N	7.00	2AC244 EX 3/14
() •		pН	<u>(4)</u> 10	su	9.41	3.96	Ø N	4.00	2A0530 EX 4/14
		DO		mm/Hg		mg/l	Y N	ng¶	
		Temp		Degrees C			N	N/A	
							Y N		
(Turbidity	1000	NTU	N/A	1013	Y N	9.89	20404 EX 4/14
HEGGentalic	tti	Turbidity	10.0	NTU	N/A	11.32	Y N	10.02	20239 EX2/14
		Turbidity	0.02	NTU	N/A	0.17	(Y) N	0.01	20201 Ex 2/14
		Turbidity		NTU	N/A		Y N		
Comments:									

Notes:

1. Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

2. pH Calibration (pH Method: EPA 150.1)

3. DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

4. Temperature Calibration: No calibration is necessary. Record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target

Form SOP 120-6 - Calibration Record-Revision 2



Groundwater Level Data Sheet

roject Na			ject Number:		Investiga	itor:	
Enterg	y Water	Gord 3	6045-460	Ċ	ÊF	Page / of /	
Weather C			asuring Device:				
Junn	7 550	1	LECK 100 1	\$ 5			
/							
Well ID	Date	Time	Depth to Water (feet below RP)			Damages/Repairs	
				Damaged w	ell nad/casing	Damaged TOC	Lacks visibility
MW-05	2/26/13	1145	4.28	Damaged by Damaged by Damaged by	ollards	Damaged lock	Lacks access
MW-03	((1200	<i>5.35</i>	Damaged be	quipment	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
1-12-0:7	10	1210	8.94	Damaged w Damaged be Damaged en		Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
MW-06	. (1220	3.71	Damaged w Damaged be Damaged e	ell pad/casing ollards	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
Nw-07	((12:30	5.30	Damaged be Damaged ed	uipment	Damaged TOC Damaged lock Un-kept vegetation	 Lacks visibility Lacks access See gw sample record
MU-03	(17:40	5.49	Damaged w Damaged bo Damaged ec	ollards	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
ma og	11	1290	3.03	Damaged bo		Damaged TOC Damaged lock Un-kept vegetation	□ Lacks visibility □ Lacks access ↓ See gw sample.record
MW-10	Сr	1700	9.90	 Damaged w Damaged bo Damaged economic 		Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access Sec gw sample record
mw-11	C ₁	1310	10.18	 Damaged w Damaged bo Damaged eo 		Damaged TOC Damaged lock Un-kept vegetation	 Lacks visibility Lacks access See gw sample record
				 Damaged w Damaged bo Damaged eo 		Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
				and a second sec	ell pad/casing bllards	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
				Damaged we	ell pad/casing Ilards	Damaged TOC Damaged lock	Lacks visibility Lacks access
				Damaged eq Damaged we Damaged bo	ell pad/casing	Un-kept vegetation Damaged TOC Damaged lock	See gw sample record Lacks visibility Lacks access
				Damaged eq	uipment ell pad/casing	Un-kept vegetation Damaged TOC	See gw sample record Lacks visibility Lacks access
				Damaged eq		Un-kept vegetation	 See gw sample record Lacks visibility
				 Damaged bo Damaged eq 		 Damaged lock Un-kept vegetation 	 Lacks access See gw sample record

RP = Reference Point TOC = Top of Casing gw = groundwater

+ Leblan 2/27/13 1800

Facility: Waterford - 3	Site ID: MW-03	Sampler: EFN
roject Number: 6045-460	Date: 2/27/13	FTN Associates, Ltd

Site Description

Type: Monitoring Well Tempor	rary Well Extraction Well	Production Well Dewatering	g Well 🔲 Borehole 🗌 Other
Weather: Overcast	Air Temp (°F):	60	Wind: None
Well Locked? X Yes No	Total Depth (ft) 37,58	Damage/repairs needed:	None
Remarks:			

Water Level Data

Measuring point description: Mark/notch on TOC	Water level N (LEC	leter Make/Mod		Serial No.	(Optional):	
 North rim of TOC Other: 	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1200	0900	0920	0937	10.25	
Depth to Water (ft)	5.35	5.36	5.73	5.91	5.89	
Date (mm/dd/yy)	2/24/13	2/27/13	2/27/13	2/27/13	2/27/13	
LNAPL Thickness (ft) (If present)			1		, ,	
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Model No: Unit or Serial No: 4i (4i (Pump description:					Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC		
Purge depth (ft): 32.		Well g	Well goes dry during purging: TYes VI No										
Casing vol. (gal): $32.58 - 5.36 \times 2^2.0468 - 4.44$ (where applicable)						= [total depth (feet) – depth to water (feet)] = [well ID (inches) ²] = 0.0408							
Time ("24:00" hr)	6903	0904	0909	0912	0915	0918	0921	0924	0927	0930	0933R	emarks 936	
Purge vol. (gal)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0-7	1:6	1.4	
Purge rate (mL/min)	150	150	150	150	190	150	150	150	150	150	150	150	
pH (su)	6.66	6.64	6.67	6.61	6.69	6.61	6.66	6.67	6.69	6.70	6.69	6.68	
Temp. (°C)	17.55	18.68	18.92	19.12	19.42	19.84	19.86	20.06	20.08	20.03	20.05	20.07	
Spec. cond. (µS/cm)	2870	2844	2818	2760	2603	2521	2597	2683	2763	2803	2796	2810	
D.O. (mg/L)	-	-	-	-	~		(-	-	-	-	-	
ORP (mV)	-	-	-	-	-	-	-	~	-	-	-	~	
Turbidity (NTU)	16.31	18.32	27.41	15.83	28.41	12.11	9.41	6.17	3.21	3.83	4.18	4.74	
Color/tint	-	-	-	-	-	-	-	~	-	~	-	-	
Odor	5	4	5	-	-	~	-	L	-	-	-	/	

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks		
MW-83	2/27/13 0940		7 None		1-500 ml 14-3; 4-16 I 131; 212 02		

Sampler's Name (print): ERIC NECHIGE Sampler Signature:

: Enie Heran

Facility: Waterford 3	Site ID: MW-04	Sampler: EFN
roject Number: 6045 - 460	Date: 2/27/13	FTN Associates, Ltd

Site Description

Type: Monitoring Well Temporary Well Extraction Well Production Well Dewatering Well Borehole Other										
Weather: Sunny	Air Temp (°F): 20	Wind: N-SmpC								
Well Locked? Ves I No	Total Depth (ft) 37.73 Damage/repairs need	led: None								
Remarks:										
Remarks:										

Water Level Data

Measuring point description:	Water level M	leter Make/Mod	± 1 No.	Serial No.	(Optional):	
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1210	1040	1100	1105	1210	
Depth to Water (ft)	8.94	895	9.27	9.34	9.68	
Date (mm/dd/yy)	2/24/13	2/27/13	2/27/13	2/27/13	2/27/13	
LNAPL Thickness (ft) (If present)	1	, , , , , , , , , , , , , , , , , , , ,	and the factor is for a set of the set of th		/ /	
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed

Field Data

Field Data												
Instrument Make/Mode	el No:	Unit on	Serial 1	No:	Pump description:						Bailer description:	
HESGENTERC		H	(ed / porta	ble)	Disposable Teflon	
								□ Submersible □ Disposable PVC				
Purge depth (ft): 32 73						Well goes dry during purging: 🔲 Yes 🔀 No						
Casing vol. (gal): (where applicable) 3.889						= [total depth (feet) – depth to water (feet)] = [well ID (inches) ²] = 0.0408						
Time ("24:00" hr)	1045	1048	1051	1054	1057	1100	1103				Remarks	
Purge vol. (gal)	0.0	0.1	0.2	Q.25	0.3	0.4	0.5					
Purge rate (mL/min)	100	(00)	100	100	100	100	100					
pH (su)	6.59	6.44	6.45	6.43	6.44	6.46	6.45					
Temp. (°C)	21.71	21.63	21.51	21.44	21.4-	21.39	21.48					
Spec. cond. (µS/cm)	4967	4960	4935	4993	5022	5064	50 41					
D.O. (mg/L)	-	-	-	-	~	-	-					
ORP (mV)	-	-	-	-		-	-					
Turbidity (NTU)	36.83	42.13	26.72	23.46	17.12	9.83	11.17					
Color/tint	-	~ .		~		-	-					
Odor	-	-	-	-	×.	-	~					

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-DY	2/27/13	1105	1	None	1-500ml H. 3: 4-16 I-131 : 1-16 ac

Sampler's Name (print): ERIC NECHISC

Sampler Signature:

Buil because

Facility: Waterford-3	Site ID: MW-05	Sampler: EFN
roject Number: 6045-460	Date: 2/27/13	FTN Associates, Ltd

Site Description

Type: Monitoring Well Temporary Well Extraction Well Production Well Dewatering Well Borehole Other									
Weather: (londy	Air Temp (°F): 48	Wind: None							
Well Locked? Yes No Total Depth	n (ft) 37.59 Damage/repairs need	ed: Some erosion under well pad							
Remarks:									

Water Level Data

Measuring point description:	Water level M KECK	leter Make/Mod	el No.	Serial No	o. (Optional):	
North rim of TOC Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1145	0710	0742	0759	0855	
Depth to Water (ft)	4.28	4.43	492	4.95	4.97	
Date (mm/dd/yy)	2/26/13	2/27/13	2/27/13	2/27/13	2/27/13	
LNAPL Thickness (ft) (If present)						
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mode YSI HFGCICU	Ňo:			p descri Peristalt Bladder Submers	ic (dedicat	ed / port	able)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC			
Purge depth (ft):	32.5	9			Well g	oes dry	during p	ourging:	Ye	s 🛛	No
Casing vol. (gal): (where applicable) 4.59 3						= [total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • 0.0408					
Time ("24:00" hr)	0734	0737	0740	0743	0748	0749	0752	0755	0758		Remarks
Purge vol. (gal)	0.0	0.15	0.25	6.4	0.5	0.6	0-75	0.9	1.0		
Purge rate (mL/min)	150	150	150	150	150	150	150	150	150		
pH (su)	6.94	7.04	7.09	7.06	7.04	7.00	7.00	6.99	6.98		
Temp. (°C)	17.21	17.77	18.37	19.11	19.33	19.47	1959	19.41	19.60		
Spec. cond. (µS/cm)	2088	1982	1735	1624	1605	1616	623	1618	1614		
D.O. (mg/L)	-	-	-	-	-	-	~	1	-		
ORP (mV)	-	~	-	-	-	~	-	-	-		
Turbidity (NTU)	10.63	8.72	14.12	16.67	23.88	11.14	16.22	9.27	14.81		
Color/tint	-	-	-		-	-		-	-		
Odor	-	-	-	-	-	-	-	-	~		

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
Mw-05	2/27/13	0500	7	None	1-SOUND 14.3; 4=16 I-131; 2-12 04
				_	

Sampler's Name (print):	ERIE	NECHISE	Sampler Signature:	End.	lecan'	
				(Construction of the second second	

Facility: Water ford 3	Site ID: MW-06	Sampler: EFN
roject Number: 604 5 - 460	Date: 2/27/13	FTN Associates, Ltd

Site Description

Type: Monitoring Well Temporary Well Extraction Well Production Well Dewatering Well Borehole Other									
Weather: Sugar	Air Temp (°F): 75	Wind: S- 10 MpL							
Well Locked? Yes No Total Dep	th (ft) 35.40 Damage/repairs needed:	None							
Remarks:									

Water Level Data

Measuring point description:	Water level M	eter Make/Mod	el No.	Serial No	Serial No. (Optional):			
☐ North rim of TOC ☐ Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks		
Time ("24:00" hr)	1220	1230	1339	1349	1439			
Depth to Water (ft)	3.71	3.25	4.65	4.52	4.85			
Date (mm/dd/yy)	2/24/13	2/20/13	2/27/13	2/27/13	2/27/13			
LNAPL Thickness (ft) (If present)			1 1	,	1			
DNAPL Thickness (ft) (If present)								

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Model No: Unit or Serial No:					Pump description:					Bailer description:	
VSI HI						Peristaltic					Disposable polyethylene
HESCHERTIEN #1						Bladder (dedicated / portable)				Disposable Teflon	
											Disposable PVC
Purge depth (ft): 32.57 30.4					Well g	Well goes dry during purging: TYes X No					
Casing vol. (gal): (where applicable) 4.969					= [total	= [total depth (feet) – depth to water (feet)] * [well ID (inches) ²] * 0.0408					
Time ("24:00" hr)	1327	12:0	1333	1336	1339	13+2	1345	1348			Remarks
Purge vol. (gal)	0.0	0.1	0-15	0.25	0.3	0.4	0.5	0.6			
Purge rate (mL/min)	100	(00	100	(00)	(60	100	(00	100			
pH (su)	7.10	7.02	7.02	7.00	6.99	6.98	6.97	6.99			
Temp. (°C)	21.60	21.49	21.34	21.30	21.17	21.27	21.24	21.21			
Spec. cond. (µS/cm)	2974	2965	2971	2964	29.65	2962	2963	2966			
D.O. (mg/L)	-	-	-	-	-	-		, i i			
ORP (mV)	-	-	1	-	-	-					
Turbidity (NTU)	8:17	6.73	12.11	13.81	43.86	12.72	11.83	8.63			
Color/tint	-	-	-	-	-	-	-	-			
Odor	-	-	-	-	-	-	-	-			

Sample Data

	Sample ID	Date	Time	# Containers	# Filtered	Remarks
	mw-06	2/27/13	1359	7	None	(500 mlt1-3; 4-12 II31; 216 d
-						

Sampler's Name (print): ERIC NECAISE

Sampler Signature: Enir Mecan

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Tealling	10 [C. 1- 3	C'to ID. Hal of	Complete CEA	7
"Facility:	Waterford - 3	Site ID: MW-07	Sampler: ETN	
roject Number:	6045-460	Date: 2/22/13	FTN Associates, Ltd	

Site Description

Type: Monitoring Well Temp	orary well Extraction well	Production Well Dewatering	
Weather: Sunny	Air Temp (°F):	25	Wind: S- Smph
Well Locked? Yes No	Total Depth (ft) 41.15	Damage/repairs needed: N	one
Remarks:			

Water Level Data

Measuring point description:	Water level M	leter Make/Mod EC IC (0)	lel No. $0 \neq 3$	Serial No	o. (Optional):	
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1230	15:07	1520	1529	1605	
Depth to Water (ft)	5.30	5.35	5.72	4.06	6.21	
Date (mm/dd/yy)	2/27/13	2/27/13	2/27/13	2/27/13	2/27/13	
LNAPL Thickness (ft) (If present)	1		7	, ,		
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Tielu Data											
YSI.	Instrument Make/Model No: Unit or Serial No:					p descri Peristalt				Bailer description:	
HE Guenh	fic		#1				Bladder Submers		ed / portal	ble)	 Disposable Teflon Disposable PVC
	36.15				Well g	oes dry	during p	urging:	Yes		No
Casing vol. (gal): (where applicable)	5.0)39			= [total	depth (fe	eet) – dep	oth to wat	er (feet)] •	[well	ID (inches) ²] = 0.0408
Time ("24:00" hr)	1510	1513	1516	1519	1522	1525	1928				Remarks
Purge vol. (gal)	0.0	0.1	0.25	0.30	05	0.75	0.8				
Purge rate (mL/min)	200	200	200	200	200	200	200				
pH (su)	6.67		6.57	6.56	6.37	6.57	6.59				
Temp. (°C)	22.85	22.56	22.45	22.51	22.47	22.48	22,55				
Spec. cond. (µS/cm)	1434	1380	1152	1036	1003	1004	1019				
D.O. (mg/L)	-	~	-	~	-	-	-				· · · · · · · · · · · · · · · · · · ·
ORP (mV)	-	-	-	-	-	-	-				
Turbidity (NTU)	6.73	5.22	2.01	0.96	0.73	0.78	1.23				
Color/tint	-	-	-	~	-						
Odor	-	-	L	-	~	-	-				

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-07	2/27/13	1530	7	nove	
	L V				

