

Draft Environmental Impact Statement

Appendix F Groundwater Well Investigation



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PUMPING TEST PROGRAM CLOVEWOOD PROPERTY BLAGGS CLOVE, VILLAGE OF SOUTH BLOOMING GROVE, ORANGE COUNTY, NEW YORK

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EXECUTIVE SUMMARY

LBG Hydrogeologic & Engineering Services, P.C. (LBGHES), member of WSP, conducted a pumping test program on the Clovewood property on Clove Road in the Village of South Blooming Grove, Orange County, New York in July 2017. The goal of the Clovewood pumping test program was to demonstrate a minimum yield of twice the average water demand of the project with the best well out of service from the new community, public water-supply source. To achieve this goal, a simultaneous pumping test was conducted on wells C-6, C-12, C-14, C-16 and C-23 between July 10 and July 16, 2017. The five wells were pumped concurrently for 5.5 days and demonstrated pumping rates of 45 gpm (gallons per minute), 40.5 gpm, 157 gpm, 50 gpm, and 90 gpm, respectively, for a combined yield from the five wells of 382.5 gpm or 550,800 gpd (gallons per day). This combined yield can support an average water demand of 191.3 gpm or 275,400 gpm. An individual pumping test was then conducted on Well C-21. Well C-21 was pumped individually as the best well between July 25 and July 28, 2017 for 72.5 hours. The well demonstrated a pumping rate of 163 gpm or 234,720 gpd.

The average water demand for the Clovewood project calculated based on the March 2014 New York State Design Standards for Intermediate Sized Wastewater Treatment Systems water usage rate of 110 gpd/bedroom for 600, 4-bedroom residential units is 264,000 gpd or 183.3 gpm. The New York State Department of Health (NYSDOH) requires that a new water system demonstrate twice the average water demand of a proposed development with the best well out of service. Therefore, to meet this NYSDOH requirement, the water system must be capable of pumping 528,000 gpd or 366.7 gpm with the best well out of service. In addition, the applicant may also consider the inclusion of swimming pools/bath houses in the proposed development. The water usage rate for a swimming pool/bath house is based on 10 gpd per swimmer with an allowed 20% reduction for the use of water saving fixtures. Assuming 2 swimmers per residential unit, the additional water demand would be 9,600 gpd or 6.7 gpm. Adding this demand to the proposed 600 units, the combined average water demand with the bath houses is 273,600 gpd or 190 gpm and twice the demand is 547,200 gpd or 380 gpm.

Prior to completion of the pumping tests, a testing and monitoring protocol dated September 30, 2016 (aka Pumping Test Plan), designed in accordance with the NYSDEC February 2015 "Pumping Test Procedures for Water Withdrawal Applications", was submitted to the Village of South Blooming Grove (VoSBG), New York State Department of Environmental Conservation (NYSDEC), Orange County Department of Health (OCDH) and NYSDOH for review. Comments received from the VoSBG's Consultant, Louis Berger Group, the NYSDOH, and the NYSDEC were incorporated into the Pumping Test Plan.

Initially, the pumping scheme proposed to include wells C-7B and C-21 in the simultaneous pumping test and well C-7A during the individual test. However, offsite water-level drawdown was observed during the early portion of the simultaneous pumping test that was attributed to pumping in well C-7B. As a result of the offsite drawdown the pumping scheme was changed, wells C-7B and C-7A were removed as pumping wells and well C-21 was assigned the role of the best well to be tested during the individual pumping test. Pumping in wells C-7B and C-21 was ended on July 12 and the simultaneous pumping test continued without these wells. Well C-21 was subsequently yield tested during the individual test conducted July 25 through July 28. VoSBG's Consultant Louis Berger Group was notified of the change in the planned pumping scheme during the test period. During the pumping test program, water-level measurements were collected from a total of 24 onsite wells, including 17 onsite bedrock monitoring wells and the 7 wells pumped during the testing program (C-6, 7B, 12, 14, 16, 21 and 23). Drawdown was measured in 16 of the onsite bedrock monitoring wells from pumping in wells C-6, 12, 14, 16 and 23 that ranged from 0.6 foot to 120.7 feet. During the individual pumping test conducted on well C-21, water-level drawdown was measured in three onsite monitoring wells that ranged from 15.8 feet to 93.5 feet. Water-level measurements were also collected from 16 offsite wells and a flowing spring on Route 208 during the pumping test program. No discernible water-level impacts were measured in any off the offsite monitoring locations that were attributed to pumping in wells C-6, 12, 14, 16 and 23 during the simultaneous pumping test or to pumping well C-21 during the individual pumping test.

Onsite monitoring of surface-water features was also completed during the pumping test program. Waterlevel measurements were collected from eight piezometer locations and stream-flow measurements were collected from nine gaging locations on the project site. The stream-flow data collected showed no discernible change in flow that was attributed to pumping in the onsite wells. The water-level data collected from seven piezometers showed no discernible pumping-related water-level drawdown in the groundwater and/or surface water during either pumping test. One piezometer, PZ-8, had a change in the groundwater level during the pumping tests that could potentially be pumping related; however, there was no discernible effect on the surface water at PZ-8 from onsite pumping. Additional monitoring of the shallow groundwater at PZ-8 may be warranted to conduct an assessment of whether the change observed was naturally occurring or a result of onsite pumping.

Water samples were collected from the onsite wells during their respective pumping periods and analyzed for the parameters required by the NYSDOH Sanitary Code Part 5, Subpart 5-1 for community water-supply wells and for the extra compounds of dioxin, endothall, diquat and glyphosate. In addition, microscopic particulate analysis (MPA), giardia and cryptosporidium samples were collected from all of the wells. The results of the water samples collected from the six proposed supply wells met all NYSDOH drinking water standards with the exception of iron, manganese, color and turbidity concentrations in wells C-6, 14, 16, 21 and 23; the presence of total coliform and E. coli bacteria in well C-12; and a slightly elevated sodium concentration in well C-16. Following the completion of the pumping test program, well C-12 was disinfected and resampled for total coliform and E.coli. The results from the resampling event were absent for total coliform. Overall, the elevated iron, manganese and color concentrations reported are likely the result of the elevated turbidity concentrations. Additional pumping to further develop the wells and reduce turbidity concentrations will likely be successful in reducing the iron, manganese and color values reported. The sodium concentration in well C-16 was 21.1 mg/L, which was slightly above the reporting limit of 20.0 mg/L. No treatment to reduce the sodium concentration will be required, as the exceedance of a notification level only.

The results for the MPA samples collected from all of the wells were reported to be low risk for potential GWUDI and all of the samples reported none detected for giardia and cryptosporidium. The physical parameters measurements of temperature, pH and conductivity collected from the pumping wells and nearby surface-water features (where surface water was present) during their respective pumping tests as part of an assessment for potential GWUDI also did not indicate a high risk of potential GWUDI in any of the onsite pumping wells.

1.0 INTRODUCTION

The following are the results of the pumping test program conducted in July 2017 by LBG Hydrogeologic & Engineering Services, P.C. (LBGHES), member of WSP USA, on the proposed bedrock water-supply wells located on the Clovewood property on Clove Road in the Village of South Blooming Grove, Orange County, New York (figure 1).

Prior to completion of the pumping tests, a testing and monitoring protocol (aka Pumping Test Plan) was prepared. The Pumping Test Plan, dated September 30, 2016, was submitted to the Village of South Blooming Grove (VoSBG), NYSDEC, Orange County Department of Health (OCDH) and New York State Department of Health (NYSDOH) for review prior to completion of the pumping test program. The protocol was designed in accordance with the New York State Department of Environmental Conservation (NYSDEC) February 2015 "Pumping Test Procedures for Water Withdrawal Applications".

Comments were received from the VoSBG's Consultant, Louis Berger Group, in a letter dated November 2, 2016. Responses to those comments and incorporation of the comments into the Pumping Test Plan were noted in the responses provided to VoSBG by LBG in a letter dated February 28, 2017. Comments were also received from the NYSDOH recommending that all pumping wells be tested for groundwater under the direct influence of surface water (GWUDI), and from the NYSDEC regarding conducting the pumping tests during dry conditions and potentially pushing the test start time to the drier summer months. No comments beyond those provided by the NYSDOH were received from the OCDH.

The comments from the NYSDOH and NYSDEC were also incorporated into the planned well testing protocol. Copies of the e-mail correspondence from the NYSDOH, OCDH, and NYSDEC pertaining to the review of the Pumping Test Plan are included in Appendix I.

2.0 WATER DEMAND

An average water demand for the Clovewood project has been calculated based on the March 2014 New York State Design Standards for Intermediate Sized Wastewater Treatment Systems water usage rate of 110 gpd/bedroom. For the planned 600, 4-bedroom residential units the average daily demand is 264,000 gpd or 183.3 gpm. The NYSDOH requires that a new water system demonstrate twice the average water demand of a proposed development with the best well out of service. Therefore, to meet this NYSDOH requirement, the water system must be able to pumping 528,000 gpd or 366.7 gpm with the best well out of service.

The applicant may also consider the inclusion of swimming pools/bath houses in the proposed development. The water usage rate for a swimming pool/bath house has been calculated based on 10 gpd per swimmer with an allowed 20% reduction for the use of water saving fixtures. A water demand requirement for the potential swimming pools/bath houses have been calculated assuming 2 swimmers per residential unit, which results in a water demand of 9,600 gpd or 6.7 gpm (2 swimmers x 600 units x 10 gpd/swimmer x 20% reduction for use of water saving fixture = 9,600 gpd).

Inclusion of the water demand for the swimming pool/bath houses with the residential water demand from above, results in an average water demand of 273,600 gpd or 190 gpm and twice this demand, to meet the NYSDOH requirement described above, is 547,200 gpd or 380 gpm.

3.0 HYDROGEOLOGIC SETTING

The Clovewood property is located on Clove Road in the Village of South Blooming Grove, New York (figure 1). The hydrogeologic features at the site are shown on figure 2 and Plate 1. The topographic high elevations on the property are located along the southern property boundary, with the highest elevations at the site around 1,360 feet. The topography slopes down from southeast to northwest toward Clove Road. The low topography on the site is located in the valley setting along Clove Road, with the lowest topographic elevation around 480 feet.

There are two small stream channels that flow off from the project site. They both exit the site along the western property boundary near the intersection of Clove Road and Route 208. The headwaters for both streams originate on the Clovewood property. The more northerly stream flows near pumping wells C-12 and C-7B and collects runoff from the northern and central portions of the project site. A dam was built by a prior property owner on this stream channel near onsite monitoring wells C-5 and C-9. There is ponded water behind the dam and some wetland areas around and upstream of the pond. The stream channel re-forms downstream of the dam and the stream flows west and off the site. The southerly stream passes near pumping wells C-6, 14, 21 and 23 and receives runoff from the southern and western portions of the project site. In addition to the wetlands near the valley pond formed by the dam, there are several other small-scale wetland areas also located around the project site (Plate 1).

3.1 Surficial Geology

The surficial material underlying the project site is mapped as mainly glacial till. Glacial till consists of non-sorted, non-stratified sediments deposited by glacial activity. The sediments contain varying proportions of clay, silt, sand, gravel and boulders. Till is generally not suitable for well development because, as a result of the unsorted character of the material, it does not transmit water in sufficient quantities to support high-yielding wells. There is also a small area of sand and gravel mapped in the valley setting on the northwestern portion of the project site along Clove Road. This sand and gravel was encountered during the drilling of wells C-7A and C-7B. However, the material was not of suitable composition or saturated thickness to attempt the development of a sand and gravel water-supply production well.

3.2 Bedrock Geology

The bedrock units mapped underlying the project site include the Martinsburg Formation (On), Undifferentiated Lower Devonian and Silurian Rocks (DS), and Undifferentiated Hamilton Group (Dh); and to the northeast of the site is mapped the Wappinger Group (OEw) and to the west and northwest some Undifferentiated Gneiss (mu). The bedrock units, geologic contacts, fracture-trace lineations and mapped faults underlying the property are shown on figure 2.

The bedrock in this area is sedimentary rock, with the exception of the undifferentiated gneiss which is metamorphic. The Martinsburg Formation contains shale, siltstone, sandstone and greywacke; the Undifferentiated Lower Devonian and Silurian Rocks are comprised of shale, sandstone and conglomerates; the Undifferentiated Hamilton Group contains shale, siltstone, sandstone, conglomerate and greywacke and the Wappinger Group is comprised of limestone dolomite and shale.

4.0 WELL INFORMATION

Well Completion Reports with the drilling logs for onsite wells C-4, 5, 6, 7, 7A, 7B (aka C-24), 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19, 20, 21, 22 and 23 are provided in Appendix II. Wells C-Well 1, C-Well 2, C-Well 3 and C-13 were original to the property and well logs for those four wells are not available.

Wells C-6, 7A, 7B, C-12, C14, C-16, C-21 and C-23 were listed in the Pumping Test Plan as the wells that would be tested during the pumping test program. A summary of the well completion information and the temporary pump settings used in these wells during the pumping tests are provided in the table below.

Well ID	Well Casing Diameter (inches)	Well Casing Length (feet)	Well Total Depth (feet)	Pump Setting During Pumping Test Program (feet)	Depth of Reported Water-Bearing Fractures (feet) and Estimated Yield from Driller's Well Log (gpm)
C-6	8	61	600	300	80 (25 gpm); 320 (50 gpm)
C-7A ^{1/}	8	80	300	200	250 (200 gpm); 256 (100 gpm); 265 (100 gpm); 280 (100 gpm)
C-7B ^{⊥/}	8	100	280	200	176-190 (10 gpm); 193-194 (20 gpm); 210 (20 gpm); 230-231 (150 gpm); 247- 260 (300 gpm); 274-290 (200 gpm)
C-12	8	70	580	230	560 (125 gpm)
C-14	8	50	750	180	110 (35 gpm); 125 (90 gpm); 610-615 (50 gpm)
C-16	8	50	690	240	245 (45 gpm); 330 (15 gpm); 600 (50 gpm)
C-21	8	101	1,010	400	150 (30 gpm); 160-180 (50 gpm); 490 (120 gpm);
C-23	8	101	1,000	400	120 (5 gpm); 160 (5 gpm); 215 (30 gpm); 600 (40 gpm); 645 (20 gpm)

Table 1: Pumping Well Completion Information

The pumping test on well C-7B was terminated early because of offsite water-level effects observed that were attributed to pumping in this well. Because of the effects observed from pumping of C-7B, well C-7A was not tested.
gpm gallons per minute

5.0 PRECIPITATION

As part of the pumping test program, precipitation information was monitored at the nearby Port Jervis weather station, a local weather station (KNYWASHI9) that publishes daily weather data on the internet, and a manual rain gage installed on the project site. Precipitation values for the test period from these three locations are provided in the tables below. The precipitation totals from the KNYWASHI9 station have been used on the hydrographs for reference and the precipitation's effect, if any, are discussed in the sections below for the wells and surface-water monitoring locations. The data from KNYWASHI9 was used on the hydrographs because of the measurement frequency (every 5 minutes), the data consistency with the measurements collected from the onsite manual rain gage, and because of the station's close proximity to the project site.

Date	Port Jervis Precipitation (inches)	KNYWASHI9 Precipitation (inches)
7/3/2017	0	0
7/4/2017	0	0
7/5/2017	0	0
7/6/2017	0	0
7/7/2017	0.12	0.57
7/8/2017	0.7	0.14
7/9/2017	0	0
7/10/2017	0	0
7/11/2017	0.03	0.07
7/12/2017	0	0
7/13/2017	0	0.30
7/14/2017	0.75	0.80
7/15/2017	0.37	0.01
7/16/2017	0	0
7/17/2017	0	0.06
7/18/2017	0	0
7/19/2017	0.52	0
7/20/2017	0	0.34
7/21/2017	0.58	0
7/22/2017	0	0
7/23/2017	0	0
7/24/2017	0.20	0.79
7/25/2017	0.89	0
7/26/2017	0.28	0
7/27/2017	0	0
7/28/2017	0	0
7/29/2017	0	0
7/30/2017	0	0
7/31/2017	0	0

Table 2: Daily Precipitation Totals for the Port Jervis Weather Station and Local Station KNYWASHI9

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Date	Port Jervis Precipitation (inches)	KNYWASHI9 Precipitation (inches)
8/1/2017	0	0
8/2/2017	0	0.21
8/3/2017	0.20	0

Table 3: Precipitation Readings from Manual Rain Gage Installed on Clovewood Property

Date	Time of Reading	Precipitation (inches)
6/30/2017	13:00	Rain gage installed
7/3/2017	14:00	0
7/5/2017	14:30	0
7/6/2017	14:30	0
7/7/2017	7:45	1.03
7/8/2017	16:45	0.35
7/9/2017	16:20	0
7/10/2017	7:00	0
7/11/2017	4:45	0.01
7/12/2017	7:30	0
7/12/2017	19:30	0
7/13/2017	12:00	0
7/13/2017	14:45	0.80
7/14/2017	7:45	0.70
7/15/2017	12:00	0
7/16/2017	11:00	0.01
7/17/2017	9:30	0
7/24/2017	8:00	0.90
7/25/2017	12:00	0
7/26/2017	12:00	0
7/27/2017	7:00	0
7/28/2017	7:00	0
7/28/2017	18:00	0

During the background data collection period from July 3 through July 9, a total of 0.71 inch of rain was measured at the nearby station KNYWASHI9 and 1.38 inches in the manual gage on the Clovewood property. The rain during the background data collection period mainly occurred on July 7 and 8. During the simultaneous pumping test period from July 10 through July 16, a total of 1.18 inches of rain was measured at the KNYWASHI9 station and 1.51 inches in the onsite manual rain gage. The majority of the rain measured during the simultaneous pumping test occurred in the middle of the test period on July 13 and 14. Following the end of the simultaneous pumping test during the recovery period and pre-test period for the individual pumping test, a total of 1.19 inches of rain was recorded at the KNYWASHI9 station and 0.91 inch in the onsite manual rain gage. The larger rain events during this period occurred on July 20 and July 24.

No precipitation was recorded at either the onsite manual rain gage or at KNYWASHI9 station during the individual pumping test conducted on well C-21 between July 25 and 28, or during the post-test recovery period until a rain event on August 2. The rain event on August 2 totaled 0.21 inch and occurred five days after the test was ended.

In addition to daily precipitation values, monthly climate normals from 1981 through 2010 for the Port Jervis weather station were used for comparison to recent monthly precipitation totals to assess the regional precipitation conditions (i.e. dry, normal or above normal precipitation) at the time the pumping test program was conducted. Copies of this precipitation information for the Port Jervis weather station are provided in the table below and in Appendix III.

Month	Total Precipitation (inches)	Precipitation Normals 1981-2010 (inches)	Difference Between Monthly Total and Normal (inches)
July 2016	5.53	3.92	1.61
Aug 2016	4.68	3.89	0.79
September 2016	1.07	4.54	-3.47
October 2016	2.20	4.41	-2.21
November 2016	2.66	3.59	-0.93
December 2016	3.09	3.78	-0.69
January 2017	2.85	3.22	-0.37
February 2017	2.43	2.93	-0.50
March 2017	4.06	3.66	0.40
April 2017	4.49	4.04	0.45
May 2017	4.06	4.01	0.05
June 2017	3.26	4.39	-1.13
Total	40.38	46.38	-6.00

Table 4: Monthly Precipitation Values for the Port Jervis Weather Station July 2016 Through June 2017

Based on the monthly normals from the Port Jervis station (Appendix III), the total precipitation in the 12 months prior to the test period (July 2016 through June 2017) was 40.38 inches which is -6.0 inches or -13% below the typical annual precipitation received in the region.

Year	Total Precipitation (inches)	Precipitation Normals 1981-2010 (inches)	Difference Between Annual Total and Normal (inches)	Percent Difference Between Annual Total and Normal
2012	40.17	46.38	-6.21	-13%
2013	42.91	46.38	-3.47	-7%
2014	39.71	46.38	-6.67	-14%
2015	43.86	46.38	-2.52	-5%
2016	33.65	46.38	-12.73	-27%
2017 (Through June 2017)	21.15	22.25	-1.10	-5%
Total	221.45	254.15	-32.70	-13%

Table 5: Precipitation Values for the Port Jervis Weather Station

Data from the five years preceding the test are also provided on the table above. The combined precipitation total beginning in 2012 (5.5 years prior to the Clovewood pumping tests) show a long-duration period of dry conditions that were a combined -13% below normal. The dry conditions prompted the NYSDEC to declare a drought watch which lasted from July 2016 to May 2017.

When evaluating drought conditions in New York State, the drought years of the 1960's are typically used as a benchmark to assess potential effects. The driest years occurred over a five-year span from 1962 through 1966. Over that five-year period, the regional precipitation was a combined 29% below normal based on a comparison to the 30-year normals from 1981 through 2010 for the Port Jervis station. The precipitation for Port Jervis from 1961 through 1970 is provided below for reference. An assessment of potential effects of prolonged drought conditions on the onsite pumping wells based on the 1960's drought data is provided in a separate section below.

Year	Port Jervis Total Precipitation (inches)	30 year Port Jervis Precipitation Normal 1981- 2010 (inches)	Difference Between Annual Total and Normal (inches)	Percent Difference Between Annual Total and Normal
1961	42.22	46.38	-4.16	-9%
1962	32.97	46.38	-13.41	-29%
1963	35.56	46.38	-10.82	-23%
1964	32.75	46.38	-13.63	-29%
1965	29.97	46.38	-16.41	-35%
1966	33.09	46.38	-13.29	-29%
1967	41.45	46.38	-4.93	-11%
1968	37.38	46.38	-9.00	-19%
1969	43.15	46.38	-3.23	-7%
1970	36.76	46.38	-9.62	-21%

Table 6: Annual Precipitation Values from the 1960's for Port Jervis and West Point Weather Stations

6.0 JULY 2017 PUMPING TEST PROGRAM

A pumping test program was conducted on the proposed bedrock water-supply wells for the Clovewood project in July 2017. A simultaneous pumping test was conducted on wells C-6, 12, 14, 16 and 23 between July 10 and July 16 and an individual pumping test was conducted on well C-21 between July 25 and July 28. Initially, the Pumping Test Plan proposed to include wells C-7B and C-21 in the simultaneous pumping test and well C-7A during the individual test. However, offsite water-level drawdown was observed during the early portion of the simultaneous pumping test that was attributed to pumping in well C-7B. As a result of the offsite drawdown the pumping scheme was changed, wells C-7B and C-7A were removed as pumping wells and well C-21 was assigned the role of the best well to be tested during the individual pumping test. Pumping in wells C-7B and C-21 was ended on July 12 and the simultaneous pumping test continued without these wells. Well C-21 was subsequently yield tested during the individual test conducted July 25 through July 28.

During the pumping test program, LBG was in communication with Louis Berger and representatives from Louis Berger conducted periodic site visits to review the progress of the pumping tests. Louis Berger was notified of the change to the pumping scheme, which deviated from the September 2016 Pumping Test Plan, at the time the change was made.

As part of the pumping test program, water-level measurements were collected from a total of 24 onsite wells, including 17 onsite bedrock monitoring wells and the 7 wells pumped during the testing program (C-6, 7B, 12, 14, 16, 21 and 23). Water-level data was collected using manual water-level meters and pressure transducers, both vented and unvented type units. In wells where unvented transducer units were utilized, the data was corrected for barometric pressure changes using data recorded on a barotroll installed on the Clovewood site. The onsite monitoring well locations are shown on Plate 1.

Hydrographs, 180-day water-level drawdown projection graphs for wells C-6, 12, 14, 16 21 and 23, and summary tables of pressure transducer water-level measurements collected from the pumping wells are included in Appendix IV. All of the water-level data collected from the pressure transducers installed in the pumping wells are included on the attached CD. An assessment of potential severe drought effects on the water levels in the onsite pumping wells has also been conducted using information from the 1960's drought in New York State and correlating water-level data with a historical USGS well RO-18. The correlation graphs for this assessment are included in Appendix V.

Hydrographs and a table of the manual water-level measurements collected from the onsite monitoring wells are included in Appendix IV. Water-level measurements were also collected from 16 offsite wells and a flowing spring on Route 208 during the pumping test program. Water-level data was collected using manual water-level meters and vented pressure transducers installed in the wells; and a 5-gallon volume calibrated bucket was used to measure the flow at the spring. The offsite monitoring locations are shown on figure 1. The hydrographs and tables of the manual water-level measurements collected from the offsite wells are included in Appendix VII. The water-level data collected from the pressure transducers installed in the onsite and offsite monitoring wells are also included on the attached CD.

Surface-water monitoring was also conducted on the project site during the pumping test program. Waterlevel measurements were collected from piezometers installed in surface-water features at eight locations on the site. Manual water-level measurements were collected from the piezometers and vented pressure transducers installed at select locations. The piezometer monitoring locations were selected in surface-water features that parallel the fracture-trace lineations on the project site and were placed close to the seven pumping wells where drawdown (if any were to occur) would most likely be measurable. An additional eighth piezometer monitoring location was installed near onsite monitoring well C-22 as proposed in the Pumping Test Plan. Where surface water was present, a single piezometer was installed and groundwater level measurements were collected from the interior and surface-water height measurements from the exterior to assess potential water-level drawdown and changes in vertical head. At locations where no surface water was present or the presence of surface water was sporadic, a nested pair of piezometers was installed, with one shallower screen and one deeper screen setting. Groundwater level measurements were collected from the interior of both nested piezometers, and when present, surface-water height on the exterior was measured to assess potential water-level drawdown and changes in vertical head. The piezometer locations are shown on Plate 1. Hydrographs for the piezometers along with tables of the manual waterlevel measurements collected are included in Appendix VIII. The water-level data collected from the pressure transducers are included on the attached CD.

Stream-flow measurements were also collected in the surface water at nine locations. The measurements were collected manually during the pumping test program using a Marsh McBirney Flow meter. At each gaging location the channel was divided into equal sections and the flow in each section measured. The flows from the sections in the channel were summed to calculate the total flow at each location for each gaging event conducted. The surface-water monitoring locations are shown on Plate 1. Graphs and a table of the stream flow measurements are included in Appendix IX.

The simultaneous pumping test was started on July 10. A staggered startup of the wells was conducted to allow for potential differentiation of drawdown impacts to other pumping wells and the monitoring wells being measured. The order of the well pump startups were C-21, 23, 14, 16, 6, 12 and 7B. As described above, the pumps in wells C-7B and C-21 were turned off on July 12 and the simultaneous pumping test continued without these wells. During the simultaneous pumping test, several of the wells experienced generator failures. These failures were addressed with Louis Berger during the test period since they caused a deviation from the Pumping Test Plan. The consensus was that in wells that experienced generator issues, the water-level trend in the well at a minimum should return to its pre-shutdown trend and then from that point a judgement should be made whether the well had achieved the required benchmarks for test stabilization and shutdown. In total, the simultaneous pumping test lasted 5.5 days as a result of the change in pumping scheme on July 12 with the shutdown of wells C-7B and C-21 and several generator failures later in the test which are described below.

After shut down of the simultaneous pumping test on July 16, water-level recovery measurements were collected until the start of the individual test on well C-21 on July 25. The test on well C-21 lasted 72.5 hours and was ended on July 28. Water-level recovery measurements were collected from the onsite and offsite monitoring locations following shutdown and equipment removal began on July 31.

The discharge locations used during the pumping tests are shown on Plate 1. The discharge locations were downstream/downgradient of all of the onsite monitoring wells and surface-water monitoring locations. The well discharge rates were measured using totalizing meters attached to the discharge lines near the wellheads and also with a calibrated bucket and stop watch from the discharge pipes.

Water samples were collected from wells C-6, 12, 14, 16, 21 and 23 during their respective pumping test periods for analysis for all parameters required by the NYSDOH Sanitary Code Part 5, Subpart 5-1, as well as the extra synthetic organic compounds (SOCs) dioxin, endothall, glyphosate, and diquat. Microscopic particulate analysis (MPA) and giardia and cryptosporidium samples were also collected from the wells to assess for potential GWUDI. The MPA samples were collected from the wells using the EPA Consensus Method which requires the flow of discharge water through a filter at 1 gpm for a time period ranging from 8 to 24 hours. The water samples were taken to Envirotest Laboratories, Inc. located in Newburgh, New York for analysis. Copies of the laboratory reports from the samples collected are included in Appendix X. Additional samples were collected from wells C-12 and C-23 in September 23 to address detections reported in the Part 5 analyses. Copies of the laboratory reports from this resampling event are included in Appendix XI.

In addition to the MPA samples, physical parameter measurements of pH, conductivity and temperature were also collected from the pumping wells and nearby surface-water features during the pumping tests as part of the GWUDI assessment. Conductivity and pH measurements were collected using a HORIBA water-quality meter. Temperature measurements were recorded using the pressure transducers. For the surface-water features, temperature measurements used in the comparison were taken from the pressure transducers installed on the exterior of the closest piezometer or, if insufficient surface water was present, from the interior of the nearest shallow-screened piezometer. Tables of the physical parameter measurements and graphs of the data collected are included in Appendix XII.

6.1 WELL C-6

Throughout the background data collection period, the water in well C-6 was flowing slightly artesian over the top of the casing. During the staggered start-up period of the simultaneous pumping test on July 10, the pumps in wells C-21, C-23, C-14 and C-16 were started prior to the start of the pump in well C-6. The artesian flow in well C-6 stopped at approximately 17:03 on July 10, approximately 1.5 hours before the pump in well C-6 was turned on.

The pump in well C-6 was started at 18:35 on July 10. The water level in well C-6 prior to the start of pumping in any of the onsite wells was 0.00 feet below top of casing (ft btoc). Just prior to the start of the pump in the well at 18:34, the water level in well C-6 was 3.87 ft btoc. Based on the end of artesian flow at 17:03, the drawdown observed is attributed to pumping in nearby well C-14 whose pumping start occurred at 16:24.

Upon startup of well C-6, the pumping rate was adjusted to 50 gpm using a valve on the discharge line. The pumping rate in well C-6 remained at 50 gpm until a manual rate reduction to 45 gpm was completed at 18:54

on July 12. The rate reduction on well C-6 was completed to reduce the slope of the water-level drawdown trend observed in well.

Following the manual rate reduction completed on July 12, the pumping rate in well C-6 remained at 45 gpm with the exception of three occurrences of generator malfunctions which caused the pump in well C-6 to shut down. The shut downs occurred on July 13 between 4:03 and 5:26, on July 13 from 20:06 to 21:12, and on July 15 from 00:35 to 00:56.

During the final 24 hours of the pumping period, the pumping rate in well C-6 remained at 45 gpm and no generator or pump failures occurred. At 1:09 on July 16 the simultaneous pumping test was ended with the shutdown of the pump in well C-14. This was followed by the shutdown of the pump in well C-6 at 1:11. The final water level in well C-6 at the end of the test was 122.92 ft btoc. Based on a static water level of 0.00 ft btoc, the total drawdown in well C-6 was 122.92 feet at the end of the simultaneous pumping test period.

The drawdown in well C-6 over the final 6 hours of pumping between 19:09 on July 15 to 1:09 on July 16 was 1.19 feet. This value meets the criteria of demonstrating less than 0.5 feet per 100 feet of available drawdown in the well over the final 6 hours of the test period. However, the trend in the water level was downward during this time, so a 180-day water-level drawdown analysis has been conducted. Based on the projection, after 180 days of continuous pumping in well C-6, the total drawdown is 209.77 feet which corresponds to a water level of 209.77 ft btoc. This leaves approximately 90 feet of available drawdown above the pump setting in the well that used during the pumping test period, which meets the requirement of maintaining a margin of 5% of the pre-test water column (minimum 30 feet) above the pump setting in the well.

The water level in well C-6 recovered following shut down of the pump in the well. The water level reached 90% of the pre-test level approximately 57 hours after the end of the test and continued to rise. Well C-6 began to flow artesian again at approximately 15:30 on July 20.

On July 12, during the simultaneous pumping test, the pumps in wells C-7B and C-21 were turned off at 11:28 and 11:56, respectively, and the tests on those wells were ended. There was no discernible disruption of the water-level drawdown trend in well C-6 that coincides with the shutdown of either well. In addition, during the individual pumping test on well C-21 from July 25 through July 28, no discernible water-level drawdown was measured in well C-6 that is attributed to pumping in well C-21.

6.2 WELL C-7B

The water level in well C-7B showed some oscillation during the background data collection period, with a slight drawdown trend of 0.5 feet over the seven days preceding the start of the simultaneous pumping test. During the staggered start-up period of the simultaneous pumping test on July 10, the pumps in wells C-21, 23, 14, 16, 6 and 12 were started prior to the start of the pump in well C-7B.

The pump in well C-7B was started at 21:03 on July 10. The water level in well C-7B prior to the start of pumping in any of the onsite wells was 32.66 ft btoc. During the staggered start-up period of the other onsite pumping wells, no discernible drawdown was measured in well C-7B. At 20:40 prior to the start on well C-7B, the water level was 32.57 ft btoc which was a rise of 0.09 feet over the nine hour staggered start-up period.

Upon startup of well C-7B, the pumping rate was adjusted to 220 gpm using a valve on the discharge line. The pumping rate in well C-7B declined slightly as a result of the loss of pressure head over the pump and was 215 gpm by 15:00 on July 11. The pumping rate in well C-7B remained at 215 gpm until the end of the test on this well on July 12 with the exception of two occurrences of pump shut down on July 12 between 1:00 and 1:17 and again on July 12 from 10:04 to 10:27.

On July 12, LBG determined that the water-level drawdown that was occurring in several of the offsite monitoring locations was attributed to pumping in well C-7B. Because of this interference, it was decided to shut down well C-7B and continue the simultaneous test without this well. The pump in well C-7B was turned off at 11:28 on July 12. The pumping water level in well C-7B prior to shut down was 76.37 ft btoc. Based on a static water level of 32.66 ft btoc, the total drawdown in well C-7B was 43.71 feet. However, a lower water level was observed at 10:03 on July 12, prior to the generator malfunction earlier that morning. At 10:03 the pumping water-level was 77.94 ft btoc and the drawdown was 45.28 feet.

The water level in well C-7B recovered following shut down of the pump in the well. The water level reached 90% of the pre-test level approximately 69.5 hours after the shut down on July 12 and continued to rise.

On July 16 at the end of the simultaneous pumping test on wells C-6, 12, 14, 16 and 23, no discernible inflection in the recovery trend in well C-7B was observed which would indicate a pumping-related effect on well C-7B from pumping in the other onsite wells. In addition, during the individual pumping test on well C-21 from July 25 through July 28, no discernible water-level drawdown was measured in well C-7B that is attributed to pumping in well C-21.

6.3 WELL C-12

The water level in well C-12 showed some oscillation during the background data collection period, but no overall increasing or decreasing trends were observed. During the staggered start-up period of the simultaneous pumping test on July 10, the pumps in wells C-21, C-23, C-14, C-16, and C-6 were started prior to the start of the pump in well C-12.

The pump in well C-12 was started at 19:48 on July 10. The water level in well C-12 prior to the start of pumping in any of the onsite wells was 102.98 ft btoc. Just prior to the start of the pump in the well at 19:47, the water level in well C-12 was 102.77 ft btoc. Based on the slight rise in water level observed during the staggered start up period, there was no discernible drawdown in well C-12 as a result of the start of pumping in the other onsite wells listed.

Upon startup of the pump in well C-12, the pumping rate was adjusted to 50 gpm using a valve on the discharge line. The pumping rate in well C-12 declined slightly as a result of the loss of pressure head over the pump and by 9:00 on July 12, the pumping rate was 42 gpm.

The MPA filtration apparatus was placed on well C-12 on July 11 and was removed on July 12. During the filtration period, the water level in well C-12 showed a sporadic oscillating pattern. This pattern continued after the filtration unit was removed from the well, so the pumping rate in well C-12 was manually reduced to 40.5 gpm at 13:04 on July 12 in an attempt to end the oscillation. After the rate reduction, the water level in well C-12 showed less fluctuation and the pumping rate remained at 40.5 gpm for the duration of the pumping test period.

At 1:09 on July 16 the simultaneous pumping test was ended with the shutdown of the pump in well C-14. This was followed by the shutdown of the pump in well C-12 at 1:21. The final water level in well C-12 just prior to turning the pump off at 1:20 was 191.33 ft btoc. Based on a static water level of 102.98 ft btoc from before the start of any of the pumping wells on July 10, the total drawdown in well C-12 was 88.35 feet at the end of the simultaneous pumping test period.

The water-level change in well C-12 over the final 6 hours of pumping between 19:09 on July 15 to 1:09 on July 16 was +1.05 feet. This value meets the criteria of demonstrating less than 0.5 foot per 100 feet of available drawdown in the well over the final 6 hours of the test period and there was no overall drawdown trend measured in the well.

Although there was no drawdown trend observed during the final six hours of the test period, a 180-day water-level drawdown analysis has been conducted for well C-12. The water-level project was completed using the final 24 hours of drawdown measurements because projections using the final 6 hours and final 12 hours both showed a significant increase in water level after 180 days which was not a realistic result. Based on the projection conducted, the water level drawdown after 180 days in well C-12 is 93.34 feet corresponding to a water level of 196.32 ft btoc. This leaves approximately 34 feet above the pump setting that was used during the pumping test period, which meets the requirement of maintaining a margin of 5% of the pre-test water column (minimum 23.85 feet) above the pump setting in the well.

The water level in well C-12 recovered following shut down of the pump in the well. The water level reached 90% of the pre-test level approximately 13 hours after the end of the test and continued to rise.

On July 12 during the simultaneous pumping test, the pumps in well C-7B was turned off at 11:28 and in well C-21 at 11:57 and the tests on those wells were ended. There was no discernible disruption of the water-level drawdown trend in well C-12 that coincides with the shutdown of either well. In addition, during the individual pumping test on well C-21 from July 25 through July 28, no discernible water-level drawdown was measured in well C-12 that is attributed to pumping in well C-21.

6.4 WELL C-14

The water level in well C-14 showed some oscillation during the background data collection period, but no overall increasing or decreasing trends were observed. During the staggered start-up period of the simultaneous pumping test on July 10, the pumps in wells C-21 and C-23 were started prior to the start of the pump in well C-14.

The pump in well C-14 was started at 16:24 on July 10, 2017. The water level in well C-14 prior to the start of pumping in any of the onsite wells was 0.25 ft btoc. Just prior to the start of the pump in the well, the water level in well C-14 was 0.36 ft btoc. The slightly lower water level measured at 16:23 appears to be the result of a slight normal oscillation in the daily water level. However, for the following analysis the water level measured at 11:54 of 0.25 ft btoc has been used as the static water level.

Upon startup of well C-14, the pumping was running slow so the rotation at the generator was corrected. Following the correction, the pumping rate in well C-14 was 152 gpm. A manual rate increase was conducted at 17:00 which brought the rate up to 168 gpm. From that point the pumping rate in well C-14 declined slightly as a result of the loss of pressure head over the pump and by 17:00 on July 11, the pumping rate was 157 gpm. The pumping rate in well C-14 remained at 157 gpm with the exception of three occurrences of generator malfunctions which caused the pump in well C-14 to shut down. The shut downs occurred on July 13 between 3.58 and 5:24, on July 13 from 20:02 to 21:10, and on July 15 from 00:33 to 00:53.

During the final 24 hours of the pumping period, the pumping rate in well C-14 remained at 157 gpm and no generator or pump failures occurred. At 1:09 on July 16 the simultaneous pumping test was ended with the shutdown of the pump in well C-14. The final water level in well C-14 just prior to turning the pump off was 121.67 ft btoc for a total drawdown of 121.42 feet at the end of the simultaneous pumping test period.

The drawdown in well C-14 over the final 6 hours of the pumping test between 19:09 on July 15 to 1:09 on July 16 was 0.61 feet. This value meets the criteria of demonstrating less than 0.5 feet per 100 feet of available drawdown in the well over the final 6 hours of the test period. However, the trend in the water level was downward during this time, so a 180-day water-level drawdown analysis has been conducted. Based on the projection, after 180 days of continuous pumping in well C-14, the total drawdown is 167.20 feet which corresponds to a water level of 167.45 ft btoc. This leaves approximately 12.5 feet above the pump setting in the well of 180 feet that was used during the pumping test period. In order to achieve the 5% water column above the pump setting (minimum 37.5 feet), the permanent pump setting when the design for well C-14 is completed should be at least 210 feet, which will also account for potential fluctuations in water level which may occur during extended drought periods discussed in further detail below.

The water level in well C-14 recovered following shut down of the pump in the well. The water level reached 90% of the pre-test level approximately 62 hours after the end of the test and continued to rise.

On July 12 during the simultaneous pumping test, the pumps in well C-7B was turned off at 11:28 and in well C-21 at 11:56 and the tests on those wells were ended. There was no discernible disruption of the water-level drawdown trend in well C-14 that coincides with the shutdown of either well. In addition, during the individual

pumping test on well C-21 from July 25 through July 28, no discernible water-level drawdown was measured in well C-14 that is attributed to pumping in well C-21.

6.5 WELL C-16

During the background data collection period, the water level in well C-16 showed a pattern of a slight daily oscillation with an overall drawdown trend of about 0.5 feet over three days. As part of the staggered start-up period of the simultaneous pumping test on July 10, the pumps in wells C-21, C-23 and C-14 were started prior to the start of the pump in well C-16.

The pump in well C-16 was started at 17:31 on July 10. The water level in well C-16 prior to the start of pumping in any of the onsite wells was 15.19 ft btoc. Just prior to the start of the pump in the well at 16:22, the water level in well C-16 was 15.25 ft btoc. For the following analysis, the water level measured at 11:54 of 15.19 ft btoc has been used as the static water level.

Upon startup of well C-16, the pumping rate was adjusted to 55 gpm using a valve on the discharge line. The pumping rate declined slightly to 53.5 gpm as a result of the loss of pressure head over the pump, so a manual rate increase to 56.5 gpm was completed at 17:57 on July 10. The pumping rate again declined as a result of the loss of pressure head over the pump and at approximately 23:00 on July 10 had reached 50 gpm. The pumping rate in well C-16 remained at 50 gpm for the duration of the test period.

At 1:09 on July 16 the simultaneous pumping test was ended with the shutdown of the pump in well C-14. This was followed by the shutdown of the pump in well C-16 at 1:41. The final water level in well C-16 just prior to turning the pump off at 1:40 was 177.23 ft bloc for a total drawdown of 162.04 feet at the end of the simultaneous pumping test period.

The drawdown in well C-16 over the final 6 hours of the pumping test between 19:09 on July 15 to 1:09 on July 16 was 0.44 feet. This value meets the criteria of demonstrating less than 0.5 foot per 100 feet of available drawdown in the well over the final 6 hours of the test period. However, the trend in the water level was downward during this time, so a 180-day water-level drawdown analysis has been conducted. Based on the projection, after 180 days of continuous pumping in well C-16, the total drawdown is 174.36 feet which corresponds to a water level of 189.55 ft btoc. This leaves approximately 50 feet above the pump setting in the well used during the pumping test period, which meets the requirement of maintaining a margin of 5% of the pre-test water column (minimum 33.7 feet) above the pump setting in the well.

The water level in well C-16 recovered following shut down of the pump in the well. The water level reached 90% of the pre-test level approximately 70 hours after the end of the test and continued to rise.

On July 12 during the simultaneous pumping test, the pumps in well C-7B and C-21 were turned off at 11:28 and 11:56, respectively, and the tests on those wells were ended. There was no discernible disruption of the water-level drawdown trend in well C-16 that coincides with the shutdown of either well. In addition, during the

individual pumping test on well C-21 from July 25 through July 28, no discernible water-level drawdown was measured in well C-16 that is attributed to pumping in well C-21.

6.6 WELL C-21

The water level in well C-21 showed some oscillation during the background data collection period, but there was no significant upward or downward trend in water level in the days preceding the start of the simultaneous pumping test. Well C-21 was the first well started as part of the simultaneous pumping test at 11:55 on July 10. The water level in well C-21 prior to the start of pumping was 49.30 ft btoc.

Upon startup of well C-21, the pumping rate was adjusted to 138 gpm using a valve on the discharge line. The pumping rate in well C-21 declined slightly as a result of the loss of pressure head over the pump and was 137 gpm by 23:00 on July 10. On the morning of July 11, a generator malfunction caused well C-21 to shut down at 1:37. The pump in well C-21 was restarted at 2:53, and the pumping rate in well C-21 was 142 gpm following the restart of the pump, then declined to 140 gpm by 8:00 on July 11. The generator in well C-21 malfunctioned several more times on July 11 and 12, causing the pump in the well to shut down. The times for these shut downs are provided in the table for well C-21 in Appendix IV.

On July 12, based on LBG's determined that offsite water-level drawdown was being caused by pumping in well C-7B, it was also determined that well C-7A would likely cause offsite water level drawdown effects when pumped during the planned individual pumping test. Therefore, with the shutdown of well C-7B and the determination that well C-7A should not be pumped, a new best well was needed in order to complete the pumping test program as intended. Based on a yield and available drawdown assessment of the pumping wells, well C-21 was determined to be the suitable replacement for well C-7A as the best well. Therefore, on July 28 at 11:56 pumping in well C-21 was ended and the simultaneous well test continued without further pumping of this well.

The pumping water level in well C-21 just before the end of the test on July 12 was 160.22 ft btoc. Based on a static water level of 49.30 ft btoc, the total drawdown in well C-21 was 110.92 feet.

The water level in well C-21 recovered following shut down of the pump in the well. However, because of interference from nearby well C-23 which continued pumping, the rising water-level trend flattened out on July 14. On July 16 at the end of the simultaneous pumping test on wells C-6, 12, 14, 16 and 23, the water level in well C-21 was 98.89 ft btoc. Based on this water level and the static water level of 49.30, the drawdown in well C-21 that is attributed to pumping in well C-23 is 49.6 feet.

The individual pumping test on well C-21 was started at 11:44 on July 25. The water level in well C-21 just prior to the start of pumping at 11:43 was 52.11 ft btoc. Upon startup of the test, the pumping rate in well C-21 was adjusted to 173 gpm. As a result of the loss of pressure head over the pump, the pumping rate declined to 163 gpm by 18:00 on July 25. The pumping rate in well C-21 remained at 163 gpm for the duration of the test period with the exception of a brief generator shut down between 13:18 and 13:19 on July 26.

The test on well C-21 was ended at 12:15 on July 28. The pumping water level in well C-21 just prior to the end of the test was 147.85 ft bloc for a total drawdown of 95.74 feet.

The drawdown in well C-21 over the final 6 hours of the pumping test between 6:14 and 12:14 on July 28 was 1.35 feet. This value meets the criteria of demonstrating less than 0.5 foot per 100 feet of available drawdown in the well over the final 6 hours of the test period. However, the trend in the water level was downward during this time, so a 180-day water-level drawdown analysis has been conducted. Based on the projection, after 180 days of continuous pumping in well C-21, the total drawdown is 162.94 feet which corresponds to a water level of 215.04 ft btoc. This leaves approximately 185 feet above the pump setting in the well that was used during the pumping test period, which meets the requirement of maintaining a margin of 5% of the pre-test water column (minimum 47.9 feet) above the pump setting in the well.

The water level in well C-21 recovered following shut down of the pump in the well. The water level reached 90% of the pre-test level approximately 98.5 hours after the end of the test and continued to rise.

6.7 WELL C-23

The water level in well C-23 showed some oscillation during the background data collection period, with a very slight drawdown trend of 0.2 feet over the final two days preceding the start of the simultaneous pumping test. During the staggered start-up period of the simultaneous pumping test on July 10, the pump in well C-21 was started before the start of the pump in well C-23.

The pump in well C-23 was started at 12:59 on July 10, 2017. The water level in well C-23 prior to the start of pumping in any of the onsite wells was 43.15 ft btoc. Just prior to the start of the pump in C-23, the water level in the well was 49.27 ft btoc at 12:58. The decline in water level measured between 11:54 and the start of the pump in well C-23 at 12:59 is the result of pumping in well C-21.

At the start of the test on well C-23, the pumping rate in the well was set at 96 gpm. The pumping rate in well C-23 declined slightly as a result of the loss of pressure head over the pump and by 10:00 on July 11, the pumping rate was 88 gpm. A manual rate increase in well C-23 was conducted at 12:45 on July 12 to increase the rate back to 90 gpm. The pumping rate in well C-23 remained at 90 gpm for the duration of the pumping test period.

During the early portion of the test period, the water-level trend in well C-23 was affected by the pump shutdowns in nearby well C-21, which can be seen in the hydrograph for the well in Appendix IV. After the test on well C-21 was ended on July 12, the water level in well C-23 showed a recovery trend. This trend continued until the evening of July 14 when a slight decline in the water-level trend was observed. The total rise in water level between the shut down in well C-21 on July 12 and the crest of the recovery trend in well C-23 on July 14 was approximately 26.5 feet.

At 1:09 on July 16 the simultaneous pumping test was ended with the shutdown of the pump in well C-14. The pump in well C-23 was shut down at 1:49 on July 16. The final water level in well C-23 just prior to turning

the pump off was 136.65 ft btoc at 1:48. Based on a static water level of 43.15 ft btoc from just before the start of the simultaneous pumping test, the total drawdown in well C-23 was 93.50 feet at the end of the test.

The drawdown in well C-23 over the final 6 hours of the pumping test between 19:09 on July 15 to 1:09 on July 16 was 0.51 foot. This value meets the criteria of demonstrating less than 0.5 foot per 100 feet of available drawdown in the well over the final 6 hours of the test period. However, the trend in the water level was downward during this time, so a 180-day water-level drawdown analysis has been conducted. Based on the projection, after 180 days of continuous pumping in well C-23, the total drawdown is 110.59 feet which corresponds to a water level of 153.74 ft btoc. This leaves approximately 246 feet above the pump setting that was used during the pumping test period, which meets the requirement of maintaining a margin of 5% of the pre-test water column (minimum 47.8 feet) above the pump setting in the well.

The water level in well C-23 recovered following shut down of the pump in the well. The water level reached 90% of the pre-test level approximately 103 hours after the end of the test and continued to rise.

During the individual pumping test on well C-21 from July 25 through July 28, water-level drawdown was again observed in well C-23. The total drawdown in well C-23 at the end of the test on July 28 was 62.6 feet.

7.0 PUMPING TEST YIELD RESULTS

The goal of the Clovewood pumping test program was to demonstrate a minimum yield of twice the average water demand of the project with the best well out of service from the new community, public water-supply source. To achieve this goal, a simultaneous pumping test was conducted on wells C-6, C-12, C-14, C-16 and C-23 between July 10 and July 16, 2017. The five wells were pumped concurrently for 5.5 days and demonstrated pumping rates of 45 gpm, 40.5 gpm, 157 gpm, 50 gpm, and 90 gpm, respectively, for a combined yield from the five wells of 382.5 gpm or 550,800 gallons per day (gpd). This combined yield can support an average water demand of 275,400 gpd.

8.0 DROUGHT CONSIDERATIONS AND GROUNDWATER RECHARGE

An additional assessment of potential severe drought effects on the water levels in the onsite pumping wells has been conducted using information from the 1960's drought in New York State. Based on the precipitation record from the Port Jervis weather station, between 1962 and 1966 the precipitation deficit ranged from 23% to 35% below the long-term normal for the region and cumulatively over the five year period there was a 29% deficit in precipitation.

Below average precipitation conditions have also occurred in New York State over the last five years. The cumulative deficit in precipitation since 2012 has been 13% below the long-term normal, with 2016 being the most severe at 27% below the long-term normal. Therefore, regional conditions were dry when the pumping tests were conducted in July 2017 and pumping test data and the 180-day water-level drawdown projections completed using that data are reflective of the aquifer's response under below-normal, dry conditions.

To assess the effect the 1960's drought had on bedrock groundwater levels, historical information was located for the USGS well RO-18 (411802073593001) near Bear Mountain State Park. This well was selected for comparison because the measurement record encompasses the 1960's drought period, the well has current data for direct comparison to existing conditions, it is within reasonable proximity to the project site, and the well is completed in bedrock. The monthly average depth to water values for RO-18 for 1961 through 1967 and for 2012 through 2017 are provided in the table below.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1961	17.68	16.71	10.55	13.90	14.99	16.63	18.87	20.07	21.05	21.71	22.72	21.92
1962	18.87	18.13	13.83	14.15	16.04	17.74	20.07	20.77	21.63	20.63	20.15	18.77
1963	19.71	18.58	13.55	14.62	17.09	18.38	19.3	20.5	23.28	23.74	23.26	21.15
1964	19.96	15.33	14.90	14.37	15.15	17.00	18.45	20.79	23.75	25.19	27.81	26.56
1965	24.37	20.52	16.69	16.13	15.87	17.20	19.65	20.78	21.69	20.96	22.65	22.72
1966	21.34	21.25	14.12	15.68	16.57	16.84	19.15	21.91	23.08	21.01	18.92	18.31
1967	15.89	15.29	14.46	14.38	15.41	16.59	17.48	19.00	19.79	20.87	19.95	15.39
2012	16.67	17.43	18.80	20.13	20.00	18.91	21.82	23.65	24.49	21.05	19.51	20.02
2013	16.35	15.97	14.69	16.67	17.68	14.60	17.81	20.95	23.58	25.72	27.60	27.44
2014	22.59	20.05	17.01	14.45	14.34	17.22	19.27	21.63	24.22	25.97	26.54	23.70
2015	21.12	20.47	17.75	14.68	16.47	17.75	19.62	22.59	24.87	25.87	25.94	23.95
2016	19.41	16.51	15.29	17.85	18.69	19.85	22.36	23.65	25.91	28.04	28.59	26.26
2017	23.86	19.31	16.90	13.97	15.45	17.38	19.17	20.82	22.44	24.38		

Table 7. Monuny Average Depth to Water in USOS Wen KO-10
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Current water-level data from well RO-18 has been correlated with water-level data from several onsite monitoring wells (C-7, 10, 11, 17, 19 and 22) collected during the background monitoring period from June 21 through July 9 prior to the start of the pumping tests. These onsite monitoring wells were the first to have the pressure transducers installed and, therefore, had the longest data record for use in comparison. The water levels used in the comparison are provided in the table below.

Date	RO-18 Average Daily DTW (ft btoc)	C-7 Average Daily DTW (ft btoc)	C-10 Average Daily DTW (ft btoc)	C-11 Average Daily DTW (ft btoc)	C-17 Average Daily DTW (ft btoc)	C-19 Average Daily DTW (ft btoc)	C-22 Average Daily DTW (ft btoc)
6/21/17	17.77	33.07	20.41	86.48	45.45	22.82	29.57
6/22/17	17.85	33.12	20.43	86.52	45.51	22.86	29.59
6/23/17	17.88	33.01	20.42	86.48	45.39	22.82	29.55
6/24/17	17.98	33.00	20.37	86.44	45.29	22.81	29.55
6/25/17	18.08	33.19	20.47	86.56	45.44	22.91	29.61
6/26/17	18.15	33.27	20.53	86.60	45.51	22.95	29.62
6/27/17	18.21	33.38	20.55	86.68	45.52	22.99	29.64
6/28/17	18.31	33.53	20.60	86.84	45.59	23.05	29.68
6/29/17	18.37	33.55	20.64	86.97	45.62	23.09	29.70
6/30/17	18.42	33.57	20.62	87.01	45.58	23.10	29.71
7/1/17	18.49	33.64	20.62	87.07	45.58	23.12	29.72
7/2/17	18.55	33.70	20.65	87.18	45.65	23.20	29.76
7/3/17	18.62	33.88	20.70	87.38	45.73	23.27	29.79
7/4/17	18.71	34.10	20.78	87.62	45.84	23.35	29.84
7/5/17	18.80	34.30	20.86	87.82	45.96	23.44	29.87
7/6/17	18.85	34.32	20.91	87.91	46.04	23.40	29.88
7/7/17	18.87	34.25	20.84	87.86	45.96	23.24	29.85
7/8/17	18.88	34.25	20.75	87.78	45.90	23.22	29.86
7/9/17	18.97	34.47	20.82	87.79	46.07	23.34	29.94

Table 8: Water Level Data From USGS Well and Onsite Monitoring Wells Used in Comparison

DTW depth to water

ft btoc feet below top of casing

The correlation using the water levels from these six wells with USGS well RO-18 was good, with r-squared values ranging from 0.86 to 0.96. Monitoring wells C-7 and C-22 demonstrated the best correlation with the USGS well, and these two onsite monitoring wells were used in the subsequent calculations to assess water-level change during extreme drought conditions. Copies of the correlation graphs are included in Appendix V.

Using the equations generated from the correlation graphs between RO-18 and the onsite monitoring wells C-7 and C-22, the lowest water-level depths that occurred in RO-18 between 1961 and 1967 were used to calculate the corresponding water-level height that would occur in the two onsite wells. Additionally, present day water-level heights for the onsite monitoring wells were also calculated using the equations for the correlation graphs. The difference between the 1960's values and the 2017 values is a measure of the decline in onsite bedrock groundwater levels that would be expected during drought conditions similar to the 1960's drought. These calculated values are provided in the table below.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Lowest Average Monthly Water Level, RO-18 1961-1967											
24.37	21.25	16.69	16.13	17.09	18.38	20.07	21.91	23.75	25.19	27.81	25.56
(1965)	(1966)	(1965)	(1965)	(1963)	(1963)	(1962)	(1966)	(1964)	(1964)	(1964)	(1964)
1960's Average Monthly Water Level For C-7 Calculated Using Correlation Equation											
41.17	37.24	31.50	30.80	32.01	33.63	35.76	38.07	40.39	42.20	45.49	43.92
2017 Average Monthly Water Level For C-7 Calculated Using Correlation Equation											
40.52	34.79	31.76	28.08	29.94	32.37	34.62	36.70	38.74	41.18	NM	NM
Difference Between 2017 and 1960's Water Levels in C-7											
-0.65	-2.45	0.26	-2.72	-2.07	-1.26	-1.14	-1.37	-1.65	-1.01	NM	NM
1960's Average Monthly Water Level For C-22 Calculated Using Correlation Equation											
31.62	30.63	29.18	29.00	29.31	29.72	30.25	30.84	31.42	31.88	32.71	32.32
2017 Average Monthly Water Level For C-22 Calculated Using Correlation Equation											
31.46	30.01	29.24	28.31	28.78	29.40	29.97	30.49	31.01	31.63	NM	NM
Difference Between 2017 and 1960's Water Levels in C-22											
-0.16	-0.62	0.07	-0.69	-0.52	-0.32	-0.29	-0.35	-0.42	-0.26	NM	NM

Table 9: Analysis of Decrease in Water Level During Drought Conditions

NM Water-level data for RO-18 from November and December 2017 not yet available, calculation could not be completed.

Based on the above assessment, the difference between 2017 water levels in the month of July when the testing program was conducted and the projected water-level heights from a 1960's magnitude drought in July would be in the range of -0.29 foot to -1.14 feet in the wells at the site. This decline is not anticipated to have a significant impact on the onsite pumping wells.

8.1 GROUNDWATER RECHARGE

Groundwater in a bedrock aquifer is continually being replenished by precipitation on the local watershed. The local recharge area for the Clovewood property has been approximated using the surficial drainage area, the hydrogeologic features and the fracture-trace assessment of the property (figure 2). The size of the local recharge area for the Clovewood property is approximately 1,177 acres.

Some of the precipitation that falls within a watershed infiltrates through the soil zone and percolates downward to recharge the bedrock. Recharge to till-covered metasedimentary bedrock is approximately 400,000 gpd/sq. mi. or about 8 inches annually based on the U.S. Geological Survey open file report 80-437. This is equal to about 625 gpd/acre (gallons per day per acre) of precipitation recharge. For the 1,177 acre watershed for the Clovewood property, the total recharge would be approximately 735,600 gpd (gallons per day) or about 510.8 gpm.

During drought periods groundwater recharge and available water supply would be reduced. The one-yearin-30 low precipitation (3.33% chance of recurrence) for Orange County is 29.5 inches (Appendix III). This precipitation amount is 69% of the annual average precipitation rate of 43 inches or a reduction in precipitation of 31%. This value is similar to the drought values from 1962 to 1966 when the precipitation deficit ranged from 23% to 35% below the long-term normal and cumulatively over the five year period with a deficit of 29%. Assuming groundwater recharge decreases at the same rate as precipitation during periods of diminished rainfall, the estimated average recharge rate would decrease about 31% to approximately 507,600 gpd during a 1 year-in-30 drought or 352.5 gpm. This drought recharge rate exceeds the average water demand of the proposed 600, four-bedroom units of 183.3 gpm. The drought recharge also exceeds the average water demand of the project with the potential inclusion of swimming pools/bath houses within the development of 190 gpm.

9.0 ONSITE MONITORING WELLS

Water-level measurements were collected from 17 onsite bedrock monitoring wells during the pumping test program conducted on the Clovewood property. In addition, the seven wells pumped during the testing program (C-6, 7B, 12, 14, 16, 21 and 23) were also used as monitoring locations when they were not actively pumping. Water-level data was collected using manual water-level meters and pressure transducers, both vented and unvented type units. In wells where unvented units were utilized, the data was corrected for barometric pressure changes using data recorded on a barotroll installed on the Clovewood site. Occasional spikes in the unvented unit data occur where the transducers were pulled from the wells to be downloaded. These spikes have been removed from the hydrographs to avoid confusion in the data interpretation.

The table below shows an assessment of the distance and drawdown values for the onsite wells measured.

Well ID	Approximate Distance to Well C-7B (feet)	Drawdown Attributed to Pumping Well C- 7B During Simultaneous Pumping Test (feet)	Approximate Distance to Closest Pumping Well (C-6, 12, 14, 16, or 23) During Simultaneous Pumping Test (feet)	Drawdown Attributed to Pumping in Wells C- 6, 12, 14, 16, and 23 at End of Simultaneous Pumping Test (feet)	Approximate Distance to Well C-21 (feet)	Drawdown Attributed to Pumping Well C-21 During Simultaneous Pumping Test (feet)
C-6	3,160	ND		121.7	3,060	ND
C-7B		45.0	1,590 (12)	ND	5,430	ND
C-12	1,590	ND		88.4	4,740	ND
C-14	3,360	ND		121.4	2,630	ND
C-16	2,390	ND		177.2	3,060	ND
C-21	5,430	ND	600 (23)	49.6		93.5
C-23	5,490	ND		93.5	600	62.6
C-1	1,320	1/	690 (12)	4.8	5,400	ND
C-4	970	<u>1/</u>	680 (12)	3.2	4,770	ND
C-5	1,420	<u>1/</u>	2,040 (6)	3.6	4,820	ND
C-7	280	33.0	1,300 (12)	ND	5,340	ND
C- 7A	40	44.5	1,620 (12)	ND	5,440	ND
C-8	2,060	<u>1/</u>	1,750 (6)	3.7	4,730	ND
C-9	1,420	<u>1/</u>	2,020 (6)	3.6	4,820	ND
C-10	3,130	0.7	870 (6)	0.8	3,880	ND
C-11	2,470	0.6	1,100 (6)	0.6	4,130	ND
C-13	1,310	<u>1/</u>	330 (12)	5.7	4,980	ND
C- 14A	3,360	ND	10 (14)	120.7	2,620	ND
C-15	3,720	ND	1,010 (14)	30.8	1,790	ND
C-17	2,880	ND	940 (16)	29.9	2,990	ND
C-18	3,740	ND	970 (14)	20.9	1,780	ND
C-19	2,740	ND	1,350 (12)	22.3	3,640	ND
C-20	4,520	ND	1,390 (23)	11.7	1,020	15.8

Table 10: Drawdown Measured in the Onsite Monitoring Wells During the 72-Hour Pumping Tests

Well ID	Approximate Distance to Well C-7B (feet)	Drawdown Attributed to Pumping Well C- 7B During Simultaneous Pumping Test (feet)	Approximate Distance to Closest Pumping Well (C-6, 12, 14, 16, or 23) During Simultaneous Pumping Test (feet)	Drawdown Attributed to Pumping in Wells C- 6, 12, 14, 16, and 23 at End of Simultaneous Pumping Test (feet)	Approximate Distance to Well C-21 (feet)	Drawdown Attributed to Pumping Well C-21 During Simultaneous Pumping Test (feet)
C-22	4,390	ND	1,260 (6)	44.4	2,940	ND

ND none discernible

1/ Level of drawdown effect from well C-7B could not be quantified from available data.

During the simultaneous pumping test conducted July 10 through July 16, water-level drawdown was measured to varying degrees in all of the onsite monitoring wells. Because of water-level drawdown that was also observed in several offsite monitoring locations, well C-7B was shut down on July 12, and well C-21 was also shut down so that it could be tested as the best well during the individual pumping test as described above. Following the shutdown of wells, water-level recovery was observed in several of the onsite wells and all of the effected offsite monitoring locations.

Using additional water-level information collected during the individual test conducted on well C-21 (July 25 through July 28), the recovery in water level observed in several of the onsite monitoring wells on July 12 can be assigned to either effects from pumping in well C-7B or C-21. The drawdown that has been attributed to C-7B is provided in the table above. In instances where only an inflection occurred in the water level at the time of the well pump shutdown in C-7B, the occurrence of the inflection is noted but the amount of drawdown attributed to well C-7B pumping has not been quantified. The drawdown values observed as result of pumping well C-7B and an approximated area of influence for the well is also shown on figure 4.

After the shutdown of wells C-7B and C-21 on July 12, the simultaneous test continued with wells C-6, 12, 14, 16 and 23 pumping until the morning of July 16. The drawdown caused by these five wells pumping simultaneously measured at the end of the test period on July 16 in the onsite monitoring wells ranged from none discernible in wells C-7, 7A and 7B to 120.7 feet in monitoring well C-14A. The drawdown values measured at the end of the simultaneous test on July 16 and an approximated area of influence for the wells pumping simultaneously is shown on figure 5.

The individual pumping test on well C-21 was conducted from July 25 through July 28. Water-level drawdown was observed in only two onsite monitoring wells, wells C-20 and C-23. The drawdown measured onsite ranged from none discernible to 62.6 feet in well C-23. The drawdown values measured at the end of the individual test on July 28 and an approximated area of influence for well C-21 is shown on figure 6.
10.0 OFFSITE MONITORING WELLS AND SPRING ON ROUTE 208

Prior to the initiation of the pumping tests, permission to conduct well monitoring was requested from nine residential property owners, one business, four community water-supply systems and one school near the Clovewood property. The table below summarizes the responses received.

	_
Property	Response
556 Clove Road	Declined Participation in Well Monitoring Program
562 Clove Road	Agreed to Participation in Well Monitoring Program
564 Clove Road	Agreed to Participation in Well Monitoring Program
568 Clove Road	Agreed to Participation in Well Monitoring Program
443 Clove Road	Declined Participation in Well Monitoring Program
479 Clove Road	Agreed to Participation in Well Monitoring Program
481 Clove Road	Agreed to Participation in Well Monitoring Program
1235 Route 208	Agreed to Participation in Well Monitoring Program
35 Round Hill Road	Agreed to Participation in Well Monitoring Program
1195 Route 208	Agreed to Participation in Well Monitoring Program
Mountain Lodge Water System	Agreed to Participation in Well Monitoring Program
Woodbury Heights Water System	Agreed to Participation in Well Monitoring Program
Village of South Blooming Grove Water System	Agreed to Participation in Well Monitoring Program
Braeside Water System	Did Not Provide LBG Authorization to Access Wells
Round Hill Elementary School	No Response Was Provided to Inquiry

Table 11: Summary of Offsite Well Monitoring Program Solicitation

In total, water-level measurements were collected from 16 offsite wells (where permission from the owner was granted) and a flowing spring located on Route 208 during the pumping test program conducted on the Clovewood property in July 2017. Water-level data was collected using dedicated, vented pressure transducers installed in the wells and a 5-gallon volume calibrated bucket was used to measure the flow at the spring. Copies of the hydrographs for the offsite wells and spring are included in Appendix VII along with tables containing the manual measurements collected at each monitoring location.

During the simultaneous pumping test, water-level drawdown was observed in four of the residential wells that were being measured on Clove Road, in Mountain Lodge Well 2, and a decrease in flow was measured in the spring located on Route 208. Because of the staggered start of the pumping wells on the first day of the test, the cause of the drawdown was attributed to pumping in well C-7B. Based on this assessment, wells C-7B and C-21 were shut down on July 21, as described above. The water levels in the effected offsite wells began to rise following shut down of well C-7B and the flow at the spring returned.

The remaining test wells C-6, 12, 14, 16, and 23 continued to pump as part of the simultaneous pumping test until the morning of July 16 when the test was ended. Following shut down of these wells, no change in the rising trends in the recovering offsite wells or in the spring were observed that would indicate any further pumping-related effects from the balance of the wells being tested.

No discernible water-level drawdown was observed in the other offsite wells being measured as a result of pumping well C-7B or the remaining tested wells C-6, 12, 14, 16, 21 and 23, which included all of the Village of South Blooming Grove wells, the Woodbury Heights wells, Mountain Lodge Well 1, the residence and business on Route 208, the residence on Round Hill Road, and the residence at 479 Clove Road.

The table below contains a summary of the drawdown observed as a result of pumping well C-7B and the distance of the offsite monitoring locations from well C-7B. Additionally, the table shows the distance from the offsite monitoring locations to the next closest onsite well included in the simultaneous test (C-6, 12, 14, 16 or 23).

Well Location	Approximate Distance to Well C-7B (feet)	Drawdown Attributed to Pumping Well C-7B During Simultaneous Pumping Test (feet)	Approximate Distance to Closest Pumping Well (C-6, 12, 14, 16, or 23) From Simultaneous Pumping Test (feet)	Drawdown Attributed to Pumping in Wells C-6, 12, 14, 16, and 23 at End of Simultaneous Pumping Test (feet)
562 Clove Road	1,600	24.5	2,850 (6)	ND
564 Clove Road	1,700	24.0	2,700 (6)	ND
568 Clove Road	1,850	5.7	2,500 (6)	ND
479 Clove Road	2,150	ND	1,900 (12)	ND
481 Clove Road	2,050	6.8	1,650 (12)	ND
1195 Route 208	3,750	ND	2,350 (6)	ND
1235 Route 208	3,550	ND	4,500 (6)	ND
Spring on Route 208	2,650	Dry	2,600 (6)	ND
35 Round Hill Road	3,000	ND	4,000 (12)	ND
Mountain Lodge Well 1	7,100	ND	6,000 (12)	ND
Mountain Lodge Well 2	6,850	4.5	5,750 (12)	ND
Woodbury Heights North Well	8,250	ND	3,100 (23)	ND
Woodbury Heights East Well	8,600	ND	3,450 (23)	ND
Village of South Blooming Grove Merriewold Well Field Well 1	6,900	ND	4,850 (6)	ND
Village of South Blooming Grove Merriewold Well Field Well 3	6,700	ND	4,700 (6)	ND
Village of South Blooming Grove Well 8	9,000	ND	7,050 (6)	ND
Village of South Blooming Grove Baseball Field Well	9,000	ND	7,150 (6)	ND

Table 12: Distance and Drawdown Measurements for Offsite Wells for Simultaneous Pumping Test

ND none discernible

Following the completion of the simultaneous pumping test, the water-levels in the aquifer were allowed to recovery for approximately nine days before the start of pumping in well C-21 for the individual pumping test. The water-level recovery in the offsite wells and spring that were influenced by pumping of well C-7B continued during this recovery period until approximately July 23-24 when the rising trends ended.

The measurement of the offsite monitoring locations continued during the pumping test conducted on well C-21. During the pumping test on C-21, no discernible drawdown effects were observed in any of the offsite monitoring locations that is attributed to pumping in well C-21. The absence of discernible drawdown in the offsite monitoring locations during the test on C-21 confirms that the drawdown measured during the first testing period was related to pumping in well C-7B. The table below contains a summary of the distance of the offsite monitoring locations from C-21 and that no discernible drawdown was observed.

Well Location	Approximate Distance to Well C-21 (feet)	Drawdown Attributed to Pumping in Well C-21 at End of Individual Pumping Test (feet)
562 Clove Road	5,750	ND
564 Clove Road	5,600	ND
568 Clove Road	5,450	ND
479 Clove Road	6,650	ND
481 Clove Road	6,400	ND
1195 Route 208	5,250	ND
1235 Route 208	7,550	ND
Spring on Route 208	5,650	ND
35 Round Hill Road	8,400	ND
Mountain Lodge Well 1	9,450	ND
Mountain Lodge Well 2	9,150	ND
Woodbury Heights North Well	2,900	ND
Woodbury Heights East Well	3,250	ND
Village of South Blooming Grove Merriewold Well Field Well 1	7,000	ND
Village of South Blooming Grove Merriewold Well Field Well 3	6,900	ND
Village of South Blooming Grove Well 8	8,950	ND
Village of South Blooming Grove Baseball Field Well	9,150	ND

Table 13: Distance and Drawdown Measurements for Offsite Wells for Simultaneous Pumping Test

ND none discernible

11.0 PIEZOMETERS

Water-level measurements were collected from piezometers installed in surface-water features at eight locations on the site. The piezometer locations are shown on Plate 1. Manual water-level measurements were collected from the piezometers and vented pressure transducers installed at select locations. The piezometer monitoring locations were placed in surface-water features that parallel the fracture-trace lineations near the pumping wells on the project site. The locations were selected close to the seven pumping wells where drawdown (if any were to occur) would most likely be measureable. An additional eighth piezometer monitoring location was installed near monitoring well C-22.

Where surface water was present, a single piezometer was installed. Groundwater level measurements were collected from the interior of the piezometer and surface-water height measurements from the exterior to assess potential water-level drawdown and changes in vertical head. At locations where no surface water was present or the presence of surface water was sporadic, a nested pair of piezometers was installed, with one shallower screen and one deeper screen setting. Groundwater level measurements were collected from the interior of both nested piezometers, and when present, surface water on the exterior was measured to assess potential water-level drawdown and changes in vertical head. Hydrographs for the piezometers along with tables of the manual water-level measurements collected are included in Appendix VIII.

The piezometers were constructed with 5-foot lengths of galvanized steel pipe; 3-inch long couplings; and 1-foot long, 10-slot screened, stainless steel drive points. The piezometers were driven to varying depths based on the height of the surface water, the depth to groundwater at each location, and the composition of the overburden soils and sediment (i.e. whether large cobbles were present). The depths to the top of the screen for the piezometers are provided in the table below.

Piezometer ID	Depth to Top of Screen (feet below grade)
PZ-1	Shallow: 3.07; Deep: 4.65
PZ-5	Single Piezometer: 1.48
PZ-6	Shallow: 2.10; Deep: 3.30
PZ-8	Single Piezometer: 2.12
PZ-9	Shallow: 1.77; Deep: 3.93
PZ-16	Shallow: 2.44 ; Deep: 4.25
PZ-Pond	Single Piezometer: 1.66
PZ-22	Shallow: 0.85; Deep: 1.95

Table 14. The connect Screen Setung	Table 14:	Piezometer	Screen	Settings
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11.1 PIEZOMETER LOCATION PZ-1

A nested pair of piezometers was installed at location PZ-1 in the stream channel near pumping well C-12. Surface water on the exterior of the piezometers was present only sporadically during the data collection period, after the rain event on July 13 and again after the rain event on July 24. Groundwater level measurements were

collected from the interior of both piezometers to assess potential drawdown and changes in vertical head as a result of pumping in the onsite wells.

In general, the water levels in the piezometer had a declining trend during the test period. However, the water level in the shallow screened piezometer increased following rain events on July 7, July 8, July 13, July 14 and July 24. The rain events on July 11 and July 20 also appear to have temporarily reduced the rate of decline in the groundwater level in the shallow piezometer. The groundwater in the deeper screened piezometer also rose in response the rain events on July 7, July 13 and July 24; however, the rising response was more muted compared to the shallow screened piezometer.

The vertical head direction between the shallow and deeper screen piezometers was upward with the exception of during and immediately following the rain events when the direction head reversed to downward. The downward head lasted approximately one to two days, and then reverted to an upward head. When surface water was present on the exterior of the PZ-1 piezometers after rain events, the head direction between surface water and groundwater was downwards.

PZ-1 Simultaneous Pumping Test

Prior to the start of the simultaneous pumping test, the water levels in the shallow and deeper screened piezometers had a declining trend beginning on July 9. This declining water-level trend continued into the pumping period until the July 13 rain event. This rain event caused a rise in water level in both piezometers and a change in head direction from upward to downward. After the rain event, the water-level trends in the piezometers leveled out and then resumed a declining trend on July 16 after the end of the simultaneous pumping test.

Prior to the rain event on July 13, the water levels and vertical head between the shallow and deeper screened piezometers did not appear to be affected as a result of pumping in the onsite wells. Additionally, although the precipitation caused an increase in the water levels in both piezometers during the second half of the simultaneous pumping test, there was no significant rise or rebound in water level resulting from the shutdown of the pumping wells on the morning of July 16.

Based on the data collected, there does not appear to be impact to the piezometers at PZ-1 as a result of pumping during the simultaneous pumping test.

PZ-1 Individual Pumping Test

The declining trend observed in the water levels in both piezometers which started on July 16 continued until the rain event on July 20 which caused a decrease in the declining trend. The subsequent rain event on July 24 caused the water levels in both the shallow and deeper screened piezometers to rise. The rain event on July 24 also caused a temporary change in head direction from upward to downward. The water-level rise in the shallow piezometer was steep but brief and the declining trend in this piezometer resumed the same day. The vertical head direction reverted back to upward late in the day on July 25. The rising trend in the deeper screened piezometer was slightly more muted and took longer to crest than in the shallow screened piezometer. The water level in the

deeper screened piezometer crested on July 25, near the start of the individual test on well C-21 and then resumed a declining trend.

The water levels in both piezometers continued their declining trends throughout the remainder of the test period on well C-21 and into the recovery period following the end of the test. There was no rise in water level in either piezometer that coincided with the shutdown of the pump in well C-21.

Based on the data collected, there does not appear to be impact to the piezometers at PZ-1 as a result of pumping during the individual pumping test.

11.2 PIEZOMETER LOCATION PZ-5

A single piezometer was installed at the location PZ-5 in the stream channel pumping well C-6. Surface water was present on the exterior of the piezometer throughout the data collection period. The groundwater level was measured in the interior of the piezometer and surface-water height on the exterior.

The water levels at piezometer PZ-5 remained relatively consistent throughout the data collection period in both the surface water and groundwater with the exception of brief rises in response to rain events on July 7, July 13, July 14, July 20 and July 24.

PZ-5 Simultaneous Pumping Test

The water levels in the groundwater and surface water had a very slight declining trend which began on July 7 after the end of the rain event, prior to the start of the simultaneous pumping test. This declining water-level trend continued into the pumping period until the July 13 rain event. This rain event caused a rise in water level in both the surface water and groundwater levels. On July 14 after the rain event, the water-level trends at the piezometer resumed a decline which continued into the post-test period.

The vertical head direction between the interior and exterior water levels changed between upward, neutral and downward frequently throughout the background, pumping and recovery periods. Head values ranged from - 0.05 to 0.08, therefore, very small changes in water level had an effect on the vertical head direction. The head changes were variable and occurred during all portions of the data collection period and do not appear to be related to pumping in the onsite wells.

Prior to the rain event on July 13, the water levels showed no discernible change in trend as a result of pumping in the onsite wells or when the pumps in wells C-7B and C-21 were shut down on July 12. Additionally, there was no discernible rebound in water level accompanying the shutdown of the pumping wells on the morning of July 16.

Based on the data collected, there does not appear to be impact to the piezometer at PZ-5 as a result of pumping during the simultaneous pumping test.

PZ-5 Individual Pumping Test

The declining trend in the water levels at PZ-5 continued until July 17 when the trend leveled out. A rain event on July 20 caused a slight rise in water level and the rain event on July 24 caused a larger water-level rise in both the groundwater and surface water.

The slight declining trend in the groundwater and surface water levels resumed after the rain event ended on July 24 and continued throughout the test period on well C-21 and into the recovery period following the end of the test. There were no changes in the water-level trends in the surface water or groundwater at PZ-5 that coincided with the shutdown of the pump on well C-21 that would indicate pumping-related effect. Similar to the simultaneous pumping test period, the vertical head direction between the interior and exterior water levels changed between upward, neutral and downward frequently throughout the background, pumping and recovery periods. The range in head values was very small from -0.02 to 0.02; therefore, very small changes in water level had an effect on the vertical head direction. The head changes were variable and occurred during all portions of the data collection period and do not appear to be related to pumping in well C-21.

Based on the data collected, there does not appear to be impact to the piezometers at PZ-5 as a result of pumping during the individual pumping test.

11.3 PIEZOMETER LOCATION PZ-6

A nested pair of piezometers was installed at location PZ-6 in the stream channel near pumping well C-14. Surface water was also present on the exterior of the piezometers during the data collection period. Groundwater level measurements were collected from the interior of both piezometers and the surface-water height was measured on the exterior.

In general, the groundwater level in the shallow piezometer and the surface water had declining trends during the testing period. The water levels in the shallow screened piezometer and surface water increased following rain events on July 7, July 13, July 14, and July 24. After each rain event, the groundwater level in the shallow screened piezometer and surface water resumed a declining trend. The groundwater in the deeper screened piezometer was on a rising trend throughout the data collection period, and was not notably affected by the individual rain events that occurred.

The vertical head directions between the shallow and deeper screen piezometers and the surface water and deeper screened piezometer were downward through most the data collection period, but steadily decreased because of the consistent upward trend in the groundwater level in the deeper screened piezometer. On July 29, the vertical head direction between the shallow and deeper screened piezometer became neutral and then upward as the deeper groundwater level continued to rise. The vertical head between the deeper groundwater and surface water remained downward during this timeframe.

The vertical head between the groundwater level in the shallow screened piezometer and the surface water was mainly downward, with the exception of a period following the rain event on July 14 when the head direction changed to upward as the shallow groundwater took longer to resume a downward trend than the surface water.

PZ-6 Simultaneous Pumping Test

The groundwater level in the shallow piezometer and surface water had slight declining trends which began prior to the start of the simultaneous pumping test. These declining water-level trends continued into the pumping period until the July 13 rain event. This rain event caused a rise in water level in both the surface water and shallow groundwater and a brief change in head direction from downward to upward. On July 14 after the rain event, the water-level trends in the shallow groundwater and surface water resumed a declining trend which continued into the post-test period and the vertical head returned to downward.

Prior to the rain event on July 13, the groundwater levels in both piezometers and the surface water, as well as the vertical head between the groundwater and surface water showed no discernible change in trend as a result of pumping in the onsite wells or when the pumps in wells C-7B and C-21 were shut down on July 12. Additionally, although the precipitation caused an increase in the water levels in the shallow groundwater and surface water during the second half of the simultaneous pumping test, there was no discernible rebound in water level accompanying the shutdown of the pumping wells on the morning of July 16. The water level in the deeper screened piezometer was on a slight rising trend, and showed no response to rain events or the start and stop of pumping.

Based on the data collected, there does not appear to be impact to the piezometers at PZ-6 as a result of pumping during the simultaneous pumping test.

PZ-6 Individual Pumping Test

The declining trend in the water levels in the shallow groundwater and surface water continued until the rain event on July 24 caused the water levels to rise. Immediately after the rain event, the surface-water level trend resumed a decline on July 24. In the shallow groundwater, the trend was level until the decline resumed on July 26. The slight declining trends in both the shallow groundwater and surface water continued into the post-test period.

The vertical head between the surface water and shallow groundwater remained downward throughout the pumping test and recovery period. The vertical head direction between the shallow groundwater and the deeper groundwater became neutral on July 29 and then upward as the deeper groundwater continued its steady upward trend.

No rebound in water level in either piezometer or in the surface water coinciding with the shutdown of the pump on well C-21 occurred that would indicate pumping-related effects.

Based on the data collected, there does not appear to be impact to the piezometers at PZ-6 as a result of pumping during the individual pumping test.

11.4 PIEZOMETER LOCATION PZ-8

A single piezometer was installed at the location PZ-8 in surface water near pumping well C-21. Surface water was present on the exterior of the piezometer throughout the data collection period. The groundwater level was measured in the interior of the piezometer and surface-water height on the exterior.

The surface-water level at piezometer PZ-8 remained relatively consistent throughout the data collection period with the exception of brief rises in response to rain events on July 7, July 13, July 14, and July 24. Compared to other onsite surface-water locations that were measured, the increases in the height of the surface water at PZ-8 were muted and after the rain events ended, the surface-water level quickly returned to its prior elevation.

The groundwater level in the piezometer was on a general downward trend during the data collection period, which was also interrupted by the rain events listed above. The rise in groundwater level was generally small, but took approximately one to two days to re-equilibrate and return to its prior downward trend.

The surface data on the hydrograph for PZ-8 in Appendix VIII shows an anomaly in the pressure transducer readings starting on July 24 during the rain event. The pressure transducer recorded erroneous data showing a large decrease, then an increase in water level which did not actually occur. The anomalous data recording ended on July 25, and the transducer returned to recording reasonable values. The manual measurements collected on July 24 and 25 are reflective of the actual surface-water height on those days.

PZ-8 Simultaneous Pumping Test

After the rain event on July 7, there was little groundwater level change until July 9 when a slight declining trend started. This declining trend continued into the simultaneous test period and steepened slightly on July 12 as the test progressed. On July 13, the groundwater level rose in response to the rain event. Another rise occurred in July 14 because of rain and then the declining trend resumed.

The vertical head direction was upward between the surface water and groundwater throughout the background, pumping and recovery periods for the simultaneous pumping test. However, the decline in the groundwater level which started during the background period and the relatively unchanging height of the surface water resulted in decreasing vertical head values during this period.

The steepening of the declining trend in the groundwater level during the simultaneous pumping test was noteworthy. However, the steepening does not coincide with the start of pumping (it occurred approximately 48 hours into the test period) and when the pump in the nearby well C-21 was shut down (on July 12), no change in the trend occurred. Similarly, there was no notable rebound in water level accompanying the shutdown of the remaining pumping wells on July 16. Based on these data, the declining trend observed in PZ-8 may be naturally occurring, but additional monitoring of the shallow groundwater at this location may be warranted for further assessment. The steepening in groundwater declining trends was also observed in the piezometers at PZ-9, which were located in the same upland setting as PZ-8. The steepening at PZ-9 is attributed to natural groundwater trends

because the phenomena took place under non-pumping and pumping conditions. The water-level response in PZ-9 is described in more detail below.

No discernible effect to surface water was measured during the simultaneous pumping test.

PZ-8 Individual Pumping Test

The decline in the groundwater level at PZ-8 continued into the post-test period until July 17 when the trend leveled. The rain event on July 24 caused a slight rise in both the groundwater and surface water. After the July 24 rain event, the surface water height stayed relatively steady. The groundwater level in the piezometer continued rising slightly until the morning of July 26, when a declining trend was observed. The downward trend in the groundwater level and the steady trend in the surface water level resulted in a change in vertical head direction on July 27 from upward to downward.

At the end of the pumping test on July 28, the declining trend in the groundwater in PZ-8 continued but decreased in intensity. Additional monitoring of the shallow groundwater at this location may be warranted to further assess whether the change in groundwater was the result of pumping or whether it was naturally occurring.

No discernible effect to the surface water at this location was measured during the individual pumping test.

11.5 PIEZOMETER LOCATION PZ-9

A nested pair of piezometers was installed at location PZ-9 in the stream channel that forms north of well C-23. No measurable surface water was present on the exterior of the piezometers during the data collection period. Groundwater level measurements were collected from the interior of both piezometers.

In general, the water levels in the piezometers had a declining trend throughout the testing period. The water level in the shallow screened piezometer increased following rain events on July 7, July 13, July 14, July 17, July 20 and July 24. After each rain event, the groundwater level in the shallow screened piezometer resumed a declining trend. The groundwater in the deeper screened piezometer also rose in response to the rain events; however, the rising response was more muted compared to the water-level response observed in the shallow screened piezometer. The vertical head direction between the shallow and deeper screen piezometers was downward throughout most of the data collection period with the exception of on July 5 and 6, before the rain event on July 7 that caused a change in vertical head direction; and again from July 28 through 31.

The water-level data for the shallow screened piezometer on the hydrograph for PZ-9 in Appendix VIII shows an anomaly in the pressure transducer readings on July 13 and 14 during the rain events. The pressure transducer recorded erroneous data that showed increases and decreases in water level which did not actually occur. The anomalous data recording stopped late in the day on July 14, and the transducer returned to recording reasonable values. The manual measurements collected during that time period are reflective of the actual water levels on those days.

PZ-9 Simultaneous Pumping Test

The water levels in the shallow and deeper screened piezometers had a declining trend which began during the background data collection period prior to the start of the simultaneous pumping test. This declining trend continued into the pumping period until the rain event occurred on July 13, causing a rise in both piezometer water levels.

A slight steepening of the declining water-level trend occurred on July 12; however, a similar steepening occurred on July 21 during a period of no onsite pumping indicating that this response may be a natural occurrence for groundwater levels at this location. After the rain events on July 13 and 14, the water-level trends in the piezometers leveled out and then resumed a decline on July 15.

Prior to the rain event on July 13, the water levels and vertical head between the piezometers did not appear to be affected as a result of pumping in the onsite wells or when the pumps in wells C-7B and C-21 were shut down on July 12. Additionally, although the precipitation caused an increase in the water levels in both piezometers during the second half of the simultaneous pumping test, there was no significant rebound or change in trend in the water levels accompanying the shutdown of the pumping wells on the morning of July 16.

Based on the data collected, there does not appear to be impact to the piezometers at PZ-9 as a result of pumping during the simultaneous pumping test.

PZ-9 Individual Pumping Test

The declining trend in the water levels in both piezometers resumed on July 15 and continued until the rain event on July 24, with the exception of a very small rise observed on July 20 from the rain received on that day. As described above, the declining trend in the piezometers steepened after the rain event on July 20 and continued until the larger rain event on July 24. The water level in the shallow piezometer rose rapidly and the rise in the deeper piezometer was slower. The rise in the shallow piezometer crested on July 24 and then the drawdown trend resumed. The rise in the groundwater level in the deeper piezometer crested on July 27 and then resumed declining. Because of this delay, the vertical head direction between the shallow groundwater and deeper groundwater changed from downward to upward on July 28.

The declining trend pattern observed during the individual pumping test period and the post-test period is similar to the pattern observed during the background period between July 20 and July 24, and the head change also appears to be precipitation related and not the result of pumping.

Based on the data collected, there does not appear to be impact to the piezometers at PZ-9 as a result of pumping during the individual pumping test. However, if additional monitoring at PZ-8 is conducted, additional data collection from PZ-9 may be warranted to provide supplemental information since both piezometer locations are in the same upland setting area.

11.6 PIEZOMETER LOCATION PZ-16

A nested pair of piezometers was installed at location PZ-16 in the wetland feature flagged near well C-16. There was no surface water present on the exterior of the piezometers throughout the data collection period. Groundwater level measurements were collected from the interior of both piezometers to assess potential drawdown and changes in vertical head as a result of pumping in the onsite wells.

The water levels in the piezometers rose in response to the rain events on July 13, July 14 and July 24. However, the rising responses had a slight delay and were more muted compared to other onsite piezometers measured during the test. The vertical head direction between the shallow and deeper screen piezometers was downward throughout the entire data collection period.

PZ-16 Simultaneous Pumping Test

The water levels in the shallow and deeper screened piezometers had declining trends which began on July 7, prior to the start of the simultaneous pumping test. These declining water-level trends continued into the pumping period until the July 13 rain event. This rain event caused a rise in water level in both piezometers. After the rain event, the water-level trends in the piezometers leveled out and then resumed a decline on July 17 after the end of the simultaneous pumping test.

Prior to the rain event on July 13, the water levels and vertical head between the piezometers did not appear to be affected as a result of pumping the onsite wells or when the pumps in wells C-7B and C-21 were shut down on July 12. Additionally, although the precipitation caused an increase in the water levels in both piezometers during the second half of the simultaneous pumping test, there was no significant rebound in water levels after the shutdown of the pumping wells on the morning of July 16. Based on the water-level data collected, there does not appear to be impact to the piezometers at PZ-16 as a result of pumping during the simultaneous pumping test.

PZ-16 Individual Pumping Test

The declining trend in the water levels in both piezometers which started on July 16 continued until the rain event on July 24. The rain event caused the water levels in both the shallow and deeper screened piezometers to rise briefly. The change in trend was short and the shallow and deeper screened piezometers resumed their declining trends which continued throughout the test period on well C-21 and into the recovery period following the end of the test. No rebound in water levels in either piezometer coinciding with the shutdown of the pump on well C-21 occurred. Based on the data collected, there does not appear to be impact to the piezometers at PZ-16 as a result of pumping during the individual pumping test.

11.7 PIEZOMETER LOCATION PZ-POND

A single piezometer was installed at the location PZ-Pond in the pond east of wells C-7B and C-7A. Surface water was present on the exterior of the piezometer throughout the data collection period. The groundwater level was measured in the interior of the piezometer and surface-water height on the exterior.

Overall, water levels at piezometer PZ-Pond were on a slight declining trend throughout the data collection period in both the surface water and groundwater with the exception of brief rises in response to rain events on July 7, July 11, July 13, July 14 and July 24. After the rain events ended, the water levels resumed their prior trends.

PZ-Pond Simultaneous Pumping Test

Prior to the start of the simultaneous pumping test, the water levels in the groundwater and surface water had a slight declining trend which began on July 8. This declining water-level trend continued into the pumping period until the morning of July 11. The water level in the surface water and groundwater in PZ-Pond began to rise slowly. A small rain event occurred on the morning of July 11 which may have contributed to this rise, but a leak in the well C-7B discharge hose along the edge of the pond was likely the main reason for the rise. The leak was repaired later that day and the declining water-level trends resumed. The rain events on July 13 and 14 also caused water level rises, followed by the resumption of the natural declining trend. No change in the declining trend was noted when the pump was shut down in well C-7B on July 12 or when the simultaneous pumping test was ended on July 16.

The vertical head difference between the interior and exterior water levels was small, ranging in value from -0.04 to 0.12 and changed direction between upward, neutral and downward relatively frequently. The head direction changes were variable and occurred during all portions of the data collection period and do not appear to be related to pumping the onsite wells.

Based on the data collected, there does not appear to be impact to the piezometer at PZ-Pond as a result of pumping during the simultaneous pumping test.

PZ-Pond Individual Pumping Test

The declining trend in the water levels at PZ-Pond continued into the post-test period until the rain event on July 24 caused a larger water-level rise in both the groundwater and surface water. The declining trend in the groundwater and surface water levels resumed after the rain event ended on July 24 and continued throughout the test period on well C-21 and into the recovery period following the end of that test. No change in the water-level declining trend was observed with the shutdown of the pump in well C-21.

The vertical head difference between the interior and exterior water levels was small, ranging in value from -0.03 to 0.10 and changed head direction relatively frequently. The head changes were variable and occurred during all portions of the data collection period and do not appear to be related to pumping in well C-21.

Based on the data collected, there does not appear to be impact to the piezometer at PZ-Pond as a result of pumping during the individual pumping test.

11.8 PIEZOMETER LOCATION PZ-22

A nested pair of piezometers was installed at location PZ-22 near the onsite monitoring well C-22. There was no surface water present on the exterior of the piezometers throughout the data collection period. Groundwater level measurements were collected from the interior of both piezometers.

The water level in the shallow screened piezometer was variable throughout the data collection period and appears to have responded to the rain events on July 7, July 13, July 14, July 17, July 20 and July 24. The water level in the deeper screened piezometer was less variable, and showed muted responses to the rain events on July 7, July 13, and July 14. The vertical head between the shallow and deeper screen piezometers was upward throughout the entire data collection period.

PZ-22 Simultaneous Pumping Test

The water levels in the shallow and deeper screened piezometers had declining trends which began on July 7, prior to the start of the simultaneous pumping test. These declining water-level trends continued into the pumping period until the July 13 rain event. This rain event caused a brief rise in water level in both piezometers. After the rain event, the water-level trends in the piezometers resumed a decline on July 14.

The water level in the deeper screened piezometer remained on a relatively consistent declining trend throughout the background, testing and recovery periods for the simultaneous pumping test. The water level in the shallow screened piezometer was much more variable, showing more dramatic changes in response to precipitation events, but there are no water-level changes that appear to coincide with the start and stop of pumping on the site.

Based on the data collected, there does not appear to be impact to the piezometers at PZ-22 as a result of pumping during the simultaneous pumping test.

PZ-22 Individual Pumping Test

The declining trend in the water level in the deeper screened piezometer, which started on July 14, continued into the test on well C-21 and through to the end of the data collection period without any further interruption from rain events. The water level in the shallow screened piezometer remained somewhat variable, rising on July 17 and July 24, and then declining through the test and recovery period for well C-21. Although, the water level in the shallow screened piezometer-level changes that appear to coincide with the start and stop of pumping in well C-21.

Based on the data collected, there does not appear to be impact to the piezometers at PZ-22 as a result of pumping during the individual pumping test.

12.0 STREAM GAGING

There are two tributary streams that flow from the project site. They both exit the site along the western property boundary close to the intersection of Clove Road and Route 208. The headwaters for both streams originate on the Clovewood property. The more northerly stream flows near pumping wells C-12 and C-7B and collects runoff from the northern and central portions of the project site. A dam was built by a prior property owner on this stream channel near onsite monitoring wells C-5 and C-9. As a result, there is ponded water behind this dam. The stream channel re-forms downstream of the dam and the stream flows west and off the project site. The more southerly stream passes near pumping wells C-6, 14, 21 and 23 and receives runoff from the southern and western portions of the project site.

Stream-flow measurements were collected from nine onsite gaging locations during the pumping test program between July 3 and July 31, 2017. The stream gaging locations SG-1 through SG-9 are shown on plate 1. Graphs and a table of the flow measurements collected are included in Appendix IX. On the graphs, the stream-flow measurements have been separated into two groups, the gaging locations that receive flow from the northern and central portions of the property (SG-1, 2 and 3), and the locations that receive flow from the southern portion of the site (SG-4, 5, 6, 7, 8 and 9).

12.1 STREAM GAGING LOCATIONS SG-1, SG-2 AND SG-3

Stream gaging locations SG-1, SG-2 and SG-3 are located along the stream that collects runoff from the northern and central regions of the property. The gaging locations are numbered in sequential order moving downstream. Location SG-1 is the farthest upstream location, east of well C-12. Location SG-2 is near monitoring well C-4, between pumping wells C-12 and C-7B. SG-3 is located downstream of well C-7B and the pond, near onsite monitoring well C-8. SG-3 was positioned upstream of the discharge locations for wells C-7B and 12.

<u>SG-1</u>

Stream gaging location SG-1 is located upstream of pumping well C-12. Overall, flow at SG-1 was very low during the data collection period, ranging from no measurable flow (0.000 cubic feet per second (cfs)) to 0.008 cfs. These flows are equal to a range of 0 gpm to 3.6 gpm. Slight increases in flow were measured following precipitation events. These flow increases were short-lived, after which the flow would again decrease to very low values. There were no discernible changes in flow that appear related to pumping of the onsite bedrock wells during the pumping test periods.

<u>SG-2</u>

SG-2 is located near onsite monitoring well C-4, downstream of C-12 and upstream of well C-7B. The flows at this location ranged from 0.011 cfs to 0.139 cfs, which are equal to a range of 4.9 gpm to 62.4 gpm. The higher flow values measured at SG-2 compared to SG-1 are reflective of the larger upstream watershed area that contributes more overland runoff and baseflow to SG-2. Similar to SG-1, increases in flow were observed at SG-2 following precipitation events, after which the flow would again decrease to very low values. There were no discernible changes in flow that appear related to pumping of the onsite bedrock wells during the pumping test periods.

<u>SG-3</u>

SG-3 is located near onsite monitoring well C-8, downstream of C-7B and the onsite pond, close to where the stream exits the property. The flows at this location ranged from 0.028 cfs to 0.209 cfs, which are equal to a range of 12.6 gpm to 93.4 gpm. The higher flows at SG-3 compared to SG-1 and SG-2 are reflective of the larger upstream watershed area that contributes more overland runoff and baseflow to SG-3. Similar to the other gaging locations, increases in flow were observed at SG-3 following precipitation events. After precipitation events, the flow at SG-3 would decrease, however the decrease in flow values took slightly longer at SG-3, potentially because of the storage and release of water from the upstream pond along the stream channel which controlled the runoff flow and caused the stream to be less flashy. A flashy stream is one that rapidly collects flows from the steep slopes within its watershed and produces flood peaks soon after a rain event. The flow quickly subsides after the rainfall stops. As noted above for PZ-Pond, there was a break in the discharge line alongside the pond on July 11 which caused a brief rise in water level until the break was repaired. This break in the discharge may have resulted in the high flow value at SG-3 measured on July 12 that was not directly associated with a precipitation event. This flow value decreased after the discharge line was repaired.

There were no discernible changes in flow that appear related to pumping of the onsite bedrock wells during either pumping test period.

SG-1 through SG-3 Flow Comparison

Overall, the stream flow at locations SG-1, 2 and 3 showed an increase in volume as the upstream watershed areas expanded and overland runoff and baseflow increased. The flows were generally low and increased as a result of rain events, after which the flow would again decrease to very low values. However, during the rain event on July 7, the flow at SG-2 was higher than anticipated compared to SG-3 (the downstream location). This change is attributed to the flashy nature of the runoff stream-flow in the channel, and the start and stop time of the rain event versus the time of day the channel was gaged.

The flow values measured at the three locations were similar during the background, pumping test and recovery periods. No discernible changes in flows were observed at SG-1, SG-2 or SG-3 that are attributed to

pumping in the onsite wells during the simultaneous pumping test from July 10 through July 16, 1027 or for the individual pumping test on well C-21 from July 25 through July 28, 2017.

12.2 STREAM GAGING LOCATIONS SG-4, SG-5, SG-6, SG-7, SG-8 AND SG-9

Stream gaging locations SG-4 through SG-9 are located along the stream that flows through the southern and western portions of the property. Location SG-4 is the farthest downstream location, west of pumping wells C-6, C-14, C-21 and C-23. The gaging locations are numbered sequentially moving upstream, with SG-5 located near pumping well C-6, SG-6 near pumping well C-14, SG-7 near onsite monitoring wells C-15 and C-18, SG-8 near pumping well C-21 and SG-9 near pumping well C-23. There were no channels upstream of wells C-21 and C-23 where an upstream gaging location could be sited.

<u>SG-4</u>

Gaging location SG-4 is the farthest downstream of the gaging locations on the southern portion of the site. The flows at SG-4 ranged from 0.022 cfs to 0.374 cfs. These flows are equal to a range of 9.9 gpm to 167.9 gpm. Increases in flow were measured following precipitation events, most noticeably on July 7 during the background period prior to the simultaneous pumping test, July 14 during the simultaneous pumping test and on July 24 prior to the start of the individual pumping test. After the rain events, the flow decreased to very low values. There were no discernible changes in flow at SG-4 that appear related to pumping of the onsite bedrock wells during the pumping test periods.

<u>SG-5</u>

Gaging location SG-5 is located near pumping well C-6. The flows at SG-5 ranged from 0.008 cfs to 0.298 cfs. These flows are equal to a range of 3.6 gpm to 133.7 gpm. Increases in flow were measured following precipitation events. After the rain events, the flow would decrease to very low values. There were no discernible changes in flow at SG-5 that appear related to pumping of the onsite bedrock wells during the pumping test periods.

<u>SG-6</u>

Gaging location SG-6 is located near pumping well C-14. The flows at SG-6 ranged from 0.013 cfs to 0.422 cfs. These flows are equal to a range of 5.8 gpm to 198.4 gpm. Increases in flow were measured following precipitation events. After the rain events, the flow would decrease to very low values. There were no discernible changes in flow at SG-6 that appear related to pumping of the onsite bedrock wells during the pumping test periods.

<u>SG-7</u>

Gaging location SG-7 is located near onsite monitoring wells C-15 and C-18. The flows at SG-7 ranged from 0.002 cfs to 0.209 cfs. These flows are equal to a range of 0.9 gpm to 93.8 gpm. Increases in flow were measured following precipitation events. After the rain events, the flow would decrease to very low values. There were no discernible changes in flow at SG-7 that appear related to pumping of the onsite bedrock wells during the pumping test periods.

<u>SG-8</u>

Gaging location SG-8 is located near pumping wells C-21. The flows at SG-8 ranged from no measureable flow (0.000 cfs) to 0.262 cfs. These flows are equal to a range of 0.0 gpm to 117.6 gpm. Increases in flow were measured following precipitation events. After the rain events, the flow would decrease to very low values. There were no discernible changes in flow at SG-8 that appear related to pumping of the onsite bedrock wells during the pumping test periods.

<u>SG-9</u>

Gaging location SG-9 is located near pumping wells C-23. The flows at SG-9 ranged from no measureable flow (0.000 cfs) to 0.118 cfs. These flows are equal to a range of 0.0 gpm to 53.0 gpm. Increases in flow were measured following precipitation events. After the rain events, the flow would decrease to very low values. There were no discernible changes in flow at SG-9 that appear related to pumping of the onsite bedrock wells during the pumping test periods.

SG-4 Through SG-9 Flow Comparison

The stream flow at locations SG-4 through SG-9 generally increased in volume as the upstream watershed area expanded and overland runoff and baseflow increased. However, during rain events some of the more upstream locations would report slightly higher flow values than downstream locations. An example of this was observed during the background monitoring period on July 7 when the flows at SG-6 and SG-8 were higher than their more downstream counterparts. This change is attributed to the flashy nature of the runoff stream-flow in the channel, and the start and stop time of the rain event versus the time of day the channel was gaged.

Overall, the stream channel was gaged between each reach along its length, with the exception of the stretch of the channel between SG-5 and SG-6. During non-precipitation conditions, this section was losing throughout the background, testing and recovery periods. The losing/downward head may be attributed to leakage along the bedrock contact between the Dh and DS bedrock formations which is mapped between SG-6 and SG-5 (Figure 2).

An increase in the loss of water along this stretch of the stream was measured on July 25 and 26 during the early portion of the individual pumping test. However, that condition of increased losing was not sustained, and the values returned to normal by the end of the pumping test period, indicating that the brief increase in loss was

not attributed to pumping and possibly related to post-precipitation recession in the flows. Further support of this conclusion was no drawdown was measured in the nearby bedrock wells or in the piezometers near these gaging locations, which would have also been observed if the change in stream flow was pumping-related impact.

In the absence of precipitation, the flows at all the gaging locations were generally very low (0.1 cfs or less). The flows would increase as a result of rain events, after which the flow would again decrease to very low values. No discernible changes in flows were observed at SG-4 through SG-9 that are attributed to pumping in the onsite wells during the simultaneous pumping test from July 10 through July 16, 1027 or during the individual pumping test on well C-21 from July 25 through July 28, 2017.

13.0 WATER-QUALITY RESULTS

Water samples were collected from wells C-6, C-12, C-14, C-16, C-21 and C-23 during the pumping test program conducted on the wells in July 2017. The samples were submitted to Envirotest Laboratories, Inc. in Newburgh, NY for analysis for all parameters listed in the NYSDOH Sanitary Code, Part 5, Subpart 5-1; for the SOCs dioxin, endothall, glyphosate, and diquat; and for MPA, giardia and cryptosporidium analyses. Copies of the laboratory reports for the samples collected are included in Appendix X.

Follow-up samples were collected from wells C-12 and C-23 in September 23 to address detections reported in the Part 5 samples collected. Copies of the laboratory reports from this sampling event are included in Appendix XI.

13.1 WELL C-6

The sample results from well C-6 met all NYSDOH drinking water standards with the exception of iron, manganese, color and turbidity. The turbidity result for well C-6 was 8.9 nephelometric turbidity units (NTU) which exceeds the NYSDOH drinking water standard maximum contaminant level (MCL) of 5 NTU for turbidity; the color result for C-6 was 20 units which exceeds the MCL of 15 units for color; the iron concentration was 1.21 micrograms per liter (mg/L) which exceeds the MCL of 0.3 mg/L for iron; and the manganese concentration was 0.201 mg/L which does not exceed the individual MCL for manganese of 0.3 mg/L, but does exceed the combined iron and manganese MCL of 0.5 mg/L.

The elevated color and iron concentrations are likely related to the elevated turbidity reported in the well. A dissolved iron analysis was included with the Part 5 analyses completed on C-6. The result of the dissolved iron analysis was not detected (ND) less than 0.06 mg/L. This data indicates that a decrease in turbidity in well C-6 would likely result in a decrease in the iron concentration in the well. Additional pumping to further develop the well is recommended to reduce the turbidity, color and iron concentrations.

The Langlier Index value, which is a measure of corrosivity, reported for well C-6 was -0.810. This value is outside of the desired range of -0.5 to 0.5; however, there is no MCL for this parameter. This value should be taken into consideration in the water treatment design for this well.

The results for the MPA sample from well C-6 reported a low risk for potential GWUDI and giardia and cryptosporidium were not detected.

13.2 WELL C-12

The sample results for well C-12 met all NYSDOH drinking water standards with the exception of the presence of total coliform and e. coli. The bacteria detection in this well is likely the result of the use of the

temporary well appurtenance for the pumping test and the absence of a sanitary sealed well cap on the well during the test period.

Well C-12 was disinfected and resampled in September 2017. The results of the resampling event were absent for total coliform and e. coli.

The results for the MPA sample from well C-12 reported a low risk for potential GWUDI and giardia and cryptosporidium were not detected.

13.3 WELL C-14

The sample results for well C-14 met all NYSDOH drinking water standards with the exception of iron, manganese, color and turbidity. The turbidity result for C-14 was 11.6 nephelometric turbidity units (NTU) which exceeds the MCL of 5 NTU; the color result for C-14 was 20 units which exceeds the MCL of 15 units; the iron concentration was 1.19 mg/L which exceeds the MCL of 0.3 mg/L; and the manganese concentration was 0.285 mg/L which does not exceed the individual MCL for manganese of 0.3 mg/L, but does exceed the combined iron and manganese MCL of 0.5 mg/L.

The elevated color and iron concentrations are likely related to the elevated turbidity reported in the well. The result of the dissolved iron analysis completed on the well C-14 sample was not detected (ND) less than 0.06 mg/L. This data indicates that a decrease in turbidity in well C-14 would likely result in a decrease in the iron concentration. Additional pumping to further develop the well is recommended to reduce the turbidity, color and iron concentrations.

The Langlier Index value for the Part 5 samples collected from C-14 was -0.690. This value is outside of the desired range of -0.5 to 0.5; however, there is no MCL for this parameter. This value should be taken into consideration in the water treatment design for this well.

The results for the MPA sample from well C-14 reported a low risk for potential GWUDI and giardia and cryptosporidium were not detected.

13.4 WELL C-16

The sample results for well C-16 met all NYSDOH drinking water standards with the exception of iron, manganese, color and turbidity. The turbidity result for C-16 was 13.0 NTU which exceeds the MCL of 5 NTU; the color result for C-16 was 30 units which exceeds the MCL of 15 units; the iron concentration was 1.05 mg/L which exceeds the MCL of 0.3 mg/L; and the manganese concentration was 0.373 mg/L which exceeds the MCL for manganese of 0.3 mg/L and the combined iron and manganese MCL of 0.5 mg/L.

The elevated color and iron concentrations are likely related to the elevated turbidity reported in the well. The result of the dissolved iron analysis completed on the sample from C-16 was not detected (ND) less than 0.06 mg/L. This data indicates that a decrease in turbidity in well C-16 would likely result in a decrease in the iron concentration. Additional pumping to further develop the well is recommended to reduce the turbidity, color and iron concentrations.

The dissolved manganese result was 0.381 mg/L which was similar to the total manganese concentration. Treatment to reduce manganese may be warranted.

The sodium concentration reported in C-16 was 21.1 mg/L which is slightly above the reporting limit of 20 mg/L for people on sodium restricted diets, but below the recommended limit of 270 mg/L. The NYSDOH does not currently have an MCL for sodium.

The results for the MPA sample from well C-16 reported a low risk for potential GWUDI and giardia and cryptosporidium were not detected.

13.5 WELL C-21

The sample results for well C-21 met all NYSDOH drinking water standards with the exception of iron, manganese, color and turbidity. The turbidity result for C-21 was 17.6 NTU which exceeds the MCL of 5 NTU; the color result for C-21 was 75 units which exceeds the MCL of 15 units; the iron concentration was 7.74 mg/L which exceeds the MCL of 0.3 mg/L; and the manganese concentration was 1.79 mg/L which exceeds the MCL for manganese of 0.3 mg/L and the combined iron and manganese MCL of 0.5 mg/L.

The elevated color and iron concentrations are likely related to the elevated turbidity reported in the well. The result of the dissolved iron analysis conducted on the sample from C-21 was 1.09 mg/L, a significant reduction in concentration, but still above the MCL of 0.3 mg/L. This data indicates that a decrease in turbidity in well C-21 would likely result in a decrease in the iron concentration. The dissolved manganese result was 1.89 mg/L which was similar to the total manganese concentration reported. Additional pumping to further develop the well is recommended to reduce the turbidity, color and iron concentrations. However, treatment to reduce iron and manganese concentration.

The Langlier Index value for the Part 5 samples collected from C-21 was -2.95. This value is outside of the desired range of -0.5 to 0.5; however, there is no MCL for this parameter. This value should be taken into consideration in the water treatment design for this well.

The results for the MPA sample from well C-21 reported a low risk for potential GWUDI and giardia and cryptosporidium were not detected.

13.6 WELL C-23

The sample results for well C-23 met all NYSDOH drinking water standards with the exception of iron, manganese, color and turbidity. The turbidity result for C-23 was 35.7 NTU which exceeds the MCL of 5 NTU;

the color result for C-23 was 75 units which exceeds the MCL of 15 units; the iron concentration was 6.70 mg/L which exceeds the MCL of 0.3 mg/L; and the manganese concentration was 1.73 mg/L which exceeds the MCL for manganese of 0.3 mg/L and the combined iron and manganese MCL of 0.5 mg/L.

The elevated color and iron concentrations are likely related to the elevated turbidity reported in the well. The result of the dissolved iron analysis completed on the sample from C-23 was 2.97 mg/L, a significant reduction in concentration, but still above the MCL of 0.3 mg/L. This data indicates that a decrease in turbidity in well C-23 would likely result in a decrease in the iron concentration.

The dissolved manganese result was 1.74 mg/L which was similar to the total manganese concentration reported. Additional pumping to further develop the well is recommended to reduce the turbidity, color and iron concentrations. However, treatment to reduce iron and manganese concentrations may still be warranted.

The Langlier Index value for the Part 5 samples collected from C-23 was -1.96. This value is outside of the desired range of -0.5 to 0.5; however, there is no MCL for this parameter. This value should be taken into consideration in the water treatment design for this well.

A very small detection of benzo(a) pyrene was reported in the sample from well C-23. The reported concentration was 0.032J micrograms per liter (ug/L). The qualifier "J" included in the reported concentration indicates that the value reported was below the practical quantitation limit but above the method detection limit for the analytical method. The reported concentration of 0.032J ug/L is below the MCL for benzo(a) pyrene of 0.2 ug/L.

Well C-23 was resampled for benzo(a)pyrene in September 2017 to confirm the presence of the detection. The September 2017 sample reported no detection of benzo(a)pyrene.

The results for the MPA sample from well C-23 reported a low risk for potential GWUDI and giardia and cryptosporidium were not detected.

14.0 PHYSICAL PARAMETER MEASUREMENTS

Physical parameter measurements of pH, conductivity and temperature were collected from the pumping wells and nearby surface-water features during the pumping tests. Conductivity and pH measurements were collected using a HORIBA water-quality meter. Temperature measurements were recorded using pressure transducers. For the surface-water features, temperature measurements used in the comparison were taken from the pressure transducers installed on the exterior of the closest piezometer or, if insufficient surface water was present, from the interior of the nearest shallow-screened piezometer. The parameters were measurements and graphs of the data collected are included in Appendix XII.

14.1 WELL C-6

Conductivity measurements were collected from the well C-6 discharge water and from the surface water in the stream channel near the well at the location of PZ-5. The conductivity values measured in the well's discharge water were in the range of 0.32 milliSiemen per centimeter (mS/cm) to 0.27 mS/cm and in the surface water conductivity ranged from 0.15 mS/cm to 0.05 mS/cm. The conductivity values measured in the groundwater were consistently higher than the values measured in the nearby surface water.

The temperature values measured in the groundwater in well C-6 were consistently lower than the temperature values measured in the surface water. The surface-water temperature showed daily fluctuations, increasing and decreasing with changes in ambient air temperature. The groundwater in well C-6 did not show the same daily fluctuating pattern.

The pH measurements in the well's discharge water and nearby surface water were all in the range of approximately 6.75 to 8.25. Both measuring locations showed some variation during the monitoring period; however, no significant changes in values occurred which would indicate direct influence effects.

The physical parameter data collected from well C-6 and the nearby surface water do not indicate a high potential for GWUDI in well C-6.

14.2 WELL C-12

Conductivity measurements were collected from the well C-12 discharge water and from surface water in the stream channel near the location of PZ-1. The conductivity values measured in the well's discharge water were in the range of 0.32 mS/cm to 0.27 mS/cm and in the surface water ranged from 0.16 mS/cm to 0.06 mS/cm. The conductivity values measured in the groundwater were consistently higher than the values measured in the nearby surface water.

Temperature values from the groundwater in well C-12 and from the interior of the shallow-screened piezometer at PZ-1 have been compared. The temperature values were consistently lower in the well water compared to the temperatures measured in the shallow groundwater in PZ-1.

The pH measurements in the well's discharge water and nearby surface water were all in the range of approximately 7.0 to 8.0 during the data collection period. Both measuring locations showed some variation during the monitoring period; however, no significant changes in values occurred which would indicate direct influence effects.

The physical parameter data collected from well C-12 and the nearby surface water do not indicate a high potential for GWUDI in well C-12.

14.3 WELL C-14

Conductivity measurements were collected from the well C-14 discharge water and the surface water in the stream channel near the location of PZ-6. The conductivity values measured in the well's discharge water were in the range of 0.30 mS/cm to 0.22 mS/cm and in the surface water ranged from 0.10 mS/cm to 0.05 mS/cm. The conductivity values measured in the groundwater were consistently higher than the values measured in the nearby surface water.

The temperature values measured in the groundwater were lower in well C-14 than in the nearby surface water during the pumping test period. The surface-water temperature showed daily fluctuations, increasing and decreasing with changes in ambient air temperature. The groundwater in well C-14 did not show the same daily fluctuating pattern.

The pH measurements in the well discharge water and nearby surface water were all in the range of approximately 6.0 to 7.5 during the data collection period. Both measuring locations showed some variation during the monitoring period; however, no significant changes in values occurred which would indicate direct influence effects.

The physical parameter data collected from well C-14 and the nearby surface water do not indicate a high potential for GWUDI in well C-14.

14.4 WELL C-16

Physical parameter measurements of pH and conductivity were collected from the discharge water from well C-16, but there was no standing surface water within 200 feet of the well to measure during the test period. Therefore, no pH or conductivity measurements could be collected from surface water near well C-16 for comparison.

Although there was no surface water nearby for comparison, the pH and conductivity values measured in well C-16 were consistent with the values measured in other onsite pumping wells. The conductivity values in C-16 ranged from 0.40 mS/cm to 0.32 mS/cm and the pH ranged from 6.8 to 7.8.

Temperature values were collected from the interior of the shallow-screen piezometer at the PZ-16 location and from the pumping well. The temperature values in well C-16 were consistently lower than the temperatures measured in the piezometer.

The physical parameter data from well C-16 do not indicate a high potential for GWUDI in well C-16.

14.5 WELL C-21

Conductivity measurements were collected from the well C-21 discharge water and from surface water at the location of PZ-8. The conductivity values measured in the well's discharge water were in the range of 0.12 mS/cm to 0.11 mS/cm and in the surface water ranged from 0.06 mS/cm to 0.04 mS/cm. The conductivity values measured in the groundwater were consistently higher than the values measured in the nearby surface water.

The temperature values measured in the groundwater in well C-21 were lower than in the nearby surface water during the pumping test period. The surface-water temperature showed some daily fluctuations, increasing and decreasing with changes in ambient air temperature. The groundwater in well C-21 did not show the same daily fluctuating pattern.

The pH measurements in the well discharge water ranged from approximately 5.0 to 7.0 and nearby surface water were all in the range of approximately 4.0 to 6.25 during the data collection period. Both measuring locations showed some variation during the monitoring period; however, no significant changes in values occurred which would indicate direct influence effects.

The physical parameter data collected from well C-21 and the nearby surface water do not indicate a high potential for GWUDI in well C-21.

14.6 WELL C-23

Conductivity measurements were collected from the well C-23 discharge water and from surface water near the well. The conductivity values measured in the well's discharge water were in the range of 0.16 mS/cm to 0.12 mS/cm and in the surface water ranged from 0.13 mS/cm to 0.05 mS/cm. The conductivity values measured in the groundwater were consistently higher than the values measured in the nearby surface water with the exception of one measurement collected for the surface water on July 10.

Temperature values for the groundwater in well C-23 and from the interior of the shallow-screened piezometer at PZ-9 have been compared. The temperature values were consistently lower in the well compared to the temperatures measured in PZ-9.

The pH measurements in the well's discharge water and nearby surface water were all in the range of approximately 5.5 to 7.5 during the data collection period. Both measuring locations showed some variation during the monitoring period; however, no significant changes in values occurred which would indicate direct influence effects.

The physical parameter data collected from well C-23 and the nearby surface water do not indicate a high potential for GWUDI in well C-23.

15.0 CONCLUSIONS

- The average water demand for the Clovewood project calculated based on the March 2014 New York State Design Standards for Intermediate Sized Wastewater Treatment Systems water usage rate of 110 gpd/bedroom for 600, 4-bedroom residential units is 264,000 gpd or 183.3 gpm. The NYSDOH requires that a new water system demonstrate twice the average water demand of a proposed development with the best well out of service. Therefore, to meet this NYSDOH requirement, the water system must be capable of pumping 528,000 gpd or 366.7 gpm with the best well out of service.
- The applicant may also consider the inclusion of swimming pools/bath houses in the proposed development. The water usage rate for a swimming pool/bath house is based on 10 gpd per swimmer with an allowed 20% reduction for the use of water saving fixtures. Assuming 2 swimmers per residential unit, the additional water demand would be 9,600 gpd or 6.7 gpm. Adding this demand to the proposed 600 units, the combined average water demand with the bath houses is 273,600 gpd or 190 gpm and twice the demand is 547,200 gpd or 380 gpm.
- A simultaneous pumping test was conducted on proposed bedrock water-supply wells C-6, 12, 14, 16 and 23 located on the Clovewood property. Well pumping was started on July 10, 2017. A staggered start up schedule of the wells was utilized to assess potential pumping-related interference effects between the wells. The pumping test was ended on the early morning of July 16, 2017. The wells were pumped concurrently for approximately 5.5 days and demonstrated stabilized yields of 45 gpm, 40.5 gpm, 157 gpm, 50 gpm and 90 gpm, respectively, for a combined total yield of 382.5 gpm or 550,800 gpd.
- Initially, wells C-7B and C-21 were also included in the simultaneous pumping test. The wells were started on July 10 along with the other five wells. However, offsite water-level impacts were observed which were attributed to pumping in well C-7B. Because of the impacts, it was determined that the test on well C-7B would be ended and that well C-7A, which was proposed to be tested as the best well during the follow up test, would also be excluded from the testing program to avoid further offsite impacts. Therefore, well C-21 was reassigned the role of the best well. As a result, the pumps in wells C-7B and C-21 were shut down on July 12 and the simultaneous pumping test continued without these wells.
- Wells C-6, 12, 14, 16 and 23 all demonstrated a water-level change of less than 0.5 per 100 feet of available drawdown in each well over the final 6 hours of the pumping test period per Section 3.a.i of the NYSDEC Pumping Test Procedures document. However, several of the wells did have a slight declining trend in water level at the end of the test period (Section 3.a.ii), therefore in accordance with Section 3.b of the NYSDEC Pumping Test Procedures guidance document, further analysis was conducted by completing 180-day water-level drawdown projections to further assess the pumping test data. The 180-day water-level drawdown projections show that the water level in wells C-6, 12, 16 and 23 remained above the pump settings used during the pumping test period with a margin of more than 5% of the available water column in the well in accordance with NYSDEC guidelines. The projected water-level drawdown in well C-14 did not meet the 5% requirement; therefore the pump in well C-14 will need to be set lower in the well to achieve the required 5%.

- Following shut down of the simultaneous pumping test on July 16, water-level recovery measurements were collected from the wells. The water levels in wells C-6, 12, 14, 16 and 23 reached 90% recovery to their pretest levels in 57 hours, 13 hours, 62 hours, 70 hours and 103 hours, respectively, and continued to rise.
- Well C-21 was tested individually as the best well between July 25 and 28, 2017. The well was pumped for 72.5 hours. The pumping rate demonstrated during the test period was 163 gpm. The drawdown over the final 6 hours of the test period in the well was less than 0.5 foot per 100 feet of available drawdown in the well. However, there was a slight declining trend in the water level at the end of the test period, so a 180-day water-level drawdown projection was conducted in accordance with Section 3.b of the NYSDEC Pumping Test Procedures document. The 180-day water-level drawdown projection shows that the water level in well C-21 remained above the pump setting used during the pumping test period with a margin of more than 5% of the available water column in the well in accordance with NYSDEC guidelines.
- Water-level recovery data was collected from well C-21 following the end of the test on July 28. The water level in well C-21 reached 90% recovery to the pre-test static level 98.5 hours after shut down of the test and continued to rise.
- A drought assessment was conducted based on the precipitation and bedrock groundwater levels which occurred during the 1960's drought in the region. Precipitation information from the Port Jervis weather station and the USGS bedrock monitoring well RO-18 were utilized to assess the effect a long-term drought would have on the groundwater levels on the Clovewood property. The assessment indicated that under severe drought conditions, a decline in water level between -0.29 and -1.14 feet would occur in the Clovewood wells compared to the July 2017 water levels. It is also noteworthy that the regional conditions over the last 5 years (2012 to the present) have been dry, with a cumulative precipitation rate that was -13% below normal, and that regional water levels were already somewhat low because of the dry conditions when the pumping test program was conducted.
- Groundwater recharge to the bedrock aquifer underlying the study property was calculated using a recharge rate for metasedimentary bedrock of 625 gpd/acre and an estimated area of potential recharge to the bedrock aquifer underlying the Clovewood site of about 1,177 acres. Based on these values, the recharge to bedrock under normal precipitation conditions is approximately 735,600 gpd. Under one-year-in-30 drought conditions, the estimated average recharge rate would decrease about 31% to approximately 507,600 gpd or 352.5 gpm. This drought recharge rate exceeds the average water demand of the proposed 600, four-bedroom units of 183.3 gpm. The drought recharge also exceeds the average water demand of the project with the potential inclusion of swimming pools/bath houses within the development of 190 gpm.
- As part of the pumping test program, water-level measurements were collected from 17 onsite monitoring wells to assess drawdown in the aquifer. In addition, the seven wells pumped during the testing program (C-6, 7B, 12, 14, 16, 21 and 23) were also used as monitoring locations when they were not actively pumping. Water-level drawdown was measured in the all of the onsite wells during the simultaneous pumping test. The drawdown measured during this test has been separated into drawdown attributed to pumping in wells C-6, 12, 14, 16 and 23. Drawdown effects were measured in 10 of the onsite monitoring wells from pumping in well C-7B and ranged from none discernible in seven of the onsite

wells to 44.5 feet in well C-7A. Drawdown was measured in 16 of the onsite wells from pumping in wells C-6, 12, 14, 16 and 23. In wells were drawdown was measured, the values ranged from 0.6 foot to 120.7 feet. During the individual pumping test conducted on well C-21, water-level drawdown was measured in three onsite wells. In the wells where drawdown was measured, the drawdown ranged from 15.8 feet to 93.5 feet.

- Water-level measurements were also collected from 16 offsite wells and a flowing spring on Route 208 during the pumping test program. No discernible water-level impacts were observed that were attributed to pumping in wells C-6, 12, 14, 16 and 23 during the simultaneous pumping test or to pumping well C-21 during the individual pumping test. Offsite water-level impacts were observed that were attributed to pumping in well C-7B. Drawdown was observed in five offsite wells and the spring on Route 208. The drawdown ranged from 4.5 feet to 24.5 feet. After the pumping of well C-7B was ended, the water levels in the impacts offsite wells and the flow at the spring recovered.
- Water-level measurements were collected from eight piezometer locations on the project site. A piezometer location was set up in surface-water features near each of the pumping wells and a location was also set up near onsite monitoring well C-22. The water-level data collected from the piezometers at PZ-1, PZ-5, PZ-6, PZ-9, PZ-16, PZ-Pond and PZ-22 did not appear to show pumping-related water-level drawdown in the groundwater and/or surface water during either test period.
- There was no discernible effect on the surface water at PZ-8 from onsite pumping. However, in the piezometer at PZ-8 a change in the groundwater level was observed during the pumping tests that could potentially be pumping related. Additional monitoring of the shallow groundwater at this location may be warranted to conduct an assessment of whether the change was naturally occurring or a result of onsite pumping. A similar change in the groundwater trend was also observed at PZ-9, which is located in the same upland setting as PZ-8. This change in trend at PZ-9 was attributed to natural groundwater conditions because the change took place under pumping and non-pumping conditions. However, if additional monitoring at PZ-8 is conducted, additional data collection from PZ-9 is recommended to provide supplemental information.
- Stream-flow measurements were collected from nine gaging locations during the pumping test period. The stream-flow data collected showed variation as a result of precipitation received during the background, testing and recovery periods, but no discernible change in flow was measured that is attributed to pumping in the onsite wells.
- Water samples were collected from the onsite wells during their respective pumping periods and analyzed for the parameters required by the NYSDOH Sanitary Code Part 5, Subpart 5-1 for community water-supply wells and for the extra compounds of dioxin, endothall, diquat and glyphosate. In addition, MPA, giardia and cryptosporidium samples were collected from all of the wells because they are located within 200 feet of surface-water bodies.
- The results of the water samples collected from the six proposed supply wells met all NYSDOH drinking water standards with the exception of iron, manganese, color and turbidity concentrations in wells C-6, 14, 16, 21 and 23; the presence of total coliform and e. coli bacteria in well C-12; and a slightly elevated sodium concentration in well C-16. Following the completion of the pumping test program, well C-12 was disinfected and resampled

for total coliform and E.coli. The results from the resampling event were absent for total coliform. Overall, the elevated iron, manganese and color concentrations reported are likely the result of the elevated turbidity concentrations reported in the wells. Dissolved iron and manganese samples were analyzed from the wells and showed significantly lower concentrations. Additional pumping to further develop the wells and reduce turbidity concentrations will likely be successful in reducing the iron, manganese and color values reported. However, in the case of wells C-21 and C-23, the dissolved iron and manganese may still be needed for these wells. The sodium concentration in well C-16 was 21.1 mg/L, which was slightly above the reporting limit of 20.0 mg/L. No treatment to reduce the sodium concentration is required, as the exceedance of a notification level only.

- Langlier Index values in wells C-6, C-14, C-21 and C-23 were -0.810, -0.690, -2.95 and -1.96, respectively, which are outside of the desired range of -0.5 to 0.5; however, there is no MCL value for this parameter. These Langlier Index values should be taken into consideration in the water treatment design for this well.
- A trace detection of benzo(a)pyrene was reported in the sample from well C-23 at a concentration of 0.032J micrograms per liter (ug/L). The qualifier "J" included in the reported concentration indicates that the value reported was below the practical quantitation limit but above the method detection limit for the analytical method. The reported concentration of 0.032J ug/L is below the MCL for benzo(a)pyrene is 0.2 ug/L. Well C-23 was resampled for benzo(a)pyrene in September 2017 to confirm the presence of the detection. The September 2017 sample reported no detection of benzo(a)pyrene above the practical quantitation limit or the method detection limit.
- Physical parameters measurements of temperature, pH and conductivity were collected from the pumping wells and nearby surface-water features (where surface water was present) during their respective pumping tests as part of an assessment for potential GWUDI. The physical parameter data collected does not indicate a high risk of potential GWUDI in any of the onsite pumping wells.
- The results for the MPA samples collected from all of the wells were reported to be low risk for potential GWUDI and all of the samples reported none detected for giardia and cryptosporidium.

cmm January 31, 2019 H:\Lake Anne\Clovewood\2019\July 2017 Pumping Test Rpt - Revised January\Revised Text.docx

FIGURES









	LEGEND
	PROPERTY BOUNDARY
٠	PUMPING WELL LOCATION
+	ONSITE MONITORING WELL LOCATION
	FAULT
	GEOLOGIC CONTACT
	FRACTURE TRACE
\sim	WETLAND NYSDEC (STATE)
\sim	WETLAND FEDERAL
BG-3	MUNICIPAL/COMMUNITY BEDROCK SUPPLY WELL - IN SERVICE
Ф WB-23	MUNICIPAL/COMMUNITY BEDROCK SUPPLY WELL - NOT IN SERVICE
On	MARTINSBURG FORMATION - SHALE, SILTSTONE, SANDSTONE AND GRAYWACKE
mu	UNDIFFERENTIATED GNEISS
Dh	UNDIFFERENTIATED HAMILTON GROUP - SHALE, SILTSTONE AND SANDSTONE IN EASTERN ORANGE COUNTY: SKUNEMUNK FORMATION - SANDSTONE, CONGLOMERATE; BELLVALE FORMATION - SHALE, SANDSTONE AND GRAYWACKE; CORNWALL SHALE
Ds	UNDIFFERENTIATED LOWER DEVONIAN AND SILURIAN ROCKS. IN ORANGE COUNTY: KANOUSE SANDSTONE; WOODBURY CREEK FORMATION - SHALE, SANDSTONE; ESOPUS SHALE; CONNELLY CONGLOMERATE; CENTRAL VALLEY SANDSTONE
OEw	WAPPINGER GROUP - LIMESTONE, DOLOMITE AND SHALE
481 CLOVE RD	OFFSITE MONITORING LOCATION

4

STRATIFIED SAND AND GRAVEL AT LAND SURFACE AND ABOVE THE WATER TABLE

		0 <u>15</u> 00
		SCALE IN FEET
	CI	OVEWOOD PROPERTY
	VILLAGE	OF SOUTH BLOOMING GROVE
	BLA	GGS CLOVE, NEW YORK
	OCW	A-HYDROGEOLOGIC FEATURES
Έ	REVISED	IBG HYDROGEOLOGIC & ENGINEERING SERVICES PC

		Men o Wi	nber f SP	4 Research Suite Shelton, Conno (203) 92	ch Drive 204 ecticut 06484 9-8555	1	
		33101141 0	cologists	de Environmenta	i Engineers		
	Professional Geologists			& Environmenta	l Engineers		
-	LEG HIDROGEOLOGIC & ENGINEERING SERVICES, P.C.				~·		





	LEGEND
	PROPERTY BOUNDARY
•	PUMPING WELL LOCATION
+	ONSITE MONITORING WELL LOCATION
	FAULT
	GEOLOGIC CONTACT
	FRACTURE TRACE
\sim	WETLAND NYSDEC (STATE)
\sim	WETLAND FEDERAL
BG-3	MUNICIPAL/COMMUNITY BEDROCK SUPPLY WELL - IN SERVICE
⊕ WB-23	MUNICIPAL/COMMUNITY BEDROCK SUPPLY WELL - NOT IN SERVICE
On	MARTINSBURG FORMATION - SHALE, SILTSTO SANDSTONE AND GRAYWACKE
mu	UNDIFFERENTIATED GNEISS
Dh	UNDIFFERENTIATED HAMILTON GROUP - SHA SILTSTONE AND SANDSTONE IN EASTERN OF COUNTY: SKUNEMUNK FORMATION - SANDST CONGLOMERATE; BELLVALE FORMATION - SH SANDSTONE AND GRAYWACKE; CORNWALL
Ds	UNDIFFERENTIATED LOWER DEVONIAN AND SILURIAN ROCKS. IN ORANGE COUNTY: KANO SANDSTONE; WOODBURY CREEK FORMATIO SHALE, SANDSTONE; ESOPUS SHALE; CONNE CONGLOMERATE; CENTRAL VALLEY SANDSTO
DEw	WAPPINGER GROUP - LIMESTONE, DOLOMITE SHALE
1 CLOVE RD	OFFSITE MONITORING LOCATION
	LOCAL RECHARGE BOUNDARY

		I DC UVDD	OCEOI	OCIC &	FUCINEEDIN	AC CEDVIC	TC DC
			OOLOL	0010 0	C ENGINEERI	NO SERVIC	ло, г.С.
		Profe	ssional G	eologists	& Environmenta	l Engineers	
			Men o	nber f	4 Researc Suite	ch Drive 204	
			W	SP	Shelton, Conne	ecticut 06484	ŀ
			•••		(203) 92	9-8555	
AWN:	RAC	CHECKED:	SS	DATE:	10/26/17	FIGURE:	3



		LEGEND
		PROPERTY BOUNDARY
	•	PUMPING WELL LOCATION
•	\$	ONSITE MONITORING WELL LOCATION
		FAULT
		GEOLOGIC CONTACT
		FRACTURE TRACE
С	\sim	WETLAND NYSDEC (STATE)
С	\sim	WETLAND FEDERAL
B	∲ }—3	MUNICIPAL/COMMUNITY BEDROCK SUPPLY WELL - IN SERVICE
WB	⊕ I−23	MUNICIPAL/COMMUNITY BEDROCK SUPPLY WELL - NOT IN SERVICE
С	n	MARTINSBURG FORMATION - SHALE, SILTSTONE, SANDSTONE AND GRAYWACKE
n	าน	UNDIFFERENTIATED GNEISS
C)h	UNDIFFERENTIATED HAMILTON GROUP - SHALE, SILTSTONE AND SANDSTONE IN EASTERN ORANGE COUNTY: SKUNEMUNK FORMATION - SANDSTONE, CONGLOMERATE; BELLVALE FORMATION - SHALE, SANDSTONE AND GRAYWACKE; CORNWALL SHALE
C)s	UNDIFFERENTIATED LOWER DEVONIAN AND SILURIAN ROCKS. IN ORANGE COUNTY: KANOUSE SANDSTONE; WOODBURY CREEK FORMATION - SHALE, SANDSTONE; ESOPUS SHALE; CONNELLY CONGLOMERATE; CENTRAL VALLEY SANDSTONE
O	Ξw	WAPPINGER GROUP - LIMESTONE, DOLOMITE AND SHALE
81 CI		OFFSITE MONITORING LOCATION
er or or	5.8	DRAWDOWN MEASURED
-	<u>1/</u>	LEVEL OF DRAWDOWN COULD NOT BE QUANTIFIED FROM AVAILABLE DATA
1	ND	NONE DISCERNIBLE
		APPROXIMATE AREA OF INFLUENCE FROM WELL C-7B PUMPING BASE ON WATER-LEVEL DRAWDOWN OBSERVATIONS, DASHED WHERE INFERRED
	4	STRATIFIED SAND AND GRAVEL AT LAND SURFACE AND ABOVE THE WATER TABLE 0 1500
		SCALE IN FEET
Ţ		CLUVEWOOD PROPERTY SE OF SOUTH BLOOMING GROVE
	B	LAGGS CLOVE, NEW YORK
	OCW	VA MAP - WATER-LEVEL DRAWDOWN
TE	REVISED	ASSESSMENT FOR WELL C-7/B
		LBG HYDROGEOLOGIC & ENGINEERING SERVICES, P.C. Professional Geologists & Environmental Engineers
		Member 4 Research Drive B of Suite 204
		WSP Shelton, Connecticut 06484 (203) 929-8555
AWN:	RAC	CHECKED: SS DATE: 10/26/17 FIGURE: 4


WN:	RAC	CHECKED: SS DATE: 10/26/17 FIGURE: 5
		WSP Shelton, Connecticut 06484 (203) 929-8555
		Member 4 Research Drive
£	REVISED	LBG HYDROGEOLOGIC & ENGINEERING SERVICES, P.C.
	FOR W	ELLS C-6, C-12, C-14, C-16 AND C-23
00	DLA CWA MAP - V	VATER-LEVEL DRAWDOWN ASSESSMENT
١	VILLAGE	OF SOUTH BLOOMING GROVE
	Cl	LOVEWOOD PROPERTY
		SCALE IN FEET
	4	STRATIFIED SAND AND GRAVEL AT LAND SURFACE AND ABOVE THE WATER TABLE 0 1500
		DASHED WHERE INFERRED
		C-6, C-12, C-14, C-16 AND C-23 PUMPING BASE ON WATER-LEVEL DRAWDOWN OBSERVATIONS
	ND	
	121.7	
481	CLOVE RD	OFFSITE MONITORING LOCATION
C)Ew	WAPPINGER GROUP - LIMESTONE, DOLOMITE AND SHALE
	US	UNDIFFERENTIATED LOWER DEVONIAN AND SILURIAN ROCKS. IN ORANGE COUNTY: KANOUSE SANDSTONE; WOODBURY CREEK FORMATION - SHALE, SANDSTONE; ESOPUS SHALE; CONNELLY CONGLOMERATE; CENTRAL VALLEY SANDSTONE
		SILTSTONE AND SANDSTONE IN EASTERN ORANGE COUNTY: SKUNEMUNK FORMATION - SANDSTONE, CONGLOMERATE; BELLVALE FORMATION - SHALE, SANDSTONE AND GRAYWACKE; CORNWALL SHALE
	Dh	UNDIFFERENTIATED HAMILTON GROUP - SHALE,
	mu	
	On	MARTINSBURG FORMATION - SHALE, SILTSTONE,
١	Ф WB-23	MUNICIPAL/COMMUNITY BEDROCK SUPPLY WELL - NOT IN SERVICE
	BG-3	MUNICIPAL/COMMUNITY BEDROCK SUPPLY WELL - IN SERVICE
		WETLAND FEDERAL
	\sim	WETLAND NYSDEC (STATE)
		FRACTURE TRACE
		GEOLOGIC CONTACT
	•	FAULT
	•	ONSITE MONITORING WELL LOCATION
	•	
		LEGEND



	LEGEND
	PROPERTY BOUNDARY
٠	PUMPING WELL LOCATION
\	ONSITE MONITORING WELL LOCATION
	FAULT
	GEOLOGIC CONTACT
	FRACTURE TRACE
\sim	WETLAND NYSDEC (STATE)
\sim	WETLAND FEDERAL
BG-3	MUNICIPAL/COMMUNITY BEDROCK SUPPLY WELL - IN SERVICE
⊕ ₩B-23	MUNICIPAL/COMMUNITY BEDROCK SUPPLY WELL - NOT IN SERVICE
On	MARTINSBURG FORMATION - SHALE, SILTSTONE, SANDSTONE AND GRAYWACKE
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OEw	WAPPINGER GROUP - LIMESTONE, DOLOMITE AND SHALE
	OFFSITE MONITORING LOCATION
121.7	DRAWDOWN MEASURED
ND	NONE DISCERNIBLE
	APPROXIMATE AREA OF INFLUENCE FROM WELL C-21 PUMPING BASE ON WATER-LEVEL DRAWDOWN OBSERVATIONS, DASHED WHERE INFERRED
4	STRATIFIED SAND AND GRAVEL AT LAND SURFACE AND ABOVE THE WATER TABLE 0 1500
	SCALE IN FEET
С	LOVEWOOD PROPERTY
VILLAGE	OF SOUTH BLOOMING GROVE
BLA	AGGS CLOVE, NEW YORK
OCWA	MAP - WATER-LEVEL DRAWDOWN ASSESSMENT FOR WELL C-21
TE REVISED	- LBG HYDROGEOLOGIC & ENGINEERING SERVICES, P.C. Professional Geologists & Environmental Engineers
	Member 4 Research Drive of Suite 204 WSP Shelton, Connecticut 06484 (203) 929 8555
WN: RAC	CHECKED: SS DATE: 10/26/17 FIGURE: 6

APPENDIX I

Stacy Stieber

From:	Miller, Keith <kmiller@orangecountygov.com></kmiller@orangecountygov.com>
Sent:	Wednesday, March 8, 2017 1:29 PM
То:	mayor@villageofsouthbloominggrove.com; Stacy Stieber
Cc:	Miller, Keith; Sims, Ed
Subject:	FW: Clovewood Pumping Test Plan_Village of South Blooming Grove
Attachments:	Pumping Test Plan_Sept 2016.pdf; Well Log_7A after deepening.pdf; Well Logs C-7A
	through C-12.pdf; Well Logs C-14 through 17.pdf; Well Logs C-4 through C-7.pdf; Well
	Logs C-18 through C-23 and C-7B.PDF

Dear Mayor Jeroloman & Ms. Stieber:

The NYSDOH has reviewed the attached materials and offers their comments below. OCHD has no comments beyond those of the NYSDOH.

Best regards,

km

Keith Miller, P.E. Sr. Public Health Engineer Orange County Health Dept. 124 Main St., Goshen, NY 10924 PH: 845-291-2331, FX: 845-291-4078 KMiller@OrangeCountyGov.com

From: Rogers, Brock (HEALTH) [mailto:brock.rogers@health.ny.gov]
Sent: Wednesday, March 08, 2017 11:33 AM
To: Pan, Minzi (HEALTH)
Cc: Miller, Keith
Subject: RE: Clovewood Pumping Test Plan_Village of South Blooming Grove

Minzi,

I have reviewed the proposed Clovewood pumping test plan. My only comment is that in addition to conducting GWUDI testing (i.e., MPA, giardia, crypto, pH, conductivity, temperature) for wells located within 200 feet of surface water, the same should be done for wells completed in a carbonite aquifer. Many of the well logs identify limestone; some logs do not indicate the rock type.

Feel free to forward this on to LBG and the Village.

Brock Rogers, P.E.

Professional Engineer 1 Bureau of Water Supply Protection

New York State Department of Health Empire State Plaza, Corning Tower, Room 1135, Albany, NY 12237 518-402-7650 | <u>brock.rogers@health.ny.gov</u> www.health.ny.gov/environmental/water/drinking/

From: Pan, Minzi (HEALTH) Sent: Friday, February 17, 2017 3:55 PM To: Rogers, Brock (HEALTH) <<u>brock.rogers@health.ny.gov</u>> Cc: Miller, Keith <<u>KMiller@orangecountygov.com</u>> Subject: RE: Clovewood Pumping Test Plan_Village of South Blooming Grove

Hi Brock,

LBG is targeting around the end of March/early April to start the well testing. It could be weather dependent.

Minzi

From: Rogers, Brock (HEALTH) Sent: Friday, February 17, 2017 3:49 PM To: Pan, Minzi (HEALTH) <<u>Minzi.Pan@health.ny.gov</u>> Cc: Miller, Keith <<u>KMiller@orangecountygov.com</u>> Subject: FW: Clovewood Pumping Test Plan_Village of South Blooming Grove

Minzi,

Has the pump test already been done? I'd be happy to take a look at the plan but I don't want to spend time reviewing it just to find out the test was already done.

Brock

From: Montysko, Michael J (HEALTH) Sent: Thursday, February 16, 2017 3:47 PM To: Rogers, Brock (HEALTH) <<u>brock.rogers@health.ny.gov</u>> Subject: FW: Clovewood Pumping Test Plan_Village of South Blooming Grove

Please get back to Minzi

Michael J. Montysko, P.E. Chief, Design Section NYS DOH Bureau of Water Supply Protection Empire State Plaza Corning Tower Rm. 1135 Albany, NY 12237 Ph. 518-402-7650 Fx. 518-402-7599 michael.montysko@health.ny.gov



From: Pan, Minzi (HEALTH) Sent: Thursday, February 16, 2017 3:34 PM To: Montysko, Michael J (HEALTH) <<u>michael.montysko@health.ny.gov</u>> Subject: FW: Clovewood Pumping Test Plan Village of South Blooming Grove

Hi Mike, Just a FYI. Don't know if your section would like to be involved in the test pumping plan review. Thank you, Minzi

From: Miller, Keith [mailto:KMiller@orangecountygov.com] Sent: Thursday, February 16, 2017 1:53 PM To: <u>sstieber@lbgct.com</u> Cc: Pan, Minzi (HEALTH) <<u>Minzi.Pan@health.ny.gov</u>>; Sims, Ed <<u>ESims@orangecountygov.com</u>> Subject: FW: Clovewood Pumping Test Plan_Village of South Blooming Grove

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Stacy,

Thanks for sending the plan.

What's your time frame for review of the pumping plan, please? I see that the date proposed for starting the pumping test given on page 8 of the Pumping Test Plan has come and gone.

