REMEDIATION SYSTEM START-UP ENGINEERING EVALUATION

PADEP Facility ID #17-14821 PAUSTIF Claim #2008-0034(M) Kwik Fill #M-90 1322 South 2nd Street Clearfield, Lawrence Township, Clearfield County, PA 16830

Prepared for:

United Refining Company of Pennsylvania 15 Bradley Street P.O. Box 688 Warren, PA 16365

Prepared by:



Letterle & Associates, LLC 2859 Oxford Boulevard, Suite 110 Allison Park, Pennsylvania 15101

Kenneth W. Dudash, P.E. Senior Project Engineer

December 2012

"By affixing my seal to this document, I am certifying that the information is true and correct to the best of my knowledge. I further certify I am licensed to practice in the Commonwealth of Pennsylvania and that it is within my professional expertise to verify the correctness of the information."

Kenneth W. Dudash, P.E. (signed and sealed this day (December 21, 2012))

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ANALYTICAL

DPE System Groundwater Results DPE System Vapor Recovery Results

1.0 INTRODUCTION

As per the approved Pennsylvania Department of Environmental Protection (PADEP) Remedial Action Plan (RAP), a remedial system was installed at the United Refining Kwik Fill #M-90 Clearfield site (Kwik Fill M-90) during September 2012. The remedial system utilizes Dual Phase Extraction (DPE) technology to extract subsurface vapor and groundwater. The system was started on October 30, 2012 with a remediation system engineering evaluation performed at the Kwik Fill M-90 on November 27, 2012. This engineering evaluation was performed to document site conditions during the operation of the remedial system and to evaluate the performance and effectiveness of the remediation system, and to determine if any changes or modifications are necessary. The remediation system was checked for overall operating condition, hydraulic influence zone, pneumatic radius of influence (ROI), and groundwater/soil vapor extraction rates. This evaluation also compares the current remediation system operation to the original system design and recommends future system enhancements, if required.

2.0 SITE HISTORY

Kleinfelder East, Inc. (Kleinfelder) performed dual-phase extraction (DPE) pilot testing at the Kwik Fill M-90 in September 2010. Pilot test activities were conducted in order to assess the applicability of groundwater extraction in conjunction with soil vapor extraction (SVE) to remediate hydrocarbon-impacted soil and groundwater at the site. The pilot test involved the simultaneous recovery of soil vapor and groundwater from a designated extraction well (MW-31), while monitoring water table drawdown and induced vacuum in surrounding monitor wells.

During the testing, an average of 150 inches of water (in H2O) (11 inches of mercury (in.Hg)) was applied to the test well, resulting in an extracted flow rate of 25 standard cubic feet per minute (scfm). The average aquifer yield was approximately 2 gallons per minute (gpm) with a groundwater capture zone of 134 to 190 feet. A pneumatic ROI could not be calculated due to a lack of vacuum response in the surrounding wells but the closest well was 17 feet from MW-31. VOC concentrations were detected at low levels in the vapor stream during the tests.

The pilot test results indicated that a DPE system would be an effective and aggressive remediation strategy to reduce adsorbed and dissolved phase petroleum hydrocarbons in subsurface soil and groundwater. However, additional shallow wells in the source area were needed to shorten the time for active remediation.

The results from the pilot test depict an accurate representation of the site's hydraulic and pneumatic properties. Based on previous investigations by others, the geology of the site generally consists of unconsolidated materials (primarily silty clay) to depths of 10 to 17 feet. Unconsolidated materials are underlain by bedrock consisting of primarily sandstone and shale (Pottsville Group). Groundwater is located within the unconsolidated materials at depths ranging from one to seven feet below ground surface (bgs) across the site and adjoining properties. Groundwater typically flows to the northwest towards the West Branch of the Susquehanna River.

The geology of the site with the confining silty clay overburden provides for a small pneumatic ROI and hydraulic influence zone in the shallow areas to be treated with the DPE. The fractured bedrock of the deep aquifer provides for a very large hydraulic influence zone for the pneumatic pumps to be effective.

A DPE system was installed at the site and was activated on October 30, 2012. The purpose of the remediation system is to achieve attainment of the PADEP SHS for a residential used aquifer at the onsite point of compliance (POC), and off-site monitoring wells identified in the Site Characterization Report.

3.0 REMEDIATION SYSTEM AS-BUILT

The remediation system installation was completed at the site in September 2012. The system was activated on October 30, 2012. The following section details the system construction.

3.1 Remediation System Construction

The remediation system utilizes DPE technology with two high vacuum rotary claw pumps and six pneumatic pumps to remove vapors and groundwater from the subsurface. Groundwater can be extracted by the pneumatic pumps from six recovery wells (MW-1, MW-1A, MW-2, MW-28, MW-31 and MW-34) and by the rotary claw pumps from MW-35 and MW-36. The claw pumps apply vacuum and provide vapor recovery in all the recovery wells. Following extraction, groundwater and soil vapor are routed through an air/water separator (AWS). Groundwater from the pneumatic pumps is combined in an equalization tank. After equalization or separation, the groundwater is pumped through six sediment filters (connected in parallel/series) and then treated with four liquid phase granular activated carbon (GAC) units connected in a parallel/series configuration. The treated groundwater is discharged to a sanitary sewer drain southwest of the existing building site for treatment by the local sanitary authority.

The extracted vapor is passed through a heat exchanger to cool the temperature to below 100 degrees Fahrenheit and then treated with two 600-pound vapor phase GAC units connected in series to remove hydrocarbons from the vapor stream.

3.2 Remediation System Piping and Equipment

The following subsurface piping is used to extract soil vapor and groundwater from the site:

- MW-1, MW-1A, MW-2, MW-28, MW-31, and MW-34 through MW-36 are 4-inch diameter poly vinyl chloride (PVC) recovery wells. MW-1 is constructed with 11 feet of slotted screen from 5 to 16 feet bgs. MW-1A is constructed with 10 feet of screen from 5 to 15 feet bgs. MW-2 is constructed with 4-inch screen from 5 to 18.5 feet bgs. MW-28 has a screen from 5 to 21.5 feet bgs. MW-31 has 14 feet of screen from 5 to 19 feet bgs and MW-34 through MW-36 was constructed with screen from 5 to 22 feet bgs.
- Each recovery well is protected by 3' x 3' concrete pads with 18-inch diameter manholes.
- Vapor and groundwater are extracted through 1-inch diameter drop tubes extended to depths of 10 feet bgs in MW-35, and 10 feet bgs in MW-36. Extracted vapor and groundwater are conveyed through 2-inch diameter schedule 40 PVC subsurface piping installed from the system trailer to each recovery well.
- Each recovery well with drop tubes is connected to the subsurface extraction piping with pitless adapters installed on the recovery well riser piping at approximately 3 feet bgs. The pneumatic

groundwater pumps in MW-1, MW-1A, MW-2, MW-28, MW-31, and MW-34 are installed with the pump inlets at 1 foot from the bottom of the well.

• Treated groundwater is discharged via a 2 inch PVC pipe under a local sanitary permit.

The following remediation equipment is currently used to extract and treat vapor and groundwater from the site:

- Two 10-hp Busch Rotary Claw Pumps 230-volt three-phase (Model MM-1252-AV)
- One 80-gallon Air/Water Separator (MS80)
- One 250-gallon Equalization Tank
- One 2-hp transfer pump (Goulds Pumps Model NPE)
- One 3-hp transfer pump (Goulds Pumps Model NPE)
- Six 20" Big Blue[®] cartridge filter canisters
- Six pneumatic pumps (QED AP-4 Short)
- One 5.0 hp air compressor
- One 1.0 hp heat exchanger
- Four 300-pound liquid phase GAC units
- Two 600-pound vapor phase GAC units
- One explosion-proof heater and exhaust fan
- Electrical supply is 120/240 three phase, 200-amp service.

A Trenching Diagram and an as-built Piping and Instrumentation Diagram (P&ID) are included as Figures 1 and 2, respectively.

4.0 CURRENT REMEDIATION SYSTEM OPERATIONS

The DPE remedial system was activated on October 30, 2012 and the system was in operation upon arrival at the site on November 26, 2012. The system was shutdown at the end of the day to allow for return of groundwater levels to static conditions prior to starting the evaluation on November 27, 2012. All remediation system equipment was observed to be in good working condition prior to shutdown.

All clear schedule 40 PVC sight-tubes on the influent manifold showed signs of only minor scaling to the system piping. Since remediation system startup, a total of 142,565 gallons of groundwater have been extracted at an average of 4.71 gpm over the time period. All equipment safety alarms have been tested and are in good working order.

5.0 **REMEDIATION SYSTEM DESIGN EVALUATION**

5.1 DPE Engineering Evaluation – November 27, 2012

Upon arrival at the site on November 27, 2012, a pneumatic ROI and hydraulic influence zone test was initiated upon restart of the system. The remedial system had been in continuous operation for more than 7 days prior to the test. During initial system startup during the week of October 30, 2012, the system was adjusted to extract from wells MW-1, MW-28, MW-31 and MW-34 only. The number of recovery wells used for system operation was limited due to the volume of groundwater that exists at the

site and the high flow rate that can be obtained. If all the recovery wells are utilized together, the groundwater extraction flow rate would exceed treatment equipment flow rate specifications.

The system was adjusted to provide a vacuum of 12 inches of mercury (inHg) (99 scfm) during the test. Photo ionization detection (PID) reading of the vapor was measured at 124.9 parts per million volume (ppmv). Data obtained from monitoring the vacuum influence at the observation wells was used to obtain an approximate ROI. The pneumatic ROI is the transient pressure distribution created by the vacuum that results in an area in which the air flow rate through the soil decreases to the point in which the contaminants will not volatize. The ROI is measured in resulting inches of water (in H₂O) vacuum. Generally, a level of 0.1 in H₂O is the industry accepted standard extent that volatilization is limited due to a lack of subsurface vapor flow, and the extent of the ROI can be calculated.

Since MW-35 and MW-36 were not utilized for extraction, these wells were included in the monitoring during the evaluation. Vacuum levels of greater than 0.1 inches of water were found in adjacent wells MW-32, MW-35, and MW-36. All other monitor wells exhibited no vacuum response. The groundwater levels in all the monitor wells were below the well screen which allowed for a vacuum response if produced in these wells. The observed influence vacuum resulted in an average calculated pneumatic ROI of approximately 47 feet to the southwest but does not extend to MW-14 (40 feet to the northeast). The areas southeast of the existing tank field and north across South 2nd Street do not appear to be influenced by the vacuum of the DPE remediation system. Hydrocarbon content was recorded in the field with the PID during the evaluation.

Groundwater levels were recorded at all monitoring wells and were compared to static levels. From the difference in the observed groundwater levels, it was apparent that drawdown was occurring at a distance of approximately 140 feet to the northeast across South 2nd Street to MW-21. Drawdown was also recorded to the southwest to MW-33 at 0.1 feet. MW-27, which is located 180 feet east of the nearest recovery well MW-1, did not exhibit any drawdown. A hydraulic zone of influence map is included as **Figure 3**. **Table 1** shows the groundwater and vacuum influence readings collected during the DPE evaluation. **Chart 1** shows the calculated pneumatic ROI from the operating recovery wells during the DPE system evaluation. **Chart 2** shows the calculated hydraulic zone of influence.

Hydrocarbon recovery was measured in the field with a PID at 116.8 ppm-v. This resulted in a calculated removal rate of 1.04 lbs per day. A summary of vapor recovery system hydrocarbon removal calculations is included as **Table 2**.

Since system startup, the remediation system has operated at an average of 81% runtime for the groundwater pumps and 56% for the vacuum pumps. The lower runtime for the vacuum pumps is due to an over amping problem which causes the claw pumps to shut down. The problems were diagnosed by a close examination of the effluent piping which contains multiple valves and piping diameters that caused excessive exhaust pressure which resulted in the over amping of the units. All exhaust piping and valves were replaced with larger diameter sizes from the rotary claw units to the heat exchanger.