Sampler's Name (print): FRIC NECRISE

Sampler Signature:

in Mun

Facility: Waterford - 3	Site ID: MW-08	Sampler: EFN
roject Number: 6045-460	Date: 2/27/13	FTN Associates, Ltd

Site Description

Type: Monitoring Well Temporary Well Extraction Well Production Well Dewatering Well Borehole Other							
Weather: Suppy	Air Temp (°F): 20°	Wind: S- Smph					
Well Locked? Yes 🗌 No 🛛 Total Depth	(ft) <u>41,42</u> Damage/repairs needed	: Well pad eroding					
Remarks:							

Water Level Data

Measuring point description: Mark/notch on TOC		leter Make/Mod		Serial No	(Optional):	
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1240	1615	1625	1630	1300	
Depth to Water (ft)	10 5.49	5.62	6.81	6.08	5.99	
Date (mm/dd/yy)	2/26/17	2/27/13	2/27/13	2/27/13	2/27/13	
LNAPL Thickness (ft) (If present)			1	, ,		
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

	Contract of the local data									and the second second	
Instrument Make/Mode	nstrument Make/Model No: Unit or Serial No:						descrip				Bailer description:
450	4ST HI					XP	eristalti	ic			Disposable polyethylene
TESGENTIC	TC	- +	10.				ladder	(dedicat	ed / port	able)	Disposable Teflon
							ubmers	ible			Disposable PVC
Purge depth (ft):	36.47				Well go	es dry d	uring p	urging:	Ye	s 🗹	No
Casing vol. (gal): (where applicable) 5.039			= [total c	depth (fee	et) – dep	th to wat	er (feet)]	[well	ID (inches) ²] = 0.0408		
Time ("24:00" hr)	1618	1621	1624	1627	1630						Remarks
Purge vol. (gal)	0.0	0.1	6.3	6.4	0.5						
Purge rate (mL/min)	700	200	200	200	200						
pH (su)	6.95	6.58	6.53	6.55	6.60						
Temp. (°C)	21.27	21.40	2155	21-61	21.60						
Spec. cond. (µS/cm)	1250	1189	1087	1089	1137						
D.O. (mg/L)	-	-	~	-	-						
ORP (mV)	-	-	-	-	-						
Turbidity (NTU)	17.63	4.17	2.91	1.28	0.86						
Color/tint	~	-	~	~	-						
Odor	-	-	_	~							

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
Ma)-08	2/27/13	1635	7	none	
Dup mw-08	ίί	1720	7	none	
EB MW-08	(L	1800	7	nove	

Sampler's Name (print): ERIC NECAUSE

Sampler Signature: Jun Tferan

Facility: Waterford - 3	Site ID: MW-09	Sampler: EFN
roject Number: 6045-460	Date: 2/24/13	FTN Associates, Ltd

Site Description

ype: Monitoring Well Temporary Well Extraction Well Production Well Dewatering Well Borehole Other							
Weather: Sunny	Air Temp (°F): 55	Wind: $\lambda l = 0$					
Well Locked? Yes No Total	Depth (ft) 40.22 Damage/repairs nee	eded: None					
Remarks:							

Water Level Data

Measuring point description:		leter Make/Mod	el No.	Serial No	. (Optional):	
 North rim of TOC Other: 	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1250	1645	1700	1709	1735	
Depth to Water (ft)	3.03	3.08	3.23	3.24	3.26	
Date (mm/dd/yy)	2/26/13	2/26/13	2/26/13	2/26/13	2/26/13	
LNAPL Thickness (ft) (If present)			10001 2000			
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mode YSt HF Scientel			p descri Peristalt Bladder Submer	ic (dedicat	ed / port	able)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC				
Purge depth (ft):	35.22	2			Well g	oes dry	during p	urging:	Ye	s 📈	No
Casing vol. (gal): 5. 25g (where applicable) 5. 25g						depth (fe	eet) – dep	oth to wat	er (feet)]	• [well	ID (inches) ²] = 0.0408
Time ("24:00" hr)	1647	1650	1653	1656	1459	1702	1705	1708			Remarks
Purge vol. (gal)	0.0	0.25		0.75	1.0	1.25	1.50	1.79			
Purge rate (mL/min)	275	275	275	275	275	275	275	275			
pH (su)	7.10	2.07	7.03	7.02	2.01	6.99	2.00	7.00			
Temp. (°C)	17.45	18.23	18.97	19.35	19:80	20.01	1998	1997			
Spec. cond. (µS/cm)	2251	2203	2110	2102	2087	2090	2086	2090			
D.O. (mg/L)	-	-	-	-	-	~	-	-			
ORP (mV)	-	-	-	-	-	-	-	-			
Turbidity (NTU)	POO	47.36	37.21	20.01	18.76	21.32	10.11	9.83			
Color/tint	-	-	*	~	~	-	-	-			
Odor	-		-	-	-	-	-	-			

Sample Data

	Sample ID	Date	Time	# Containers	# Filtered	Remarks
	MW-09	2/26/17	1110	7	nore	1-500mpH-3; 4-16 I-131; 2-16 x
	/			(, ,
ų						

Sampler's Name (print):	ERIC	NECHISE	Sampler Signature:	Bint.	lucari.	
			(

Facility: Wateford - 3	Site ID: MW-10	Sampler: EAN
roject Number: 6045-460	Date: 2/26/13	FTN Associates, Ltd

Site Description

Type: Amenitoring Well Temporary Well Extraction Well Production Well Dewatering Well Borehole Other									
Weather: Sunny	Air Temp (°F): 60	Wind: N - 1 0							
Well Locked? 🖄 Yes 🗍 No 🛛 Total Dep	h (ft) 38.51 Damage/repairs needed:	None							
Remarks:									

Water Level Data

Measuring point description:		leter Make/Mod		Serial No.	(Optional):	
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1300	1530	1540	1545		
Depth to Water (ft)	9.90	9.91	10-23	10.28		
Date (mm/dd/yy)	2/24/13	2/26/13	2/26/13	2/26/13		
LNAPL Thickness (ft) (If present)				the second s		
DNAPL Thickness (ft) (If present)		1				

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Fleiu Data										
Instrument Make/Mod YSI HE Scrent		Unit o	r Serial I # / #]	No:		X	p descrip Peristalti Bladder (Submers	c (dedicat	ed / portable)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft):	33.51	(Well g	goes dry	during pu	arging:	Yes V] No
Casing vol. (gal): (where applicable)	3.8	85g			= [tota	depth (f	eet) - dept	th to wat	er (feet)] • [we	ll ID (inches) ²] • 0.0408
Time ("24:00" hr)	1530	1533	1536	1539	1542	1545				Remarks
Purge vol. (gal)	0.0	0.2	0.4	0.6	08	1.0				
Purge rate (mL/min)	250	250	250	250	250	250				
pH (su)	693	692	6.90	6.88	6.89	And a state of the				
Temp. (°C)	1935	20.18	20.83	20.73	20.74	20.68				
Spec. cond. (µS/cm)	5305	54.57	5718	5706	5723	5720				
D.O. (mg/L)	-	-	-	-	-					
ORP (mV)	-	-	-	-	-					
Turbidity (NTU)	24.17	48.63	37.18	43.12	36.23	17.14				
Color/tint	-	-			-	-				
Odor	-	v	1	1	v	L				
ALCOHOLD BE COMPANY OF THE REAL PROPERTY OF THE REA	Support of the Party of the Par	THE OWNER OF THE OWNER OF THE OWNER OF	And the second s		and the second se					

Sample Data

	Sample ID	Date	Time	# Containers	# Filtered	Remarks
	MW-10	2/26/17	1550	7	Nove	1-50/14/4-3; 4-12 II31; 2-12 ×
-						

Sampler's Name (print): ERIC NECAISE

Sampler Signature: Ba

Esie Turan

Facility: Entergy Waterford - 3	Site ID: MW-11	Sampler: EFN
roject Number: 6045-460	Date: 2/24/13	FTN Associates, Ltd

Site Description

Type: Monitoring Well Temporary Well Extraction Well Production Well Dewatering Well Borehole Other									
Weather: Sunny	Air Temp (°F):	0 Wind: N-10							
Well Locked? 🖸 Yes 🗌 No	Total Depth (ft) 42.84 Dan	nage/repairs needed: None							
Remarks:									

Water Level Data

Measuring point description:		leter Make/Mod	el No.	Serial No. (Optional):				
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks		
Time ("24:00" hr)	1310	1330	1345	1352	1520			
Depth to Water (ft)	10.18	10.18	11.71	12.01	12.18			
Date (mm/dd/yy)	2/26/13	2/26/13	2/26/3	2/24/13				
LNAPL Thickness (ft) (If present)			- (set / / /					
DNAPL Thickness (ft) (If present)								

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

lel No:	-	41	No:		X	Peristalt Bladder	tic (dedicat		Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
37.	84			Well g	goes dry	during p	ourging:	Yes X N	0
4.9	ilg			= [total	l depth (fe	eet) – dej	oth to wat	er (feet)] = [well II) (inches) ²] = 0.0408
1330	1333	1336	1339	1342	1345	1348	1351		Remarks
0.0	1.15	0.25	0.3	0.35	0.40	0.45	0.5		
100	100	100	100	100	(00	100	100		
6.74	4.78	6.84	6.88	6.92	6.94	6.92	6.93		
18-68	18.63	18.75	18.81	18.86	1904	and the second second second	19.05		
5370	5396	5448	5492	5476	1	1	5451		
-	-		-	-	-	~	-		
~	-	-	-	-	-	-	-		
53.63	37.83	17.32	12.83	27.14	18.27	16.42	11.15		
-	-	~				- Starley			
~	-	~							
	37. 4.9 1370 0.0 100 6.74 18-68 5370 53.63	37.84 4.51g 1370 1333 0.0 1.185 100 100 6.74 4.78 18.63 5370 5396 53.63 37.83 	H 1 37.84 4.51g 1370 1333 1336 0.0 1.15 0.25 100 100 100 6.74 4.78 6.84 18.63 18.75 5370 5396 5448 53.63 37.83 17.32 	H (37.84 4.5/g 1370 1333 1336 1339 0.0 1.18 0.25 0.3 100 100 100 100 6.74 4.78 6.84 6.88 18.63 18.75 18.91 5370 5396 5448 5492 53.63 37.83 17.32 12.83 	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-11	1555				
MW-11	2/26/13	1355	7	non	1-500 mp H-3: 41-6 I-131; 2-12 x
					/

Sampler's Name (print):	ERIC A	ECAISE	Sampler Signature:	Enil	leceni
Contractor of the second s	M. M			1 1 1	ω = 1

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CHAIN-OF-CUSTOD / Analytical Request Document

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

Section Required	A Client Information:	Section B Required P		forma	tion						ion C e infor		n:													P	age:	1		of /	
Company	ENTERGY WATERFORD 3	Report To:	Rod	Iney	LeBland	0				Atlent	ion:		SAME									1									
Address:	17265 River Road	Copy To:								Comp	any Na	ame:										REC	JULA	ORY	AGE	NCY					
	Killona, LA 70057									Addre	SS:											r	NPD	ES	~	GROU	IND W	VATER	r DF	INKING W	ATER
Email To	rieblan@entergy.com	Purchase 0	rder No	c.						Pace (4	UST			RCR				OTHER	
Phone:	(504) 464-3267 Fax	Project Nan	ne:							-	roject	(Cindy	Olav	esen	(504	4) 305	5-362	26				ite Lo		M	later	ford	13	///////		
Requeste	d Due Date/TAT: 15 WORKING DAYS	Project Nur	nber:						-		Profile #	# {	5448										s	TATE.		LA	-				
										-									R	ique	ested	Ana	lysis	Filter	ad (Y	7N)		///			
	Section D Valid Matr		ę										_					1.	1	1.	1./			T							
	Required Client Information MATRIX DRIVING WA WATER		se to left)	C=COMP)		COLL	ECTED					ŕ	Prese	l l	Ves	T		~	1	1~	1N	$\left \right $	+	+		+	+	-			
	WAIER WASTE WAI PRODUCT	WW ER P SL	d codes	0		MPOSITE	COMP	OSITE	SAMPLE TEMP AT COLLECTION																			3			
		SL OL WP AR OT	(nee valid	(G=GRAB					OLLE									3										Residual Chlorine (Y/N)			
	ANTELLID AR	OT TS		0					AT C	LER								1										uin			
	Sample IDs MUST BE UNIQUE		CODE	TYPE					EMP	TAIL	Per							1	E									Š			
# W			MATRIX	PLET					PLET	# OF CONTAINERS	Unpreserved	ð.		II	203	onar	-	Ĭ	SS		M							idual			
ITEM #			MAT	SAMPLE	DATE	TIME	DATE	TIME	SAM	0 #	- L D	H2SO4	N I	NaOH	Na ₂ S ₂ O ₃	Meth	Other Analysis Yeek	OAMMA	GROSS BETA	-131	TRITIUM							Res	Pace	Project N	lo./ Lab I.D.
1	mw-11		от	G	2/24		-	1355		7	5		2	1				8	-	-	-							Τ			
2	MW-10		1	1			2/26/13			1	1		1					i	1	1	11										
3	MW-09						2/24/13											Ц													
4	mw- 05		11	Ш				0300			Ш		1					Ц	11	1	11							+			
5	MW-03,		11	Щ			2/27/2			4	111		\square			_	_	Щ	1	1	11		_	+			+	+			
8	MW-04		╟	\vdash			2/21/13				Ш		4	┝	\vdash	-	-8	H	#		╢	$\left \right $	-	+	\square		+	+			
7	MW-06 MW-07						4/2/13	1355										H													
9	MW-08						2/21/1	1530									-	Ħ		Ŧ	₩										
10	Dup mw -08			H			264	172			H							Ħ		Ħ	Ħ										
11	EB MW-08		ł	4			2/27/13	18/60		\downarrow	4	•	Ч	1				Ţ	-14	1	壮							T			
12							1-902	1000					-	1					1												
	ADDITISINAL COMMENTS		REUN	QUIBI	ED BY //	FILIATIC	×	DAT			NIE				AC	CEPT	EO BY	() AFI	FILIA	TION			Ç14	TE		TME			SAME	LE CONDITI	ONS
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							SIGNATUR			1	-{	VI				-				E Sig								Tem	2 eceiv	Custody Cooler	Samples Intact (Y/N)
									1	Ì	en j	4	ua	cu					(MM	DDIY	Y):								L."		

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per menth for any invoices not paid within 30 days.