My supervisor suggests that you concurrently involve NYSDOH in the test pumping plan review, since they will be asked to approve the resulting water supply (or modification to an existing water supply) should you have a successful conclusion. This is also reasonable since we're talking about adding 2,400 to 3,600 bedrooms, practically doubling the population of the Village of South Blooming Grove (NY3510641).

Best regards,

km

Keith Miller, P.E. Sr. Public Health Engineer Orange County Health Dept. 124 Main St., Goshen, NY 10924 PH: 845-291-2331, FX: 845-291-4078 KMiller@OrangeCountyGov.com

From: Stacy Stieber [mailto:SStieber@LBGct.com]
Sent: Thursday, February 16, 2017 11:57 AM
To: Miller, Keith
Cc: T. CUSACK
Subject: Clovewood Pumping Test Plan_Village of South Blooming Grove

Keith,

We are planning to conducted a new pumping test program for proposed supply wells on the Clovewood Property in the Village of South Blooming Grove. The Village of South Blooming Grove has requested that we have OCDH and NYSDEC review the plan prior to starting the test. Therefore, I am forwarding the Pumping Test Plan (dated September 2016) for this current proposed well test for your review and comment. They have also requested that we send copies of the well logs. I have included logs for all of the onsite wells that we have. Note, Wells C-1, C-2, C-3 and C-13 are original to the property and we do not have copies of the logs for these onsite monitoring wells.

Thank you in advance for your time. Let me know if you have any questions or need me to send you a hard copy of the attached plan.

Thanks,

Stacy Stieber, CPG Associate/Hydrogeologist Leggette, Brashears & Graham, Inc.

4 Research Drive, Suite 204 Shelton, CT 06484 Direct Dial: (475) 882-1723 Office Phone: (203) 929-8555 ext. 1723 Fax: (203) 926-9140 <u>sstieber@lbgct.com</u> www.lbgweb.com

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This message has been scanned for malware.

Stacy Stieber

From: Sent: To: Cc: Subject: Stacy Stieber Thursday, February 23, 2017 10:07 AM 'Garry, James (DEC)' T. CUSACK RE: Clovewood Pumping Test Plan_Village of South Blooming Grove

Jim,

We are targeting around the end of March/early April to start the well testing. However, the start will be weather dependent. Precipitation is still below average in the area, even compared to summer conditions.

Stacy Stieber, CPG Associate/Hydrogeologist Leggette, Brashears & Graham, Inc.

4 Research Drive, Suite 204 Shelton, CT 06484 Direct Dial: (475) 882-1723 Office Phone: (203) 929-8555 ext. 1723 Fax: (203) 926-9140 <u>sstieber@lbgct.com</u> www.lbgweb.com

From: Garry, James (DEC) [mailto:james.garry@dec.ny.gov]
Sent: Tuesday, February 21, 2017 4:30 PM
To: Stacy Stieber
Cc: T. CUSACK
Subject: RE: Clovewood Pumping Test Plan_Village of South Blooming Grove

Stacy,

The proposed pumping test for Clovewood is well conceived. Just one question. The report shows a December date for the test. When will the test be conducted? Is it possible to delay the test until the summer months? If not, how does the current winter precipitation compare to typical summer conditions?

Jim

From: Stacy Stieber [mailto:SStieber@LBGct.com] Sent: Thursday, February 16, 2017 11:54 AM To: Garry, James (DEC) <<u>james.garry@dec.ny.gov</u>> Cc: T. CUSACK <<u>TCUSACK@LBGct.com</u>> Subject: Clovewood Pumping Test Plan_Village of South Blooming Grove

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Jim,

We are planning to conducted a new pumping test program for proposed supply wells on the Clovewood Property in the Village of South Blooming Grove. The Village of South Blooming Grove has requested that we have OCDH and NYSDEC review the plan prior to starting the test. Therefore, I am forwarding the Pumping Test Plan (dated September 2016) for this current proposed well test for your review and comment. They have also requested that we send copies of the well logs. I have included logs for all of the onsite wells that we have. Note, Wells C-1, C-2, C-3 and C-13 are original to the property and we do not have copies of the logs for these onsite monitoring wells.

Thank you in advance for your time. Let me know if you have any questions or need me to send you a hard copy of the attached plan.

Thanks,

Stacy Stieber, CPG Associate/Hydrogeologist Leggette, Brashears & Graham, Inc.

4 Research Drive, Suite 204 Shelton, CT 06484 Direct Dial: (475) 882-1723 Office Phone: (203) 929-8555 ext. 1723 Fax: (203) 926-9140 <u>sstieber@lbgct.com</u> www.lbgweb.com

APPENDIX II

			(1) 8/1	
2) TOWN BLOOMING GROUE	ATER WELL COM	PLETION REPORT		<u>nU7</u>
(4) OWNER			(43)	
(5) ADDRESS	IES			LOG
477 BEDFORD AVE	E BROOKLYN	V, NY 11211	Ground Surface EL. 602	ft. above sea level
(6) LOCATION OF WELL (See Instructions On Roverse) T Show Lavicong ((available and method used: CIOVE KD. R	ST#1 LOOMING GROV	F NV	Top Of Casing is	localed
(1 ISPS (1) Map Interpoletion (1), 23, 134	N 074.09.851	W	ft. above (+) or b	elow (-) ground surfa
(7) DEPTH OF WELL BELOW LAND SURFACE (Leal)	(8) DEPTH TO GROUNDWATER BELOW LAND SURFACE (6	BO 3-30-09	TOP	OF WELL
	CASINGS			C usp
8 in.	in. [In. in		GLOSE
70 ft.	ft.	fi.	20'	
(11) GROUT TYPE / SEALING BEN SEAL	(12) GROUT / SEALING INTERV (feet) FF	ац юм <u>с</u> то <u>70'</u>	-	HORD
(13) MAKE & MATERIAL	SCREENS			L'ON Cano
	in.]	in.) in	60'	<u> </u>
(16) LENGTH ft.	rt.	fL in		BEOROC
(17) DEPTH TO TOP OF SCREEN, FROM TOP OF CASING (F	ael)		70'	Castos
Hernats				7
3-30-07	<u><u><u> </u></u></u>			
(20) LIFT METHOD C Pump SAir Lift C Ba		67	CI DE UTE	
(22) STATIC LEVEL PRIOR TO TEST (feet/inches below top of casing)	(23) MAXIMUM DRAWDOWN (3 (Iselinches below lap of de	Slabilized) Ising)	8 5 86t	
(24) RECOVERY (Time in hours/minutes)	(25) Was the water produced du discharged away from imme	ring the test diate area? Yes Na		in and
PUN		174) PUNP INSTALLES	-	FRACIU
YEB NO			280	8 75 38
(29) TYPE	(30) MAKE		- 0001	FRACIU
(32) NAXIMUM CAPACITY (GPM)	(33) PUMP INSTALLATION LEV FROM TOP OF CASING (F	(EL eel)	320	55 40 38
	(35) USE OF WATER		-	
Carlier Cable Tool Other	(See Instructions for choice			Fractur
(JB) DATE DRILLING WORK STARTED	(37) DATE BRILLING WORK		325	5. 70' gp
(38) DATE REPORT FILED (39) REGISTERED COMPANY	(
3-30-7 NORTHEN D	Billing TN.			
		T. L. MALO	410	
MARK UNNBULL	ti (1) I am certified in supervise	water well drilling activities as	вотт	OM OF HOLE
defined by Environmental Conservation Law §1 water well standards promulgated by the New	5-1502; (2) this water well wat York State Department of Healt	s constructed in accordance with h; (3) under the penalty of to and complete and I under-	DRIL	ER COPY
perjury the information provided in this Weil Co stand that any false statement made herein is	punishable as a class A Misdeme	eanor under Penal Law 5210,45		
			· · ·	
LOCATION SKETCH - Indicate north	•			
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			(3) DI	EC Wel	l Number
ALOOMING SLOOMING SLOUP			08	52	O[
(4) OWNER	TER WELL CON	MPLETION REPORT		<u>.</u>	!·
KEENE EQUIT	ES LIC	•	(4	3) I C	
(6) ADDRESS			-		
477 BEDFORD AV	E. BROOKL	YN, NY 11211	Ground Surface EL.	<u>30'</u> ft.	above sea level
(6) LOCATION OF WELL (see Instructions On Reverse), TE Show Lavilong it evaluable	ST# 2	TEST WELL & Z	Top Of Casing		
	GMINGGROV	E, NY	ft. above (+) or	below (ea (-) ground surface
(7) DEPTH OF WELL BELOW	074.10.14	PR DATE MEASURED			
LAND SURFACE (feel) 350	BELOW LAND SURFACE	(lee!) 80' 4-3-07		F UF V	
(9) DIAMETER	JASINGS		-		Haro
<u> 3</u> in,	in.	<u>in.</u> <u>in.</u> <u>in.</u>			PEP
	ft. }	a in.		1.	ROULDSES
	(12) GROUT / SEALING INTER	WAL O' TO LOO'	4		+0
<u>DEN SEAL</u>	CREENS		80'	Ì	KKK
13) MAKE & MATERIAL	(14) OPENINGS			+	LIME Stone
IS) DIAMETER			4	ł	SEt C.
in,	In.	in. նո.	100'		5 (AS) M
tu)⊥=nG7H ft.	ft.]	ft.] ín.			· ·
17) DEPTH TO TOP OF SCREEN, FROM TOP OF CASING	· · · · · · · · · · · · · · · · · · ·		8		
(red)			DRIVE		
18) DATE	(19) DURATION OF TEST	······································	2000		:
20 LIFT METHOD	4 (21) \$74041250 DIROWARDS	(CDA))	· · .		
		2007			
(feeUnches befow Icp of casing)	(23) MAXIMUM DRAWDOWN ((feel/inches below top of ca	Şlabilizad) Ising)			
24) RECOVERY (Time in hours/minutes)	(25) Was the water produced du	uring the test	- · ·		
BHMP I		301346 876827 198 ¥ NO	ner'	.	
28) PUMP INSTALLED?	(27) DATE	(28) PUMP INSTALLER	000	+	LARSE
	(30) MAKE	(1) NODE	Į.		Fracture
·····	(a) whe		298'		200 gpm
IZ) MAXIMUM CAPACITY (GPM)	(33) PUMP INSTALLATION LEV FROM TOP OF CASING (F	/EL eci)] ,		ROOKEN
					υP
	(35) USE OF WATER (See Instructions for choice	s)	· ·		Limestone
B) DATE DRILLING WORK STARTED	(37) DATE DRILLING WORK CO	DMPLETED			40
4.2.07	4-3-07		-		Bottom
		NIVED 1A177	1 1 1 1 1		
4-2-07 NORHERN DRI	Hing INC		1		
1) CERTIFIED ORILLER (Phininame) · · ·	(42) CERTIFIED DRILLER SIGN	IATURE *	ori		ł
MARK TUNNBULL	mar Tu	une.	300		
By signing this document I hereby affirm that: (1)	I am certified to supervise	water well drilling activities as	BOTIC		
affined by Environmental Conservation Law §15-15- vater well standards promulgated by the New York	02; (2) this water well was State Department of Health	; (3) under the penalty of	(r (243.)	23	- C. (1997)
erjury the information provided in this Well Comple tand that any faise statement made herein is punis	tion Report is true, accurat hable as a class A Misdeme	e and complete, and I under- anor under Penal Law §210.45.	· 1.3 F 1 · 6	<u>с</u> п	64 CAM 8 - 1
			·····		· · · · · · · · · · · · · · · · · · ·
LOCATION SKETCH - Indicate north					
					<i>,</i>
		· · · ·			. ·
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- ADMAR		N H	(3) DEC	Well Number
COUNTY ORANGE		7 - 1	0,050	
TOWN BLOOMING WAT				202
4) OWINER		<u>,</u>	(14)	
SI ADDRESS	TIES LL	LAKE MUH	(T4) .:	LOG
477 BEDFORD AV.	E. BROOK	LYN, NY11211	Ground Surface EL. 674	/fL above sea level
(6) LOCATION OF WELL (See Instructions On Reverse) Show Latitong if available and method used:	D. BLOOMIN	JGROVE, NY	Top Of Cesing is it	ocated 18"
GPS 1 Map Interpotation 41.22.650	N 074. 10.	011' W	ft. above (+) or bei	low (-) ground surface
(7) DEPTH OF WELL BELOW LAND SURFACE ((real) 600	(B) DEPTH TO GROUNDWATER BELOW LAND SURFACE (M	el 15 5-17.07	TOP	
	SINGS			SALO
S ¹¹ In.	in_]	in In	16	Baun
(10) LENGTH 6 1 R. 1	n.]	K. in.		GREY
11) GROUT TYPE / SEALING	(12) GROUT / SEALING INTERV (Teal) FR	AL 0' TO 61"		LINESTOR
ISER JEAP SC	REENS			SIT SIT
(13) MAKE & MATERIAL	(14) DPENINGS			
(15) DIAMETER	In.]	in. In.	61	
(16) LENGTH	e.]	ft. [in.	1	
(17) DEPTH TO TOP OF SCREEN, FROM TOP OF CABING			8"	8".,¢D
(raei) YiE	D TEST		SHOE	1214
(18) DATE	(19) DURATION OF TEST	· · · · · · · · · · · · · · · · · · ·		440
20) LIFT METHOD	(21) STABILIZED DISCHARGE (GPM)		
	(23) MAKINUM DRAWDOWN (5	5		FRACTUR
(testinchas below lop of casing)	(feel/inches below lop of ca	sing)	80'	51 25 gen
(24) RECOVERY (Time in hours/minulas)	(25) Was the water produced du discharged away from Imma	ning line lest diate enex? Yes <u>No</u>		
PUMP IN	STALLATION			
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
(29) TYPE	(30) MAKE	(31) MODEL		
(32) MAXIMUM CAPACITY (BPM)	(33) PUMP INSTALLATION LEV FROM TOP OF CASING (F	EL 281)		FRACIURE
	·····		320'	55 50 gpm
	(35) LISE OF WATER (See instructions for choice	s]		WANT TO
(36) DATE DRILLING WORK STARTED	(37) DATE DRILLING WORK C	OMPLETED	UUA'	6 HANNI
(34) DATE REPORT FILED (39) REGISTERED COMPANY	1 5- 18- O	(40) DEC REGISTRATION NO.		┟┈╌┟╧╾═╾┑╵╼┙┶╸
• • • • • • • • • • • • • • • • • • •		NYRD 10177		
(41) CERTIFIED ORILLER (Print name)	(42) CERTIFIED DRILLER SIG	JATURE *	1	
The second second	man	a Japana and	600'	<u> </u>
* By cigning this document I berefy affirm that: (1)	I am certified to supervise	water well drilling activities as	ΒΟΤΤΟ	
by signing the second secon	12; (2) this water well wat State Department of Heald tion Report is true, accurat hable as a class A Misdement	s constructed in accordance with (3) under the penalty of a and complete, and I under- canor under Penal Law §210.45.	DRILL	ER COPY
		· · · · · · · · · · · · · · · · · · ·		
LOCATION SKETCH - Indicate north		4 ¹		
		. '		

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I) COUNTY DRAME				(3) DEC	Well	Number	
TOWN BLOOMINGCOVE		-		08	2	03	
(4) DWINER	WATER WELL CO	MPLETION REP	ORT				
(S) ADDRESS	EqUITIES	LLC		(43)	LO	э	
477 BEDFORD	DAVE BROC	KLYN, M	11211	urface EL. 560	/ [ft.a	bove sea level	
(B) LOCATION OF WELL (See Instructions On Reverse Show Law and Vavailable CLOVE R and method used:	D. BLOOMING	ROVE, NY	T	op Of Casing is i above (+) or be	ocale		
	(175 N 074.09.9	Z9 W	IEASURED	TOP	OF W	ELL	•
LAND SURFACE (feel) 525		E [1941] 20 5-2	1-07	<u> </u>			
(9) DIAMETER // in	in.}	in.	in.			GRAUFL	
(10) LENGTH fL	rt.	ft.	ín.			LOOSE	
(1) GROUT TYPE ASEALING REAL SEAL	(12) GROUT / SEALING INT (Igel).	ERVAL D' TO	<u>51'</u>	40'		10 POCK	
	SCREENS				÷	SFT 8"	
			· .	61'	i	CASHING	
In.	(n.)	in,]	in.				
	ft.	fi.	ln.	8'			
(17) DEPTH TO TOP OF SCREEN, FROM TOP OF C	ASING (Feel)			SHOE			
(18).DATE	THELD TEST						
5-21-07	(21) STABILIZED DISCHAR	GE (GPM)		_		FRACHURY	
(22) STATIC LEVEL PRIOR TO TEST	(23) MAXIMUM DRAWDOW	200 ⁺ N (Slabilized)	<u></u>	90'	55	12 34.	
(feel/inches below lop of casing)	(reelAnches below top of (reelAnches below top of (25) Was the water provider	of casing)				NO	
Provincial and a second s	discharged away from in	nmediale aron? Yes 📈 N	•			franks.	
(26) PUMP INSTALLED? YES NO	(27) DATE	(28) PUMP INSTALLER		41.01		8" West	-
(29) TYPE	(30) MAKE	(31) MODEL		<u> </u>	; <u> </u>		
(32) MAXIMUM CAPACITY (GPM)	(33) PUMP INSTALLATION FROM TOP OF CASIM	LEVEL 3 (Feel)			-	BROKEN	
124) METHOD OF DRILLING	(35) USE OF WATER			510'	<u>. :</u>	UP	
	IST DATE DRILLING WOR	alces)		200+		to	
$\frac{5-19-07}{5}$	5-2	1-07	NQ.	gpm		Limestone	·
(38) OATE REPORT FILED (38) REGISTERED OU	CON DI LUMAS TOC	NYRD Joj	17	625'		DRILLING	
(41) CERTIFIED CRILLER (Print name)	(42) CERTIFIED DRILLER 3	BIGNATURE*			, ··	1 1.	
MARK TUNNBULL	mara -	Turny		BOTTO	N OF	HOLE	
* By signing this document I hereby affir defined by Environmental Conservation L	m that: (1) I am certified to superv aw §15-1502; (2) this water well v New York State Department of He	(se water well drilling activ was constructed in accorda alth: (3) upder the penalt	vities as ance with				
water well standards promulgated by the perjury the information provided in this V stand that any false statement made here	Vell Completion Report is true, accu ein is punishable as a class A Misde	urate and complete, and I meanor under Penal Law	under- §210_15.		5: [M	1.1.245 3	
	north	<u>`</u> `	····]	
Productions offeriori - indiado	······	,	-			14	
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NEW YORK S	TATE DEPARTMENT OF		L CONSERV	ATION	Well block of	
COUNTY CULLUL				1711	251	
TOWN DLODINI W	ATER WELL CON	IPLETION RE	PORT			_
SINON	Les CPC	LLC		. ⁽⁴⁵⁾ WE		
POBAY 2020 M	DNROE NY	110949	r)epth to Bedrock	(ft. below (and surface)	
) LOCATION OF WELL (See Instructions On Reverse)	(Ch	leck here 🔲 if address is sam	a se above)	Fround Elevation	(ft. above	
LOLITE 2084 CLOVE R.) LATITUDEALONGITUDE AND NETHOD USED LOPS I May LIL 92. Organization and	D BLOOMING	GROUEN	174	op of Casing	(ft. above (+) or low (-) land surface)	
DEPTH OF WELL BELOW	(10) DEPTH TO GROUNDWATH	ER . OATE	MEASURED			-
	CASINGS			. 10P C		
1) DIAMETER	in.			(4)	SAND EL	·
	fi.	fl.	in.	70	60 fo 60'	
	(14) GROUT / SEALING INTER (feel) FROM	AL C' TO TO	»···	, togo reagent day and	v	T
SI MAKE & MATERIAL	(16) OPENINGS	inco telentino.		-	SEDDOC-	
				1º -	SFIB	
h,	in.	in.	in.	80'	CASING	
B) LENGTH	ft.	fL.		1.2.1	+	T
DEPTH TO TOP OF SCREEN, FROM TOP OF CASING (Fee	1)			8	KEEP	.
	HELD TEST			DRING	pump	
	(21) DURATION OF TEST	<u>ح</u>		2444	200 08	÷.
	(23) STABILIZED DISCHARGE (GPM)	· · · · ·		ACOVE	
I) STATIC LEVEL PRIOR TO TEST	(25) NAXIMUM DRAWDOWN (S	abilized)	`			. X
(feet/inches below lop of casing)	(feet/inches below top of cas	aing)		250'		
	discharged eway from immed	diaia araa? Yes 🔽	No	, e se	Stoke -	
PUMP INSTALLED?	(29) DATE	(30) PUMP INSTALLER			Onck	
YE\$ NO	(32) MAKE	(33) MODEL			APPA	
					19 "	
) MAXIMUM CAPACITY (GPM)	(35) PUMP INSTALLATION LEVI FROM TOP OF CASING (Fe	EL. Hat)		1.67 2	15	
DRILLE			<u> </u>		1	ŀ
Rotary Cable Tool Cher Alena K	(Sae instructions for choices	TESTWEEL		54		
) DATE DRILLING WORK STARTED		MPLETED .				.
DATE REPORT FILED (41) REGISTERED COMPANY	mil Tak	(42) DEC REGISTRATION	19			
) CERTIFIED DRILLER (Privi nama)	(44) CERTIFIED DRILLER SIGN	ATURE ·		265		
A signing this document I hereby affirm that: (1)	i am certified to supervise wa	ater well drilling activitie				
fined by Environmental Conservation Law 15-16 tter well standards promulgated by the New York	02; (2) this water well was co State Department of Health;	(3) under the penalty	of perjury	BOTTOM		-
a Information provided in this Well Completion Re y false statement made herein is punishable as a	aport is true, accurate and co a Class A Misdemeanor unde	mpiete, and I understa er Penal Law §210.45,	nd that .	own	VER .	
OCATION SKETCH - Indicate north						Ĩ
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) r					·	
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		(3) DEC	Well Number
BIOMING WATER WELL COMPLETION REPO	RT	010	251
Simon Gella PPC 111 Well H 7A		⁽⁴⁵⁾ WE	LLLOG
GADDRESS	Dept	h to Bedrock	(ft. below land surface)
(Check here] it édérese is same as ab	ove) Grou	ind Elevation	(ft. above sea level)
(7) LAYITUDEALONGTRIDE AND METHOD USED (8) TAX MAP NO. □ GPS □ M8p	Тор	of Casing be	(ft. above (+) or low (-) land surface)
(9) DEPTH OF WELL BELOW LAND SURFACE (400) 300 (10) DEPTH TO GROUNDWATER DATE MEAS BELOW LAND SURFACE (400)	DERD	TOP	OF WELL
(1) DIAMETER	in.		in the line of
(12) LENGTH (t. ft. ft.	in. 2	50	brown
13) GROUT TYPE / SEALING (14) GROUT / SEALING INTERVAL Bantonites do 100000 (14) GROUT / SEALING INTERVAL	-		Meta Horphi
IS NAME & MATERIAL (18) OPENINGS			rock
	*2	50	200 gpH
in. in. In.	in. 2	56	F100 8PM
to Lans III ft. ft. ft. ft.	n. *2	45	+ 100 gpm
YigLib YESD		80	begin
(20) DATE (21) DERATION OF TEST	0		shale
	*3	80	1+ 100gp-
(24) STATIC LEVEL PRIOR TO TEST (25) MAXIMUM DRAWOGAWA (Statificed) (Leythoches below top of casing) (Lectinoties below top of casing)		_	(hora.in
(25) RECOVERY (Time in hours/initiates) (27) Wes the value produced defining the last orischarged sway from/miniedate press / Yes / 200	~~~~	300	shale
PUMP INSTALLATION (29) PUMP INSTALLED? (29) PUMP INSTALLED? (29) PUMP INSTALLED?		-	
YESNO (01) TYPE (02) MAKE (03) MOD5.			
ASII MAXIMUM CAPACITY (GPM) //3SI PUMP INSTALLATION LEVEL	<u> </u>		-
PROM TOP OF CASING (Fore) DRILLER (NEORMATION			500 gpi
12" DO OF DEALING QUAL (37) USE OF WATER VOLANY CALVE TOOL BLOTHER COLOURS (See instructions for christian) domestic	<u> </u>		-total
(38) DATE DRILLING WORK STARTED 0 (39) DATE DRILLING WORK COLPLETED 8 - 11 - 1/p $8 - 11 - 1/p$			
1460 DATE REPORT FILED (41) REGISTERED COMPANY (1/22) DEC REGISTRATION NO. Frey Well Drilling (1/22) DEC REGISTRATION NO. NYRD LOOC	29		
(43) CERTIFIED DRILLER (Print rainer Frey William Ingeneration Ingeneration Ingeneration Ingeneration Ingeneration Ingeneration Ingeneration Ingeneration	20		
(* By signing this document.) hereby attirm (hat(_2)) i am certified to supervise water were turning activities - defined by Environmental Conservation Law 15-1502: (2) this water well was constructed in accontance water well standards promulgated by the New York State Department of Health; (3) under the penalty of	with perjury	BOTTO	M OF HOLE
the information provided in this Well Completion Report is true, accurate and complete, and I understand any false statement made herein is punishable as a Class A Misdemeanor under Penal Law §210.45,	that .00/2010	NY	SDEC
LOCATION SKETCH - Indicate north	y dre	pened	the well
Well was drinked up solicions out io	1	N.	
no additional cusing put	х.	•	
	وجودي فيشتك ومراجع وراغي فسير		·

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

NEW YORK ST	ATE DEPARTMENT OF ENVIRONMENTAL CONSER	NOITAV	7B 24
TOTADE		(3) DEC	Well Number
Nencic		00	829
(2) TONK WA	TER WELL COMPLETION REPORT	[
Simon Gelb C.P.	C. LLC.		
MADRESS DO BOY DODO NU	NOR NUL LAQUO	Death to Bedrock	Land surface)
16) LOCATION OF WELL (See Instructions On Revense)	(Citede have [] / addatus is serve as obove)	Ground Elevation	(11. aboys 868 (Svei)
CLOVE Rd R4 21	HONTCE NY	Ton of Casing	A Ift. above (+) or
O ares D range		j	elow () land surface (
LAND SURFACE (MAN) 280	1201 DEPTH 70 GROUNDWATER GATE NEARINED DELOW LAND SURFACE (Swy	TOP	OFWELL
	ASINGS	[
S in 12	in. in.	1-21	tine, course area sand
100 11 21-pulled	a. a. ja.	21-45	son gray
Protocity do Lannul	THE GROUT I SEALING INTERIAL 20 1 TO SILVACE	45-68	dry gravel
Jon we	CREENS	10.00	where the
N/A	NTV, MITCANINGS.	60-68	orange dry Gravei
(17) WAMETER	In. In. In.	68'	gray back
(IQ LENDTH II,	ft. 19. 10	176-190	black shale
(The DEPTH TO YER OF BORED'S FROM TEP OF GASING (Fam)			10 804
	ELD YEST	140-143	NGOK Shale
8-2-16	I tr		Siched Crange
(22) JET METHOD D PUGA D'ARLES O BASA	Lan STABLIZED DISCHARGE (SPU)	210	black shale
(24) STATIC LENGL PHIOR FOTEST Residents Standard (Sester)	(29) EARL'HERRADDANG (Spec-280) Begaartaal (Conclusion Statio)		sicunal orange + 20 april
24) RECOMERT (Times & name him, him)	127; F. in American graintental rang has lead	K210 225	brownineacte
FIND	successful analysis and a second to the second s		50 gon total
Cash-Put /P Matchildo?	20, EATE (20) ALE FALLER	990-980	Brynte 150 con
And a second sec		230-231	frosture
AND THE MERICAN AND AND AND AND AND AND AND AND AND A	In PWW WISTALLATION LEVEL	231-247	granite
and a second	La Transla and an an	247-260	+ 300 gpH
ORULEF	(INFORMATION)	New Stab	granite
sating C Bobber Theo & Street Rotany	Den maliye Habit for curriess DorteStic		Grant G
8-1-10	8-3-14	Scolo	House Construction
USIDATE REPURT FLED	NYRD 10009	274-290	+ 200 gp4
HAN CENTIMED DIRALER (PM SHAR)	HI CHATECEN BELLES SCRATURE	Ann	muday seam
Busing the angent angent the film they	we confided to paramice water well different files	290-300	Cauce in the sau
defined by Environmental Conservation Law 15-160 water well mendarics promutated by the New York	2: (2) this water well was constructed in accordance with State Department of Health. (3) under the geneity of paramy.		oned departe
the information provided in Inis Well Completion Rel any false statement mode herein in purichable as a	port is frue, accurate and complete, and I understand that Class A Misclemeanor under Penal Law §210.45.	M'78	500 gpm total
LOCATION SKETCH - Indicate north	animation and a second seco Animation and a second		
	\$7-12 ⁷		
20s /	Clove RC		
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COUNTY	. •			(3) DEC We	li Number
Bimmelont				0.107	50
) OWNER	WATER WEL	L COMPLETION	REPORT		
Survey (HIS CPC.	1.1.6		· ···· WELL	LOG
ADDRESS M	ONRDE, NYLI	6929		Depth to Bedrock	(ft. below land surface)
LOCATION OF WELL (See Instructions On Reven	UECL CENT	(Checkhere [] il eddress	is same as above)	Ground Elevation 🔝	(ft. above
BOUTE 208+CLO	WE RD BLOD	MING GROVE N	1/ 00	Tan of Casing 105	sea level)
GPS	and in all	(8) TAX MAP NO.		below	(-) land surface)
DEPTH OF WELL BELOW	(10) DEPTH TO (ROUNDWATER	DATE MEASURED		
LAND SURFACE (Teel)			<u>sin</u>	TOP OF	VELL
DIAMÉTER TY	Here is a second description	1 		P - -	11-10
	in,	in.	in.		post
60 n.	ˈfl.	· fl.	ìn.	50	(SDUF, Col
3) GROUT TYPE / SEALING	(14) GROUT / SE		66'	· · · · · · · · · · · · · · · · · · ·	A FOINT
OCN SEA	SCREENS-	areas of lines where	t trianti tratica		2481
5) MAKE & MATERIAL	(16) OPENINGS			1.	ASIM
7) DIAMETER	,,	·		UU	
in.	in.	In.	In.		19.3 M
B) LENGTH	ft. .	ft.	in l	D. RIVE	
B) DEPTH TO TOP OF SCREEN FROM TOP OF (CASING (Feel)			SHOP	
	VIELD TEST	4.5-6-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5		1.5	
D) DATE	(21) DURATION C	DF TEST			LACEY C
2115T METHOD		DISCHARGE (OPM)		320 4	Rund K
🗆 Purnó 🚿 Air Lift	D Baller			OFO A	LIAN
4) STATIC LEVEL PRIOR TO TEST (feet/inches below top of casing)	(25) MAXIMUM D (leevinches i	RAWDOWN (Stabilized) selow top of casing		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
8) RECOVERY (Time in hours/minutes)	(27) Was the weld	r produced during the lest	7		
	PLIMP INSTALL ATIO	VI	No		
B) PUMP INSTALLED?	(29) DATE	(30) PUMP INSTAL	LLER	· · · · · · · · · · · · · · · · · · ·	
	(32) MAKE	(93) MODEL		· · · . 1	40,00
				355 5	i in
I) MAXIMUM CAPACITY (GPM)	(35) PUMP INSTA FROM TOP C	LLATION LEVEL OF CASING (Feel)			Tol 4
6	DRILLER INFORMATIO	DN		VERW	en l
3) METHOD OF DRILLING	(37) USE OF WAT (See Instruction	ER ans for choices)	Nr.0.	BURN	Rapit
A) DATE DRILLING WORK STARTED	(39) DATE DRILL	NG WORK COMPLETED		₩A	UV K
7-28-14	<u> </u>	6-14-		RUCI	500
Date Report File (1) Registered C	SO DRIKA J	NYRD	10/17	S AM	
S) CERTIFIED DRILLER (Print name)	(44) CERMITED	RILLER SIGNATURE	,	340 1	
By signing this document I hereby affir	n that; (1) I am certified to s	upervise water well drilling as	ctivitiés as		
fined by Environmental Conservation I ater well standards promulgated by the	Law 15-1502; (2) this water New York State Departmen	well was constructed in acco t of Heelth; (3) under the pe	ordance with	BOTTOMO	
e information provided in this Well Con ny false statement made herein is punis	npletion Report is true, accu shable as a Class A Misdem	rate and complete, and I und leanor under Penal Law §210	erstand that 0.45		B I
	··		10/2011		······································
OCATION SKETCH - Indicate north					
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				i	. <u>.</u>
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Alles - Set C	an an 🚈				
(1) COUNTY OF COUNTY		?		(3) DEC	Well Number
12) TOWN BLOOMING GROVE WA	TER WELL CON		REPORT	010	195
(4) OWNER				⁽⁴⁵⁾ WE	
SIAW 6	us CPC,	LLC		Boptin to Bodrack	90'
P.D. BOX 2020 MO	NROE, NY 1	0949		Dobul ID Deglock	land surface)
(6) LOCATION OF WELL (See Instructions On Reverse)	C9 ROUTE 20	eak here 🔲 if address la	same as above)	Ground Elevation	(ft. above sea leve!)
(7) LATITUDE AND METHOD USED	101 - WIX - UN	TAX MAP NO.	WRD,	Top of Casing	(ft. above (+) or
G GPS - MAP #1 22 934 1) 074 1	a 119'w			bē	iow (-) land surface)
(9) DEPTH OF WELL BELOW LAND SURFACE (feet)	(10) DEPTH TO GROUNDWATE BELOW LAND SURFACE ((ATE MEASURED	TOPO	EWELL
	CARINGS		30-17	0	1
(11) DIAMETER	 in	in l	·		Hano pou
(12) LENGTH	- l	····]	, n,	, <u>n</u>	Boylow
	nt.	ft. j	in.	96' -	SUNIO GROUN
BAD SEAL -	(icel) FROM	и то	64 +		14.156 CAL
	CRAENE	ilymi fincinia	er and could be	·	L'ORGE
(10) MARE & MALENIAL	(16) OPENINGS			5 B	LINESTANE
(17) DIAMETER	in				54 8
(18) LENGTH (in.	104	<i>u.p</i> sy
ft.	fL.	fL	in.	1	
(18) DEPTH TO TOP OF SCREEN, FROM TOP OF CASING (Feel) 가	•			8	
<u> </u>	FLD NEAT	MH1		SH-0	.
(20) DATE	(21) DURATION OF TEST	;			
(22) LIFT METHOD	(23) STABILIZED DISCHARGE (GPM)			1 .]
(24) STATIC 1 EVEL PRIOR TO TEST	25) MAXIMUN DRAWDOWN (6	S	·	290'	LARAS FRACT
(leel/inches below top of casing)	(fest/inches below top of cas	sing)	·	·	
(28) RECOVERY (Time in hours/minutes)	(27) Was the water produced duri discharged away from immed	ing the test date area? Yes	No	{	CONKEN
PLANP?	INSTALLATION	· · · · · ·			UP I
(28) PUMP INSTALLED? YEB NO	(29) DATE	(30) PUMP INSTALL	ER .		Rock
(31) TYPE .	(32) MAKE	(33) MODEL			500#
(34) MAXIMUM CAPACITY (GPM)	(35) PUMP (NSTALLATION LEVE	<u> </u>			5200
	FROM TOP OF CASING (F	ei)		-	
	(37) USE OF WATER	<u>ç</u>			
Rolary Cable Tool Ither HANNER	(See instructions for choices	TESTANA	TER		18 at 1
	(S9) DATE DRILLING WORK CO.	MPLETED			
(40) DATE REPORT FILED (41) REGISTERED COMPANY		(42) DEC REGISTRATI	ON NO.		
7-26-14 Nonthe 0	12:12 TIC.		471		
AS CERTIFIED DIRICLER (PHIL RAME)	Mark 7	suller.	~	325	l · · ·
By signing this document I hereby affirm that: (1) I defined by Environmental Conservation Law 15-15	am certified to supervise wa	ater well drilling actionstructed in accord	vities as	BOTTOM	OFHOLE
water well standards promulgated by the New York.	State Department of Health; port is true, accurate and co	(3) under the pena molete, and i under	alty of perjury stand that		
any false statement made herein is punishable as a	Class A Misdemeanor unde	r Penal Law §210.4	45.	OWN	ER
LOCATION SKETCH - Indicate conth	,,, ,		·····		
Footunal a cuff fort - Unional India			· ·		41
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NEW YORK ST	ATE DEPARTMENT OF ENVIRONMENTAL CONS		
COUNTY OPANGE	•		Well Number
OWNER	TER WELL COMPLETION REPOR	(45) WE	
ADDRESS C.P.	C. LLC		26 (It helow
P. D. Box 2020	MONROE NY 10949		land surface)
LOCATION OF WELL (See Instructions On Revenue)		Ground Elevation	sea level)
LATITUDER ONGITUDE AND METHOD USED	(#) TAX MAP NO.	Top of Casing	(ft. above (+) or low (-) land surface)
DEPTH OF WELL BELOW	(10) DEPTH TO GROUNDWATER DATE MEASURE		
LAND SURFACE (feet)	BELOW LAND BURFACE (1991) 50' 6:28-11	TOP C	FWELL
) DIAMETER		<u></u>	55
) LENGTH	<u>in.</u> in. in.		16 19 CESIA
16" R.] 40"		-	SEDROCK
BEN SEAL	(keel) FROM D TO	40	1640
		10"	
DIAMETER In,	in, in, in,	DRIVE	1 .
LENGTH ft.	ft. ft. in.	2400	
DEPTH TO TOP OF SCREEN, FROM TOP OF CASING (Feel)		- · · · · · · · · · · · · · · · · · · ·	
<u></u>		-	
DATE	(21) DURATION OF TEST		
LIFT METHOD	(23) 8TABILIZED DISCHARGE (GPM)		TEACHRE
STATIC LEVEL PRIOR TO TEST	(25) MAXIMUM DRAWDOWN (Slabilizad)	210'	6 mm
(feel/lishes below top of casing)	(feet/inches below top of casing)		<u> 77 - </u>
LECOVERY (Time in hours/minutes)	(27) Wes the water produced during Uterleail		
			·.
YES NO			NO
Түре	(32) MAKE (33) MODEL	· ·	FRACTURE
MAXIMUM CAPACITY (GPM)	(35) PUMP INSTALLATION LEVEL FROM TOP OF CASING (Feet)	-	• •
ÓRILLE F	INFORMATION	┥ .	
	(37) USE OF WATER (See instructions for choices)	┐ · │	
DATE DRILLING WORK STARTED	(39) DATE DRILLING WORK COMPLETED	-	
DATE REPORT FILED (41) REGISTERED COMPANY	6.23.14	- · ·	
6-15-14 DORHHERN C	PEILLING NYRD 10177	المذو	
MARK TIMEL	144) CERTIFIED DRILLER BIGNATURE	6.20	and a state of a state of the s
/ signing this document I hereby affirm that; (1) [/ ned by Environmental Conservation Law 15-150/	am certified to supervise water well drilling activities as ; (2) this water well was constructed in accordance with	воттом	OF HOLE
er well standards promulgated by the New York S Information provided in this Well Completion Rep	itale Department of Health; (3) under the penalty of perjur ort is true, accurate and complete, and I understand that	У	
false statement made herein is punishable as a t	Class A Misdemeanor under Penai Law §210.45,		IER
CATION SKETCH - Indicate north	· · · · · · · · · · · · · · · · · · ·	1	, .
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	· · · · · · · ·		•
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MALLAC		(3) DEC	Well Number
BI MALLING COMIC			-19U
	VATER WELL COMPLETION REPORT		
Sinen 64.9	CPC LLC	⁽⁴⁵⁾ W	ELLLOG
STADDRESS	MANDE NULLOOUS	Depth to Bedrock	
8) LOCATION OF WELL (See Instructions On Reverse)	Church have I if address is same as about	Ground Elevation	629 (ft. above
ROUTE 208 + CL	UVERID BLOOMING GROVE NY		sea (evel)
7) LATITUDE/LONGITUDE AND METHOD USED	(B) TAX MAP ND.	top of Casing	elow (-) land surface)
9) DEPTH OF WELL BELOW	(10) DEPTH TO GROUNDWATER DATE MEASURED		
LAND SURFACE (leel) 745	BELOW LAND SURFACE (feet) 80 7-10-14	тор	OF WELL
1) DIAMETER		0	1111
8 in.	in. in. in.		HOLD
	ft. ft. in.	901	CRUURER
13) GROUT TYPE / SEALING	(14) GROUT / SEALING INTERVAL		and the second
BED SEAL	CONTRACTOR STATES		Set
16) MAKE & MATERIAL	(16) OPENINGS		8" apres
		<u> </u>	
in.	ia, in. in.	. 1	┝-┠
(6) LENGTH	e + +	Sant	, i i
19) DEPTH TO TOP OF SCREEN, FROM TOP OF CASING	(Fasi)	SHOE	
		-	
20) OATE	VIELD TEST	·	FRACE
7.10.14	4.HR	490	c 8900
22) LIFT METHOD	(23) STABILIZED DISCHARGE (GPM) allor • • • • •		1
4) STATIC LEVEL PRIOR TO TEST	(25) MAXIMUM DRAWDOWN (Steblized)		
(reconcrea below top or casing)	(Age in the water produced during the fest	•\$	
	discharged away from immediate area? Yes No		
YES NO			1
N) TYPE	(32) MAKE (33) MODEL		
34) MAXIMUM CAPACITY (GPM)	(35) PUMP INSTALLATION LEVEL		
8) METHOD OF DRILLING	(37) USE OF WATER		
Rotary Cable Tool J Other	(See Instructions for choices)	, i .	
38) DATE DRILLING WORK STARTED		·	
(41) DATE REPORT FILED (41) REGISTERED COMPANY			1.842
5 - 4: 14 DORTHEN IS) CERTIFIED DRILLER (Print name)	(44) CELTIFIED DRILLER SIGNATURE	7112	.t.
MARK TIMAN	Mach Tursel	1921	وروي يستع مريحين مستعمين والمين
By signing this document I hereby affirm that: efined by Environmental Conservation Law 15	(1) I am certified to supervise water well drilling activities as -1502; (2) this water well was constructed in accordance with	BOTTO	NOFHOLE .
vater well standards promulgated by the New ` ne information provided in this Well Completion	rork State Department of Health; (3) under the penalty of perjury n Report is true, accurate and complete, and I understand that	<u>.</u>	· •• ·
ny talse statement made herein is punishable	as a Class A Misdemeanor under Penal Law §210.45. 10/2011	. OM	NER
LOCATION SKETCH - Indicate north			,
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· · · · ·			
		·	·

I) COUNTY OR MORE				· (3) DE	C Well Number
TOWN BLOOMINAPOUL				01	5192
4) OWNER	ALER WELL CO	IMPLETION R	EPORT	(45)	
ELADDRESS	CPC L	LĊ		N	
P.D. Box 2020 Moi	ARDE NY	10949		Depth to Bedroc	(ft. below land surface)
6) LOCATION OF WELL (See Institute libra On Reverse)	C-12	(Check here if addrees is ea	me as ebove)	Ground Elevation	(ft. above
AULTE AUX OF CULUE	RD OLDON	1:14 G GIRDIN	e; MY	Top of Casing	(fi. above (+) or
AGPE MAD 41. 90 189'N.0	4.01.632W			. I	below (-) land surface)
LAND SURFACE (leat) 580	BELOW LAND SURFAC		E MEASURED	TOP	OF WELL
(1) DIAMETER	CASINGS	iten in a state of		0'	
In.	in.	in.	, in.		HARDPAN
12) LENGTH	fL.	ft.	In.	50	Benero
	(14) GROUT / SEALING INT		70'		
CAR DERL	SCREENS-LALATTE	and first (as) erstat		· · · ·	Lineshine
5) MAKE & MATERIAL	(16) OPENINGS			ا والمعصر.	SPI
7) DIAMETER				D	CASIN G
8) LENGTH 1	IR.	in, j	in.	. /	
	ft		ín.	ALL VE	
STOLET IN TO FOR OF SURGEN, FROM TOP OF CASING (Fee				SHOE	
D) DATE					
7.1-14	4 42	5			
2) LIFT METHOD I Pump KAIr Lifi 🗖 Ballar	(23) STABILIZED DISCHARG	e(GPM) In≪			Strip of
I) STATIC LEVEL PRIOR TO TEST	(25) MAXIMUM DRAWDOWN	I (Stablized)			······································
RECOVERY (Time In hours/minutes)	(27) Wee the water produced	during the test			
the seato	discharged away from im	madiaia arao 7 Yea 🐴	No]
) PUMP INSTALLED?	(29) DATE	(30) PUMP INSTALLER		1	
)TYPE	(32) MAKE	(33) MODEL		.	12
MAYNU IM CARACITY (CON)					1.2.
	FROM TOP OF CASING	EVEL (Feel)		. •*	Extres .
METHOD OF DRILLING	(37) USE OF WATER				Rock
Rolary Cable Tool Other HAMER	See Instructions for choic	TEATWORL	L	560	125 port
6 2 2 14		COMPLETED			VERI
DATE REPORT FILED (41) REGISTERED COMPANY	Tal.		NO,	{	SECTION 1
CERTIFIED DRILLER (Print name)	(14) CERTIFIED DRILLER SIG	NATURE '	- T	680'	Rock
MAR K TUMBUL	am certified to supervise		†···	an ha an the Alice Anna dan	
fined by Environmental Conservation Law 15-150 ter well standards promulgated by the New York	2; (2) this water well was State Department of Healt	constructed in accordan	ce with	BOTTOM	OFHOLE
information provided in this Well Completion Re y false statement made herein is punishable as a	port is true, accurate and o Class A Misdemeanor un	complete, and I understa der Penal Law §210.45,	nd that		NED
			10/2011		
JUATION SKETCH - Indicate north					
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NEW YORK STA	TE DEPARTMENT OF ENVIRONMENTAL CONSI	ERVATION
ORDING		(3) DEC Well Number
BLOOMILEROUS WAT	ER WELL COMPLETION REPOR	Т
E D C L L C		(45) WELL LOG
LCOPESS P D BOX	2020 MONRUE NY	Depth to Bedrock <u>50</u> (it. below land surface)
CLOJETU 1 _JCATION OF WELL (See Instructions On Reverse)	Sime JE (Check here D it address is same ag above)	Ground Elevation G77 (fit. above saa level)
WELL HIGO (1)	OVE ICD (B) TAX MAP NO.	Top of Casing <u>70</u> (it. above (+) or below (-) land surface)
A DEPT-DE NEL BELOW	(10) DEPTH TO GROUNDWATER (DATE MEASURE SELOW LAND SURFACE (Inter)	TOP OF WELL
<u> </u>	ASINGS	0 500 600-20
Sume se h in.	in, in, in, in,	- 30 TOBEDRA
50' ft.	ft. ft. ft.	50 Winkstor
BEN SEAL	(reat) FROM 0 TO 50	5 JE 620, 0457
MATERIAL	(16) OPENINGS	DRSN
T SAMETER 1	in. in.	10 Forcture by
in.	e ft ft	TIOGPIN
ft. (19) DEPTH TO TOP OF SCREEN, FROM TOP OF CASING (Feel)		FRACTURE
No. and a state of the state of the Market	ELD TEST	125 5 ap 4 by
1201 DATE -5-15	(21) DURATION OF TEST	0'90
(22) LIFT METHOD	(23) STABILIZED DISCHARGE (GPM)	NO ton to
್ರೇ ನ್ಲೇಸ್ಟ್ ಪ್ರಸ್ಥೆ ಅಗ್ರವರ್ 1.೧೪೩೯ ಗ್ರೀ ನ್ಲೇಸ್ಟ್ ಪ್ರೇಸ್ಟ್ ಅಗ್ರವರ್ 1.೧೪೩೯ ಗ್ರೀ ಕ್ರೀಯ ಆರ್ಥಿಕ್ರಿಯಾಗವರ್ ಗ್ರೇಮನಿಗಿದ್ದ	La Lucia (1 CAUNDER - CLUSSER Jertinense reinward of clusser)	440
(26) RECOVERY (Time in hours/minutes)	(27) Was the water produced during the Inst discharged away from Immediate area? Yes No	Wall In
(28) PUMP INSTALLED? YESNO	(29) DATE (30) CERTIFIED PUMP INSTALL	Increased To 125 gev Increased To 125 gev
(31) TYPE	(32) MAKE (33) MODEL	135
(34) MAXIMUM CAPACITY (GPM)	(36) PUMP INSTALLATION LEVEL FROM TOP OF CASING (Feat)	610 to 615
(36) METHOD OF DRILLING	(37) USE OF WATER (37) USE OF WATER (See instructions for charges)	gom por acond
(38) DATE DRILLING WORK STARTED	32 DATE DRILLING WORK COMPLETED	DRIVE TO 155
7-27-15	AP DED REGISTRY OF UP	L No percentition
7-38-5 NOBHEION	DOTAL CONTRACTOR	150
BL Sonna this document (hereby effirm their	11 am certified to supervise water well drilling activities a	BOTTOM OF HOLE
defined by Environmental Conservation Law 15- water well standards promulgated by the New Yo the information provided in this Well Completion any take statement made berean is constantly a	Report is true, accurate and complete, and i understand s a Class A Misdemaansr under Para Law \$210.45	pedury that NYSDEC

1 COUNTY BRAUS		COMINGSODEC. I	Well Number
12) TOWN BLODNINGERS W	ATER WELL COMPLETION REPORT	2 <u>8</u> °	
A) OWNER		(45) WE	LLLOG
(5) ADDRESS		Depth to Bedrock	(ft. below
(6) LOCATION OF WELL (See Instructions On Revenue)	MONRDE NY 10949	Ground Elevation	land surface)
2 marsa up Hill Fran 15th	H KG CLOVE RD.	Top of Casino	p sea level)
A aps D well, 22, 639 N mul	STANLAP NO	bel	ow (-) land surface)
S DEFTH OF NELL SELOW LAND SUPFACE ION FILK	AL DEFTH TO GROUNDWATER DATE MEASURED	TOP O	
	CASINGS		
	in in in		SANOY LOOM
NO LENSTR	tt E		BUL
(13) GROUT TYPE/SEALING	(14) GROUT (SEALING PATERIAL N LIN		LIMESTAL
WEW DERL			MASIN
(15) MAKE & MATERIAL	(16) OPENINGS		
(17) DIAMETER		EY	
(18) LENGTH	in. in. in.	QRIE	
ft.	ft. ft. ft.	57"	proston
(19) DEPTH TO TOP OF SCREEN, FROM TOP OF CASING (F	26()		3567
(20) DATE	YIELD TEST	1 <u>30</u> c	
82615	4 Ae		~
(22) LIFT METHOD	er		FRACTURE
(24) STATIC LEVEL PRIOR TO TEST (feet/inches below top of casing)	(25) MAXIMUM ORAWDOWN (Stabilized) (feet/inches.below top of casing)		logon
25 RELOWERY. There is housing the	27 A BD THE ARBET BROOMERS OLIVITY FOR STREET		0
PUM	PINSTALLATION	1du 5	
(28) PUMP INSTALLED? YES NO	(29) DATE (30) GERTIFIED PUMP INSTALLER		
(31) TYPE	(32) MAKE (33) MODEL		
(34) MAXIMUM CAPACITY (GPM)	(35) PUMP INSTALLATION LEVEL		ti s
DRIS			familing
(36) METHOD OF DRILLING	(37) USE OF WATER		(PORTON
(38) DATE DRILLING WORK STARTED	(39) DATE DRILLING WORK.COMPLETED		
8-12-15	8-27-15	-	
RINNE NORTHED	UDRilli, The NYRD DIT		
(43) CERTIFIED DRILLER (Print name) MARAJE TI # 10 PR 13	Hay Turner	8401	
* By signing this document I hereby affirm that: (1) I am certified to supervise water well drilling activities as	воттом	OF HOLE
water well standards promulgated by the New Yo	brk State Department of Health; (3) under the penalty of perjury Recort is true, accurate and complete, and Lunderstand that		
any false statement made herein is punishable a	s a Class A Misdemeanor under Penal Law §210.45.	NYSI	DEC
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LOCATION SKETCH - Indicate contr

NEW YORK STA	TE DEPARTMENT OF EN	VIRONMENTAL CONSER	VATION	
<u> </u>			(3) DEC W	ell Number
COUNTY OROLE	e e e e e e e e e e e e e e e e e e e		A	1
TOWN BLOOM RATE WAT	TER WELL COMPL	ETION REPORT	(45) 14/5	
4) OWNER			WEL	LLUG
CPC LLC	and a statistic strategy in the state of the	n a fallen en e	Depth to Bedrock	20 (ft. below land surface)
β ADORESS $2\pi 2\pi$	MONRDE.	NY	Cround Elevation	ST (ft. above
BU OCATION OF WELL (See Instructions On Revenue)	Check h	ere 🛄 if address is some as abova)	Storic Listandi L	sea level)
-,	C#16		- Top of Casing	(ft. above (+) or
TOTAL CONTRACTOR AND METHOD USED	59. TOU'L)		Udi	
1	13. DEPTH TO GROUNDWATER	DATE MEASURED	TOP O	F WELL
-NC 50 474 0 5 1801 6 10	BELOW LAND SURFACE (Ref)	30 111-3113	1 51	1
	CASINGS			SAND GROSS
	in l	in. in.	50	1 to Roch
		<u>a</u> l <u>ñ</u>	8" DE19	THELEST
22 * 6	La L	na na sana ana ana ana ana ana ana ana a	- 5m	14.1000
Bring String	na ser ser ser la ser la ser en la ser l La ser la ser	<u>o -, 63</u>		
DEN JENE	SCREENS		1 2	+ COLONORO
Inst Make & MATERIAL	(18) OPENINGS		16.1	651 8 1900
	Charles	a Martine and a state of the st	DENVE	SER
(17) DIAMETER	in.	in. in.	544	PELVELT
III.				6.400
(18) LENGTH ft.	ft.	ft. It:	,	andur
(19) DEPTH TO TOP OF SCREEN, FROM TOP OF CASING (Fe	et)		245	6
and the second	VIEI D TEST			()
DOMENTS	(21) DURATION OF TEST	and a second	4584	
1) 4/15	<u>6.H4</u>			
(22) LIFT METHOD	(23) STABILIZED DISCHARGE (G	(PM)		
	1	aa j uwa ,		
(leat/inches below top of casing)	(feet/loches below top of cash	ng)		
(26) RECOVERY (Time in hours/minutes)	(27) Was the water produced durin discharged away from immed	ng tho test No No		1000
PUM	PINSTALLATION			Fribat
(729) PUMP INSTALLED?	(29) DATE	(30) CERTIFIED PUMP INSTALLED	1 220	15 5100
YES NO	and in \$1.5. The second s	/223 KE(\$15)		
	(32) MAKE	(as) moore		
AL ALLS YEAR DIFLIC ALL AND ALL ALL ALL ALL ALL ALL ALL ALL ALL AL	38 PUMP INSTALLATION LEV	EL		
	FRUM TOP OF CASING (F	nen 19 july - Anna Martina († 1911)		
DRN	LER INFORMATION			1 month
(36) METHOD OF DRILLING	(See instructions for choice	s,		112300
(38) DATE DRILLING WORK STARTED	(39) DATE DRILLING WORK CO	OMPLETED	600	8
10/29/1%	115/1		- chola	To
(40) DATE REPORT FILED (41) REGISTERED COMPANY	and in The	NYRD 1017	12082	
10/10/18 NORTHER	(44) CERTIFIED DRILLER SIG	VATURE	670'	
MARAL TIDALIST	mart To	well"	• • • •	
* By signing this document I hereby affirm that:	(1) I am certified to supervise v	vater well drilling activities as	h BOTT	OM OF HOLE
defined by Environmental Conservation Law 15 water well standards promulgated by the New	York State Department of Healt	h: (3) under the penalty of pe	rjury	
the information provided in this Well Completion	n Report is true, accurate and c as a Class A Misdemeanor un	complete, and i understand in der Penal Law §210.45.	" N	YSDEC

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	Berkshire Bus	sniss Fointa, inc. Hudson,	NY (518) 628-26	ಕರಿತಿ ಹೆಚ್ <i>ತಿ ಗ</i> ತ್ರಿಸಿ		
			South	IN STOR		
NEW YORK	STATE DEPARTN	MENT OF ENVIRO	NMENTAL	CONSERV		
I) COUNTY OF BLYS					(3) DEC	Well Number
2) TOWN BLOOMLASH W	ATER WELL	COMPLET	ION RE	PORT		
(4) OWNER	211 571 77 50				⁽⁴⁵⁾ W	ELL LOG
(S) ADDRESS D D D	ANY DAD	D MONR	DE T	77-1	Depth to Bedrock	30 (ft. below
e Druc	I AWHEU	or By stree	74U.	·/	Ground Elevation	Iand surface)
ELECATION OF WELL See Instructors On Revenue;	LOVE RT	(Chockhote 🖽 i)	f address is same	a as above)	Cionina Elevador	sea level)
TURTITUZELONGITUEE AND METHOD USED		T A E H	<u>د</u>		Top of Casing 1	9 (ff. above (+) or below (-) land surface)
ET GPS LI Map 41, 22. 713 N OT	4 . 57 . 541		DATE	MEASURED		
LAND SURFACE (feel)	BELOW LAND) SURFACE (feel)		<u></u>	TOP	OF WELL
	CASINGS	<u>1977 (2010) (2010) (2010)</u> 1	161.12 1.4.	MORT REMOVE		11mon DAM
<u><u> </u></u>	in.	in. (in, i		INDRUN
	ñ.,)	#		ñ.	32'	2 50 6Rose
(15) GROUT TYPE / SEALING	(14) GROUT / SE/ (fost)		70 S	<u>र</u>		Lineston
IJEN OWA	SCREENS				50'	54505
(15) MAKE & MATERIAL	(18) OPENINGS				9	
(17) DIAMETER	. [i.e.	"_"	
	IR. 	Ш» [and and an all the second s	311, 	Spire	÷
ft.	ft.	tt. }		ft.	SHOE	
(19) DEPTH TO TOP OF SCREEN, FROM TOP OF CASING (Feel)					Constitut
	WIELD TEST					FROOT
120) DATE 10/ 17/15	(21) DURATION	1 HR			290	3 25 SM
122) LIFT METHOD	(23) STABILIZED	DISCHARGE (GPM)	tolo		· · · · · · · · · · · · · · · · · · ·	
(24) STATIC LEVEL PRIOR TO TEST	(25) MAXIMUM C	DRAWDOWN (Stabilized)		میک است بیون میں میں ایک میں میں م		
(feet/inches below top of casing)	(1940/mchas	ter produced during the test				
(26) RECOVERT (1 mm in hour connotes)	discharged a	nway from immediate area?	Yes V	Na		
(28) PUMP INSTALLED?	MP INSTALLATIC	(30) CF	ERTIFIED PUMP	INSTALLER		
YES NO	And a second secon			en en anter a la compañsión de la compañsió		
(31) TYPE	(32) MAKE	(33) Mi	UVEL			
(34) MAXIMUM CAPACITY (GPN)	(35) PUMP INST FROM TOP	ALLATION LEVEL OF CASING (Feel)			dan	-30°00
DRI	LER INFORMAT				7.00	1*1-0
(36) METHOD OF DRILLING.	MEL (See Instruc	otions for choices)				
(38) DATE DRILLING WORK STARTED	(39) DATE DRIL	LINGWORK COMPLETED	•			
(40) DATE REPORT FILED (41) REGISTERED COMPAN	EN DR:11	142) DEC	CREGISTRATIC	IN NO.	1.00	
(43) CERTIFIED DRILLER (Print name)	(44) CERTIFIES	DRILLER SIGNATURE	11/10		1 670	
By signing this document Lineraby affirm that	(1) I am certified to	supervise water we	drilling activ	illes as	вотт	OM OF HOLE
defined by Environmental Conservation Law 1 water well standards promulgated by the New	5-1502: (2) this wate York State Departm	er well was construct ent of Health; (3) un	der the pena and 1 unders	ance with Ity of perjury- stand that		a <u>mananan ana amin'ny sora</u> na amin'ny sorana amin'ny sorana amin'ny sorana amin'ny sorana amin'ny sorana amin'ny s
the information provided in this Well Completic	in Report is true, act	Jurate and complete		n panda kanal ing kanala. Ta	1	S JA M HA

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION ± (18) am(3) DEC Well Number (3) DOUM 50 010710 121 TOWN ATER WELL COMPLETION REPORT 44 OWNER (45) WELL LOG Depth to Bedrock (1. below land surface) (5) ADCRES (6) LOCATION OF WELL (fl. above sea level) (° Q m. ル Top of Casing ________(R: above (+) or below (-) iand surface) C CPS C Ling L IS OEPTH OF WELL BELOK IN DEPTH TO GROUNDWATER DATE MEASURED LAND SURFACE (See) 95 D THIN LAND BURFACE MART TOP OF WELL CASINGS (11) DIAMETER 4 8 in, ín, íñ. n. 28 1DC 1121 LENGTH 100' 8 "t. auteda **A**. in. 48 13) GROUT TYPE . SEALING (14) GROUT / SEALING INTERVAL mon__28 · (2007) _ 10 Surface Bentonite d behind SCREENS Cosing INSTRUMET & LEATERIAL THE OPENINGE lar 1171 DIALIETER ín. in. Ìri, зñ, IT SI VENOTH ħ_ 11. 青. ۶ŋ, THE DEPTH TO TOP OF SCREEN FROM TOP OF CASHIG FRE YELD TEST 155 (24) 50.7% DI TOURATION OF TEST 3/24/10 hr 1220 UFT METHOD 20 STABUZED CISCHARGE (GPN D Punie D ANGA 🗍 55Fe 90 THE STATIC LEVEL PRICE TO THE RELIMANDED HI OFLAST DOWNE (Stationed) (feed/mones the dramps of casing) NORTHOMA Delaw lop of seeings ista (24) RECOVERY Trise in hours winnes! 12"- was in some provident strong the issue Vis V discreaged sway non-immediate aren? PUMP INSTALLATION 25 (20) PUR # # STALLED 125 DATE ION PUNP HISTALLOR V БΟ YCE 30 qp ATT TYPE 021165015E (33) EUDEL IS I MARK OF CAPACITY (396) 32 PULP RISTALLATION LEVEL TROP TOP OF GASING Presid DRILLER INFORMATION 157 FERHOD OF CHILLING HAR IN BACK MATE Dual (San laslo, etterater and 43136 🗍 Orde Teyl 🗶 äller Rotan domestic/ KS UNTE DALLING WORK ST 3/2.1/10 19 DUTE DUILLING WORK CONF 3/24/16. HO DATE REPORT NYRD 10009 41) REGISTERED COMPAN 211 re HT CERTIFIED DRULER IP ATURE S CALL Miam) ([] Q. in BOTTOM OF HOLE NYSOEC 68120 60 LOCATION SKETCH - Indicate north Ν \mathcal{O} 2005

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION 12/01 (3) DEC Well Number range **A LOOUNTY** ilsen 010711 al ISS TOWN WATER WELL COMPLETION REPORT MI CANHER (HIST WELL LOG 1 pr Depth to Bedrack 28 (it below LI ADOREBO land surface) Ground Elevation i fi. ebave BILOCATION sen level) Clove KG 2 In. above (+) or op of Casing 7; LATITUDE DOPS D May bolow (-) land surface) INH DEPTH TO GROUND ANTER BELOW LAND SURFACE (MAI ST. DEPTH OF WELL BELOW TOP OF WELL UNIT SURFACE HINKS 700 CASINGS 111 OM NET BR sha iri. ÎN, **浙**、 ÌĽ. 28 8 12 - OCI IN LEASTH Ν. Ĥ. h. ia. 100.5 21-DAL GROWT / SOM ING SUITER VAL 92 EMOIN 28 13 GROUT TYPE / SEALING 10 SUCTACE Bentonite d arive SCREENS 27 15) HAVE & MATSRIAL CIEL OPENING (IT) GAMETER Variatto **Б**, la. In. ÌΩ. HULENGTH Ř. ħ. ñ. | 驗 TO DEPTH TO TOP OF SCREEN FROM TOP OF CASHIG FROM VIELD TEST 20,055 HT DURATON OF THET 4-15-16 + 480 100 305 22:121 121400 ZUSTARI RED DISG 🖱 temp I maria D Bons 70 124) STATICLEVEL PROF TO TEET CELLOOD AM DRAMACINE CONTRACT showing indow was at coving) contraction betan top of catings) was no were in Accessions on the (26) PECOVERS' I Treas to Addition of the International You V_ 140 Anthony and from the address of the PUNP DISTALLATION 100-14-1-2742124 JECT DATE NO_K 195 211 7498 DEFENSE 13374222 Province of Ochie Film nationalistentente (opta) 700 T01dea DRHLER INFERMATION ******* Dual DTIUSE OF WITER - See wanters share the states domestic assas . 🗖 Carls Tos 🗙 Oliver Rotary CHATCORD LOOG WATER CO. DE DATT DINLEUS WOMENTATIES 4-14-16 N-15-16 HOI BATE REPORT FLED NUMERIC LOSS 10000 NYRD rilling 211 Irreyu repositensicurune HOI CERTIFIED DRILL BR IN)illiam Hearn 12. Li ŀ Tel It ALL TALLES IN THE SECOND STATE SECOND STATE S :ALC BOTTOM OF HOLE HYSDEC 10.0010 LOCATION SKETCH - Indicate confit S) \odot

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (3) DEC Well Number Orange moounte 010737 11De 30 WATER WELL COMPLETION REPORT (Z) TOAN HIS WELL LOG 14 OWNER Depth to Bedrock 8/_ If below 15) ACOMES land surface) (IL above Ground Elevatio his Loci sea level) (YQ $\mathcal{A}_{(k)}(\mathbf{k}, \mathbf{sbove}(\mathbf{k}))$ or balow (+) kind surface) A Top of Casing TO ATTUOLA ONG 0 6-2 D (10) DEPTH TO GROUNDWATER (U) DEPTH OF VAELL SELONY DATE NEASURED TOP OF WELL LAND SURFACE MILE) 800 CASINGS 215 (UIAL/ETEN 12 in. 0-6 8 ìn. in. in. $n \omega$ SEI LENGTH led" Ħ. Ìñ. A. | by sandstool 101 6-11 IN GROUT TYPE - GEALING HAL GROUP I SEALT S INTERVAL boulder FRICAL 20 AIR face Bentonite at theel SCREENS llow fam 11-38 (15) WARE & MATERIAL NI) OPENNICS r nocri clai (17) DIAKSTER sengnau 38 - 7 in. ណ៍រ in. ١Ŋ. r claif stal (1P) LENIGTH al N n İ 我 łn. 40 (slab. (IV) dependent for an ornern fram iopts casing (Fro gayclai 42-81 YIELD TEST * hocks? 1203 C.47E IST COMMINEN OF THEST Solid siltstore bedrock 5/6/10 bc 81 122) LITT RETACO 21 STABLIZED DISCHARGE (SPAN W. entir 🗆 Punje 🗊 Balar 50 110 (34) STRIVEL PROCE TO TEST I (Schmanne server and control) 20) AMAGININ DRAYTICIYA (BUILLIAN) that water takes to be strated (27) Sinis the tenter mails of during the Lost 1101 TEDDUBAY (Tom in houseln index) 705 1 priated duringent inny mpiciply dentity stand 145 PUMP DISTALLATION n mining interaction Comparent and the second 293 BATS NO. V 755 IN ASSAUL 32 MARKE IST FYRE japmi 10 165 ¥ STREAP PRIMITALIANS LEVEL SPELLIOP OF CASHO PROL HI MAYAUN CARNETY IOFW 190 * (HO DRILLER NEOPMATION Var Diture of whiter Dual THE WELSO OF DEBLINGS 00, (Description of the second domestic line 🗋 cara ter 🗙 start Rotary 70)91 225 COLORING WARS NOTED 80 5 4/24/16 576/14 NYRD 10009 NU DATE REPORT FR. ED MAN REPORTS COUPAU النظي u'ell Frey DOGA n TUNE Hardstrings chilles (ninthorne) The signing this accument, hereby effinit has 31 the conflict to average water well chilling adbeiles as conflicted by Environmental Conservation Law 15-1502; (2) this wellow well owell chilling adbeiles as conflicted by Environmental Conservation Law 15-1502; (2) this wellow well wes constructed in accordance with wellow well standards promigated by the New York State Department of Health: (3) under the penalty of penulty the information provided in this Well Completion Report is true, accurate and complete, and Lunderstand bat any folse statement made herein a pointebble as a Class A Mademeteror under Penal Law §210.45. LITICHATIFIED ONILLER (Planting rotalde 800 TOTA INSOEC. Jour NCL LOCATION SKETCH - Incides worth રેળ્ડ (\overline{X})

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION 13) DEC Well Number Orana COUNTY . 010728 noe (a) TOMM COMPLETION REPORT Ŵ 1) OWNER (45) WELL LOG non Dorth to Bedrock 4/ In below (S) ADDRESS land surface) 10949 (II. above sea level) G/curd Elevation IN LOCATION D 10 A-110 MOMOL BITANTA STATION 1/11 (II. abova (+) or below (+) land surface) Top of Casing IT LAT TUDE LONGTHOPE AND HETHOD USED aps D Lap (0) DEPTH OF WELL BELOW (10) DEPTH TO GRO ADWATER CATE MEASURED LAND SUIT ADE (IMAI) 1010 SELCAN LAND STIRFARE HOAT TOP OF WELL CASING (1) SAMETER Grown tell, 0-40 ોલ 8 m 12 àt. RÌ. G25 LEVISTIC us 1 ŧĿ. 101 11. ìn. 21 11) OPOLIT TYPE I SEALING HE GROUT PREAL AS INTERNAL 20' ro Surface arrive FRICAS Bentonite d \sim SCREENS IST MANDE & MATERIA (15: CINENSIA) ITTI CHANDTER 16 Ξŧ, 97L. in, (III) (ENGTH 1 <u>fi</u>, .*ti*. | in. WI DEPTH TO THE OF SCREEN TOOL TOP OF CARDIN Hand YISLD TEAT 50) D418. 121-CORATION OF THE hr 12315 MARTIZED DISCHARGE TRA COLFT: METHOD 1 win 🗇 Pasa 🔲 traver 200+ PERSIANC LEVEL PROPER TO TEST CALLVARY II DOATHOOMS (Environme destrictions had a trip of calegory iscontinues televenspiri user gi mane trade at The weather and 627) Was the name on test define the 199 one fragment of the first and the first one of Var V PUMPINSYALLATION 18 Puble mid #LLED? IST CATE NU: PULTE HISSALLER 1 - 12 705 SUDYE (11)1995 DN COREU GL, BREALEN CRALLEY (1996) "S) powe interaction of the Frank Top of Cosing (from DRILLER INFORMATION STICO OF DRILLING Inal STATER OF TATER ria. IQOperatic. in manuzin with dis [] 乙肟酸 (18)2 🗙 cario • **•** • • • • • Rotary a and drugs work stand SANE FRANK ING MERING AND 983 4/19/16 4/23/16 MATI REGISTERED COMPANY STODATE PROOFT FLED AT DECREASTR Innic 10009 Freywell NYRD Cill Contraction of the second 81010 1-31 COLLER (R REIGNATINE Ē) Illiam NUL liam rei BOTTOM OF HOLE any talse statement made horoin & punishable as a Class A Misdenmanar under Ponzi Law §210.45. NYSDEG N 208 LOCATION SKETCH - Indicate north (\mathbf{x}) ٦

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (3) DEC Well Number manae (1) COUNTY NISLO 010729 monoe (Z) TOWN WATER WELL COMPLETION REPORT ALCINNER (45) WELL LOG CPC. LAC Gelh. $m \alpha n$ Depth to Bedrock 11 (it, below (5) ADDRESS land surface) onmer 10950 Ground Elevation (IL above (B) LOCATION OF WELL IS sea level) ? love nne 2. (ft. above (+) or below (-) land surface) Top of Casing CALATTUDE LON (I) DEPTH OF WELL BELONY ID, DEPTH TO GROUNDWATER DATE MEASLRED TOP OF WELL LAND SURFACE MAN 800 PRIME (AND SIMPLICE (ISH)) -CASINO IT DIAMETER -24 in. in, 髚. ín. 0 brown TZILENGT) banknun Und " ħ. ín. Ħ. 1 10| raill (15) GROUT TYPE I SEALING 1141 GROUT / SEALING INTERVAL 101 The SUL 1ac Bentonite d - Chield PRON ar SCREENS ravel 15: MARE & LANTERIAL HA, OPENHICS NΑ 50 Shutoff (17) DIAMETER lr_i ín, in. łđ, loching million (In LEXOTA 8. ۴. ĺŧ. Ĭ٦. TE DEPTH TO TOP OF SCREEN, FROM TOP OF CASHING (Frees YIELD TEST (26) 6373 TH DURATION OF TEST 13/10 ഗ് hr IN STABILIZED DISCH RCE (GPH) - Post rìr 🛄 <u>Đ</u>uếc ar di 65 155 (29) KANDOUKI DAVW/DOMY (Stabilized (Jostractine original cests) (24) STATICLEVEL PRIOR TO YEST Surviving the second carries of 27/14/38 the waller grading of a start of the TEST RECOVERY (This is to us meeters cateorypei avay beau in term and Yes Na PUMP INSTALLATION ISOI PUNPINSTALLER CALPINE SUSTALLED 20) DATE \$3 VĽ8 131 MAATE 120117-00021 i tirtine CALMANE UC CAPACITY (GPC) AST FUMP ENSTALLAT OF LEVEL 405-415 FROM TOP OF CASING (Feel) white cal DRILLES INFORMATION Section ISI WARHOD OF DRULLING WARSE OF WATER Dual IS a family studies to strates Diorolatic 📋 Casie Yes: All the states of the states o M Orn 440 Rotany ist but offering some eterte "BIT1 P. 30 gpm 3/10 5 121 DEC REGISTRATION NO. NYRD 10009 na IND DATE REPORT PLEC 1411 860 Varia gray Fre PACKS ER SICHATURE (a) Centreup Peters Canada Sana (a) Centreup Peters Canada Sana (a) Centreup Peters Canada Sana (a) Centreup Peters (a) C 431 CENTIFIED DHILLER # 뿽 Totalde 800 TOTO BOTTOM OF HOLE 'NYSDEC ait ou nd LOCATION SKETCH - Indicate north X y \bigotimes

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION 13) DEC Well Onana PD COUNTY VNIA 010828 (a) TOres WATER WELL COMPLETION REPORT (4) CIWHER HS WELL LOG NON 10 th below Ceph to Bedrock (S) ADDRES! 0949 land surface) (ft. above sea level) Ground Elevation lear Locie Tr 10 nons A (fl. shows (+) or Tup of Casing D OPS D May below (-) land surface) (2) DEPTH OF WELL GELOW IL DEPTH TO GROUNDRATER DATE MEASIFIED LAND SURFACE HAA 000 NOT THAT I AND SURFACE (LALE) TOP OF WELL -----CASINGS ATTI DAMAETER 16' in. in 10. e. ran HIZLLENGTH oulled" ! ŧ. 101 ĥ. (h) *120 110) ORDUT TYPET SEALING THI GOODT I SEALING INTERVAL 20' rosusface feet FRIQU Bentonite SCREENS 160 THE MAKE & MATCRIAL IN OPTIMICS 10 total (17) DIALIETER ¥215 in. in. 88, 'n. (181 LENDETS n. n 19, [н 460 UN DEPTH POTOR OF SCHRETE PROMINE OF CASENE (FINE WELD TEST 20110471 211 OURATION OF SES \$ 600 pm sotoku 8/10/16 Line (GPR) 1241 UNT METHOD EN STANUZED DISCH * 645 J'ana 🔲 5080 🗇 Prime 100 100 total 1241 STATISCUSVEL PRICE TO TEST 75; DAMARIC STRADOS VIN (SER David Marthumbus interview of cash-ja linei rizhes z Ferrioù di debitiga 1201 SECONERS (Tons I' Tomorialitation 221 And the winer produced during the test (2.2.5.5.5.6.6 prody may make an ended No Y variations 16-PUMP INSTALLATION 1000 shales iza) datu m Puris Instantion CENTRAL BARRAGER × V itt s millionel \$7.17mE JAN WE 1241 MARKER MICH PROPERTY PEPSIE NOT THE PROPERTY OF THE PARTY O FREALTON OF GASNES IF NO BRUIER WRITEN C-7: LISE OF WATER Dual 100 PERSON OF BRAILEIG Similar utam to chatce Rotany 1000 lahay 👘 🛄 Debie Tea. 🗙 Thirt mestic 10/10/16 1.41, 27 12 amil 1.003 4 Jan 1977 1978 1977 1978 let PO DO TO TE REPORT FILED (1 I) APCISTERED COUPANS 21 DEC PEGISTRAMORI (NYRD 10009 211 Freyu ino +0t0434 DEPITHNED SARLIES INTO WILLER BRANATURE By signing this document I hereby aftern back(P) I am bonfiled to supervise waler well diffug advites or formed by signing this document I hereby aftern back(P) I am bonfiled to supervise waler well diffug advites or formed by water well standards promulgated by the New York State Department of Health: (a) under the penality of perjury the information provided in this Wall Completion Report is true, incurate and complete, and Lunderstand that any false statement made hereb & punishable as a Class A Mademannor under Penal Lew \$210.45. 門 BOTTOM OF HOLE MYSDEC and the second LOCATION SKETCH - Indicate north N Ptall nd 个 Ø

APPENDIX III



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Monthly Total Precipitation for PORT JERVIS, NY

			Each co	olumn cor	tains mo	nthly valu	e and mo	nthly num	ber of m	ssing days	S		_
Year	Jan	Feb	Mar	Apr	May	Jun	Jui	Aug	Sep	Oct	Nov	Dec	Annual
1893	3.57 0	5.54 2	3.80 0	3.61 0	8.44 1	3.79 0	3.33 0	5.63 0	1.93 0	3.67 0	3.47 0	3.92 0	50.70
1894	2.45 1	4.03 0	1.57 0	3.28 0	6.68 0	1.95 0	1.83 0	1.57 0	6.02 0	6.06 1	3.34 0	6.05 0	44.83
1895	3.77 0	1.45 0	1.69 0	4.67 0	3.04 0	2.71 0	3.20 1	8.14 0	1.48 0	5.79 0	2.90 0	3.33 0	42.17
1896	1.55 0	0.51 0	0.00 0	1.63 0	2.88 0	6.06 U	8.61 2	2.51 0	5.43 0	3.53 0	4.80 0	1.14 0	51.25
1897	2.91 U	3.00 0	2.74 0	3.11 0	5.57 U	M 22	9.53 1	3.65 U	2.22 0	1.18 0	5.71 0	M 1/	IVI NA
1090	IVI 22	4.33 2	IVI 20	3.23 0	IVI 11	4.15 U	IVI 22	IVI 16	2.14 0	5.04 0	M 18	2.27 0	IVI
1099	222 0	4.04 U	5.65 U	2.23 0	2.30 0	100 0	IVI 19	IVI 23	IVI 15	1.00 0	2.22 U	2.01 0	IVI
1900	1.52 0	M 21	5 10 0	2.00 0	2.92 0	4.99 0	733 0	M 15	IVI 22	1.31 0	IVI 10	2.90 0	IVI
1907	M 22	646 0	M 21	M 21	M 22	2.00 U	M Q	M 10	8.01 0	5 30 0	M 19	7.99 U M 17	IVI M
1902	3.00 0	M 18	3.68 0	3.52 0	100 0	13.76 0	4 50 0	8.25 0	1.52 0	10.60 0	1 99 0	3.86 0	M
1904	3.42 0	2.08 1	3.56 0	3.31 0	4.97 0	2.01 0	5.05 0	M 21	6.80 0	M 25	2.28 0	2 10 0	M
1905	5.26 1	2.00 0	3.60 0	1.85 0	2.04 0	M 17	M 18	6.39 0	5.51 0	M 24	M 22	3.49 0	M
1906	2.00 0	2.28 0	M 18	M 21	4.07 0	M 15	5 36 0	3 44 0	M 21	2.58 0	1.56 0	M 18	M
1907	3.26 0	1.72 0	2.24 0	2.37 0	2.72 0	2.99 0	2.95 0	M 18	7.01 0	5.30 0	M 17	4 81 0	M
1908	2.83 0	M 21	4.23 0	M 17	M 16	M 23	M 21	M 24	2.17 0	M 22	0.80 0	2.70 0	M
1909	M 15	5.21 0	4.04 0	5.98 0	2.83 1	3.54 0	1.37 0	2.39 0	2.83 0	1.20 0	2.13 0	3.88 2	M
1910	4.34 0	3.47 0	1.20 0	7.98 0	1.86 0	3.53 0	1.27 0	4.73 0	2.08 0	0.90 0	3.78 0	2.40 0	37.54
1911	2.03 0	2.16 0	3.49 0	3.48 0	1.11 0	7.69 0	4.14 0	6.69 0	M 18	5.89 0	2.78 0	3.10 0	М
1912	1.19 0	1.68 2	5.25 0	4.11 0	2.99 0	1.40 0	1.72 0	4.87 0	4.43 0	3.35 0	2.27 0	4.03 0	37.29
1913	3.57 0	1.89 0	6.09 0	4.44 0	3.03 0	1.57 0	6.92 0	4.07 0	2.54 0	5.46 0	3.79 0	3.57 0	46.94
1914	2.58 0	2.93 0	5.87 0	4.63 0	3.33 0	3.80 0	3.55 0	2.30 0	0.33 0	2.24 0	2.83 0	3.21 0	37.60
1915	5.12 0	4.14 0	0.63 0	2.24 0	3.77 0	2.70 0	5.96 0	6.17 0	2.54 0	3.33 0	2.32 0	6.41 0	45.33
1916	1.40 0	2.16 0	3.92 0	3.57 0	5.22 0	4.66 0	6.41 0	2.37 0	4.19 0	1.57 0	2.75 0	3.36 0	41.58
1917	2.93 0	1.51 0	3.49 0	1.49 0	3.54 0	5.57 0	2.56 0	1.36 0	0.97 0	5.99 0	0.70 0	3.14 0	33.25
1918	4.38 0	1.61 0	1.71 0	4.92 0	4.93 0	2.79 0	3.38 0	4.63 0	3.92 0	2.04 0	2.36 0	3.21 0	39.88
1919	2.54 0	2.28 0	4.77 0	2.60 0	3.79 0	4.01 0	5.83 0	4.06 0	3.57 0	3.70 0	4.82 0	1.91 0	43.88
1920	2.81 0	4.22 0	4.43 0	5.24 0	2.36 0	5.67 0	9.46 0	4.45 0	7.17 0	2.71 0	4.37 0	3.92 0	56.81
1921	2.31 0	3.90 0	3.67 0	2.97 0	2.55 0	3.88 0	2.17 0	3.21 0	3.11 0	1.61 0	5.01 0	2.15 0	36.54
1922	2.09 0	1.73 0	3.81 0	1.93 0	2.98 0	11.85 0	4.88 0	4.03 0	1.58 0	1.66 0	1.27 0	3.75 0	41.56
1923	6.42 0	1.95 0	2.29 0	1.89 0	3.46 0	4.45 0	4.25 0	1.64 0	3.28 0	3.25 0	3.10 0	3.59 0	39.57
1924	3.76 U	2.01 U	2.35 0	0.30 0	0.48 0	1.99 0	1.74 0	3.07 0	7.42 0	0.27 0	IVI 30	IVI 31	IVI M
1925	M 31	M 20	3.12 U	1.39 0	1.12 0	3.34 0	9.00 0	2.83 0	5.10 0	3.28 U	4.74 0	2.47 0	IVI
1920	4.19 1	3.46 0	1.00 0	2.09 0	2.41 0	3.90 0	2.79 0	7.39 0	5.40 U	5.30 U	6.04 0	1.07 0	40.93
1928	2 77 0	4 50 0	3.73 0	5.61 0	2.67 0	7.93 0	6.47 0	6.14 0	2.00 0	2.04 0	1 11 0	2.43 3	45.98
1929	2.88 0	3.40 0	2 23 0	7.24 0	3.29 0	494 0	1.91 0	2 75 0	5.22 0	3.97 0	2 42 0	3.23 0	43.48
1930	1.43 0	0.96 0	3.79 0	1.71 0	3.51 0	4.99 0	3.23 0	3.64 0	4.89 0	1.60 0	2.63 0	3.34 0	35.72
1931	1.75 0	2.34 0	2.61 0	4.45 0	4.74 0	5.11 0	7.60 0	3.94 0	2.77 0	1.89 0	0.89 0	2 31 0	40.40
1932	2.58 0	2.54 0	2.72 0	1.52 0	4.96 0	3.40 0	3.50 0	4.50 0	1.61 0	9.60 0	6.26 0	1.59 0	44.78
1933	1.37 0	3.41 0	4.56 0	3.39 1	2.25 0	1.55 0	2.68 0	10.13 0	6.63 0	2.83 0	0.83 0	2.76 0	42.39
1934	2.29 0	2.50 0	2.71 0	4.67 0	5.06 0	4.30 0	4.78 0	2.27 0	7.87 0	2.75 0	4.34 0	2.57 2	46.11
1935	3.05 0	1.80 1	1.76 0	1.63 0	2.78 0	4.35 0	7.30 0	1.73 0	3.92 0	7.19 0	4.56 0	1.71 0	41.78
1936	4.28 0	1.44 0	7.93 0	3.51 0	3.82 0	4.15 0	0.97 0	6.21 0	3.51 0	2.72 0	1.52 0	4.95 0	45.01
1937	5.17 0	2.76 0	2.79 0	3.94 0	3.59 0	5.66 0	4.70 0	4.97 0	3.16 0	5.24 0	3.82 0	2.22 0	48.02
1938	3.36 0	1.81 0	2.18 0	2.33 0	3.53 0	8.62 0	11.35 0	3.27 0	8.43 0	3.05 0	3.32 0	3.13 1	54.38
1939	2.55 0	4.85 0	3.45 0	4.52 0	1.48 0	3.76 0	2.04 0	4.27 0	4.08 0	5.25 0	2.04 0	1.56 0	39.85
1940	1.87 0	2.26 2	5.54 0	4.41 0	4.81 0	6.51 0	1.65 0	5.54 0	1.80 0	1.91 0	4.98 0	2.26 0	43.54
1941	2.02 0	2.00 0	1.83 0	1.49 0	1.87 0	4.10 0	7.30 0	3.36 0	0.40 0	1.69 0	1.77 0	3.09 0	30.92
1942	2.78 0	1.30 0	3.12 0	1.28 0	3.43 0	4.66 0	7.05 0	4.92 0	5.73 0	2.21 0	4.05 0	5.51 0	46.04
1943	3.04 0	2.24 0	1.46 0	1.73 0	5.40 0	2.79 0	3.35 0	2.27 0	0.54 0	6.15 0	2.68 0	0.36 0	32.01
1944	1.00 0	2.65 0	4.42 0	4.75 0	1.52 0	3.64 0	2.43 0	1.46 0	4.98 0	1.18 0	3.40 0	3.01 0	34.44
1945	4.77 0	3.61 0	1.90 0	3.65 0	6.01 0	5.90 0	6.54 0	4.30 0	3.24 0	2.10 0	6.16 0	4.62 0	52.80
1946	1.18 2	2.82 0	1.65 0	1.02 0	6.6/ 0	2.96 0	4.02 0	2.81 0	4.96 0	1.94 0	0.71 0	1.6/ 0	32.41
194/	3.01 0	2.30 0	2.35 0	0.40 0	0.70 0	3.05 0	9.1/ 0	0.79 0	2.32 0	1.60 1	0./3 0	3.88 0	49.36
1940	438 0	1.62 0	2.70 0	4.02 0	5.52 0	4.71 0	3.00 0	1.00 0	1.01 0	1.00 0	0.80 U	3.21 0	43./5
1950	221 0	3.32 0	3.80 0	2.26 0	3.42 0	5.03 0	1.65 0	2.24 0	196 0	1.50 0	3.83 0	4.46 0	35.45
1951	4.12 0	4 46 0	5.30 0	2.50 0	3.98 0	4 03 0	3.64 0	3.57 0	1.62 0	3.34 0	5.94 0	278 0	45 75
1952	3.17 0	1.58 0	4.56 0	9,10 0	5.86 0	5.13 0	5.20 0	3.73 0	5.87 0	1.02 0	7.45 0	4.33 0	57 00
1953	5.50 0	0.80 0	5.15 0	7.05 0	3.88 0	3.48 0	3.45 0	1.87 0	3.38 0	6.43 0	2.52 0	4.15 0	47.66
1954	1.55 1	1.66 0	1.97 0	3.84 0	4.29 0	0.90 0	1.49 0	4.02 0	2.80 0	1.91 0	6.32 0	4.66 0	35.41
1955	1.05 0	2.06 0	3.54 0	3.24 0	1.44 0	2.62 0	1.89 0	17.34 0	3.05 0	9.21 0	3.35 0	1.23 0	50.02
1956	2.31 0	3.07 0	4.01 0	3.27 0	2.43 0	3.04 0	5.23 0	1.53 0	6.12 0	1.85 0	2.87 0	2.61 0	38.34
1957	2.45 0	1.64 0	2.00 0	3.65 0	1.87 0	2.52 0	4.35 0	1.41 0	3.33 0	3.26 0	2.68 0	6.08 0	35.24
1958	5.34 0	4.58 0	4.87 0	5.59 0	3.77 0	3.14 0	4.11 0	4.66 0	4.27 0	6.16 0	1.53 1	1.06 0	49.08
1959	0.98 0	1.48 0	M 31	M 30	M 31	M 30	M 31	M 31	M 30	M 31	M 30	M 31	М
1960	M 31	M 29	M 31	M 30	M 24	4.31 0	6.61 0	6.08 0	6.56 0	1.63 0	1.54 0	2.20 0	М
84-	0.00	0.77	0.54	0.00	0.00	1.01	4.10	1.51	0.01	0.02	0.07	0.15	10 -
wean	2.99	2.11	3.51	3.68	3.93	4.24	4.43	4.01	3.84	3.38	3.37	3.40	43.54
Max	8.91 1979	0.51 1896	8.58 1977	10.69	11.11 1989	13.76 1903	11.35 1938	17.34 1955	10.51	10.60 1903	9.46 1972	9.03 1973	71.77
	0.52	0.59	0.43	1,02	0.87	0.59	0.96	0.73	0.33	T	0.70	0.23	29.97
wiin	1980	1968	1981	1946	1962	1966	1999	1964	1914	1963	1917	1928	1965

Year	Jan	_	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1961	3.13	0	3.65 0	4.84 1	5.27 0	4.56 0	2.66 0	3.45 0	2.90 0	2.48 0	1.17 0	5.22 0	2.89 1	42.22
1962	2.97	0	3.74 0	2.18 0	3.51 0	0.87 0	2.16 0	1.52 0	3.29 0	2.10 0	3.95 0	3.78 0	2.90 0	32.97
1963	2.93	0	3.23 0	2.91 0	1.36 0	3.04 0	2.75 0	6.28 0	1.81 0	3.00 0	Τ Ο	5.99 0	2.26 0	35.56
1964	5.00	0	2.59 0	2.04 0	3.99 0	3.63 0	2.23 0	4.86 0	0.73 0	1.79 0	0.61 0	2.02 0	3.26 0	32.75
1965	2.97	0	2.33 0	1.92 0	2.21 0	2.14 0	1.82 0	3.47 0	4.47 0	2.63 0	2.34 0	1.91 0	1.76 0	29.97
1966	2.53	0	2.99 0	2.30 0	2.32 0	2.74 0	0.59 0	2.65 0	1.67 0	4.30 0	3.20 0	3.77 0	4.03 0	33.09
1967	1.26	0	1.98 0	6.17 0	2.82 0	3.29 0	2.97 0	6.00 0	6.15 0	1.97 0	1.98 0	2.51 0	4.35 0	41.45
1968	1.92	0	0.59 0	3.42 0	3.41 0	5.99 0	5.40 0	1.37 0	3.32 0	1.82 0	2.91 0	4.44 0	2.79 0	37.38
1969	2.17	0	1.51 0	3.20 0	3.84 0	1.55 0	3.75 0	7.33 0	4.41 0	2.96 0	1.94 0	4.47 0	6.02 0	43.15
1970	0.61	0	2.79 0	3.49 0	3.56 0	2.92 0	1.95 0	3.89 0	2.38 1	3.02 0	4.55 0	5.09 0	2.51 0	36.76
1971	2.55	0	5.31 0	2.61 0	1.96 0	6.61 0	2.28 0	3.78 0	6.74 0	4.42 0	3.20 0	4.44 0	2.70 0	46.60
1972	2.20	0	4.56 0	4.90 0	3.92 0	6.17 0	9.53 0	3.48 0	2.97 0	1.46 0	3.15 0	9.46 0	5.44 0	57.24
1973	3.35	0	2.47 0	2.78 0	6.99 0	6.83 0	6.96 0	4.38 0	2.45 0	3.60 0	3.34 0	1.68 0	9.03 0	53.86
1974	3.77	0	2.35 0	5.10 0	3.20 0	3.87 0	5.42 0	5.72 0	5.74 0	5.37 0	1.62 0	2.48 0	4.42 0	49.06
1975	5.24	0	4.20 0	3.88 0	2.36 0	3.72 0	5.07 0	4.70 0	4.32 0	4.88 0	3 26 0	433 0	2 43 0	48.39
1976	4.62	0	2.71 0	2.20 0	2.32 0	4.39 0	6.41 0	5.38 0	4.12 0	3.33 0	5.64 0	1.06 0	2.48 0	44 66
1977	1.39	0	2.85 0	8.58 0	4.27 0	1.37 0	2.21 0	3 20 0	3.14 0	6.02 0	3.87 0	4.52 0	5 19 0	46.61
1978	6.76	0	1.72 0	3.11 0	1.19 0	6.19 0	2.63 0	2.18 0	3.14 0	2.41 0	2.47 0	2.36 0	3.88 0	38.04
1979	8.91	0	3.23 0	2.60 0	3.99 0	5.46 0	2.92 0	4.85 0	3.83 0	6.78 0	4.05 0	3.22 0	1.48 0	51.32
1980	0.52	0	1.18 0	6.83 0	5.30 0	1.31 0	3.83 0	M 31	2.15 0	2.75 0	4.74 0	3.05 0	1.02 0	M
1981	0.61	0	5.61 0	0.43 0	3.95 0	4.95 0	4.36 0	4.53 0	1.08 0	3.72 0	4.55 0	1.41 0	3.55 0	38,75
1982	3.20	0	2.99 0	2.34 0	4.04 0	3.51 0	6,18 0	2.87 0	5.11 0	3.82 0	1.06 0	3.37 0	1.53 0	40.02
1983	3.13	0	3.69 0	6.28 0	10.69 0	4.49 0	4.42 0	1.73 0	3.22 0	4.03 0	3.59 0	5.78 0	7.04 0	58.09
1984	1.36	0	4.44 0	5.06 0	6.57 0	8.70 0	4.30 0	6.46 0	3.40 0	0.70 0	1.61 0	2.72 0	3.42 0	48,74
1985	0.91	0	2.48 0	2.30 0	1.37 0	7.63 0	4.52 0	3.98 0	2.32 0	9.09 0	1.65 0	6.73 0	2.91 0	45.89
1986	4.47	0	4.52 0	2.83 0	5.35 0	2.03 0	4.99 0	7.23 0	2.10 0	1.47 0	2.05 0	5.53 0	3.39 0	45,96
1987	4.30	0	0.60 0	2.18 0	5.87 0	1.96 0	1.17 0	3.94 0	3.86 0	7.52 0	4.93 0	3.94 0	1.66 0	41.93
1988	2.05	0	3.83 0	1.71 0	1.58 0	5.47 0	1.14 0	7.97 0	4.14 0	3.32 0	1.93 0	5.64 0	0.82 0	39.60
1989	1.47	0	1.80 0	2.99 0	1.70 0	11.11 0	6.28 0	2.04 0	4.41 0	8.15 0	6.07 0	1.60 0	1.31 0	48.93
1990	4.76	0	3.02 0	3.14 0	2.43 0	6.96 0	1.24 0	4.54 0	7.04 0	1.84 0	3.92 0	3.65 0	6.46 0	49.00
1991	2.59	0	1.50 0	4.22 0	3.76 0	1.80 0	2.34 0	1.80 0	3.07 0	4.16 0	3.69 0	3.40 0	2.69 0	35.02
1992	2.11	0	2.07 0	3.46 0	2.65 0	4.27 0	5.03 0	6.25 0	1.97 0	3.66 0	1.40 0	3.88 0	5.59 0	42.34
1993	2.59	0	3.40 0	5.97 0	6.89 0	1.15 0	3.28 0	1.82 0	1.76 0	6.40 0	4.69 0	3.38 0	3.82 0	45.15
1994	5.68	0	2.87 0	5.87 0	4.32 0	3.39 0	5.51 0	4.28 0	8.26 0	5.14 0	1.86 0	3.61 0	2.63 0	53.42
1995	3.54	0	2.32 0	3.05 0	2.43 0	2.15 0	1.64 0	3.18 0	1.65 0	2.89 0	8.25 0	4.98 0	2.06 0	38,14
1996	7.32	0	2.19 0	3.00 0	7.37 0	2.88 0	3.61 0	9.83 0	2.72 0	7.30 0	5.66 0	4.34 0	6.47 0	62.69
1997	2.50	0	1.77 0	5.13 0	2.70 0	2.39 0	2.00 0	3.25 0	6.14 0	3.85 0	1.67 0	4.48 0	3.70 0	39.58
1998	3.46	0	4.34 0	4.54 0	5.38 0	6.67 0	11.06 0	1.78 0	1.75 0	1.53 0	2.73 0	1.72 0	1.09 0	46.05
1999	6.07	0	2.48 0	4.82 0	2.27 0	2.39 0	1.23 0	0.96 0	3.46 0	10.43 0	3.02 0	1.91 0	2.34 0	41.38
2000	3.84	0	2.63 0	3.66 0	4.16 0	3.02 0	7.54 0	5.96 0	3.61 0	4.40 0	1.16 0	2.45 0	5.69 0	48.12
2001	1.79	0	2.72 0	5.15 0	1.57 0	M 31	3.44 0	1.92 0	2.25 0	4.33 0	0.84 0	1.06 0	1.80 1	М
2002	1.30	0	0.71 0	3.60 0	3.67 0	6.97 0	4.89 0	1.88 0	3.25 0	3.71 0	6.42 0	4.02 0	6.07 0	46.49
2003	2.37	1	3.67 2	3.44 1	1.56 0	4.23 0	M 11	M 20	5.40 0	M 17	M 20	M 19	M 18	M
2004	M	15	M 24	M 15	M 20	M 12	M 20	M 18	M 19	M 22	M 24	3.54 0	M 20	M
2005	M	13	2.54 0	M 19	M 19	M 19	3.11 1	M 18	7.85 0	M 25	M 19	M 19	M 21	M
2006	M 2	20	M 20	M 26	M 19	M 21	8.10 0	3.60 2	M 22	M 15	M 22	M 21	M 23	M
2007	M 2	21	1.90 0	2.52 0	5.35 0	M 26	3.85 0	5.06 0	4.61 0	1.19 0	M 22	4.03 1	M 14	М
2008	M 2	20	M 17	M 20	M 23	3.66 0	2.16 4	M 17	1.68 0	5.85 0	5.97 0	2.71 0	7.46 0	M
2009	1.32	1	0.77 0	2.19 0	2.70 0	3.91 0	8.79 0	5.47 0	3.66 0	0.54 3	4.90 0	1.90 0	4.83 0	40.98
2010	1.73	0	3.72 0	7.36 0	3.31 0	2.71 0	3.15 0	2.74 0	4.00 0	1.70 0	9.24 0	2.78 0	3.29 0	45.73
2011	2.01	0	2.24 0	6.62 0	5.38 2	5.45 0	8.55 0	5.95 0	13.79 0	10.51 2	3.84 0	3.17 0	4.26 0	71.77
2012	3.17	0	0.68 0	1.40 0	2.74 0	3.39 0	3.64 0	4.31 0	2.95 0	7.78 0	4.87 0	0.97 0	4.27 0	40.17
2013	3.15	0	1.69 0	2.06 0	2.77 0	3.32 0	9.95 0	3.17 0	7.11 0	1.44 0	1.48 0	2.96 0	3.81 0	42.91
2014	3.29	0	3.30 0	2.29 0	2.15 0	4.67 0	3.94 0	6.53 0	2.56 1	1.94 0	3.36 0	2.62 0	3.06 0	39.71
2015	2.73	0	1.33 0	2.68 0	2.62 0	1.60 0	8.29 0	7.86 0	3.54 0	4.75 0	3.20 0	1.61 0	3.65 0	43.86
2016	1.49	0	4.38 0	0.55 0	1.94 0	3.74 0	2.32 0	5.53 0	4.68 0	1.07 0	2.20 0	2.66 0	3.09 0	33.65
2017	2.85	0	2.43 0	4.06 0	4.49 0	4.06 0	3.26 0	4.56 0	3.93 0	2.27 0	M 15	M 30	M 31	М
Mean	2.99		2.77	3.51	3.68	3.93	4.24	4.43	4.01	3.84	3.38	3.37	3.40	43.54
Merr	8.91		6.51	8.58	10.69	11.11	13.76	11.35	17.34	10.51	10.60	9.46	9.03	71.77
wax	1979		1896	1977	1983	1989	1903	1938	1955	2011	1903	1972	1973	2011
Min	0.52		0.59	0.43	1.02	0.87	0.59	0.96	0.73	0.33	Т	0.70	0.23	29.97
	1980		1968	1981	1946	1962	1966	1999	1964	1914	1963	1917	1928	1965


Month	Total Precipitation Normal (inches)	Mean Max Temperature Normal (°F)	Mean Min Temperature Normal (°F)	Mean Avg Tempera (°F)
January	3.22	33.7	15.4	24.6
February	2.93	38.0	17.5	27.7
March	3.66	47.6	24.7	36.1
April	4.04	61.1	34.8	48.0
May	4.01	71.7	44.9	58.3
June	4.39	79.1	54.4	66.7
July	3.92	83.4	59.1	71.2
August	3.89	81.2	57.7	69.5
September	4.54	73.3	50.1	61.7
October	4.41	61.5	38.4	50.0
November	3.59	49.9	30.2	40.0
December	3.78	37.9	20.8	29.4

10/17/2017

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APPENDIX IV

C-6





K:\Jobs\Lake Anne\Clovewood\2017\Hydrographs\Pumping Wells\C-6180Day.grf

LBG Hydrogeologic & Engineering Services, P.C.

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Date	Time	Depth to Water/Drawdown (ft btoc/feet)	Elapsed Time/Recovery (minutes)	Comments
7/6/17	16:00	flowing		Pressure transducer installed in well.
7/6/17	17:00	flowing		
7/6/17	18:00	flowing		
7/6/17	19:00	flowing		
7/6/17	20:00	flowing		
7/6/17	21:00	flowing		
7/6/17	22:00	flowing		
7/6/17	23:00	flowing		
7/7/17	0:00	flowing		
7/7/17	1:00	flowing		
7/7/17	2:00	flowing		
7/7/17	3:00	flowing		
7/7/17	4:00	flowing		
7/7/17	5:00	flowing		
7/7/17	6:00	flowing		
7/7/17	7:00	flowing		
7/7/17	8:00	flowing		
7/7/17	9:00	flowing		
7/7/17	10:00	flowing		
7/7/17	11:00	flowing		
7/7/17	12:00	flowing		
7/7/17	13:00	flowing		
7/7/17	14:00	flowing		
7/7/17	15:00	flowing		
7/7/17	16:00	flowing		
7/7/17	17:00	flowing		
7/7/17	18:00	flowing		
7/7/17	19:00	flowing		
7/7/17	20:00	flowing		
7/7/17	21:00	flowing		
7/7/17	22:00	flowing		
7/7/17	23:00	flowing		
7/8/17	0:00	flowing		
7/8/17	1:00	flowing		
7/8/17	2:00	flowing		
7/8/17	3:00	flowing		
7/8/17	4:00	flowing		
7/8/17	5:00	flowing		
7/8/17	6:00	flowing		
7/8/17	7:00	flowing		
7/8/17	8:00	flowing		
7/8/17	9:00	flowing		
7/8/17	10:00	flowing		
7/8/17	11:00	flowing		
7/8/17	12:00	flowing		
7/8/17	13:00	flowing		
7/8/17	14:00	flowing		
7/8/17	15:00	flowing		
7/8/17	16:00	flowing		
7/8/17	17:00	flowing		
7/8/17	18:00	flowing		
7/8/17	19:00	flowing		
7/8/17	20:00	flowing		
7/8/17	21:00	flowing		

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Date	Time	Depth to Water/Drawdown (ft btoc/feet)	Elapsed Time/Recovery (minutes)	Comments
7/8/17	22:00	flowing		
7/8/17	23:00	flowing		
7/9/17	0:00	flowing		
7/9/17	1:00	flowing		
7/9/17	2:00	flowing		
7/9/17	3:00	flowing		
7/9/17	4:00	flowing		
7/9/17	5:00	flowing		
7/9/17	6:00	flowing		
7/9/17	7:00	flowing		
7/9/17	8:00	flowing		
7/9/17	9:00	flowing		
7/9/17	10:00	flowing		
7/9/17	11:00	flowing		
7/9/17	12:00	flowing		
7/9/17	13:00	flowing		
7/9/17	14:00	flowing		
7/9/17	15:00	flowing		
7/9/17	16:00	flowing		
7/9/17	17:00	flowing		
7/9/17	18:00	flowing		
7/9/17	19:00	flowing		
7/9/17	20:00	flowing		
7/9/17	21:00	flowing		
7/9/17	22:00	flowing		
7/9/17	23:00	flowing		
7/10/17	0:00	flowing		
7/10/17	1:00	flowing		
7/10/17	2:00	flowing		
7/10/17	3:00	flowing		
7/10/17	4:00	flowing		
7/10/17	5:00	flowing		
7/10/17	6:00	flowing		
7/10/17	7:00	flowing		
7/10/17	8:00	flowing		
7/10/17	9:00	flowing		
7/10/17	10:00	flowing		
7/10/17	11:00	flowing		
7/10/17	11:54	flowing		Static water level used from prior to the start of pumping in any onsite wells.
7/10/17	12:00	flowing		Pump in well C-21 started at 11:55.
7/10/17	13:00	flowing		Pump in well C-23 started 12:59.
7/10/17	14:00	flowing		
7/10/17	15:00	flowing		
7/10/17	16:00	flowing		
7/10/17	17:00	flowing		Pump in well C-14 started at 16:24.
7/10/17	17:03	0.05		Artesian flowing in well C-6 stopped.
7/10/17	18:00	2.20		Pump in well C-16 started at 17:31.
7/10/17	18:34	3.87		
7/10/17	18:35	12.25	1	Pump in well C-6 started.
7/10/17	18:36	19.95	2	Pumping rate adjusted to 50 gpm.
7/10/17	18:37	23.86	3	
7/10/17	18:38	25.95	4	
7/10/17	18:39	26.94	5	

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Date	Time	Depth to Water/Drawdown (ft btoc/feet)	Elapsed Time/Recovery (minutes)	Comments
7/10/17	18:40	27.51	6	Pumping rate in well C-6 50 gpm.
7/10/17	18:41	28.05	7	
7/10/17	18:42	28.75	8	
7/10/17	18:43	28.75	9	
7/10/17	18:44	29.02	10	
7/10/17	18:45	29.43	11	
7/10/17	18:46	29.02	12	
7/10/17	18:47	29.04	13	
7/10/17	18:48	29.32	14	
7/10/17	18:49	29.58	15	
7/10/17	18:50	29.98	16	Pumping rate in well C-6 50 gpm.
7/10/17	18:55	31.88	21	
7/10/17	19:00	33.72	26	Pumping rate in well C-6 50 gpm.
7/10/17	19:05	35.38	31	
7/10/17	19:10	36.95	36	Pumping rate in well C-6 50 gpm.
7/10/17	19:15	38.34	41	
7/10/17	19:20	39.60	46	Pumping rate in well C-6 50 gpm.
7/10/17	19:25	40.88	51	
7/10/17	19:30	42.01	56	Pumping rate in well C-6 50 gpm.
7/10/17	19:35	43.07	61	Pumping rate in well C-6 50 gpm.
7/10/17	20:00	47.52	86	Pump in well C-12 started at 19:48.
7/10/17	21:00	55.07	146	Pump in well C-7B started at 21:03.
7/10/17	22:00	59.91	206	Pumping rate in well C-6 50 gpm.
7/10/17	23:00	65.73	266	Pumping rate in well C-6 50 gpm.
7/11/17	0:00	69.84	326	Pumping rate in well C-6 50 gpm.
7/11/17	1:00	73.46	386	Pumping rate in well C-6 50 gpm.
7/11/17	2:00	76.65	446	Pumping rate in well C-6 50 gpm.
7/11/17	3:00	79.15	506	Pumping rate in well C-6 50 gpm.
7/11/17	4:00	81.71	566	Pumping rate in well C-6 50 gpm.
7/11/17	5:00	83.56	626	Pumping rate in well C-6 50 gpm.
7/11/17	6:00	84.94	686	Pumping rate in well C-6 50 gpm.
7/11/17	7:00	86.08	/46	Pumping rate in well C-6 50 gpm.
//11/1/	8:00	86.99	806	Pumping rate in well C-6 50 gpm.
7/11/17	9:00	88.13	866	Pumping rate in well C-6 50 gpm.
7/11/17	10:00	89.15	926	Pumping rate in well C-6 50 gpm.
7/11/17	12:00	90.10	980	Pumping rate in well C-6 50 gpm.
7/11/17	12:00	90.99	1,040	Pumping rate in well C-6 50 gpm.
7/11/17	14:00	91.80	1,100	Pumping rate in well C 6 50 gpm.
7/11/17	14.00	02.66	1,100	Pumping rate in well C 6 50 gpm.
7/11/17	16:00	93.00	1,220	Pumping rate in well C 6 50 gpm.
7/11/17	17:00	95.10	1,200	Pumping rate in well C 6 50 gpm.
7/11/17	18.00	06.06	1,040	Pumping rate in well C 6 50 gpm.
7/11/17	10.00	96.60	1,400	Pumping rate in well C 6 50 gpm.
7/11/17	20.00	97.31	1,400	Pumping rate in well C 6 50 gpm.
7/11/17	20.00	07.88	1,520	Pumping rate in well C 6 50 gpm.
7/11/17	22:00	98.47	1 646	Pumping rate in well C-6 50 gpm.
7/11/17	22:00	98.76	1,040	Pumping rate in well C-6 50 gpm.
7/12/17	0.00	99.51	1 766	Pumping rate in well C-6 50 gpm.
7/12/17	1.00	100.21	1 826	Pumping rate in well C-6 50 gpm.
7/12/17	2.00	100.21	1 886	Pumping rate in well C-6 50 gpm.
7/12/17	3.00	100.50	1 946	Pumping rate in well C-6 50 gpm.
7/12/17	4.00	101.18	2 006	Pumping rate in well C-6 50 gpm.
7/12/17	5.00	101.10	2,000	Pumping rate in well C-6 50 gpm.
//14/1/	5.00	101.75	2,000	r umping rate in wen C-0.50 gpin.

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Date	Time	Depth to Water/Drawdown (ft btoc/feet)	Elapsed Time/Recovery (minutes)	Comments
7/12/17	6:00	102.49	2,126	Pumping rate in well C-6 50 gpm.
7/12/17	7:00	103.03	2,186	Pumping rate in well C-6 50 gpm.
7/12/17	8:00	103.72	2,246	Pumping rate in well C-6 50 gpm.
7/12/17	9:00	104.33	2,306	Pumping rate in well C-6 50 gpm.
7/12/17	10:00	105.05	2,366	Pumping rate in well C-6 50 gpm.
7/12/17	11:00	105.59	2,426	Pumping rate in well C-6 50 gpm.
7/12/17	12:00	106.15	2,486	Pump in well C-7B shut down at 11:28 and pump in well C-21 shut down at 11:56.
7/12/17	13:00	106.65	2,546	Pumping rate in well C-6 50 gpm.
7/12/17	14:00	107.42	2,606	Pumping rate in well C-6 50 gpm.
7/12/17	15:00	107.99	2,666	Pumping rate in well C-6 50 gpm.
7/12/17	16:00	108.45	2,726	Pumping rate in well C-6 50 gpm.
7/12/17	17:00	108.88	2,786	Pumping rate in well C-6 50 gpm.
7/12/17	18:00	109.44	2,846	Pumping rate in well C-6 50 gpm.
7/12/17	18:54	109.94	2,900	Pumping rate in well C-6 manually decreased.
7/12/17	19:00	107.47	2,906	Pumping rate in well C-6 45 gpm.
7/12/17	20:00	106.60	2,966	Pumping rate in well C-6 45 gpm.
7/12/17	21:00	106.60	3,026	Pumping rate in well C-6 45 gpm.
7/12/17	22:00	106.67	3,086	Pumping rate in well C-6 45 gpm.
7/12/17	23:00	106.82	3,146	Pumping rate in well C-6 45 gpm.
7/13/17	0:00	107.11	3,206	Pumping rate in well C-6 45 gpm.
7/13/17	1:00	107.37	3,266	Pumping rate in well C-6 45 gpm.
7/13/17	2:00	107.61	3,326	Pumping rate in well C-6 45 gpm.
7/13/17	3:00	107.87	3,386	Pumping rate in well C-6 45 gpm.
7/13/17	4:00	108.13	3,446	Pumping rate in well C-6 45 gpm.
7/13/17	4:03	98.07	3,449	Generator shut down.
7/13/17	5:00	69.19	3,506	
7/13/17	5:26	74.34	3,532	Generator restarted.
7/13/17	6:00	96.59	3,566	Pumping rate in well C-6 45 gpm.
7/13/17	7:00	101.50	3,626	Pumping rate in well C-6 45 gpm.
7/13/17	8:00	103.99	3,686	Pumping rate in well C-6 45 gpm.
7/13/17	9:00	105.64	3,746	Pumping rate in well C-6 45 gpm.
7/13/17	10:00	106.90	3,806	Pumping rate in well C-6 45 gpm.
7/13/17	11:00	107.92	3,866	Pumping rate in well C-6 45 gpm.
7/13/17	12:00	108.80	3,926	Pumping rate in well C-6 45 gpm.
7/13/17	13:00	109.55	3,986	Pumping rate in well C-6 45 gpm.
7/13/17	14:00	110.09	4,046	Pumping rate in well C-6 45 gpm.
7/13/17	15:00	110.50	4,106	Pumping rate in well C-6 45 gpm.
7/13/17	16:00	111.00	4,166	Pumping rate in well C-6 45 gpm.
7/13/17	17:00	111.51	4,226	Pumping rate in well C-6 45 gpm.
7/13/17	18:00	111.81	4,286	Pumping rate in well C-6 45 gpm.
7/13/17	19:00	112.20	4,346	Pumping rate in well C-6 45 gpm.
7/13/17	20:00	112.54	4,406	Pumping rate in well C-6 45 gpm.
7/13/17	20:06	112.07	4,412	Generator shut down down.
7/13/17	21:00	73.23	4,466	
7/13/17	21:12	77.44	4,478	Generator restarted.
7/13/17	22:00	104.77	4,526	Pumping rate in well C-6 45 gpm.
7/13/17	23:00	107.76	4,586	Pumping rate in well C-6 45 gpm.
7/14/17	0:00	109.46	4,646	Pumping rate in well C-6 45 gpm.
7/14/17	1:00	110.36	4,706	Pumping rate in well C-6 45 gpm.
7/14/17	2:00	111.28	4,766	Pumping rate in well C-6 45 gpm.
7/14/17	3:00	111.95	4,826	Pumping rate in well C-6 45 gpm.
7/14/17	4:00	112.44	4,886	Pumping rate in well C-6 45 gpm.
7/14/17	5:00	112.87	4,946	Pumping rate in well C-6 45 gpm.

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Date	Time	Depth to Water/Drawdown (ft btoc/feet)	Elapsed Time/Recovery (minutes)	Comments
7/14/17	6:00	113.24	5,006	Pumping rate in well C-6 45 gpm.
7/14/17	7:00	113.68	5,066	Pumping rate in well C-6 45 gpm.
7/14/17	8:00	113.97	5,126	Pumping rate in well C-6 45 gpm.
7/14/17	9:00	114.32	5,186	Pumping rate in well C-6 45 gpm.
7/14/17	10:00	114.64	5,246	Pumping rate in well C-6 45 gpm.
7/14/17	11:00	114.99	5,306	Pumping rate in well C-6 45 gpm.
7/14/17	12:00	115.29	5,366	Pumping rate in well C-6 45 gpm.
7/14/17	13:00	115.56	5,426	Pumping rate in well C-6 45 gpm.
7/14/17	14:00	115.84	5,486	Pumping rate in well C-6 45 gpm.
7/14/17	15:00	116.14	5,546	Pumping rate in well C-6 45 gpm.
7/14/17	16:00	116.37	5,606	Pumping rate in well C-6 45 gpm.
7/14/17	17:00	116.67	5,666	Pumping rate in well C-6 45 gpm.
7/14/17	18:00	116.89	5,726	Pumping rate in well C-6 45 gpm.
7/14/17	19:00	117.14	5,786	Pumping rate in well C-6 45 gpm.
7/14/17	20:00	117.39	5,846	Pumping rate in well C-6 45 gpm.
7/14/17	21:00	117.60	5,906	Pumping rate in well C-6 45 gpm.
7/14/17	22:00	117.75	5,966	Pumping rate in well C-6 45 gpm.
7/14/17	23:00	118.16	6,026	Pumping rate in well C-6 45 gpm.
7/15/17	0:00	118.48	6,086	Pumping rate in well C-6 45 gpm.
7/15/17	0:35	117.91	6,121	Generator shut down.
7/15/17	0:56	87.25	6,142	Generator restarted.
7/15/17	1:00	104.11	6,146	Pumping rate in well C-6 45 gpm.
7/15/17	2:00	115.65	6,206	Pumping rate in well C-6 45 gpm.
7/15/17	3:00	116.72	6,266	Pumping rate in well C-6 45 gpm.
7/15/17	4:00	117.27	6,326	Pumping rate in well C-6 45 gpm.
7/15/17	5:00	117.76	6,386	Pumping rate in well C-6 45 gpm.
7/15/17	6:00	118.13	6,446	Pumping rate in well C-6 45 gpm.
7/15/17	7:00	118.40	6,506	Pumping rate in well C-6 45 gpm.
7/15/17	8:00	118.71	6,566	Pumping rate in well C-6 45 gpm.
7/15/17	9:00	119.10	6,626	Pumping rate in well C-6 45 gpm.
7/15/17	10:00	119.40	6,686	Pumping rate in well C-6 45 gpm.
7/15/17	11:00	119.62	6,746	Pumping rate in well C-6 45 gpm.
7/15/17	12:00	119.93	6,806	Pumping rate in well C-6 45 gpm.
//15/17	13:00	120.17	6,866	Pumping rate in well C-6 45 gpm.
7/15/17	14:00	120.43	6,926	Pumping rate in well C-6 45 gpm.
7/15/17	15:00	120.64	6,986	Pumping rate in well C-6 45 gpm.
7/15/17	16:00	120.99	7,046	Pumping rate in well C-6 45 gpm.
7/15/17	17:00	121.23	7,106	Pumping rate in well C-6 45 gpm.
7/15/17	18:00	121.43	7,166	Pumping rate in well C-6 45 gpm.
7/15/17	19:00	121.69	7,226	Pumping rate in well C-6 45 gpm.
7/15/17	19:09	121.73	7,235	Pumping rate in well C-6 45 gpm.
//15/1/	19:11	121./1	7,237	Pumping rate in well C-6 45 gpm.
//15/1/	20:00	121.88	/,286	Pumping rate in well C-6 45 gpm.
7/15/17	21:00	122.11	7,346	Pumping rate in well C-6 45 gpm.
7/15/17	22:00	122.27	7,400	Pumping rate in Well C-6 45 gpm.
7/16/17	23:00	122.31	7,400	Pumping rate in well C-6 45 gpm.
7/16/17	1.00	122.00	7,520	Pumping rate in went C-0 45 gpm.
//10/1/	1.00	122.8/	1,380	Fullphing fate in Well C-0 45 gpm.
7/16/17	1:09	122.92	7,595	14, 16, and 23) started.
7/16/17	1:10	122.90	7,596	Pumping rate in well C-6 45 gpm.
7/16/17	1:11	122.87	7,597	Pump in well C-6 shut down.
7/16/17	1:12	115.90	-1	
7/16/17	1:13	108.73	-2	

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Date	Time	Depth to Water/Drawdown (ft btoc/feet)	Elapsed Time/Recovery (minutes)	Comments
7/16/17	1:14	104.58	-3	
7/16/17	1:15	101.79	-4	
7/16/17	1:16	99.68	-5	
7/16/17	1:17	98.03	-6	
7/16/17	1:18	96.67	-7	
7/16/17	1:19	95.54	-8	
7/16/17	1:20	94.57	-9	
7/16/17	1:21	93.69	-10	
7/16/17	1:22	93.00	-11	
7/16/17	1:23	92.33	-12	
7/16/17	1:24	91.75	-13	
7/16/17	1:25	91.22	-14	
7/16/17	1:26	90.79	-15	
7/16/17	1:30	89.23	-19	
7/16/17	1:35	87.85	-24	
7/16/17	1:40	86.73	-29	
7/16/17	1:45	85.81	-34	
7/16/17	1:50	84.97	-39	
7/16/17	1:55	84.27	-44	
7/16/17	2:00	83.60	-49	
7/16/17	2:05	82.98	-54	
7/16/17	2:10	82.45	-59	
7/16/17	3:00	78.10	-109	
7/16/17	4:00	74.60	-169	
7/16/17	5:00	71.88	-229	
7/16/17	6:00	69.70	-289	
7/16/17	7:00	67.85	-349	
7/16/17	8:00	65.85	-409	
7/16/17	9:00	63.98	-469	
7/16/17	10:00	62.23	-529	
7/16/17	11:00	60.55	-589	
7/16/17	12:00	58.89	-649	
7/16/17	13:00	57.30	-709	
7/16/17	14:00	55.37	-769	
7/16/17	15:00	53.58	-829	
7/16/17	16:00	51.78	-889	
7/16/17	17:00	50.15	-949	
7/16/17	18:00	48.58	-1,009	
7/16/17	19:00	4/.1/	-1,069	
7/16/17	20:00	45.76	-1,129	
//16/17	21:00	44.45	-1,189	
//16/17	22:00	43.12	-1,249	
7/16/17	23:00	41.88	-1,309	
//1//1/	0:00	40.65	-1,369	
//1//1/	1:00	39.48	-1,429	
7/17/17	2:00	38.28	-1,489	
7/17/17	3:00	3/.18	-1,549	
7/17/17	4:00	30.14	-1,609	
7/17/17	5:00	24.02	-1,009	
7/17/17	0:00	34.03	-1,/29	
7/17/17	/:00	21.00	-1,/89	
7/17/17	8:00	31.98	-1,849	
7/17/17	9:00	30.99	-1,909	
//1//1/	10:00	29.95	-1,969	

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Date	Time	Depth to Water/Drawdown (ft btoc/feet)	Elapsed Time/Recovery (minutes)	Comments
7/17/17	11:00	28.89	-2,029	
7/17/17	12:00	27.92	-2,089	
7/17/17	13:00	26.94	-2,149	
7/17/17	14:00	26.00	-2,209	
7/17/17	15:00	25.11	-2,269	
7/17/17	16:00	24.26	-2,329	
7/17/17	17:00	23.46	-2,389	
7/17/17	18:00	22.67	-2,449	
7/17/17	19:00	21.91	-2,509	
7/17/17	20:00	21.18	-2,569	
7/17/17	21:00	20.41	-2,629	
7/17/17	22:00	19.69	-2,689	
7/17/17	23:00	18.93	-2,749	
7/18/17	0:00	18.21	-2,809	
7/18/17	1:00	17.49	-2,869	
7/18/17	2:00	16.81	-2,929	
7/18/17	3:00	16.14	-2,989	
7/18/17	4:00	15.54	-3,049	
7/18/17	5:00	14.92	-3,109	
7/18/17	6:00	14.34	-3,169	
7/18/17	7:00	13.83	-3,229	
7/18/17	8:00	13.28	-3,289	
7/18/17	9:00	12.80	-3,349	
7/18/17	10:00	12.30	-3,409	90% recovery achieved.
7/18/17	11:00	11.80	-3,469	
7/18/17	12:00	11.37	-3,529	
7/18/17	13:00	10.93	-3,589	
7/18/17	14:00	10.47	-3,649	
7/18/17	15:00	10.06	-3,709	
7/18/17	16:00	9.66	-3,769	
7/18/17	1/:00	9.28	-3,829	
//18/1/	18:00	8.95	-3,889	
7/18/17	19:00	0.30	-5,949	
7/10/17	20.00	7.00	-4,009	
7/18/17	21:00	7.90	-4,009	
7/18/17	22:00	7.55	-4,129	
7/10/17	23.00	6.04	-4,189	
7/19/17	1.00	6.63	-4,249	
7/10/17	2.00	6.35	4 369	
7/19/17	3.00	6.07	-4 429	
7/19/17	4.00	5 79	-4,429	
7/19/17	5.00	5.55	-4 549	
7/19/17	6.00	5.35	-4,609	
7/19/17	7.00	5.13	-4 669	
7/19/17	8.00	4 85	-4 729	
7/19/17	9:00	4,61	-4,789	
7/19/17	10.00	4 42	-4 849	
7/19/17	11:00	4,22	-4,909	
7/19/17	12:00	3.96	-4,969	
7/19/17	13:00	3.71	-5.029	
7/19/17	14:00	3.49	-5.089	
7/19/17	15:00	3.30	-5.149	
7/19/17	16:00	3,13	-5,209	
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Date	Time	Depth to Water/Drawdown (ft btoc/feet)	Elapsed Time/Recovery (minutes)	Comments
7/19/17	17:00	2.92	-5,269	
7/19/17	18:00	2.80	-5,329	
7/19/17	19:00	2.60	-5,389	
7/19/17	20:00	2.43	-5,449	
7/19/17	21:00	2.28	-5,509	
7/19/17	22:00	2.15	-5,569	
7/19/17	23:00	1.96	-5,629	
7/20/17	0:00	1.83	-5,689	
7/20/17	1:00	1.68	-5,749	
7/20/17	2:00	1.55	-5,809	
7/20/17	3:00	1.40	-5,869	
7/20/17	4:00	1.31	-5,929	
7/20/17	5:00	1.17	-5,989	
7/20/17	6:00	1.06	-6,049	
7/20/17	7:00	0.95	-6,109	
7/20/17	8:00	0.86	-6,169	
7/20/17	9:00	0.74	-6,229	
7/20/17	10:00	0.65	-6,289	
7/20/17	11:00	0.51	-6,349	
7/20/17	12:00	0.39	-6,409	
7/20/17	13:00	0.27	-6,469	
7/20/17	14:00	0.16	-6,529	
7/20/17	15:00	0.06	-6,589	
7/20/17	16:00	flowing	-6,649	Well C-6 began to flow artesian again.
7/20/17	17:00	flowing	-6,709	
7/20/17	18:00	flowing	-6,769	
7/20/17	19:00	flowing	-6,829	
7/20/17	20:00	flowing	-6,889	
7/20/17	21:00	flowing	-6,949	
7/20/17	22:00	flowing	-7,009	
7/20/17	23:00	flowing	-7,069	
7/21/17	0:00	flowing	-7,129	
//21/17	1:00	flowing	-7,189	
//21/1/	2:00	flowing	-7,249	
7/21/17	3:00	flowing	-7,309	
7/21/17	4:00	flowing	-7,369	
7/21/17	5:00	flowing	-7,429	
7/21/17	7:00	flowing	-7,489	
7/21/17	8.00	flowing	-7,349	
7/21/17	0.00	flowing	-7,009	
7/21/17	9.00	flowing	7 720	
7/21/17	11.00	flowing	7 780	
7/21/17	12:00	flowing	-7,789	
7/21/17	12.00	flowing	7 000	
7/21/17	13.00	flowing	-7,909	
7/21/17	14.00	flowing	-7,909	
7/21/17	16.00	flowing	8 090	
7/21/17	17.00	flowing	-0,007	
7/21/17	18.00	flowing	-0,147	
7/21/17	10.00	flowing	-0,209	
7/21/17	20.00	flowing	-0,207	
7/21/17	20.00	flowing	-0, <i>327</i> 8 290	
7/21/17	21.00	flowing	-0,307	
//21/1/	22.00	nowing	-0,++7	

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Date	Time	Depth to Water/Drawdown (ft btoc/feet)	Elapsed Time/Recovery (minutes)	Comments
7/21/17	23:00	flowing	-8,509	
7/22/17	0:00	flowing	-8,569	
7/22/17	1:00	flowing	-8,629	
7/22/17	2:00	flowing	-8,689	
7/22/17	3:00	flowing	-8,749	
7/22/17	4:00	flowing	-8,809	
7/22/17	5:00	flowing	-8,869	
7/22/17	6:00	flowing	-8,929	
7/22/17	7:00	flowing	-8,989	
7/22/17	8:00	flowing	-9,049	
7/22/17	9:00	flowing	-9,109	
7/22/17	10:00	flowing	-9,169	
7/22/17	11:00	flowing	-9,229	
7/22/17	12:00	flowing	-9,289	
7/22/17	13:00	flowing	-9,349	
7/22/17	14:00	flowing	-9,409	
7/22/17	15:00	flowing	-9,469	
7/22/17	16:00	flowing	-9,529	
7/22/17	17:00	flowing	-9,589	
7/22/17	18:00	flowing	-9,649	
7/22/17	19:00	flowing	-9,709	
7/22/17	20:00	flowing	-9,769	
7/22/17	21:00	flowing	-9,829	
7/22/17	22:00	flowing	-9,889	
7/22/17	23:00	flowing	-9,949	
7/23/17	0:00	flowing	-10,009	
7/23/17	1:00	flowing	-10,069	
7/23/17	2:00	flowing	-10,129	
7/23/17	3:00	flowing	-10,189	
7/23/17	4:00	flowing	-10,249	
7/23/17	5:00	flowing	-10,309	
7/23/17	6:00	flowing	-10,369	
7/23/17	/:00	flowing	-10,429	
7/23/17	8:00	flowing	-10,489	
7/23/17	9:00	flowing	-10,549	
7/23/17	10:00	flowing	-10,609	
7/23/17	12:00	flowing	-10,009	
7/23/17	12:00	flowing	-10,729	
7/22/17	13:00	flowing	-10,/89	
7/23/17	14:00	flowing	-10,849	
7/23/17	15:00	flowing	-10,909	
7/23/17	17:00	flowing	-10,909	
7/23/17	17:00	flowing	-11,029	
7/22/17	10.00	flowing	-11,009	
7/22/17	20.00	flowing	-11,149	
7/23/17	20.00	flowing	-11,207	
7/23/17	22:00	flowing		
7/23/17	22.00	flowing	-11,527	
7/2/17	0.00	flowing	-11,307	
7/24/17	1.00	flowing	-11,449	
7/24/17	2.00	flowing	-11,509	
7/24/17	2.00	flowing	-11,507	
7/24/17	4.00	flowing	-11,027	
//24/1/	ч.00	nowing	-11,007	

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Date	Time	Depth to Water/Drawdown (ft btoc/feet)	Elapsed Time/Recovery (minutes)	Comments
7/24/17	5:00	flowing	-11,749	
7/24/17	6:00	flowing	-11,809	
7/24/17	7:00	flowing	-11,869	
7/24/17	8:00	flowing	-11,929	
7/24/17	9:00	flowing	-11,989	
7/24/17	10:00	flowing	-12,049	
7/24/17	11:00	flowing	-12,109	
7/24/17	12:00	flowing	-12,169	
7/24/17	13:00	flowing	-12,229	
7/24/17	14:00	flowing	-12,289	
7/24/17	15:00	flowing	-12,349	
7/24/17	16:00	flowing	-12,409	
7/24/17	17:00	flowing	-12,469	
7/24/17	18:00	flowing	-12,529	
7/24/17	19:00	flowing	-12,589	
7/24/17	20:00	flowing	-12,649	
7/24/17	21:00	flowing	-12,709	
7/24/17	22:00	flowing	-12,769	
7/24/17	23:00	flowing	-12,829	
7/25/17	0:00	flowing	-12,889	
7/25/17	1:00	flowing	-12,949	
7/25/17	2:00	flowing	-13,009	
7/25/17	3:00	flowing	-13,069	
7/25/17	4:00	flowing	-13,129	
7/25/17	5:00	flowing	-13,189	
7/25/17	0:00	flowing	-13,249	
7/25/17	7.00 8.00	flowing	-13,309	
7/25/17	9.00	flowing	-13,309	
7/25/17	10.00	flowing	-13,429	
7/25/17	11.00	flowing	-13 549	Pump in well C-21 started at 11:44
7/25/17	12.00	flowing	-13 609	
7/25/17	13:00	flowing	-13.669	
7/25/17	14:00	flowing	-13.729	
7/25/17	15:00	flowing	-13,789	
7/25/17	16:00	flowing	-13,849	
7/25/17	17:00	flowing	-13,909	
7/25/17	18:00	flowing	-13,969	
7/25/17	19:00	flowing	-14,029	
7/25/17	20:00	flowing	-14,089	
7/25/17	21:00	flowing	-14,149	
7/25/17	22:00	flowing	-14,209	
7/25/17	23:00	flowing	-14,269	
7/26/17	0:00	flowing	-14,329	
7/26/17	1:00	flowing	-14,389	
7/26/17	2:00	flowing	-14,449	
7/26/17	3:00	flowing	-14,509	
7/26/17	4:00	tlowing	-14,569	
7/26/17	5:00	flowing	-14,629	
7/26/17	0:00	flowing	-14,089	
7/26/17	/:00	flowing	-14,/49	
7/26/17	0.00	flowing	-14,009	
7/26/17	9.00	flowing	-14,009	
//20/1/	10.00	nowing	-14,929	

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Date	Time	Depth to Water/Drawdown (ft btoc/feet)	Elapsed Time/Recovery (minutes)	Comments
7/26/17	11:00	flowing	-14,989	
7/26/17	12:00	flowing	-15,049	
7/26/17	13:00	flowing	-15,109	
7/26/17	14:00	flowing	-15,169	
7/26/17	15:00	flowing	-15,229	
7/26/17	16:00	flowing	-15,289	
7/26/17	17:00	flowing	-15,349	
7/26/17	18:00	flowing	-15,409	
7/26/17	19:00	flowing	-15,469	
7/26/17	20:00	flowing	-15,529	
7/26/17	21:00	flowing	-15,589	
7/26/17	22:00	flowing	-15,649	
7/26/17	23:00	flowing	-15,709	
7/27/17	0:00	flowing	-15,769	
7/27/17	1:00	flowing	-15,829	
7/27/17	2:00	flowing	-15,889	
7/27/17	3:00	flowing	-15,949	
7/27/17	4:00	flowing	-16,009	
7/27/17	5:00	flowing	-16,069	
7/27/17	6:00	flowing	-16,129	
7/27/17	7:00	flowing	-16,189	
7/27/17	8:00	flowing	-16,249	
7/27/17	9:00	flowing	-16,309	
7/27/17	10:00	flowing	-16,369	
7/27/17	11:00	flowing	-16,429	
//2//1/	12:00	flowing	-16,489	
7/27/17	13:00	flowing	-10,349	
7/27/17	14:00	flowing	-10,009	
7/27/17	15.00	flowing	-10,009	
7/27/17	10.00 17.00	flowing	-16,729	
7/27/17	18.00	flowing	-16,849	
7/27/17	19.00	flowing	-16 909	
7/27/17	20:00	flowing	-16.969	
7/27/17	21:00	flowing	-17.029	
7/27/17	22:00	flowing	-17.089	
7/27/17	23:00	flowing	-17,149	
7/28/17	0:00	flowing	-17,209	
7/28/17	1:00	flowing	-17,269	
7/28/17	2:00	flowing	-17,329	
7/28/17	3:00	flowing	-17,389	
7/28/17	4:00	flowing	-17,449	
7/28/17	5:00	flowing	-17,509	
7/28/17	6:00	flowing	-17,569	
7/28/17	7:00	flowing	-17,629	
7/28/17	8:00	flowing	-17,689	
7/28/17	9:00	flowing	-17,749	
7/28/17	10:00	flowing	-17,809	
7/28/17	11:00	flowing	-17,869	
7/28/17	12:00	tlowing	-17,929	Pump in well C-21 shut down at 12:15.
7/28/17	13:00	flowing	-17,989	
7/28/17	14:00	nowing	-18,049	
7/20/17	15:00	flowing	-10,109	
//20/1/	10:00	nowing	-10,109	

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Date	Time	Depth to Water/Drawdown (ft btoc/feet)	Elapsed Time/Recovery (minutes)	Comments
7/28/17	17:00	flowing	-18,229	
7/28/17	18:00	flowing	-18,289	
7/28/17	19:00	flowing	-18,349	
7/28/17	20:00	flowing	-18,409	
7/28/17	21:00	flowing	-18,469	
7/28/17	22:00	flowing	-18,529	
7/28/17	23:00	flowing	-18,589	
7/29/17	0:00	flowing	-18,649	
7/29/17	1:00	flowing	-18,709	
7/29/17	2:00	flowing	-18,769	
7/29/17	3:00	flowing	-18,829	
7/29/17	4:00	flowing	-18,889	
7/29/17	5:00	flowing	-18,949	
7/29/17	6:00	flowing	-19,009	
7/29/17	7:00	flowing	-19,069	
7/29/17	8:00	flowing	-19,129	
7/29/17	9:00	flowing	-19,189	
7/29/17	10:00	flowing	-19,249	
7/29/17	11:00	flowing	-19,309	
7/29/17	12:00	flowing	-19,369	
7/29/17	13:00	flowing	-19,429	
7/29/17	14:00	flowing	-19,489	
7/29/17	15:00	flowing	-19,549	
7/29/17	16:00	flowing	-19,609	
7/29/17	17:00	flowing	-19,669	
7/29/17	18:00	flowing	-19,729	
7/29/17	19:00	flowing	-19,789	
7/29/17	20:00	flowing	-19,849	
7/29/17	21:00	flowing	-19,909	
7/29/17	22:00	flowing	-19,969	
7/29/17	23:00	flowing	-20,029	
7/30/17	0:00	flowing	-20,089	
7/30/17	1:00	flowing	-20,149	
7/30/17	2:00	flowing	-20,209	
7/30/17	3:00	flowing	-20,269	
7/30/17	4:00	flowing	-20,329	
7/30/17	5:00	flowing	-20,389	
7/30/17	6:00	flowing	-20,449	
7/30/17	7:00	flowing	-20,509	
7/30/17	8:00	flowing	-20,569	
7/30/17	9:00	flowing	-20,629	
7/30/17	10:00	flowing	-20,689	
7/30/17	11:00	flowing	-20,749	
7/30/17	12:00	flowing	-20,809	
7/30/17	13:00	flowing	-20,869	
7/30/17	14:00	flowing	-20,929	
7/30/17	15:00	flowing	-20,989	
7/30/17	16:00	flowing	-21,049	
7/30/17	17:00	flowing	-21,109	
7/30/17	18:00	flowing	-21,169	
7/30/17	19:00	flowing	-21,229	
7/30/17	20:00	flowing	-21,289	
7/30/17	21:00	flowing	-21,349	
7/30/17	22:00	flowing	-21,409	

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Date	Time	Depth to Water/Drawdown (ft btoc/feet)	Elapsed Time/Recovery (minutes)	Comments
7/30/17	23:00	flowing	-21,469	
7/31/17	0:00	flowing	-21,529	
7/31/17	1:00	flowing	-21,589	
7/31/17	2:00	flowing	-21,649	
7/31/17	3:00	flowing	-21,709	
7/31/17	4:00	flowing	-21,769	
7/31/17	5:00	flowing	-21,829	
7/31/17	6:00	flowing	-21,889	
7/31/17	7:00	flowing	-21,949	
7/31/17	8:00	flowing	-22,009	
7/31/17	9:00	flowing	-22,069	
7/31/17	10:00	flowing	-22,129	
7/31/17	11:00	flowing	-22,189	
7/31/17	12:00	flowing	-22,249	
7/31/17	13:00	flowing	-22,309	
7/31/17	14:00	flowing	-22,369	
7/31/17	15:00	flowing	-22,429	
7/31/17	16:00	flowing	-22,489	
7/31/17	17:00	flowing	-22,549	
7/31/17	18:00	flowing	-22,609	
7/31/17	19:00	flowing	-22,669	
7/31/17	20:00	flowing	-22,729	
7/31/17	21:00	flowing	-22,789	
7/31/17	22:00	flowing	-22,849	
7/31/17	23:00	flowing	-22,909	
8/1/17	0:00	flowing	-22,969	
8/1/17	1:00	flowing	-23,029	
8/1/17	2:00	flowing	-23,089	
8/1/17	3:00	flowing	-23,149	
8/1/17	4:00	flowing	-23,209	
8/1/1/	5:00	flowing	-23,269	
8/1/1/	6:00	flowing	-23,329	
8/1/1/	/:00	flowing	-23,389	
0/1/1/	0.00	flowing	-23,449	
8/1/17	9:00	flowing	-23,509	
8/1/17	10:00	flowing	-23,509	
0/1/17	12.00	flowing	-23,029	
0/1/1/ 8/1/17	12:00	flowing	-23,089	
8/1/17	14.00	flowing	-23,747	
8/1/17	15.00	flowing	-23,869	
8/1/17	16.00	flowing	-23,009	
8/1/17	17.00	flowing	-23 989	
8/1/17	18.00	flowing	-24 049	
8/1/17	19.00	flowing	-24 109	
8/1/17	20:00	flowing	-24,169	
8/1/17	21:00	flowing	-24.229	
8/1/17	22:00	flowing	-24.289	
8/1/17	23:00	flowing	-24,349	
8/2/17	0:00	flowing	-24,409	
8/2/17	1:00	flowing	-24,469	
8/2/17	2:00	flowing	-24,529	
8/2/17	3:00	flowing	-24,589	
8/2/17	4:00	flowing	-24,649	

Summary of Water-Level Measurements from Pressure Transducer Installed in Well C-6 Collected During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Depth to Water/Drawdown (ft btoc/feet)	Elapsed Time/Recovery (minutes)	Comments
8/2/17	5:00	flowing	-24,709	
8/2/17	6:00	flowing	-24,769	
8/2/17	7:00	flowing	-24,829	
8/2/17	8:00	flowing	-24,889	
8/2/17	9:00	flowing	-24,949	
8/2/17	10:00	flowing	-25,009	
8/2/17	11:00	flowing	-25,069	
8/2/17	12:00	flowing	-25,129	
8/2/17	13:00	flowing	-25,189	
8/2/17	14:00	flowing	-25,249	
8/2/17	15:00	flowing	-25,309	
8/2/17	16:00	flowing	-25,369	
8/2/17	17:00	flowing	-25,429	
8/2/17	18:00	flowing	-25,489	
8/2/17	19:00	flowing	-25,549	
8/2/17	20:00	flowing	-25,609	
8/2/17	21:00	flowing	-25,669	
8/2/17	22:00	flowing	-25,729	
8/2/17	23:00	flowing	-25,789	
8/3/17	0:00	flowing	-25,849	
8/3/17	1:00	flowing	-25,909	
8/3/17	2:00	flowing	-25,969	
8/3/17	3:00	flowing	-26,029	
8/3/17	4:00	flowing	-26,089	
8/3/17	5:00	flowing	-26,149	
8/3/17	6:00	flowing	-26,209	
8/3/17	7:00	flowing	-26,269	
8/3/17	8:00	flowing	-26,329	
8/3/17	9:00	flowing	-26,389	
8/3/17	10:00	flowing	-26,449	
8/3/17	11:00	flowing	-26,509	
8/3/17	12:00	flowing	-26,569	
8/3/17	13:00	flowing	-26,629	
8/3/17	14:00	flowing	-26,689	
8/3/17	15:00	flowing	-26,749	
8/3/17	16:00	flowing	-26,809	
8/3/17	17:00	flowing	-26,869	
8/3/17	18:00	flowing	-26,929	
8/3/17	19:00	flowing	-26,989	
8/3/17	20:00	flowing	-27,049	
8/3/17	21:00	flowing	-27,109	
8/3/17	22:00	flowing	-27,169	
8/3/17	23:00	flowing	-27,229	

ft btoc feet below top of casing

gpm gallons per minute

H:\Lake Anne\Clovewood\2017\July Pumping Test Report\C-6 Table.docx

C-7B

LBG Hydrogeologic & Engineering Services, P.C.