The telemetry unit was connected during the initial operation of the system and has responded during alarm conditions. With only MW-1, MW-28, MW-31, and MW-34 DPE recovery wells in operation; the petroleum-impacted shallow area near the tank field is being affected by the system operation (based on groundwater drawdown and vacuum response produced by the wells during the evaluation). Vacuum short circuiting is apparent into the tank field with the LRP operating at <5 in. Hg with MW-1 in full operation. This results in a low availability of vacuum pump capacity to apply to the other DPE recovery

wells in operation. The applied vacuum was valved off to MW-1 to increase the vacuum of the system. Areas beyond MW-21 to the north/northeast due not appear to be influenced by the DPE system.

The DPE remediation system recovery wells are producing a hydraulic influence zone similar to the size calculated from the site pilot test data and predicted in the RAP. The pneumatic ROI appears to be larger than predicated in the pilot test study. The remediation system was designed to be able to establish a hydraulic influence zone and pneumatic ROI to encompass the entire onsite shallow impacted plume and extend down gradient to influence the plume. When the pneumatic ROI is overlaid over the contaminant plume map, results show that the majority of the shallow contaminated area on-site is affected by the current DPE remediation system.

5.2 Key Criteria of System Feasibility

Key criteria and quantified ranges of values that were expected during the system testing in order to ensure a technology is a technically feasible application and for the system to operate as planned and meet the clean-up schedule included the following:

• If the maximum attainable groundwater extraction rate realized during system operation is below 2 gpm DPE technology would be deemed infeasible;

The remedial system has averaged greater than 4 gpm since the system startup and averaged 3.6 gpm during the evaluation.

• The groundwater capture zone will be defined as a decrease in the elevation of groundwater of at least 0.1 feet at a distance from the extraction point of a least 134 feet for two of the observation points at varied directions from the test well;

The calculated hydraulic zone of influence from the evaluation results is 145 feet and includes the majority of the plume area north of the site across South 2^{nd} Street.

• If the maximum attainable vacuum realized during the extraction is below 11 in. Hg, the specified vacuum equipment would be deemed infeasible and other vacuum equipment such as a regenerative blower will be the utilized equipment;

Although several of the recovery wells exhibited low vacuum yields during the evaluation, the majority of the site geology requires the applied vacuum to be above 11 in. Hg which requires the use of the existing vacuum equipment.

• The pneumatic ROI as defined by an observed vacuum of 0.1 inches of water after stabilization of the readings will be observed at a minimum distance of 15 feet from the extraction point for two observation points located at varied directions from the test well;

The calculated pneumatic ROI was 25 feet in a measured response at the site in a northeast and southwest direction from the operating recovery wells.

• The VOC recovery rate in the extracted vapor will be greater than 0.5 pounds per day, as calculated from the analytical results of the extracted vapor or field measured levels, and the attainable flow rate measured during the interval of the test.

The VOC recovery rate as calculated from the initial analytical results of the extracted vapor is 0.25 lbs/day which is below the 0.5 lbs/day criteria however, when calculated by the field measured levels, the system has been extracting 7.49 lbs/day (**Table 2**).

Due to the location of the site next to the West Branch of the Susquehanna River and the high water table, the available extracted groundwater rate is greater than 10 gpm for the initial 24 hours of system operation. Once the site has been dewatered, the recovery rate slows to less than 1.0 gpm per recovery well. It appears from the evaluation data that the remedial extraction equipment may have been

overdesigned and can provide the hydraulic influence with fewer recovery wells in operation. If the remedial system has been down for longer than 24 hours, the groundwater extraction rate during restart is greater than the design flow. This flow rate provides a groundwater pump air usage that exceeds the capacity of the air compressor. The actual groundwater flow rate is higher than the anticipated design flow rate which has overwhelmed the treatment units and transfer pump shutting down the system. Utilizing a lower number of recovery wells has allowed the system to remain in operation.

The extracted groundwater flow rate decreases with the dewatering of the site and allows the air compressor to operate at an optimum 30% duty cycle after approximately 24 hours of operation. The high groundwater levels at the site also inhibit vapor recovery due to the lack of available open soil pore space. Once the site is dewatered, the groundwater table falls and opens areas of the soil that was not available for vapor extraction without the dewatering of the site.

6.0 REMEDIATION SYSTEM UPGRADES

The over amping of the rotary claw SVE pumps has been eliminated by increasing the size of the exhaust piping. Heat tape and insulation have been installed on all hoses and piping that is exposed under the trailer to prevent freezing. Sediment filter changes will initially occur during every O&M event in order to minimize system downtime due to clogged sediment filters. The four 400-pound liquid-phase GAC pressure vessels will continue to be connected in a parallel/series arrangement to treat the groundwater. The existing vapor carbon treatment system will remain with two 600-pound vapor-phase GAC units connected in a series configuration.

7.0 REMEDIATION SYSTEM PERMITTING

The recovered groundwater is treated and discharged directly to the sanitary pipe under a permit issued by the Clearfield Municipal Authority (CMA). Under the terms of the permit, analytical reports and totalizer readings are reported in Discharge Monitoring Reports (DMR) on a monthly basis to the CMA.

Petroleum impacted soil and groundwater remediation systems have been listed as exempt from the Plan Approval/Operating permit requirements by PADEP, Division of Air Quality. The remediation system is operated under the exemption requirements.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this system engineering evaluation, the remediation system at the Kwik Fill M-90 site is operating with influence results similar to the original design and currently, the influence of the DPE system is large enough to cover the majority of the down gradient contaminated plume area. The DPE system has been placed into operation and extraction from the recovery wells will continue. To allow for adequate vacuum levels with the addition of the VEGE system, DPE recovery wells MW-1 and MW-28, MW-31, and MW-34 will be continuously operated through 2013. MW-1A, MW-2, MW-35 and MW-36 will remain shutdown to increase the vacuum of the DPE system and to prevent overwhelming the groundwater treatment system with excessive amounts of extracted groundwater. The system will be serviced twice a month for regularly scheduled preventative maintenance to ensure operational success. Future evaluations will include measurements of vacuum at the top of each

recovery well, groundwater recovery rates from each DPE well, and water table drawdown after an extended period of system operation.

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TABLES

TABLE 1: DPE SYSTEM EVALUATION EVENT SUMMARY

SITE: M-90 Clearfield Quick Fill

DATE: 11/20/2012

VEGE EXTRACTION WELLS: MW-1, MW-28, MW-31, MW-34

GROUNDWATER GAUGING DATA ELAPSED TIME (IN HRS.)

Well	Initial DTW	10:10	11:10	12:10	13:10	14:10	Total Drawdown
MW-2	5.15	5.34	5.63	5.78	5.86	6.2	1.05
MW-3	6.47	6.6	6.71	6.79	6.82	6.95	0.48
MW-4	5.04	5.05	5.05	5.06	5.06	5.06	0.02
MW-7	7.73	7.75	7.75	7.73	7.73	7.74	0.01
MW-8	6.4	6.4	6.41	6.48	6.51	6.46	0.06
MW-10	3.00	3.00	3.00	3.00	3.00	3.00	0.00
MW-14	8.12	8.51	8.81	8.98	9.1	9.31	1.19
MW-15	6.37	6.47	6.54	6.60	6.63	6.79	0.42
MW-21	5.72	5.74	5.81	5.81	5.86	5.9	0.18
MW-22	4.84	4.86	4.88	4.87	4.88	4.85	0.01
MW-23	6.31	6.35	6.25	6.25	6.25	6.24	-0.07
MW-27	6.7	6.67	6.69	6.67	6.66	6.67	-0.03
MW-29	6.47	6.51	6.55	6.57	6.58	6.64	0.17
MW-30	6.71	6.81	6.93	7.02	7.03	7.22	0.51
MW-32	7.51	7.65	7.93	8.16	8.3	8.5	0.99
MW-33	7.11	7.12	7.12	7.12	7.17	7.21	0.10
MW-35	9.45	11.88	12.46	12.66	12.81	14.55	5.10
MW-36	7.85	10.06	10.51	10.66	10.80	11.17	3.32
Totalizer	141695.4	142109.4	142283		142565.3		3.62 gpm

SOIL VAPOR GAUGING DATA ELAPSED TIME (IN HRS.)

Well	1:00	2:00	3:00	4:00	5:00	
MW-2A				0	0	
MW-14				0	0	
MW-32				0.11	0.12	
MW-35				>10	>10	
MW-36				0.62	0.64	
PID				124.9	116.8	<u></u>
Blower VAC (i.e., applied) Well VAC				15	12	

TABLE 2 VAPOR RECOVERY SYSTEM HYDROCARBON REMOVAL CALCULATIONS (Field Quantification)

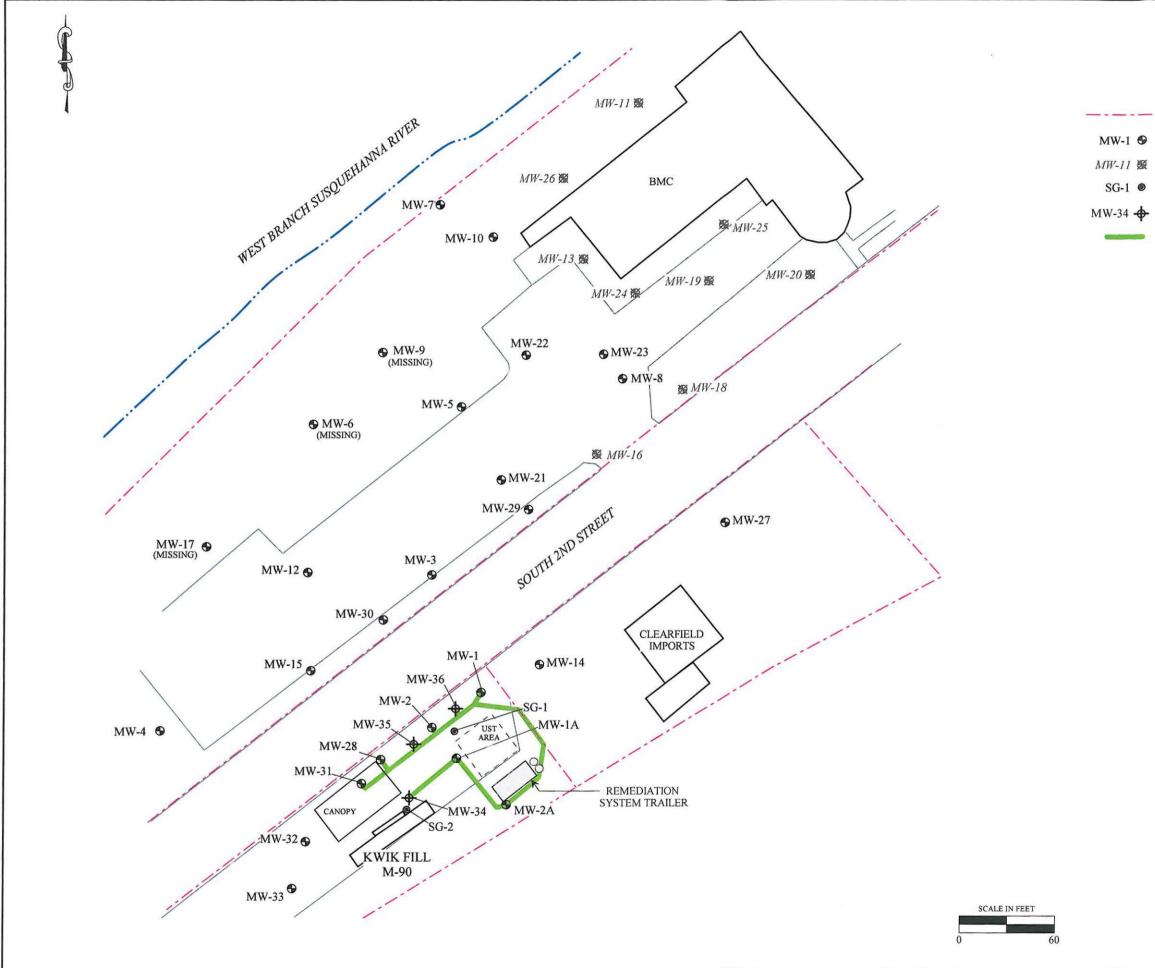
United Refining--Kwik Fill M-90 1322 South 2nd Street Clearfield, Pennsylvania 16830

Sample Location	Date	Extracted Vapor rate (scfm)	PID Hydrocarbon concentration (ppm)	Hydrocarbon Mass Removed (lb/day)	Hydrocarbon Mass Removed To Date (lb)
Influent	10/04/12	158	126	1.79	1.79
	10/17/2012	158	227	3.22	43.69
	11/7/2012	158	75.3	1.07	37.07
	11/20/2012	99	116.8	1.04	77.97

<u>Notes:</u> NA denotes Not Analyzed. NS denotes Not Sampled.