Daily Log

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Site Location: Waferford - 3	Date: June 3, 20/3
Project Number: 06045 - 0036-002	Page / of
1070 - Pegin witter level measurement s 1070 - Pegin witter level measurements 1115 - Begin Sampling MW-03 1645 - Einigh gampling MW-10 1700 - Leave site	ch Subby meeting
1700 - Leave site	
· · · · · · · · · · · · · · · · · · ·	

Daily Log

Site Location: Waterford-3	Date: Page	4/4	11	3
Project Number: 06045-0031-002_	Page	Ż	of	2-
Project Number: 06045-0031-002 0700 - Arrivic on sile - Calibrate Equipment Prejob Salety Meeting 0715 - Begun Sampling MW-05 1200 - Leve site				
0715 - Begue Sampling MW-05				
1200- Leve Site 1				
		popayangan		1
		100-00-00-00-00-00-00-00-00-00-00-00-00-		
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				init ALL ON comments and a second
	11-14-14-14-14-14-14-14-14-14-14-14-14-1			



FTN Associates Calibration Form

Date/Time: 6/3/13 0945 Prepared By: EFN Location: Waterford - 3 Project #: 06045-0031-002

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
		Cond	0	uS/cm		l	Y N		
YSI	世	Cond	14(3	uS/cm	28.87	1427	Ŷ N	1413	241351 EK 12/13
		pН	7	su	28.49	6.98	Ø N	200	3AC066 Ex 3/15
		pН	4/10	su	29.52	4.06	YN	4.00	2AD 530 EX 4/17
		DO		mm/Hg		mg/l	Y N	mg/l	,
		Temp		Degrees C	30.0	29.67	N	N/A	
							Y N		
HF Scientife	#1	Turbidity	0.02	NTU	N/A	0.27	Y N	<i>j</i> .0(20201 Ex 2/14
		Turbidity	10.0	NTU	N/A	10,10	ΥN	1014	20239 CX 2/14
		Turbidity	1000	NTU	N/A	987.4	Y N	1028	20404 Ex 4/14
		Turbidity		NTU	N/A		YN		
Comments:									

Notes:

1. Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

2. pH Calibration (pH Method: EPA 150.1)

3. DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

4. Temperature Calibration: No calibration is necessary. Record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target

Form SOP 120-6 - Calibration Record-Revision 2

FTN Associates Calibration Form

54 90 Date/Time: $\langle \epsilon/\psi/r
angle$ Prepared By:

Wake to Location:

00 -1200 66045 Project #:

	Instrument		Standard		Temp. of Standard	Reading Prior to		Post Calibration	
Instrument Type	Ō	Parameter	(ns)	Units	(degrees C)	(degrees C) Calibration Calibrated	Calibrated		Comments
		Cond	0	uS/cm			N Y		
V5 <i>T</i> .	甘(Cond	1413	uS/cm	21.80	1487	N S	1413	2AU351 Ex 12/13
-		рН	7	Su	21.79	7.07	v Ø	2.00	3ACOVE EX 3/15
		рН	4/10	Su	22.00	4.02	γN		240530 Ex 4/14
		DO		mm/Hg		βĜu	N Y	убш	
		Temp		Degrees C	22.00	20.02	z	N/A	
			•) • • • • • •				N X		
HF Scientifice	÷(Turbidity	6.02	NTU	N/A	0.00	N Q	0.04	20201 Er 2/14
		Turbidity	10.0	NTU	N/A	9.48	N (X)	10.05	20234 FX 2/14
		Turbidîty	(000)	NTU	N/A	1017	Y) N	1003	20404 Ex 4/14
		Turbidity		NTU	N/A		N ≻		
Comments:									
Land and the									

Notes:

1. Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

2. pH Calibration (pH Method: EPA 150.1)

3. DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

4. Temperature Calibration: No calibration is necessary. Record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target

Form SOP 120-6 - Calibration Record-Revision 2



Groundwater Level Data Sheet

Project Na		Pro	ject Number:		Investiga		
Water	ford - 3	06	045-603	1-002	EE	EN	Page of
Weather Co			asuring Device:				
		0	~				
Parly 4	oudy 85	<u> </u>	LECK 100	43			
		T	1	1			
Well ID	Date	Time	Depth to Water (feet below RP)			Damages/Repairs	
				· · · · · · · · · · · · · · · · · · ·			
MW-09	6/3/13	1030	5.16	Damaged w Damaged b Damaged ed	ollards	Damaged TOC Damaged lock Un-kept vcgetation	 Lacks visibility Lacks access See gw sample record
mw-03	11	1035	4.95	Damaged w Damaged b Damaged ed	ell pad/casing ollards	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
NCW-07	į (1040	555		ell pad/casing ollards	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
MW-04	11	1045	4.24	Damaged w Damaged be Damaged co	cell pad/casing ollards	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
MW-05	11	1050	5.90	the second	cll pad/casing ollards	Damaged TOC Damaged lock Un-kept vegetation	 Lacks visibility Lacks access See gw sample record
MW-10	((1055	9.90	Contraction and the second sec	cll pad/casing ollards	Damaged TOC Damaged lock Un-kept vegetation	 Lacks visibility Lacks access See gw sample record
Mw.1(((((60	10 13	Damaged w Damaged bo Damaged co	ell pad/casing ollards	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
Mw-01	f i	1105	8.92	Damaged bo	uipment	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
M.W. 03	ţ	110	6.08	Damaged bo	uipment	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
				Damaged w Damaged bo Damaged ec	1	Damaged TOC Damaged lock Un-kept vegetation	 Lacks visibility Lacks access See gw sample record
					ell pad/casing ollards	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
				Damaged w	ell pad/casing ollards	Damaged TOC Damaged lock	Lacks visibility Lacks access
1. (1. (1. (1. (1. (1. (1. (1. (1. (1. (Damaged eq Damaged w Damaged bo Damaged bo	ell pad/casing ollards	Un-kept vegetation Damaged TOC Damaged lock Un-kept vegetation	See gw sample record Lacks visibility Lacks access See gw sample record
					cll pad/casing ollards	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
			****		ell pad/casing ollards	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record

Notes: RP = Reference Point TOC = Top of Casing gw = groundwater

acility: Wilterford 3	Site ID: $MW - O3$	Sampler: EFN
Project Number: 06045-0031-602	Date: 6/3/13	FTN Associates, Ltd

Site Description

Type: Monitoring Well	oorary Well Extraction Well Production Well Do	cwatering Well 🗌 Borehole 🗌 Other
Weather: Party Cloudy	Air Temp (°F): 85 °	Wind: SE - SmpL
Well Locked? 🔯 Yes 🗌 No	Total Depth (ft) 37.58 Damage/repairs neede	ed: None
Remarks:		

Water Level Data

Measuring point description:		feter Make/Mod そこん 100	lel No. 4 3	Serial No	o. (Optional):	
North rim of TOC Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1110	1115	1130	1136	1220	
Depth to Water (ft)	6.08	6.08	6.37	6.41	6 52	
Date (mm/dd/yy)	613/13	6/3/13	6/3/13	6103/13	6/3/13	
LNAPL Thickness (ft) (If present)	1				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
DNAPL Thickness (ft) (If present)]				

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

-

Instrument Make/Mode <u>451</u> <u>HESCLENTIC</u>	No:		Disposabl				Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC				
Purge depth (ft):	32 5	8			Well g	oes dry	during p	ourging:	T Ye	s 🕅	No
Casing vol. (gal): (where applicable)	N	7 a			= [total	depth (f	eet) – dep	oth to wat	er (feet)]	• [well	ID (inches) ²] • 0.0408
Time ("24:00" hr)	1118	1121	1121	1127	1130	1133	1136				Remarks
Purge vol. (gal)	6.0	0.1	0.2	0.4	0 5	0.6	6.75				
Purge rate (mL/min)	150	150	150	150	150	150	150				
pH (su)	6.74	6.79	6.82	6.81	6.86	6.83	6.82				
Temp. (°C)	24.11	24.46	24.43	24.36	24.57	24.53	24.56				
Spec. cond. (µS/cm)	3216	3273	3286	3246	3318	3329	3325				
D.O. (mg/L)	1 000	.asb	· ••••	-	.	~	~				
ORP (mV)	-	*	<i>35</i> -	P	,	unge	~		- 1. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Turbidity (NTU)	13.48	15.14	16.87	12.42	11.17	9.86	8.11				
Color/tint	~	t.		No. 1	a	~~.					
Odor	*			~~	re,	*					

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-03	6/3/13	1140	2	None	1-250 nd H-3; 1-1ga/ X

Sampler's Name (print): ERIC NECAISE	Sampler Signature: Elie Them

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	1 0,	/	
acility: Waterford - 3	Site ID: MW-04 Sam	pler: EFN	
Project Number: 06045-0031-002	Date: $\frac{1}{6}/\frac{3}{13}$	FTN	I Associates, Ltd
	t t		

Site Description

Type: 🖾 Monitoring Well 🔲 Temporary Well 📄 Extraction Well 📄 Production Well 📄 Dewatering Well 📄 Borchole 🗋 Other									
Weather: Partly youdy	Air Temp (°F): $\Im \varsigma \diamond$	Wind: SE. SmPh							
Well Locked? 🛛 Yes 🗌 No	Total Depth (ft) 32.7.3 Damage/repairs needed:	Bollanda need painting							
Remarks:		ų.							

Water Level Data

Measuring point description:	Water level M たモイ	leter Make/Mod	el No.	Serial No.	(Optional):	
☐ North rim of TOC ☐ Other:	Prc-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1105	1230	1242	1300	1345	
Depth to Water (ft)	892	8.83	9.27	936	9. XI	
Date (mm/dd/yy)	6/3/13	6/3/13	6/3/13	6/3/13	6/3/13	
LNAPL Thickness (ft) (If present)						
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod V ST ME Scientist	No:		Peristaltic Bladder (dedicated / portable)					Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC			
Purge depth (ft):	3	2.73	>		Well g	goes dry	during p	ourging:	ΠYe	s 🛛 N	lo
Casing vol. (gal): (where applicable)		NYA			= [tota]	depth (fe	eet) – dej	oth to wat	er (feet)]	• [well II	D (inches) ²] • 0.0408
Time ("24:00" hr)	1233	1236	1239	1211	1244	1247	1250	1253	1256	1259	Remarks
Purge vol. (gal)	6.0	0.1	0.2	03	0.1	0.5	0.6	0.1	0.8	1.3	
Purge rate (mL/min)	175	175	175	125	125	(25	12.5	125	125	125	
pH (su)	6.55	6.57	6.52	6.57	6.58	6.67	6.63	6.68	6.71	6.71	
Temp. (°C)	24.35	24.42	24.43	24.32		24.18	23.77	23.83	23.86	23.4	8
Spec. cond. (µS/cm)	4881	4969	5063	5153	5278	5393	5495	5693	5826	5811	
D.O. (mg/L)				~~				-	10	e.	
ORP (mV)					~	~	~	~		~	
Turbidity (NTU)	26.98	2350	17.14	1517	21.37	14.85	1.87	23.17	14.81	16.23	
Color/tint	-	~				· ·	pr.	1	~	~	
Odor	~		~	1	~	v	1	1	.54	-	

Contract of the	Sample ID	Date	Time	# Containers	# Filtered	Remarks
	new.ot	6/3/13	1300	2	None	1-250 ml H-3: 1. 1 gel 2
		· 1			Construction of the statements	

Sampler's Name (print). ERIC NECAISE	Sampler Signature:	Lui Vicconi

	a presentation of the second	
acility: Water ford - 3	Site ID: MW D9	Sampler: EFN
Project Number: 16045-0031-002	Date: 6/4/13	FTN Associates, Ltd

Site Description

Type: Monitoring Well Temporary Well Extraction Well Production Well Dewatering Well Borehole Other									
Weather: DVerCast	Air Temp (°F): 70	Wind: Nom							
Well Locked? 🔀 Yes 🔲 No	Total Depth (ft) 32ラス Damage/repairs need	ded: Bullards need painting. Eroscon							
Remarks:		around well pad.							

Water Level Data

Measuring point description:	Water level N	vel Meter Make/Model No. そこと 100 H 3			o. (Optional):	
☐ North rim of TOC ☐ Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1050	0700	0730	0735	0805	
Depth to Water (ft)	5 9 0	5.98	12.43	6.44	6.49	
Date (mm/dd/yy)	6/3/13	6/4/13	6/4/13	6/4/13	4/4/13	
LNAPL Thickness (ft) (If present)	1 , , , , , , , , , , , , , , , , , , ,		••••••••••••••••••••••••••••••••••••••	, .		
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed

Field Data

Instrument Make/Model No: Unit or Serial No: VST. HE HE SCIENTIFIC HE					Pump description: Peristaltic Bladder (dedicated / portable) Submersible				Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC		
Purge depth (ft):		32 9	4		Well g	oes dry	during p	ourging:	TYes	j Ø	No
Casing vol. (gal): (where applicable)						= [total depth (feet) - depth to water (feet)] • [well ID (inches) ²] • 0.0408					
Time ("24:00" hr)	0713	0716	0719	0723	0725	0728	0731	0733			Remarks
Purge vol. (gal)	00	0.1	0.25	0.3	0.5	0.6	0.7	a. 8			
Purge rate (mL/min)	150	150	150	150	150	150	150	190			
pH (su)	6.93	7.02	2.08	7.10	7.11	7.09	7.08	7.09			
Temp. (°C)	23 27	23.35	2341	23.37	23.48	235	23.55	23.94			
Spec. cond. (µS/cm)	5466	5488	5460	5313	4402	4298	4047	4093			
D.O. (mg/L)		200		~*	burns	Aig.	~~~				
ORP (mV)		x	,9		(a)	jesta	Sear.	2~1			
Turbidity (NTU)	7.62	7.58	5.06	12.71	4.86	5.17	7.09	6.87			
Color/tint	~	<i>j</i> \$~	· ·	~	, ,		n.,				
Odor	<i>a</i> r 1		ж.	2	. <i>.</i>	<u> </u>	5	•			

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-05	6/4/13	0740	2	None	1-250m H-3- 1- 1gal de
		1			

Sampler's Name (print):	ERIC	NECAS	ε	Sampler Signature:	Fla Herei

1			
acility: Waterford - 3	Site ID: MW 06	Sampler: EFN	
Project Number: 06045-0031-002	Date: $\frac{4}{4}$	FTN Associates, L	_td

Site Description

Type: Monitoring Well 🔲 Tompo	rary Well Extraction Well Production Well Dewa	atering Well Borchole Other
Weather: UVercast	Air Temp (°F): 75 °	Wind:
Well Locked? 🖾 Yes 📋 No	Total Depth (ft) <u>35.40</u> Damage/repairs needed:	None Soil washed away
Remarks:	from	c bollards and well pad

Water Level Data

Measuring point description:	Water level M	leter Make/Mod く 106 H	el No.	Serial No	. (Optional):	
North rim of TOC Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1045	6810	0820	0824	0925	
Depth to Water (ft)	4.24	4.28	5.03	5.05	5.86	
Date (mm/dd/yy)	6/3/13	6/4/13	6/4/12	6/4/12	10/4/12	
LNAPL Thickness (ft) (If present)	/ /			•	er	
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Model No: Unit or Serial No: <u> </u>						and the second se	istaltic	ledicat	ed / port	able)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft):	3	040			Well go	es dry dur	ing pu	rging:	T Ye	s 🛛	No
Casing vol. (gal): (where applicable) N/Λ					= [total d	epth (feet)	– depth	i to wat	er (feet)]	• [well	ID (inches) ²] • 0.0408
Time ("24:00" hr)	0815	0318	0821	0824	1						Remarks
Purge vol. (gal)	0.0	0.1	02	0.25							
Purge rate (mL/min)	130 190 190 190										
pH (su)	716	2.10	7.12	7.13							
Temp. (°C)	24.79	24.71	24.81	24.52							
Spec. cond. (µS/cm)	2785	2790	2788	2793							
D.O. (mg/L)	~*	-984-	çar	4							
ORP (mV)	(6 ₁₀		tok	~~.			1				
Turbidity (NTU)	6.43	2.46	8.13	6.71							
Color/tint									····· · · · · · · · · · · · · · · · ·		
Odor											

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-06	6/4/13	D825	2	Non	1250 ml H 3, 1-1900 x
Dup Mie.06	11	8955	2	None	it)) li

				2
Sampler's Name (print):	FRIC NECAISE	Sampler Signature:	Frie Ih	St and
			/	

acility:	Waterford - 3	Site ID	: MW-07	Sampler:	EFN	
Project Number:	06045-0031-002	Date:	6/4/13			FTN Associates, Ltd

Site Description

Lype: Monitoring Well 🗌 Lempore	ry Well Extraction Well Production Well Dewa	atering Well Dorehole Other
Weather: Partl cloudy	Air Temp (°F): 80	Wind: Non
Well Locked? 🖾 Yes 🗌 No 👘	Total Depth (ft) 41. 15 Damage/repairs needed:	None
Remarks:		• •

Water Level Data

Measuring point description:	Water level N KECK	leter Make/Mod < (00 封	iel No.	Serial No	. (Optional):	
☐ North rim of TOC ☐ Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1040	0930	0945	0950	1220	
Depth to Water (ft)	5.55	5.59	6.63	6.64	1.64	
Date (mm/dd/yy)	6/3/13	6/4/13	614/13	6/4/13	6/4/1-3	
LNAPL Thickness (ft) (If present)	1 1 1	1111	· · · · · · · · · · · · · · · · · · ·			
DNAPL Thickness (ft) (If present)		1				