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Date	Time	Depth to Water (ft btoc)	Elapsed Time/Recovery (minutes)	Drawdown (feet)	Comments
7/3/17	0.00	32.10			
7/3/17	1.00	32.08			
7/3/17	2.00	32.00			
7/3/17	3.00	32.09			
7/3/17	4.00	32.09			
7/3/17	5:00	32.10			
7/3/17	6.00	32.11			
7/3/17	7.00	32.13			
7/3/17	8:00	32.19			
7/3/17	9:00	32.23			
7/3/17	10:00	32.25			
7/3/17	11:00	32.26			
7/3/17	12:00	32.27			
7/3/17	13:00	32.32			
7/3/17	14:00	32.26			
7/3/17	15:00	32.28			
7/3/17	16:00	32.31			
7/3/17	17:00	32.32			
7/3/17	18:00	32.39			
7/3/17	19:00	32.37			
7/3/17	20:00	32.40			
7/3/17	21:00	32.42			
7/3/17	22:00	32.43			
7/3/17	23:00	32.46			
7/4/17	0:00	32.41			
7/4/17	1:00	32.43			
7/4/17	2:00	32.37			
7/4/17	3:00	32.40			
7/4/17	4:00	32.36			
7/4/17	5:00	32.34			
7/4/17	6:00	32.36			
7/4/17	7:00	32.37			
//4/1/	8:00	32.42			
//4/1/	9:00	32.41			
7/4/17	10:00	32.41			
7/4/17	12.00	32.44			
7/4/17	12.00	32.49			
7/4/17	14.00	32.02			
7/4/17	15.00	32.33			
7/4/17	16.00	32.35			
7/4/17	17:00	32.41			
7/4/17	18:00	32.39			
7/4/17	19:00	32.42			
7/4/17	20:00	32.48			
7/4/17	21:00	32.50			
7/4/17	22:00	32.52			
7/4/17	23:00	32.53			
7/5/17	0:00	32.51			
7/5/17	1:00	32.51			
7/5/17	2:00	32.50			
7/5/17	3:00	32.48			
7/5/17	4:00	32.48			
7/5/17	5:00	32.47			
7/5/17	6:00	32.47			

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$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
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7/5/17 $17:00$ 32.46 $7/5/17$ $18:00$ 32.46 $7/5/17$ $19:00$ 32.46 $7/5/17$ $20:00$ 32.50 $7/5/17$ $21:00$ 32.51 $7/5/17$ $22:00$ 32.53 $7/5/17$ $23:00$ 32.53 $7/5/17$ $23:00$ 32.52 $7/6/17$ $0:00$ 32.52 $7/6/17$ $1:00$ 32.50 $7/6/17$ $1:00$ 32.49 $7/6/17$ $3:00$ 32.47 $7/6/17$ $4:00$ 32.45 $7/6/17$ $5:00$ 32.46 $7/6/17$ $5:00$ 32.46 $7/6/17$ $7:00$ 32.49	
7/5/17 $18:00$ 32.46 $7/5/17$ $19:00$ 32.46 $7/5/17$ $20:00$ 32.50 $7/5/17$ $21:00$ 32.51 $7/5/17$ $22:00$ 32.53 $7/5/17$ $22:00$ 32.53 $7/5/17$ $23:00$ 32.53 $7/6/17$ $0:00$ 32.52 $7/6/17$ $1:00$ 32.50 $7/6/17$ $1:00$ 32.50 $7/6/17$ $2:00$ 32.49 $7/6/17$ $3:00$ 32.47 $7/6/17$ $4:00$ 32.45 $7/6/17$ $5:00$ 32.46 $7/6/17$ $6:00$ 32.46 $7/6/17$ $7:00$ 32.49 $7/6/17$ <td< td=""><th></th></td<>	
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////// 5:00 52:45 7/7/17 4:00 22:42	
7/7/17 5:00 22:43	
7/7/17 6:00 32.41	
7/7/17 7.00 32.41	
7/7/17 8.00 32.42	
7/7/17 9:00 32:42	
7/7/17 10:00 32:41	
7/7/17 11:00 32:41	
7/7/17 12:00 32:41	
7/7/17 13:00 32:40	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/Recovery (minutes)	Drawdown (feet)	Comments
7/7/17	14:00	32.38			
7/7/17	15:00	32.34			
7/7/17	16:00	32.32			
7/7/17	17:00	32.31			
7/7/17	18:00	32.30			
7/7/17	19:00	32.30			
7/7/17	20:00	32.33			
7/7/17	21:00	32.38			
7/7/17	22:00	32.35			
7/7/17	23:00	32.37			
7/8/17	0:00	32.35			
7/8/17	1:00	32.35			
7/8/17	2:00	32.32			
7/8/17	3:00	32.31			
7/8/17	4:00	32.28			
7/8/17	5:00	32.28			
7/8/17	6:00	32.30			
7/8/17	7:00	32.28			
7/8/17	8:00	32.29			
7/8/17	9:00	32,31			
7/8/17	10:00	32.32			
7/8/17	11:00	32.34			
7/8/17	12.00	32.34			
7/8/17	13:00	32.36			
7/8/17	14.00	32.37			
7/8/17	15.00	32.37			
7/8/17	16:00	32.35			
7/8/17	17.00	32.38			
7/8/17	18:00	32.37			
7/8/17	19:00	32.36			
7/8/17	20:00	32.45			
7/8/17	21:00	32.42			
7/8/17	22:00	32.46			
7/8/17	23:00	32.47			
7/9/17	0:00	32.48			
7/9/17	1:00	32.49			
7/9/17	2:00	32.48			
7/9/17	3:00	32.47			
7/9/17	4:00	32.47			
7/9/17	5:00	32.46			
7/9/17	6:00	32.45			
7/9/17	7:00	32.49			
7/9/17	8:00	32.51			
7/9/17	9:00	32.54			
7/9/17	10:00	32.57			
7/9/17	11:00	32.60			
7/9/17	12:00	32.62			
7/9/17	13:00	32.62			
7/9/17	14:00	32.61			
7/9/17	15:00	32.62			
7/9/17	16:00	32.61			
7/9/17	17:00	32.59			
7/9/17	18:00	32.57			
7/9/17	19:00	32.58			
7/9/17	20:00	32.59			

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/Recovery (minutes)	Drawdown (feet)	Comments
7/9/17	21:00	32.62			
7/9/17	22:00	32.63			
7/9/17	23:00	32.66			
7/10/17	0:00	32.66			
7/10/17	1:00	32.66			
7/10/17	2:00	32.66			
7/10/17	3:00	32.64			
7/10/17	4:00	32.62			
7/10/17	5:00	32.61			
7/10/17	6:00	32.59			
7/10/17	7:00	32.59			
7/10/17	8:00	32.60			
7/10/17	9:00	32.63			
7/10/17	10:00	32.65			
7/10/17	11:00	32.65			
7/10/17	11:54	32.66			Static water level used from prior to the start of pumping in any onsite wells.
7/10/17	12:00	32.66			Pump in well C-21 started at 11:55.
7/10/17	13:00	32.67			Pump in well C-23 started at 12:59.
7/10/17	14:00	32.65			
7/10/17	15:00	32.64			
7/10/17	16:00	32.60			
7/10/17	17:00	32.59			Pump in well C-14 started at 16:24.
7/10/17	18:00	32.58			Pump in well C-16 started at 17:31.
7/10/17	19:00	32.58			Pump in well C-6 started at 18:35.
7/10/17	20:00	32.56			Pump in well C-12 started at 19:48.
7/10/17	20:40	32.57			
7/10/17	21:00	32.88			Reset test on pressure transducer.
7/10/17	21:03	32.92			Pump in well C-7B started.
7/10/17	21:04	39.18	1	6.52	Pump rate in well C-7B adjusted to 220 gpm.
7/10/17	21:05	43.10	2	10.44	
7/10/17	21:06	43.67	3	11.01	
7/10/17	21:07	42.84	4	10.18	
7/10/17	21:08	41.17	5	8.51	
7/10/17	21:09	42.62	6	9.96	
7/10/17	21:10	43.05	7	10.39	Pumping rate in well C-7B 220 gpm.
7/10/17	21:11	43.20	8	10.54	
7/10/17	21:12	43.54	9	10.88	
7/10/17	21:13	43.89	10	11.23	
//10/17	21:14	44.11	11	11.45	D : (: 11 C 7D 220
7/10/17	21:15	44.36	12	11.70	Pumping rate in well C-/B 220 gpm.
7/10/17	21:10	44.59	13	11.93	
7/10/17	21:17	44.98	14	12.32	
7/10/17	21:18	45.03	15	12.39	
7/10/17	21:19	45.28	10	12.02	Dumping acts in well C 7D 220 and
7/10/17	21:20	45.44	17	12.78	Pumping rate in well C-7B 220 gpm.
7/10/17	21:23	40.33	22	13.09	Dumping rate in well C 7D 220 anm
7/10/17	21.30	47.30	27	14.04	Fullping fate in wen C-7B 220 gpm.
7/10/17	21:33	4/./0	32	15.12	Dumping rate in well C 7D 220 anm
7/10/17	21.40	40.07	42	16.05	r umping rate in well C-/D 220 gpifi.
7/10/17	21:43	49.04	42	10.38	Dumping rate in well C 7D 220 cmm
7/10/17	21.50	47.41	+/ 52	10.75	r umping rate in well C-/D 220 gpifi.
7/10/17	21:55	+7.70 50.40	52	17.32	Dumping rate in well C 7D 220 anm
7/10/17	22:00	54.11	<u> </u>	1/./4	Pumping rate in well C-7B 220 gpm.
//10/1/	25:00	34.11	11/	21.43	Pumping rate in well C-/B 220 gpm.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/Recovery	Drawdown (feet)	Comments
7/11/17	0.00	56.72	177	24.06	Pumping rate in well C 7B 220 gpm
7/11/17	1.00	58.52	227	24.00	Pumping rate in well C 7B 220 gpm.
7/11/17	2.00	60.10	297	25.80	Pumping rate in well C-7B 220 gpm.
7/11/17	2.00	61.42	357	27.44	Pumping rate in well C-7B 220 gpm.
7/11/17	4.00	62.60	417	20.70	Pumping rate in well C-7B 220 gpm.
7/11/17	5.00	63.68	417	31.02	Pumping rate in well C-7B 220 gpm.
7/11/17	6.00	64.82	537	32.16	Pumping rate in well C-7B 220 gpm.
7/11/17	7.00	65.65	597	32.00	Pumping rate in well C-7B 218 gpm.
7/11/17	8.00	66.67	657	34.01	Pumping rate in well C-7B 218 gpm.
7/11/17	9.00	67.23	717	34 57	Pumping rate in well C-7B 218 gpm.
7/11/17	10:00	68.19	777	35.53	Pumping rate in well C-7B 218 gpm.
7/11/17	11:00	68.79	837	36.13	Pumping rate in well C-7B 218 gpm.
7/11/17	12:00	69.51	897	36.85	Pumping rate in well C-7B 218 gpm.
7/11/17	13:00	70.09	957	37.43	Pumping rate in well C-7B 218 gpm.
7/11/17	14:00	70.66	1.017	38.00	Pumping rate in well C-7B 218 gpm.
7/11/17	15:00	71.29	1.077	38.63	Pumping rate in well C-7B 215 gpm.
7/11/17	16:00	71.78	1,137	39.12	Pumping rate in well C-7B 215 gpm.
7/11/17	17:00	72.27	1,197	39.61	Pumping rate in well C-7B 215 gpm.
7/11/17	18:00	72.64	1,257	39.98	Pumping rate in well C-7B 215 gpm.
7/11/17	19:00	73.26	1,317	40.60	Pumping rate in well C-7B 215 gpm.
7/11/17	20:00	73.74	1,377	41.08	Pumping rate in well C-7B 215 gpm.
7/11/17	21:00	74.16	1,437	41.50	Pumping rate in well C-7B 215 gpm.
7/11/17	22:00	74.68	1,497	42.02	Pumping rate in well C-7B 215 gpm.
7/11/17	23:00	74.76	1,557	42.10	Pumping rate in well C-7B 215 gpm.
7/12/17	0:00	75.39	1,617	42.73	Pumping rate in well C-7B 215 gpm.
7/12/17	1:00	71.97	1,677	39.31	Generator shut down.
7/12/17	1:17	67.12	1,694	34.46	Generator restarted.
7/12/17	2:00	74.07	1,737	41.41	Pumping rate in well C-7B 215 gpm.
7/12/17	3:00	75.28	1,797	42.62	Pumping rate in well C-7B 215 gpm.
7/12/17	4:00	75.89	1,857	43.23	Pumping rate in well C-7B 215 gpm.
7/12/17	5:00	76.30	1,917	43.64	Pumping rate in well C-7B 215 gpm.
7/12/17	6:00	76.76	1,977	44.10	Pumping rate in well C-7B 215 gpm.
7/12/17	7:00	77.00	2,037	44.34	Pumping rate in well C-7B 215 gpm.
7/12/17	8:00	77.38	2,097	44.72	Pumping rate in well C-7B 215 gpm.
7/12/17	9:00	77.67	2,157	45.01	Pumping rate in well C-/B 215 gpm.
7/12/17	10:00	77.88	2,217	45.22	Pumping rate in well C-/B 215 gpm.
7/12/17	10:03	//.94	2,220	45.28	Pumping rate in well C-/B 215 gpm.
7/12/17	10:04	/4.52	2,221	41.80	Generator shut down.
7/12/17	10:27	07.80	2,244	33.19	Dumning rate in well C 7D 215 mm
7/12/17	11.00	76.37	2,277	42.09	Pumping rate in well C-7B 215 gpm.
7/12/17	11.27	70.57	2,304	29.51	Pump in well C-7B shut down. End of test on
7/12/17	11:28	/1.1/	-1	38.31	well C-7B.
7/12/17	11:29	69.96	-2	37.30	
7/12/17	11:30	69.17	-3	36.51	
7/12/17	11:31	08.33	-4	35.89	
7/12/17	11:32	67.55	-3	24.90	
7/12/17	11:33	67.14	-0	34.07	
7/12/17	11.34	66.78	-/	34.40	
7/12/17	11.35	66.44	-0	33.78	
7/12/17	11.30	66.13	-9	33.47	
7/12/17	11:38	65.85	-11	33.19	
7/12/17	11:39	65.57	-12	32.91	
7/12/17	11:40	65.32	-13	32.66	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/Recovery (minutes)	Drawdown (feet)	Comments
7/12/17	11:41	65.09	-14	32.43	
7/12/17	11:42	64.85	-15	32.19	
7/12/17	11:43	64.65	-16	31.99	
7/12/17	11:44	64.43	-17	31.77	
7/12/17	11:45	64.24	-18	31.58	
7/12/17	11:50	63.35	-23	30.69	
7/12/17	11:55	62.56	-28	29.90	
7/12/17	12:00	61.86	-33	29.20	Shut down pump in well C-21 at 11:56.
7/12/17	12:05	61.22	-38	28.56	
7/12/17	12:10	60.65	-43	27.99	
7/12/17	12:15	60.12	-48	27.46	
7/12/17	12:20	59.64	-53	26.98	
7/12/17	12:25	59.15	-58	26.49	
7/12/17	12:20	58.71	-63	26.05	
7/12/17	13.00	56.51	-93	23.85	
7/12/17	13.00 14.00	53 79	-153	21.13	
7/12/17	15.00	51.92	-213	19.26	
7/12/17	16.00	50.51	-273	17.85	
7/12/17	17.00	49.36	-333	16 70	
7/12/17	18.00	48.44	-393	15.78	
7/12/17	19.00	47.62	-453	14.96	
7/12/17	20.00	46.90	-513	14 24	
7/12/17	21.00	46.27	-573	13.61	
7/12/17	22:00	45.77	-633	13.01	
7/12/17	23.00	45.25	-693	12 59	
7/13/17	0.00	44.82	-753	12.16	
7/13/17	1.00	44 38	-813	11.72	
7/13/17	2.00	44.02	-873	11.72	
7/13/17	3.00	43.66	-933	11.00	
7/13/17	4.00	43.29	-993	10.63	
7/13/17	5:00	42.99	-1.053	10.33	
7/13/17	6:00	42.69	-1.113	10.03	
7/13/17	7:00	42.40	-1.173	9.74	
7/13/17	8:00	42.14	-1.233	9.48	
7/13/17	9:00	41.91	-1.293	9.25	
7/13/17	10:00	41.73	-1,353	9.07	
7/13/17	11:00	41.54	-1.413	8.88	
7/13/17	12:00	41.35	-1.473	8.69	
7/13/17	13:00	41.18	-1,533	8.52	
7/13/17	14:00	41.01	-1,593	8.35	
7/13/17	15:00	40.83	-1,653	8.17	
7/13/17	16:00	40.67	-1,713	8.01	
7/13/17	17:00	40.50	-1,773	7.84	
7/13/17	18:00	40.37	-1,833	7.71	
7/13/17	19:00	40.23	-1,893	7.57	
7/13/17	20:00	40.09	-1,953	7.43	
7/13/17	21:00	39.96	-2,013	7.30	
7/13/17	22:00	39.85	-2,073	7.19	
7/13/17	23:00	39.74	-2,133	7.08	
7/14/17	0:00	39.64	-2,193	6.98	
7/14/17	1:00	39.53	-2,253	6.87	
7/14/17	2:00	39.44	-2,313	6.78	
7/14/17	3:00	39.34	-2,373	6.68	
7/14/17	4:00	39.25	-2,433	6.59	
7/14/17	5:00	39.15	-2,493	6.49	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/Recovery (minutes)	Drawdown (feet)	Comments
7/14/17	6:00	39.08	-2,553	6.42	
7/14/17	7:00	38.95	-2,613	6.29	
7/14/17	8:00	38.84	-2,673	6.18	
7/14/17	9:00	38.82	-2,733	6.16	
7/14/17	10:00	38.71	-2,793	6.05	
7/14/17	11:00	38.59	-2,853	5.93	
7/14/17	12:00	38.58	-2,913	5.92	
7/14/17	13:00	38.50	-2,973	5.84	
7/14/17	14:00	38.42	-3,033	5.76	
7/14/17	15:00	38.35	-3,093	5.69	
7/14/17	16:00	38.27	-3,153	5.61	
7/14/17	17:00	38.20	-3,213	5.54	
7/14/17	18:00	38.12	-3,273	5.46	
7/14/17	19:00	38.03	-3,333	5.37	
7/14/17	20:00	37.97	-3,393	5.31	
7/14/17	21:00	37.89	-3,453	5.23	
7/14/17	22:00	37.85	-3,513	5.19	
7/14/17	23:00	37.77	-3,573	5.11	
7/15/17	0:00	37.70	-3,633	5.04	
7/15/17	1:00	37.67	-3,693	5.01	
7/15/17	2:00	37.59	-3,753	4.93	
7/15/17	3:00	37.54	-3,813	4.88	
7/15/17	4:00	37.48	-3,8/3	4.82	
7/15/17	5:00	37.42	-3,933	4.76	
7/15/17	6:00	37.35	-3,993	4.69	
7/15/17	/:00	37.30	-4,053	4.64	
7/15/17	8:00	37.24	-4,113	4.58	000/ magazierry achieved
7/15/17	9:00	37.19	-4,1/3	4.55	90% recovery achieved.
7/15/17	11:00	37.12	4,235	4.40	
7/15/17	12.00	37.08	4,295	4.42	
7/15/17	12.00	37.03	-4 413	4 36	
7/15/17	14.00	36.98	-4 473	4.30	
7/15/17	15.00	36.95	-4 533	4 29	
7/15/17	16.00	36.90	-4 593	4 24	
7/15/17	17:00	36.87	-4.653	4.21	
7/15/17	18:00	36.83	-4,713	4.17	
7/15/17	19:00	36.78	-4,773	4.12	
7/15/17	20:00	36.74	-4,833	4.08	
7/15/17	21:00	36.72	-4,893	4.06	
7/15/17	22:00	36.67	-4,953	4.01	
7/15/17	23:00	36.63	-5,013	3.97	
7/16/17	0:00	36.62	-5,073	3.96	
7/16/17	1:00	36.59	-5,133	3.93	
7/16/17	1:09	36.56	-5,142	3.90	Shut down of simultaneous pumping test (wells C-6, 12, 14, 16, and 23).
7/16/17	2:00	36.54	-5,193	3.88	
7/16/17	3:00	36.50	-5,253	3.84	
7/16/17	4:00	36.45	-5,313	3.79	
7/16/17	5:00	36.42	-5,373	3.76	
7/16/17	6:00	36.37	-5,433	3.71	
7/16/17	7:00	36.34	-5,493	3.68	
7/16/17	8:00	36.30	-5,553	3.64	
7/16/17	9:00	36.26	-5,613	3.60	
7/16/17	10:00	36.24	-5,673	3.58	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/Recovery (minutes)	Drawdown (feet)	Comments
7/16/17	11:00	36.20	-5.733	3.54	
7/16/17	12:00	36.17	-5.793	3.51	
7/16/17	13:00	36.18	-5.853	3.52	
7/16/17	14:00	36.16	-5.913	3.50	
7/16/17	15:00	36.15	-5.973	3.49	
7/16/17	16:00	36.10	-6.033	3.44	
7/16/17	17:00	36.06	-6.093	3.40	
7/16/17	18:00	36.05	-6.153	3.39	
7/16/17	19:00	36.03	-6.213	3.37	
7/16/17	20:00	36.03	-6.273	3.37	
7/16/17	21:00	36.05	-6,333	3.39	
7/16/17	22:00	35.99	-6,393	3.33	
7/16/17	23:00	35.97	-6,453	3.31	
7/17/17	0:00	35.99	-6,513	3.33	
7/17/17	1:00	35.97	-6,573	3.31	
7/17/17	2:00	35.95	-6,633	3.29	
7/17/17	3:00	35.89	-6,693	3.23	
7/17/17	4:00	35.88	-6,753	3.22	
7/17/17	5:00	35.89	-6,813	3.23	
7/17/17	6:00	35.85	-6,873	3.19	
7/17/17	7:00	35.82	-6,933	3.16	
7/17/17	8:00	35.82	-6,993	3.16	
7/17/17	9:00	35.84	-7,053	3.18	
7/17/17	10:00	35.77	-7,113	3.11	
7/17/17	11:00	35.73	-7,173	3.07	
7/17/17	12:00	35.76	-7,233	3.10	
7/17/17	13:00	35.73	-7,293	3.07	
7/17/17	14:00	35.70	-7,353	3.04	
7/17/17	15:00	35.68	-7,413	3.02	
7/17/17	16:00	35.68	-7,473	3.02	
7/17/17	17:00	35.66	-7,533	3.00	
//1//1/	18:00	35.66	-7,593	3.00	
7/17/17	19:00	35.64	-/,053	2.98	
7/17/17	20:00	35.67	-/,/13	3.01	
7/17/17	21:00	35.02	-7,773	2.90	
7/17/17	22.00	35.60	-7,855	2.94	
7/18/17	23.00	35.00	7 053	2.94	
7/18/17	1.00	35.57	-7,555	2.91	
7/18/17	2.00	35.55	-8,013	2.89	
7/18/17	3:00	35.53	-8,133	2.87	
7/18/17	4:00	35.53	-8.193	2.87	
7/18/17	5:00	35.51	-8.253	2.85	
7/18/17	6:00	35.51	-8.313	2.85	
7/18/17	7:00	35.50	-8,373	2.84	
7/18/17	8:00	35.50	-8,433	2.84	
7/18/17	9:00	35.51	-8,493	2.85	
7/18/17	10:00	35.48	-8,553	2.82	
7/18/17	11:00	35.45	-8,613	2.79	
7/18/17	12:00	35.41	-8,673	2.75	
7/18/17	13:00	35.37	-8,733	2.71	
7/18/17	14:00	35.34	-8,793	2.68	
7/18/17	15:00	35.32	-8,853	2.66	
7/18/17	16:00	35.30	-8,913	2.64	
7/18/17	17:00	35.29	-8,973	2.63	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/Recovery (minutes)	Drawdown (feet)	Comments
7/18/17	18:00	35.28	-9,033	2.62	
7/18/17	19:00	35.29	-9.093	2.63	
7/18/17	20:00	35.28	-9,153	2.62	
7/18/17	21:00	35.27	-9,213	2.61	
7/18/17	22:00	35.27	-9,273	2.61	
7/18/17	23:00	35.26	-9.333	2.60	
7/19/17	0:00	35.23	-9,393	2.57	
7/19/17	1:00	35.22	-9.453	2.56	
7/19/17	2:00	35.20	-9,513	2.54	
7/19/17	3:00	35.19	-9.573	2.53	
7/19/17	4:00	35.17	-9.633	2.51	
7/19/17	5:00	35.18	-9.693	2.52	
7/19/17	6:00	35.16	-9.753	2.50	
7/19/17	7:00	35.17	-9.813	2.51	
7/19/17	8:00	35.18	-9.873	2.52	
7/19/17	9:00	35.19	-9.933	2.53	
7/19/17	10:00	35.16	-9,993	2.50	
7/19/17	11:00	35.18	-10.053	2.52	
7/19/17	12:00	35.11	-10,113	2.45	
7/19/17	13:00	35.10	-10.173	2.44	
7/19/17	14:00	35.06	-10,233	2.40	
7/19/17	15:00	35.04	-10.293	2.38	
7/19/17	16:00	35.01	-10.353	2.35	
7/19/17	17:00	34.99	-10,413	2.33	
7/19/17	18:00	34.99	-10.473	2.33	
7/19/17	19:00	34.94	-10,533	2.28	
7/19/17	20:00	35.01	-10,593	2.35	
7/19/17	21:00	35.01	-10,653	2.35	
7/19/17	22:00	35.02	-10,713	2.36	
7/19/17	23:00	35.01	-10.773	2.35	
7/20/17	0:00	34,99	-10.833	2.33	
7/20/17	1:00	34.98	-10,893	2.32	
7/20/17	2:00	34.96	-10,953	2.30	
7/20/17	3:00	34.94	-11.013	2.28	
7/20/17	4:00	34.93	-11.073	2.27	
7/20/17	5:00	34.91	-11,133	2.25	
7/20/17	6:00	34.93	-11,193	2.27	
7/20/17	7:00	34.96	-11,253	2.30	
7/20/17	8:00	34.97	-11,313	2.31	
7/20/17	9:00	34.97	-11,373	2.31	
7/20/17	10:00	34.98	-11,433	2.32	
7/20/17	11:00	34.95	-11,493	2.29	
7/20/17	12:00	34.94	-11,553	2.28	
7/20/17	13:00	34.90	-11,613	2.24	
7/20/17	14:00	34.86	-11,673	2.20	
7/20/17	15:00	34.83	-11,733	2.17	
7/20/17	16:00	34.81	-11,793	2.15	
7/20/17	17:00	34.79	-11,853	2.13	
7/20/17	18:00	34.79	-11,913	2.13	
7/20/17	19:00	34.81	-11,973	2.15	
7/20/17	20:00	34.79	-12,033	2.13	
7/20/17	21:00	34.81	-12,093	2.15	
7/20/17	22:00	34.81	-12,153	2.15	
7/20/17	23:00	34.81	-12,213	2.15	
7/21/17	0:00	34.80	-12,273	2.14	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/Recovery (minutes)	Drawdown (feet)	Comments
7/21/17	1:00	34.79	-12.333	2.13	
7/21/17	2:00	34.75	-12,393	2.09	
7/21/17	3:00	34.74	-12,453	2.08	
7/21/17	4:00	34.73	-12.513	2.07	
7/21/17	5:00	34.72	-12,573	2.06	
7/21/17	6:00	34.73	-12,633	2.07	
7/21/17	7:00	34.73	-12,693	2.07	
7/21/17	8:00	34.77	-12,753	2.11	
7/21/17	9:00	34.78	-12.813	2.12	
7/21/17	10:00	34.77	-12.873	2.11	
7/21/17	11:00	34.77	-12,933	2.11	
7/21/17	12:00	34.76	-12,993	2.10	
7/21/17	13:00	34.72	-13,053	2.06	
7/21/17	14:00	34.69	-13,113	2.03	
7/21/17	15:00	34.67	-13,173	2.01	
7/21/17	16:00	34.64	-13,233	1.98	
7/21/17	17:00	34.62	-13,293	1.96	
7/21/17	18:00	34.61	-13,353	1.95	
7/21/17	19:00	34.62	-13,413	1.96	
7/21/17	20:00	34.62	-13,473	1.96	
7/21/17	21:00	34.64	-13,533	1.98	
7/21/17	22:00	34.66	-13,593	2.00	
7/21/17	23:00	34.66	-13,653	2.00	
7/22/17	0:00	34.65	-13,713	1.99	
7/22/17	1:00	34.62	-13,773	1.96	
7/22/17	2:00	34.63	-13,833	1.97	
7/22/17	3:00	34.61	-13,893	1.95	
7/22/17	4:00	34.58	-13,953	1.92	
7/22/17	5:00	34.55	-14,013	1.89	
7/22/17	6:00	34.56	-14,0/3	1.90	
7/22/17	7:00	34.50	-14,133	1.90	
7/22/17	0.00	34.57	-14,195	1.91	
7/22/17	9.00	34.60	-14,255	1.94	
7/22/17	11.00	34.63	-14 373	1.90	
7/22/17	12.00	34.65	-14 433	1.97	
7/22/17	13:00	34.64	-14.493	1.98	
7/22/17	14:00	34.62	-14.553	1.96	
7/22/17	15:00	34.58	-14,613	1.92	
7/22/17	16:00	34.55	-14,673	1.89	
7/22/17	17:00	34.53	-14,733	1.87	
7/22/17	18:00	34.51	-14,793	1.85	
7/22/17	19:00	34.51	-14,853	1.85	
7/22/17	20:00	34.50	-14,913	1.84	
7/22/17	21:00	34.51	-14,973	1.85	
7/22/17	22:00	34.53	-15,033	1.87	
7/22/17	23:00	34.52	-15,093	1.86	
7/23/17	0:00	34.51	-15,153	1.85	
7/23/17	1:00	34.51	-15,213	1.85	
7/23/17	2:00	34.48	-15,273	1.82	
7/23/17	3:00	34.45	-15,333	1.79	
7/22/17	4:00	34.42	-13,393	1./0	
7/22/17	5:00	34.42	-13,433	1./0	
7/22/17	7:00	24.45	-13,313	1.//	
1123/11	7.00	34.41	-13,373	1./3	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/Recovery (minutes)	Drawdown (feet)	Comments
7/23/17	8:00	34.44	-15.633	1.78	
7/23/17	9:00	34.46	-15,693	1.80	
7/23/17	10:00	34.49	-15.753	1.83	
7/23/17	11:00	34.52	-15,813	1.86	
7/23/17	12:00	34.52	-15,873	1.86	
7/23/17	13:00	34.54	-15,933	1.88	
7/23/17	14:00	34.55	-15,993	1.89	
7/23/17	15:00	34.53	-16,053	1.87	
7/23/17	16:00	34.53	-16,113	1.87	
7/23/17	17:00	34.52	-16,173	1.86	
7/23/17	18:00	34.51	-16,233	1.85	
7/23/17	19:00	34.50	-16,293	1.84	
7/23/17	20:00	34.52	-16,353	1.86	
7/23/17	21:00	34.53	-16,413	1.87	
7/23/17	22:00	34.55	-16,473	1.89	
7/23/17	23:00	34.55	-16,533	1.89	
7/24/17	0:00	34.59	-16,593	1.93	
7/24/17	1:00	34.56	-16,653	1.90	
7/24/17	2:00	34.53	-16,713	1.87	
7/24/17	3:00	34.52	-16,773	1.86	
7/24/17	4:00	34.48	-16,833	1.82	
7/24/17	5:00	34.46	-16,893	1.80	
7/24/17	6:00	34.44	-16,953	1.78	
7/24/17	7:00	34.44	-17,013	1.78	
7/24/17	8:00	34.45	-17,073	1.79	
7/24/17	9:00	34.48	-17,133	1.82	
7/24/17	10:00	34.48	-17,193	1.82	
7/24/17	11:00	34.49	-17,253	1.83	
7/24/17	12:00	34.53	-17,313	1.87	
7/24/17	13:00	34.52	-17,373	1.86	
7/24/17	14:00	34.51	-17,433	1.85	
//24/17	15:00	34.49	-17,493	1.83	
7/24/17	16:00	34.47	-1/,553	1.81	
7/24/17	1/:00	34.44	-17,013	1.78	
7/24/17	10.00	34.43	-17,073	1.79	
7/24/17	20.00	34.42	17 703	1.70	
7/24/17	20.00 21.00	34.45	-17,795	1.77	
7/24/17	21.00 22.00	34.45	-17,855	1.75	
7/24/17	22.00	34.50	-17,913	1.81	
7/25/17	0:00	34 53	-18,033	1.87	
7/25/17	1.00	34 53	-18 093	1.87	
7/25/17	2:00	34.52	-18,153	1.86	
7/25/17	3:00	34.50	-18,213	1.84	
7/25/17	4:00	34.48	-18.273	1.82	
7/25/17	5:00	34.47	-18,333	1.81	
7/25/17	6:00	34.47	-18,393	1.81	
7/25/17	7:00	34.47	-18,453	1.81	
7/25/17	8:00	34.47	-18,513	1.81	
7/25/17	9:00	34.50	-18,573	1.84	
7/25/17	10:00	34.51	-18,633	1.85	
7/25/17	11:00	34.52	-18,693	1.86	
7/25/17	12:00	34.56	-18,753	1.90	Pump in well C-21 started at 11:44.
7/25/17	13:00	34.57	-18,813	1.91	
7/25/17	14:00	34.58	-18,873	1.92	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/Recovery (minutes)	Drawdown (feet)	Comments
7/25/17	15:00	34.55	-18.933	1.89	
7/25/17	16:00	34.55	-18,993	1.89	
7/25/17	17:00	34.53	-19.053	1.87	
7/25/17	18:00	34.53	-19.113	1.87	
7/25/17	19:00	34.51	-19.173	1.85	
7/25/17	20:00	34.53	-19.233	1.87	
7/25/17	21:00	34.53	-19.293	1.87	
7/25/17	22:00	34.55	-19.353	1.89	
7/25/17	23:00	34.58	-19.413	1.92	
7/26/17	0:00	34.58	-19.473	1.92	
7/26/17	1:00	34.59	-19,533	1.93	
7/26/17	2:00	34.59	-19,593	1.93	
7/26/17	3:00	34.57	-19,653	1.91	
7/26/17	4:00	34.54	-19,713	1.88	
7/26/17	5:00	34.52	-19,773	1.86	
7/26/17	6:00	34.52	-19,833	1.86	
7/26/17	7:00	34.50	-19,893	1.84	
7/26/17	8:00	34.50	-19,953	1.84	
7/26/17	9:00	34.49	-20,013	1.83	
7/26/17	10:00	34.51	-20,073	1.85	
7/26/17	11:00	34.51	-20,133	1.85	
7/26/17	12:00	34.51	-20,193	1.85	
7/26/17	13:00	34.51	-20,253	1.85	
7/26/17	14:00	34.52	-20,313	1.86	
7/26/17	15:00	34.50	-20,373	1.84	
7/26/17	16:00	34.49	-20,433	1.83	
7/26/17	17:00	34.47	-20,493	1.81	
7/26/17	18:00	34.44	-20,553	1.78	
//26/17	19:00	34.43	-20,613	1.//	
7/26/17	20:00	34.41	-20,673	1.75	
7/26/17	21:00	24.41	-20,755	1.73	
7/26/17	22.00	24.43	-20,793	1.77	
7/27/17	0.00	34.43	-20,835	1.77	
7/27/17	1.00	34.43	-20,913	1.77	
7/27/17	2.00	34.42	-21 033	1.77	
7/27/17	3:00	34.40	-21,093	1.74	
7/27/17	4:00	34.38	-21.153	1.72	
7/27/17	5:00	34.37	-21,213	1.71	
7/27/17	6:00	34.35	-21,273	1.69	
7/27/17	7:00	34.31	-21,333	1.65	
7/27/17	8:00	34.33	-21,393	1.67	
7/27/17	9:00	34.33	-21,453	1.67	
7/27/17	10:00	34.32	-21,513	1.66	
7/27/17	11:00	34.35	-21,573	1.69	
7/27/17	12:00	34.34	-21,633	1.68	
7/27/17	13:00	34.34	-21,693	1.68	
7/27/17	14:00	34.32	-21,753	1.66	
7/27/17	15:00	34.33	-21,813	1.67	
7/27/17	16:00	34.31	-21,873	1.65	
7/27/17	17:00	34.31	-21,933	1.65	
7/27/17	18:00	34.27	-21,993	1.61	
7/27/17	19:00	34.20	-22,005	1.60	
7/27/17	20:00	34.23	-22,113	1.39	
//2//1/	21:00	34.20	-22,1/3	1.00	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/Recovery (minutes)	Drawdown (feet)	Comments
7/27/17	22:00	34.25	-22.233	1.59	
7/27/17	23:00	34.26	-22.293	1.60	
7/28/17	0:00	34.28	-22.353	1.62	
7/28/17	1:00	34.27	-22,413	1.61	
7/28/17	2:00	34.27	-22,473	1.61	
7/28/17	3:00	34.27	-22,533	1.61	
7/28/17	4:00	34.26	-22,593	1.60	
7/28/17	5:00	34.26	-22.653	1.60	
7/28/17	6:00	34.25	-22,713	1.59	
7/28/17	7:00	34.23	-22,773	1.57	
7/28/17	8:00	34.25	-22,833	1.59	
7/28/17	9:00	34.27	-22,893	1.61	
7/28/17	10:00	34.26	-22,953	1.60	
7/28/17	11:00	34.26	-23,013	1.60	
7/28/17	12:00	34.27	-23,073	1.61	Pump in well C-21 shut down at 12:15.
7/28/17	13:00	34.29	-23,133	1.63	*
7/28/17	14:00	34.28	-23,193	1.62	
7/28/17	15:00	34.28	-23,253	1.62	
7/28/17	16:00	34.30	-23,313	1.64	
7/28/17	17:00	34.28	-23,373	1.62	
7/28/17	18:00	34.29	-23,433	1.63	
7/28/17	19:00	34.30	-23,493	1.64	
7/28/17	20:00	34.31	-23,553	1.65	
7/28/17	21:00	34.32	-23,613	1.66	
7/28/17	22:00	34.31	-23,673	1.65	
7/28/17	23:00	34.31	-23,733	1.65	
7/29/17	0:00	34.32	-23,793	1.66	
7/29/17	1:00	34.32	-23,853	1.66	
7/29/17	2:00	34.33	-23,913	1.6/	
7/29/17	3:00	34.32	-23,973	1.66	
7/29/17	5:00	34.32	-24,055	1.00	
7/29/17	5.00	24.28	-24,093	1.05	
7/29/17	7.00	34.28	-24,135	1.62	
7/29/17	8.00	34.28	-24 273	1.62	
7/29/17	9.00	34.25	-24 333	1.59	
7/29/17	10:00	34.26	-24,393	1.60	
7/29/17	11:00	34.25	-24.453	1.59	
7/29/17	12:00	34.26	-24,513	1.60	
7/29/17	13:00	34.27	-24,573	1.61	
7/29/17	14:00	34.31	-24,633	1.65	
7/29/17	15:00	34.31	-24,693	1.65	
7/29/17	16:00	34.32	-24,753	1.66	
7/29/17	17:00	34.33	-24,813	1.67	
7/29/17	18:00	34.34	-24,873	1.68	
7/29/17	19:00	34.34	-24,933	1.68	
7/29/17	20:00	34.34	-24,993	1.68	
7/29/17	21:00	34.35	-25,053	1.69	
7/29/17	22:00	34.34	-25,113	1.68	
7/29/17	23:00	34.35	-25,173	1.69	
7/30/17	0:00	34.35	-25,233	1.69	
7/30/17	1:00	34.36	-25,293	1.70	
7/20/17	2:00	34.30 24.29	-20,303	1.70	
7/20/17	3:00	34.38 24.29	-23,413	1.72	
//30/1/	4:00	34.38	-23,473	1./2	

Summary of Water-Level Measurements from Pressure Transducer Installed in Well C-7B Collected During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Depth to Water (ft btoc)	Elapsed Time/Recovery (minutes)	Drawdown (feet)	Comments
7/30/17	5:00	34.38	-25,533	1.72	
7/30/17	6:00	34.43	-25,593	1.77	
7/30/17	7:00	34.39	-25,653	1.73	
7/30/17	8:00	34.40	-25,713	1.74	
7/30/17	9:00	34.44	-25,773	1.78	
7/30/17	10:00	34.40	-25,833	1.74	
7/30/17	11:00	34.43	-25,893	1.77	
7/30/17	12:00	34.43	-25,953	1.77	
7/30/17	13:00	34.44	-26,013	1.78	
7/30/17	14:00	34.44	-26,073	1.78	
7/30/17	15:00	34.46	-26,133	1.80	
7/30/17	16:00	34.45	-26,193	1.79	
7/30/17	17:00	34.45	-26,253	1.79	
7/30/17	18:00	34.45	-26,313	1.79	
7/30/17	19:00	34.45	-26,373	1.79	
7/30/17	20:00	34.46	-26,433	1.80	
7/30/17	21:00	34.47	-26,493	1.81	
7/30/17	22:00	34.51	-26,553	1.85	
7/30/17	23:00	34.49	-26,613	1.83	
7/31/17	0:00	34.48	-26,673	1.82	
7/31/17	1:00	34.47	-26,733	1.81	
7/31/17	2:00	34.50	-26,793	1.84	
7/31/17	3:00	34.48	-26,853	1.82	
7/31/17	4:00	34.46	-26,913	1.80	
7/31/17	5:00	34.46	-26,973	1.80	
7/31/17	6:00	34.47	-27,033	1.81	
7/31/17	7:00	34.50	-27,093	1.84	
7/31/17	8:00	34.49	-27,153	1.83	
7/31/17	9:00	34.49	-27,213	1.83	
7/31/17	10:00	34.47	-27,273	1.81	
7/31/17	11:00	34.48	-27,333	1.82	
7/31/17	12:00	34.45	-27,393	1.79	
7/31/17	13:00	34.46	-27,453	1.80	

ft btoc feet below top of casing

gpm gallons per minute

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C-12



180-Day Water-Level Drawdown Projection on Pumping Well C-12 from Water-Level Measurements Collected from Pumping Well C-12 During Simultanous Pumping Test Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 in July 2017



LBG Hydrogeologic & Engineering Services, P.C.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time\ Recovery (minutes)	Drawdown (feet)	Comments
7/9/17	15:00	102.88			Pressure transducer installed in well.
7/9/17	16:00	102.87			
7/9/17	17:00	102.83			
7/9/17	18:00	102.82			
7/9/17	19:00	102.81			
7/9/17	20:00	102.75			
7/9/17	21:00	102.79			
7/9/17	22:00	102.79			
7/9/17	23:00	102.82			
7/10/17	0:00	102.92			
7/10/17	1:00	102.83			
7/10/17	2:00	102.86			
7/10/17	3:00	102.83			
7/10/17	4:00	102.80			
7/10/17	5:00	102.80			
7/10/17	6:00	102.76			
7/10/17	7:00	102.81			
7/10/17	8:00	102.85			
7/10/17	9:00	102.90			
7/10/17	10:00	102.93			
7/10/17	11:00	102.95			
7/10/17	11:54	102.98			Static water level used from prior to the start of pumping in any onsite wells.
7/10/17	12:00	102.98			Pump in well C-21 started at 11:55.
7/10/17	13:00	102.94			Pump in well C-23 started at 12:59.
7/10/17	14:00	102.91			
7/10/17	15:00	102.97			
7/10/17	16:00	102.83			
7/10/17	17:00	102.81			Pump in well C-14 started at 16:24.
7/10/17	18:00	102.77			Pump in well C-16 started at 17:31.
7/10/17	19:00	102.75			Pump in well C-6 started at 18:35.
7/10/17	19:47	102.77			
7/10/17	19:48	104.98	1	2.00	Pump in well C-12 started.
7/10/17	19:49	105.42	2	2.44	Pumping rate in well C-12 adjusted to 50 gpm.
7/10/17	19:50	109.51	3	6.53	
7/10/17	19:51	109.67	4	6.69	
7/10/17	19:52	119.72	5	16.74	Pumping rate in well C-12 47 gpm.
7/10/17	19:53	129.21	6	26.23	
7/10/17	19:54	135.88	7	32.90	
7/10/17	19:55	140.81	8	37.83	
7/10/17	19:56	144.29	9	41.31	
7/10/17	19:57	147.07	10	44.09	
7/10/17	19:58	149.09	11	46.11	
7/10/17	19:59	150.78	12	47.80	
7/10/17	20:00	152.20	13	49.22	
7/10/17	20:01	153.40	14	50.42	
7/10/17	20:02	154.53	15	51.55	Pumping rate in well C-12 45 gpm.
7/10/17	20:03	155.32	16	52.34	
7/10/17	20:04	156.12	17	53.14	
//10/17/	20:05	15/.03	18	54.05	
7/10/17	20:10	160.32	23	57.34	D :
7/10/17	20:15	162.73	28	59.75	Pumping rate in well C-12 45 gpm.
7/10/17	20:20	164.61	33	61.63	
7/10/17	20:25	166.09	38	63.11	Pumping rate in well C-12 45 gpm.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time\ Recovery (minutes)	Drawdown (feet)	Comments
7/10/17	20:30	167.77	43	64.79	
7/10/17	20:35	169.01	48	66.03	Pumping rate in well C-12 45 gpm.
7/10/17	20:40	170.23	53	67.25	
7/10/17	20:45	171.24	58	68.26	Pumping rate in well C-12 45 gpm.
7/10/17	20:50	172.08	63	69.10	
7/10/17	20:55	173.00	68	70.02	Pumping rate in well C-12 45 gpm.
7/10/17	21:00	173.59	73	70.61	Pump in well C-7B started at 21:03.
7/10/17	22:00	179.78	133	76.80	Pumping rate in well C-12 45 gpm.
7/10/17	23:00	183.95	193	80.97	Pumping rate in well C-12 45 gpm.
7/11/17	0:00	187.05	253	84.07	Pumping rate in well C-12 45 gpm.
7/11/17	1:00	188.53	313	85.55	Pumping rate in well C-12 45 gpm.
7/11/17	2:00	189.83	373	86.85	Pumping rate in well C-12 45 gpm.
7/11/17	3:00	190.75	433	87.77	Pumping rate in well C-12 45 gpm.
7/11/17	4:00	192.25	493	89.27	Pumping rate in well C-12 45 gpm.
7/11/17	5:00	192.98	553	90.00	Pumping rate in well C-12 45 gpm.
7/11/17	6:00	193.68	613	90.70	Pumping rate in well C-12 45 gpm.
7/11/17	7:00	194.13	673	91.15	Pumping rate in well C-12 45 gpm.
7/11/17	8:00	194.52	733	91.54	Pumping rate in well C-12 45 gpm.
7/11/17	9:00	194.54	793	91.56	Pumping rate in well C-12 45 gpm.
7/11/17	10:00	195.20	853	92.22	Pumping rate in well C-12 45 gpm.
7/11/17	11:00	195.63	913	92.65	Pumping rate in well C-12 45 gpm.
7/11/17	12:00	196.25	973	93.27	Pumping rate in well C-12 45 gpm.
7/11/17	13:00	196.43	1,033	93.45	Pumping rate in well C-12 45 gpm.
7/11/17	14:00	196.76	1,093	93.78	Pumping rate in well C-12 45 gpm.
7/11/17	15:00	196.99	1,153	94.01	Pumping rate in well C-12 45 gpm.
7/11/17	16:00	196.78	1,213	93.80	Pumping rate in well C-12 45 gpm.
7/11/17	17:00	194.26	1,273	91.28	Pumping rate in well C-12 45 gpm.
7/11/17	18:00	194.12	1,333	91.14	Pumping rate in well C-12 45 gpm.
7/11/17	19:00	194.34	1,393	91.36	Pumping rate in well C-12 45 gpm.
7/11/17	20:00	194.18	1,453	91.20	Pumping rate in well C-12 45 gpm.
7/11/17	21:00	194.71	1,513	91.73	Pumping rate in well C-12 45 gpm.
7/11/17	22:00	194.93	1,573	91.95	Pumping rate in well C-12 44 gpm.
7/11/17	23:00	194.52	1,633	91.54	Pumping rate in well C-12 43 gpm.
7/12/17	0:00	195.48	1,693	92.50	Pumping rate in well C-12 43 gpm.
7/12/17	1:00	195.63	1,753	92.65	Pumping rate in well C-12 43 gpm.
7/12/17	2:00	195.52	1,813	92.54	Pumping rate in well C-12 43 gpm.
7/12/17	3:00	195.72	1,873	92.74	Pumping rate in well C-12 43 gpm.
7/12/17	4:00	194.79	1,933	91.81	Pumping rate in well C-12 43 gpm.
7/12/17	5:00	195.53	1,993	92.55	Pumping rate in well C-12 43 gpm.
7/12/17	6:00	195.84	2,053	92.86	Pumping rate in well C-12 43 gpm.
7/12/17	7:00	195.25	2,113	92.27	Pumping rate in well C-12 43 gpm.
7/12/17	8:00	193.42	2,173	90.44	Pumping rate in well C-12 43 gpm.
7/12/17	9:00	191.84	2,233	88.86	Pumping rate in well C-12 42 gpm.
7/12/17	10:00	191.79	2,293	88.81	Pumping rate in well C-12 42 gpm.
7/12/17	11:00	192.31	2,353	89.33	Pumping rate in well C-12 42 gpm.
7/12/17	12:00	194.31	2,413	91.33	Pump in well C-7B shut down at 11:28 and pump in well C-21 shut down at 11:56.
7/12/17	13:00	194.86	2,473	91.88	Pumping rate in well C-12 42 gpm.
7/12/17	13:04	194.78	2,477	91.80	Pumping rate in well C-12 manually decreased to 40.5
7/12/17	14:00	191.54	2,533	88.56	Pumping rate in well C-12 40.5 gnm.
7/12/17	15.00	191 21	2,593	88.23	Pumping rate in well C-12 40.5 gpm
7/12/17	16:00	191.14	2,653	88.16	Pumping rate in well C-12 40.5 gpm.
7/12/17	17.00	191 17	2 713	88.19	Pumping rate in well C-12 40.5 gpm
1114111	1,.00	1/1.1/	2,15	00.17	i umping iute in wen e iz 10.5 gpin.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time\ Recovery (minutes)	Drawdown (feet)	Comments
7/12/17	18:00	191.05	2,773	88.07	Pumping rate in well C-12 40.5 gpm.
7/12/17	19:00	190.91	2,833	87.93	Pumping rate in well C-12 40.5 gpm.
7/12/17	20:00	190.94	2,893	87.96	Pumping rate in well C-12 40.5 gpm.
7/12/17	21:00	190.83	2,953	87.85	Pumping rate in well C-12 40.5 gpm.
7/12/17	22:00	191.02	3,013	88.04	Pumping rate in well C-12 40.5 gpm.
7/12/17	23:00	190.92	3,073	87.94	Pumping rate in well C-12 40.5 gpm.
7/13/17	0:00	191.66	3,133	88.68	Pumping rate in well C-12 40.5 gpm.
7/13/17	1:00	191.71	3,193	88.73	Pumping rate in well C-12 40.5 gpm.
7/13/17	2:00	192.25	3,253	89.27	Pumping rate in well C-12 40.5 gpm.
7/13/17	3:00	192.20	3,313	89.22	Pumping rate in well C-12 40.5 gpm.
7/13/17	4:00	192.33	3,373	89.35	Pumping rate in well C-12 40.5 gpm.
7/13/17	5:00	192.26	3,433	89.28	Pumping rate in well C-12 40.5 gpm.
7/13/17	6:00	192.41	3,493	89.43	Pumping rate in well C-12 40.5 gpm.
7/13/17	7:00	192.18	3,553	89.20	Pumping rate in well C-12 40.5 gpm.
7/13/17	8:00	192.19	3,613	89.21	Pumping rate in well C-12 40.5 gpm.
7/13/17	9:00	192.34	3,673	89.36	Pumping rate in well C-12 40.5 gpm.
7/13/17	10:00	192.37	3,733	89.39	Pumping rate in well C-12 40.5 gpm.
7/13/17	11:00	192.33	3,793	89.35	Pumping rate in well C-12 40.5 gpm.
7/13/17	12:00	192.42	3,853	89.44	Pumping rate in well C-12 40.5 gpm.
7/13/17	13:00	192.40	3,913	89.42	Pumping rate in well C-12 40.5 gpm.
7/13/17	14:00	192.43	3,973	89.45	Pumping rate in well C-12 40.5 gpm.
7/13/17	15:00	192.04	4,033	89.06	Pumping rate in well C-12 40.5 gpm.
7/13/17	16:00	192.03	4,093	89.05	Pumping rate in well C-12 40.5 gpm.
7/13/17	17:00	191.92	4,153	88.94	Pumping rate in well C-12 40.5 gpm.
7/13/17	18:00	191.85	4,213	88.87	Pumping rate in well C-12 40.5 gpm.
7/13/17	19:00	192.06	4,273	89.08	Pumping rate in well C-12 40.5 gpm.
7/13/17	20:00	192.03	4,333	89.05	Pumping rate in well C-12 40.5 gpm.
7/13/17	21:00	191.63	4,393	88.07	Pumping rate in well C-12 40.5 gpm.
7/13/17	22:00	191.04	4,435	88.00	Pumping rate in well C 12 40.5 gpm.
7/1//17	23.00	191.55	4,513	88.57	Pumping rate in well C-12 40.5 gpm.
7/14/17	1.00	191.50	4 633	88.47	Pumping rate in well C-12 40.5 gpm.
7/14/17	2.00	191.45	4 693	88.27	Pumping rate in well C-12 40.5 gpm.
7/14/17	3.00	191.23	4 753	88.46	Pumping rate in well C-12 40.5 gpm.
7/14/17	4:00	191.35	4.813	88.37	Pumping rate in well C-12 40.5 gpm.
7/14/17	5:00	191.24	4.873	88.26	Pumping rate in well C-12 40.5 gpm.
7/14/17	6:00	191.21	4,933	88.23	Pumping rate in well C-12 40.5 gpm.
7/14/17	7:00	191.11	4,993	88.13	Pumping rate in well C-12 40.5 gpm.
7/14/17	8:00	191.37	5,053	88.39	Pumping rate in well C-12 40.5 gpm.
7/14/17	9:00	191.42	5,113	88.44	Pumping rate in well C-12 40.5 gpm.
7/14/17	10:00	191.41	5,173	88.43	Pumping rate in well C-12 40.5 gpm.
7/14/17	11:00	191.43	5,233	88.45	Pumping rate in well C-12 40.5 gpm.
7/14/17	12:00	191.70	5,293	88.72	Pumping rate in well C-12 40.5 gpm.
7/14/17	13:00	191.76	5,353	88.78	Pumping rate in well C-12 40.5 gpm.
7/14/17	14:00	191.81	5,413	88.83	Pumping rate in well C-12 40.5 gpm.
7/14/17	15:00	191.91	5,473	88.93	Pumping rate in well C-12 40.5 gpm.
7/14/17	16:00	191.83	5,533	88.85	Pumping rate in well C-12 40.5 gpm.
7/14/17	17:00	191.99	5,593	89.01	Pumping rate in well C-12 40.5 gpm.
7/14/17	18:00	191.93	5,653	88.95	Pumping rate in well C-12 40.5 gpm.
7/14/17	19:00	191.90	5,713	88.92	Pumping rate in well C-12 40.5 gpm.
7/14/17	20:00	191.46	5,773	88.48	Pumping rate in well C-12 40.5 gpm.
7/14/17	21:00	191.23	5,833	88.25	Pumping rate in well C-12 40.5 gpm.
//14/17	22:00	191.19	5,893	88.21	Pumping rate in well C-12 40.5 gpm.
//14/1/	23:00	191.26	5,955	88.28	Pumping rate in well C-12 40.5 gpm.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time\ Recovery (minutes)	Drawdown (feet)	Comments
7/15/17	0:00	191.36	6,013	88.38	Pumping rate in well C-12 40.5 gpm.
7/15/17	1:00	191.59	6,073	88.61	Pumping rate in well C-12 40.5 gpm.
7/15/17	2:00	191.78	6,133	88.80	Pumping rate in well C-12 40.5 gpm.
7/15/17	3:00	191.85	6,193	88.87	Pumping rate in well C-12 40.5 gpm.
7/15/17	4:00	191.55	6,253	88.57	Pumping rate in well C-12 40.5 gpm.
7/15/17	5:00	191.47	6,313	88.49	Pumping rate in well C-12 40.5 gpm.
7/15/17	6:00	191.37	6,373	88.39	Pumping rate in well C-12 40.5 gpm.
7/15/17	7:00	191.62	6,433	88.64	Pumping rate in well C-12 40.5 gpm.
7/15/17	8:00	191.58	6,493	88.60	Pumping rate in well C-12 40.5 gpm.
7/15/17	9:00	191.65	6,553	88.67	Pumping rate in well C-12 40.5 gpm.
7/15/17	10:00	191.59	6,613	88.61	Pumping rate in well C-12 40.5 gpm.
7/15/17	11:00	191.70	6,673	88.72	Pumping rate in well C-12 40.5 gpm.
7/15/17	12:00	191.71	6,733	88.73	Pumping rate in well C-12 40.5 gpm.
7/15/17	13:00	192.06	6,793	89.08	Pumping rate in well C-12 40.5 gpm.
7/15/17	14:00	192.17	6,853	89.19	Pumping rate in well C-12 40.5 gpm.
7/15/17	15:00	192.35	6,913	89.37	Pumping rate in well C-12 40.5 gpm.
7/15/17	16:00	192.55	6,973	89.57	Pumping rate in well C-12 40.5 gpm.
7/15/17	17:00	192.61	7,033	89.63	Pumping rate in well C-12 40.5 gpm.
7/15/17	18:00	192.57	7,093	89.59	Pumping rate in well C-12 40.5 gpm.
7/15/17	19:00	192.31	7,153	89.33	Pumping rate in well C-12 40.5 gpm.
7/15/17	19:09	192.29	7,162	89.31	Pumping rate in well C-12 40.5 gpm.
7/15/17	20:00	192.05	7,213	89.07	Pumping rate in well C-12 40.5 gpm.
7/15/17	21:00	191.90	7,273	88.92	Pumping rate in well C-12 40.5 gpm.
7/15/17	22:00	191.69	7,333	88.71	Pumping rate in well C-12 40.5 gpm.
7/15/17	23:00	191.36	7,393	88.38	Pumping rate in well C-12 40.5 gpm.
7/16/17	0:00	191.26	7,453	88.28	Pumping rate in well C-12 40.5 gpm.
7/16/17	1:00	191.22	7,513	88.24	Pumping rate in well C-12 40.5 gpm.
7/16/17	1:09	191.24	7,522	88.26	Shut down of simultaneous pumping test (wells C-6, 12, 14, 16, and 23) started.
7/16/17	1:20	191.33	7,533	88.35	Pumping rate in well C-12 40.5 gpm.
7/16/17	1:21	183.11	-1	80.13	Pump in well C-12 shut down.
7/16/17	1:22	167.24	-2	64.26	
7/16/17	1:23	160.87	-3	57.89	
7/16/17	1:24	157.52	-4	54.54	
7/16/17	1:25	154.82	-5	51.84	
7/16/17	1:26	152.58	-6	49.60	
7/16/17	1:27	150.82	-7	47.84	
7/16/17	1:28	149.28	-8	46.30	
7/16/17	1:29	148.00	-9	45.02	
7/16/17	1:30	146.86	-10	43.88	
7/16/17	1:31	145.89	-11	42.91	
7/16/17	1:32	145.03	-12	42.05	
7/16/17	1:33	144.26	-13	41.28	
7/16/17	1:34	143.52	-14	40.54	
7/16/17	1:35	142.86	-15	39.88	
7/16/17	1:40	140.12	-20	37.14	
7/16/17	1:45	138.18	-25	35.20	
7/16/17	1:50	136.48	-30	33.50	
7/16/17	1:55	135.13	-35	32.15	
7/16/17	2:00	133.92	-40	30.94	
7/16/17	2:05	132.78	-45	29.80	
7/16/17	2:10	131.86	-50	28.88	
7/16/17	2:15	130.93	-55	27.95	
7/16/17	2:20	130.09	-60	27.11	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time\ Recovery (minutes)	Drawdown (feet)	Comments
7/16/17	3:00	125.25	-100	22.27	
7/16/17	4:00	121.01	-160	18.03	
7/16/17	5:00	118.35	-220	15.37	
7/16/17	6:00	116.89	-280	13.91	
7/16/17	7:00	115.49	-340	12.51	
7/16/17	8:00	114.37	-400	11.39	
7/16/17	9:00	113.64	-460	10.66	
7/16/17	10:00	112.99	-520	10.01	
7/16/17	11:00	112.53	-580	9.55	
7/16/17	12:00	112.38	-640	9.40	
7/16/17	13:00	112.38	-700	9.40	
7/16/17	14:00	112.30	-760	9.32	
7/16/17	15:00	110.97	-820	7.99	90% recovery achieved.
7/16/17	16:00	110.80	-880	7.82	
7/16/17	17:00	110.48	-940	7.50	
7/16/17	18:00	110.10	-1,000	7.11	
7/16/17	19:00	109.80	-1,060	6.82	
7/16/17	20:00	109.45	-1,120	6.47	
7/16/17	21:00	109.01	-1,180	6.03	
7/16/17	22:00	109.23	-1,240	6.25	
7/16/17	23:00	109.02	-1,300	6.04	
7/17/17	0:00	108.91	-1,360	5.93	
7/17/17	1:00	108.91	-1,420	5.93	
7/17/17	2:00	108.77	-1,480	5.79	
7/17/17	3:00	108.67	-1,540	5.69	
7/17/17	4:00	108.62	-1,600	5.64	
7/17/17	5:00	108.50	-1,660	5.52	
7/17/17	6:00	108.42	-1,720	5.44	
7/17/17	7:00	108.38	-1,780	5.40	
7/17/17	8:00	108.26	-1,840	5.28	
7/17/17	9:00	108.29	-1,900	5.31	
7/17/17	10:00	108.20	-1,960	5.21	
7/17/17	11:00	108.18	-2,020	5.20	
7/17/17	12:00	108.06	-2,080	5.08	
7/17/17	13:00	107.94	-2,140	4.96	
7/17/17	14:00	107.86	-2,200	4.88	
7/17/17	15:00	107.76	-2,260	4.78	
7/17/17	16:00	107.70	-2,320	4.72	
7/17/17	17:00	107.64	-2,380	4.66	
7/17/17	18:00	107.57	-2,440	4.58	
7/17/17	19:00	107.52	-2,500	4.54	
7/17/17	20:00	107.58	-2,560	4.60	
7/17/17	21:00	107.45	-2,620	4.47	
7/17/17	22:00	107.40	-2,680	4.42	
7/17/17	23:00	107.34	-2,740	4.36	
7/18/17	0:00	107.27	-2,800	4.29	
7/18/17	1:00	107.22	-2,860	4.24	
7/18/17	2:00	107.18	-2,920	4.20	
7/18/17	3:00	107.18	-2,980	4.20	
7/18/17	4:00	107.17	-3,040	4.19	
7/18/17	5:00	107.13	-3,100	4.15	
7/18/17	6:00	107.02	-3,160	4.04	
7/18/17	7:00	107.04	-3,220	4.06	
7/18/17	8:00	107.06	-3,280	4.08	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time\ Recovery (minutes)	Drawdown (feet)	Comments
7/18/17	9:00	107.01	-3,340	4.03	
7/18/17	10:00	106.96	-3,400	3.98	
7/18/17	11:00	106.87	-3,460	3.89	
7/18/17	12:00	106.80	-3,520	3.82	
7/18/17	13:00	106.82	-3,580	3.84	
7/18/17	14:00	106.77	-3,640	3.79	
7/18/17	15:00	106.63	-3,700	3.65	
7/18/17	16:00	106.65	-3,760	3.67	
7/18/17	17:00	106.68	-3,820	3.70	
7/18/17	18:00	106.54	-3,880	3.56	
7/18/17	19:00	106.52	-3,940	3.54	
7/18/17	20:00	106.49	-4,000	3.51	
7/18/17	21:00	106.46	-4,060	3.48	
7/18/17	22:00	106.44	-4,120	3.46	
7/18/17	23:00	106.40	-4,180	3.41	
7/19/17	0:00	106.30	-4,240	3.32	
7/19/17	1:00	106.30	-4,300	3.32	
7/19/17	2:00	106.29	-4,360	3.31	
7/19/17	3:00	106.26	-4,420	3.28	
7/19/17	4:00	106.27	-4,480	3.29	
7/19/17	5:00	106.28	-4,540	3.30	
7/19/17	6:00	106.28	-4,600	3.30	
7/19/17	7:00	106.34	-4,660	3.36	
7/19/17	8:00	106.33	-4,720	3.35	
7/19/17	9:00	106.28	-4,780	3.30	
7/19/17	10:00	106.27	-4,840	3.29	
7/19/17	11:00	106.26	-4,900	3.28	
7/19/17	12:00	106.20	-4,960	3.22	
7/19/17	13:00	106.10	-5,020	3.12	
7/19/17	14:00	106.03	-5,080	3.05	
//19/1/	15:00	106.08	-5,140	3.10	
7/19/17	16:00	105.97	-5,200	2.99	
7/19/17	1/:00	105.93	-5,260	2.95	
7/19/17	18:00	105.90	-3,320	2.97	
7/19/17	19:00	105.87	-5,580	2.89	
7/19/17	20.00	105.87	-5,440	2.09	
7/19/17	21.00	105.81	-5,500	2.83	
7/19/17	22:00	105.82	-5,500	2.04	
7/20/17	23.00	105.80	-5,020	2.79	
7/20/17	1.00	105.80	-5,080	2.02	
7/20/17	2.00	105.74	-5,740	2.70	
7/20/17	2.00	105.67	-5,860	2.79	
7/20/17	4.00	105.07	-5,800	2.00	
7/20/17	5.00	105.75	5 080	2.01	
7/20/17	6.00	105.70	-5,980	2.78	
7/20/17	7.00	105.80	-6,100	2.19	
7/20/17	8.00	105.80	-6 160	2.82	
7/20/17	9.00	105.80	-6,220	2.02	
7/20/17	10.00	105.01	-6,220	2.03	
7/20/17	11.00	105.04	-6,200	2.00	
7/20/17	12.00	105.72	-6 400	2.74	
7/20/17	13.00	105.75	-6 460	2.75	
7/20/17	14.00	105.57	-6 520	2.09	
//20/1/	11.00	105.57	0,520	2.37	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time\ Recovery (minutes)	Drawdown (feet)	Comments
7/20/17	15:00	105.56	-6,580	2.57	
7/20/17	16:00	105.48	-6,640	2.49	
7/20/17	17:00	105.38	-6,700	2.40	
7/20/17	18:00	105.44	-6,760	2.46	
7/20/17	19:00	105.42	-6,820	2.44	
7/20/17	20:00	105.34	-6,880	2.36	
7/20/17	21:00	105.39	-6,940	2.41	
7/20/17	22:00	105.39	-7,000	2.41	
7/20/17	23:00	105.34	-7,060	2.35	
7/21/17	0:00	105.37	-7,120	2.39	
7/21/17	1:00	105.27	-7,180	2.29	
7/21/17	2:00	105.32	-7,240	2.34	
7/21/17	3:00	105.31	-7,300	2.33	
7/21/17	4:00	105.24	-7,360	2.26	
7/21/17	5:00	105.25	-/,420	2.26	
7/21/17	0:00	105.31	-/,480	2.33	
7/21/17	7:00	105.30	-7,540	2.38	
7/21/17	8:00	105.38	-7,600	2.40	
7/21/17	9.00	105.40	-7,000	2.41	
7/21/17	11:00	105.41	-7,720	2.43	
7/21/17	12.00	105.30	-7,7840	2.30	
7/21/17	12:00	105.28	-7,040	2.30	
7/21/17	13.00 14.00	105.19	-7,960	2.2)	
7/21/17	15:00	105.23	-8 020	2.21	
7/21/17	16:00	105.14	-8.080	2.16	
7/21/17	17:00	105.08	-8,140	2.10	
7/21/17	18:00	105.07	-8.200	2.09	
7/21/17	19:00	105.07	-8,260	2.09	
7/21/17	20:00	105.02	-8,320	2.04	
7/21/17	21:00	105.07	-8,380	2.09	
7/21/17	22:00	105.09	-8,440	2.10	
7/21/17	23:00	105.04	-8,500	2.06	
7/22/17	0:00	105.07	-8,560	2.08	
7/22/17	1:00	105.04	-8,620	2.06	
7/22/17	2:00	105.01	-8,680	2.02	
7/22/17	3:00	104.98	-8,740	1.99	
7/22/17	4:00	104.92	-8,800	1.94	
7/22/17	5:00	104.91	-8,860	1.93	
7/22/17	6:00	104.97	-8,920	1.99	
7/22/17	7:00	105.04	-8,980	2.06	
7/22/17	8:00	105.02	-9,040	2.04	
7/22/17	9:00	105.09	-9,100	2.11	
7/22/17	10:00	105.12	-9,160	2.13	
7/22/17	11:00	105.06	-9,220	2.08	
7/22/17	12:00	105.10	-9,280	2.12	
7/22/17	13.00	103.05	-7,340	2.03	
7/22/17	14.00	104.97	-9,400	1.99	
7/22/17	16:00	104.94	-9,520	1.90	
7/22/17	17.00	104.77	-9,520	1.90	
7/22/17	18:00	104.77	-9.640	1.79	
7/22/17	19:00	104.74	-9,700	1.76	
7/22/17	20:00	104.81	-9,760	1.83	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time\ Recovery (minutes)	Drawdown (feet)	Comments
7/22/17	21:00	104.78	-9,820	1.80	
7/22/17	22:00	104.80	-9,880	1.82	
7/22/17	23:00	104.79	-9,940	1.81	
7/23/17	0:00	104.76	-10,000	1.78	
7/23/17	1:00	104.70	-10,060	1.72	
7/23/17	2:00	104.69	-10,120	1.71	
7/23/17	3:00	104.63	-10,180	1.65	
7/23/17	4:00	104.64	-10,240	1.66	
7/23/17	5:00	104.57	-10,300	1.59	
7/23/17	6:00	104.62	-10,360	1.64	
7/23/17	7:00	104.63	-10,420	1.65	
7/23/17	8:00	104.70	-10,480	1.72	
7/23/17	9:00	104.76	-10,540	1.78	
7/23/17	10:00	104.81	-10,600	1.83	
7/23/17	11:00	104.84	-10,660	1.86	
7/23/17	12:00	104.79	-10,720	1.81	
7/23/17	13:00	104.80	-10,780	1.82	
7/23/17	14:00	104.82	-10,840	1.84	
7/23/17	15:00	104.73	-10,900	1.75	
7/23/17	16:00	104.59	-10,960	1.61	
7/23/17	17:00	104.64	-11,020	1.66	
7/23/17	18:00	104.55	-11,080	1.57	
7/23/17	19:00	104.57	-11,140	1.59	
7/23/17	20:00	104.57	-11,200	1.59	
7/23/17	21:00	104.61	-11,260	1.63	
7/23/17	22:00	104.69	-11,320	1.71	
7/23/17	23:00	104.66	-11,380	1.68	
7/24/17	0:00	104.66	-11,440	1.68	
7/24/17	1:00	104.67	-11,500	1.69	
7/24/17	2:00	104.68	-11,560	1.70	
7/24/17	3:00	104.60	-11,620	1.62	
7/24/17	4:00	104.55	-11,680	1.57	
7/24/17	5:00	104.55	-11,740	1.57	
7/24/17	6:00	104.48	-11,800	1.50	
7/24/17	7:00	104.50	-11,860	1.52	
7/24/17	8:00	104.50	-11,920	1.52	
7/24/17	9:00	104.59	-11,980	1.61	
7/24/17	10:00	104.56	-12,040	1.58	
7/24/17	11:00	104.57	-12,100	1.59	
7/24/17	12:00	104.69	-12,160	1.71	
7/24/17	13:00	104.64	-12,220	1.65	
7/24/17	14:00	104.65	-12,280	1.67	
7/24/17	15:00	104.68	-12,340	1.70	
7/24/17	16:00	104.57	-12,400	1.59	
7/24/17	17:00	104.59	-12,460	1.61	
7/24/17	18:00	104.50	-12,520	1.52	
7/24/17	19:00	104.65	-12,580	1.66	
7/24/17	20:00	104.62	-12,640	1.64	
7/24/17	21:00	104.67	-12,700	1.69	
7/24/17	22:00	104.70	-12,760	1.72	
7/24/17	23:00	104.83	-12,820	1.85	
7/25/17	0:00	104.74	-12,880	1.76	
7/25/17	1:00	104.87	-12,940	1.89	
7/25/17	2:00	104.93	-13,000	1.95	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time\ Recovery (minutes)	Drawdown (feet)	Comments
7/25/17	3:00	104.92	-13,060	1.94	
7/25/17	4:00	104.93	-13,120	1.95	
7/25/17	5:00	104.98	-13,180	2.00	
7/25/17	6:00	105.00	-13,240	2.02	
7/25/17	7:00	105.03	-13,300	2.05	
7/25/17	8:00	105.02	-13,360	2.04	
7/25/17	9:00	105.18	-13,420	2.20	
7/25/17	10:00	105.24	-13,480	2.26	
7/25/17	11:00	105.33	-13,540	2.35	
7/25/17	12:00	105.35	-13,600	2.37	Pump in well C-21 started at 11:44.
7/25/17	13:00	105.43	-13,660	2.45	
7/25/17	14:00	105.51	-13,720	2.53	
7/25/17	15:00	105.58	-13,780	2.60	
7/25/17	16:00	105.54	-13,840	2.56	
7/25/17	17:00	105.62	-13,900	2.64	
7/25/17	18:00	105.50	-13,960	2.51	
7/25/17	19:00	105.48	-14,020	2.50	
7/25/17	20:00	105.57	-14,080	2.59	
7/25/17	21:00	105.53	-14,140	2.55	
7/25/17	22:00	105.62	-14,200	2.64	
7/25/17	23:00	105.60	-14,260	2.62	
7/26/17	0:00	105.59	-14,320	2.61	
7/26/17	1:00	105.68	-14,380	2.70	
7/26/17	2:00	105.72	-14,440	2.74	
7/26/17	3:00	105.76	-14,500	2.78	
7/26/17	4:00	105.76	-14,560	2.78	
7/26/17	5:00	105.73	-14,620	2.75	
7/26/17	0:00	105.81	-14,080	2.83	
7/26/17	7:00	105.85	-14,740	2.83	
7/26/17	0.00	105.85	-14,000	2.07	
7/26/17	9.00	105.91	-14,000	2.93	
7/26/17	11.00	105.97	-14,920	3.04	
7/26/17	12.00	106.02	-15,040	3.07	
7/26/17	12.00	106.05	-15,040	3.16	
7/26/17	13.00 14.00	106.09	-15,160	3.11	
7/26/17	15.00	106.10	-15 220	3.12	
7/2.6/17	16:00	106.06	-15,280	3.08	
7/26/17	17:00	106.02	-15,340	3.04	
7/26/17	18:00	106.02	-15,400	3.04	
7/26/17	19:00	105.94	-15.460	2.96	
7/26/17	20:00	105.91	-15.520	2.93	
7/26/17	21:00	105.86	-15.580	2.88	
7/26/17	22:00	105.88	-15.640	2.90	
7/26/17	23:00	105.85	-15,700	2.87	
7/27/17	0:00	105.79	-15,760	2.81	
7/27/17	1:00	105.79	-15,820	2.81	
7/27/17	2:00	105.82	-15,880	2.84	
7/27/17	3:00	105.80	-15,940	2.82	
7/27/17	4:00	105.73	-16,000	2.75	
7/27/17	5:00	105.65	-16,060	2.67	
7/27/17	6:00	105.68	-16,120	2.70	
7/27/17	7:00	105.66	-16,180	2.68	
7/27/17	8:00	105.50	-16,240	2.52	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time\ Recovery (minutes)	Drawdown (feet)	Comments
7/27/17	9:00	105.55	-16,300	2.57	
7/27/17	10:00	105.55	-16,360	2.57	
7/27/17	11:00	105.61	-16,420	2.63	
7/27/17	12:00	105.56	-16,480	2.58	
7/27/17	13:00	105.63	-16,540	2.65	
7/27/17	14:00	105.51	-16,600	2.53	
7/27/17	15:00	105.38	-16,660	2.40	
7/27/17	16:00	105.45	-16,720	2.47	
7/27/17	17:00	105.41	-16,780	2.43	
7/27/17	18:00	105.32	-16,840	2.34	
7/27/17	19:00	105.29	-16,900	2.31	
7/27/17	20:00	105.23	-16,960	2.25	
7/27/17	21:00	105.23	-17,020	2.25	
7/27/17	22:00	105.19	-17,080	2.21	
7/27/17	23:00	105.25	-17,140	2.27	
7/28/17	0:00	105.18	-17,200	2.20	
7/28/17	1:00	105.19	-17,260	2.21	
7/28/17	2:00	105.28	-17,320	2.30	
7/28/17	3:00	105.16	-17,380	2.18	
7/28/17	4:00	105.26	-17,440	2.28	
7/28/17	5:00	105.22	-17,500	2.24	
7/28/17	6:00	105.11	-17,560	2.13	
7/28/17	7:00	105.12	-17,620	2.13	
7/28/17	8:00	105.14	-17,680	2.16	
7/28/17	9:00	105.14	-17,740	2.16	
7/28/17	10:00	105.09	-17,800	2.11	
7/28/17	11:00	105.18	-17,860	2.20	
7/28/17	12:00	105.11	-17,920	2.13	
7/28/17	13:00	105.04	-17,980	2.06	Pump in well C-21 shut down at 12:15.
7/28/17	14:00	105.08	-18,040	2.10	
7/28/17	15:00	105.11	-18,100	2.13	
7/28/17	10:00	105.05	-18,160	2.07	
7/28/17	17:00	103.03	-18,220	2.03	
7/20/17	10.00	104.93	-18,280	1.95	
7/28/17	20.00	104.93	-18,540	1.93	
7/28/17	20.00 21.00	104.91	-18,400	1.93	
7/28/17	21.00 22.00	104.92	-18,400	1.94	
7/28/17	22.00 23.00	104.87	-18,520	1.91	
7/29/17	0.00	104.94	-18 640	1.05	
7/29/17	1.00	104.95	-18 700	1.90	
7/29/17	2:00	104.98	-18,760	1.99	
7/29/17	3:00	104.94	-18.820	1.96	
7/29/17	4:00	104.96	-18,880	1.98	
7/29/17	5:00	104.92	-18,940	1.93	
7/29/17	6:00	104.87	-19,000	1.89	
7/29/17	7:00	104.93	-19,060	1.95	
7/29/17	8:00	104.88	-19,120	1.90	
7/29/17	9:00	104.86	-19,180	1.88	
7/29/17	10:00	104.90	-19,240	1.91	
7/29/17	11:00	104.94	-19,300	1.96	
7/29/17	12:00	104.94	-19,360	1.96	
7/29/17	13:00	104.85	-19,420	1.87	
7/29/17	14:00	104.89	-19,480	1.91	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time\ Recovery (minutes)	Drawdown (feet)	Comments
7/29/17	15:00	104.84	-19,540	1.85	
7/29/17	16:00	104.86	-19,600	1.88	
7/29/17	17:00	104.86	-19,660	1.88	
7/29/17	18:00	104.90	-19,720	1.92	
7/29/17	19:00	104.85	-19,780	1.87	
7/29/17	20:00	104.85	-19,840	1.87	
7/29/17	21:00	104.84	-19,900	1.86	
7/29/17	22:00	104.75	-19,960	1.77	
7/29/17	23:00	104.87	-20,020	1.89	
7/30/17	0:00	104.91	-20,080	1.93	
7/30/17	1:00	104.86	-20,140	1.88	
7/30/17	2:00	104.80	-20,200	1.82	
7/30/17	3:00	104.93	-20,260	1.95	
7/30/17	4:00	104.85	-20,320	1.87	
7/30/17	5:00	104.93	-20,380	1.95	
7/30/17	6:00	104.97	-20,440	1.99	
7/30/17	7:00	104.98	-20,500	1.99	
7/30/17	8:00	104.94	-20,560	1.96	
7/30/17	9:00	104.94	-20,620	1.96	
7/30/17	10:00	104.92	-20,680	1.93	
7/30/17	11:00	104.96	-20,740	1.98	
7/30/17	12:00	104.92	-20,800	1.93	
7/30/17	13:00	104.90	-20,860	1.92	
7/30/17	14:00	104.92	-20,920	1.94	
7/30/17	15:00	104.84	-20,980	1.86	
7/30/17	16:00	104.84	-21,040	1.86	
7/30/17	17:00	104.97	-21,100	1.99	
7/30/17	18:00	104.90	-21,160	1.92	
7/30/17	19:00	104.82	-21,220	1.84	
7/30/17	20:00	104.91	-21,280	1.93	
7/30/17	21:00	104.91	-21,340	1.93	
7/30/17	22:00	104.89	-21,400	1.91	
7/30/17	23:00	104.93	-21,460	1.95	
7/21/17	0:00	104.90	-21,520	1.92	
7/21/17	1:00	104.89	-21,580	1.91	
7/21/17	2:00	104.83	-21,040	1.8/	
7/21/17	3:00	104.94	-21,700	1.90	
7/21/17	4:00	104.90	-21,700	1.98	
7/31/17	5.00	104.90	-21,020	1.70	
7/21/17	7.00	104.90	-21,000	1.98	
7/21/17	7.00	104.95	-21,940	1.97	
7/21/17	0.00	104.90	-22,000	1.92	
7/31/17	9.00	104.89	-22,000	1.91	
7/31/17	11.00	104.90	_22,120	1.72	
7/21/17	12.00	104.90	-22,180	2.00	
7/31/17	12.00	104.20	-22,240	1.88	
7/31/17	14.00	104.85	-22,300	1.00	
7/31/17	15.00	104.05	-22,500	1.00	
7/31/17	16.00	104.91	-22,720	1.93	
7/31/17	17.00	104.89	-22,400	1.05	
7/31/17	18.00	104.85	-22,540	1.91	
7/31/17	19.00	104.81	-22,660	1.87	
7/31/17	20:00	104.79	-22,720	1.81	
1101111	20.00	101.17	,120	1.01	1

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Date	Time	Depth to Water (ft btoc)	Elapsed Time\ Recovery (minutes)	Drawdown (feet)	Comments
7/31/17	21:00	104.73	-22,780	1.75	
7/31/17	22:00	104.77	-22,840	1.79	
7/31/17	23:00	104.73	-22,900	1.74	
8/1/17	0:00	104.78	-22,960	1.80	
8/1/17	1:00	104.72	-23,020	1.74	
8/1/17	2:00	104.81	-23,080	1.83	
8/1/17	3:00	104.79	-23,140	1.81	
8/1/17	4:00	104.81	-23,200	1.83	
8/1/17	5:00	104.80	-23,260	1.82	
8/1/17	6:00	104.88	-23,320	1.90	
8/1/17	7:00	104.84	-23,380	1.86	
8/1/17	8:00	104.86	-23,440	1.88	
8/1/17	9:00	104.87	-23,500	1.89	
8/1/17	10:00	104.92	-23,560	1.94	
8/1/17	11:00	104.86	-23,620	1.88	
8/1/17	12:00	104.80	-23,680	1.82	
8/1/17	13:00	104.78	-23,740	1.80	
8/1/17	14:00	104.78	-23,800	1.80	
8/1/17	15:00	104.72	-23,860	1.74	
8/1/17	16:00	104.80	-23,920	1.82	
8/1/17	17:00	104.75	-23,980	1.77	
8/1/17	18:00	104.77	-24,040	1.79	
8/1/17	19:00	104.76	-24,100	1.78	
8/1/17	20:00	104.67	-24,160	1.69	
8/1/17	21:00	104.70	-24,220	1.72	
8/1/1/	22:00	104.68	-24,280	1.70	
8/1/1/	25:00	104.71	-24,340	1.73	
8/2/17	0:00	104.68	-24,400	1.70	
8/2/17	2.00	104.08	-24,400	1.70	
8/2/17	2.00	104.80	-24,520	1.82	
8/2/17	4.00	104.75	-24,580	1.73	
8/2/17	5.00	104.73	-24,040	1.77	
8/2/17	6.00	104.75	-24 760	1.77	
8/2/17	7.00	104.71	-24 820	1.73	
8/2/17	8:00	104.77	-24,880	1.79	
8/2/17	9:00	104.87	-24,940	1.89	
8/2/17	10:00	104.73	-25.000	1.75	
8/2/17	11:00	104.75	-25,060	1.77	
8/2/17	12:00	104.79	-25,120	1.81	
8/2/17	13:00	104.65	-25,180	1.67	
8/2/17	14:00	104.60	-25,240	1.62	
8/2/17	15:00	104.63	-25,300	1.65	
8/2/17	16:00	104.70	-25,360	1.72	
8/2/17	17:00	104.69	-25,420	1.71	
8/2/17	18:00	104.69	-25,480	1.71	
8/2/17	19:00	104.72	-25,540	1.74	
8/2/17	20:00	104.69	-25,600	1.71	
8/2/17	21:00	104.65	-25,660	1.67	
8/2/17	22:00	104.70	-25,720	1.71	
8/2/17	23:00	104.68	-25,780	1.70	
8/3/17	0:00	104.64	-25,840	1.66	
8/3/17	1:00	104.73	-25,900	1.75	
8/3/17	2:00	104.64	-25,960	1.66	

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Summary of Water-Level Measurements from Pressure Transducer Installed in Well C-12 Collected During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Depth to Water (ft btoc)	Elapsed Time\ Recovery (minutes)	Drawdown (feet)	Comments
8/3/17	3:00	104.70	-26,020	1.72	
8/3/17	4:00	104.65	-26,080	1.67	
8/3/17	5:00	104.65	-26,140	1.67	
8/3/17	6:00	104.71	-26,200	1.73	
8/3/17	7:00	104.72	-26,260	1.74	
8/3/17	8:00	104.74	-26,320	1.76	
8/3/17	9:00	104.85	-26,380	1.87	
8/3/17	10:00	104.80	-26,440	1.82	
8/3/17	11:00	104.72	-26,500	1.74	
8/3/17	12:00	104.73	-26,560	1.75	
8/3/17	13:00	104.64	-26,620	1.66	
8/3/17	14:00	104.61	-26,680	1.63	
8/3/17	15:00	104.56	-26,740	1.58	
8/3/17	16:00	104.55	-26,800	1.57	
8/3/17	17:00	104.56	-26,860	1.57	
8/3/17	18:00	104.55	-26,920	1.57	
8/3/17	19:00	104.63	-26,980	1.65	
8/3/17	20:00	104.64	-27,040	1.66	
8/3/17	21:00	104.63	-27,100	1.65	
8/3/17	22:00	104.72	-27,160	1.74	
8/3/17	23:00	104.70	-27,220	1.72	

ft btoc feet below top of casing

gpm gallons per minute

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C-14



LBG Hydrogeologic & Engineering Services, P.C.



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LBG Hydrogeologic & Engineering Services, P.C.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/10/17	10:00	0.33			Pressure transducer installed in well.
7/10/17	11:00	0.30			
7/10/17	11:54	0.25			Static water level used from prior to the start of pumping in any onsite wells.
7/10/17	12:00	0.29			Pump in well C-21 started at 11:55.
7/10/17	13:00	0.30			Pump in well C-23 started at 12:59.
7/10/17	14:00	0.30			
7/10/17	15:00	0.26			
7/10/17	16:00	0.36			
7/10/17	16:23	0.36			
7/10/17	16:24	3.27	1	3.02	Pump in well C-14 started.
7/10/17	16:25	8.36	2	8.11	
7/10/17	16:26	5.46	3	5.21	
7/10/17	16:27	3.18	4	2.93	
7/10/17	16:28	2.32	5	2.07	Pump was running slow, corrected rotation.
7/10/17	16:29	22.08	6	21.83	Pumping rate in well C-14 152 gpm.
7/10/17	16:30	37.10	7	36.85	
7/10/17	16:31	41.52	8	41.27	
7/10/17	16:32	41.01	9	40.76	
7/10/17	16:33	39.54	10	39.29	
7/10/17	16:34	36.47	11	36.22	
7/10/17	16:35	33.94	12	33.69	Pumping rate in well C-14 152 gpm.
7/10/17	16:36	31.95	13	31.70	
7/10/17	16:37	31.44	14	31.19	
7/10/17	16:38	31.00	15	30.75	
7/10/17	16:39	31.39	16	31.14	D
7/10/17	16:40	35.23	17	34.98	Pumping rate in well C-14 152 gpm.
//10/17	16:45	35.27	22	35.02	
7/10/17	16:50	36.20	27	35.95	D
7/10/17	10:55	37.29	32	37.04	Pumping rate in well C-14 152 gpm.
7/10/17	17:00	42.26	37	42.01	Pumping rate in well C-14 manually increased.
7/10/17	17:03	45.07	42	45.42	
7/10/17	17.10	40.23	47 52	40.00	
7/10/17	17:13	46.20	57	48.01	
7/10/17	17.20	49.22 50.26	67	40.97 50.01	Pumping rote in well C 14 168 gpm
7/10/17	17.23	56.47	02	56.22	Pump in well C 16 started at 17:31
7/10/17	10.00	63 30	157	63.14	Pump in well C 6 started at 18:35
7/10/17	20.00	69.89	217	69.64	Pump in well C-12 started at 19:48
7/10/17	20.00 21.00	74 57	277	74 32	Pump in well C-7B started at 21:03
7/10/17	21.00 22.00	78.37	337	78.12	Pumping rate in well C-14 168 gpm
7/10/17	23:00	82.21	397	81.96	Pumping rate in well C-14 163 gpm.
7/11/17	0:00	84.45	457	84.20	Pumping rate in well C-14 163 gpm.
7/11/17	1:00	87.16	517	86.91	Pumping rate in well C-14 160 gpm.
7/11/17	2:00	89.11	577	88.86	Pumping rate in well C-14 160 gpm.
7/11/17	3:00	90.89	637	90.64	Pumping rate in well C-14 160 gpm.
7/11/17	4:00	92.77	697	92.52	Pumping rate in well C-14 160 gpm.
7/11/17	5:00	93.41	757	93.16	Pumping rate in well C-14 160 gpm.
7/11/17	6:00	94.84	817	94.59	Pumping rate in well C-14 160 gpm.
7/11/17	7:00	96.05	877	95.80	Pumping rate in well C-14 160 gpm.
7/11/17	8:00	97.08	937	96.83	Pumping rate in well C-14 160 gpm.
7/11/17	9:00	97.91	997	97.66	Pumping rate in well C-14 160 gpm.
7/11/17	10:00	98.95	1,057	98.70	Pumping rate in well C-14 160 gpm.
7/11/17	11:00	99.80	1,117	99.55	Pumping rate in well C-14 160 gpm.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/11/17	12:00	100.73	1,177	100.48	Pumping rate in well C-14 160 gpm.
7/11/17	13:00	101.39	1,237	101.14	Pumping rate in well C-14 159 gpm.
7/11/17	14:00	101.29	1,297	101.04	Pumping rate in well C-14 158 gpm.
7/11/17	15:00	102.30	1,357	102.05	Pumping rate in well C-14 158 gpm.
7/11/17	16:00	102.75	1,417	102.50	Pumping rate in well C-14 158 gpm.
7/11/17	17:00	102.53	1,477	102.28	Pumping rate in well C-14 157 gpm.
7/11/17	18:00	103.28	1,537	103.03	Pumping rate in well C-14 157 gpm.
7/11/17	19:00	103.70	1,597	103.45	Pumping rate in well C-14 157 gpm.
7/11/17	20:00	104.32	1,657	104.07	Pumping rate in well C-14 157 gpm.
7/11/17	21:00	104.61	1,717	104.36	Pumping rate in well C-14 157 gpm.
7/11/17	22:00	105.06	1,777	104.81	Pumping rate in well C-14 157 gpm.
7/11/17	23:00	105.33	1,837	105.08	Pumping rate in well C-14 157 gpm.
7/12/17	0:00	105.77	1,897	105.52	Pumping rate in well C-14 157 gpm.
7/12/17	1:00	105.97	1,957	105.72	Pumping rate in well C-14 157 gpm.
7/12/17	2:00	106.19	2,017	105.94	Pumping rate in well C-14 157 gpm.
7/12/17	3:00	106.66	2,077	106.41	Pumping rate in well C-14 157 gpm.
7/12/17	4:00	107.18	2,137	106.93	Pumping rate in well C-14 157 gpm.
7/12/17	5:00	107.73	2,197	107.48	Pumping rate in well C-14 157 gpm.
7/12/17	6:00	107.45	2,257	107.20	Pumping rate in well C-14 157 gpm.
7/12/17	7:00	107.89	2,317	107.64	Pumping rate in well C-14 157 gpm.
7/12/17	8:00	108.14	2,377	107.89	Pumping rate in well C-14 157 gpm.
7/12/17	9:00	109.08	2,437	108.83	Pumping rate in well C-14 157 gpm.
7/12/17	10:00	109.60	2,497	109.35	Pumping rate in well C-14 157 gpm.
7/12/17	11:00	109.89	2,557	109.64	Pumping rate in well C-14 157 gpm.
7/12/17	12:00	110.43	2,617	110.18	Pump in well C-7B shut down at 11:28 and pump in well C-21 shut down at 11:56.
7/12/17	13:00	110.43	2,677	110.18	Pumping rate in well C-14 157 gpm.
7/12/17	14:00	111.01	2,737	110.76	Pumping rate in well C-14 157 gpm.
7/12/17	15:00	110.98	2,797	110.73	Pumping rate in well C-14 157 gpm.
7/12/17	16:00	111.72	2,857	111.47	Pumping rate in well C-14 157 gpm.
7/12/17	17:00	111.86	2,917	111.61	Pumping rate in well C-14 157 gpm.
7/12/17	18:00	112.20	2,977	111.95	Pumping rate in well C-14 157 gpm.
7/12/17	19:00	112.31	3,037	112.06	Pumping rate in well C-14 157 gpm.
7/12/17	20:00	112.27	3,097	112.02	Pumping rate in well C-14 157 gpm.
7/12/17	21:00	112.43	3,157	112.18	Pumping rate in well C-14 157 gpm.
7/12/17	22:00	112.72	3,217	112.47	Pumping rate in well C-14 157 gpm.
7/12/17	23:00	112.41	3,277	112.16	Pumping rate in well C-14 157 gpm.
7/13/17	0:00	112.70	3,337	112.45	Pumping rate in well C-14 157 gpm.
7/13/17	1:00	112.60	3,397	112.35	Pumping rate in well C-14 157 gpm.
7/13/17	2:00	112.72	3,457	112.47	Pumping rate in well C-14 157 gpm.
7/13/17	3:00	113.01	3,517	112.76	Pumping rate in well C-14 157 gpm.
7/13/17	3:58	113.22	3,575	112.97	Generator shut down.
7/13/17	4:00	103.07	3,577	102.82	
7/13/17	5:00	/4.12	5,037	/5.8/	Comparetary system 1
7/13/17	5:24	88.51	3,001	88.06	Generator restarted.
7/13/17	6:00	102.93	5,097	102.68	Pumping rate in well C-14 157 gpm.
7/13/17	/:00	100.13	3,/3/	105.88	Pumping rate in well C-14 15/ gpm.
7/13/17	0:00	107.95	3,81/	10/./0	Pumping rate in well C-14 157 gpm.
7/12/17	9:00	109.42	3,8//	109.17	Pumping rate in well C-14 15/ gpm.
7/13/17	10:00	110.31	3,937	111.00	Pumping rate in well C-14 157 gpm.
7/12/17	12.00	111.31	3,991	111.20	Pumping rate in well C-14 15/ gpm.
7/12/17	12:00	112.07	4,057	111.82	Pumping rate in well C-14 157 gpm.
7/12/17	13:00	112./9	4,117	112.34	Pumping rate in well C 14 157 gpm.
//13/1/	14:00	115.54	4,1//	115.09	Pumping rate in well C-14 15/ gpm.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/13/17	15:00	113.85	4,237	113.60	Pumping rate in well C-14 157 gpm.
7/13/17	16:00	114.00	4,297	113.75	Pumping rate in well C-14 157 gpm.
7/13/17	17:00	114.29	4,357	114.04	Pumping rate in well C-14 157 gpm.
7/13/17	18:00	114.76	4,417	114.51	Pumping rate in well C-14 157 gpm.
7/13/17	19:00	114.87	4,477	114.62	Pumping rate in well C-14 157 gpm.
7/13/17	20:00	115.17	4,537	114.92	Pumping rate in well C-14 157 gpm.
7/13/17	20:02	114.51	4,539	114.26	Generator shut down.
7/13/17	21:00	76.71	4,597	76.46	
7/13/17	21:10	89.56	4,607	89.31	Generator restarted.
7/13/17	22:00	106.71	4,657	106.46	Pumping rate in well C-14 157 gpm.
7/13/17	23:00	109.10	4,717	108.85	Pumping rate in well C-14 157 gpm.
7/14/17	0:00	111.33	4,777	111.08	Pumping rate in well C-14 157 gpm.
7/14/17	1:00	111.81	4,837	111.56	Pumping rate in well C-14 157 gpm.
7/14/17	2:00	113.37	4,897	113.12	Pumping rate in well C-14 157 gpm.
7/14/17	3:00	113.38	4,957	113.13	Pumping rate in well C-14 157 gpm.
7/14/17	4:00	114.02	5,017	113.77	Pumping rate in well C-14 157 gpm.
7/14/17	5:00	114.66	5,077	114.41	Pumping rate in well C-14 157 gpm.
7/14/17	6:00	114.97	5,137	114.72	Pumping rate in well C-14 157 gpm.
7/14/17	7:00	115.07	5,197	114.82	Pumping rate in well C-14 157 gpm.
7/14/17	8:00	115.70	5,257	115.45	Pumping rate in well C-14 157 gpm.
7/14/17	9:00	115.63	5,317	115.38	Pumping rate in well C-14 157 gpm.
7/14/17	10:00	116.50	5,377	116.25	Pumping rate in well C-14 157 gpm.
7/14/17	11:00	116.29	5,437	116.04	Pumping rate in well C-14 157 gpm.
7/14/17	12:00	116.45	5,497	116.20	Pumping rate in well C-14 157 gpm.
7/14/17	13:00	116.73	5,557	116.48	Pumping rate in well C-14 157 gpm.
7/14/17	14:00	117.05	5,617	116.80	Pumping rate in well C-14 157 gpm.
7/14/17	15:00	117.48	5,677	117.23	Pumping rate in well C-14 157 gpm.
7/14/17	16:00	117.24	5,737	116.99	Pumping rate in well C-14 157 gpm.
//14/1/	1/:00	117.84	5,/97	117.59	Pumping rate in well C-14 157 gpm.
//14/1/	18:00	112.11	5,857	117.52	Pumping rate in well C-14 157 gpm.
//14/1/	19:00	118.01	5,917	117.76	Pumping rate in well C-14 157 gpm.
7/14/17	20:00	117.80	5,977	117.53	Pumping rate in well C-14 157 gpm.
7/14/17	21:00	11/./8	6,037	117.55	Pumping rate in well C-14 157 gpm.
7/14/17	22.00	118.00	6,157	117.75	Pumping rate in well C 14 157 gpm.
7/14/17	23.00	118.00	6 217	117.75	Pumping rate in well C 14 157 gpm.
7/15/17	0.00	108.07	6 250	107.82	Generator shut down
7/15/17	0.53	94.34	6 270	94.09	Generator restarted
7/15/17	1.00	106.22	6 277	105.97	Pumping rate in well C-14 157 gpm
7/15/17	2:00	115.63	6,337	115 38	Pumping rate in well C-14 157 gpm.
7/15/17	3:00	116.30	6.397	116.05	Pumping rate in well C-14 157 gpm.
7/15/17	4:00	117.08	6.457	116.83	Pumping rate in well C-14 157 gpm.
7/15/17	5:00	117.91	6.517	117.66	Pumping rate in well C-14 157 gpm.
7/15/17	6:00	118.10	6.577	117.85	Pumping rate in well C-14 157 gpm.
7/15/17	7:00	118.19	6,637	117.94	Pumping rate in well C-14 157 gpm.
7/15/17	8:00	118.54	6,697	118.29	Pumping rate in well C-14 157 gpm.
7/15/17	9:00	118.82	6,757	118.57	Pumping rate in well C-14 157 gpm.
7/15/17	10:00	118.91	6,817	118.66	Pumping rate in well C-14 157 gpm.
7/15/17	11:00	119.34	6,877	119.09	Pumping rate in well C-14 157 gpm.
7/15/17	12:00	119.69	6,937	119.44	Pumping rate in well C-14 157 gpm.
7/15/17	13:00	119.80	6,997	119.55	Pumping rate in well C-14 157 gpm.
7/15/17	14:00	120.20	7,057	119.95	Pumping rate in well C-14 157 gpm.
7/15/17	15:00	119.96	7,117	119.71	Pumping rate in well C-14 157 gpm.
7/15/17	16:00	120.71	7,177	120.46	Pumping rate in well C-14 157 gpm.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/15/17	17:00	120.43	7,237	120.18	Pumping rate in well C-14 157 gpm.
7/15/17	18:00	120.68	7,297	120.43	Pumping rate in well C-14 157 gpm.
7/15/17	19:00	121.01	7,357	120.76	Pumping rate in well C-14 157 gpm.
7/15/17	19:08	121.06	7,365	120.81	Pumping rate in well C-14 157 gpm.
7/15/17	20:00	121.27	7,417	121.02	Pumping rate in well C-14 157 gpm.
7/15/17	21:00	120.95	7,477	120.70	Pumping rate in well C-14 157 gpm.
7/15/17	22:00	121.29	7,537	121.04	Pumping rate in well C-14 157 gpm.
7/15/17	23:00	121.45	7,597	121.20	Pumping rate in well C-14 157 gpm.
7/16/17	0:00	121.51	7,657	121.26	Pumping rate in well C-14 157 gpm.
7/16/17	1:00	121.50	7,717	121.25	Pumping rate in well C-14 157 gpm.
7/16/17	1:08	121.67	7,725	121.42	Pumping rate in well C-14 157 gpm.
7/16/17	1:09	110.24	-1	109.99	Pump in well C-14 shut down. Shut down of simultaneous pumping test (wells C-6, 12, 14, 16, and 23).
7/16/17	1:10	107.57	-2	107.32	
7/16/17	1:11	106.06	-3	105.81	
7/16/17	1:12	104.70	-4	104.45	
7/16/17	1:13	103.52	-5	103.27	
7/16/17	1:14	102.45	-6	102.20	
7/16/17	1:15	101.23	-7	100.98	
7/16/17	1:16	100.19	-8	99.94	
7/16/17	1:17	99.13	-9	98.88	
7/16/17	1:18	98.28	-10	98.03	
7/16/17	1:19	97.42	-11	97.17	
7/16/17	1:20	96.66	-12	96.41	
7/16/17	1:21	95.99	-13	95.74	
7/16/17	1:22	95.44	-14	95.19	
7/16/17	1:23	94.76	-15	94.51	
7/16/17	1:24	94.11	-16	93.86	
7/16/17	1:25	93.62	-17	93.37	
7/16/17	1:30	91.53	-22	91.28	
7/16/17	1:35	89.79	-27	89.54	
7/16/17	1:40	88.25	-32	88.00	
7/16/17	1:45	87.05	-37	86.80	
//16/17	1:50	86.08	-42	85.83	
//16/17	1:55	85.27	-4'/	85.02	
//16/17	2:00	84.44	-52	84.19	
7/16/17	2:05	83.70	-57	83.45	
7/16/17	2:10	83.03	-62	82.78	
7/16/17	3:00	78.37	-112	78.12	
//16/1/	4:00	74.02	-1/2	/3.//	
7/16/17	5:00	70.51	-232	70.26	
//10/1/	6:00	67.54	-292	67.29	
//16/1/	/:00	65.12	-352	64.8/	
//10/1/	8:00	02.75	-412	02.30	
7/10/17	9:00	59.79	-4/2	60.43 59.52	
7/16/17	10:00	30./8 56.96	-332	30.33	
7/16/17	12.00	55 00	-392	54.02	
7/16/17	12:00	53.08	-032	52.00	
7/16/17	13:00	51.00	-/12	51.65	
7/16/17	14:00	50.41	-//2	50.16	
7/16/17	16:00	18 02	-032	19 67	
7/16/17	17.00	40.92	-092	40.07	
7/16/17	18.00	46.00	-932	15.22	
//10/1/	10.00	40.09	-1,012	40.04	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/16/17	19:00	44.73	-1,072	44.48	
7/16/17	20:00	43.48	-1,132	43.23	
7/16/17	21:00	42.21	-1,192	41.96	
7/16/17	22:00	40.95	-1,252	40.70	
7/16/17	23:00	39.74	-1,312	39.49	
7/17/17	0:00	38.51	-1,372	38.26	
7/17/17	1:00	37.40	-1,432	37.15	
7/17/17	2:00	36.29	-1,492	36.04	
7/17/17	3:00	35.22	-1,552	34.97	
7/17/17	4:00	34.19	-1,612	33.94	
7/17/17	5:00	33.22	-1,672	32.97	
7/17/17	6:00	32.24	-1,732	31.99	
7/17/17	7:00	31.26	-1,792	31.01	
7/17/17	8:00	30.33	-1,852	30.08	
7/17/17	9:00	29.45	-1,912	29.20	
7/17/17	10:00	28.63	-1,972	28.38	
7/17/17	11:00	27.82	-2,032	27.57	
7/17/17	12:00	26.99	-2,092	26.74	
7/17/17	13:00	26.18	-2,152	25.93	
7/17/17	14:00	25.48	-2,212	25.23	
7/17/17	15:00	24.76	-2,272	24.51	
7/17/17	16:00	24.05	-2,332	23.80	
7/17/17	17:00	23.38	-2,392	23.13	
7/17/17	18:00	22.67	-2,452	22.42	
7/17/17	19:00	22.05	-2,512	21.80	
7/17/17	20:00	21.38	-2,572	21.13	
7/17/17	21:00	20.72	-2,632	20.47	
7/17/17	22:00	20.12	-2,692	19.87	
7/17/17	23:00	19.52	-2,752	19.27	
7/18/17	0:00	19.01	-2,812	18.76	
//18/1/	1:00	18.48	-2,872	18.23	
//18/1/	2:00	17.95	-2,932	17.70	
//18/1/	3:00	1/.46	-2,992	1/.21	
7/18/17	4:00	16.90	-3,032	16.71	
//18/1/	5:00	16.47	-3,112	16.22	
7/18/17	0:00	15.98	-3,172	15.73	
7/10/17	2.00	15.00	-3,232	13.30	
7/10/17	0.00	13.09	-3,292	14.04	
7/10/17	9.00	14.00	-3,332	14.41	
7/18/17	11:00	14.20	-3,412	14.01	
7/18/17	12.00	13.00	-3, 532	13.01	
7/18/17	12.00	13.50	_3 502	12 70	
7/18/17	14.00	12.04	-3,652	12.79	
7/18/17	15.00	12.75	-3 712	12.40	90% recovery achieved
7/18/17	16:00	12.04	-3.772	11.79	y or of the other y demoted.
7/18/17	17:00	11.66	-3,832	11.41	
7/18/17	18:00	11.34	-3,892	11.09	
7/18/17	19:00	11.06	-3,952	10.81	
7/18/17	20:00	10.74	-4,012	10.49	
7/18/17	21:00	10.48	-4,072	10.23	
7/18/17	22:00	10.15	-4,132	9.90	
7/18/17	23:00	9.87	-4,192	9.62	
7/19/17	0:00	9.60	-4,252	9.35	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/19/17	1:00	9.42	-4,312	9.17	
7/19/17	2:00	9.10	-4,372	8.85	
7/19/17	3:00	8.84	-4,432	8.59	
7/19/17	4:00	8.64	-4,492	8.39	
7/19/17	5:00	8.42	-4,552	8.17	
7/19/17	6:00	8.20	-4,612	7.95	
7/19/17	7:00	8.01	-4,672	7.76	
7/19/17	8:00	7.71	-4,732	7.46	
7/19/17	9:00	7.58	-4,792	7.33	
7/19/17	10:00	7.38	-4,852	7.13	
7/19/17	11:00	7.22	-4,912	6.97	
7/19/17	12:00	6.99	-4,972	6.74	
7/19/17	13:00	6.80	-5,032	6.55	
7/19/17	14:00	6.72	-5,092	6.47	
7/19/17	15:00	6.54	-5,152	6.29	
7/19/17	16:00	6.35	-5,212	6.10	
7/19/17	17:00	6.22	-5,272	5.97	
7/19/17	18:00	6.04	-5,332	5.79	
7/19/17	19:00	5.84	-5,392	5.59	
7/19/17	20:00	5.75	-5,452	5.50	
7/19/17	21:00	5.52	-5,512	5.27	
//19/1/	22:00	5.43	-5,572	5.18	
7/19/17	23:00	5.24	-5,632	4.99	
//20/17	0:00	5.10	-5,692	4.85	
7/20/17	1:00	4.94	-5,/52	4.69	
7/20/17	2:00	4.81	-5,812	4.56	
7/20/17	3:00	4.68	-5,872	4.43	
7/20/17	4:00	4.30	-3,932	4.31	
7/20/17	5:00	4.44	-3,992	4.19	
7/20/17	7:00	4.30	-0,032	4.11	
7/20/17	8.00	4.20	-0,112	3.00	
7/20/17	0.00	4.13	-0,172	3.90	
7/20/17	10.00	3.99	-6,292	3.74	
7/20/17	11.00	3.84	-6 352	3 59	
7/20/17	12.00	3.72	-6 412	3.47	
7/20/17	13:00	3.63	-6.472	3.38	
7/20/17	14:00	3.56	-6.532	3.31	
7/20/17	15:00	3.41	-6,592	3.16	
7/20/17	16:00	3.31	-6.652	3.06	
7/20/17	17:00	3.21	-6,712	2.96	
7/20/17	18:00	3.14	-6,772	2.89	
7/20/17	19:00	3.00	-6,832	2.75	
7/20/17	20:00	2.95	-6,892	2.70	
7/20/17	21:00	2.84	-6,952	2.59	
7/20/17	22:00	2.73	-7,012	2.48	
7/20/17	23:00	2.63	-7,072	2.38	
7/21/17	0:00	2.52	-7,132	2.27	
7/21/17	1:00	2.49	-7,192	2.24	
7/21/17	2:00	2.35	-7,252	2.10	
7/21/17	3:00	2.26	-7,312	2.01	
7/21/17	4:00	2.18	-7,372	1.93	
7/21/17	5:00	2.19	-7,432	1.94	
7/21/17	6:00	2.13	-7,492	1.88	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/21/17	7:00	2.01	-7,552	1.76	
7/21/17	8:00	1.98	-7,612	1.73	
7/21/17	9:00	1.91	-7,672	1.66	
7/21/17	10:00	1.88	-7,732	1.63	
7/21/17	11:00	1.83	-7,792	1.58	
7/21/17	12:00	1.75	-7,852	1.50	
7/21/17	13:00	1.70	-7,912	1.45	
7/21/17	14:00	1.66	-7,972	1.41	
7/21/17	15:00	1.54	-8,032	1.29	
7/21/17	16:00	1.41	-8,092	1.16	
7/21/17	17:00	1.38	-8,152	1.13	
7/21/17	18:00	1.35	-8,212	1.10	
7/21/17	19:00	1.28	-8,272	1.03	
7/21/17	20:00	1.26	-8,332	1.01	
7/21/17	21:00	1.20	-8,392	0.95	
7/21/17	22:00	1.17	-8,452	0.92	
7/21/17	23:00	1.11	-8,512	0.86	
7/22/17	0:00	1.09	-8,572	0.84	
7/22/17	1:00	1.09	-8,632	0.84	
7/22/17	2:00	1.05	-8,692	0.80	
7/22/17	3:00	1.05	-8,752	0.80	
7/22/17	4:00	1.08	-8,812	0.83	
7/22/17	5:00	1.08	-8,872	0.83	
7/22/17	6:00	1.05	-8,932	0.80	
7/22/17	7:00	1.02	-8,992	0.77	
7/22/17	8:00	1.02	-9,052	0.77	
7/22/17	9:00	1.04	-9,112	0.79	
7/22/17	10:00	1.05	-9,172	0.80	
7/22/17	11:00	1.04	-9,232	0.79	
7/22/17	12:00	1.05	-9,292	0.80	
7/22/17	13:00	1.05	-9,352	0.80	
7/22/17	14:00	1.04	-9,412	0.79	
7/22/17	15:00	1.11	-9,472	0.86	
7/22/17	16:00	1.12	-9,532	0.87	
7/22/17	17:00	1.13	-9,592	0.88	
7/22/17	18:00	1.14	-9,652	0.89	
7/22/17	19:00	1.11	-9,712	0.86	
7/22/17	20:00	1.15	-9,772	0.90	
7/22/17	21:00	1.14	-9,832	0.89	
7/22/17	22:00	1.14	-9,892	0.89	
7/22/17	23:00	1.10	-9,952	0.85	
7/23/17	0:00	1.16	-10,012	0.91	
7/23/17	1:00	1.16	-10,072	0.91	
7/23/17	2:00	1.17	-10,132	0.92	
7/23/17	3:00	1.16	-10,192	0.91	
7/23/17	4:00	1.16	-10,252	0.91	
7/23/17	5:00	1.13	-10,312	0.88	
7/23/17	6:00	1.16	-10,372	0.91	
7/23/17	7:00	1.12	-10,432	0.87	
7/23/17	8:00	1.11	-10,492	0.86	
7/23/17	9:00	1.11	-10,552	0.86	
7/23/17	10:00	1.14	-10,612	0.89	
7/23/17	11:00	1.10	-10,672	0.85	
7/23/17	12:00	1.10	-10,732	0.85	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/23/17	13:00	1.08	-10,792	0.83	
7/23/17	14:00	1.05	-10,852	0.80	
7/23/17	15:00	1.08	-10,912	0.83	
7/23/17	16:00	1.06	-10,972	0.81	
7/23/17	17:00	1.10	-11,032	0.85	
7/23/17	18:00	1.07	-11,092	0.82	
7/23/17	19:00	1.01	-11,152	0.76	
7/23/17	20:00	1.05	-11,212	0.80	
7/23/17	21:00	1.08	-11,272	0.83	
7/23/17	22:00	1.03	-11,332	0.78	
7/23/17	23:00	1.04	-11,392	0.79	
7/24/17	0:00	1.02	-11,452	0.77	
7/24/17	1:00	1.02	-11,512	0.77	
7/24/17	2:00	1.05	-11,572	0.80	
7/24/17	3:00	1.03	-11,632	0.78	
7/24/17	4:00	1.08	-11,692	0.83	
7/24/17	5:00	1.08	-11,/52	0.83	
7/24/17	6:00	1.05	-11,812	0.80	
7/24/17	2.00	1.00	-11,072	0.81	
7/24/17	0.00	1.10	-11,932	0.83	
7/24/17	10.00	1.09	-12,052	0.82	
7/24/17	11.00	1.07	-12,032	0.81	
7/24/17	12.00	1.00	-12,112	0.76	
7/24/17	13.00	1.01	-12 232	0.80	
7/24/17	14:00	0.98	-12,292	0.73	
7/24/17	15:00	1.02	-12,352	0.77	
7/24/17	16:00	0.97	-12,412	0.72	
7/24/17	17:00	0.98	-12,472	0.73	
7/24/17	18:00	0.97	-12,532	0.72	
7/24/17	19:00	0.92	-12,592	0.67	
7/24/17	20:00	0.95	-12,652	0.70	
7/24/17	21:00	0.94	-12,712	0.69	
7/24/17	22:00	0.94	-12,772	0.69	
7/24/17	23:00	0.90	-12,832	0.65	
7/25/17	0:00	0.84	-12,892	0.59	
7/25/17	1:00	0.88	-12,952	0.63	
7/25/17	2:00	0.85	-13,012	0.60	
7/25/17	3:00	0.87	-13,072	0.62	
7/25/17	4:00	0.83	-13,132	0.58	
7/25/17	5:00	0.80	-13,192	0.55	
7/25/17	6:00	0.83	-13,252	0.58	
7/25/17	/:00	0.76	-13,312	0.51	
7/25/17	0:00	0.79	-13,372	0.54	
7/25/17	9:00	0.77	-13,432	0.32	
7/25/17	11.00	0.74	-13,492	0.49	
7/25/17	12.00	0.70	-13,552	0.43	Pump in well C_2 started at 11.44
7/25/17	13.00	0.00	-13,672	0.46	
7/25/17	14.00	0.68	-13 732	0.43	
7/25/17	15:00	0.71	-13.792	0.46	
7/25/17	16:00	0.67	-13.852	0.42	
7/25/17	17:00	0.66	-13.912	0.41	
7/25/17	18:00	0.65	-13,972	0.40	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/25/17	19:00	0.64	-14,032	0.39	
7/25/17	20:00	0.62	-14,092	0.37	
7/25/17	21:00	0.66	-14,152	0.41	
7/25/17	22:00	0.57	-14,212	0.32	
7/25/17	23:00	0.60	-14,272	0.35	
7/26/17	0:00	0.59	-14,332	0.34	
7/26/17	1:00	0.59	-14,392	0.34	
7/26/17	2:00	0.59	-14,452	0.34	
7/26/17	3:00	0.48	-14,512	0.23	
7/26/17	4:00	0.58	-14,572	0.33	
7/26/17	5:00	0.53	-14,632	0.28	
7/26/17	6:00	0.54	-14,692	0.29	
7/26/17	7:00	0.53	-14,752	0.28	
7/26/17	8:00	0.50	-14,812	0.25	
7/26/17	9:00	0.54	-14,872	0.29	
7/26/17	10:00	0.47	-14,932	0.22	
7/26/17	11:00	0.57	-14,992	0.32	
7/26/17	12:00	0.58	-15,052	0.33	
7/26/17	13:00	0.63	-15,112	0.38	
7/26/17	14:00	0.58	-15,172	0.33	
7/26/17	15:00	0.61	-15,232	0.36	
//26/17	16:00	0.60	-15,292	0.35	
7/26/17	17:00	0.64	-15,352	0.39	
//26/17	18:00	0.63	-15,412	0.38	
7/26/17	19:00	0.60	-15,472	0.35	
7/26/17	20:00	0.62	-15,532	0.37	
7/20/17	21:00	0.66	-15,592	0.41	
7/26/17	22:00	0.71	-13,032	0.40	
7/20/17	23.00	0.74	-13,712	0.49	
7/27/17	1:00	0.70	-13,772	0.51	
7/27/17	2.00	0.78	-15,832	0.55	
7/27/17	2.00	0.80	-15,052	0.55	
7/27/17	4.00	0.86	-16.012	0.55	
7/27/17	5:00	0.87	-16.072	0.62	
7/27/17	6.00	0.85	-16 132	0.60	
7/27/17	7:00	0.86	-16,192	0.61	
7/27/17	8:00	0.89	-16.252	0.64	
7/27/17	9:00	0.79	-16.312	0.54	
7/27/17	10:00	0.91	-16.372	0.66	
7/27/17	11:00	0.91	-16,432	0.66	
7/27/17	12:00	0.89	-16,492	0.64	
7/27/17	13:00	0.94	-16,552	0.69	
7/27/17	14:00	0.98	-16,612	0.73	
7/27/17	15:00	1.00	-16,672	0.75	
7/27/17	16:00	0.85	-16,732	0.60	
7/27/17	17:00	0.97	-16,792	0.72	
7/27/17	18:00	1.04	-16,852	0.79	
7/27/17	19:00	1.03	-16,912	0.78	
7/27/17	20:00	1.00	-16,972	0.75	
7/27/17	21:00	1.01	-17,032	0.76	
7/27/17	22:00	1.04	-17,092	0.79	
7/27/17	23:00	1.01	-17,152	0.76	
7/28/17	0:00	1.03	-17,212	0.78	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/28/17	1:00	1.04	-17,272	0.79	
7/28/17	2:00	1.04	-17,332	0.79	
7/28/17	3:00	1.05	-17,392	0.80	
7/28/17	4:00	1.06	-17,452	0.81	
7/28/17	5:00	1.04	-17,512	0.79	
7/28/17	6:00	1.01	-17,572	0.76	
7/28/17	7:00	1.02	-17,632	0.77	
7/28/17	8:00	1.01	-17,692	0.76	
7/28/17	9:00	1.04	-17,752	0.79	
7/28/17	10:00	1.02	-17,812	0.77	
7/28/17	11:00	1.00	-17,872	0.75	
7/28/17	12:00	1.05	-17,932	0.80	Pump in well C-21 shut down at 12:15.
7/28/17	13:00	1.01	-17,992	0.76	
7/28/17	14:00	1.05	-18,052	0.80	
7/28/17	15:00	1.04	-18,112	0.79	
//28/1/	16:00	0.97	-18,1/2	0.72	
7/28/17	1/:00	1.09	-18,232	0.84	
7/28/17	18:00	1.11	-18,292	0.86	
7/28/17	19:00	1.08	-18,332	0.83	
7/28/17	20:00	1.08	-18,412	0.83	
7/28/17	21.00	1.04	-10,472	0.79	
7/28/17	22.00	1.01	-18,552	0.70	
7/20/17	23.00	1.04	-18,592	0.79	
7/20/17	1.00	1.07	-18,052	0.82	
7/29/17	2.00	1.07	-18,772	0.82	
7/29/17	3.00	1.09	-18,832	0.85	
7/29/17	4.00	1.10	-18 892	0.83	
7/29/17	5:00	1.10	-18.952	0.85	
7/29/17	6:00	1.01	-19.012	0.76	
7/29/17	7:00	1.08	-19.072	0.83	
7/29/17	8:00	1.02	-19,132	0.77	
7/29/17	9:00	1.03	-19,192	0.78	
7/29/17	10:00	1.03	-19,252	0.78	
7/29/17	11:00	1.02	-19,312	0.77	
7/29/17	12:00	1.03	-19,372	0.78	
7/29/17	13:00	1.05	-19,432	0.80	
7/29/17	14:00	1.05	-19,492	0.80	
7/29/17	15:00	1.08	-19,552	0.83	
7/29/17	16:00	1.08	-19,612	0.83	
7/29/17	17:00	1.01	-19,672	0.76	
7/29/17	18:00	1.01	-19,732	0.76	
7/29/17	19:00	1.01	-19,792	0.76	
7/29/17	20:00	0.97	-19,852	0.72	
7/29/17	21:00	0.98	-19,912	0.73	
7/29/17	22:00	0.99	-19,972	0.74	
7/29/17	23:00	0.99	-20,032	0.74	
7/30/17	0:00	0.96	-20,092	0.71	
7/30/17	1:00	0.97	-20,152	0.72	
7/30/17	2:00	0.93	-20,212	0.68	
7/20/17	5:00	0.95	-20,272	0.70	
7/20/17	4:00	0.95	-20,332	0.70	
7/20/17	5:00	0.90	-20,392	0./1	
//30/1/	0:00	0.89	-20,452	0.64	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/30/17	7:00	0.89	-20,512	0.64	
7/30/17	8:00	0.88	-20,572	0.63	
7/30/17	9:00	0.90	-20,632	0.65	
7/30/17	10:00	0.87	-20,692	0.62	
7/30/17	11:00	0.83	-20,752	0.58	
7/30/17	12:00	0.85	-20,812	0.60	
7/30/17	13:00	0.83	-20,872	0.58	
7/30/17	14:00	0.80	-20,932	0.55	
7/30/17	15:00	0.83	-20,992	0.58	
7/30/17	16:00	0.87	-21,052	0.62	
7/30/17	17:00	0.88	-21,112	0.63	
7/30/17	18:00	0.86	-21,172	0.61	
7/30/17	19:00	0.82	-21,232	0.57	
7/30/17	20:00	0.82	-21,292	0.57	
7/30/17	21:00	0.83	-21,352	0.58	
7/30/17	22:00	0.81	-21,412	0.56	
7/30/17	23:00	0.81	-21,472	0.56	
7/31/17	0:00	0.76	-21,532	0.51	
7/31/17	1:00	0.81	-21,592	0.56	
7/31/17	2:00	0.86	-21,652	0.61	
7/31/17	3:00	0.80	-21,712	0.55	
7/31/17	4:00	0.83	-21,772	0.58	
7/31/17	5:00	0.81	-21,832	0.56	
7/31/17	6:00	0.83	-21,892	0.58	
7/31/17	7:00	0.80	-21,952	0.55	
7/31/17	8:00	0.83	-22,012	0.58	
7/21/17	9:00	0.79	-22,072	0.54	
7/21/17	10:00	0.81	-22,132	0.56	
7/21/17	12.00	0.77	-22,192	0.32	
7/21/17	12:00	0.79	-22,232	0.54	
7/21/17	13.00	0.83	-22,312	0.58	
7/31/17	14.00	0.81	-22,372	0.50	
7/31/17	15.00	0.85	-22,452	0.00	
7/31/17	17.00	0.92	-22,492	0.67	
7/31/17	18.00	0.87	-22,552	0.58	
7/31/17	19.00	0.03	-22,672	0.56	
7/31/17	20:00	0.84	-22.732	0.59	
7/31/17	21:00	0.88	-22.792	0.63	
7/31/17	22:00	0.84	-22.852	0.59	
8/1/17	23:00	0.79	-24.352	0.54	
8/1/17	0:00	0.84	-22,972	0.59	
8/1/17	1:00	0.83	-23,032	0.58	
8/1/17	2:00	0.82	-23,092	0.57	
8/1/17	3:00	0.81	-23,152	0.56	
8/1/17	4:00	0.86	-23,212	0.61	
8/1/17	5:00	0.86	-23,272	0.61	
8/1/17	6:00	0.84	-23,332	0.59	
8/1/17	7:00	0.84	-23,392	0.59	
8/1/17	8:00	0.83	-23,452	0.58	
8/1/17	9:00	0.82	-23,512	0.57	
8/1/17	10:00	0.82	-23,572	0.57	
8/1/17	11:00	0.78	-23,632	0.53	
8/1/17	12:00	0.79	-23,692	0.54	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
8/1/17	13:00	0.83	-23,752	0.58	
8/1/17	14:00	0.86	-23,812	0.61	
8/1/17	15:00	0.84	-23,872	0.59	
8/1/17	16:00	0.82	-23,932	0.57	
8/1/17	17:00	0.84	-23,992	0.59	
8/1/17	18:00	0.82	-24,052	0.57	
8/1/17	19:00	0.84	-24,112	0.59	
8/1/17	20:00	0.85	-24,172	0.60	
8/1/17	21:00	0.84	-24,232	0.59	
8/1/17	22:00	0.80	-24,292	0.55	
8/1/17	23:00	0.79	-24,352	0.54	
8/2/17	0:00	0.82	-24,412	0.57	
8/2/17	1:00	0.83	-24,472	0.58	
8/2/17	2:00	0.81	-24,532	0.56	
8/2/17	3:00	0.81	-24,592	0.56	
8/2/17	4:00	0.81	-24,652	0.56	
8/2/17	5:00	0.82	-24,712	0.57	
8/2/17	6:00	0.84	-24,772	0.59	
8/2/17	7:00	0.80	-24,832	0.55	
8/2/17	8:00	0.79	-24,892	0.54	
8/2/17	9:00	0.79	-24,952	0.54	
8/2/17	10:00	0.82	-25,012	0.57	
8/2/17	11:00	0.81	-25,072	0.56	
8/2/17	12:00	0.81	-25,132	0.56	
8/2/17	13:00	0.84	-25,192	0.59	
8/2/17	14:00	0.85	-25,252	0.60	
8/2/17	15:00	0.85	-25,312	0.60	
8/2/17	16:00	0.74	-25,372	0.49	
8/2/17	17:00	0.77	-25,432	0.52	
8/2/17	18:00	0.81	-25,492	0.56	
8/2/17	19:00	0.82	-25,552	0.57	
8/2/17	20:00	0.80	-25,612	0.55	
8/2/17	21:00	0.76	-25,672	0.51	
8/2/17	22:00	0.79	-25,732	0.54	
8/2/17	23:00	0.76	-25,792	0.51	
8/3/17	0:00	0.78	-25,852	0.53	
8/3/1/	1:00	0.77	-25,912	0.52	
8/3/1/	2:00	0.79	-25,972	0.54	
8/3/1/	3:00	0.72	-20,032	0.56	
8/3/17	4:00	0.73	-26,092	0.48	
8/3/1/	5:00	0.78	-20,152	0.53	
0/3/1/	0:00	0.73	-20,212	0.48	
8/3/1/	/:00	0.74	-20,272	0.49	
8/3/17	0.00	0.79	-20,332	0.54	
8/3/17	9.00	0.77	-20,392	0.32	
8/3/17	11.00	0.74	-20,432	0.49	
8/3/17	12.00	0.75	-26,512	0.51	
8/3/17	13.00	0.76	-26,572	0.51	
8/3/17	14.00	0.75	-26,692	0.51	
8/3/17	15.00	0.79	-26 752	0.54	
8/3/17	16:00	0.79	-26,812	0.54	
8/3/17	17:00	0.86	-26,872	0.61	
8/3/17	18:00	0.85	-26,932	0.60	
			, /	0.00	

Summary of Water-Level Measurements from Pressure Transducer Installed in Well C-14 Collected During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
8/3/17	19:00	0.83	-26,992	0.58	
8/3/17	20:00	0.80	-27,052	0.55	
8/3/17	21:00	0.77	-27,112	0.52	
8/3/17	22:00	0.74	-27,172	0.49	
8/3/17	23:00	0.82	-27,232	0.57	

ft btoc feet below top of casing

gpm gallons per minute

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C-16



LBG Hydrogeologic & Engineering Services, P.C.

180-Day Water-Level Drawdown Projection on Pumping Well C-16 from Water-Level Measurements Collected from Pumping Well C-16 During Simultanous Pumping Test Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 in July 2017



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LBG Hydrogeologic & Engineering Services, P.C.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/7/17	18:00	14.53			Pressure transducer installed in well.
7/7/17	19:00	14.69			
7/7/17	20:00	14.80			
7/7/17	21:00	14.72			
7/7/17	22:00	14.80			
7/7/17	23:00	14.81			
7/8/17	0:00	14.89			
7/8/17	1:00	14.89			
7/8/17	2:00	14.84			
7/8/17	3:00	14.84			
7/8/17	4:00	14.86			
7/8/17	5:00	14.91			
7/8/17	6:00	14.79			
7/8/17	7:00	14.85			
7/8/17	8:00	14.89			
7/8/17	9:00	14.99			
7/8/17	10:00	14.95			
7/8/17	11:00	15.09			
7/8/17	12:00	15.08			
7/8/17	13:00	15.04			
7/8/17	14:00	15.01			
7/8/17	15:00	15.00			
7/8/17	16:00	14.95			
7/8/17	17:00	14.87			
7/8/17	18:00	14.84			
7/8/17	19:00	14.91			
7/8/17	20:00	14.87			
7/8/17	21:00	14.89			
7/8/17	22:00	14.94			
7/8/17	23:00	14.95			
7/9/17	0:00	15.00			
7/9/17	1:00	15.01			
7/9/17	2:00	14.99			
7/9/17	3:00	15.00			
7/9/17	4:00	14.88			
7/9/17	5:00	14.91			
7/9/17	6:00	14.90			
7/9/17	7:00	14.94			
7/9/17	8:00	14.97			
7/9/17	9:00	15.06			
7/9/17	10:00	15.12			
7/9/17	11:00	15.19			
7/9/17	12:00	15.16			
//9/17	13:00	15.22			
7/9/17	14:00	15.17			
7/9/17	15:00	15.11			
//9/1/	10:00	15.08			
7/0/17	1/:00	15.08			
7/0/17	18:00	13.11			
7/0/17	19:00	14.99			
7/0/17	20:00	15.05			
7/0/17	21:00	15.01			
7/0/17	22:00	15.08			
// 7/ 1 /	25:00	13.14			
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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/10/17	0:00	15.04			
7/10/17	1:00	15.04			
7/10/17	2:00	15.13			
7/10/17	3:00	14.97			
7/10/17	4:00	15.01			
7/10/17	5:00	14.92			
7/10/17	6:00	15.06			
7/10/17	7:00	15.05			
7/10/17	8:00	15.03			
7/10/17	9:00	15.09			
7/10/17	10:00	15.13			
7/10/17	11:00	15.11			
7/10/17	11:54	15.19			Static water level used from prior to the start of pumping in any onsite wells.
7/10/17	12:00	15.19			Pump in well C-21 started at 11:55.
7/10/17	13:00	15.22			Pump in well C-23 started at 12:59
7/10/17	14:00	15.30			
7/10/17	15:00	15.26			
7/10/17	16:00	15.18			
7/10/17	17:00	15.20			Pump in well C-14 started at 16:24.
7/10/17	17:30	15.25			
7/10/17	17:31	18.87	1	3.68	Pump in well C-16 started.
7/10/17	17:32	37.68	2	22.49	Pumping rate in well C-16 55 gpm.
7/10/17	17:33	36.95	3	21.76	
7/10/17	17:34	38.13	4	22.94	
7/10/17	17:35	41.65	5	26.46	
7/10/17	17:36	45.25	6	30.06	
7/10/17	17:37	48.00	7	32.81	
7/10/17	17:38	48.94	8	33.75	
7/10/17	17:39	50.53	9	35.34	
7/10/17	17:40	51.95	10	36.76	Pumping rate in well C-16 55 gpm.
7/10/17	17:41	53.24	11	38.05	
7/10/17	17:42	54.22	12	39.03	
7/10/17	17:43	55.10	13	39.91	
7/10/17	17:44	56.05	14	40.86	
7/10/17	17:45	56.83	15	41.64	
7/10/17	17:46	57.71	16	42.52	
7/10/17	17:47	58.62	17	43.43	
7/10/17	17:48	59.69	18	44.50	
7/10/17	17:49	61.20	19	46.01	
7/10/17	17:50	61.92	20	46.73	
7/10/17	17:55	65.36	25	50.17	Pumping rate in well C-16 53.5 gpm.
7/10/17	17:57	66.77	27	51.58	Manual pumping rate increase in well C-16 to 56.5 gpm.
7/10/17	18:00	68.33	30	53.14	
7/10/17	18:05	72.37	35	57.18	
7/10/17	18:10	75.01	40	59.82	Pumping rate in well C-16 56 gpm.
7/10/17	18:15	77.68	45	62.49	
7/10/17	18:20	79.72	50	64.53	
7/10/17	18:25	81.28	55	66.09	Pumping rate in well C-16 56 gpm.
7/10/17	18:30	83.19	60	68.00	Pump in well C-6 started at 18:35.
7/10/17	19:00	91.11	90	75.92	Pumping rate in well C-16 55 gpm.
7/10/17	20:00	103.40	150	88.21	Pump in well C-12 started at 19:48.
7/10/17	21:00	111.54	210	96.35	Pump in well C-7B started at 21:03.
7/10/17	22:00	118.16	270	102.97	Pumping rate in well C-16 55 gpm.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/10/17	23:00	123.12	330	107.93	Pumping rate in well C-16 50 gpm.
7/11/17	0:00	135.74	390	120.55	Pumping rate in well C-16 50 gpm.
7/11/17	1:00	140.67	450	125.48	Pumping rate in well C-16 50 gpm.
7/11/17	2:00	143.74	510	128.55	Pumping rate in well C-16 50 gpm.
7/11/17	3:00	146.52	570	131.33	Pumping rate in well C-16 50 gpm.
7/11/17	4:00	148.35	630	133.16	Pumping rate in well C-16 50 gpm.
7/11/17	5:00	149.99	690	134.80	Pumping rate in well C-16 50 gpm.
7/11/17	6:00	151.36	750	136.17	Pumping rate in well C-16 50 gpm.
7/11/17	7:00	154.91	810	139.72	Pumping rate in well C-16 50 gpm.
7/11/17	8:00	156.49	870	141.30	Pumping rate in well C-16 50 gpm.
7/11/17	9:00	157.59	930	142.40	Pumping rate in well C-16 50 gpm.
7/11/17	10:00	158.51	990	143.32	Pumping rate in well C-16 50 gpm.
7/11/17	11:00	159.42	1,050	144.23	Pumping rate in well C-16 50 gpm.
7/11/17	12:00	159.82	1,110	144.63	Pumping rate in well C-16 50 gpm.
7/11/17	13:00	160.56	1,170	145.37	Pumping rate in well C-16 50 gpm.
7/11/17	14:00	161.60	1,230	146.41	Pumping rate in well C-16 50 gpm.
7/11/17	15:00	162.20	1,290	147.01	Pumping rate in well C-16 50 gpm.
7/11/17	16:00	162.73	1,350	147.54	Pumping rate in well C-16 50 gpm.
7/11/17	17:00	163.26	1,410	148.07	Pumping rate in well C-16 50 gpm.
7/11/17	18:00	164.11	1,470	148.92	Pumping rate in well C-16 50 gpm.
7/11/17	19:00	164.37	1,530	149.18	Pumping rate in well C-16 50 gpm.
7/11/17	20:00	164.90	1,590	149.71	Pumping rate in well C-16 50 gpm.
7/11/17	21:00	165.25	1,650	150.06	Pumping rate in well C-16 50 gpm.
7/11/17	22:00	165.60	1,710	150.41	Pumping rate in well C-16 50 gpm.
7/11/17	23:00	166.35	1,770	151.16	Pumping rate in well C-16 50 gpm.
7/12/17	0:00	166.69	1,830	151.50	Pumping rate in well C-16 50 gpm.
7/12/17	1:00	166.93	1,890	151.74	Pumping rate in well C-16 50 gpm.
7/12/17	2:00	16/.18	1,950	151.99	Pumping rate in well C-16 50 gpm.
7/12/17	3:00	167.51	2,010	152.32	Pumping rate in well C-16 50 gpm.
7/12/17	4:00	162.00	2,070	152.09	Pumping rate in well C-16 50 gpm.
7/12/17	5:00	168.00	2,130	152.01	Pumping rate in well C-16 50 gpm.
7/12/17	7.00	108.22	2,190	153.05	Pumping rate in well C 16 50 gpm.
7/12/17	8.00	168.72	2,230	153.59	Pumping rate in well C-16 50 gpm.
7/12/17	0.00	168.82	2,310	153.63	Pumping rate in well C-16 50 gpm.
7/12/17	10.00	169.39	2,370	153.05	Pumping rate in well C-16 50 gpm.
7/12/17	11.00	169.51	2,150	154.32	Pumping rate in well C-16 50 gpm
//12/1/	11.00	107.01	2,190	101.02	Pump in well C-7B shut down at 11:28 and pump in well C-
7/12/17	12:00	169.73	2,550	154.54	21 shut down at 11:56.
7/12/17	13:00	169.95	2,610	154.76	Pumping rate in well C-16 50 gpm.
7/12/17	14:00	169.87	2,670	154.68	Pumping rate in well C-16 50 gpm.
7/12/17	15:00	170.24	2,730	155.05	Pumping rate in well C-16 50 gpm.
7/12/17	16:00	170.34	2,790	155.15	Pumping rate in well C-16 50 gpm.
7/12/17	17:00	170.50	2,850	155.31	Pumping rate in well C-16 50 gpm.
7/12/17	18:00	170.79	2,910	155.60	Pumping rate in well C-16 50 gpm.
7/12/17	19:00	171.09	2,970	155.90	Pumping rate in well C-16 50 gpm.
7/12/17	20:00	171.41	3,030	156.22	Pumping rate in well C-16 50 gpm.
7/12/17	21:00	171.44	3,090	156.25	Pumping rate in well C-16 50 gpm.
7/12/17	22:00	171.74	3,150	156.55	Pumping rate in well C-16 50 gpm.
7/12/17	23:00	171.75	3,210	156.56	Pumping rate in well C-16 50 gpm.
7/13/17	0:00	171.88	3,270	156.69	Pumping rate in well C-16 50 gpm.
7/13/17	1:00	172.17	3,330	156.98	Pumping rate in well C-16 50 gpm.
7/13/17	2:00	172.36	3,390	157.17	Pumping rate in well C-16 50 gpm.
7/13/17	3:00	172.34	3,450	157.15	Pumping rate in well C-16 50 gpm.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/13/17	4:00	172.37	3,510	157.18	Pumping rate in well C-16 50 gpm.
7/13/17	5:00	172.64	3,570	157.45	Pumping rate in well C-16 50 gpm.
7/13/17	6:00	172.66	3,630	157.47	Pumping rate in well C-16 50 gpm.
7/13/17	7:00	172.80	3,690	157.61	Pumping rate in well C-16 50 gpm.
7/13/17	8:00	172.84	3,750	157.65	Pumping rate in well C-16 50 gpm.
7/13/17	9:00	172.92	3,810	157.73	Pumping rate in well C-16 50 gpm.
7/13/17	10:00	173.20	3,870	158.01	Pumping rate in well C-16 50 gpm.
7/13/17	11:00	173.22	3,930	158.03	Pumping rate in well C-16 50 gpm.
7/13/17	12:00	173.18	3,990	157.99	Pumping rate in well C-16 50 gpm.
7/13/17	13:00	173.43	4,050	158.24	Pumping rate in well C-16 50 gpm.
7/13/17	14:00	173.67	4,110	158.48	Pumping rate in well C-16 50 gpm.
7/13/17	15:00	173.58	4,170	158.39	Pumping rate in well C-16 50 gpm.
7/13/17	16:00	173.83	4,230	158.64	Pumping rate in well C-16 50 gpm.
7/13/17	17:00	173.99	4,290	158.80	Pumping rate in well C-16 50 gpm.
7/13/17	18:00	173.89	4,350	158.70	Pumping rate in well C-16 50 gpm.
7/13/17	19:00	174.36	4,410	159.17	Pumping rate in well C-16 50 gpm.
7/13/17	20:00	174.43	4,470	159.24	Pumping rate in well C-16 50 gpm.
7/13/17	21:00	174.35	4,530	159.16	Pumping rate in well C-16 50 gpm.
7/13/17	22:00	174.26	4,590	159.07	Pumping rate in well C-16 50 gpm.
7/13/17	23:00	174.46	4,650	159.27	Pumping rate in well C-16 50 gpm.
7/14/17	0:00	174.31	4,710	159.12	Pumping rate in well C-16 50 gpm.
7/14/17	1:00	174.56	4,770	159.37	Pumping rate in well C-16 50 gpm.
7/14/17	2:00	174.57	4,830	159.38	Pumping rate in well C-16 50 gpm.
7/14/17	3:00	174.83	4,890	159.64	Pumping rate in well C-16 50 gpm.
7/14/17	4:00	174.89	4,950	159.70	Pumping rate in well C-16 50 gpm.
7/14/17	5:00	174.79	5,010	159.60	Pumping rate in well C-16 50 gpm.
7/14/17	6:00	174.96	5,070	159.77	Pumping rate in well C-16 50 gpm.
7/14/17	7:00	174.78	5,130	159.59	Pumping rate in well C-16 50 gpm.
7/14/17	8:00	175.07	5,190	159.88	Pumping rate in well C-16 50 gpm.
7/14/17	9:00	175.17	5,250	159.98	Pumping rate in well C-16 50 gpm.
7/14/17	10:00	175.34	5,310	160.15	Pumping rate in well C-16 50 gpm.
7/14/17	11:00	175.35	5,370	160.16	Pumping rate in well C-16 50 gpm.
7/14/17	12:00	175.44	5,430	160.25	Pumping rate in well C-16 50 gpm.
7/14/17	13:00	175.56	5,490	160.37	Pumping rate in well C-16 50 gpm.
7/14/17	14:00	175.68	5,550	160.49	Pumping rate in well C-16 50 gpm.
7/14/17	15:00	175.47	5,610	160.28	Pumping rate in well C-16 50 gpm.
7/14/17	16:00	175.83	5,670	160.64	Pumping rate in well C-16 50 gpm.
7/14/17	17:00	175.62	5,730	160.43	Pumping rate in well C-16 50 gpm.
7/14/17	18:00	175.88	5,790	160.69	Pumping rate in well C-16 50 gpm.
7/14/17	19:00	175.91	5,850	160.72	Pumping rate in well C-16 50 gpm.
7/14/17	20:00	176.21	5,910	161.02	Pumping rate in well C-16 50 gpm.
7/14/17	21:00	176.08	5,970	160.89	Pumping rate in well C-16 50 gpm.
7/14/17	22:00	176.13	6,030	160.94	Pumping rate in well C-16 50 gpm.
7/14/17	23:00	176.14	6,090	160.95	Pumping rate in well C-16 50 gpm.
7/15/17	0:00	176.19	6,150	161.00	Pumping rate in well C-16 50 gpm.
7/15/17	1:00	176.37	6,210	161.18	Pumping rate in well C-16 50 gpm.
7/15/17	2:00	176.47	6,270	161.28	Pumping rate in well C-16 50 gpm.
7/15/17	3:00	176.52	6,330	161.33	Pumping rate in well C-16 50 gpm.
7/15/17	4:00	176.86	6,390	161.67	Pumping rate in well C-16 50 gpm.
7/15/17	5:00	176.68	6,450	161.49	Pumping rate in well C-16 50 gpm.
7/15/17	6:00	176.63	6,510	161.44	Pumping rate in well C-16 50 gpm.
7/15/17	7:00	176.81	6,570	161.62	Pumping rate in well C-16 50 gpm.
7/15/17	8:00	176.90	6,630	161.71	Pumping rate in well C-16 50 gpm.
7/15/17	9:00	176.70	6,690	161.51	Pumping rate in well C-16 50 gpm.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/15/17	10:00	176.59	6,750	161.40	Pumping rate in well C-16 50 gpm.
7/15/17	11:00	176.59	6,810	161.40	Pumping rate in well C-16 50 gpm.
7/15/17	12:00	176.64	6,870	161.45	Pumping rate in well C-16 50 gpm.
7/15/17	13:00	176.54	6,930	161.35	Pumping rate in well C-16 50 gpm.
7/15/17	14:00	176.57	6,990	161.38	Pumping rate in well C-16 50 gpm.
7/15/17	15:00	176.99	7,050	161.80	Pumping rate in well C-16 50 gpm.
7/15/17	16:00	176.82	7,110	161.63	Pumping rate in well C-16 50 gpm.
7/15/17	17:00	176.95	7,170	161.76	Pumping rate in well C-16 50 gpm.
7/15/17	18:00	176.80	7,230	161.61	Pumping rate in well C-16 50 gpm.
7/15/17	19:00	176.96	7,290	161.77	Pumping rate in well C-16 50 gpm.
7/15/17	19:09	176.71	7,299	161.52	Pumping rate in well C-16 50 gpm.
7/15/17	20:00	176.86	7,350	161.67	Pumping rate in well C-16 50 gpm.
7/15/17	21:00	176.98	7,410	161.79	Pumping rate in well C-16 50 gpm.
7/15/17	22:00	177.16	7,470	161.97	Pumping rate in well C-16 50 gpm.
7/15/17	23:00	177.00	7,530	161.81	Pumping rate in well C-16 50 gpm.
7/16/17	0:00	176.97	7,590	161.78	Pumping rate in well C-16 50 gpm.
7/16/17	1:00	176.97	7,650	161.78	Pumping rate in well C-16 50 gpm.
7/16/17	1:09	177.15	7,659	161.96	Shut down of simultaneous pumping test (wells C-6, 12, 14, 16, and 23) started.
7/16/17	1:39	176.94	7,689	161.75	Pumping rate in well C-16 50 gpm.
7/16/17	1:40	177.23	7,690	162.04	Pumping rate in well C-16 50 gpm.
7/16/17	1:41	163.04	-1	147.85	Pump in well C-16 shut down.
7/16/17	1:42	158.51	-2	143.32	
7/16/17	1:43	155.83	-3	140.64	
7/16/17	1:44	153.97	-4	138.78	
7/16/17	1:45	152.69	-5	137.50	
7/16/17	1:46	151.59	-6	136.40	
7/16/17	1:47	150.66	-7	135.47	
7/16/17	1:48	150.02	-8	134.83	
7/16/17	1:49	149.47	-9	134.28	
7/16/17	1:50	149.00	-10	133.81	
7/16/17	1:51	148.47	-11	133.28	
7/16/17	1:52	148.23	-12	133.04	
7/16/17	1:53	147.82	-13	132.63	
7/16/17	1:54	147.42	-14	132.23	
7/16/17	1:55	147.26	-15	132.07	
7/16/17	2:00	145.90	-20	130.71	
7/16/17	2:05	144.94	-25	129.75	
7/16/17	2:10	144.14	-30	128.95	
7/16/17	2:15	143.28	-35	128.09	
7/16/17	2:20	142.56	-40	127.37	
7/16/17	2:25	141.84	-45	126.65	
7/16/17	2:30	141.11	-50	125.92	
7/16/17	2:35	140.37	-55	125.18	
7/16/17	2:40	139.83	-60	124.64	
7/16/17	3:00	137.44	-80	122.25	
7/16/17	4:00	130.80	-140	115.61	
7/16/17	5:00	124.66	-200	109.47	
7/16/17	6:00	119.17	-260	103.98	
7/16/17	7:00	114.04	-320	98.85	
7/16/17	8:00	109.28	-380	94.09	
7/16/17	9:00	104.53	-440	89.34	
7/16/17	10:00	99.97	-500	84.78	
7/16/17	11:00	95.91	-560	80.72	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/16/17	12:00	92.30	-620	77.11	
7/16/17	13:00	89.03	-680	73.84	
7/16/17	14:00	85.98	-740	70.79	
7/16/17	15:00	82.94	-800	67.75	
7/16/17	16:00	80.20	-860	65.01	
7/16/17	17:00	77.73	-920	62.54	
7/16/17	18:00	75.39	-980	60.20	
7/16/17	19:00	73.17	-1,040	57.98	
7/16/17	20:00	71.04	-1,100	55.85	
7/16/17	21:00	69.03	-1,160	53.84	
7/16/17	22:00	67.19	-1,220	52.00	
7/16/17	23:00	65.36	-1,280	50.17	
7/17/17	0:00	63.76	-1,340	48.57	
7/17/17	1:00	62.09	-1,400	46.90	
7/17/17	2:00	60.47	-1,460	45.28	
7/17/17	3:00	59.08	-1,520	43.89	
7/17/17	4:00	57.72	-1,580	42.53	
7/17/17	5:00	56.58	-1,640	41.39	
7/17/17	6:00	55.40	-1,700	40.21	
7/17/17	7:00	54.24	-1,760	39.05	
7/17/17	8:00	53.24	-1,820	38.05	
7/17/17	9:00	52.06	-1,880	36.87	
7/17/17	10:00	51.05	-1,940	35.86	
7/17/17	11:00	50.07	-2,000	34.88	
7/17/17	12:00	49.11	-2,060	33.92	
7/17/17	13:00	48.36	-2,120	33.17	
7/17/17	14:00	47.50	-2,180	32.31	
7/17/17	15:00	46.63	-2,240	31.44	
7/17/17	16:00	45.94	-2,300	30.75	
7/17/17	17:00	45.25	-2,360	30.06	
7/17/17	18:00	44.55	-2,420	29.36	
7/17/17	19:00	43.85	-2,480	28.66	
7/17/17	20:00	43.28	-2,540	28.09	
7/17/17	21:00	42.56	-2,600	27.37	
//1//1/	22:00	42.04	-2,660	26.85	
7/19/17	23:00	41.49	-2,720	26.30	
7/18/17	0:00	40.8/	-2,/80	23.08	
7/10/17	2:00	40.39	-2,840	23.20	
7/10/17	2:00	20 21	-2,900	24.0/	
7/18/17	4.00	37.31	-2,900	27.12	
7/18/17	4.00 5.00	38.00	-3,020	23.07	
7/18/17	5.00	38.49	-3,080	23.30	
7/18/17	7.00	37.55	-3,140	22.03	
7/18/17	8.00	37.33	-3,200	22.30	
7/18/17	9.00	36.81	-3,200	21.95	
7/18/17	10.00	36.29	-3 380	21.02	
7/18/17	11.00	35.88	-3 440	20.69	
7/18/17	12:00	35.48	-3,500	20.09	
7/18/17	13.00	35.13	-3 560	19 94	
7/18/17	14:00	34.65	-3,620	19.46	
7/18/17	15:00	34,33	-3.680	19.14	
7/18/17	16:00	33.89	-3.740	18.70	
7/18/17	17:00	33.53	-3,800	18.34	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/18/17	18:00	33.20	-3,860	18.01	
7/18/17	19:00	32.82	-3,920	17.63	
7/18/17	20:00	32.54	-3,980	17.35	
7/18/17	21:00	32.18	-4,040	16.99	
7/18/17	22:00	31.78	-4,100	16.59	
7/18/17	23:00	31.56	-4,160	16.37	
7/19/17	0:00	31.27	-4,220	16.08	90% recovery achieved.
7/19/17	1:00	30.89	-4,280	15.70	
7/19/17	2:00	30.67	-4,340	15.48	
7/19/17	3:00	30.33	-4,400	15.14	
7/19/17	4:00	30.10	-4,460	14.91	
7/19/17	5:00	29.80	-4,520	14.61	
7/19/17	6:00	29.61	-4,580	14.42	
7/19/17	7:00	29.34	-4,640	14.15	
7/19/17	8:00	29.06	-4,700	13.87	
7/19/17	9:00	28.87	-4,760	13.68	
7/19/17	10:00	28.61	-4,820	13.42	
7/19/17	11:00	28.31	-4,880	13.12	
7/19/17	12:00	28.10	-4,940	12.91	
7/19/17	13:00	27.87	-5,000	12.68	
7/19/17	14:00	27.61	-5,060	12.42	
7/19/17	15:00	27.24	-5,120	12.05	
7/19/17	16:00	27.06	-5,180	11.87	
7/19/17	17:00	26.88	-5,240	11.69	
7/19/17	18:00	26.61	-5,300	11.42	
7/19/17	19:00	26.44	-5,360	11.25	
7/19/17	20:00	26.21	-5,420	11.02	
7/19/17	21:00	26.04	-5,480	10.85	
7/19/17	22:00	25.84	-5,540	10.65	
7/19/17	23:00	25.53	-5,600	10.34	
7/20/17	0:00	25.43	-5,660	10.24	
7/20/17	1:00	25.21	-5,720	10.02	
7/20/17	2:00	25.03	-5,/80	9.84	
7/20/17	3:00	24.79	-5,840	9.60	
7/20/17	4:00	24.09	-3,900	9.30	
7/20/17	5:00	24.33	-3,960	9.30	
7/20/17	7.00	24.34	-0,020	9.13	
7/20/17	7.00 8.00	24.20	-0,000	9.09	
7/20/17	0.00	24.05	-6,140	8.86	
7/20/17	10.00	23.03	-6.260	8 73	
7/20/17	11.00	23.92	-6 320	8.47	
7/20/17	12.00	23.50	-6 380	8 31	
7/20/17	13.00	23.33	-6 440	8.14	
7/20/17	14.00	23.33	-6 500	7.95	
7/20/17	15:00	22,98	-6.560	7.79	
7/20/17	16:00	22.86	-6,620	7.67	
7/20/17	17:00	22.61	-6,680	7.42	
7/20/17	18:00	22.47	-6,740	7.28	
7/20/17	19:00	22.40	-6,800	7.21	
7/20/17	20:00	22.31	-6,860	7.12	
7/20/17	21:00	22.21	-6,920	7.02	
7/20/17	22:00	22.03	-6,980	6.84	
7/20/17	23:00	21.92	-7,040	6.73	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/21/17	0:00	21.83	-7,100	6.64	
7/21/17	1:00	21.76	-7,160	6.57	
7/21/17	2:00	21.48	-7,220	6.29	
7/21/17	3:00	21.38	-7,280	6.19	
7/21/17	4:00	21.27	-7,340	6.08	
7/21/17	5:00	21.19	-7,400	6.00	
7/21/17	6:00	21.12	-7,460	5.93	
7/21/17	7:00	20.96	-7,520	5.77	
7/21/17	8:00	20.91	-7,580	5.72	
7/21/17	9:00	20.82	-7,640	5.63	
7/21/17	10:00	20.81	-7,700	5.62	
7/21/17	11:00	20.62	-7,760	5.43	
7/21/17	12:00	20.59	-7,820	5.40	
7/21/17	13:00	20.49	-7,880	5.30	
7/21/17	14:00	20.36	-/,940	5.02	
7/21/17	15:00	20.21	-8,000	5.02	
7/21/17	10:00	20.07	-8,000	4.88	
7/21/17	18:00	19.92	-0,120	4./3	
7/21/17	10.00	19.88	-8,180	4.09	
7/21/17	20.00	19.74	-8,240	4.55	
7/21/17	20.00 21.00	19.75	-8,360	4.30	
7/21/17	21.00 22.00	19.59	-8 420	4 40	
7/21/17	22.00	19.51	-8 480	4 32	
7/22/17	0:00	19.44	-8.540	4.25	
7/22/17	1:00	19.37	-8.600	4.18	
7/22/17	2:00	19.18	-8.660	3.99	
7/22/17	3:00	19.21	-8.720	4.02	
7/22/17	4:00	19.12	-8,780	3.93	
7/22/17	5:00	19.00	-8,840	3.81	
7/22/17	6:00	18.94	-8,900	3.75	
7/22/17	7:00	18.92	-8,960	3.73	
7/22/17	8:00	18.90	-9,020	3.71	
7/22/17	9:00	18.85	-9,080	3.66	
7/22/17	10:00	18.85	-9,140	3.66	
7/22/17	11:00	18.81	-9,200	3.62	
7/22/17	12:00	18.74	-9,260	3.55	
7/22/17	13:00	18.73	-9,320	3.54	
7/22/17	14:00	18.56	-9,380	3.37	
7/22/17	15:00	18.47	-9,440	3.28	
7/22/17	16:00	18.36	-9,500	3.17	
7/22/17	17:00	18.22	-9,560	3.03	
7/22/17	18:00	18.22	-9,620	3.03	
7/22/17	19:00	18.16	-9,680	2.97	
7/22/17	20:00	18.13	-9,/40	2.90	
7/22/17	21:00	10.14	-9,800	2.93	
7/22/17	22:00	18.07	-9,000	2.94	
7/23/17	0.00	17.07	-9,920	2.00	
7/23/17	1.00	17.90	-10.040	2.77	
7/23/17	2:00	17.71	-10,100	2.52	
7/23/17	3:00	17.82	-10,160	2.63	
7/23/17	4:00	17.72	-10.220	2.53	
7/23/17	5:00	17.69	-10,280	2.50	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/23/17	6:00	17.64	-10,340	2.45	
7/23/17	7:00	17.66	-10,400	2.47	
7/23/17	8:00	17.57	-10,460	2.38	
7/23/17	9:00	17.66	-10,520	2.47	
7/23/17	10:00	17.65	-10,580	2.46	
7/23/17	11:00	17.68	-10,640	2.49	
7/23/17	12:00	17.67	-10,700	2.48	
7/23/17	13:00	17.62	-10,760	2.43	
7/23/17	14:00	17.61	-10,820	2.42	
7/23/17	15:00	17.53	-10,880	2.34	
7/23/17	16:00	17.42	-10,940	2.23	
7/23/17	17:00	17.40	-11,000	2.21	
7/23/17	18:00	17.31	-11,060	2.12	
7/23/17	19:00	17.24	-11,120	2.05	
7/23/17	20:00	17.25	-11,180	2.06	
7/23/17	21:00	17.25	-11,240	2.06	
7/23/17	22:00	17.24	-11,300	2.05	
7/23/17	23:00	17.28	-11,360	2.09	
7/24/17	0:00	17.12	-11,420	1.93	
7/24/17	1:00	17.10	-11,480	1.91	
7/24/17	2:00	17.15	-11,540	1.96	
7/24/17	3:00	17.03	-11,600	1.84	
7/24/17	4:00	16.97	-11,660	1.78	
7/24/17	5:00	16.96	-11,720	1.77	
7/24/17	6:00	16.98	-11,780	1.79	
7/24/17	7:00	16.88	-11,840	1.69	
7/24/17	8:00	16.86	-11,900	1.67	
7/24/17	9:00	16.83	-11,960	1.64	
7/24/17	10:00	16.86	-12,020	1.67	
7/24/17	11:00	16.89	-12,080	1.70	
7/24/17	12:00	16.88	-12,140	1.69	
7/24/17	13:00	16.92	-12,200	1./3	
7/24/17	14:00	16.82	-12,260	1.63	
7/24/17	15:00	16.82	-12,320	1.03	
7/24/17	10:00	16.85	-12,380	1.04	
7/24/17	1/:00	16.75	-12,440	1.30	
7/24/17	10.00	16.60	-12,500	1.47	
7/24/17	20.00	16.02	-12,500	1.43	
7/2/17	21.00	16.66	-12,020	1.42	
7/24/17	22:00	16.69	-12,000	1.47	
7/24/17	22:00	16.55	-12 800	1.30	
7/25/17	0.00	16.64	-12,860	1.50	
7/25/17	1.00	16.58	-12 920	1 39	
7/25/17	2:00	16.60	-12,980	1.41	
7/25/17	3:00	16.57	-13.040	1.38	
7/25/17	4:00	16.58	-13,100	1.39	
7/25/17	5:00	16.55	-13,160	1.36	
7/25/17	6:00	16.52	-13,220	1.33	
7/25/17	7:00	16.47	-13,280	1.28	
7/25/17	8:00	16.43	-13,340	1.24	
7/25/17	9:00	16.52	-13,400	1.33	
7/25/17	10:00	16.47	-13,460	1.28	
7/25/17	11:00	16.45	-13,520	1.26	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/25/17	12:00	16.55	-13,580	1.36	Pump in well C-21 started at 11:44.
7/25/17	13:00	16.49	-13,640	1.30	•
7/25/17	14:00	16.50	-13,700	1.31	
7/25/17	15:00	16.54	-13,760	1.35	
7/25/17	16:00	16.50	-13,820	1.31	
7/25/17	17:00	16.46	-13,880	1.27	
7/25/17	18:00	16.45	-13,940	1.26	
7/25/17	19:00	16.40	-14,000	1.21	
7/25/17	20:00	16.37	-14,060	1.18	
7/25/17	21:00	16.32	-14,120	1.13	
7/25/17	22:00	16.32	-14,180	1.13	
7/25/17	23:00	16.31	-14,240	1.12	
7/26/17	0:00	16.30	-14,300	1.11	
7/26/17	1:00	16.40	-14,360	1.21	
7/26/17	2:00	16.45	-14,420	1.26	
7/26/17	3:00	16.42	-14,480	1.23	
7/26/17	4:00	16.23	-14,540	1.04	
7/26/17	5:00	16.27	-14,600	1.08	
7/26/17	6:00	16.32	-14,660	1.13	
7/26/17	7:00	16.18	-14,720	0.99	
7/26/17	8:00	16.18	-14,780	0.99	
7/26/17	9:00	16.24	-14,840	1.05	
7/26/17	10:00	16.30	-14,900	1.11	
7/26/17	11:00	16.25	-14,960	1.06	
7/26/17	12:00	16.27	-15,020	1.08	
7/26/17	13:00	16.26	-15,080	1.07	
7/26/17	14:00	16.32	-15,140	1.13	
7/26/17	15:00	16.27	-15,200	1.08	
7/26/17	16:00	16.17	-15,260	0.98	
7/26/17	17:00	16.22	-15,320	1.03	
7/26/17	18:00	16.14	-15,380	0.95	
7/26/17	19:00	16.12	-15,440	0.93	
7/26/17	20:00	16.01	-15,500	0.82	
//26/17	21:00	16.01	-15,560	0.82	
7/26/17	22:00	15.97	-15,620	0.78	
7/20/17	23:00	15.97	-15,680	0.78	
7/27/17	0:00	15.95	-15,740	0.75	
7/27/17	1:00	16.03	-15,800	0.84	
7/27/17	2:00	10.00	-13,800	0.81	
7/27/17	3:00	13.95	-13,920	0.70	
7/27/17	+:00 5:00	15.00	-13,960	0.09	
7/27/17	5.00	15.92	-10,040	0.73	
7/27/17	7.00	15.07	-10,100	0.00	
7/27/17	7.00 8.00	15.80	16 220	0.09	
7/27/17	9.00	15.89	-16,220	0.70	
7/27/17	10.00	15.85	-16 340	0.70	
7/27/17	11.00	15.00	-16 400	0.07	
7/27/17	12.00	15.90	-16.460	0.71	
7/27/17	13.00	15.80	-16 520	0.63	
7/27/17	14.00	15.82	-16,520	0.03	
7/27/17	15.00	15.82	-16 640	0.03	
7/27/17	16.00	15.09	-16 700	0.70	
7/27/17	17:00	15.75	-16,760	0.56	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/27/17	18:00	15.74	-16,820	0.54	
7/27/17	19:00	15.70	-16,880	0.51	
7/27/17	20:00	15.68	-16,940	0.49	
7/27/17	21:00	15.68	-17,000	0.49	
7/27/17	22:00	15.70	-17,060	0.51	
7/27/17	23:00	15.70	-17,120	0.51	
7/28/17	0:00	15.66	-17,180	0.47	
7/28/17	1:00	15.72	-17,240	0.53	
7/28/17	2:00	15.64	-17,300	0.45	
7/28/17	3:00	15.71	-17,360	0.52	
7/28/17	4:00	15.70	-17,420	0.51	
7/28/17	5:00	15.66	-17,480	0.47	
7/28/17	6:00	15.69	-17,540	0.50	
7/28/17	7:00	15.63	-17,600	0.44	
7/28/17	8:00	15.64	-17,660	0.45	
7/28/17	9:00	15.62	-17,720	0.43	
7/28/17	10:00	15.62	-17,780	0.43	
7/28/17	11:00	15.61	-17,840	0.42	
7/28/17	12:00	15.65	-17,900	0.46	Pump in well C-21 shut down at 12:15.
7/28/17	13:00	15.62	-17,960	0.43	
7/28/17	14:00	15.60	-18,020	0.41	
7/28/17	15:00	15.60	-18,080	0.41	
7/28/17	16:00	15.55	-18,140	0.36	
7/28/17	17:00	15.53	-18,200	0.34	
7/28/17	18:00	15.51	-18,260	0.32	
//28/1/	19:00	15.52	-18,320	0.33	
7/28/17	20:00	15.45	-18,380	0.23	
7/28/17	21:00	15.43	-18,440	0.26	
7/28/17	22:00	15.37	-18,500	0.18	
7/20/17	25:00	15.41	-18,500	0.22	
7/20/17	1.00	15.48	-18,620	0.35	
7/29/17	2.00	15.40	-18,080	0.29	
7/29/17	3.00	15.47	-18,740	0.28	
7/29/17	4.00	15.40	-18 860	0.20	
7/29/17	5.00	15.40	-18,000	0.20	
7/29/17	6:00	15.46	-18,980	0.27	
7/29/17	7:00	15.48	-19.040	0.29	
7/29/17	8:00	15.51	-19.100	0.32	
7/29/17	9:00	15.45	-19.160	0.26	
7/29/17	10:00	15.44	-19,220	0.25	
7/29/17	11:00	15.39	-19,280	0.20	
7/29/17	12:00	15.46	-19,340	0.27	
7/29/17	13:00	15.41	-19,400	0.22	
7/29/17	14:00	15.46	-19,460	0.27	
7/29/17	15:00	15.36	-19,520	0.17	
7/29/17	16:00	15.43	-19,580	0.24	
7/29/17	17:00	15.48	-19,640	0.29	
7/29/17	18:00	15.34	-19,700	0.15	
7/29/17	19:00	15.46	-19,760	0.27	
7/29/17	20:00	15.30	-19,820	0.11	
7/29/17	21:00	15.45	-19,880	0.26	
7/29/17	22:00	15.40	-19,940	0.21	
7/29/17	23:00	15.37	-20,000	0.18	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/30/17	0:00	15.41	-20,060	0.22	
7/30/17	1:00	15.33	-20,120	0.14	
7/30/17	2:00	15.39	-20,180	0.20	
7/30/17	3:00	15.36	-20,240	0.16	
7/30/17	4:00	15.40	-20,300	0.21	
7/30/17	5:00	15.49	-20,360	0.30	
7/30/17	6:00	15.50	-20,420	0.31	
7/30/17	7:00	15.42	-20,480	0.23	
7/30/17	8:00	15.41	-20,540	0.22	
7/30/17	9:00	15.48	-20,600	0.29	
7/30/17	10:00	15.34	-20,660	0.15	
7/30/17	11:00	15.42	-20,720	0.23	
7/30/17	12:00	15.40	-20,780	0.21	
7/30/17	13:00	15.40	-20,840	0.21	
7/30/17	14:00	15.40	-20,900	0.20	
7/30/17	15:00	15.42	-20,960	0.23	
7/30/17	16:00	15.38	-21,020	0.19	
7/30/17	17:00	15.51	-21,080	0.32	
7/30/17	18:00	15.37	-21,140	0.18	
7/30/17	19:00	15.39	-21,200	0.20	
7/30/17	20:00	15.38	-21,260	0.19	
7/30/17	21:00	15.33	-21,320	0.14	
7/30/17	22:00	15.39	-21,380	0.20	
7/30/17	23:00	15.39	-21,440	0.20	
7/31/17	0:00	15.35	-21,500	0.16	
7/31/17	1:00	15.38	-21,560	0.19	
//31/1/	2:00	15.38	-21,620	0.19	
7/21/17	3:00	15.39	-21,680	0.20	
7/21/17	4:00	15.39	-21,740	0.20	
7/21/17	5:00	15.39	-21,800	0.20	
7/21/17	7.00	15.40	-21,000	0.27	
7/31/17	8.00	15.45	-21,920	0.20	
7/31/17	9.00	15.38	-21,980	0.19	
7/31/17	10.00	15.42	-22,040	0.16	
7/31/17	11.00	15.35	-22,160	0.15	
7/31/17	12.00	15.37	-22,220	0.13	
7/31/17	13:00	15.35	-22,280	0.16	
7/31/17	14:00	15.30	-22.340	0.11	
7/31/17	15:00	15.27	-22,400	0.08	
7/31/17	16:00	15.40	-22,460	0.21	
7/31/17	17:00	15.30	-22,520	0.11	
7/31/17	18:00	15.21	-22.580	0.02	
7/31/17	19:00	15.29	-22,640	0.10	
7/31/17	20:00	15.40	-22,700	0.21	
7/31/17	21:00	15.32	-22,760	0.13	
7/31/17	22:00	15.22	-22,820	0.03	
7/31/17	23:00	15.20	-22,880	0.01	
8/1/17	0:00	15.22	-22,940	0.03	
8/1/17	1:00	15.27	-23,000	0.08	
8/1/17	2:00	15.38	-23,060	0.18	
8/1/17	3:00	15.26	-23,120	0.07	
8/1/17	4:00	15.28	-23,180	0.09	
8/1/17	5:00	15.28	-23,240	0.09	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
8/1/17	6:00	15.32	-23,300	0.13	
8/1/17	7:00	15.41	-23,360	0.22	
8/1/17	8:00	15.39	-23,420	0.20	
8/1/17	9:00	15.34	-23,480	0.15	
8/1/17	10:00	15.33	-23,540	0.14	
8/1/17	11:00	15.33	-23,600	0.14	
8/1/17	12:00	15.43	-23,660	0.24	
8/1/17	13:00	15.35	-23,720	0.16	
8/1/17	14:00	15.29	-23,780	0.10	
8/1/17	15:00	15.31	-23,840	0.12	
8/1/17	16:00	15.28	-23,900	0.09	
8/1/17	17:00	15.30	-23,960	0.11	
8/1/17	18:00	15.26	-24,020	0.07	
8/1/17	19:00	15.26	-24,080	0.07	
8/1/17	20:00	15.28	-24,140	0.09	
8/1/17	21:00	15.31	-24,200	0.12	
8/1/17	22:00	15.30	-24,260	0.11	
8/1/17	23:00	15.26	-24,320	0.07	
8/2/17	0:00	15.25	-24,380	0.06	
8/2/17	1:00	15.21	-24,440	0.02	
8/2/17	2:00	15.28	-24,500	0.09	
8/2/17	3:00	15.23	-24,560	0.04	
8/2/17	4:00	15.22	-24,620	0.03	
8/2/17	5:00	15.27	-24,680	0.08	
8/2/17	6:00	15.26	-24,740	0.07	
8/2/17	7:00	15.31	-24,800	0.11	
8/2/17	8:00	15.30	-24,860	0.11	
8/2/17	9:00	15.39	-24,920	0.20	
8/2/17	10:00	15.29	-24,980	0.10	
8/2/17	11:00	15.33	-25,040	0.14	
8/2/17	12:00	15.34	-25,100	0.13	
8/2/17	13:00	15.32	-23,100	0.13	
8/2/17	14.00	15.37	-25,220	0.18	
8/2/17	15.00	15.23	-25,280	0.19	
8/2/17	17.00	15.38	-25,340	0.19	
8/2/17	18.00	15.28	-25,460	0.09	
8/2/17	19.00	15.25	-25,520	0.04	
8/2/17	20:00	15.17	-25,580	-0.02	
8/2/17	21.00	15.26	-25 640	0.02	
8/2/17	22:00	15.27	-25,700	0.08	
8/2/17	23:00	15.27	-25.760	0.08	
8/3/17	0:00	15.21	-25.820	0.02	
8/3/17	1:00	15.19	-25,880	0.00	
8/3/17	2:00	15.15	-25,940	-0.04	
8/3/17	3:00	15.18	-26,000	-0.01	
8/3/17	4:00	15.24	-26,060	0.04	
8/3/17	5:00	15.21	-26,120	0.02	
8/3/17	6:00	15.29	-26,180	0.09	
8/3/17	7:00	15.32	-26,240	0.13	
8/3/17	8:00	15.36	-26,300	0.17	
8/3/17	9:00	15.38	-26,360	0.19	
8/3/17	10:00	15.29	-26,420	0.10	
8/3/17	11:00	15.37	-26,480	0.18	