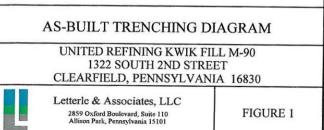
1 of 1

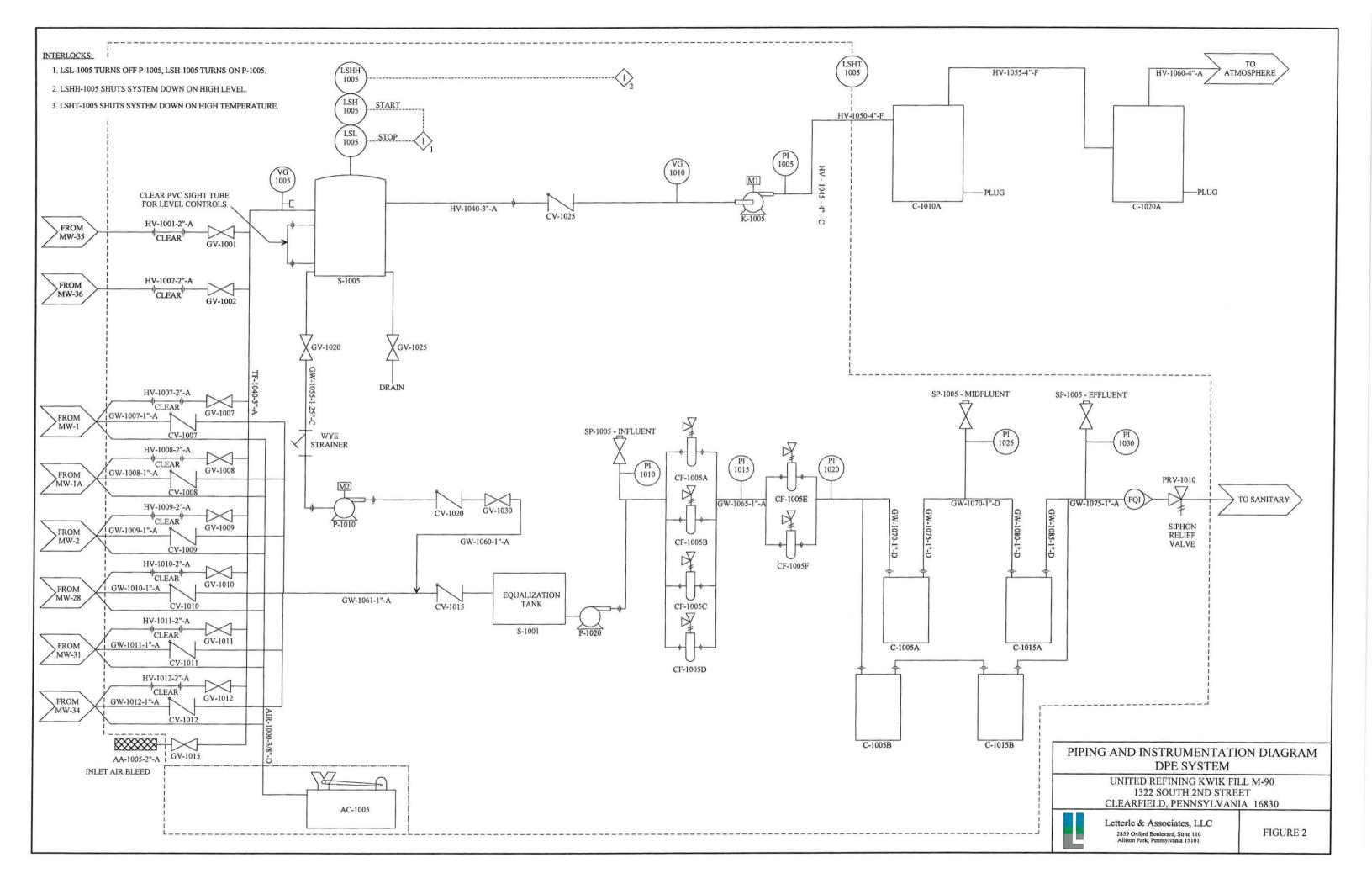
FIGURES

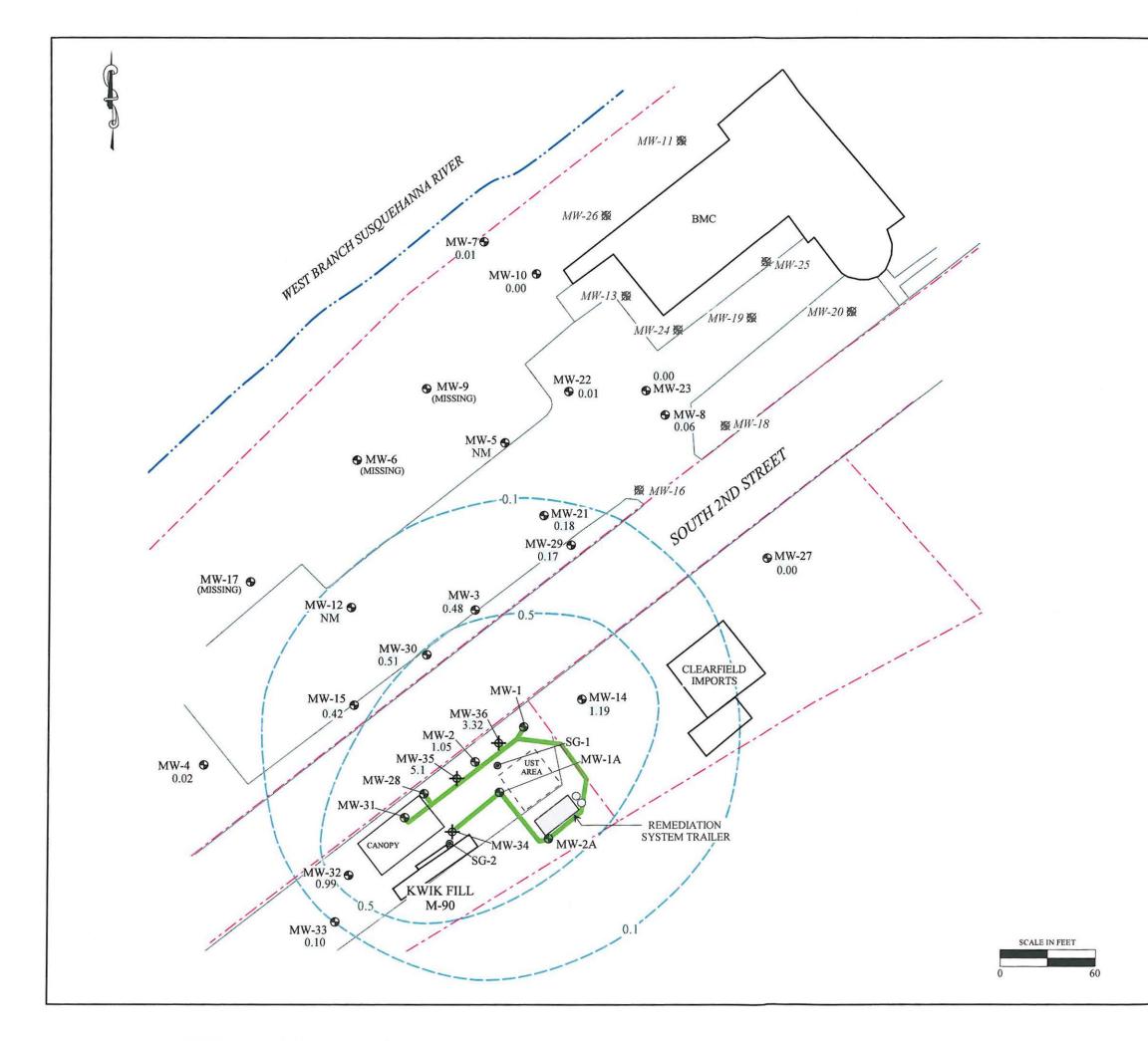


LEGEND

- PROPERTY BOUNDARY
 MW-1 EXISTING MONITOR WELL
 MW-11 缀 MONITOR WELL ABANDONED
 SG-1 SOIL GAS MONITORING POINT
 - 4 DPE WELL
 - TRENCH LOCATION

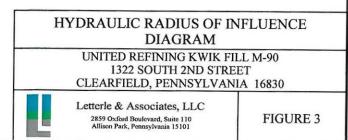






LEGEND

	PROPERTY BOUNDARY
MW-1 🗣	EXISTING MONITOR WELL
<i>M₩-11</i> 🕱	MONITOR WELL - ABANDONED
SG-1 O	SOIL GAS MONITORING POINT
MW-34 🕁	DPE WELL
	TRENCH LOCATION
0.01	DRAWDOWN (FT)
NM	NOT MEASURED



CHARTS

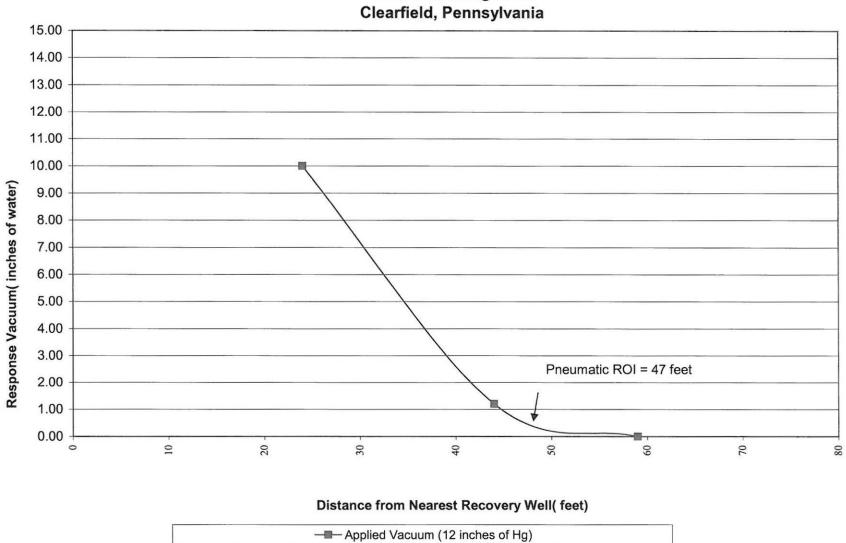


CHART 1: DPE System Pneumatic ROI November 20, 2012 United Refining M-90

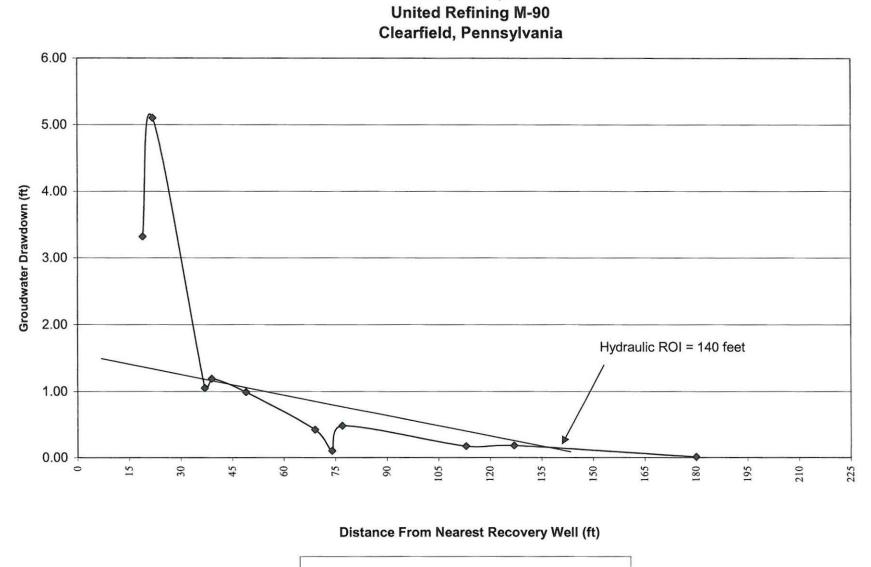


CHART 2: DPE System Hydraulic Zone of Influence December 20, 2012

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10/17/2012

Mr. Jed Hill Letterle and Associates, LLC 2859 Oxford Blvd, Suite 110 Allison Park, PA 15101

Dear Jed:

Enclosed are the sample data report, chain of custody record and quality control data for the sample(s) received on October 8, 2012 for your project; 277 - United Clearfield.