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod VSI HE Scientif	Pump description: Peristaltic Bladder (dedicated / portable) Submersible			Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC							
Purge depth (ft):		Well ge	oes dry	during p	urging:	ï∏İYe	s 🕅	No			
Casing yel (cal):						depth (f	eet) – dep	oth to wat	ter (feet)]	• [well	ID (inches) ²] • 0.0408
Time ("24:00" hr)	0933	0936	939	14Z	0945						Remarks
Purge vol. (gal)	0.0	0.1	0.2	0.25	0.4						
Purge rate (mL/min)	150	150	150	150	150						
pH (su)	6.78	6.73	6.73	6.72	6.73	addae - 14 - 160 - 16 - 1.					
Temp. (°C)	25 18	\$510	25 18	24.95	24.02						
Spec. cond. (µS/cm)	976	959	955	956	958						
D.O. (mg/L)	ijere.		por-	~	-						//////////////////////////////////////
ORP (mV)	^	******	-	~							
Turbidity (NTU)	12,57	4.00	207	2 95	3.82						
Color/tint		.184				*****					******
Odor		541.		~							

Sample Data

Sample ID	Date Time		Date Time # Containers # Filtered			# Filtered	Remarks				
MW-07	6/4/13	0950	<u> </u>	None	1. 250 x 0 H- 3; 1- 1 gal 02						
	1 '(*			and a state of an experimental second and	/ *						
-											

Sampler's Name (print):	ERIC	NECAISE	Sampler Signature:	Ela Herani	
				αταπροτιματική προστοποιουται το του του του αγ _{αμτ} ο 2007 2000 2000 00000000000000000000000	

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acility: Waterford -3	Site ID: MW-08	Sampler: EFN
1'roject Number: 06045-0031-002	Date: 6/4/13	FTN Associates, Ltd

Site Description

Type: Monitoring Well Temporary Well Extraction Well Production Well Dewatering Well Borehole Other								
Weather: Overcast	Air Temp (°F):	850	Wind: None					
Well Locked? 🕅 Yes 🔲 No	Total Depth (ft) <u>41.47</u>	Damage/repairs needed: ERC	sion of sal around					
Remarks:		well pad						

Water Level Data

Measuring point description:	Water level M	leter Make/Mod		Serial No.	Serial No. (Optional):		
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks	
Time ("24:00" hr)	(035	1040	1100	1103	1130	· · · ·	
Depth to Water (ft)	4.95.	5.01	5.39	5.42	5.44		
Date (mm/dd/yy)	6/3/13	10/4/12	6/4/13	6/4/13	6/4/13		
LNAPL Thickness (ft) (If present)	1		terrent for the for the second s	·	, , ,		
DNAPL Thickness (ft) (If present)		1			ľ		

Note: Record "S" in Remarks Column if sheen is observed

Field Data

Instrument Make/Model No: Unit or Serial No: 4.0						Bladder (dedicated / portable) Disposable Te					Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft): 36.97						oes dry	luring p	urging:	I Ye	s 🕅	No
Casing vol. (gal): (where applicable) N/A						= [total depth (feet) - depth to water (feet)] • [well ID (inches) ²] • 0.0408					
Time ("24:00" hr)	1048	1051	1053	1056	1.059	1102					Remarks
Purge vol. (gal)	0.0	0.1	0.2	03	0.4	0.5	,				
Purge rate (mL/min)	150	150	150	150	150	150					
pH (su)	7.17	6.70	6.71	1.72	6.76	6.77					
Temp. (°C)	25.74	24.73	24,60	24.72	24.68	24.87					
Spec. cond. (µS/cm)	1281	1202	1219	1255	1217	1283					
D.O. (mg/L)	~	~	an.								
ORP (mV)	~	·	str.	prov		÷					
Turbidity (NTU)	19.13	23.31	15.52	12.89	9.86	6.12					
Color/tint											
Odor											

Sample Data

And a state of the	Sample ID	Date Time		Date Time # Containers # Filtered		Remarks				
Contraction of the local division of the loc	MW-08	6/4/13	1105	Jacom	None	1-250 ml H-3; 1-1gal X				
1000		61								

						1	
Sampler's Name (print):	ERIC	NECHISE	Sampler Signature:	Z	Ster .	Le	6 and i
					1	Carl Street	

acility: Waterford-3	Site ID: MULP9	Sampler: EFN
Project Number: 06045-0031-002	Date: 6/4/13	FTN Associates, Ltd

Site Description

Type: Monitoring Well	orary Well Extraction Well	Production Well Dewaterin	g Well 🔄 Borehole 🗋 Other
Weather: Party Cloudy	Air Temp (°F):	æ G	Wind: None
Well Locked? 🕅 Yes 🔲 No	Total Depth (ft) <u>40.22</u>	Damage/repairs needed:	None
Remarks:			

Water Level Data

Measuring point description:		Ieter Make/Mod ティル 100	el No. #3	Serial No	o. (Optional):	
☐ North rim of TOC ☐ Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1030	1147	1159	1200	12.35	
Depth to Water (ft)	5.16	530	5.40	5.41	5.41.	
Date (mm/dd/yy)	6/3/13	6/4/13	6/1/13	6/4/13	6/4/13	
LNAPL Thickness (ft) (If present)			111			
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Model No: Unit or Serial No: <u>UST</u> <u><u><u>H</u></u><u>I</u> <u>UST</u><u><u>H</u><u>I</u> <u>UNIT</u><u>I</u><u>I</u><u>I</u><u>I</u><u>I</u><u>I</u><u>I</u><u>I</u><u>I</u><u>I</u><u>I</u><u>I</u><u>I</u></u></u>							o descri Peristalt Bladder Submers	ic (dedicat	ted / port	able)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft):		35 2	2.		Well go	es dry	luring p	ourging:	∏ Ye	s 🗹	No
Casing vol. (gal): (where applicable) \mathcal{N}/α					= [total c	= [total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • 0.0408					
Time ("24:00" hr)	1151	1154	1157	1200							Remarks
Purge vol. (gal)	0.0	0.1	0.2	6.3							
Purge rate (mL/min)	150	150	150	150							
pH (su)	6.74	1072	6-73	4.72			************				
Temp. (°C)	24.80	24.53	2450	24.58							
Spec. cond. (µS/cm)	2296	2299		2305							
D.O. (mg/L)	~ war	-		-							
ORP (mV)		·		879°							
Turbidity (NTU)	5.54	3.05	1.61	179							 • • • • • • • • • • • • • • • • • • •
Color/tint				•							***************************************
Odor	· · ·										

Sample ID	Date	Time	# Containers	# Filtered	Remarks
M.W-09	6/4/13	1205	2	Norg	1-250m H.3; 1-190 X
EBMW-09	11	1210	2	Nory	te Per
		9			

		<u>19</u>
Sampler's Name (print):	ERIC NECHISE	Sampler Signature: Othe Machan

'acility: Waterford 3	Site ID: $MW - U$	Sampler: EFN
Project Number: 1)6045-0031-002	Date: 6/3/13	FTN Associates, Ltd

Site Description

Type: Monitoring Well Temporary Well Extraction Well Production Well Dewatering Well Borchole Other									
Weather: Sunay	Air Temp (°F): 90	Wind: St. Supl							
Well Locked? 🛛 Yes' 🗌 No	Total Depth (ft) and some Damage/repairs need	led: Well casing needs paint							
Remarks:		ý I							

Water Level Data

Measuring point description:		leter Make/Mod		Serial No	o. (Optional):	
North rim of TOC Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1055	1535	1550	1600	1635	
Depth to Water (ft)	9.90	9.90	10.15	10.16	1015	
Date (mm/dd/yy)	6/3/13	6/3/13	6/3/13	613/13	6/3/13	
LNAPL Thickness (ft) (If present)				· · · ·		
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed

Field Data

Instrument Make/Mod VSL HE Scientific		Bladder (dedicated / portable) Disposable Tet					Disposable polyethylene				
Purge depth (ft):		30	,		Well g	goes dry	during p	urging:	The Yes	N I	No
Casing vol. (gal): (where applicable)		N /eu			= {tota	= [total depth (feet) - depth to water (feet)] • [well ID (inches) ²] • 0.0408					
Time ("24:00" hr)	1536	1,39	1541	1544	1547	1550	1553	1556	>		Remarks
Purge vol. (gal)	0.0		·								
Purge rate (mL/min)	150	150	150	150	150	150	150	150			
pH (su)	6.20	6.82	6.78	6.77	6.78	:.79	6.78	6.77			
Temp. (°C)	25.38	25.00	24-78	24.84	24.82	24.71	24.76	24.77			
Spec. cond. (µS/cm)	5309	5447	5562	6087	6391	6477	6498	64 91			
D.O. (mg/L)		~		4.	~	n	, on				
ORP (mV)			~				~				
Turbidity (NTU)	25.69	20.11	1.59	6.03	3.72	315	3.24	2.73			
Color/tint		~		~	~						
Odor	·	~	<i>د</i> .	galan.	, mart-					0010020 0000000000 0	ne en son per a allegador en de andréa de la contra de la La contra de la contr

Sample ID	Date	Time	# Containers	# Filtered	Remarks
Mw-10	6/3/13	1600	2	None	1-250 M-3-1-1 Gal a

Sampler's Name (print): ERIC NECACSE	Sampler Signature:	Asia Huran.

	and the second second second second second second second second second second second second second second second		personance and
acility: Waterford-3	Site ID: MW-11	Sampler: EEN	
Project Number: 060450 - 0031-002	Date: 6/3/13	FTN Associates, I	td

Site Description

Type: 📈 Monitoring Well 🗌 Temporary Well 📄 Extraction Well 📄 Production Well 📄 Dewatering Well 📄 Borchole 🛄 Other								
Weather: Sunny 20°	Air Temp (°F):	Wind: 5E - Smph						
Well Locked? 🗌 Yes 🗌 No 🛛 Tota	al Depth (ft) inknow Damage/repairs	sneeded: Well casing not painted						
Remarks:								

Water Level Data

Measuring point description:		leter Make/Mod FCIC (ひりは		Serial No.	(Optional):	
North rim of TOC Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	let 1(00	1405	14ZO	1423	1530	
Depth to Water (ft)	1013	1013.	10.64	10.67	1079	
Date (mm/dd/yy)	6/3/13	6/3/13	6/5/13	6/3/13	6/3/13	
LNAPL Thickness (ft) (If present)		······	\$\$\$			
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

	10000 ministration and a managem	CONTRACTOR CONTRACTOR											
Instrument Make/Mod	el No:		r Serial ì	No:			ip descrij				Bailer description:		
YSE		<u>t</u> i	<u>6 (</u>		· TTRATICINAR LODING.		Peristalt	ic			Disposable polyethylene		
HESUENTICIC	Contractor Descention (a)	-11	<u> </u>				Bladder	(dedicat	ed / porta	ible)	Disposable Teflon		
							Submers	ible	-		Disposable PVC		
Purge depth (ft):		30			Well g	oes dry	during p	urging:	T Yes	I A	No		
Casing vol. (gal): (where applicable)				#FCCT-0464754 084 04-4	= [total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • 0.0408								
Time ("24.00" hr)	1410	1413	1416	1419	1421	1423					Remarks		
Purge vol. (gal)	0.0	0.15	0.25	0.3	0.35	0.4		******					
Purge rate (mL/min)	100	100	100	100	100	100							
pH (su)	6.93	683	6.79	6.76	6.76	6.78							
Temp. (°C)	26.79	26.46	26.08	26.11	1	26.10				***************************************			
Spec. cond. (µS/cm)	5860	5697			5709	5714							
D.O. (mg/L)		****	euro.	-ca1	~	<i>7~</i>							
ORP (mV)	~	-		-	~			199 269 269 269 269 269 269 269 269 269 2					
Turbidity (NTU)	20.8	11.16	6.67	317	4.27	7.82							
Color/tint	540.00	l.e		ur.	~								
Odor	hutun.		1	~	د.								

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-11	6/3/13	1425	Ð.	None	1-250 al H.3; 1- 13 d L
					, , , ,

			10
Sampler's Name (print):	ERIC NECHISE	Sampler Signature:	Conten
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÷.,	그렇게 물건에 다 다 가지 않는 것이 없는 것이다.	

Date	Project			der l. cr	4	Kenne Martin			Project Num	ber Jacober J				ager (F		Alert I				Page of
Laboratory Nar	ne				Submit		oy:		06045-031-692			Parameters (Method Number)							Lab Turn-Around	
Phone: ()									3									24 Hours 48 Hours 7 Days		
Sampler Signature(s)											K							Other: Due://_		
SAMPLE DESCRI					IPTION Matrix* Method															
Field Sample	Number	Date (mm/dd/		Time (hh:mm) }	W	1atrix S	• 0	Number of Containers	Comp	Grab									Laboratory Not
- E 0, m w	189	- 6 f A f		12803	1	X			n de L adar		1. X. O		J.							
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		n an															1.1.2			
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						* Ma	triv	W =	Water S = S		Other						1		1	
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Relinquished B			Print Na	***************************************				Date	Time	・ ディスシー・ブランド	d By Lal				Prin	t Nam	e	<u>ni si si si s</u> Si si si si Si si		Date Tin
Sampler Remar	(S									Laborat	ory Rem	arks:								



Date Project							Project Num					ager (I						
6/4/13 En	<u>Ergy i</u>	<u>a parte</u>	<u>rfoid 3</u>				06045-0	1031-1	2 6 Zune -	. A	0.63	W16 S	angener i se					Page of
Laboratory Name			Subn	nitted	by:						F	arame	ers (M	ethod 1	Numbe	ñ .		Lab Turn-Around Tim
TELEDIN				FTN Associates, Ltd. 124 W. Sunbridge Drive, Suite 3 Fayetteville, AR 72703														24 Hours
							Fax (479) 5	571-333	3									48 Hours
Sampler Signature(s)				Recorded By (Print)												경험물	🔲 7 Days	
가 있 는 것 같은 것이 있 는 것이 같은 것이 같이 많이 있는 것이 같이 있다. 것이 같이 많이 많이 많이 없다.				Recorded By (Print)												Other:		
						1.	<u>C.A.M.D.S.P.</u>											Due://
SAMPLE DESCRIPTION Matrix*								Method										
Field Sample Number	Dat (mm/d		Time (hh:mm)	W	S	0	Number of Containers	Comp	Grab									Laboratory Notes
M.J-03	let P	113	140	X		f a sel Roch	C. Lawrence († 19	adata		i de la composición de la composición de la composición de la composición de la composición de la composición d Composición de la composición de la comp	×.							
Mui- 04			1300	J.			la se la compania da se se Granda da Companya da se se se se se se se se se se se se se		an the state		Harris							
Male II			1.825	X			a Land	ing ang sang sang sang sang sang sang san		. K	(J.							
Mar O	V		1600	Lau	14 m 2 19 m 2 19 m 2		an Brian		la faithe	Maria								
Mw-05	C. J. May	11.25	0.140	, de July			and Summer and		14	J. Maria	X							
NW-06			9625				land Level and		×.	A	and the second							
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and the second second			0490	J.					Maria	Julie - Standard - Standard - Standard - Standard - Standard - Standard - Standard - Standard - Standard - Standard - Standard - Standard - Standard - Standard - Standard - Standard	(L)		1000					
MW-08			17.05	J.			and the second se			i Ha	N.							
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				* M	atrix:	W =	Water S = S	aa damad	harren ar harren ar harren ar harren ar harren ar harren ar harren ar harren ar harren ar harren ar harren ar h		Z stala		<u>in in</u>	din di Carata				-
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Relinquished By (Signature)		Print Na				Date	Time	Receive	d By La	porator	y (Sign	ature)	Prir	t Nam	e			Date Time
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Revision Date 11/22/02

Dai	ly	Log
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ite Location: Waterford- 3	Date: 7/10/13
oject Number: 06045-0031-002	Page / of Z
0845. ARRIVE ON SITE 0930. Complete JOB SAFETY BRIEF AN 0935. Start Collecting mater Levels 1100 - Start Sampling at MW-03 1210-1245 Raining 1400-1445 Raining 1145. Left Site	
0930 . Complete JUB SAFETY BRIEF AN	ND CALIBRAION
0935 - Start collecting mater Levels	at mw-03
1100 - Start Sampling at MW-03	
1210-1245- Raining	
1400-1445 Raining	
1745- Leff Sile	
H	