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Summary of Water-Level Measurements from Pressure Transducer Installed in Well C-16 Collected During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
8/3/17	12:00	15.36	-26,540	0.17	
8/3/17	13:00	15.29	-26,600	0.09	
8/3/17	14:00	15.31	-26,660	0.12	
8/3/17	15:00	15.20	-26,720	0.01	
8/3/17	16:00	15.23	-26,780	0.04	
8/3/17	17:00	15.21	-26,840	0.02	
8/3/17	18:00	15.14	-26,900	-0.05	
8/3/17	19:00	15.21	-26,960	0.02	
8/3/17	20:00	15.18	-27,020	-0.01	
8/3/17	21:00	15.22	-27,080	0.03	
8/3/17	22:00	15.23	-27,140	0.04	
8/3/17	23:00	15.26	-27,200	0.07	

ft btoc feet below top of casing

gpm gallons per minute

H:\Lake Anne\Clovewood\2017\July Pumping Test Report\C-16 Table.docx

C-21



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LBG Hydrogeologic & Engineering Services, P.C.



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LBG Hydrogeologic & Engineering Services, P.C.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/6/17	14:00	49.09			Pressure transducer installed in well.
7/6/17	15:00	49.00			
7/6/17	16:00	48.97			
7/6/17	17:00	48.95			
7/6/17	18:00	48.94			
7/6/17	19:00	48.95			
7/6/17	20:00	48.96			
7/6/17	21:00	48.99			
7/6/17	22:00	49.00			
7/6/17	23:00	49.02			
7/7/17	0:00	49.01			
7/7/17	1:00	49.02			
7/7/17	2:00	49.01			
7/7/17	3:00	49.02			
7/7/17	4:00	49.02			
7/7/17	5:00	49.04			
7/7/17	6:00	49.07			
7/7/17	7:00	49.12			
7/7/17	8:00	49.17			
7/7/17	9:00	49.22			
7/7/17	10:00	49.26			
7/7/17	11:00	49.29			
7/7/17	12:00	49.31			
7/7/17	13:00	49.36			
7/7/17	14:00	49.27			
7/7/17	15:00	49.23			
7/7/17	16:00	49.21			
7/7/17	17:00	49.17			
7/7/17	18:00	49.16			
7/7/17	19:00	49.14			
7/7/17	20:00	49.15			
7/7/17	21:00	49.18			
7/7/17	22:00	49.18			
7/7/17	23:00	49.18			
7/8/17	0:00	49.18			
7/8/17	1:00	49.18			
7/8/17	2:00	49.16			
7/8/17	3:00	49.13			
7/8/17	4:00	49.11			
7/8/17	5:00	49.11			
7/8/17	6:00	49.11			
7/8/17	7:00	49.15			
7/8/17	8:00	49.19			
7/8/17	9:00	49.24			
7/8/17	10:00	49.30			
7/8/17	11:00	49.33			
7/8/17	12:00	49.35			
7/8/17	13:00	49.34			
7/8/17	14:00	49.31			
7/8/17	15:00	49.28			
7/8/17	16:00	49.24			
7/8/17	17:00	49.18			
7/8/17	18:00	49.14			
7/8/17	19:00	49.12			

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/8/17	20:00	49.10			
7/8/17	21:00	49.11			
7/8/17	22:00	49.11			
7/8/17	23:00	49.11			
7/9/17	0:00	49.11			
7/9/17	1:00	49.11			
7/9/17	2:00	49.07			
7/9/17	3:00	49.04			
7/9/17	4:00	49.02			
7/9/17	5:00	48.99			
7/9/17	6:00	48.99			
7/9/17	7:00	48.99			
7/9/17	8:00	49.01			
7/9/17	9:00	49.08			
7/9/17	10:00	49.14			
7/9/17	11:00	49.19			
7/9/17	12:00	49.21			
7/9/17	13:00	49.22			
7/9/17	14:00	49.21			
7/9/17	15:00	49.19			
7/9/17	16:00	49.14			
7/9/17	17:00	49.10			
7/9/17	18:00	49.08			
7/9/17	19:00	49.05			
7/9/17	20:00	49.07			
7/9/17	21:00	49.07			
//9/1/	22:00	49.09			
//9/1/	23:00	49.10			
7/10/17	0:00	49.10			
7/10/17	1:00	49.09			
7/10/17	2:00	49.07			
7/10/17	3:00	49.04			
7/10/17	4:00	49.03			
7/10/17	6.00	49.00			
7/10/17	7.00	49.00			
7/10/17	8.00	49.02			
7/10/17	9.00	49.08			
7/10/17	10:00	49.13			
7/10/17	11:00	49.19			
7/10/17	11:54	49.30			
7/10/17	11:55	71.44	1	22.14	Pump in well C-21 started.
7/10/17	11:56	81.00	2	31.70	Pumping rate adjusted to 138 gpm.
7/10/17	11:57	82.80	3	33.50	
7/10/17	11:58	82.82	4	33.52	
7/10/17	11:59	83.08	5	33.78	Pumping rate in well C-21 138 gpm.
7/10/17	12:00	82.16	6	32.86	
7/10/17	12:01	81.71	7	32.41	
7/10/17	12:02	81.78	8	32.48	
7/10/17	12:03	81.94	9	32.64	
7/10/17	12:04	82.37	10	33.07	
7/10/17	12:05	82.45	11	33.15	Pumping rate in well C-21 138 gpm.
7/10/17	12:06	82.71	12	33.41	
7/10/17	12:07	83.36	13	34.06	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/10/17	12:08	83.57	14	34.27	
7/10/17	12:09	83.71	15	34.41	
7/10/17	12:10	84.08	16	34.78	Pumping rate in well C-21 138 gpm.
7/10/17	12:15	85.53	21	36.23	
7/10/17	12:20	86.53	26	37.23	Pumping rate in well C-21 138 gpm.
7/10/17	12:25	87.46	31	38.16	
7/10/17	12:30	88.20	36	38.90	Pumping rate in well C-21 138 gpm.
7/10/17	12:35	89.24	41	39.94	
7/10/17	12:40	89.72	46	40.42	Pumping rate in well C-21 138 gpm.
7/10/17	12:45	90.41	51	41.11	
7/10/17	12:50	90.95	56	41.65	Pumping rate in well C-21 138 gpm.
7/10/17	12:55	91.46	61	42.16	
7/10/17	13:00	92.29	66	42.99	Pump in well C-23 started at 12:59.
7/10/17	14:00	100.37	126	51.07	
7/10/17	15:00	105.87	186	56.57	Pumping rate in well C-21 138 gpm.
7/10/17	16:00	110.27	246	60.97	
7/10/17	17:00	114.33	306	65.03	Pump in well C-14 started at 16:24.
7/10/17	18:00	117.68	366	68.38	Pump in well C-16 started at 17:31.
7/10/17	19:00	120.76	426	71.46	Pump in well C-6 started at 18:35.
7/10/17	20:00	123.55	486	74.25	Pump in well C-12 started at 19:48.
7/10/17	21:00	126.23	546	76.93	Pump in well C-7B started at 21:03.
7/10/17	22:00	128.56	606	79.26	
7/10/17	23:00	130.77	666	81.47	Pumping rate in well C-21 137 gpm.
7/11/17	0:00	132.59	726	83.29	
7/11/17	1:00	133.85	786	84.55	Pumping rate in well C-21 137 gpm.
7/11/17	1:37	115.70	823	66.40	Generator shut down.
7/11/17	2:00	102.97	846	53.67	
7/11/17	2:53	111.62	899	62.32	Generator restarted.
7/11/17	3:00	125.31	906	76.01	Pumping rate in well C-21 142 gpm.
7/11/17	4:00	134.30	966	85.00	
7/11/17	5:00	137.74	1,026	88.44	Pumping rate in well C-21 142 gpm.
7/11/17	6:00	139.74	1,086	90.44	
7/11/17	7:00	141.87	1,146	92.57	
7/11/17	8:00	143.17	1,206	93.87	Pumping rate in well C-21 140 gpm.
7/11/17	9:00	143.82	1,266	94.52	Pumping rate in well C-21 140 gpm.
7/11/17	9:38	133.39	1,304	84.09	Generator shut down.
7/11/17	9:41	113.63	1,307	64.33	Generator restarted.
7/11/17	10:00	143.77	1,326	94.47	Pumping rate in well C-21 140 gpm.
7/11/17	10:31	121.74	1,357	72.44	Generator shut down.
7/11/17	10:32	139.56	1,358	90.26	Generator restarted.
//11/1/	11:00	145.41	1,386	96.11	Pumping rate in well C-21 140 gpm.
//11/1/	12:00	145.98	1,446	96.68	Pumping rate in well C-21 140 gpm.
7/11/17	13:00	144.95	1,506	95.65	Pumping rate in well C-21 140 gpm.
7/11/17	13:45	138.34	1,551	89.04	Generator shut down.
7/11/17	14:00	115.47	1,566	66.17	
7/11/17	14:29	130.79	1,595	81.49	Generator restarted.
//11/17	15:00	143.98	1,626	94.68	Pumping rate in well C-21 140 gpm.
7/11/17	16:00	14/.5/	1,686	98.27	Pumping rate in well C-21 140 gpm.
7/11/17	17:00	149.69	1,/46	100.39	Pumping rate in well C-21 140 gpm.
7/11/17	18:00	150.70	1,806	101.40	Pumping rate in well C-21 140 gpm.
7/11/17	18:42	132.95	1,848	83.65	Generator shut down.
7/11/17	19:00	122.07	1,866	72.77	
7/11/17	20:00	114.32	1,926	65.02	
7/11/17	20:20	110.44	1,946	61.14	Generator restarted.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/11/17	21:00	143.85	1,986	94.55	Pumping rate in well C-21 140 gpm.
7/11/17	22:00	148.24	2,046	98.94	Pumping rate in well C-21 140 gpm.
7/11/17	23:00	150.39	2,106	101.09	Pumping rate in well C-21 140 gpm.
7/12/17	0:00	152.06	2,166	102.76	Pumping rate in well C-21 140 gpm.
7/12/17	1:00	153.28	2,226	103.98	Pumping rate in well C-21 140 gpm.
7/12/17	2:00	154.27	2,286	104.97	Pumping rate in well C-21 140 gpm.
7/12/17	3:00	155.12	2,346	105.82	Pumping rate in well C-21 140 gpm.
7/12/17	4:00	155.85	2,406	106.55	Pumping rate in well C-21 140 gpm.
7/12/17	5:00	156.46	2,466	107.16	Pumping rate in well C-21 140 gpm.
7/12/17	6:00	156.83	2,526	107.53	Pumping rate in well C-21 140 gpm.
7/12/17	6:49	148.04	2,575	98.74	Generator shut down.
7/12/17	6:56	149.90	2,582	100.60	Generator restarted.
7/12/17	7:00	155.47	2,586	106.17	Pumping rate in well C-21 140 gpm.
7/12/17	8:00	157.72	2,646	108.42	Pumping rate in well C-21 140 gpm.
7/12/17	9:00	158.48	2,706	109.18	Pumping rate in well C-21 140 gpm.
7/12/17	10:00	158.96	2,766	109.66	Pumping rate in well C-21 140 gpm.
7/12/17	11:00	159.48	2,826	110.18	Pumping rate in well C-21 140 gpm.
7/12/17	11:56	160.22	2,882	110.92	Pump in well C-21 shut down, test on well C-21 ended.
7/12/17	11:57	143.46	-1	94.16	
7/12/17	11:58	136.90	-2	87.60	
7/12/17	11:59	136.68	-3	87.38	
7/12/17	12:00	136.67	-4	87.37	
7/12/17	12:01	136.12	-5	86.82	
7/12/17	12:02	135.54	-6	86.24	
7/12/17	12:03	135.00	-7	85.70	
7/12/17	12:04	134.52	-8	85.22	
7/12/17	12:05	134.14	-9	84.84	
7/12/17	12:06	133.75	-10	84.45	
7/12/17	12:07	133.36	-11	84.06	
7/12/17	12:08	133.02	-12	83.72	
7/12/17	12:09	132.68	-13	83.38	
7/12/17	12:10	132.39	-14	83.09	
7/12/17	12:11	132.08	-15	82.78	
7/12/17	12:12	131.79	-16	82.49	
7/12/17	12:13	131.58	-17	82.28	
7/12/17	12:14	131.26	-18	81.96	
7/12/17	12:15	131.02	-19	81.72	
7/12/17	12:20	129.94	-24	80.64	
7/12/17	12:25	128.90	-29	79.60	
7/12/17	12:30	128.07	-34	78.77	
7/12/17	12:35	127.28	-39	77.98	
7/12/17	12:40	126.56	-44	77.26	
7/12/17	12:45	125.89	-49	76.59	
7/12/17	12:50	125.26	-54	75.96	
7/12/17	12:55	124.69	-59	75.39	
7/12/17	13:00	124.14	-64	74.84	
7/12/17	14:00	119.48	-124	70.18	
7/12/17	15:00	116.53	-184	67.23	
7/12/17	16:00	114.36	-244	65.06	
7/12/17	17:00	112.63	-304	63.33	
7/12/17	18:00	111.18	-364	61.88	
7/12/17	19:00	109.94	-424	60.64	
7/12/17	20:00	108.89	-484	59.59	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/12/17	21:00	107.97	-544	58.67	
7/12/17	22:00	107.16	-604	57.86	
7/12/17	23:00	106.48	-664	57.18	
7/13/17	0:00	105.85	-724	56.55	
7/13/17	1:00	105.29	-784	55.99	
7/13/17	2:00	104.78	-844	55.48	
7/13/17	3:00	104.29	-904	54.99	
7/13/17	4:00	103.85	-964	54.55	
7/13/17	5:00	103.41	-1,024	54.11	
7/13/17	6:00	103.01	-1,084	53.71	
7/13/17	7:00	102.67	-1,144	53.37	
7/13/17	8:00	102.36	-1,204	53.06	
7/13/17	9:00	102.08	-1,264	52.78	
7/13/17	10:00	101.85	-1,324	52.55	
7/13/17	11:00	101.65	-1,384	52.35	
7/13/17	12:00	101.46	-1,444	52.16	
7/13/17	13:00	101.28	-1,504	51.98	
7/13/17	14:00	101.08	-1,564	51.78	
7/13/17	15:00	100.90	-1,624	51.60	
7/13/17	16:00	100.70	-1,684	51.40	
7/13/17	17:00	100.52	-1,744	51.22	
7/13/17	18:00	100.36	-1,804	51.06	
7/13/17	19:00	100.20	-1,864	50.90	
7/13/17	20:00	100.05	-1,924	50.75	
7/13/17	21:00	99.88	-1,984	50.58	
7/13/17	22:00	99.77	-2,044	50.47	
7/13/17	23:00	99.70	-2,104	50.40	
7/14/17	0:00	99.62	-2,164	50.32	
7/14/17	1:00	99.56	-2,224	50.26	
7/14/17	2:00	99.51	-2,284	50.21	
//14/1/	3:00	99.42	-2,344	50.12	
7/14/17	4:00	99.33	-2,404	50.03	
7/14/17	5:00	99.23	-2,404	49.93	
7/14/17	0:00	99.17	-2,324	49.8/	
7/14/17	/:00	99.04	-2,584	49.74	
7/14/17	0.00	96.96	-2,044	49.00	
7/14/17	9:00	98.92	-2,704	49.62	
7/14/17	11.00	98.90	-2,704	49.00	
7/14/17	12.00	98.00	-2,024	49.50	
7/14/17	12.00	98.87	-2,004	49.57	
7/14/17	14.00	98.87	-3,004	49 57	
7/14/17	15.00	98.85	-3 064	49.55	
7/14/17	16:00	98.83	-3.124	49.53	
7/14/17	17:00	98.80	-3,184	49.50	
7/14/17	18:00	98.74	-3,244	49.44	
7/14/17	19:00	98.71	-3,304	49.41	
7/14/17	20:00	98.66	-3,364	49.36	
7/14/17	21:00	98.65	-3,424	49.35	
7/14/17	22:00	98.60	-3,484	49.30	
7/14/17	23:00	98.61	-3,544	49.31	
7/15/17	0:00	98.65	-3,604	49.35	
7/15/17	1:00	98.64	-3,664	49.34	
7/15/17	2:00	98.67	-3,724	49.37	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/15/17	3:00	98.66	-3,784	49.36	
7/15/17	4:00	98.69	-3,844	49.39	
7/15/17	5:00	98.66	-3,904	49.36	
7/15/17	6:00	98.67	-3,964	49.37	
7/15/17	7:00	98.70	-4,024	49.40	
7/15/17	8:00	98.63	-4,084	49.33	
7/15/17	9:00	98.63	-4,144	49.33	
7/15/17	10:00	98.67	-4,204	49.37	
7/15/17	11:00	98.69	-4,264	49.39	
7/15/17	12:00	98.73	-4,324	49.43	
7/15/17	13:00	98.77	-4,384	49.47	
7/15/17	14:00	98.80	-4,444	49.50	
7/15/17	15:00	98.81	-4,504	49.51	
7/15/17	16:00	98.82	-4,564	49.52	
7/15/17	17:00	98.84	-4,624	49.54	
7/15/17	18:00	98.84	-4,684	49.54	
7/15/17	19:00	98.89	-4,744	49.59	
7/15/17	20:00	98.81	-4,804	49.51	
7/15/17	21:00	98.81	-4,864	49.51	
7/15/17	22:00	98.79	-4,924	49.49	
7/15/17	23:00	98.81	-4,984	49.51	
7/16/17	0:00	98.86	-5,044	49.56	
7/16/17	1:00	98.89	-5,104	49.59	
7/16/17	1:09	98.89	-5,113	49.59	Shut down of simultaneous pumping test (wells C-6, 12, 14,16, and 23).
7/16/17	2:00	98.28	-5,164	48.98	
7/16/17	3:00	94.74	-5,224	45.44	
7/16/17	4:00	92.58	-5,284	43.28	
7/16/17	5:00	90.93	-5,344	41.63	
7/16/17	6:00	89.54	-5,404	40.24	
7/16/17	7:00	88.32	-5,464	39.02	
7/16/17	8:00	87.26	-5,524	37.96	
7/16/17	9:00	86.30	-5,584	37.00	
7/16/17	10:00	85.43	-5,644	36.13	
7/16/17	11:00	84.67	-5,704	35.37	
7/16/17	12:00	83.89	-5,764	34.59	
7/16/17	13:00	83.18	-5,824	33.88	
7/16/17	14:00	82.55	-5,884	33.25	
7/16/17	15:00	81.93	-5,944	32.63	
7/16/17	16:00	81.40	-6,004	32.10	
7/16/17	17:00	80.83	-6,064	31.53	
7/16/17	18:00	80.28	-6,124	30.98	
7/16/17	19:00	79.75	-6,184	30.45	
7/16/17	20:00	79.22	-6,244	29.92	
7/16/17	21:00	78.72	-6,304	29.42	
7/16/17	22:00	78.23	-6,364	28.93	
7/16/17	23:00	77.77	-6,424	28.47	
7/17/17	0:00	77.34	-6,484	28.04	
7/17/17	1:00	76.92	-6,544	27.62	
7/17/17	2:00	76.53	-6,604	27.23	
7/17/17	3:00	76.15	-6,664	26.85	
7/17/17	4:00	75.80	-6,724	26.50	
7/17/17	5:00	75.44	-6,784	26.14	
7/17/17	6:00	75.07	-6,844	25.77	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/17/17	7:00	74.69	-6,904	25.39	
7/17/17	8:00	74.33	-6,964	25.03	
7/17/17	9:00	73.98	-7,024	24.68	
7/17/17	10:00	73.62	-7,084	24.32	
7/17/17	11:00	73.28	-7,144	23.98	
7/17/17	12:00	72.94	-7,204	23.64	
7/17/17	13:00	72.65	-7,264	23.35	
7/17/17	14:00	72.34	-7,324	23.04	
7/17/17	15:00	72.03	-7,384	22.73	
7/17/17	16:00	71.75	-7,444	22.45	
7/17/17	17:00	71.47	-7,504	22.17	
7/17/17	18:00	71.17	-7,564	21.87	
7/17/17	19:00	70.89	-7,624	21.59	
7/17/17	20:00	70.56	-7,684	21.26	
7/17/17	21:00	70.33	-7,744	21.03	
7/17/17	22:00	70.03	-7,804	20.73	
7/17/17	23:00	69.75	-7,864	20.45	
7/18/17	0:00	69.48	-7,924	20.18	
7/18/17	1:00	69.24	-7,984	19.94	
7/18/17	2:00	69.01	-8,044	19.71	
7/18/17	3:00	68.81	-8,104	19.51	
7/18/17	4:00	68.58	-8,164	19.28	
7/18/17	5:00	68.38	-8,224	19.08	
7/18/17	6:00	68.18	-8,284	18.88	
7/18/17	7:00	67.95	-8,344	18.65	
7/18/17	8:00	67.73	-8,404	18.43	
7/18/17	9:00	67.50	-8,464	18.20	
7/18/17	10:00	67.27	-8,524	17.97	
7/18/17	11:00	67.04	-8,584	17.74	
7/18/17	12:00	66.80	-8,644	17.50	
//18/1/	13:00	66.58	-8,704	17.28	
7/18/17	14:00	66.17	-8,/64	1/.0/	
7/18/17	15:00	65.09	-8,824	16.8/	
7/18/17	10:00	65.70	-0,004	16.08	
7/18/17	17:00	65.61	-8,944	16.49	
7/18/17	10.00	65.42	-9,004	16.12	
7/18/17	20.00	65.22	-9,004	15.02	
7/18/17	20.00	64.99	-9,124	15.69	
7/18/17	21.00	64.84	_0 244	15.09	
7/18/17	22.00	64 64	-9,244	15.34	
7/19/17	0.00	64.47	-9 364	15.17	
7/19/17	1.00	64.28	-9 424	14.98	
7/19/17	2.00	64.11	-9 484	14.81	
7/19/17	3:00	63.96	-9.544	14.66	
7/19/17	4:00	63.80	-9,604	14 50	
7/19/17	5:00	63,68	-9,664	14.38	
7/19/17	6:00	63,54	-9.724	14.24	
7/19/17	7:00	63.41	-9.784	14.11	
7/19/17	8:00	63.27	-9.844	13.97	
7/19/17	9:00	63,13	-9.904	13.83	
7/19/17	10:00	62,97	-9.964	13.67	
7/19/17	11:00	62.77	-10.024	13.47	
7/19/17	17:06	61.51	-10,036	12.21	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/19/17	18:00	61.45	-10,090	12.15	
7/19/17	19:00	61.35	-10,150	12.05	
7/19/17	20:00	61.21	-10,210	11.91	
7/19/17	21:00	61.08	-10,270	11.78	
7/19/17	22:00	60.90	-10,330	11.60	
7/19/17	23:00	60.78	-10,390	11.48	
7/20/17	0:00	60.62	-10,450	11.32	
7/20/17	1:00	60.48	-10,510	11.18	
7/20/17	2:00	60.34	-10,570	11.04	
7/20/17	3:00	60.23	-10,630	10.93	
7/20/17	4:00	60.11	-10,690	10.81	
7/20/17	5:00	60.05	-10,750	10.75	
7/20/17	6:00	59.91	-10,810	10.61	
7/20/17	7:00	59.87	-10,870	10.57	
7/20/17	8:00	59.79	-10,930	10.49	
7/20/17	9:00	59.70	-10,990	10.40	
7/20/17	10:00	59.60	-11,050	10.30	
7/20/17	11:00	59.47	-11,110	10.17	
7/20/17	12:00	59.38	-11,170	10.08	
7/20/17	13:00	59.21	-11,230	9.91	
7/20/17	14:00	59.06	-11,290	9.76	
7/20/17	15:00	58.91	-11,350	9.61	
7/20/17	16:00	58.78	-11,410	9.48	
7/20/17	17:00	58.64	-11,470	9.34	
7/20/17	18:00	58.54	-11,530	9.24	
7/20/17	19:00	58.45	-11,590	9.15	
7/20/17	20:00	58.40	-11,650	9.10	
7/20/17	21:00	58.28	-11,710	8.98	
7/20/17	22:00	58.17	-11,770	8.87	
7/20/17	23:00	58.11	-11,830	8.81	
7/21/17	0:00	57.93	-11,890	8.63	
7/21/17	1:00	57.82	-11,950	8.52	
7/21/17	2:00	57.73	-12,010	8.43	
7/21/17	3:00	57.61	-12,070	8.31	
7/21/17	4:00	57.51	-12,130	8.21	
7/21/17	5:00	57.42	-12,190	8.12	
7/21/17	6:00	57.39	-12,250	8.09	
7/21/17	7:00	57.32	-12,310	8.02	
7/21/17	8:00	57.27	-12,370	7.97	
7/21/17	9:00	57.26	-12,430	7.96	
7/21/17	10:00	57.20	-12,490	7.90	
7/21/17	11:00	57.16	-12,550	7.86	
7/21/17	12:00	57.05	-12,610	7.75	
7/21/17	13:00	56.96	-12,670	7.66	
7/21/17	14:00	56.80	-12,730	7.50	
7/21/17	15:00	56.75	-12,790	7.45	
7/21/17	16:00	56.56	-12,850	7.26	
7/21/17	17:00	56.43	-12,910	7.13	
7/21/17	18:00	56.37	-12,970	7.07	
7/21/17	19:00	56.31	-13,030	7.01	
7/21/17	20:00	56.31	-13,090	7.01	
7/21/17	21:00	56.22	-13,150	6.92	
7/21/17	22:00	56.18	-13,210	6.88	
7/21/17	23:00	56.09	-13,270	6.79	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/22/17	0:00	56.04	-13,330	6.74	
7/22/17	1:00	55.95	-13,390	6.65	
7/22/17	2:00	55.85	-13,450	6.55	
7/22/17	3:00	55.76	-13,510	6.46	
7/22/17	4:00	55.69	-13,570	6.39	
7/22/17	5:00	55.61	-13,630	6.31	
7/22/17	6:00	55.59	-13,690	6.29	
7/22/17	7:00	55.57	-13,750	6.27	
7/22/17	8:00	55.50	-13,810	6.20	
7/22/17	9:00	55.51	-13,870	6.21	
7/22/17	10:00	55.48	-13,930	6.18	
7/22/17	11:00	55.44	-13,990	6.14	
7/22/17	12:00	55.37	-14,050	6.07	
7/22/17	13:00	55.27	-14,110	5.97	
7/22/17	14:00	55.18	-14,170	5.88	
7/22/17	15:00	55.05	-14,230	5.75	
7/22/17	16:00	54.91	-14,290	5.61	
7/22/17	17:00	54.81	-14,350	5.51	
7/22/17	18:00	54.77	-14,410	5.47	
7/22/17	19:00	54.66	-14,470	5.36	
7/22/17	20:00	54.65	-14,530	5.35	
7/22/17	21:00	54.58	-14,590	5.28	
7/22/17	22:00	54.55	-14,650	5.25	
7/22/17	23:00	54.50	-14,710	5.20	
7/23/17	0:00	54.47	-14,770	5.17	
7/23/17	1:00	54.41	-14,830	5.11	
7/23/17	2:00	54.32	-14,890	5.02	
7/23/17	3:00	54.20	-14,950	4.90	
7/23/17	4:00	54.14	-15,010	4.84	
7/23/17	5:00	54.07	-15,070	4.77	
7/23/17	6:00	54.05	-15,130	4.75	
7/23/17	7:00	54.02	-15,190	4.72	
7/23/17	8:00	54.00	-15,250	4.70	
7/23/17	9:00	54.06	-15,310	4.76	
7/23/17	10:00	54.04	-15,370	4.74	
7/23/17	11:00	54.04	-15,430	4.74	
7/23/17	12:00	54.02	-15,490	4.72	
7/23/17	13:00	53.93	-15,550	4.63	
7/23/17	14:00	53.85	-15,610	4.55	
7/23/17	15:00	53.81	-15,670	4.51	
7/23/17	16:00	53.69	-15,730	4.39	
//23/17	1/:00	53.60	-15,790	4.30	
7/23/17	18:00	53.51	-15,850	4.21	
7/23/17	19:00	53.47	-15,910	4.17	
7/22/17	20:00	52.44	-15,970	4.11	
7/22/17	21:00	52 20	-10,030	4.14	
7/22/17	22:00	53.20	-10,090	4.00	
7/20/17	0.00	53.39	-10,130	4.09	
7/24/17	1.00	53.25	-16 270	3.08	
7/24/17	2.00	53.20	-16 330	3.96	
7/24/17	3.00	53 15	-16 390	3.85	
7/24/17	4.00	53.07	-16 450	3 77	
7/24/17	5:00	53.00	-16,510	3.70	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/24/17	6:00	52.99	-16,570	3.69	
7/24/17	7:00	52.92	-16,630	3.62	
7/24/17	8:00	52.89	-16,690	3.59	
7/24/17	9:00	52.91	-16,750	3.61	
7/24/17	10:00	52.95	-16,810	3.65	
7/24/17	11:00	52.98	-16,870	3.68	
7/24/17	12:00	52.92	-16,930	3.62	
7/24/17	13:00	52.96	-16,990	3.66	
7/24/17	14:00	52.84	-17,050	3.54	
7/24/17	15:00	52.72	-17,110	3.42	
7/24/17	16:00	52.68	-17,170	3.38	
7/24/17	17:00	52.62	-17.230	3.32	
7/24/17	18:00	52.53	-17,290	3.23	
7/24/17	19:00	52.46	-17,350	3.16	
7/24/17	20:00	52.43	-17.410	3.13	
7/24/17	21:00	52.36	-17,470	3.06	
7/24/17	22:00	52.38	-17.530	3.08	
7/24/17	23:00	52.35	-17,590	3.05	
7/25/17	0:00	52.36	-17,650	3.06	
7/25/17	1:00	52.34	-17.710	3.04	
7/25/17	2:00	52.28	-17.770	2.98	
7/25/17	3:00	52.24	-17.830	2.94	
7/25/17	4:00	52.19	-17,890	2.89	
7/25/17	5:00	52.14	-17.950	2.84	
7/25/17	6.00	52.09	-18 010	2 79	
7/25/17	7:00	52.07	-18,070	2.77	
7/25/17	8:00	52.07	-18,130	2.77	
7/25/17	9.00	52.05	-18 190	2 75	
7/25/17	10:00	52.09	-18,250	2.79	
7/25/17	11.00	52.07	-18 310	2 77	
7/25/17	11:43	52.11	-18,353	2.81	
7/25/17	11:44	69.35	1	17.24	Pump in well C-21 started.
7/25/17	11:45	80.04	2	27.93	Pumping rate adjusted to 173 gpm.
7/25/17	11:46	82.48	3	30.37	
7/25/17	11:47	83.62	4	31.51	
7/25/17	11:48	84.30	5	32.19	
7/25/17	11:49	84.85	6	32.74	
7/25/17	11:50	85.17	7	33.06	Pumping rate in well C-21 173 gpm.
7/25/17	11:51	84.91	8	32.80	
7/25/17	11:52	84.94	9	32.83	
7/25/17	11:53	84.65	10	32.54	
7/25/17	11:54	84.12	11	32.01	
7/25/17	11:55	84.14	12	32.03	Pumping rate in well C-21 173 gpm.
7/25/17	11:56	84.50	13	32.39	
7/25/17	11:57	84.71	14	32.60	
7/25/17	11:58	84.47	15	32.36	
7/25/17	11:59	84.52	16	32.41	
7/25/17	12:00	84.70	17	32.59	Pumping rate in well C-21 173 gpm.
7/25/17	12:05	85.74	22	33.63	
7/25/17	12:10	86.91	27	34.80	Pumping rate in well C-21 173 gnm.
7/25/17	12:15	87.73	32	35.62	
7/25/17	12:20	88.43	37	36.32	Pumping rate in well C-21 173 gnm.
7/25/17	12:25	89.27	42	37.16	
7/25/17	12.23	90.027	47	37.91	Pumping rate in well C-21 173 gpm
1120111	12.50	20.02	• /	51.71	r umping rute in tren e 21 175 gpin.

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72517 12.35 90.68 52 38.57 72517 12.40 91.15 57 39.04 Pumping rate in well C-21 173 gpm. 72517 12.00 93.45 77 41.34 Pumping rate in well C-21 173 gpm. 72517 15.00 101.56 197 49.45 Pumping rate in well C-21 173 gpm. 72517 17.00 10.67 53.17 54.64 Pumping rate in well C-21 163 gpm. 72517 17.00 10.67 437 58.46 Pumping rate in well C-21 163 gpm. 72517 12.00 110.57 437 58.46 Pumping rate in well C-21 163 gpm. 72517 12.00 115.23 61.7 64.52 Pumping rate in well C-21 163 gpm. 72517 12.00 115.23 61.7 64.52 Pumping rate in well C-21 163 gpm. 72617 1.00 118.06 737 65.95 Pumping rate in well C-21 163 gpm. 72617 1.00 118.06 737 65.95 Pumping rate in well C-21 163 gpm. 72617 1.00 1	Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
72517 12:40 91.15 57 39.04 Pumping rate in well C-21 173 gpm. 72517 12:45 91.88 62 39.77 72517 12:40 98.20 137 46.09 72517 16:00 101.56 197 49.45 Pumping rate in well C-21 173 gpm. 72517 16:00 104.51 257 52.20 7 72517 16:00 106.51 317 54.64 Pumping rate in well C-21 173 gpm. 72517 10:00 110.57 437 58.46 Pumping rate in well C-21 165 gpm. 72517 10:00 111.30 557 61.69 Pumping rate in well C-21 165 gpm. 72517 12:00 115.63 617 63.12 Pumping rate in well C-21 165 gpm. 72517 12:00 118.66 737 65.95 Pumping rate in well C-21 165 gpm. 72617 10:00 119.15 797 67.04 Pumping rate in well C-21 165 gpm. 72617 10:00 121.52 917 69.41 Pumping rate in	7/25/17	12:35	90.68	52	38.57	
725/17 12.45 91.88 62 39.77 725/17 12.00 95.45 77 41.34 Pumping rate in well C-21 173 gpm. 725/17 15.00 101.56 197 49.45 Pumping rate in well C-21 173 gpm. 725/17 15.00 106.55 317 54.64 Pumping rate in well C-21 163 gpm. 725/17 15.00 106.65 317 54.64 Pumping rate in well C-21 163 gpm. 725/17 15.00 101.67 497 59.96 Pumping rate in well C-21 163 gpm. 725/17 12.00 112.07 497 59.96 Pumping rate in well C-21 163 gpm. 725/17 12.00 115.33 61.7 64.52 Pumping rate in well C-21 163 gpm. 726/17 10.00 118.06 737 65.95 Pumping rate in well C-21 163 gpm. 726/17 10.00 119.15 797 67.04 Pumping rate in well C-21 163 gpm. 726/17 10.00 123.48 1,037 71.37 Pumping rate in well C-21 163 gpm. 726/17 10.00<	7/25/17	12:40	91.15	57	39.04	Pumping rate in well C-21 173 gpm.
725/17 13:00 93:45 77 41.34 Pumping rate in well C-21 173 gpm. 725/17 15:00 101.56 197 49.45 Pumping rate in well C-21 173 gpm. 725/17 16:00 104.31 257 52.20 Temping rate in well C-21 173 gpm. 725/17 16:00 106.61 377 55:60 Pumping rate in well C-21 163 gpm. 725/17 18:00 108.61 377 55:60 Pumping rate in well C-21 163 gpm. 725/17 12:00 112.07 497 59:96 Pumping rate in well C-21 163 gpm. 725/17 12:00 115.63 617 61.42 Pumping rate in well C-21 163 gpm. 725/17 12:00 115.63 617 64.52 Pumping rate in well C-21 163 gpm. 726/17 10:00 118.06 737 65.95 Pumping rate in well C-21 163 gpm. 726/17 10:00 120.20 857 66.09 Pumping rate in well C-21 163 gpm. 726/17 10:00 121.52 917 60.41 Pumping rate in well C-21 163 gpm.	7/25/17	12:45	91.88	62	39.77	
125/17 14:00 98:20 137 46:09 1725/17 15:00 101.56 197 49:45 Pumping rate in well C-21 173 gpm. 1725/17 17:00 106:75 317 55:60 Pumping rate in well C-21 163 gpm. 1725/17 18:00 110:57 437 55:46 Pumping rate in well C-21 163 gpm. 1725/17 19:00 110:57 437 55:46 Pumping rate in well C-21 163 gpm. 1725/17 19:00 110:57 437 55:46 Pumping rate in well C-21 163 gpm. 1725/17 20:00 115:23 617 65:12 Pumping rate in well C-21 163 gpm. 1726/17 10:00 118:16 737 65:95 Pumping rate in well C-21 163 gpm. 1726/17 10:00 119:15 797 67:04 Pumping rate in well C-21 163 gpm. 1726/17 10:00 12:12 917 69:41 Pumping rate in well C-21 163 gpm. 1726/17 10:00 12:43 977 73:12 Pumping rate in well C-21 163 gpm. 1726/17 <	7/25/17	13:00	93.45	77	41.34	Pumping rate in well C-21 173 gpm.
725/17 15:00 101.56 197 49.45 Pumping rate in well C-21 173 gpm. 725/17 16:00 104.31 257 52.00 Pumping rate in well C-21 163 gpm. 725/17 18:00 108.61 377 56.50 Pumping rate in well C-21 163 gpm. 725/17 19:00 110.57 437 58.46 Pumping rate in well C-21 163 gpm. 725/17 20:00 113.80 557 61.69 Pumping rate in well C-21 163 gpm. 725/17 20:00 118.06 737 65.95 Pumping rate in well C-21 163 gpm. 726/17 10:00 119.15 797 67.04 Pumping rate in well C-21 163 gpm. 726/17 10:00 112.52 917 69.41 Pumping rate in well C-21 163 gpm. 726/17 20:00 122.43 977 70.32 Pumping rate in well C-21 163 gpm. 726/17 50:00 123.44 1,037 71.37 Pumping rate in well C-21 163 gpm. 726/17 60:00 124.52 1,157 73.12 Pumping rate in well C-21 163 gpm.	7/25/17	14:00	98.20	137	46.09	
125/17 16:00 104.31 257 52.0 725/17 17:00 106.75 317 56.60 Pumping rate in well C-21163 gpm. 725/17 19:00 110.57 437 58.66 Pumping rate in well C-21163 gpm. 725/17 20:00 112.07 497 59.96 Pumping rate in well C-21163 gpm. 725/17 21:00 115.23 617 65.12 Pumping rate in well C-21163 gpm. 725/17 23:00 116.63 677 64.52 Pumping rate in well C-21163 gpm. 726/17 10:00 118.06 737 65.95 Pumping rate in well C-21163 gpm. 726/17 10:00 118.166 737 65.95 Pumping rate in well C-21163 gpm. 726/17 20:00 123.24 977 70.32 Pumping rate in well C-21163 gpm. 726/17 50:00 123.48 1,037 71.37 Pumping rate in well C-21163 gpm. 726/17 60:00 124.52 1,097 72.41 Pumping rate in well C-21163 gpm. 726/17 10:00	7/25/17	15:00	101.56	197	49.45	Pumping rate in well C-21 173 gpm.
725/17 17:00 106.75 317 54.64 Pumping rate in vell C-21163 gpm. 725/17 19:00 110.57 437 55.50 Pumping rate in vell C-21163 gpm. 725/17 19:00 112.07 497 59.96 Pumping rate in vell C-21163 gpm. 725/17 12:00 113.80 557 61.69 Pumping rate in vell C-21163 gpm. 725/17 22:00 115.23 617 63.12 Pumping rate in vell C-21163 gpm. 725/17 20:00 118.06 737 65.95 Pumping rate in vell C-21163 gpm. 726/17 10:00 119.15 797 70.32 Pumping rate in vell C-21163 gpm. 726/17 20:00 122.43 977 70.32 Pumping rate in vell C-21163 gpm. 726/17 50:00 123.48 1.037 71.37 Pumping rate in vell C-21163 gpm. 726/17 50:00 124.52 1.097 72.41 Pumping rate in vell C-21163 gpm. 726/17 10:00 127.50 1.337 75.39 Pumping rate in vell C-21163 gpm.	7/25/17	16:00	104.31	257	52.20	
7/25/17 18:00 108.61 377 56.50 Pumping rate in well C-21 163 gpm. 7/25/17 20:00 112.07 497 59.96 Pumping rate in well C-21 163 gpm. 7/25/17 22:00 115.23 61.7 63.12 Pumping rate in well C-21 163 gpm. 7/25/17 22:00 115.23 617 63.12 Pumping rate in well C-21 163 gpm. 7/25/17 23:00 116.63 677 64.52 Pumping rate in well C-21 163 gpm. 7/26/17 2:00 118.06 737 65.95 Pumping rate in well C-21 163 gpm. 7/26/17 1:00 119.15 797 67.04 Pumping rate in well C-21 163 gpm. 7/26/17 2:00 120.20 857 68.09 Pumping rate in well C-21 163 gpm. 7/26/17 3:00 12:1.52 917 70.32 Pumping rate in well C-21 163 gpm. 7/26/17 5:00 12:4.48 1,037 71.37 Pumping rate in well C-21 163 gpm. 7/26/17 1:00 124:4.52 1,097 72.41 Pumping rate in well C-21 163 gpm.	7/25/17	17:00	106.75	317	54.64	Pumping rate in well C-21 173 gpm.
7125/17 19:00 110.57 437 58:46 Pumping rate in well C-21 163 gpm. 7125/17 21:00 113.80 557 61.69 Pumping rate in well C-21 163 gpm. 7125/17 22:00 115.23 617 63.12 Pumping rate in well C-21 163 gpm. 7125/17 23:00 116.63 677 64.52 Pumping rate in well C-21 163 gpm. 7126/17 100 119.15 797 67.04 Pumping rate in well C-21 163 gpm. 7126/17 100 119.15 797 67.04 Pumping rate in well C-21 163 gpm. 7126/17 200 12.2.43 977 70.32 Pumping rate in well C-21 163 gpm. 7126/17 600 12.4.52 1.097 72.41 Pumping rate in well C-21 163 gpm. 7126/17 700 125.23 1.157 73.12 Pumping rate in well C-21 163 gpm. 7126/17 8:00 126.06 1.217 75.03 Pumping rate in well C-21 163 gpm. 7126/17 10:00 127.44 1.277 75.03 Pumping ratein well C-21 163 gpm.	7/25/17	18:00	108.61	377	56.50	Pumping rate in well C-21 163 gpm.
7125/17 20:00 112.07 497 59.96 Pumping rate in well C-21 163 gpm. 7125/17 12:00 113.80 557 61.69 Pumping rate in well C-21 163 gpm. 7125/17 12:00 113.80 557 61.69 Pumping rate in well C-21 163 gpm. 7125/17 12:00 118.06 737 65.95 Pumping rate in well C-21 163 gpm. 7126/17 1:00 118.15 797 67.04 Pumping rate in well C-21 163 gpm. 7126/17 1:00 121.52 917 69.41 Pumping rate in well C-21 163 gpm. 7126/17 4:00 122.43 977 70.32 Pumping rate in well C-21 163 gpm. 7126/17 6:00 124.52 1.097 72.41 Pumping rate in well C-21 163 gpm. 7126/17 7:00 122.23 1.157 73.12 Pumping rate in well C-21 163 gpm. 7126/17 7:00 122.33 1.337 75.39 Pumping rate in well C-21 163 gpm. 7126/17 1:00 128.49 1.397 76.38 Pumping rate in well C-21 163 gpm. </td <td>7/25/17</td> <td>19:00</td> <td>110.57</td> <td>437</td> <td>58.46</td> <td>Pumping rate in well C-21 163 gpm.</td>	7/25/17	19:00	110.57	437	58.46	Pumping rate in well C-21 163 gpm.
7/25/17 21:00 113:80 557 61.69 Pumping rate in well C-21 163 gpm. 7/25/17 23:00 116:63 677 64:52 Pumping rate in well C-21 163 gpm. 7/26/17 0:00 118:06 737 65:95 Pumping rate in well C-21 163 gpm. 7/26/17 1:00 119:15 797 67:04 Pumping rate in well C-21 163 gpm. 7/26/17 2:00 120:20 857 66:09 Pumping rate in well C-21 163 gpm. 7/26/17 5:00 123:48 10:37 71.37 Pumping rate in well C-21 163 gpm. 7/26/17 5:00 123:48 10:37 71.37 Pumping rate in well C-21 163 gpm. 7/26/17 5:00 123:48 10:37 73.12 Pumping rate in well C-21 163 gpm. 7/26/17 5:00 123:48 1,377 75.39 Pumping rate in well C-21 163 gpm. 7/26/17 1:00 127.50 1,337 75.39 Pumping rate in well C-21 163 gpm. 7/26/17 1:00 128:49 1,337 75.39 Pumping rate in well C-21 163 gpm.	7/25/17	20:00	112.07	497	59.96	Pumping rate in well C-21 163 gpm.
7/25/17 22:00 115.23 617 63.12 Pumping rate in well C-21 163 gpm. 7/26/17 0:00 118.06 737 65.95 Pumping rate in well C-21 163 gpm. 7/26/17 1:00 119.15 797 67.04 Pumping rate in well C-21 163 gpm. 7/26/17 1:00 12.12 917 69.41 Pumping rate in well C-21 163 gpm. 7/26/17 3:00 12.152 917 70.32 Pumping rate in well C-21 163 gpm. 7/26/17 5:00 12.3.48 1,037 71.37 Pumping rate in well C-21 163 gpm. 7/26/17 1:00 12.5.23 1,157 73.12 Pumping rate in well C-21 163 gpm. 7/26/17 9:00 127.14 1.277 75.03 Pumping rate in well C-21 163 gpm. 7/26/17 9:00 127.14 1.277 75.03 Pumping rate in well C-21 163 gpm. 7/26/17 1:0:00 127.50 1,337 75.39 Pumping rate in well C-21 163 gpm. 7/26/17 1:0:00 127.50 1,337 75.39 Pumping rate in well C-21 163	7/25/17	21:00	113.80	557	61.69	Pumping rate in well C-21 163 gpm.
7/25/17 23:00 116.63 677 64.52 Pumping rate in well C-21 163 gpm. 7/26/17 1:00 119.15 797 67.04 Pumping rate in well C-21 163 gpm. 7/26/17 2:00 120.20 857 68.09 Pumping rate in well C-21 163 gpm. 7/26/17 2:00 121.52 917 69.41 Pumping rate in well C-21 163 gpm. 7/26/17 5:00 123.48 1,037 71.37 Pumping rate in well C-21 163 gpm. 7/26/17 6:00 124.52 1,097 72.41 Pumping rate in well C-21 163 gpm. 7/26/17 6:00 124.52 1,097 73.12 Pumping rate in well C-21 163 gpm. 7/26/17 8:00 126.06 1.217 73.95 Pumping rate in well C-21 163 gpm. 7/26/17 1:00 127.44 1.277 75.03 Pumping rate in well C-21 163 gpm. 7/26/17 1:00 128.49 1.337 75.39 Pumping rate in well C-21 163 gpm. 7/26/17 1:00 128.49 1.337 77.38 Pumping rate in well C-21 163 gpm	7/25/17	22:00	115.23	617	63.12	Pumping rate in well C-21 163 gpm.
7/26/17 0:00 118.06 737 65.95 Pumping rate in well C-21 163 gpm. 7/26/17 1:00 119.15 797 67.04 Pumping rate in well C-21 163 gpm. 7/26/17 3:00 121.52 917 69.41 Pumping rate in well C-21 163 gpm. 7/26/17 4:00 122.43 977 70.32 Pumping rate in well C-21 163 gpm. 7/26/17 5:00 123.48 1,037 71.37 Pumping rate in well C-21 163 gpm. 7/26/17 6:00 124.52 1,097 72.41 Pumping rate in well C-21 163 gpm. 7/26/17 6:00 124.52 1,097 73.12 Pumping rate in well C-21 163 gpm. 7/26/17 9:00 127.14 1,217 75.03 Pumping rate in well C-21 163 gpm. 7/26/17 1:00 127.50 1,337 75.39 Pumping rate in well C-21 163 gpm. 7/26/17 1:00 127.50 1,337 75.39 Pumping rate in well C-21 163 gpm. 7/26/17 1:30 129.42 1,457 77.01 Pumping rate in well C-21 163 gpm.	7/25/17	23:00	116.63	677	64.52	Pumping rate in well C-21 163 gpm.
7/26/17 1:00 119:15 797 67:04 Pumping rate in well C-21 163 gpm. 7/26/17 2:00 120:20 857 68:09 Pumping rate in well C-21 163 gpm. 7/26/17 4:00 121:32 917 69:41 Pumping rate in well C-21 163 gpm. 7/26/17 4:00 122:43 977 70:32 Pumping rate in well C-21 163 gpm. 7/26/17 5:00 123:48 1(037 71:37 Pumping rate in well C-21 163 gpm. 7/26/17 6:00 124:52 1,097 72:41 Pumping rate in well C-21 163 gpm. 7/26/17 8:00 126:06 1,217 73:35 Pumping rate in well C-21 163 gpm. 7/26/17 10:00 127:50 1,337 75:39 Pumping rate in well C-21 163 gpm. 7/26/17 11:00 128:49 1,397 76:38 Pumping rate in well C-21 163 gpm. 7/26/17 12:00 129:12 1,457 77:01 Pumping rate in well C-21 163 gpm. 7/26/17 13:00 129:83 1,517 77:7.2 Pumping rate in well C-21 163	7/26/17	0:00	118.06	737	65.95	Pumping rate in well C-21 163 gpm.
7/26/17 2:00 120:0 857 68:09 Pumping rate in well C-21 163 gpm. 7/26/17 3:00 121:52 917 69:41 Pumping rate in well C-21 163 gpm. 7/26/17 4:00 122:43 977 70.32 Pumping rate in well C-21 163 gpm. 7/26/17 5:00 123:48 1,037 71.37 Pumping rate in well C-21 163 gpm. 7/26/17 6:00 124:52 1,097 72:41 Pumping rate in well C-21 163 gpm. 7/26/17 8:00 125:63 1,117 73:95 Pumping rate in well C-21 163 gpm. 7/26/17 9:00 127.14 1,277 75:03 Pumping rate in well C-21 163 gpm. 7/26/17 12:00 129:12 1,457 77.101 Pumping rate in well C-21 163 gpm. 7/26/17 13:00 129:83 1,517 77.72 Pumping rate in well C-21 163 gpm. 7/26/17 13:18 110:44 1,535 58:33 Generator shut down. 7/26/17 13:19 127.16 1,536 75.05 Generator shut down. <t< td=""><td>7/26/17</td><td>1:00</td><td>119.15</td><td>797</td><td>67.04</td><td>Pumping rate in well C-21 163 gpm.</td></t<>	7/26/17	1:00	119.15	797	67.04	Pumping rate in well C-21 163 gpm.
7/26/17 3:00 121.52 917 69.41 Pumping rate in well C-21 163 gpm. 7/26/17 5:00 123.48 1.037 71.37 Pumping rate in well C-21 163 gpm. 7/26/17 5:00 123.48 1.037 71.37 Pumping rate in well C-21 163 gpm. 7/26/17 5:00 123.48 1.037 73.12 Pumping rate in well C-21 163 gpm. 7/26/17 5:00 126.06 1.217 73.95 Pumping rate in well C-21 163 gpm. 7/26/17 9:00 127.14 1.277 75.03 Pumping rate in well C-21 163 gpm. 7/26/17 10:00 127.50 1.337 75.39 Pumping rate in well C-21 163 gpm. 7/26/17 13:00 129.12 1.457 77.10 Pumping rate in well C-21 163 gpm. 7/26/17 13:00 129.83 1.517 77.72 Pumping rate in well C-21 163 gpm. 7/26/17 13:00 129.24 1.537 78.94 Pumping rate in well C-21 163 gpm. 7/26/17 15:00 131.05 1.637 78.94 Pumping rate in well C-	7/26/17	2:00	120.20	857	68.09	Pumping rate in well C-21 163 gpm.
7/26/17 4:00 122.43 977 70.32 Pumping rate in well C-21 163 gpm. 7/26/17 5:00 123.48 1,037 71.37 Pumping rate in well C-21 163 gpm. 7/26/17 6:00 124.52 1,097 72.41 Pumping rate in well C-21 163 gpm. 7/26/17 8:00 126.06 1.217 73.95 Pumping rate in well C-21 163 gpm. 7/26/17 9:00 127.14 1.277 75.03 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 127.14 1.277 75.03 Pumping rate in well C-21 163 gpm. 7/26/17 11:00 128.49 1.397 76.38 Pumping rate in well C-21 163 gpm. 7/26/17 13:00 129.83 1.517 77.72 Pumping rate in well C-21 163 gpm. 7/26/17 13:18 110.44 1.535 58.33 Generator shatu down. 7/26/17 13:18 10.44 1.536 75.05 Generator restarded. 7/26/17 14:00 131.05 1.637 78.94 Pumping rate in well C-21 163 gpm.	7/26/17	3:00	121.52	917	69.41	Pumping rate in well C-21 163 gpm.
1726/17 5:00 123.48 1.037 71.37 Pumping rate in well C-21 163 gpm. 7/26/17 6:00 124.52 1.097 72.41 Pumping rate in well C-21 163 gpm. 7/26/17 7:00 125.23 1,157 73.12 Pumping rate in well C-21 163 gpm. 7/26/17 9:00 127.14 1,277 75.03 Pumping rate in well C-21 163 gpm. 7/26/17 10:00 127.50 1,337 75.39 Pumping rate in well C-21 163 gpm. 7/26/17 10:00 127.50 1,337 77.38 Pumping rate in well C-21 163 gpm. 7/26/17 13:00 129.12 1,457 77.01 Pumping rate in well C-21 163 gpm. 7/26/17 13:00 129.83 1,517 77.72 Pumping rate in well C-21 163 gpm. 7/26/17 13:19 127.16 1,536 75.05 Generator shut down. 7/26/17 14:00 130.24 1,577 78.13 Pumping rate in well C-21 163 gpm. 7/26/17 14:00 131.05 1,637 78.94 Pumping rate in well C-21 163 gpm	7/26/17	4:00	122.43	977	70.32	Pumping rate in well C-21 163 gpm.
7/26/17 6:00 124.52 1.097 72.41 Pumping rate in well C-21 163 gpm. 7/26/17 8:00 125.23 1.157 73.12 Pumping rate in well C-21 163 gpm. 7/26/17 8:00 126.06 1.217 73.95 Pumping rate in well C-21 163 gpm. 7/26/17 10:00 127.50 1.337 75.39 Pumping rate in well C-21 163 gpm. 7/26/17 11:00 128.49 1.397 76.38 Pumping rate in well C-21 163 gpm. 7/26/17 13:00 129.83 1.517 77.72 Pumping rate in well C-21 163 gpm. 7/26/17 13:18 110.44 1.535 58.33 Generator started. 7/26/17 13:18 10.44 1.535 58.33 Generator started. 7/26/17 15:00 131.05 1.637 78.94 Pumping rate in well C-21 163 gpm. 7/26/17 15:00 131.05 1.637 78.94 Pumping rate in well C-21 163 gpm. 7/26/17 18:00 132.28 1.757 80.17 Pumping rate in well C-21 163 gpm.	7/26/17	5:00	123.48	1,037	71.37	Pumping rate in well C-21 163 gpm.
1/26/17 1/30 125.23 1,157 73.12 Pumping rate in well C21 163 gpm. 7/26/17 8:00 126.06 1,217 73.95 Pumping rate in well C21 163 gpm. 7/26/17 9:00 127.14 1,277 75.03 Pumping rate in well C21 163 gpm. 7/26/17 10:00 127.50 1,337 75.39 Pumping rate in well C21 163 gpm. 7/26/17 11:00 128.49 1,397 76.38 Pumping rate in well C21 163 gpm. 7/26/17 12:00 129.12 1,457 77.01 Pumping rate in well C21 163 gpm. 7/26/17 13:00 129.83 1,517 77.72 Pumping rate in well C21 163 gpm. 7/26/17 13:18 110.44 1,535 58.33 Generator restarted. 7/26/17 13:00 130.24 1,577 78.13 Pumping rate in well C21 163 gpm. 7/26/17 16:00 131.75 1,637 78.94 Pumping rate in well C21 163 gpm. 7/26/17 16:00 132.28 1,757 80.17 Pumping rate in well C21 163 gpm.	7/26/17	6:00	124.52	1,097	72.41	Pumping rate in well C-21 163 gpm.
1/26/17 8:00 126.06 1,217 73.95 Pumping rate in well C-21 163 gpm. 7/26/17 9:00 127.14 1,277 75.03 Pumping rate in well C-21 163 gpm. 7/26/17 10:00 127.50 1,337 75.39 Pumping rate in well C-21 163 gpm. 7/26/17 12:00 129.12 1,457 77.01 Pumping rate in well C-21 163 gpm. 7/26/17 13:00 129.83 1,517 77.71 Pumping rate in well C-21 163 gpm. 7/26/17 13:18 110.44 1,535 58.33 Generator shut down. 7/26/17 13:19 127.16 1,536 75.05 Generator restarted. 7/26/17 15:00 131.05 1,637 78.94 Pumping rate in well C-21 163 gpm. 7/26/17 16:00 131.78 1,697 79.67 Pumping rate in well C-21 163 gpm. 7/26/17 18:00 132.62 1,817 80.17 Pumping rate in well C-21 163 gpm. 7/26/17 18:00 133.27 1,877 81.16 Pumping rate in well C-21 163 gpm. <	7/26/17	7:00	125.23	1,157	73.12	Pumping rate in well C-21 163 gpm.
17/26/17 9:00 127.14 1,277 75.03 Pumping rate in well C-21 163 gpm. 77/26/17 10:00 127.50 1,337 75.39 Pumping rate in well C-21 163 gpm. 77/26/17 11:00 128.49 1,397 76.38 Pumping rate in well C-21 163 gpm. 77/26/17 13:00 129.83 1,517 77.72 Pumping rate in well C-21 163 gpm. 77/26/17 13:18 110.44 1,535 58.33 Generator shut down. 726/17 13:19 127.16 1,536 75.05 Generator restarted. 77/26/17 14:00 130.24 1,577 78.13 Pumping rate in well C-21 163 gpm. 7/26/17 15:00 131.78 1,697 79.67 Pumping rate in well C-21 163 gpm. 7/26/17 16:00 131.78 1,697 79.67 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 133.27 1,877 80.17 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 133.27 1,877 81.16 Pumping rate in well C-21 163 gpm.	7/26/17	8:00	126.06	1,217	73.95	Pumping rate in well C-21 163 gpm.
1/2617 10:00 127.50 1,337 75.39 Pumping rate in well C-21 163 gpm. 7/26/17 11:00 128.49 1,397 76.38 Pumping rate in well C-21 163 gpm. 7/26/17 12:00 129.12 1,457 77.01 Pumping rate in well C-21 163 gpm. 7/26/17 13:18 110.44 1,535 58.33 Generator shut down. 7/26/17 13:19 127.16 1,536 75.05 Generator restarted. 7/26/17 14:00 130.24 1,577 78.13 Pumping rate in well C-21 163 gpm. 7/26/17 15:00 131.05 1,637 78.94 Pumping rate in well C-21 163 gpm. 7/26/17 16:00 131.78 1,697 79.67 Pumping rate in well C-21 163 gpm. 7/26/17 18:00 132.62 1,817 80.51 Pumping rate in well C-21 163 gpm. 7/26/17 18:00 132.62 1,817 81.95 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 133.27 1,877 81.16 Pumping rate in well C-21 163 gpm.	7/26/17	9:00	127.14	1,277	75.03	Pumping rate in well C-21 163 gpm.
17/26/17 11:00 128:49 1,397 76:38 Pumping rate in well C-21 163 gpm. 7/26/17 12:00 129:12 1,457 77.01 Pumping rate in well C-21 163 gpm. 7/26/17 13:00 129:83 1,517 77.72 Pumping rate in well C-21 163 gpm. 7/26/17 13:18 110:44 1,535 58:33 Generator shut down. 7/26/17 13:00 130:24 1,577 78:13 Pumping rate in well C-21 163 gpm. 7/26/17 14:00 130:24 1,577 78:13 Pumping rate in well C-21 163 gpm. 7/26/17 16:00 131.78 1,697 79:67 Pumping rate in well C-21 163 gpm. 7/26/17 18:00 132.28 1,757 80:17 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 133.27 1,817 80:51 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 134.06 1.937 81:95 Pumping rate in well C-21 163 gpm. 7/26/17 20:00 134.06 1.937 82:40 Pumping rate in well C-21 16	7/26/17	10:00	127.50	1,337	75.39	Pumping rate in well C-21 163 gpm.
17/26/17 12:00 12:9.12 1,457 77.01 Pumping rate in well C-21 163 gpm. 7/26/17 13:00 129.83 1,517 77.72 Pumping rate in well C-21 163 gpm. 7/26/17 13:18 110.44 1,535 58.33 Generator shut down. 7/26/17 13:19 127.16 1,536 75.05 Generator restarted. 7/26/17 14:00 130.24 1,577 78.13 Pumping rate in well C-21 163 gpm. 7/26/17 15:00 131.78 1,697 79.67 Pumping rate in well C-21 163 gpm. 7/26/17 18:00 132.28 1,757 80.17 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 133.262 1,817 81.16 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 134.06 1,937 81.95 Pumping rate in well C-21 163 gpm. 7/26/17 21:00 134.92 2,057 82.81 Pumping rate in well C-21 163 gpm. 7/26/17 22:00 135.56 2,117 83.45 Pumping rate in well C-21 163 gpm.	7/26/17	11:00	128.49	1,397	76.38	Pumping rate in well C-21 163 gpm.
1/26/17 13:00 129.83 1,517 17.12 Pumping rate in well C-21 163 gpm. 7/26/17 13:18 110.44 1,535 58.33 Generator shut down. 7/26/17 13:19 127.16 1,536 75.05 Generator restarted. 7/26/17 14:00 130.24 1,577 78.13 Pumping rate in well C-21 163 gpm. 7/26/17 15:00 131.05 1,637 78.94 Pumping rate in well C-21 163 gpm. 7/26/17 15:00 131.78 1,697 79.67 Pumping rate in well C-21 163 gpm. 7/26/17 18:00 132.62 1,817 80.51 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 133.27 1.877 81.16 Pumping rate in well C-21 163 gpm. 7/26/17 21:00 134.06 1,937 81.95 Pumping rate in well C-21 163 gpm. 7/26/17 21:00 134.51 1.997 82.40 Pumping rate in well C-21 163 gpm. 7/26/17 23:00 135.56 2,117 83.45 Pumping rate in well C-21 163 gpm.	7/26/17	12:00	129.12	1,457	77.01	Pumping rate in well C-21 163 gpm.
17/26/17 13:19 110.44 1,333 35.35 Generator shut down. 7/26/17 13:19 127.16 1,536 75.05 Generator restarted. 7/26/17 14:00 130.24 1,577 78.13 Pumping rate in well C-21 163 gpm. 7/26/17 15:00 131.05 1,637 78.94 Pumping rate in well C-21 163 gpm. 7/26/17 16:00 131.78 1,697 79.67 Pumping rate in well C-21 163 gpm. 7/26/17 17:00 132.28 1,757 80.17 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 133.27 1,817 81.16 Pumping rate in well C-21 163 gpm. 7/26/17 20:00 134.06 1,937 81.95 Pumping rate in well C-21 163 gpm. 7/26/17 21:00 134.92 2,057 82.81 Pumping rate in well C-21 163 gpm. 7/26/17 21:00 136.24 2,117 83.45 Pumping rate in well C-21 163 gpm. 7/27/17 0:00 136.24 2,117 84.13 Pumping rate in well C-21 163 gpm.	7/26/17	13:00	129.83	1,517	//./2 59.22	Pumping rate in well C-21 163 gpm.
1/26/17 13:19 127.16 1,350 73.05 Generator restarted. 7/26/17 14:00 130.24 1,577 78.13 Pumping rate in well C-21 163 gpm. 7/26/17 15:00 131.05 1,637 78.94 Pumping rate in well C-21 163 gpm. 7/26/17 16:00 131.78 1,697 79.67 Pumping rate in well C-21 163 gpm. 7/26/17 18:00 132.28 1,757 80.17 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 133.27 1,877 81.16 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 133.27 1,877 81.16 Pumping rate in well C-21 163 gpm. 7/26/17 20:00 134.06 1,937 82.40 Pumping rate in well C-21 163 gpm. 7/26/17 21:00 134.92 2,057 82.81 Pumping rate in well C-21 163 gpm. 7/26/17 20:00 136.62 2,117 83.45 Pumping rate in well C-21 163 gpm. 7/27/17 0:00 136.72 2,237 84.61 Pumping rate in well C-21 163	//26/17	13:18	110.44	1,535	58.33	Generator shut down.
17/26/17 15:00 131.05 1,637 78.94 Pumping rate in well C-21 163 gpm. 7/26/17 15:00 131.05 1,637 78.94 Pumping rate in well C-21 163 gpm. 7/26/17 16:00 131.78 1,697 79.67 Pumping rate in well C-21 163 gpm. 7/26/17 17:00 132.28 1,757 80.17 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 133.27 1,877 81.16 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 134.06 1,937 81.95 Pumping rate in well C-21 163 gpm. 7/26/17 20:00 134.06 1,937 82.40 Pumping rate in well C-21 163 gpm. 7/26/17 21:00 134.51 1,997 82.40 Pumping rate in well C-21 163 gpm. 7/26/17 22:00 134.92 2,057 82.81 Pumping rate in well C-21 163 gpm. 7/26/17 23:00 136.24 2,177 84.13 Pumping rate in well C-21 163 gpm. 7/27/17 0:00 136.24 2,177 84.13 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.72 2,2	7/26/17	13:19	12/.10	1,530	/5.05	Generator restarted.
17/26/17 151.03 151.03 1607 78.94 Pumping rate in well C-21 163 gpm. 7/26/17 16:00 131.78 1.697 79.67 Pumping rate in well C-21 163 gpm. 7/26/17 17:00 132.28 1.757 80.17 Pumping rate in well C-21 163 gpm. 7/26/17 18:00 132.62 1.817 80.51 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 133.27 1.877 81.16 Pumping rate in well C-21 163 gpm. 7/26/17 20:00 134.06 1.937 81.95 Pumping rate in well C-21 163 gpm. 7/26/17 20:00 134.92 2.057 82.81 Pumping rate in well C-21 163 gpm. 7/26/17 23:00 135.56 2,117 83.45 Pumping rate in well C-21 163 gpm. 7/27/17 0:00 136.24 2,177 84.13 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.72 2,237 84.61 Pumping rate in well C-21 163 gpm. 7/27/17 2:00 137.14 2,297 85.03 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 137.33 2,357	7/26/17	14:00	130.24	1,577	78.04	Pumping rate in well C-21 163 gpm.
7/26/17 17.00 132.28 1,757 80.17 Pumping rate in well C-21 163 gpm. 7/26/17 18:00 132.22 1,877 80.51 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 133.27 1,877 81.16 Pumping rate in well C-21 163 gpm. 7/26/17 20:00 134.06 1,937 81.95 Pumping rate in well C-21 163 gpm. 7/26/17 21:00 134.51 1,997 82.40 Pumping rate in well C-21 163 gpm. 7/26/17 22:00 134.92 2,057 82.81 Pumping rate in well C-21 163 gpm. 7/26/17 23:00 135.56 2,117 83.45 Pumping rate in well C-21 163 gpm. 7/27/17 0:00 136.24 2,177 84.13 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.72 2,237 84.61 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.72 2,237 85.03 Pumping rate in well C-21 163 gpm. 7/27/17 2:00 137.14 2,297 85.03 Pumping rate in well C-21 163 gpm. 7/27/17 3:00 138.03 2,417 </td <td>7/26/17</td> <td>15:00</td> <td>131.03</td> <td>1,037</td> <td>70.67</td> <td>Pumping rate in well C-21 163 gpm.</td>	7/26/17	15:00	131.03	1,037	70.67	Pumping rate in well C-21 163 gpm.
17/26/17 17/26/17 18:00 132.62 1,817 80.51 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 133.27 1,817 81.16 Pumping rate in well C-21 163 gpm. 7/26/17 20:00 134.06 1,937 81.95 Pumping rate in well C-21 163 gpm. 7/26/17 21:00 134.51 1,997 82.40 Pumping rate in well C-21 163 gpm. 7/26/17 22:00 134.92 2,057 82.81 Pumping rate in well C-21 163 gpm. 7/26/17 23:00 135.56 2,117 83.45 Pumping rate in well C-21 163 gpm. 7/27/17 0:00 136.24 2,177 84.13 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.72 2,237 84.61 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.72 2,237 85.03 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.72 2,237 85.03 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.33 2,417 85.92 Pumping rate in well C-21 163 gpm. 7/27/17 5:00 138.4	7/26/17	17.00	131.78	1,097	79.07	Pumping rate in well C 21 163 gpm.
7/26/17 18.00 132.02 1,817 80.31 Pumping rate in well C-21 163 gpm. 7/26/17 19:00 133.27 1,877 81.16 Pumping rate in well C-21 163 gpm. 7/26/17 20:00 134.06 1,937 81.95 Pumping rate in well C-21 163 gpm. 7/26/17 21:00 134.51 1,997 82.40 Pumping rate in well C-21 163 gpm. 7/26/17 22:00 134.92 2,057 82.81 Pumping rate in well C-21 163 gpm. 7/26/17 23:00 135.56 2,117 83.45 Pumping rate in well C-21 163 gpm. 7/27/17 0:00 136.24 2,177 84.13 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.72 2,237 84.61 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.72 2,237 85.03 Pumping rate in well C-21 163 gpm. 7/27/17 2:00 137.14 2,297 85.03 Pumping rate in well C-21 163 gpm. 7/27/17 3:00 138.03 2,417 85.92 Pumping rate in well C-21 163 gpm. 7/27/17 5:00 138.48 2,477 <td>7/26/17</td> <td>17.00</td> <td>132.20</td> <td>1,737</td> <td>80.17</td> <td>Pumping rate in well C 21 163 gpm.</td>	7/26/17	17.00	132.20	1,737	80.17	Pumping rate in well C 21 163 gpm.
7/26/17 20:00 134.06 1,937 81.10 1 unping rate in well C-21 163 gpm. 7/26/17 20:00 134.06 1,937 81.95 Pumping rate in well C-21 163 gpm. 7/26/17 21:00 134.92 2,057 82.81 Pumping rate in well C-21 163 gpm. 7/26/17 22:00 134.92 2,057 82.81 Pumping rate in well C-21 163 gpm. 7/26/17 23:00 135.56 2,117 83.45 Pumping rate in well C-21 163 gpm. 7/27/17 0:00 136.24 2,177 84.13 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.72 2,237 84.61 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.72 2,237 85.03 Pumping rate in well C-21 163 gpm. 7/27/17 2:00 137.14 2,297 85.03 Pumping rate in well C-21 163 gpm. 7/27/17 3:00 137.33 2,357 85.22 Pumping rate in well C-21 163 gpm. 7/27/17 4:00 138.03 2,417 85.92 Pumping rate in well C-21 163 gpm. 7/27/17 5:00 138.48 2,477 <td>7/26/17</td> <td>10.00</td> <td>132.02</td> <td>1,017</td> <td>81.16</td> <td>Pumping rate in well C-21 163 gpm.</td>	7/26/17	10.00	132.02	1,017	81.16	Pumping rate in well C-21 163 gpm.
7/26/17 20:00 134.50 1,997 81.93 Pumping rate in well C-21 163 gpm. 7/26/17 21:00 134.51 1,997 82.40 Pumping rate in well C-21 163 gpm. 7/26/17 22:00 134.92 2,057 82.81 Pumping rate in well C-21 163 gpm. 7/26/17 23:00 135.56 2,117 83.45 Pumping rate in well C-21 163 gpm. 7/27/17 0:00 136.24 2,177 84.13 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.72 2,237 84.61 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 137.14 2,297 85.03 Pumping rate in well C-21 163 gpm. 7/27/17 2:00 137.14 2,297 85.03 Pumping rate in well C-21 163 gpm. 7/27/17 3:00 137.33 2,357 85.22 Pumping rate in well C-21 163 gpm. 7/27/17 4:00 138.03 2,417 85.92 Pumping rate in well C-21 163 gpm. 7/27/17 5:00 138.48 2,477 86.37 Pumping rate in well C-21 163 gpm. 7/27/17 6:00 139.32 2,597	7/26/17	20.00	133.27	1,077	81.05	Pumping rate in well C-21 163 gpm.
7/26/17 21:00 134.92 2,057 82.81 Pumping rate in well C-21 163 gpm. 7/26/17 23:00 135.56 2,117 83.45 Pumping rate in well C-21 163 gpm. 7/26/17 23:00 135.56 2,117 83.45 Pumping rate in well C-21 163 gpm. 7/27/17 0:00 136.24 2,177 84.13 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.72 2,237 84.61 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.72 2,237 84.61 Pumping rate in well C-21 163 gpm. 7/27/17 2:00 137.14 2,297 85.03 Pumping rate in well C-21 163 gpm. 7/27/17 3:00 137.33 2,357 85.22 Pumping rate in well C-21 163 gpm. 7/27/17 4:00 138.03 2,417 85.92 Pumping rate in well C-21 163 gpm. 7/27/17 5:00 138.48 2,477 86.37 Pumping rate in well C-21 163 gpm. 7/27/17 6:00 139.32 2,597 87.21 Pumping rate in well C-21 163 gpm. 7/27/17 7:00 139.58 2,657	7/26/17	20.00	134.50	1,997	82.40	Pumping rate in well C-21 163 gpm.
7/26/17 23:00 13:5.56 2,117 83:45 Pumping rate in well C-21 163 gpm. 7/26/17 23:00 13:5.56 2,117 83:45 Pumping rate in well C-21 163 gpm. 7/27/17 0:00 13:6.24 2,177 84.13 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 13:6.72 2,237 84:61 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 13:7.14 2,297 85:03 Pumping rate in well C-21 163 gpm. 7/27/17 2:00 137:14 2,297 85:03 Pumping rate in well C-21 163 gpm. 7/27/17 3:00 137:33 2,357 85:22 Pumping rate in well C-21 163 gpm. 7/27/17 4:00 138:03 2,417 85:92 Pumping rate in well C-21 163 gpm. 7/27/17 5:00 138:48 2,477 86:37 Pumping rate in well C-21 163 gpm. 7/27/17 6:00 138:90 2,537 86:79 Pumping rate in well C-21 163 gpm. 7/27/17 7:00 139:32 2,597 87:21 Pumping rate in well C-21 163 gpm. 7/27/17 7:00 139:58 2,657 </td <td>7/26/17</td> <td>21.00 22.00</td> <td>134.92</td> <td>2 057</td> <td>82.40</td> <td>Pumping rate in well C-21 163 gpm.</td>	7/26/17	21.00 22.00	134.92	2 057	82.40	Pumping rate in well C-21 163 gpm.
7/27/17 20:00 136.24 2,177 84.13 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.24 2,177 84.13 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.72 2,237 84.61 Pumping rate in well C-21 163 gpm. 7/27/17 2:00 137.14 2,297 85.03 Pumping rate in well C-21 163 gpm. 7/27/17 3:00 137.33 2,357 85.22 Pumping rate in well C-21 163 gpm. 7/27/17 4:00 138.03 2,417 85.92 Pumping rate in well C-21 163 gpm. 7/27/17 5:00 138.48 2,477 86.37 Pumping rate in well C-21 163 gpm. 7/27/17 5:00 138.48 2,477 86.37 Pumping rate in well C-21 163 gpm. 7/27/17 6:00 138.90 2,537 86.79 Pumping rate in well C-21 163 gpm. 7/27/17 7:00 139.32 2,597 87.21 Pumping rate in well C-21 163 gpm. 7/27/17 7:00 139.58 2,657 87.47 Pumping rate in well C-21 163 gpm. 7/27/17 9:00 140.14 2,717	7/26/17	22:00	135.56	2,037	83.45	Pumping rate in well C-21 163 gpm.
7/27/17 1:00 136.72 2,237 84.61 Pumping rate in well C-21 163 gpm. 7/27/17 1:00 136.72 2,237 84.61 Pumping rate in well C-21 163 gpm. 7/27/17 2:00 137.14 2,297 85.03 Pumping rate in well C-21 163 gpm. 7/27/17 3:00 137.33 2,357 85.22 Pumping rate in well C-21 163 gpm. 7/27/17 4:00 138.03 2,417 85.92 Pumping rate in well C-21 163 gpm. 7/27/17 4:00 138.48 2,477 86.37 Pumping rate in well C-21 163 gpm. 7/27/17 5:00 138.48 2,477 86.37 Pumping rate in well C-21 163 gpm. 7/27/17 6:00 138.90 2,537 86.79 Pumping rate in well C-21 163 gpm. 7/27/17 7:00 139.32 2,597 87.21 Pumping rate in well C-21 163 gpm. 7/27/17 8:00 139.58 2,657 87.47 Pumping rate in well C-21 163 gpm. 7/27/17 8:00 139.58 2,657 87.47 Pumping rate in well C-21 163 gpm. 7/27/17 10:00 140.14 2,717	7/27/17	0.00	136.24	2,117	84.13	Pumping rate in well C-21 163 gpm.
7/27/17 2:00 137.14 2;297 85.03 Pumping rate in well C-21 163 gpm. 7/27/17 2:00 137.14 2;297 85.03 Pumping rate in well C-21 163 gpm. 7/27/17 3:00 137.33 2;357 85.22 Pumping rate in well C-21 163 gpm. 7/27/17 4:00 138.03 2;417 85.92 Pumping rate in well C-21 163 gpm. 7/27/17 5:00 138.48 2;417 86.37 Pumping rate in well C-21 163 gpm. 7/27/17 5:00 138.48 2;477 86.37 Pumping rate in well C-21 163 gpm. 7/27/17 6:00 138.90 2;537 86.79 Pumping rate in well C-21 163 gpm. 7/27/17 7:00 139.32 2;597 87.21 Pumping rate in well C-21 163 gpm. 7/27/17 7:00 139.58 2;657 87.47 Pumping rate in well C-21 163 gpm. 7/27/17 8:00 139.58 2;657 87.47 Pumping rate in well C-21 163 gpm. 7/27/17 9:00 140.14 2;717 88.03 Pumping rate in well C-21 163 gpm. 7/27/17 10:00 140.50 2;777	7/27/17	1:00	136.72	2.237	84.61	Pumping rate in well C-21 163 gpm.
7/27/17 3:00 137.33 2,357 85.22 Pumping rate in well C-21 163 gpm. 7/27/17 3:00 137.33 2,357 85.22 Pumping rate in well C-21 163 gpm. 7/27/17 4:00 138.03 2,417 85.92 Pumping rate in well C-21 163 gpm. 7/27/17 5:00 138.48 2,477 86.37 Pumping rate in well C-21 163 gpm. 7/27/17 5:00 138.48 2,477 86.37 Pumping rate in well C-21 163 gpm. 7/27/17 6:00 138.90 2,537 86.79 Pumping rate in well C-21 163 gpm. 7/27/17 7:00 139.32 2,597 87.21 Pumping rate in well C-21 163 gpm. 7/27/17 8:00 139.58 2,657 87.47 Pumping rate in well C-21 163 gpm. 7/27/17 8:00 139.58 2,657 87.47 Pumping rate in well C-21 163 gpm. 7/27/17 10:00 140.14 2,717 88.03 Pumping rate in well C-21 163 gpm. 7/27/17 10:00 140.50 2,777 88.39 Pumping rate in well C-21 163 gpm. 7/27/17 11:00 141.00 2,837	7/27/17	2.00	137.14	2 297	85.03	Pumping rate in well C-21 163 gpm
7/27/17 4:00 138.03 2,417 85.92 Pumping rate in well C-21 163 gpm. 7/27/17 5:00 138.48 2,417 85.92 Pumping rate in well C-21 163 gpm. 7/27/17 5:00 138.48 2,477 86.37 Pumping rate in well C-21 163 gpm. 7/27/17 6:00 138.90 2,537 86.79 Pumping rate in well C-21 163 gpm. 7/27/17 7:00 139.32 2,597 87.21 Pumping rate in well C-21 163 gpm. 7/27/17 7:00 139.58 2,657 87.47 Pumping rate in well C-21 163 gpm. 7/27/17 8:00 139.58 2,657 87.47 Pumping rate in well C-21 163 gpm. 7/27/17 9:00 140.14 2,717 88.03 Pumping rate in well C-21 163 gpm. 7/27/17 10:00 140.50 2,777 88.39 Pumping rate in well C-21 163 gpm. 7/27/17 11:00 141.00 2,837 88.89 Pumping rate in well C-21 163 gpm. 7/27/17 12:00 141.30 2,897 89.19 Pumping rate in well C-21 163 gpm. 7/27/17 13:00 141.67 2,857	7/27/17	3.00	137.33	2 357	85.22	Pumping rate in well C-21 163 gpm
7/27/17 5:00 138.48 2,477 86.37 Pumping rate in well C-21 163 gpm. 7/27/17 5:00 138.48 2,477 86.37 Pumping rate in well C-21 163 gpm. 7/27/17 6:00 138.90 2,537 86.79 Pumping rate in well C-21 163 gpm. 7/27/17 7:00 139.32 2,597 87.21 Pumping rate in well C-21 163 gpm. 7/27/17 8:00 139.58 2,657 87.47 Pumping rate in well C-21 163 gpm. 7/27/17 8:00 139.58 2,657 87.47 Pumping rate in well C-21 163 gpm. 7/27/17 9:00 140.14 2,717 88.03 Pumping rate in well C-21 163 gpm. 7/27/17 10:00 140.50 2,777 88.39 Pumping rate in well C-21 163 gpm. 7/27/17 11:00 141.00 2,837 88.89 Pumping rate in well C-21 163 gpm. 7/27/17 12:00 141.30 2,897 89.19 Pumping rate in well C-21 163 gpm. 7/27/17 13:00 141.67 2,957 89.56 Pumping rate in well C-21 163 gpm.	7/27/17	4.00	138.03	2,337	85.92	Pumping rate in well C-21 163 gpm
7/27/17 5:00 138:90 2;537 86:79 Pumping rate in well C-21 163 gpm. 7/27/17 6:00 138:90 2;537 86:79 Pumping rate in well C-21 163 gpm. 7/27/17 7:00 139:32 2;597 87:21 Pumping rate in well C-21 163 gpm. 7/27/17 8:00 139:58 2;657 87:47 Pumping rate in well C-21 163 gpm. 7/27/17 9:00 140.14 2;717 88:03 Pumping rate in well C-21 163 gpm. 7/27/17 10:00 140.50 2;777 88:39 Pumping rate in well C-21 163 gpm. 7/27/17 10:00 140.50 2;777 88:39 Pumping rate in well C-21 163 gpm. 7/27/17 11:00 141.00 2;837 88:89 Pumping rate in well C-21 163 gpm. 7/27/17 12:00 141.30 2;897 89:19 Pumping rate in well C-21 163 gpm. 7/27/17 13:00 141.67 2;857 89:56 Pumping rate in well C-21 163 gpm.	7/27/17	5.00	138.48	2,117	86.37	Pumping rate in well C-21 163 gpm.
7/27/17 7:00 139.32 2;597 87.21 Pumping rate in well C-21 163 gpm. 7/27/17 8:00 139.58 2;657 87.47 Pumping rate in well C-21 163 gpm. 7/27/17 8:00 139.58 2;657 87.47 Pumping rate in well C-21 163 gpm. 7/27/17 9:00 140.14 2;717 88.03 Pumping rate in well C-21 163 gpm. 7/27/17 10:00 140.50 2;777 88.39 Pumping rate in well C-21 163 gpm. 7/27/17 10:00 141.00 2;837 88.89 Pumping rate in well C-21 163 gpm. 7/27/17 11:00 141.00 2;837 88.89 Pumping rate in well C-21 163 gpm. 7/27/17 12:00 141.30 2;897 89.19 Pumping rate in well C-21 163 gpm. 7/27/17 13:00 141.67 2;857 89.56 Pumping rate in well C-21 163 gpm.	7/27/17	6:00	138.90	2,537	86.79	Pumping rate in well C-21 163 gpm
7/27/17 8:00 139.58 2,657 87.47 Pumping rate in well C-21 163 gpm. 7/27/17 8:00 139.58 2,657 87.47 Pumping rate in well C-21 163 gpm. 7/27/17 9:00 140.14 2,717 88.03 Pumping rate in well C-21 163 gpm. 7/27/17 10:00 140.50 2,777 88.39 Pumping rate in well C-21 163 gpm. 7/27/17 11:00 141.00 2,837 88.89 Pumping rate in well C-21 163 gpm. 7/27/17 12:00 141.30 2,897 89.19 Pumping rate in well C-21 163 gpm. 7/27/17 13:00 141.67 2,957 89.56 Pumping rate in well C-21 163 gpm.	7/27/17	7:00	139.32	2,597	87.21	Pumping rate in well C-21 163 gpm
7/27/17 9:00 140.14 2,717 88.03 Pumping rate in well C-21 163 gpm. 7/27/17 10:00 140.50 2,777 88.39 Pumping rate in well C-21 163 gpm. 7/27/17 10:00 140.50 2,777 88.39 Pumping rate in well C-21 163 gpm. 7/27/17 11:00 141.00 2,837 88.89 Pumping rate in well C-21 163 gpm. 7/27/17 12:00 141.30 2,897 89.19 Pumping rate in well C-21 163 gpm. 7/27/17 13:00 141.67 2,957 89.56 Pumping rate in well C-21 163 gpm.	7/27/17	8:00	139.58	2,657	87.47	Pumping rate in well C-21 163 gpm.
7/27/17 10:00 140.50 2,777 88.39 Pumping rate in well C-21 163 gpm. 7/27/17 11:00 141.00 2,837 88.89 Pumping rate in well C-21 163 gpm. 7/27/17 12:00 141.30 2,837 89.19 Pumping rate in well C-21 163 gpm. 7/27/17 12:00 141.30 2,897 89.19 Pumping rate in well C-21 163 gpm. 7/27/17 13:00 141.67 2.957 89.56 Pumping rate in well C-21 163 gpm.	7/27/17	9:00	140.14	2,717	88.03	Pumping rate in well C-21 163 gpm.
7/27/17 11:00 141:00 2,837 88.89 Pumping rate in well C-21 163 gpm. 7/27/17 12:00 141:30 2,897 89.19 Pumping rate in well C-21 163 gpm. 7/27/17 12:00 141:30 2,897 89.19 Pumping rate in well C-21 163 gpm. 7/27/17 13:00 141:67 2,957 89.56 Pumping rate in well C-21 163 gpm.	7/27/17	10:00	140.50	2,777	88.39	Pumping rate in well C-21 163 gpm.
7/27/17 12:00 141.30 2,897 89.19 Pumping rate in well C-21 163 gpm. 7/27/17 13:00 141.67 2,957 89.56 Pumping rate in well C-21 163 gpm.	7/27/17	11:00	141.00	2,837	88.89	Pumping rate in well C-21 163 gpm.
7/77/17 13:00 141.67 2:057 90.56 Dumping rate in year 0.21.162 gram	7/27/17	12:00	141.30	2.897	89.19	Pumping rate in well C-21 163 gpm
1/2/11/1 + 15.00 + 141.07 + 2.757 + 67.50 + rumping rate in wen -21.103 gpm.	7/27/17	13:00	141.67	2,957	89.56	Pumping rate in well C-21 163 gpm.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/27/17	14:00	141.96	3,017	89.85	Pumping rate in well C-21 163 gpm.
7/27/17	15:00	142.31	3,077	90.20	Pumping rate in well C-21 163 gpm.
7/27/17	16:00	142.52	3,137	90.41	Pumping rate in well C-21 163 gpm.
7/27/17	17:00	143.01	3,197	90.90	Pumping rate in well C-21 163 gpm.
7/27/17	18:00	143.19	3,257	91.08	Pumping rate in well C-21 163 gpm.
7/27/17	19:00	143.50	3,317	91.39	Pumping rate in well C-21 163 gpm.
7/27/17	20:00	143.78	3,377	91.67	Pumping rate in well C-21 163 gpm.
7/27/17	21:00	144.26	3,437	92.15	Pumping rate in well C-21 163 gpm.
7/27/17	22:00	144.36	3,497	92.25	Pumping rate in well C-21 163 gpm.
7/27/17	23:00	144.59	3,557	92.48	Pumping rate in well C-21 163 gpm.
7/28/17	0:00	145.04	3,617	92.93	Pumping rate in well C-21 163 gpm.
7/28/17	1:00	145.22	3,677	93.11	Pumping rate in well C-21 163 gpm.
7/28/17	2:00	145.60	3,737	93.49	Pumping rate in well C-21 163 gpm.
7/28/17	3:00	145.72	3,797	93.61	Pumping rate in well C-21 163 gpm.
7/28/17	4:00	146.02	3,857	93.91	Pumping rate in well C-21 163 gpm.
7/28/17	5:00	146.27	3,917	94.16	Pumping rate in well C-21 163 gpm.
7/28/17	6:00	146.37	3,977	94.26	Pumping rate in well C-21 163 gpm.
7/28/17	6:14	146.50	3,991	94.41	Pumping rate in well C-21 163 gpm.
7/28/17	7:00	146.46	4,037	94.35	Pumping rate in well C-21 163 gpm.
7/28/17	8:00	146.87	4,097	94.76	Pumping rate in well C-21 163 gpm.
7/28/17	9:00	147.44	4,157	95.33	Pumping rate in well C-21 163 gpm.
7/28/17	10:00	147.32	4,217	95.21	Pumping rate in well C-21 163 gpm.
7/28/17	11:00	147.52	4,277	95.41	Pumping rate in well C-21 163 gpm.
7/28/17	12:00	147.86	4,337	95.75	Pumping rate in well C-21 163 gpm.
7/28/17	12:14	147.85	4,351	95.74	Pumping rate in well C-21 163 gpm.
7/28/17	12:15	142.82	-1	90.71	Pump in well C-21 shut down, test on well C-21 ended.
7/28/17	12:16	124.13	-2	72.02	
7/28/17	12:17	122.84	-3	70.73	
7/28/17	12:18	122.62	-4	70.51	
7/28/17	12:19	122.02	-5	69.91	
7/28/17	12:20	121.33	-6	69.22	
7/28/17	12:21	120.77	-7	68.66	
7/28/17	12:22	120.22	-8	68.11	
7/28/17	12:23	119.88	-9	67.77	
7/28/17	12:24	119.40	-10	67.29	
7/28/17	12:25	118.97	-11	66.86	
7/28/17	12:26	118.58	-12	66.47	
7/28/17	12:27	118.24	-13	66.13	
7/28/17	12:28	117.98	-14	65.87	
7/28/17	12:29	117.64	-15	65.53	
7/28/17	12:30	117.36	-16	65.25	
7/28/17	12:35	115.99	-21	63.88	
7/28/17	12:40	114.84	-26	62.73	
7/28/17	12:45	113.85	-31	61.74	
7/28/17	12:50	112.95	-36	60.84	
7/28/17	12:55	112.14	-41	60.03	
7/28/17	13:00	111.41	-46	59.30	
7/28/17	13:05	110.69	-51	58.58	
7/28/17	13:10	110.02	-56	57.91	
7/28/17	13:15	109.41	-61	57.30	
7/28/17	14:00	105.53	-106	53.42	
7/28/17	15:00	101.67	-166	49.56	
7/28/17	16:00	98.98	-226	46.87	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/28/17	17:00	96.70	-286	44.59	
7/28/17	18:00	94.80	-346	42.69	
7/28/17	19:00	93.16	-406	41.05	
7/28/17	20:00	91.74	-466	39.63	
7/28/17	21:00	90.45	-526	38.34	
7/28/17	22:00	89.28	-586	37.17	
7/28/17	23:00	88.22	-646	36.11	
7/29/17	0:00	87.27	-706	35.16	
7/29/17	1:00	86.41	-766	34.30	
7/29/17	2:00	85.49	-826	33.38	
7/29/17	3:00	84.71	-886	32.60	
7/29/17	4:00	83.96	-946	31.85	
7/29/17	5:00	83.21	-1,006	31.10	
7/29/17	6:00	82.52	-1,066	30.41	
7/29/17	7:00	81.90	-1,126	29.79	
7/29/17	8:00	81.27	-1,186	29.16	
7/29/17	9:00	80.69	-1,246	28.58	
7/29/17	10:00	80.11	-1,306	28.00	
7/29/17	11:00	79.56	-1,366	27.45	
7/29/17	12:00	79.02	-1,426	26.91	
7/29/17	13:00	78.57	-1,486	26.46	
7/29/17	14:00	77.90	-1,546	25.79	
7/29/17	15:00	77.67	-1,606	25.56	
7/29/17	16:00	77.21	-1,666	25.10	
7/29/17	17:00	76.75	-1,726	24.64	
7/29/17	18:00	76.35	-1,786	24.24	
7/29/17	19:00	75.91	-1,846	23.80	
7/29/17	20:00	75.48	-1,906	23.37	
7/29/17	21:00	75.14	-1,966	23.03	
7/29/17	22:00	74.74	-2,026	22.63	
7/29/17	23:00	74.42	-2,086	22.31	
7/30/17	0:00	74.12	-2,146	22.01	
7/30/17	1:00	73.75	-2,206	21.64	
7/30/17	2:00	73.47	-2,266	21.36	
7/30/17	3:00	73.15	-2,326	21.04	
7/30/17	4:00	72.86	-2,386	20.75	
7/30/17	5:00	72.59	-2,446	20.48	
7/30/17	6:00	72.30	-2,506	20.19	
7/30/17	7:00	71.97	-2,566	19.86	
7/30/17	8:00	71.72	-2,626	19.61	
7/30/17	9:00	71.42	-2,686	19.31	
7/30/17	10:00	71.15	-2,746	19.04	
7/30/17	11:00	70.90	-2,806	18.79	
7/30/17	12:00	70.61	-2,866	18.50	
7/30/17	13:00	70.36	-2,926	18.25	
7/30/17	14:00	70.12	-2,986	18.01	
7/30/17	15:00	69.86	-3,046	17.75	
7/30/17	16:00	69.62	-3,106	17.51	
7/30/17	17:00	69.39	-3,166	17.28	
7/30/17	18:00	69.14	-3,226	17.03	
7/30/17	19:00	68.90	-3,286	16.79	
7/30/17	20:00	68.71	-3,346	16.60	
7/30/17	21:00	68.43	-3,406	16.32	
7/30/17	22:00	68.21	-3,466	16.10	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
7/30/17	23:00	67.96	-3,526	15.85	
7/31/17	0:00	67.77	-3,586	15.66	
7/31/17	1:00	67.60	-3,646	15.49	
7/31/17	2:00	67.35	-3,706	15.24	
7/31/17	3:00	67.19	-3,766	15.08	
7/31/17	4:00	67.00	-3,826	14.89	
7/31/17	5:00	66.90	-3,886	14.79	
7/31/17	6:00	66.67	-3,946	14.56	
7/31/17	7:00	66.50	-4,006	14.39	
7/31/17	8:00	66.25	-4,066	14.14	
7/31/17	9:00	66.10	-4,126	13.99	
7/31/17	10:00	65.93	-4,186	13.82	
7/31/17	11:00	65.70	-4,246	13.59	
7/31/17	12:00	65.31	-4,306	13.20	
7/31/17	13:00	65.36	-4,366	13.25	
7/31/17	14:00	65.17	-4,426	13.06	
7/31/17	15:00	65.01	-4,486	12.90	
7/31/17	16:00	64.81	-4,546	12.70	
7/31/17	17:00	64.66	-4,606	12.55	
7/31/17	18:00	64.50	-4,666	12.39	
7/31/17	19:00	64.37	-4,726	12.26	
7/31/17	20:00	64.21	-4,786	12.10	
7/31/17	21:00	64.04	-4,846	11.93	
7/31/17	22:00	63.91	-4,906	11.80	
7/31/17	23:00	63.74	-4,966	11.63	
8/1/17	0:00	63.59	-5,026	11.48	
8/1/17	1:00	63.43	-5,086	11.32	
8/1/17	2:00	63.32	-5,146	11.21	
8/1/17	3:00	63.21	-5,206	11.10	
8/1/17	4:00	63.10	-5,266	10.99	
8/1/17	5:00	62.95	-5,326	10.84	
8/1/17	6:00	62.86	-5,386	10.75	
8/1/17	7:00	62.75	-5,446	10.64	
8/1/17	8:00	62.63	-5,506	10.52	
8/1/17	9:00	62.48	-5,566	10.37	
8/1/17	10:00	62.34	-5,626	10.23	
8/1/17	11:00	62.20	-5,686	10.09	
8/1/17	12:00	62.03	-5,746	9.92	
8/1/17	13:00	61.93	-5,806	9.82	
8/1/17	14:00	61.75	-5,866	9.64	
8/1/17	15:00	61.64	-5,926	9.53	90% recovery achieved.
8/1/17	16:00	61.54	-5,986	9.43	
8/1/17	17:00	61.42	-6,046	9.31	
8/1/17	18:00	61.31	-6,106	9.20	
8/1/17	19:00	61.22	-6,166	9.11	
8/1/17	20:00	61.08	-6,226	8.97	
8/1/17	21:00	60.95	-6,286	8.84	
8/1/17	22:00	60.85	-6,346	8.74	
8/1/17	23:00	60.75	-6,406	8.64	
8/2/17	0:00	60.64	-6,466	8.53	
8/2/17	1:00	60.51	-6,526	8.40	
8/2/17	2:00	60.43	-6,586	8.32	
8/2/17	3:00	60.34	-6,646	8.23	
8/2/17	4:00	60.27	-6,706	8.15	

Summary of Water-Level Measurements from Pressure Transducer Installed in Well C-21 Collected During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Depth to Water (ft btoc)	Elapsed Time/ Recovery (minutes)	Drawdown (feet)	Comments
8/2/17	5:00	60.18	-6,766	8.07	
8/2/17	6:00	60.14	-6,826	8.03	
8/2/17	7:00	59.99	-6,886	7.88	
8/2/17	8:00	59.96	-6,946	7.85	
8/2/17	9:00	59.86	-7,006	7.75	
8/2/17	10:00	59.80	-7,066	7.69	
8/2/17	11:00	59.68	-7,126	7.57	
8/2/17	12:00	59.55	-7,186	7.44	
8/2/17	13:00	59.45	-7,246	7.34	
8/2/17	14:00	59.37	-7,306	7.26	
8/2/17	15:00	59.20	-7,366	7.09	
8/2/17	16:00	59.16	-7,426	7.05	
8/2/17	17:00	59.13	-7,486	7.02	
8/2/17	18:00	59.00	-7,546	6.89	
8/2/17	19:00	58.94	-7,606	6.83	
8/2/17	20:00	58.90	-7,666	6.79	
8/2/17	21:00	58.75	-7,726	6.64	
8/2/17	22:00	58.70	-7,786	6.59	
8/2/17	23:00	58.66	-7,846	6.55	
8/3/17	0:00	58.55	-7,906	6.44	
8/3/17	1:00	58.47	-7,966	6.36	
8/3/17	2:00	58.36	-8,026	6.25	
8/3/17	3:00	58.27	-8,086	6.16	
8/3/17	4:00	58.27	-8,146	6.16	
8/3/17	5:00	58.19	-8,206	6.08	
8/3/17	6:00	58.12	-8,266	6.01	
8/3/17	7:00	58.14	-8,326	6.03	
8/3/17	8:00	58.05	-8,386	5.94	
8/3/17	9:00	58.00	-8,446	5.89	
8/3/17	10:00	57.99	-8,506	5.88	
8/3/17	11:00	57.90	-8,566	5.79	
8/3/17	12:00	57.81	-8,626	5.70	
8/3/17	13:00	57.70	-8,686	5.59	
8/3/17	14:00	57.59	-8,746	5.47	
8/3/17	15:00	57.46	-8,806	5.35	
8/3/17	16:00	57.43	-8,866	5.32	
8/3/17	17:00	57.34	-8,926	5.23	
8/3/17	18:00	57.26	-8,986	5.15	
8/3/17	19:00	57.25	-9,046	5.14	
8/3/17	20:00	57.16	-9,106	5.05	
8/3/17	21:00	57.14	-9,166	5.03	
8/3/17	22:00	57.07	-9,226	4.96	
8/3/17	23:00	57.01	-9,286	4.90	

ft btoc feet below top of casing

gpm gallons per minute

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C-23



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LBG Hydrogeologic & Engineering Services, P.C.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/6/17	14:00	43.16			Pressure transducer installed in well.
7/6/17	15:00	42.96			
7/6/17	16:00	42.99			
7/6/17	17:00	42.85			
7/6/17	18:00	42.83			
7/6/17	19:00	42.88			
7/6/17	20:00	42.86			
7/6/17	21:00	42.87			
7/6/17	22:00	42.91			
7/6/17	23:00	42.86			
7/7/17	0:00	42.90			
7/7/17	1:00	42.91			
7/7/17	2:00	42.83			
7/7/17	3:00	42.83			
7/7/17	4:00	42.80			
7/7/17	5:00	42.80			
7/7/17	6:00	42.91			
7/7/17	7:00	42.80			
7/7/17	8:00	42.92			
7/7/17	9:00	42.96			
7/7/17	10:00	42.90			
7/7/17	11:00	42.99			
7/7/17	12:00	42.93			
7/7/17	13:00	42.92			
7/7/17	14:00	42.94			
7/7/17	15:00	42.90			
7/7/17	16:00	42.78			
7/7/17	17:00	42.83			
7/7/17	18:00	42.72			
7/7/17	19:00	42.73			
7/7/17	20:00	42.75			
7/7/17	21:00	42.77			
7/7/17	22:00	42.76			
7/7/17	23:00	42.86			
7/8/17	0:00	42.81			
7/8/17	1:00	42.82			
7/8/17	2:00	42.68			
7/8/17	3:00	42.72			
7/8/17	4:00	42.69			
7/8/17	5:00	42.72			
7/8/17	6:00	42.75			
7/8/17	7:00	42.71			
7/8/17	8:00	42.81	-		
7/8/17	9:00	42.85			
7/8/17	10:00	42.86			
7/8/17	11:00	42.86			
7/8/17	12:00	42.97			
7/8/17	13:00	42.86			
7/8/17	14:00	42.91			
7/8/17	15:00	42.89			
7/8/17	16:00	42.85			
7/8/17	17:00	42.81			
7/8/17	18:00	42.73			
7/8/17	19:00	42.75			

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/8/17	20:00	42.80			
7/8/17	21:00	42.76			
7/8/17	22:00	42.81			
7/8/17	23:00	42.85			
7/9/17	0:00	42.83			
7/9/17	1:00	42.85			
7/9/17	2:00	42.89			
7/9/17	3:00	42.84			
7/9/17	4:00	42.82			
7/9/17	5:00	42.77			
7/9/17	6:00	42.81			
7/9/17	7:00	42.90			
7/9/17	8:00	42.90			
7/9/17	9:00	42.92			
7/9/17	10:00	43.04			
7/9/17	11:00	43.06			
7/9/17	12:00	43.15			
7/9/17	13:00	43.17			
7/9/17	14:00	43.04			
7/9/17	15:00	43.12			
7/9/17	16:00	43.02			
7/9/17	17:00	43.02			
7/9/17	18:00	42.97			
7/9/17	19:00	42.96			
7/9/17	20:00	43.01			
7/9/17	21:00	42.96			
7/9/17	22:00	42.95			
7/9/17	23:00	43.06			
7/10/17	0:00	43.00			
7/10/17	1:00	43.07			
7/10/17	2:00	43.02			
7/10/17	3:00	43.03			
7/10/17	4:00	43.00			
7/10/17	5:00	43.03			
7/10/17	6:00	42.96			
7/10/17	7:00	42.97			
7/10/17	8:00	42.90			
7/10/17	9:00	43.01			
7/10/17	10:00	42.98			
7/10/17	11:00	43.12			
7/10/17	11:54	43.15			Static water level used from prior to the start of pumping in any onsite wells.
7/10/17	12:00	43.20			Pump in well C-21 started at 11:55.
7/10/17	12:58	49.27			
7/10/17	12:59	73.35	1	30.20	Pump in well C-23 started.
7/10/17	13:00	92.67	2	49.52	
7/10/17	13:01	101.07	3	57.92	Pumping rate in well C-23 96 gpm.
7/10/17	13:02	105.60	4	62.45	
7/10/17	13:03	107.33	5	64.18	
7/10/17	13:04	105.90	6	62.75	
7/10/17	13:05	102.58	7	59.43	Pumping rate in well C-23 96 gpm.
7/10/17	13:06	98.96	8	55.81	
7/10/17	13:07	96.21	9	53.06	
7/10/17	13:08	94.47	10	51.32	
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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/10/17	13:09	93.42	11	50.27	Pumping rate in well C-23 96 gpm.
7/10/17	13:10	92.03	12	48.88	
7/10/17	13:11	91.22	13	48.07	
7/10/17	13:12	90.70	14	47.55	
7/10/17	13:13	90.77	15	47.62	
7/10/17	13:14	90.44	16	47.29	Pumping rate in well C-23 95 gpm.
7/10/17	13:15	90.29	17	47.14	
7/10/17	13:20	91.64	22	48.49	Pumping rate in well C-23 95 gpm.
7/10/17	13:25	92.15	27	49.00	
7/10/17	13:30	92.86	32	49.71	
7/10/17	13:35	93.78	37	50.63	Pumping rate in well C-23 95 gpm.
7/10/17	13:40	94.27	42	51.12	
7/10/17	13:45	95.11	47	51.96	
7/10/17	13:50	95.38	52	52.23	Pumping rate in well C-23 95 gpm.
7/10/17	13:55	96.45	57	53.30	
7/10/17	14:00	96.95	62	53.80	Pumping rate in well C-23 93 gpm.
7/10/17	15:00	102.84	122	59.69	Pumping rate in well C-23 92 gpm.
7/10/17	16:00	107.27	182	64.12	Pumping rate in well C-23 92 gpm.
7/10/17	17:00	110.97	242	67.82	Pump in well C-14 started at 16:24.
7/10/17	18:00	114.07	302	70.92	Pump in well C-16 started at 17:31.
7/10/17	19:00	117.36	362	74.21	Pump in well C-6 started at 18:35.
7/10/17	20:00	120.01	422	76.86	Pump in well C-12 started at 19:48.
7/10/17	21:00	122.48	482	79.33	Pump in well C-7B started at 21:03.
7/10/17	22:00	125.40	542	82.25	Pumping rate in well C-23 90 gpm.
7/10/17	23:00	127.53	602	84.38	Pumping rate in well C-23 90 gpm.
7/11/17	0:00	129.81	662	86.66	Pumping rate in well C-23 90 gpm.
7/11/17	1:00	131.54	722	88.39	Pumping rate in well C-23 90 gpm.
7/11/17	2:00	130.89	782	87.74	Pumping rate in well C-23 90 gpm.
7/11/17	3:00	128.45	842	85.30	Pumping rate in well C-23 90 gpm.
7/11/17	4:00	132.43	902	89.28	Pumping rate in well C-23 90 gpm.
7/11/17	5:00	134.95	962	91.80	Pumping rate in well C-23 90 gpm.
7/11/17	6:00	137.59	1,022	94.44	Pumping rate in well C-23 90 gpm.
7/11/17	7:00	139.27	1,082	96.12	Pumping rate in well C-23 90 gpm.
7/11/17	8:00	140.59	1,142	97.44	Pumping rate in well C-23 90 gpm.
7/11/17	9:00	142.42	1,202	99.27	Pumping rate in well C-23 90 gpm.
7/11/17	10:00	143.06	1,262	99.91	Pumping rate in well C-23 88 gpm.
7/11/17	11:00	144.58	1,322	101.43	Pumping rate in well C-23 88 gpm.
7/11/17	12:00	145.86	1,382	102.71	Pumping rate in well C-23 88 gpm.
7/11/17	13:00	146.72	1,442	103.57	Pumping rate in well C-23 88 gpm.
7/11/17	14:00	145.40	1,502	102.25	Pumping rate in well C-23 88 gpm.
7/11/17	15:00	144.63	1,562	101.48	Pumping rate in well C-23 88 gpm.
7/11/17	16:00	147.26	1,622	104.11	Pumping rate in well C-23 88 gpm.
7/11/17	17:00	148.33	1,682	105.18	Pumping rate in well C-23 88 gpm.
7/11/17	18:00	149.85	1,742	106.70	Pumping rate in well C-23 88 gpm.
7/11/17	19:00	148.35	1,802	105.20	Pumping rate in well C-23 88 gpm.
7/11/17	20:00	143.76	1,862	100.61	Pumping rate in well C-23 88 gpm.
7/11/17	21:00	145.26	1,922	102.11	Pumping rate in well C-23 88 gpm.
7/11/17	22:00	147.79	1,982	104.64	Pumping rate in well C-23 88 gpm.
7/11/17	23:00	149.80	2,042	106.65	Pumping rate in well C-23 88 gpm.
7/12/17	0:00	150.88	2,102	107.73	Pumping rate in well C-23 88 gpm.
7/12/17	1:00	151.90	2,162	108.75	Pumping rate in well C-23 88 gpm.
7/12/17	2:00	153.04	2,222	109.89	Pumping rate in well C-23 88 gpm.
7/12/17	3:00	153.85	2,282	110.70	Pumping rate in well C-23 88 gpm.
7/12/17	4:00	154.14	2,342	110.99	Pumping rate in well C-23 88 gpm.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/12/17	5:00	154.53	2,402	111.38	Pumping rate in well C-23 88 gpm.
7/12/17	6:00	155.15	2,462	112.00	Pumping rate in well C-23 88 gpm.
7/12/17	7:00	154.98	2,522	111.83	Pumping rate in well C-23 88 gpm.
7/12/17	8:00	155.77	2,582	112.62	Pumping rate in well C-23 88 gpm.
7/12/17	9:00	156.29	2,642	113.14	Pumping rate in well C-23 88 gpm.
7/12/17	10:00	156.85	2,702	113.70	Pumping rate in well C-23 88 gpm.
7/12/17	10:45	153.37	2,747	114.22	Manually increased pumping rate in well C-23.
7/12/17	11:00	161.74	2,762	118.59	Pumping rate in well C-23 88 gpm.
7/12/17	12:00	162.50	2,822	119.35	Pump in well C-7B shut down at 11:28 and pump in well C-21 shut down at 11:56.
7/12/17	13:00	156.82	2,882	113.67	Pumping rate in well C-23 92 gpm.
7/12/17	14:00	153.97	2,942	110.82	Pumping rate in well C-23 90 gpm.
7/12/17	15:00	151.53	3,002	108.38	Pumping rate in well C-23 90 gpm.
7/12/17	16:00	150.02	3,062	106.87	Pumping rate in well C-23 90 gpm.
7/12/17	17:00	148.19	3,122	105.04	Pumping rate in well C-23 90 gpm.
7/12/17	18:00	147.24	3,182	104.09	Pumping rate in well C-23 90 gpm.
7/12/17	19:00	145.97	3,242	102.82	Pumping rate in well C-23 90 gpm.
7/12/17	20:00	145.01	3,302	101.86	Pumping rate in well C-23 90 gpm.
7/12/17	21:00	144.30	3,362	101.15	Pumping rate in well C-23 90 gpm.
7/12/17	22:00	143.58	3,422	100.43	Pumping rate in well C-23 90 gpm.
7/12/17	23:00	143.28	3,482	100.13	Pumping rate in well C-23 90 gpm.
7/13/17	0:00	142.73	3,542	99.58	Pumping rate in well C-23 90 gpm.
7/13/17	1:00	142.26	3,602	99.11	Pumping rate in well C-23 90 gpm.
7/13/17	2:00	141.53	3,662	98.38	Pumping rate in well C-23 90 gpm.
7/13/17	3:00	141.22	3,722	98.07	Pumping rate in well C-23 90 gpm.
7/13/17	4:00	140.92	3,782	97.77	Pumping rate in well C-23 90 gpm.
7/13/17	5:00	140.13	3,842	96.98	Pumping rate in well C-23 90 gpm.
7/13/17	6:00	139.96	3,902	96.81	Pumping rate in well C-23 90 gpm.
7/13/17	7:00	139.26	3,962	96.11	Pumping rate in well C-23 90 gpm.
7/13/17	8:00	139.50	4,022	96.35	Pumping rate in well C-23 90 gpm.
7/13/17	9:00	139.15	4,082	96.00	Pumping rate in well C-23 90 gpm.
7/13/17	10:00	139.08	4,142	95.93	Pumping rate in well C-23 90 gpm.
7/13/17	11:00	138.38	4,202	95.23	Pumping rate in well C-23 90 gpm.
7/13/17	12:00	138.49	4,262	95.34	Pumping rate in well C-23 90 gpm.
7/13/17	13:00	138.26	4,322	95.11	Pumping rate in well C-23 90 gpm.
7/13/17	14:00	138.64	4,382	95.49	Pumping rate in well C-23 90 gpm.
7/13/17	15:00	138.16	4,442	95.01	Pumping rate in well C-23 90 gpm.
7/13/17	16:00	137.78	4,502	94.63	Pumping rate in well C-23 90 gpm.
7/13/17	17:00	137.78	4,562	94.63	Pumping rate in well C-23 90 gpm.
7/13/17	18:00	137.80	4,622	94.65	Pumping rate in well C-23 90 gpm.
7/13/17	19:00	137.63	4,682	94.48	Pumping rate in well C-23 90 gpm.
7/13/17	20:00	137.38	4,742	94.23	Pumping rate in well C-23 90 gpm.
7/13/17	21:00	137.24	4,802	94.09	Pumping rate in well C-23 90 gpm.
7/13/17	22:00	137.20	4,862	94.05	Pumping rate in well C-23 90 gpm.
7/13/17	23:00	137.32	4,922	94.17	Pumping rate in well C-23 90 gpm.
7/14/17	0:00	136.67	4,982	93.52	Pumping rate in well C-23 90 gpm.
//14/17	1:00	130.91	5,042	93.76	Pumping rate in well C-23 90 gpm.
7/14/17	2:00	15/.14	5,102	93.99	Pumping rate in well C-23 90 gpm.
7/14/17	3:00	136.73	5,162	93.58	Pumping rate in well C-23 90 gpm.
//14/17/	4:00	136.92	5,222	93.77	Pumping rate in well C-23 90 gpm.
7/14/17	5:00	136.67	5,282	93.52	Pumping rate in well C-23 90 gpm.
7/14/17	0:00	130.//	5,342	93.02	Pumping rate in Well C-23 90 gpm.
7/14/17	/:00	130.84	5,402	93.09	Pumping rate in well C-23 90 gpm.
//14/17/	8:00	136.61	5,462	95.46	Pumping rate in well C-23 90 gpm.