Please give me a call if you have questions or I can be of further assistance. Thank you for using Vaportech Services.

Sincerely,

Dest. Mun

David J. Masdea

Enclosure:

1158 Pittsburgh Road, Suite 201, Valencia, PA 16059 Ph: 724-898-2622 Fx: 724-898-2633 www.vaportechservices.com

Vaportech Service, Inc

LET38-2655

Letterle and Associates, LLC Project: 277 - United Clearfield

CONCENTRATIONS IN PPMV

COMPOUND	EFFLUENT	BETWEEN	INFLUENT	PQL
MTBE	ND	ND	ND	0.07
BENZENE	ND	ND	1.84	0.07
TOLUENE	ND	ND	0.66	0.07
ETHYL BENZENE	ND	ND	0.27	0.07
M&P XYLENE	ND	ND	1.29	0.07
O-XYLENE	ND	ND	0.13	0.07
CUMENE	ND	ND	ND	0.07
NAPHTHALENE	ND	ND	ND	0.07
FILE NAME	V73A.581.BND	V73A.582.BND	V73A.583.BND	
DATE SAMPLED	10/04/12	10/04/12	10/04/12	
DATE RECEIVED	10/08/12	10/08/12	10/08/12	
DATE ANALYZED	10/11/12	10/11/12	10/11/12	

PQL - denotes lower 'Practical Quantitation Limit'

ND - 'Not Detected' at or above the lower practical quantitation limit

Reviewed by:

Vaportech Service, Inc

Letterle and Associates, LLC Quality Control Laboratory Project(s): 2655, 2663, 2664, 2665

CONCENTRATIONS IN PPMV

CONTINUING CALIBRATION CHECK

LABORATORY BLANK RESULTS

PRACTICAL

STANDARDS:	STD 21V R4	PA-BTEX-H
FILE NAME:	V73A.571.BND	V73A.575.BND
DATE ANALYZED:	10/10/12	10/10/12

BLANK: N2 IN VIAL FILE NAME: V73A.570.BND DATE ANALYZED: 10/10/12

					QU	ANTITATION
	KNOWN	RESULT	PERCENT		BLANK	LIMIT
COMPOUND	(PPMV)	(PPMV)	DIFFERENCE	COMPOUND	(PPMV)	(PPMV)
MTBE	50.33	48.00	4.63	MTBE	ND	0.07
BENZENE	1.25	1.26	0.64	BENZENE	ND	0.07
TOLUENE	1.06	1.10	3.30	TOLUENE	ND	0.07
ETHYL BENZENE	0.92	0.96	4.24	ETHYL BENZENE	ND	0.07
M&P XYLENE	1.84	1.94	5.65	M&P XYLENE	ND	0.07
O-XYLENE	0.92	0.96	4.24	O-XYLENE	ND	0.07
CUMENE	36.91	34.62	6.21	CUMENE	ND	0.07
NAPHTHALENE	34.61	32.68	5.58	NAPHTHALENE	ND	0.07

ND - 'Not Detected' at or above the lower practical quantitation limit

Reviewed by:



CHAIN-OF-CUSTODY RECORD



1158 Pittsburgh Road • Suite 201 • Valencia, PA 16059 Tel: 724-898-2622 • Fax: 724-898-2633

Company 1	Name:	Letteru	1 Assa	idge Drive State: PA	_L						4-898-2622	• Fax: 724-8	398-26	33		
Address:	2 62	SE. R.	dling Ri	idge Drive			Anal	ysis (Options		E	nter letters in		sted Analysis colum	ns below.	
City:	Bell	4 Fonte		State: PA	Zip: 148	23	A	Ligi	nt Hydro	carbons	5		F	BTEX		
Proj Mon		Ted	11:11				B	Peri	manent G	ases			G	BTEX & C5 - C	10	
Proi. Loca	tion:	United	1 Che	rfield			C	Met	hane				H	TPH (C4 - C12	range)	
Proi. Num	ber:	#277					D	Met	hane, Et	hane, E	thylene		I	Chlorinated Hyd	lrocarbons	
Phone #:	814-3	355-224	l.	Fax #: 814-3	55-2410		E	Hyd	lrogen				J	624 Compound	List	
Sampler's	signat	ure:	Vyl	nad		Perma BTEX: C5-C10	nent Ga	ises:	Carbon Benzene Pentane 1,1-DCI	Dioxide, e, Toluen , Hexane E, 1,1-D0	, Oxygen, Nitr le, Ethyl Benz c, Heptane, Oc CA, Methylen	rogen, Methane ene, m & p -Xy stane, Nonane, e Chloride, tran	, Carbo /lene, o Decane ns-1,2-E	-Xylene		1
Collect		Number of	Sample		Sample						10					
	Time	Containers			lentification		F	quest	ted Anal	ysis		Other)		Rema		
10/4/12		3	Aic	Influe			F				Cumer	~, mTis	= , 4.	nd Naphtha	une	26.1
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Relinquish	in	at	Company :	e + Assoc.	Date :	Time : //0C)	Rece	and)	it	h		Company:	wit.	L 18/8/	12 73	
Relinquish	ied by :		Company :		Date :	Time :	Rece	ived l	Sy: U			Company:		Date :	Time :	
Relinquish	ned by :		Company :	:	Date :	Time :	Rece	ived l	oy :			Company :		Date :	Time :	
L				WHITE COPY	Laboratory to 1	return.	YELL	ow c	OPY : La	boratory	y PI	NK COPY : Su	bmitte	r		

ABORATORY	2019 Ninth Avenue PO Box 1925 Altoona, PA 16603 (814) 946-4306 NELAP: PA 07-062, VA 460212	89 Kristi Road Pennsdale, PA 17756 (570) 494-6380 PaDEP: PA 41-04684	FAIRWAY LABORATORIES
	State Certifications: M	MD 275, WV 364	www.fairwaylaboratories.com

Letterie & Associates		Project.	UNITED CLEARFIELD	
629 East Rolling Ridge Drive		Project Number:	[none]	Reported:
Bellefonte PA, 16823		Collector:	CLIENT	10/25/12 12:32
Project Manager:	Jed Hill	Number of Containers:	7	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
INFLUENT	2J11059-01	Water	Grab	10/04/12 11:00	10/11/12 13:45
BETWEEN	2J11059-02	Water	Grab	10/04/12 11:05	10/11/12 13:45
EFFLUENT	2J11059-03	Water	Grab	10/04/12 11:10	10/11/12 13:45

Fairway Laboratories, Inc.

Reviewed and Submitted by:

wat

Michael P. Tyler Laboratory Director Fairway Labs in Altoona, PA is a NELAP (National Environmental Laboratory Accreditation Program) accredited lab, and as such, certifies that all applicable test results meet the requirements of NELAP, unless otherwise stated on the analytical report.

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Page 1 of 7

P Alton (8)	 Ninth Avenue O Box 1925 ona, PA 1660. 14) 946-4306 PA 07-062, VA 4 State Certifi 	3	Pennsda (570 PaDEP	Kristi Road ale, PA 1')) 494-638 ?: PA 41-04 ' 364	7756 FAIR 0 584	WAY LAE		
Letterle & Associates				Proje	ct: UNITED CL	EARFIELD	12	154-54B
629 East Rolling Ridge Drive			Pr	oject Numl			Reporte	d
				Collec	1.5 0		10/25/12 1	
Bellefonte PA, 16823							10/23/12 1	2.32
Project Manager: Jed Hill			Number	of Contain	ers: 7			
					Date/Time Samp	lea: 10/04/	12 11.00	
	atory Sample	(*************************************		(Water/G1	ab) Date / Time		*	Note
Labor	atory Sample Result	ID: 2J	11059-01 RL		ab)	Method	* Analyst	Note
Labor	Result	MDL		(Water/G1	ab) Date / Time		*	Note
Labor analyte Datile Organic Compounds by EPA	Result	MDL		(Water/G1	ab) Date / Time		*	Note
Labor Analyte Datile Organic Compounds by EPA	Result Method 8260B	MDL	RL	(Water/Gr Units	ab) Date / Time Analyzed	Method	* Analyst	Note
uosuut 11-menus Pestudo Alikuotekko 1 u	Result Method 8260E <2.00	MDL	RL 2.00	(Water/Gr Units ug/l	ab) Date / Time Analyzed 10/15/12 22:29	Method EPA 8260B	* Analyst mlf	Note
Labor Analyte olatile Organic Compounds by EPA Benzene 'oluene	Result <u>Method 8260E</u> <2.00 <2.00	MDL	RL 2.00 2.00	(Water/Gr Units ug/l ug/l	ab) Date / Time Analyzed 10/15/12 22:29 10/15/12 22:29	Method EPA 8260B EPA 8260B	Analyst mlf mlf	Note
Labor Inalyte Datile Organic Compounds by EPA Genzene Soluene thylbenzene Sylenes (total)	Result <u>Method 8260E</u> <2.00 <2.00 <2.00	MDL	RL 2.00 2.00 2.00	(Water/Gr Units ug/l ug/l ug/l	ab) Date / Time Analyzed 10/15/12 22:29 10/15/12 22:29 10/15/12 22:29	Method EPA 8260B EPA 8260B EPA 8260B	* Analyst mlf mlf mlf	Note
Labor Inalyte Datile Organic Compounds by EPA enzene foluene thylbenzene (ylenes (total) sopropylbenzene	Result <u>Method 8260E</u> <2.00 <2.00 <2.00 <4.00	MDL	RL 2.00 2.00 2.00 4.00	(Water/Gr Units ug/l ug/l ug/l ug/l	ab) Date / Time Analyzed 10/15/12 22:29 10/15/12 22:29 10/15/12 22:29 10/15/12 22:29	Method EPA 8260B EPA 8260B EPA 8260B EPA 8260B	Analyst mlf mlf mlf mlf	Note
Labor Analyte olatile Organic Compounds by EPA Benzene Soluene Sthylbenzene	Result <u>Method 8260E</u> <2.00 <2.00 <2.00 <4.00 <2.00	MDL	RL 2.00 2.00 2.00 4.00 2.00	(Water/Gr Units ug/l ug/l ug/l ug/l ug/l	ab) Date / Time Analyzed 10/15/12 22:29 10/15/12 22:29 10/15/12 22:29 10/15/12 22:29 10/15/12 22:29	Method EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B	Analyst mlf mlf mlf mlf mlf mlf	Note
Labor Analyte olatile Organic Compounds by EPA Benzene Toluene Toluene Sthylbenzene Kylenes (total) sopropylbenzene Atthyl tert-butyl ether	Result Method 8260E <2.00 <2.00 <2.00 <4.00 <2.00 20.1	MDL	RL 2.00 2.00 2.00 4.00 2.00 2.00	(Water/Gr Units ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l	ab) Date / Time Analyzed 10/15/12 22:29 10/15/12 22:29 10/15/12 22:29 10/15/12 22:29 10/15/12 22:29 10/15/12 22:29	Method EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B	Analyst mlf mlf mlf mlf mlf mlf mlf	
Labor Analyte olatile Organic Compounds by EPA Benzene Foluene Schylbenzene Kylenes (total) sopropylbenzene Aethyl tert-butyl ether Japhthalene	Result Method 8260E <2.00 <2.00 <2.00 <4.00 <2.00 20.1	MDL	RL 2.00 2.00 2.00 4.00 2.00 2.00 2.00	(Water/Gr Units ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l	ab) Date / Time Analyzed 10/15/12 22:29 10/15/12 22:29 10/15/12 22:29 10/15/12 22:29 10/15/12 22:29 10/15/12 22:29 10/15/12 22:29 10/15/12 22:29	Method EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B	Analyst mlf mlf mlf mlf mlf mlf mlf mlf	