Daily Log

ite Location: WF-3	Date: 7/11/13
oject Number: 06045-0031-002	Page 2 of 2
1730 - Arrive on site calibrate equipment	
0730 - Arrive on site, calibrate equipment 0745 - Presob Sately weeting	
0147 Fresob Satury Mering 0615- Begin Sampling MW-04 1400 - Finish Sampling MW-11 1420 - Transferred Coc to Danielle Breauc 1430 - Left site	
1100 - Emich Gammain inter	
1420 - Thereford Cor to Danielle Brown	1
1120 Transteriter COC to Danteue Dicane	,
1490 - CETT DIE	
	1.16



FTN Associates Calibration Form

Date/Time:	9/10/13 0900
Prepared By:	ÊFN
Location:	Waterford - 3
Project #:	16045-0031-002

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments			
a	28 6.4 40 1	Cond	0	uS/cm		10000	Y N					
		Cond	1413	uS/cm	28.94	1435	(N	1413	LOTZAL 351 Ex 12/13			
YSI	#(pН	7	su	17.13	2.19	ΘN	7.00	LOTZAL351 Ex 12/13 LOT 3ACOGO Ex 3/15			
		pН	4/10	su	27.99	3.99	ΘN	4.00	LOT 24KG44 EX11/14			
_		DO		mm/Hg	123	mg/l	Y N	mg/l				
	1	Temp	1	Degrees C	28.0	28.4	N	N/A				
			1.1.1				YN		New York New York			
HF Scientifi	. 年1	Turbidity	0.02	NTU	N/A	0.00	8 N	0.01	LOTZOZO1 EX 2/14			
		Turbidity	10.0	NTU	N/A	8.99	ON N	10.03	LOT 20239 Ex 2/14			
		Turbidity	1000	NTU	N/A	819.4	O N	498.6	LOTZO 404 EX #/14			
		Turbidity	1.1.1.1	NTU	N/A		Y N	6	(

Notes:

1. Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

2. pH Calibration (pH Method: EPA 150.1)

3. DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

4. Temperature Calibration: No calibration is necessary. Record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target



FTN Associates Calibration Form

9/11/13 0730
EFA
WF.3
06045-0031-002

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
		Cond	0	uS/cm		1	YN		
		Cond	1413	uS/cm	25.00	1363	(N	14(3	LOTZAL351 Ex 12/13
VSI	世(pН	7	su	25.40	2.01	(M) N	1,00	Lot 3ACUGG EX 3/15
		pН	4/10	su	25.03	4.04	Ø N	9.00	Lot 24K644 Exilin
· · · · · · · · · · · · · · · · · · ·		DO		mm/Hg		mg/l	YN	mg/l	
	(C	Temp		Degrees C	29.0	24.97	N	N/A	
	(halos a)				1	1257-212	YN		
HF Scientific	井 (Turbidity	0.02	NTU	N/A	0.16	(Y) N	0.01	Lot 20201 Ex 2/14
	10.001	Turbidity	10.0	NTU	N/A	10.02	(P) N	9.97	Lot 20239 EX 2/14
		Turbidity	1000	NTU	N/A	1006	() N	1007	20+ 20404 Ex 4/14
		Turbidity		NTU	N/A	Lorenzo de L	Y N	1	
Comments:									

Notes:

1. Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

2. pH Calibration (pH Method: EPA 150.1)

3. DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

4. Temperature Calibration: No calibration is necessary. Record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target



Groundwater Level Data Sheet

Project Nat Waler	me: ford-3		9 ject Number: 045-0037-	002	Investiga	ator: FN	Page /_ of /
Weather Co Sunny	onditions: Wind Sm		asuring Device: ECK 100 E				
Well ID	Date	Time	Depth to Water (feet below RP)			Damages/Repairs	
NW-09	9/10/13	0935	5.00	Damaged to Damaged to	ollards	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
Mw-08	i,Î	0945	7.12	and the second se	well pad/casing collards	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access
MW-07	_I I	0955	6.25	Damaged b Damaged e	equipment	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample recor
mw-04	11	1005	4.20	Damaged b Damaged e	quipment	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample recor
MW-05	D^{+}	1015	5.83	Damaged v Damaged b Damaged e		Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample recor
mw-10	ρ	1025	9.49	Damaged v Damaged b Damaged e		Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample recor
MW-11	1F	1035	9.71	Damaged v Damaged b Damaged e		Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
mw-oy	u.	1045	8.41	Damaged v Damaged b Damaged e		Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
MW-03	n.	1055	5-63	Damaged v Damaged b Damaged e		Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
				Damaged v Damaged b Damaged e	vell pad/casing oollards quipment vell pad/casing	Damaged TOC Damaged lock Un-kept vegetation Damaged TOC Damaged TOC Damaged lock	Lacks visibility Lacks access See gw sample record Lacks visibility Lacks visibility Lacks access
				Damaged e	quipment well pad/casing collards	Un-kept vegetation Damaged TOC Damaged lock Un-kept vegetation	See gw sample recor Lacks visibility Lacks access See gw sample recor
				Damaged w Damaged b Damaged e Damaged w	vell pad/casing ollards quipment vell pad/casing	Damaged TOC Damaged lock Un-kept vegetation Damaged TOC	Lacks visibility Lacks access See gw sample record Lacks visibility
				Damaged b Damaged e Damaged w Damaged b Damaged b Damaged e	quipment vell pad/casing ollards	Damaged lock Un-kept vegetation Damaged TOC Damaged lock Un-kept vegetation	Lacks access See gw sample record Lacks visibility Lacks access See gw sample record

Notes: RP - Reference Point TOC = Top of Casing gw - groundwater

Facility: WF-3	Site ID: MW-03	Sampler: ÉFN
roject Number: 06045-0031-002	Date: 9/10/13	FTN Associates, Ltd

Site Description

Weather: Sunny	Air Temp (°F)): 85	Wind: W- Smph		
Well Locked? Yes 🗆 No	Total Depth (ft) 37.58	Damage/repairs needed:	Bollards need	painting	

Water Level Data

Measuring point description: Mark/notch on TOC	Water level N	leter Make/Mod CIく 100 は		Serial No	Serial No. (Optional):			
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks		
Time ("24:00" hr)	1055	1100	1120	1135	1210			
Depth to Water (ft)	6.63	5.43	5.89	5.97	6.02			
Date (mm/dd/yy)	9/10/13	9/10/13	4/10/13	9/10/13	9/10/13			
LNAPL Thickness (ft) (If present)		1 c						
DNAPL Thickness (ft) (If present)								

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Moo VST HESCIENGGI	lel No:		r Serial I 4 (No:		Pump description: Peristaltic Bladder (dedicated / portable) Submersible					Dispo	cription: sable polyethylene sable Teflon sable PVC	
Purge depth (ft):	Purge depth (ft): 37.58						Well goes dry during purging: Yes X No						
Casing vol. (gal): (where applicable)		5,21			= [total	depth (fe	eet) – dep	oth to wat			O (inches) ²] = 0.0408	
Time ("24:00" hr)	1102	1105	1108	1111	1114	1117	1120	1123	1126	1129	1132Re	marks	
Purge vol. (gal)	0.0	0-1	0.2	0-3	0.4	0.5	0.6	07	0.8	0.9	1.0		
Purge rate (mL/min)	125	125	125	125	125	125	125	125	125	125	125	1 C C C C C C C C C C C C C C C C C C C	
pH (su)	6.52	6.58	6.62	4.68	6.71	6.74	6.71	6.80	6.83	6.83	6.92		
Temp. (°C)	26.35	26.44	26.44	26.30	26.35	26.26	26.31	26.43	24.41	26.38	1		
Spec. cond. (µS/cm)	2450	2693			2760			3012	3123	3118	3113		
D.O. (mg/L)	~	-	-	-	-	-		-	-	-	- 1		
ORP (mV)	~	-	-	~	-	-		-	-	03.011	-		
Turbidity (NTU)	152.8	25.40	9:30	5.11	4.71	6.18	3.47	8.23	4.41	6.87	3.82		
Color/tint		1-	-	~	-	2	-	-	-	-	-		
Odor	-	4	~	~	5	-	-	5	-	-	- 1		

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW~ 63	9/10/13	1135	2	None	1-250x0 11-3; 1-1 gal cubitamin

Sampler's Name (print): ERIC NECHISE

Sampler Signature: Grut

Form SOP 120-3 - Sampling Record - Revision 2 (JAN 2012)

wan

Facility: ME-3	Site ID: MW-64	Sampler: EFN	
. roject Number: 06045 -0031-002	Date: 9/10/13		FTN Associates, Ltd

Site Description

Weather:	Sunny	85		Air Temp (°F):	85	Wind: Smph West
Well Locked? [YYes	🗌 No	Total Dept	n (ft) 37.73	Damage/repairs needed:	Bollards need paint
Remarks:		S				and dirt is washed away from bollards and pad

Water Level Data

Measuring point description:	Water level N	Aeter Make/Mod	el No.	Serial No. (Optional):			
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks	
Time ("24:00" hr)	1041	1245	1300	1303	1345		
Depth to Water (ft)	8.41	8.41	9.11	9.23	9.67		
Date (mm/dd/yy)	2/10/13	19/10/13	9/10/13	9/10/13	9/10/13	1.000	
LNAPL Thickness (ft) (If present)		1	4 (2	1111			
DNAPL Thickness (ft) (If present)							

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod <u>VST</u> HESCIENTE			r Serial] ∦ (⊯	No:	-			 Bailer description: Disposable polyethylen Disposable Teflon Disposable PVC 			
Purge depth (ft):	3	A.10	32.7	3	Well g	oes dry durin	g purging: 🔲	Yes X	No		
Casing vol. (gal): (where applicable)		440	4.7	9	= [total	depth (feet) -	depth to water (fe	et)] = [well	ID (inches) ²] • 0.0408		
Time ("24:00" hr)	1248	1251	1254	1257	1300	1303			Remarks		
Purge vol. (gal)	0.0	0.1	0.2	0.3	0.4	0.6					
Purge rate (mL/min)	125	125	125	125	125	125		1.11			
pH (su)	6.80	6.61	6.58	6.56	6.54	6.56	1111				
Temp. (°C)	26.13	25.89	26.00			26.06					
Spec. cond. (µS/cm)	4862		4742		+827	4864	1				
D.O. (mg/L)	-	-	-	-	-	~					
ORP (mV)	~	~	-	-	~	-					
Turbidity (NTU)	12.95	13.81	9.83	11.09	8.49	11.81					
Color/tint	~	-	-	~		-					
Odor	L	4	~	4	L	L					

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
Mw-04	9/10/13	1305	R	none	1-150 ml H-3; 1-1golaubilance x

Sampler's Name (print): ERIC NECAISE

Sampler Signature: Lin Olecui.

Facility: WF-3	Site ID: MW-05	Sampler: EFN	
Project Number: 06045-0031-002	Date: 9/10/13		FTN Associates, Ltd

Site Description

Weather: Overcast	Air Temp (°F)	: 85	Wind: None
Well Locked? Yes No	Total Depth (ft) 37.59	Damage/repairs n	needed: Billards need painting
Remarks:			and dirf replaced near
			pad.

Water Level Data

Measuring point description:		Aeter Make/Mode	el No.	Serial No	. (Optional):	
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1015	1440	1457	1520	1600	
Depth to Water (ft)	5.83	5.85	6,13,	6.12	6.15	
Date (mm/dd/yy)	2/10/13	2/10/13	9/10/13	9/10/13	9/10/13	
LNAPL Thickness (ft) (If present)	1			190		
DNAPL Thickness (ft) (If present)					- St	

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod 15I Life Scientifi		-3	t Serial I t (t (No:			p descri Peristalt Bladder Submers	ic (dedica	ted / por	table)	Di Di	description: sposable polyet sposable Teflor sposable PVC	
Purge depth (ft):		32.5	2		Wellg	goes dry	during p	ourging:	TY	es K	No		
Casing vol. (gal): (where applicable)	5,18	[= [total	depth (f	eet) – dep	oth to wat	ter (feet)]	• [well I	D (inche	es) ²] • 0.0408	
Time ("24:00" hr)	1445	1448	1451	1454	1457	1500	1503	1506	1509	1512	1515	Remarks 1518	1
Purge vol. (gal)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	11.0	1-1	1
Purge rate (mL/min)	125	125	125	125	125	125	125	125	125	125	125	125	
pH (su)	258	7.33	7.26	1.22	7,20	2.18	7.16	7.11	7.08	2.03	2.03	7.06	1
Temp. (°C)	26.62	26.53	27.06	24.85	26.74	26.83	21.96	27.09	27.17	27.33	27.4		-
Spec. cond. (µS/cm)	4974		1	5169		4803		1	4163	4017	413	14228	
D.O. (mg/L)		-	-	-	-	-	~	~	~	~	-	1 - 1	
ORP (mV)	~	-	-	-			14	~	-	1	-	-	
Turbidity (NTU)	35.19	4.03	11.13	6.71	4.18	3.72	2.11	6.81	7.23	11.18	42.13	36.22	
Color/tint	-	1	-	-	-	-	-	-	-	-	-	-	
Odor		*	~	4	-	~	-	4	~	1	-	-	

Sample Data

	Remarks	R	# Filtered	# Containers	Time	Date	Sample ID
X	1-1gal cube X	1-250 ml H-3; 1	None	2	1520	9/10/13	MW-05
	-	1				-1 1	

Sampler's Name (print): ERIC NECAISE

Sampler Signature: Snul

en

Facility: WF3	Site ID: MW-06	Sampler: EFN	
. roject Number: 06045 -0031-002	Date: 9/11/13		FTN Associates, Ltd

Site Description

Weather: Sunny	Air Temp (°F): 80	Wind: E- Saph
Well Locked? Yes 🗆 No	Total Depth (ft) 35. 40 Damage/re	epairs needed: Bollards and well need pains

Water Level Data

Measuring point description: Mark/notch on TOC	Water level N KEC /C	Ieter Make/Mod 100 # 3	el No.	Serial No	. (Optional):	
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1005	0815	0835	0845	0935	
Depth to Water (ft)	4.20	4.22	4.61	4.75	5.06	
Date (mm/dd/yy)	2/10/13	9/11/13	2/11/13	9/11/13	9/11/13	
LNAPL Thickness (ft) (If present)	6 1 1	1.1		1.01.2		
DNAPL Thickness (ft) (If present)	-					

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod 152	lel No:		Serial 1 #-(No:			p descri Peristali		0.00/	Bailer description:
HESCIENTIFIC		- 4	ti	_			Bladder Submer		ted / portable)) Disposable Teflon Disposable PVC
Purge depth (ft):	30.0	10			Well g	goes dry	during p	ourging:	Yes [No
Casing vol. (gal): (where applicable)	i	5.09			= [total	l depth (f	eet) – dej	oth to wa	ter (feet)] • [we	ell ID (inches) ²] • 0.0408
Time ("24:00" hr)	0820	0823	0826	0829	0832	0835	0838	0841	0847	Remarks
Purge vol. (gal)	0.0	0-1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	
Purge rate (mL/min)	125	125	125	125	125	125	125	125	(25	
pH (su)	6.86	7.00	7.07	2.10	2.13	7.15	7.18	7.19	7.17	
Temp. (°C)	26.11	25.93	25.88	25.93	26.13	26.60	26.47	26.82	26.38	
Spec. cond. (µS/cm)	3026	2923	2986	2992	29.90	2993	2994	3004	3013	
D.O. (mg/L)	-	-	-	-	-	-	-	-	-	
ORP (mV)	-	-	-	~	-	-	-	×	-	
Turbidity (NTU)	1.57	1.07	0.74	0.59	0.86	1.86	5.17	3.30	4.73	
Color/tint	-	~	-	-	-	-	-	-	-	
Odor	-	-	Ú.	-	*	-		~	1 × 1	

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MN-04	9/11/13	0845	2	how	1-250 ml H-3; 1-1gal cube
				1	

Sampler's Name (print): ERIC NECASE

Sampler Signature:

Ein Jernisi

Facility: WF-3	Site ID: MW-07	Sampler: EFN	
Project Number: 06045-003-002	Date: 9/10/13		FTN Associates, Ltd