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/14/17	9:00	136.16	5,522	93.01	Pumping rate in well C-23 90 gpm.
7/14/17	10:00	136.35	5,582	93.20	Pumping rate in well C-23 90 gpm.
7/14/17	11:00	136.01	5,642	92.86	Pumping rate in well C-23 90 gpm.
7/14/17	12:00	136.33	5,702	93.18	Pumping rate in well C-23 90 gpm.
7/14/17	13:00	136.41	5,762	93.26	Pumping rate in well C-23 90 gpm.
7/14/17	14:00	136.46	5,822	93.31	Pumping rate in well C-23 90 gpm.
7/14/17	15:00	136.41	5,882	93.26	Pumping rate in well C-23 90 gpm.
7/14/17	16:00	136.50	5,942	93.35	Pumping rate in well C-23 90 gpm.
7/14/17	17:00	136.32	6,002	93.17	Pumping rate in well C-23 90 gpm.
7/14/17	18:00	136.32	6,062	93.17	Pumping rate in well C-23 90 gpm.
7/14/17	19:00	136.24	6,122	93.09	Pumping rate in well C-23 90 gpm.
7/14/17	20:00	135.92	6,182	92.77	Pumping rate in well C-23 90 gpm.
7/14/17	21:00	136.15	6,242	93.00	Pumping rate in well C-23 90 gpm.
7/14/17	22:00	136.32	6,302	93.17	Pumping rate in well C-23 90 gpm.
7/14/17	23:00	136.15	6,362	93.00	Pumping rate in well C-23 90 gpm.
7/15/17	0:00	136.02	6,422	92.87	Pumping rate in well C-23 90 gpm.
7/15/17	1:00	136.17	6,482	93.02	Pumping rate in well C-23 90 gpm.
7/15/17	2:00	135.99	6,542	92.84	Pumping rate in well C-23 90 gpm.
7/15/17	3:00	136.23	6,602	93.08	Pumping rate in well C-23 90 gpm.
7/15/17	4:00	136.13	6,662	92.98	Pumping rate in well C-23 90 gpm.
7/15/17	5:00	136.55	6,722	93.40	Pumping rate in well C-23 90 gpm.
7/15/17	6:00	136.26	6,782	93.11	Pumping rate in well C-23 90 gpm.
7/15/17	7:00	136.30	6,842	93.15	Pumping rate in well C-23 90 gpm.
7/15/17	8:00	136.16	6,902	93.01	Pumping rate in well C-23 90 gpm.
7/15/17	9:00	135.71	6,962	92.56	Pumping rate in well C-23 90 gpm.
7/15/17	10:00	135.92	7,022	92.77	Pumping rate in well C-23 90 gpm.
7/15/17	11:00	136.66	7,082	93.51	Pumping rate in well C-23 90 gpm.
7/15/17	12:00	136.20	7,142	93.05	Pumping rate in well C-23 90 gpm.
7/15/17	13:00	136.43	7,202	93.28	Pumping rate in well C-23 90 gpm.
7/15/17	14:00	136.37	7,262	93.22	Pumping rate in well C-23 90 gpm.
7/15/17	15:00	136.33	7,322	93.18	Pumping rate in well C-23 90 gpm.
7/15/17	16:00	136.25	7,382	93.10	Pumping rate in well C-23 90 gpm.
7/15/17	17:00	136.29	7,442	93.14	Pumping rate in well C-23 90 gpm.
7/15/17	18:00	136.28	7,502	93.13	Pumping rate in well C-23 90 gpm.
7/15/17	19:00	136.14	7,562	92.99	Pumping rate in well C-23 90 gpm.
7/15/17	19:09	136.24	7,571	93.09	Pumping rate in well C-23 90 gpm.
7/15/17	20:00	136.50	7,622	93.35	Pumping rate in well C-23 90 gpm.
7/15/17	21:00	136.35	7,682	93.20	Pumping rate in well C-23 90 gpm.
7/15/17	22:00	136.84	7,742	93.69	Pumping rate in well C-23 90 gpm.
7/15/17	23:00	136.34	7,802	93.19	Pumping rate in well C-23 90 gpm.
7/16/17	0:00	136.00	7,862	92.85	Pumping rate in well C-23 90 gpm.
7/16/17	1:00	136.70	7,922	93.55	Pumping rate in well C-23 90 gpm.
7/16/17	1:09	136.75	7,931	93.60	Shut down of simultaneous pumping test (wells C-6, 12, 14, 16, and 23) started.
7/16/17	1:47	136.59	7,969	93.44	Pumping rate in well C-23 90 gpm.
7/16/17	1:48	136.65	7,970	93.50	Pumping rate in well C-23 90 gpm.
7/16/17	1:49	118.36	-1	75.21	Pump in well C-23 shut down.
7/16/17	1:50	107.15	-2	64.00	
7/16/17	1:51	102.66	-3	59.51	
7/16/17	1:52	100.80	-4	57.65	
7/16/17	1:53	99.55	-5	56.40	
7/16/17	1:54	98.61	-6	55.46	
7/16/17	1:55	97.92	-7	54.77	
7/16/17	1:56	97.47	-8	54.32	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/16/17	1:57	97.09	-9	53.94	
7/16/17	1:58	96.56	-10	53.41	
7/16/17	1:59	96.22	-11	53.07	
7/16/17	2:00	96.03	-12	52.88	
7/16/17	2:01	95.89	-13	52.74	
7/16/17	2:02	95.46	-14	52.31	
7/16/17	2:03	95.34	-15	52.19	
7/16/17	2:04	95.26	-16	52.11	
7/16/17	2:05	94.99	-17	51.84	
7/16/17	2:10	94.21	-22	51.06	
7/16/17	2:15	93.80	-27	50.65	
7/16/17	2:20	93.16	-32	50.01	
7/16/17	2:25	92.77	-37	49.62	
7/16/17	2:30	92.29	-42	49.14	
7/16/17	2:35	91.99	-47	48.84	
7/16/17	2:40	91.77	-52	48.62	
7/16/17	3:00	90.65	-72	47.50	
7/16/17	4:00	88.22	-132	45.07	
7/16/17	5:00	86.34	-192	43.19	
7/16/17	6:00	84.93	-252	41.78	
7/16/17	7:00	83.52	-312	40.37	
7/16/17	8:00	82.38	-372	39.23	
7/16/17	9:00	81.36	-432	38.21	
7/16/17	10:00	80.36	-492	37.21	
7/16/17	11:00	79.51	-552	36.36	
7/16/17	12:00	78.68	-612	35.53	
7/16/17	13:00	78.01	-672	34.86	
7/16/17	14:00	77.25	-732	34.10	
7/16/17	15:00	76.48	-792	33.33	
7/16/17	16:00	75.87	-852	32.72	
//16/1/	1/:00	/5.30	-912	32.15	
7/16/17	18:00	/4./2	-9/2	31.57	
7/16/17	19:00	74.29	-1,032	31.14	
7/16/17	20:00	73.54	-1,092	30.39	
7/16/17	21:00	72.97	-1,152	29.82	
7/16/17	22:00	72.30	-1,212	29.33	
7/10/17	25:00	72.08	-1,272	28.95	
7/17/17	1.00	71.32	-1,552	20.37	
7/17/17	2.00	70.60	-1,392	27.60	
7/17/17	2:00	70.09	-1,432	27.34	
7/17/17	3.00	60.83	-1,512	27.23	
7/17/17	4.00	60.40	-1,572	26.08	
7/17/17	6.00	69.12	-1,032	20.34	
7/17/17	7.00	68.66	-1,092	25.51	
7/17/17	7.00 8.00	68 20	-1,/32	25.51	
7/17/17	9.00	67.97	-1,012	23.14	
7/17/17	10.00	67.64	_1 032	24.02	
7/17/17	11.00	67.04	-1,752	24.47	
7/17/17	12.00	66.96	-1,772	27.07	
7/17/17	12:00	66 53	-2,032	23.71	
7/17/17	14.00	66.05	_2,112	23.30	
7/17/17	15.00	65.03	_2,172	22.90	
7/17/17	16.00	65.47	_2,232	22.70	
//1//1/	10.00	UJ.7/	-2,292	22.32	

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717717 18.00 64.34 -2.352 22.05 71777 18.00 64.34 -2.472 21.69 71777 18.00 64.33 -2.532 20.90 71717 20.00 64.33 -2.532 20.90 71717 22.00 63.60 -2.652 20.45 71717 22.00 63.42 -2.172 20.00 71817 70.00 62.86 -2.82 19.46 71817 70.00 62.26 -2.82 19.46 71817 50.00 62.26 -2.82 19.46 71817 50.00 62.26 -2.82 19.46 71817 50.00 62.26 -2.82 19.46 71817 70.00 61.44 -3.132 18.77 71817 70.00 61.44 -3.132 17.57 71817 70.00 60.42 -3.432 17.27	Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7/17/17	17:00	65.20	-2,352	22.05	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7/17/17	18:00	64.84	-2,412	21.69	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7/17/17	19:00	64.71	-2,472	21.56	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7/17/17	20:00	64.33	-2,532	21.18	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7/17/17	21:00	64.05	-2,592	20.90	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7/17/17	22:00	63.60	-2,652	20.45	
7/18/17 0.00 63.15 -2.722 20.00 $7/18/17$ 100 62.266 -2.832 19.71 $7/18/17$ 3.00 62.266 -2.932 19.46 $7/18/17$ 400 62.11 -3.012 18.97 $7/18/17$ 600 61.64 -3.132 18.49 $7/18/17$ 700 61.64 -3.132 18.49 $7/18/17$ 700 61.64 -3.322 18.49 $7/18/17$ 9.00 60.94 -3.312 17.99 $7/18/17$ 10.00 60.69 -3.372 17.54 $7/18/17$ 10.00 60.69 -3.372 17.54 $7/18/17$ 10.00 60.24 -3.362 16.76 $7/18/17$ 15.00 59.91 -3.552 16.76 $7/18/17$ 15.00 59.25 -3.732 16.10 $7/18/17$ 15.00 59.25 -3.732 16.10 $7/18/17$ 15.00 58.66 -3.912 15.21	7/17/17	23:00	63.42	-2,712	20.27	
7/18/17 $1:00$ 62.86 -2.832 19.71 $7/18/17$ $3:00$ 62.36 -2.892 19.46 $7/18/17$ $3:00$ 62.36 -2.952 19.21 $7/18/17$ $4:00$ 62.11 -3.012 18.96 $7/18/17$ $6:00$ 61.64 -3.132 18.49 $7/18/17$ $7:00$ 61.44 -3.132 18.49 $7/18/17$ $7:00$ 61.44 -3.132 18.49 $7/18/17$ $7:00$ 61.44 -3.312 17.54 $7/18/17$ $1:00$ 60.69 -3.312 17.54 $7/18/17$ $1:00$ 60.69 -3.342 17.27 $7/18/17$ $1:00$ 59.91 -3.552 16.76 $7/18/17$ $1:00$ 59.94 -3.612 16.34 $7/18/17$ $1:00$ 59.49 -3.612 16.34 $7/18/17$ $1:00$ 58.40 -3.822 15.65 $7/18/17$ $1:00$ 58.40 -3.372 15.21	7/18/17	0:00	63.15	-2,772	20.00	
7/18/17 $2:00$ 62.61 -2.892 19.46 $7/18/17$ $3:00$ 62.36 -2.952 19.21 $7/18/17$ $6:00$ 61.64 -3.012 18.77 $7/18/17$ $6:00$ 61.64 -3.132 18.49 $7/18/17$ $7:00$ 61.64 -3.312 17.9 $7/18/17$ $8:00$ 61.19 -3.252 18.04 $7/18/17$ $9:00$ 60.94 -3.312 17.79 $7/18/17$ $10:00$ 60.62 -3.372 17.54 $7/18/17$ $10:00$ 60.64 -3.432 17.27 $7/18/17$ $11:00$ 60.42 -3.652 16.76 $7/18/17$ $14:00$ 59.58 -3.612 16.43 $7/18/17$ $15:00$ 59.25 -3.732 15.18 $7/18/17$ $16:00$ 59.25 -3.732 15.18 $7/18/17$ $19:00$ 58.66 -3.912 15.51 $7/18/17$ $19:00$ 58.66 -3.912 15.51 </td <td>7/18/17</td> <td>1:00</td> <td>62.86</td> <td>-2,832</td> <td>19.71</td> <td></td>	7/18/17	1:00	62.86	-2,832	19.71	
7/18/17 3:00 62.36 -2.952 19.21 7/18/17 4:00 62.11 -3.012 18.97 7/18/17 5:00 61.92 -3.072 18.77 7/18/17 7:00 61.44 -3.132 18.49 7/18/17 7:00 61.44 -3.132 18.49 7/18/17 8:00 60.94 -3.312 17.79 7/18/17 10:00 60.69 -3.312 17.74 7/18/17 10:00 60.69 -3.322 17.74 7/18/17 11:00 60.42 -3.432 17.27 7/18/17 11:00 60.42 -3.432 17.27 7/18/17 11:00 59.91 -3.552 16.76 7/18/17 15:00 59.49 -3.672 16.34 7/18/17 16:00 59.25 -3.732 16.10 7/18/17 19:00 58.66 -3.912 15.51 7/18/17 19:00 58.66 -3.912 15.21 <	7/18/17	2:00	62.61	-2,892	19.46	
7/18/17 4.00 62.11 -3.012 18.96 $7/18/17$ 5.00 61.64 -3.132 18.77 $7/18/17$ 5.00 61.44 -3.192 18.29 $7/18/17$ 8.00 61.19 -3.252 18.04 $7/18/17$ 8.00 60.94 -3.312 17.79 $7/18/17$ 10.00 60.42 -3.432 17.27 $7/18/17$ 11.00 60.42 -3.432 17.27 $7/18/17$ 11.00 60.42 -3.432 17.27 $7/18/17$ 11.00 60.42 -3.432 17.27 $7/18/17$ 11.00 59.49 -3.672 16.34 $7/18/17$ 15.00 59.49 -3.672 16.34 $7/18/17$ 15.00 59.49 -3.672 15.85 $7/18/17$ 15.00 59.49 -3.672 15.85 $7/18/17$ 19.00 58.66 -3.912 15.51 $7/18/17$ 12.00 58.14 -4.032 14.49	7/18/17	3:00	62.36	-2,952	19.21	
7/18/17 5.00 61.92 -3.072 18.77 $7/18/17$ $6:00$ 61.64 -3.132 18.49 $7/18/17$ $7:00$ 61.44 -3.192 18.29 $7/18/17$ $8:00$ 60.94 -3.312 17.79 $7/18/17$ $10:00$ 60.69 -3.372 17.54 $7/18/17$ $10:00$ 60.642 -3.432 17.27 $7/18/17$ $10:00$ 60.642 -3.432 17.27 $7/18/17$ $10:00$ 60.42 -3.352 16.76 $7/18/17$ $15:00$ 59.91 -3.552 16.76 $7/18/17$ $15:00$ 59.49 -3.612 16.43 $7/18/17$ $15:00$ 59.49 -3.612 16.34 $7/18/17$ $15:00$ 59.49 -3.612 16.51 $7/18/17$ $15:00$ 58.80 -3.852 15.65 $7/18/17$ $12:00$ 58.46 -3.912 15.11 $7/18/17$ $21:00$ 58.44 4.092 $14.$	7/18/17	4:00	62.11	-3,012	18.96	
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	7/18/17	5:00	61.92	-3,072	18.77	
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	7/18/17	6:00	61.64	-3,132	18.49	
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	7/18/17	7:00	61.44	-3,192	18.29	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7/18/17	8:00	61.19	-3,252	18.04	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7/18/17	9:00	60.94	-3,312	17.79	
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	7/18/17	10:00	60.69	-3,372	17.54	
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	7/18/17	11:00	60.42	-3,432	17.27	
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	7/18/17	12:00	60.16	-3,492	17.01	
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	7/18/17	13:00	59.91	-3,552	16.76	
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	7/18/17	14:00	59.58	-3,612	16.43	
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	7/18/17	15:00	59.49	-3,672	16.34	
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	7/18/17	16:00	59.25	-3,732	16.10	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7/18/17	17:00	59.03	-3,792	15.88	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7/18/17	18:00	58.80	-3,852	15.65	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	//18/1/	19:00	58.00	-3,912	15.51	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7/18/17	20:00	58.14	-3,972	13.21	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7/18/17	21.00 22.00	58.04	-4,032	14.99	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7/18/17	22:00	57.80	-4,072	14.65	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7/19/17	0.00	57.65	-4 212	14 50	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7/19/17	1:00	57.47	-4.272	14.32	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7/19/17	2:00	57.22	-4.332	14.07	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7/19/17	3:00	56.98	-4.392	13.83	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7/19/17	4:00	56.80	-4,452	13.65	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7/19/17	5:00	56.72	-4,512	13.57	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7/19/17	6:00	56.55	-4,572	13.40	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7/19/17	7:00	56.44	-4,632	13.29	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7/19/17	8:00	56.25	-4,692	13.10	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7/19/17	9:00	55.95	-4,752	12.80	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7/19/17	10:00	55.91	-4,812	12.76	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7/19/17	11:00	55.81	-4,872	12.66	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7/19/17	12:00	55.39	-4,932	12.24	
7/19/17 14:00 55.14 -5,052 11.99 7/19/17 15:00 54.89 -5,112 11.74 7/19/17 16:00 54.69 -5,172 11.54 7/19/17 17:00 54.61 -5,232 11.46 7/19/17 18:00 54.43 -5,292 11.28 7/19/17 19:00 54.24 -5,352 11.09 7/19/17 20:00 54.11 -5,412 10.96	7/19/17	13:00	55.28	-4,992	12.13	
7/19/17 15:00 54.89 -5,112 11.74 7/19/17 16:00 54.69 -5,172 11.54 7/19/17 17:00 54.61 -5,232 11.46 7/19/17 18:00 54.43 -5,292 11.28 7/19/17 19:00 54.24 -5,352 11.09 7/19/17 20:00 54.11 -5,412 10.96	7/19/17	14:00	55.14	-5,052	11.99	
7/19/17 16:00 54.69 -5,172 11.54 7/19/17 17:00 54.61 -5,232 11.46 7/19/17 18:00 54.43 -5,292 11.28 7/19/17 19:00 54.24 -5,352 11.09 7/19/17 20:00 54.11 -5,412 10.96	7/19/17	15:00	54.89	-5,112	11.74	
//19/1/ 17:00 54.61 -5,232 11.46 7/19/17 18:00 54.43 -5,292 11.28 7/19/17 19:00 54.24 -5,352 11.09 7/19/17 20:00 54.11 -5,412 10.96	7/19/17	16:00	54.69	-5,172	11.54	
//19/1/ 18:00 54:43 -5,292 11.28 7/19/17 19:00 54:24 -5,352 11.09 7/19/17 20:00 54:11 -5,412 10.96	7/19/17	17:00	54.61	-5,232	11.46	
//19/1/ 19:00 54.24 -5,552 11.09 7/19/17 20:00 54.11 -5,412 10.96	7/19/17	18:00	54.43	-5,292	11.28	
//19/1/ 20.00 34.11 -3,412 10.90	7/19/17	19:00	54.24	-5,352	11.09	
7/10/17 21:00 52:07 5:472 10:92	7/19/17	20:00	52.07	-3,412	10.90	
7/19/17 22:00 53.81 -5.532 10.66	7/19/17	22:00	53.97	-5,532	10.62	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/19/17	23:00	53.72	-5,592	10.57	
7/20/17	0:00	53.49	-5,652	10.34	
7/20/17	1:00	53.35	-5,712	10.20	
7/20/17	2:00	53.18	-5,772	10.03	
7/20/17	3:00	53.02	-5,832	9.87	
7/20/17	4:00	53.00	-5,892	9.85	
7/20/17	5:00	52.87	-5,952	9.72	
7/20/17	6:00	52.70	-6,012	9.55	
7/20/17	7:00	52.62	-6,072	9.47	
7/20/17	8:00	52.56	-6,132	9.41	
7/20/17	9:00	52.41	-6,192	9.26	90% recovery achieved.
7/20/17	10:00	52.27	-6,252	9.12	
7/20/17	11:00	52.20	-6,312	9.05	
7/20/17	12:00	52.06	-6,372	8.91	
7/20/17	13:00	51.97	-6,432	8.82	
7/20/17	14:00	51.80	-6,492	8.65	
7/20/17	15:00	51.49	-6,552	8.34	
7/20/17	16:00	51.53	-6,612	8.38	
7/20/17	17:00	51.31	-6,672	8.16	
7/20/17	18:00	51.20	-6,732	8.05	
7/20/17	19:00	51.25	-6,792	8.10	
7/20/17	20:00	51.03	-6,852	7.88	
7/20/17	21:00	50.96	-6,912	7.81	
7/20/17	22:00	50.82	-6,972	7.67	
7/20/17	23:00	50.71	-7,032	7.56	
7/21/17	0:00	50.63	-7,092	7.48	
7/21/17	1:00	50.48	-7,152	7.33	
7/21/17	2:00	50.39	-7,212	7.24	
7/21/17	3:00	50.24	-7,272	7.09	
7/21/17	4:00	50.19	-7,332	7.04	
//21/17	5:00	50.12	-7,392	6.97	
7/21/17	6:00	50.08	-/,452	6.93	
7/21/17	/:00	49.97	-7,512	6.82	
7/21/17	8:00	49.88	-7,572	0.73	
7/21/17	9:00	49.84	-7,632	6.69	
7/21/17	10:00	49.76	-7,092	6.52	
7/21/17	12.00	49.08	-7,732	6.50	
7/21/17	12:00	49.03	-7,812	6.30	
7/21/17	13.00	49.49	-7,072	6.17	
7/21/17	14:00	49.52	-7,932	5.00	
7/21/17	15.00	49.03	-7,992	5.90	
7/21/17	17.00	49.09	-8,032	5.79	
7/21/17	18.00	48.93	-8,112	5.78	
7/21/17	10.00	48.83	-6,172	5.60	
7/21/17	20.00	48.84	-8,232	5.64	
7/21/17	21.00	48.63	-0,292	5 48	
7/21/17	22:00	48.62	-8 412	5 47	
7/21/17	22.00	48.46	-8 472	5 31	1
7/22/17	0.00	48 51	-0,+72	5 36	
7/22/17	1.00	48 30	_8 597	5 24	
7/22/17	2.00	48 31	-8 652	5 16	
7/22/17	3.00	48.22	-8 712	5.07	
7/22/17	4:00	48.13	-8,772	4.98	
//22/17/	4:00	48.13	-8,772	4.98	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/22/17	5:00	47.99	-8,832	4.84	
7/22/17	6:00	47.95	-8,892	4.80	
7/22/17	7:00	47.94	-8,952	4.79	
7/22/17	8:00	47.89	-9,012	4.74	
7/22/17	9:00	47.81	-9,072	4.66	
7/22/17	10:00	47.88	-9,132	4.73	
7/22/17	11:00	47.75	-9,192	4.60	
7/22/17	12:00	47.72	-9,252	4.57	
7/22/17	13:00	47.59	-9,312	4.44	
7/22/17	14:00	47.46	-9,372	4.31	
7/22/17	15:00	47.31	-9,432	4.16	
7/22/17	16:00	47.25	-9,492	4.10	
7/22/17	17:00	47.21	-9,552	4.06	
7/22/17	18:00	47.07	-9,612	3.92	
7/22/17	19:00	47.06	-9,672	3.91	
7/22/17	20:00	47.02	-9,732	3.87	
7/22/17	21:00	46.89	-9,792	3.74	
7/22/17	22:00	46.90	-9,852	3.75	
7/22/17	23:00	46.88	-9,912	3.73	
7/23/17	0:00	46.71	-9,972	3.56	
7/23/17	1:00	46.57	-10,032	3.42	
7/23/17	2:00	46.67	-10,092	3.52	
7/23/17	3:00	46.49	-10,152	3.34	
7/23/17	4:00	46.50	-10,212	3.35	
7/23/17	5:00	46.43	-10,272	3.28	
7/23/17	6:00	46.37	-10,332	3.22	
7/23/17	7:00	46.22	-10,392	3.07	
7/23/17	8:00	46.31	-10,452	3.16	
7/23/17	9:00	46.32	-10,512	3.17	
7/23/17	10:00	46.26	-10,572	3.11	
7/23/17	11:00	46.25	-10,632	3.10	
7/23/17	12:00	46.11	-10,692	2.96	
7/23/17	13:00	46.25	-10,/52	3.10	
7/23/17	14:00	46.12	-10,812	2.97	
7/23/17	15:00	46.02	-10,872	2.8/	
7/23/17	10:00	45.89	-10,932	2.74	
7/23/17	17.00	45.70	-10,992	2.55	
7/23/17	10.00	45.71	-11,032	2.30	
7/22/17	20.00	45.02	-11,112	2.47	
7/23/17	20.00	45.55	-11,172	2.30	
7/23/17	21.00	45.57	-11,232	2.42	
7/23/17	22.00	45.50	-11,232	2.33	
7/24/17	23.00	45.58	-11,332	2.43	
7/24/17	1.00	45.47	-11,412	2.32	
7/24/17	2.00	45.45	-11,472	2.30	
7/24/17	3.00	45.78	-11,552	2.23	
7/24/17	4.00	45 21	-11,592	2.15	
7/24/17	5.00	45 21	-11,032	2.10	
7/24/17	6.00	45.08	-11,712	1.00	
7/24/17	7.00	45.03	_11 832	1.95	
7/24/17	8.00	45 10	-11 892	1.00	
7/24/17	9.00	45.09	-11 952	1.93	
7/24/17	10.00	45.06	-12,012	1.91	
1121111	10.00	12.00	12,012	1.71	1

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/24/17	11:00	44.95	-12,072	1.80	
7/24/17	12:00	44.95	-12,132	1.80	
7/24/17	13:00	45.02	-12,192	1.87	
7/24/17	14:00	44.93	-12,252	1.78	
7/24/17	15:00	44.91	-12,312	1.76	
7/24/17	16:00	44.68	-12,372	1.53	
7/24/17	17:00	44.75	-12,432	1.60	
7/24/17	18:00	44.64	-12,492	1.49	
7/24/17	19:00	44.54	-12,552	1.39	
7/24/17	20:00	44.43	-12,612	1.28	
7/24/17	21:00	44.43	-12,672	1.28	
7/24/17	22:00	44.29	-12,732	1.14	
7/24/17	23:00	44.32	-12,792	1.17	
7/25/17	0:00	44.27	-12,852	1.12	
7/25/17	1:00	44.22	-12,912	1.07	
7/25/17	2:00	44.27	-12,972	1.12	
7/25/17	3:00	44.17	-13,032	1.02	
7/25/17	4:00	44.09	-13,092	0.94	
7/25/17	5:00	44.14	-13,152	0.98	
7/25/17	6:00	44.04	-13,212	0.89	
7/25/17	7:00	44.01	-13,272	0.86	
7/25/17	8:00	44.01	-13,332	0.86	
7/25/17	9:00	44.02	-13,392	0.87	
7/25/17	10:00	44.09	-13,452	0.94	
7/25/17	11:00	44.02	-13,512	0.87	Proven in and 11 (C 21, starts 1 at 11,44
7/25/17	11:44	44.03	-13,556	0.88	Pump in well C-21 started at 11:44.
7/25/17	12:00	40.30	-13,372	<u> </u>	
7/25/17	14:00	55 70	-13,032	0.04	
7/25/17	14.00	58.85	-13,092	15.04	
7/25/17	16:00	61.40	-13,752	18.25	
7/25/17	17:00	63.61	-13,812	20.46	
7/25/17	18:00	65.71	-13,072	20.40	
7/25/17	19.00	67.62	-13,992	22.30	
7/25/17	20.00	69.37	-14 052	26.22	
7/25/17	21.00	70.85	-14 112	27.70	
7/25/17	22:00	72.33	-14.172	29.18	
7/25/17	23:00	73.79	-14.232	30.64	
7/26/17	0:00	75.05	-14,292	31.90	
7/26/17	1:00	76.27	-14,352	33.12	
7/26/17	2:00	77.45	-14,412	34.30	
7/26/17	3:00	78.61	-14,472	35.46	
7/26/17	4:00	79.59	-14,532	36.44	
7/26/17	5:00	80.61	-14,592	37.46	
7/26/17	6:00	81.43	-14,652	38.28	
7/26/17	7:00	82.51	-14,712	39.36	
7/26/17	8:00	83.27	-14,772	40.12	
7/26/17	9:00	84.18	-14,832	41.03	
7/26/17	10:00	84.99	-14,892	41.84	
7/26/17	11:00	85.91	-14,952	42.76	
7/26/17	12:00	86.57	-15,012	43.42	
7/26/17	13:00	87.32	-15,072	44.17	
7/26/17	14:00	88.00	-15,132	44.85	
7/26/17	15:00	88.65	-15,192	45.50	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/26/17	16:00	89.30	-15,252	46.15	
7/26/17	17:00	89.90	-15,312	46.75	
7/26/17	18:00	90.37	-15,372	47.22	
7/26/17	19:00	91.05	-15,432	47.90	
7/26/17	20:00	91.69	-15,492	48.54	
7/26/17	21:00	92.22	-15,552	49.07	
7/26/17	22:00	92.80	-15,612	49.65	
7/26/17	23:00	93.35	-15,672	50.20	
7/27/17	0:00	93.92	-15,732	50.77	
7/27/17	1:00	94.38	-15,792	51.23	
7/27/17	2:00	95.00	-15,852	51.85	
7/27/17	3:00	95.38	-15,912	52.23	
7/27/17	4:00	95.86	-15,972	52.71	
7/27/17	5:00	96.23	-16,032	53.08	
7/27/17	6:00	96.60	-16,092	53.45	
7/27/17	7:00	97.06	-16,152	53.91	
7/27/17	8:00	97.43	-16,212	54.28	
7/27/17	9:00	97.87	-16,272	54.72	
7/27/17	10:00	98.25	-16,332	55.10	
7/27/17	11:00	98.82	-16,392	55.67	
7/27/17	12:00	99.15	-16,452	56.00	
7/27/17	13:00	99.58	-16,512	56.43	
7/27/17	14:00	99.83	-16,572	56.68	
7/2//17	15:00	100.30	-16,632	57.15	
7/27/17	16:00	100.58	-16,692	57.43	
7/27/17	1/:00	101.00	-16,/52	57.85	
7/27/17	10:00	101.12	-10,812	58.28	
7/27/17	20.00	101.43	-16,932	58.65	
7/27/17	20.00 21.00	102.09	-16,992	58.05	
7/27/17	21.00 22.00	102.34	-17.052	59.19	
7/27/17	23:00	102.70	-17.112	59.55	
7/28/17	0:00	102.89	-17.172	59.74	
7/28/17	1:00	103.23	-17.232	60.08	
7/28/17	2:00	103.45	-17,292	60.30	
7/28/17	3:00	103.80	-17,352	60.65	
7/28/17	4:00	103.95	-17,412	60.80	
7/28/17	5:00	104.26	-17,472	61.11	
7/28/17	6:00	104.40	-17,532	61.25	
7/28/17	7:00	104.71	-17,592	61.56	
7/28/17	8:00	104.79	-17,652	61.64	
7/28/17	9:00	105.02	-17,712	61.87	
7/28/17	10:00	105.27	-17,772	62.12	
7/28/17	11:00	105.46	-17,832	62.31	
7/28/17	12:00	105.68	-17,892	62.53	
7/28/17	12:15	105.75	-17,907	62.60	Pump in well C-21 shut down at 12:15.
7/28/17	13:00	100.90	-1/,952	52.51	
7/28/17	14:00	90.00	-18,012	50.65	
7/28/17	15:00	93.80	-10,072	30.05	
7/28/17	17:00	91.30	-10,152	40.21	
7/28/17	18.00	87.71	-10,192	40.27	
7/28/17	19.00	86.27	-18 312	43.12	
7/28/17	20:00	84.92	-18,372	41.77	

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7/30/17 12:00 63.91 -20,772 20.76 7/30/17 13:00 63.65 -20.832 20.50	
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7/30/17 14:00 63.45 -20,892 20.30	
7/30/17 15:00 63.10 -20,952 19.95	
7/30/17 16:00 62.80 -21,012 19.65	
7/30/17 17:00 62.58 -21,072 19.43	
7/30/17 18:00 62.35 -21,132 19.20	
7/30/17 19:00 62.04 -21,192 18.89	
7/30/17 20:00 61.86 -21,252 18.71	
<u>//30/17</u> 21:00 61.64 -21,312 18.49	
//30/17 22:00 61.59 -21,372 18.24 7/20/17 22:00 61.05 21.422 17.00	
//30/1/ 25:00 01.05 -21,432 17.90 7/21/17 0:00 60.81 21.402 17.66	
//31/1/ 0.00 00.81 -21,472 1/.00 7/21/17 1.00 60.64 21,552 17.40	
7/31/17 2:00 60.39 -21.612 17.24	

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Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
7/31/17	3:00	60.30	-21,672	17.15	
7/31/17	4:00	60.03	-21,732	16.88	
7/31/17	5:00	59.94	-21,792	16.79	
7/31/17	6:00	59.76	-21,852	16.61	
7/31/17	7:00	59.47	-21,912	16.32	
7/31/17	8:00	59.34	-21,972	16.19	
7/31/17	9:00	59.08	-22,032	15.93	
7/31/17	10:00	58.86	-22,092	15.71	
7/31/17	11:00	58.67	-22,152	15.52	
7/31/17	12:00	58.47	-22,212	15.32	
7/31/17	13:00	58.32	-22,272	15.17	
7/31/17	14:00	58.17	-22,332	15.02	
7/31/17	15:00	57.89	-22,392	14.74	
7/31/17	16:00	57.68	-22,452	14.53	
7/31/17	17:00	57.61	-22,512	14.46	
7/31/17	18:00	57.39	-22,572	14.24	
7/31/17	19:00	57.24	-22,632	14.09	
7/31/17	20:00	57.07	-22,692	13.92	
7/31/17	21:00	56.87	-22,752	13.72	
7/31/17	22:00	56.74	-22,812	13.59	
7/31/17	23:00	56.62	-22,872	13.47	
8/1/17	0:00	56.50	-22,932	13.35	
8/1/17	1:00	56.21	-22,992	13.06	
8/1/17	2:00	56.14	-23,052	12.99	
8/1/17	3:00	55.85	-23,112	12.70	
8/1/17	4:00	55.92	-23,172	12.77	
8/1/17	5:00	55.76	-23,232	12.61	
8/1/17	6:00	55.58	-23,292	12.43	
8/1/17	7:00	55.40	-23,352	12.25	
8/1/1/	8:00	55.42	-23,412	12.27	
8/1/1/	9:00	55.17	-23,472	12.02	
8/1/1/	10:00	55.10	-23,532	11.95	
8/1/17	12:00	54.80	-23,392	11.65	
0/1/1/	12:00	54.60	-23,032	11.03	
0/1/17 8/1/17	13.00	54.39	-23,712	11.44	
8/1/17	15.00	54.47	-23,772	11.32	
8/1/17	15.00	54.30	-23,832	11.23	
8/1/17	17.00	54.10	-23,052	10.95	
8/1/17	18.00	54.00	-23,932	10.95	
8/1/17	10.00	53.06	-24,012	10.85	
8/1/17	20.00	53.73	-24,072	10.51	
8/1/17	20.00 21.00	53.58	-24,192	10.33	
8/1/17	21.00 22.00	53.50	-24,152	10.45	
8/1/17	22.00 23.00	53.42	-24,252	10.33	
8/2/17	0.00	53.72	-24,312	10.27	
8/2/17	1:00	53.18	-24,432	10.12	
8/2/17	2.00	53.03	-74 497	9.88	
8/2/17	3:00	52.95	-24,552	9,80	
8/2/17	4.00	52.95	-24 612	9.65	
8/2/17	5.00	52.00	-24,012	9.75	
8/2/17	6:00	52.71	-24,732	9.56	
8/2/17	7.00	52.60	-24 792	9.45	
8/2/17	8:00	52.49	-24,852	9.34	
J / I /	0.00		,052	2.21	

Summary of Water-Level Measurements from Pressure Transducer Installed in Well C-23 Collected During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Depth to Water (ft btoc)	Elapsed Time /Recovery (minutes)	Drawdown (feet)	Comments
8/2/17	9:00	52.36	-24,912	9.21	
8/2/17	10:00	52.37	-24,972	9.22	
8/2/17	11:00	52.31	-25,032	9.16	
8/2/17	12:00	52.07	-25,092	8.92	
8/2/17	13:00	51.93	-25,152	8.78	
8/2/17	14:00	51.79	-25,212	8.64	
8/2/17	15:00	51.73	-25,272	8.58	
8/2/17	16:00	51.64	-25,332	8.49	
8/2/17	17:00	51.61	-25,392	8.46	
8/2/17	18:00	51.54	-25,452	8.39	
8/2/17	19:00	51.44	-25,512	8.29	
8/2/17	20:00	51.36	-25,572	8.21	
8/2/17	21:00	51.27	-25,632	8.12	
8/2/17	22:00	51.14	-25,692	7.99	
8/2/17	23:00	51.11	-25,752	7.96	
8/3/17	0:00	51.02	-25,812	7.87	
8/3/17	1:00	50.93	-25,872	7.78	
8/3/17	2:00	50.89	-25,932	7.74	
8/3/17	3:00	50.72	-25,992	7.57	
8/3/17	4:00	50.75	-26,052	7.60	
8/3/17	5:00	50.71	-26,112	7.56	
8/3/17	6:00	50.56	-26,172	7.41	
8/3/17	7:00	50.41	-26,232	7.26	
8/3/17	8:00	50.43	-26,292	7.28	
8/3/17	9:00	50.34	-26,352	7.19	
8/3/17	10:00	50.42	-26,412	7.27	
8/3/17	11:00	50.36	-26,472	7.21	
8/3/17	12:00	50.16	-26,532	7.01	
8/3/17	13:00	50.17	-26,592	7.02	
8/3/17	14:00	49.88	-26,652	6.73	
8/3/17	15:00	49.85	-26,712	6.70	
8/3/17	16:00	49.83	-26,772	6.68	
8/3/17	17:00	49.69	-26,832	6.54	
8/3/17	18:00	49.68	-26,892	6.53	
8/3/17	19:00	49.56	-26,952	6.41	
8/3/17	20:00	49.65	-27,012	6.50	
8/3/17	21:00	49.49	-27,072	6.34	
8/3/17	22:00	49.44	-27,132	6.29	
8/3/17	23:00	49.34	-27,192	6.19	

ft btoc feet below top of casing

gpm gallons per minute

H:\Lake Anne\Clovewood\2017\July Pumping Test Report\C-23 Table.docx

APPENDIX V



K:\Jobs\Lake Anne\Clovewood\2017\Hydrographs\Drought\RO-18vsC-7.grf

Correlation of Water-Level Measurements Between USGS Well RO-18 and Onsite Monitoring Well C-10



K:\Jobs\Lake Anne\Clovewood\2017\Hydrographs\Drought\RO-18vsC-10.grf

Correlation of Water-Level Measurements Between USGS Well RO-18 and Onsite Monitoring Well C-11



LBG Hydrogeologic & Engineering Services, P.C.

Correlation of Water-Level Measurements Between USGS Well RO-18 and Onsite Monitoring Well C-17



K:\Jobs\Lake Anne\Clovewood\2017\Hydrographs\Drought\RO-18vsC-17.grf

LBG Hydrogeologic & Engineering Services, P.C.

Correlation of Water-Level Measurements Between USGS Well RO-18 and Onsite Monitoring Well C-19



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LBG Hydrogeologic & Engineering Services, P.C.

Correlation of Water-Level Measurements Between USGS Well RO-18 and Onsite Monitoring Well C-22



K:\Jobs\Lake Anne\Clovewood\2017\Hydrographs\Drought\RO-18vsC-22.grf

APPENDIX VI

PUMPING WELLS

Hydrograph of Water-Level Measurements Collected from Pumping Well C-6 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 in July 2017



K:\Jobs\Lake Anne\Clovewood\2017\Hydrographs\Pumping Wells\C-6Comprehensive.grf



K:\Jobs\Lake Anne\Clovewood\2017\Hydrographs\Pumping Wells\C-7BComprehensive.grf





CLOVEWOOD PROPERTY VILLAGE OF SOUTH BLOOMING GROVE

K:\Jobs\Lake Anne\Clovewood\2017\Hydrographs\Pumping Wells\C-14Comprehensive.grf



K:\Jobs\Lake Anne\Clovewood\2017\Hydrographs\Pumping Wells\C-16Comprehensive.grf



K:\Jobs\Lake Anne\Clovewood\2017\Hydrographs\Pumping Wells\C-21Comprehensive.grf

Hydrograph of Water-Level Measurements Collected from Pumping Well C-23 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 in July 2017



K:\Jobs\Lake Anne\Clovewood\2017\Hydrographs\Pumping Wells\C-23Comprehensive.grf

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Date	Time	Depth to Water (feet below top of casing)	Depth to Water (feet below top of dip tube)	Date	Time	Depth to Water (feet below top of casing)	Depth to Water (feet below top of dip tube)
		C-6	• • · · · ·			C-7B	• • ·
7/8/2017	10:00	Flowing		6/30/2017	17:10	32.09	
7/8/2017	11:00	Flowing		7/10/2017	20:41	32.95	33.70
7/9/2017	11:00	Flowing		7/10/2017	21:06	42.95	43.70
7/10/2017	11:00	Flowing		7/10/2017	21:07	43.50	44.25
7/10/2017	18:28	3.48	3.78	7/10/2017	21:08	41.05	41.80
7/10/2017	18:40	27.50	27.80	7/10/2017	21:10	42.90	43.65
7/10/2017	18:44	29.42	29.72	7/10/2017	21:12	43.65	44.40
7/10/2017	18:45	29.05	29.35	7/10/2017	21:29	46.98	47.73
7/10/2017	18:48	29.55	29.85	7/11/2017	0:09	57.00	57.75
7/10/2017	18:50	30.02	30.32	7/11/2017	1:44	59.81	60.56
7/10/2017	18:55	32.03	32.33	7/11/2017	4:31	63.26	64.01
7/10/2017	19:00	33.85	34.15	7/11/2017	6:46	65.53	66.28
7/10/2017	20:49	53.79	54.09	7/11/2017	8:52	67.27	68.02
7/10/2017	23:40	68.39	68.69	7/11/2017	12:03	69.61	70.36
7/11/2017	1:30	75.12	75.42	7/11/2017	13:37	70.56	71.31
7/11/2017	3:46	81.08	81.38	7/11/2017	14:42	71.20	71.95
7/11/2017	6:05	84.44	84.74	7/11/2017	15:40	71.71	72.46
7/11/2017	8:23	87.41	87.71	7/11/2017	16:40	72.26	73.01
7/11/2017	10:32	89.72	90.02	7/11/2017	17:50	72.78	73.53
7/11/2017	11:39	90.73	91.03	7/11/2017	23:22	75.03	75.78
7/11/2017	13:15	92.09	92.39	7/12/2017	4:07	76.02	76.77
7/11/2017	14:20	93.06	93.36	7/12/2017	6:42	77.02	77.77
7/11/2017	15:19	94.04	94.34	7/12/2017	8:23	77.69	78.44
7/11/2017	16:22	94.74	95.04	7/12/2017	9:59	78.12	78.87
7/11/2017	17:23	95.62	95.92	7/12/2017	10:35	73.43	74.18
7/11/2017	18:40	96.58	96.88	7/12/2017	22:25	45.60	46.35
7/11/2017	22:25	98.76	99.06	7/13/2017	1:22	44.33	45.08
7/12/2017	1:08	100.20	100.50	7/13/2017	4:14	43.36	44.11
7/12/2017	3:20	100.78	101.08	7/13/2017	6:31	42.69	43.44
7/12/2017	5:59	102.53	102.83	7/13/2017	8:19	42.24	42.99
7/12/2017	8:13	103.93	104.23	7/13/2017	9:20	42.01	42.76
7/12/2017	9:42	104.86	105.16	7/13/2017	10:04	41.74	42.49
7/12/2017	11:00	105.57	105.87	7/13/2017	10:47	41.75	42.50
7/12/2017	12:23	106.32	106.62	7/13/2017	11:42	41.49	42.24
7/12/2017	13:29	107.03	107.33	7/13/2017	16:55	40.51	41.26
7/12/2017	14:08	107.58	107.88	7/13/2017	18:58	40.32	41.07
7/12/2017	15:06	108.08	108.38	7/13/2017	23:00	39.89	40.64
7/12/2017	16:15	108.66	108.96	7/14/2017	2:03	39.51	40.26
7/12/2017	17:42	109.66	109.96	7/14/2017	4:43	39.29	40.04
7/12/2017	18:45	109.88	110.18	7/14/2017	6:38	39.19	39.94
7/12/2017	18:55	108.81	109.11	7/14/2017	8:42	39.04	39.79
7/12/2017	18:57	107.36	107.66	7/14/2017	9:47	38.83	39.58
7/12/2017	21:37	106.63	106.93	7/14/2017	10:54	38.73	39.48
7/13/2017	0:22	107.15	107.45	7/14/2017	11:49	38.78	39.53
7/13/2017	3:17	108.01	108.31	7/14/2017	13:14	38.64	39.39
7/13/2017	6:02	96.87	97.17	7/14/2017	23:41	37.89	38.64
7/13/2017	6:46	100.77	101.07	7/15/2017	3:48	37.70	38.45
7/13/2017	7:35	103.07	103.37	7/15/2017	6:32	37.48	38.23
7/13/2017	8:35	105.01	105.31	7/15/2017	11:00	36.45	37.20
7/13/2017	9:35	106.51	106.81	7/15/2017	13:00	36.41	37.16

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D		Depth to Water	Depth to Water	D	-	Depth to Water	Depth to Water
Date	Time	(feet below top of	(feet below top of	Date	Time	(feet below top of	(feet below top of
		casing)	dip tube)			casing)	dip tube)
	10.10	C-6 (continued)	107.70	- 4 - 10 - 4 -	1.5.00	C-/B (continued)	27.10
7/13/2017	10:18	107.22	107.52	7/15/2017	15:02	36.35	37.10
7/13/2017	11:05	108.11	108.41	7/17/2017	14:14	35.83	36.58
7/13/2017	12:35	109.35	109.65	7/17/2017	15:41	35.65	36.40
7/13/2017	15:01	110.41	110.71	7/17/2017	17:43	35.67	36.42
7/13/2017	16:21	111.23	111.53	7/18/2017	12:44	35.48	36.23
7/13/2017	18:25	112.09	112.39	7/18/2017	14:43	35.48	36.23
7/13/2017	22:00	105.57	105.87	7/18/2017	16:32	35.46	36.21
7/14/2017	1:10	111.53	111.83	//19/2017	10:22	35.26	36.01
7/14/2017	4:02	113.35	113.65	//19/2017	15:30	35.21	35.96
7/14/2017	6:07	114.25	114.55	7/25/2017	8:23	33.95	34.70
7/14/2017	8:22	115.05	115.35	7/27/2017	15:18	34.50	35.25
7/14/2017	9:26	115.31	115.61	7/28/2017	16:20	34.50	
7/14/2017	10:29	115.//	116.07	//29/2017	12:20	34.50	
7/14/2017	12:50	116.28	110.38				
7/14/2017	12:50	110.45	110./3				
7/14/2017	14:30	117.03	117.55				
7/14/2017	10:40	11/.49	117.79				
7/14/2017	22.50	118.12	110.42				
7/14/2017	22.30	118.30	119.29				
7/15/2017	6:05	120.12	120.42				
7/15/2017	8.22	120.12	120.42				
7/15/2017	10.59	120.77	121.07				
7/15/2017	15.02	122.65	122.95				
7/15/2017	15.38	122.05	123.06				
7/15/2017	17:50	123.45	123.75				
7/15/2017	18:30	123.60	123.90				
7/15/2017	20:55	123.90	124.20				
7/15/2017	22:10	124.15	124.45				
7/15/2017	23:00	123.75	124.05				
7/16/2017	1:12	113.70	114.00				
7/16/2017	2:34	81.85	82.15				
7/16/2017	11:28	61.88	62.18				
7/16/2017	13:19	58.65	58.95				
7/16/2017	15:31	49.09	49.39				
7/17/2017	13:10	28.86	29.16				
7/17/2017	15:31	26.59	26.89				
7/17/2017	17:25	25.05	25.35				
7/18/2017	12:16	13.26	13.56				
7/18/2017	14:09	12.42	12.72				
7/18/2017	15:50	11.67	11.97				
7/19/2017	12:45	5.75	6.05				
7/25/2017	8:50	Flowing					
7/27/2017	15:47	Flowing					
7/28/2017	16:45	Flowing					
7/29/2017	13:10	Flowing					

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Date	Time	Depth to Water (feet below top of	Depth to Water (feet below top of	Date	Time	Depth to Water (feet below top of	Depth to Water (feet below top of
Date	Thire	casing)	dip tube)	Date	Thire	casing)	dip tube)
		C-12	• • ·			C-14	• •
7/7/2017	18:50	102.71		7/7/2017	18:10	0.95	1.85
7/8/2017	18:10	102.45		7/8/2017	15:00	0.37	1.27
7/9/2017	14:56	102.80	103.00	7/10/2017	9:30	0.39	1.29
7/10/2017	8:55	102.95	103.15	7/10/2017	16:20	0.42	1.32
7/10/2017	17:20	102.80	103.00	7/10/2017	16:27	1.65	2.55
7/10/2017	19:54	122.83	123.03	7/10/2017	16:33	37.65	38.55
7/10/2017	19:55	132.80	133.00	7/10/2017	16:34	41.30	42.20
7/10/2017	19:56	138.10	138.30	7/10/2017	16:35	40.90	41.80
7/10/2017	19:57	143.55	143.75	7/10/2017	16:36	39.55	40.45
7/10/2017	19:58	145.70	145.90	7/10/2017	16:37	35.40	36.30
7/10/2017	19:59	148.80	149.00	7/10/2017	16:38	33.10	34.00
7/10/2017	20:00	150.05	150.25	7/10/2017	16:39	31.60	32.50
7/10/2017	20:05	155.95	156.15	7/10/2017	16:40	31.10	32.00
7/10/2017	20:10	159.60	159.80	7/10/2017	16:41	31.10	32.00
7/10/2017	20:15	162.15	162.35	7/10/2017	16:42	32.85	33.75
7/10/2017	20:20	164.05	164.25	7/10/2017	16:43	35.60	36.50
7/10/2017	20:25	165.65	165.85	7/10/2017	16:46	35.20	36.10
7/10/2017	20:30	167.37	167.57	7/10/2017	16:50	35.80	36.70
7/10/2017	21:47	179.52	179.72	7/10/2017	16:55	36.60	37.50
7/11/2017	0:02	187.24	187.44	7/10/2017	17:00	38.10	39.00
7/11/2017	1:56	190.18	190.38	7/10/2017	17:05	32.00	32.90
7/11/2017	23:02	195.10	195.30	7/10/2017	17:10	42.12	43.02
7/12/2017	1:41	195.96	196.16	7/10/2017	17:15	47.53	48.43
7/12/2017	3:48	196.41	196.61	7/10/2017	17:20	48.69	49.59
7/12/2017	6:28	196.38	196.58	//10/2017	17:25	49.86	50.76
//12/2017	/:35	196.14	196.34	//10/2017	17:30	50.88	52.91
//12/2017	8:58	192.44	192.64	//10/2017	17:40	52.91	55.29
7/12/2017	10:44	191.34	191.54	//10/2017	1/:50	54.48	57.02
7/12/2017	11:38	192.41	192.01	7/10/2017	18:00	50.12	57.02
7/12/2017	12:40	192.30	192.50	7/10/2017	20:10	09.51	/0.41
7/12/2017	13:03	192.32	192.32	7/10/2017	1.00	87.02	83.08
7/12/2017	13.07	192.32	192.52	7/11/2017	3.04	01.16	07.92
7/12/2017	13.11	192.32	192.32	7/11/2017	5.33	91.10	92.00
7/12/2017	13.30 14.28	192.12	192.02	7/11/2017	8.20	97.40	98.30
7/12/2017	15.33	191.05	192.05	7/11/2017	12.30	101.00	101.90
7/12/2017	16.43	191.68	191.88	7/11/2017	14.12	102.24	103.14
7/12/2017	18.17	191.58	191.00	7/11/2017	17.13	103.33	104.23
7/12/2017	19.01	191.50	191.70	7/11/2017	21.36	105.15	106.05
7/12/2017	21.52	191.50	191.70	7/12/2017	0.53	106.21	107.11
7/13/2017	0:51	192.19	192.39	7/12/2017	2:42	106.87	107.77
7/13/2017	3:42	192.81	193.01	7/12/2017	5:32	107.84	108.74
7/13/2017	6:20	192.87	193.07	7/12/2017	9:47	109.86	110.76
7/13/2017	7:58	192.75	192.95	7/12/2017	14:02	110.66	111.56
7/13/2017	9:05	192.93	193.13	7/12/2017	15:47	111.44	112.34
7/13/2017	9:51	192.80	193.00	7/12/2017	17:25	111.78	112.68
7/13/2017	1:38	192.97	193.17	7/12/2017	18:12	111.86	112.76
7/13/2017	11:25	192.92	193.12	7/12/2017	21:05	112.16	113.06
7/13/2017	12:20	193.00	193.20	7/12/2017	23:38	112.46	113.36
7/13/2017	14:20	192.98	193.18	7/13/2017	2:37	113.00	113.90

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Date	Time	Depth to Water (feet below top of	Depth to Water (feet below top of	Date	Time	Depth to Water (feet below top of	Depth to Water (feet below top of
		casing)	dip tube)			casing)	dip tube)
	1	C-12 (continued)			1	C-14 (continued)	
7/13/2017	15:31	192.85	193.05	7/13/2017	5:07	74.77	75.67
7/13/2017	18:36	192.93	193.13	7/13/2017	5:32	94.37	95.27
7/13/2017	22:36	192.58	192.78	7/13/2017	5:41	99.35	100.25
7/14/2017	1:28	192.55	192.75	7/13/2017	6:40	105.35	106.25
7/14/2017	4:24	192.56	192.76	7/13/2017	8:35	109.02	109.92
7/14/2017	6:30	192.48	192.68	7/13/2017	10:11	110.65	111.55
7/14/2017	8:03	192.68	192.88	7/13/2017	12:22	111.45	112.35
7/14/2017	9:02	192.77	192.97	7/13/2017	14:27	112.76	113.66
7/14/2017	10:02	192.74	192.94	7/13/2017	17:43	113.88	114.78
7/14/2017	11:09	192.73	192.93	7/13/2017	19:00	113.93	114.83
7/14/2017	12:07	192.89	193.09	7/13/2017	21:11	72.45	73.35
7/14/2017	14:02	192.92	193.12	7/13/2017	21:19	97.26	98.16
7/14/2017	17:22	193.08	193.28	7/13/2017	21:24	100.77	101.67
7/14/2017	19:44	192.66	192.86	7/14/2017	0:26	109.69	110.59
7/14/2017	20:30	192.47	192.67	7/14/2017	3:07	112.68	113.58
7/14/2017	23:04	192.41	192.61	7/14/2017	5:24	113.66	114.56
7/15/2017	3:22	192.87	193.07	7/14/2017	8:00	115.55	116.45
7/15/2017	6:19	192.64	192.84	7/14/2017	9:30	115.85	116.75
7/15/2017	10:06	192.55	192.75	7/14/2017	11:01	116.43	117.33
7/15/2017	12:54	192.55	192.75	7/14/2017	12:32	116.78	117.68
7/15/2017	15:56	192.70	192.90	7/14/2017	15:16	117.32	118.22
7/15/2017	18:15	192.75	192.95	7/14/2017	18:22	117.96	118.86
7/15/2017	21:20	192.50	192.70	7/14/2017	21:49	118.15	119.05
7/15/2017	22:50	192.45	192.65	7/15/2017	2:00	115.17	116.07
7/16/2017	0:22	192.22	192.42	7/15/2017	5:23	117.62	118.52
7/16/2017	1:29	150.10	150.30	7/15/2017	9:44	119.08	119.98
7/16/2017	2:45	127.30	127.50	7/15/2017	12:12	119.32	120.22
7/16/2017	11:12	112.40	112.60	7/15/2017	14:47	119.81	120.71
7/16/2017	13:09	111.85	112.05	7/15/2017	15:44	119.92	120.82
7/16/2017	15:16	111.20	111.40	7/15/2017	16:30	120.35	121.25
7/17/2017	13:41	107.98	108.18	7/15/2017	18:50	120.70	121.60
7/17/2017	15:54	107.80	108.00	7/15/2017	20:24	120.90	121.80
7/17/2017	17:35	107.67	107.87	7/15/2017	22:05	121.04	121.94
7/18/2017	13:05	106.88	107.08	7/15/2017	23:15	121.15	122.05
7/18/2017	14:26	106.81	107.01	7/16/2017	1:15	121.30	122.20
7/18/2017	16:19	106.76	106.96	7/16/2017	2:20	81.85	82.75
7/19/2017	12:30	106.40	106.60	7/16/2017	11:52	54.70	55.60
7/25/2017	8:40	104.80		7/16/2017	13:50	50.65	51.55
7/27/2017	16:50	105.47	105.67	//16/2017	16:20	47.75	48.65
7/28/2017	16:13	105.14	105.34	7/17/2017	12:26	26.30	27.20
				7/17/2017	15:21	24.10	25.00
				7/17/2017	17:13	22.81	23.71
				7/18/2017	12:44	12.59	13.49
				7/18/2017	14:31	11.70	12.60
				7/18/2017	16:21	11.09	11.99
				1/19/2017	13:10	6.30	7.20
				7/25/2017	9:10	0.26	1.16

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Date	Time	Depth to Water (feet below top of	Depth to Water (feet below top of din tube)	Date	Time	Depth to Water (feet below top of	Depth to Water (feet below top of din tube)
		C 16	up tube)			C 23	uip tube)
7/7/2017	17.50	14.49	15 45	7/6/2017	12.57	42.05	12 25
7/10/2017	1/:30	14.46	15.45	7/10/2017	15:57	42.93	43.33
7/10/2017	14:20	15.38	16.33	7/10/2017	12.45	43.32	43.72
7/10/2017	17:20	13.43	20.45	7/10/2017	12:43	48.02	40.42
7/10/2017	17:27	36.46	29.43	7/10/2017	12:00	49.55	49.75
7/10/2017	17:20	37.78	36./3	7/10/2017	12:00	/4.03	/3.03
7/10/2017	17:29	40.03	41.00	7/10/2017	12:01	95.50	95.70
7/10/2017	17:30	43.43	44.40	7/10/2017	13:02	102.83	105.23
7/10/2017	17:31	47.48	40.43	7/10/2017	12:03	100.85	107.25
7/10/2017	17:32	49.47	51.17	7/10/2017	13:04	107.05	108.05
7/10/2017	17:33	50.20	52.57	7/10/2017	13:05	105.80	106.20
7/10/2017	17:34	52.82	52.07	7/10/2017	13:00	100.95	101.35
7/10/2017	17:40	52.85	59.75	7/10/2017	13:07	99.10	99.30
7/10/2017	17:40	57.78	38./5	7/10/2017	13:08	96.33	96.75
7/10/2017	17:40	03.08	04.00	7/10/2017	13:09	94.60	95.00
7/10/2017	17:50	03.93	70.00	7/10/2017	13:10	92.90	93.30
7/10/2017	1/:55	69.03	70.00	7/10/2017	13:11	91.50	91.90
7/10/2017	18:00	/3.13	/4.10	7/10/2017	13:13	90.93	91.33
7/10/2017	18:05	/5.85	/0.80	7/10/2017	13:14	90.75	91.15
7/10/2017	18:10	/8.23	/9.20	7/10/2017	13:24	92.10	92.30
7/10/2017	18:15	80.23	81.20	7/10/2017	13:34	93.70	94.10
7/10/2017	20:28	108.07	109.04	7/10/2017	13:44	95.15	95.55
7/10/2017	23:23	125.65	120.02	7/10/2017	14:21	99.35	99.75
7/11/2017	1:17	142.46	143.43	7/10/2017	14:36	100.76	101.16
7/11/2017	5:52	148.35	149.32	7/10/2017	14:51	102.24	102.64
//11/2017	5:50	152.04	153.01	//10/2017	15:06	103.41	103.81
//11/2017	8:55	158.23	159.20	7/10/2017	15:21	104.60	105.00
//11/2017	13:54	162.16	165.13	7/10/2017	15:54	106.90	107.30
7/11/2017	10:50	164.24	165.21	7/10/2017	16:20	108.//	109.17
7/11/2017	22:02	100.55	10/.52	7/10/2017	10:50	110.75	111.13
7/12/2017	1:00	167.69	108.00	7/10/2017	17:20	112.45	112.85
7/12/2017	2:39	168.20	109.23	7/10/2017	18:20	115.80	110.20
7/12/2017	0.22	169.00	170.05	7/10/2017	19:18	118.03	119.05
7/12/2017	9:55	109.87	171.55	7/10/2017	22:50	120.97	127.57
7/12/2017	15:30	170.38	1/1.33	7/11/2017	0:55	131.31	131./1
7/12/2017	15:57	1/1.21	172.18	7/11/2017	2:52	129.04	130.04
7/12/2017	10:29	1/1.39	172.50	7/11/2017	7.40	133.94	130.34
7/12/2017	21.25	1/1.04	172.01	7/11/2017	10.02	140.03	141.23
7/12/2017	21:23	1/2.28	1/3.23	7/11/2017	10:02	143.70	144.10
7/12/2017	25:58	172.03	174.11	7/11/2017	12:01	140.37	140.//
7/13/2017	5.03	172.41	174.11	7/11/2017	14.47	144.70	145.10
7/13/2017	J.40 8.50	1/3.41	174.30	7/11/2017	18:00	147.74	140.14
7/12/2017	0.30	1/3./0	1/4.0/	7/11/2017	20.50	130.23	130.03
7/13/2017	10:43	1/3.00	174.00	7/12/2017	20:30	143.30	143.90
7/13/2017	12:07	1/4.02	1/4.99	7/12/2017	0.29	152 27	154.55
7/13/2017	14:40	1/4.44	1/3.41	7/12/2017	2.00	152.57	152.77
7/13/2017	16.09	174.00	175.05	7/12/2017	2.00 1.18	155.30	155.90
7/13/2017	18.15	174.00	175.05	7/12/2017	10.42	153.40	153.00
7/13/2017	21.27	1/4./4	175.71	7/12/2017	10.43	150.20	161 71
7/14/2017	0.40	1/3.10	176.07	7/12/2017	10:33	101.31	101./1
//14/201/	0.49	1/3.29	1/0.20	//12/201/	11:03	102.01	103.01

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Date	Time	Depth to Water (feet below top of	Depth to Water (feet below top of	Date	Time	Depth to Water (feet below top of	Depth to Water (feet below top of
		C 16 (continued)	aip tube)			C 23 (continued)	aip tube)
7/14/2017	2.24	175.52	17(50	7/12/2017	14.20	C-25 (continued)	152.05
//14/2017	5.49	1/5.55	1/6.50	7/12/2017	14:29	153.55	153.95
7/14/2017	5:48	1/5./5	1/6./2	//12/2017	16:09	150.57	150.97
7/14/2017	9:00	1/6.08	177.10	//12/2017	10:56	149.48	149.88
7/14/2017	10:26	1/6.13	1//.10	//12/2017	18:29	147.41	14/.81
7/14/2017	12:20	1/6.34	1//.31	//12/2017	20:37	145.52	145.92
//14/2017	15:59	1/6.46	1//.43	//12/2017	23:15	143.78	144.18
//14/2017	18:45	1/6.66	177.63	//13/2017	1:48	142.31	142.71
7/14/2017	22:18	176.95	177.92	7/13/2017	4:33	141.19	141.59
7/15/2017	2:14	177.20	178.17	7/13/2017	7:58	140.07	140.47
7/15/2017	5:42	177.45	178.42	7/13/2017	9:41	139.68	140.08
7/15/2017	9:47	177.54	178.51	7/13/2017	11:48	139.17	139.57
7/15/2017	12:40	177.47	178.44	7/13/2017	12:45	139.10	139.50
7/15/2017	16:40	177.48	178.45	7/13/2017	15:01	138.73	139.13
7/15/2017	18:40	177.58	178.55	7/13/2017	16:02	138.41	138.81
7/15/2017	20:30	177.68	178.65	7/13/2017	18:38	138.18	138.58
7/15/2017	22:30	177.88	178.85	7/13/2017	20:38	137.96	138.36
7/16/2017	0:09	177.90	178.87	7/13/2017	23:20	137.73	138.13
7/16/2017	1:40	152.43	153.40	7/14/2017	2:23	137.46	137.86
7/16/2017	2:26	142.03	143.00	7/14/2017	5:00	137.32	137.72
7/16/2017	11:41	93.78	94.75	7/14/2017	8:25	137.09	137.49
7/16/2017	13:30	87.74	88.71	7/14/2017	9:30	137.04	137.44
7/16/2017	16:04	80.63	81.60	7/14/2017	10:30	137.11	137.51
7/17/2017	12:42	49.11	50.08	7/14/2017	11:00	136.99	137.39
7/17/2017	15:28	46.78	47.75	7/14/2017	11:30	136.95	137.35
7/17/2017	17:20	45.43	46.40	7/14/2017	12:00	136.99	137.39
7/18/2017	12:55	35.78	36.75	7/14/2017	12:30	136.99	137.39
7/18/2017	14:43	34.54	35.51	7/14/2017	13:00	136.99	137.39
7/18/2017	16:31	34.18	35.15	7/14/2017	14:00	136.95	137.35
7/19/2017	14:40	27.96	28.93	7/14/2017	14:30	136.98	137.38
7/25/2017	9:00	16.93	17.90	7/14/2017	15:00	136.95	137.35
7/27/2017	16:24	16.25	17.22	7/14/2017	15:30	136.95	137.35
7/28/2017	17:00	14.98	15.95	7/14/2017	16:06	136.84	137.24
7/29/2017	13:30	14.83	15.80	7/14/2017	18:44	136.85	137.25
				7/14/2017	21:17	136.80	137.20
				7/15/2017	0:48	136.75	137.15
				7/15/2017	4:18	136.78	137.18
				7/15/2017	6:49	136.79	137.19
				7/15/2017	8:46	136.87	137.27
				7/15/2017	11:18	136.93	137.33
				7/15/2017	13:30	137.05	137.45
				7/15/2017	14:09	137.05	137.45
				7/15/2017	17:15	137.10	137.50
				7/15/2017	19:00	137.20	137.60
				7/15/2017	21:50	137.05	137.45
				7/15/2017	23:30	137.20	137.60
				7/16/2017	2:05	89.85	90.25
				7/16/2017	16:53	75.70	76.10
				7/17/2017	11:03	67.53	67.93
				7/17/2017	15:08	66.00	66.40
				7/17/2017	17:00	65.42	65.82

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Data	T:	Depth to Water	Depth to Water	Dete	Т:	Depth to Water	Depth to Water
Date	Time	(leet below top of	(leet below top of din tube)	Date	Time	(leet below top of	(leet below top of din tube)
		casing)				C-23 (continued)	up tube)
				7/18/2017	12.22	60.40	60.80
				7/18/2017	12.22	59.96	60.36
				7/18/2017	16:03	59.48	59.88
				7/19/2017	14.00	55.17	55.57
				7/25/2017	9:50	44.40	44.80
		C-21			,	C-21 (continued)	
7/6/2017	13.42	49.20	49 54	7/25/2017	11.48	83.86	84 20
7/10/2017	11:42	49.36	49.70	7/25/2017	11:49	84.93	85.27
7/10/2017	11:56	49.41	49.75	7/25/2017	11:50	85.16	85.50
7/10/2017	11:57	81.81	82.15	7/25/2017	11:51	85.13	85.47
7/10/2017	12:00	82.49	82.83	7/25/2017	11:52	85.31	85.65
7/10/2017	12:03	81.54	81.88	7/25/2017	11:53	84.66	85.00
7/10/2017	12:06	82.77	83.11	7/25/2017	11:54	84.23	84.57
7/10/2017	12:08	83.35	83.69	7/25/2017	12:00	84.86	85.20
7/10/2017	12:09	83.62	83.96	7/25/2017	12:06	86.31	86.65
7/10/2017	12:10	84.00	84.34	7/25/2017	12:11	87.41	87.75
7/10/2017	12:11	84.23	84.57	7/25/2017	12:16	88.26	88.60
7/10/2017	12:15	85.44	85.78	7/25/2017	12:20	88.81	89.15
7/10/2017	12:20	86.37	86.71	7/25/2017	12:25	89.49	89.83
7/10/2017	12:25	87.28	87.62	7/25/2017	12:30	90.36	90.70
7/10/2017	12:30	88.17	88.51	7/25/2017	12:40	91.51	91.85
7/10/2017	12:35	89.00	89.34	7/25/2017	12:50	92.69	93.03
7/10/2017	12:40	89.58	89.92	7/25/2017	13:00	93.76	94.10
7/10/2017	12:45	90.32	90.66	7/25/2017	13:20	95.53	95.87
7/10/2017	12:55	91.59	91.93	7/25/2017	13:40	97.11	97.45
7/10/2017	13:05	92.77	93.11	7/25/2017	14:00	98.51	98.85
7/10/2017	13:15	94.63	94.97	7/25/2017	14:30	100.31	100.65
7/10/2017	13:25	95.92	96.26	7/25/2017	15:00	101.81	102.15
7/10/2017	13:35	97.31	97.65	7/25/2017	15:30	103.24	103.58
7/10/2017	13:50	99.38	99.72	7/25/2017	16:00	104.56	104.90
7/10/2017	14:03	99.90	100.24	7/25/2017	10:50	105.71	100.03
7/10/2017	14.20	102.40	102.80	7/25/2017	17.00	107.96	107.23
7/10/2017	14.50	105.07	105.47	7/25/2017	18.00	107.96	109.30
7/10/2017	15.05	106.21	106.55	7/25/2017	18.30	109.89	110.23
7/10/2017	15:20	107.47	107.81	7/25/2017	19:00	110.94	111.28
7/10/2017	15:50	109.62	109.96	7/25/2017	20:00	112.55	112.89
7/10/2017	16:20	102.02	102.36	7/25/2017	21:00	114.21	114.55
7/10/2017	17:48	116.81	117.15	7/25/2017	22:00	115.56	115.90
7/10/2017	19:47	122.68	123.02	7/25/2017	23:00	116.97	117.31
7/10/2017	22:47	130.00	130.34	7/26/2017	0:00	118.33	118.67
7/11/2017	0:46	133.43	133.77	7/26/2017	1:00	119.52	119.86
7/11/2017	2:49	97.81	98.15	7/26/2017	2:00	120.56	120.90
7/11/2017	3:00	124.75	125.09	7/26/2017	3:00	121.69	122.03
7/11/2017	5:18	138.01	138.35	7/26/2017	4:00	122.71	123.05
7/11/2017	8:00	142.86	143.20	7/26/2017	5:00	123.67	124.01
7/11/2017	9:50	142.76	143.10	7/26/2017	6:00	124.62	124.96
7/11/2017	10:30	143.91	144.25	7/26/2017	7:00	125.56	125.90
7/11/2017	11:04	145.21	145.55	7/26/2017	8:00	126.41	126.75

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	-	Depth to Water	Depth to Water	D		Depth to Water	Depth to Water
Date	Time	(feet below top of	(feet below top of	Date	Time	(feet below top of	(feet below top of
		C 21 (continued)	aip tube)			C 21 (continued)	aip tube)
7/11/2017	11.26	<u>146.20</u>	14(72	7/20/2017	0.00	<u>127.21</u>	107.55
//11/2017	11:36	146.39	146./3	7/26/2017	9:00	12/.21	127.55
7/11/2017	12:36	145.41	145.75	7/26/2017	10:00	128.06	128.40
7/11/2017	13:30	144.46	144.80	7/26/2017	12.00	128.76	129.10
7/11/2017	13:40	122.00	122.40	7/26/2017	12:00	129.01	129.95
7/11/2017	13:48	120.00	120.94	7/26/2017	13:00	130.19	130.33
7/11/2017	13:30	118.21	110.33	7/26/2017	14:00	130.31	130.83
7/11/2017	14.33	130.39	130.75	7/26/2017	15.00	131.20	131.00
7/11/2017	14.30	140.22	140.30	7/26/2017	17.00	132.00	132.40
7/11/2017	14.43	141.15	141.49	7/26/2017	17.00	132.55	132.07
7/11/2017	15.00	144.18	147.52	7/26/2017	10.00	133.00	133.40
7/11/2017	16.43	147.28	147.02	7/26/2017	20.00	133.73	134.13
7/11/2017	17.30	150.57	150.91	7/26/2017	21.00	134.81	135.15
7/11/2017	21.12	1/4 95	1/15 29	7/26/2017	22:00	135.44	135.15
7/12/2017	0.07	152 27	152.61	7/26/2017	22:00	136.01	136.35
7/12/2017	0.07	153.08	153.42	7/27/2017	0.00	136.51	136.85
7/12/2017	1:23	153.82	154.16	7/27/2017	1:00	136.94	137.28
7/12/2017	2:19	154.69	155.03	7/27/2017	2:00	137.50	137.84
7/12/2017	5:13	156.67	157.01	7/27/2017	3:00	138.02	138.36
7/12/2017	9:01	158.80	159.14	7/27/2017	4:00	138.48	138.82
7/12/2017	10:19	159.40	159.74	7/27/2017	5:00	138.71	139.05
7/12/2017	11:56	160.53	160.87	7/27/2017	6:00	139.28	139.62
7/12/2017	11:57	137.99	138.33	7/27/2017	7:00	139.63	139.97
7/12/2017	12:02	136.22	136.56	7/27/2017	8:00	139.98	140.32
7/12/2017	12:05	131.22	131.56	7/27/2017	9:00	140.39	140.73
7/12/2017	12:11	132.74	133.08	7/27/2017	10:00	140.72	141.06
7/12/2017	12:20	130.15	130.49	7/27/2017	11:00	141.20	141.54
7/12/2017	12:29	128.37	128.71	7/27/2017	12:00	141.66	142.00
7/12/2017	14:44	127.20	127.54	7/27/2017	13:00	142.04	142.38
7/12/2017	16:44	113.10	113.44	7/27/2017	14:00	142.26	142.60
7/12/2017	20:53	108.23	108.57	7/27/2017	16:00	143.03	143.37
7/12/2017	23:25	106.40	106.74	7/27/2017	17:00	143.34	143.68
7/13/2017	2:07	104.85	105.19	7/27/2017	18:00	143.61	143.95
7/13/2017	4:57	103.46	103.80	7/27/2017	19:00	143.86	144.20
7/13/2017	9:56	101.91	102.25	7/27/2017	20:00	144.19	144.53
7/13/2017	13:59	101.28	101.62	7/27/2017	21:00	144.53	144.87
7/13/2017	17:19	100.56	100.90	7/27/2017	22:00	144.79	145.13
7/13/2017	20:56	100.04	100.38	7/27/2017	23:00	145.14	145.48
7/13/2017	23:58	99.75	100.09	7/28/2017	0:00	145.36	145.70
7/14/2017	2:43	99.59	99.93	7/28/2017	1:00	145.67	146.01
7/14/2017	5:05	99.47	99.81	7/28/2017	2:00	145.82	146.16
7/14/2017	10:47	99.11	99.45	7/28/2017	3:00	146.16	146.50
7/14/2017	12:35	99.05	99.39	7/28/2017	4:00	146.40	146.74
7/14/2017	16:44	98.94	99.28	7/28/2017	5:00	146.65	146.99
7/14/2017	18:39	98.86	99.20	7/28/2017	6:00	146.76	147.10
7/14/2017	21:31	98.79	99.13	7/28/2017	7:00	147.05	147.39
7/15/2017	1:05	98.73	99.07	7/28/2017	8:00	147.31	147.65
7/15/2017	5:02	98.70	99.04	7/28/2017	9:00	147.46	147.80
7/15/2017	12:02	98.78	99.12	7/28/2017	10:00	147.73	148.07
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Manual Water-Level Measurements Collected from Onsite Pumping Wells During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Depth to Water (feet below top of casing)	Depth to Water (feet below top of dip tube)	Date	Time	Depth to Water (feet below top of casing)	Depth to Water (feet below top of dip tube)
	C-21 (continued)		C-21 (continued)				
7/16/2017	12:04	83.87	84.21	7/28/2017	11:00	148.01	148.35
7/16/2017	14:10	82.55	82.89	7/28/2017	12:00	148.11	148.45
7/17/2017	11:25	73.36	73.70	7/28/2017	12:14	148.21	148.55
7/17/2017	15:13	73.07	73.41	7/28/2017	12:16	124.59	124.93
7/17/2017	17:06	71.56	71.90	7/28/2017	12:17	123.11	123.45
7/18/2017	12:30	66.82	67.16	7/28/2017	12:18	122.66	123.00
7/18/2017	14:08	67.46	67.80	7/28/2017	12:19	121.96	122.30
7/18/2017	16:13	66.05	66.39	7/28/2017	12:20	121.31	121.65
7/19/2017	11:30	62.79	63.13	7/28/2017	12:25	119.06	119.40
7/19/2017	14:20	62.16	62.50	7/28/2017	12:30	117.36	117.70
7/19/2017	17:05	61.71	62.05	7/28/2017	12:40	115.14	115.48
7/25/2017	10:50	52.24	52.58	7/28/2017	12:50	113.26	113.60
7/25/2017	11:40	52.31	52.65	7/28/2017	13:00	111.53	111.87
7/25/2017	11:45	78.19	78.53	7/28/2017	13:12	110.01	110.35
7/25/2017	11:46	82.21	82.55	7/28/2017	13:22	100.04	100.38
7/25/2017	11:47	83.64	83.98				

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ONSITE MONITORING WELLS

LBG Hydrogeologic & Engineering Services, P.C.



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LBG Hydrogeologic & Engineering Services, P.C.



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LBG Hydrogeologic & Engineering Services, P.C.

Hydrograph of Water-Level Measurements Collected from Onsite Monitoring Well C-7 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 in July 2017



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LBG Hydrogeologic & Engineering Services, P.C.



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LBG Hydrogeologic & Engineering Services, P.C.



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LBG Hydrogeologic & Engineering Services, P.C.



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LBG Hydrogeologic & Engineering Services, P.C.



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LBG Hydrogeologic & Engineering Services, P.C.



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LBG Hydrogeologic & Engineering Services, P.C.

Hydrograph of Water-Level Measurements Collected from Onsite Monitoring Well C-13 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 in July 2017





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LBG Hydrogeologic & Engineering Services, P.C.

Hydrograph of Water-Level Measurements Collected from Onsite Monitoring Well C-15 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 in July 2017



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LBG Hydrogeologic & Engineering Services, P.C.

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Hydrograph of Water-Level Measurements Collected from Onsite Monitoring Well C-18 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 in July 2017



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LBG Hydrogeologic & Engineering Services, P.C.



 $K: Jobs \ Lake \ Anne \ Clovewood \ 2017 \ Hydrographs \ Onsite \ MWs \ C-19 Comprehensive. grf$

LBG Hydrogeologic & Engineering Services, P.C.

Hydrograph of Water-Level Measurements Collected from Onsite Monitoring Well C-20 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 in July 2017



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LBG Hydrogeologic & Engineering Services, P.C.

Hydrograph of Water-Level Measurements Collected from Onsite Monitoring Well C-22 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 in July 2017



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LBG Hydrogeologic & Engineering Services, P.C.

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Manual Water-Level Measurements Collected from Onsite Monitoring Wells During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Depth to Water (feet below top of casing)	Date	Time	Depth to Water (feet below top of casing)	
		C-1	C-4			
6/29/2017	13:30	125.68	7/7/2017	10:05	101.25	
7/7/2017	10:25	125.95	7/8/2017	17:10	101.15	
7/8/2017	16:30	125.70	7/10/2017	9:00	101.45	
7/10/2017	8:43	126.12	7/13/2017	15:20	103.50	
7/13/2017	15:08	129.00	7/21/2017	14:15	103.55	
7/21/2017	14:43	130.10	7/24/2017	12:50	103.43	
7/24/2017	12:10	129.70	7/27/2017	17:45	103.56	
7/27/2017	18:25	129.45	8/14/2017	16:57	103.15	
8/14/2017	17:05	128.80				
		C-5	C-7			
6/29/2017	15:05	91.89	6/21/2017	17:10	33.00	
7/5/2017	12:30	97.16	7/7/2017	13:30	34.35	
7/6/2017	10:56	95.65	7/10/2017	8:20	34.50	
7/10/2017	9:50	94.03	7/13/2017	14:52	42.82	
7/13/2017	14:23	96.43	7/24/2017	12:35	36.08	
7/21/2017	13:10	95.50	7/27/2017	17:50	35.80	
7/24/2017	13:50	95.08				
7/27/2017	18:40	96.80				
8/14/2017	17:47	94.55				
		C-7A			C-8	
6/30/2017	17:10	32.09	6/21/2017	13:13	65.44	
7/7/2017	18:37	32.45	7/6/2017	11:25	68.62	
7/8/2017	18:48	32.55	7/10/2017	10:10	67.05	
7/10/2017	20:41	33.70	7/13/2017	14:38	69.52	
7/11/2017	15:04	70.50	7/21/2017	12:58	68.50	
7/14/2017	15:40	38.20	7/24/2017	13:43	68.10	
7/25/2017	8:17	34.45	7/27/2017	18:35	69.85	
7/27/2017	14:36	34.30	8/14/2017	17:35	67.55	
8/8/2017	13:03	34.68				
		C-9			C-10	
6/29/2017	15:10	90.51	6/21/2017	13:58	20.75	
7/5/2017	12:34	95.81	7/6/2017	11:59	21.97	
7/6/2017	11:12	94.30	7/10/2017	9:20	20.90	
7/10/2017	9:57	92.68	7/13/2017	15:50	22.12	
7/13/2017	14:32	95.03	7/21/2017	13:26	20.15	
7/21/2017	13:15	94.15	7/24/2017	13:10	20.37	
7/24/2017	13:52	93.73	7/27/2017	17:38	20.65	
7/27/2017	18:45	95.40	8/8/2017	16:35	20.85	
8/14/2017	17:57	93.15	8/14/2017	16:40	20.70	
	C-11	C-13				
6/21/2017	14:17	87.10	7/7/2017	13:05	103.68	
7/6/2017	12:06	87.97	7/10/2017	8:50	103.98	
7/10/2017	9:15	87.72	7/1/2017	15:15	108.03	
7/13/2017	15:35	88.85	7/21/2017	14:35	105.60	
7/21/2017	13:47	88.15	7/24/2017	12:30	105.30	
7/24/2017	13:03	88.45	7/27/2017	18:20	105.40	
7/27/2017	17:30	88.70	8/14/2017	17:15	105.25	
8/8/2017	16:20	88.80				
8/14/2017	16:39	88.50				

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Manual Water-Level Measurements Collected from Onsite Monitoring Wells During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Depth to Water (feet below top of casing)	Date	Time	Depth to Water (feet below top of casing)
	C-14A	C-15			
6/29/2017	13:00	Flowing	6/30/2017	17:30	33.37
7/3/2017	13:00	Flowing	7/6/2017	12:58	33.84
7/5/2017	13:00	Flowing	7/11/2017	14:38	47.13
7/6/2017	13:00	Flowing	7/14/2017	15:58	62.17
7/7/2017	13:00	Flowing	7/20/2017	12:30	54.92
7/8/2017	13:00	Flowing	7/25/2017	9:20	50.40
7/9/2017	13:00	Flowing	7/27/2017	15:03	49.80
7/10/2017	9:30	Flowing	8/8/2017	14:00	48.60
7/10/2017	16:50	34.60	8/14/2017	13:32	48.20
7/10/2017	17:36	41.02			
7/11/2017	8:22	96.90			
7/12/2017	10:00	109.45			
7/12/2007	18:13	111.62			
7/14/2017	8:13	114.90			
7/14/2017	10:58	115.76			
7/14/2017	12:37	115.89			
7/14/2017	15:19	116.38			
7/14/2017	18:30	116.43			
7/15/2017	9:46	118.23			
7/15/2017	12:20	118.73			
7/16/2017	0:50	120.70			
7/17/2017	12:33	25.86			
7/19/2017	13:10	6.00			
7/24/2017	12:00	Flowing			
7/25/2017	9:10	Flowing			
7/26/2017	12:00	Flowing			
7/27/2017	12:00	Flowing			
7/28/2017	18:00	Flowing			
7/29/2017	13:40	Flowing			
8/8/2017	13:20	Flowing			
	C-17	C-18			
7/6/2017	12:30	46.04	7/6/2017	13:07	40.25
7/11/2017	14:10	62.45	7/8/2017	15:50	40.30
7/14/2017	10:40	74.60	7/14/2017	16:25	60.45
7/20/2017	13:03	60.75	7/20/2017	12:30	48.72
7/25/2017	10:20	56.85	7/25/2017	9:30	47.20
7/27/2017	15:32	56.45	7/27/2017	15:12	47.00
8/8/2017	15:15	55.60	8/8/2017	14:07	47.60
8/14/2017	15:24	55.90	8/14/2017	13:40	47.70
	C-19	C-20			
7/6/2017	12:40	23.32	7/5/2017	14:50	39.05
7/14/2017	16:54	44.93	7/11/2017	13:57	48.65
7/20/2017	13:20	30.00	7/14/2017	16:20	51.75
7/25/2017	10:30	20.90	7/20/2017	12:50	42.20
7/27/2017	15:44	26.55	7/25/2017	10:10	38.80
8/8/2017	15:25	26.30	7/27/2017	15:25	51.32
8/14/2017	15:31	26.20	8/8/2017	15:05	39.00
			8/14/2017	15:10	47.95

Manual Water-Level Measurements Collected from Onsite Monitoring Wells During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Depth to Water (feet below top of casing)	Date	Time	Depth to Water (feet below top of casing)
		C-22			
6/21/2017	16:39	45.00			
7/6/2017	15:20	29.82			
8/8/2017	13:43	30.35			
8/14/2017	13:17	30.22			

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APPENDIX VII

OFFSITE MONITORING WELLS

LBG Hydrogeologic & Engineering Services, P.C.



LBG Hydrogeologic & Engineering Services, P.C.

Hydrograph of Water-Level Measurements Collected from Merrieworld Well 1 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 in July 2017



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LBG Hydrogeologic & Engineering Services, P.C.



LBG Hydrogeologic & Engineering Services, P.C.

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Hydrograph of Water-Level Measurements Collected from Mountain Lodge Well 2 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 in July 2017 0 Precipitation Depth to Water - Pressure Transducer • Depth to Water - Manual Measurements 25 Depth to Water (feet below top of casing) 50 Simultaneous Pumping Test Started Wells C-21 and C-7B Shutdown Started Simultaneous Pumping Test Ended Pumping Test on Well C-21 Ended Pumping Test on Well C-21 75 Precipitation (inches 0.75 0.5 0.25 100 7/23/17 8/1/12 0 7/8/12 ²1/6/2 ²1/21/2 21/8/12 7/21/17 7/22/17 7/24/17 7/25/17 7/26/17 7/22//17 7/29/17 7/30/17 L1/18/2 Z1/01/2 7/12/17_ 7/13/17 7/15/17 ²1/61/2 7/20/17 7/28/17 21/bl/2 ^{8/2/17} ^{8/3/17} 21/2/12

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Hydrograph of Water-Level Measurements Collected from Mountain Lodge Well 1 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 in July 2017 0 25 Depth to Water (feet below top of casing) Precipitation Depth to Water - Pressure Transducer • Depth to Water - Manual Measurements 50 Wells C-21 and C-7B Shutdown Simultaneous Pumping Test Started Simultaneous Pumping Test Ended Pumping Test on Well C-21 Ended Pumping Test on Well C-21 Started 75 Precipitation (inches 0.75 0.5 0.25 8/2/17 100 7/23/17 \$1/12 0 Z1/8/12 Z1/6/2 ²1/21/2 7/21/17 7/22/17 7/24/17 7/25/17 7/26/17 7/22/17 7/29/17 7/30/17 21/1_{E/2} 7/12/17_ 7/15/17 2/18/12 ²1/61/2 7/20/17 7/28/17 ²1/01/2 7/13/17 21/4/12 8/3/17 L1/L/L



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LBG Hydrogeologic & Engineering Services, P.C.



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LBG Hydrogeologic & Engineering Services, P.C.



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LBG Hydrogeologic & Engineering Services, P.C.

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Manual Water-Level Measurements Collected from Offsite Monitoring Wells During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Depth to Water (ft btoc)	Date	Time	Depth to Water (ft btoc)	Date	Time	Depth to Water (ft btoc)	
	481	Clove Road		35 Rou	ınd Hill Road		564	Clove Road	
7/3/2017	10:10	92.45	7/3/2017	10:38	20.55	7/3/2017	11:28	79.43	
7/7/2017	11:30	93.15	7/7/2017	11:50	20.89	7/7/2017	12:05	79.54	
7/10/2017	8:23	93.99	7/10/2017	9:15	20.96	7/10/2017	9:43	79.63	
7/11/2017	10:56	95.11	7/11/2017	10:40	21.08	7/11/2017	10:20	92.09	
7/12/2017	8:24	99.09	7/12/2017	8:50	21.04	7/12/2017	9:20	103.22	
7/13/2017	8:38	99.94	7/13/2017	9:35	21.19	7/12/2017	10:18	103.50	
7/17/2017	11:29	96.28	7/17/2017	12:47	21.15	7/12/2017	11:01	103.47	
7/19/2017	11:15	95.61	7/19/2017	12:13	21.28	7/12/2017	14:35	101.55	
7/21/2017	12:27	95.21	7/21/2017	13:16	21.32	7/12/2017	17:13	99.06	
7/24/2017	13:43	94.91	7/24/2017	14:32	21.45	7/13/2017	7:28	90.97	
7/26/2017	10:46	95.07	7/26/2017	11:22	22.36	7/13/2017	11:00	89.46	
7/27/2017	11:27	94.82	7/27/2017	11:12	21.78	7/13/2017	13:21	88.64	
7/28/2017	14:01	94.72	7/28/2017	13:46	21.54	7/13/2017	15:50	88.03	
8/3/2017	11:14	95.13	8/3/2017	11:50	21.83	7/13/2017	17:40	87.55	
						7/17/2017	13:08	81.74	
						7/19/2017	12:27	81.18	
						7/21/2017	13:30	80.84	
						7/24/2017	13:24	80.61	
						7/26/2017	10:08	80.74	
						7/29/2017	10:04	80.54	
						7/28/2017	13:09	80.47	
						8/3/2017	12:10	80.78	
	1195	5 Route 208		1235	5 Route 208	479 Clove Road			
7/3/2017	12:20	54.00	7/3/2017	12:03	42.05	7/3/2017	10:20	10.75	
7/7/2017	12:35	55.91	7/7/2017	12:25	43.04	7/7/2017	11:35	11.20	
7/10/2017	11:29	58.17	7/10/2017	10:26	42.81	7/10/2017	8:44	11.24	
7/11/2017	8:48	56.29	7/11/2017	9:30	42.77	7/11/2017	17:00	11.30	
7/12/2017	17:53	56.53	7/12/2017	17:38	43.01	7/12/2017	8:38	11.42	
7/13/2017	8:06	56.94	7/13/2017	7:51	42.99	7/13/2017	8:46	11.76	
7/17/2017	14:15	56.51	7/17/2017	13:58	42.71	7/17/2017	12:37	11.27	
7/19/2017	11:05	57.20	7/19/2017	10:51	43.32	7/19/2017	11:33	11.46	
7/21/2017	11:09	58.41	7/21/2017	10:48	43.19	7/21/2017	12:35	11.66	
7/24/2017	12:45	57.90	7/24/2017	13:03	45.61	7/24/2017	13:52	11.79	
7/26/2017	8:28	57.76	7/26/2017	7:40	44.19	7/26/2017	11:08	11.91	
7/27/2017	8:26	57.97	7/27/2017	7:45	44.19	7/27/2017	11:20	11.84	
7/28/2017	11:42	55.83	7/28/2017	11:25	43.18	7/28/2017	14:23	11.88	
8/3/2017	12:48	57.44	8/3/2017	12:35	43.74	8/3/2017	11:20	12.30	

Manual Water-Level Measurements Collected from Offsite Monitoring Wells During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Depth to Water (ft btoc)	Date	Time	Depth to Water (ft btoc)	Date	Time	Depth to Water (ft btoc)	
	562	Clove Road		568	Clove Road	Woodbury	/ Heights	Water System - East Well	
7/3/2017	10:59	102.30	7/5/2017	16:05	98.50	7/7/2017	16:00	34.01	
7/7/2017	12:00	92.90	7/7/2017	9:41	98.26	7/10/2017	12:01	29.68	
7/10/2017	9:32	93.23	7/10/2017	10:11	98.07	7/11/2017	8:15	29.71	
7/11/2017	10:05	105.78	7/10/2017	11:09	97.88	7/12/2017	18:28	32.98	
7/12/2017	9:13	118.23	7/11/2017	9:48	100.00	7/13/2017	10:14	30.85	
8/3/2017	12:05	94.31	8/3/2017	12:18	99.15	7/17/2017	14:51	30.16	
						7/19/2017	13:17	30.25	
						7/21/2017	11:52	30.22	
						7/24/2017	12:25	37.25	
						7/26/2017	9:34	31.93	
						7/27/2017	9:21	31.35	
						7/28/2017	12:25	59.02	
						8/3/2017 10:50 32.05			
	Mountai	in Lodge Well 1	Mountain Lodge Well 2			Woodbury Heights Water System - North Well			
7/7/2017	14:30	11.84	7/7/2017	14:40	21.84	7/7/2017 15:50 70.0		70.62	
7/10/2017	8:59	9.69	7/10/2017	12:55	22.03	7/10/2017	11:53	71.59	
7/11/2017	17:13	12.52	7/12/2017	10:43	22.11	7/11/2017	8:05	71.56	
7/12/2017	10:37	12.01	7/13/2017	9:10	25.00	7/12/2017	18:17	72.71	
7/13/2017	9:18	12.23	7/17/2017	12:14	23.59	7/13/2017	10:01	72.51	
7/17/2017	12:10	12.23	7/19/2017	11:47	23.43	7/17/2017	14:41	73.25	
7/19/2017	11:56	12.81	7/21/2017	12:57	22.78	7/19/2017	13:09	76.17	
7/21/2017	11:46	11.46	7/24/2017	14:08	23.54	7/21/2017	11:41	74.03	
7/24/2017	14:20	13.01	7/26/2017	11:50	23.33	7/24/2017	11:46	75.83	
7/26/2017	11:42	12.39	7/27/2017	12:18	22.59	7/26/2017	9:19	75.05	
7/27/2017	12:09	11.06	7/28/2017	14:57	23.78	7/27/2017	9:05	75.86	
7/28/2017	14:43	13.25	8/3/2017	11:40	24.07	7/28/2017	12:15	75.76	
8/3/2017	11:44	13.65				8/3/2017	10:38	77.40	
Villa	ge of Sou	uth Blooming Grove	Villa	ge of Sou	uth Blooming Grove	Villa	age of So	uth Blooming Grove	
Me	rriewold	l Well Field Well 1	Me	rriewold	Well Field Well 3		Baseb	all Field Well	
7/14/2017	12:03	377.53 <u>1/</u>	7/14/2017	11:25	$301.83^{1/}$	7/14/2017 11:13 353.27 ^{1/}		$353.27^{1/}$	
7/21/2017	12:30	402.51 ^{1/}	7/21/2017	12:10	303.80 ^{1/}	7/21/2017	11:56	345.05 ^{1/}	
7/24/2017	11:40	391.61 ^{1/}	7/24/2017	11:32	448.42 ^{1/}	7/24/2017	11:20	347.59 <u>1/</u>	
7/26/2017	11:15	360.03 ^{1/}	7/26/2017	11:05	301.80 ^{1/}	7/26/2017	10:55	350.60 <u>1/</u>	
7/28/2017	14:55	294.29 ^{1/}	7/28/2017	14:55	354.91 ^{1/}	7/28/2017	14:35	351.92 ^{1/}	
8/4/2017	10:15	387.25	8/4/2017	10:25	299.10				

Manual Water-Level Measurements Collected from Offsite Monitoring Wells During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Depth to Water (ft btoc)	Date	Time	Depth to Water (ft btoc)	Date	Time	Depth to Water (ft btoc)
Village of South Blooming Grove Well 8								
7/14/2017	10:42	267.90						
7/21/2017	11:45	267.20						
7/24/2017	11:10	267.00						
7/26/2017	10:40	267.15						
7/28/2017	14:20	266.70						
8/4/2017	9:45	266.15						

ft btoc feet below top of casing

1/ Water-level measurement collected using well sounder.

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SPRING ON ROUTE 208

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Flow Rate Measurements Collected from the Spring on Route 208 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Measured Rate (gallons per minute)
6/29/2017	13:00	10.4
7/3/2017	11:45	10.4
7/5/2017	12:00	10.7
7/6/2017	12:00	10.4
7/7/2017	12:20	10.4
7/7/2017	19:30	10.4
7/8/2017	19:00	10.4
7/9/2017	15:00	10.0
7/9/2017	18:00	10.4
7/10/2017	11:22	10.0
7/10/2017	13:44	10.4
7/10/2017	15:53	10.4
7/10/2017	18:46	10.5
7/11/2017	7:00	8.3
7/11/2017	11:20	6.9
7/11/2017	16:31	5.1
7/11/2017	17:55	4.7
7/12/2017	7:20	0.4
7/12/2017	11:13	0
7/12/2017	14:40	0
7/12/2017	17:27	0
7/12/2017	18:53	0
7/13/2017	6:58	2.5
7/13/2017	10:49	3.7
7/13/2017	13:13	2.6
7/13/2017	15:34	2.7
7/13/2017	17:50	5.2
7/14/2017	7:58	6.5
7/14/2017	9:56	6.9
7/14/2017	14:54	7.3
7/14/2017	18:05	7.5
7/15/2017	21:00	8.3
7/16/2017	10:42	7.2
7/16/2017	17:45	7.6
7/17/2017	10:48	8.5
7/17/2017	14:05	8.8
7/17/2017	15:41	9.1
7/18/2017	11:52	9.1
7/18/2017	15:01	8.8
7/18/2017	16:55	8.6
7/19/2017	10:43	8.8
7/19/2017	13:50	8.8
7/20/2017	9:19	7.5
7/20/2017	12:00	7.5
7/20/2017	15:55	7.7
7/21/2017	10:58	9.1
7/21/2017	13:55	9.4
7/24/2017	12:55	9.7
7/24/2017	15:10	9.4
7/25/2017	10:30	9.4
7/25/2017	12:38	9.4
7/25/2017	14:03	9.4
7/26/2017	7:24	9.4

Flow Rate Measurements Collected from the Spring on Route 208 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Measured Rate (gallons per minute)
7/26/2017	12:46	9.4
7/26/2017	16:47	9.4
7/26/2017	18:30	9.4
7/27/2017	7:26	9.7
7/27/2017	12:40	9.7
7/27/2017	17:14	9.7
7/28/2017	6:25	9.4
7/28/2017	11:11	9.9
7/28/2017	15:33	9.7
7/28/2017	18:30	9.4
7/29/2017	9:00	9.7
7/29/2017	12:30	9.7
7/31/2017	15:00	9.7
7/31/2017	17:30	9.4
8/1/2017	10:13	9.4
8/1/2017	12:18	9.1
8/3/2017	12:30	9.1

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APPENDIX VIII



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Manual Water-Level Measurements Collected from Piezometer Location PZ-1 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Shallow Screened Piezometer Depth to Water (ft btoc)	Deeper Screened Piezometer Depth to Water ^{1/} (ft btoc)	Exterior Depth to Surface Water (ft btoc)	Vertical Head (Shallow Groundwater- Deeper Groundwater)	Vertical Head Direction (Shallow Groundwater- Deeper Groundwater)	Vertical Head (Surface Water- Shallow Groundwater)	Vertical Head Direction (Surface Water- Shallow Groundwater)
	1	((PZ-1		1	,
7/6/2017	12:35	3.17	3.01	Drv	0.16	Upward		
7/6/2017	14:37	3.19	3.02	Drv	0.17	Upward		
7/7/2017	13:46	2.30	2.94	Dry	-0.64	Downward		
7/7/2017	15:38	2.31	2.89	Dry	-0.58	Downward		
7/8/2017	14:40	2.35	2.59	Dry	-0.24	Downward		
7/9/2017	11:00	2.37	2.53	Dry	-0.16	Downward		
7/9/2017	15:20	2.41	2.56	Dry	-0.15	Downward		
7/10/2017	10:00	2.71	2.58	Dry	0.13	Upward		
7/10/2017	11:27	2.72	2.60	Dry	0.12	Upward		
7/10/2017	13:48	2.75	2.60	Dry	0.15	Upward		
7/10/2017	17:47	2.85	2.62	Dry	0.23	Upward		
7/10/2017	21:58	2.90	2.63	Dry	0.27	Upward		
7/10/2017	23:58	2.94	2.66	Dry	0.28	Upward		
7/11/2017	1:57	2.95	2.64	Dry	0.31	Upward		
7/11/2017	4:05	2.96	2.65	Dry	0.31	Upward		
7/11/2017	6:27	2.96	2.67	Dry	0.29	Upward		
7/11/2017	7:50	2.97	2.68	Dry	0.29	Upward		
7/11/2017	10:09	2.97	2.68	Dry	0.29	Upward		
7/11/2017	12:00	2.98	2.68	Dry	0.30	Upward		
7/11/2017	14:05	3.01	2.70	Dry	0.31	Upward		
7/11/2017	15:00	3.01	2.71	Dry	0.30	Upward		
7/11/2017	16:02	3.02	2.71	Dry	0.31	Upward		
7/11/2017	17.11	3.04	2.71	Dry	0.33	Upward		
7/11/2017	23.01	3.04	2.73	Dry	0.31	Upward		
7/12/2017	3.51	3.00	2.73	Dry	0.33	Upward		
7/12/2017	6.30	3.00	2.75	Dry	0.33	Upward		
7/12/2017	7.58	3.07	2.74	Dry	0.33	Upward		
7/12/2017	9:16	3.07	2.76	Dry	0.31	Upward		
7/12/2017	10:46	3.07	2.76	Dry	0.31	Upward		
7/12/2017	11:45	3.07	2.77	Drv	0.30	Upward		
7/12/2017	13:02	3.05	2.78	Dry	0.27	Upward		
7/12/2017	13:55	3.06	2.78	Dry	0.28	Upward		
7/12/2017	14:32	3.06	2.78	Dry	0.28	Upward		
7/12/2017	15:40	3.06	2.78	Dry	0.28	Upward		
7/12/2017	17:00	3.05	2.78	Dry	0.27	Upward		
7/12/2017	18:21	3.13	2.80	Dry	0.33	Upward		
7/12/2017	19:07	3.15	2.79	Dry	0.36	Upward		
7/12/2017	21:53	3.18	2.79	Dry	0.39	Upward		
7/13/2017	0:27	3.17	2.81	Dry	0.36	Upward		
7/13/2017	3:47	3.17	2.82	Dry	0.35	Upward		
7/13/2017	6:20	3.18	2.84	Dry	0.34	Upward		
7/13/2017	8:10	3.17	2.84	Dry	0.33	Upward		
7/13/2017	9:11	3.17	2.84	Dry	0.33	Upward		
7/13/2017	9:55	3.17	2.84	Dry	0.33	Upward		
7/13/2017	10:41	3.16	2.86	Dry	0.30	Upward		
7/13/2017	11:30	3.18	2.85	Dry	0.33	Upward		
7/13/2017	12:25	3.18	2.86	Dry	0.32	Upward		 D 1
7/13/2017	14:25	2.86	2.80	1.95	0.06	Upward	-0.91	Downward
7/13/2017	18:38	2.31	2.73	1.98	-0.42	Downward	-0.33	Downward

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Manual Water-Level Measurements Collected from Piezometer Location PZ-1 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

		Shallow Screened	Deeper Screened	Exterior Depth	Vertical Head (Shallow	Vertical Head Direction	Vertical Head	Vertical Head Direction
Date	Time	Piezometer	Piezometer	to	Groundwater-	(Shallow	Water-	(Surface
Date	Time	Depth to	Depth to	Surface	Deeper	Groundwater-	Shallow	Water-
		Water	Water"	Water	Groundwater)	Deeper	Groundwater)	Shallow
7/12/2017	22.22	(ft btoc)	(ft btoc)	(ft btoc)	,	Groundwater)	, , ,	Groundwater)
7/13/2017	22:33	2.30	2.69	1.97	-0.39	Downward	-0.33	Downward
7/14/2017	1:38	2.29	2.66	1.98	-0.37	Downward	-0.31	Downward
7/14/2017	4:26	2.28	2.63	1.98	-0.35	Downward	-0.30	Downward
7/14/2017	7:55	2.18	2.59	1.90	-0.41	Downward	-0.28	Downward
7/14/2017	9:02	2.19	2.55	1.90	-0.36	Downward	-0.29	Downward
7/14/2017	10:12	2.17	2.54	1.93	-0.37	Downward	-0.24	Downward
7/14/2017	11:12	2.18	2.53	1.94	-0.35	Downward	-0.24	Downward
7/14/2017	12:10	2.21	2.51	1.97	-0.30	Downward	-0.24	Downward
7/14/2017	14:10	2.22	2.49	1.94	-0.27	Downward	-0.28	Downward
7/14/2017	17:20	2.22	2.47	1.93	-0.25	Downward	-0.29	Downward
7/14/2017	23:12	2.24	2.42	1.98	-0.18	Downward	-0.26	Downward
7/15/2017	5:21	2.24	2.43	1.96	-0.19	Downward	-0.28	Downward
7/15/2017	0:22	2.23	2.43	1.94	-0.18	Downward	-0.31	Downward
7/15/2017	10.17	2.24	2.41	1.95	-0.17	Downward	-0.29	Downward
7/15/2017	12:38	2.20	2.41	1.95	-0.13	Downward	-0.31	Downward
7/15/2017	19.20	2.27	2.41	1.98	-0.14	Downward	-0.29	Downward
7/15/2017	21.25	2.28	2.42	1.97	-0.14	Downward	-0.31	Downward
7/15/2017	21.23	2.28	2.42	1.98	-0.14	Downward	-0.30	Downward
7/16/2017	0.20	2.28	2.42	1.98	-0.14	Downward	-0.30	Downward
7/16/2017	2.43	2.28	2.41	1.98	-0.13	Downward	-0.30	Downward
7/16/2017	11.14	2.28	2.41	1.96	-0.13	Downward	-0.30	Downward
7/16/2017	13.15	2.28	2.41	1.94	-0.15	Downward	-0.37	Downward
7/16/2017	15.23	2.27	2.43	1.95	-0.18	Downward	-0.32	Downward
7/17/2017	13.23	2.58	2.15	2.17	0.12	Upward	-0.41	Downward
7/17/2017	15.48	2.50	2.10	Dry	0.12	Upward		
7/17/2017	17.34	2 70	2.48	Dry	0.22	Upward		
7/18/2017	12:38	2.75	2.53	Dry	0.22	Upward		
7/18/2017	14:31	2.79	2.54	Dry	0.25	Upward		
7/18/2017	16:23	2.84	2.55	Dry	0.29	Upward		
7/20/2017	12:30	3.21	2.75	Dry	0.46	Upward		
7/20/2017	14:12	3.23	2.75	Drv	0.48	Upward		
7/20/2017	15:37	3.25	2.76	Dry	0.49	Upward		
7/21/2017	13:19	3.19	2.82	Dry	0.37	Upward		
7/21/2017	14:31	3.21	2.83	Dry	0.38	Upward		
7/24/2017	13:38	2.33	2.85	1.98	-0.52	Downward	1.98	Downward
7/24/2017	14:51	2.33	2.83	2.00	-0.50	Downward	2.00	Downward
7/24/2017	18:02	2.34	2.76	2.02	-0.42	Downward	2.02	Downward
7/25/2017	8:50	2.47	2.66	2.13	-0.19	Downward	2.13	Downward
7/25/2017	11:05	2.50	2.65	2.15	-0.15	Downward	2.15	Downward
7/25/2017	14:26	2.54	2.65	Dry	-0.11	Downward		
7/25/2017	16:38	2.58	2.67	Dry	-0.09	Downward		
7/26/2017	8:57	2.74	2.68	Dry	0.06	Upward		
7/26/2017	11:47	2.79	2.69	Dry	0.10	Upward		
7/26/2017	13:49	2.85	2.70	Dry	0.15	Upward		
7/26/2017	15:54	2.92	2.71	Dry	0.21	Upward		
7/27/2017	7:33	3.02	2.75	Dry	0.27	Upward		
7/27/2017	11:57	3.03	2.78	Dry	0.25	Upward		
7/27/2017	13:59	3.06	2.79	Dry	0.27	Upward		
7/27/2017	16:10	3.07	2.80	Dry	0.27	Upward		
7/28/2017	8:15	3.10	2.83	Dry	0.27	Upward		

Manual Water-Level Measurements Collected from Piezometer Location PZ-1 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Shallow Screened Piezometer Depth to Water (ft btoc)	Deeper Screened Piezometer Depth to Water ^{1/} (ft btoc)	Exterior Depth to Surface Water (ft btoc)	Vertical Head (Shallow Groundwater- Deeper Groundwater)	Vertical Head Direction (Shallow Groundwater- Deeper Groundwater)	Vertical Head (Surface Water- Shallow Groundwater)	Vertical Head Direction (Surface Water- Shallow Groundwater)
7/28/2017	11:00	3.10	2.85	Dry	0.25	Upward		
7/28/2017	13:29	3.11	2.86	Dry	0.25	Upward		
7/28/2017	14:59	3.11	2.87	Dry	0.24	Upward		
7/28/2017	17:17	3.17	2.88	Dry	0.29	Upward		
7/29/2017	9:20	3.24	2.94	Dry	0.30	Upward		
7/29/2017	11:10	3.25	2.94	Dry	0.31	Upward		
7/29/2017	13:00	3.28	2.95	Dry	0.33	Upward		
7/31/2017	13:15	3.47	3.11	Dry	0.36	Upward		
7/31/2017	15:33	3.48	3.12	Dry	0.36	Upward		

ft btoc feet below top of casing

1/ Water-level measurements for deeper screened piezometer have been corrected based on a difference in casing height of 1.58 feet between the shallow screened and deeper screened piezometers in order to conduct a comparison of vertical head changes.

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Manual Water-Level Measurements Collected from Piezometer Location PZ-5 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Interior Piezometer Depth to Groundwater (ft btoc)	Exterior Depth to Surface Water (ft btoc)	Vertical Head (Surface Water-Shallow Groundwater)	Vertical Head Direction (Surface Water- Shallow Groundwater)	
	I	(11 0100)	P7-5	Groundwater)	Shanow Groundwater)	
7/6/2017	12.15	3.01	3.03	0.02	Upward	
7/6/2017	13:10	3.03	3.02	-0.01	Downward	
7/7/2017	13:18	2.92	2.92	0.00	Neutral	
7/7/2017	14:45	2.90	2.90	0.00	Neutral	
7/8/2017	14:20	2.97	2.95	-0.02	Downward	
7/9/2017	11:20	2.97	2.96	-0.01	Downward	
7/9/2017	16:20	2.99	3.00	0.01	Upward	
7/10/2017	9:30	3.00	3.00	0.00	Neutral	
7/10/2017	10:58	3.01	3.00	-0.01	Downward	
7/10/2017	13:19	3.01	3.01	0.00	Neutral	
7/10/2017	16:08	3.00	3.00	0.00	Neutral	
7/10/2017	20:58	3.03	3.03	0.00	Neutral	
7/10/2017	23:44	3.02	3.03	0.01	Upward	
7/11/2017	3:34	3.02	3.03	0.01	Upward	
7/11/2017	6:09	3.02	3.02	0.00	Neutral	
7/11/2017	8:29	3.03	3.03	0.00	Neutral	
7/11/2017	10:31	3.03	3.04	0.01	Upward	
7/11/2017	11:50	3.04	3.04	0.00	Neutral	
7/11/2017	13:22	3.03	3.04	0.01	Upward	
7/11/2017	14:27	3.04	3.04	0.00	Neutral	
7/11/2017	15:24	3.04	3.05	0.01	Upward	
7/11/2017	16:27	3.05	3.05	0.00	Neutral	
7/11/2017	17:38	3.07	3.00	-0.01	Downward Neutrol	
7/11/2017	22.20	3.04	3.04	0.00	Ineutral	
7/12/2017	22.30	3.05	3.00	0.05	Neutral	
7/12/2017	6.01	3.03	3.05	0.00	Unward	
7/12/2017	8.18	3.06	3.05	-0.01	Downward	
7/12/2017	9:47	3.05	3.05	0.00	Neutral	
7/12/2017	11:06	3.06	3.05	-0.01	Downward	
7/12/2017	12:31	3.05	3.08	0.03	Upward	
7/12/2017	13:34	3.03	3.08	0.05	Upward	
7/12/2017	14:15	3.04	3.07	0.03	Upward	
7/12/2017	15:18	3.05	3.05	0.00	Neutral	
7/12/2017	16:23	3.05	3.05	0.00	Neutral	
7/12/2017	17:55	3.06	3.08	0.02	Upward	
7/12/2017	18:49	3.07	3.06	-0.01	Downward	
7/12/2017	21:36	3.06	3.06	0.00	Neutral	
7/13/2017	0:25	3.04	3.04	0.00	Neutral	
7/13/2017	3:20	3.05	3.06	0.01	Upward	
7/13/2017	7:43	3.06	3.06	0.00	Neutral	
7/13/2017	8:46	3.07	3.06	-0.01	Downward	
7/13/2017	9:40	3.06	3.07	0.01	Upward	
//13/2017	10:23	3.05	3.06	0.01	Upward	
7/13/2017	11:10	3.07	3.06	-0.01	Downward	
7/13/2017	12:50	3.03	3.00	0.00		
7/12/2017	10:15	2.93	2.98	0.03	Upward	
7/13/2017	21.57	2.94	2.93	0.01	Upward	
7/14/2017	1.12	2.90	2.97	0.01	Noutral	
7/14/2017	1.12	2.97	2.97	0.00	Neutral	
7/14/2017	6.09	2.97	2.97	0.00	Neutral	
7/14/2017	8.27	2.99	2.99	0.00	Unward	
7/14/2017	9.27	2.00	2.09	-0.05	Downward	
7/14/2017	10.30	2.00	2.75	0.03	Unward	
7/14/2017	11:35	2.81	2.80	-0.01	Downward	
			2.00			

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Manual Water-Level Measurements Collected from Piezometer Location PZ-5 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

	Interior Piezometer Depth		Exterior Depth to	Vertical Head	Vertical Head Direction
Date	Time	to Groundwater	Surface Water	(Surface Water-Shallow	(Surface Water-
		(ft btoc)	(ft btoc)	Groundwater)	Shallow Groundwater)
7/14/2017	12:58	2.82	2.90	0.08	Upward
7/14/2017	14:57	2.85	2.85	0.00	Neutral
7/14/2017	16:27	2.88	2.88	0.00	Neutral
7/14/2017	22:57	2.93	2.94	0.01	Upward
7/15/2017	6:08	2.93	2.93	0.00	Neutral
7/15/2017	8:29	2.96	2.98	0.02	Upward
7/15/2017	11:02	2.97	2.96	-0.01	Downward
7/15/2017	15:38	2.97	2.99	0.02	Upward
7/15/2017	17:55	2.99	2.99	0.00	Neutral
7/15/2017	20:55	2.99	2.99	0.00	Neutral
7/16/2017	1:00	2.99	3.00	0.01	Upward
7/16/2017	2:35	3.00	3.00	0.00	Neutral
7/16/2017	11:30	3.00	3.00	0.00	Neutral
7/16/2017	13:30	3.00	3.00	0.00	Neutral
7/16/2017	15:48	3.00	3.00	0.00	Neutral
7/17/2017	13:29	3.04	3.03	-0.01	Downward
7/17/2017	15:33	3.04	3.04	0.00	Neutral
7/17/2017	17:27	3.06	3.06	0.00	Neutral
7/18/2017	12:24	3.04	3.04	0.00	Neutral
7/18/2017	14:15	3.05	3.05	0.00	Neutral
7/18/2017	16:06	3.06	3.06	0.00	Neutral
7/19/2017	12:50	3.05	3.04	-0.01	Downward
7/20/2017	11:57	3.05	3.06	0.01	Upward
7/20/2017	13:39	3.06	3.08	0.02	Upward
7/20/2017	15:28	3.07	3.08	0.01	Upward
7/21/2017	14:08	3.06	3.06	0.00	Neutral
7/21/2017	15:56	3.05	3.05	0.00	Neutral
7/24/2017	12:25	2.98	2.98	0.00	Neutral
7/24/2017	14:43	2.98	2.98	0.00	Neutral
7/24/2017	17:53	2.98	2.97	-0.01	Downward
7/25/2017	9:07	3.00	3.00	0.00	Neutral
7/25/2017	11:15	3.00	3.00	0.00	Neutral
7/25/2017	14:46	3.00	3.00	0.00	Neutral
7/25/2017	16:55	3.01	3.00	-0.01	Downward
7/26/2017	10:03	3.01	3.01	0.00	Neutral
7/26/2017	11:59	3.01	3.01	0.00	Neutral
7/26/2017	13:56	3.01	3.01	0.00	Neutral
7/26/2017	16:56	3.02	3.03	0.01	Upward
7/27/2017	8:22	3.02	3.01	-0.01	Downward
7/27/2017	12:06	3.02	3.02	0.00	Neutral
7/27/2017	14:08	3.02	3.03	0.01	Upward
7/27/2017	16:28	3.03	3.03	0.00	Neutral
//28/2017	8:30	3.02	3.02	0.00	Neutral
7/28/2017	11:10	3.03	3.02	-0.01	Downward
//28/2017	13:21	3.03	3.03	0.00	Neutral
7/28/2017	14:43	3.03	3.03	0.00	Neutral
7/28/2017	17:06	3.03	3.03	0.00	Ineutral
7/29/2017	9:45	3.04	3.02	-0.02	Downward
7/29/2017	11:10	3.04	3.02	-0.02	Downward
7/29/2017	13:10	5.04	3.03	-0.01	DownWard
7/21/2017	15:02	3.05	3.05	0.00	Neutral Neutral
//31/201/	15:14	3.06	3.06	0.00	Neutral

ft btoc feet below top of casing

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Manual Water-Level Measurements Collected from Piezometer Location PZ-6 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

		Shallow	Deeper	Exterior	Vertical Head	Vertical Head	Vertical Head	Vertical Head
		Screened	Screened	Depth	(Shallow	Direction	(Surface	Direction
Date	Time	Piezometer	Piezometer	to	Groundwater-	(Shallow	Water-	(Surface
		Depth to	Depth to	Surface	Deeper	Groundwater-	Shallow	Water-
		(ft btoo)	(ft btoo)	(ft btoo)	Groundwater)	Deeper Croundwater)	Groundwater)	Shallow Croundwater)
			(It bloc)	(11 0100)	P7-6	Groundwater)		Groundwater)
7/6/2017	11.51	2 99	3.61	3.00	-0.62	Downward	0.01	Unward
7/6/2017	13.05	2.99	3 64	2.96	-0.70	Downward	0.02	Unward
7/7/2017	12:46	3.00	3 59	2.90	-0.59	Downward	-0.19	Downward
7/7/2017	14:36	2.92	3.60	2.80	-0.68	Downward	-0.12	Downward
7/8/2017	14:00	2.92	3.58	2.87	-0.66	Downward	-0.05	Downward
7/9/2017	11:35	2.92	3.52	2.88	-0.60	Downward	-0.04	Downward
7/9/2017	16:40	2.91	3.58	2.89	-0.67	Downward	-0.02	Downward
7/10/2017	9:10	2.97	3.50	2.94	-0.53	Downward	-0.03	Downward
7/10/2017	10:48	2.97	3.49	2.93	-0.52	Downward	-0.04	Downward
7/10/2017	12:52	2.97	3.49	2.93	-0.52	Downward	-0.04	Downward
7/10/2017	15:28	2.97	3.50	2.93	-0.53	Downward	-0.04	Downward
7/10/2017	20:17	2.99	3.48	2.91	-0.49	Downward	-0.08	Downward
7/10/2017	23:14	3.01	3.49	2.91	-0.48	Downward	-0.10	Downward
7/11/2017	1:13	3.02	3.50	2.91	-0.48	Downward	-0.11	Downward
7/11/2017	3:24	3.00	3.48	2.94	-0.48	Downward	-0.06	Downward
7/11/2017	5:39	2.99	3.46	2.90	-0.47	Downward	-0.09	Downward
7/11/2017	8:45	2.99	3.47	2.95	-0.48	Downward	-0.04	Downward
7/11/2017	12:38	3.02	3.48	2.95	-0.46	Downward	-0.07	Downward
7/11/2017	14:56	3.02	3.48	2.96	-0.46	Downward	-0.06	Downward
7/11/2017	17:22	3.02	3.46	2.96	-0.44	Downward	-0.06	Downward
7/11/2017	21:46	3.03	3.46	2.97	-0.43	Downward	-0.06	Downward
7/12/2017	2:48	3.05	3.45	2.95	-0.40	Downward	-0.10	Downward
7/12/2017	5:35	3.07	3.47	2.95	-0.40	Downward	-0.12	Downward
7/12/2017	9:33	3.04	3.45	2.90	-0.41	Downward	-0.08	Downward
7/12/2017	15.55	3.00	3.44	2.90	-0.38	Downward	-0.10	Downward
7/12/2017	21.10	3.06	3.45	2.98	-0.39	Downward	-0.08	Downward
7/12/2017	23.42	3.00	3.46	2.97	-0.37	Downward	-0.05	Downward
7/13/2017	2:39	3.07	3.45	2.90	-0.38	Downward	-0.10	Downward
7/13/2017	8:41	3.07	3.45	2.97	-0.38	Downward	-0.10	Downward
7/13/2017	10:13	3.08	3.44	3.00	-0.36	Downward	-0.08	Downward
7/13/2017	12:27	3.07	3.44	3.00	-0.37	Downward	-0.07	Downward
7/13/2017	14:35	3.06	3.41	2.95	-0.35	Downward	-0.11	Downward
7/13/2017	17:40	2.96	3.43	2.81	-0.47	Downward	-0.15	Downward
7/13/2017	21:16	2.90	3.40	2.83	-0.50	Downward	-0.07	Downward
7/14/2017	0:26	2.91	3.40	2.84	-0.49	Downward	-0.07	Downward
7/14/2017	3:08	2.91	3.40	2.84	-0.49	Downward	-0.07	Downward
7/14/2017	5:21	2.90	3.40	2.85	-0.50	Downward	-0.05	Downward
7/14/2017	8:10	2.89	3.38	2.72	-0.49	Downward	-0.17	Downward
7/14/2017	9:40	2.84	3.38	2.64	-0.54	Downward	-0.20	Downward
7/14/2017	11:15	2.90	3.36	2.64	-0.46	Downward	-0.26	Downward
7/14/2017	15:39	2.75	3.37	2.72	-0.62	Downward	-0.03	Downward
7/14/2017	21:50	2.76	3.36	2.72	-0.60	Downward	-0.04	Downward
7/15/2017	2:07	2.78	3.34	2.79	-0.56	Downward	0.01	Upward
7/15/2017	5:28	2.80	3.34	2.79	-0.54	Downward	-0.01	Downward
7/15/2017	9:50	2.81	3.34	2.84	-0.53	Downward	0.03	Upward
//15/2017	12:10	2.83	3.35	2.85	-0.52	Downward	0.02	Upward
7/15/2017	10:55	2.85	3.33	2.80	-0.50	Downward	0.01	Upward
7/16/2017	18:30	2.83	2.33	2.8/	-0.30	Downward	0.02	Upward
//10/201/	0:50	2.80	3.33	∠.ðð	-0.49	Downward	0.02	Opward

Manual Water-Level Measurements Collected from Piezometer Location PZ-6 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Shallow Screened Piezometer Depth to Water (ft btoc)	Deeper Screened Piezometer Depth to Water ^{1/} (ft btoc)	Exterior Depth to Surface Water (ft btoc)	Vertical Head (Shallow Groundwater- Deeper Groundwater)	Vertical Head Direction (Shallow Groundwater- Deeper Groundwater)	Vertical Head (Surface Water- Shallow Groundwater)	Vertical Head Direction (Surface Water- Shallow Groundwater)
7/16/2017	11:54	2.86	3.34	2.88	-0.48	Downward	0.02	Upward
7/16/2017	13:53	2.90	3.33	2.92	-0.43	Downward	0.02	Upward
7/16/2017	16:24	2.88	3.31	2.91	-0.43	Downward	0.03	Upward
7/17/2017	12:22	2.96	3.31	2.93	-0.35	Downward	-0.03	Downward
7/17/2017	15:23	2.96	3.32	2.92	-0.36	Downward	-0.04	Downward
7/17/2017	17:14	2.98	3.33	2.94	-0.35	Downward	-0.04	Downward
7/18/2017	12:48	2.94	3.27	2.94	-0.33	Downward	0.00	Upward
7/18/2017	14:37	3.01	3.29	2.99	-0.28	Downward	-0.02	Downward
7/18/2017	16:23	3.02	3.28	2.97	-0.26	Downward	-0.05	Downward
7/19/2017	13:20	3.05	3.28	2.96	-0.23	Downward	-0.09	Downward
7/20/2017	11:28	3.06	3.26	2.97	-0.20	Downward	-0.09	Downward
7/20/2017	13:20	3.06	3.26	2.96	-0.20	Downward	-0.10	Downward
7/20/2017	15:15	3.04	3.23	2.97	-0.19	Downward	-0.07	Downward
7/21/2017	13:55	3.08	3.23	3.00	-0.15	Downward	-0.08	Downward
7/21/2017	16:08	3.09	3.23	3.00	-0.14	Downward	-0.09	Downward
7/24/2017	12:51	3.03	3.12	2.91	-0.09	Downward	-0.12	Downward
7/24/2017	14:30	3.03	3.13	2.89	-0.10	Downward	-0.14	Downward
7/24/2017	17:39	3.04	3.14	2.90	-0.10	Downward	-0.14	Downward
7/25/2017	9:36	3.02	3.11	2.93	-0.09	Downward	-0.09	Downward
7/25/2017	11:31	3.03	3.11	2.94	-0.08	Downward	-0.09	Downward
7/25/2017	14:57	3.04	3.12	2.94	-0.08	Downward	-0.10	Downward
7/25/2017	17:36	3.03	3.12	2.94	-0.09	Downward	-0.09	Downward
7/26/2017	9:31	3.04	3.09	2.95	-0.05	Downward	-0.09	Downward
7/26/2017	12:25	3.05	3.11	2.96	-0.06	Downward	-0.09	Downward
7/26/2017	14:50	3.04	3.12	2.94	-0.08	Downward	-0.10	Downward
7/26/2017	17:24	3.05	3.12	2.96	-0.07	Downward	-0.09	Downward
7/27/2017	11:00	3.07	3.11	2.97	-0.04	Downward	-0.10	Downward
7/27/2017	12:15	3.07	3.11	2.97	-0.04	Downward	-0.10	Downward
7/27/2017	14:14	3.06	3.11	2.96	-0.05	Downward	-0.10	Downward
7/27/2017	16:35	3.06	3.10	2.97	-0.04	Downward	-0.09	Downward
7/28/2017	8:56	3.07	3.09	2.98	-0.02	Downward	-0.09	Downward
7/28/2017	11:31	3.06	3.08	2.97	-0.02	Downward	-0.09	Downward
7/28/2017	13:05	3.09	3.11	2.98	-0.02	Downward	-0.11	Downward
7/28/2017	14:24	3.09	3.10	2.98	-0.01	Downward	-0.11	Downward
7/28/2017	16:34	3.09	3.10	2.98	-0.01	Downward	-0.11	Downward
7/29/2017	10:05	3.10	3.10	2.98	0.00	Neutral	-0.12	Downward
7/29/2017	11:30	3.10	3.10	2.98	0.00	Neutral	-0.12	Downward
7/29/2017	13:30	3.10	3.10	2.98	0.00	Neutral	-0.12	Downward
7/31/2017	12:18	3.12	3.05	2.99	0.07	Upward	-0.13	Downward
7/31/2017	14:35	3.13	3.06	2.99	0.07	Upward	-0.14	Downward

ft btoc feet below top of casing

1/ Water-level measurements for deeper screened piezometer have been corrected based on a difference in casing height of 1.20 feet between the shallow screened and deeper screened piezometers in order to conduct a comparison of vertical head changes.

K:\Jobs\Lake Anne\Clovewood\2017\Report\PZ-6 table.doc

Hydrograph of Water-Level Measurements Collected from Piezometers at Location PZ-8 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 in July 2017



K:\Jobs\Lake Anne\Clovewood\2017\Hydrographs\PZs\New\PZ-8Comprehensive.grf

LBG Hydrogeologic & Engineering Services, P.C.

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Manual Water-Level Measurements Collected from Piezometer Location PZ-8 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date Time No 6 croundwatery (rb bac) Surface Water-Shallow Croundwatery) Surface Water-Shallow Groundwatery) 76/2017 11:14 1.87 2.25 0.38 Upward 76/2017 11:14 1.87 2.25 0.40 Upward 77/2017 14:12 1.83 2.27 0.44 Upward 77/2017 13:31 1.86 2.22 0.36 Upward 7/92017 1:03 1.88 2.23 0.35 Upward 7/92017 1:01 1.88 2.23 0.35 Upward 7/92017 1:03 1.90 2.25 0.35 Upward 7/102017 1:34 1.90 2.25 0.35 Upward 7/102017 1:50 1.90 2.26 0.36 Upward 7/102017 1:50 1.90 2.26 0.36 Upward 7/102017 1:52 1.92 2.26 0.31 Upward 7/102017 1:53 1.92 2.6			Interior Piezometer Denth	Exterior Depth to	Vertical Head	Vertical Head Direction
Init Isolation Construction Shallow Groundwater) 76/2017 11:14 1.87 2.25 0.38 Upward 7/6/2017 14:12 1.85 2.25 0.40 Upward 7/7/2017 12:15 1.83 2.27 0.44 Upward 7/7/2017 12:15 1.88 2.22 0.34 Upward 7/9/2017 12:05 1.88 2.22 0.34 Upward 7/9/2017 12:05 1.88 2.23 0.35 Upward 7/9/2017 12:05 1.88 2.23 0.35 Upward 7/10/2017 16:36 1.90 2.25 0.35 Upward 7/10/2017 16:36 1.90 2.26 0.36 Upward 7/10/2017 16:48 1.90 2.26 0.36 Upward 7/10/2017 16:50 1.90 2.26 0.33 Upward 7/10/2017 16:52 1.94 2.28 0.34 Upward	Date	Time	to Groundwater	Surface Water	(Surface Water-Shallow	(Surface Water-
P7.8 P7.8 Description 7/6/2017 11:14 1.87 2.25 0.38 Upward 7/7/2017 12:15 1.83 2.27 0.44 Upward 7/7/2017 12:15 1.83 2.22 0.34 Upward 7/7/2017 12:15 1.83 2.22 0.34 Upward 7/7/2017 12:15 1.88 2.23 0.35 Upward 7/9/2017 17:01 1.88 2.23 0.35 Upward 7/9/2017 17:01 1.88 2.25 0.35 Upward 7/10/2017 18:57 1.90 2.25 0.35 Upward 7/10/2017 16:50 1.90 2.26 0.36 Upward 7/10/2017 19:4 1.93 2.26 0.34 Upward 7/11/2017 6:4 1.93 2.26 0.34 Upward 7/11/2017 19:5 2.26 0.31 Upward 7/11/2017 19:4 1.95 <th>Dutt</th> <th>Time</th> <th>(ft btoc)</th> <th>(ft btoc)</th> <th>Groundwater)</th> <th>Shallow Groundwater)</th>	Dutt	Time	(ft btoc)	(ft btoc)	Groundwater)	Shallow Groundwater)
7/6/2017 11:14 1.87 2.25 0.38 Upward 7/6/2017 14:12 1.85 2.25 0.40 Upward 7/7/2017 14:19 1.88 2.27 0.44 Upward 7/7/2017 14:19 1.88 2.22 0.34 Upward 7/9/2017 12:05 1.88 2.22 0.35 Upward 7/9/2017 17:01 1.88 2.23 0.35 Upward 7/9/2017 17:01 1.88 2.25 0.35 Upward 7/10/2017 15:36 1.90 2.25 0.35 Upward 7/10/2017 16:59 1.90 2.26 0.36 Upward 7/10/2017 16:59 1.90 2.26 0.33 Upward 7/10/2017 2:52 1.94 2.28 0.34 Upward 7/10/2017 2:52 1.94 2.25 0.33 Upward 7/11/2017 3:04 1.97 2.25 0.31 Upward <th></th> <th></th> <th>(11 bloc)</th> <th>P7.8</th> <th>Groundwater)</th> <th>Shanow Groundwater)</th>			(11 bloc)	P7.8	Groundwater)	Shanow Groundwater)
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$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7/11/2017	11:41	1.95	2.26	0.31	Upward
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7/11/2017	15:04	1.97	2.26	0.29	Upward
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7/14/2017 20.30 2.20 0.13 Upward 7/14/2017 0:01 2.07 2.20 0.13 Upward 7/14/2017 2:10 0.14 Upward 7/14/2017 5:10 2.07 2.21 0.14 Upward 7/14/2017 10:45 2.07 2.19 0.12 Upward 7/14/2017 10:45 2.07 2.19 0.12 Upward 7/14/2017 12:35 2.07 2.19 0.12 Upward 7/14/2017 12:35 2.07 2.19 0.12 Upward 7/14/2017 12:35 2.09 2.21 0.12 Upward 7/14/2017 13:0 2.06 2.21 0.15 Upward 7/15/2017 1:30 2.06 2.20 0.14 Upward 7/16/2017 12:07 2.15 2.21 0.06 Upward 7/16/2017 16:04 2.16 2.23 0.07 Upward 7/16/2017	7/13/2017	20.56	2.07	2.20	0.15	Upward
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7/13/2017	20.30	2.00	2.21	0.13	Upward
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7/14/2017	2.42	2.07	2.20	0.13	Upward
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7/14/2017	5.10	2.07	2.20	0.13	Upward
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	7/14/2017	10.45	2.07	2.21	0.17	Upward
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7/14/2017 21:35 2.09 2.21 0.13 Upward 7/15/2017 1:30 2.06 2.21 0.12 Upward 7/15/2017 1:30 2.06 2.21 0.15 Upward 7/15/2017 4:45 2.06 2.20 0.14 Upward 7/16/2017 12:07 2.15 2.21 0.06 Upward 7/16/2017 12:07 2.16 2.23 0.07 Upward 7/16/2017 12:50 2.16 2.24 0.08 Upward 7/17/2017 11:30 2.19 2.24 0.05 Upward 7/17/2017 15:15 2.21 2.26 0.05 Upward 7/18/2017 12:32 2.19 2.24 0.05 Upward 7/18/2017 12:32 2.19 2.24 0.05 Upward 7/18/2017 14:11 2.20 2.26 0.06 Upward 7/18/2017 14:11 2.20 2.26 0.07 Upward 7/18/2017 16:15 2.19 2.26 0.04 U	7/14/2017	17.00	2.07	2.19	0.12	Unward
7/15/2017 1:30 2:05 2:21 0:12 Opward 7/15/2017 1:30 2:06 2:21 0.15 Upward 7/15/2017 4:45 2:06 2:20 0.14 Upward 7/16/2017 12:07 2:15 2:21 0.06 Upward 7/16/2017 12:50 2:16 2:23 0.07 Upward 7/16/2017 12:50 2:16 2:24 0.08 Upward 7/16/2017 16:04 2:16 2:24 0.05 Upward 7/17/2017 11:30 2:19 2:24 0.05 Upward 7/17/2017 15:15 2:21 2:26 0.05 Upward 7/18/2017 12:32 2:19 2:24 0.05 Upward 7/18/2017 12:32 2:19 2:24 0.05 Upward 7/18/2017 14:11 2:20 2:26 0.06 Upward 7/18/2017 14:11 2:20 2:26 0.07 Upward 7/19/2017 11:30 2:20 2:24 0.04 U	7/14/2017	21.35	2.01	2.15	0.12	Unward
7/15/2017 4:45 2:00 2:21 0:15 Upward 7/16/2017 12:07 2:15 2:21 0:06 Upward 7/16/2017 12:07 2:15 2:21 0:06 Upward 7/16/2017 12:50 2:16 2:23 0:07 Upward 7/16/2017 12:50 2:16 2:23 0:07 Upward 7/16/2017 16:04 2:16 2:24 0:08 Upward 7/17/2017 11:30 2:19 2:24 0:05 Upward 7/17/2017 15:15 2:21 2:26 0:05 Upward 7/18/2017 12:32 2:19 2:24 0:05 Upward 7/18/2017 12:32 2:19 2:24 0:05 Upward 7/18/2017 14:11 2:20 2:26 0:06 Upward 7/18/2017 16:15 2:19 2:26 0:07 Upward 7/19/2017 11:30 2:20 2:24 0:04 Upward	7/15/2017	1:30	2.06	2.21	0.12	Unward
7/16/2017 12:07 2:15 2:21 0:11 Upward 7/16/2017 12:50 2.16 2:23 0:07 Upward 7/16/2017 12:50 2.16 2:23 0:07 Upward 7/16/2017 16:04 2.16 2:24 0:08 Upward 7/17/2017 11:30 2.19 2:24 0:05 Upward 7/17/2017 15:15 2:21 2:26 0:05 Upward 7/17/2017 15:15 2:21 2:26 0:04 Upward 7/18/2017 12:32 2:19 2:24 0:05 Upward 7/18/2017 12:32 2:19 2:24 0:05 Upward 7/18/2017 14:11 2:20 2:26 0:06 Upward 7/18/2017 16:15 2:19 2:26 0:07 Upward 7/19/2017 11:30 2:20 2:24 0:04 Upward	7/15/2017	4:45	2.06	2.20	0.14	Unward
7/16/2017 12:30 2:11 0:00 0:pward 7/16/2017 12:50 2:16 2:23 0:07 Upward 7/16/2017 16:04 2.16 2:24 0:08 Upward 7/17/2017 11:30 2.19 2:24 0:05 Upward 7/17/2017 15:15 2:21 2:26 0:05 Upward 7/18/2017 12:32 2:19 2:24 0:05 Upward 7/18/2017 12:32 2:19 2:24 0:05 Upward 7/18/2017 12:32 2:19 2:26 0:06 Upward 7/18/2017 14:11 2:20 2:26 0:06 Upward 7/18/2017 16:15 2:19 2:26 0:07 Upward 7/19/2017 11:30 2:20 2:24 0:04 Upward	7/16/2017	12.07	2.15	2.20	0.06	Upward
7/16/2017 16:04 2.16 2.24 0.08 Upward 7/17/2017 11:30 2.19 2.24 0.05 Upward 7/17/2017 11:30 2.19 2.24 0.05 Upward 7/17/2017 15:15 2.21 2.26 0.05 Upward 7/17/2017 17:08 2.20 2.24 0.04 Upward 7/18/2017 12:32 2.19 2.24 0.05 Upward 7/18/2017 12:32 2.19 2.26 0.06 Upward 7/18/2017 14:11 2.20 2.26 0.06 Upward 7/18/2017 16:15 2.19 2.26 0.07 Upward 7/19/2017 11:30 2.20 2.24 0.04 Upward	7/16/2017	12:50	2.16	2.23	0.07	Upward
7/17/2017 11:30 2.19 2.24 0.05 Upward 7/17/2017 15:15 2.21 2.26 0.05 Upward 7/17/2017 15:15 2.21 2.26 0.05 Upward 7/17/2017 17:08 2.20 2.24 0.04 Upward 7/18/2017 12:32 2.19 2.26 0.06 Upward 7/18/2017 14:11 2.20 2.26 0.06 Upward 7/18/2017 16:15 2.19 2.26 0.07 Upward 7/18/2017 16:15 2.19 2.26 0.04 Upward 7/19/2017 11:30 2.20 2.24 0.04 Upward	7/16/2017	16:04	2.16	2.24	0.08	Upward
7/17/2017 15:15 2.21 2.26 0.05 Upward 7/17/2017 17:08 2.20 2.24 0.04 Upward 7/18/2017 12:32 2.19 2.24 0.05 Upward 7/18/2017 14:11 2.20 2.26 0.06 Upward 7/18/2017 16:15 2.19 2.26 0.06 Upward 7/18/2017 16:15 2.19 2.26 0.07 Upward 7/19/2017 11:30 2.20 2.24 0.04 Upward	7/17/2017	11:30	2.19	2.24	0.05	Upward
7/17/2017 17:08 2.20 2.24 0.04 Upward 7/18/2017 12:32 2.19 2.24 0.05 Upward 7/18/2017 14:11 2.20 2.26 0.06 Upward 7/18/2017 16:15 2.19 2.26 0.07 Upward 7/19/2017 11:30 2.20 2.24 0.04 Upward	7/17/2017	15:15	2.21	2.26	0.05	Upward
7/18/2017 12:32 2.19 2.24 0.05 Upward 7/18/2017 14:11 2.20 2.26 0.06 Upward 7/18/2017 16:15 2.19 2.26 0.07 Upward 7/18/2017 16:15 2.19 2.26 0.07 Upward 7/19/2017 11:30 2.20 2.24 0.04 Upward	7/17/2017	17:08	2.20	2.24	0.04	Upward
7/18/2017 14:11 2.20 2.26 0.06 Upward 7/18/2017 16:15 2.19 2.26 0.07 Upward 7/19/2017 11:30 2.20 2.24 0.04 Upward	7/18/2017	12:32	2.19	2.24	0.05	Upward
7/18/2017 16:15 2.19 2.26 0.07 Upward 7/19/2017 11:30 2.20 2.24 0.04 Upward	7/18/2017	14:11	2.20	2.26	0.06	Upward
7/19/2017 11:30 2.20 2.24 0.04 Upward	7/18/2017	16:15	2.19	2.26	0.07	Upward
	7/19/2017	11:30	2.20	2.24	0.04	Upward
7/19/2017 14:20 2.20 2.24 0.04 Ubward	7/19/2017	14:20	2.20	2.24	0.04	Upward

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Manual Water-Level Measurements Collected from Piezometer Location PZ-8 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

		Interior Piezometer Depth	Exterior Depth to	Vertical Head	Vertical Head Direction
Date	Time	to Groundwater (ft btoc)	Surface Water (ft btoc)	(Surface Water-Shallow Groundwater)	(Surface Water- Shallow Groundwater)
7/20/2017	10.43		2.26	0.06	Unward
7/20/2017	13.10	2.20	2.20	0.06	Upward
7/20/2017	15.07	2.20	2.20	0.07	Upward
7/21/2017	13:37	2.22	2.26	0.04	Upward
7/21/2017	15:31	2.22	2.26	0.04	Upward
7/24/2017	11:57	2.18	2.22	0.04	Upward
7/24/2017	17:18	2.16	2.23	0.07	Upward
7/25/2017	10:06	2.14	2.25	0.11	Upward
7/25/2017	11:40	2.15	2.24	0.09	Upward
7/25/2017	14:10	2.15	2.25	0.10	Upward
7/25/2017	16:10	2.15	2.25	0.10	Upward
7/25/2017	18:10	2.15	2.25	0.10	Upward
7/25/2017	19:10	2.15	2.25	0.10	Upward
7/25/2017	20:10	2.15	2.25	0.10	Upward
7/25/2017	21:10	2.15	2.25	0.10	Upward
7/25/2017	22:10	2.14	2.25	0.11	Upward
7/25/2017	23:10	2.14	2.25	0.11	Upward
7/26/2017	0:10	2.14	2.25	0.11	Upward
7/26/2017	1:10	2.14	2.25	0.11	Upward
7/26/2017	2:10	2.15	2.26	0.11	Upward
7/26/2017	3:10	2.15	2.26	0.11	Upward
7/26/2017	4:10	2.16	2.26	0.10	Upward
7/26/2017	5:10	2.16	2.27	0.11	Upward
7/26/2017	6:10	2.16	2.27	0.11	Upward
7/26/2017	7:10	2.16	2.27	0.11	Upward
7/26/2017	9:10	2.16	2.25	0.09	Upward
7/26/2017	12:10	2.16	2.25	0.09	Upward
7/26/2017	14:20	2.17	2.25	0.08	Upward
7/26/2017	10:20	2.18	2.25	0.07	Upward
7/26/2017	20:10	2.18	2.23	0.07	Upward
7/26/2017	20.10	2.19	2.23	0.00	Upward
7/26/2017	21.10 22.10	2.19	2.20	0.07	Unward
7/26/2017	22.10	2.19	2.20	0.06	Upward
7/27/2017	0.10	2.20	2.20	0.05	Upward
7/27/2017	1:10	2.21	2.26	0.05	Upward
7/27/2017	2:10	2.22	2.27	0.05	Upward
7/27/2017	3:10	2.23	2.26	0.03	Upward
7/27/2017	4:10	2.23	2.26	0.03	Upward
7/27/2017	5:10	2.24	2.26	0.02	Upward
7/27/2017	6:10	2.24	2.26	0.02	Upward
7/27/2017	7:10	2.24	2.26	0.02	Upward
7/27/2017	10:30	2.26	2.25	-0.01	Downward
7/27/2017	12:10	2.26	2.25	-0.01	Downward
7/27/2017	13:50	2.26	2.25	-0.01	Downward
7/27/2017	16:10	2.28	2.25	-0.03	Downward
7/27/2017	18:10	2.28	2.25	-0.03	Downward
7/27/2017	19:10	2.29	2.26	-0.03	Downward
7/27/2017	20:10	2.29	2.26	-0.03	Downward
7/27/2017	21:10	2.29	2.26	-0.03	Downward
7/27/2017	22:10	2.29	2.26	-0.03	Downward
7/27/2017	23:10	2.30	2.26	-0.04	Downward
7/28/2017	0:10	2.30	2.26	-0.04	Downward
7/28/2017	1:10	2.31	2.26	-0.05	Downward

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Manual Water-Level Measurements Collected from Piezometer Location PZ-8 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

		Interior Piezometer Depth	Exterior Depth to	Vertical Head	Vertical Head Direction
Date	Time	to Groundwater	Surface Water	(Surface Water-Shallow	(Surface Water-
		(ft btoc)	(ft btoc)	Groundwater)	Shallow Groundwater)
7/28/2017	2:18	2.31	2.26	-0.05	Downward
7/28/2017	3:10	2.31	2.26	-0.05	Downward
7/28/2017	4:10	2.32	2.26	-0.06	Downward
7/28/2017	5:10	2.32	2.26	-0.06	Downward
7/28/2017	6:10	2.32	2.26	-0.06	Downward
7/28/2017	7:10	2.33	2.26	-0.07	Downward
7/28/2017	9:10	2.34	2.25	-0.09	Downward
7/28/2017	11:10	2.35	2.25	-0.10	Downward
7/28/2017	12:10	2.35	2.25	-0.10	Downward
7/28/2017	13:30	2.35	2.25	-0.10	Downward
7/28/2017	17:30	2.37	2.26	-0.11	Downward
7/29/2017	10:30	2.38	2.26	-0.12	Downward
7/29/2017	12:00	2.38	2.26	-0.12	Downward
7/29/2017	14:00	2.38	2.26	-0.12	Downward
7/31/2017	12:00	2.40	2.31	-0.09	Downward
7/31/2017	14:12	2.41	2.33	-0.08	Downward

ft btoc feet below top of casing

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LBG Hydrogeologic & Engineering Services, P.C.

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Manual Water-Level Measurements Collected from Piezometer Location PZ-9 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

		Shallow Screened	Deeper Screened Piezometer	Exterior Depth to	Vertical Head (Shallow	Vertical Head Direction
Date	Time	Piezometer	Depth to Water ¹¹	Surface	Groundwater-Deeper	(Shallow Groundwater-
		Depth to Water	(ft htee)	(ft btoo)	Groundwater)	Deeper Groundwater)
		(11 0100)	(11 0100)	P7.0		
7/6/2017	11.22	2.82	2 75	Г <i>L-</i> У Dev	0.08	Upword
7/6/2017	14.03	3.85	3.75	Dry	0.08	Upward
7/7/2017	12.25	3.65	3.76	Dry	-0.11	Downward
7/7/2017	14.17	3.65	3.75	Dry	-0.10	Downward
7/8/2017	13:30	3.73	3.77	Dry	-0.04	Downward
7/9/2017	12:10	3.74	3.83	Dry	-0.09	Downward
7/9/2017	17:05	3.73	3.84	Dry	-0.11	Downward
7/10/2017	8:45	3.76	3.85	Dry	-0.09	Downward
7/10/2017	10:33	3.76	3.85	Dry	-0.09	Downward
7/10/2017	12:39	3.77	3.86	Dry	-0.09	Downward
7/10/2017	14:50	3.77	3.86	Dry	-0.09	Downward
7/10/2017	16:38	3.77	3.86	Dry	-0.09	Downward
7/10/2017	19:36	3.78	3.86	Dry	-0.08	Downward
7/10/2017	22:00	3.77	3.87	Dry	-0.10	Downward
7/11/2017	0:36	3.77	3.86	Dry	-0.09	Downward
7/11/2017	2:32	3.78	3.86	Dry	-0.08	Downward
7/11/2017	5:08	3.77	3.86	Dry	-0.09	Downward
7/11/2017	7:54	3.79	3.87	Dry	-0.08	Downward
7/11/2017	10:15	3.80	3.87	Dry	-0.07	Downward
7/11/2017	12:07	3.79	3.88	Dry	-0.09	Downward
7/11/2017	14:54	3.81	3.88	Dry	-0.07	Downward
7/11/2017	18:12	3.82	3.88	Dry	-0.06	Downward
7/11/2017	20:53	3.83	3.88	Dry	-0.05	Downward
7/12/2017	2:00	3.81	3.88	Dry	-0.07	Downward
7/12/2017	5:02	3.83	3.88	Dry	-0.05	Downward
7/12/2017	10:55	3.84	3.91	Dry	-0.07	Downward
7/12/2017	14:38	3.80	3.92	Dry	-0.06	Downward
7/12/2017	16:12	3.8/	3.92	Dry	-0.05	Downward
7/12/2017	10:59	3.8/	3.92	Dry	-0.05	Downward
7/12/2017	20:57	3.8/	3.93	Dry	-0.06	Downward
7/12/2017	1.56	3.07	3.93	Diy	-0.08	Downward
7/13/2017	1.30	3.91	3.90	Dry	-0.03	Downward
7/13/2017	8.10	3.94	4.00	Dry	-0.07	Downward
7/13/2017	9.50	3.94	4.00	Dry	-0.06	Downward
7/13/2017	12.27	3.96	4.00	Dry	-0.08	Downward
7/13/2017	16.56	3.70	4 00	Dry	-0.30	Downward
7/13/2017	20:42	3.69	4.01	Dry	-0.32	Downward
7/13/2017	23:25	3.67	3.98	Dry	-0.31	Downward
7/14/2017	2:26	3.63	4.00	Dry	-0.37	Downward
7/14/2017	5:00	3.63	3.98	Drv	-0.35	Downward
7/14/2017	9:35	3.64	3.99	Drv	-0.35	Downward
7/14/2017	12:00	3.65	3.96	Dry	-0.31	Downward
7/14/2017	13:12	3.67	3.98	Dry	-0.31	Downward
7/14/2017	14:23	3.67	3.98	Dry	-0.31	Downward
7/14/2017	17:35	3.68	3.98	Dry	-0.30	Downward
7/14/2017	18:48	3.68	3.98	Dry	-0.30	Downward
7/14/2017	21:20	3.69	3.97	Dry	-0.28	Downward
7/15/2017	0:52	3.70	3.96	Dry	-0.26	Downward
7/15/2017	4:30	3.70	3.97	Dry	-0.27	Downward
7/15/2017	8:48	3.72	3.98	Dry	-0.26	Downward
7/15/2017	14:10	3.72	3.97	Dry	-0.25	Downward
7/15/2017	17:20	3.75	3.98	Dry	-0.23	Downward
7/15/2017	21:00	3.75	3.99	Dry	-0.24	Downward

Manual Water-Level Measurements Collected from Piezometer Location PZ-9 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Shallow Screened Piezometer Depth to Water (ft btoc)	Deeper Screened Piezometer Depth to Water ^{1/} (ft btoc)	Exterior Depth to Surface Water (ft btoc)	Vertical Head (Shallow Groundwater-Deeper Groundwater)	Vertical Head Direction (Shallow Groundwater- Deeper Groundwater)
7/15/2017	23:45	3.76	3.99	Dry	-0.23	Downward
7/16/2017	2:05	3.76	4.00	Dry	-0.24	Downward
7/16/2017	12:13	3.76	4.01	Dry	-0.25	Downward
7/16/2017	14:19	3.76	4.01	Dry	-0.25	Downward
7/16/2017	17:00	3.76	4.01	Dry	-0.25	Downward
7/17/2017	11:10	3.79	4.03	Dry	-0.24	Downward
7/17/2017	15:09	3.81	4.02	Dry	-0.21	Downward
7/17/2017	17:01	3.80	4.04	Dry	-0.24	Downward
7/18/2017	12:24	3.80	4.03	Dry	-0.23	Downward
7/18/2017	14:06	3.80	4.03	Dry	-0.23	Downward
7/18/2017	16:07	3.80	4.03	Dry	-0.23	Downward
7/19/2017	11:50	3.84	4.05	Dry	-0.21	Downward
7/19/2017	14:00	3.85	4.05	Dry	-0.20	Downward
7/20/2017	10:34	3.88	4.05	Dry	-0.17	Downward
7/20/2017	13:00	3.90	4.05	Dry	-0.15	Downward
7/20/2017	15:00	3.94	4.05	Dry	-0.11	Downward
7/21/2017	13:39	3.96	4.05	Dry	-0.09	Downward
7/21/2017	15:09	3.97	4.05	Dry	-0.08	Downward
7/24/2017	12:10	3.69	4.24	Dry	-0.55	Downward
7/24/2017	14:13	3.70	4.23	Dry	-0.53	Downward
7/24/2017	17:00	3.75	4.23	Dry	-0.48	Downward
7/25/2017	10:17	3.79	4.15	Dry	-0.36	Downward
7/25/2017	12:10	3.79	4.14	Dry	-0.35	Downward
7/25/2017	13:50	3.80	4.15	Dry	-0.35	Downward
7/25/2017	16:15	3.81	4.14	Dry	-0.33	Downward
7/25/2017	18:15	3.80	4.13	Dry	-0.33	Downward
7/26/2017	9:30	3.83	4.10	Dry	-0.27	Downward
7/26/2017	11:50	3.85	4.10	Dry	-0.25	Downward
7/26/2017	15:20	3.86	4.08	Dry	-0.22	Downward
7/26/2017	17:20	3.87	4.08	Dry	-0.21	Downward
7/26/2017	19:20	3.87	4.08	Dry	-0.21	Downward
7/27/2017	11:10	3.90	4.05	Dry	-0.15	Downward
7/27/2017	13:10	3.92	4.05	Dry	-0.13	Downward
7/27/2017	17:20	3.94	4.05	Dry	-0.11	Downward
7/27/2017	19:20	3.95	4.04	Dry	-0.09	Downward
7/28/2017	7:30	4.00	4.06	Dry	-0.06	Downward
7/28/2017	10:30	4.01	4.07	Dry	-0.06	Downward
7/28/2017	13:40	4.04	4.08	Dry	-0.04	Downward
7/28/2017	17:40	4.11	4.09	Dry	0.02	Upward
7/29/2017	10:35	4.24	4.19	Dry	0.05	Upward
7/29/2017	12:05	4.25	4.20	Dry	0.05	Upward
7/29/2017	14:05	4.27	4.21	Dry	0.06	Upward
7/31/2017	11:45	4.59	4.57	Dry	0.02	Upward
7/31/2017	13:55	4.60	4.58	Dry	0.02	Upward

ft btoc feet below top of casing

1/ Water-level measurements for deeper screened piezometer have been corrected based on a difference in casing height of 2.16 feet between the shallow screened and deeper screened piezometers in order to conduct a comparison of vertical head changes.

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Hydrograph of Water-Level Measurements Collected from Piezometers at Location PZ-16 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 in July 2017



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Manual Water-Level Measurements Collected from Piezometer Location PZ-16 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Shallow Screened Piezometer Depth to Water (ft btoc)	Deeper Screened Piezometer Depth to Water ^{1/} (ft btoc)	Exterior Depth to Surface Water (ft btoc)	Vertical Head (Shallow Groundwater-Deeper Groundwater)	Vertical Head Direction (Shallow Groundwater- Deeper Groundwater)
		(11 % 10 1)	(11 ~ 10 0)	PZ-16	1	1
7/6/2017	12:00	3,15	3.98	Drv	-0.83	Downward
7/6/2017	13:46	3.19	4.03	Dry	-0.84	Downward
7/7/2017	13:07	3.19	4.11	Dry	-0.92	Downward
7/8/2017	14:10	3.24	4.17	Dry	-0.93	Downward
7/9/2017	11:27	3.25	4.21	Dry	-0.96	Downward
7/9/2017	16:35	3.27	4.24	Drv	-0.97	Downward
7/10/2017	9:15	3.30	4.27	Dry	-0.97	Downward
7/10/2017	11:08	3.31	4.27	Dry	-0.96	Downward
7/10/2017	13:09	3.32	4.28	Dry	-0.96	Downward
7/10/2017	15:55	3.34	4.31	Dry	-0.97	Downward
7/10/2017	20:39	3.31	4.31	Dry	-1.00	Downward
7/10/2017	23:28	3.35	4.31	Dry	-0.96	Downward
7/11/2017	1:17	3.35	4.31	Dry	-0.96	Downward
7/11/2017	3:37	3.35	4.31	Dry	-0.96	Downward
7/11/2017	5:52	3.36	4.31	Dry	-0.95	Downward
7/11/2017	9:01	3.38	4.35	Dry	-0.97	Downward
7/11/2017	14:04	3.41	4.34	Dry	-0.93	Downward
7/11/2017	17:01	3.41	4.38	Dry	-0.97	Downward
7/11/2017	22:10	3.41	4.38	Dry	-0.97	Downward
7/12/2017	3:05	3.41	4.40	Dry	-0.99	Downward
7/12/2017	5:49	3.41	4.41	Dry	-1.00	Downward
7/12/2017	9:35	3.45	4.42	Dry	-0.97	Downward
7/12/2017	13:37	3.47	4.44	Dry	-0.97	Downward
7/12/2017	15:39	3.48	4.44	Dry	-0.96	Downward
7/12/2017	16:31	3.48	4.45	Dry	-0.97	Downward
7/12/2017	21:28	3.47	4.47	Dry	-1.00	Downward
7/13/2017	0:02	3.49	4.48	Dry	-0.99	Downward
7/13/2017	3:05	3.51	4.49	Dry	-0.98	Downward
7/13/2017	5:54	3.51	4.51	Dry	-1.00	Downward
7/13/2017	8:50	3.53	4.53	Dry	-1.00	Downward
7/13/2017	10:47	3.53	4.54	Dry	-1.01	Downward
7/13/2017	12:12	3.54	4.54	Dry	-1.00	Downward
7/13/2017	14:50	3.50	4.49	Dry	-0.99	Downward
7/13/2017	16:10	3.49	4.49	Dry	-1.00	Downward
7/13/2017	18:16	3.50	4.49	Dry	-0.99	Downward
7/13/2017	21:39	3.50	4.51	Dry	-1.01	Downward
7/14/2017	0:52	3.50	4.51	Dry	-1.01	Downward
7/14/2017	3:26	3.50	4.51	Dry	-1.01	Downward
7/14/2017	5:48	3.51	4.51	Dry	-1.00	Downward
7/14/2017	9:10	3.49	4.45	Dry	-0.96	Downward
7/14/2017	10:40	3.49	4.44	Dry	-0.95	Downward
7/14/2017	15:55	3.48	4.42	Dry	-0.94	Downward
7/14/2017	18:52	3.47	4.41	Dry	-0.94	Downward
7/14/2017	22:20	3.55	4.38	Dry	-0.83	Downward
7/15/2017	2:18	3.45	4.37	Dry	-0.92	Downward
7/15/2017	5:45	3.45	4.37	Dry	-0.92	Downward
7/15/2017	9:51	3.46	4.37	Dry	-0.91	Downward
7/15/2017	12:44	3.46	4.36	Dry	-0.90	Downward
7/15/2017	16:40	3.48	4.36	Dry	-0.88	Downward
7/15/2017	18:30	3.47	4.34	Dry	-0.87	Downward
7/15/2017	22:30	3.47	4.34	Dry	-0.87	Downward

Manual Water-Level Measurements Collected from Piezometer Location PZ-16 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Shallow Screened Piezometer Depth to Water (ft btoc)	Deeper Screened Piezometer Depth to Water ^{1/} (ft btoc)	Exterior Depth to Surface Water (ft btoc)	Vertical Head (Shallow Groundwater-Deeper Groundwater)	Vertical Head Direction (Shallow Groundwater- Deeper Groundwater)
7/16/2017	0:10	3.47	4.33	Dry	-0.86	Downward
7/16/2017	2:30	3.47	4.33	Drv	-0.86	Downward
7/16/2017	11:43	3.47	4.32	Dry	-0.85	Downward
7/16/2017	13:35	3.48	4.31	Dry	-0.83	Downward
7/16/2017	16:08	3.48	4.31	Dry	-0.83	Downward
7/17/2017	12:56	3.52	4.34	Dry	-0.82	Downward
7/17/2017	15:26	3.52	4.34	Dry	-0.82	Downward
7/17/2017	17:19	3.52	4.35	Dry	-0.83	Downward
7/18/2017	12:59	3.57	4.40	Dry	-0.83	Downward
7/18/2017	14:44	3.58	4.40	Dry	-0.82	Downward
7/18/2017	16:33	3.58	4.39	Dry	-0.81	Downward
7/19/2017	14:40	3.64	4.48	Dry	-0.84	Downward
7/20/2017	11:43	3.69	4.57	Dry	-0.88	Downward
7/20/2017	13:30	3.70	4.58	Dry	-0.88	Downward
7/20/2017	15:22	3.70	4.58	Dry	-0.88	Downward
7/21/2017	14:00	3.79	4.71	Dry	-0.92	Downward
7/21/2017	16:18	3.78	4.73	Dry	-0.95	Downward
7/24/2017	13:12	4.02	5.05	Dry	-1.03	Downward
7/24/2017	14:37	4.02	5.05	Dry	-1.03	Downward
7/24/2017	17:45	4.03	5.06	Dry	-1.03	Downward
7/25/2017	9:20	4.04	5.06	Dry	-1.02	Downward
7/25/2017	11:23	4.05	5.06	Dry	-1.01	Downward
7/25/2017	13:52	4.05	5.07	Dry	-1.02	Downward
7/25/2017	17:15	4.06	5.08	Dry	-1.02	Downward
7/26/2017	9:13	4.08	5.11	Dry	-1.03	Downward
7/26/2017	12:08	4.09	5.11	Dry	-1.02	Downward
7/26/2017	14:08	4.10	5.13	Dry	-1.03	Downward
7/26/2017	16:22	4.11	5.14	Dry	-1.03	Downward
7/27/2017	8:50	4.15	5.18	Dry	-1.03	Downward
7/27/2017	12:25	4.17	5.19	Dry	-1.02	Downward
7/27/2017	14:43	4.18	5.19	Dry	-1.01	Downward
7/27/2017	16:50	4.18	5.19	Dry	-1.01	Downward
7/28/2017	8:42	4.22	5.24	Dry	-1.02	Downward
7/28/2017	11:17	4.24	5.26	Dry	-1.02	Downward
7/28/2017	13:13	4.23	5.26	Dry	-1.03	Downward
7/28/2017	14:35	4.24	5.26	Dry	-1.02	Downward
7/28/2017	16:51	4.24	5.27	Dry	-1.03	Downward
7/29/2017	9:50	4.30	5.34	Dry	-1.04	Downward
7/29/2017	11:20	4.30	5.35	Dry	-1.05	Downward
7/29/2017	13:20	4.30	5.35	Dry	-1.05	Downward
7/31/2017	12:55	4.48	5.59	Dry	-1.11	Downward
7/31/2017	14:58	4.48	5.59	Dry	-1.11	Downward

ft btoc feet below top of casing

1/ Water-level measurements for deeper screened piezometer have been corrected based on a difference in casing height of 1.81 feet between the shallow screened and deeper screened piezometers in order to conduct a comparison of vertical head changes.