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TROPACCRED	2019 Ninth PO Box Altoona, PA (814) 946 NELAP: PA 07-06 Sta	1925 16603 -4306	Pennso (57 PaDE	Kristi Road lale, PA 17750 0) 494-6380 P: PA 41-04684 V 364		WAY LAE	•	
Letterle & Associates				Project:	UNITED CLI	EARFIELD		
629 East Rolling Ridge	Drive		Р	roject Number:	[none]		Reporte	d:
Bellefonte PA, 16823				Collector:	CLIENT		10/25/12 12	2:32
Project Manager: J	ed Hill		Number	of Containers:	7			
Client Sample ID:	BETWEEN Laboratory S	ample ID:	2J11059-02	Dat (Water/Grab)	e/Time Samp	led: 10/04/	12 11:05	
Analyte	R	esult MD	L RL	Units	Date / Time Analyzed	Method	* Analyst	Note
Volatile Organic Compo								
Benzene	<	1.00	1.00	ug/l 1	0/17/12 17:38	EPA 8260B	mlf	

<1.00	1.00	ug/l	10/17/12 17:38	EPA 8260B	mlf	
<1.00	1.00	ug/l	10/17/12 17:38	EPA 8260B	mlf	
<1.00	1.00	ug/l	10/17/12 17:38	EPA 8260B	mlf	
<2.00	2.00	ug/l	10/17/12 17:38	EPA 8260B	mlf	
<1.00	1.00	ug/l	10/17/12 17:38	EPA 8260B	mlf	
<1.00	1.00	ug/l	10/17/12 17:38	EPA 8260B	mlf	VH
<1.00	1.00	ug/l	10/17/12 17:38	EPA 8260B	mlf	
109 %	70-1	30	10/17/12 17:38	EPA 8260B	mlf	
107 %	70-1	30	10/17/12 17:38	EP.4 8260B	mlf	
77.7 %	70-1	30	10/17/12 17:38	EPA 8260B	mlf	
	<1.00 <1.00 <2.00 <1.00 <1.00 <1.00 <i>109 %</i> <i>107 %</i>	<1.00	<1.00 1.00 ug/l <1.00 1.00 ug/l <2.00 2.00 ug/l <1.00 1.00 ug/l <1.00 1.00 ug/l <1.00 1.00 ug/l <1.00 1.00 ug/l	<1.00	<1.00	<1.00

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Page 3 of 7

REAL ACCRED	P Alto (81	 Ninth Avenue O Box 1925 ona, PA 1660 14) 946-4306 PA 07-062, VA 4 State Certif 	3 60212	Pennsda (570	Kristi Road ale, PA 1775) 494-6380 : PA 41-04684 364		WAY LAE	•	
Letterle & Associates					Project:	UNITED CL	EARFIELD		
629 East Rolling Ridge D	Drive			Pre	oject Number:	[none]		Reporte	d:
Bellefonte PA, 16823					Collector:	CLIENT		10/25/12 1	2:32
	ed Hill			Number	of Containers:	7			
Client Sample ID: 1	EFFLUENT				Da	te/Time Samp	oled: 10/04/	12 11:10	
	Labor	atory Sample	ID: 2.	J11059-03 ((Water/Grab)				
Analyte	Labor	atory Sample Result	ID: 2. MDL	J11059-03 (RL	(Water/Grab) Units	Date / Time Analyzed	Method	* Analyst	Note
Analyte /olatile Organic Compou		Result	MDL			Date / Time	Method	* Analyst	Note
		Result	MDL		Units	Date / Time	Method EPA 8260B	* Analyst mlf	Note
olatile Organic Compou		Result Method 8260B	MDL	RL	Units ug/l 1	Date / Time Analyzed			Note
7 olatile Organic Compou Benzene Toluene		Result Method 8260B <1.00	MDL	RL 1.00	Units ug/l 1 ug/l 1	Date / Time Analyzed 0/17/12 18:16	EPA 8260B	mlf	Note
Volatile Organic Compou Benzene Toluene Ethylbenzene		Result <u>Method 8260B</u> <1.00 <1.00	MDL	RL 1.00 1.00	Units ug/l 1 ug/l 1 ug/l 1	Date / Time Analyzed 0/17/12 18:16 0/17/12 18:16	EPA 8260B EPA 8260B	mlf mlf	Note
Volatile Organic Compou Benzene Toluene Ethylbenzene Xylenes (total)		Result Method 8260B <1.00 <1.00 <1.00	MDL	RL 1.00 1.00 1.00	Units ug/1 1 ug/1 1 ug/1 1 ug/1 1	Date / Time Analyzed 0/17/12 18:16 0/17/12 18:16 0/17/12 18:16	EPA 8260B EPA 8260B EPA 8260B	mlf mlf mlf	Note
Yolatile Organic Compou Benzene Toluene Ethylbenzene Xylenes (total) Isopropylbenzene		Result Method 8260B <1.00 <1.00 <1.00 <2.00	MDL	RL 1.00 1.00 1.00 2.00	Units ug/l 1 ug/l 1 ug/l 1 ug/l 1 ug/l 1	Date / Time Analyzed 0/17/12 18:16 0/17/12 18:16 0/17/12 18:16 0/17/12 18:16	EPA 8260B EPA 8260B EPA 8260B EPA 8260B	mlf mlf mlf mlf	Note
Yolatile Organic Compou Benzene Toluene Ethylbenzene Xylenes (total) Isopropylbenzene Methyl tert-butyl ether		Result Method 8260B <1.00 <1.00 <2.00 <1.00	MDL	RL 1.00 1.00 1.00 2.00 1.00	Units ug/l 1 ug/l 1 ug/l 1 ug/l 1 ug/l 1 ug/l 1	Date / Time Analyzed 0/17/12 18:16 0/17/12 18:16 0/17/12 18:16 0/17/12 18:16	EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B	mlf mlf mlf mlf mlf	
Volatile Organic Compou Benzene	inds by EPA	Result Method 8260B <1.00 <1.00 <2.00 <1.00 <1.00	MDL	RL 1.00 1.00 1.00 2.00 1.00 1.00	Units ug/l 1 ug/l 1 ug/l 1 ug/l 1 ug/l 1 ug/l 1 ug/l 1	Date / Time Analyzed 0/17/12 18:16 0/17/12 18:16 0/17/12 18:16 0/17/12 18:16 0/17/12 18:16	EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B	mlf mlf mlf mlf mlf mlf	
Volatile Organic Compou Benzene Toluene Ethylbenzene Xylenes (total) Isopropylbenzene Methyl tert-butyl ether Naphthalene	unds by EPA	Result Method 8260B <1.00 <1.00 <2.00 <1.00 <1.00	MDL	RL 1.00 1.00 1.00 2.00 1.00 1.00 1.00	Units ug/l 1 ug/l 1 ug/l 1 ug/l 1 ug/l 1 ug/l 1 ug/l 1	Date / Time Analyzed 0/17/12 18:16 0/17/12 18:16 0/17/12 18:16 0/17/12 18:16 0/17/12 18:16 0/17/12 18:16	EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B	mlf mlf mlf mlf mlf mlf mlf	
Volatile Organic Compou Benzene Toluene Ethylbenzene Xylenes (total) Isopropylbenzene Methyl tert-butyl ether Naphthalene Surrogate: 4-Bromofluorobe	unds by EPA	Result Method 8260B <1.00 <1.00 <2.00 <1.00 <1.00	MDL	RL 1.00 1.00 1.00 1.00 1.00 1.00 1.00 70-1	Units ug/l 1 ug/l 2 ug/l 2 ug/l 2 ug/l 3 ug/l 3	Date / Time Analyzed	EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B	mlf mlf mlf mlf mlf mlf mlf mlf	
Volatile Organic Compou Benzene Toluene Ethylbenzene Xylenes (total) Isopropylbenzene Methyl tert-butyl ether Naphthalene Surrogate: 4-Bromofluorobe Surrogate: 1,2-Dichloroetha	Inds by EPA	Result Method 8260B <1.00	MDL 107 % 105 % 76.9 %	RL 1.00 1.00 1.00 1.00 1.00 1.00 1.00 70-1 70-1 70-1	Units ug/l 1 ug/l 2 ug/l 2 ug/l 2 ug/l 3 ug/l 3	Date / Time Analyzed	EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B	mlf mlf mlf mlf mlf mlf mlf mlf mlf	

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BOR ATONY	2019 Ninth Avenue PO Box 1925 Altoona, PA 16603 (814) 946-4306 NELAP: PA 07-062, VA 460212 State Certificatio	89 Kristi Road Pennsdale, PA 17756 (570) 494-6380 PaDEP: PA 41-04684 2 ons: MD 275, WV 364	•	LABORATORIES
Letterle & Associa	ites	Project:	UNITED CLEARFIE	LD
629 East Rolling H	Ridge Drive	Project Number:	[none]	Reported:
Bellefonte PA, 16	323	Collector:	CLIENT	10/25/12 12:32
Project Manager:	Jed Hill	Number of Containers:	7	
VC C	Notes Theck standard was outside the QC range. Data ac CS value was outside the QC range. Data accept			
5] ; ;	Definitions Surrogate values must be within the indicated rang Reporting limits are adjusted accordingly when sa The following analyses are to be performed immed ron. The date and time reported reflect the time the f the solid sample weight for VOC analysis does a	mples are analyzed at a dilution due to t diately upon sampling: pH, sulfite, chlo he samples were analyzed at the laborate	he matrix. rine residual, dissolved oxyg ory.	
* 1	indicates analysis performed by Fairway Labora	tories, Inc. at the Pennsdale location. Th	nis location is PaDEP Chapte	er 252 certified.
< 1	Represents "less than" - indicates that the result wa	as less than reporting limit.		
	Method Detection Limit - is the lowest or minimum eported result values that are less than the MDL a		vel that the analyte is detected	ed. Any
RL I	Reporting Limit - is the lowest or minimum level a	at which the analyte can be quantified.		
Fairway Laboratories	Inc.	Fairway Labs in Altoona, PA is a Accreditation Program) accredit results meet the requirements of? report.	ed lab, und as such, certifies that NELAP, unless otherwise stated of	all applicable test on the analytical
		The results in this report apply to custody document. This analytica		

lease print. See back of COC for instructions/ferms	2019 9th Ave. P.O. Box 1925 Altoona, PA 16602 Phone: (814) 946-4306 Fax: (814) 946-8791	FAIRWAY LABOR	89 Kristi Rd Pennsdale, PA 17756 ATORIES Phone: (570) 494-638 Environmental Laboratory	
Client Name: Letter PASsociates Address: 629 6. Polling Pidge Drive Beilefonte, PA 11823 Contact: Jed 1111 Phone #: 814-355-2241	Received on ice? Y N Sample Temp:	Reportable to PADEP? Yes 🗅 PWSID #	Analyses Requested	LAB USE ONLY FedEx USPS UPS Other
Fax #: 814-355-2410 Project Name: United Clarfield Quote/PO #:	GR. -or Composite Comp Start En	p esite Containers	998 Unhadud Dil & brosk	Tracking #
Sample Description/Location	Start Start End Date Time Date	Z Water A Water		Bottle Type/Comments

1	Latiunt	X			10-4-12	Mau			5	X								
г	Between	X				1105	Y		2	X								
3	Efflyint	X			V	1110	7		3	X	X							
	Sampled by	Date	Time	Received by	<i>/</i> :	NN	7	Dat		Time				Re	emark	cs		
			1500			<u> / V </u>	/			5910				*				
	Relinquished by:	Date	Time 1250	Received by	R	ILÍ	_	Dat	1	Time		APRIL COMP.						
	///)	Date	Time		- //	Helm		/0/ Dat		Time	·		 					
	Relinquished by:	1011	13.45	Received by	y:						-		 				 	
	Relinquished by:	Date	Time	Dessived by				Dai	te	Time						-	 	
	Kennquisned by.			Received by	Y:	ns		Phi	12	1345							 	

By relinquishing my sample to Fairway Laboratories, Inc., I hereby agree to the terms and conditions printed on the reverse.