Site Description

Weather: Sunny	Air Temp (°F)): 85 Wind:	
Well Locked? Ves 🗌 No	Total Depth (ft) 41.15	Damage/repairs needed: None	

Water Level Data

Measuring point description:		Aeter Make/Mod	el No. 123	Serial No. (Optional):			
□ North rim of TOC □ Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks	
Time ("24:00" hr)	0955	1619	1625	1633	1740		
Depth to Water (ft)	6-25	6.25	7.12	2.23	7.03		
Date (mm/dd/yy)	2/0/13	9/10/13	4/10/13	9/10/13	9/10/13		
LNAPL Thickness (ft) (If present)	t up par	1	1				
DNAPL Thickness (ft) (If present)							

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Model No: $\frac{\sqrt{SI}}{\frac{1}{1}}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1}$				No:		Pump description: Bailer description: Peristaltic Disposable polyethyle Bladder (dedicated / portable) Disposable Teflon Submersible Disposable PVC						
Purge depth (ft):	1	36.15			Well goes dry during purging: TYes KNo							
Casing vol. (gal): 5,69						= [total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • 0.0408						
Time ("24:00" hr)	1620	1623	1626	1629	1632		Remarks					
Purge vol. (gal)	0.0	0.1	0.2	0.3	0.4							
Purge rate (mL/min)	125	125	125	125	125							
pH (su)	6.89	6.72	6.67	4.68	6.67							
Temp. (°C)		125.90		25.77	25.78							
Spec. cond. (µS/cm)	1021	1009	1002	1002	1002							
D.O. (mg/L)	~	-	~	-	-		1					
ORP (mV)	-	-	-	-	~							
Turbidity (NTU)	6.59	2.60	3,14	2.76	4.82							
Color/tint	-	-	In	~	-							
Odor	-	4	~	~	*							

Sample Data

	Date Time	# Containers	# Filtered	Remarks
MW-07 9/1	10/13 635	2	1000	1-250ml H-3; 1-1gal L
Dapmm-07 :	1/ 1710	2	none	11 11

Sampler's Name (print): ERIC NECAUSE

Sampler Signature:

Facility: WE3	Site ID: MW-08	Sampler: EFN	
roject Number: 06045-0031-002	Date: 9/11/13		FTN Associates, Ltd

Site Description

The second second		0.00	W'IE Ford
Weather: Overcast	Air Temp (°F):	83	Wind: E-5 Mph
Well Locked? KYes D No	Total Depth (ft) 41.47	Damage/repairs needed	: Dirtnerds to be replaced
Remarks:			around pad

Water Level Data

Measuring point description:		Ieter Make/Mod		Serial No.	Serial No. (Optional):			
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks		
Time ("24:00" hr)	0945	0949	0952	1003	1040			
Depth to Water (ft)	7.12	7.13	7.32	2.41	2.53			
Date (mm/dd/yy)	2/10/13	9/11/13	9/11/13	2/4/13	9/11/13			
LNAPL Thickness (ft) (If present)								
DNAPL Thickness (ft) (If present)	1							

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Model No: Unit or Serial No: UF Secentric #1 #1								Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC			
Purge depth (ft):	36.	97			Well go	Well goes dry during purging: Yes No					
Casing vol. (gal): 5.60						= [total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • 0.0408					
Time ("24:00" hr)	0950	0953	0956	0959	1002		-		Remarks		
Purge vol. (gal)	0.0	0.1	0.2	0.3	0.4						
Purge rate (mL/min)	125	125	125	125	125						
pH (su)	7.22	6.67	6.59	6.58	6.59						
Temp. (°C)	27.23	26.11		26.16	24.15						
Spec. cond. (µS/cm)	1234	1083	1060	1055	1059	1					
D.O. (mg/L)	-	-	-	-	-						
ORP (mV)	-	~	-	-	-						
Turbidity (NTU)	3.24	7.88	2.50	2.26	3.48		-				
Color/tint	-	*	-	-	-						
Odor	1	-	-	-	~						

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-08	9/11/13	1005	2	Aone	1-250ml H-3: 1-1gal X
				6-	1 0

Sampler's Name (print): ERIC NECAISE

Sampler Signature: Control te cam

Facility: WF-3	Site ID: MW-09	Sampler: EFN	
. roject Number: 06045-0031-002	Date: 9/11/13		FTN Associates, Ltd

Site Description

Weather: Overcast	Air Temp (°F): 85 Wind: 5	unjoh East
Well Locked? Ves 🗆 No	Total Depth (ft) 40.22 Damage/repairs needed: None	

Water Level Data

Measuring point description:		leter Make/Mod ビこと 100		Serial No. (Optional):				
North rim of TOC Other:	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks		
Time ("24:00" hr)	0935	1046	1100	1105	1140			
Depth to Water (ft)	5.00	5.05	5.15	5.16	5.18			
Date (mm/dd/yy)	9/10/13	9/10/13	2/10/13	9/11/13	9/11/13			
LNAPL Thickness (ft) (If present)		· · · · · · · · · · · · · · · ·						
DNAPL Thickness (ft) (If present)								

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod VSI HEGUEW		Unit o	r Serial I # [# [No:	_		p descrip Peristaltic Bladder (Submersi	e dedicat	ed / porta	ble)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft):	35.	22			Well	oes dry	during pu	rging:	Yes	Ø	No
Casing vol. (gal): 5,74 (where applicable)						= [total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • 0.0408					ID (inches) ²] • 0.0408
Time ("24:00" hr)	1048	1051	1054	1657	1100	1103			10.10		Remarks
Purge vol. (gal)	0.0	0.1	0.2	0.3	0.4	0.5			1		
Purge rate (mL/min)	125	125	125	125	125	125				-	
pH (su)	6.93	6.88	6.87	6.88	6.88	6.88	1.				
Temp. (°C)	25.59	25.63	25.68	25.54	25.68	25.11				-	
Spec. cond. (µS/cm)	25.42	2562	2541	2535	2513	2526					
D.O. (mg/L)	-	1	-	-	-	-					
ORP (mV)	-	-	~	-	-	-					
Turbidity (NTU)	4.18	18.41	1.59	401	3.73	4.92					
Color/tint	1-	-	-	-	*	-					
Odor	-	-		~	5	L					

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-09	9/11/13	1105	2	hone	1-250ml H-3; 1-1gol x
				-	

Sampler's Name (print): ERIC NECAISE

Sampler Signature: Esta Viciant

Facility: WE3	Site ID: MW-10	Sampler: EFN	
Project Number: 06045-0031-082	Date: 9/11/13		FTN Associates, Ltd

Site Description

Weather: Overcast	Air Temp (°F):	: 85	Wind:	10mpl East
Well Locked? Ves 🗆 No	Total Depth (ft) 32.82	Damage/repairs needed:	None	1 1

Water Level Data

Measuring point description:	Water level N	Heter Make/Mode	el No. 3	Serial No. (Optional):				
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks		
Time ("24:00" hr)	1025	1151	1210	1217	1255			
Depth to Water (ft)	9.49	9.50	9.45	9.71	9.23			
Date (mm/dd/yy)	9/10/13	9/11/13	9/11/13	9/11/13	9/11/13			
LNAPL Thickness (ft) (If present)		1 1 1 1	11 (
DNAPL Thickness (ft) (If present)	1							

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod <u>497</u> <u>HE Scientific</u>		Unit o	r Serial 1 H (H	No:	_	各	p descri Peristalt Bladder Submer	ic (dedicated	l / portable)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft):	27	.82			Well g	goes dry	during p	ourging:	Yes X	No
Casing vol. (gal): (where applicable)		.81			= [total	depth (f	eet) – dep	oth to water	(feet)] = [well	ID (inches) ²] = 0.0408
Time ("24:00" hr)	1155	1158	1201	1204	1207	1210	12/3	1216		Remarks
Purge vol. (gal)	0.0	0.1	0.2	0.2	0.3	0.4	0.5	0.6		
Purge rate (mL/min)	125	125	125	125	125	125	125	125		
pH (su)	6.86	6.76	6.73	6.72	6.72	6.12	6.74	6.75		
Temp. (°C)	25.71	26.17	25:78					25.42		
Spec. cond. (µS/cm)	1	5006		5249			4489		10 C	
D.O. (mg/L)	-	~	- 1	-	~	~	-	-	111	
ORP (mV)	-	-	-	-	-	×	-	-		
Turbidity (NTU)	5.62	3.90	2.46	2.67	1.88	1.33	1.63	1.61		
Color/tint	-	-		~	-	-	-	-		
Odor	-	-		~	-	-	~	~	1.1	

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
M.W-10	9/11/13	1220	2	None	1-250 ml. H-3, 1-1 gul x

Sampler's Name (print): ERIC NECALSE

Sampler Signature: Curifican

Facility: WF 3	Site ID: MW - 11	Sampler:	ENN	
Project Number: 06045-0031-602	Date: 9/11/13			FTN Associates, Ltd

Site Description

Weather: Overcast	Air Temp (°F)	: 35	Wind: 10 Mph 5W
Well Locked? Yes No	Total Depth (ft) 38.29	Damage/repairs needed: A	love

Water Level Data

Measuring point description:		Ieter Make/Mod		Serial No.	(Optional):	
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	1035	1300	1315	1320	1355	
Depth to Water (ft)	9.71	9.75	11.61	11.70	1237	
Date (mm/dd/yy)	2/10/13	9/11/13	9/11/13	9/11/13	9/11/13	94
LNAPL Thickness (ft) (If present)						
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod Y 3I UF Scientie			r Serial I 世(世)	No:		8	p descrip Peristalti Bladder Submers	ic (dedicated	/ portable)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft):	33 29				Well g	oes dry	during p	urging:	Yes X	No
Casing vol. (gal): (where applicable)					= [total	depth (fe	eet) – dep	th to water	(feet)] • [well	ID (inches) ²] • 0.0408
Time ("24:00" hr)	1301	1304	1307	1310	1313	1316	1319		-	Remarks
Purge vol. (gal)	0.0	0.1	0.2	0.3	0.4	0.5	0.6			
Purge rate (mL/min)	125	125	125	125	125	125	125			
pH (su)	6.97	6.81	6.75	6.72	6.70	6.68	6.70			
Temp. (°C)	26.62	26.07	25.92	26.09	25.89	25.97	2605			
Spec. cond. (µS/cm)	5325	4885	4836	4842	4866	49.21	4979			
D.O. (mg/L)	~	-	-	•	-	-	-		2.1	
ORP (mV)	-	-	-		-	-	-			
Turbidity (NTU)	25.58	11.51	6.20	3.67	3.55	3.08	3.91			
Color/tint	-	-	-	-	-	-	-			
Odor	1.1-1.1	L	-	~	-	-	-			

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-11	2/11/13	1320	2	none	1-250 ml H-3; 1-1gal x
EBMW-11	10	1400	2	none	« / n

Sampler's Name (print): ER& NECAISE

Sampler Signature:

un



Date	Project N	Name						Project Numb					ager (P			and an average of the			Page _/_ of _2
9/11/13	W	1F-3	-	1.2.1				06045-00	31-00	20	E	SOB	W.	531					rage 01
Laboratory Name				Sub	mitted b	oy:						р	aramete	ers (M	ethod N	Jumbe	r)		Lab Turn-Around Time
				FT	N Ass	ociat	tes. I	.td.				Î	arannet	10 (111	cuiou i	Tumbe	í		
								Drive, Suite	e 3					-					24 Hours
					vettevi														48 Hours
Phone: ()				(47	9) 571	-333	34 •	Fax (479) 5	71-3338										
											-	R							7 Days
Sampler Signature	(s)				orded B						*	Y							Other:
Eru .	flea	esa		4	. R + C	1	VE	CAISE	-		w								Due: _/_/
6			SAN	MPLE DESCRI	TION														
					N	latrix	*		Meth	nod									
Field Sample Nu	mber	Date (mm/dd		Time (hh:mm)	W	S	0	Number of Containers	Comp	Grab									Laboratory Notes
MW-03		4/10		1135	X			2		×	x	X		-					
MW- 04		1		1305	×			2		X	X	X							
MW- 05				1520	×			2		×	×	x							
MW-07				1635	X			2		×	R	K							
OUP MW- 0	57	Y		1710	X			2		×	x	R		Y					
MW-06		9/11/1	2,	0845	X			12		X	K	x		10 x					
MW-D8		1		1805	×			2		X	K	x							
MW-09		1		1105	X			2		X	×	x							
Mu3-10		-		1220	X			Zur		×	X	K							
MW-11		Y	the set	1320	X	-		2		X	×	X							
		8			* Ma	trix:	W =	Water $S = S$	in the second					-					
Relinquished By (S			Print N	NECAIS	F	91	Date	Time 5 14/0	Received	d By (Sig			nd	Prin	t Name	lle	Bree	and	9/11/13 Time
Relinquished By (S			Print N				Date	Time	Received						t Name				Date Time
Sampler Remarks						1		-	Laborato	ory Rema	arks:								

1 - The - Barra Maria Barla - The Mar and I will



Date	Project Name				Carterer	Project Numb	ber		Projec	ct Mana							
9/11/13	WFE	3			_	06045.0	031-	002		BOI	13 W	VEST			Page 2 of	- Const	
Laboratory Name			Submitte	ed by:					-	Do	ramet	ers (Method N	lumber)		Lab Turn-Aro	und Time	
			FTN A	ssocia	tes I	td			-	Ta	lanet	cis (include i		1	Luo Tun Tuo	und mine	
						Drive, Suite	3								24 Hours	-	
3			Fayette												48 Hours		
Phone: ()						Fax (479) 5	71-3338	3									
										0					7 Days		
Sampler Signature			Recorde						The	X		3. 3 - 1			Other:	-	
Jam de	land	1	ER	16 1	NE	AISE			w						Due:	1-1-	
(SAMPLE DE	SCRIPTIC	DN												Martin Contraction	
and the second				Matri	x*		Met	hod		2						And a state of the	
Field Sample Nu	mber Date (mm/dd/yy) Tim (hh:n		N S	0	Number of Containers	Comp	Grab							Laboratory	y Notes	and the second
EB MW-11	9/11/12			C		2		×	1	1						and the second designed	
11.4 11	11.112	17.							. A.					1.5			
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Mar Barran																and a second second second second second second second second second second second second second second second	and a col
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Relinquished By (S		int Name	AIGH	9	Date	d and a detail		d By Lal				Print Name		CANG	Date	Time	
Reinquisned By (3	Signature)	int Name			Date	Ime	Receive	u by La	oratory	y (Signat	ure)	I fint Ivanik	·		Duit	Thine	
Sampler Remarks		7	-				Laborat	ory Rem	arks:		-						1
																	Stard Str

Daily L	лg
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te Location: Wyber Gord - 3	Date: 12/17/13
oject Number: 06045 - 0031 - 002	Page (of Z
0730. ARRIVE ON Site	
0800 - Start Water Level Megsuremen	
0800 - Start Water I evel Megsuremen	ts
0970 - Logo Equipment and enter	SOCA
1100 - Begin Well Development of ma	0-12
1300 - Bagin Sampling MW-12 (pu	irgina)
1100 - Begin Well Development of ma 1300 - Bogin Sampling MW-12 (pu 1430 - Exit Soc A and Begin Pure (700 - Left Site	ging MW03
(700 - left site	

Form SOP 120-2 – Daily Log – Revision 1

Daily Log

ite Location: WF3	Date. (2/ 18/17
Droject Number: 06045-003(-002 0730 ARRIVE ON Sibe 0745 Calibrate Equipment 0830 - frejob Satety 0840 begin Jurging MW-05 1700 - leave site	Date: 12/18/13 Page 2 of Z
0730 ARRIVE ON Sile	
0745 Calibrate Equipment	
0870 - Prejob Satety	
0840 begin Durging MW-05	
1700 - legve site	
	-



FTN Associates Calibration Form

Date/Time:	12/17/13 0.245
Prepared By:	ÉPN
Location:	Waterford - 3
Project #:	06045-0031-002