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Hydrograph of Water-Level Measurements Collected from Piezometer near the Onsite Pond During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 in July 2017



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Manual Water-Level Measurements Collected from Piezometer Location PZ-Pond During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

[Interior Piezometer Denth	Exterior Denth to	Vertical Head	Vertical Head Direction
Date	Time	to Groundwater	Surface Water	(Surface Water-Shallow	(Surface Water-
Date	Thirt	(ft btoc)	(ft btoc)	Groundwater)	Shallow Groundwater)
		(11 0100)	P7-Pond	Groundwater)	Sindion Groundwater)
7/6/2017	12.27	2.45	2.45	0.00	Neutral
7/6/2017	12.27	2.45	2.43	0.00	Neutral
7/0/2017	14.50	2.45	2.43	0.00	Ineutiai
7/7/2017	15.30	2.50	2.42	0.00	Deumuuard
7/9/2017	13.33	2.41	2.39	-0.02	Downward
7/8/2017	14:30	2.40	2.39	-0.01	Downward
7/9/2017	16.02	2.40	2.39	-0.01	Downward
7/9/2017	10:03	2.41	2.40	-0.01	Downward
7/10/2017	9:33	2.44	2.43	-0.01	Downward
7/10/2017	11:17	2.43	2.44	-0.01	Downward
7/10/2017	13:42	2.43	2.43	-0.02	Downward
7/10/2017	18:14	2.45	2.52	0.07	Upward
7/10/2017	21:34	2.39	2.43	0.04	Upward
7/11/2017	0:13	2.43	2.40	-0.03	Downward
7/11/2017	1:40	2.43	2.40	-0.03	Downward
7/11/2017	4:30	2.38	2.40	0.02	Upward
7/11/2017	6:49	2.35	2.40	0.05	Upward
7/11/2017	8:59	2.36	2.39	0.03	Upward
7/11/2017	12:15	2.35	2.31	-0.04	Downward
7/11/2017	13:45	2.32	2.29	-0.03	Downward
7/11/2017	14:4/	2.31	2.28	-0.03	Downward
7/11/2017	15:43	2.29	2.28	-0.01	Downward
7/11/2017	16:46	2.29	2.28	-0.01	Downward
7/11/2017	18:01	2.27	2.28	0.01	Upward
7/11/2017	23:35	2.27	2.28	0.01	Upward
7/11/2017	23:55	2.25	2.27	0.02	Upward
7/12/2017	0:15	2.24	2.27	0.03	Upward
7/12/2017	1:29	2.24	2.27	0.03	Upward
7/12/2017	4:18	2.23	2.27	0.04	Upward
7/12/2017	6:49	2.22	2.27	0.05	Upward
7/12/2017	8:40	2.21	2.30	0.09	Upward
7/12/2017	10:03	2.23	2.32	0.07	Upward
7/12/2017	13:34	2.27	2.30	0.03	Upward
7/12/2017	1/:19	2.27	2.31	0.04	Upward
7/12/2017	18:34	2.27	2.30	0.03	Upward
7/12/2017	22:30	2.27	2.31	0.04	Upward
7/12/2017	1.22	2.27	2.20	0.01	Upward
7/12/2017	4:14	2.29	2.30	0.01	Upward Nextrol
7/13/2017	8.20	2.20	2.28	0.00	Incutrat
7/12/2017	0.22	2.29	2.30	0.01	Novtro1
7/13/2017	9.22	2.51	2.31	0.00	Neutral
7/13/2017	10.00	2.51	2.51	0.00	Deumand
7/13/2017	10:50	2.55	2.31	-0.04	Downward Neutrol
7/12/2017	11:54	2.31	2.31	0.00	Ineutral Devenueral
7/12/2017	10:38	2.22	2.20	-0.02	Downward
7/13/2017	19:00	2.24	2.21	-0.03	DownWard
7/13/2017	22:30	2.24	2.22	-0.02	DownWard
7/14/2017	2:04	2.23	2.22	-0.03	DownWard
7/14/2017	4:44	2.25	2.22	-0.03	DownWard
7/14/2017	0:42	2.20	2.30	0.10	
7/14/2017	9:4/	2.1/	2.20	0.03	
7/14/2017	10:37	2.08	2.20	0.12	Upward
7/14/2017	12.16	2.13	2.13	0.02	Upward
//14/201/	13:10	2.10	2.13	0.05	Upwara

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Manual Water-Level Measurements Collected from Piezometer Location PZ-Pond During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

[Interior Piezometer Denth	Exterior Denth to	Vertical Head	Vertical Head Direction
Date	Time	to Groundwater	Surface Water	(Surface Water-Shallow	(Surface Water-
Dutt	Time	(ft btoc)	(ft btoc)	Groundwater)	Shallow Groundwater)
7/14/2017	23.41	2.06	2.12	0.06	Unward
7/15/2017	3.00	2.00	2.12	0.07	Upward
7/15/2017	6.36	2.03	2.12	0.04	Upward
7/15/2017	18.07	2.00	2.12	-0.01	Downward
7/16/2017	11:03	2.15	2.10	0.00	Neutral
7/16/2017	13.05	2.15	2.15	0.00	Neutral
7/16/2017	15:05	2.15	2.15	0.10	Upward
7/17/2017	14.02	2.15	2.25	0.10	Upward
7/17/2017	15.41	2.20	2.24	0.04	Upward
7/17/2017	17.42	2.21	2.24	0.03	Upward
7/18/2017	17.42	2.21	2.24	0.03	Neutral
7/18/2017	14.52	2.23	2.23	0.00	Lenned
7/18/2017	14:33	2.24	2.23	0.01	Upward Neutrol
7/18/2017	10:40	2.23	2.23	0.00	Deutral
7/19/2017	13:30	2.28	2.27	-0.01	Downward Nasatus 1
7/20/2017	12:10	2.32	2.32	0.00	Neutral Nesstar 1
7/20/2017	14:05	2.32	2.32	0.00	Neutral Nesstar 1
7/20/2017	15:45	2.34	2.34	0.00	Neutral
//21/2017	14:21	2.35	2.32	-0.03	Downward
7/21/2017	15:44	2.35	2.32	-0.03	Downward
//24/2017	13:52	2.31	2.30	-0.01	Downward
7/24/2017	18:10	2.32	2.31	-0.01	Downward
7/25/2017	8:33	2.31	2.31	0.00	Neutral
7/25/2017	10:59	2.31	2.30	-0.01	Downward
7/25/2017	14:14	2.33	2.32	-0.01	Downward
7/25/2017	16:04	2.32	2.32	0.00	Neutral
7/26/2017	8:44	2.33	2.33	0.00	Neutral
7/26/2017	11:39	2.33	2.33	0.00	Neutral
7/26/2017	13:38	2.36	2.34	-0.02	Downward
7/26/2017	15:38	2.36	2.34	-0.02	Downward
7/27/2017	8:08	2.36	2.36	0.00	Neutral
7/27/2017	11:49	2.35	2.36	0.01	Upward
7/27/2017	13:50	2.37	2.36	-0.01	Downward
7/27/2017	15:57	2.37	2.36	-0.01	Downward
7/28/2017	7:51	2.40	2.38	-0.02	Downward
7/28/2017	10:50	2.40	2.38	-0.02	Downward
7/28/2017	13:38	2.40	2.38	-0.02	Downward
7/28/2017	15:08	2.40	2.39	-0.01	Downward
7/28/2017	17:31	2.41	2.39	-0.02	Downward
7/29/2017	9:35	2.42	2.40	-0.02	Downward
7/29/2017	10:55	2.43	2.41	-0.02	Downward
7/29/2017	12:40	2.43	2.41	-0.02	Downward
7/31/2017	13:21	2.50	2.48	-0.02	Downward
7/31/2017	15:56	2.50	2.50	0.00	Neutral

ft btoc feet below top of casing

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Manual Water-Level Measurements Collected from Piezometer Location PZ-22 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Shallow Screened Piezometer Depth to Water (ft btoc)	Deeper Screened Piezometer Depth to Water ^{1/} (ft btoc)	Exterior Depth to Surface Water (ft btoc)	Vertical Head (Shallow Groundwater-Deeper Groundwater)	Vertical Head Direction (Shallow Groundwater- Deeper Groundwater)
		(10,000)		P7-22		1
7/6/2017	10.57	5.01	4 08	Drv	0.93	Unward
7/6/2017	12.52	5.03	4 09	Dry	0.94	Unward
7/7/2017	11:57	4.53	4.01	Dry	0.52	Upward
7/7/2017	14:02	4.67	4.00	Dry	0.67	Upward
7/8/2017	11:50	5.03	4.10	Drv	0.93	Upward
7/8/2017	14:50	5.04	4.06	Dry	0.98	Upward
7/8/2017	16:48	5.13	4.11	Dry	1.02	Upward
7/10/2017	8:25	5.06	4.14	Dry	0.92	Upward
7/10/2017	10:12	5.09	4.14	Dry	0.95	Upward
7/10/2017	12:16	5.14	4.14	Dry	1.00	Upward
7/10/2017	18:51	5.15	4.17	Dry	0.98	Upward
7/11/2017	20:05	5.26	4.21	Dry	1.05	Upward
7/12/2017	8:05	5.25	4.25	Dry	1.00	Upward
7/12/2017	11:30	5.38	4.25	Dry	1.13	Upward
7/12/2017	15:16	5.43	4.25	Dry	1.18	Upward
7/12/2017	17:36	5.47	4.26	Dry	1.21	Upward
7/12/2017	20:14	5.39	4.27	Dry	1.12	Upward
7/13/2017	9:02	5.47	4.23	Dry	1.24	Upward
7/13/2017	12:48	5.44	4.32	Dry	1.12	Upward
7/13/2017	17:09	5.10	4.28	Dry	0.82	Upward
7/13/2017	20:16	5.18	4.28	Dry	0.90	Upward
7/14/2017	10:10	4.87	4.22	Dry	0.65	Upward
7/14/2017	11:49	4.96	4.21	Dry	0.75	Upward
7/15/2017	17:40	5.33	4.28	Dry	1.05	Upward
7/16/2017	17:15	5.34	4.33	Dry	1.01	Upward
7/17/2017	11:55	5.00	4.37	Dry	0.63	Upward
7/18/2017	3:39	4.95	4.40	Dry	0.55	Upward
7/19/2017	17:20	5.03	4.46	Dry	0.57	Upward
7/20/2017	11:16	4.97	4.47	Dry	0.50	Upward
7/21/2017	13:29	5.05	4.51	Dry	0.54	Upward
7/21/2017	14:47	5.06	4.52	Dry	0.54	Upward
7/21/2017	16:28	5.07	4.53	Dry	0.54	Upward
7/24/2017	12:31	4.88	4.61	Dry	0.27	Upward
7/24/2017	14:01	4.88	4.61	Dry	0.27	Upward
7/25/2017	9:48	5.15	4.64	Dry	0.51	Upward
7/25/2017	11:47	5.15	4.64	Dry	0.51	Upward
7/25/2017	15:15	5.17	4.64	Dry	0.53	Upward
7/25/2017	17:59	5.19	4.65	Dry	0.54	Upward
//26/2017	9:48	5.21	4.68	Dry	0.53	Upward
7/26/2017	12:38	5.24	4.69	Dry	0.55	Upward
7/26/2017	15:00	5.27	4.69	Dry	0.58	Upward
7/26/2017	1/:38	5.28	4.69	Dry	0.59	Upward
7/27/2017	11:0/	5.21	4./2	Dry	0.49	Upward
7/27/2017	14:40	5.23	4./3	Dry	0.50	Upward
7/28/2017	1/:24	5.24	4./4	Dry	0.30	Upward
//28/2017	9:13	5.21	4./6	Dry	0.45	Upward
7/28/2017	11:43	5.25	4.//	Dry	0.48	Upward
7/28/2017	12:31	5.20	4.//	Dry	0.49	Upward
7/28/2017	14:03	5.29	4.//	Dry	0.32	Upward
7/20/2017	10:07	5.33	4.//	Dry	0.50	Upward
//29/201/	10:15	5.34	4.82	Dry	0.52	Upward

Manual Water-Level Measurements Collected from Piezometer Location PZ-22 During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Shallow Screened Piezometer Depth to Water (ft btoc)	Deeper Screened Piezometer Depth to Water ^{1/} (ft btoc)	Exterior Depth to Surface Water (ft btoc)	Vertical Head (Shallow Groundwater-Deeper Groundwater)	Vertical Head Direction (Shallow Groundwater- Deeper Groundwater)
7/29/2017	11:45	5.38	4.82	Dry	0.56	Upward
7/29/2017	13:45	5.41	4.82	Dry	0.59	Upward
7/31/2017	12:35	5.59	4.90	Dry	0.69	Upward

ft btoc feet below top of casing

<u>1/</u> Water-level measurements for deeper screened piezometer have been corrected based on a difference in casing height of 1.10 feet between the shallow screened and deeper screened piezometers in order to conduct a comparison of vertical head changes.

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APPENDIX IX







LBG Hydrogeologic & Engineering Services, P.C.



LBG Hydrogeologic & Engineering Services, P.C.

Stream Flow Measurements Collected During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

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Date	Time	Flow (cfs)	Date	Time	Flow (cfs)	Date	Time	Flow (cfs)
	SG-1	· · · · ·		SG-2			SG-3	· · · · ·
7/3/2017	10:08	0.002	7/3/2017	10:55	0.018	7/3/2017	15:51	0.048
7/5/2017	10:20	0.000	7/5/2017	10:38	0.042	7/5/2017	14:32	0.095
7/7/2017	9:45	0.007	7/7/2017	10:07	0.139	7/7/2017	14:10	0.132
7/9/2017	15:05	0.001	7/9/2017	14:25	0.011	7/9/2017	15:35	0.028
7/10/2017	6:38	0.008	7/10/2017	7:02	0.054	7/10/2017	10:15	0.082
7/10/2017	17:55	0.001	7/10/2017	17:17	0.030	7/10/2017	18:34	0.091
7/11/2017	7:48	0.000	7/11/2017	8:08	0.050	7/11/2017	11:55	0.137
7/12/2017	12:24	0.003	7/12/2017	13:01	0.032	7/12/2017	16:15	0.209
7/13/2017	12:25	0.002	7/13/2017	12:53	0.072	7/13/2017	17:03	0.147
7/14/2017	14:05	0.008	7/14/2017	19:41	0.099	7/14/2017	14:55	0.201
7/15/2017	7:53	0.002	7/15/2017	8:22	0.066	7/15/2017	13:45	0.200
7/16/2017	10:38	0.003	7/16/2017	10:59	0.033	7/16/2017	9:30	0.081
7/17/2017	11:33	0.002	7/17/2017	14:12	0.036	7/17/2017	10:59	0.109
7/19/2017	11:39	0.002	7/19/2017	11:57	0.037	7/19/2017	10:30	0.131
7/21/2017	11:06	0.001	7/21/2017	14:05	0.019	7/21/2017	10:25	0.089
7/24/2017	11:48	0.001	7/24/2017	15:00	0.039	7/24/2017	11:04	0.142
7/25/2017	7:05	0.005	7/25/2017	9:55	0.026	7/25/2017	6:29	0.111
7/25/2017	14:46	0.001	7/25/2017	15:05	0.025	7/25/2017	14:08	0.078
7/26/2017	8:47	0.001	7/26/2017	9:04	0.024	7/26/2017	8:02	0.070
7/27/2017	9:09	0.001	7/27/2017	9:31	0.020	7/27/2017	8:31	0.061
7/28/2017	723	0.001	7/28/2017	7:40	0.028	7/28/2017	6:46	0.070
7/28/2017	16:08	0.001	7/28/2017	15:25	0.024	7/28/2017	16:42	0.055
7/29/2017	11:01	0.000	7/29/2017	11:20	0.032	7/29/2017	10:19	0.058
7/31/2017	12:56	0.000	7/31/2017	13:14	0.017	7/31/2017	12:15	0.045
	SG-4			SG-5			SG-6	
7/3/2017	15:00	0.105	7/3/2017	13:57	0.051	7/3/2017	13:35	0.094
7/5/2017	13:58	0.083	7/5/2017	13:07	0.031	7/5/2017	12:38	0.045
7/7/2017	13:33	0.362	7/7/2017	12:51	0.266	7/7/2017	12:28	0.337
7/9/2017	14:10	0.127	7/9/2017	13:42	0.090	7/9/2017	13:30	0.129
7/10/2017	9:39	0.089	7/10/2017	9:00	0.055	7/10/2017	8:34	0.071
7/10/2017	16:47	0.066	7/10/2017	16:09	0.026	7/10/2017	15:31	0.067
7/11/2017	11:03	0.077	7/11/2017	10:14	0.031	7/11/2017	9:48	0.041
//12/2017	15:40	0.055	7/12/2017	15:03	0.035	7/12/2017	14:35	0.042
7/13/2017	15:50	0.213	7/13/2017	15:10	0.134	7/13/2017	14:35	0.098
//14/2017	19:05	0.374	//14/2017	18:42	0.298	//14/2017	18:10	0.422
//15/2017	12:57	0.194	//15/2017	11:54	0.135	//15/2017	11:15	0.225
7/10/2017	13:00	0.083	7/10/2017	14:15	0.049	7/10/2017	13:15	0.100
7/10/2017	13:40	0.022	7/10/2017	13:17	0.029	7/10/2017	12:39	0.035
7/21/2017	14:54	0.030	7/19/2017	14:20	0.019	7/19/2017	14:04	0.029
7/21/2017	13:37	0.033	7/21/2017	12:30	0.019	7/21/2017	13:31	0.015
7/24/2017	0.20	0.138	7/24/2017	14:05 8:57	0.090	7/24/2017	13:42 8:20	0.085
7/25/2017	9:30	0.089	7/25/2017	0:52	0.072	7/25/2017	0:30	0.079
7/26/2017	0.22	0.067	7/26/2017	10:00	0.030	7/26/2017	10:23	0.000
7/20/2017	9.52	0.000	7/20/2017	10:01	0.012	7/20/2017	10:54	0.000
7/28/2017	9.00	0.001	7/28/2017	8.20	0.015	7/28/2017	0.05	0.033
7/28/2017	0.02	0.037	7/28/2017	0.29	0.027	7/28/2017	9.05	0.038
7/20/2017	11.52	0.049	7/29/2017	14.22	0.027	7/20/2017	13.55	0.030
7/31/2017	13.42	0.002	7/31/2017	14.03	0.022	7/31/2017	14.32	0.027
1131/2017	10.70	0.071	113112011	17.05	0.000	113112011	17.33	0.010

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Date	Time	Flow (cfs)	Date	Time	Flow (cfs)	Date	Time	Flow (cfs)
	SG-7			SG-8			SG-9	
7/3/2017	12:50	0.041	7/3/2017	12:18	0.008	7/3/2017	11:58	0.008
7/5/2017	11:56	0.016	7/5/2017	11:23	0.002	7/5/2017	11:07	0.062
7/7/2017	11:48	0.209	7/7/2017	11:13	0.262	7/7/2017	10:41	0.118
7/9/2017	13:13	0.035	7/9/2017	12:40	0.007	7/9/2017	12:15	0.004
7/10/2017	8:05	0.031	7/10/2017	7:41	0.013	7/10/2017	7:29	0.003
7/10/2017	14:52	0.021	7/10/2017	14:19	0.006	7/10/2017	14:00	0.000
7/11/2017	9:10	0.016	7/11/2017	8:51	0.004	7/11/2017	8:39	0.000
7/12/2017	14:09	0.018	7/12/2017	13:39	0.003	7/12/2017	13:31	0.000
7/13/2017	13:53	0.015	7/13/2017	13:31	0.001	7/13/2017	13:20	0.000
7/14/2017	17:33	0.187	7/14/2017	16:20	0.130	7/14/2017	15:58	0.017
7/15/2017	10:15	0.106	7/15/2017	9:40	0.046	7/15/2017	9:22	0.021
7/16/2017	12:38	0.045	7/16/2017	11:55	0.015	7/16/2017	11:48	0.000
7/17/2017	12:32	0.082	7/17/2017	12:07	0.001	7/17/2017	11:58	0.000
7/19/2017	13:22	0.015	7/19/2017	12:50	0.007	7/19/2017	12:33	0.000
7/21/2017	12:03	0.005	7/21/2017	11:38	0.000	7/21/2017	11:30	0.000
7/24/2017	13:02	0.005	7/24/2017	12:37	0.061	7/24/2017	12:17	0.032
7/25/2017	8:02	0.027	7/25/2017	7:39	0.024	7/25/2017	7:31	0.011
7/25/2017	16:48	0.027	7/25/2017	17:27	0.012	7/25/2017	17:16	0.001
7/26/2017	10:57	0.021	7/26/2017	11:44	0.006	7/26/2017	11:34	0.001
7/27/2017	11:22	0.012	7/27/2017	12:12	0.001	7/27/2017	11:59	0.000
7/28/2017	9:25	0.010	7/28/2017	10:01	0.001	7/28/2017	9:52	0.000
7/28/2017	13:20	0.008	7/28/2017	12:55	0.001	7/28/2017	12:45	0.000
7/29/2017	13:27	0.007	7/29/2017	14:05	0.001	7/31/2017	15:40	0.000
7/31/2017	15:04	0.002	7/31/2017	15:27	0.000			

Stream Flow Measurements Collected During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

cfs cubic feet per second

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APPENDIX X

C-6



ANALYTICAL REPORT

Job Number: 420-123595-1 SDG Number: Clovewood Job Description: LBG, Inc.

For: Leggette, Brashears & Graham, Inc. 4 Research Drive Shelton, CT 06464

Attention: Stacy Stieber

Debra 60

Debra Bayer Customer Service Manager dbayer@envirotestlaboratories.com 08/24/2017

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EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554



METHOD SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-1 SDG Number: Clovewood

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7 Sample Filtration Total Metals Digestion for 200.7 200 Series Drinking Water Prep Determination Step	EnvTest EnvTest EnvTest EnvTest	EPA 200.7 Re	ev 4.4 FILTRATION EPA 200.7 EPA 200.7/200.8
ICPMS Metals by 200.8 200 Series Drinking Water Prep Determination Step Total Metals Digestion for 200.8	EnvTest EnvTest EnvTest	EPA 200.8 Re	ev.5.4 EPA 200.7/200.8 EPA 200.8
Mercury in Water by CVAA Digestion for CVAA Mercury in Waters	EnvTest EnvTest	EPA 245.1 Re	ev.3.0 EPA 245.1
Anions by Ion Chromatography	EnvTest	MCAWW 300	0.0
Anions by Ion Chromatography	EnvTest	EPA 300.0 Re	ev. 2.1
EPA 504.1 EDB	Pace	EPA 504.1	
EPA 505 Pesticide/PCB	Pace	EPA 505	
EPA 515 Chlorinated Acids	Pace	EPA 515	
Purgeable Organic Compounds in Water by GC/MS	EnvTest	EPA-DW 524	.2
EPA 525.2 Semivolatile Organics	Pace	EPA 525.2	
EPA 531.1 Carbamate Pesticides in Drinki	Pace	EPA 531.1	
EPA 900 Series GA/GB/RA226/RA228/Gamma	Radios	EPA 900	
Uranium	Radios	STL-STL EPA	A
Heterotropic Plate Count	EnvTest	IDEXX SIMPI	LATE
Odor, Threshold Test	EnvTest	SM20 SM 21	50B
Alkalinity, Titration Method	EnvTest	SM21 SM 232	20B-97,-11
Corrosivity LSI Calculation	EnvTest	SM20 SM 23	30B
Hardness by Calculation	EnvTest	SM20 SM 234	40B-97,-11
рН	EnvTest	SM19 SM 450	00 H+ B
Nitrite by Colormetric	EnvTest	SM20 SM 450	00 NO2 B
Total Coliform and Escherichia coli by Colilert - Presence/Absence	EnvTest	SMWW SM 9	0223
Apparent Color	EnvTest	SM21 SM212	20B-01,11
Turbidity	EnvTest	SM21 SM213	30B-01,11
Total Dissolved Solids (Dried at 180 °C)	EnvTest	SM21 SM254	ł0C-97,11
Cyanide, Total: Colorimetric Method Cyanide: Distillation	EnvTest EnvTest	SM21 SM450	00 CN E-99 SM21 SM 4500 CN C
General Sub Contract Method	Pace	Subcontract	
General Sub Contract Method	Radios	Subcontract	

METHOD SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-1 SDG Number: Clovewood

Description	Lab Location	Method	Preparation Method	

Lab References:

EnvTest = EnviroTest

Pace = Pace Analytical - Ormond Beach

Radios = Pace Analytical Services, Inc.

Method References:

EPA = US Environmental Protection Agency

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

IDEXX =

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM19 = "Standard Methods For The Examination Of Water And Wastewater", 19Th Edition, 1995."

SM20 = "Standard Methods For The Examination Of Water And Wastewater", 20th Edition."

SM21 = "Standard Methods For The Examination Of Water And Wastewater", 21st Edition

SMWW = "Standard Methods for the Examination of Water and Wastewater"

STL-STL = Severn Trent Laboratories, St. Louis, Facility Standard Operating Procedure.

METHOD / ANALYST SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-1 SDG Number: Clovewood

Method	Analyst	Analyst ID
EPA-DW 524.2	Andersen, Eric C	ECA
EPA 200.7 Rev 4.4	Sirico, Derek	DS
EPA 200.8 Rev.5.4	Sirico, Derek	DS
EPA 245.1 Rev.3.0	Sirico, Derek	DS
SM20 SM 2340B-97,-11	Sirico, Derek	DS
MCAWW 300.0	Luis, Carlos	CL
EPA 300.0 Rev. 2.1	Luis, Carlos	CL
IDEXX SIMPLATE	O'Driscoll, Kate	КО
SM20 SM 2150B	O'Driscoll, Kate	КО
SM21 SM 2320B-97,-11	Tramantano, Matt	MT
SM20 SM 2330B	Cusack, Renee	RC
SM19 SM 4500 H+ B	O'Driscoll, Kate	КО
SM20 SM 4500 NO2 B	Grant, Ameya	AG
SMWW SM 9223	Grant, Ameya	AG
SM21 SM2120B-01,11	O'Driscoll, Kate	КО
SM21 SM2130B-01,11	O'Driscoll, Kate	КО
SM21 SM2540C-97,11	O'Driscoll, Kate	КО
SM21 SM4500 CN E-99	Osborne, Amy	AO

SAMPLE SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-1 SDG Number: Clovewood

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-123595-1	C - 6	Drinking Water	07/13/2017 0950	07/13/2017 1000

Client: Leggette, Brashears & Graham,		ım, Inc.		Job Number: 420-123595-1 Sda Number: Clovewood
Client Sample ID:	C - 6			
Lab Sample ID:	420-123595-1		Date Sampled:	07/13/2017 0950
Client Matrix:	Drinking Water		Date Received	: 07/13/2017 1000
		524.2 Purgeable Organic Compounds	in Water by GC/MS	
Method:	524.2	Analysis Batch: 420-112453	Instrument ID:	Agilent 7890A/5975C
Preparation:	N/A		Lab File ID:	X071418.D
Dilution:	1.0		Initial Weight/Volum	e: 5 mL
Date Analyzed	07/14/2017 1812		Final Weight/Volum	e: 5 ml
Date Prenared:	N/A			
Analyte		Result (ug/L)	Qualifier	RL
1,1,1,2-Tetrachloroe	ethane	<0.500		0.500
1,1,1-Trichloroethan	e	<0.500		0.500
1,1,2,2-Tetrachloroe	ethane	<0.500		0.500
1,1,2-Trichloroethan	ie	<0.500		0.500
1,1-Dichloroethane		<0.500		0.500
1,1-Dichloroethene		<0.500		0.500
1,1-Dichloropropene	9	<0.500		0.500
1,2,3-Trichlorobenze	ene	<0.500		0.500
1,2,3-Trichloropropa	ane	<0.500		0.500
1,2,4-Trichlorobenze	ene	<0.500		0.500
1,2,4-Trimethylbenz	ene	<0.500		0.500
1,2-Dichloroethane	_	<0.500		0.500
1,2-Dichlorobenzen	e	<0.500		0.500
1,2-Dichloropropane	9	<0.500		0.500
1,3-Dichloropropane		< 0.500		0.500
1,4-Dichloropenzen	e	< 0.500		0.500
2,2-Dichioropropane	5	< 0.500		0.500
Bromohenzene		<0.500		0.500
Bromochloromethar		<0.500		0.500
Bromomethane		<0.500		0.500
n-Rutylbenzene		<0.500		0.500
cis-1 2-Dichloroethe	ne	<0.500		0.500
cis-1 3-Dichloropror	hene	<0.500		0.500
Carbon tetrachloride	2	<0.500		0.500
Chlorobenzene		<0.500		0.500
Chloroethane		<0.500		0.500
Chloromethane		<0.500		0.500
Dibromomethane		<0.500		0.500
Ethylbenzene		<0.500		0.500
Dichlorodifluoromet	hane	<0.500		0.500
Hexachlorobutadien	ie	<0.500		0.500
Isopropylbenzene		<0.500		0.500
p-lsopropyltoluene		<0.500		0.500
Methylene Chloride		<0.500		0.500
m-Xylene & p-Xylen	e	<1.00		1.00
Methyl tert-butyl eth	er	<0.500		0.500
o-Xylene		<0.500		0.500
Tetrachloroethene		<0.500		0.500
Toluene		<0.500		0.500
trans-1,2-Dichloroet	hene	<0.500		0.500
trans-1,3-Dichloropr	opene	<0.500		0.500
Trichloroethene		<0.500		0.500
tert-Butylbenzene		<0.500		0.500

EnviroTest Laboratories, Inc.

08/24/2017

Analytical Data

Client: Leggette,	, Brashears & Graham, I	nc.	Jo	b Number: 420-123595-1 Sda Number: Clovewood
Client Sample ID:	C - 6			
Lab Sample ID: Client Matrix:	420-123595-1 Drinking Water		Date Sampled: Date Received:	07/13/2017 0950 07/13/2017 1000
	524	1.2 Purgeable Organic Compounds in	Water by GC/MS	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	524.2 N/A 1.0 07/14/2017 1812 N/A	Analysis Batch: 420-112453	Instrument ID: Ag Lab File ID: X0 Initial Weight/Volume: Final Weight/Volume:	ilent 7890A/5975C 71418.D 5 mL 5 mL
Analyte		Result (ug/L)	Qualifier	RL
Trichlorofluorometha	ane	<0.500		0.500
Vinyl chloride		<0.500		0.500
Xylenes, Total		<1.50		1.50
Styrene		<0.500		0.500
sec-Butylbenzene		<0.500		0.500
1,3,5-Trimethylbenz	ene	<0.500		0.500
N-Propylbenzene		<0.500		0.500
1,3-Dichlorobenzen	e	<0.500		0.500
2-Chlorotoluene		<0.500		0.500
4-Chlorotoluene		<0.500		0.500
Surrogate		%Rec	Accepta	ance Limits
4-Bromofluorobenze	ene	91	71 - 1	20
Toluene-d8 (Surr)		115	79 - 1	21
1,2-Dichloroethane-	-d4 (Surr)	116	70 - 1	28

Client: Leggette, Brashears & Graham, Inc.

C - 6

Client Sample ID:

Job Number: 420-123595-1 Sdg Number: Clovewood

Lab Sample ID: Client Matrix:	420-123595-1 Drinking Water		Date Sampled: Date Received:	07/13/2017 0950 07/13/2017 1000
		200.7 Rev 4.4 ICP Metals by	200.7	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.7 Rev 4.4 200.7/200.8 1.0 07/17/2017 1421 07/17/2017 0925	Analysis Batch: 420-112479 Prep Batch: 420-112493	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Thermo ICP N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Iron Manganese Sodium Zinc		1210 201 19900 <20.0	g	60.0 10.0 200 20.0
		200.7 Rev 4.4 ICP Metals by 200.7	/-Dissolved	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.7 Rev 4.4 200.7 1.0 07/19/2017 1821 07/17/2017 1505	Analysis Batch: 420-112597 Prep Batch: 420-112501	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Thermo ICP N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Iron Manganese		<60.0 209		60.0 10.0

Client: Leggette, Brashears & Graham, Inc.

C - 6

Client Sample ID:

Job Number: 420-123595-1 Sdg Number: Clovewood

Lab Sample ID: Client Matrix:	420-123595-1 Drinking Water		Date Sampled: Date Received:	07/13/2017 0950 07/13/2017 1000
		200.8 Rev.5.4 ICPMS Metals b	oy 200.8	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.8 Rev.5.4 200.7/200.8 1.0 07/17/2017 1322 07/17/2017 0925	Analysis Batch: 420-112457 Prep Batch: 420-112493	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Perkin Elmer ELAN N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Lead Arsenic Beryllium Cadmium Chromium Nickel Antimony Thallium Barium Selenium		<1.00 <1.40 <0.300 <1.00 <7.00 1.04 <0.400 <0.300 14.6 <2.00		1.00 1.40 0.300 1.00 7.00 0.500 0.400 0.300 2.00 2.00
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.8 Rev.5.4 200.8 1.0 07/18/2017 1706 07/17/2017 1800	Analysis Batch: 420-112536 Prep Batch: 420-112520	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Perkin Elmer ELAN N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Silver		<1.00		1.00
		245.1 Rev.3.0 Mercury in Water	by CVAA	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	245.1 Rev.3.0 245.1 1.0 07/18/2017 1209 07/17/2017 1115	Analysis Batch: 420-112511 Prep Batch: 420-112451	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Perkin Elmer FIMS N/A 25 mL 25 mL
Analyte		Result (ug/L)	Qualifier	RL
Mercury		<0.200		0.200

Client: Leggette, Brashears & Graham, Inc.

C - 6

Client Sample ID:

Job Number: 420-123595-1 Sdg Number: Clovewood

Lab Sample ID: Client Matrix:	420-123595-1 Drinking Water		Date Sampled: Date Received:	07/13/2017 0950 07/13/2017 1000
		SM 2340B-97,-11 Hardness by C	alculation	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	SM 2340B-97,-11 N/A 1.0 07/17/2017 1421 N/A	Analysis Batch: 420-112535	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	None N/A
Analyte		Result (mg/L)	Qualifier	RL
Calcium hardness	as calcium carbonate	66.1		1.25

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-1

Analytical Data

Sdg Number: Clovewood

Client Sample ID:	C - 6					
Lab Sample ID: Client Matrix:	420-123595-1 Drinking Water		Date Sampled: Date Received:	07/13/2017 0950 07/13/2017 1000		
Analyte	Result	Qual Units		Dil	Method	
Coliform, Total	Absent Anly Batch: 420-112380	CFU/100mL Date Analyzed 07/13/2017 1510		1.0	SM 9223	
Escherichia coli	Absent Anly Batch: 420-112380	CFU/100mL Date Analyzed 07/13/2017 1510		1.0	SM 9223	
Analyte	Result	Qual Units	RL	Dil	Method	
Heterotrophic Plate Con	unt 132 Anly Batch: 420-112413	CFU/mL Date Analyzed 07/13/2017 1550	2.00	1.0	SIMPLATE	

Biology

General Chemistry

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-1 Sdg Number: Clovewood

		General Chemistry			
Client Sample ID:	C - 6				
Lab Sample ID: Client Matrix:	420-123595-1 Drinking Water		Date Sampled: Date Received:	07/1 07/1	3/2017 0950 3/2017 1000
Analyte	Result	Qual Units	RL	Dil	Method
Nitrate as N	<0.250 Anly Batch: 420-112412	mg/L Date Analyzed 07/13/2017 1618	0.250	1.0	300.0
Analyte	Result	Qual Units		Dil	Method
Langelier Index	-0.810	NONE		1.0	SM 2330B

Anly Batch: 420-112765 Date Analyzed 07/26/2017 1302

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-1 Sdg Number: Clovewood

Client Sample ID:	C - 6					
Lab Sample ID: 4: Client Matrix: D	20-123595-1 rinking Water			Date Sampled: Date Received:	07/1 07/1	3/2017 0950 3/2017 1000
Analyte	Result	Qual l	Units	RL	Dil	Method
Alkalinity	139 Anly Batch: 420-112669	r Date Analyzed	mg/L 07/21/2017 1730	5.00	1.0	SM 2320B-97,-11
Total Dissolved Solids	172 Anly Batch: 420-112602	r Date Analyzed	mg/L 07/20/2016 1700	5.00	1.0	SM2540C-97,11
Chloride	2.17 Anly Batch: 420-112412	r Date Analyzed	mg/L 07/13/2017 1618	1.50	1.0	300.0 Rev. 2.1
Sulfate	11.2 Anly Batch: 420-112412	r Date Analyzed	mg/L 07/13/2017 1618	5.00	1.0	300.0 Rev. 2.1
Fluoride	<0.500 Anly Batch: 420-112412	r Date Analyzed	mg/L 07/13/2017 1618	0.500	1.0	300.0 Rev. 2.1
Cyanide, Total	<0.00500 Anly Batch: 420-112524	r Date Analyzed	mg/L 07/18/2017 1400	0.00500	1.0	SM4500 CN E-99
Apparent Color	20.0 20.0 Anly Batch: 420-112486	g F Date Analyzed	Pt-Co 07/13/2017 1746	2.00	1.0	SM2120B-01,11
pH@color measurement	6.99 Anly Batch: 420-112486	S Date Analyzed	SU 07/13/2017 1746	2.00	1.0	SM2120B-01,11
Turbidity	8.90 Anly Batch: 420-112420	g I Date Analyzed	NTU 07/13/2017 1809	0.100	1.0	SM2130B-01,11
Odor	1.00 Anly Batch: 420-112485	- Date Analyzed	T.O.N. 07/13/2017 1800	1.00	1.0	SM 2150B
Temp @ Odor Measuren	nent 60.0 Anly Batch: 420-112485	I Date Analyzed	Degrees C 07/13/2017 1800	5.00	1.0	SM 2150B
рН	6.99 Anly Batch: 420-112487	H S Date Analyzed	SU 07/13/2017 1741	0.200	1.0	SM 4500 H+ B
Temp @ pH Measureme	nt 16.5 Anly Batch: 420-112487	I Date Analyzed	Degrees C 07/13/2017 1741	5.00	1.0	SM 4500 H+ B
Nitrite as N	<0.0100 Anly Batch: 420-112510	r Date Analyzed	mg/L 07/14/2017 1047	0.0100	1.0	SM 4500 NO2 B

General Chemistry

DATA REPORTING QUALIFIERS

Client: Leggette, Brashears & Graham, Inc.

Job Number: Sdg Number: Clovewood

Lab Section	Qualifier	Description
Metals		
	9	Result fails applicable NYS drinking water standards
General Chemistry		
	g	Result fails applicable NYS drinking water standards
	Η	Sample was prepped or analyzed beyond the specified holding time

Client: Leggette, Brashears & Graham, Inc.

Job Number:

Sdg Number: Clovewood

The following analytes are Not Part of the ELAP scope of accreditation

Sulfur, Tungsten, Silicon, Bicarbonate Alkalinity, 7 Day BOD 5210C, 28 Day BOD, Soluble BOD, Carbon Dioxide, Carbonate Alkalinity, CBOD Soluble, Chlorine, Cyanide (WAD), Ferrous Iron, Ferric Iron, Total Nitrogen, Total Organic Nitrogen, Dissolved Oxygen, pH, Phenolphthalein Alkalinity, Solids (Fixed), Solids (Percent), Solids (Percent Moisture) , Solids (Percent Volatile), Solids (Volatile Suspended), Temperature, TKN (Soluble), COD (Soluble), Total Inorganic Carbon, Volatile Acids as Acetic Acid, 2-Aminopyridine, 3-Picoline, 1-Methyl-2-pyrrilidinone, Aziridine, Dimethyl sulfoxide, 1-Chlorohexane, Iron Bacteria, Salmonella, & Sulfur Reducing Bacteria.

The following analytes are Not Part of ELAP Potable Water scope of accreditation

Cobalt (200.7, 200.8), Tin (200.7), Strontium (200.7), Gold (200.7), Platinum (200.7), Palladium (200.7), Titanium (200.7), Phosphorus (365.3), Nitrate-Nitrite (10-107-4-1C, 353.2), m-Xylene & p-Xylene (502.2, 524), Naphthalene (502.2), o-Xylene (502.2, 524), & Fecal Coliform (9222D).

The following analytes are Not Part of ELAP Solid and Hazardous Waste scope of accreditation

Ammonia (SM 4500NH3G), TKN (351.2), Phosphorus (365.3), 1,2-Dichloro-1,1,2-trifluoroethane (8260), & Chlorodifluoromethane (8260).

The following analytes are Not Part of ELAP Non Potable Water scope of accreditation

Dissolved Organic Carbon (5310C), Mecoprop (8151A), & MCPA (8151A).

Definitions and Glossary

Client: Leggette, Brashears & Graham, Inc.

Job Number:

Sdg Number: Clovewood

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%R	Percent Recovery
DL, RA, RE	Indicates a Dilution, Reanalysis or Reextraction.
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit - an estimate of the minimum amount of a substance that an analytical process can reliably detect. A MDL is analyte- and matrix-specific and may be laboratory-dependent.
ND	Not detected at the reporting limit (or MDL if shown).
QC	Quality Control
RL	Reporting Limit - the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.
RPD	Relative Percent Difference - a measure of the relative difference between two points

JECT REFERENCE	PROJECT NO.	PROJECT LOCATION	315	MATH	erton	Avenu		ynnaw 	yn, Ne	REOI	к 125 ЛВЕД	ANAL	5-562- 	-0890				PAGE 1 of	1
Clovewood ROTEST PROJECT MANAGER Debra Bayer	P.O. NUMBER	TOWN	h	TYPI		15	Ŷ	hio.	hio.	803	Cid	(pin		Р́А	erile	itric	San		
NT (SITE) PM	CLIENT PHONE	CLIENT FAX		5		A C/G	Vials	jum T	lium T	I/Na2	litric /	nio(liq	er Pla	- Eng	tic Ste	stic N	anU st		
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				11		2-Lite	er Ambe	r Unpr	es.	<u> </u>	L					<u> </u>		Table 8D (Cl,Fe	e,Mn,Ag,Na,SO4,Zn,Odor,Color)
		· · · · · · · · · · · · · · · · · · ·		$\parallel $		1-250	ml Amb	ber Un	pres.			L						524.2 (POC,MT	BE,Vinyl Chloride)
						3-250	ml Plas	tic Un	pres. (r	io air)								SOCs (504,508,	,515,525,531,547,548,549,Dloxin)
						2-40r	nl Ambe	er Sodi	ium Thi	0.							ĺ	Additional Test	ts (Total coliform
						1-500	mi Ami	oer So	dium Ti	nio.								thru Zinc)	
						1-Lite	or Ambe	r Plast	tic Sodi	um Thi	o.&H2	SO4						Radio(Gross A	lpha/Beta,Radium-226/228,Uranium)
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NATURE	711717 11/2	YES	2	5	Φ,.	The	E-				-								

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-1 SDG Number: Clovewood

Login Number: 123595

Question	T/F/NA	Comment
Samples were collected by ETL employee as per SOP-SAM-1	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is recorded.	True	3.5C
Cooler Temp. is within method specified range.(0-6 C PW, 0-8 C NPW, or BAC <10 C	True	
If false, was sample received on ice within 6 hours of collection.	NA	
Based on above criteria cooler temperature is acceptable.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	False	рН
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	



Pace Analytical Services, LLC 1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

August 03, 2017

Ms. Debra Bayer EnviroTest Laboratories, Inc. 315 Fullerton Avenue Newburgh, NY 12550

RE: Project: 42001269 Pace Project No.: 30224102

Dear Ms. Bayer:

Enclosed are the analytical results for sample(s) received by the laboratory on July 14, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sugnalylillins

Jacquelyn Collins jacquelyn.collins@pacelabs.com (724)850-5612 Project Manager

Enclosures

cc: Janine Rader, EnviroTest Laboratories, Inc.





Pace Analytical Services, LLC 1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

CERTIFICATIONS

Project:	42001269
Pace Project No.:	30224102

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601 L-A-B DOD-ELAP Accreditation #: L2417 Alabama Certification #: 41590 Arizona Certification #: AZ0734 Arkansas Certification California Certification #: 04222CA Colorado Certification Connecticut Certification #: PH-0694 **Delaware Certification** Florida/TNI Certification #: E87683 Georgia Certification #: C040 **Guam Certification** Hawaii Certification Idaho Certification **Illinois Certification** Indiana Certification Iowa Certification #: 391 Kansas/TNI Certification #: E-10358 Kentucky Certification #: 90133 Louisiana DHH/TNI Certification #: LA140008 Louisiana DEQ/TNI Certification #: 4086 Maine Certification #: PA00091 Maryland Certification #: 308 Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification Missouri Certification #: 235

Montana Certification #: Cert 0082 Nebraska Certification #: NE-05-29-14 Nevada Certification #: PA014572015-1 New Hampshire/TNI Certification #: 2976 New Jersey/TNI Certification #: PA 051 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190 Oregon/TNI Certification #: PA200002 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282 South Dakota Certification Tennessee Certification #: TN2867 Texas/TNI Certification #: T104704188-14-8 Utah/TNI Certification #: PA014572015-5 USDA Soil Permit #: P330-14-00213 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 460198 Washington Certification #: C868 West Virginia DEP Certification #: 143 West Virginia DHHR Certification #: 9964C Wisconsin Certification Wyoming Certification #: 8TMS-L



SAMPLE SUMMARY

30224102001	C-6 (420-123595-1)	Drinking Water	07/13/17 09:50	07/14/17 10:20
Lab ID	Sample ID	Matrix	Date Collected	Date Received
Pace Project No	.: 30224102			
Project:	42001269			



SAMPLE ANALYTE COUNT

 Project:
 42001269

 Pace Project No.:
 30224102

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30224102001	C-6 (420-123595-1)	SM7500RnB-07	NEG	1
		EPA 900.0	NEG	2
		EPA 903.1	WRR	1
		EPA 904.0	VAL	1
		ASTM D5174-97	RMK	1



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 42001269

Pace Project No.: 30224102

Sample: C-6 (420-123595-1) PWS:	Lab ID: 302241020 Site ID:	001 Collected: 07/13/17 09:50 Sample Type:	Received:	07/14/17 10:20 N	Matrix: Drinking Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radon	SM7500RnB-07	51.1 ± 28.9 (46.2) C:NA T:NA	pCi/L	07/15/17 07:41	10043-92-2	
Gross Alpha	EPA 900.0	0.079 ± 1.02 (2.67) C:NA T:NA	pCi/L	07/24/17 08:37	12587-46-1	
Gross Beta	EPA 900.0	0.099 ± 0.610 (1.45) C:NA T:NA	pCi/L	07/24/17 08:37	12587-47-2	
Radium-226	EPA 903.1	0.324 ± 0.335 (0.501) C:NA T:106%	pCi/L	07/26/17 13:09	13982-63-3	
Radium-228	EPA 904.0	0.549 ± 0.322 (0.624) C:76% T:90%	pCi/L	07/27/17 11:17	15262-20-1	
Total Uranium	ASTM D5174-97	0.210 ± 0.008 (0.193) C:NA T:NA	ug/L	08/02/17 16:11	7440-61-1	



QUALITY CONTROL - RADIOCHEMISTRY

Project:	42001269					
Pace Project No.:	30224102					
QC Batch:	265053	Analysis Method:	SM7500RnB	-07		
QC Batch Method:	SM7500RnB-07	Analysis Description:	7500Rn B Ra	adon		
Associated Lab Sar	nples: 30224102	001				
METHOD BLANK:	1305441	Matrix: Water				
Associated Lab Sar	nples: 30224102	001				
Parar	neter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radon		2.8 ± 18.8 (32.7) C:NA T:NA	pCi/L	07/15/17 02:40		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL - RADIOCHEMISTRY

Project:	42001269					
Pace Project No.:	30224102					
QC Batch:	265152	Analysis Method:	EPA 903.1			
QC Batch Method:	EPA 903.1	Analysis Descriptic	on: 903.1 Radiur	903.1 Radium-226		
Associated Lab Sar	mples: 3022410	2001				
METHOD BLANK:	1306510	Matrix: Wate	r			
Associated Lab Sar	mples: 3022410	2001				
Parar	meter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radium-226		0.159 ± 0.312 (0.570) C:NA T:95%	pCi/L	07/26/17 12:14	-	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.


QUALITY CONTROL - RADIOCHEMISTRY

Project:	42001269						
Pace Project No.:	30224102						
QC Batch:	265148		Analysis Method:	EPA 900.0			
QC Batch Method:	EPA 900.0		Analysis Description:	900.0 Gross	Alpha/Beta		
Associated Lab Sar	mples: 3022410	2001					
METHOD BLANK:	1306505		Matrix: Water				
Associated Lab Sar	mples: 3022410	2001					
Parar	neter	Act ± U	nc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Gross Alpha		-0.333 ± 0.399	(1.52) C:NA T:NA	pCi/L	07/24/17 08:35		
Gross Beta		-0.362 ± 0.578	(1.62) C:NA T:NA	pCi/L	07/24/17 08:35		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL - RADIOCHEMISTRY

Project:	42001269					
Pace Project No.:	30224102					
QC Batch:	265158	Analysis Method:	EPA 904.0			
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radiu	ım 228		
Associated Lab Sar	mples: 3022410	2001				
METHOD BLANK:	1306521	Matrix: Water				
Associated Lab Sar	mples: 3022410	2001				
Para	meter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radium-228		0.0810 ± 0.316 (0.717) C:75% T:85%	pCi/L	07/27/17 11:14		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL - RADIOCHEMISTRY

Project:	42001269						
Pace Project No.:	30224102						
QC Batch:	265552		Analysis Method:	ASTM D517	4-97		
QC Batch Method:	ASTM D5174-97	,	Analysis Description:	D5174.97 To	otal Uranium KPA		
Associated Lab Sar	mples: 30224102	2001					
METHOD BLANK:	1307891		Matrix: Water				
Associated Lab Sai	mples: 30224102	2001					
Para	meter	Act ± Ur	nc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Total Uranium		0.032 ± 0.001 (0.193) C:NA T:NA	ug/L	07/26/17 12:46		-

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

 Project:
 42001269

 Pace Project No.:
 30224102

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

EnviroTest Laboratories, Inc.												44200 and 6400.
315 Fullerton Avenue			خ	io nie	je na	to dv					oviroTe	
Newburgh, NY 12550 Phone (845) 562-0890 Fax (845) 562-0841			5		n n)	ĥ	J D P C C C	-		2	aborat	ories Inc.
Client Information (Sub Contract Lab)	Sampler.	LI RL	-101-	Lab PN Raver	: Dehra			Carrier Tra	cking No(s):	COC No:	7	
Client Contact. Shinnin/Receiving	Phone:	2		E-Mail						Page:	1.4	
Company:				lubaye	u de unito	restiabor	atories.com			Page 1	of 1	
Pace Analytical Services, Inc.							Analysi	s Requested		420-123	3595-1	
Address. 1638 Roseytown Rd,Suites 2,3,4,	Due Date Requested: 7/27/2017									Preserva	ation Codes:	
City. Greensburg	TAT Requested (days	ä		I	(ΣZ(- Hexane - None - Si - Si
State. Zip: PA, 15601					825 A)						cetate Acid P	- AsNaO2 - Na2O4S - Na2SO3
Phone:	₽0#			T	556/H					F - MeOF G - Amch	T E	- H2SO4
Emal:	¥0¥				ом 10 (0) АЯІВ	wnju				H - Ascor 1-1ce	rbic Acid T	- TSP Dodecahydrate - Acetone
Project Name: LBG, Inc.	Project #				GA/C 2 00 5 2 01 5	al Ura				stanlis K - EDTA F - EDTA		- MC/W - ph 4-5 - other (specify)
Site:	SSOW#:				006 933 erdu	atoT bsЯ				nuo:	1	
						110.				9 10		
Samula Identification Clicat ID (Lab ID)		Sample	Sample Type C=comp,	Matrix W-water, 5=zolid, wesstefoil,		ARTNOCEU ARTNOCEU				jedmuýi listo	N SG	ر القالت مصر القالت
		X	Preservation	Code:	s K	s s				ы ч Х	pecial Instr	uctions/Note:
C - 6 (420-123595-1)	71/3/17	9:50		Water	×	×				7		100
	-											
							Ś	2005 1002	241(N		
Possible Hazard Identification			1		Sampl	e Dispo.	al (A fee m	ly be assessed	if samples a	re retained long	er than 1 m	onth)
Deliverable Requested: I, II, III, IV, Other (specify)			adioiogical		Specia	Tetum /	o <i>Cilent</i> ons/QC Rea	Disposal E lirements:	By Lab	Archive For		Months
Empty Kit Relinquished by:		ate:		ľ	Lime			Math	od of Shinmont			
Relinquished by. //	Date/Tijme: /		Col	ngany	Rec	CVd Davia			Data/Time			
R I MARO	7/13/17 14	125		R	<u> </u>	N	H		1 KC	4/12- 200	20	Pro C
	Date/ I me:		60	hany	Rec	eived by:			Date/fime		0	ompany
Keinquished by:	Date/Time:		БО О	npany	Rec	eived by:			Date/Time			ompany
Custody Seals Intact: Custody Seal No.:			n		8 S	ler Tempé	ature(s) °C and	Other Remarks:	-			

Sample Condition Upon Rec	ceipt F	Pitts	bur	gh	30224102
Face Analytical Client Name:	Ê	nv.	<u>ro t</u>	est labos.	_ Project #
	nt □ 3 ⊜	bomm	ercia	Pace Olher	Label Z.H. LIMS Login AN
Tracking #: 17 4.70 23-11-5		7	E.	als blact: Uves	ne l
Cuetody Seal on Cooler/Box Present: Lives	ر <u>الحما</u> 		. (u		
Thermometer Used	iype	of ice			ా °C Final Temp: సి.క్ °C
Cooler Temperature Observed Temp	<u></u>		00		
Leub zuorin de appae neexing is a o					Date and initials of person examining
Comments:	Yes	No	N/	Α]	
Chain of Cuslody Present:	1/			1.	·
Chain of Custody Filled Oul:	1			2.	
Chain of Custody Relinguished:	1		Γ	3.	
Sampler Name & Signature on COC:		1		4.	
Sample Labels match COC	1			5.	
Includes date//mail/10000	WT	-	<u> </u>]	·
Samples Arrived wilbln Hold Time:	1/1		Ī	6	
Short Hold Time Analysis (<72br remaining);	1			7.	
Short Furn Around Time Requested:		/		8.	
Russi Tum Around Time Reduced	1			9.	
	11			10.	
Baro Containers Used		1			
	171			11.	
				12.	
Ornophosphate rela interca		1	1	13.	
Ellered volume received for Dissolved tests			1	14.	
All containers have been checked for preservation.	1			15.	
Il containers needing preservation are found to be in ompliance with EPA recommendation.	1				
ventions: VOA coliform TOC O&G Phenolics				completed Ct-f	preservation
				Lol # of added preservalive	
eadspace in VOA Vials (>6mm):				16	
rip Blank Present:			4	17.	
rip Blank Custody Seals Present					
ad Aqueous Samples Screened > 0.6 mrem/hr			ļ	completed: 714	Date: +11411 +
lient NotIfication/ Resolution:					
Person Contacled:		D	ale/Ti	me:	Contacted By:
Comments/ Resolution:					
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	onal info	ormai	flon	has been stored in	ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DErrick Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers) *PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

J:\QAQC\Master\Document Management\Sample Mgt\Sample Condition Upon Receipt Pittsburgh (C056-5 5July2017)



Pace Analytical Services, LLC 8 East Tower Circle Ormond Beach, FL 32174 (386)672-5668

August 07, 2017

Ron Bayer EnviroTest Laboratories Inc. 315 Fullerton Avenue Newburgh, NY 12550

RE: Project: LBG,Inc 42001269 Pace Project No.: 35324052

Dear Ron Bayer:

Enclosed are the analytical results for sample(s) received by the laboratory on July 14, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Bo Garcia bo.garcia@pacelabs.com (386)672-5668 Project Manager

Enclosures

cc: Debra Bayer, EnviroTest Laboratories Inc.
 Renee Cusack, EnviroTest Laboratories Inc.
 Laura Marciano, EnviroTest Laboratories Inc.
 Janine Rader, EnviroTest Laboratories Inc.
 Meredith Ruthven, EnviroTest Laboratories Inc.





Pace Analytical Services, LLC 8 East Tower Circle Ormond Beach, FL 32174 (386)672-5668

CERTIFICATIONS

Project: LBG,Inc 42001269 Pace Project No.: 35324052

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174 Alabama Certification #: 41320 Connecticut Certification #: PH-0216 Delaware Certification: FL NELAC Reciprocity Florida Certification #: E83079 Georgia Certification #: 955 Guam Certification: FL NELAC Reciprocity Hawaii Certification: FL NELAC Reciprocity Illinois Certification #: 200068 Indiana Certification: FL NELAC Reciprocity Kansas Certification #: E-10383 Louisiana Certification #: FL NELAC Reciprocity Louisiana Environmental Certificate #: 05007 Maryland Certification: #346 Michigan Certification #: 9911 Mississippi Certification: FL NELAC Reciprocity Missouri Certification #: 236 Montana Certification #: Cert 0074

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747 New York Certification #: 10478 Primary Accrediting Body New Jersey Certification #: NY158 Pennsylvania Certification #: 68-00350 Connecticut Certification #: PH-0435 Nebraska Certification: NE-OS-28-14 Nevada Certification: FL NELAC Reciprocity New York Certification #: 11608 North Carolina Environmental Certificate #: 667 North Carolina Certification #: 12710 Oklahoma Certification #: D9947 Pennsylvania Certification #: 68-00547 Puerto Rico Certification #: FL01264 South Carolina Certification: #96042001 Tennessee Certification #: TN02974 Texas Certification: FL NELAC Reciprocity US Virgin Islands Certification: FL NELAC Reciprocity Virginia Environmental Certification #: 460165 Wyoming Certification: FL NELAC Reciprocity West Virginia Certification #: 9962C Wisconsin Certification #: 399079670 Wyoming (EPA Region 8): FL NELAC Reciprocity

Maryland Certification #: 208 Rhode Island Certification #: LAO00340 Massachusetts Certification #: M-NY026 New Hampshire Certification #: 2987



SAMPLE SUMMARY

Project: LBG,Inc 42001269 Pace Project No.: 35324052

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35324052001	C-6	Drinking Water	07/13/17 09:50	07/14/17 11:10



SAMPLE ANALYTE COUNT

Project:LBG,Inc 42001269Pace Project No.:35324052

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35324052001	C-6	EPA 504.1	BP1	2	PASI-O
		EPA 505	MMR	3	
		EPA 508.1	NS1	18	PASI-O
		EPA 515.3	LJM	8	PASI-O
		EPA 531.1	WFH	9	PASI-O
		EPA 547	NMB	1	PASI-O
		EPA 549.2	NMB	1	PASI-O
		EPA 525.2	NS1	7	PASI-O
		EPA 548.1	JDT	1	PASI-O



ANALYTICAL RESULTS

Project: LBG,Inc 42001269

Pace Project No.: 35324052

Sample: C-6	Lab ID:	35324052001	Collecte	d: 07/13/1	7 09:50	Received: 07/	14/17 11:10 Ma	atrix: Drinking	Water
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504.1 GCS EDB and DBCP	Analytical	Method: EPA 5	04.1 Prepa	aration Meth	nod: EP/	A 504.1			
1,2-Dibromo-3-chloropropane 1,2-Dibromoethane (EDB)	<0.0060 <0.0071	ug/L ug/L	0.019 0.0094	0.0060 0.0071	1 1	07/16/17 14:45 07/16/17 14:45	07/17/17 02:23 07/17/17 02:23	96-12-8 106-93-4	
505 GCS Pesticides/PCBs	Analytical	Method: EPA 5	05 Prepara	ation Metho	d: EPA (505			
Aldrin	<0.025	ug/L	0.025	0.025	1	07/20/17 16:38	07/21/17 00:08	309-00-2	
Surrogates	05	0/	00 4 5 0			07/00/47 40 00	07/04/47 00 00	077 00 0	
letrachloro-m-xylene (S)	95	%.	30-150		1	07/20/17 16:38	07/21/17 00:08	877-09-8	
Decachlorobiphenyl (S)	70	%.	30-150		1	07/20/17 16:38	07/21/17 00:08	2051-24-3	
508.1 GCS Pesticides	Analytical	Method: EPA 5	08.1 Prepa	aration Meth	nod: EP/	A 508.1			
Alachlor	<0.038	ug/L	0.22	0.038	1	07/21/17 15:45	07/28/17 03:24	15972-60-8	
Atrazine	<0.068	ug/L	0.11	0.068	1	07/21/17 15:45	07/28/17 03:24	1912-24-9	
gamma-BHC (Lindane)	<0.0032	ug/L	0.022	0.0032	1	07/21/17 15:45	07/28/17 03:24	58-89-9	
Butachlor	<0.029	ug/L	0.11	0.029	1	07/21/17 15:45	07/28/17 03:24	23184-66-9	
Chlordane (Technical)	<0.051	ug/L	0.22	0.051	1	07/21/17 15:45	07/28/17 03:24	57-74-9	
Dieldrin	<0.021	ug/L	0.11	0.021	1	07/21/17 15:45	07/28/17 03:24	60-57-1	
Endrin	<0.0076	ug/L	0.011	0.0076	1	07/21/17 15:45	07/28/17 03:24	72-20-8	
Heptachlor	<0.013	ug/L	0.043	0.013	1	07/21/17 15:45	07/28/17 03:24	76-44-8	
Heptachlor epoxide	<0.0032	ug/L	0.022	0.0032	1	07/21/17 15:45	07/28/17 03:24	1024-57-3	
Hexachlorobenzene	<0.021	ug/L	0.11	0.021	1	07/21/17 15:45	07/28/17 03:24	118-74-1	
Hexachlorocyclopentadiene	<0.035	ug/L	0.11	0.035	1	07/21/17 15:45	07/28/17 03:24	77-47-4	
Methoxychlor	<0.055	ug/L	0.11	0.055	1	07/21/17 15:45	07/28/17 03:24	72-43-5	
Metolachlor	<0.051	ug/L	0.11	0.051	1	07/21/17 15:45	07/28/17 03:24	51218-45-2	
PCB. Total	<0.086	ua/L	0.11	0.086	1	07/21/17 15:45	07/28/17 03:24	1336-36-3	
Propachlor	<0.032	ua/L	0.11	0.032	1	07/21/17 15:45	07/28/17 03:24	1918-16-7	
Simazine	<0.075	ua/L	0.076	0.075	1	07/21/17 15:45	07/28/17 03:24	122-34-9	
Toxaphene	<0.66	ua/l	1.1	0.66	1	07/21/17 15:45	07/28/17 03:24	8001-35-2	
Surrogates		- 9. –			-				
Decachlorobiphenyl (S)	88	%	70-130		1	07/21/17 15:45	07/28/17 03:24	2051-24-3	
515.3 Chlorinated Herbicides	Analytical	Method: EPA 5	15.3 Prepa	aration Meth	nod: EP/	A 515.3			
2,4-D	<0.081	ug/L	0.10	0.081	1	07/20/17 09:35	07/22/17 06:39	94-75-7	
Dalapon	<0.89	ug/L	1.0	0.89	1	07/20/17 09:35	07/22/17 06:39	75-99-0	
Dicamba	<0.067	ug/L	0.10	0.067	1	07/20/17 09:35	07/22/17 06:39	1918-00-9	L1
Dinoseb	<0.16	ug/L	0.20	0.16	1	07/20/17 09:35	07/22/17 06:39	88-85-7	
Pentachlorophenol	<0.030	ua/L	0.040	0.030	1	07/20/17 09:35	07/22/17 06:39	87-86-5	
Picloram	<0.094	ua/L	0.10	0.094	1	07/20/17 09:35	07/22/17 06:39	1918-02-1	
2.4.5-TP (Silvex)	<0.16	ua/L	0.20	0.16	1	07/20/17 09:35	07/22/17 06:39	93-72-1	
Surrogates		- 9. –			-				
2,4-DCAA (S)	92	%	70-130		1	07/20/17 09:35	07/22/17 06:39	19719-28-9	
531.1 HPLC Carbamates	Analytical	Method: EPA 5	31.1						
Aldicarb	<0.64	ug/L	2.0	0.64	1		07/18/17 15:48	116-06-3	
Aldicarb sulfone	<0.37	ug/L	2.0	0.37	1		07/18/17 15:48	1646-88-4	
Aldicarb sulfoxide	<0.59	ug/L	2.0	0.59	1		07/18/17 15:48	1646-87-3	
Carbofuran	<0.32	ug/L	2.0	0.32	1		07/18/17 15:48	1563-66-2	

REPORT OF LABORATORY ANALYSIS



ANALYTICAL RESULTS

Project: LBG,Inc 42001269

Pace Project No.: 35324052

Sample: C-6	Lab ID:	35324052001	Collecte	d: 07/13/17	09:50	Received: 07/	14/17 11:10 Ma	atrix: Drinking	Water
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
531.1 HPLC Carbamates	Analytical	Method: EPA 5	31.1						
3-Hydroxycarbofuran	<0.45	ug/L	2.0	0.45	1		07/18/17 15:48	16655-82-6	
Methomyl	<0.57	ug/L	2.0	0.57	1		07/18/17 15:48	16752-77-5	
Oxamyl	<0.55	ug/L	2.0	0.55	1		07/18/17 15:48	23135-22-0	
Carbaryl	<0.27	ug/L	2.0	0.27	1		07/18/17 15:48	63-25-2	
Surrogates									
BDMC (S)	102	%	80-120		1		07/18/17 15:48		
547 HPLC Glyphosate	Analytical	Method: EPA 5	47						
Glyphosate	<4.2	ug/L	6.0	4.2	1		07/20/17 04:41		
549.2 HPLC Paraquat Diquat	Analytical	Method: EPA 5	49.2 Prepa	aration Meth	od: EP	A 549.2			
Diquat	<0.30	ug/L	0.40	0.30	1	07/18/17 10:40	07/19/17 17:39	85-00-7	
525.2 Base Neutral Extractable	Analytical	Method: EPA 5	25.2 Prepa	aration Meth	od: EP	A 525.2			
Benzo(a)pyrene	<0.012	ug/L	0.096	0.012	1	07/25/17 10:30	07/26/17 14:20	50-32-8	L2
bis(2-Ethylhexyl)adipate	<0.37	ug/L	1.5	0.37	1	07/25/17 10:30	07/26/17 14:20	103-23-1	
bis(2-Ethylhexyl)phthalate	<0.48	ug/L	1.9	0.48	1	07/25/17 10:30	07/26/17 14:20	117-81-7	
Metribuzin	<0.14	ug/L	0.29	0.14	1	07/25/17 10:30	07/26/17 14:20	21087-64-9	
Surrogates									
1,3-Dimethyl-2-nitrobenzene(S)	116	%	70-130		1	07/25/17 10:30	07/26/17 14:20	81209	
Perylene-d12 (S)	84	%	70-130		1	07/25/17 10:30	07/26/17 14:20	1520963	
Triphenylphosphate (S)	93	%	70-130		1	07/25/17 10:30	07/26/17 14:20	115-86-6	
548.1 GCS Endothall	Analytical	Method: EPA 5	48.1 Prepa	aration Meth	od: EP	A 548.1			
Endothall	<4.3	ug/L	9.0	4.3	1	07/19/17 17:00	07/24/17 23:24		L2,L5



Project: LBG,Inc 42001269

Pace Project No.:

35324052

QC Batch:	381535		Analysis Meth	nod:	EPA 531.1		
QC Batch Method:	EPA 531.1		Analysis Dese	cription:	531.1 HPLC Carba	mate	
Associated Lab Sam	oles: 35324052001						
METHOD BLANK:	2070180		Matrix:	Water			
Associated Lab Sam	oles: 35324052001						
			Blank	Reporting			
Paramo	eter	Units	Result	Limit	MDL	Analyzed	Qualifiers
3-Hydroxycarbofuran		ua/l		2	0 0.45	07/18/17 12:36	

3-Hydroxycarbofuran	ug/L	<0.45	2.0	0.45	07/18/17 12:36	
Aldicarb	ug/L	<0.64	2.0	0.64	07/18/17 12:36	
Aldicarb sulfone	ug/L	<0.37	2.0	0.37	07/18/17 12:36	
Aldicarb sulfoxide	ug/L	<0.59	2.0	0.59	07/18/17 12:36	
Carbaryl	ug/L	<0.27	2.0	0.27	07/18/17 12:36	
Carbofuran	ug/L	<0.32	2.0	0.32	07/18/17 12:36	
Methomyl	ug/L	<0.57	2.0	0.57	07/18/17 12:36	
Oxamyl	ug/L	<0.55	2.0	0.55	07/18/17 12:36	
BDMC (S)	%	120	80-120		07/18/17 12:36	

LABORATORY CONTROL SAMPLE: 2070181

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
3-Hydroxycarbofuran	ug/L		10.3	103	80-120	
Aldicarb	ug/L	10	11.2	112	80-120	
Aldicarb sulfone	ug/L	10	10.9	109	80-120	
Aldicarb sulfoxide	ug/L	10	12.0	120	80-120	
Carbaryl	ug/L	10	12.0	120	80-120	
Carbofuran	ug/L	10	11.7	117	80-120	
Methomyl	ug/L	10	10.6	106	80-120	
Oxamyl	ug/L	10	11.8	118	80-120	
BDMC (S)	%			118	80-120	

MATRIX SPIKE & MATRIX SPI	ATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2070182 2070183												
			MSD										
	3	5323850001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max		
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual	
3-Hydroxycarbofuran	ug/L	0.45U	10	10	10	10.2	100	102	80-120	2	20		
Aldicarb	ug/L	0.64U	10	10	10.5	10.3	105	103	80-120	3	20		
Aldicarb sulfone	ug/L	0.37U	10	10	9.5	9.8	95	98	80-120	4	20		
Aldicarb sulfoxide	ug/L	0.59U	10	10	11.2	11.0	112	110	80-120	2	20		
Carbaryl	ug/L	0.27U	10	10	12.0	11.5	120	115	80-120	4	20		
Carbofuran	ug/L	0.32U	10	10	11.3	10.5	113	105	80-120	7	20		
Methomyl	ug/L	0.57U	10	10	10.5	11.1	105	111	80-120	6	20		
Oxamyl	ug/L	0.55U	10	10	10.2	10.0	102	100	80-120	2	20		
BDMC (S)	%						103	98	80-120				

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



Project:	LBG,Inc 420012	69											
Pace Project No.:	35324052												
QC Batch:	382091			Analys	sis Method:	: 6	EPA 547						
QC Batch Method:	EPA 547			Analys	sis Descript	tion: 5	547 HPLC GI	yphosate					
Associated Lab Sar	nples: 353240	5200 [,]	1										
METHOD BLANK:	2073233			1	Matrix: Wa	ter							
Associated Lab Sar	nples: 353240	5200 ⁻	1										
				Blanl	k R	eporting							
Parar	neter		Units	Resu	lt	Limit	MDL		Analyzed	Qua	alifiers		
Glyphosate			ug/L		<4.2	6.0	0	4.2 07/	20/17 02:06	i			
LABORATORY CO	NTROL SAMPLE:	20)73234										
Parar	neter		Units	Spike Conc.	LCS Resu	S Ilt	LCS % Rec	% Re Limits	c S Qu	alifiers			
Glyphosate			ug/L	50)	52.3	105	80)-120		-		
MATRIX SPIKE & N	IATRIX SPIKE DI	JPLI	CATE: 20732:	35		2073236	;						
				MS	MSD								
Paramete	er U	nits	35324897001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Glyphosate	U	g/L	0.0042U mg/L	50	50	48.2	48.4	96	97	80-120	0	30	
MATRIX SPIKE & N	IATRIX SPIKE DI	JPLIC	CATE: 207323	37		2073238	;						
			25224066004	MS Spiles	MSD	MC	MCD	MC	MCD	0/ Dec		Mov	
Paramete	er U	nits	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Glyphosate	U	g/L	<4.2	50	50	51.2	49.9	102	100	80-120	3	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	LBG,Inc 4200	269												
Pace Project No.:	35324052													
QC Batch:	381135			Analys	is Method:	EF	PA 504.1							
QC Batch Method:	EPA 504.1			Analys	is Descripti	ion: 50	4 EDB [DBCP						
Associated Lab Sam	ples: 35324	052001												
METHOD BLANK:	2067594			Ν	latrix: Wat	er								
Associated Lab Sam	ples: 35324	052001												
				Blank	Re	eporting								
Param	eter		Units	Result	t	Limit	M	DL	Anal	yzed	Qu	alifiers		
1,2-Dibromo-3-chloro	opropane		ug/L	<0.	0064	0.020		0.0064	07/16/1	7 20:27	,			
1,2-Dibromoethane (EDB)		ug/L	<0.	0075	0.010		0.0075	07/16/1	7 20:27	,			
LABORATORY CON	TROL SAMPL	E & LCS	D: 2067595		2	068674								
_				Spike	LCS	LCSD	LCS	LCSD	% Rec	_		Max		
Param	eter		Units	Conc.	Result	Result	% Rec	% Rec	Limits	R	PD	RPD	Qu	alifiers
1,2-Dibromo-3-chloro	propane		ug/L	.25	0.24	0.26	98	104	70-13	0	6	40		
1,2-Dibromoethane (EDB)		ug/L	.25	0.22	0.24	88	94	70-13	0	6	40		
MATRIX SPIKE & M	ATRIX SPIKE I	DUPLICA	ATE: 206867	75		2068676								
				MS	MSD									
-		3	5323705002	Spike	Spike	MS	MSD	M	S N	ISD	% Rec		Max	. .
Parameter		Units	Result	Conc.	Conc.	Result	Result	% R	lec %	Rec	Limits	_ RPD	RPD	Qual
1,2-Dibromo-3- chloropropane		ug/L	0.0061U	.44	.44	0.63	0.6	65	144	149	65-13	53	40	M1
1,2-Dibromoethane (EDB)	ug/L	0.0072U	.44	.44	0.61	0.5	58	139	132	65-135	56	40	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Pace Project No.: 35324052 QC Batch: 32255 QC Batch Method: EPA 505 Analysis Description: 505 GCS Pesticides Associated Lab Samples: 35324052001 Matrix: Water METHOD BLANK: 149103 Associated Lab Samples: Matrix: Water Associated Lab Samples: 35324052001 Matrix: Water Associated Lab Samples: 35324052001 Blank Reporting Result MDL Analyzed Qualifiers Aldrin ug/L <0.025 0.025 0.025 0.7/20/17 18:40 Qualifiers LABORATORY CONTROL SAMPLE: 149104 Spike LCS LCS % Rec Limits Qualifiers Aldrin ug/L .048 0.047 98 70-130 Qualifiers Aldrin ug/L .048 0.047 95 30-150 Qualifiers LABORATORY CONTROL SAMPLE: 149105 Spike LCS Kec Limits Qualifiers Aldrin ug/L .048 0.047 95 30-150 LABORATORY CONTROL SA	Project: LBG,Inc 420	01269						
QC Batch: 32255 Analysis Method: EPA 505 QC Batch Method: EPA 505 Analysis Description: 505 GCS Pesticides Associated Lab Samples: 35324052001 Matrix: Water METHOD BLANK: 149103 Matrix: Water Associated Lab Samples: 35324052001 Blank Reporting Parameter Units Result Limit MDL Analyzed Qualifiers Aldrin ug/L <0.025 0.025 0.720/17 18:40 Qualifiers Decachlorobiphenyl (S) %. 75 30-150 07/20/17 18:40 Qualifiers LABORATORY CONTROL SAMPLE: 149104 Spike LCS LCS LCS Limits Qualifiers Aldrin ug/L .048 0.047 98 70-130 Qualifiers Aldrin ug/L .048 0.047 95 30-150 Qualifiers LABORATORY CONTROL SAMPLE: 149105 Spike LCS LCS % Rec Limits Qualifiers LABORATORY CONTROL SAMPLE: 149105 Spike LCS % Rec L	Pace Project No.: 35324052							
QC Batch Method: EPA 505 Analysis Description:: 505 GCS Pesticides Associated Lab Samples: 35324052001 Matrix: Water METHOD BLANK: 149103 Matrix: Water Associated Lab Samples: 35324052001 Blank Reporting Parameter Units Result Limit MDL Analyzed Qualifiers Aldrin ug/L <0.025	QC Batch: 32255		Analysis Me	ethod: E	PA 505			
Associated Lab Samples: 35324052001 METHOD BLANK: 149103 Associated Lab Samples: Matrix: Water Associated Lab Samples: 35324052001 Blank Result Reporting Limit MDL Analyzed O7/20/17 18:40 Qualifiers Aldrin ug/L <0.025	QC Batch Method: EPA 505		Analysis De	escription: 5	05 GCS Pestic	cides		
METHOD BLANK: 149103 Matrix: Water Associated Lab Samples: 35324052001 Blank Reporting MDL Analyzed Qualifiers Aldrin ug/L <0.025 0.025 0.025 07/20/17 18:40 Decachlorobiphenyl (S) %. 75 30-150 07/20/17 18:40 Decachlorobiphenyl (S) %. 85 30-150 07/20/17 18:40 LABORATORY CONTROL SAMPLE: 149104 Spike LCS LCS % Rec Limits Qualifiers Aldrin ug/L .048 0.047 98 70-130 Decachlorobiphenyl (S) %. 94 30-150 Decachlorobiphenyl (S) %. 94 30-150 94 30-150 Decachlorobiphenyl (S) Qualifiers LABORATORY CONTROL SAMPLE: 149105 LCS LCS Kec Limits Qualifiers LABORATORY CONTROL SAMPLE: 149105 Spike LCS LCS % Rec Limits Qualifiers LABORATORY CONTROL SAMPLE: 149105 Spike LCS % Rec Limits <	Associated Lab Samples: 3532	4052001						
Associated Lab Samples: 35324052001 Parameter Units Blank Result Reporting Limit MDL Analyzed Analyzed Qualifiers Aldrin ug/L <0.025	METHOD BLANK: 149103		Matrix	: Water				
ParameterUnitsResultLimitMDLAnalyzedQualifiersAldrinug/L<0.025	Associated Lab Samples: 3532	4052001						
ParameterUnitsResultLimitMDLAnalyzedQualifiersAldrinug/L<0.025			Blank	Reporting				
Aldrin ug/L <0.025 0.025 0.025 0.7/20/17 18:40 Decachlorobiphenyl (S) %. 75 30-150 07/20/17 18:40 LABORATORY CONTROL SAMPLE: 149104 Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Aldrin ug/L .048 0.047 98 70-130 03-150 Decachlorobiphenyl (S) %. 95 30-150 94 30-150 LABORATORY CONTROL SAMPLE: 149105 Spike LCS LCS % Rec Limits Qualifiers LABORATORY CONTROL SAMPLE: 149105 Spike LCS LCS % Rec Limits Qualifiers LABORATORY CONTROL SAMPLE: 149105 Spike LCS LCS % Rec Limits Qualifiers Aldrin ug/L .0095 <0.025	Parameter	Units	Result	Limit	MDL	Analyz	ed Qualifi	ers
Decachlorobiphenyl (S) %. 75 30-150 07/20/17 18:40 Tetrachloro-m-xylene (S) %. 85 30-150 07/20/17 18:40 LABORATORY CONTROL SAMPLE: 149104 Spike LCS LCS % Rec Limits Qualifiers Aldrin ug/L .048 0.047 98 70-130 Qualifiers Decachlorobiphenyl (S) %. .048 0.047 98 70-130 Qualifiers LABORATORY CONTROL SAMPLE: 149105 %. 94 30-150 94 30-150 LABORATORY CONTROL SAMPLE: 149105 Spike LCS LCS % Rec Limits Qualifiers LABORATORY CONTROL SAMPLE: 149105 Spike LCS LCS % Rec Limits Qualifiers Aldrin ug/L .0095 <0.025	Aldrin	ug/L	<0.025	0.025	5 0.02	25 07/20/17 ⁻	18:40	
Tetrachloro-m-xylene (S) %. 85 30-150 07/20/17 18:40 LABORATORY CONTROL SAMPLE: 149104 Spike LCS LCS % Rec Limits Qualifiers Aldrin ug/L .048 0.047 98 70-130 95 30-150 Decachlorobiphenyl (S) %. .048 0.047 98 70-130 94 LABORATORY CONTROL SAMPLE: 149105 Spike LCS LCS % Rec Limits Qualifiers LABORATORY CONTROL SAMPLE: 149105 Spike LCS LCS % Rec Limits Qualifiers Aldrin ug/L .0095 <0.025	Decachlorobiphenyl (S)	%.	75	30-150)	07/20/17	18:40	
LABORATORY CONTROL SAMPLE:149104Spike Conc.LCS ResultLCS % RecLCS LimitsQualifiersAldrinug/L.0480.0479870-130Decachlorobiphenyl (S)%.9430-150Tetrachloro-m-xylene (S)%.SpikeLCS 4LCSLCS % RecLABORATORY CONTROL SAMPLE:149105LABORATORY CONTROL SAMPLE:149105LABORATORY CONTROL SAMPLE:149105LABORATORY CONTROL SAMPLE:149105LABORATORY CONTROL SAMPLE:149106LABORATORY CONTROL SAMPLE:149106	Tetrachloro-m-xylene (S)	%.	85	30-150)	07/20/17	18:40	
ParameterUnitsSpike Conc.LCS ResultLCS % RecW Rec LimitsQualifiersAldrinug/L.0480.0479870-130Decachlorobiphenyl (S)%.9530-150Tetrachloro-m-xylene (S)%.9430-150LABORATORY CONTROL SAMPLE:149105ParameterUnitsConc.Result% RecUnitsConc.Result% RecLimitsQualifiersAldrinug/L.0095<0.025	LABORATORY CONTROL SAMP	LE: 149104						
ParameterUnitsConc.Result% RecLimitsQualifiersAldrinug/L.0480.0479870-130Decachlorobiphenyl (S)%.9530-150Tetrachloro-m-xylene (S)%.9430-150LABORATORY CONTROL SAMPLE:149105LABORATORY CONTROL SAMPLE:149105ParameterUnitsConc.Result% RecLimitsQualifiersAldrinug/L.0095<0.025			Spike	LCS	LCS	% Rec		
Aldrin ug/L .048 0.047 98 70-130 Decachlorobiphenyl (S) %. 95 30-150 Tetrachloro-m-xylene (S) %. 94 30-150 LABORATORY CONTROL SAMPLE: 149105 LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Aldrin ug/L .0095 <0.025	Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers	
Decachlorobiphenyl (S) %. 95 30-150 Tetrachloro-m-xylene (S) %. 94 30-150 LABORATORY CONTROL SAMPLE: 149105 LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Aldrin ug/L .0095 <0.025 97 70-130 Decachlorobiphenyl (S) %. 89 30-150 Tetrachloro-m-xylene (S) %. 95 30-150	Aldrin	ug/L	.048	0.047	98	70-130		
Tetrachloro-m-xylene (S)%.9430-150LABORATORY CONTROL SAMPLE:149105ParameterUnitsSpikeLCSLCS% RecAldrinug/L.0095<0.025	Decachlorobiphenyl (S)	%.			95	30-150		
LABORATORY CONTROL SAMPLE: 149105 Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Aldrin ug/L .0095 <0.025	Tetrachloro-m-xylene (S)	%.			94	30-150		
ParameterUnitsSpike Conc.LCS ResultLCS % RecMec 	LABORATORY CONTROL SAMP	LE: 149105						
ParameterUnitsConc.Result% RecLimitsQualifiersAldrinug/L.0095<0.025			Spike	LCS	LCS	% Rec		
Aldrin ug/L .0095 <0.025 97 70-130 Decachlorobiphenyl (S) %. 89 30-150 Tetrachloro-m-xylene (S) %. 95 30-150 MATRIX SPIKE SAMPLE: 149106 149106 149106	Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers	
Decachlorobiphenyl (S) %. 89 30-150 Tetrachloro-m-xylene (S) %. 95 30-150 MATRIX SPIKE SAMPLE: 149106 149106	Aldrin	ug/L	.0095	<0.025	97	70-130		
Tetrachloro-m-xylene (S) %. 95 30-150 MATRIX SPIKE SAMPLE: 149106	Decachlorobiphenyl (S)	%.			89	30-150		
MATRIX SPIKE SAMPLE: 149106	Tetrachloro-m-xylene (S)	%.			95	30-150		
	MATRIX SPIKE SAMPLE:	149106						
7024421001 Spike MS MS % Rec			7024421001	I Spike	MS	MS	% Rec	
Parameter Units Result Conc. Result % Rec Limits Qualifiers	Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Aldrin ug/L <0.025 .095 0.092 96 65-135	Aldrin	ug/L	<0.0	.095	0.092	9	6 65-13	5
Decachlorobiphenyl (S) %. 75 30-150	Decachlorobiphenyl (S)	%.				7	5 30-150)
Tetrachloro-m-xylene (S) %. 97 30-150	Tetrachloro-m-xylene (S)	%.				9	30-150)

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



Project: LBG,Inc 42001269

Pace Project No.: 35324052

QC Batch:	382070	Analysis Method:	EPA 508.1
QC Batch Method:	EPA 508.1	Analysis Description:	508 GCS Pesticide
Associated Lab Sam	oles: 35324052001		

Matrix: Water

METHOD BLANK: 2073167

Associated Lab Samples: 35324052001

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Alachlor	ug/L	<0.035	0.20	0.035	07/26/17 10:06	
Atrazine	ug/L	<0.063	0.10	0.063	07/26/17 10:06	
Butachlor	ug/L	<0.027	0.10	0.027	07/26/17 10:06	
Chlordane (Technical)	ug/L	<0.047	0.20	0.047	07/26/17 10:06	
Dieldrin	ug/L	<0.019	0.10	0.019	07/26/17 10:06	
Endrin	ug/L	<0.0070	0.010	0.0070	07/26/17 10:06	
gamma-BHC (Lindane)	ug/L	<0.0030	0.020	0.0030	07/26/17 10:06	
Heptachlor	ug/L	<0.012	0.040	0.012	07/26/17 10:06	
Heptachlor epoxide	ug/L	<0.0030	0.020	0.0030	07/26/17 10:06	
Hexachlorobenzene	ug/L	<0.019	0.10	0.019	07/26/17 10:06	
Hexachlorocyclopentadiene	ug/L	<0.032	0.10	0.032	07/26/17 10:06	
Methoxychlor	ug/L	<0.051	0.10	0.051	07/26/17 10:06	
Metolachlor	ug/L	<0.047	0.10	0.047	07/26/17 10:06	
Propachlor	ug/L	<0.030	0.10	0.030	07/26/17 10:06	
Simazine	ug/L	<0.069	0.070	0.069	07/26/17 10:06	
Toxaphene	ug/L	<0.61	1.0	0.61	07/26/17 10:06	
Decachlorobiphenyl (S)	%	103	70-130		07/26/17 10:06	

LABORATORY CONTROL SAMPLE: 2073168

Demonster		Spike	LCS	LCS	% Rec	Qualifiant
Parameter	Units	Conc	Result	% Rec	Limits	Qualifiers
Alachlor	ug/L	1	1.0	100	70-130	
Atrazine	ug/L	1.2	1.2	97	70-130	
Butachlor	ug/L	.5	0.48	96	70-130	
Dieldrin	ug/L	.5	0.51	103	70-130	
Endrin	ug/L	.05	0.053	106	70-130	
gamma-BHC (Lindane)	ug/L	.1	0.10	102	70-130	
Heptachlor	ug/L	.2	0.18	91	70-130	
Heptachlor epoxide	ug/L	.1	0.10	100	70-130	
Hexachlorobenzene	ug/L	.5	0.46	92	70-130	
Hexachlorocyclopentadiene	ug/L	.5	0.47	94	70-130	
Methoxychlor	ug/L	.5	0.53	107	70-130	
Metolachlor	ug/L	.5	0.48	96	70-130	
Propachlor	ug/L	.5	0.48	96	70-130	
Simazine	ug/L	.88	0.78	89	70-130	
Decachlorobiphenyl (S)	%			105	70-130	

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REPORT OF LABORATORY ANALYSIS



Project: LBG,Inc 42001269 Pace Project No.: 35324052

MATRIX SPIKE & MATRIX SPI	KE DUPLICA											
			MS									
	3	5323850001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Alachlor	ug/L	0.034U	2	2	2.0	1.9	100	97	65-135	3	40	
Atrazine	ug/L	0.061U	2.5	2.5	2.6	3.1	102	123	65-135	19	40	
Butachlor	ug/L	0.026U	1	1	0.93	0.89	93	89	65-135	4	40	
Chlordane (Technical)	ug/L	0.045U			<0.094	<0.094					40	
Dieldrin	ug/L	0.018U	1	1	1.0	1.0	104	104	65-135	0	40	
Endrin	ug/L	0.0067U	.1	.1	0.11	0.11	107	107	65-135	0	40	
gamma-BHC (Lindane)	ug/L	0.0029U	.2	.2	0.22	0.22	110	111	65-135	1	40	
Heptachlor	ug/L	0.012U	.4	.4	0.70	0.81	174	201	65-135	14	40	M1
Heptachlor epoxide	ug/L	0.0029U	.2	.2	0.21	0.21	104	103	65-135	0	40	
Hexachlorobenzene	ug/L	0.018U	1	1	1.0	1.1	102	111	65-135	8	40	
Hexachlorocyclopentadiene	ug/L	0.031U	1	1	1.2	1.0	116	105	65-135	10	40	
Methoxychlor	ug/L	0.049U	1	1	1.0	0.97	101	97	65-135	4	40	
Metolachlor	ug/L	0.045U	1	1	0.95	0.95	95	95	65-135	0	40	
Propachlor	ug/L	0.029U	1	1	1.0	1.2	103	123	65-135	17	40	
Simazine	ug/L	0.066U	1.8	1.8	0.62	0.68	36	39	65-135	9	40	M1
Toxaphene	ug/L	0.58U			<1.2	<1.2					40	
Decachlorobiphenyl (S)	%						94	94	70-130		40	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: LBG,Inc 42001269

Pace Project No.: 35324052

QC Batch:	382064		Analysis Method:		EPA 515.3			
QC Batch Method:	EPA 515.3		Analysis Dese	cription:	5153 GCS Herbicio	les		
Associated Lab Samp	oles: 35324052001							
METHOD BLANK: 2	2073155		Matrix:					
Associated Lab Samp	oles: 35324052001							
			Blank	Reporting				
Parame	eter	Units	Result	Limit	MDL	Analyzed	Qualifiers	
2,4,5-TP (Silvex)		ug/L	<0.16	0.	20 0.16	07/22/17 00:29		
2,4-D		ug/L	<0.081	0.	10 0.081	07/22/17 00:29		
Dalapon		ug/L	<0.89	1	.0 0.89	07/22/17 00:29		
Dicamba		ug/L	<0.067	0.	10 0.067	07/22/17 00:29		
Dinoseb		ug/L	<0.16	0.	20 0.16	07/22/17 00:29		
Pentachlorophenol		ug/L	<0.030	0.0	40 0.030	07/22/17 00:29		
Picloram		ug/L	<0.094	0.	10 0.094	07/22/17 00:29		
2,4-DCAA (S)		%	88	70-1	30	07/22/17 00:29		

LABORATORY CONTROL SAMPLE: 2073156

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
2,4,5-TP (Silvex)	ug/L	1	1.0	103	70-130	
2,4-D	ug/L	.5	0.39	78	70-130	
Dalapon	ug/L	5	4.5	90	70-130	
Dicamba	ug/L	.5	0.66	132	70-130 L	1
Dinoseb	ug/L	1	1.1	114	70-130	
Pentachlorophenol	ug/L	.2	0.20	98	70-130	
Picloram	ug/L	.5	0.50	99	70-130	
2,4-DCAA (S)	%			93	70-130	

MATRIX SPIKE & MATRIX SP												
			MS	MSD								
	9	2347613003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
2,4,5-TP (Silvex)	ug/L	ND	1	1	1.1	1.1	108	111	70-130	3	40	
2,4-D	ug/L	ND	.5	.5	0.42	0.47	84	94	70-130	11	40	
Dalapon	ug/L	ND	5	5	5.7	6.0	115	120	70-130	5	40	
Dicamba	ug/L	ND	.5	.5	0.58	0.63	117	126	70-130	7	40	
Dinoseb	ug/L	ND	1	1	1.1	1.1	105	113	70-130	7	40	
Pentachlorophenol	ug/L	ND	.2	.2	0.18	0.19	91	95	70-130	4	40	
Picloram	ug/L	ND	.5	.5	0.65	0.70	130	140	70-130	7	40	M1
2,4-DCAA (S)	%						98	99	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



Project: LBG,Inc 42001269 Pace Project No.: 35324052

IATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2073480 2073481												
			MS	MSD								
	3	5323949005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
2,4,5-TP (Silvex)	ug/L	<0.16	1	1	1.1	1.1	108	110	70-130	1	40	
2,4-D	ug/L	<0.081	.5	.5	0.40	0.41	79	82	70-130	3	40	
Dalapon	ug/L	<0.89	5	5	4.7	4.8	94	95	70-130	1	40	
Dicamba	ug/L	<0.067	.5	.5	0.51	0.63	103	127	70-130	21	40	
Dinoseb	ug/L	<0.16	1	1	1.1	1.1	110	111	70-130	1	40	
Pentachlorophenol	ug/L	<0.030	.2	.2	0.19	0.19	96	97	70-130	1	40	
Picloram	ug/L	<0.094	.5	.5	0.55	0.57	110	115	70-130	5	40	
2,4-DCAA (S)	%						95	93	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



Project: LBG,Inc 42001269

Pace Project No.: 35324052

QC Batch: 382937		Analysis M	ethod:	EPA 525.2	2				
QC Batch Method: EPA 525.2		Analysis De	escription:	525.2 Bas	se Neutra	I Extractab	les		
Associated Lab Samples: 35324052	2001								
METHOD BLANK: 2078153		Matrix	x: Water						
Associated Lab Samples: 35324052	2001								
		Blank	Reporting	9					
Parameter	Units	Result	Limit	Μ	DL	Analyz	zed	Qualifiers	
Benzo(a)pyrene	ug/L	<0.013	3 0	.10	0.013	07/26/17	11:53		
bis(2-Ethylhexyl)adipate	ug/L	<0.38	3	1.6	0.38	07/26/17	11:53		
bis(2-Ethylhexyl)phthalate	ug/L	<0.50)	2.0	0.50	07/26/17	11:53		
Metribuzin	ug/L	<0.15	5 0	.30	0.15	07/26/17	11:53		
1,3-Dimethyl-2-nitrobenzene(S)	%	105	5 70- ⁻	130		07/26/17	11:53		
Perylene-d12 (S)	%	84	4 70- ⁻	130		07/26/17	11:53		
Triphenylphosphate (S)	%	83	3 70- ⁻	130		07/26/17	11:53		
LABORATORY CONTROL SAMPLE:	2078154								
		Spike	LCS	LCS	9	6 Rec			
Parameter	Units	Conc.	Result	% Rec	I	_imits	Qualifi	ers	
Benzo(a)pyrene	ug/L	.4	0.26		65	70-130	L2		
bis(2-Ethylhexyl)adipate	ug/l	6.4	5.4		84	70-130			

	ug/L	0.4	0.4	04	10 100	
bis(2-Ethylhexyl)phthalate	ug/L	8	6.8	85	70-130	
Metribuzin	ug/L	1.2	1.2	103	70-130	
1,3-Dimethyl-2-nitrobenzene(S)	%			106	70-130	
Perylene-d12 (S)	%			75	70-130	
Triphenylphosphate (S)	%			83	70-130	

MATRIX SPIKE & MATRIX SP	IKE DUPLIC	ATE: 20784	76		2078477							
			MS	MSD								
		92348121001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Benzo(a)pyrene	ug/L				0.092J	0.098J					40	MO
bis(2-Ethylhexyl)adipate	ug/L				10.9	10.3				6	40	
bis(2-Ethylhexyl)phthalate	ug/L				14.0	13.5				3	40	
Metribuzin	ug/L				2.2	<0.30					40	M1
1,3-Dimethyl-2- nitrobenzene(S)	%						110	120	70-130			
Perylene-d12 (S)	%						64	62	70-130			S0, S8
Triphenylphosphate (S)	%						83	84	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



Project:	LBG,Inc 42001269	9										
Pace Project No.:	35324052											
QC Batch:	381974		Analys	sis Method:	: E	PA 548.1						
QC Batch Method:	EPA 548.1		Analys	sis Descript	tion: 5	48 GCS End	dothall					
Associated Lab Sat	mples: 35324052	2001										
METHOD BLANK:	2072291		I	Matrix: Wa	ter							
Associated Lab Sar	mples: 35324052	2001										
			Blanl	k R	eporting							
Para	neter	Units	Resu	lt	Limit	MDL		Analyzed	Qua	alifiers		
Endothall		ug/L		<4.3	9.0)	4.3 07/2	24/17 19:29)			
LABORATORY CO	NTROL SAMPLE:	2072292										
Para	neter	Units	Spike Conc.	LCS Resu	S Ilt	LCS % Rec	% Reo Limits	c G QI	alifiers			
Endothall		ug/L	50)	39.6	79	80)-120		-		
MATRIX SPIKE & M	MATRIX SPIKE DUF	PLICATE: 20723	347		2072348							
			MS	MSD								
Paramete	er Uni	35324386001 its Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Endothall	ug,	/L 4.3U	50	50	45.0	44.4	90	89	80-120	1	30	
MATRIX SPIKE & M	MATRIX SPIKE DUF	PLICATE: 20723	58		2072359							
			MS	MSD								
_		35324386002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er Uni	its Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Endothall	ug	/L 4.3U	50	50	34.3	41.0	69	82	80-120	18	30	MO

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	LBG,Inc 42001269)										
Pace Project No.:	35324052											
QC Batch:	381247		Analys	sis Method:	E	EPA 549.2						
QC Batch Method:	EPA 549.2		Analys	sis Descript	ion: 5	549 HPLC Pa	raquat Diq	uat				
Associated Lab San	nples: 353240520	001										
METHOD BLANK:	2068888		Ν	Matrix: Wa	ter							
Associated Lab San	nples: 353240520	001										
			Blank	k R	eporting							
Paran	neter	Units	Resul	t	Limit	MDL		Analyzed	Qua	alifiers		
Diquat		ug/L	•	<0.30	0.40)	0.30 07/	19/17 13:34				
LABORATORY COM	NTROL SAMPLE:	2068889										
			Spike	LCS	i	LCS	% Red	0				
Paran	neter	Units	Conc.	Resu	lt	% Rec	Limits	G Qu	alifiers	_		
Diquat		ug/L	2	1	1.6	80	70)-130				
MATRIX SPIKE & M	ATRIX SPIKE DUP	LICATE: 20702	41		2070242							
			MS	MSD	2010212							
		35323937005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er Unit	ts Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Diquat	ug/	L <0.30	2	2	1.5	1.6	77	82	70-130	6	30	
MATRIX SPIKE & M	IATRIX SPIKE DUP	LICATE: 20702	43		2070244							
			MS	MSD								
		35323949005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er Unit	ts Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Diquat	ug/	L <0.30	2	2	1.7	1.6	85	82	70-130	4	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: LBG,Inc 42001269

Pace Project No.: 35324052

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

- L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
- L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
- L5 LCS recovery exceeded QC limits. Batch accepted based on matrix spike recovery within LCS limits.
- M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- S0 Surrogate recovery outside laboratory control limits.
- S8 Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-extraction and/or re-analysis)



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LBG,Inc 42001269 Pace Project No.: 35324052

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35324052001	C-6	EPA 504.1	381135	EPA 504.1	381255
35324052001	C-6	EPA 505	32255	EPA 505	32334
35324052001	C-6	EPA 508.1	382070	EPA 508.1	382791
35324052001	C-6	EPA 515.3	382064	EPA 515.3	382572
35324052001	C-6	EPA 531.1	381535		
35324052001	C-6	EPA 547	382091		
35324052001	C-6	EPA 549.2	381247	EPA 549.2	381830
35324052001	C-6	EPA 525.2	382937	EPA 525.2	383335
35324052001	C-6	EPA 548.1	381974	EPA 548.1	382933

EnviroTest Laboratories, Inc. 315 Fullerton Avenue Newburgh, NY 12550 Phone (845) 562-0890 Fax (845) 562-0841	W0#:35324052		Custody Record		EnviroTest Laboratorie	s Inc.
Client Information (Sub Contract Lab)	35324052)ebra	Carrier Tracking No(s):	COC No: 420-9122,1	
Client Contact: Shipping/Receiving		dbayer@	Denvirotestlaboratories.com		Page: Page 1 of 1	
company: Pace Analytical Ormond Beach			Analysis Re	quested	STL Job #: 420-123595-1	
Address: 8 Eact Tower Circle	Due Date Requested: 7/05/2017	XM	M		Preservation Codes:	Γ
der sons on one of the sons of	TAT Requested (days):		s:] ul se		A - HCL M - Hexane B - NaOH N - None	
State, 21: FL, 32:174	TAT AR	200	ds DBCP DBCP		D - VIItic Acid P - Na2045 E - NaHSO4 Q - Na2SO	
Phone: 111-222-3333(Tel)	PO#	(0	ate Pe ate Pe atile C		F - MeOH R - Na2S2S G - Amchlor S - H2SO4 H Assochis Asid T TSD Do	03
Email:	;# OM	or No	(o) effort fr.408 fr.408 fr.408 fort fovim		J - DI Water V - MCAA	receitionate
Project Name: I BG Inc	Project #; 42001269	20X) 6	1 10 21 5 Chlo 1 EPA 1 1 Ca 5 2 Se 3 5 2 Se 3 5 2 Se	uixe	K - EDTA W - ph 4-5 L - EDA Z - other (s)	ecify)
Site:	SSOV#:	sample	212 (Yaa 212 (Yaa 212 (Soa 212 (Soa 21)	010 \T:	Other:	
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C - D (420-123030-1)		Matel	< < < < < < < < < < < < < < < < < < <	< <	2	
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					Contract of the second	
Possible Hazard Identification	Delison B Inknown Radiolog	iical	Sample Disposal (A fee may be	assessed if samples are	retained longer than 1 month) Archive For Month	
Deliverable Requested: I, II, III, IV, Other (specify)			Special Instructions/QC Requireme	nts:		
Empty Kit Relinquished by:	Date:	Tin	je:	Method of Shipment:		Τ
celinguieted by	Date 1/3/17 1440	Company C	Received by: ALL	Date/Lime:	Company Company	70
Binquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Redinguished by: 으	Date/Time:	Company	Received by:	Date/Time:	Company	
Sustody Seals Intact: Custody Seal No.: Δ Yes Δ No			Cooler Temperature(s) °C and Other Re	emarks;	-	T

Pace Analytical	Document Name: Sample Condition Upon Receipt Form Document No.:	February 6, 2017 Issuing Authority:
Floridi Laboratory	F-FL-C-007 rev. 11	
	Sample Condition Upon Reco	int Form (SCUR)
Project # Project Manager: Client:	WOH: 35324052 PM: VEG Due Date: 07/2 CLIENT: EVNTES	28/17 Date and Initials of person: Examining contents: Label: Deliver: pH:
	36 Date: 3/14/17	Time: <u>1110</u> Initials: <u>Marine</u>
oler #1 Temp.°C (Visual oler #2 Temp.°C (Visual oler #3 Temp.°C (Visual oler #3 Temp.°C (Visual oler #4 Temp.°C (Visual oler #5 Temp.°C (Visual oler #6 Temp.°C (Visual urier: Fed Ex (Visual ustody Seal on Cooler/Box Prese (Visual ustody Seal on Cooler/Box Prese (Visual	I) I) <td< td=""><td>(Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Ground Other (Inther on the on t</td></td<>	(Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Samples on ice, cooling process has begu (Actual) □ Ground Other (Inther on the on t
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	Com	ments:
hain of Custody Present		
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elinquished Signature & Sampler N		
amples Arrived within Hold Time		
ush TAT requested on COC		
ufficient Volume		
orrect Containers Used		
ontainers Intact ample Labels match COC (sample IDs	ØYes □ No □N/A	
Il containers needing acid/base preser hecked. Il Containers needing preservation are compliance with EPA recommendation: Exceptions: VOA, Col	vation have been found to be in □Yes □ No □N/A iform, TOC, O&G, Carbamates	Preservation Information: Preservative: Lot #/Trace #: Date: Initials:
Headspace in VOA Vials? (>6mm)	: DYes D No DN/A	
Trip Blank Present:	□Yes □ No ☑Ń/A	
Client Notification/ Resolution: Person Contacted:		Date/Time:
Comments/ Resolution (use bac	k for additional comments): to NUN OUT pl-f)M
Project Manager Review:		Date: Page :



www.pacelabs.com

Report Prepared for:

Bo Garcia PASI Florida 8 East Tower Circle Ormond Beach FL 32174

REPORT OF LABORATORY ANALYSIS FOR 2,3,7,8-TCDD

Report Summary:

This report contains results of one drinking water sample analyzed to determine 2,3,7,8-TCDD content. This sample was analyzed according to Method 1613 by High Resolution Gas Chromatography/High Resolution Mass Spectrometry.

Report Prepared Date:

August 3, 2017

Pace Analytical Services, Inc. 1700 Elm Street Minneapolis, MN 55414 Phone: 612.607.1700 Fax: 612.607.6444

Report Information:

Pace Project #: 10396064 Sample Receipt Date: 07/18/2017 Client Project #: 35324052 Client Sub PO #: N/A State Cert #: 11647

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 Drinking Water Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Sarah Platzer, your Pace Project Manager.

This report has been reviewed by:

August 03, 2017 Sarah Platzer, Project Manager 612-607-6451 (612) 607-6444 (fax) sarah.platzer@pacelabs.com



Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.



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Pace Analytical Services, Inc. 1700 Elm Street - Suite 200 Minneapolis, MN 55414

> Tel: 612-607-1700 Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Montana	CERT0092
Alabama	40770	Nebraska	NE-OS-18-06
Alaska	MN00064	Nevada	MN00064
Alaska	UST-078	New Jersey (NE	MN002
Arizona	AZ0014	New York (NEL	11647
Arkansas	88-0680	New hampshire	2081
CNMI Saipan	MP0003	North Carolina	27700
California	MN00064	North Carolina	530
Colorado	MN00064	North Dakota	R-036
Connecticut	PH-0256	Ohio	41244
EPA Region 8	8TMS-L	Ohio VAP	CL101
Florida (NELAP	E87605	Oklahoma	9507
Georgia (EDP)	959	Oregon (ELAP)	MN200001
Guam EPA	959	Oregon (OREL	MN300001
Hawaii	MN00064	Pennsylvania	68-00563
Idaho	MN00064	Puerto Rico	MN00064
Illinois	200011	South Carolina	74003001
Indiana	C-MN-01	Tennessee	TN02818
lowa	368	Texas	T104704192
Kansas	E-10167	Utah (NELAP)	MN00064
Kentucky	90062	Virginia	460163
Louisiana	03086	Washington	C486
Louisiana	MN00064	West Virginia #	9952C
Maryland	322	West Virginia D	382
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-L
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, Inc. 1700 Elm Street - Suite 200 Minneapolis, MN 55414

> Tel: 612-607-1700 Fax: 612- 607-6444

Reporting Flags

- A = Reporting Limit based on signal to noise
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- I = Interference present
- J = Estimated value
- Nn = Value obtained from additional analysis
- P = PCDE Interference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X = %D Exceeds limits
- Y = Calculated using average of daily RFs
- * = See Discussion

Chain of Custody

Re	•										÷							1	Ľ	P	ace	Analy	Aical ^{se} e/ebs.com
O Workorder:	35324052	Workorder i	Name:LBG,Inc	42001269				Own	er R	eceiv	ved i	Date	:	7/14/2	2017	Re	sult	is Re	eque	ester	d By	: 7/28	/2017
Bo Garcia Pace Analytica 8 East Tower C Ormond Beach Phone (386)67	l Ormond Beach ircle , FL 32174 2-5668		Suscented Pace / 1700 Suite : Minne Phone	Analytical Minne Elm Street SE 200 apolis, MN 554 e (612)607-1700	esota 114)						EPA 1613							A NAMA					
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***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

	and a second sec	Document	t Name:	Document Revised: 19Dec2016					
	Pace Analytical*	Sample Condition U	pon Receipt Form	Page 1 of 2					
		Documer F-MN-L-21	nt No.: 3-rey 20	Issuing Authority:					
		(MIN-L-21	J-JEV.20						
Sample Cor Upon Rec	ndition Client Name:	۱ <u>۵</u>	Project #:						
	tace Umo	nd Beach							
Courier:	Fed Ex UPS		Client						
Commerc	sial Pace SpeeD	ee Other:		elle statut de la constant de la con A la constant de la co					
Tracking N	lumber: 1422-0549-	- 7553							
Custody Se	al on Cooler/Box Present? Yes	No Seals Int	act? 🛛 Yes 🕅	No Optional: Proj. Due Date: Proj. Name:					
Packing Ma	aterial: 🔲 Bubble Wrap 🕅 Bubble	Bags 🛄 None 📋	Other:	Temp Blank? 🗍 Yes 🕅 No					
Thermomet Used:	ter 151401163	Type of Ice:	Wet Blue	None Samples on ice, cooling process has begu					
Cooler Tem	p Read (°C): 0 💭 Cooler Ter	mp Corrected (°C): O e	2	Biological Tissue Frozen?					
Temp should	be above freezing to 6°C Correction	on Factor:	Date and initia	Is of Person Examining Contents: 7/18/15					
Did samples o	ated Soil (N/A, water sample)			710111 022					
NC, NM, NY, (DK, OR, SC, TN, TX or VA (check maps)?	Jhited States: AL, AR, CA, FI	., GA, ID, LA. MS, (es	Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)?					
	If Yes to either question, fill ou	t a Regulated Soil Checkli	ist (F-MN-Q-338) and	l include with SCUR/COC paperwork.					
		· · · · · · · · · · · · · · · · · · ·		COMMENTS:					
Chain of Cust	ody Present?	Yes No	1.						
Chain of Cust	ody Filled Out?	Yes No	2.	· · · · · · · · · · · · · · · · · · ·					
Chain of Cust	ody Relinquished?	Yes 🔲 No	3.						
Sampler Nam	ne and/or Signature on COC?	Yes No	N/A 4.						
Samples Arriv	ved within Hold Time?	Yes 🗍 No	5.						
Short Hold Ti	ime Analysis (<72 hr)?	Ves VNo	6.						
Rush Turn Ar	ound Time Requested?		7.	· · · · · · · · · · · · · · · · · · ·					
Sufficient Vol	ume?								
Correct Conta	ainers Used?		0.						
-Pace Cont	ainers Used?								
Containers In	tact?		10						
Filtered Volur	ne Received for Dissolved Tests?		<u>10.</u>						
Sample Label	s Match COC?			e if sediment is visible in the dissolved container					
in the label			12.						
All containers	needing acid/base preservation have bee	21		-					
checked?		Yes No	XIN/A 13.	HNO ₃ H ₂ SO ₄ NaOH Positive for Res.					
All containers	needing preservation are found to be in		Sample #						
(HNO ₃ , H ₂ SO ₄ ,	, <2pH, NaOH >9 Sulfide, NaOH>12 Cvani	de) 🗆 Ves 🗂 No							
Exceptions: V	DA, Coliform, TOC/DOC Oil and Grease,		Initial when	n Lot # of added					
DRO/8015 (wa	ater) and Dioxin.		N/A completed	: preservative:					
Headspace in	VOA Vials (>6mm)?	Yes No	N/A 14.						
Trip Blank Pre		∏Yes ∏No	X N/A 15.	· · · ·					
Pace Tris Place	k Lot # /if our charged	∐Yes □No .							
			,	· · · · · · · · · · · · · · · · · · ·					
C Dama C				Field Data Required? Yes No					
Communication	ciea:		Date/Tim	e:					
comments/Re				·····					
<u> </u>									
	<u> </u>	Tra-							
Pro	ect Manager Review	aber		Date: 7/18/2017					

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).



Pace Analytical Services, LLC. 1700 Elm Street - Suite 200 Minneapolis, MN, 55414

Drinking Water Analysis Results 2,3,7,8-TCDD -- USEPA Method 1613B

Tel: 612-607-1700 Fax: 612-607-6444

Sample ID	.C-6
Client	PASI Florida
Lab Sample ID	35324052001-R

Date Collected.....07/13/2017 Date Received.....07/18/2017 Date Extracted.....07/31/2017

	Sample C-6	Method Blank	Lab Spike	Lab Spike Dup	
[2,3,7,8-TCDD]	ND	ND			
EDL	1.8 pg/L	1.8 pg/L			
2,3,7,8-TCDD Recovery			89%	82%	
Spike Recovery Limit			73-146%	73-146%	
RPD			7.9%		
IS Recovery	105%	97%	104%	98%	
IS Recovery Limits	31-137%	31-137%	25-141% 25-141%		
CS Recovery	103%	94%	103% 96%		
CS Recovery Limits	42-164%	42-164%	37-158% 37-158%		
Filename	F170801B 24	F170801B 23	F170801B 21	F170801B 22	
Analysis Date	08/02/2017	08/02/2017	08/02/2017	08/02/2017	
Analysis Time	10:20	09:37	08:12	08:54	
Analyst	SMT	SMT	SMT SMT		
Volume	0.953L	1.027L	1.010L 1.020L		
Dilution	NA	NA	NA NA		
ICAL Date	01/11/2017	01/11/2017	01/11/2017	01/11/2017 01/11/2017	
CCAL Filename	F170801B_17	F170801B_17	F170801B_17	F170801B_17	

! = Outside the Control Limits

ND = Not Detected

Jugan M. Cho Analyst:

EDL = Estimated Detection Limit

RPD = Relative Percent Difference of Lab Spike Recoveries

IS = Internal Standard [2,3,7,8-TCDD- ${}^{13}C_{12}$]

CS = Cleanup Standard [2,3,7,8-TCDD-³⁷Cl₄]

Project No.....10396064

C-12



ANALYTICAL REPORT

Job Number: 420-123595-2 SDG Number: Clovewood Job Description: LBG, Inc.

For: Leggette, Brashears & Graham, Inc. 4 Research Drive Shelton, CT 06464

Attention: Stacy Stieber

Debra 60

Debra Bayer Customer Service Manager dbayer@envirotestlaboratories.com 08/24/2017

NYSDOH ELAP does not certify for all parameters. EnviroTest Laboratories does hold certification for all analytes where certification is offered by ELAP unless otherwise specified in the Certification Information section of this report. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval of the laboratory. EnviroTest Laboratories Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our laboratory. All questions regarding this report should be directed to the EnviroTest Customer Service Representative.

Page 1 of 18

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554



METHOD SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-2 SDG Number: Clovewood

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7 Sample Filtration Total Metals Digestion for 200.7 200 Series Drinking Water Prep Determination Step	EnvTest EnvTest EnvTest EnvTest	EPA 200.7 Re	ev 4.4 FILTRATION EPA 200.7 EPA 200.7/200.8
ICPMS Metals by 200.8 200 Series Drinking Water Prep Determination Step Total Metals Digestion for 200.8	EnvTest EnvTest EnvTest	EPA 200.8 Rev.5.4 EPA 200.7/200.8 EPA 200.8	
Mercury in Water by CVAA Digestion for CVAA Mercury in Waters	EnvTest EnvTest	EPA 245.1 Rev.3.0 EPA 245.1	
Anions by Ion Chromatography	EnvTest	MCAWW 300.0	
Anions by Ion Chromatography	EnvTest	EPA 300.0 Rev. 2.1	
EPA 504.1 EDB	Pace	EPA 504.1	
EPA 505 Pesticide/PCB	Pace	EPA 505	
EPA 515 Chlorinated Acids	Pace	EPA 515	
Purgeable Organic Compounds in Water by GC/MS	EnvTest	EPA-DW 524.2	
EPA 525.2 Semivolatile Organics	Pace	EPA 525.2	
EPA 531.1 Carbamate Pesticides in Drinki	Pace	EPA 531.1	
EPA 900 Series GA/GB/RA226/RA228/Gamma	Radios	EPA 900	
Uranium	Radios	STL-STL EPA	
Heterotropic Plate Count	EnvTest	IDEXX SIMPLATE	
Odor, Threshold Test	EnvTest	SM20 SM 21	50B
Alkalinity, Titration Method	EnvTest	SM21 SM 2320B-97,-11	
Corrosivity LSI Calculation	EnvTest	SM20 SM 2330B	
Hardness by Calculation	EnvTest	SM20 SM 2340B-97,-11	
рН	EnvTest	SM19 SM 4500 H+ B	
Nitrite by Colormetric	EnvTest	SM20 SM 4500 NO2 B	
Total Coliform and Escherichia coli by Colilert - Presence/Absence	EnvTest	SMWW SM 9223	
Apparent Color	EnvTest	SM21 SM2120B-01,11	
Turbidity	EnvTest	SM21 SM2130B-01,11	
Total Dissolved Solids (Dried at 180 °C)	EnvTest	SM21 SM2540C-97,11	
Cyanide, Total: Colorimetric Method Cyanide: Distillation	EnvTest EnvTest	SM21 SM4500 CN E-99 SM21 SM 4500 CN C	
General Sub Contract Method	Pace	Subcontract	
General Sub Contract Method	Radios	Subcontract	
METHOD SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-2 SDG Number: Clovewood

Descript	ion	Lab Location	Method	Preparation Method

Lab References:

EnvTest = EnviroTest

Pace = Pace Analytical - Ormond Beach

Radios = Pace Analytical Services, Inc.

Method References:

EPA = US Environmental Protection Agency

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

IDEXX =

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM19 = "Standard Methods For The Examination Of Water And Wastewater", 19Th Edition, 1995."

SM20 = "Standard Methods For The Examination Of Water And Wastewater", 20th Edition."

SM21 = "Standard Methods For The Examination Of Water And Wastewater", 21st Edition

SMWW = "Standard Methods for the Examination of Water and Wastewater"

STL-STL = Severn Trent Laboratories, St. Louis, Facility Standard Operating Procedure.

METHOD / ANALYST SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-2 SDG Number: Clovewood

Method	Analyst	Analyst ID
EPA-DW 524.2	Andersen, Eric C	ECA
EPA 200.7 Rev 4.4	Sirico, Derek	DS
EPA 200.8 Rev.5.4	Sirico, Derek	DS
EPA 245.1 Rev.3.0	Sirico, Derek	DS
SM20 SM 2340B-97,-11	Sirico, Derek	DS
MCAWW 300.0	Luis, Carlos	CL
EPA 300.0 Rev. 2.1	Luis, Carlos	CL
IDEXX SIMPLATE	O'Driscoll, Kate	КО
SM20 SM 2150B	O'Driscoll, Kate	КО
SM21 SM 2320B-97,-11	Tramantano, Matt	MT
SM20 SM 2330B	Cusack, Renee	RC
SM19 SM 4500 H+ B	O'Driscoll, Kate	КО
SM20 SM 4500 NO2 B	Grant, Ameya	AG
SMWW SM 9223	Grant, Ameya	AG
SM21 SM2120B-01,11	O'Driscoll, Kate	КО
SM21 SM2130B-01,11	O'Driscoll, Kate	КО
SM21 SM2540C-97,11	O'Driscoll, Kate	КО
SM21 SM4500 CN E-99	Osborne, Amy	AO

SAMPLE SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-2 SDG Number: Clovewood

I ah Samala ID	Client Semple ID	Client Matrix	Date/Time	Date/Time	
420-123595-2			07/13/2017 1020	07/13/2017 1000	-

Client. Leggette	, Diasilears & Granani, i	nc.	Sdg Number: Clovewo
Client Sample ID:	C - 12		
Lab Sample ID: Client Matrix:	420-123595-2 Drinking Water		Date Sampled:07/13/20171020Date Received:07/13/20171000
	524	1.2 Purgeable Organic Compounds in Wa	ater by GC/MS
Method:	524.2	Analysis Batch: 420-112453	Instrument ID: Agilent 7890A/5975C
Preparation:	N/A		Lab File ID: X071419.D
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	07/14/2017 1844		Final Weight/Volume: 5 mL
Date Prepared:	N/A		
Analyte		Result (ug/L)	Qualifier RL
1,1,1,2-Tetrachloroe	ethane	<0.500	0.500
1,1,1-Trichloroethar	ne	<0.500	0.500
1,1,2,2-Tetrachloroe	ethane	<0.500	0.500
1,1,2-Trichloroethar	ne	<0.500	0.500
1,1-Dichloroethane		<0.500	0.500
1,1-Dichloroethene		<0.500	0.500
1,1-Dichloropropene	e	<0.500	0.500
1,2,3-Trichlorobenz	ene	<0.500	0.500
1,2,3-Trichloropropa	ane	<0.500	0.500
1,2,4-Trichlorobenz	ene	<0.500	0.500
1,2,4-Trimethylbenz	zene	<0.500	0.500
1,2-Dichloroethane		<0.500	0.500
1,2-Dichlorobenzen	e	<0.500	0.500
1,2-Dichloropropane	e	<0.500	0.500
1,3-Dichloropropane	e	<0.500	0.500
1,4-Dichlorobenzen	e	<0.500	0.500
2,2-Dichloropropane	e	<0.500	0.500
Benzene		<0.500	0.500
Bromosbloromothor	20	< 0.500	0.500
Bromomothano		< 0.500	0.500
n-Butylbenzene		<0.500	0.500
cis-1 2-Dichloroethe	ano	<0.500	0.500
cis-1,2-Dichloropror	hene	<0.500	0.500
Carbon tetrachloride	e	<0.500	0.500
Chlorobenzene		<0.500	0.500
Chloroethane		<0.500	0.500
Chloromethane		<0.500	0.500
Dibromomethane		<0.500	0.500
Ethylbenzene		<0.500	0.500
Dichlorodifluoromet	hane	<0.500	0.500
Hexachlorobutadier	ne	<0.500	0.500
Isopropylbenzene		<0.500	0.500
p-Isopropyltoluene		<0.500	0.500
Methylene Chloride		<0.500	0.500
m-Xylene & p-Xyler	ne	<1.00	1.00
Methyl tert-butyl eth	ner	<0.500	0.500
o-Xylene		<0.500	0.500
Tetrachloroethene		<0.500	0.500
Toluene		<0.500	0.500
trans-1,2-Dichloroet	thene	<0.500	0.500
trans-1,3-Dichlorop	ropene	<0.500	0.500
Irichloroethene		<0.500	0.500
tert-Butylbenzene		<0.500	0.500

Client: Leggette Brashears & Graham In

lob Number: 420-123595-2

Analytical Data

Client: Leggette,	, Brashears & Graham,	Inc.	Jol	b Number: 420-123595-2
	0.40			Sdg Number: Clovewood
Client Sample ID:	C - 12			
Lab Sample ID:	420-123595-2		Date Sampled:	07/13/2017 1020
Client Matrix:	Drinking Water		Date Received:	07/13/2017 1000
	52	24.2 Purgeable Organic Compounds in	Water by GC/MS	
Method:	524.2	Analysis Batch: 420-112453	Instrument ID: Agi	ilent 7890A/5975C
Preparation:	N/A		Lab File ID: X0	71419.D
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/14/2017 1844		Final Weight/Volume:	5 mL
Date Prepared:	N/A			
Analyte		Result (ug/L)	Qualifier	RL
Trichlorofluorometha	ane	<0.500		0.500
Vinyl chloride		<0.500		0.500
Xylenes, Total		<1.50		1.50
Styrene		<0.500		0.500
sec-Butylbenzene		<0.500		0.500
1,3,5-Trimethylbenz	ene	<0.500		0.500
N-Propylbenzene		<0.500		0.500
1,3-Dichlorobenzen	e	<0.500		0.500
2-Chlorotoluene		<0.500		0.500
4-Chlorotoluene		<0.500		0.500
Surrogate		%Rec	Accepta	ince Limits
4-Bromofluorobenze	ene	101	71 - 12	20
Toluene-d8 (Surr)		119	79 - 12	21
1,2-Dichloroethane-	-d4 (Surr)	121	70 - 12	28

Client: Leggette, Brashears & Graham, Inc.

C - 12

Client Sample ID:

Job Number: 420-123595-2 Sdg Number: Clovewood

Lab Sample ID: Client Matrix:	420-123595-2 Drinking Water		Date Sampled: Date Received:	07/13/2017 1020 07/13/2017 1000
		200.7 Rev 4.4 ICP Metals by	200.7	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.7 Rev 4.4 200.7/200.8 1.0 07/17/2017 1440 07/17/2017 0925	Analysis Batch: 420-112479 Prep Batch: 420-112493	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Thermo ICP N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Iron Manganese Sodium Zinc		<60.0 <10.0 6870 28.4		60.0 10.0 200 20.0
		200.7 Rev 4.4 ICP Metals by 200.7	7-Dissolved	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.7 Rev 4.4 200.7 1.0 07/19/2017 1801 07/17/2017 1505	Analysis Batch: 420-112597 Prep Batch: 420-112501	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Thermo ICP N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Iron Manganese		<60.0 <10.0		60.0 10.0

Client: Leggette, Brashears & Graham, Inc.

Client Sample ID:

C - 12

Job Number: 420-123595-2 Sdg Number: Clovewood

Lab Sample ID: Client Matrix:	420-123595-2 Drinking Water		Date Sampled: Date Received:	07/13/2017 1020 07/13/2017 1000
		200.8 Rev.5.4 ICPMS Metals b	by 200.8	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.8 Rev.5.4 200.7/200.8 1.0 07/17/2017 1324 07/17/2017 0925	Analysis Batch: 420-112457 Prep Batch: 420-112493	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Perkin Elmer ELAN N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Lead Arsenic Beryllium Cadmium Chromium Nickel Antimony Thallium Barium Selenium		<1.00 <1.40 <0.300 <1.00 <7.00 1.96 <0.400 <0.300 6.80 <2.00		1.00 1.40 0.300 1.00 7.00 0.500 0.400 0.300 2.00 2.00
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.8 Rev.5.4 200.8 1.0 07/18/2017 1721 07/17/2017 1800	Analysis Batch: 420-112536 Prep Batch: 420-112520	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Perkin Elmer ELAN N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Silver		<1.00		1.00
		245.1 Rev.3.0 Mercury in Water	by CVAA	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	245.1 Rev.3.0 245.1 1.0 07/18/2017 1211 07/17/2017 1115	Analysis Batch: 420-112511 Prep Batch: 420-112451	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Perkin Elmer FIMS N/A 25 mL 25 mL
Analyte		Result (ug/L)	Qualifier	RL
Mercury		<0.200		0.200

Job Number: 420-123595-2

Client: Leggette, Brashears & Graham, Inc. Sdg Number: Clovewood C - 12 Client Sample ID: 07/13/2017 1020 Lab Sample ID: 420-123595-2 Date Sampled: 07/13/2017 1000 Client Matrix: Drinking Water Date Received: SM 2340B-97,-11 Hardness by Calculation SM 2340B-97,-11 Instrument ID: Method: Analysis Batch: 420-112535 None Preparation: N/A Lab File ID: N/A Dilution: 1.0 Initial Weight/Volume: 07/17/2017 1440 Final Weight/Volume: Date Analyzed: Date Prepared: N/A Analyte Result (mg/L) Qualifier RL Calcium hardness as calcium carbonate 110 1.25

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-2 Sdg Number: Clovewood

Analytical Data

				Biology			
Client Sample ID:	C - 12						
Lab Sample ID:	420-123595-2				Date Sampled:	07/1	3/2017 1020
Client Matrix:	Drinking Water				Date Received:	07/1	3/2017 1000
Analyte		Result	Qual	Units		Dil	Method
Coliform, Total		Present	g	CFU/100mL		1.0	SM 9223
	Anly Batch: 42	20-112380	Date Analyze	d 07/13/2017 1510			
Escherichia coli		Present	g	CFU/100mL		1.0	SM 9223
	Anly Batch: 42	20-112380	Date Analyze	d 07/13/2017 1510			
Analyte		Result	Qual	Units	RL	Dil	Method
Heterotrophic Plate C	Count	28.0		CFU/mL	2.00	1.0	SIMPLATE
	Anly Batch: 42	20-112413	Date Analyze	d 07/13/2017 1550			

General Chemistry

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-2 Sdg Number: Clovewood

General Chemistry					
Client Sample ID:	C - 12				
Lab Sample ID: Client Matrix:	420-123595-2 Drinking Water		Date Sampled: Date Received:	07/1 07/1	3/2017 1020 3/2017 1000
Analyte	Result	Qual Units	RL	Dil	Method
Nitrate as N	<0.250 Anly Batch: 420-112412	mg/L Date Analyzed 07/13/2017 1631	0.250	1.0	300.0
Analyte Langelier Index	Result -0.0500	Qual Units NONE		Dil 1.0	Method SM 2330B

Anly Batch: 420-112765 Date Analyzed 07/26/2017 1302

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-2 Sdg Number: Clovewood

Client Sample ID:	C - 12					
Lab Sample ID: 4 Client Matrix: D	20-123595-2 Drinking Water			Date Sampled: Date Received:	07/1: 07/1:	3/2017 1020 3/2017 1000
Analyte	Result	Qual	Units	RL	Dil	Method
Alkalinity	115 Anly Batch: 420-112669	Date Analyzec	mg/L y 07/21/2017 1730	5.00	1.0	SM 2320B-97,-11
Total Dissolved Solids	168 Anly Batch: 420-112602	Date Analyzec	mg/L 1 07/20/2016 1700	5.00	1.0	SM2540C-97,11
Sulfate	20.0 Anly Batch: 420-112412	Date Analyzed	mg/L 1 07/13/2017 1631	5.00	1.0	300.0 Rev. 2.1
Fluoride	<0.500 Anly Batch: 420-112412	Date Analyzec	mg/L 1 07/13/2017 1631	0.500	1.0	300.0 Rev. 2.1
Chloride	9.06 Anly Batch: 420-112447	Date Analyzec	mg/L j 07/14/2017 2321	3.00	2.0	300.0 Rev. 2.1
Cyanide, Total	<0.00500 Anly Batch: 420-112524	Date Analyzed	mg/L j 07/18/2017 1400	0.00500	1.0	SM4500 CN E-99
Apparent Color	Prep Batch: 5.00 Anly Batch: 420-112486	Date Prepared	t: 07/14/2017 1300 Pt-Co t 07/13/2017 1747	2.00	1.0	SM2120B-01,11
pH@color measurement	7.62 Anly Batch: 420-112486	Date Analyzed	SU 1 07/13/2017 1747	2.00	1.0	SM2120B-01,11
Turbidity	0.482 Anly Batch: 420-112420	Date Analyzed	NTU 1 07/13/2017 1810	0.100	1.0	SM2130B-01,11
Odor	1.00 Anly Batch: 420-112485	Date Analyzec	T.O.N. 07/13/2017 1800	1.00	1.0	SM 2150B
Temp @ Odor Measuren	nent 60.0 Anly Batch: 420-112485	Date Analyzec	Degrees C 07/13/2017 1800	5.00	1.0	SM 2150B
рН	7.62 Anly Batch: 420-112487	H Date Analyzed	SU 07/13/2017 1745	0.200	1.0	SM 4500 H+ B
Temp @ pH Measureme	nt 17.3 Anly Batch: 420-112487	Date Analyzec	Degrees C 07/13/2017 1745	5.00	1.0	SM 4500 H+ B
Nitrite as N	<0.0100 Anly Batch: 420-112510	Date Analyzed	mg/L 1 07/14/2017 1047	0.0100	1.0	SM 4500 NO2 B

General Chemistry

DATA REPORTING QUALIFIERS

Client: Leggette, Brashears & Graham, Inc.

Job Number: Sdg Number: Clovewood

Qualifier	Description
н	Sample was prepped or analyzed beyond the specified holding time
g	Result fails applicable NYS drinking water standards
	Qualifier H

Client: Leggette, Brashears & Graham, Inc.

Job Number:

Sdg Number: Clovewood

The following analytes are Not Part of the ELAP scope of accreditation

Sulfur, Tungsten, Silicon, Bicarbonate Alkalinity, 7 Day BOD 5210C, 28 Day BOD, Soluble BOD, Carbon Dioxide, Carbonate Alkalinity, CBOD Soluble, Chlorine, Cyanide (WAD), Ferrous Iron, Ferric Iron, Total Nitrogen, Total Organic Nitrogen, Dissolved Oxygen, pH, Phenolphthalein Alkalinity, Solids (Fixed), Solids (Percent), Solids (Percent Moisture) , Solids (Percent Volatile), Solids (Volatile Suspended), Temperature, TKN (Soluble), COD (Soluble), Total Inorganic Carbon, Volatile Acids as Acetic Acid, 2-Aminopyridine, 3-Picoline, 1-Methyl-2-pyrrilidinone, Aziridine, Dimethyl sulfoxide, 1-Chlorohexane, Iron Bacteria, Salmonella, & Sulfur Reducing Bacteria.

The following analytes are Not Part of ELAP Potable Water scope of accreditation

Cobalt (200.7, 200.8), Tin (200.7), Strontium (200.7), Gold (200.7), Platinum (200.7), Palladium (200.7), Titanium (200.7), Phosphorus (365.3), Nitrate-Nitrite (10-107-4-1C, 353.2), m-Xylene & p-Xylene (502.2, 524), Naphthalene (502.2), o-Xylene (502.2, 524), & Fecal Coliform (9222D).

The following analytes are Not Part of ELAP Solid and Hazardous Waste scope of accreditation

Ammonia (SM 4500NH3G), TKN (351.2), Phosphorus (365.3), 1,2-Dichloro-1,1,2-trifluoroethane (8260), & Chlorodifluoromethane (8260).

The following analytes are Not Part of ELAP Non Potable Water scope of accreditation

Dissolved Organic Carbon (5310C), Mecoprop (8151A), & MCPA (8151A).

Definitions and Glossary

Client: Leggette, Brashears & Graham, Inc.

Job Number:

Sdg Number: Clovewood

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%R	Percent Recovery
DL, RA, RE	Indicates a Dilution, Reanalysis or Reextraction.
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit - an estimate of the minimum amount of a substance that an analytical process can reliably detect. A MDL is analyte- and matrix-specific and may be laboratory-dependent.
ND	Not detected at the reporting limit (or MDL if shown).
QC	Quality Control
RL	Reporting Limit - the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.
RPD	Relative Percent Difference - a measure of the relative difference between two points

En	vir	oTest	t	EB
La	bor	ator	ies.	Inc.

CHAIN OF CUSTODY

123595-2

REPORT# (Lab Use Only)

Lab Name EnviroTest Laboratories

JUTATURES

Address & Phone	315 Fullerton Avenue, Newburgh, New York 12550 845-562-0890	
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PROJECT R	EFERENCE	ovewood		PROJECT NO.		PROJECT LOCATION		MATI TYP	RIX PE						REQL	JIRED	ANAL	YSES					PAGE 1 of	1			
ENVIROTES	T PROJECT De	MANAGER Dra Bayer		P.O. NUMBER		CLIENT FAX	Π	5			A C/G kit	Vials HCI	ium Thio.	ium Thio.	UNa2SO3	litric Acid	iio(liquid)	er Plastic	fium Hyd.	tic Sterile	stic Nitric	ls Unpres		TURNAROUND TIME			
	L	BG, Inc.		203-9	29-8555		DICATE	tter) Indicar			ž	40ml	mi Sod	ber Sod	nber HC	lastic N	VSod.TF	ĽŸ	stic Soc	ml Plas	iter Pla	0ml Via	NORMAL				
CLIENT NA	Sta	cy Stiebe					AB (G) IN	Waste Wa					4	oml Am	Liter An	250mi F	mi Mon		0ml Pla	125		4	QUICK				
CLIENT AD	DRESS arch Dri	ve, Suite 2	04, Shelton	, CT 06484	4		OR GR	n or W (SoLid	ļ				มั			4		52				VERBAL				
COMPANY	CONTRACTO	NG THIS WORK	(if applicable):				SITE (C)	TAW) SL	R SEM	Specify													#OF COOLERS	i			
DA	SAMPL	E TIME		SAMPL	E IDENTIFICA	TION	OMPO	AQUEO(ETHER 1	NUMBER OF CONTAINERS SUBMITTED					REMARKS											
713	14	1020		C-	12		Ť	D				3	2	1	2	1	2	4	1	2	5	2	Table 8B (Sb,A	s,Ba,Be,Cd,Cr,Cn,Hg,Ni			
['']	1 1																						Se,TI,F)				
																							Table 8C (NO3	,NO2)			
								\parallel			2-Liter	Ambe	r Unpr	es.									Table 8D (CI,Fe	ə,Mn,Ag,Na,SO4,Zn,Odor,Color)			
										·	1-250r	nl Amb	er Unp	ores.									524.2 (POC,MTBE,Vinyl Chloride)				
	i						\square	1	Ш		3-250r	nl Plas	tic Unp	ores. (I	no air)								SOCs (504,508,515,525,531,547,548,549,Dloxin)				
											2-40m	Ambe	r Sodi	um Th	o.								Additional Tests (Total coliform				
							Ц	1			1-500r	ni Amb	er Soo	dium T	nio.	L_]		<u> </u>	thru Zinc)	·			
											1-Liter	Ambe	r Plast	lc Sod	um Thi	o.&H2	SO4						Radio(Gross A	Ipha/Beta,Radium-226/228,Uranium)			
								1			2-Liter	Ambe	r Sodii	um Thi	o.]		Radon				
	<u> </u>	<u> </u>		<u> </u>	/			4	4					L	ļ			ļ				<u> </u>	Dissolved Fe,	Mn			
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SAMPLE	to ever (sin	anatyoseff	0	COMPAN	i G	DATE 1/13/17	TIM	е //)2	0	RECE	IVED I	97: (S	IGNAT	URE)					COMP	ÂNY		DATE	TIME			
RELINO	JISHED	YUSIGNATU	IRE)	COMPAN	Ϋ́	DATE	TIM	E			RECE	IVED	3Y: (S	IGNAT	URE)					COMP	ÂNY		DATE	TIME			
SUBC	ONTAC	T: PACE	-80Cs, R	adio, Rad	on; ASI-M	PA/Crypto/Glar	dla										/	/									
RECEIVI		ABORATOR 2	Y BY:	DATE 7113/1	TIME	CUSTODY INTACT YES NO	3	sler T		-	LABO	RATO S	RY RE	MARK	S:	ICE_	ĹΡ	H	_ CL2		Revel	wed by	·				
	P																										

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-2 SDG Number: Clovewood

Login Number: 123595

Question	T/F/NA	Comment
Samples were collected by ETL employee as per SOP-SAM-1	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is recorded.	True	3.5C
Cooler Temp. is within method specified range.(0-6 C PW, 0-8 C NPW, or BAC <10 C	True	
If false, was sample received on ice within 6 hours of collection.	NA	
Based on above criteria cooler temperature is acceptable.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	False	рН
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	



Pace Analytical Services, LLC 1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

August 03, 2017

Ms. Debra Bayer EnviroTest Laboratories, Inc. 315 Fullerton Avenue Newburgh, NY 12550

RE: Project: 42001269 Pace Project No.: 30224100

Dear Ms. Bayer:

Enclosed are the analytical results for sample(s) received by the laboratory on July 14, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sugnalylillins

Jacquelyn Collins jacquelyn.collins@pacelabs.com (724)850-5612 Project Manager

Enclosures

cc: Janine Rader, EnviroTest Laboratories, Inc.