White Original - FLI File Canary - FLI Copy Pink - Customer Receipt Copy

SOP FL10601-002	Revision 14B	Date: May 21, 2012	Page of	Г
Receiver: <u>S</u>	Chain o	of Custody Receiving Document Page of	-	7 06 7
Date/Time of this check: 10/11/10	14:03 Sample Tempe	erature: 2.2 Client: Letterk Assoc.	Lab#2J/105902-	Dood 7
Received at Lab on ICE ? $\underline{\gamma} \Box *$	Sample Temperature wi	hen arrived at Lab: 2.2 Acceptable? $\underline{\gamma}\Box$	\ast or In cool down process? \Box \ast	
Custody Seals? Inta	act?			

COC/Labels on bottles agree? \square^* Correct containers for all the analysis requested? \square^* Matrix: $\square \square \square^*$

COC #	Number and Type of BOTTLES									Comments	
	Poly Non- Pres.	Poly H2SO4	Poly HNO3	Amber H2SO4	Amber Non- Pres.	Poly NaOH	VOCS (Head space?) HCL	Other	Properly Preserved	Bacti	
1							2		NA		
2							2		NA	1 all of	
3				1			2		4		
										and the	
										「「「「」」	
							ŀ			Sec.	
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* DEVIATION PRESENT:	CLIENT CALLED:	CLIENT RESPONSE:
⊗ No Ice ()	YES ()	Proceed with analysis; qualify data ()
(a) Not at Proper Temperature ()	By Whom:	Will Resample ()
(a) Wrong Container		Provided Information ()
Missing Information: ()	Date:	No Response; Proceed and qualified ()
с. С	e g	Client Contact:Date:

* Comments: _

Chain of Custody Receiving Document

This is a date sensitive document and may not be current after October 5, 2012.

BULLE ACCRED	2019 Ninth Avenue PO Box 1925 Altoona, PA 16603 (814) 946-4306 NELAP: PA 07-062, VA 460212	89 Kristi Road Pennsdale, PA 17756 (570) 494-6380 PaDEP: PA 41-04684	FAIRWAY LABORATORIES
	State Certifications: 1	MD 275, WV 364	www.fairwaylaboratories.com

Letterle & Associates		Project:	UNITED CLE	CARFIELD
629 East Rolling Ridg	e Drive	Project Number:	[none]	Reported:
Bellefonte PA, 16823		Collector:	TW	11/26/12 11:41
Project Manager:	Jed Hill	Number of Containers:	7	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
INFLUENT	2K08082-01	Water	Grab	11/07/12 09:40	11/08/12 13:30
BETWEEN	2K08082-02	Water	Grab	11/07/12 09:45	11/08/12 13:30
EFFLUENT	2K08082-03	Water	Grab	11/07/12 09:50	11/08/12 13:30

Fairway Laboratories, Inc.

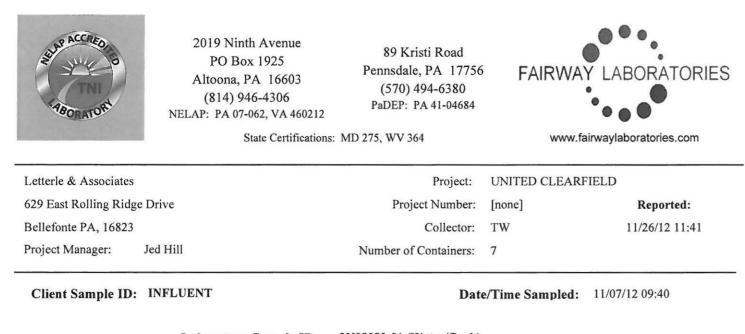
Reviewed and Submitted by:

mot

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Page 1 of 7



Laboratory Sample ID: 2K08082-01 (Water/Grab)

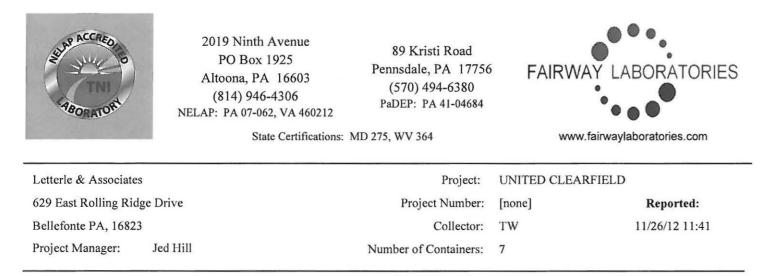
Analyte	Result	MDL	RL	Units	Date / Time Analyzed	Method	* Analyst	Note
olatile Organic Compounds by EPA	A Method 8260B							
Benzene	<2.00		2.00	ug/l	11/09/12 07:08	EPA 8260B	mlf	
Toluene	<2.00		2.00	ug/l	11/09/12 07:08	EPA 8260B	mlf	
Ethylbenzene	<2.00		2.00	ug/l	11/09/12 07:08	EPA 8260B	mlf	
Xylenes (total)	<4.00		4.00	ug/l	11/09/12 07:08	EPA 8260B	mlf	
Isopropylbenzene	<2.00		2.00	ug/l	11/09/12 07:08	EPA 8260B	mlf	
Methyl tert-butyl ether	17.6		2.00	ug/l	11/09/12 07:08	EPA 8260B	mlf	
Naphthalene	<2.00		2.00	ug/l	11/09/12 07:08	EPA 8260B	mlf	
Surrogate: 4-Bromofluorobenzene	98	8.9 %	70-	130	11/09/12 07:08	EPA 8260B	mlf	
Surrogate: 1,2-Dichloroethane-d4	1	07 %	70	130	11/09/12 07:08	EPA 8260B	mlf	
Surrogate: Fluorobenzene	90	5.1%	70-	130	11/09/12 07:08	EPA 8260B	mlf	

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Client Sample ID: BETWEEN

Date/Time Sampled: 11/07/12 09:45

Laboratory Sample ID: 2K08082-02 (Water/Grab)

Analyte	Result	MDL	RL	Units	Date / Time Analyzed	Method	* Analyst	Note
olatile Organic Compounds by	EPA Method 8260B				the second second			
Benzene	<1.00		1.00	ug/l	11/09/12 08:57	EPA 8260B	mlf	
Toluene	<1.00		1.00	ug/l	11/09/12 08:57	EPA 8260B	mlf	
Ethylbenzene	<1.00		1.00	ug/l	11/09/12 08:57	EPA 8260B	mlf	
Xylenes (total)	<2.00		2.00	ug/l	11/09/12 08:57	EPA 8260B	mlf	
Isopropylbenzene	<1.00		1.00	ug/l	11/09/12 08:57	EPA 8260B	mlf	
Methyl tert-butyl ether	<1.00		1.00	ug/l	11/09/12 08:57	EPA 8260B	mlf	
Naphthalene	<1.00		1.00	ug/l	11/09/12 08:57	EPA 8260B	mlf	
Surrogate: 4-Bromofluorobenzene		91.1 %	70	130	11/09/12 08:57	EPA 8260B	mlf	
Surrogate: 1,2-Dichloroethane-d4		108 %	70-	130	11/09/12 08:57	EPA 8260B	mlf	
Surrogate: Fluorobenzene		106 %	70-	120	11/09/12 08:57	EPA 8260B	mlf	

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ACCRED B	PO	linth Avenue Box 1925 a, PA 1660 946-4306 07-062, VA 4	3	Pennsd (570	Kristi Road ale, PA 17756)) 494-6380 : PA 41-04684	FAI	RWAY L	ABORAT	ORIES
	1	State Certif	ications: M	D 275, WV	364		www.fairway	laboratories.	com
Letterle & Associates					Project:	UNITED C	LEARFIELD)	
629 East Rolling Ridge	Drive			Pr	oject Number:	[none]		Reporte	d:
Bellefonte PA, 16823					Collector:	TW		11/26/12 1	1:41
Project Manager:	Jed Hill			Number	of Containers:	7			
Client Sample ID:	EFFLUENT				Dat	e/Time Sam	apled: 11/0	7/12 09:50	
	Laborate	ory Sample	ID: 21	K08082-03	(Water/Grab)				
Analyte		Result	MDL	RL	Units	Date / Time Analyzed	Method	* Analyst	Note

Volatile Organic Compounds by EPA Method 8260B 11/09/12 09:35 EPA 8260B <1.00 1.00 mlf Benzene ug/l Toluene <1.00 1.00 ug/l 11/09/12 09:35 EPA 8260B mlf Ethylbenzene 1.00 11/09/12 09:35 <1.00 ug/l EPA 8260B mlf Xylenes (total) <2.00 2.00 ug/l 11/09/12 09:35 EPA 8260B mlf Isopropylbenzene <1.00 1.00 ug/l 11/09/12 09:35 EPA 8260B mlf 1.00 11/09/12 09:35 EPA 8260B Methyl tert-butyl ether <1.00 ug/l mlf Naphthalene <1.00 1.00 11/09/12 09:35 EPA 8260B mlf ug/l Surrogate: 4-Bromofluorobenzene 90.3 % 70-130 11/09/12 09:35 EPA 8260B mlf Surrogate: 1,2-Dichloroethane-d4 11/09/12 09:35 EPA 8260B mlf 106 % 70-130 Surrogate: Fluorobenzene 102 % 70-130 11/09/12 09:35 EPA 8260B mlf **Conventional Chemistry Parameters by SM/EPA Methods** Oil & Grease <6.30 6.30 mg/l 11/19/12 16:00 EPA 1664A rhb

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	State Certification	ns: MD 275, WV 364	www.	airwaylaboratories.com
Letterle & Assoc	iates	Project:	UNITED CLEAR	FIELD
629 East Rolling	Ridge Drive	Project Number:	[none]	Reported:
Bellefonte PA, 1	6823	Collector:	TW	11/26/12 11:41
Project Manager:	Jed Hill	Number of Containers:	7	
	Surrogate values must be within the indicated range Reporting limits are adjusted accordingly when sam The following analyses are to be performed immediation. The date and time reported reflect the time the	nples are analyzed at a dilution due to t iately upon sampling: pH, sulfite, chlo	the matrix. prine residual, dissolved	oxygen and ferrous
	If the solid sample weight for VOC analysis does n	ot fall within the 3.5-6.5 gram range, th	ne results are considered	estimated values.
*	P indicates analysis performed by Fairway Laborate	ories, Inc. at the Pennsdale location. T	his location is PaDEP C	hapter 252 certified.
<	Represents "less than" - indicates that the result wa	s less than reporting limit.		
MDL	Method Detection Limit - is the lowest or minimum reported result values that are less than the MDL ar		evel that the analyte is d	etected. Any
RL	Reporting Limit - is the lowest or minimum level a	t which the analyte can be quantified.		
airway Laboratorie	s, Inc.	Fairway Labs in Altoona, PA is a Accreditation Program) accredit results meet the requirements of J report.	ed lab, and as such, certifie	s that all applicable test
airway Laboratorie	s, Inc.	Accreditation Program) accredite	ed lab, and as such, certific NELAP, unless otherwise s the samples analyzed in a	is that all applicable test ated on the analytical scordance with the chain of

REQUEST FOR ANALYSIS e print, See back of COC for instructions/terms onditions.		P.O. Box 19 ltoona, PA 1 ne: (814) 94 : (814) 94	6602 6-4306	FAII	RWA		.AB		ATOR		ıl Labon	Phon	nsdale	risti Rd , PA 1775 70) 494-63	6	082-01 COC#	
ient Name: Lettertup Associetes Idress: 629 E. 12-11in Ridge for Bellutonte, PA 14823 ontact: Jed 1411 ione #: 814-355-2241 ix#: 814-355-2410 oject Name: United (Luerfield	San	eived on ice?	Y N	PWSI) D#_	rtable DEP Yes [[atri	? 		Unhaded bas	٩ الدوجر	nalyse	s Requ	uested		– LAB US FedEx UPS Tracking #	E ONLY USPS Other	
AT: Normal A Rush A surcharge A surcharge A subject to pre-approval and surcharge A surcha	Composite	Composite Start	-or Comp En End	r- osite	Solid	Water	Other	# of Containers	NU 8991	01 + 1:0					Bottle Type	c/Comments	

Influent	X			11-7-12	0940	17		2	X						 	
Influent Midfluent Effluent	X				0945	1	X	2	X							
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By relinquishing my sample to Fairway Laboratories, Inc., I hereby agree to the terms and conditions printed on the reverse.