Instrument Type	instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
		Cond	0	uS/cm			Y N		
45I	ti V	Cond	1413	uS/cm	12.10	1365	(Y)N	1413	241351 Ex 12/13
		pН	7	su	11.87	7.05	(M)N	2,00	3AG547 7/15
		pН	((4)/10	su	13.66	4.04	(Y) N	400	3AI959 9/15
		DO		mm/Hg		mg/l	Y N	mg/i	
2		Temp	A	Degrees C	13.68	14.0	N	N/A	
· · · · ·			1				YN		
HF Scientifie	#2	Turbidity	0.02	NTU	N/A	0.00	Y N	0.05	20201 Ex 2/14
r.		Turbidity	10.0	NTU	N/A	8.54	Y N	9.29	20239 Ex 2/14
		Turbidity	1000	NTU	N/A	997.9	Y N	1001	20404 Ex 4/14
	1.000	Turbidity		NTU	N/A		YN	(

Notes:

1. Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

2. pH Calibration (pH Method: EPA 150.1)

3. DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

4. Temperature Calibration: No calibration is necessary. Record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

Precision and accuracy targets are commonly based on relative percent differences. Precision is either based on a relative percent difference between replicates (analytical precision) or duplicate samples (method precision) as follows:

Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target



FTN Associates Calibration Form

Date/Time:	12/15/13 0730
Prepared By:	EFN
Location:	Waterford - 3
Project #:	06045_0031-002

Instrument Type	Instrument ID	Parameter	Standard (su)	Units	Temp. of Standard (degrees C)	Reading Prior to Calibration	Calibrated	Post Calibration Reading	Comments
	· · · · · · · · ·	Cond	0	uS/cm			Y N		1
YSI	#2	Cond	1413	uS/cm	7.34	1488	Ø N	1413	2AL351 Ex12/13
		рН	7	su	8.60	6.87	(N	7.00	3AG-547 7/15
		рН	AY 10	su	8.17	3.95	(N	4.00	3AI 959 9/15
		DO		mm/Hg		mg/l	Y N	mg/l	
	(=)	Temp	8.23	Degrees C	8.0		N	N/A	
							YN		
HF Scientfre	#2	Turbidity	0.02	NTU	N/A	0.71	Y N	0.01	20201 Ex 2/14
		Turbidity	16.0	NTU	N/A	12.84	Y N	9.83	20239 Ex 2/14
		Turbidity	1000	NTU	N/A	941.5	ÝN	1032	20404 EX 4/14
	41 · · · · · · · · · · · · · · · · · · ·	Turbidity	1	NTU	N/A		Y N		

Notes:

1. Specific Conductivity Calibration: Calibrate first to zero using air, then to standard using standard solution.

2. pH Calibration (pH Method: EPA 150.1)

3. DO Calibration: Use 100% air saturation method. Use pressure in mm/Hg as standard to calibrate in DO% saturation. Record readings in mg/l.

4. Temperature Calibration: No calibration is necessary. Record temperature of standard using thermometer while in calibration cup.

Then record sonde temperature reading.

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Relative Percent Difference (RPD) = 100 * (rep1 - rep2)/(rep1 + rep2)/2

The standard deviation of the average of a group of replicate (or duplicate) pairs represents the precision for a measurement parameter. For accuracy, percent difference is determined relative to a known or target value and is as follows:

Percent Difference = 100 * (observed - target)/target



Groundwater Level Data Sheet

roject Na Wale	me: . r ford - 3		ject Number: 045-0031 -0	202	Investiga Ef	/	Page_(of /
Weather C		Me	asuring Device: 5010/1/st 201			٣	
Well ID	Date	Time	Depth to Water (feet below RP)			Damages/Repairs	
MW-03	12/17/13	0800	5.75	Damaged w Damaged b Damaged ed		 Damaged TOC Damaged lock Un-kept vegetation 	 Lacks visibility Lacks access See gw sample record
MW-04		0815	8.64		ell pad/casing ollards	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
MW-10		08 25	10.03	Damaged be	uipment	Damaged TOC Damaged lock Un-kept vegetation	 Lacks visibility Lacks access See gw sample record
MW-1(0830	10.34	Damaged be	uipment	Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record
MW-05		0840	5.32	Damaged be	uipment	Damaged TOC Damaged lock Un-kept vegetation	 Lacks visibility Lacks access See gw sample record
MW-06		0850	4.08	Damaged bo		Damaged TOC Damaged lock Un-kept vegetation	Lacks visibility Lacks access See gw sample record Lacks visibility
MU-07		0900	6.54	Damaged bo	ollards	Damaged TOC Damaged lock Un-kept vegetation Damaged TOC	Lacks visibility Lacks access See gw sample record Lacks visibility
Miv-08		0910	7.32	Damaged bo	ollards	Damaged lock Un-kept vegetation Damaged TOC ·	Lacks visibility Lacks visibility Lacks visibility
MW-09		0920	3.53	Damaged bo	ollards	Damaged lock Un-kept vegetation Damaged TOC	Lacks visibility Lacks visibility
M.W-12	~	1100	7-16	Damaged bo	ollards	Damaged lock Un-kept vegetation Damaged TOC	Lacks visibility Lacks visibility
				Damaged bo	ollards	Damaged lock Un-kept vegetation Damaged TOC	Lacks access See gw sample record Lacks visibility
				Damaged bo	ollards	Damaged lock Un-kept vegetation Damaged TOC	Lacks access See gw sample record Lacks visibility
				Damaged bo	ollards	Damaged lock Un-kept vegetation Damaged TOC	 Lacks access See gw sample record Lacks visibility
				Damaged bo	ollards	Damaged lock Un-kept vegetation Damaged TOC	 Lacks access See gw sample record Lacks visibility
)			1	Damaged bo	ollards	Damaged lock Un-kent vegetation	Lacks access

acility: Walesford - 3	Site ID: 11. 03	Sampler: EFN	
Project Number: 16045-0031-002	Date: (2/17/13		FTN Associates, Ltd

Site Description

eather: SunnM	Air Temp (°F):	65	Wind: Nor
	otal Depth (ft) 37,58	Damage/repairs needed:	
emarks:	otal Depth (π) <u>34.58</u>	Damage/repairs needed:	

Water Level Data

Measuring point description:	Water level M Solin	1eter Make/Mod sf Mod ()		Serial No	Serial No. (Optional):			
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks		
Time ("24:00" hr)	0800	1450	1505	1507	1525			
Depth to Water (ft)	5,75	5.75	5.92	5.93	6.04			
Date (mm/dd/yy)	12/17/13	12/17/13	12/17/13	12/17/13	13/10/2			
LNAPL Thickness (ft) (If present)	-		1 1		1			
DNAPL Thickness (ft) (If present)	-	1						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod			$\frac{\forall 2}{\forall 2}$	No:	<u> </u>	Pump descrip	ic (dedicated	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC	
Purge depth (ft): 32	258				Well go	es dry during p	urging:	Yes 🚺	No
Casing vol. (gal): (where applicable)	NIK				= [total d	lepth (feet) – dep	th to water	(feet)] • [well	ID $(inches)^2$] • 0.0408
Time ("24:00" hr)	1455	1458	1501	1504	1507				Remarks
Purge vol. (gal)	0.0	0.08	6.15	0.25	D.4				
Purge rate (mL/min)	125	125	125	125	125				
pH (su)	7.60	7.45	7.35	2.32	134				
Temp. (°C)	21.10	21.38	21.44	21.23	21.21				
Spec. cond. (µS/cm)	2695	2711	2722	2769	2782		-		
D.O. (mg/L)	-			-	~				
ORP (mV)	-			-	-				
Turbidity (NTU)	18.47	16.82	15.05	13.49	11.81				
Color/tint	-	-	-	-	-				
Odor	-	÷	-		1				

Sample Data

Date	Time	# Containers	# Filtered	Remarks				
12/12/13	1510	2	None	1-250 ml H-3; 1-1 gal Gamma				
and the second se	1.1	I I K						

Sampler's Name (print): ELIC NECAISE

Sampler Signature: Sur Jecan

acility:	WATERFORD - 3	Site ID: MW-04	Sampler:	EFN	
Project Num	iber: 06045-0031-002	Date: 12/17/13			FTN Associates, Ltd

Site Description

Weather: Sunny	Air Temp (°F):	Wind: None
Well Locked? Xes 🗌 No	Total Depth (ft) 37,73 Damag	ge/repairs needed: None

Water Level Data

Measuring point description:	Water level N Soluns	leter Make/Mod - Møde ((2, 2)	Serial No	o. (Optional):	
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	08/54	1550	1600	1609	1640	
Depth to Water (ft)	8.64	8.68.	8.71	8.76	9.03	
Date (mm/dd/yy)	12/18/13	12/17/13	12/17/13	12/17/1	2 12/17/03	
LNAPL Thickness (ft) (If present)	1. 1					
DNAPL Thickness (ft) (If present)	1	2				

Note: Record "S" in Remarks Column if sheen is observed

Field Data

Instrument Make/Mod VSI HF Scientific	el No:	Unit or	Serial L HZ HZ		Pump description: Bailer description: Peristaltic Disposable polyeth Bladder (dedicated / portable) Disposable Teflon Submersible Disposable PVC						
Purge depth (ft):	32.7	3			Well	goes dry	during p	urging:	Yes	🖸 No	
Casing vol. (gal): (where applicable)	NA				= [total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • 0.0408						
Time ("24:00" hr)	1551	1554	1557	1600	1603	1604	1609			Remarks	
Purge vol. (gal)	0.0	0.05	5.16	0.25	0.4	0.45	6.5	1			
Purge rate (mL/min)	125	125	125	125	125	125	125				
pH (su)	7.15	10.92	6.91	6.89	6.85	6-90	6.91				
Temp. (°C)	20.87			20.95	21.01	22.01	22.26				
Spec. cond. (µS/cm)	5096		5775	5214	5329	52.40	5237				
D.O. (mg/L)	1	-	-		-	-	-				
ORP (mV)	-	-	+	-	4	-	-				
Turbidity (NTU)	13.11	8.43	2.71	3.90	2.18	3.81	437	-			
Color/tint	-										
Odor	-										

Sample Data

Sample ID	e ID Date Time # Containers				Remarks
MW-04	12/17/13	1610	2	None	1-250 ml (1-3 ; 1-1gal Gama
i	_				/
1	_				

Sampler's Name (print): ERIC NECAIST

Sampler Signature: Sus Ma

Form SOP 120-3 - Sampling Record - Revision 2 (JAN 2012)

acility: WF-3	Site ID: MW-09	Sampler: ERIC NECAISE
Project Number: 060 45-0031-002	Date: (2/18/13	FTN Associates, Ltd

Site Description

Weather: Sunny	Air Temp (°F)): 45	Wind: None	
Well Locked? Yes I No	Total Depth (ft) 37,59	Damage/repairs needed:	Fill Needed aroun	d bollars

Water Level Data

Measuring point description:		leter Make/Mod		Serial N	o. (Optional):	
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	0840	0840	0905	0918	0950	
Depth to Water (ft)	532	5.38	5.72	5.71	5.71	
Date (mm/dd/yy)	12/17/13	12/18/13	12/18/13	12/18/17	12/18/13	
LNAPL Thickness (ft) (If present)	1.11					
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

YST	UFScrewbibec #2					Pump description: Bailer description: Peristaltic Disposable polyeth Bladder (dedicated / portable) Disposable Teflon Submersible Disposable PVC							m	
Purge depth (ft):	32.59				Well g	Well goes dry during purging: TYes 🕅 No								
Casing vol. (gal): (where applicable)	NA				= [total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • 0.0408									
Time ("24:00" hr)	0845	0818	0851	0854	0857	OHON	0903	0906	0929	0912	0915 Re	marks 8		
Purge vol. (gal)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0:7	0.8	0.9	1.0	1.1		
Purge rate (mL/min)	125	125	125	125	125	125	125	125	125	125	125	125		
pH (su)	8.80	9.10	9.89	9.79	9.70	9.64	9.57	9.48	9.43	9.36	9.31	9.30	4	
Temp. (°C)	12.43	18.91	19.40	19,47	19.66	19.81	20.34	20.32	20.37	20.41	20.29	20.24		
Spec. cond. (µS/cm)	4673	4425	3623	3213	2928	2755	2512	2456	2427	2365	2350	2358		
D.O. (mg/L)	-	-	-	+	-	-	-	~	-	-		-		
ORP (mV)	-	-	-	1	-	-	1	-	~	-		-		
Turbidity (NTU)	6.54	7.11	7.81	7.08	5.70	3.74	6.40	9.21	7.52	4.18	3.86	6.81		
Color/tint	-	÷	~	-	~	-	-	*	-					
Odor	-	~	-	-	-	-	4		-			1		

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-05	12/18/13	6920	2	None	1-250mplf-3= 1-1 gol of
					1

Sampler's Name (print): Ekic NECAISE Sampler Signature: Emiliean

acility: WF3	Site ID: MW-06	Sampler: EFN	
Project Number: 06045-0031-002	Date: 12/18/13		FTN Associates, Ltd

Site Description

Weather: Sunny	Air Temp (°F): うう	Wind: $N-5^{\circ}$
Well Locked? Ves 🗌 No	Total Depth (ft) 35,40 Damage	/repairs needed:

Water Level Data

Measuring point description:	Water level M Solch	leter Make/Mod		Serial No	. (Optional):	
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	0850	1000	1015	1029	1100	
Depth to Water (ft)	4.08	4.11	4.88	4.43	5.11	
Date (mm/dd/yy)	12/17/13	12/18/13	(2/18/13	12/18/13	12/18/13	
LNAPL Thickness (ft) (If present)						
DNAPL Thickness (ft) (If present)						

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod USE HE Scientic,		Unit or Serial No: <u> </u>			Pump description: Peristaltic Bladder (dedicated / portable) Submersible					Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC	
Purge depth (ft):	30,40				Well g	Well goes dry during purging: 🌘 Yes 🔀 No					
Casing vol. (gal): (where applicable)	NIA				= [total	= [total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • 0.0408					
Time ("24:00" hr)	1006	1009	1012	1015	1018	1021	1023	1026	1029	Remarks	
Purge vol. (gal)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8		
Purge rate (mL/min)	125	125	129	125	125	125	125	125	(25)		
pH (su)	9.43	9.35	9.25	9.23	9.21	9.18	9.14	9.10			
Temp. (°C)	19.32	19.68	20.17	20.24	20.45	20.28	20.33	20.41	20.42	2	
Spec. cond. (µS/cm)	2887	2881	2884	2894	2902	2910	2903	2906	2900	A	
D.O. (mg/L)	-	-	-		-	-	-	9	-		
ORP (mV)	-	1-	-		-		-	-	-		
Turbidity (NTU)	21.52	18.06	11.75	7.23	4.09	3.71	2.86	4.11	4.82	/	
Color/tint	-	-	10-	-	-	-	-	u v	~		
Odor	-	-	1	~	-	~	-	-	-		

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-06	12/18/13	1030	2	Norie	1-250 ml H-3; 1-1gal oc
	_	1			
			1		

Sampler's Name (print): FRIC N	ECAISE	Sampler Signature: & Millecan
		P FOI & Build

Tacility: WF-3	Site ID: MW-07	Sampler: EFN	
Project Number: 06045-0031-002	Date: ML 18/13		FTN Associates, Ltd

Site Description

Weather: Summy	Air Temp (°F): 60	Wind:
Well Locked?	Total Depth (ft) <u>-//./5</u> Damage/repairs	needed: None

Water Level Data

Measuring point description:		leter Make/Mod 'ngf Mod		Serial No.	(Optional):	
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	0900	1110	1130	1135	1215	
Depth to Water (ft)	6.54	0.58	2.22	7.31	7.33	
Date (mm/dd/yy)	12/17/13	12/18/13	12/18/13	12/18/13	12/18/13	
LNAPL Thickness (ft) (If present)		1	1 1	1		
DNAPL Thickness (ft) (If present)		· · · · · · · · · · · · · · · · · · ·				