Pace Analytical[®]

Pace Analytical Services, LLC 1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

CERTIFICATIONS

 Project:
 42001269

 Pace Project No.:
 30224100

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601 L-A-B DOD-ELAP Accreditation #: L2417 Alabama Certification #: 41590 Arizona Certification #: AZ0734 Arkansas Certification California Certification #: 04222CA Colorado Certification Connecticut Certification #: PH-0694 **Delaware Certification** Florida/TNI Certification #: E87683 Georgia Certification #: C040 **Guam Certification** Hawaii Certification Idaho Certification **Illinois Certification** Indiana Certification Iowa Certification #: 391 Kansas/TNI Certification #: E-10358 Kentucky Certification #: 90133 Louisiana DHH/TNI Certification #: LA140008 Louisiana DEQ/TNI Certification #: 4086 Maine Certification #: PA00091 Maryland Certification #: 308 Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification Missouri Certification #: 235

Montana Certification #: Cert 0082 Nebraska Certification #: NE-05-29-14 Nevada Certification #: PA014572015-1 New Hampshire/TNI Certification #: 2976 New Jersey/TNI Certification #: PA 051 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190 Oregon/TNI Certification #: PA200002 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282 South Dakota Certification Tennessee Certification #: TN2867 Texas/TNI Certification #: T104704188-14-8 Utah/TNI Certification #: PA014572015-5 USDA Soil Permit #: P330-14-00213 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 460198 Washington Certification #: C868 West Virginia DEP Certification #: 143 West Virginia DHHR Certification #: 9964C Wisconsin Certification Wyoming Certification #: 8TMS-L



SAMPLE SUMMARY

30224100001	C-12 (420-123595-2)	Drinking Water	07/13/17 10:20	07/14/17 10:20
Lab ID	Sample ID	Matrix	Date Collected	Date Received
Pace Project No.: 30224100				
Project:	42001269			



SAMPLE ANALYTE COUNT

 Project:
 42001269

 Pace Project No.:
 30224100

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30224100001	C-12 (420-123595-2)	SM7500RnB-07	NEG	1
		EPA 900.0	NEG	2
		EPA 903.1	WRR	1
		EPA 904.0	VAL	1
		ASTM D5174-97	RMK	1



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 42001269

Pace Project No.: 30224100

Sample: C-12 (420-123595-2) PWS:	Lab ID: 30224100 Site ID:	001 Collected: 07/13/17 10:20 Sample Type:	Received:	07/14/17 10:20 N	/latrix: Drinking	Water
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radon	SM7500RnB-07		pCi/L	07/15/17 06:34	10043-92-2	
Gross Alpha	EPA 900.0	0.718 ± 1.28 (2.89) C:NA T:NA	pCi/L	07/24/17 08:37	12587-46-1	
Gross Beta	EPA 900.0	0.949 ± 0.730 (1.47) C:NA T:NA	pCi/L	07/24/17 08:37	12587-47-2	
Radium-226	EPA 903.1	0.301 ± 0.391 (0.647) C:NA T:93%	pCi/L	07/26/17 12:51	13982-63-3	
Radium-228	EPA 904.0	0.459 ± 0.347 (0.703) C:77% T:82%	pCi/L	07/27/17 11:16	15262-20-1	
Total Uranium	ASTM D5174-97	0.717 ± 0.025 (0.193) C:NA T:NA	ug/L	08/03/17 16:26	7440-61-1	



Project:	42001269					
Pace Project No.:	30224100					
QC Batch:	265143	Analysis Method:	ASTM D517	4-97		
QC Batch Method:	ASTM D5174-97	Analysis Description:	D5174.97 To	otal Uranium KPA		
Associated Lab Sar	mples: 3022410000	1				
METHOD BLANK:	1306496	Matrix: Water				
Associated Lab Sar	mples: 3022410000	1				
Parar	neter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Total Uranium	0.	064 ± 0.004 (0.193) C:NA T:NA	ug/L	08/03/17 11:33		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	42001269					
Pace Project No.:	30224100					
QC Batch:	265053	Analysis Method:	SM7500RnB	-07		
QC Batch Method:	SM7500RnB-07	Analysis Description:	7500Rn B Ra	adon		
Associated Lab Sar	nples: 30224100	001				
METHOD BLANK:	1305441	Matrix: Water				
Associated Lab Sar	nples: 30224100	001				
Parar	neter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radon		2.8 ± 18.8 (32.7) C:NA T:NA	pCi/L	07/15/17 02:40	-	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	42001269					
Pace Project No.:	30224100					
QC Batch:	265152	Analysis Metho	bd: EPA 903.1			
QC Batch Method:	EPA 903.1	Analysis Descr	iption: 903.1 Radiu	: 903.1 Radium-226		
Associated Lab Sar	mples: 3022410	0001				
METHOD BLANK:	1306510	Matrix: V	Vater			
Associated Lab Sar	mples: 3022410	0001				
Parar	neter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radium-226		0.159 ± 0.312 (0.570) C:NA T:95%	pCi/L	07/26/17 12:14		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	42001269					
Pace Project No.:	30224100					
QC Batch:	265148	Analysis Method:	EPA 900.0			
QC Batch Method:	EPA 900.0	Analysis Descripti	Analysis Description: 900.0 Gross Alpha/Beta			
Associated Lab Sar	mples: 3022410	0001				
METHOD BLANK:	1306505	Matrix: Wat	ər			
Associated Lab Sar	mples: 3022410	0001				
Parar	neter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Gross Alpha		-0.333 ± 0.399 (1.52) C:NA T:NA	pCi/L	07/24/17 08:35		
Gross Beta		-0.362 ± 0.578 (1.62) C:NA T:NA	pCi/L	07/24/17 08:35		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	42001269					
Pace Project No.:	30224100					
QC Batch:	265158	Analysis Method:	EPA 904.0			
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radiu			
Associated Lab Sar	mples: 3022410	0001				
METHOD BLANK:	1306521	Matrix: Water				
Associated Lab Sar	mples: 3022410	0001				
Parar	meter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radium-228		$\frac{1}{0.0810 \pm 0.316} (0.717) \text{ C:} 75\% \text{ T:} 85\%$	pCi/L	07/27/17 11:14		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

 Project:
 42001269

 Pace Project No.:
 30224100

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

a an and a grad	EnviroTest 🔝	COC No:	Page: Page:	STL Job #: 420-123595-2	Preservation Codes:	C - Zn Acetate O - AsNaO2	D - Nitrie Acid P - Na204S E - NaHS04 Q - Na2S03	F - MeOH R - Na2S2SO3 G - Amchlor S - H2SO4	H - Ascorbic Acid I - TSP Dodecanydrate I - Ice U - Acetone - I - Di Water V - MCAA	E K-EDTA W-ph 4-5 E L-EDA Z-other (specify)	other:	NY Solves	H Special Instructions/Note:	8)		etained longer than 1 month)	Archive For Months		Company		Company	
	Record	Carrier Tracking No(s):	atories.com	Analysis Requested													W0#:30224			ial (A fee may be assessed if samples are r	o union unsposar by Lab ons/QC Requirements:	Method of Shipment:		7 / 1/	Date/Time:	rature(s) °C and Other Remarks:
	Chain of Custody	Ren y is) Baver Debra	dbayer@envirotestiabor			81	22 AF)	(0) 49,10 49,10	(100 (100 (100 (100 (100 (100 (100 (100	1008 /1: 1008 /1: 101 /1: 101 /1: 101 /1:	Sample Matrix Sample Matrix Type (www.str. (www.str. (www.str. (montation) (www.str.	Preservation Code: XXX 0 0	Water X X X						Badickeinet	Special Instruct	Time:	Company Recented by	Company Received by:	Company Received by:	Looler Tempe
化乙烯酸盐 人名法加弗 化基苯基乙基		Sampler Sampler	Phone:		Due Date Requested: 7/27/2017	TAT Requested (days):		#Od	#OM	Project #: 42001269	进AOSS	Sample		7/13/17 10:20						Doison B		Date:	Date/Time: 17 1425	Date/Time:	Date/Time:	-
EnviroTest Laboratories, Inc.	315 Fullerton Avenue Newburgh, NY 12550 Deversion Francisco Francisco	Client Information (Sub Contract Lab)	Client Contact Shipping/Receiving	Company: Pace Analytical Services, Inc.	Address: 1638 Roseytown Rd,Suites 2,3,4,	City: Greensburg	State, Zip: PA, 15601	Phone:	Email:	Project Name: LBG, Inc.	Site:	Samula Idantification Clinet ID 4 of ID		C - 12 (420-123595-2)						Possible Hazard identification	Deliverable Requested: I, II, IV, Other (specify)	Empty Kit Relinquished by:	Relinquished by:	Relinquished by:	Relinquished by:	Custody Seals Intact: Custody Seal No.:

Pace Analulical	~	~	,		Draigat #	
Client Name:	Ľ	nv		CSF Labos	Project #	
Courler: Fed Ex UPS USPS Clie	nt E 3⊘S	Domi	nercia	Pace Other		Label 64- LIMS Login AINL
Custody Seel on Cooler/Box Present: Ves		7 10	Se	als_Intact: 🗌 yes	no	
Thermometer Used	Тур	e of ic	:e: (N	fat Blue None		
Cooler Temperature Observed Temp	3.5	•0	Co	rrection Factor: 🔿 ,	<u>⊖</u> °C Final´	remp <u>: ک_ح_</u> °C
Temp should be above freezing to 6°C					Date and l	utials of person examining
· · ·			-1.0	~	contents	Bit 7/14/17
Comments:	Yes	3 No 7	<u> N/</u>	A		1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 - 1999 -
Chain of Custody Present:	+4					
Chain of Custody Filled Oul:				2.		
Chain of Custody Relinquished:	+	+-	,—	3		
Sampler Name & Signature on COC:		\vdash		4	· · · · · · · · · · · · · · · · · · ·	
Sample Labels match COC:			<u> </u>	5.		
-Includes date/lime/ID Matrix:	$\frac{1}{\sqrt{1}}$	1	Τ-			·
Samples Arrived within Hold Time:	<u> /</u> -	<u> </u>		<u> 6.</u>		
Short Hold Time Analysis (<72hr remaining):	1			7		
Rush Turn Around Time Requested:	<u> </u>	1/		8	· · · · · · · · · · · · · · · · · · ·	
Sufficient Volume:		ļ		9		
Correct Containers Used;	\mid			10.		
-Pace Containets Used:		/			,,,,,,,	
Containers Infact;	1		102304	11.		
Orthophosphate Reld filtered	ļ	,		12		
Organic Samples checked for dechlorination:			4	13		
illered volume received for Dissolved tests			<u> -</u>	14		
I containers have been checked for preservation.	1		ļ	15,		
ll conlainers needing preservalion are found to be in ompliance with EPA recommendation.	1			bulla) when 7.1	Date/lime of	
xceptions: VOA, coliform, TOC, O&G, Phenolics				completed CI-1	preservation	
	<u> </u>			Lot # of added preservalive		
eadspace in VOA Vials (>6mm):				16		
rip Blank Present:	<u> </u>			17.		
rip Blank Cuslody Seals Present ad Aqueous Samples Screened > 0.5 mrem/hr		1		Initial when completed; H4	Date: 7/1	1/17
llent Notffication/ Resolution:						
Person Contacled:			Date/T	ime:	Contacted	B <u>y:</u>
Comments/ Resolution:						
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Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers) *PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status se of the Workorder Edit Screen.

J:\QAQCIMaster\Document Management\Sample Mgt\Sample Condition Upon Receipt Pittsburgh (C056-5 5July2017)



Pace Analytical Services, LLC 8 East Tower Circle Ormond Beach, FL 32174 (386)672-5668

August 07, 2017

Ron Bayer EnviroTest Laboratories Inc. 315 Fullerton Avenue Newburgh, NY 12550

RE: Project: LBG, Inc 42001269 Pace Project No.: 35324054

Dear Ron Bayer:

Enclosed are the analytical results for sample(s) received by the laboratory on July 14, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Bo Garcia bo.garcia@pacelabs.com (386)672-5668 Project Manager

Enclosures

cc: Debra Bayer, EnviroTest Laboratories Inc.
 Renee Cusack, EnviroTest Laboratories Inc.
 Laura Marciano, EnviroTest Laboratories Inc.
 Janine Rader, EnviroTest Laboratories Inc.
 Meredith Ruthven, EnviroTest Laboratories Inc.





Pace Analytical Services, LLC 8 East Tower Circle Ormond Beach, FL 32174 (386)672-5668

CERTIFICATIONS

Project: LBG, Inc 42001269 Pace Project No.: 35324054

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174 Alabama Certification #: 41320 Connecticut Certification #: PH-0216 Delaware Certification: FL NELAC Reciprocity Florida Certification #: E83079 Georgia Certification #: 955 Guam Certification: FL NELAC Reciprocity Hawaii Certification: FL NELAC Reciprocity Illinois Certification #: 200068 Indiana Certification: FL NELAC Reciprocity Kansas Certification #: E-10383 Louisiana Certification #: FL NELAC Reciprocity Louisiana Environmental Certificate #: 05007 Maryland Certification: #346 Michigan Certification #: 9911 Mississippi Certification: FL NELAC Reciprocity Missouri Certification #: 236 Montana Certification #: Cert 0074

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747 New York Certification #: 10478 Primary Accrediting Body New Jersey Certification #: NY158 Pennsylvania Certification #: 68-00350 Connecticut Certification #: PH-0435 Nebraska Certification: NE-OS-28-14 Nevada Certification: FL NELAC Reciprocity New York Certification #: 11608 North Carolina Environmental Certificate #: 667 North Carolina Certification #: 12710 Oklahoma Certification #: D9947 Pennsylvania Certification #: 68-00547 Puerto Rico Certification #: FL01264 South Carolina Certification: #96042001 Tennessee Certification #: TN02974 Texas Certification: FL NELAC Reciprocity US Virgin Islands Certification: FL NELAC Reciprocity Virginia Environmental Certification #: 460165 Wyoming Certification: FL NELAC Reciprocity West Virginia Certification #: 9962C Wisconsin Certification #: 399079670 Wyoming (EPA Region 8): FL NELAC Reciprocity

Maryland Certification #: 208 Rhode Island Certification #: LAO00340 Massachusetts Certification #: M-NY026 New Hampshire Certification #: 2987



SAMPLE SUMMARY

Project:LBG, Inc 42001269Pace Project No.:35324054

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35324054001	C-12	Drinking Water	07/13/17 10:20	07/14/17 11:10



SAMPLE ANALYTE COUNT

Project:LBG, Inc 42001269Pace Project No.:35324054

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35324054001	C-12	EPA 504.1	BP1	2	PASI-O
		EPA 505	MMR	3	
		EPA 508.1	NS1	18	PASI-O
		EPA 515.3	LJM	8	PASI-O
		EPA 531.1	WFH	9	PASI-O
		EPA 547	NMB	1	PASI-O
		EPA 549.2	NMB	1	PASI-O
		EPA 525.2	NS1	7	PASI-O
		EPA 548.1	JDT	1	PASI-O



ANALYTICAL RESULTS

Project: LBG, Inc 42001269

Pace Project No.: 35324054

Sample: C-12	Lab ID:	35324054001	Collected:	07/13/1	7 10:20	Received: 07/	14/17 11:10 Ma	atrix: Drinking	Water
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504.1 GCS EDB and DBCP	Analytica	I Method: EPA 5	04.1 Prepar	ation Meth	nod: EP/	A 504.1			
1,2-Dibromo-3-chloropropane 1,2-Dibromoethane (EDB)	<0.0054 <0.0064	ug/L ug/L	0.017 0.0085	0.0054 0.0064	1 1	07/18/17 07:15 07/18/17 07:15	07/18/17 18:08 07/18/17 18:08	96-12-8 106-93-4	
505 GCS Pesticides/PCBs	Analytica	I Method: EPA 5	05 Preparat	ion Metho	d: EPA	505			
Aldrin Surrogates	<0.025	ug/L	0.025	0.025	1	07/20/17 16:38	07/21/17 00:30	309-00-2	
Tetrachloro-m-xylene (S)	67	%.	30-150		1	07/20/17 16:38	07/21/17 00:30	877-09-8	
Decachlorobiphenyl (S)	68	%.	30-150		1	07/20/17 16:38	07/21/17 00:30	2051-24-3	
508.1 GCS Pesticides	Analytica	I Method: EPA 5	08.1 Prepar	ation Meth	nod: EP/	A 508.1			
Alachlor	<0.037	ug/L	0.21	0.037	1	07/21/17 15:45	07/28/17 03:50	15972-60-8	
Atrazine	<0.066	ug/L	0.11	0.066	1	07/21/17 15:45	07/28/17 03:50	1912-24-9	
gamma-BHC (Lindane)	<0.0032	ug/L	0.021	0.0032	1	07/21/17 15:45	07/28/17 03:50	58-89-9	
Butachlor	<0.028	ug/L	0.11	0.028	1	07/21/17 15:45	07/28/17 03:50	23184-66-9	
Chlordane (Technical)	<0.050	ug/L	0.21	0.050	1	07/21/17 15:45	07/28/17 03:50	57-74-9	
Dieldrin	<0.020	ug/L	0.11	0.020	1	07/21/17 15:45	07/28/17 03:50	60-57-1	
Endrin	<0.0074	ug/L	0.011	0.0074	1	07/21/17 15:45	07/28/17 03:50	72-20-8	
Heptachlor	<0.013	ug/L	0.042	0.013	1	07/21/17 15:45	07/28/17 03:50	76-44-8	
Heptachlor epoxide	<0.0032	ug/L	0.021	0.0032	1	07/21/17 15:45	07/28/17 03:50	1024-57-3	
Hexachlorobenzene	<0.020	ug/L	0.11	0.020	1	07/21/17 15:45	07/28/17 03:50	118-74-1	
Hexachlorocyclopentadiene	<0.034	ug/L	0.11	0.034	1	07/21/17 15:45	07/28/17 03:50	77-47-4	
Methoxychlor	<0.054	ug/L	0.11	0.054	1	07/21/17 15:45	07/28/17 03:50	72-43-5	
Metolachlor	<0.050	ug/L	0.11	0.050	1	07/21/17 15:45	07/28/17 03:50	51218-45-2	
PCB. Total	<0.084	ua/L	0.11	0.084	1	07/21/17 15:45	07/28/17 03:50	1336-36-3	
Propachlor	< 0.032	ug/L	0.11	0.032	1	07/21/17 15:45	07/28/17 03:50	1918-16-7	
Simazine	<0.073	ug/L	0.074	0.073	1	07/21/17 15:45	07/28/17 03:50	122-34-9	
Toxaphene	<0.64	ug/l	1.1	0.64	1	07/21/17 15:45	07/28/17 03:50	8001-35-2	
Surrogates		~g/ =		0.01	•	01/21/11/10110	0.720, 00.00		
Decachlorobiphenyl (S)	94	%	70-130		1	07/21/17 15:45	07/28/17 03:50	2051-24-3	
515.3 Chlorinated Herbicides	Analytica	Method: EPA 5	15.3 Prepar	ation Meth	nod: EP/	A 515.3			
2,4-D	<0.081	ug/L	0.10	0.081	1	07/20/17 09:35	07/22/17 07:10	94-75-7	
Dalapon	<0.89	ug/L	1.0	0.89	1	07/20/17 09:35	07/22/17 07:10	75-99-0	
Dicamba	<0.067	ug/L	0.10	0.067	1	07/20/17 09:35	07/22/17 07:10	1918-00-9	L1
Dinoseb	<0.16	ug/L	0.20	0.16	1	07/20/17 09:35	07/22/17 07:10	88-85-7	
Pentachlorophenol	<0.030	ug/L	0.040	0.030	1	07/20/17 09:35	07/22/17 07:10	87-86-5	
Picloram	<0.094	ug/L	0.10	0.094	1	07/20/17 09:35	07/22/17 07:10	1918-02-1	
2,4,5-TP (Silvex)	<0.16	ug/L	0.20	0.16	1	07/20/17 09:35	07/22/17 07:10	93-72-1	
Surrogates		Ū							
2,4-DCAA (S)	94	%	70-130		1	07/20/17 09:35	07/22/17 07:10	19719-28-9	
531.1 HPLC Carbamates	Analytica	I Method: EPA 5	31.1						
Aldicarb	<0.64	ug/L	2.0	0.64	1		07/18/17 16:26	116-06-3	
Aldicarb sulfone	<0.37	ug/L	2.0	0.37	1		07/18/17 16:26	1646-88-4	
Aldicarb sulfoxide	<0.59	ug/L	2.0	0.59	1		07/18/17 16:26	1646-87-3	
Carbofuran	<0.32	ug/L	2.0	0.32	1		07/18/17 16:26	1563-66-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LBG, Inc 42001269

Pace Project No.: 35324054

Sample: C-12	Lab ID:	35324054001	Collecte	d: 07/13/17	7 10:20	Received: 07/	'14/17 11:10 Ma	atrix: Drinking	Water
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
531.1 HPLC Carbamates	Analytical	Method: EPA 5	31.1						
3-Hydroxycarbofuran	<0.45	ug/L	2.0	0.45	1		07/18/17 16:26	16655-82-6	
Methomyl	<0.57	ug/L	2.0	0.57	1		07/18/17 16:26	16752-77-5	
Oxamyl	<0.55	ug/L	2.0	0.55	1		07/18/17 16:26	23135-22-0	
Carbaryl	<0.27	ug/L	2.0	0.27	1		07/18/17 16:26	63-25-2	
Surrogates									
BDMC (S)	97	%	80-120		1		07/18/17 16:26		
547 HPLC Glyphosate	Analytical	Method: EPA 5	47						
Glyphosate	<4.2	ug/L	6.0	4.2	1		07/20/17 04:57		
549.2 HPLC Paraquat Diquat	Analytical	Method: EPA 5	49.2 Prepa	aration Meth	od: EP	A 549.2			
Diquat	<0.30	ug/L	0.40	0.30	1	07/19/17 11:00	07/20/17 02:12	85-00-7	
525.2 Base Neutral Extractable	Analytical	Method: EPA 5	25.2 Prepa	aration Meth	od: EP	A 525.2			
Benzo(a)pyrene	<0.013	ug/L	0.097	0.013	1	07/25/17 10:30	07/26/17 14:41	50-32-8	L2
bis(2-Ethylhexyl)adipate	<0.37	ug/L	1.6	0.37	1	07/25/17 10:30	07/26/17 14:41	103-23-1	
bis(2-Ethylhexyl)phthalate	<0.49	ug/L	1.9	0.49	1	07/25/17 10:30	07/26/17 14:41	117-81-7	
Metribuzin	<0.15	ug/L	0.29	0.15	1	07/25/17 10:30	07/26/17 14:41	21087-64-9	
1.3-Dimethyl-2-nitrobenzene(S)	123	%	70-130		1	07/25/17 10:30	07/26/17 14:41	81209	
Pervlene-d12 (S)	68	%	70-130		1	07/25/17 10:30	07/26/17 14:41	1520963	S0.S8
Triphenylphosphate (S)	96	%	70-130		1	07/25/17 10:30	07/26/17 14:41	115-86-6	,
548.1 GCS Endothall	Analytical	Method: EPA 5	48.1 Prepa	aration Meth	od: EP	A 548.1			
Endothall	<4.3	ug/L	9.0	4.3	1	07/20/17 18:00	07/25/17 09:23		



QUALITY CONTROL DATA

Project: LBG, Inc 42001269

Pace Project No.:

Carbaryl

Carbofuran

Methomyl

BDMC (S)

Oxamyl

35324054

OC Batch:	381535		Analysis Mot	hod: E	DA 531 1						
	Batch Method: EPA 531.1										
QC Batch Method	I: EPA 531.1		Analysis Des	cription: 5	31.1 HPLC Carba	mate					
Associated Lab Sa	amples: 35324054001										
METHOD BLANK	2070180		Matrix:	Water							
Associated Lab Sa	amples: 35324054001										
			Blank	Reporting							
Para	ameter	Units	Result	Limit	MDL	Analyzed	Qualifiers				
3-Hydroxycarbofu	ran	ug/L	<0.45	2.0	0.45	07/18/17 12:36					
Aldicarb		ug/L	<0.64	2.0	0.64	07/18/17 12:36					
Aldicarb sulfone		ug/L	<0.37	2.0	0.37	07/18/17 12:36					
Aldicarb sulfoxide		ug/L	<0.59	2.0	0.59	07/18/17 12:36					

2.0

2.0

2.0

2.0

80-120

0.27

0.57

07/18/17 12:36

07/18/17 12:36

07/18/17 12:36

0.32 07/18/17 12:36

0.55 07/18/17 12:36

<0.27

< 0.32

<0.57

<0.55

120

LABORATORY CONTROL SAMPLE: 2070181

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
3-Hydroxycarbofuran	ug/L	10	10.3	103	80-120	
Aldicarb	ug/L	10	11.2	112	80-120	
Aldicarb sulfone	ug/L	10	10.9	109	80-120	
Aldicarb sulfoxide	ug/L	10	12.0	120	80-120	
Carbaryl	ug/L	10	12.0	120	80-120	
Carbofuran	ug/L	10	11.7	117	80-120	
Methomyl	ug/L	10	10.6	106	80-120	
Oxamyl	ug/L	10	11.8	118	80-120	
BDMC (S)	%			118	80-120	

ug/L

ug/L

ug/L

ug/L

%

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2070182 2070183														
Parameter	: Units	35323850001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual		
3-Hydroxycarbofuran	ug/L	0.45U	10	10	10	10.2	100	102	80-120	2	20			
Aldicarb	ug/L	0.64U	10	10	10.5	10.3	105	103	80-120	3	20			
Aldicarb sulfone	ug/L	0.37U	10	10	9.5	9.8	95	98	80-120	4	20			
Aldicarb sulfoxide	ug/L	0.59U	10	10	11.2	11.0	112	110	80-120	2	20			
Carbaryl	ug/L	0.27U	10	10	12.0	11.5	120	115	80-120	4	20			
Carbofuran	ug/L	0.32U	10	10	11.3	10.5	113	105	80-120	7	20			
Methomyl	ug/L	0.57U	10	10	10.5	11.1	105	111	80-120	6	20			
Oxamyl	ug/L	0.55U	10	10	10.2	10.0	102	100	80-120	2	20			
BDMC (S)	%						103	98	80-120					

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.


Project:	LBG, Inc 420012	69											
Pace Project No.:	35324054												
QC Batch:	382091			Analys	sis Method:	: E	EPA 547						
QC Batch Method:	EPA 547			Analys	sis Descript	tion: 5	547 HPLC GI	yphosate					
Associated Lab Sar	nples: 3532405	4001											
METHOD BLANK:	2073233			1	Matrix: Wa	ter							
Associated Lab Sar	nples: 3532405	4001											
				Blanl	k R	eporting							
Parar	neter	U	Inits	Resu	lt	Limit	MDL		Analyzed	Qua	alifiers		
Glyphosate		u	ıg/L		<4.2	6.0	D	4.2 07	/20/17 02:06	6			
LABORATORY CO	NTROL SAMPLE:	207323	34										
Parar	neter	U	Inits	Spike Conc.	LCS Resu	S Ilt	LCS % Rec	% Re Limit	s Qu	ualifiers			
Glyphosate		u	ıg/L	50)	52.3	105	8	0-120		-		
MATRIX SPIKE & N	IATRIX SPIKE DU	PLICATE:	: 207323	35		2073236							
				MS	MSD								
Paramete	er U	3532 nits	4897001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Glyphosate	U	g/L	0.0042U mg/L	50	50	48.2	48.4	96	97	80-120	0	30	
MATRIX SPIKE & N	IATRIX SPIKE DU	PLICATE:	: 20732:	37		2073238							
		2522	4066004	MS	MSD	MC	MCD	MC	MCD	0/ Dec		Most	
Paramete	er U	3532 nits	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	³ Rec Limits	RPD	RPD	Qual
Glyphosate		g/L	<4.2	50	50	51.2	49.9	102	100	80-120	3	30	

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Project:	LBG, Inc	42001269												
Pace Project No.:	3532405	4												
QC Batch:	381399)		Analys	is Method:	EF	PA 504.1							
QC Batch Method:	EPA 50	4.1		Analys	is Descripti	ion: 50	4 EDB D	BCP						
Associated Lab San	nples: 3	3532405400 [,]	1											
METHOD BLANK:	2069376			N	Aatrix: Wat	er								
Associated Lab San	nples:	3532405400 [,]	1											
				Blank	Re Re	eporting								
Paran	neter		Units	Units Result Limit MDL		Analyze	ed	Qua	alifiers					
1,2-Dibromo-3-chlor	opropane		ug/L	<0.	0064	0.020 0.0064		07/18/17 1	3:43					
1,2-Dibromoethane	(EDB)		ug/L	<0.	0075	0.010		0.0075	07/18/17 1	13:43				
LABORATORY COM	NTROL SA	AMPLE & LC	SD: 2069377		2	070238								
				Spike	LCS	LCSD	LCS	LCSD	% Rec		ſ	Max		
Paran	neter		Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPI	D F	RPD	Qu	alifiers
1,2-Dibromo-3-chlor	opropane		ug/L	.25	0.27	0.24	109	96	70-130		12	40		
1,2-Dibromoethane	(EDB)		ug/L	.25	0.29	0.25	116	101	70-130		13	40		
MATRIX SPIKE & M	IATRIX SF		CATE: 20702	39		2070240								
				MS	MSD									
_			35324127010	Spike	Spike	MS	MSD	MS	S MSI	D	% Rec		Max	- ·
Paramete	r	Units	Result	Conc.	Conc.	Result	Result	% R	ec % Re	ec	Limits	RPD	RPD	Qual
1,2-Dibromo-3- chloropropane		ug/L	<0.0055	.44	.44	0.64	0.6	3	146	143	65-135	2	40	M1
1.2-Dibromoethane	(EDB)	ua/L	< 0.0064	.44	.44	0.64	0.6	3	146	145	65-135	1	40	M1

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Project: LBG, Inc 4200126	69									
Pace Project No.: 35324054										
QC Batch: 32255		Analysis N	Method:	E	PA 505					
QC Batch Method: EPA 505		Analysis D	Descript	ion: 5	05 GCS Pe	sticide	S			
Associated Lab Samples: 35324054	4001									
METHOD BLANK: 149103		Matr	rix: Wat	ter						
Associated Lab Samples: 35324054	4001									
		Blank	R	eporting						
Parameter	Units	Result		Limit	MDL		Analyz	ed	Qualifiers	S
Aldrin	ug/L	<0.02	25	0.025	5 C	0.025	07/20/17	18:40		
Decachlorobiphenyl (S)	%.	7	75	30-150)		07/20/17	18:40		
Tetrachloro-m-xylene (S)	%.	8	35	30-150)		07/20/17	18:40		
LABORATORY CONTROL SAMPLE:	149104									
		Spike	LCS	;	LCS	%	6 Rec			
Parameter	Units	Conc.	Resu	llt	% Rec	L	imits	Qualif	fiers	
Aldrin	ug/L	.048		0.047	98		70-130			
Decachlorobiphenyl (S)	%.				95		30-150			
Tetrachloro-m-xylene (S)	%.				94		30-150			
LABORATORY CONTROL SAMPLE:	149105									
		Spike	LCS	;	LCS	%	6 Rec			
Parameter	Units	Conc.	Resu	lt	% Rec	L	imits	Qualif	fiers	
Aldrin	ug/L	.0095	<	0.025	97		70-130			
Decachlorobiphenyl (S)	%.				89		30-150			
Tetrachloro-m-xylene (S)	%.				95		30-150			
MATRIX SPIKE SAMPLE:	149106									
		702442100	01	Spike	MS		MS	%	6 Rec	
Parameter	Units	Result		Conc.	Result		% Rec	L	imits	Qualifiers
Aldrin	ug/L	<0	0.025	.095	0.0	92	g	96	65-135	
Decachlorobiphenyl (S)	%.						7	75	30-150	
Tetrachloro-m-xylene (S)	%.						g	97	30-150	

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REPORT OF LABORATORY ANALYSIS



Project: LBG, Inc 42001269

Pace Project No.: 35324054

QC Batch:	382070	Analysis Method:	EPA 508.1
QC Batch Method:	EPA 508.1	Analysis Description:	508 GCS Pesticide
Associated Lab Samp	les: 35324054001		

Matrix: Water

METHOD BLANK: 2073167

Associated Lab Samples: 35324054001

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Alachlor	ug/L	<0.035	0.20	0.035	07/26/17 10:06	
Atrazine	ug/L	<0.063	0.10	0.063	07/26/17 10:06	
Butachlor	ug/L	<0.027	0.10	0.027	07/26/17 10:06	
Chlordane (Technical)	ug/L	<0.047	0.20	0.047	07/26/17 10:06	
Dieldrin	ug/L	<0.019	0.10	0.019	07/26/17 10:06	
Endrin	ug/L	<0.0070	0.010	0.0070	07/26/17 10:06	
gamma-BHC (Lindane)	ug/L	<0.0030	0.020	0.0030	07/26/17 10:06	
Heptachlor	ug/L	<0.012	0.040	0.012	07/26/17 10:06	
Heptachlor epoxide	ug/L	<0.0030	0.020	0.0030	07/26/17 10:06	
Hexachlorobenzene	ug/L	<0.019	0.10	0.019	07/26/17 10:06	
Hexachlorocyclopentadiene	ug/L	< 0.032	0.10	0.032	07/26/17 10:06	
Methoxychlor	ug/L	<0.051	0.10	0.051	07/26/17 10:06	
Metolachlor	ug/L	<0.047	0.10	0.047	07/26/17 10:06	
Propachlor	ug/L	<0.030	0.10	0.030	07/26/17 10:06	
Simazine	ug/L	<0.069	0.070	0.069	07/26/17 10:06	
Toxaphene	ug/L	<0.61	1.0	0.61	07/26/17 10:06	
Decachlorobiphenyl (S)	%	103	70-130		07/26/17 10:06	

LABORATORY CONTROL SAMPLE: 2073168

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Alachlor	ug/L	1	1.0	100	70-130	
Atrazine	ug/L	1.2	1.2	97	70-130	
Butachlor	ug/L	.5	0.48	96	70-130	
Dieldrin	ug/L	.5	0.51	103	70-130	
Endrin	ug/L	.05	0.053	106	70-130	
gamma-BHC (Lindane)	ug/L	.1	0.10	102	70-130	
Heptachlor	ug/L	.2	0.18	91	70-130	
Heptachlor epoxide	ug/L	.1	0.10	100	70-130	
Hexachlorobenzene	ug/L	.5	0.46	92	70-130	
Hexachlorocyclopentadiene	ug/L	.5	0.47	94	70-130	
Methoxychlor	ug/L	.5	0.53	107	70-130	
Metolachlor	ug/L	.5	0.48	96	70-130	
Propachlor	ug/L	.5	0.48	96	70-130	
Simazine	ug/L	.88	0.78	89	70-130	
Decachlorobiphenyl (S)	%			105	70-130	

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REPORT OF LABORATORY ANALYSIS



Project: LBG, Inc 42001269

Pace Project No.: 35324054

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2074971 2074972												
			MS	MSD								
	:	35323850001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Alachlor	ug/L	0.034U	2	2	2.0	1.9	100	97	65-135	3	40	
Atrazine	ug/L	0.061U	2.5	2.5	2.6	3.1	102	123	65-135	19	40	
Butachlor	ug/L	0.026U	1	1	0.93	0.89	93	89	65-135	4	40	
Chlordane (Technical)	ug/L	0.045U			<0.094	<0.094					40	
Dieldrin	ug/L	0.018U	1	1	1.0	1.0	104	104	65-135	0	40	
Endrin	ug/L	0.0067U	.1	.1	0.11	0.11	107	107	65-135	0	40	
gamma-BHC (Lindane)	ug/L	0.0029U	.2	.2	0.22	0.22	110	111	65-135	1	40	
Heptachlor	ug/L	0.012U	.4	.4	0.70	0.81	174	201	65-135	14	40	M1
Heptachlor epoxide	ug/L	0.0029U	.2	.2	0.21	0.21	104	103	65-135	0	40	
Hexachlorobenzene	ug/L	0.018U	1	1	1.0	1.1	102	111	65-135	8	40	
Hexachlorocyclopentadiene	ug/L	0.031U	1	1	1.2	1.0	116	105	65-135	10	40	
Methoxychlor	ug/L	0.049U	1	1	1.0	0.97	101	97	65-135	4	40	
Metolachlor	ug/L	0.045U	1	1	0.95	0.95	95	95	65-135	0	40	
Propachlor	ug/L	0.029U	1	1	1.0	1.2	103	123	65-135	17	40	
Simazine	ug/L	0.066U	1.8	1.8	0.62	0.68	36	39	65-135	9	40	M1
Toxaphene	ug/L	0.58U			<1.2	<1.2					40	
Decachlorobiphenyl (S)	%						94	94	70-130		40	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: LBG, Inc 42001269

Pace Project No.: 35324054

QC Batch: 382064			Analysis Method:		EPA 515.3				
QC Batch Method:	EPA 515.3		Analysis Dese	cription:	5153 GCS Herbicio	des			
Associated Lab Samp	oles: 35324054001								
METHOD BLANK: 2	2073155		Matrix:	Water					
Associated Lab Samp	oles: 35324054001								
			Blank	Reporting					
Parame	eter	Units	Result	Limit	MDL	Analyzed	Qualifiers		
2,4,5-TP (Silvex)		ug/L	<0.16	0.2	20 0.16	07/22/17 00:29			
2,4-D		ug/L	<0.081	0.1	10 0.081	07/22/17 00:29			
Dalapon		ug/L	<0.89	1	.0 0.89	07/22/17 00:29			
Dicamba		ug/L	<0.067	0.	10 0.067	07/22/17 00:29			
Dinoseb		ug/L	<0.16	0.2	20 0.16	07/22/17 00:29			
Pentachlorophenol		ug/L	<0.030	0.04	40 0.030	07/22/17 00:29			
Picloram		ug/L	<0.094	0.	0.094	07/22/17 00:29			
2,4-DCAA (S)		%	88	70-13	30	07/22/17 00:29			

LABORATORY CONTROL SAMPLE: 2073156

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
2,4,5-TP (Silvex)	ug/L	1	1.0	103	70-130	
2,4-D	ug/L	.5	0.39	78	70-130	
Dalapon	ug/L	5	4.5	90	70-130	
Dicamba	ug/L	.5	0.66	132	70-130 L ⁻	1
Dinoseb	ug/L	1	1.1	114	70-130	
Pentachlorophenol	ug/L	.2	0.20	98	70-130	
Picloram	ug/L	.5	0.50	99	70-130	
2,4-DCAA (S)	%			93	70-130	

MATRIX SPIKE & MATRIX S	SPIKE DUPLICA	TE: 20734	78		2073479							
			MS	MSD								
	9	2347613003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
2,4,5-TP (Silvex)	ug/L	ND	1	1	1.1	1.1	108	111	70-130	3	40	
2,4-D	ug/L	ND	.5	.5	0.42	0.47	84	94	70-130	11	40	
Dalapon	ug/L	ND	5	5	5.7	6.0	115	120	70-130	5	40	
Dicamba	ug/L	ND	.5	.5	0.58	0.63	117	126	70-130	7	40	
Dinoseb	ug/L	ND	1	1	1.1	1.1	105	113	70-130	7	40	
Pentachlorophenol	ug/L	ND	.2	.2	0.18	0.19	91	95	70-130	4	40	
Picloram	ug/L	ND	.5	.5	0.65	0.70	130	140	70-130	7	40	M1
2,4-DCAA (S)	%						98	99	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



Project: LBG, Inc 42001269 Pace Project No.: 35324054

MATRIX SPIKE & MATRIX SI	PIKE DUPLICA	TE: 20734	80		2073481							
			MS	MSD								
	3	5323949005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
2,4,5-TP (Silvex)	ug/L	<0.16	1	1	1.1	1.1	108	110	70-130	1	40	
2,4-D	ug/L	<0.081	.5	.5	0.40	0.41	79	82	70-130	3	40	
Dalapon	ug/L	<0.89	5	5	4.7	4.8	94	95	70-130	1	40	
Dicamba	ug/L	<0.067	.5	.5	0.51	0.63	103	127	70-130	21	40	
Dinoseb	ug/L	<0.16	1	1	1.1	1.1	110	111	70-130	1	40	
Pentachlorophenol	ug/L	<0.030	.2	.2	0.19	0.19	96	97	70-130	1	40	
Picloram	ug/L	<0.094	.5	.5	0.55	0.57	110	115	70-130	5	40	
2,4-DCAA (S)	%						95	93	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



Project: LBG, Inc 42001269

Pace Project No.: 35324054

QC Batch:	QC Batch: 382937			nod:	EPA 525.2			
QC Batch Method:	EPA 525.2		Analysis Dese	cription:	525.2 Base Neutra	I Extractables		
Associated Lab Samp	oles: 3532405400	1						
METHOD BLANK: 2	2078153		Matrix:	Water				
Associated Lab Samp	oles: 3532405400	1						
			Blank	Reporting				
Parame	eter	Units	Result	Limit	MDL	Analyzed	Qualifiers	
Benzo(a)pyrene		ug/L	<0.013	0.1	0 0.013	07/26/17 11:53		
bis(2-Ethylhexyl)adipa	ate	ug/L	<0.38	1.	6 0.38	07/26/17 11:53		
bis(2-Ethylhexyl)phtha	alate	ug/L	<0.50	2.	0 0.50	07/26/17 11:53		
Metribuzin		ug/L	<0.15	0.3	0 0.15	07/26/17 11:53		
1,3-Dimethyl-2-nitrobe	enzene(S)	%	105	70-13	0	07/26/17 11:53		
Perylene-d12 (S)		%	84	70-13	0	07/26/17 11:53		
Triphenylphosphate (S)	%	83	70-13	0	07/26/17 11:53		

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzo(a)pyrene	ug/L	.4	0.26	65	70-130) L2
bis(2-Ethylhexyl)adipate	ug/L	6.4	5.4	84	70-130)
bis(2-Ethylhexyl)phthalate	ug/L	8	6.8	85	70-130)
Metribuzin	ug/L	1.2	1.2	103	70-130)
1,3-Dimethyl-2-nitrobenzene(S)	%			106	70-130)
Perylene-d12 (S)	%			75	70-130)
Triphenylphosphate (S)	%			83	70-130)

MATRIX SPIKE & MATRIX SPI	IKE DUPLI	2078477										
Parameter	Units	92348121001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzo(a)pyrene	ug/L				0.092J	0.098J	·				40	MO
bis(2-Ethylhexyl)adipate	ug/L				10.9	10.3				6	40	
bis(2-Ethylhexyl)phthalate	ug/L				14.0	13.5				3	40	
Metribuzin	ug/L				2.2	<0.30					40	M1
1,3-Dimethyl-2- nitrobenzene(S)	%						110	120	70-130			
Perylene-d12 (S)	%						64	62	70-130			S0, S8
Triphenylphosphate (S)	%						83	84	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS



Project:	LBG, Inc 42001269											
Pace Project No .:	35324054											
QC Batch:	382068		Analys	sis Method:	E	PA 548.1						
QC Batch Method:	EPA 548.1		Analys	sis Descript	tion: 5	48 GCS End	dothall					
Associated Lab Sar	nples: 3532405400)1										
METHOD BLANK:	2073163		٦	Matrix: Wa	ter							
Associated Lab Sar	nples: 3532405400)1										
			Blank	K R	eporting							
Paran	neter	Units	Resu	lt	Limit	MDL	A	Analyzed	Qua	alifiers		
Endothall		ug/L		<4.3	9.0)	4.3 07/2	25/17 03:47	,			
LABORATORY COI	NTROL SAMPLE: 2	073164										
Paran	neter	Units	Spike Conc.	LCS Resu	S Ilt	LCS % Rec	% Rec Limits	; Qu	alifiers			
Endothall		ug/L	50)	41.5	83	80	-120		-		
MATRIX SPIKE & M	IATRIX SPIKE DUPLI	CATE: 20740	52		2074053							
			MS	MSD					_			
Paramete	er Units	35324366001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Endothall	ug/L	4.3U	50	50	52.4	49.0	105	98	80-120	7	30	
MATRIX SPIKE & M	IATRIX SPIKE DUPLI	CATE: 20740	54		2074055							
			MS	MSD								
Paramete	er Units	35324454001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Endothall	ug/L	0.0043U mg/L	50	50	<4.3	<4.3	0	0	80-120		30	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	LBG, Inc 42	2001269											
Pace Project No.:	35324054												
QC Batch:	381794			Analys	sis Method:	E	PA 549.2						
QC Batch Method:	EPA 549.2	2		Analys	sis Descript	ion: 5	49 HPLC Pa	araquat Diq	uat				
Associated Lab Sa	amples: 353	324054001											
METHOD BLANK:	2071478			٦	Matrix: Wat	er							
Associated Lab Sa	amples: 353	324054001											
				Blank	k Re	eporting							
Para	ameter		Units	Resu	lt	Limit	MDL	/	Analyzed	Qua	alifiers		
Diquat			ug/L		<0.30	0.40)	0.30 07/2	20/17 00:32				
LABORATORY CO	ONTROL SAM	IPLE: 20	071479										
Para	ameter		Units	Spike Conc.	LCS Resu	lt	LCS % Rec	% Rec Limits	; Qı	alifiers			
Diquat			ug/L	2	2	1.6	82	70	-130		-		
MATRIX SPIKE &	MATRIX SPIK		CATE: 20718	82		2071883							
				MS	MSD								
D	1	11.1	35324366001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	0
Parame	ter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Quai
Diquat		ug/L	0.30U	2	2	1.7	1.7	84	84	70-130	0	30	
MATRIX SPIKE &	MATRIX SPI		CATE: 20718	84		2071885							
				MS	MSD								
Parama	ter	l Inite	35324454001 Result	Spike Conc	Spike Conc	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
						0.00		20		70 120			
Diquat		ug/L	mg/L	2	2	0.60	0.84	30	42	70-130	აე	30	W1,K1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: LBG, Inc 42001269

Pace Project No.: 35324054

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

- L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
- L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
- M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- R1 RPD value was outside control limits.
- S0 Surrogate recovery outside laboratory control limits.
- S8 Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-extraction and/or re-analysis)



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LBG, Inc 42001269 Pace Project No.: 35324054

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35324054001	C-12	EPA 504.1	381399	EPA 504.1	381607
35324054001	C-12	EPA 505	32255	EPA 505	32334
35324054001	C-12	EPA 508.1	382070	EPA 508.1	382791
35324054001	C-12	EPA 515.3	382064	EPA 515.3	382572
35324054001	C-12	EPA 531.1	381535		
35324054001	C-12	EPA 547	382091		
35324054001	C-12	EPA 549.2	381794	EPA 549.2	382025
35324054001	C-12	EPA 525.2	382937	EPA 525.2	383335
35324054001	C-12	EPA 548.1	382068	EPA 548.1	382953

EnviroTest Laboratories, Inc. 315 Fullerton Avenue Newburgh, NY 12550 Phone (845) 562-0841	MO#: 3532	240	4		Cus	stod	y Re	COL	g .				EnviroT Labora	est E
Client Information (Sub Contract Lab)					Debra					Carrier T	acking No(s):	C00 420	C No: 0-9123.1	
Client Contact: Shipping/Receiving	100224004				r@envir	otestlab	oratorie	es.com		_		Pag	e: ge 1 of 1	
Jompany: Pace Analytical Ormond Beach							4	ualys	is Re	queste	p	STL 420	.Job #:)-123595-2	
Address: 3 East Tower Circle.	Due Date Requested: 7/25/2017						Ma			-		Pre	servation Code	S: M Lavano
Dity: Dimond Beach	TAT Requested (days)	. 5			n h	ЧC	ni csbi Ides In					: d ù d	NaOH Zn Acetate Nitric Acid	N - None 0 - Asna02 P - Na204S
state, zip: FL_ 32174)	1	い(5))	03	r ship	80/80	Pestic BTO e		-				NaHSO4 MeOH	Q - Na2SO3 R - Na2S2SO3
-none: 111-222-3333(Tel) 	# # #	Ĩ			(oN .	03 F.4	etsme					<u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>	Amchlor Ascorbic Acid ce	S - H2SO4 T - TSP Dodecahydrate U - Acetone
211au.	2				(oN i	09 A	sdrs:		_	-			DI Water EDTA	V - MCAA W - ph 4-5
Project Name: LBG, Inc.	Project #: 42001269			T		04 Eb	31.1 C	80	48 74	67		ulatin	EDA	Z - other (specify)
Site:	:#MOSS			Ī	d asi	CT/ 50	CT/ 5	CT/ 5	CT/ 5	CT/ D		es to	er:	
		ample (0	ample Type C=comp,	Matrix (w-water, s-solid, o-waste/oil,	leid Filtered M/SM mrohe	Аятиораи	АЯТИОЭВU АЯТИОЭВU	Аятиораи	ивсоитка ивсоитка	Аятиорац		nedmuN Isto		
Sample Identification Client ID (Lab ID)	Sample Uate		Preservatio	Tissue, A-Air on Code:		s	s s	S	S S	S	State State		opecial IIIs	rincipality india-
C - 12 (420-123595-2)	7/13/17	10:20		Water		×	×	×	××	×		13		
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												510		
Possible Hazard Identification					Samp	ole Disp	posal (A fee n	lay be	assesse	d if sample	s are retained I	longer than 1	month)
Non-Hazard Hammable Skin Irritar Deliverable Requested: I, II, IV, Other (specify)	T POISON B UNKNOW		adological		Speci	al Instru	uctions/	QC Re	quireme	ints:	Dy Lau		0	CINION
Empty Kit Relinquished by:	Da	ite:			Time:					We	thod of Shipme	at.		
Relinquistret by	Date/Time:	1946	0 0	mpany	818	ceived b	sI.	A	ale			111 F112	et 0	Company SLO 10.4
lage)	f								D		Company
adinquished by: Q	Date/Time:		0	mpany	<u>~</u>	ceived b	×				Date/T	me:		Company
Noustody Seals Intact: Custody Seal No.: A Yes A No					ð	oler Tem	perature(s) °C and	Other R	emarks:				
1.1.1					1									

	Sample Condition Upon Receipt Form	(Dodu Fel	ument Revised: pruary 6, 2017
Floridit Laboratory	Document No.: E-EL-C-007 rev. 11		Issi	uing Authority:
	Sample Condition Upon Bo	noint Form (80		onda Quality Office
Project # Project Manager: Client:	WO#: 35324054 PM: VEG Due Date: 07 CLIENT: EVNTES	/28/17	Date and I Examining of Label: Deliver:	nitials of person: contents:
			pH:	
Thermometer Used:	$\underline{C} \underline{\Psi}$ Date: $\underline{\rightarrow} (\underline{U} \underline{U} \underline{V} \underline{V})$	Time: \\\	<u>0</u> Initial	s:
Cooler #1 Temp.°c <u>(Visua</u> (Visua	al) <u>+0.1</u> (Correction Factor) <u>9.7</u>	(Actual)	Samples b	n ice, cooling process has begun
Cooler #2 Temp.°C 10.3 (Visua	al) + D - 1 (Correction Factor) 10.4	((Actual)	Samples b	n ice, cooling process has begun
Cooler #3 Temp.°C <u> </u>	al) 40.1 (Correction Factor) 9.5	(Actual)	Samples o	n ice, cooling process has begun
Cooler #4 Temp.°C(Visua	I)(Correction Factor)	(Actual)	Samples o	n ice, cooling process has begun
Cooler #5 Temp.°C(Visua	I)(Correction Factor)	(Actual)	Samples o	n ice, cooling process has begun
Cooler #6 Temp.°C(Visua	I)(Correction Factor)	(Actual)	Samples o	n ice, cooling process has begun
Shipping Method:		aidht 🗆 Pace I	Uther	
Billing:	Sender D Third Poder		□ Other	
racking # 7796 26	210 4340/7796 260	09 3485	17796	2608 5178
ustody Seal on Cooler/Box Preser	nt: Tyes ANo Seals intact:		Ico: Wat	lua Nene
acking waterial. Labubble wrap	Bubble Bags LNone LOther_			
amples shorted to lab (If Yes, com	plete) Shorted Date:	Shorted	Time:	Qty:
amples shorted to lab (If Yes, com	Image: Constraint of the sector of the s	Shorted	Time:	Qty:
hain of Custody Present	Image: Construction Construction plete) Shorted Date:	Shorted	Time:	Qty:
hain of Custody Present hain of Custody Present hain of Custody Filled Out elinquished Signature & Sampler Na		Shorted	Time:	Qty:
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and King Waterial. Zebubble Wrap amples shorted to lab (If Yes, com chain of Custody Present chain of Custody Filled Out celinquished Signature & Sampler Na amples Arrived within Hold Time ush TAT requested on COC ufficient Volume orrect Containers Used ontainers Intact ample Labels match COC (sample IDs & one officient of the second of the second ontainers needing acid/base preservation tecked. I Containers needing preservation are four mpliance with EPA recommendation: Exceptions: VOA, Coliforn eadspace in VOA Viale? (Seme)	Dubble Bags None Other	Preservative: Lot #/Trace #:_ Initials:	Time:	Qty:
amples shorted to lab (If Yes, com chain of Custody Present chain of Custody Filled Out chain of Custody Filled Out complex Arrived within Hold Time custof The Coc containers Intact containers Intact containers needing acid/base preservation custof Coc (sample IDs & containers needing preservation are four compliance with EPA recommendation: Exceptions: VOA, Coliforn eadspace in VOA Vials? (>6mm): rio Blank Present:	Dubble Bags None Other	Shorted	Time:	Qty:
acking waterial: ZBubble Wrap amples shorted to lab (If Yes, com chain of Custody Present chain of Custody Filled Out celinquished Signature & Sampler Na amples Arrived within Hold Time ush TAT requested on COC ufficient Volume orrect Containers Used ontainers Intact ample Labels match COC (sample IDs & oblection) I containers needing acid/base preservation tecked. I Containers needing preservation are fou publication: Exceptions: VOA, Coliforn eadspace in VOA Vials? (>6mm): tip Blank Present:	Dubble Bags None Other	Preservative: Lot #/Trace #:_ Initials:	Time:	Qty:
acking waterial:Bubble wrap amples shorted to lab (If Yes, com chain of Custody Present thain of Custody Filled Out telinquished Signature & Sampler Na amples Arrived within Hold Time ush TAT requested on COC ufficient Volume orrect Containers Used ontainers Intact ample Labels match COC (sample IDs & oblection) I containers needing acid/base preservation tecked. I Containers needing acid/base preservation tecked. I Containers needing preservation are fou ompliance with EPA recommendation: Exceptions: VOA, Coliforn eadspace in VOA Vials? (>6mm): tip Blank Present: lient Notification/ Resolution: Person Contacted:	Debble Bags None Other	Shorted	Time:	Qty:
Chain of Custody Present Chain of Custody Present Chain of Custody Filled Out Chain of Custody Filled Out Containers Intact Containers Intact Containers Intact Containers needing acid/base preservation Containers needing preservation are fou compliance with EPA recommendation: Exceptions: VOA, Coliforn Leadspace in VOA Vials? (>6mm): Fillent Notification/ Resolution: Person Contacted: Comments/ Resolution (use back for Comments/ Comments/ Commen	Dubble Bags None Other	Shorted	Time:	Qty:
acking Material: ZBubble Wrap amples shorted to lab (If Yes, com chain of Custody Present chain of Custody Filled Out celinquished Signature & Sampler Na amples Arrived within Hold Time tush TAT requested on COC ufficient Volume orrect Containers Used ontainers Intact ample Labels match COC (sample IDs & on the cked. I Containers needing acid/base preservation necked. I Containers needing preservation are four public with EPA recommendation: Exceptions: VOA, Coliforn eadspace in VOA Vials? (>6mm): rip Blank Present: lient Notification/ Resolution: Person Contacted: Omments/ Resolution (use back for CACAA	Dubble Bags None Other_ plete) Shorted Date:	Shorted	Time:	Qty:
acking waterial. ZBubble Wrap amples shorted to lab (If Yes, com chain of Custody Present chain of Custody Filled Out celinquished Signature & Sampler Na amples Arrived within Hold Time ush TAT requested on COC ufficient Volume orrect Containers Used ontainers Intact ample Labels match COC (sample IDs & onlection) I containers needing acid/base preservation lecked. I Containers needing preservation are four impliance with EPA recommendation: Exceptions: VOA, Coliforn eadspace in VOA Vials? (>6mm): ip Blank Present: lient Notification/ Resolution: Person Contacted: Dimments/ Resolution (use back for Different State Stat	Dubble Bags None Other	Shorted	Time:	
Samples shorted to lab (If Yes, com Chain of Custody Present Chain of Custody Filled Out Chain of Custody Filled Out Complex Arrived within Hold Time Custod Containers Needed on COC Containers Intact Containers Intact Containers Intact Containers needing acid/base preservation Exceptions: VOA, Coliforn eadspace in VOA Vials? (>6mm): rip Blank Present: Itent Notification/ Resolution: Person Contacted: OMMENTS/ Resolution (use back fo	Dubble Bags None Other	Shorted	Time:	



www.pacelabs.com

Report Prepared for:

Bo Garcia PASI Florida 8 East Tower Circle Ormond Beach FL 32174

REPORT OF LABORATORY ANALYSIS FOR 2,3,7,8-TCDD

Report Summary:

This report contains results of one drinking water sample analyzed to determine 2,3,7,8-TCDD content. This sample was analyzed according to Method 1613 by High Resolution Gas Chromatography/High Resolution Mass Spectrometry.

Report Prepared Date:

July 28, 2017

Pace Analytical Services, Inc. 1700 Elm Street Minneapolis, MN 55414 Phone: 612.607.1700 Fax: 612.607.6444

Report Information:

Pace Project #: 10396111 Sample Receipt Date: 07/18/2017 Client Project #: 35324054 Client Sub PO #: N/A State Cert #: 11647

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 Drinking Water Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Sarah Platzer, your Pace Project Manager.

This report has been reviewed by:

July 28, 2017 Sarah Platzer, Project Manager 612-607-6451 (612) 607-6444 (fax) sarah.platzer@pacelabs.com



Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.



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Pace Analytical Services, Inc. 1700 Elm Street - Suite 200 Minneapolis, MN 55414

> Tel: 612-607-1700 Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Montana	CERT0092
Alabama	40770	Nebraska	NE-OS-18-06
Alaska	MN00064	Nevada	MN00064
Alaska	UST-078	New Jersey (NE	MN002
Arizona	AZ0014	New York (NEL	11647
Arkansas	88-0680	New hampshire	2081
CNMI Saipan	MP0003	North Carolina	27700
California	MN00064	North Carolina	530
Colorado	MN00064	North Dakota	R-036
Connecticut	PH-0256	Ohio	41244
EPA Region 8	8TMS-L	Ohio VAP	CL101
Florida (NELAP	E87605	Oklahoma	9507
Georgia (EDP)	959	Oregon (ELAP)	MN200001
Guam EPA	959	Oregon (OREL	MN300001
Hawaii	MN00064	Pennsylvania	68-00563
Idaho	MN00064	Puerto Rico	MN00064
Illinois	200011	South Carolina	74003001
Indiana	C-MN-01	Tennessee	TN02818
lowa	368	Texas	T104704192
Kansas	E-10167	Utah (NELAP)	MN00064
Kentucky	90062	Virginia	460163
Louisiana	03086	Washington	C486
Louisiana	MN00064	West Virginia #	9952C
Maryland	322	West Virginia D	382
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-L
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS



Pace Analytical Services, Inc. 1700 Elm Street - Suite 200 Minneapolis, MN 55414

> Tel: 612-607-1700 Fax: 612- 607-6444

Reporting Flags

- A = Reporting Limit based on signal to noise
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- I = Interference present
- J = Estimated value
- Nn = Value obtained from additional analysis
- P = PCDE Interference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X = %D Exceeds limits
- Y = Calculated using average of daily RFs
- * = See Discussion

Chain of Custody

Chain of Custody				مى	τ.							50 ·	A			2	e P	2 ace	1039 <i>Anal</i> y	6 \\
교 90 Workorder: 35324054 W	Vorkorder	Name:LBG, Inc	42001269		the second	C)wne	r Rec	eived	Date	9: 9:	7/14/2	2017	Res	ults I	Requ	estec	i By:	. 7/28/	habs.com /2017
Bo Garcia Pace Analytical Ormond Beach 8 East Tower Circle Ormond Beach, FL 32174 Phone (386)672-5668		Pace 1700 Suite Minne Phone	Analytical Minr Elm Street SE 200 eapolis, MN 55 e (612)607-170	esota 414 0	perves	served	Cons		EPA 1613				1860 North N							
Item Sample ID		Date/Marcel		Matrix	Cubre	23										·		d de la	LAB USE	
1 C-12	P\$	7/13/2017 10:20	35324054001	Drinking	2	_		_	<u> </u>										_001	
3															+					
4																				
5	a sang kana na								- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1								e 14 milion	Waris :- 12	**	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
Transfers Released By		Date/Time	Received I	Зу	Þ.			Date/T	ime				21- A . 24-3				×.	Trail Brack	and the second	
1 Macy	7/17	17 1700		Z	/pA	LE	7/	z/17	9:	35										
	•		4-					-	r	4										
Cooler Temperature on Rece	ipt 2.5	°C Cus	tody Seal	r or (N	$\mathbf{\Sigma}$	R	lecei	ved o	on Ice)or	N			Sam	ples	Intac	<u>ቱ </u>	or N	

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

Saturday, July 15, 2017 11:23:30 AM

	Document Name:	Document Revised: 19Dec2016
Pace Analytical*	Sample Condition Upon Recei	ipt Form Page 1 of 2
	F-MN-L-213-rev. 20	Pace Minnesota Quality Office
	I	
Sample Condition Upon Receipt Pace Orma	and Beach	# WO#:10396111
Courier: "VFed Ex UPS	USPS Client	
Commercial Pace SpeeD	ee Other:	
Tracking Number: 7422-5590	7-7564	
Custody Seal on Cooler/Box Present?	No Seals Intact?	Yes Wo Optional: Proj. Due Date: Proj. Name:
Packing Material: 🗌 Bubble Wrap 🕅 Bubble	e Bags 🗌 None 🙀 Other: 📜	Temp Blank? Yes
Thermometer 151401163 Used: 151401164	Type of Ice: Wet	et Blue None Samples on ice, cooling process has begun
Cooler Temp Read (°C): 25 Cooler Ter	mp Corrected (°C): 3.5	Biological Tissue Frozen? 🗌 Yes 🔲 No 🎉 N/A
Temp should be above freezing to 6°C Correction	on Factor: Turne Date	te and Initials of Person Examining Contents: 7/18/15
USUA Regulated Soil (MA, water sample) Did samples originate in a quarantine zone within the !	United States: AL AR CA FL GA ID I	A. MS. Did samples originate from a foreign source (internationally
NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? If Yes to either question, fill ou	ut a Regulated Soil Checklist (F-MN	No including Hawaii and Puerto Rico)?
		COMMENTS:
Chain of Custody Present?	Ves 🗌 No	1.
Chain of Custody Filled Out?	es 🗌 No	2.
Chain of Custody Relinquished?	kres □No	3.
Sampler Name and/or Signature on COC?	Yes □No □N/A	4.
Samples Arrived within Hold Time?	Nes No	5.
Short Hold Time Analysis (<72 hr)?		6.
Rush Turn Around Time Requested?	Yes V No	7.
Sufficient Volume?		8.
Correct Containers Used?	ŽYes □No	9.
-Pace Containers Used?	ŹYes ∐No	
Containers Intact?		10.
Filtered Volume Received for Dissolved Tests?		11. Note if sediment is visible in the dissolved container
Sample Labels Match COC?		12.
-Includes Date/Time/ID/Analysis Matrix:	TA	
All containers needing acid/base preservation have be		12 Duble Duse Duse Positive for Res.
checked? All containers needing preservation are found to be in	□Yes □No 🔏 N/A	Sample #
compliance with EPA recommendation?	•	Sample #
(HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH>12 Cyan	iide) □Yes □No 🔊 N/A	
DRO/8015 (water) and Dioxin.		completed: preservative:
Headspace in VOA Vials (>6mm)?		14.
Trip Blank Present?	Yes No XN/A	15.
Trip Blank Custody Seals Present?		
Pace Trip Blank Lot # (if purchased):		
CLIENT NOTIFICATION/RESOLUTION		Field Data Required? Yes No
Person Contacted:		Date/Time:
Comments/Resolution:		
	m	7/40/0047

Project Manager Review: Date: 7/19/2017
Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).



Pace Analytical Services, LLC. 1700 Elm Street - Suite 200 Minneapolis, MN, 55414

Drinking Water Analysis Results 2,3,7,8-TCDD -- USEPA Method 1613B

Tel: 612-607-1700 Fax: 612-607-6444

Sample IDC-12			Date Collecte	ed07/13/2017					
Client PASI Flo	rida		Date Received07/18/2017						
Lab Sample ID 3532405	4001		Date Extracte	ed07/25/2017					
	Sample C-12	Method Blank	Lab Spike	Lab Spike Dup					
[2,3,7,8-TCDD]	ND	ND							
EDL	2.2 pg/L	3.1 pg/L							
2,3,7,8-TCDD Recovery			102%	118%	-				
Spike Recovery Limit			73-146%	73-146%					
RPD			14	1.4%					
IS Recovery	56%	65%	68%	71%	-				
IS Recovery Limits	31-137%	31-137%	25-141%	25-141%					
CS Recovery	82%	82%	74%	90%					
CS Recovery Limits	42-164%	42-164%	37-158%	37-158%					
Filename	Y170727B_30	Y170727B_14	Y170727B_12	Y170727B_13	-				
Analysis Date	07/28/2017	07/27/2017	07/27/2017	07/27/2017					
Analysis Time	06:21	22:43	21:45	22:14					
Analyst	SMT	SMT	SMT	SMT					
Volume	0.941L	1.010L	1.048L	1.047L					
Dilution	NA	NA	NA	NA					
ICAL Date	07/27/2017	07/27/2017	07/27/2017	07/27/2017					
CCAL Filename	Y170727B_11	Y170727B_11	Y170727B_11	Y170727B_11					

! = Outside the Control Limits

ND = Not Detected

Lagan M. Uk Analyst:

EDL = Estimated Detection Limit

Limits = Control Limits from Method 1613 (10/94 Revision), Tables 6A and 7A

RPD = Relative Percent Difference of Lab Spike Recoveries

IS = Internal Standard [2,3,7,8-TCDD- ${}^{13}C_{12}$]

CS = Cleanup Standard [2,3,7,8-TCDD-³⁷Cl₄]

Project No.....10396111

C-14



ANALYTICAL REPORT

Job Number: 420-123595-3 SDG Number: Clovewood Job Description: LBG, Inc.

For: Leggette, Brashears & Graham, Inc. 4 Research Drive Shelton, CT 06464

Attention: Stacy Stieber

Debra 60

Debra Bayer Customer Service Manager dbayer@envirotestlaboratories.com 08/24/2017

NYSDOH ELAP does not certify for all parameters. EnviroTest Laboratories does hold certification for all analytes where certification is offered by ELAP unless otherwise specified in the Certification Information section of this report. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval of the laboratory. EnviroTest Laboratories Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our laboratory. All questions regarding this report should be directed to the EnviroTest Customer Service Representative.

Page 1 of 17

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554



METHOD SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-3 SDG Number: Clovewood

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7 Sample Filtration Total Metals Digestion for 200.7 200 Series Drinking Water Prep Determination Step	EnvTest EnvTest EnvTest EnvTest	EPA 200.7 Re	ev 4.4 FILTRATION EPA 200.7 EPA 200.7/200.8
ICPMS Metals by 200.8 200 Series Drinking Water Prep Determination Step Total Metals Digestion for 200.8	EnvTest EnvTest EnvTest	EPA 200.8 Re	ev.5.4 EPA 200.7/200.8 EPA 200.8
Mercury in Water by CVAA Digestion for CVAA Mercury in Waters	EnvTest EnvTest	EPA 245.1 Re	ev.3.0 EPA 245.1
Anions by Ion Chromatography	EnvTest	MCAWW 300	0.0
Anions by Ion Chromatography	EnvTest	EPA 300.0 Re	ev. 2.1
EPA 504.1 EDB	Pace	EPA 504.1	
EPA 505 Pesticide/PCB	Pace	EPA 505	
EPA 515 Chlorinated Acids	Pace	EPA 515	
Purgeable Organic Compounds in Water by GC/MS	EnvTest	EPA-DW 524	.2
EPA 525.2 Semivolatile Organics	Pace	EPA 525.2	
EPA 531.1 Carbamate Pesticides in Drinki	Pace	EPA 531.1	
EPA 900 Series GA/GB/RA226/RA228/Gamma	Radios	EPA 900	
Uranium	Radios	STL-STL EPA	A
Heterotropic Plate Count	EnvTest	IDEXX SIMPI	LATE
Odor, Threshold Test	EnvTest	SM20 SM 21	50B
Alkalinity, Titration Method	EnvTest	SM21 SM 23	20B-97,-11
Corrosivity LSI Calculation	EnvTest	SM20 SM 23	30B
Hardness by Calculation	EnvTest	SM20 SM 23	40B-97,-11
рН	EnvTest	SM19 SM 45	00 H+ B
Nitrite by Colormetric	EnvTest	SM20 SM 45	00 NO2 B
Total Coliform and Escherichia coli by Colilert - Presence/Absence	EnvTest	SMWW SM 9	0223
Apparent Color	EnvTest	SM21 SM212	20B-01,11
Turbidity	EnvTest	SM21 SM213	30B-01,11
Total Dissolved Solids (Dried at 180 °C)	EnvTest	SM21 SM254	IOC-97,11
Cyanide, Total: Colorimetric Method Cyanide: Distillation	EnvTest EnvTest	SM21 SM450	00 CN E-99 SM21 SM 4500 CN C
General Sub Contract Method	Pace	Subcontract	
General Sub Contract Method	Radios	Subcontract	

METHOD SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-3 SDG Number: Clovewood

Descript	ion	Lab Location	Method	Preparation Method

Lab References:

EnvTest = EnviroTest

Pace = Pace Analytical - Ormond Beach

Radios = Pace Analytical Services, Inc.

Method References:

EPA = US Environmental Protection Agency

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

IDEXX =

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM19 = "Standard Methods For The Examination Of Water And Wastewater", 19Th Edition, 1995."

SM20 = "Standard Methods For The Examination Of Water And Wastewater", 20th Edition."

SM21 = "Standard Methods For The Examination Of Water And Wastewater", 21st Edition

SMWW = "Standard Methods for the Examination of Water and Wastewater"

STL-STL = Severn Trent Laboratories, St. Louis, Facility Standard Operating Procedure.

METHOD / ANALYST SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-3 SDG Number: Clovewood

Method	Analyst	Analyst ID
EPA-DW 524.2	Andersen, Eric C	ECA
EPA 200.7 Rev 4.4	Sirico, Derek	DS
EPA 200.8 Rev.5.4	Sirico, Derek	DS
EPA 245.1 Rev.3.0	Sirico, Derek	DS
SM20 SM 2340B-97,-11	Sirico, Derek	DS
MCAWW 300.0	Luis, Carlos	CL
EPA 300.0 Rev. 2.1	Luis, Carlos	CL
IDEXX SIMPLATE	O'Driscoll, Kate	КО
SM20 SM 2150B	O'Driscoll, Kate	КО
SM21 SM 2320B-97,-11	Tramantano, Matt	MT
SM20 SM 2330B	Cusack, Renee	RC
SM19 SM 4500 H+ B	O'Driscoll, Kate	КО
SM20 SM 4500 NO2 B	Grant, Ameya	AG
SMWW SM 9223	Grant, Ameya	AG
SM21 SM2120B-01,11	O'Driscoll, Kate	КО
SM21 SM2130B-01,11	O'Driscoll, Kate	КО
SM21 SM2540C-97,11	O'Driscoll, Kate	КО
SM21 SM4500 CN E-99	Osborne, Amy	AO

SAMPLE SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-3 SDG Number: Clovewood

			Date/Time	Date/Time
Lab Sample ID	Client Sample ID	Client Matrix	Sampled	Received
420-123595-3	C - 14	Drinking Water	07/13/2017 0840	07/13/2017 1000

Client Sample ID:	C - 14			Sdg Number: Clovewood
Lab Sample ID: Client Matrix:	420-123595-3 Drinking Water		Date Sample Date Receive	nd: 07/13/2017 0840 ed: 07/13/2017 1000
	524	.2 Purgeable Organic Compounds in	Water by GC/MS	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	524.2 N/A 1.0 07/14/2017 1916 N/A	Analysis Batch: 420-112453	Instrument ID: Lab File ID: Initial Weight/Volu Final Weight/Volu	Agilent 7890A/5975C X071420.D me: 5 mL me: 5 mL
Analyte		Result (ug/L)	Qualifier	RL
1 1 1 2-Tetrachloroe	thane	<0.500		0.500
1.1.1-Trichloroethar	10	<0.500		0.500
1 1 2 2-Tetrachloroe	thane	<0.500		0.500
1 1 2-Trichloroethan	ne.	<0.500		0.500
1 1-Dichloroethane		<0.500		0.500
1 1-Dichloroethene		<0.500		0.500
1,1-Dichloropropene	۵	<0.500		0.500
1 2 3-Trichlorobenzo	ene	<0.500		0.500
1 2 3-Trichloropropa	ane	<0.500		0.500
1 2 4-Trichlorobenzo	ene	<0.500		0.500
1 2 4-Trimethylbenz	zene	<0.500		0.500
1 2-Dichloroethane		<0.500		0.500
1 2-Dichlorobenzen	e	<0.500		0.500
1.2-Dichloropropane	9	<0.500		0.500
1.3-Dichloropropane	9	<0.500		0.500
1,4-Dichlorobenzen	e	<0.500		0.500
2,2-Dichloropropane	e	<0.500		0.500
Benzene		<0.500		0.500
Bromobenzene		<0.500		0.500
Bromochloromethar	ne	<0.500		0.500
Bromomethane		<0.500		0.500
n-Butylbenzene		<0.500		0.500
cis-1,2-Dichloroethe	ene	<0.500		0.500
cis-1,3-Dichloroprop	bene	<0.500		0.500
Carbon tetrachloride	9	<0.500		0.500
Chlorobenzene		<0.500		0.500
Chloroethane		<0.500		0.500
Chloromethane		<0.500		0.500
Dibromomethane		<0.500		0.500
Ethylbenzene		<0.500		0.500
Dichlorodifluoromet	hane	<0.500		0.500
Hexachlorobutadier	ne	<0.500		0.500
Isopropylbenzene		<0.500		0.500
p-Isopropyltoluene		<0.500		0.500
Methylene Chloride		<0.500		0.500
m-Xylene & p-Xylen	ie	<1.00		1.00
Methyl tert-butyl eth	ier	<0.500		0.500
o-Xylene		<0.500		0.500
Tetrachloroethene		<0.500		0.500
Toluene		<0.500		0.500
trans-1,2-Dichloroet	thene	<0.500		0.500
trans-1,3-Dichloropr	ropene	<0.500		0.500
Trichloroethene		<0.500		0.500
tert-Butylbenzene		<0.500		0.500

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-3

Analytical Data

Client: Leggette, Brashears & Graham, Inc.			Joł	o Number: 420-123595-3
	0.44			Sdg Number: Clovewood
Client Sample ID:	C - 14			
Lab Sample ID:	420-123595-3		Date Sampled:	07/13/2017 0840
Client Matrix:	Drinking Water		Date Received:	07/13/2017 1000
	52	24.2 Purgeable Organic Compounds in	Nater by GC/MS	
Method:	524.2	Analysis Batch: 420-112453	Instrument ID: Agi	lent 7890A/5975C
Preparation:	N/A		Lab File ID: X07	71420.D
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/14/2017 1916		Final Weight/Volume:	5 mL
Date Prepared:	N/A			
Analyte		Result (ug/L)	Qualifier	RL
Trichlorofluorometha	ane	<0.500		0.500
Vinyl chloride		<0.500		0.500
Xylenes, Total		<1.50		1.50
Styrene		<0.500		0.500
sec-Butylbenzene		<0.500		0.500
1,3,5-Trimethylbenz	ene	<0.500		0.500
N-Propylbenzene		<0.500		0.500
1,3-Dichlorobenzen	e	<0.500		0.500
2-Chlorotoluene		<0.500		0.500
4-Chlorotoluene		<0.500		0.500
Surrogate		%Rec	Accepta	nce Limits
4-Bromofluorobenze	ene	94	71 - 12	20
Toluene-d8 (Surr)		110	79 - 12	21
1,2-Dichloroethane-	d4 (Surr)	122	70 - 12	28

Client: Leggette, Brashears & Graham, Inc.

C - 14

Client Sample ID:

Job Number: 420-123595-3 Sdg Number: Clovewood

Lab Sample ID: Client Matrix:	420-123595-3 Drinking Water		Date Sampled: Date Received:	07/13/2017 0840 07/13/2017 1000
		200.7 Rev 4.4 ICP Metals by	200.7	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.7 Rev 4.4 200.7/200.8 1.0 07/18/2017 1839 07/17/2017 1800	Analysis Batch: 420-112534 Prep Batch: 420-112519	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Thermo ICP N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Iron Manganese Sodium Zinc		1190 281 16500 37.0	g	60.0 10.0 200 20.0
		200.7 Rev 4.4 ICP Metals by 200.7	7-Dissolved	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.7 Rev 4.4 200.7 1.0 07/19/2017 1841 07/17/2017 1505	Analysis Batch: 420-112597 Prep Batch: 420-112501	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Thermo ICP N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Iron Manganese		<60.0 285		60.0 10.0
		200.8 Rev.5.4 ICPMS Metals b	oy 200.8	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.8 Rev.5.4 200.7/200.8 1.0 07/18/2017 1726 07/17/2017 1800	Analysis Batch: 420-112536 Prep Batch: 420-112520	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Perkin Elmer ELAN N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Lead Silver Arsenic Beryllium Cadmium Chromium Nickel Antimony Thallium Barium		<1.00 <1.00 <1.40 <0.300 <1.00 <7.00 0.871 <0.400 <0.300 13.7 2.00		1.00 1.00 1.40 0.300 1.00 7.00 0.500 0.400 0.300 2.00

Client: Leggette, Brashears & Graham, Inc.

Client Sample ID:

C - 14

Job Number: 420-123595-3 Sdg Number: Clovewood

Lab Sample ID: Client Matrix:	420-123595-3 Drinking Water		Date Sampled: Date Received:	07/13/2017 0840 07/13/2017 1000
		245.1 Rev.3.0 Mercury in Water	r by CVAA	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	245.1 Rev.3.0 245.1 1.0 07/18/2017 1213 07/17/2017 1115	Analysis Batch: 420-112511 Prep Batch: 420-112451	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Perkin Elmer FIMS N/A 25 mL 25 mL
Analyte		Result (ug/L)	Qualifier	RL
Mercury		<0.200		0.200
		SM 2340B-97,-11 Hardness by C	Calculation	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	SM 2340B-97,-11 N/A 1.0 07/18/2017 1839 N/A	Analysis Batch: 420-112542	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	None N/A
Analyte		Result (mg/L)	Qualifier	RL
Calcium hardness	s as calcium carbonate	60.5		1.25

EnviroTest Laboratories, Inc.

Analytical Data

Job Number: 420-123595-3 Sdg Number: Clovewood

Client: Leggette, Brashears & Graham, Inc.

		Biology			
Client Sample ID:	C - 14				
Lab Sample ID: Client Matrix:	420-123595-3 Drinking Water		Date Sampled: Date Received:	07/1 07/1	3/2017 0840 3/2017 1000
Analyte	Result	Qual Units		Dil	Method
Coliform, Total	Absent Anly Batch: 420-112380	CFU/100mL Date Analyzed 07/13/2017 1510		1.0	SM 9223
Escherichia coli	Absent Anly Batch: 420-112380	CFU/100mL Date Analyzed 07/13/2017 1510		1.0	SM 9223
Analyte	Result	Qual Units	RL	Dil	Method
Heterotrophic Plate Co	unt 42.0 Anly Batch: 420-112413	CFU/mL Date Analyzed 07/13/2017 1550	2.00	1.0	SIMPLATE

General Chemistry

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-3 Sdg Number: Clovewood

		General Chemistry			
Client Sample ID:	C - 14				
Lab Sample ID: Client Matrix:	420-123595-3 Drinking Water		Date Sampled: Date Received:	07/1 07/1	3/2017 0840 3/2017 1000
Analyte	Result	Qual Units	RL	Dil	Method
Nitrate as N	<0.250 Anly Batch: 420-112412	mg/L Date Analyzed 07/13/2017 1644	0.250	1.0	300.0
Analyte	Result	Qual Units		Dil	Method
Langelier Index	-0.690	NONE		1.0	SM 2330B

Anly Batch: 420-112765 Date Analyzed 07/26/2017 1302

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-3 Sdg Number: Clovewood

Client Sample ID:	C - 14						
Lab Sample ID: 4 Client Matrix: 1	420-123595-3 Drinking Water				Date Sampled: Date Received:	07/13 07/13	3/2017 0840 3/2017 1000
Analyte	Result	Qual L	Jnits		RL	Dil	Method
Alkalinity	123		ng/l		5.00	1.0	SM 2320B-07 -11
Лікашіцу	Anly Batch: 420-112669	Date Analyzed	07/21/2017	1730	3.00	1.0	31123200-37,-11
Total Dissolved Solids	152 Anly Batch: 420-112602	n Date Analyzed	ng/L 07/20/2016	1700	5.00	1.0	SM2540C-97,11
Chloride	2.45	r	na/L		1.50	1.0	300.0 Rev. 2.1
	Anly Batch: 420-112412	Date Analyzed	07/13/2017	1644			
Sulfate	12.3	n	ng/L		5.00	1.0	300.0 Rev. 2.1
	Anly Batch: 420-112412	Date Analyzed	07/13/2017	1644			
Fluoride	<0.500	r	ng/L		0.500	1.0	300.0 Rev. 2.1
	Anly Batch: 420-112412	Date Analyzed	07/13/2017	1644			
Cyanide, Total	<0.00500	n	ng/L		0.00500	1.0	SM4500 CN E-99
	Anly Batch: 420-112524	Date Analyzed	07/18/2017	1400			
	Prep Batch:	Date Prepared:	07/14/2017	1300			
Apparent Color	20.0	g F	Pt-Co	1040	2.00	1.0	SM2120B-01,11
	Anly Batch: 420-112486	Date Analyzed	07/13/2017	1048			
pH@color measuremen	t 7.19	5	SU		2.00	1.0	SM2120B-01,11
	Anly Batch: 420-112486	Date Analyzed	07/13/2017	1648			
Turbidity	11.6	g N	NTU		0.100	1.0	SM2130B-01,11
	Anly Batch: 420-112420	Date Analyzed	07/13/2017	1812			
Odor	1.00	Т	Г.О.N.		1.00	1.0	SM 2150B
	Anly Batch: 420-112485	Date Analyzed	07/13/2017	1800			
Temp @ Odor Measure	ment 60.0	Γ	Degrees C		5.00	1.0	SM 2150B
	Anly Batch: 420-112485	Date Analyzed	07/13/2017	1800			
рН	7.19	н з	SU		0.200	1.0	SM 4500 H+ B
	Anly Batch: 420-112487	Date Analyzed	07/13/2017	1747			
Temp @ pH Measureme	ent 17.1	C	Degrees C		5.00	1.0	SM 4500 H+ B
	Anly Batch: 420-112487	Date Analyzed	07/13/2017	1747			
Nitrite as N	<0.0100	n	ng/L		0.0100	1.0	SM 4500 NO2 B
	Anly Batch: 420-112510	Date Analyzed	07/14/2017	1047			

General Chemistry

DATA REPORTING QUALIFIERS

Client: Leggette, Brashears & Graham, Inc.

Job Number: Sdg Number: Clovewood

Lab Section	Qualifier	Description
Metals		
	9	Result fails applicable NYS drinking water standards
General Chemistry		
	g	Result fails applicable NYS drinking water standards
	Η	Sample was prepped or analyzed beyond the specified holding time

Client: Leggette, Brashears & Graham, Inc.

Job Number:

Sdg Number: Clovewood

The following analytes are Not Part of the ELAP scope of accreditation

Sulfur, Tungsten, Silicon, Bicarbonate Alkalinity, 7 Day BOD 5210C, 28 Day BOD, Soluble BOD, Carbon Dioxide, Carbonate Alkalinity, CBOD Soluble, Chlorine, Cyanide (WAD), Ferrous Iron, Ferric Iron, Total Nitrogen, Total Organic Nitrogen, Dissolved Oxygen, pH, Phenolphthalein Alkalinity, Solids (Fixed), Solids (Percent), Solids (Percent Moisture) , Solids (Percent Volatile), Solids (Volatile Suspended), Temperature, TKN (Soluble), COD (Soluble), Total Inorganic Carbon, Volatile Acids as Acetic Acid, 2-Aminopyridine, 3-Picoline, 1-Methyl-2-pyrrilidinone, Aziridine, Dimethyl sulfoxide, 1-Chlorohexane, Iron Bacteria, Salmonella, & Sulfur Reducing Bacteria.

The following analytes are Not Part of ELAP Potable Water scope of accreditation

Cobalt (200.7, 200.8), Tin (200.7), Strontium (200.7), Gold (200.7), Platinum (200.7), Palladium (200.7), Titanium (200.7), Phosphorus (365.3), Nitrate-Nitrite (10-107-4-1C, 353.2), m-Xylene & p-Xylene (502.2, 524), Naphthalene (502.2), o-Xylene (502.2, 524), & Fecal Coliform (9222D).

The following analytes are Not Part of ELAP Solid and Hazardous Waste scope of accreditation

Ammonia (SM 4500NH3G), TKN (351.2), Phosphorus (365.3), 1,2-Dichloro-1,1,2-trifluoroethane (8260), & Chlorodifluoromethane (8260).

The following analytes are Not Part of ELAP Non Potable Water scope of accreditation

Dissolved Organic Carbon (5310C), Mecoprop (8151A), & MCPA (8151A).

Definitions and Glossary

Client: Leggette, Brashears & Graham, Inc.

Job Number:

Sdg Number: Clovewood

Abbreviation	These commonly used abbreviations may or may not be present in this report.																		
%R	Percent Recovery																		
DL, RA, RE	Indicates a Dilution, Reanalysis or Reextraction.																		
EPA	United States Environmental Protection Agency																		
MDL	Method Detection Limit - an estimate of the minimum amount of a substance that an analytical process can reliably detect. A MDL is analyte- and matrix-specific and may be laboratory-dependent.																		
ND	Not detected at the reporting limit (or MDL if shown).																		
QC	Quality Control																		
RL	Reporting Limit - the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.																		
RPD	Relative Percent Difference - a measure of the relative difference between two points																		
EnviroTest Laboratories,	₽ Inc.	CHA Lab Name Address & Phone	Envl 315	O roTe Fulle) F st La	CU borato Avenu	ST ories e, Nev	'OI	DY gh, Ne	w Yo	rk 128	12 150 84	30	57 -0890	5	۴ / /	3	REPORT# (L	.ab Use Only)
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PROJECT REFERENCE Clovewood	PROJECT NO.	PROJECT LOCATION		MATRI	x					REQ	JIRED	ANAL	YSES					PAGE 1 of	1
ENVIROTEST PROJECT MANAGER Debra Bayer						A C/G kit	Vials HCI	um Thio.	um Thio.	Ma2SO3	itric Acid	io(liquid)	er Plastic	ium Hyd.	ic Sterile	tic Nitric	s Unpres		TURNAROUND TIME
	203-929-8555		DICATE	tater) Indicat		MM	40ml	10ml Sodi	nber Sodi	mber HC	Plastic N	n/Sod.Th	Lite	astic Sod	5ml Plast	Liter Plas	40ml Viab	NORMAL	×
CLIENT ADDRESS		* <u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	GRAB (G) #	W (Waste M	0				250mt An	Liter A	250ml	40mi Mo		250ml Pt	1			QUICK VERBAL	······································
4 Research Drive, Suite 204, Sheltor COMPANY CONTRACTING THIS WORK (# applicable):	n, CT 06484	1	ISITE (C) OR	ing Water) or	DR SEMISOL Specify		L	L	<u> </u>	L	L	L	L		L	L	L	#OF COOLERS	
SAMPLE DATE TIME	SAMPLE IDENTIFICA	TION	OMPO) (Drink	SOLD SOLD			~	NUMBE	ROF	CONT	AINER	S SUB	MITTE	D				REMARKS
7/13/17 840	P-14			D			3	2	1	2	1	2	4	1	2	5	2	Table 8B (Sb,A	s,Ba,Be,Cd,Cr,Cn,Hg,Nl
	i/	······································		Ē.		1												Se,TI,F)	
							<u> </u>			<u> </u>							<u> </u>	Table 8C (NO3,	NO2)
						2-Lite	r Ambe	r Unpre	es.									Table 8D (CI,Fe	e,Mn,Ag,Na,SO4,Zn,Odor,Color)
				\mathbf{T}		1-250	ml Amt	oer Unp	ores.									524.2 (POC,MT	BE,Vinyl Chloride)
				\mathbf{V}		3-250	ml Plas	stic Ung	pres. (r	no air)						1		SOCs (504,508	,515,525,531,547,548,549,Dioxin)
						2-40n	ni Ambe	er Sodi	um Thi	o.								Additional Tes	ts (Total coliform
				1		1-500	ml Aml	ber Soc	dium T	nio.						1		thru Zinc)	
				1		1-Lite	r Ambe	r Plast	ic Sodi	um Th	lo.&H2	SO4						Radio(Gross A	Ipha/Beta,Radium-226/228,Uranium)
						2-Lite	r Ambe	er Sodiu	um Thi	0.								Radon	· · · · · · · · · · · · · · · · · · ·
VV	V			V				<u> </u>	Τ		<u> </u>						1	Dissolved Fe,	Mn
Δ			Π																
									Γ							Γ			
RELINGUISTED BY: (SIGNATURE)	COMPANY	DATE //3/17		IY.	3	REĈI	EIVED	BY: (SI	IGNAT	URE)					COMP	ANY		DATE	TIME .
SAMF/JEDBY: (91GHATCHI)	COMPANY LBG	7/13/17		34	0	RECE	IVED	BY: (S	IGNAT	URE)					COMP	ANY		DATE	TIME
	COMPANY /		TIMI			RECI	IVED	BY: (S	IGNAT	URE)					COMP	ANY		DATE	TIME
SUBCONTACT: PACE-SOCs, F	Radio, Radon; ASI-M	PA/Crypto/Giaro	lla							2	1210	Ζ							
RECEIVED FOR LABORATORY BY:	711317 1143	CUSTODY INTACT YES NO	3.	er Ter 52	mp:	RU		RY RE	MARK	8:	ICE	P	н	_ CL2		Revel	wed by)	,
	<u> </u>																		

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-3 SDG Number: Clovewood

Login Number: 123595

Question	T/F/NA	Comment
Samples were collected by ETL employee as per SOP-SAM-1	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is recorded.	True	3.5C
Cooler Temp. is within method specified range.(0-6 C PW, 0-8 C NPW, or BAC <10 C	True	
If false, was sample received on ice within 6 hours of collection.	NA	
Based on above criteria cooler temperature is acceptable.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	False	рН
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	



Pace Analytical Services, LLC 1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

August 03, 2017

Ms. Debra Bayer EnviroTest Laboratories, Inc. 315 Fullerton Avenue Newburgh, NY 12550

RE: Project: 42001269 Pace Project No.: 30224098

Dear Ms. Bayer:

Enclosed are the analytical results for sample(s) received by the laboratory on July 14, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sugnalylillins

Jacquelyn Collins jacquelyn.collins@pacelabs.com (724)850-5612 Project Manager

Enclosures

cc: Janine Rader, EnviroTest Laboratories, Inc.



Pace Analytical www.pacelabs.com

Pace Analytical Services, LLC 1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

CERTIFICATIONS

 Project:
 42001269

 Pace Project No.:
 30224098

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601 L-A-B DOD-ELAP Accreditation #: L2417 Alabama Certification #: 41590 Arizona Certification #: AZ0734 Arkansas Certification California Certification #: 04222CA Colorado Certification Connecticut Certification #: PH-0694 **Delaware Certification** Florida/TNI Certification #: E87683 Georgia Certification #: C040 **Guam Certification** Hawaii Certification Idaho Certification **Illinois Certification** Indiana Certification Iowa Certification #: 391 Kansas/TNI Certification #: E-10358 Kentucky Certification #: 90133 Louisiana DHH/TNI Certification #: LA140008 Louisiana DEQ/TNI Certification #: 4086 Maine Certification #: PA00091 Maryland Certification #: 308 Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification Missouri Certification #: 235

Montana Certification #: Cert 0082 Nebraska Certification #: NE-05-29-14 Nevada Certification #: PA014572015-1 New Hampshire/TNI Certification #: 2976 New Jersey/TNI Certification #: PA 051 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190 Oregon/TNI Certification #: PA200002 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282 South Dakota Certification Tennessee Certification #: TN2867 Texas/TNI Certification #: T104704188-14-8 Utah/TNI Certification #: PA014572015-5 USDA Soil Permit #: P330-14-00213 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 460198 Washington Certification #: C868 West Virginia DEP Certification #: 143 West Virginia DHHR Certification #: 9964C Wisconsin Certification Wyoming Certification #: 8TMS-L



SAMPLE SUMMARY

30224098001	C-14 (420-123595-3)	Drinking Water	07/13/17 08:40	07/14/17 10:20
Lab ID	Sample ID	Matrix	Date Collected	Date Received
Pace Project No	o.: 30224098			
Project:	42001269			



SAMPLE ANALYTE COUNT

 Project:
 42001269

 Pace Project No.:
 30224098

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30224098001	C-14 (420-123595-3)	SM7500RnB-07	NEG	1
		EPA 900.0	NEG	2
		EPA 903.1	WRR	1
		EPA 904.0	VAL	1
		ASTM D5174-97	RMK	1



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 42001269

Pace Project No.: 30224098

Sample: C-14 (420-123595-3) PWS:	Lab ID: 302240980 Site ID:	001 Collected: 07/13/17 08:40 Sample Type:	Received:	07/14/17 10:20 N	/latrix: Drinking	Water
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radon	SM7500RnB-07	169.4 ± 33.7 (46.0) C:NA T:NA	pCi/L	07/15/17 06:01	10043-92-2	
Gross Alpha	EPA 900.0	1.75 ± 1.40 (2.53) C:NA T:NA	pCi/L	07/24/17 08:36	12587-46-1	
Gross Beta	EPA 900.0	1.77 ± 0.816 (1.42) C:NA T:NA	pCi/L	07/24/17 08:36	12587-47-2	
Radium-226	EPA 903.1	0.378 ± 0.494 (0.826) C:NA T:91%	pCi/L	07/26/17 12:51	13982-63-3	
Radium-228	EPA 904.0	0.624 ± 0.345 (0.665) C:73% T:90%	pCi/L	07/27/17 11:16	15262-20-1	
Total Uranium	ASTM D5174-97	0.258 ± 0.010 (0.193) C:NA T:NA	ug/L	08/03/17 16:23	7440-61-1	



Project:	42001269					
Pace Project No.:	30224098					
QC Batch:	265143	Analysis Method:	ASTM D517	4-97		
QC Batch Method:	ASTM D5174-97	Analysis Description:	D5174.97 To	otal Uranium KPA		
Associated Lab Sar	mples: 302240980	001				
METHOD BLANK:	1306496	Matrix: Water				
Associated Lab Sai	mples: 302240980	001				
Para	meter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Total Uranium		0.064 ± 0.004 (0.193) C:NA T:NA	ug/L	08/03/17 11:33		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	42001269					
Pace Project No.:	30224098					
QC Batch:	265053	Analysis Method:	SM7500RnE	3-07		
QC Batch Method:	SM7500RnB-07	Analysis Description:	7500Rn B R	adon		
Associated Lab Sar	mples: 30224098	001				
METHOD BLANK:	1305441	Matrix: Water				
Associated Lab Sar	mples: 30224098	001				
Parar	neter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radon		2.8 ± 18.8 (32.7) C:NA T:NA	pCi/L	07/15/17 02:40		-

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	42001269					
Pace Project No.:	30224098					
QC Batch:	265152	Analysis Method:	EPA 903.1			
QC Batch Method:	EPA 903.1	Analysis Description	n: 903.1 Radiur	n-226		
Associated Lab Sar	mples: 30224098	001				
METHOD BLANK:	1306510	Matrix: Water				-
Associated Lab Sar	mples: 30224098	001				
Parar	meter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radium-226		0.159 ± 0.312 (0.570) C:NA T:95%	pCi/L	07/26/17 12:14		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	42001269					
Pace Project No.:	30224098					
QC Batch:	265148	Analysis Method:	EPA 900.0			
QC Batch Method:	EPA 900.0	Analysis Description:	900.0 Gross	Alpha/Beta		
Associated Lab Sar	mples: 3022409	3001				
METHOD BLANK:	1306505	Matrix: Water				
Associated Lab Sar	mples: 3022409	3001				
Parar	neter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Gross Alpha		-0.333 ± 0.399 (1.52) C:NA T:NA	pCi/L	07/24/17 08:35		
Gross Beta		-0.362 ± 0.578 (1.62) C:NA T:NA	pCi/L	07/24/17 08:35		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	42001269						
Pace Project No.:	30224098						
QC Batch:	265158		Analysis Method:	EPA 904.0			
QC Batch Method:	EPA 904.0		Analysis Description:	904.0 Radiu	ım 228		
Associated Lab Sar	mples: 3022409	8001					
METHOD BLANK:	1306521		Matrix: Water				
Associated Lab Sa	mples: 3022409	8001					
Para	meter	Act ± Uno	: (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radium-228		0.0810 ± 0.316 (0.717) C:75% T:85%	pCi/L	07/27/17 11:14		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

 Project:
 42001269

 Pace Project No.:
 30224098

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

EnviroTest Laboratories, Inc.						
315 Fullerton Avenue		Chain of (Custody Reco	rd		EnviroTest
Newburgh, NY 12550 Phone (845) 562-0890 Fax (845) 562-0841						Laboratories Inc.
Client Information (Sub Contract Lab)	Sampler, et al	5 7/2/17 Bayer, [Jebra	Carrier Tracking	Na(s):	COC No: 420-9119 1
Client Contact Shipping/Receiving	Phone:	OZ E-Mail: dbayer@	genvirotestlaboratories.cor	E		age: Page 1 of 1
Сотралу: Pace Analytical Services, Inc.			Analy	vsis Requested		5TL Job #. 420-123595-3
Address: 1638 Roseytown Rd,Suites 2,3,4,	Due Date Requested: 7/27/2017					Preservation Codes:
City: Greensburg	TAT Requested (days):		8			A - HCL M - Hexane B - NaOH N - None C - Zo Acatoto O A ANOCO
State, Zip: PA, 15601			322 AF			0 - ZII ACELLE 0 - ASNAUZ <u>D - Nitrio Acid</u> P - Na204S E - NaHSO4 Q - Na2SO3
Phone:	PO#;		, 326/F			F - MeOH R - Na2S2SO3 G - Amchlor S - H2SO4
Email:	** 0.M	DI NO	(ð) AA\86 mulni		8	H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - Di Water V - MCAA
Project Name: LBG, Inc.	Project #: 42001269	<u>89)) 6</u>	19-011 0 GA/C 181 Ura 10 nob		ກອກໂຄ	K-EDTA W-ph 4.5 L-EDA Z-other (specify)
Site:	SSOW#:	Idmes	906 \TC 007 \TC 59 \TC		of con	Other:
Sample Identification Client ID (Lab ID)	Sample Date Time G⊒	mple Matrix 6 ype (www.matrix 6 ype secula, 10 comp, orwattion, 10 drab) securation, 10 orab)	MI2M mone MARTNODBUS MARTODBUS MARTNODBUS		oted MuM leto	/UT Sples
		reservation Code: X	5 5 5			special instructions/Note:
C - 14 (420-123595-3)	7/13/17 8:40	Water	××××		4	SVI SVI
				WO#:30	22409	0
Possible Hazard Identification	ison B	lioloaical	Sample Disposal (A fee	e may be assessed if s	amples are retain	ed longer than 1 month) ins For Months
Deliverable Requested: I, II, II, IV, Other (specify)			Special Instructions/QC F	Requirements:		
Empty Kit Relinquished by:	Date:		he:	Method of	f Shipment:	
	Date/Time:	Company	Received by A		Date/Time:	Company
Belinquished by: T	Date/Time;	Company	Received by:		Date/Time:	Company
LRelinquished by: Do	Date/Time:	Company	Received by:		Date/Time:	Company
Custody Seals Intact: Custody Seal No.: Φ Δ Yes Δ No			Cooler Temperature(s) °C	and Other Remarks;		

,

k L

Sample Condition Upon Rec	eipt	Pitt	spur	gn		30224(
<i>, Face Analytical</i> Client Name:	É	<u>í</u> nv	.not	rest Labos.	_ Project #_	wiener
	nt E 3 S	bom	nercia	I Pace Olher	L	Label ZA. IMS Login AM
$\operatorname{Trackdng} \# = \frac{1}{1 + 1 + 2 + 2 + 2 + 3 + 4}$		7	Ċ.	als Intest	∏no	
Custody Seal on Cooler/Box Present: L_yes		100	30			
Thermoineter Used	Тур	e of lo	:0: (<u>M</u>		- °C Final Tr	mn 3,5 °C
Cooler Temperature Observed Temp	<u>د ز</u>		· Co			······································
Temp should be above freezing to 5°C					Date and Ini	tals of person examining
Comments	Ye	s N	5 N/	A]	Cunterna	
Chain of Cuelody Present'	1	/		1.		·
Chain of Cusledy Filed Oul		1		2.		·······
Chain of Cuslody Failed State	17	·		3.		
Sampler Name & Signature on COC:		[/		4		
Sample Labels match COC:	[/			5.		
-tochides date/lime/ID Matrix:	~1					· · · · · · · · · · · · · · · · · · ·
Samples Arrived within Hold Time:	1	T		6		
Short Hold Time Analysis (<72hr remaining):	17			7		
Rush Turn Around Time Requested:		1		8	· · · · · · · · · · · · · · · · · · ·	
Sufficient Volume:	1			9.		
Correct Containers Used:	1			10.	·	
-Pace Containets Used:		1				
Containers Intact:	1			11	·····	
Orthophosphate field filtered				12	·	
Organic Samples checked for dechlorination:]		1	13.		
Fillered volume received for Dissolved lests			1	14		
All containers have been checked for preservation.			<u> </u>	15.		
All containers needing preservation are found to be in	1	-				
compliance with EPA recommendation.				Infilm) when 7. (Dale/lime of	
exceptions: VOA, coliform, TOC, O&G, Phenolics				completed Cl-f	preservalion	
				Lot # of added		
			1	16.		
leadspace in VOA Viais (>6mm);	•		1	17.		
Frip Blank Present:			1			
rip Blank Custody Seals Present Rad Aqueous Samples Screened > 0.5 mrem/hr		1		Initial when	Date: 7/14	1/17
······································		F		completeo; TVI		<u></u>
Ilent Notification/ Resolution:			Dalor	- Imet	Contacted E	y:
Person Contacled:	······		Date/ I	() IIC,		
Comments/ Resolution:			<u> </u>			
		•				
		<u>_</u>				

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of terrip, incorrect containers) *PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section

of the Workorder Edit Screen.

J:\QAQC\Master\Document Management\Sample Mgt\Sample Condition Upon Receipt Pittsburgh (C056-5 5July2017)



Pace Analytical Services, LLC 8 East Tower Circle Ormond Beach, FL 32174 (386)672-5668

August 07, 2017

Ron Bayer EnviroTest Laboratories Inc. 315 Fullerton Avenue Newburgh, NY 12550

RE: Project: LBG,Inc 42001269 Pace Project No.: 35324055

Dear Ron Bayer:

Enclosed are the analytical results for sample(s) received by the laboratory on July 15, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Bo Garcia bo.garcia@pacelabs.com (386)672-5668 Project Manager

Enclosures

cc: Debra Bayer, EnviroTest Laboratories Inc.
 Renee Cusack, EnviroTest Laboratories Inc.
 Laura Marciano, EnviroTest Laboratories Inc.
 Janine Rader, EnviroTest Laboratories Inc.
 Meredith Ruthven, EnviroTest Laboratories Inc.





Pace Analytical Services, LLC 8 East Tower Circle Ormond Beach, FL 32174 (386)672-5668

CERTIFICATIONS

Project: LBG,Inc 42001269 Pace Project No.: 35324055

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174 Alabama Certification #: 41320 Connecticut Certification #: PH-0216 Delaware Certification: FL NELAC Reciprocity Florida Certification #: E83079 Georgia Certification #: 955 Guam Certification: FL NELAC Reciprocity Hawaii Certification: FL NELAC Reciprocity Illinois Certification #: 200068 Indiana Certification: FL NELAC Reciprocity Kansas Certification #: E-10383 Louisiana Certification #: FL NELAC Reciprocity Louisiana Environmental Certificate #: 05007 Maryland Certification: #346 Michigan Certification #: 9911 Mississippi Certification: FL NELAC Reciprocity Missouri Certification #: 236 Montana Certification #: Cert 0074

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747 New York Certification #: 10478 Primary Accrediting Body New Jersey Certification #: NY158 Pennsylvania Certification #: 68-00350 Connecticut Certification #: PH-0435 Nebraska Certification: NE-OS-28-14 Nevada Certification: FL NELAC Reciprocity New York Certification #: 11608 North Carolina Environmental Certificate #: 667 North Carolina Certification #: 12710 Oklahoma Certification #: D9947 Pennsylvania Certification #: 68-00547 Puerto Rico Certification #: FL01264 South Carolina Certification: #96042001 Tennessee Certification #: TN02974 Texas Certification: FL NELAC Reciprocity US Virgin Islands Certification: FL NELAC Reciprocity Virginia Environmental Certification #: 460165 Wyoming Certification: FL NELAC Reciprocity West Virginia Certification #: 9962C Wisconsin Certification #: 399079670 Wyoming (EPA Region 8): FL NELAC Reciprocity

Maryland Certification #: 208 Rhode Island Certification #: LAO00340 Massachusetts Certification #: M-NY026 New Hampshire Certification #: 2987



SAMPLE SUMMARY

Project:LBG,Inc 42001269Pace Project No.:35324055

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35324055001	C-14	Drinking Water	07/13/17 08:40	07/15/17 11:10



SAMPLE ANALYTE COUNT

Project:LBG,Inc 42001269Pace Project No.:35324055

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35324055001	C-14	EPA 504.1	BP1	2	PASI-O
		EPA 505	MMR	3	
		EPA 508.1	NS1	18	PASI-O
		EPA 515.3	LJM	8	PASI-O
		EPA 531.1	WFH	9	PASI-O
		EPA 547	NMB	1	PASI-O
		EPA 549.2	NMB	1	PASI-O
		EPA 525.2	NS1	7	PASI-O
		EPA 548.1	JDT	1	PASI-O



ANALYTICAL RESULTS

Project: LBG,Inc 42001269

Pace Project No.: 35324055

Sample: C-14	Lab ID:	35324055001	Collected	07/13/1	7 08:40	Received: 07/	15/17 11:10 Ma	atrix: Drinking	Water
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504.1 GCS EDB and DBCP	Analytical	Method: EPA 5	04.1 Prepar	ation Metl	nod: EP/	A 504.1			
1,2-Dibromo-3-chloropropane 1,2-Dibromoethane (EDB)	<0.0055 <0.0065	ug/L ug/L	0.017 0.0086	0.0055 0.0065	1 1	07/18/17 07:15 07/18/17 07:15	07/18/17 18:52 07/18/17 18:52	96-12-8 106-93-4	
505 GCS Pesticides/PCBs	Analytical	Method: EPA 5	05 Preparat	ion Metho	d: EPA	505			
Aldrin Surrogates	<0.025	ug/L	0.025	0.025	1	07/20/17 16:38	07/20/17 23:46	309-00-2	
Tetrachloro-m-xylene (S)	101	%.	30-150		1	07/20/17 16:38	07/20/17 23:46	877-09-8	
Decachlorobiphenyl (S)	75	%.	30-150		1	07/20/17 16:38	07/20/17 23:46	2051-24-3	
508.1 GCS Pesticides	Analytical	Method: EPA 5	08.1 Prepar	ation Meth	nod: EP/	A 508.1			
Alachlor	<0.037	ug/L	0.21	0.037	1	07/24/17 10:15	07/28/17 14:06	15972-60-8	
Atrazine	<0.067	ug/L	0.11	0.067	1	07/24/17 10:15	07/28/17 14:06	1912-24-9	L2
gamma-BHC (Lindane)	<0.0032	ug/L	0.021	0.0032	1	07/24/17 10:15	07/28/17 14:06	58-89-9	
Butachlor	<0.029	ug/L	0.11	0.029	1	07/24/17 10:15	07/28/17 14:06	23184-66-9	
Chlordane (Technical)	<0.050	ug/L	0.21	0.050	1	07/24/17 10:15	07/28/17 14:06	57-74-9	
Dieldrin	<0.020	ug/L	0.11	0.020	1	07/24/17 10:15	07/28/17 14:06	60-57-1	
Endrin	<0.0074	ug/L	0.011	0.0074	1	07/24/17 10:15	07/28/17 14:06	72-20-8	
Heptachlor	<0.013	ug/L	0.042	0.013	1	07/24/17 10:15	07/28/17 14:06	76-44-8	
Heptachlor epoxide	<0.0032	ug/L	0.021	0.0032	1	07/24/17 10:15	07/28/17 14:06	1024-57-3	
Hexachlorobenzene	<0.020	ug/L	0.11	0.020	1	07/24/17 10:15	07/28/17 14:06	118-74-1	
Hexachlorocyclopentadiene	<0.034	ug/L	0.11	0.034	1	07/24/17 10:15	07/28/17 14:06	77-47-4	
Methoxychlor	<0.054	ug/L	0.11	0.054	1	07/24/17 10:15	07/28/17 14:06	72-43-5	
Metolachlor	<0.050	ua/L	0.11	0.050	1	07/24/17 10:15	07/28/17 14:06	51218-45-2	
PCB. Total	<0.085	ua/L	0.11	0.085	1	07/24/17 10:15	07/28/17 14:06	1336-36-3	
Propachlor	< 0.032	ua/L	0.11	0.032	1	07/24/17 10:15	07/28/17 14:06	1918-16-7	
Simazine	< 0.073	ua/l	0.074	0.073	1	07/24/17 10:15	07/28/17 14:06	122-34-9	12
Toxaphene	<0.64	ug/L	1 1	0.64	1	07/24/17 10:15	07/28/17 14:06	8001-35-2	
Surrogates		ug/ E		0.01	•	01/2 // 10.10	01720/11 1100	0001 00 2	
Decachlorobiphenyl (S)	69	%	70-130		1	07/24/17 10:15	07/28/17 14:06	2051-24-3	S0
515.3 Chlorinated Herbicides	Analytical	Method: EPA 5	15.3 Prepar	ation Metl	nod: EP/	A 515.3			
2,4-D	<0.081	ug/L	0.10	0.081	1	07/20/17 09:35	07/22/17 10:46	94-75-7	
Dalapon	<0.89	ug/L	1.0	0.89	1	07/20/17 09:35	07/22/17 10:46	75-99-0	
Dicamba	<0.067	ug/L	0.10	0.067	1	07/20/17 09:35	07/22/17 10:46	1918-00-9	L1
Dinoseb	<0.16	ug/L	0.20	0.16	1	07/20/17 09:35	07/22/17 10:46	88-85-7	
Pentachlorophenol	<0.030	ug/L	0.040	0.030	1	07/20/17 09:35	07/22/17 10:46	87-86-5	
Picloram	<0.094	ug/L	0.10	0.094	1	07/20/17 09:35	07/22/17 10:46	1918-02-1	
2,4,5-TP (Silvex)	<0.16	ug/L	0.20	0.16	1	07/20/17 09:35	07/22/17 10:46	93-72-1	
Surrogates		0							
2,4-DCAA (S)	94	%	70-130		1	07/20/17 09:35	07/22/17 10:46	19719-28-9	
531.1 HPLC Carbamates	Analytical	Method: EPA 5	31.1						
Aldicarb	<0.64	ug/L	2.0	0.64	1		07/18/17 18:21	116-06-3	
Aldicarb sulfone	<0.37	ug/L	2.0	0.37	1		07/18/17 18:21	1646-88-4	
Aldicarb sulfoxide	<0.59	ug/L	2.0	0.59	1		07/18/17 18:21	1646-87-3	
Carbofuran	<0.32	ug/L	2.0	0.32	1		07/18/17 18:21	1563-66-2	

REPORT OF LABORATORY ANALYSIS



ANALYTICAL RESULTS

Project: LBG,Inc 42001269

Pace Project No.: 35324055

Sample: C-14	Lab ID:	35324055001	Collecte	d: 07/13/17	7 08:40	Received: 07/	(15/17 11:10 Ma	atrix: Drinking	Water
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
531.1 HPLC Carbamates	Analytical	Method: EPA 5	31.1						
3-Hydroxycarbofuran	<0.45	ug/L	2.0	0.45	1		07/18/17 18:21	16655-82-6	
Methomyl	<0.57	ug/L	2.0	0.57	1		07/18/17 18:21	16752-77-5	
Oxamyl	<0.55	ug/L	2.0	0.55	1		07/18/17 18:21	23135-22-0	
Carbaryl	<0.27	ug/L	2.0	0.27	1		07/18/17 18:21	63-25-2	
Surrogates									
BDMC (S)	107	%	80-120		1		07/18/17 18:21		
547 HPLC Glyphosate	Analytical	Method: EPA 5	47						
Glyphosate	<4.2	ug/L	6.0	4.2	1		07/20/17 05:59		
549.2 HPLC Paraquat Diquat	Analytical	Method: EPA 5	49.2 Prepa	aration Meth	od: EP	A 549.2			
Diquat	<0.30	ug/L	0.40	0.30	1	07/19/17 11:00	07/20/17 02:23	85-00-7	
525.2 Base Neutral Extractable	Analytical	Method: EPA 5	25.2 Prepa	aration Meth	od: EP	A 525.2			
Benzo(a)pyrene	<0.014	ug/L	0.11	0.014	1	07/25/17 10:15	07/25/17 18:24	50-32-8	
bis(2-Ethylhexyl)adipate	<0.41	ug/L	1.7	0.41	1	07/25/17 10:15	07/25/17 18:24	103-23-1	
bis(2-Ethylhexyl)phthalate	<0.53	ug/L	2.1	0.53	1	07/25/17 10:15	07/25/17 18:24	117-81-7	
Metribuzin	<0.16	ug/L	0.32	0.16	1	07/25/17 10:15	07/25/17 18:24	21087-64-9	
Surrogates									
1,3-Dimethyl-2-nitrobenzene(S)	100	%	70-130		1	07/25/17 10:15	07/25/17 18:24	81209	
Perylene-d12 (S)	85	%	70-130		1	07/25/17 10:15	07/25/17 18:24	1520963	
Triphenylphosphate (S)	90	%	70-130		1	07/25/17 10:15	07/25/17 18:24	115-86-6	
548.1 GCS Endothall	Analytical	Method: EPA 5	48.1 Prepa	aration Meth	od: EP	A 548.1			
Endothall	<4.3	ug/L	9.0	4.3	1	07/19/17 17:00	07/24/17 23:39		L2,L5



Project: LBG,Inc 42001269

Pace Project No.: 35324055

QC Batch:	381535	Analysis Method:	EPA 531.1
QC Batch Method:	EPA 531.1	Analysis Description:	531.1 HPLC Carbamate
Associated Lab Sam	ples: 35324055001		
METHOD BLANK:	2070180	Matrix: Water	
Associated Lab Sam	ples: 35324055001		
		Blank Reporting	r

Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
3-Hydroxycarbofuran	ug/L	<0.45	2.0	0.45	07/18/17 12:36	
Aldicarb	ug/L	<0.64	2.0	0.64	07/18/17 12:36	
Aldicarb sulfone	ug/L	<0.37	2.0	0.37	07/18/17 12:36	
Aldicarb sulfoxide	ug/L	<0.59	2.0	0.59	07/18/17 12:36	
Carbaryl	ug/L	<0.27	2.0	0.27	07/18/17 12:36	
Carbofuran	ug/L	<0.32	2.0	0.32	07/18/17 12:36	
Methomyl	ug/L	<0.57	2.0	0.57	07/18/17 12:36	
Oxamyl	ug/L	<0.55	2.0	0.55	07/18/17 12:36	
BDMC (S)	%	120	80-120		07/18/17 12:36	

LABORATORY CONTROL SAMPLE: 2070181

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
3-Hydroxycarbofuran	ug/L		10.3	103	80-120	
Aldicarb	ug/L	10	11.2	112	80-120	
Aldicarb sulfone	ug/L	10	10.9	109	80-120	
Aldicarb sulfoxide	ug/L	10	12.0	120	80-120	
Carbaryl	ug/L	10	12.0	120	80-120	
Carbofuran	ug/L	10	11.7	117	80-120	
Methomyl	ug/L	10	10.6	106	80-120	
Oxamyl	ug/L	10	11.8	118	80-120	
BDMC (S)	%			118	80-120	

MATRIX SPIKE & MATRIX SPI	KE DUPLICA	TE: 207018	32		2070183							
			MS	MSD								
	3	5323850001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
3-Hydroxycarbofuran	ug/L	0.45U	10	10	10	10.2	100	102	80-120	2	20	
Aldicarb	ug/L	0.64U	10	10	10.5	10.3	105	103	80-120	3	20	
Aldicarb sulfone	ug/L	0.37U	10	10	9.5	9.8	95	98	80-120	4	20	
Aldicarb sulfoxide	ug/L	0.59U	10	10	11.2	11.0	112	110	80-120	2	20	
Carbaryl	ug/L	0.27U	10	10	12.0	11.5	120	115	80-120	4	20	
Carbofuran	ug/L	0.32U	10	10	11.3	10.5	113	105	80-120	7	20	
Methomyl	ug/L	0.57U	10	10	10.5	11.1	105	111	80-120	6	20	
Oxamyl	ug/L	0.55U	10	10	10.2	10.0	102	100	80-120	2	20	
BDMC (S)	%						103	98	80-120			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	LBG,Inc 420012	69											
Pace Project No.:	35324055												
QC Batch:	382091			Analys	sis Method:	: 6	EPA 547						
QC Batch Method:	EPA 547			Analys	sis Descript	tion: 5	547 HPLC GI	yphosate					
Associated Lab Sar	nples: 3532408	5500 ⁻	1										
METHOD BLANK:	2073233			1	Matrix: Wa	ter							
Associated Lab Sar	nples: 353240	5500 <i>°</i>	1										
				Blanl	k R	eporting							
Parar	neter		Units	Resu	lt	Limit	MDL		Analyzed	Qua	alifiers		
Glyphosate			ug/L		<4.2	6.0	0	4.2 07/	20/17 02:06	i			
LABORATORY CO	NTROL SAMPLE:	20)73234										
Parar	neter		Units	Spike Conc.	LCS Resu	S Ilt	LCS % Rec	% Re Limits	c S Qu	alifiers			
Glyphosate			ug/L	50)	52.3	105	80)-120		-		
MATRIX SPIKE & N	IATRIX SPIKE DI	JPLIC	CATE: 20732:	35		2073236	;						
				MS	MSD								
Paramete	er U	nits	35324897001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Glyphosate	u	g/L	0.0042U mg/L	50	50	48.2	48.4	96	97	80-120	0	30	
MATRIX SPIKE & N	IATRIX SPIKE DI	JPLIC	CATE: 20732	37		2073238							
				MS	MSD								
Paramete	er U	nits	35324066001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Glyphosate	u	g/L	<4.2	50	50	51.2	49.9	102	100	80-120	3	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: L	BG,Inc 42001269												
Pace Project No.: 3	5324055												
QC Batch:	381399		Analys	is Method:	EF	PA 504.1							
QC Batch Method:	EPA 504.1		Analys	is Descript	ion: 50	4 EDB D	BCP						
Associated Lab Samp	es: 353240550	001											
METHOD BLANK: 2	069376		Ν	Aatrix: Wat	er								
Associated Lab Sample	es: 353240550	001											
			Blank	: Re	eporting								
Parame	ter	Units	Resul	t	Limit	ME	DL	Analyz	ed	Qu	alifiers		
1,2-Dibromo-3-chlorop	ropane	ug/L	<0.	0064	0.020		0.0064	07/18/17 [·]	13:43				
1,2-Dibromoethane (E	DB)	ug/L	<0.	0075	0.010		0.0075	07/18/17 ⁻	13:43				
LABORATORY CONT	ROL SAMPLE & I	_CSD: 2069377	,	2	070238								
			Spike	LCS	LCSD	LCS	LCSD	% Rec		I	Max		
Paramet	er	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RP	PD F	RPD	Qu	alifiers
1,2-Dibromo-3-chlorop	oropane	ug/L	.25	0.27	0.24	109	96	70-130		12	40		
1,2-Dibromoethane (E	DB)	ug/L	.25	0.29	0.25	116	101	70-130		13	40		
MATRIX SPIKE & MA	TRIX SPIKE DUPI	LICATE: 20702	39		2070240								
			MS	MSD									
_		35324127010	Spike	Spike	MS	MSD	MS	S MS	D	% Rec		Max	
Parameter	Unit	s Result	Conc.	Conc.	Result	Result	% R	ec % R	ec	Limits	RPD	RPD	Qual
1,2-Dibromo-3- chloropropane	ug/L	< 0.0055	.44	.44	0.64	0.6	3	146	143	65-135	2	40	M1
1,2-Dibromoethane (E	DB) ug/L	< 0.0064	.44	.44	0.64	0.6	3	146	145	65-135	5 1	40	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Pace Project No.: 35324055 QC Batch: 32255 Analysis Method: EPA 505 QC Batch Method: EPA 505 Analysis Description: 505 GCS Pesticides Associated Lab Samples: 35324055001 Matrix: Water METHOD BLANK: 149103 Matrix: Water Associated Lab Samples: 35324055001 Matrix: Water Associated Lab Samples: 35324055001 Blank Reporting Parameter Units Result Limit MDL Analyzed Qualifiers Aldrin ug/L <0.025 0.025 0.025 07/20/17 18:40 LABORATORY CONTROL SAMPLE: 149104 Spike LCS LCS % Rec Limits Qualifiers Aldrin ug/L .048 0.047 98 70-130 Qualifiers Aldrin ug/L .048 .047 98 70-130 Qualifiers Etrachloro-m-xylene (S) %. 95 30-150 94 30-150	
QC Batch: 32255 Analysis Method: EPA 505 QC Batch Method: EPA 505 Analysis Description: 505 GCS Pesticides Associated Lab Samples: 35324055001 Matrix: Water METHOD BLANK: 149103 Matrix: Water Associated Lab Samples: 35324055001 Blank Reporting Parameter Units Result Limit MDL Analyzed Qualifiers Aldrin ug/L <0.025 0.025 0.7/20/17 18:40 Qualifiers LABORATORY CONTROL SAMPLE: 149104 Spike LCS LCS Limits Qualifiers Aldrin ug/L .048 0.047 98 70-130 Qualifiers Aldrin ug/L .048 0.047 95 30-150 150 Decachlorobiphenyl (S) %. 95 30-150 94 30-150 14047	
QC Batch Method: EPA 505 Analysis Description: 505 GCS Pesticides Associated Lab Samples: 35324055001 Matrix: Water METHOD BLANK: 149103 Matrix: Water Associated Lab Samples: 35324055001 Blank Reporting Parameter Units Result Limit MDL Analyzed Qualifiers Aldrin ug/L <0.025	
Associated Lab Samples: 35324055001 METHOD BLANK: 149103 Matrix: Water Associated Lab Samples: 35324055001 Matrix: Water Parameter Units Result Limit MDL Analyzed Qualifiers Aldrin ug/L <0.025	
METHOD BLANK: 149103 Matrix: Water Associated Lab Samples: 35324055001 Blank Reporting MDL Analyzed Qualifiers Aldrin ug/L <0.025 0.025 0.025 07/20/17 18:40 Decachlorobiphenyl (S) %. 75 30-150 07/20/17 18:40 LABORATORY CONTROL SAMPLE: 149104 Spike LCS LCS % Rec Qualifiers Aldrin ug/L .048 0.047 98 70-130 Qualifiers Aldrin ug/L .048 0.047 94 30-150 40015 Decachlorobiphenyl (S) %. 94 30-150 94 30-150	
Associated Lab Samples: 35324055001 Parameter Units Result Limit MDL Analyzed Qualifiers Aldrin ug/L <0.025	
ParameterUnitsResultLimitMDLAnalyzedQualifiersAldrinug/L<0.025	
ParameterUnitsResultLimitMDLAnalyzedQualifiersAldrinug/L<0.025	
Aldrin ug/L <0.025 0.025 0.025 07/20/17 18:40 Decachlorobiphenyl (S) %. 75 30-150 07/20/17 18:40 Tetrachloro-m-xylene (S) %. 85 30-150 07/20/17 18:40 LABORATORY CONTROL SAMPLE: 149104 Qualifiers Aldrin ug/L .048 0.047 98 70-130 Qualifiers Decachlorobiphenyl (S) %. .048 0.047 98 70-130 Decachlorobiphenyl (S) %. 94 30-150	
Decachlorobiphenyl (S) %. 75 30-150 07/20/17 18:40 Tetrachloro-m-xylene (S) %. 85 30-150 07/20/17 18:40 LABORATORY CONTROL SAMPLE: 149104 Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Aldrin ug/L .048 0.047 98 70-130 Decachlorobiphenyl (S) %. 95 30-150 Tetrachloro-m-xylene (S) %. 94 30-150	
Tetrachloro-m-xylene (S)%.8530-15007/20/17 18:40LABORATORY CONTROL SAMPLE:149104ParameterUnitsSpikeLCSLCS% RecAldrinug/L.0480.0479870-130Decachlorobiphenyl (S)%.9530-150Tetrachloro-m-xylene (S)%.9430-150	
LABORATORY CONTROL SAMPLE: 149104ParameterUnitsSpike Conc.LCS ResultLCS % RecLimits LimitsQualifiersAldrinug/L.0480.0479870-130Decachlorobiphenyl (S)%.9530-150Tetrachloro-m-xylene (S)%.9430-150	
ParameterUnitsSpike Conc.LCS ResultLCS % RecLCS LimitsQualifiersAldrinug/L.0480.0479870-130Decachlorobiphenyl (S)%.9530-150Tetrachloro-m-xylene (S)%.9430-150	
ParameterUnitsConc.Result% RecLimitsQualifiersAldrinug/L.0480.0479870-130Decachlorobiphenyl (S)%.9530-150Tetrachloro-m-xylene (S)%.9430-150	
Aldrin ug/L .048 0.047 98 70-130 Decachlorobiphenyl (S) %. 95 30-150 Tetrachloro-m-xylene (S) %. 94 30-150	
Decachlorobiphenyl (S) %. 95 30-150 Tetrachloro-m-xylene (S) %. 94 30-150	
Tetrachloro-m-xylene (S) %. 94 30-150	
LABURATURY CUNTRUL SAMPLE: 149105	
Spike LCS LCS % Rec	
Parameter Units Conc. Result % Rec Limits Qualifiers	
Aldrin ug/L .0095 <0.025 97 70-130	
Decachlorobiphenyl (S) %. 89 30-150	
Tetrachloro-m-xylene (S)%.9530-150	
MATRIX SPIKE SAMPLE: 149106	
7024421001 Spike MS MS % Rec	
Parameter Units Result Conc. Result % Rec Limits Qualifiers	rs
Aldrin ug/L <0.025 .095 0.092 96 65-135	_
Decachlorobiphenyl (S) %. 75 30-150	
Tetrachloro-m-xylene (S) %. 97 30-150	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: LBG,Inc 42001269

Pace Project No.: 35324055

QC Batch:	382602	Analysis Method:	EPA 508.1
QC Batch Method:	EPA 508.1	Analysis Description:	508 GCS Pesticide
Associated Lab Samp	les: 35324055001		

Matrix: Water

METHOD BLANK: 2076395

Associated Lab Samples: 35324055001

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Alachlor	ug/L	<0.035	0.20	0.035	07/28/17 05:11	
Atrazine	ug/L	<0.063	0.10	0.063	07/28/17 05:11	
Butachlor	ug/L	<0.027	0.10	0.027	07/28/17 05:11	
Chlordane (Technical)	ug/L	<0.047	0.20	0.047	07/28/17 05:11	
Dieldrin	ug/L	<0.019	0.10	0.019	07/28/17 05:11	
Endrin	ug/L	<0.0070	0.010	0.0070	07/28/17 05:11	
gamma-BHC (Lindane)	ug/L	<0.0030	0.020	0.0030	07/28/17 05:11	
Heptachlor	ug/L	<0.012	0.040	0.012	07/28/17 05:11	
Heptachlor epoxide	ug/L	<0.0030	0.020	0.0030	07/28/17 05:11	
Hexachlorobenzene	ug/L	<0.019	0.10	0.019	07/28/17 05:11	
Hexachlorocyclopentadiene	ug/L	< 0.032	0.10	0.032	07/28/17 05:11	
Methoxychlor	ug/L	<0.051	0.10	0.051	07/28/17 05:11	
Metolachlor	ug/L	<0.047	0.10	0.047	07/28/17 05:11	
Propachlor	ug/L	<0.030	0.10	0.030	07/28/17 05:11	
Simazine	ug/L	<0.069	0.070	0.069	07/28/17 05:11	
Toxaphene	ug/L	<0.61	1.0	0.61	07/28/17 05:11	
Decachlorobiphenyl (S)	%	93	70-130		07/28/17 05:11	

LABORATORY CONTROL SAMPLE: 2076396

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Alachlor	ug/L	1	0.93	93	70-130	
Atrazine	ug/L	1.2	< 0.063	0	70-130	L2
Butachlor	ug/L	.5	0.50	99	70-130	
Chlordane (Technical)	ug/L		<0.047			
Dieldrin	ug/L	.5	0.45	90	70-130	
Endrin	ug/L	.05	0.044	87	70-130	
gamma-BHC (Lindane)	ug/L	.1	0.090	90	70-130	
Heptachlor	ug/L	.2	0.17	86	70-130	
Heptachlor epoxide	ug/L	.1	0.10	100	70-130	
Hexachlorobenzene	ug/L	.5	0.63	125	70-130	
Hexachlorocyclopentadiene	ug/L	.5	0.78	155	70-130	
Methoxychlor	ug/L	.5	0.55	110	70-130	
Metolachlor	ug/L	.5	0.43	87	70-130	
Propachlor	ug/L	.5	0.48	97	70-130	
Simazine	ug/L	.88	0.43	49	70-130	L2
Toxaphene	ug/L		<0.61			
Decachlorobiphenyl (S)	%			96	70-130	

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Project: LBG,Inc 42001269 Pace Project No.: 35324055

MATRIX SPIKE & MATRIX SPI	2077206											
			MS	MSD								
	:	35324367001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Alachlor	ug/L				0.96	0.95				1	40	M1
Atrazine	ug/L				<0.13	<0.13					40	MO
Butachlor	ug/L				0.50	0.50				1	40	M1
Chlordane (Technical)	ug/L				<0.094	<0.094					40	
Dieldrin	ug/L				0.44	0.43				1	40	M1
Endrin	ug/L				0.043	0.043				0	40	M1
gamma-BHC (Lindane)	ug/L				0.092	0.091				1	40	M1
Heptachlor	ug/L				0.18	0.16				9	40	M1
Heptachlor epoxide	ug/L				0.098	0.097				2	40	M1
Hexachlorobenzene	ug/L				0.64	0.60				8	40	M1
Hexachlorocyclopentadiene	ug/L				0.80	0.69				15	40	
Methoxychlor	ug/L				0.52	0.52				1	40	
Metolachlor	ug/L				0.46	0.46				1	40	M1
Propachlor	ug/L				0.52	0.51				2	40	M1
Simazine	ug/L				1.1	1.2				8	40	
Toxaphene	ug/L				<1.2	<1.2					40	
Decachlorobiphenyl (S)	%						46	46	70-130)	40	S0

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Project: LBG,Inc 42001269

Pace Project No.: 35324055

QC Batch:	382064		Analysis Method:		EPA 515.3			
QC Batch Method:	EPA 515.3		Analysis Desc	ription:	5153 GCS Herbicic	les		
Associated Lab Samp	bles: 35324055001							
METHOD BLANK: 2	2073155		Matrix:	Water				
Associated Lab Samp	oles: 35324055001							
			Blank	Reporting				
Parame	eter	Units	Result	Limit	MDL	Analyzed	Qualifiers	
2,4,5-TP (Silvex)		ug/L	<0.16	0.	20 0.16	07/22/17 00:29		
2,4-D		ug/L	<0.081	0.	10 0.081	07/22/17 00:29		
Dalapon		ug/L	<0.89	1	.0 0.89	07/22/17 00:29		
Dicamba		ug/L	<0.067	0.	10 0.067	07/22/17 00:29		
Dinoseb		ug/L	<0.16	0.	20 0.16	07/22/17 00:29		
Pentachlorophenol		ug/L	< 0.030	0.0	40 0.030	07/22/17 00:29		
Picloram		ug/L	<0.094	0.	0.094	07/22/17 00:29		
2,4-DCAA (S)		%	88	70-1	30	07/22/17 00:29		

LABORATORY CONTROL SAMPLE: 2073156

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
2,4,5-TP (Silvex)	ug/L	1	1.0	103	70-130	
2,4-D	ug/L	.5	0.39	78	70-130	
Dalapon	ug/L	5	4.5	90	70-130	
Dicamba	ug/L	.5	0.66	132	70-130 L	1
Dinoseb	ug/L	1	1.1	114	70-130	
Pentachlorophenol	ug/L	.2	0.20	98	70-130	
Picloram	ug/L	.5	0.50	99	70-130	
2,4-DCAA (S)	%			93	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2073478 2073479												
			MS	MSD								
	9	2347613003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
2,4,5-TP (Silvex)	ug/L	ND	1	1	1.1	1.1	108	111	70-130	3	40	
2,4-D	ug/L	ND	.5	.5	0.42	0.47	84	94	70-130	11	40	
Dalapon	ug/L	ND	5	5	5.7	6.0	115	120	70-130	5	40	
Dicamba	ug/L	ND	.5	.5	0.58	0.63	117	126	70-130	7	40	
Dinoseb	ug/L	ND	1	1	1.1	1.1	105	113	70-130	7	40	
Pentachlorophenol	ug/L	ND	.2	.2	0.18	0.19	91	95	70-130	4	40	
Picloram	ug/L	ND	.5	.5	0.65	0.70	130	140	70-130	7	40	M1
2,4-DCAA (S)	%						98	99	70-130			

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REPORT OF LABORATORY ANALYSIS



Project: LBG,Inc 42001269 Pace Project No.: 35324055

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2073480 2073481												
			MS	MSD								
	3	5323949005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
2,4,5-TP (Silvex)	ug/L	<0.16	1	1	1.1	1.1	108	110	70-130	1	40	
2,4-D	ug/L	<0.081	.5	.5	0.40	0.41	79	82	70-130	3	40	
Dalapon	ug/L	<0.89	5	5	4.7	4.8	94	95	70-130	1	40	
Dicamba	ug/L	<0.067	.5	.5	0.51	0.63	103	127	70-130	21	40	
Dinoseb	ug/L	<0.16	1	1	1.1	1.1	110	111	70-130	1	40	
Pentachlorophenol	ug/L	<0.030	.2	.2	0.19	0.19	96	97	70-130	1	40	
Picloram	ug/L	<0.094	.5	.5	0.55	0.57	110	115	70-130	5	40	
2,4-DCAA (S)	%						95	93	70-130			

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REPORT OF LABORATORY ANALYSIS



Project: LBG,Inc 42001269

Pace Project No.: 35324055

QC Batch: 382603		Analysis M	lethod:	EPA 525.2			
QC Batch Method: EPA 525.2		Analysis D	escription:	525.2 Base Ne	eutral Extractab	les	
Associated Lab Samples: 353240	55001						
METHOD BLANK: 2076402		Matri	ix: Water				
Associated Lab Samples: 353240	55001						
		Blank	Reporting	3			
Parameter	Units	Result	Limit	MDL	Analyz	zed Qualifiers	
Benzo(a)pyrene	ug/L	<0.01	3 0	.10 0.	013 07/25/17	15:37	_
bis(2-Ethylhexyl)adipate	ug/L	<0.3	8	1.6 0	0.38 07/25/17	15:37	
bis(2-Ethylhexyl)phthalate	ug/L	<0.5	0	2.0 0	0.50 07/25/17	15:37	
Metribuzin	ug/L	<0.1	5 0	.30 0	0.15 07/25/17	15:37	
1,3-Dimethyl-2-nitrobenzene(S)	%	8	5 70-	130	07/25/17	15:37	
Perylene-d12 (S)	%	10	9 70-	130	07/25/17	15:37	
Triphenylphosphate (S)	%	8	5 70-	130	07/25/17	15:37	
LABORATORY CONTROL SAMPLE	2076403						
		Spike	LCS	LCS	% Rec		
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers	
Benzo(a)pyrene	ug/L	.4	0.30	76	70-130		
bis(2-Ethylhexyl)adipate	ug/L	6.4	4.9	77	70-130		
bis(2-Ethylhexyl)phthalate	ug/L	8	6.8	85	70-130		
Metribuzin	ug/L	1.2	1.0	83	70-130		
1,3-Dimethyl-2-nitrobenzene(S)	%			101	70-130		

MATRIX SPIKE & MATRIX SPI	KE DUPLICA	TE: 20772	03		2077204							
			MS	MSD								
	3	5323929005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Benzo(a)pyrene	ug/L	<0.013	.8	.8	0.66	0.67	83	84	70-130	1	40	
bis(2-Ethylhexyl)adipate	ug/L	<0.37	12.8	12.8	9.7	10.4	76	81	70-130	6	40	
bis(2-Ethylhexyl)phthalate	ug/L	<0.49	16	16	12.6	13.7	79	86	70-130	9	40	
Metribuzin	ug/L	<0.15	2.4	2.4	1.7	1.7	71	72	70-130	2	40	
1,3-Dimethyl-2- nitrobenzene(S)	%						100	99	70-130			
Perylene-d12 (S)	%						88	93	70-130			
Triphenylphosphate (S)	%						80	87	70-130			

94

86

70-130

70-130

%

%

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REPORT OF LABORATORY ANALYSIS

Perylene-d12 (S)

Triphenylphosphate (S)



Project:	LBG,Inc 420	01269											
Pace Project No.:	35324055												
QC Batch:	381974			Analys	sis Method:	E	PA 548.1						
QC Batch Method:	EPA 548.1			Analys	sis Descript	ion: 5	548 GCS End	lothall					
Associated Lab Sar	mples: 3532	24055002	I										
METHOD BLANK:	2072291			Ν	Matrix: Wa	ter							
Associated Lab Sar	mples: 3532	2405500	I										
				Blank	k R	eporting							
Para	neter		Units	Resul	t	Limit	MDL	/	Analyzed	Qua	alifiers		
Endothall			ug/L		<4.3	9.0)	4.3 07/2	24/17 19:29				
LABORATORY CO	NTROL SAMF	PLE: 20)72292										
_				Spike	LCS	5	LCS	% Red	;				
Para	neter		Units	Conc.	Resu	llt	% Rec	Limits	Qu	alifiers	_		
Endothall			ug/L	50	1	39.6	79	80	-120				
MATRIX SPIKE & M	ATRIX SPIKE	E DUPLIC	CATE: 20723	47		2072348							
				MS	MSD								
-			35324386001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	<u> </u>
Paramete	er	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Endothall		ug/L	4.3U	50	50	45.0	44.4	90	89	80-120	1	30	
MATRIX SPIKE & M	ATRIX SPIKE		CATE: 20723	58		2072359							
				MS	MSD								
_			35324386002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	. .
Paramete	er	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Endothall		ug/L	4.3U	50	50	34.3	41.0	69	82	80-120	18	30	MO

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Project:	LBG,Inc 42	001269											
Pace Project No.:	35324055												
QC Batch:	381794			Analys	sis Method:	E	EPA 549.2						
QC Batch Method	EPA 549.2	2		Analys	sis Descript	tion: 5	549 HPLC Pa	araquat Diq	uat				
Associated Lab Sa	amples: 353	324055001	l										
METHOD BLANK	2071478			Ν	Matrix: Wa	ter							
Associated Lab Sa	amples: 353	324055001	l										
				Blank	k R	eporting							
Para	ameter		Units	Resu	lt	Limit	MDL		Analyzed	Qua	alifiers		
Diquat			ug/L		<0.30	0.40	0	0.30 07/2	20/17 00:32				
LABORATORY CO	ONTROL SAM	PLE: 20)71479										
Para	ameter		Units	Spike Conc.	LCS Resu	; Ilt	LCS % Rec	% Rec Limits	; Qı	alifiers			
Diquat			ug/L	2	2	1.6	82	70	-130		-		
MATRIX SPIKE &	MATRIX SPIK		CATE: 20718	82		2071883							
				MS	MSD								
Parame	ter	Units	35324366001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Diquat		ug/L	0.30U	2	2	1.7	7 1.7	84	84	70-130	0	30	
MATRIX SPIKE &	MATRIX SPIK		CATE: 20718	84		2071885	;						
				MS	MSD								
Parame	ter	Units	35324454001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Diquat		ug/L	0.00030U mg/L	2	2	0.60	0.84	30	42	70-130	35	30	M1,R1

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QUALIFIERS

Project: LBG,Inc 42001269

Pace Project No.: 35324055

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

- L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
- L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
- L5 LCS recovery exceeded QC limits. Batch accepted based on matrix spike recovery within LCS limits.
- M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- R1 RPD value was outside control limits.
- S0 Surrogate recovery outside laboratory control limits.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LBG,Inc 42001269 Pace Project No.: 35324055

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35324055001	C-14	EPA 504.1	381399	EPA 504.1	381607
35324055001	C-14	EPA 505	32255	EPA 505	32334
35324055001	C-14	EPA 508.1	382602	EPA 508.1	383798
35324055001	C-14	EPA 515.3	382064	EPA 515.3	382572
35324055001	C-14	EPA 531.1	381535		
35324055001	C-14	EPA 547	382091		
35324055001	C-14	EPA 549.2	381794	EPA 549.2	382025
35324055001	C-14	EPA 525.2	382603	EPA 525.2	382996
35324055001	C-14	EPA 548.1	381974	EPA 548.1	382933

lient Information (Sub Contract Lab) 35324055 ant Contact: inping/Receiving meany: East Tower Circle,								
ent Contact: ipping/Receiving meany: meany: East Tower Circle,			: Debra		Carrier	Tracking No(s):	COC No: 420-9124.1	1
mpany: ace Analytical Ormond Beach dress: East Tower Circle, , 71 East Tower Circle, , 71 . 32174 		lapaye	r@envirotestlat	boratories.col			Page: Page 1 of *	1
dress: East Tower Circle, , , 7/ 7/ mond Beach mond Beach 				Analy	/sis Request	ed	STL Job #: 420-12359	15-3
y: mond Beach ate.Zip. . 32174 . 222-3333(Tel) mail: 	ue Date Requested: '25/2017			Ma			Preservatio	on Codes: M - Hexane
ite. Zip. ., 32174 one: 1-222-3333(Tel) wil:	AT Requested (days):		d	ni set soli			B - NaOH C - Zn Aceta	N - None 0 - AsNaO2
one: 1-222-3333(Tel) aali: W	int pho	713100	NDBC Iqa	esticio Organ			E - NaHSO4	d P - Na204S Q - Na2SO3 P - Na2SSO3
nail:	0#		ed Ac	elitel			G - Amchlor H - Ascorbic	S - H2SO4
	,#Q		V 504.	mbam ovime			J - DI Water	U - Acetone V - MCAA
pjett Name. Pr. 36. Inc. 42.	roject #: 2001269			8 9'5 2'9 9'1 C	6 8 2	ujxo	K-EDTA L-EDA	W - ph 4-5 Z - other (specify)
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And the state of the		eservation code.	~ ~ ~		, , ,		<;	
C - 14 (420-123995-3)	7/13/17 8:40	vvater	× ×	* * *	× × ×	<	2	
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ossible Hazard Identification	-		Sample Dis	posal (A fee	may be assess	sed if samples are	e retained longer	than 1 month)
□ Non-Hazard □ Flammable □ Skin Imtant □ Poisor	_{п В} Шикпомп — _{Rac}	liological	Special Instr	n To Client uctions/OC R	Leauirements:	al By Lab	Archive For	Months
eliverable requested. 1, 11, 111, 17, Other (specing)								
mpty Kit Relinquished by:	Date:		Time:		2	fethod of Shipment:		
inquished by Muser 102	atertime: $7/13/7$ /44 $^{\circ}$ atertime:	Company	Received t	the par	J.	Date/Time:	OTTE	Company Task 10-4 Company
Øinquished by:	ate/Time:	Company	Received b	y:		Date/Time:		Company
Custody Seals Intact: Custody Seal No.:			Cooler Ten	nperature(s) °C a	ind Other Remarks:			

Project # Project Manager: Client: Thermometer Used: Cooler #1 Temp.°C(Visual) - Cooler #2 Temp.°C(Visual) - Cooler #3 Temp.°C(Visual) - Cooler #4 Temp.°C(Visual) - Cooler #5 Temp.°C(Visual) - Cooler #6 Temp.°C(Visual) -	Correcti Correcti Correcti	current No: -C-007 rev. 11 clition Upon 32405 Due Date: \therefore Due Date: on Factor) <u>10</u> on Factor) <u>10</u> on Factor) <u>10</u>	Receipt Form (S 5 07/31/17 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <th>Date and Examining Label: Deliver: pH: Samples</th> <th>Initials of person: contents;</th>	Date and Examining Label: Deliver: pH: Samples	Initials of person: contents;
Project # Project Manager: Client: Thermometer Used: Thermometer Used: Cooler #1 Temp.°C Cooler #2 Temp.°C Cooler #3 Temp.°C Cooler #4 Temp.°C Cooler #5 Temp.°C (Visual) Cooler #5 Temp.°C (Visual) Cooler #6 Temp.°C (Visual)	Sample Con Sample	Cition Upon 32405 Due Date: Due Date: Due Date:	Receipt Form (S 5 07/31/17	Date and Examining Label: Deliver: pH: Initia	Initials of person: contents;
Project # Project Manager: Client: Thermometer Used: Cooler #1 Temp.°C Cooler #2 Temp.°C Cooler #3 Temp.°C Cooler #4 Temp.°C Cooler #5 Temp.°C Cooler #6 Temp.°C	Sample Con JO#: VEG CLIENT: EVNTES Q Date Q. (Correcting) LO. (Correcting)	$\frac{2405}{32405}$ Due Date: $\frac{32405}{32405}$ Due Date: $\frac{32405}{32}$ Due Date: $\frac{32405}{32}$ Due Date: $\frac{32405}{32}$ Due Date: $\frac{32405}{32}$ Due Date: $\frac{32405}{32}$ Due Date: $\frac{32405}{32}$	Accel pt Form (S 5 07/31/17 Actual) (Actual)	Date and Examining Label: Deliver: pH: () () Initia	Initials of person: contents:
Project # Project Manager: Client: Thermometer Used: Thermometer Used: Cooler #1 Temp.°C Cooler #2 Temp.°C Cooler #3 Temp.°C Cooler #4 Temp.°C Cooler #5 Temp.°C (Visual) Cooler #5 Temp.°C (Visual) Cooler #6 Temp.°C (Visual)	AO#:35 M: VEG CLIENT: EVNTES Q Date Q. Q. <	32405 Due Date: Due Date: Due Date: Due Date:	07/31/17	Date and Examining Label: Deliver: pH: (10 Initia	Initials of person: contents:
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100mily 1-1-1-10 ×101(1 4340	174465	604 3485	1-1-146	2608 STAS
Chain of Custody Present	⊠Yes		omments;		
Unain of Custody Filled Out	PYes				
Reinquisned Signature & Sampler Name C	COC DYes				
Duck TAT received within Hold Time	J⊒Yes				
Rush TAT requested on COC	□Yes	2'No DN/A			
	Yes				
	⊻Yes				
ample Labels match COC (sample IDs & date/I	ime of				
ollection) Il containers needing acid/base preservation ha	ØÝes we been	□ No □N/A			
hecked. Il Containers needing preservation are found to ompliance with EPA recommendation: Exceptions: VOA, Coliform. TC	be in Ves C. O&G. Carbamates	□ No □N/A □ No □N/A	F Preservative: Lot #/Trace # Date: Initiale:	Preservation Informati	on:
leadspace in VOA Vials? (>6mm):	□Yes	□ No ØN/A			
rip Blank Present:	□Yes				
lient Notification/ Resolution: Person Contacted:			Date/Time:		
comments/ Resolution (use back for add	litional comments): LUN OUT	Per	pm		
Project Manager Review					


www.pacelabs.com

Report Prepared for:

Bo Garcia PASI Florida 8 East Tower Circle Ormond Beach FL 32174

REPORT OF LABORATORY ANALYSIS FOR 2,3,7,8-TCDD

Report Summary:

This report contains results of one drinking water sample analyzed to determine 2,3,7,8-TCDD content. This sample was analyzed according to Method 1613 by High Resolution Gas Chromatography/High Resolution Mass Spectrometry.

Report Information:

Pace Project #: 10396061 Sample Receipt Date: 07/18/2017 Client Project #: 35324055 Client Sub PO #: N/A State Cert #: 11647

Pace Analytical Services, Inc.

Minneapolis, MN 55414

Phone: 612.607.1700 Fax: 612.607.6444

1700 Elm Street

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 Drinking Water Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Sarah Platzer, your Pace Project Manager.

This report has been reviewed by:



Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.

Report Prepared Date: July 31, 2017



_

Pace Analytical Services, Inc. 1700 Elm Street - Suite 200 Minneapolis, MN 55414

> Tel: 612-607-1700 Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Montana	CERT0092
Alabama	40770	Nebraska	NE-OS-18-06
Alaska	MN00064	Nevada	MN00064
Alaska	UST-078	New Jersey (NE	MN002
Arizona	AZ0014	New York (NEL	11647
Arkansas	88-0680	New hampshire	2081
CNMI Saipan	MP0003	North Carolina	27700
California	MN00064	North Carolina	530
Colorado	MN00064	North Dakota	R-036
Connecticut	PH-0256	Ohio	41244
EPA Region 8	8TMS-L	Ohio VAP	CL101
Florida (NELAP	E87605	Oklahoma	9507
Georgia (EDP)	959	Oregon (ELAP)	MN200001
Guam EPA	959	Oregon (OREL	MN300001
Hawaii	MN00064	Pennsylvania	68-00563
Idaho	MN00064	Puerto Rico	MN00064
Illinois	200011	South Carolina	74003001
Indiana	C-MN-01	Tennessee	TN02818
lowa	368	Texas	T104704192
Kansas	E-10167	Utah (NELAP)	MN00064
Kentucky	90062	Virginia	460163
Louisiana	03086	Washington	C486
Louisiana	MN00064	West Virginia #	9952C
Maryland	322	West Virginia D	382
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-L
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc. 1700 Elm Street - Suite 200 Minneapolis, MN 55414

> Tel: 612-607-1700 Fax: 612- 607-6444

Reporting Flags

- A = Reporting Limit based on signal to noise
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- I = Interference present
- J = Estimated value
- Nn = Value obtained from additional analysis
- P = PCDE Interference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X = %D Exceeds limits
- Y = Calculated using average of daily RFs
- * = See Discussion

allow of Occupiends allow

			• • • • • • • • • • • • • • • • • • •	
Workorder: 35324055 Work	korder Name:LBG,Inc 42001269	Owner Received Date	: 7/15/2017 I	Results Requested By: 7/31/2017
Bo Garcia Bo Garcia Pace Analytical Ormond Beach 8 East Tower Circle Ormond Beach, FL 32174 Phone (386)672-5668 I C-14 2 3 4 5 Transfers Released By 1 Mathematical M	Pace Analytical Minnesota 1700 Elm Street SE Suite 200 Minneapolis, MN 55414 Phone (612)607-1700 Sample Date/Time Received By Time Received By The Analytical Minnesota Date/Time Received By The Analytical Minnesota Date/Time Received By The Analytical Minnesota 1700 Elm Street SE Suite 200 Minneapolis, MN 55414 Phone (612)607-1700 Pate/Time Received By The Analytical Minnesota Date/Time Received By The Analytical Minnesota The Analytical Minnesota Suite 200 Minneapolis, MN 55414 Phone (612)607-1700 Pate/Time Received By The Analytical Minnesota Minneapolis, MN 55414 Phone (612)607-1700 Pate/Time Received By The Analytical Minnesota The Analytical Minnesota Minneapolis, MN 55414 Phone (612)607-1700 Pate/Time Received By The Analytical Minnesota Minneapolis, MN 55414 Phone (612)607-1700 Pate/Time Received By The Analytical Minnesota The Analytical Minnesota Minneapolis, MN 55414 Phone (612)607-1700 Pate/Time Received By The Analytical Minnesota Minneapolis, MN 55414 Phone (612)607-1700 Pate/Time Received By The Analytical Minnesota Minneapolis, MN 55414 Phone (612)607-1700 Pate/Time Received By The Analytical Minnesota Minneapolis, MN 55414 Phone (612)607-1700 Phone (612)60	Served Contextines		
3 Cooler Temperature on Receipt	2.2 °C Custody Seal Y or N	Received on Ice Y	or N	Samples Intact Por N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

1039606

1	Document Name:	Document Revised: 19Dec2016
Face Analytical*	Sample Condition Upon Receipt I	Form Page 1 of 2
	F-MN-L-213-rev.20	Pace Minnesota Quality Office
	·	
Courier:	Project #:	WO#:10396061
Tracking Number: 7427-5599	- 7553	10396061
		- Ontional: Broi Duo Data: Drai Nama
Custody Seal on Cooler/Box Present?	"¥UNo Seals Intact? ∐Ye	
	Bags Mone LOther:	
Used:	Type of Ice:	Blue None Samples on ice, cooling process has begun
Cooler Temp Read (°C): $O_{\omega} Q_{\omega}$ Cooler Temp should be above freezing to 6°C Corrective	mp Corrected (°C): 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Biological Tissue Frozen? Yes No N/A
USDA Regulated Soil (N/A, water sample)		- <u>410111 US</u>
Did samples originate in a quarantine zone within the I	Jnited States: AL, AR, CA, FL, GA, ID, LA. N	AS, Did samples originate from a foreign source (internationally,
If Yes to either question, fill or	It a Regulated Soil Checklist (F-MN-Q-3	38) and include with SCUR/COC paperwork.
		COMMENTS:
Chain of Custody Present?	Yes No 1.	· · · · · · · · · · · · · · · · · · ·
Chain of Custody Filled Out?	Yes No 2	· · ·
Chain of Custody Relinquished?	Yes No 3.	
Sampler Name and/or Signature on COC?	Nes □No □N/A 4	
Samples Arrived within Hold Time?	Pres No 5	
Short Hold Time Analysis (<72 hr)?	Yes No 6	
Rush Turn Around Time Requested?	Yes No 7.	
Sufficient Volume?	Ves No 8.	· · · · · · · · · · · · · · · · · · ·
Correct Containers Used?	ves □No 9.	,
-Pace Containers Used?	Yes No	
Containers Intact?	Yes No 10	D.
Filtered Volume Received for Dissolved Tests?	Yes No NN/A 1	 Note if sediment is visible in the dissolved container
Sample Labels Match COC?	Yes INo 1	2.
-Includes Date/Time/ID/Analysis Matrix:	<u>71</u>	
All containers needing acid/base preservation have be checked? All containers needing preservation are found to be in	en II: IVes INo XIV/A Sa	3. \square HNO ₃ \square H ₂ SO ₄ \square NaOH Positive for Res. Chlorine? Y N ample #
Compliance with EPA recommendation? $(HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyan Exceptions: VOA Coliform TOC/DOC Oil and Grease$	ide) □Yes □No + N/A	itial when let the field of
DRO/8015 (water) and Dioxin.	Yes No N/A C	ompleted: preservative:
Headspace in VOA Vials (>6mm)?	YesNo A 14	ł
Trip Blank Present?	Yes No N/A 1	5. · · · · · · · · · · · · · · · · · · ·
Trip Blank Custody Seals Present?	🗆 Yes 🗖 No 🍌 🕅 /A	
Pace Trip Blank Lot # (if purchased):		
CLIENT NOTIFICATION/RESOLUTION		Field Data Required? Yes No
Person Contacted:	[Date/Time:
Comments/Resolution:		
Project Manager Review:	Finter .	Date: 7/19/2017

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).