White Original - FLI File Canary - FLI Copy Pink - Customer Receipt Copy

SOP FLI0601-002			Revisi	on 14B			Da	te: May 21, 201	2		Page of
Receiver:	CB			(Chain	of Cus	tody Rec	eiving Doc I	eument Page of	f	
Date/Time of this che											ab #_2K08082-0L
Received at Lab on	ICE ? <u>\</u>	*	Sample	Temper	ature w	hen ar	rived at L	ab: Ac	ceptable?	🗆 * or I	n cool down process? 🔲 *
Custody Seals? COC/Labels on bottle	71	_ Intact?	?_ \						/]∗ Matrix:		v
COC #				Nu	mber an	d Type	of BOTTI	LES			Comments
.	Poly Non- Pres.	Poly H2SO4	Poly HNO3	Amber H2SO4	Amber Non- Pres.	Poly NaOH	VOCS (Head space?)	Other	Properly Preserved	Bacti	
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MO									NA	Tal ion	
EFF				1			•	adire di	N	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	12

Page 7 of 7

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* DEVIATION PRESENT:		CLIENT CALLED:	CLIENT RESPONSE:
No Ice	()	YES ()	Proceed with analysis; qualify data ()
8 Not at Proper Temperature	Č	By Whom:	Will Resample ()
Wrong Container	Č		Provided Information ()
Missing Information:	Č)	Date:	No Response; Proceed and qualified ()
	1999 - 19	â	Client Contact:Date:

* Comments:

Chain of Custody Receiving Document

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This is a date sensitive document and may not be current after November 5, 2012.

ACCRED B	2019 Ninth Avenue PO Box 1925 Altoona, PA 16603 (814) 946-4306 NELAP: PA 07-062, VA 460212	89 Kristi Road Pennsdale, PA 17756 (570) 494-6380 PaDEP: PA 41-04684	FAIRWAY LABORATORIES
	State Certifications: 1	MD 275, WV 364	www.fairwaylaboratories.com

Letterle & Associates		Project:	UNITED CLEARFIELD	
629 East Rolling Ridg	e Drive	Project Number:	[none]	Reported:
Bellefonte PA, 16823		Collector:	TW	12/14/12 10:12
Project Manager:	Jed Hill	Number of Containers:	7	

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Sample Type	Date Sampled	Date Received
INFLUENT	2L04066-01	Water	Grab	12/03/12 15:25	12/04/12 14:30
BETWEEN	2L04066-02	Water	Grab	12/03/12 15:27	12/04/12 14:30
EFFLUENT	2L04066-03	Water	Grab	12/03/12 15:30	12/04/12 14:30

Fairway Laboratories, Inc.

Reviewed and Submitted by:

mot

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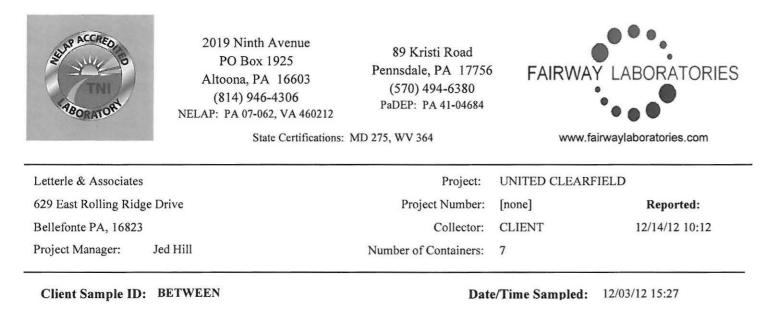
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Page 1 of 7

629 East Rolling Ridge Drive Project Number [none] Reported: Bellefonte PA, 16823 Collector CLIENT 12/14/12 10:12 Project Manager: Jed Hill Number of Containers: 7 Date/Time Sampled: 12/03/12 15:25 Laboratory Sample ID: 2L04066-01 (Water/Grab) Date / Time Method Analyst Note Note Officient Organic Compounds by EPA Method 8260B Will Result MDL RL Units Date / Time Analyzed Method Analyst Note Senzene 22.00 ug/1 12/11/12 02:49 EPA 8260B will Coluene 22.00 ug/1 12/11/12 02:49 EPA 8260B will Senzene 22.00 ug/1 12/11/12 02:49 <th>A</th> <th>019 Ninth Avenu PO Box 1925 Itoona, PA 1660 (814) 946-4306 P: PA 07-062, VA 4 State Certif</th> <th>3</th> <th>Pennsda (570 PaDEP</th> <th>Kristi Road ale, PA 177)) 494-6380): PA 41-0468 364</th> <th>4</th> <th>WAY LAE</th> <th>•</th> <th></th>	A	019 Ninth Avenu PO Box 1925 Itoona, PA 1660 (814) 946-4306 P: PA 07-062, VA 4 State Certif	3	Pennsda (570 PaDEP	Kristi Road ale, PA 177)) 494-6380): PA 41-0468 364	4	WAY LAE	•	
629 East Rolling Ridge Drive Project Number: [none] Reported: Bellefonte PA, 16823 Collector: CLIENT 12/14/12 10:12 Project Manager: Jed Hill Number of Containers: 7 Date/Time Sampled: 12/03/12 15:25 Client Sample ID: INFLUENT Date / Time Analyzed Method Analyst Note Analyte Result MDL RL Units Date / Time Analyzed Method Analyst Note Senzene <2.00 ug/1 12/11/12 02:49 EPA 8260B wlm Goluene <2.00 ug/1 12/11/12 02:49 EPA 8260B wlm Schores (total) <4.00 4.00 ug/1 12/11/12 02:49 EPA 8260B wlm Soporpylbenzene <2.00 0.00 ug/1 12/11/12 02:49 EPA 8260B wlm Soporpylbenzene <2.00 2.00 ug/1 12/11/12 02:49 EPA 8260B wlm Soporpylbenzene <2.00 2.00 ug/1 12/11/12 02:49 EPA 8260B wlm	Letterle & Associates				Project	: UNITED CL	EARFIELD		
Bellefonte PA, 16823 Collector: CLIENT 12/14/12 10:12 Project Manager: Jed Hill Number of Containers: 7 Date/Time Sampled: 12/03/12 15:25 Client Sample ID: INFLUENT Date/Time Sampled: 12/03/12 15:25 Laboratory Sample ID: 2L04066-01 (Water/Grab) Analyte Result MDL RL Units Analyzed Method Analyst Note Senzene <2.00	629 East Rolling Ridge Drive			Pr				Reporte	d:
Project Manager: Jed Hill Number of Containers: 7 Client Sample ID: INFLUENT Date/Time Sampled: 12/03/12 15:25 Laboratory Sample ID: 2L04066-01 (Water/Grab) Date / Time Analyzed Method Analyst Note Analyte Result MDL RL Units Date / Time Analyst Note Olatile Organic Compounds by EPA Method 8260B MDL RL Units Date / Time Analyst Note Olatile Organic Compounds by EPA Method 8260B Banzene 20.00 ug/l 12/11/12 02:49 EPA 8260B wim Olduene 2.00 2.00 ug/l 12/11/12 02:49 EPA 8260B wim Sthylbenzene 2.00 2.00 ug/l 12/11/12 02:49 EPA 8260B wim Stappropylbenzene 2.00 2.00 ug/l 12/11/12 02:49 EPA 8260B wim Kylenes (total) 4.00 ug/l 12/11/12 02:49 EPA 8260B wim Kylenes (total) 4.00 ug/l 12/11/12 02:4							1	-	
Client Sample ID: INFLUENT Date/Time Sampled: 12/03/12 15:25 Laboratory Sample ID: 2L04066-01 (Water/Grab) Date / Time Analyte Method Analyst Note Analyte Result MDL RL Units Date / Time Analyzed Method Analyst Note Olatile Organic Compounds by EPA Method 8260B MDL RL Units Date / Time Analyzed Method Analyst Note Olatile Organic Compounds by EPA Method 8260B September 2.00 ug/l 12/11/12 02:49 EPA 8260B wim Staylbenzene <2.00 2.00 ug/l 12/11/12 02:49 EPA 8260B wim Staylbenzene <2.00 2.00 ug/l 12/11/12 02:49 EPA 8260B wim Staylbenzene <2.00 2.00 ug/l 12/11/12 02:49 EPA 8260B wim Staylbenzene <2.00 2.00 ug/l 12/11/12 02:49 EPA 8260B wim Aphthalene <2.00 2.00 ug/l 12/11/12 02:49 EPA 8260B </td <td></td> <td></td> <td></td> <td>Number</td> <td></td> <td></td> <td></td> <td></td> <td>16-0730 20</td>				Number					16-0730 20
olatile Organic Compounds by EPA Method 8260B Benzene <2.00			ID: 21	.04066-01			led: 12/03/1	12 15:25	
Coluene <2.00	Lat	ooratory Sample			(Water/Gra	b) Date / Time		*	Note
Sthylbenzene <2.00	Lat Analyte Jolatile Organic Compounds by El	Result PA Method 8260E	MDL	RL	(Water/Gra Units	b) Date / Time Analyzed	Method	* Analyst	Note
Kylenes (total) <4.00 ug/l 12/11/12 02:49 EPA 8260B wlm sopropylbenzene <2.00	Lat Analyte 'olatile Organic Compounds by E l Benzene	Result PA Method 8260E <2.00	MDL	RL 2.00	(Water/Gra Units ug/l	b) Date / Time Analyzed 12/11/12 02:49	Method EPA 8260B	* Analyst wlm	Note
sopropylbenzene <2.00 ug/l 12/11/12 02:49 EPA 8260B wlm Acthyl tert-butyl ether 12.5 2.00 ug/l 12/11/12 02:49 EPA 8260B wlm Naphthalene <2.00	Lat Analyte Volatile Organic Compounds by El Benzene Toluene	PA Method 8260E <2.00 <2.00	MDL	RL 2.00 2.00	(Water/Gra Units ug/l ug/l	b) Date / Time Analyzed 12/11/12 02:49 12/11/12 02:49	Method EPA 8260B EPA 8260B	* Analyst wlm wlm	Note
Naphthalene <2.00 ug/l 12/11/12 02:49 EPA 8260B wlm VC Surrogate: 4-Bromofluorobenzene 92.4 % 70-130 12/11/12 02:49 EPA 8260B wlm VC Surrogate: 1,2-Dichloroethane-d4 113 % 70-130 12/11/12 02:49 EPA 8260B wlm	Lat Analyte Volatile Organic Compounds by El Benzene Foluene Ethylbenzene	Pooratory Sample Result PA Method 8260E <2.00	MDL	RL 2.00 2.00 2.00	(Water/Gra Units ug/l ug/l ug/l	b) Date / Time Analyzed 12/11/12 02:49 12/11/12 02:49 12/11/12 02:49	Method EPA 8260B EPA 8260B EPA 8260B	* Analyst wlm wlm wlm	Note
Surrogate: 4-Bromofluorobenzene 92.4 % 70-130 12/11/12 02:49 EPA 8260B wlm Surrogate: 1,2-Dichloroethane-d4 113 % 70-130 12/11/12 02:49 EPA 8260B wlm	Lat Analyte Volatile Organic Compounds by El Benzene Toluene	PA Method 8260E <2.00	MDL	RL 2.00 2.00 2.00 4.00	(Water/Gra Units ug/l ug/l ug/l ug/l	b) Date / Time Analyzed 12/11/12 02:49 12/11/12 02:49 12/11/12 02:49 12/11/12 02:49	Method EPA 8260B EPA 8260B EPA 8260B EPA 8260B	* Analyst wlm wlm wlm wlm	Note
Currogate: 1,2-Dichloroethane-d4 113 % 70-130 12/11/12 02:49 EPA 8260B wlm	Lat Analyte <u>'olatile Organic Compounds by El</u> Benzene Foluene Ethylbenzene Xylenes (total)	PA Method 8260E <2.00	MDL	RL 2.00 2.00 2.00 4.00 2.00	(Water/Gra Units ug/l ug/l ug/l ug/l ug/l ug/l	b) Date / Time Analyzed 12/11/12 02:49 12/11/12 02:49 12/11/12 02:49 12/11/12 02:49 12/11/12 02:49	Method EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B	* Analyst wlm wlm wlm wlm wlm wlm	Note
	Lat Analyte Yolatile Organic Compounds by El Benzene Foluene Ethylbenzene Xylenes (total) isopropylbenzene	PA Method 8260E <2.00	MDL	RL 2.00 2.00 2.00 4.00 2.00 2.00	(Water/Gra Units ug/l ug/l ug/l ug/l ug/l ug/l	b) Date / Time Analyzed 12/11/12 02:49 12/11/12 02:49 12/11/12 02:49 12/11/12 02:49 12/11/12 02:49 12/11/12 02:49	Method EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B	* Analyst wlm wlm wlm wlm wlm wlm	
	Lat Analyte <u>Volatile Organic Compounds by El</u> Benzene Toluene Ethylbenzene Kylenes (total) (sopropylbenzene Methyl tert-butyl ether Naphthalene Surrogate: 4-Bromofluorobenzene	PA Method 8260E <2.00	MDL 3 92.4 %	RL 2.00 2.00 2.00 4.00 2.00 2.00 2.00 2.00	(Water/Gra Units ug/l ug/l ug/l ug/l ug/l ug/l ug/l	b) Date / Time Analyzed 12/11/12 02:49 12/11/12 02:49 12/11/12 02:49 12/11/12 02:49 12/11/12 02:49 12/11/12 02:49 12/11/12 02:49	Method EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B	* Analyst wlm wlm wlm wlm wlm wlm wlm wlm wlm	