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod		t	Serial N C C	No:		X	p descriptio Peristaltic Bladder (de Submersible	dicated / portable)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft): 2	6,15				Well g	oes dry	during purg	ing: 🔲 Yes 📝	No
Casing vol. (gal): (where applicable)	NIA				= [total	depth (fe	eet) – depth to	o water (feet)] • [well	ID $(inches)^2$] • 0.0408
Time ("24:00" hr)	1118	1121	1124	1127	1130	(133			Remarks
Purge vol. (gal)	0.0	0.1	0.2	0.25	0.3	6.7			
Purge rate (mL/min)	100	100	100	100	100	100			
pH (su)	9.58	8.94	8.81	8.74	8.23	8.73			
Temp. (°C)	20.95	22.09	22.12	22,23	22.17	22.16			
Spec. cond. (µS/cm)	1254	969	953	955	157	961			
D.O. (mg/L)	-	-	-	-	*	~			
ORP (mV)	-	-	-	-	-		Jan La		
Turbidity (NTU)	7.79	7.43	10.97	5.13	4.27	4.06			
Color/tint	-								
Odor	-		12273						

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-07	12/18/13	1135	2	None	1-250ml 14-3; 1-1gal X
					,

Sampler's Name (print): ERIC NECAISE

Sampler	Signature:	Potu
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Theo

acility: WF-3	Site ID: MW-08	Sampler: EFN	
Project Number: 06045-003(-002	Date: 12/18/13		FTN Associates, Ltd

Site Description

Weather: Su	nny	Air Temp	(°F): 65	Wind: $N_{-} \leq$	
Well Locked? V	s 🗌 No	Total Depth (ft) 41.4	7 Damage/repairs n	eeded: None	

Water Level Data

Measuring point description:	Water level M Solu	(Optional):				
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	0410	1240	1300	1303	1335	
Depth to Water (ft)	7.32	7.33	2.72	7.75	7.71.	
Date (mm/dd/yy)	12/17/13		12/18/13	12/18/13	12/18/13	
LNAPL Thickness (ft) (If present)	1			. ,		
DNAPL Thickness (ft) (If present)	11					

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod YSI HFScientici		Unit or	Serial I H Z Z	No:		Pump desc Perista Bladde	ultic er (dedicate	ed / portable)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft):	36.97				Well g	oes dry during	purging:	Yes X	No
Casing vol. (gal): (where applicable)	NIA				= [total	depth (feet) - d	epth to wate	er (feet)] • [well	ID $(inches)^2$] = 0.0408
Time ("24:00" hr)	1249	1252	1255	1258	1301	1303			Remarks
Purge vol. (gal)	0.0	0.1	0.2	0.3	D.4	0.5			
Purge rate (mL/min)	150	150	150	150	150	(50			
pH (su)	8.81	8.64	8.64	8.60	8.59	8.61			
Temp. (°C)	22.20		22.71	22.72	22.70	22.64			
Spec. cond. (µS/cm)	1095	1021	1024	1030	1036				
D.O. (mg/L)	-	-							
ORP (mV)	-	-	1.00						
Turbidity (NTU)	12,54	6.83	8.50	5.06	5.57	6.11			
Color/tint	-		-	-	-	-			
Odor	-	-		-	1	~			

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-08	12/18/13	1305	2	Noue	1-250ml H-3; 1-1gal gamme

Sampler's Name (print):	ERIC NECAISE	Sampler Signature:
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Questean

acility: WF3	Site ID: MW-09	Sampler: EFN	
Project Number: 06045-0031-002	Date: 12/18/13		FTN Associates, Ltd

Site Description

Weather: SUMMy Air Temp (°F): 63 Wind: N-S
Well Locked? Yes No Total Depth (ft) 40.22 Damage/repairs needed: Now

Water Level Data

Measuring point description:	Water level N Sole	leter Make/Mod nsf Mode	/	Serial No	Serial No. (Optional):			
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks		
Time ("24:00" hr)	0920	1340	1350	1352	1415			
Depth to Water (ft)	3.53	3.59	370.	3.72	3.73			
Date (mm/dd/yy)	12/12/17	12/18/13	12/18/13	12/18/13	12/18/13			
LNAPL Thickness (ft) (If present)	1 Carlos	- t-P						
DNAPL Thickness (ft) (If present)	1							

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod			r Serial) H Z H Z	No:			lescription ristaltic adder (ded bmersible	licated / por	table)	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft):	35.22				Well go	es dry du	ring purgi	ng: 🔲 Y	es 🕅	No
Casing vol. (gal): (where applicable)	NIA				= [total c	lepth (feet)) – depth to	water (feet)]] • [well	ID $(inches)^2$] • 0.0408
Time ("24:00" hr)	1342	1345	1348	1351						Remarks
Purge vol. (gal)	0.0	0.15	03	0.45		1.1				
Purge rate (mL/min)	200	200	200	260		-				
pH (su)	8.80	8.67	8.64	8.61				1		
Temp. (°C)	21.64		21.61	21.73					18-2	
Spec. cond. (µS/cm)	2148	2108	2113	2151						
D.O. (mg/L)	-	-	~	~						4;
ORP (mV)	-	-	-	-						
Turbidity (NTU)	8.87	5.28	5.78	6.67						
Color/tint										
Odor				1				10.00		

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-09	12/18/13	1355	2	None	1-250 ml H-3; 1-1gal ac
				-	
		-			

Sampler's Name (print): F. RIC NZC N i St Sampler Sign
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Form SOP 120-3 - Sampling Record - Revision 2 (JAN 2012)

Facility: WF3	Site ID: MW-10	Sampler: EFN	
roject Number: 06045-0031-002	Date: 12/18/13		FTN Associates, Ltd

Site Description

Veather: Sunny	Air Temp (°F)	: 65	Wind: N-S
Vell Locked? Ves 🗌 No	Total Depth (ft) 32.82	Damage/repairs needed:	None

Water Level Data

Measuring point description:			leter Make/Mod s+ Mod I		Serial No	. (Optional):	
☐ North rim of TOC ☐ Other:		purge itial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	09	\$25	1440	1455	1503	1545	
Depth to Water (ft)	10.	03	10.05	10,28	10.32	10.33	
Date (mm/dd/yy)	12/1	17/13	12/18/13	12/18/13	12/18/17	12/18/13	
LNAPL Thickness (ft) (If present)	1	100					
DNAPL Thickness (ft) (If present)							

Note: Record "S" in Remarks Column if sheen is observed,

Field Data

Instrument Make/Mode VSI HE Scientic			Serial N HZ HZ			R	p descrip Peristalti Bladder (Submers	c (dedicat	ed / portable	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft):	30				Well g	oes dry	during p	urging:	[]Yes	No
Casing vol. (gal): (where applicable)	NA			- 1	= [total	depth (fe	et) – dep	th to wat	er (feet)] • [w	rell ID (inches) ²] • 0.0408
Time ("24:00" hr)	1445	1448	1451	1454	1457	1500	1503			Remarks
Purge vol. (gal)	0.0	0.2	0.3	0.4	0.5	0.6	0.7			
Purge rate (mL/min)	200	200	200	200	200		200			
pH (su)	8.93	8.79	8.74	8.70	8.72	8.75	8.74			
Temp. (°C)	21.97	22.17	22.14	22.23	27.25	22.12	22.18		-	
Spec. cond. (µS/cm)	4980	4968	5240	5748	6312	6348	63:11			
D.O. (mg/L)	-	2	-	1	1	-	-			
ORP (mV)	-	-	-	-	~	-	-			
Turbidity (NTU)	14,44	9.74	5.34	8.02	4.42	6.49	5.17			
Color/tint								•		
Odor		1								

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-10	12/18/13	1505	2	None	1-250m0 H-3 - 1- 1gd X
DUPMW-10	l'ic t	1525	tc	11	71 11

Sampler's Name (print):	ERIC	NECAISE	Sampler Signature:	Grig	Jecani
			(

Facility: WF3	Site ID: MW-((Sampler: EFN	
roject Number: 6045-0031-002	Date: 12/18/13		FTN Associates, Ltd

Site Description

Weather: Summ	Air Temp (°F)): 60	Wind: N-S
Well Locked? Yes I No	Total Depth (ft) 38.29	Damage/repairs ne	eded:
Remarks:			

Water Level Data

Measuring point description:	Water level N Solue	Ieter Make/Mod 5+ Mod (Z		Serial No	. (Optional):	
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks
Time ("24:00" hr)	0830	1550	1615	1618	1700	
Depth to Water (ft)	10.34	10.39	12.10	12.34	12.85	
Date (mm/dd/yy)	12/17/13	12/18/13	12/18/13	12/18/13	12/18/13	
LNAPL Thickness (ft) (If present)		1.1.1	and the set of the set	1.1.		
DNAPL Thickness (ft) (If present)		1				

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod		No:	Pump description: Bailer description: Peristaltic Disposable polyethylend Bladder (dedicated / portable) Disposable Teflon Submersible Disposable PVC								
Purge depth (ft):	с -	30			Well g	goes dry	during p	urging:	Yes	No No	
Casing vol. (gal): (where applicable)						= [total depth (feet) – depth to water (feet)] • [well ID (inches) ²] • 0.0408					
Time ("24:00" hr)	1600	1603	1608	1609	1612	1615	1618			Remarks	
Purge vol. (gal)	0.0	0.05	01	0.15	0.2	0.25	0.3				
Purge rate (mL/min)	100	100	100	100	(00	100	(00)				
pH (su)	9.13	8.93	8:85	8.81	8.80	8.78	8.81				
Temp. (°C)	20.89	20.91	21.09	21.23	21.18	21.08	21.05				
Spec. cond. (µS/cm)	5936	5814	5751	5216	5724	5743	5752				
D.O. (mg/L)	-	-	-	-			-				
ORP (mV)	-	-	-	~	~		-				
Turbidity (NTU)	18.61	17.37	6.75	2.13	3.17	4.82	6.12		2		
Color/tint	Bitel										
Odor	-										

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-11	12/18/13	1620	2	None	1-250 ml 1f-3; 1-1gal Gamm
EB MW-11	17	1200		(L	1-250ml (4-3

Sampler's Name (print): ERIC NECASE

Sampler Signature: Sputfican

acility: Weyerford - 3	Site ID: WW-12	Sampler: EFN	
Project Number: 06045-0031-002	Date: 12 17 13	1	FTN Associates, Ltd

Site Description

Weather: Summe	Air Temp (°F): 65	Wind: No wind
Well Locked? Yes 📋 No	Total Depth (ft) 39.7 by Damage/repairs nee	eded: None

Water Level Data

Measuring point description:	Water level N	leter Make/Mod	el No.	Serial No	Serial No. (Optional):						
North rim of TOC	Pre-purge initial	Pre-purge confirmation	During purging	Purge end	After sampling	Remarks					
Time ("24:00" hr)	1100	1755	1315	1323	1350						
Depth to Water (ft)	7.16	7.70	7.74	7.75	1.72						
Date (mm/dd/yy)	12/12/13	12/17/13	12/17/13	12/17/13	12/12/13						
LNAPL Thickness (ft) (If present)	1.1.2	1	1.1.1		1	1					
DNAPL Thickness (ft) (If present)											

Note: Record "S" in Remarks Column if sheen is observed.

Field Data

Instrument Make/Mod	el No:	Unit or 	r Serial N Z	No:			p descrip Peristalti Bladder Submers	.c (dedicat	ed / portable	Bailer description: Disposable polyethylene Disposable Teflon Disposable PVC
Purge depth (ft):	34.7	Lys			Well g	goes dry	during p	urging:	Yes	X No
Casing vol. (gal): (where applicable)	214				= [tota]	l depth (fe	eet) – dep	th to wat	er (feet)] • [w	ell ID (inches) ²] • 0.0408
Time ("24:00" hr)	1304	1307	1310	1313	1316	1319	1322			Remarks
Purge vol. (gal)	0.0	D.I	0.2	03	0.4	0.5	6.6			
Purge rate (mL/min)	175	175	(75	175	175	175	175			
pH (su)	6.26	0.73	6.90	6.94	6.95	6.96	6.94	1		
Temp. (°C)	21.54	21.79	21:78	21.72	21.81	21.83	21.77			
Spec. cond. (µS/cm)	2443	2486	2451	2453	2437	24.45	2468			
D.O. (mg/L)	-	-	-	-	- '	-	~			
ORP (mV)	-	1	-	-	~	0	-		4	
Turbidity (NTU)	438.3	322.5	257.5	233.2	227.6	218,4	212.3			
Color/tint	gray			grey	gray		9501			
Odor	1, 1	1-1	1	01	1	11	01			

Sample Data

Sample ID	Date	Time	# Containers	# Filtered	Remarks
MW-12	12/17/13	1325	2	None	1-250 H-3; 1-1gal x
				1	
		1.		1	

Sampler's Name (print): FRIC NECAISE

Sampler Signature: Sie Specie



Date	Project		me Project No						oject N		Page of				
Laboratory Name:	001	Submitted By:									Parameters (M	ethod Number)			Lab Turnaround Time
Phone: Sampler Signature(s)						d Circle, Suite 220 ck, AR 72211 5-7779) 225-6738 d By (Print)									□ 24 Hours □ 48 Hours □ Normal □ Other □ Due:_/_/_
1	SAM	PLE DE	SCRI	PTION			-	(V)	(JAMMA A						
Sample Identification Date / 7		/ Time		atrix* S O	No. of Containers	Comp	Grab								Laboratory Notes
MW-12	12fafis	3 1325	x		2		X	1	1	1					Laboratory Hotes
1401.03	1	1510	1	_	1		1	1	1						
MW-04	W	1610	1						1	_					
MW-05	12/18/1						1			-					
MW-06		1030	+ +	-		-	11			-					
MW-07 MW-08		1305	++	-		-				-					
MW-09	d-	1355	*		W.		Ý	We	4						
					Contai	nor T		6	P						
									1.1.2						
*Matrix: W = Water S = Soil O = Other	S = Soil $P = Plastic$ $H = HC1 t$					ium 1 to	Thio			S = Sulfur N = Nitric B = NaOH		Z =	Zinc a	acetate	
Relinquished By (Signa	Relinquished By (Signature) Print Name		Date 12/18/13	1	Tim 70				By (Signature)	Print Name	Breaud	Date	Time		
Relinquished By (Signa			Date	ſ	Tim	-		_	By (Signature)	Print Name		Date	e Time		
Sampler Remarks:								-	I	abo	ratory Remarks:				
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Date	te Project Name Project No							Project Manager (Print)								Page of															
12/18/13	U	WF3 06045.0031-602																													
Laboratory Name:									Parameters (Method Number)										Lab Turnaround Time												
Phone:							З Innwood Ci Little Rock, A (501) 225-777 Fax: (501) 22				, Suite 220 72211 738		od Circle, Suite 220 ock, AR 72211 5-7779 1) 225-6738				3 Innwood Circle, Suite 220 Little Rock, AR 72211 (501) 225-7779 Fax: (501) 225-6738					0									 24 Hours 48 Hours Normal Other
Sampler Signature(s)		Recorded By (Print) ERIC NECAISE						H-3	Armin A									Due:_/_/													
	SAMPL	E DES	CRIP	TION	T				5	MA																					
				trix*	No.	of	Comp	Grab		-																					
Sample Identification	Date / Ti	me	W S	s o	Conta	iners		X	1	1			-		-		-	-	Laboratory Notes												
DUPMW-10		1525	Î	-				~	i	1			-		-			-													
MW-11	1	120	1		1º				1	*																					
EB Mal-11		700	*		1			-	¥																						
		-		-	-		-	-							-			-													
				_		Containe	er Ty	pe	6	P			-		5																
*Matrix: W = Water S = Soil O = Other	Preservative Preservative $atrix: W = Water$ $G = Glass$ $T = Sodiur$ $S = Soil$ $P = Plastic$ $H = HC1$					um T to p ne	H2			N = I $B = I$	Nitric NaOH	ic acid acid pH to pH1	12 2		Z =	Zinc a	acetate														
Bre Deran	Relinquished By (Signature) Print Name		Date	1/13		Гіте 700	R	Received By (Signati		ignature)		Print Name			eaud	Date	Time														
Relinquished By (Sign	ature) Pr	rint Na	me		Date	1]	Гіте				ignature)		Print	Name	e		Date	Time												
Sampler Remarks:										Lat	orato	ry Remai	rks:																		
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