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Laboratory Sample ID: 2L04066-02 (Water/Grab)

Analyte	Result	MDL	RL	Units	Date / Time Analyzed	Method	* Analyst	Note
olatile Organic Compounds by EP	A Method 8260B							
Benzene	<1.00		1.00	ug/l	12/06/12 11:55	EPA 8260B	mlf	QB, VC
Toluene	<1.00		1.00	ug/l	12/06/12 11:55	EPA 8260B	mlf	
Ethylbenzene	<1.00		1.00	ug/l	12/06/12 11:55	EPA 8260B	mlf	
Xylenes (total)	<2.00		2.00	ug/l	12/06/12 11:55	EPA 8260B	mlf	
Isopropylbenzene	<1.00		1.00	ug/l	12/06/12 11:55	EPA 8260B	mlf	
Methyl tert-butyl ether	1.85		1.00	ug/l	12/06/12 11:55	EPA 8260B	mlf	
Naphthalene	<1.00		1.00	ug/l	12/06/12 11:55	EPA 8260B	mlf	
Surrogate: 4-Bromofluorobenzene		86.8 %	70-	130	12/06/12 11:55	EPA 8260B	mlf	
Surrogate: 1,2-Dichloroethane-d4		173 %	70	130	12/06/12 11:55	EPA 8260B	mlf	QF
Surrogate: Fluorobenzene		140 %	70-	130	12/06/12 11:55	EPA 8260B	mlf	QF

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Page 3 of 7

Alt	 19 Ninth Avenue PO Box 1925 oona, PA 16603 814) 946-4306 PA 07-062, VA 460 State Certific 		Pennsda (570 PaDEP	Kristi Roa ale, PA 1)) 494-638 2: PA 41-04	7756 FAIR 30 684	WAY LAE	•		3
	State certific	ations. w	D 275, WV	504		ww.ran waylab	oratories.e		
Letterle & Associates				Proje	ect: UNITED CL	EARFIELD			
629 East Rolling Ridge Drive			Pr	oject Num	ber: [none]		Reporte	d:	
Bellefonte PA, 16823				Collec	tor: CLIENT		12/14/12 1	0:12	
Project Manager: Jed Hill			Number	of Contain					
16424 KZ									
Analyte	Result	D: 21	.04066-03 RL	(Water/G	rab) Date / Time Analyzed	Method	* Analyst	Note]
Analyte	Result				Date / Time	Method	* Analyst	Note]
Analyte Yolatile Organic Compounds by EPA	Result				Date / Time	Method EPA 8260B	* Analyst mlf	Note]
Analyte olatile Organic Compounds by EP Benzene	Result A Method 8260B		RL	Units	Date / Time Analyzed			Note]
Analyte olatile Organic Compounds by EP Benzene Foluene	Result A Method 8260B <1.00		RL 1.00	Units ug/l	Date / Time Analyzed 12/06/12 14:46	EPA 8260B	mlf	Note	_
Analyte Olatile Organic Compounds by EP Benzene Foluene Ethylbenzene	Result A Method 8260B <1.00 <1.00		RL 1.00 1.00	Units ug/l ug/l	Date / Time Analyzed 12/06/12 14:46 12/06/12 14:46	EPA 8260B EPA 8260B	mlf mlf	Note	_
Analyte Yolatile Organic Compounds by EP Benzene Foluene Ethylbenzene Xylenes (total)	Result A Method 8260B <1.00 <1.00 <1.00		RL 1.00 1.00 1.00	Units ug/l ug/l ug/l	Date / Time Analyzed 12/06/12 14:46 12/06/12 14:46 12/06/12 14:46	EPA 8260B EPA 8260B EPA 8260B	mlf mlf mlf	Note	
Analyte Colatile Organic Compounds by EP Benzene Foluene Ethylbenzene Kylenes (total) sopropylbenzene	Result A Method 8260B <1.00 <1.00 <2.00		RL 1.00 1.00 1.00 2.00	Units ug/l ug/l ug/l ug/l	Date / Time Analyzed 12/06/12 14:46 12/06/12 14:46 12/06/12 14:46 12/06/12 14:46	EPA 8260B EPA 8260B EPA 8260B EPA 8260B	mlf mlf mlf mlf	Note	_
Analyte Colatile Organic Compounds by EP Benzene Foluene Ethylbenzene Kylenes (total) sopropylbenzene Methyl tert-butyl ether	Result A Method 8260B <1.00 <1.00 <2.00 <1.00 <2.00 <1.00 <1.00 <2.00 <1.00 <1.00 <2.00 <1.00 <2.00 <2.00 <1.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00 <2.00		RL 1.00 1.00 1.00 2.00 1.00	Units ug/l ug/l ug/l ug/l ug/l	Date / Time Analyzed 12/06/12 14:46 12/06/12 14:46 12/06/12 14:46 12/06/12 14:46 12/06/12 14:46	EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B	mlf mlf mlf mlf mlf	Note	
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Analyte Yolatile Organic Compounds by EP. Benzene Toluene Ethylbenzene Xylenes (total) Isopropylbenzene Methyl tert-butyl ether Naphthalene Surrogate: 4-Bromofluorobenzene	Result A Method 8260B <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.00 <1.0	MDL	RL 1.00 1.00 1.00 2.00 1.00 1.00 1.00	Units ug/l ug/l ug/l ug/l ug/l ug/l ug/l 130	Date / Time Analyzed	EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B	mlf mlf mlf mlf mlf mlf mlf	QF	_
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Fairway Labs in Altoona, PA is a NELAP (National Environmental Laboratory Accreditation Program) accredited lab, and as such, certifies that all applicable test results meet the requirements of NELAP, unless otherwise stated on the analytical report.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ABORA	PO Box 1925 Altoona, PA 16603 (814) 946-4306 NELAP: PA 07-062, VA 40 State Certifi	(570) 494-6380 PaDEP: PA 41-04684		Y LABORATORIES
Letterle & As	ssociates	Project:	UNITED CLEAR	FIELD
529 East Roll	ling Ridge Drive	Project Number:	[none]	Reported:
Bellefonte PA	A, 16823	Collector:	CLIENT	12/14/12 10:12
Project Mana	ger: Jed Hill	Number of Containers:	7	
	Notes			
QB	The spike recovery was outside acceptance li was accepted based on acceptable CCV recov		natrix interferences. The	batch
QF	Surrogate recovery out of range due to possib	le matrix interference.		
VC	Check standard was outside the QC range. Da	ata accepted based on acceptable LCS.		
	Definitions			
	Surrogate values must be within the indicated	I range, otherwise the results are considered to	o be estimated.	
	Reporting limits are adjusted accordingly wh	en samples are analyzed at a dilution due to the	he matrix.	
	The following analyses are to be performed in iron. The date and time reported reflect the t			oxygen and ferrous
	If the solid sample weight for VOC analysis	does not fall within the 3.5-6.5 gram range, th	ne results are considered	estimated values.
*	P indicates analysis performed by Fairway La	aboratories, Inc. at the Pennsdale location. Th	his location is PaDEP Cl	hapter 252 certified.
<	Represents "less than" - indicates that the rest	ult was less than reporting limit.		
MDL	Method Detection Limit - is the lowest or min reported result values that are less than the M		vel that the analyte is de	tected. Any
RL	Reporting Limit - is the lowest or minimum l	evel at which the analyte can be quantified.		

Accreditation Program) accredited lab, and as such, certifies that all applicable test results meet the requirements of NELAP, unless otherwise stated on the analytical report.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Address: <u>629</u> <u>Bell</u> Contact: <u>50</u> Phone #: <u>819</u>	Herly PASSONA 6. Relling Rid ufonky PA 11 1-355-2241 -355-2241 -355-2410	tes ge (1827		Received Sample 7	l on ice? ſemp:	YN	- PWSI	PA	rtable DEP Yes C	?		كعك لميل	,	nalyse	Requ	lested			LAB USE ONLY FedEx USPS UPS Other Tracking #
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COC #				Nu	mber an	d Type	of BOTTI	LES	÷.		Comments].
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* DEVIATION PRESENT:		CLIENT CALLED:	CLIENT RESPONSE:
8 No Ice	()	YES ()	Proceed with analysis; qualify data ()
Not at Proper Temperature	Č	By Whom:	Will Resample ()
S Wrong Container	ö		Provided Information ()
Missing Information:	Č)	Date:	No Response; Proceed and qualified ()
			Client Contact:Date:

* Comments: _

Chain of Custody Receiving Document

This is a date sensitive document and may not be current after November 26, 2012.