Pace Analytical Services, LLC. 1700 Elm Street - Suite 200 Minneapolis, MN, 55414

Drinking Water Analysis Results 2,3,7,8-TCDD -- USEPA Method 1613B

Tel: 612-607-1700 Fax: 612-607-6444

Sample IDC-14			Date Collecte	ed07/13/2017	
Client PASI Flo	rida		Date Receive	ed07/18/2017	
Lab Sample ID 3532405	5001		Date Extracte	ed07/27/2017	
	Sample C-14	Method Blank	Lab Spike	Lab Spike Dup	
[2,3,7,8-TCDD]	ND	ND			
EDL	3.9 pg/L	4.8 pg/L			
2,3,7,8-TCDD Recovery			132%	134%	
Spike Recovery Limit			73-146%	73-146%	
RPD			1.	8%	
IS Recovery	58%	66%	54%	61%	
IS Recovery Limits	31-137%	31-137%	25-141%	25-141%	
CS Recovery	90%	97%	81%	99%	
CS Recovery Limits	42-164%	42-164%	37-158%	37-158%	
Filename	Y170728B_11	Y170728B_05	Y170728B_03	Y170728B_04	
Analysis Date	07/28/2017	07/28/2017	07/28/2017	07/28/2017	
Analysis Time	22:17	19:25	18:27	18:56	
Analyst	BAL	BAL	BAL	BAL	
Volume	1.041L	1.019L	1.054L	1.066L	
Dilution	NA	NA	NA	NA	
ICAL Date	07/27/2017	07/27/2017	07/27/2017	07/27/2017	
CCAL Filename	Y170728B 02	Y170728B 02	Y170728B 02	Y170728B 02	

! = Outside the Control Limits

ND = Not Detected

EDL = Estimated Detection Limit

Limits = Control Limits from Method 1613 (10/94 Revision), Tables 6A and 7A

RPD = Relative Percent Difference of Lab Spike Recoveries

IS = Internal Standard $[2,3,7,8-TCDD-\frac{13}{27}C_{12}]$

CS = Cleanup Standard [2,3,7,8-TCDD-³⁷Cl₄]

Analyst: Barn a Lart

Project No.....10396061

C-16



ANALYTICAL REPORT

Job Number: 420-123595-4 SDG Number: Clovewood Job Description: LBG, Inc.

For: Leggette, Brashears & Graham, Inc. 4 Research Drive Shelton, CT 06464

Attention: Stacy Stieber

Debra 60

Debra Bayer Customer Service Manager dbayer@envirotestlaboratories.com 08/24/2017

NYSDOH ELAP does not certify for all parameters. EnviroTest Laboratories does hold certification for all analytes where certification is offered by ELAP unless otherwise specified in the Certification Information section of this report. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval of the laboratory. EnviroTest Laboratories Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our laboratory. All questions regarding this report should be directed to the EnviroTest Customer Service Representative.

Page 1 of 18

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554



METHOD SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-4 SDG Number: Clovewood

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7 Sample Filtration Total Metals Digestion for 200.7 200 Series Drinking Water Prep Determination Step	EnvTest EnvTest EnvTest EnvTest	EPA 200.7 Re	ev 4.4 FILTRATION EPA 200.7 EPA 200.7/200.8
ICPMS Metals by 200.8 200 Series Drinking Water Prep Determination Step Total Metals Digestion for 200.8	EnvTest EnvTest EnvTest	EPA 200.8 Re	ev.5.4 EPA 200.7/200.8 EPA 200.8
Mercury in Water by CVAA Digestion for CVAA Mercury in Waters	EnvTest EnvTest	EPA 245.1 Re	ev.3.0 EPA 245.1
Anions by Ion Chromatography	EnvTest	MCAWW 300	0.0
Anions by Ion Chromatography	EnvTest	EPA 300.0 Re	ev. 2.1
EPA 504.1 EDB	Pace	EPA 504.1	
EPA 505 Pesticide/PCB	Pace	EPA 505	
EPA 515 Chlorinated Acids	Pace	EPA 515	
Purgeable Organic Compounds in Water by GC/MS	EnvTest	EPA-DW 524	.2
EPA 525.2 Semivolatile Organics	Pace	EPA 525.2	
EPA 531.1 Carbamate Pesticides in Drinki	Pace	EPA 531.1	
EPA 900 Series GA/GB/RA226/RA228/Gamma	Radios	EPA 900	
Uranium	Radios	STL-STL EPA	A
Heterotropic Plate Count	EnvTest	IDEXX SIMPI	LATE
Odor, Threshold Test	EnvTest	SM20 SM 21	50B
Alkalinity, Titration Method	EnvTest	SM21 SM 23	20B-97,-11
Corrosivity LSI Calculation	EnvTest	SM20 SM 23	30B
Hardness by Calculation	EnvTest	SM20 SM 234	40B-97,-11
рН	EnvTest	SM19 SM 45	00 H+ B
Nitrite by Colormetric	EnvTest	SM20 SM 45	00 NO2 B
Total Coliform and Escherichia coli by Colilert - Presence/Absence	EnvTest	SMWW SM 9	0223
Apparent Color	EnvTest	SM21 SM212	20B-01,11
Turbidity	EnvTest	SM21 SM213	30B-01,11
Total Dissolved Solids (Dried at 180 °C)	EnvTest	SM21 SM254	40C-97,11
Cyanide, Total: Colorimetric Method Cyanide: Distillation	EnvTest EnvTest	SM21 SM450	00 CN E-99 SM21 SM 4500 CN C
General Sub Contract Method	Pace	Subcontract	
General Sub Contract Method	Radios	Subcontract	

METHOD SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-4 SDG Number: Clovewood

Descriptio	Lab Location	Method P	reparation Method

Lab References:

EnvTest = EnviroTest

Pace = Pace Analytical - Ormond Beach

Radios = Pace Analytical Services, Inc.

Method References:

EPA = US Environmental Protection Agency

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

IDEXX =

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM19 = "Standard Methods For The Examination Of Water And Wastewater", 19Th Edition, 1995."

SM20 = "Standard Methods For The Examination Of Water And Wastewater", 20th Edition."

SM21 = "Standard Methods For The Examination Of Water And Wastewater", 21st Edition

SMWW = "Standard Methods for the Examination of Water and Wastewater"

STL-STL = Severn Trent Laboratories, St. Louis, Facility Standard Operating Procedure.

METHOD / ANALYST SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-4 SDG Number: Clovewood

Method	Analyst	Analyst ID
EPA-DW 524.2	Andersen, Eric C	ECA
EPA 200.7 Rev 4.4	Sirico, Derek	DS
EPA 200.8 Rev.5.4	Sirico, Derek	DS
EPA 245.1 Rev.3.0	Sirico, Derek	DS
SM20 SM 2340B-97,-11	Sirico, Derek	DS
MCAWW 300.0	Luis, Carlos	CL
EPA 300.0 Rev. 2.1	Luis, Carlos	CL
IDEXX SIMPLATE	O'Driscoll, Kate	КО
SM20 SM 2150B	O'Driscoll, Kate	КО
SM21 SM 2320B-97,-11	Tramantano, Matt	MT
SM20 SM 2330B	Cusack, Renee	RC
SM19 SM 4500 H+ B	O'Driscoll, Kate	КО
SM20 SM 4500 NO2 B	Grant, Ameya	AG
SMWW SM 9223	Grant, Ameya	AG
SM21 SM2120B-01,11	O'Driscoll, Kate	КО
SM21 SM2130B-01,11	O'Driscoll, Kate	КО
SM21 SM2540C-97,11	O'Driscoll, Kate	КО
SM21 SM4500 CN E-99	Osborne, Amy	AO

SAMPLE SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-4 SDG Number: Clovewood

			Date/Time	Date/Time
Lab Sample ID	Client Sample ID	Client Matrix	Sampled	Received
420-123595-4	C - 16	Drinking Water	07/13/2017 0915	07/13/2017 1000

Client. Leggette, Brashears & Granan		, IIIC.		Sda Number: Clovewood
Client Sample ID:	C - 16			
Lab Sample ID: Client Matrix:	420-123595-4 Drinking Water		Date Sampled Date Received	: 07/13/2017 0915 1: 07/13/2017 1000
	ŧ	524.2 Purgeable Organic Compounds in W	ater by GC/MS	
Method:	524.2	Analysis Batch: 420-112453	Instrument ID:	Agilent 7890A/5975C
Preparation:	N/A		Lab File ID:	X071421.D
Dilution:	1.0		Initial Weight/Volum	ie: 5 mL
Date Analyzed:	07/14/2017 1948		Final Weight/Volum	e: 5 mL
Date Prepared:	N/A			
Analyte		Result (ug/L)	Qualifier	RL
1,1,1,2-Tetrachloroe	ethane	<0.500		0.500
1,1,1-Trichloroetha	ne	<0.500		0.500
1,1,2,2-Tetrachloroe	ethane	<0.500		0.500
1,1,2-Trichloroethai	ne	<0.500		0.500
1,1-Dichloroethane		<0.500		0.500
1,1-Dichloroethene		<0.500		0.500
1,1-Dichloropropen	e	<0.500		0.500
1,2,3-Trichlorobenz	ene	<0.500		0.500
1,2,3-Trichloropropa	ane	<0.500		0.500
1,2,4-Trichlorobenz	ene	<0.500		0.500
1,2,4-Trimethylbenz	zene	<0.500		0.500
1,2-Dichloroethane		<0.500		0.500
1,2-Dichlorobenzen	ne	<0.500		0.500
1,2-Dichloropropan	e	<0.500		0.500
1,3-Dichloropropan	e	<0.500		0.500
1,4-Dichlorobenzen	ne	<0.500		0.500
2,2-Dichloropropan	e	<0.500		0.500
Benzene		<0.500		0.500
Bromobenzene		<0.500		0.500
Bromochlorometha	ne	<0.500		0.500
Bromomethane		<0.500		0.500
n-Butylbenzene		<0.500		0.500
cis-1,2-Dichloroethe	ene	<0.500		0.500
cis-1,3-Dicnioropro	pene	<0.500		0.500
Carbon tetrachiorid	e	<0.500		0.500
Chloroothana		<0.500		0.500
Chloromothana		<0.500		0.500
Dibromomothano		<0.500		0.500
Ethylbenzene		<0.500		0.500
Dichlorodifluoromet	thane	<0.500		0.500
Hexachlorobutadie	ne	<0.500		0.500
Isonronylbenzene		<0.000		0.500
n-Isopropylochizerie		<0.500		0.500
Methylene Chloride	2	<0.500		0.500
m-Xylene & p-Xyler	ne	<1.00		1.00
Methyl tert-butyl eth	her	<0.500		0.500
o-Xylene		<0.500		0.500
Tetrachloroethene		<0.500		0.500
Toluene		<0.500		0.500
trans-1,2-Dichloroe	thene	<0.500		0.500
trans-1,3-Dichlorop	ropene	<0.500		0.500
Trichloroethene		<0.500		0.500
tert-Butylbenzene		<0.500		0.500

Client: Leggette Brashears & Graham Inc.

Job Number: 420-123595-4

Analytical Data

Client: Leggette, Brashears & Graham, Inc.		Inc.	Job Number: 420-1235	
Client Sample ID:	C - 16			Sdg Number: Clovewood
Lab Sample ID: Client Matrix:	420-123595-4 Drinking Water		Date Sampled: Date Received:	07/13/2017 0915 07/13/2017 1000
	52	4.2 Purgeable Organic Compounds in \	Water by GC/MS	
Method:	524.2	Analysis Batch: 420-112453	Instrument ID: Ag	ilent 7890A/5975C
Preparation:	N/A		Lab File ID: X0	71421.D
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/14/2017 1948		Final Weight/Volume:	5 mL
Date Prepared:	N/A			
Analyte		Result (ug/L)	Qualifier	RL
Trichlorofluorometha	ane	<0.500		0.500
Vinyl chloride		<0.500		0.500
Xylenes, Total		<1.50		1.50
Styrene		<0.500		0.500
sec-Butylbenzene		<0.500		0.500
1,3,5-Trimethylbenz	ene	<0.500		0.500
N-Propylbenzene		<0.500		0.500
1,3-Dichlorobenzen	e	<0.500		0.500
2-Chlorotoluene		<0.500		0.500
4-Chlorotoluene		<0.500		0.500
Surrogate		%Rec	Accepta	ince Limits
4-Bromofluorobenze	ene	101	71 - 1:	20
Toluene-d8 (Surr)		118	79 - 1	21
1,2-Dichloroethane-d4 (Surr)		124	70 - 1	28

Client: Leggette, Brashears & Graham, Inc.

C - 16

Client Sample ID:

Job Number: 420-123595-4 Sdg Number: Clovewood

Lab Sample ID: Client Matrix:	420-123595-4 Drinking Water		Date Sampled: Date Received:	07/13/2017 0915 07/13/2017 1000
		200.7 Rev 4.4 ICP Metals by	200.7	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.7 Rev 4.4 200.7/200.8 1.0 07/17/2017 1445 07/17/2017 0925	Analysis Batch: 420-112479 Prep Batch: 420-112493	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Thermo ICP N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Iron Manganese Sodium Zinc		1050 373 21100 35.0	9 g	60.0 10.0 200 20.0
		200.7 Rev 4.4 ICP Metals by 200.7	/-Dissolved	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.7 Rev 4.4 200.7 1.0 07/19/2017 1846 07/17/2017 1505	Analysis Batch: 420-112597 Prep Batch: 420-112501	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Thermo ICP N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Iron Manganese		<60.0 381		60.0 10.0

Client: Leggette, Brashears & Graham, Inc.

C - 16

Client Sample ID:

Job Number: 420-123595-4 Sdg Number: Clovewood

Lab Sample ID: Client Matrix:	420-123595-4 Drinking Water		Date Sampled: Date Received:	07/13/2017 0915 07/13/2017 1000
		200.8 Rev.5.4 ICPMS Metals b	oy 200.8	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.8 Rev.5.4 200.7/200.8 1.0 07/17/2017 1330 07/17/2017 0925	Analysis Batch: 420-112457 Prep Batch: 420-112493	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Perkin Elmer ELAN N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Lead Arsenic Beryllium Cadmium Chromium Nickel Antimony Thallium Barium Selenium		<1.00 1.45 <0.300 <1.00 <7.00 1.32 <0.400 <0.300 17.7 <2.00		1.00 1.40 0.300 1.00 7.00 0.500 0.400 0.300 2.00 2.00
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.8 Rev.5.4 200.8 1.0 07/18/2017 1732 07/17/2017 1800	Analysis Batch: 420-112536 Prep Batch: 420-112520	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Perkin Elmer ELAN N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Silver		<1.00		1.00
		245.1 Rev.3.0 Mercury in Water	by CVAA	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	245.1 Rev.3.0 245.1 1.0 07/18/2017 1215 07/17/2017 1115	Analysis Batch: 420-112511 Prep Batch: 420-112451	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Perkin Elmer FIMS N/A 25 mL 25 mL
Analyte		Result (ug/L)	Qualifier	RL
Mercury		<0.200		0.200

Client: Leggette, Brashears & Graham, Inc.

C - 16

Client Sample ID:

Job Number: 420-123595-4 Sdg Number: Clovewood

Lab Sample ID: Client Matrix:	420-123595-4 Drinking Water	Date Sampled: Date Received:	07/13/2017 0915 07/13/2017 1000	
		SM 2340B-97,-11 Hardness by Ca	alculation	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	SM 2340B-97,-11 N/A 1.0 07/17/2017 1445 N/A	Analysis Batch: 420-112535	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	None N/A
Analyte		Result (mg/L)	Qualifier	RL
Calcium hardness	as calcium carbonate	88.2		1.25

Job Number: 420-123595-4 Sdg Number: Clovewood

Analytical Data

Client: Leggette, Brashears & Graham, Inc.

Biology **Client Sample ID:** C - 16 07/13/2017 0915 Lab Sample ID: 420-123595-4 Date Sampled: 07/13/2017 1000 Client Matrix: **Drinking Water** Date Received: Analyte Dil Method Result Qual Units Coliform, Total Absent CFU/100mL 1.0 SM 9223 07/13/2017 1510 Anly Batch: 420-112380 Date Analyzed Escherichia coli Absent CFU/100mL 1.0 SM 9223 07/13/2017 1510 Anly Batch: 420-112380 Date Analyzed Analyte RL Dil Method Result Qual Units SIMPLATE Heterotrophic Plate Count 90.0 CFU/mL 2.00 1.0 07/13/2017 1550 Anly Batch: 420-112413 Date Analyzed

General Chemistry

EnviroTest	Laboratories,	Inc.

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-4 Sdg Number: Clovewood

General Chemistry										
Client Sample ID:	C - 16									
Lab Sample ID: Client Matrix:	420-123595-4 Drinking Water		Date Sampled: Date Received:	07/1 07/1	13/2017 0915 13/2017 1000					
Analyte	Result	Qual Units	RL	Dil	Method					
Nitrate as N	<0.250 Anly Batch: 420-112412	mg/L Date Analyzed 07/13/2017 1658	0.250	1.0	300.0					
Analyte	Result	Qual Units		Dil	Method					
Langelier Index	-0.270	NONE		1.0	SM 2330B					

Anly Batch: 420-112765 Date Analyzed 07/26/2017 1302

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-4 Sdg Number: Clovewood

Client Sample ID:	C - 16					
Lab Sample ID: Client Matrix:	420-123595-4 Drinking Water			Date Sampled: Date Received:	07/1 07/1	3/2017 0915 3/2017 1000
Analyte	Result	Qual	Units	RL	Dil	Method
Alkalinity	190		mg/L	5.00	1.0	SM 2320B-97,-11
	Anly Batch: 420-112669	Date Analyzed	07/21/2017 1730			
Total Dissolved Solids	192		mg/L	5.00	1.0	SM2540C-97,11
	Anly Batch: 420-112602	Date Analyzed	07/20/2016 1700			
Chloride	1 62		ma/l	1.50	10	300.0 Rev. 2.1
	Anly Batch: 420-112412	Date Analyzed	07/13/2017 1658	1.00	1.0	000.0100.2.1
Cultata	0.11			5.00	1.0	200 0 Day 2 4
Sullate	9.11 Anly Batch: 420-112412	Date Analyzed	11g/L 1 07/13/2017 1658	5.00	1.0	300.0 Rev. 2.1
Fluoride	<0.500 Anly Batch: 420-112412	Date Analyzed	mg/L 07/13/2017 1658	0.500	1.0	300.0 Rev. 2.1
		Duter indigzee				
Cyanide, Total	<0.00500		mg/L	0.00500	1.0	SM4500 CN E-99
	Anly Batch: 420-112524 Prep Batch:	Date Analyzeo	1 07/18/2017 1400 1· 07/14/2017 1300			
Apparent Color	30.0	g	Pt-Co	2.00	1.0	SM2120B-01,11
	Anly Batch: 420-112486	Date Analyzed	07/13/2017 1750			
pH@color measureme	nt 7.29		SU	2.00	1.0	SM2120B-01,11
- 0	Anly Batch: 420-112486	Date Analyzed	07/13/2017 1750			
Turbidity	13.0	0	NTU	0 100	1.0	SM2130B 01 11
Turblatty	Anly Batch: 420-112420	9 Date Analyzed	07/13/2017 1813	0.100	1.0	SW2150D-01,11
.	4.00			4.00		014 04 505
Odor	1.00 Anly Batch [,] 420-112485	Date Analyzed	I.O.N. I 07/13/2017 1800	1.00	1.0	SM 2150B
		2010701019200				
Temp @ Odor Measure	ement 60.0	Data Analyzad	Degrees C	5.00	1.0	SM 2150B
	Aniy Batch: 420-112485	Date Analyzed	07/13/2017 1800			
рН	7.29	Н	SU	0.200	1.0	SM 4500 H+ B
	Anly Batch: 420-112487	Date Analyzed	07/13/2017 1749			
Temp @ pH Measurem	nent 16.6		Degrees C	5.00	1.0	SM 4500 H+ B
	Anly Batch: 420-112487	Date Analyzed	07/13/2017 1749			
Nitrite as N	<0.0100		mg/L	0.0100	1.0	SM 4500 NO2 B
	Anly Batch: 420-112510	Date Analyzed	07/14/2017 1047		-	

General Chemistry

DATA REPORTING QUALIFIERS

Client: Leggette, Brashears & Graham, Inc.

Job Number: Sdg Number: Clovewood

Lab Section	Qualifier	Description
Metals		
	9	Result fails applicable NYS drinking water standards
General Chemistry		
	g	Result fails applicable NYS drinking water standards
	Н	Sample was prepped or analyzed beyond the specified holding time

Client: Leggette, Brashears & Graham, Inc.

Job Number:

Sdg Number: Clovewood

The following analytes are Not Part of the ELAP scope of accreditation

Sulfur, Tungsten, Silicon, Bicarbonate Alkalinity, 7 Day BOD 5210C, 28 Day BOD, Soluble BOD, Carbon Dioxide, Carbonate Alkalinity, CBOD Soluble, Chlorine, Cyanide (WAD), Ferrous Iron, Ferric Iron, Total Nitrogen, Total Organic Nitrogen, Dissolved Oxygen, pH, Phenolphthalein Alkalinity, Solids (Fixed), Solids (Percent), Solids (Percent Moisture) , Solids (Percent Volatile), Solids (Volatile Suspended), Temperature, TKN (Soluble), COD (Soluble), Total Inorganic Carbon, Volatile Acids as Acetic Acid, 2-Aminopyridine, 3-Picoline, 1-Methyl-2-pyrrilidinone, Aziridine, Dimethyl sulfoxide, 1-Chlorohexane, Iron Bacteria, Salmonella, & Sulfur Reducing Bacteria.

The following analytes are Not Part of ELAP Potable Water scope of accreditation

Cobalt (200.7, 200.8), Tin (200.7), Strontium (200.7), Gold (200.7), Platinum (200.7), Palladium (200.7), Titanium (200.7), Phosphorus (365.3), Nitrate-Nitrite (10-107-4-1C, 353.2), m-Xylene & p-Xylene (502.2, 524), Naphthalene (502.2), o-Xylene (502.2, 524), & Fecal Coliform (9222D).

The following analytes are Not Part of ELAP Solid and Hazardous Waste scope of accreditation

Ammonia (SM 4500NH3G), TKN (351.2), Phosphorus (365.3), 1,2-Dichloro-1,1,2-trifluoroethane (8260), & Chlorodifluoromethane (8260).

The following analytes are Not Part of ELAP Non Potable Water scope of accreditation

Dissolved Organic Carbon (5310C), Mecoprop (8151A), & MCPA (8151A).

Definitions and Glossary

Client: Leggette, Brashears & Graham, Inc.

Job Number:

Sdg Number: Clovewood

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%R	Percent Recovery
DL, RA, RE	Indicates a Dilution, Reanalysis or Reextraction.
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit - an estimate of the minimum amount of a substance that an analytical process can reliably detect. A MDL is analyte- and matrix-specific and may be laboratory-dependent.
ND	Not detected at the reporting limit (or MDL if shown).
QC	Quality Control
RL	Reporting Limit - the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.
RPD	Relative Percent Difference - a measure of the relative difference between two points

EnviroTest	æ
Laboratories,	Inc.

CHAIN OF CUSTODY

123595-4

REPORT# (Lab Use Only)

Lab Name EnviroTest Laboratories

Address & Phone 315 Fullerton Avenue, Newburgh, New York 12550 845-562-0890

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION	T	MAT	RIX	-						UDEE		VOED						
	P.O. NUMBER	TOWN	┝╾┯	TY	PE	$ \rightarrow $	<u></u>			1 -	HEQI			1 2	T 2 **	1 0	10	<u>,</u>	PAGE 1 OF	1
CLIENT (SITE) PM		CLIENT FAX		livetta	ncate		MPA C/G ki	ml Vials HC	odium Thio	odium Thio	HCI/Na2SO	c Nitric Acit	Thio(liquid	Litter Plastic	odium Hyd	astic Sterile	lastic Nitric	fials Unpres		
	203-929-0000	L	NDICATE	fortant ford	vater) inc				40ml S	nber S	unber	Plastic	n/Sod.		astic S	Smi Pi	Litter F	40ml V	NORMAL	<u> </u>
Stacy Stieber			(C) (C)	1	aste					I An	terA	[mo	No I		I P	12			QUICK	
CLIENT ADDRESS		······································	OR GRA	CH (H)						250n	<u>د</u>	ស	40m		250r				VERBAL	
COMPANY CONTRACTING THIS WORK (# applicable):		1	DSITE (C) (JUS (WAIE	OR SEMIS	Specify													#OF COOLERS	S
SAMPLE DATE TIME	SAMPLE IDENTIFICA	TION	COMPC		UTIOS	OTHER			1	NUMB	ER OF	CONT	AINE	RS SUE	BMITTE	ED				REMARKS
7/13/17 915	(-16			D	2			3	2	1	2	1	2	4	1	2	5	2	Table 8B (Sb,	As,Ba,Be,Cd,Cr,Cn,Hg,Ni
			Γ		T								[T		Se,TI,F)	
				Π	Π														Table 8C (NO3	3,NO2)
				Π			2-Liter A	Amber	r Unpr	es.									Table 8D (Ci,F	e,Mn,Ag,Na,SO4,Zn,Odor,Color)
				1			1-250m	i Amb	er Unj	pres.							[524.2 (POC,M	TBE,Vinyi Chloride)
							3-250m	I Plast	tic Un	pres. (no air)								SOCs (504,50	8,515,525,531,547,548,549,Dioxin)
							2-40ml	Ambe	r Sodi	ium Th	io.								Additional Te	sts (Total coliform
			\prod	Π			1-500m	l Amb	er So	dium T	'nio.								thru Zinc)	
				Π			1-Liter /	Amber	r Plast	tic Soc	ium Thi	io.&H2	SO4						Radio(Gross	Alpha/Beta,Radium-226/228,Uranium)
							2-Liter	Amber	r Sodi	um Th	io.								Radon	······
	V			V	∕∏														Dissolved Fe,	Mn
			Π																	
RELINQUISHED BY: (SIGNATURE)	COMPANY	DATE 7/13/17	ТІМ	е //	1ª	3	RECEN	VED E	3Y: (S	IGNA	URE)					COMF	ANY		DATE	TIME .
SAMP/000 BY: (SIGNATIONE)	COMPANY	DATE 1/3/17	TIM		5	-	RECEN	VED E	37: (S	IGNA	URE)					COMF	ANY		DATE	TIME
REVINQUISHED BY (SIGNATURE)	COMPANY	DATE /	TIM	E			RECEN	VED E	3Y: (S	IGNA	'URE)					COMF	ANY		DATE	TIME
SUBCONTACT: PACE-SOCs, F	Radio, Radon; ASI-M	PA/Crypto/Glare	lia		-	-			,			_	P							
RECEIVED FOR LABORATORY BY:	DATE TIME	CUSTODY INTACT	Coo	ler T	emp:	•	LABOR		AY RE	MÀRI	(S:	IPE_		pH	_ 012	2	Reve	lwed b	У	
WIIIA	71131 1143	NO	3	,5	2	7	1CI	+3	>											۰ ۱

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-4 SDG Number: Clovewood

Login Number: 123595

Question	T/F/NA	Comment
Samples were collected by ETL employee as per SOP-SAM-1	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is recorded.	True	3.5C
Cooler Temp. is within method specified range.(0-6 C PW, 0-8 C NPW, or BAC <10 C	True	
If false, was sample received on ice within 6 hours of collection.	NA	
Based on above criteria cooler temperature is acceptable.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	False	рН
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	



Pace Analytical Services, LLC 1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

August 03, 2017

Ms. Debra Bayer EnviroTest Laboratories, Inc. 315 Fullerton Avenue Newburgh, NY 12550

RE: Project: 42001269 Pace Project No.: 30224101

Dear Ms. Bayer:

Enclosed are the analytical results for sample(s) received by the laboratory on July 14, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sugnalylillins

Jacquelyn Collins jacquelyn.collins@pacelabs.com (724)850-5612 Project Manager

Enclosures

cc: Janine Rader, EnviroTest Laboratories, Inc.





Pace Analytical Services, LLC 1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

CERTIFICATIONS

Project:	42001269
Pace Project No.:	30224101

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601 L-A-B DOD-ELAP Accreditation #: L2417 Alabama Certification #: 41590 Arizona Certification #: AZ0734 Arkansas Certification California Certification #: 04222CA Colorado Certification Connecticut Certification #: PH-0694 **Delaware Certification** Florida/TNI Certification #: E87683 Georgia Certification #: C040 **Guam Certification** Hawaii Certification Idaho Certification **Illinois Certification** Indiana Certification Iowa Certification #: 391 Kansas/TNI Certification #: E-10358 Kentucky Certification #: 90133 Louisiana DHH/TNI Certification #: LA140008 Louisiana DEQ/TNI Certification #: 4086 Maine Certification #: PA00091 Maryland Certification #: 308 Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification Missouri Certification #: 235

Montana Certification #: Cert 0082 Nebraska Certification #: NE-05-29-14 Nevada Certification #: PA014572015-1 New Hampshire/TNI Certification #: 2976 New Jersey/TNI Certification #: PA 051 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190 Oregon/TNI Certification #: PA200002 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282 South Dakota Certification Tennessee Certification #: TN2867 Texas/TNI Certification #: T104704188-14-8 Utah/TNI Certification #: PA014572015-5 USDA Soil Permit #: P330-14-00213 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 460198 Washington Certification #: C868 West Virginia DEP Certification #: 143 West Virginia DHHR Certification #: 9964C Wisconsin Certification Wyoming Certification #: 8TMS-L



SAMPLE SUMMARY

30224101001	C-16 (420-123595-4)	Drinking Water	07/13/17 09:15	07/14/17 10:20
Lab ID	Sample ID	Matrix	Date Collected	Date Received
Pace Project No	.: 30224101			
Project:	42001269			



SAMPLE ANALYTE COUNT

 Project:
 42001269

 Pace Project No.:
 30224101

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30224101001	C-16 (420-123595-4) SM7500RnB-07		NEG	1
		EPA 900.0	NEG	2
		EPA 903.1	WRR	1
		EPA 904.0	VAL	1
		ASTM D5174-97	RMK	1



ANALYTICAL RESULTS - RADIOCHEMISTRY

 Project:
 42001269

 Pace Project No.:
 30224101

Pace Project No.: 30224101						
Sample: C-16 (420-123595-4) PWS:	Lab ID: 30224 Site ID:	4101001 Collected: 07/13/17 09:15 Sample Type:	Received:	07/14/17 10:20	Matrix: Drinking	Water
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radon	SM7500RnB-07	59.3 ± 29.2 (46.2) C:NA T:NA	pCi/L	07/15/17 07:07	10043-92-2	
Gross Alpha	EPA 900.0	1.85 ± 1.52 (2.65) C:NA T:NA	pCi/L	07/24/17 08:50	12587-46-1	
Gross Beta	EPA 900.0	1.01 ± 0.753 (1.47) C:NA T:NA	pCi/L	07/24/17 08:50	12587-47-2	
Radium-226	EPA 903.1	0.503 ± 0.364 (0.412) C:NA T:93%	pCi/L	07/26/17 13:09	13982-63-3	
Radium-228	EPA 904.0	0.372 ± 0.301 (0.613) C:75% T:91%	pCi/L	07/27/17 11:16	15262-20-1	
Total Uranium	ASTM D5174-97	0.558 ± 0.019 (0.193) C:NA T:NA	ug/L	08/03/17 16:28	7440-61-1	



Project:	42001269					
Pace Project No.:	30224101					
QC Batch:	265143	Analysis Method:	ASTM D517	4-97		
QC Batch Method:	ASTM D5174-97	Analysis Description:	D5174.97 To	otal Uranium KPA		
Associated Lab Sar	mples: 302241010	01				
METHOD BLANK:	1306496	Matrix: Water				
Associated Lab Sar	mples: 302241010	01				
Parar	meter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Total Uranium	(0.064 ± 0.004 (0.193) C:NA T:NA	ug/L	08/03/17 11:33		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	42001269					
Pace Project No.:	30224101					
QC Batch:	265053	Analysis Method:	SM7500RnB	-07		
QC Batch Method:	SM7500RnB-07	Analysis Description:	7500Rn B Ra	adon		
Associated Lab Sar	nples: 30224101	001				
METHOD BLANK:	1305441	Matrix: Water				
Associated Lab Sar	nples: 30224101	001				
Parar	neter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radon		2.8 ± 18.8 (32.7) C:NA T:NA	pCi/L	07/15/17 02:40		-

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	42001269						
Pace Project No.:	30224101						
QC Batch:	265152	Analysis	Method:	EPA 903.1			
QC Batch Method:	EPA 903.1	Analysis	Description:	903.1 Radium-226			
Associated Lab Sar	mples: 3022410	1001					
METHOD BLANK:	1306510	Mat	rix: Water				
Associated Lab Sar	mples: 3022410	1001					
Parar	meter	Act ± Unc (MDC) Carr T	rac	Units	Analyzed	Qualifiers	
Radium-226		0.159 ± 0.312 (0.570) C:NA T:9	5%	pCi/L	07/26/17 12:14		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	42001269					
Pace Project No.:	30224101					
QC Batch:	265148	Analysis Method:	EPA 900.0			
QC Batch Method:	EPA 900.0	Analysis Description:	900.0 Gross Alpha/Beta			
Associated Lab Sar	mples: 3022410	1001				
METHOD BLANK:	1306505	Matrix: Water				
Associated Lab Sar	mples: 3022410	1001				
Parar	neter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Gross Alpha		-0.333 ± 0.399 (1.52) C:NA T:NA	pCi/L	07/24/17 08:35		
Gross Beta		-0.362 ± 0.578 (1.62) C:NA T:NA	pCi/L	07/24/17 08:35		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	42001269					
Pace Project No.:	30224101					
QC Batch:	265158	Analysis Method:	EPA 904.0			
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radium 228			
Associated Lab Sar	mples: 3022410 ⁴	1001				
METHOD BLANK:	1306521	Matrix: Water				
Associated Lab Sar	mples: 3022410 ⁻	1001				
Parar	meter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radium-228		0.0810 ± 0.316 (0.717) C:75% T:85%	pCi/L	07/27/17 11:14		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

 Project:
 42001269

 Pace Project No.:
 30224101

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.
nviroTest Laboratories, Inc. ^{5 Fullerton} Avenue	3					1	:		ļ	
ourgh, NY 12550 ie (845) 562-0890 Fax (845) 562-0841		•	Chain o	f Cust	ody Re	cord			ц Б С С С С С С С С С С С С С С С С С С	oTest 🖾 ratories Inc.
nt Information (Sub Contract Lab)	Sampler Sheber Sl	+036	Lab P Bave	M: r. Debra		Carrie	ar Tracking No(s):		COC Na:	
contact: ping/Receiving	Phone:	14	SU7 03 E-Mai	er@envirote	stlaboratories.	com			420-9120.1 Page: Dace 1 of 1	
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ss: Roseytown Rd,Suites 2,3,4,	Due Date Requested: 7/27/2017								Preservation Co	des:
insburg	TAT Requested (days):								A - HCL B - NaOH	M - Hexane N - None
Zip: 15601				822 AS					C - Zn Acetate <u>D - Nitric Acid</u> F - NaHCO4	0 - AsNaO2 P - Na2O4S
	¥ Od			336/E					F - MeOH 6 - Amchlor	. и - Na2SO3 R - Na2S2SO3 S - H2SO4
	:# OM			or No (9) AA/8	wnju				H - Ascorbic Acid I - Ico	T - TSP Dodecahydrate U - Acetone
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		Preservi	ation Code:	s a X	s s			01)	Special Ir	nstructions/Note: '3
C - 16 (420-123595-4)	7/13/17 9:15		Water	×	××					
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أأه للمحمط الممعفقة معقني										
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Sample Condition Upon Reco	elpt F	Pitts	ourg	ıh	302241
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Cooler Temperature Observed temp	<u>, , , , , , , , , , , , , , , , , , , </u>	-	00,		
					contents: Cet 7/19/17
Comments:	Yes	No	N/A	۸	
Chain of Custody Present:				1	
Chain of Custody Filled Oul;	\Box			2	
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Sampler Name & Signature on COC:		1		4	
Sample Labels match COC:	1	Ĺ	<u> </u>	5.	
-looludes date/lime/ID Matrix:	WT		_		·
Samples Arrived within Hold Time:	1			6	
Short Hold Time Analysis (<72hr remaining):	1			7	
Short Hold Time Analysis, services and the Requested:		1		8	· · · · · · · · · · · · · · · · · · ·
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ad Aqueous Samples Screened > 0.5 menun		/		completed: 114	Date:
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Person Contacled:		E	Date/T	Ime:	
Comments/ Resolution:					
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Note: whenever more is a disprepancy aneuring norm carolina compliance samples, a copy of this form with the series of the norm of contained electronically in contract preservative, out of temp, incorrect containers) *PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

J:\QAQCIMaster\Document Management\Sample Mgt\Sample Condition Upon Receipt Pttlsburgh (C056-5 5July2017)



Pace Analytical Services, LLC 8 East Tower Circle Ormond Beach, FL 32174 (386)672-5668

August 15, 2017

Ron Bayer EnviroTest Laboratories Inc. 315 Fullerton Avenue Newburgh, NY 12550

RE: Project: LBG,Inc 42001269 Pace Project No.: 35324056

Dear Ron Bayer:

Enclosed are the analytical results for sample(s) received by the laboratory on July 14, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Bo Garcia bo.garcia@pacelabs.com (386)672-5668 Project Manager

Enclosures

cc: Debra Bayer, EnviroTest Laboratories Inc.
 Renee Cusack, EnviroTest Laboratories Inc.
 Laura Marciano, EnviroTest Laboratories Inc.
 Janine Rader, EnviroTest Laboratories Inc.
 Meredith Ruthven, EnviroTest Laboratories Inc.





Pace Analytical Services, LLC 8 East Tower Circle Ormond Beach, FL 32174 (386)672-5668

CERTIFICATIONS

Project: LBG,Inc 42001269 Pace Project No.: 35324056

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174 Alabama Certification #: 41320 Connecticut Certification #: PH-0216 Delaware Certification: FL NELAC Reciprocity Florida Certification #: E83079 Georgia Certification #: 955 Guam Certification: FL NELAC Reciprocity Hawaii Certification: FL NELAC Reciprocity Illinois Certification #: 200068 Indiana Certification: FL NELAC Reciprocity Kansas Certification #: E-10383 Louisiana Certification #: FL NELAC Reciprocity Louisiana Environmental Certificate #: 05007 Maryland Certification: #346 Michigan Certification #: 9911 Mississippi Certification: FL NELAC Reciprocity Missouri Certification #: 236 Montana Certification #: Cert 0074

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747 New York Certification #: 10478 Primary Accrediting Body New Jersey Certification #: NY158 Pennsylvania Certification #: 68-00350 Connecticut Certification #: PH-0435

Nebraska Certification: NE-OS-28-14 Nevada Certification: FL NELAC Reciprocity New Jersey Certification #: FL022 New York Certification #: 11608 North Carolina Environmental Certificate #: 667 North Carolina Certification #: 12710 Oklahoma Certification #: D9947 Pennsylvania Certification #: 68-00547 Puerto Rico Certification #: FL01264 South Carolina Certification: #96042001 Tennessee Certification #: TN02974 Texas Certification: FL NELAC Reciprocity US Virgin Islands Certification: FL NELAC Reciprocity Virginia Environmental Certification #: 460165 Wyoming Certification: FL NELAC Reciprocity West Virginia Certification #: 9962C Wisconsin Certification #: 399079670 Wyoming (EPA Region 8): FL NELAC Reciprocity

Maryland Certification #: 208 Rhode Island Certification #: LAO00340 Massachusetts Certification #: M-NY026 New Hampshire Certification #: 2987



SAMPLE SUMMARY

Project: LBG,Inc 42001269 Pace Project No.: 35324056

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35324056001	C-16	Drinking Water	07/13/17 09:15	07/14/17 11:10



SAMPLE ANALYTE COUNT

Project:LBG,Inc 42001269Pace Project No.:35324056

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35324056001	C-16	EPA 504.1	BP1	2	PASI-O
		EPA 505	MMR	3	
		EPA 508.1	NS1	18	PASI-O
		EPA 515.3	LJM	8	PASI-O
		EPA 531.1	WFH	9	PASI-O
		EPA 547	NMB	1	PASI-O
		EPA 549.2	NMB	1	PASI-O
		EPA 525.2	NS1	7	PASI-O
		EPA 548.1	JDT	1	PASI-O



ANALYTICAL RESULTS

Project: LBG,Inc 42001269

Pace Project No.: 35324056

Sample: C-16	Lab ID:	35324056001	Collected	d: 07/13/1	7 09:15	Received: 07/	14/17 11:10 Ma	atrix: Drinking	Water
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504.1 GCS EDB and DBCP	Analytical	Method: EPA 5	04.1 Prepa	ration Meth	nod: EP/	A 504.1			
1,2-Dibromo-3-chloropropane 1,2-Dibromoethane (EDB)	<0.0055 <0.0064	ug/L ug/L	0.017 0.0086	0.0055 0.0064	1 1	07/18/17 07:15 07/18/17 07:15	07/18/17 18:23 07/18/17 18:23	96-12-8 106-93-4	
505 GCS Pesticides/PCBs	Analytical	Method: EPA 5	05 Prepara	tion Metho	d: EPA	505			
Aldrin Surrogates	<0.025	ug/L	0.025	0.025	1	07/20/17 16:38	07/21/17 00:52	309-00-2	
Tetrachloro-m-xylene (S)	88	%.	30-150		1	07/20/17 16:38	07/21/17 00:52	877-09-8	
Decachlorobiphenyl (S)	57	%.	30-150		1	07/20/17 16:38	07/21/17 00:52	2051-24-3	
508.1 GCS Pesticides	Analytical	Method: EPA 5	08.1 Prepa	ration Meth	nod: EP/	A 508.1			
Alachlor	<0.037	ug/L	0.21	0.037	1	07/21/17 15:45	07/28/17 04:17	15972-60-8	
Atrazine	<0.067	ug/L	0.11	0.067	1	07/21/17 15:45	07/28/17 04:17	1912-24-9	
gamma-BHC (Lindane)	<0.0032	ug/L	0.021	0.0032	1	07/21/17 15:45	07/28/17 04:17	58-89-9	
Butachlor	<0.029	ug/L	0.11	0.029	1	07/21/17 15:45	07/28/17 04:17	23184-66-9	
Chlordane (Technical)	<0.050	ug/L	0.21	0.050	1	07/21/17 15:45	07/28/17 04:17	57-74-9	
Dieldrin	<0.020	ug/L	0.11	0.020	1	07/21/17 15:45	07/28/17 04:17	60-57-1	
Endrin	<0.0074	ug/L	0.011	0.0074	1	07/21/17 15:45	07/28/17 04:17	72-20-8	
Heptachlor	<0.013	ug/L	0.042	0.013	1	07/21/17 15:45	07/28/17 04:17	76-44-8	
Heptachlor epoxide	<0.0032	ug/L	0.021	0.0032	1	07/21/17 15:45	07/28/17 04:17	1024-57-3	
Hexachlorobenzene	<0.020	ug/L	0.11	0.020	1	07/21/17 15:45	07/28/17 04:17	118-74-1	
Hexachlorocyclopentadiene	<0.034	ug/L	0.11	0.034	1	07/21/17 15:45	07/28/17 04:17	77-47-4	
Methoxychlor	<0.054	ug/L	0.11	0.054	1	07/21/17 15:45	07/28/17 04:17	72-43-5	
Metolachlor	<0.050	ug/L	0.11	0.050	1	07/21/17 15:45	07/28/17 04:17	51218-45-2	
PCB. Total	< 0.084	ug/l	0.11	0.084	1	07/21/17 15:45	07/28/17 04:17	1336-36-3	
Propachlor	< 0.032	ug/L	0.11	0.032	1	07/21/17 15:45	07/28/17 04:17	1918-16-7	
Simazine	< 0.073	ug/L	0.074	0.073	1	07/21/17 15:45	07/28/17 04:17	122-34-9	
Toyanhene	<0.64	ug/L	1 1	0.64	1	07/21/17 15:45	07/28/17 04:17	8001-35-2	
Surrogates	10.04	ug/L		0.04	•	01/21/11 10.40	01/20/11 04.11	0001 00 2	
Decachlorobiphenyl (S)	106	%	70-130		1	07/21/17 15:45	07/28/17 04:17	2051-24-3	
515.3 Chlorinated Herbicides	Analytical	Method: EPA 5	15.3 Prepa	ration Meth	nod: EP/	A 515.3			
2,4-D	<0.081	ug/L	0.10	0.081	1	07/20/17 09:35	07/22/17 07:41	94-75-7	
Dalapon	<0.89	ug/L	1.0	0.89	1	07/20/17 09:35	07/22/17 07:41	75-99-0	
Dicamba	<0.067	ug/L	0.10	0.067	1	07/20/17 09:35	07/22/17 07:41	1918-00-9	L1
Dinoseb	<0.16	ug/L	0.20	0.16	1	07/20/17 09:35	07/22/17 07:41	88-85-7	
Pentachlorophenol	<0.030	ug/L	0.040	0.030	1	07/20/17 09:35	07/22/17 07:41	87-86-5	
Picloram	<0.094	ug/L	0.10	0.094	1	07/20/17 09:35	07/22/17 07:41	1918-02-1	
2,4,5-TP (Silvex)	<0.16	ug/L	0.20	0.16	1	07/20/17 09:35	07/22/17 07:41	93-72-1	
Surrogates		0							
2,4-DCAA (S)	97	%	70-130		1	07/20/17 09:35	07/22/17 07:41	19719-28-9	
531.1 HPLC Carbamates	Analytical	Method: EPA 5	31.1						
Aldicarb	<0.64	ug/L	2.0	0.64	1		07/18/17 17:04	116-06-3	
Aldicarb sulfone	<0.37	ug/L	2.0	0.37	1		07/18/17 17:04	1646-88-4	
Aldicarb sulfoxide	<0.59	ug/L	2.0	0.59	1		07/18/17 17:04	1646-87-3	
Carbofuran	<0.32	ug/L	2.0	0.32	1		07/18/17 17:04	1563-66-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LBG,Inc 42001269

Pace Project No.: 35324056

Sample: C-16	Lab ID:	35324056001	Collecte	d: 07/13/17	7 09:15	Received: 07/	14/17 11:10 Ma	atrix: Drinking	Water
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
531.1 HPLC Carbamates	Analytical	Method: EPA 5	31.1						
3-Hydroxycarbofuran	<0.45	ug/L	2.0	0.45	1		07/18/17 17:04	16655-82-6	
Methomyl	<0.57	ug/L	2.0	0.57	1		07/18/17 17:04	16752-77-5	
Oxamyl	<0.55	ug/L	2.0	0.55	1		07/18/17 17:04	23135-22-0	
Carbaryl	<0.27	ug/L	2.0	0.27	1		07/18/17 17:04	63-25-2	
Surrogates									
BDMC (S)	111	%	80-120		1		07/18/17 17:04		
547 HPLC Glyphosate	Analytical	Method: EPA 5	47						
Glyphosate	<4.2	ug/L	6.0	4.2	1		07/20/17 05:13		
549.2 HPLC Paraquat Diquat	Analytical	Method: EPA 5	49.2 Prepa	aration Meth	od: EP	A 549.2			
Diquat	<0.30	ug/L	0.40	0.30	1	07/19/17 11:00	07/20/17 02:33	85-00-7	
525.2 Base Neutral Extractable	Analytical	Method: EPA 5	25.2 Prepa	aration Meth	od: EP	A 525.2			
Benzo(a)pyrene	<0.013	ug/L	0.096	0.013	1	07/25/17 10:30	07/26/17 15:02	50-32-8	L2
bis(2-Ethylhexyl)adipate	<0.37	ug/L	1.5	0.37	1	07/25/17 10:30	07/26/17 15:02	103-23-1	
bis(2-Ethylhexyl)phthalate	<0.48	ug/L	1.9	0.48	1	07/25/17 10:30	07/26/17 15:02	117-81-7	
Metribuzin	<0.14	ug/L	0.29	0.14	1	07/25/17 10:30	07/26/17 15:02	21087-64-9	
Surrogates									
1,3-Dimethyl-2-nitrobenzene(S)	153	%	70-130		1	07/25/17 10:30	07/26/17 15:02	81209	S3
Perylene-d12 (S)	107	%	70-130		1	07/25/17 10:30	07/26/17 15:02	1520963	
Triphenylphosphate (S)	85	%	70-130		1	07/25/17 10:30	07/26/17 15:02	115-86-6	
548.1 GCS Endothall	Analytical	Method: EPA 5	48.1 Prepa	aration Meth	od: EP	A 548.1			
Endothall	<4.3	ug/L	9.0	4.3	1	07/19/17 17:00	07/24/17 23:53		L2,L5



Project: LBG,Inc 42001269

Pace Project No.: 35324056

QC Batch Method:

QC Batch: 381535

EPA 531.1

Analysis Method:

Analysis Description: 531.1 HPLC Carbamate

EPA 531.1

Associated Lab Samples: 35324056001

METHOD BLANK: 2070180

Associated Lab Samples: 35324056001

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
3-Hydroxycarbofuran	ug/L	<0.45	2.0	0.45	07/18/17 12:36	
Aldicarb	ug/L	<0.64	2.0	0.64	07/18/17 12:36	
Aldicarb sulfone	ug/L	<0.37	2.0	0.37	07/18/17 12:36	
Aldicarb sulfoxide	ug/L	<0.59	2.0	0.59	07/18/17 12:36	
Carbaryl	ug/L	<0.27	2.0	0.27	07/18/17 12:36	
Carbofuran	ug/L	<0.32	2.0	0.32	07/18/17 12:36	
Methomyl	ug/L	<0.57	2.0	0.57	07/18/17 12:36	
Oxamyl	ug/L	<0.55	2.0	0.55	07/18/17 12:36	
BDMC (S)	%	120	80-120		07/18/17 12:36	

Matrix: Water

LABORATORY CONTROL SAMPLE: 2070181

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
3-Hydroxycarbofuran	ug/L		10.3	103	80-120	
Aldicarb	ug/L	10	11.2	112	80-120	
Aldicarb sulfone	ug/L	10	10.9	109	80-120	
Aldicarb sulfoxide	ug/L	10	12.0	120	80-120	
Carbaryl	ug/L	10	12.0	120	80-120	
Carbofuran	ug/L	10	11.7	117	80-120	
Methomyl	ug/L	10	10.6	106	80-120	
Oxamyl	ug/L	10	11.8	118	80-120	
BDMC (S)	%			118	80-120	

MATRIX SPIKE & MATRIX SF	VIKE DUPLIC	CATE: 207018	82		2070183							
Parameter	Units	35323850001 Result	MS Spike Conc	MSD Spike Conc	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec	RPD	Max RPD	Qual
3-Hydroxycarbofuran	ug/L	0.450	10	10	10	10.2	100	102	80-120	2	20	
Aldicarb	ug/L	0.64U	10	10	10.5	10.3	105	103	80-120	3	20	
Aldicarb sulfone	ug/L	0.37U	10	10	9.5	9.8	95	98	80-120	4	20	
Aldicarb sulfoxide	ug/L	0.59U	10	10	11.2	11.0	112	110	80-120	2	20	
Carbaryl	ug/L	0.27U	10	10	12.0	11.5	120	115	80-120	4	20	
Carbofuran	ug/L	0.32U	10	10	11.3	10.5	113	105	80-120	7	20	
Methomyl	ug/L	0.57U	10	10	10.5	11.1	105	111	80-120	6	20	
Oxamyl	ug/L	0.55U	10	10	10.2	10.0	102	100	80-120	2	20	
BDMC (S)	%						103	98	80-120			

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Project:	LBG,Inc 420012	69											
Pace Project No.:	35324056												
QC Batch:	382091			Analys	sis Method:	: 6	EPA 547						
QC Batch Method:	EPA 547			Analys	sis Descript	tion: 5	547 HPLC GI	yphosate					
Associated Lab Sar	nples: 3532405	6001											
METHOD BLANK:	2073233			1	Matrix: Wa	ter							
Associated Lab Sar	nples: 3532405	6001											
				Blanl	k R	eporting							
Parar	neter		Units	Resu	lt	Limit	MDL		Analyzed	Qua	alifiers		
Glyphosate			ug/L		<4.2	6.0	0	4.2 07/	20/17 02:06	i			
LABORATORY CO	NTROL SAMPLE:	20	73234										
Parar	neter		Units	Spike Conc.	LCS Resu	S Ilt	LCS % Rec	% Re Limits	c S Qu	alifiers			
Glyphosate			ug/L	50)	52.3	105	80)-120		-		
MATRIX SPIKE & N	IATRIX SPIKE DU	IPLIC	ATE: 20732	35		2073236	;						
				MS	MSD								
Paramete	er U	nits	35324897001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Glyphosate	u	g/L	0.0042U mg/L	50	50	48.2	48.4	96	97	80-120	0	30	
MATRIX SPIKE & N	IATRIX SPIKE DU	IPLIC	ATE: 20732	37		2073238							
			25224066004	MS	MSD	MC	MCD	MC	MCD	0/ Dec		Most	
Paramete	er U	nits	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	70 Rec	RPD	RPD	Qual
Glyphosate	u	g/L	<4.2	50	50	51.2	49.9	102	100	80-120	3	30	

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Project:	LBG,Inc 4200126	9											
Pace Project No.:	35324056												
QC Batch:	381399		Analys	is Method:	EF	PA 504.1							
QC Batch Method:	EPA 504.1		Analys	is Descripti	ion: 50	4 EDB D	DBCP						
Associated Lab Sar	nples: 3532405	6001											
METHOD BLANK:	2069376		N	latrix: Wat	er								
Associated Lab Sar	nples: 3532405	6001											
Paran	neter	Units	Blank Resul	Re t	eporting Limit	ME	DL	Analyz	ed	Qu	alifiers		
1,2-Dibromo-3-chlor	ropropane	ug/L	<0.	0064	0.020		0.0064	07/18/17	13:43				
1,2-Dibromoethane	(EDB)	ug/L	<0.	0075	0.010		0.0075	07/18/17	13:43				
LABORATORY COI	NTROL SAMPLE 8	LCSD: 2069377	,	2	070238								
			Spike	LCS	LCSD	LCS	LCSD	% Rec		1	Max		
Parar	neter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RP	D F	RPD	Qu	alifiers
1,2-Dibromo-3-chlor	ropropane	ug/L	.25	0.27	0.24	109	96	70-130		12	40		
1,2-Dibromoethane	(EDB)	ug/L	.25	0.29	0.25	116	101	70-130		13	40		
MATRIX SPIKE & M	IATRIX SPIKE DU	PLICATE: 20702	39		2070240								
			MS	MSD									
Paramete	er Ur	35324127010 hits Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % R	S MS lec % R	D ' ec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3- chloropropane	ug	/L <0.0055	.44	.44	0.64	0.6	3	146	143	65-135	2	40	M1
1,2-Dibromoethane	(EDB) ug	/L <0.0064	.44	.44	0.64	0.6	63	146	145	65-135	1	40	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: LBG,Inc 420012 Pace Project No.: 35324056	269						
QC Batch: 32255		Analysis Me	ethod:	EPA 505			
QC Batch Method: EPA 505		Analysis De	escription:	505 GCS Pestic	ides		
Associated Lab Samples: 353240	56001	·					
METHOD BLANK: 149103		Matrix	: Water				
Associated Lab Samples: 353240	56001						
_		Blank	Reporting				
Parameter	Units	Result	Limit	MDL	Analyz	ed Qualifie	rs
Aldrin	ug/L	<0.025	0.02	5 0.02	25 07/20/17	18:40	
Decachlorobiphenyl (S)	%.	75	30-15	0	07/20/17	18:40	
Tetrachioro-m-xylene (S)	70.	00	30-15	0	07/20/17	16.40	
LABORATORY CONTROL SAMPLE	149104						
Demonster	11-26-	Spike	LCS	LCS	% Rec	0	
Parameter		Conc.	Result	% Rec	Limits	Qualifiers	
Aldrin	ug/L	.048	0.047	98	70-130		
Decachiorobiphenyl (S)	%. %			95	30-150 30-150		
	/0.			54	30-130		
LABORATORY CONTROL SAMPLE	149105						
		Spike	LCS	LCS	% Rec		
Parameter	Units	Conc	Result	% Rec	Limits	Qualifiers	
Aldrin	ug/L	.0095	<0.025	97	70-130		
Decachlorobiphenyl (S)	%.			89	30-150		
Tetrachloro-m-xylene (S)	%.			95	30-150		
MATRIX SPIKE SAMPLE:	149106						
		7024421001	l Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Aldrin	ug/L	<0.0	.095	0.092	9	6 65-135	
Decachlorobiphenyl (S)	%.				7	5 30-150	
Tetrachloro-m-xylene (S)	%.				9	7 30-150	

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Project: LBG,Inc 42001269

Pace Project No.: 35324056

QC Batch:	382070	Analysis Method:	EPA 508.1
QC Batch Method:	EPA 508.1	Analysis Description:	508 GCS Pesticide
Associated Lab Samp	les: 35324056001		

Matrix: Water

METHOD BLANK: 2073167

Associated Lab Samples: 35324056001

		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Alachlor	ug/L	<0.035	0.20	0.035	07/26/17 10:06	
Atrazine	ug/L	< 0.063	0.10	0.063	07/26/17 10:06	
Butachlor	ug/L	<0.027	0.10	0.027	07/26/17 10:06	
Chlordane (Technical)	ug/L	<0.047	0.20	0.047	07/26/17 10:06	
Dieldrin	ug/L	<0.019	0.10	0.019	07/26/17 10:06	
Endrin	ug/L	<0.0070	0.010	0.0070	07/26/17 10:06	
gamma-BHC (Lindane)	ug/L	<0.0030	0.020	0.0030	07/26/17 10:06	
Heptachlor	ug/L	<0.012	0.040	0.012	07/26/17 10:06	
Heptachlor epoxide	ug/L	<0.0030	0.020	0.0030	07/26/17 10:06	
Hexachlorobenzene	ug/L	<0.019	0.10	0.019	07/26/17 10:06	
Hexachlorocyclopentadiene	ug/L	<0.032	0.10	0.032	07/26/17 10:06	
Methoxychlor	ug/L	<0.051	0.10	0.051	07/26/17 10:06	
Metolachlor	ug/L	<0.047	0.10	0.047	07/26/17 10:06	
Propachlor	ug/L	<0.030	0.10	0.030	07/26/17 10:06	
Simazine	ug/L	<0.069	0.070	0.069	07/26/17 10:06	
Toxaphene	ug/L	<0.61	1.0	0.61	07/26/17 10:06	
Decachlorobiphenyl (S)	%	103	70-130		07/26/17 10:06	

LABORATORY CONTROL SAMPLE: 2073168

Demonster		Spike	LCS	LCS	% Rec	Qualifiant
Parameter	Units	Conc	Result	% Rec	Limits	Qualifiers
Alachlor	ug/L	1	1.0	100	70-130	
Atrazine	ug/L	1.2	1.2	97	70-130	
Butachlor	ug/L	.5	0.48	96	70-130	
Dieldrin	ug/L	.5	0.51	103	70-130	
Endrin	ug/L	.05	0.053	106	70-130	
gamma-BHC (Lindane)	ug/L	.1	0.10	102	70-130	
Heptachlor	ug/L	.2	0.18	91	70-130	
Heptachlor epoxide	ug/L	.1	0.10	100	70-130	
Hexachlorobenzene	ug/L	.5	0.46	92	70-130	
Hexachlorocyclopentadiene	ug/L	.5	0.47	94	70-130	
Methoxychlor	ug/L	.5	0.53	107	70-130	
Metolachlor	ug/L	.5	0.48	96	70-130	
Propachlor	ug/L	.5	0.48	96	70-130	
Simazine	ug/L	.88	0.78	89	70-130	
Decachlorobiphenyl (S)	%			105	70-130	

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Project: LBG,Inc 42001269 Pace Project No.: 35324056

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2074971												
			MS	MSD								
		35323850001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Alachlor	ug/L	0.034U	2	2	2.0	1.9	100	97	65-135	3	40	
Atrazine	ug/L	0.061U	2.5	2.5	2.6	3.1	102	123	65-135	19	40	
Butachlor	ug/L	0.026U	1	1	0.93	0.89	93	89	65-135	4	40	
Chlordane (Technical)	ug/L	0.045U			<0.094	<0.094					40	
Dieldrin	ug/L	0.018U	1	1	1.0	1.0	104	104	65-135	0	40	
Endrin	ug/L	0.0067U	.1	.1	0.11	0.11	107	107	65-135	0	40	
gamma-BHC (Lindane)	ug/L	0.0029U	.2	.2	0.22	0.22	110	111	65-135	1	40	
Heptachlor	ug/L	0.012U	.4	.4	0.70	0.81	174	201	65-135	14	40	M1
Heptachlor epoxide	ug/L	0.0029U	.2	.2	0.21	0.21	104	103	65-135	0	40	
Hexachlorobenzene	ug/L	0.018U	1	1	1.0	1.1	102	111	65-135	8	40	
Hexachlorocyclopentadiene	ug/L	0.031U	1	1	1.2	1.0	116	105	65-135	10	40	
Methoxychlor	ug/L	0.049U	1	1	1.0	0.97	101	97	65-135	4	40	
Metolachlor	ug/L	0.045U	1	1	0.95	0.95	95	95	65-135	0	40	
Propachlor	ug/L	0.029U	1	1	1.0	1.2	103	123	65-135	17	40	
Simazine	ug/L	0.066U	1.8	1.8	0.62	0.68	36	39	65-135	9	40	M1
Toxaphene	ug/L	0.58U			<1.2	<1.2					40	
Decachlorobiphenyl (S)	%						94	94	70-130		40	

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Project: LBG,Inc 42001269

Pace Project No.: 35324056

QC Batch:	382064		Analysis Meth	nod:	EPA 515.3			
QC Batch Method:	EPA 515.3		Analysis Dese	cription:	5153 GCS Herbicio	des		
Associated Lab Samp	oles: 35324056001							
METHOD BLANK: 2	2073155		Matrix:	Water				
Associated Lab Samp	oles: 35324056001							
			Blank	Reporting				
Parameter		Units	Result	Limit	MDL	Analyzed	Qualifiers	
2,4,5-TP (Silvex)		ug/L	<0.16	0.	20 0.16	07/22/17 00:29		
2,4-D		ug/L	<0.081	0.	10 0.081	07/22/17 00:29		
Dalapon		ug/L	<0.89	1	.0 0.89	07/22/17 00:29		
Dicamba		ug/L	<0.067	0.	10 0.067	07/22/17 00:29		
Dinoseb		ug/L	<0.16	0.	20 0.16	07/22/17 00:29		
Pentachlorophenol		ug/L	<0.030	0.0	40 0.030	07/22/17 00:29		
Picloram		ug/L	<0.094	0.	0.094	07/22/17 00:29		
2,4-DCAA (S)		%	88	70-1	30	07/22/17 00:29		

LABORATORY CONTROL SAMPLE: 2073156

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
2,4,5-TP (Silvex)	ug/L	1	1.0	103	70-130	
2,4-D	ug/L	.5	0.39	78	70-130	
Dalapon	ug/L	5	4.5	90	70-130	
Dicamba	ug/L	.5	0.66	132	70-130 L	1
Dinoseb	ug/L	1	1.1	114	70-130	
Pentachlorophenol	ug/L	.2	0.20	98	70-130	
Picloram	ug/L	.5	0.50	99	70-130	
2,4-DCAA (S)	%			93	70-130	

MATRIX SPIKE & MATRIX S	PIKE DUPLICA	TE: 20734	78		2073479							
			MS	MSD								
	9	2347613003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
2,4,5-TP (Silvex)	ug/L	ND	1	1	1.1	1.1	108	111	70-130	3	40	
2,4-D	ug/L	ND	.5	.5	0.42	0.47	84	94	70-130	11	40	
Dalapon	ug/L	ND	5	5	5.7	6.0	115	120	70-130	5	40	
Dicamba	ug/L	ND	.5	.5	0.58	0.63	117	126	70-130	7	40	
Dinoseb	ug/L	ND	1	1	1.1	1.1	105	113	70-130	7	40	
Pentachlorophenol	ug/L	ND	.2	.2	0.18	0.19	91	95	70-130	4	40	
Picloram	ug/L	ND	.5	.5	0.65	0.70	130	140	70-130	7	40	M1
2,4-DCAA (S)	%						98	99	70-130			

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Project: LBG,Inc 42001269 Pace Project No.: 35324056

MATRIX SPIKE & MATRIX SPIK			2073481									
			MS	MSD								
	3	5323949005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
2,4,5-TP (Silvex)	ug/L	<0.16	1	1	1.1	1.1	108	110	70-130	1	40	
2,4-D	ug/L	<0.081	.5	.5	0.40	0.41	79	82	70-130	3	40	
Dalapon	ug/L	<0.89	5	5	4.7	4.8	94	95	70-130	1	40	
Dicamba	ug/L	<0.067	.5	.5	0.51	0.63	103	127	70-130	21	40	
Dinoseb	ug/L	<0.16	1	1	1.1	1.1	110	111	70-130	1	40	
Pentachlorophenol	ug/L	<0.030	.2	.2	0.19	0.19	96	97	70-130	1	40	
Picloram	ug/L	<0.094	.5	.5	0.55	0.57	110	115	70-130	5	40	
2,4-DCAA (S)	%						95	93	70-130			

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Project: LBG,Inc 42001269

382937

Pace Project No.: 35324056

QC Batch:

QC Batch:	382937		Analysis Meth	nod:	EPA 525.2				
QC Batch Method:	EPA 525.2		Analysis Des	cription:	525.2 Base Neutra	Extractables			
Associated Lab Sample	es: 35324056001								
METHOD BLANK: 20)78153		Matrix:	Matrix: Water					
Associated Lab Sample	es: 35324056001								
	Blank	Reporting							
Parameter U		Units	Result	Limit	MDL	Analyzed	Qualifiers		
Benzo(a)pyrene		ug/L	<0.013	0.1	0 0.013	07/26/17 11:53			
bis(2-Ethylhexyl)adipat	e	ug/L	<0.38	1.	.6 0.38	07/26/17 11:53			
bis(2-Ethylhexyl)phthal	ate	ug/L	<0.50	2.	.0 0.50	07/26/17 11:53			
Metribuzin		ug/L	<0.15	0.3	0.15	07/26/17 11:53			
1,3-Dimethyl-2-nitrober	nzene(S)	%	105	70-13	0	07/26/17 11:53			
Perylene-d12 (S)		%	84	70-13	0	07/26/17 11:53			
Triphenylphosphate (S)	%	83	70-13	0	07/26/17 11:53			

LABORATORY CONTROL SAMPLE:	2078154	

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Benzo(a)pyrene	ug/L	.4	0.26	65	70-130) L2
bis(2-Ethylhexyl)adipate	ug/L	6.4	5.4	84	70-130)
bis(2-Ethylhexyl)phthalate	ug/L	8	6.8	85	70-130)
Metribuzin	ug/L	1.2	1.2	103	70-130)
1,3-Dimethyl-2-nitrobenzene(S)	%			106	70-130)
Perylene-d12 (S)	%			75	70-130)
Triphenylphosphate (S)	%			83	70-130)

MATRIX SPIKE & MATRIX SP	IKE DUPLI	CATE: 20784	76		2078477							
Parameter	Units	92348121001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzo(a)pyrene	ug/L				0.092J	0.098J					40	MO
bis(2-Ethylhexyl)adipate	ug/L				10.9	10.3				6	40	
bis(2-Ethylhexyl)phthalate	ug/L				14.0	13.5				3	40	
Metribuzin	ug/L				2.2	<0.30					40	M1
1,3-Dimethyl-2- nitrobenzene(S)	%						110	120	70-130			
Perylene-d12 (S)	%						64	62	70-130			S0, S8
Triphenylphosphate (S)	%						83	84	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Project:	LBG,Inc 420012	69											
Pace Project No.:	35324056												
QC Batch:	381974			Analys	sis Method:	: E	EPA 548.1						
QC Batch Method:	EPA 548.1			Analys	sis Descript	tion: 5	548 GCS End	lothall					
Associated Lab Sar	mples: 353240	5600 ⁻	1										
METHOD BLANK:	2072291			Ν	Matrix: Wa	ter							
Associated Lab Sar	nples: 353240	5600´	1										
				Blank	k R	eporting							
Para	neter		Units	Resul	t	Limit	MDL		Analyzed	Qua	alifiers		
Endothall			ug/L		<4.3	9.0)	4.3 07/2	24/17 19:29)			
LABORATORY CO	NTROL SAMPLE:	20)72292										
5				Spike	LCS	5	LCS	% Red	с С				
Parai	neter		Units	Conc.	Resu	ilt	% Rec	Limits	. Qi	alifiers	-		
Endothall			ug/L	50)	39.6	79	80)-120				
MATRIX SPIKE & M	ATRIX SPIKE DI	JPLIC	CATE: 207234	47		2072348							
				MS	MSD								
Dement		L. 11.	35324386001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	0
Paramete	er C	Inits	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Quai
Endothall	L	ıg/L	4.3U	50	50	45.0) 44.4	90	89	80-120	1	30	
MATRIX SPIKE & M	ATRIX SPIKE DI	JPLIC	CATE: 20723	58		2072359							
				MS	MSD								
_			35324386002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	. .
Paramete	er L	Inits	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Endothall	ι	ıg/L	4.3U	50	50	34.3	41.0	69	82	80-120	18	30	MO

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	LBG,Inc 42001269	9										
Pace Project No.:	35324056											
QC Batch:	381794		Analys	sis Method:	E	EPA 549.2						
QC Batch Method:	EPA 549.2		Analys	sis Descript	ion: 5	549 HPLC Pa	araquat Diq	uat				
Associated Lab Sar	nples: 35324056	001										
METHOD BLANK:	2071478		I	Matrix: Wat	ter							
Associated Lab Sar	nples: 35324056	001										
			Blanl	k R	eporting							
Paran	neter	Units	Resu	lt	Limit	MDL		Analyzed	Qua	alifiers		
Diquat		ug/L		<0.30	0.40)	0.30 07/2	20/17 00:32				
LABORATORY COI	NTROL SAMPLE:	2071479										
Paran	neter	Units	Spike Conc.	LCS Resu	i It	LCS % Rec	% Rec Limits	c Qu	alifiers			
Diquat		ug/L	2	2	1.6	82	70	-130		-		
MATRIX SPIKE & M	IATRIX SPIKE DUF	PLICATE: 20718	82		2071883							
			MS	MSD								
Paramete	er Uni	35324366001 ts Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Diquat	ug/	L 0.30U	2	2	1.7	1.7	84	84	70-130	0	30	
MATRIX SPIKE & M	IATRIX SPIKE DUF	PLICATE: 20718	84		2071885							
			MS	MSD								
Dans		35324454001	Spike	Spike	MS	MSD	MS % Dee	MSD	% Rec		Max	Qual
Paramete	er Uni	ts Result	Conc.	Conc.	Result	Result	% Rec	% Rec	LIMITS	RPD	<u>крр</u>	Qual
Diquat	ug/	L 0.00030U mg/L	2	2	0.60	0.84	30	42	70-130	35	30	M1,R1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: LBG,Inc 42001269

Pace Project No.: 35324056

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

- L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
- L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
- L5 LCS recovery exceeded QC limits. Batch accepted based on matrix spike recovery within LCS limits.
- M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- R1 RPD value was outside control limits.
- S0 Surrogate recovery outside laboratory control limits.
- S3 Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.
- S8 Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-extraction and/or re-analysis)



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LBG,Inc 42001269 Pace Project No.: 35324056

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35324056001	C-16	EPA 504.1	381399	EPA 504.1	381607
35324056001	C-16	EPA 505	32255	EPA 505	32334
35324056001	C-16	EPA 508.1	382070	EPA 508.1	382791
35324056001	C-16	EPA 515.3	382064	EPA 515.3	382572
35324056001	C-16	EPA 531.1	381535		
35324056001	C-16	EPA 547	382091		
35324056001	C-16	EPA 549.2	381794	EPA 549.2	382025
35324056001	C-16	EPA 525.2	382937	EPA 525.2	383335
35324056001	C-16	EPA 548.1	381974	EPA 548.1	382933

EnviroTest Laboratories, Inc. 315 Fullerton Avenue Newburgh, NY 12550 Phone (845) 562-0890 Fax (845) 562-0841	W0#: 35324056	Custody Record	i	EnviroTest
Client Information (Sub Contract Lab)	35324056	Debra	arrier Tracking No(s):	COC No: 420-9125.1
Client Contact: Shipping/Receiving		dbayer@envirotestlaboratories.com		Page: Page 1 of 1
Company: Pace Analytical Ormond Beach		Analysis Regi	lested	STL Job #: 420-123595-4
Address: 8 East Tower Circle,	Due Date Requested: 7/25/2017	MQ		Preservation Codes:
City: Ormond Beach	TAT Requested (days):	sol ni sət		B - NaOH N - None C - Zn Acetate O - AsNaO2
State, Zip: FL, 32174	site of a	VDBCF VDBCF da da da		D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3
Phone: 111-222-3333(Tel)	щ	(EDB/ EDB/ EDB/ adite Pee atite C		F - MeOH R - Na2S2SO3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahudrate
Email:	WO #;	(ov vietnik vietni Vietnik vietnik vie	S	I - Ice U - Acetone J - DI Water V - MCAA
Project Name: LBG, Inc.	Project #: 42001269	9 (Yes 5 Chid 5 Chid 7.1 Ca 5.2 Se 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	enistr	K - EDTA W - ph 4-5 L - EDA Z - other (specify)
Site:	SSOW#:	reading the second seco	44 JTC 54 DIG	Other:
	Sample Type Sample (C=combine C=combine		SUBCONTRAC	Snocial Instrucțions Moto.
Sample Identification Client ID (Lab ID)	Preservati	is interest. A wait) the team of team		
C - 16 (420-123595-4)	7/13/17 9:15	Water X X X X X X X X X	X X 13	
Possible Hazard Identification	ot 🗌 Poison B 🗍 Unknown 🗍 Radiological	Sample Disposal (A fee may be as	sessed if samples are retain	ed longer than 1 month) hive For Months
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirement	10	
Empty Kit Relinguished by:	Date:	Time:	Method of Shipment:	
Relinquished by	Date/Time/ 3/17 1440 0	Company Received by:	Date/Time:	1110 1000 10.4
Redinquished by:	Date/Time:	company Received by:	Date/Time:	Company
啓jinquished by: o	Date/Time:	company Received by:	Date/Time:	Company
Custody Seals Intact: Custody Seal No.:		Cooler Temperature(s) °C and Other Rem	arks:	

Pace Analytical	Sample Condition Upon Receipt Form	Doc Fe	bruary 6, 2017
Fionda Laboratory	F-FL-C-007 rev. 11	lss Pace F	uing Authority: orida Quality Office
	Sample Condition Upon Recoir	SCUR)	
Drojoot #	104:35324056		
Project #	Due Date: 07/2	28/17 Date and	Initials of person:
Project Manager:	CLIENT · FVNTES	Examining Label:	contents:
Client:	CELENT: ETTTE	Deliver:	TYX
Thermometer Used:	Q Date: Alylia	Time: \\\Q) Initia	
Cooler #1 Temp Or W (Visual)	Fill in Fill		
Cooler #2 Temp °C 10.3 (Visual)	Del (Correction Factor) (() ()	Actual) Samples	on ice, cooling process has begun
Cooler #3 Temp $C (1, 4)$ (Visual)	$\pm 0 < 1$ (Correction Factor) 10^{10} (,	Actual) Samples	on ice, cooling process has begun
Cooler #4 Temp °C (Visual)	<u>10, (Correction Factor)</u> ()	Actual) Samples	on ice, cooling process has begun
Cooler #5 Temp °C (Visual)		Actual) Samples	on ice, cooling process has begun
Cooler #6 Temp.°C (Visual)	(Correction Factor)(/	Actual) Samples	on ice, cooling process has begun
		Actual) Samples	on ice, cooling process has begun
Courier: Fed Ex UPS	G □ USPS □ Client □ Commercial	I Pace Other	
Shipping Method:	Priority Overnight Standard Overnight	t Ground Other	
Billing: DRecipient	🛛 Sender 🛛 Third Party 🗆 Unkn	nown	
Tracking# 47910 2010	3 4340/7796 2609	3485/77960	JUDE SIZE
		11.0	0000010
Custody Seal on Cooler/Box Present:	Tyes ANO Seals intact:	Van DNa I I	
Custody Seal on Cooler/Box Present:	□Yes ☑No Seals intact: □ `	Yes □No Ice: Wet)	Blue None
Custody Seal on Cooler/Box Present: Packing Material:	Yes INo Seals intact: Seals intact: Seals intact:	Yes ∏No Ice: Wet (Blue None
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap [Samples shorted to lab (If Yes, completed to lab (If Y	☐Yes ☐No Seals intact: ☐ ` Bubble Bags ☐None ☐Other te) Shorted Date:	Yes No Ice: Wet I	Blue None
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap [Samples shorted to lab (If Yes, complet		Yes No Ice: Wet I	Blue None Qty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, complet Chain of Custody Present		Yes No Ice: Wet I	Blue NoneQty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, complet Chain of Custody Present Chain of Custody Filled Out	☐Yes ☐No Seals intact: ☐ ☐Bubble Bags ☐None ☐Other Bubble Bags ☐None ☐Other Comment ☐ ☐Yes ☐ No □N/A	Yes No Ice: Wet I	Blue None Qty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, complet Chain of Custody Present Chain of Custody Filled Out Relinquished Signature & Sampler Name	Yes No Seals intact: Bubble Bags None Other Bubble Bags None Other Shorted Date: Comment ØYes No ØYes No N/A ØYes No N/A ØYes No N/A	Yes No Ice: Wet I	Blue NoneQty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, complet Chain of Custody Present Chain of Custody Filled Out Relinquished Signature & Sampler Name (Samples Arrived within Hold Time	☐Yes ☐No Seals intact: ☐Yes ☐Bubble Bags ☐None ☐Other ☐Bubble Bags ☐None ☐Other ☐Shorted Date: ☐Yes ☐No □N/A ☐Yes ☐No □N/A ☐Yes ☐No □N/A ☐Yes ☐ No □N/A ☐Yes ☐ No □N/A ☐Yes ☐ No □N/A	Yes No Ice: Wet I	Blue NoneQty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, complet Chain of Custody Present Chain of Custody Filled Out Relinquished Signature & Sampler Name of Samples Arrived within Hold Time Rush TAT requested on COC	Yes ØNo Seals intact: None Bubble Bags None Other Shorted Date:	Yes No Ice: Wet I	Blue NoneQty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, complet Chain of Custody Present Chain of Custody Filled Out Relinquished Signature & Sampler Name of Samples Arrived within Hold Time Rush TAT requested on COC Sufficient Volume	Yes No Seals intact: Bubble Bags None Other Bubble Bags None Other Shorted Date: Even No N/A ØYes No N/A	Yes No Ice: Wet I	Blue NoneQty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, complet Chain of Custody Present Chain of Custody Filled Out Relinquished Signature & Sampler Name of Samples Arrived within Hold Time Rush TAT requested on COC Sufficient Volume Correct Containers Used	☐Yes ☐No Seals intact: ☐Yes ☐Bubble Bags ☐None ☐Other Shorted Date:	Yes No Ice: Wet I	Blue NoneQty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, complet Chain of Custody Present Chain of Custody Filled Out Relinquished Signature & Sampler Name (Samples Arrived within Hold Time Rush TAT requested on COC Sufficient Volume Correct Containers Used Containers Intact	☐Yes ☐No Seals intact: ☐Yes ☐Bubble Bags ☐None Other Bubble Bags ☐None Other Shorted Date:	Yes No Ice: Wet I	Blue NoneQty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, complet Chain of Custody Present Chain of Custody Filled Out Relinquished Signature & Sampler Name o Samples Arrived within Hold Time Rush TAT requested on COC Sufficient Volume Correct Containers Used Containers Intact Sample Labels match COC (sample IDs & date/ Sollection)	Yes No Seals intact: No Bubble Bags None Other Bubble Bags None Other Shorted Date: Eve) Shorted Date: ØYes No N/A ØYes No N/A	Yes No Ice: Wet I	Blue NoneQty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, complet Chain of Custody Present Chain of Custody Filled Out Relinquished Signature & Sampler Name (Samples Arrived within Hold Time Rush TAT requested on COC Sufficient Volume Correct Containers Used Containers Intact Sample Labels match COC (sample IDs & date/ collection) All containers needing acid/base preservation h	Yes No Seals intact: No Bubble Bags None Other Bubble Bags None Other Shorted Date:	Yes No Ice: Wet I	Blue NoneQty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, complet Chain of Custody Present Chain of Custody Filled Out Relinquished Signature & Sampler Name o Samples Arrived within Hold Time Rush TAT requested on COC Sufficient Volume Correct Containers Used Containers Intact Sample Labels match COC (sample IDs & date/ sollection) III containers needing acid/base preservation h shecked. III Containers needing acid/base preservation h	Yes No Seals intact: Bubble Bags None Other Bubble Bags None Other Shorted Date:	Yes No Ice: Wet I	Blue NoneQty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, complet Chain of Custody Present Chain of Custody Filled Out Relinquished Signature & Sampler Name Samples Arrived within Hold Time Rush TAT requested on COC Sufficient Volume Correct Containers Used Containers Intact Sample Labels match COC (sample IDs & date/ collection) All containers needing acid/base preservation h checked. All Containers needing preservation are found to compliance with EPA recommendation:	Yes No Seals intact: Bubble Bags None Other Bubble Bags None Other Shorted Date:	Yes No Ice: Wet I	Blue NoneQty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, complet Chain of Custody Present Chain of Custody Filled Out Relinquished Signature & Sampler Name o Samples Arrived within Hold Time Rush TAT requested on COC Sufficient Volume Correct Containers Used Containers Intact Sample Labels match COC (sample IDs & date/ scollection) All containers needing acid/base preservation h shecked. All Containers needing preservation are found to scompliance with EPA recommendation: Exceptions: VOA, Coliform, TC	Yes No Seals intact: Bubble Bags None Other	Yes No Ice: Wet I	Blue NoneQty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, complet Chain of Custody Present Chain of Custody Present Chain of Custody Filled Out Relinquished Signature & Sampler Name (Samples Arrived within Hold Time Rush TAT requested on COC Sufficient Volume Correct Containers Used Containers Intact Sample Labels match COC (sample IDs & date/ collection) All containers needing acid/base preservation h checked. All Containers needing preservation are found to compliance with EPA recommendation: Exceptions: VOA, Coliform, TC Headspace in VOA Vials? (>6mm):	Yes No Seals intact: Bubble Bags None Other Bubble Bags None Other Shorted Date:	Yes No Ice: Wet I	Blue NoneQty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, complet Chain of Custody Present Chain of Custody Filled Out Relinquished Signature & Sampler Name of Samples Arrived within Hold Time Rush TAT requested on COC Sufficient Volume Correct Containers Used Containers Intact Sample Labels match COC (sample IDs & date/ scollection) All containers needing acid/base preservation h shecked. All Containers needing preservation are found to compliance with EPA recommendation: Exceptions: VOA, Coliform, TC Headspace in VOA Vials? (>6mm): Trip Blank Present:	Yes No Seals intact: No Bubble Bags None Other Shorted Date:	Yes No Ice: Wet I	Blue NoneQty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, completed Chain of Custody Present Chain of Custody Filled Out Relinquished Signature & Sampler Name (Samples Arrived within Hold Time Rush TAT requested on COC Sufficient Volume Correct Containers Used Containers Intact Sample Labels match COC (sample IDs & date/ collection) All containers needing acid/base preservation h checked. All Containers needing preservation are found to compliance with EPA recommendation: Exceptions: VOA, Coliform, TC Headspace in VOA Vials? (>6mm): Trip Blank Present: Client Notification/ Resolution:	Mes Mo Seals intact: Mo Bubble Bags None Other Shorted Date:	Yes No Ice: Wet I	Blue NoneQty:
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Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, completed Chain of Custody Present Chain of Custody Present Chain of Custody Filled Out Relinquished Signature & Sampler Name (Samples Arrived within Hold Time Rush TAT requested on COC Sufficient Volume Correct Containers Used Containers Intact Sample Labels match COC (sample IDs & date/ collection) All containers needing acid/base preservation h checked. All Containers needing preservation are found to compliance with EPA recommendation: Exceptions: VOA, Coliform, TC Headspace in VOA Vials? (>6mm): Trip Blank Present: Client Notification/ Resolution: Person Contacted: Comments/ Resolution (use back for addition) Comments/ Resolution (use back for addition)	Mes Mo Seals intact: Mo Bubble Bags None Other Shorted Date:	Yes No Ice: Wether Ice: Ice: <thice:< th=""> <thice:< th=""> <thice:< th=""> Ice</thice:<></thice:<></thice:<>	Blue NoneQty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, complet Chain of Custody Present Chain of Custody Present Chain of Custody Filled Out Relinquished Signature & Sampler Name of Samples Arrived within Hold Time Rush TAT requested on COC Sufficient Volume Correct Containers Used Containers Intact Sample Labels match COC (sample IDs & date/ sollection) All containers needing acid/base preservation in thecked. All Containers needing preservation are found to compliance with EPA recommendation: Exceptions: VOA, Coliform, TC Headspace in VOA Vials? (>6mm): Trip Blank Present: Client Notification/ Resolution: Person Contacted: Comments/ Resolution (use back for ad)	Mes Mo Seals intact: Mone Bubble Bags None Other	Yes No Ice: Wether Itele	Blue NoneQty:
Custody Seal on Cooler/Box Present: Packing Material: Bubble Wrap Samples shorted to lab (If Yes, complete Chain of Custody Present Chain of Custody Present Chain of Custody Filled Out Relinquished Signature & Sampler Name of Samples Arrived within Hold Time Rush TAT requested on COC Sufficient Volume Correct Containers Used Containers Intact Sample Labels match COC (sample IDs & date/ collection) II containers needing acid/base preservation h thecked. II Containers needing preservation are found to compliance with EPA recommendation: Exceptions: VOA, Coliform, TC leadspace in VOA Vials? (>6mm): Tip Blank Present: Client Notification/ Resolution: Person Contacted: Comments/ Resolution (use back for add Coloration (use back for add)	Mes Mo Seals intact: Mone Bubble Bags None Other	Yes No Ice: Wether Ice: Ice: <thice:< th=""> Ice: Ice: I</thice:<>	Blue NoneQty:



www.pacelabs.com

Report Prepared for:

Bo Garcia PASI Florida 8 East Tower Circle Ormond Beach FL 32174

REPORT OF LABORATORY ANALYSIS FOR 2,3,7,8-TCDD

Report Summary:

This report contains results of one drinking water sample analyzed to determine 2,3,7,8-TCDD content. This sample was analyzed according to Method 1613 by High Resolution Gas Chromatography/High Resolution Mass Spectrometry.

Report Prepared Date:

August 3, 2017

Pace Analytical Services, Inc. 1700 Elm Street Minneapolis, MN 55414 Phone: 612.607.1700 Fax: 612.607.6444

Report Information:

Pace Project #: 10396113 Sample Receipt Date: 07/18/2017 Client Project #: 35324056 Client Sub PO #: N/A State Cert #: 11647

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 Drinking Water Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Sarah Platzer, your Pace Project Manager.

This report has been reviewed by:

August 03, 2017 Sarah Platzer, Project Manager 612-607-6451 (612) 607-6444 (fax) sarah.platzer@pacelabs.com



Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.

Page 22 of 27



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Pace Analytical Services, Inc. 1700 Elm Street - Suite 200 Minneapolis, MN 55414

> Tel: 612-607-1700 Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Montana	CERT0092
Alabama	40770	Nebraska	NE-OS-18-06
Alaska	MN00064	Nevada	MN00064
Alaska	UST-078	New Jersey (NE	MN002
Arizona	AZ0014	New York (NEL	11647
Arkansas	88-0680	New hampshire	2081
CNMI Saipan	MP0003	North Carolina	27700
California	MN00064	North Carolina	530
Colorado	MN00064	North Dakota	R-036
Connecticut	PH-0256	Ohio	41244
EPA Region 8	8TMS-L	Ohio VAP	CL101
Florida (NELAP	E87605	Oklahoma	9507
Georgia (EDP)	959	Oregon (ELAP)	MN200001
Guam EPA	959	Oregon (OREL	MN300001
Hawaii	MN00064	Pennsylvania	68-00563
Idaho	MN00064	Puerto Rico	MN00064
Illinois	200011	South Carolina	74003001
Indiana	C-MN-01	Tennessee	TN02818
lowa	368	Texas	T104704192
Kansas	E-10167	Utah (NELAP)	MN00064
Kentucky	90062	Virginia	460163
Louisiana	03086	Washington	C486
Louisiana	MN00064	West Virginia #	9952C
Maryland	322	West Virginia D	382
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-L
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

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Report No.....10396113_1613DW



Pace Analytical Services, Inc. 1700 Elm Street - Suite 200 Minneapolis, MN 55414

> Tel: 612-607-1700 Fax: 612- 607-6444

Reporting Flags

- A = Reporting Limit based on signal to noise
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- I = Interference present
- J = Estimated value
- Nn = Value obtained from additional analysis
- P = PCDE Interference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X = %D Exceeds limits
- Y = Calculated using average of daily RFs
- * = See Discussion

instody is considered complete as is since this information is available in the owner laboratory.	sed By Date/Time Received By Date/Time		Linking Lin	mond Beach acc Analytical Minnesota e EPA 1613 EPA 1613 FPA 1	224056 Workorder Name:LBG,Inc 42001269 Owner Received Date: 7/14/2017 Results Requested By:	Samples Intact V
		leased By Date/Time Received By Date/Time Control of Date/Time	leased By Date/Time Received By Date/Time Controls is a Control is a c	Processor Processor Processor 113/2017 00:15 35324056001 Drinking 1 PS 7/13/2017 00:15 35324056001 Drinking PS 7/13/2017 00:15 353240566001 Drinking PS 7/12/17 2 2 PS 7/13/2017 00:15 2 2 PS 7/13/2017 00:15 2 2 PS 7/12/17 7 2 <td>Ormond Beach Pace Analytical Minnesota Icfle 32174 1700 Elm Street SE Suito Elm Street SE Suito Elm Street SE Minnespolis, MN 55414 Pace Analytical Minnesota Suito Elm Street SE Suito Elm Street SE Minnespolis, MN 55414 Pace Analytical Minnesota Suito Elm Street SE Minnespolis, MN 55414 Pace Analytical Minnesota Suito Elm Street SE Minnespolis, MN 55414 Pace Analytical Minnespolis, MN 55414 Pace Final Minnespolis, MN 55414 Pace Analytical Final Minnespolis, MN 55414 Pace Final Minnespolis, MN 55414 Pace Minnespolis, MN 55414 Pace Final Minnespolis, MN 55414 Pace Minnespolis, MN 55414 Pace Final Minnespolis, MN 55414 Pace Minnespolis, MN 55414 Pace Final Minnespolit Minnespolis, MN 55414 Pace Final Minnespolit Minnespolit Pace Final Minnespolit Minnespolit Pace Final Minnespolit</td> <td>And this COC document.</td>	Ormond Beach Pace Analytical Minnesota Icfle 32174 1700 Elm Street SE Suito Elm Street SE Suito Elm Street SE Minnespolis, MN 55414 Pace Analytical Minnesota Suito Elm Street SE Suito Elm Street SE Minnespolis, MN 55414 Pace Analytical Minnesota Suito Elm Street SE Minnespolis, MN 55414 Pace Analytical Minnesota Suito Elm Street SE Minnespolis, MN 55414 Pace Analytical Minnespolis, MN 55414 Pace Final Minnespolis, MN 55414 Pace Analytical Final Minnespolis, MN 55414 Pace Final Minnespolis, MN 55414 Pace Minnespolis, MN 55414 Pace Final Minnespolis, MN 55414 Pace Minnespolis, MN 55414 Pace Final Minnespolis, MN 55414 Pace Minnespolis, MN 55414 Pace Final Minnespolit Minnespolis, MN 55414 Pace Final Minnespolit Minnespolit Pace Final Minnespolit Minnespolit Pace Final Minnespolit	And this COC document.

		Document Na	ame:	Document Revised: 19Dec2016
	Pace Analytical	Sample Condition Upor	n Receipt Form	Page 1 of 2
•		F-MN-L-213-r	ev.20	Pace Minnesota Quality Office
		<u></u>		
Sample Co	ndition Client Name:	Pr	roject #:	
Upon Re	Pare Doma	and Breich		A0#:10396113
Courier:	Fed Ex		nt	
Commer	cial Pace SpeeD	eeOther:		
Tracking N	Number: <u>7422-559</u> 2	7-7564		0396113
Custody Se	eal on Cooler/Box Present?	Seals intac	t? □Yes \\	o Optional: Proj. Due Date: Proj. Name:
Packing Ma	aterial: 🗌 Bubble Wrap 🕅 Bubble	≥ Bags □None ¶2Ot	her: TB	Temp Blank? Ves 19/No
Thermome	ter 151401163	Type of Ice:	Wet Blue	None Samples on ice, cooling process has begun
Usea: Cooler Tem	151401164	- Conserved (sc) 2 5	, <u> </u>	
Temp should	d be above freezing to 6° Correction	on Factor:	Date and Initials	of Person Examining Contents: $2/18/15$
USDA Regul	ated Soil (🙀 N/A, water sample)			The son examining concerns. The son
Did samples	originate in a quarantine zone within the U	Jnited States: AL, AR, CA, FL, G	A, ID, LA. MS,	oid samples originate from a foreign source (internationally,
INC, MIVI, NY,	If Yes to either question, fill ou	yes It a Regulated Soil Checklist	ن No ال_No (F-MN-O-338) and i	ncluding Hawaii and Puerto Rico)? UYes No
				COMMENTS:
Chain of Cus	tody Present?		1.	
Chain of Cus	tody Filled Out?		2.	
Chain of Cus	tody Relinquished?		3.	
Sampler Nan	me and/or Signature on COC?		ΠN/A 4.	
Samples Arri	ived within Hold Time?		5.	
Short Hold T	"ime Analysis (<72 hr)?		б.	
Rush Turn A	round Time Requested?		7.	
Sufficient Vo	lume?		8.	
Correct Cont	ainers Used?		9	
-Pace Con	tainers Used?			
Containers Ir	ntact?		10	
Filtered Volu	me Received for Dissolved Tests?		N/A 11. Note	If sediment is visible in the dissolved container
Sample Labe	Is Match COC?		12.	
-includes		\mathcal{T}		
All container	s needing acid/base preservation have be	en .		Positive for Res.
checked?		□Yes □No 🔪		LIHNO3 LIH2SO4 LINAOH Chlorine? Y N
compliance v	s needing preservation are found to be in with EPA recommendation?		Sample #	
(HNO₃, H₂SO	4, <2 p H, NaOH >9 Sulfide, NaOH>12 Cyan	ide) 🗌 Yes 🗌 No 🔎		
Exceptions: V	/OA, Coliform, TOC/DOC Oil and Grease,		Initial when	Lot # of added
Headspace in	1 VOA Vials (>6mm)?			preservative:
Trip Blank Pr	esent?		N/A 15.	
Trip Blank Cu	istody Seals Present?			
Pace Trip Bla	nk Lot # (if purchased):			
	CLIENT NOTIFICATION/RESOLUTION			Field Data Required? Types Tho
Person Conta	acted:		Date/Time	
Comments/R	Resolution:			
			×	
		- +	·····	
Pr	oject Manager Review: Sug IA	Patron	r	Date: 7/19/2017
Note: Whenev	ver there is a discrepancy affecting North Cal	rolina compliance samples, a cor	v of this form will be	sent to the North Carolina DEHNR Certification Office (i.e. out of

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).



Pace Analytical Services, LLC. 1700 Elm Street - Suite 200 Minneapolis, MN, 55414

Drinking Water Analysis Results 2,3,7,8-TCDD -- USEPA Method 1613B

Tel: 612-607-1700 Fax: 612-607-6444

 Sample	Method	-
Sample	Method	

Date Collected.....07/13/2017 Date Received.....07/18/2017 Date Extracted.....07/31/2017

	Sample C-16	Method Blank	Lab Spike	Lab Spike Dup
[2,3,7,8-TCDD]	ND	ND		
EDL	1.5 pg/L	1.8 pg/L		
2,3,7,8-TCDD Recovery			89%	82%
Spike Recovery Limit			73-146%	73-146%
RPD			7.	9%
IS Recovery	94%	97%	104%	98%
IS Recovery Limits	31-137%	31-137%	25-141%	25-141%
CS Recovery	98%	94%	103%	96%
CS Recovery Limits	42-164%	42-164%	37-158%	37-158%
Filename	F170801B_25	F170801B_23	F170801B_21	F170801B_22
Analysis Date	08/02/2017	08/02/2017	08/02/2017	08/02/2017
Analysis Time	11:03	09:37	08:12	08:54
Analyst	SMT	SMT	SMT	SMT
Volume	0.950L	1.027L	1.010L	1.020L
Dilution	NA	NA	NA	NA
ICAL Date	01/11/2017	01/11/2017	01/11/2017	01/11/2017
CCAL Filename	F170801B_17	F170801B_17	F170801B_17	F170801B_17

! = Outside the Control Limits

ND = Not Detected EDL = Estimated Det

hegen M. Uhr Analyst:

EDL= Estimated Detection LimitLimits= Control Limits from Method 1613 (10/94 Revision), Tables 6A and 7A

- RPD = Relative Percent Difference of Lab Spike Recoveries
- IS = Internal Standard $[2,3,7,8-TCDD-^{13}C_{12}]$

CS = Cleanup Standard [2,3,7,8-TCDD-³⁷Cl₄]

C-21



ANALYTICAL REPORT

Job Number: 420-124221-1 SDG Number: Clovewood, LakAnn, Monroe, NY Job Description: LBG, Inc.

> For: Leggette, Brashears & Graham, Inc. 4 Research Drive Shelton, CT 06464

> > Attention: Stacy Stieber

Debra Ga

Debra Bayer Customer Service Manager dbayer@envirotestlaboratories.com 08/24/2017

NYSDOH ELAP does not certify for all parameters. EnviroTest Laboratories does hold certification for all analytes where certification is offered by ELAP unless otherwise specified in the Certification Information section of this report. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval of the laboratory. EnviroTest Laboratories Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our laboratory. All questions regarding this report should be directed to the EnviroTest Customer Service Representative.

Page 1 of 18

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554



METHOD SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-124221-1 SDG Number: Clovewood, LakAnn, Monroe, NY

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7 Sample Filtration Total Metals Digestion for 200.7 200 Series Drinking Water Prep Determination Step	EnvTest EnvTest EnvTest EnvTest	EPA 200.7 Re	ev 4.4 FILTRATION EPA 200.7 EPA 200.7/200.8
ICPMS Metals by 200.8 200 Series Drinking Water Prep Determination Step Total Metals Digestion for 200.8	EnvTest EnvTest EnvTest	EPA 200.8 Re	ev.5.4 EPA 200.7/200.8 EPA 200.8
Mercury in Water by CVAA Digestion for CVAA Mercury in Waters	EnvTest EnvTest	EPA 245.1 Re	ev.3.0 EPA 245.1
Anions by Ion Chromatography	EnvTest	MCAWW 300	0.0
Anions by Ion Chromatography	EnvTest	EPA 300.0 Re	ev. 2.1
EPA 504.1 EDB	Pace	EPA 504.1	
EPA 505 Pesticide/PCB	Pace	EPA 505	
EPA 515 Chlorinated Acids	Pace	EPA 515	
Purgeable Organic Compounds in Water by GC/MS	EnvTest	EPA-DW 524	.2
EPA 525.2 Semivolatile Organics	Pace	EPA 525.2	
EPA 531.1 Carbamate Pesticides in Drinki	Pace	EPA 531.1	
EPA 900 Series GA/GB/RA226/RA228/Gamma	Pace	EPA 900	
Uranium	Radios	STL-STL EPA	A
Heterotropic Plate Count	EnvTest	IDEXX SIMPI	LATE
Odor, Threshold Test	EnvTest	SM20 SM 21	50B
Alkalinity, Titration Method	EnvTest	SM21 SM 23	20B-97,-11
Corrosivity LSI Calculation	EnvTest	SM20 SM 23	30B
Hardness by Calculation	EnvTest	SM20 SM 23	40B-97,-11
рН	EnvTest	SM19 SM 45	00 H+ B
Nitrite by Colormetric	EnvTest	SM20 SM 45	00 NO2 B
Total Coliform and Escherichia coli by Colilert - Presence/Absence	EnvTest	SMWW SM 9	0223
Apparent Color	EnvTest	SM21 SM212	20B-01,11
Turbidity	EnvTest	SM21 SM213	30B-01,11
Total Dissolved Solids (Dried at 180 °C)	EnvTest	SM21 SM254	40C-97,11
Cyanide, Total: Colorimetric Method Cyanide: Distillation	EnvTest EnvTest	SM21 SM450	00 CN E-99 SM21 SM 4500 CN C
General Sub Contract Method	Pace	Subcontract	
General Sub Contract Method	Radios	Subcontract	

METHOD SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-124221-1 SDG Number: Clovewood, LakAnn, Monroe, NY

Description	Lab Location	Method	Preparation Method

Lab References:

EnvTest = EnviroTest

Pace = Pace Analytical - Ormond Beach

Radios = Pace Analytical Services, Inc.

Method References:

EPA = US Environmental Protection Agency

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

IDEXX =

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM19 = "Standard Methods For The Examination Of Water And Wastewater", 19Th Edition, 1995."

SM20 = "Standard Methods For The Examination Of Water And Wastewater", 20th Edition."

SM21 = "Standard Methods For The Examination Of Water And Wastewater", 21st Edition

SMWW = "Standard Methods for the Examination of Water and Wastewater"

STL-STL = Severn Trent Laboratories, St. Louis, Facility Standard Operating Procedure.

METHOD / ANALYST SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-124221-1 SDG Number: Clovewood, LakAnn, Monroe, NY

Method	Analyst	Analyst ID
EPA-DW 524.2	Andersen, Eric C	ECA
EPA 200.7 Rev 4.4	Sirico, Derek	DS
EPA 200.8 Rev.5.4	Sirico, Derek	DS
EPA 245.1 Rev.3.0	Sirico, Derek	DS
SM20 SM 2340B-97,-11	Sirico, Derek	DS
MCAWW 300.0	Luis, Carlos	CL
EPA 300.0 Rev. 2.1	Luis, Carlos	CL
IDEXX SIMPLATE	O'Driscoll, Kate	КО
SM20 SM 2150B	O'Driscoll, Kate	КО
SM21 SM 2320B-97,-11	Luis, Carlos	CL
SM20 SM 2330B	Cusack, Renee	RC
SM19 SM 4500 H+ B	O'Driscoll, Kate	КО
SM20 SM 4500 NO2 B	Molchon, Renee	RM
SMWW SM 9223	Grant, Ameya	AG
SM21 SM2120B-01,11	O'Driscoll, Kate	КО
SM21 SM2130B-01,11	O'Driscoll, Kate	КО
SM21 SM2540C-97,11	O'Driscoll, Kate	КО
SM21 SM4500 CN E-99	Molchon, Renee	RM

SAMPLE SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-124221-1 SDG Number: Clovewood, LakAnn, Monroe, NY

l ah Samplo ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Bacoived	
420-124221-1	C-21	Drinking Water	07/27/2017 0830	07/27/2017 0945	

Analytical Data

			Sdg Number: Clovewood, LakAnn, Monroe, N	
Client Sample ID:	C-21			
Lab Sample ID: Client Matrix:	420-124221-1 Drinking Water		Date Sampleo Date Receive	d: 07/27/2017 0830 d: 07/27/2017 0945
		524.2 Purgeable Organic Compounds in N	Vater by GC/MS	
Method:	524.2	Analysis Batch: 420-112881	Instrument ID:	HP
Preparation:	N/A	,	Lab File ID:	V072809.D
Dilution:	1.0		Initial Weight/Volur	me [.] 5 ml
Date Analyzed	07/28/2017 1443		Final Weight/Volum	ne: 5 ml
Date Prepared:	N/A			ic. o me
Analyte		Result (ug/L)	Qualifier	RL
1.1.1.2-Tetrachloro	ethane	<0.500		0.500
1.1.1-Trichloroetha	ne	<0.500		0.500
1.1.2.2-Tetrachloro	ethane	<0.500		0.500
1,1,2-Trichloroetha	ne	<0.500		0.500
1,1-Dichloroethane	1	<0.500		0.500
1,1-Dichloroethene	1	<0.500		0.500
1,1-Dichloropropen	e	<0.500		0.500
1,2,3-Trichlorobenz	zene	<0.500		0.500
1,2,3-Trichloroprop	ane	<0.500		0.500
1,2,4-Trichlorobenz	zene	<0.500		0.500
1,2,4-Trimethylben	zene	<0.500		0.500
1,2-Dichloroethane	1	<0.500		0.500
1,2-Dichlorobenzer	ne	<0.500		0.500
1,2-Dichloropropan	e	<0.500		0.500
1,3-Dichloropropan	e	<0.500		0.500
1,4-Dichlorobenzer	ne	<0.500		0.500
2,2-Dichloropropan	e	<0.500		0.500
Benzene		<0.500		0.500
Bromobenzene		<0.500		0.500
Bromochlorometha	ine	<0.500		0.500
Bromomethane		<0.500		0.500
n-Butylbenzene		<0.500		0.500
cis-1,2-Dichloroeth	ene	<0.500		0.500
cis-1,3-Dichloropro	pene	<0.500		0.500
Carbon tetrachlorid	le	<0.500		0.500
Chlorobenzene		<0.500		0.500
Chloroethane		<0.500		0.500
Chloromethane		<0.500		0.500
Dibromomethane		<0.500		0.500
Ethylbenzene		<0.500		0.500
Dichlorodifluorome	thane	<0.500		0.500
Hexachlorobutadie	ne	<0.500		0.500
Isopropylbenzene		<0.500		0.500
p-Isopropyltoluene		<0.500		0.500
Methylene Chloride	9	<0.500		0.500
m-Xylene & p-Xylei	ne	<1.00		1.00
Methyl tert-butyl eth	her	<0.500		0.500
o-Xylene		<0.500		0.500
Ietrachloroethene		<0.500		0.500
Ioluene		<0.500		0.500
trans-1,2-Dichloroe	thene	<0.500		0.500
trans-1,3-Dichlorop	propene	<0.500		0.500
Irichloroethene		<0.500		0.500
tert-Butylbenzene		<0.500		0.500

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-124221-1 Sdg Number: Clovewood, LakAnn, Monroe, NY
EnviroTest Laboratories, Inc.

00 /			Sdg Number: Clovew	ood, LakAnn, Monroe, NY
Client Sample ID:	C-21			
Lab Sample ID: Client Matrix:	420-124221-1 Drinking Water		Date Sampled: Date Received:	07/27/2017 0830 07/27/2017 0945
		524.2 Purgeable Organic Compounds in V	Water by GC/MS	
Method:	524.2	Analysis Batch: 420-112881	Instrument ID: HP	
Preparation:	N/A		Lab File ID: V0	72809.D
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/28/2017 1443		Final Weight/Volume:	5 mL
Date Prepared:	N/A			
Analyte		Result (ug/L)	Qualifier	RL
Trichlorofluorometha	ane	<0.500		0.500
Vinyl chloride		<0.500		0.500
Xylenes, Total		<1.50		1.50
Styrene		<0.500		0.500
sec-Butylbenzene		<0.500		0.500
1,3,5-Trimethylbenz	ene	<0.500		0.500
N-Propylbenzene		<0.500		0.500
1,3-Dichlorobenzene	e	<0.500		0.500
2-Chlorotoluene		<0.500		0.500
4-Chlorotoluene		<0.500		0.500

Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	95	71 - 120
Toluene-d8 (Surr)	95	79 - 121
1,2-Dichloroethane-d4 (Surr)	97	70 - 128

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-124221-1

Analytical Data

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-124221-1 Sdg Number: Clovewood, LakAnn, Monroe, NY

Client Sample ID:	C-21			
Lab Sample ID: Client Matrix:	420-124221-1 Drinking Water		Date Sampled: Date Received:	07/27/2017 0830 07/27/2017 0945
		200.7 Rev 4.4 ICP Metals by	200.7	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.7 Rev 4.4 200.7/200.8 1.0 08/01/2017 1516 08/01/2017 0916	Analysis Batch: 420-112958 Prep Batch: 420-112921	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Thermo ICP N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Iron Manganese Sodium Zinc		7740 1790 2340 96.1	g g	60.0 10.0 200 20.0
		200.7 Rev 4.4 ICP Metals by 200.7	/-Dissolved	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.7 Rev 4.4 200.7 1.0 08/03/2017 2307 08/02/2017 1530	Analysis Batch: 420-113070 Prep Batch: 420-113055	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Thermo ICP N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Iron Manganese		1090 1890		60.0 10.0

Job Number: 420-124221-1 Sdg Number: Clovewood, LakAnn, Monroe, NY

Client Sample ID:	C-21			
Lab Sample ID: Client Matrix:	420-124221-1 Drinking Water		Date Sampled: Date Received:	07/27/2017 0830 07/27/2017 0945
		200.8 Rev.5.4 ICPMS Metals b	oy 200.8	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.8 Rev.5.4 200.7/200.8 1.0 08/01/2017 1239 08/01/2017 0916	Analysis Batch: 420-112950 Prep Batch: 420-112921	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Perkin Elmer ELAN N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Lead Arsenic Beryllium Cadmium Chromium Nickel Antimony Thallium Barium Selenium		<1.00 1.61 <0.300 <1.00 <7.00 0.949 <0.400 <0.300 22.7 <2.00		1.00 1.40 0.300 1.00 7.00 0.500 0.400 0.300 2.00 2.00
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.8 Rev.5.4 200.8 1.0 08/01/2017 1459 07/31/2017 1400	Analysis Batch: 420-112949 Prep Batch: 420-112942	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Perkin Elmer ELAN N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Silver		<1.00		1.00
		245.1 Rev.3.0 Mercury in Water	by CVAA	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	245.1 Rev.3.0 245.1 1.0 08/03/2017 1528 08/03/2017 0945	Analysis Batch: 420-113021 Prep Batch: 420-112999	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Perkin Elmer FIMS N/A 25 mL 25 mL
Analyte		Result (ug/L)	Qualifier	RL
Mercury		<0.200		0.200

Client: Leggette, Brashears & Graham, Inc.

Client: Leggette	e, Brashears & Graham, Inc.		Jo Sdg Number: Clovev	b Number: 420-124221-1 vood, LakAnn, Monroe, NY
Client Sample ID:	C-21			
Client: Leggett Client Sample ID: Lab Sample ID: Client Matrix: Method: Preparation: Dilution: Date Analyzed: Date Prepared: Analyte	420-124221-1 Drinking Water		Date Sampled: Date Received:	07/27/2017 0830 07/27/2017 0945
		SM 2340B-97,-11 Hardness by Ca	alculation	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	SM 2340B-97,-11 N/A 1.0 08/01/2017 1516 N/A	Analysis Batch: 420-112962	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	None N/A
Analyte		Result (mg/L)	Qualifier	RL
Calcium hardness	as calcium carbonate	12.0		1.25

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-124221-1 Sdg Number: Clovewood, LakAnn, Monroe, NY

		Biology			
Client Sample ID:	C-21				
Lab Sample ID:	420-124221-1		Date Sampled:	07/2	27/2017 0830
Client Matrix:	Drinking Water		Date Received:	07/2	27/2017 0945
Analyte	Result	Qual Units		Dil	Method
Coliform, Total	Absent	CFU/100mL		1.0	SM 9223
	Anly Batch: 420-112815	Date Analyzed 07/27/2017 1358			
Escherichia coli	Absent	CFU/100mL		1.0	SM 9223
	Anly Batch: 420-112815	Date Analyzed 07/27/2017 1358			
Analyte	Result	Qual Units	RL	Dil	Method
Heterotrophic Plate	Count 8.00	CFU/mL	2.00	1.0	SIMPLATE
	Anly Batch: 420-112867	Date Analyzed 07/27/2017 1317			

General Chemistry

Job Number: 420-124221-1 Sdg Number: Clovewood, LakAnn, Monroe, NY

Client: Leggette, Brashears & Graham, Inc.

		General Chemistry			
Client Sample ID:	C-21				
Lab Sample ID:	420-124221-1		Date Sampled:	07/2	27/2017 0830
Client Matrix:	Drinking Water		Date Received:	07/2	27/2017 0945
Analyte	Resul	Qual Units	RL	Dil	Method
Nitrate as N	<0.25) mg/L	0.250	1.0	300.0
	Anly Batch: 420-11283	3 Date Analyzed 07/27/2017 1851			
Analyte	Resul	Qual Units		Dil	Method
Langelier Index	-2.95	NONE		1.0	SM 2330B

Anly Batch: 420-113039 Date Analyzed 08/04/2017 0903

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-124221-1 Sdg Number: Clovewood, LakAnn, Monroe, NY

		General C	hemistry			
Client Sample ID:	C-21					
Lab Sample ID: 4 Client Matrix: E	20-124221-1 Drinking Water			Date Sampled: Date Received:	07/2 07/2	27/2017 0830 27/2017 0945
Analyte	Result	Qual Unit	S	RL	Dil	Method
Alkalinity	34.4 Anly Batch: 420-112920	mg/ Date Analyzed	L 07/31/2017 1700	5.00	1.0	SM 2320B-97,-11
Total Dissolved Solids	34.0 Anly Batch: 420-112952	mg/ Date Analyzed	L 08/01/2017 1722	5.00	1.0	SM2540C-97,11
Chloride	<1.50 Anly Batch: 420-112838	mg/ Date Analyzed	L 07/27/2017 1851	1.50	1.0	300.0 Rev. 2.1
Sulfate	11.4 Anly Batch: 420-112838	mg/ Date Analyzed	L 07/27/2017 1851	5.00	1.0	300.0 Rev. 2.1
Fluoride	<0.500 Anly Batch: 420-112838	mg/ Date Analyzed	L 07/27/2017 1851	0.500	1.0	300.0 Rev. 2.1
Cyanide, Total	<0.0050 Anly Batch: 420-112916) mg/ Date Analyzed	L 07/28/2017 1600 07/28/2017 1100	0.00500	1.0	SM4500 CN E-99
Apparent Color	75.0 Anly Batch: 420-112863	Date Prepared. Pt-C Date Analyzed	Co 07/27/2017 1626	2.00	1.0	SM2120B-01,11
pH@color measurement	6.12 Anly Batch: 420-112863	SU Date Analyzed	07/27/2017 1626	2.00	1.0	SM2120B-01,11
Turbidity	17.6 Anly Batch: 420-112861	NTU Date Analyzed	J 07/27/2017 1611	0.100	1.0	SM2130B-01,11
Odor	1.00 Anly Batch: 420-112862	T.O Date Analyzed	.N. 07/27/2017 1625	1.00	1.0	SM 2150B
Temp @ Odor Measurer	nent 60.0 Anly Batch: 420-112862	Deg Date Analyzed	rees C 07/27/2017 1625	5.00	1.0	SM 2150B
рН	6.12 Anly Batch: 420-112864	H SU Date Analyzed	07/27/2017 1538	0.200	1.0	SM 4500 H+ B
Temp @ pH Measureme	nt 18.2 Anly Batch: 420-112864	Deg Date Analyzed	rees C 07/27/2017 1538	5.00	1.0	SM 4500 H+ B
Nitrite as N	<0.0100 Anly Batch: 420-112809	mg/ Date Analyzed	L 07/27/2017 1145	0.0100	1.0	SM 4500 NO2 B

DATA REPORTING QUALIFIERS

Client: Leggette, Brashears & Graham, Inc.

Job Number: Sdg Number: Clovewood, LakAnn, Monroe, NY

Lab Section	Qualifier	Description
Metals		
	g	Result fails applicable NYS drinking water standards
General Chemistry		
	н	Sample was prepped or analyzed beyond the specified holding time

Client: Leggette, Brashears & Graham, Inc.

Job Number:

Sdg Number: Clovewood, LakAnn, Monroe, NY

The following analytes are Not Part of the ELAP scope of accreditation

Sulfur, Tungsten, Silicon, Bicarbonate Alkalinity, 7 Day BOD 5210C, 28 Day BOD, Soluble BOD, Carbon Dioxide, Carbonate Alkalinity, CBOD Soluble, Chlorine, Cyanide (WAD), Ferrous Iron, Ferric Iron, Total Nitrogen, Total Organic Nitrogen, Dissolved Oxygen, pH, Phenolphthalein Alkalinity, Solids (Fixed), Solids (Percent), Solids (Percent Moisture) , Solids (Percent Volatile), Solids (Volatile Suspended), Temperature, TKN (Soluble), COD (Soluble), Total Inorganic Carbon, Volatile Acids as Acetic Acid, 2-Aminopyridine, 3-Picoline, 1-Methyl-2-pyrrilidinone, Aziridine, Dimethyl sulfoxide, 1-Chlorohexane, Iron Bacteria, Salmonella, & Sulfur Reducing Bacteria.

The following analytes are Not Part of ELAP Potable Water scope of accreditation

Cobalt (200.7, 200.8), Tin (200.7), Strontium (200.7), Gold (200.7), Platinum (200.7), Palladium (200.7), Titanium (200.7), Phosphorus (365.3), Nitrate-Nitrite (10-107-4-1C, 353.2), m-Xylene & p-Xylene (502.2, 524), Naphthalene (502.2), o-Xylene (502.2, 524), & Fecal Coliform (9222D).

The following analytes are Not Part of ELAP Solid and Hazardous Waste scope of accreditation

Ammonia (SM 4500NH3G), TKN (351.2), Phosphorus (365.3), 1,2-Dichloro-1,1,2-trifluoroethane (8260), & Chlorodifluoromethane (8260).

The following analytes are Not Part of ELAP Non Potable Water scope of accreditation

Dissolved Organic Carbon (5310C), Mecoprop (8151A), & MCPA (8151A).

Client: Leggette, Brashears & Graham, Inc.

Job Number:

Sdg Number: Clovewood, LakAnn, Monroe, NY

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%R	Percent Recovery
DL, RA, RE	Indicates a Dilution, Reanalysis or Reextraction.
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit - an estimate of the minimum amount of a substance that an analytical process can reliably detect. A MDL is analyte- and matrix-specific and may be laboratory-dependent.
ND	Not detected at the reporting limit (or MDL if shown).
QC	Quality Control
RL	Reporting Limit - the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.
RPD	Relative Percent Difference - a measure of the relative difference between two points



CHAIN OF CUSTODY

REPORT# (Lab Use Only)

Lab Name EnviroTest Laboratories

Address & Phone 315 Fullerton Avenue, Newburgh, New York 12550 845-562-0890

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION		MATR	IX					REQ	UIREC	ANAL	YSES					PAGE 1 of	1
INVIROTEST PROJECT MANAGER Debra Bayer	P.O. NUMBER	TOWN Monsoc		9		A C/G kit	Vials HCI	um Thio.	ium Thio.	I/Na2SO3	itric Acid	io(liquid)	er Plastic	ium Hyd.	tic Sterile	stic Nitric	s Unpres		TURNAROUND TIME
LBG, Inc.	203-929-8555		NCATE	tter) Indica		MP	40ml	ml Sodi	ber Sodi	ber HC	lastic N	/Sod.Th	Ē	stic Sod	ml Plast	iter Pla	0ml Vial	NORMAL	_ <u> </u>
Stacy Stieber			(C) INC	iste Wa				4	Amt	er Am	L L L	Mon		i Plas	125	L	4	QUICK	
CLIENT ADDRESS	l		GRAB	r W (Wa	E				250m	Ē	55(40mi		250m				VERBAL	
4 Research Drive, Suite 204, She 20MPANY CONTRACTING THIS WORK (if applicable	lton, CT 06484	1	SITE (C) OI	ng Water) o	R SEMISO	linedo		I	1	1	I	1	L	I:		L	L	#OF COOLERS	
	SAMPLE IDENTIFICA	TION	COMPOS	0 (Drinki				٨	UMBE	ROF	CONT	AINER	S SUB	мітте	D .				REMARKS
7.27.11 0830	C-21			$\overline{\mathcal{D}}$	<u> </u>	1	3	2	1	2	1	2	34	1	2	5	2	Table 8B (Sb,A	s,Ba,Be,Cd,Cr,Cn,Hg,Ni
	- · ·					1							25	1-17				Se, TI,F)	·
						1							1 1 - 4					Table 8C (NO3,	NO2)
						2-Liter	Amber	r Unpre	es.									Table 8D (CI,Fe	Mn,Ag,Na,SO4,Zn,Odor,Color)
						1-250	nl Amb	er Unp	ores.									524.2 (POC,MT	BE,Vinyl Chloride)
			\square			3-250	ni Plasi	tic Unp	ores. (n	o air)								SOCs (504,508	,515,525,531,547,548,549,Dloxin)
						2-40m	Ambe	r Sodi	um Thie	0.							<u> </u>	Additional Tes	is (Total coliform
						1-500r	nl Amb	er Sod	lium Th	nio.								thru Zinc)	
						1-Liter	Amber	r Plasti	c Sodii	um Thi	o.&H2	SO4						Radio(Gross A	lpha/Beta,Radium-226/228,Uranium)
						2-Liter	Amber	r Sodiu	ım Thio) .	[Radon	· · · · · · · · · · · · · · · · · · ·
						1					1							Dissolved Fe, I	Mn
																			<u></u>
	COMPANY	DATE 7.7.17		qu	5	RECE	IVED 8	3Y: (SI	GNATI	JRE)			I	(COMPA	ANY	1	DATE	TIME
SAMPLED BY (SIGNATURE)	COMPANY	DATE 7.27.13	TIME	83	50	RECE	IVED 8	3Y: (SI	GNATU	JRE)				(OMPA	ANY .		DATE	TIME
RELINQUISHED BY: (SIGNATURE)	COMPANY	DATE	TIME			RECE	IVED 8	3Y: (SI	GNATI	JRE)				C	COMPA	NY		DATE	TIME
SUBCONTACT: PACE-SOCs	, Radio, Radon; ASI-MF	 PA/Crypto/Giard	lia			1						1							
SEGENCED FOR LABORATORY BY:	DATE TIME	CUSTODY INTACT	Coole	ar Ten	np: -0/-	LABO	RATOF	REI	MARK	9;	ICE	_ pł	<u>-7`</u>	_ CL2_		Reveiv	ved by	and and a second se	



420-1242 C-21

Page 17 of 18

08/24/2017 420-1087975

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-124221-1 SDG Number: Clovewood, LakAnn, Monroe, NY

Login Number: 124221

Question	T/F/NA	Comment
Samples were collected by ETL employee as per SOP-SAM-1	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is recorded.	True	2.5 C
Cooler Temp. is within method specified range.(0-6 C PW, 0-8 C NPW, or BAC <10 C	True	
If false, was sample received on ice within 6 hours of collection.	NA	
Based on above criteria cooler temperature is acceptable.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	False	рН
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	



Pace Analytical Services, LLC 1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

July 31, 2017

Ms. Debra Bayer EnviroTest Laboratories, Inc. 315 Fullerton Avenue Newburgh, NY 12550

RE: Project: LBG, Inc. Pace Project No.: 30225535

Dear Ms. Bayer:

Enclosed are the analytical results for sample(s) received by the laboratory on July 28, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sugnalylillins

Jacquelyn Collins jacquelyn.collins@pacelabs.com (724)850-5612 Project Manager

Enclosures

cc: Janine Rader, EnviroTest Laboratories, Inc.





Pace Analytical Services, LLC 1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

CERTIFICATIONS

Project:	LBG, Inc.
Pace Project No.:	30225535

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601 L-A-B DOD-ELAP Accreditation #: L2417 Alabama Certification #: 41590 Arizona Certification #: AZ0734 Arkansas Certification California Certification #: 04222CA Colorado Certification Connecticut Certification #: PH-0694 **Delaware Certification** Florida/TNI Certification #: E87683 Georgia Certification #: C040 **Guam Certification** Hawaii Certification Idaho Certification **Illinois Certification** Indiana Certification Iowa Certification #: 391 Kansas/TNI Certification #: E-10358 Kentucky Certification #: 90133 Louisiana DHH/TNI Certification #: LA140008 Louisiana DEQ/TNI Certification #: 4086 Maine Certification #: PA00091 Maryland Certification #: 308 Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification Missouri Certification #: 235

Montana Certification #: Cert 0082 Nebraska Certification #: NE-05-29-14 Nevada Certification #: PA014572015-1 New Hampshire/TNI Certification #: 2976 New Jersey/TNI Certification #: PA 051 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190 Oregon/TNI Certification #: PA200002 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282 South Dakota Certification Tennessee Certification #: TN2867 Texas/TNI Certification #: T104704188-14-8 Utah/TNI Certification #: PA014572015-5 USDA Soil Permit #: P330-14-00213 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 460198 Washington Certification #: C868 West Virginia DEP Certification #: 143 West Virginia DHHR Certification #: 9964C Wisconsin Certification Wyoming Certification #: 8TMS-L



SAMPLE SUMMARY

30225535001	C-21 (420-124221-1)	Drinking Water	07/27/17 08:30	07/28/17 10:00
Lab ID	Sample ID	Matrix	Date Collected	Date Received
Pace Project No	.: 30225535			
Project:	LBG, Inc.			



SAMPLE ANALYTE COUNT

Project:LBG, Inc.Pace Project No.:30225535

Lab ID	Sample ID	Method	Analysts	Analytes Reported	
30225535001	 C-21 (420-124221-1)	SM7500RnB-07	NEG	1	



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project:	LBG, Inc.							
Pace Project No.:	30225535							
Sample: C-21 (420 PWS:)-124221-1)	Lab ID: 302255 Site ID:	35001	Collected: 07/27/17 08:30 Sample Type:	Received:	07/28/17 10:00	Matrix: Drinking	Water
Comments: • Sam	ple collection til	mes were not present or	the sam	nple containers.				
Parame	eters	Method	Ac	t ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radon		SM7500RnB-07	55.4 : C:NA	± 29.3 (46.8) . T:NA	pCi/L	07/28/17 21:5	0 10043-92-2	



QUALITY CONTROL - RADIOCHEMISTRY

Project:	LBG, Inc.						
Pace Project No.:	30225535						
QC Batch:	266626		Analysis Method:	SM7500RnB-	-07		
QC Batch Method:	SM7500RnB-07		Analysis Description:	7500Rn B Ra	adon		
Associated Lab San	nples: 30225535	001					
METHOD BLANK:	1312837		Matrix: Water				
Associated Lab San	nples: 30225535	001					
Paran	neter	Act ±	LUnc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radon		-21.0 ± 19.6	(35.3) C:NA T:NA	pCi/L	07/28/17 17:37		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: LBG, Inc. Pace Project No.: 30225535

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

EnviroTest Laboratories, Inc.					1 4000 <u></u>
315 Fullerton Avenue		Chain of Custo	odv Record		nviroTest
Newburgh, NY 12550 Phone (845) 562-0890 Fax (845) 562-0841					aboratories Inc.
Client Information (Sub Contract Lab)	Sampler.	Lab PM: Bayer, Debra	Carrier Tra	cking No(s); COC No	
Client Contact Shipping/Receiving	Phone:	E-Mait: dbayer@envirotes	stlaboratories.com	Page: Page:	11
Company: Pace Analytical Services, Inc.			Analvsis Requested	STL JOD	# 4001-1
Address: 1638 Roseytown Rd,Suites 2,3,4,	Due Date Requested: 8/10/2017 Standlor O			Presen	/ation Codes:
city. Greensburg	TAT Requested (days):				H N - None
state. Zp. PA, 15601			~		cetate U - Asnauz c Acid P - Na204S S04 Q - Na2S03
Phone:	PO#	~		F - MeO	H R - Na2S2SO3 Mor S - H2SO4
Email:	#0M	unin of No		H - Aso	orbic Acid T - TSP Dodecahydrate U - Acetone Mater V - MCAA
Project Name: LBG, Inc.	Project #: 42001269	art Ura sorf)e		atenis برجم ۲۹۳	A W - ph 4-5 Z - other (specify)
Site	SSOW#	ample semple	71 Kad	Cont Otter:	
	Sampl Type Sample (C=com	P C Mattrix Mattrix Measurer Id Fillered S MMSM minor MSM minor	всоиткус		
Sample Identification Client ID (Lab ID)	Sample Date Time G=grat	0) BT#Tssue, A#AIr) 🛍 🔐 🕹 Mation Code:			special Instructions/Note:
C-24 (420L-124204-41)					
(1-1)2742(-074) 17-0	117/11/ B:30	Water		e	602
	-				
			:30225535		
		303955			
Possible Hazard Identification		Sample I	Disposal (A fee may be assessed	if samples are retained long	er than 1 month)
Deliverable Requested: I, II, II, IV, Other (specify)		Special Ir	ium ro Crient hstructions/QC Requirements:	y Lap Archive For	Months
Empty Kit Relinquished by:	Date:	Time:	Meth	od of Shipment:	
Reinquished by Milen	Date/Time: 7/2>//>//////////////	Company Receiv		Date/Time:	Company
Relinquished by:	Date/Time:	Company	eð by:	ナビントレントレン Date/Time:	Company
Reinquished by:	Date/Time:	Company Receiv	ed by:	Date/Time:	Company
Custody Seats Intact: Custody Seal No.:		Cooler	Temperature(s) °C and Other Remarks:		

Sample Con	dition Upon Recei	pt P	ittsb	urgł	700553
Pace Analytical	Cliopt Name'	Ē	0.0	ຕົ	Test Project#
* •	Cilent Marrie.		170	.0	mint
Courier: 📕 Fed Ex 🗌]UPS []USPS []Client		omme	rcial	Pace Other LabelLMS Login WW
Tracking #:	797476944	134			
Custody Seal on Cooler	r/Box Present: 🔲 yes	 ∠] n	0	Seal	
Thermometer Used		Туре	of Ice:	Wel	Blue None
Cooler Temperature	Observed Temp	<u>,</u> Ce	°C	Corr	ection Factor: 0.0 · milar remp
Temp should be above free:	zing to 6°C				Date and Initials of person examining
		Yes	No	I N/A	CURRENTS
Comments:		100			1.
Chain of Custody Presen	<u>t:</u>				2.
Chain of Custody Filled C	Dui:				3.
Chain of Custody Reling	Jshed:				4
Sampler Name & Signati	Ire on COC:		ľ	†	5 no time on Samples
Sample Labels match CC	DC:			I	
-Includes date/lime/ID	Mathx:			<u> </u>	6
Samples Arrived within H	old Time:				7
Short Hold Time Analys	ls (<72hr remaining):	7	$\overline{\mathbf{Y}}$		a DML
Rush Turn Around Time	e Requested:				
Sufficient Volume:				┼───	10
Correct Containers Used	,				101
-Pace Conialners Use	d:				11
Containers Intact:					10
Orthophosphate field fille	red				12
Organic Samples chec	ked for dechlorination:			-	14
Fillered volume received	for Dissolved tests				45
All coulginets liave peen clu	eched for preserver				, i.i.
All containers needing prese	ervation are found to be in mendation.		_		
compliance with EPA recom	mendanon				Initial when the Dale/time of preservation
exceptions: VOA, colifor	m, TOC, O&G, Phenolics				Lot # of added
					preservalive
Headspace in VOA Vials	(>6mm):			<u></u>	16
Trip Blank Present:					17.
Trip Blank Custody Seals	Present				
Rad Aqueous Samples	Screenéd > 0,5 mrem/hr		/		completed; 4 Date: 7/28/17
Client Notification/ Reg	olution:	ek			
Person Confacted				Dale/	Fime:Contacted By:
Comments/ Resolution:					
·					
🗋 A check in this I	box indicates that addit	ional	infor	natio	n has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers) *PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screep of the Workorder Edit Screen.

J:\QAQC\Master\Document Management\Sample Mgt\Sample Condition Upon Receipt Pttsburgh (C056-5 5July2017)



Pace Analytical Services, LLC 8 East Tower Circle Ormond Beach, FL 32174 (386)672-5668

August 10, 2017

Ron Bayer EnviroTest Laboratories Inc. 315 Fullerton Avenue Newburgh, NY 12550

RE: Project: LBG, Inc. Pace Project No.: 35326821

Dear Ron Bayer:

Enclosed are the analytical results for sample(s) received by the laboratory on July 28, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Bo Garcia bo.garcia@pacelabs.com (386)672-5668 Project Manager

Enclosures

cc: Debra Bayer, EnviroTest Laboratories Inc. Renee Cusack, EnviroTest Laboratories Inc. Laura Marciano, EnviroTest Laboratories Inc. Janine Rader, EnviroTest Laboratories Inc. Meredith Ruthven, EnviroTest Laboratories Inc.





Pace Analytical Services, LLC 8 East Tower Circle Ormond Beach, FL 32174 (386)672-5668

CERTIFICATIONS

Project: LBG, Inc. Pace Project No.: 35326821

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601 L-A-B DOD-ELAP Accreditation #: L2417 Alabama Certification #: 41590 Arizona Certification #: AZ0734 Arkansas Certification California Certification #: 04222CA Colorado Certification Connecticut Certification #: PH-0694 **Delaware Certification** Florida/TNI Certification #: E87683 Georgia Certification #: C040 **Guam Certification** Hawaii Certification Idaho Certification **Illinois Certification** Indiana Certification Iowa Certification #: 391 Kansas/TNI Certification #: E-10358 Kentucky Certification #: 90133 Louisiana DHH/TNI Certification #: LA140008 Louisiana DEQ/TNI Certification #: 4086 Maine Certification #: PA00091 Maryland Certification #: 308 Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification Missouri Certification #: 235

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174 Alabama Certification #: 41320 Connecticut Certification #: PH-0216 Delaware Certification: FL NELAC Reciprocity Florida Certification #: E83079 Georgia Certification #: 955 Guam Certification: FL NELAC Reciprocity Hawaii Certification: FL NELAC Reciprocity Illinois Certification #: 200068 Indiana Certification: FL NELAC Reciprocity Kansas Certification #: E-10383 Louisiana Certification #: FL NELAC Reciprocity Louisiana Environmental Certificate #: 05007 Maryland Certification: #346 Michigan Certification #: 9911 Mississippi Certification: FL NELAC Reciprocity Missouri Certification #: 236 Montana Certification #: Cert 0074

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747 New York Certification #: 10478 Primary Accrediting Body New Jersey Certification #: NY158 Montana Certification #: Cert 0082 Nebraska Certification #: NE-05-29-14 Nevada Certification #: PA014572015-1 New Hampshire/TNI Certification #: 2976 New Jersey/TNI Certification #: PA 051 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190 Oregon/TNI Certification #: PA200002 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282 South Dakota Certification Tennessee Certification #: TN2867 Texas/TNI Certification #: T104704188-14-8 Utah/TNI Certification #: PA014572015-5 USDA Soil Permit #: P330-14-00213 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 460198 Washington Certification #: C868 West Virginia DEP Certification #: 143 West Virginia DHHR Certification #: 9964C Wisconsin Certification Wyoming Certification #: 8TMS-L

Nebraska Certification: NE-OS-28-14 Nevada Certification: FL NELAC Reciprocity New York Certification #: 11608 North Carolina Environmental Certificate #: 667 North Carolina Certification #: 12710 Oklahoma Certification #: D9947 Pennsylvania Certification #: 68-00547 Puerto Rico Certification #: FL01264 South Carolina Certification: #96042001 Tennessee Certification #: TN02974 Texas Certification: FL NELAC Reciprocity US Virgin Islands Certification: FL NELAC Reciprocity Virginia Environmental Certification #: 460165 Wyoming Certification: FL NELAC Reciprocity West Virginia Certification #: 9962C Wisconsin Certification #: 399079670 Wyoming (EPA Region 8): FL NELAC Reciprocity

Pennsylvania Certification #: 68-00350 Connecticut Certification #: PH-0435 Maryland Certification #: 208



CERTIFICATIONS

Project: LBG, Inc. Pace Project No.: 35326821

Long Island Certification IDs

Rhode Island Certification #: LAO00340 Massachusetts Certification #: M-NY026 New Hampshire Certification #: 2987



SAMPLE SUMMARY

35326821001	C-21	Drinking Water	07/27/17 08:30	07/28/17 10:20
Lab ID	Sample ID	 Matrix	Date Collected	Date Received
Pace Project No	o.: 35326821			
Project:	LBG, Inc.			



SAMPLE ANALYTE COUNT

Project:LBG, Inc.Pace Project No.:35326821

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35326821001	C-21	EPA 504.1	BP1	2	PASI-O
		EPA 505	MMR	15	
		EPA 508.1	NS1	18	PASI-O
		EPA 515.3	LJM	8	PASI-O
		EPA 531.1	NMB	9	PASI-O
		EPA 547	NMB	1	PASI-O
		EPA 549.2	NMB	1	PASI-O
		EPA 525.2	NS1	7	PASI-O
		EPA 548.1	JDT	1	PASI-O
		EPA 900.0	NEG	2	PASI-PA
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		ASTM D5174-97	RMK	1	PASI-PA



ANALYTICAL RESULTS

Project:	LBG, Inc
,	,

Pace Project No.: 35326821

Sample: C-21	Lab ID:	35326821001	Collected	d: 07/27/17	7 08:30	Received: 07/	28/17 10:20 Ma	atrix: Drinking	Water
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504.1 GCS EDB and DBCP	Analytical	Method: EPA 5	04.1 Prepa	ration Meth	nod: EP	A 504.1			
1,2-Dibromo-3-chloropropane	<0.0060	ug/L	0.019	0.0060	1	08/02/17 14:30	08/02/17 22:55	96-12-8	
1,2-Dibromoethane (EDB)	<0.0070	ug/L	0.0094	0.0070	1	08/02/17 14:30	08/02/17 22:55	106-93-4	
505 GCS Pesticides/PCBs	Analytical	Method: EPA 5	05 Prepara	tion Metho	d: EPA	505			
Alachlor	<0.20	ug/L	0.20	0.20	1	08/03/17 12:51	08/03/17 16:39	15972-60-8	
Aldrin	<0.025	ug/L	0.025	0.025	1	08/03/17 12:51	08/03/17 16:39	309-00-2	
gamma-BHC (Lindane)	<0.020	ug/L	0.020	0.020	1	08/03/17 12:51	08/03/17 16:39	58-89-9	
Chlordane (Technical)	<0.20	ug/L	0.20	0.20	1	08/03/17 12:51	08/03/17 16:39	57-74-9	
Dieldrin	<0.050	ug/L	0.050	0.050	1	08/03/17 12:51	08/03/17 16:39	60-57-1	
Endrin	<0.010	ug/L	0.010	0.010	1	08/03/17 12:51	08/03/17 16:39	72-20-8	
Heptachlor	<0.025	ug/L	0.025	0.025	1	08/03/17 12:51	08/03/17 16:39	76-44-8	
Heptachlor epoxide	<0.020	ug/L	0.020	0.020	1	08/03/17 12:51	08/03/17 16:39	1024-57-3	
Hexachlorobenzene	<0.10	ug/L	0.10	0.10	1	08/03/17 12:51	08/03/17 16:39	118-74-1	
Hexachlorocyclopentadiene	<0.10	ug/L	0.10	0.10	1	08/03/17 12:51	08/03/17 16:39	77-47-4	
Methoxychlor	<0.10	ug/L	0.10	0.10	1	08/03/17 12:51	08/03/17 16:39	72-43-5	
PCB Screen	<0.40	ug/L	0.40	0.40	1	08/03/17 12:51	08/03/17 16:39		
Toxaphene	<1.0	ug/L	1.0	1.0	1	08/03/17 12:51	08/03/17 16:39	8001-35-2	
Surrogates		U U							
Tetrachloro-m-xylene (S)	98	%.	30-150		1	08/03/17 12:51	08/03/17 16:39	877-09-8	
Decachlorobiphenyl (S)	67	%.	30-150		1	08/03/17 12:51	08/03/17 16:39	2051-24-3	
508.1 GCS Pesticides	Analytical	Method: EPA 5	08.1 Prepa	ration Meth	nod: EP	A 508.1			
Alachlor	<0.037	ug/L	0.21	0.037	1	08/03/17 17:00	08/06/17 02:18	15972-60-8	
Atrazine	<0.066	ug/L	0.10	0.066	1	08/03/17 17:00	08/06/17 02:18	1912-24-9	
gamma-BHC (Lindane)	<0.0031	ug/L	0.021	0.0031	1	08/03/17 17:00	08/06/17 02:18	58-89-9	
Butachlor	<0.028	ug/L	0.10	0.028	1	08/03/17 17:00	08/06/17 02:18	23184-66-9	
Chlordane (Technical)	<0.049	ug/L	0.21	0.049	1	08/03/17 17:00	08/06/17 02:18	57-74-9	
Dieldrin	<0.020	ug/L	0.10	0.020	1	08/03/17 17:00	08/06/17 02:18	60-57-1	
Endrin	<0.0073	ug/L	0.010	0.0073	1	08/03/17 17:00	08/06/17 02:18	72-20-8	
Heptachlor	<0.013	ug/L	0.042	0.013	1	08/03/17 17:00	08/06/17 02:18	76-44-8	
Heptachlor epoxide	<0.0031	ug/L	0.021	0.0031	1	08/03/17 17:00	08/06/17 02:18	1024-57-3	
Hexachlorobenzene	<0.020	ug/L	0.10	0.020	1	08/03/17 17:00	08/06/17 02:18	118-74-1	
Hexachlorocyclopentadiene	<0.034	ug/L	0.10	0.034	1	08/03/17 17:00	08/06/17 02:18	77-47-4	
Methoxychlor	<0.053	ug/L	0.10	0.053	1	08/03/17 17:00	08/06/17 02:18	72-43-5	
Metolachlor	<0.049	ug/L	0.10	0.049	1	08/03/17 17:00	08/06/17 02:18	51218-45-2	
PCB, Total	<0.084	ug/L	0.10	0.084	1	08/03/17 17:00	08/06/17 02:18	1336-36-3	
Propachlor	<0.031	ug/L	0.10	0.031	1	08/03/17 17:00	08/06/17 02:18	1918-16-7	
Simazine	<0.072	ug/L	0.073	0.072	1	08/03/17 17:00	08/06/17 02:18	122-34-9	
Toxaphene	<0.64	ug/L	1.0	0.64	1	08/03/17 17:00	08/06/17 02:18	8001-35-2	
Surrogates		5							
Decachlorobiphenyl (S)	106	%	70-130		1	08/03/17 17:00	08/06/17 02:18	2051-24-3	
515.3 Chlorinated Herbicides	Analytical	Method: EPA 5	15.3 Prepa	ration Meth	nod: EP	A 515.3			
2,4-D	<0.081	ug/L	0.10	0.081	1	08/01/17 09:25	08/04/17 18:26	94-75-7	
Dalapon	<0.89	ug/L	1.0	0.89	1	08/01/17 09:25	08/04/17 18:26	75-99-0	
Dicamba	<0.067	ug/L	0.10	0.067	1	08/01/17 09:25	08/04/17 18:26	1918-00-9	



ANALYTICAL RESULTS

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Pace Project No.: 35326821

Sample: C-21	Lab ID: 3	35326821001	Collected: 07/27/17 08:30			30 Received: 07/28/17 10:20 Matrix: Drinking Water				
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
515.3 Chlorinated Herbicides	Analytical M	/lethod: EPA 5	15.3 Prepa	aration Meth	od: EP	A 515.3				
Dinoseb	<0.16	ug/L	0.20	0.16	1	08/01/17 09:25	08/04/17 18:26	88-85-7		
Pentachlorophenol	<0.030	ug/L	0.040	0.030	1	08/01/17 09:25	08/04/17 18:26	87-86-5		
Picloram	<0.094	ug/L	0.10	0.094	1	08/01/17 09:25	08/04/17 18:26	1918-02-1		
2,4,5-TP (Silvex)	<0.16	ug/L	0.20	0.16	1	08/01/17 09:25	08/04/17 18:26	93-72-1		
Surrogates										
2,4-DCAA (S)	93	%	70-130		1	08/01/17 09:25	08/04/17 18:26	19719-28-9		
531.1 HPLC Carbamates	Analytical M	/lethod: EPA 5	31.1							
Aldicarb	<0.64	ug/L	2.0	0.64	1		07/29/17 03:50	116-06-3	P4	
Aldicarb sulfone	<0.37	ug/L	2.0	0.37	1		07/29/17 03:50	1646-88-4	P4	
Aldicarb sulfoxide	<0.59	ug/L	2.0	0.59	1		07/29/17 03:50	1646-87-3	P4	
Carbofuran	<0.32	ug/L	2.0	0.32	1		07/29/17 03:50	1563-66-2	P4	
3-Hydroxycarbofuran	<0.45	ug/L	2.0	0.45	1		07/29/17 03:50	16655-82-6	P4	
Methomyl	<0.57	ug/L	2.0	0.57	1		07/29/17 03:50	16752-77-5		
Oxamyl	<0.55	ug/L	2.0	0.55	1		07/29/17 03:50	23135-22-0	P4	
Carbaryl	<0.27	ug/L	2.0	0.27	1		07/29/17 03:50	63-25-2	P4	
Surrogates										
BDMC (S)	114	%	80-120		1		07/29/17 03:50		P4	
547 HPLC Glyphosate	Analytical M	/lethod: EPA 5	47							
Glyphosate	<4.2	ug/L	6.0	4.2	1		07/29/17 08:34			
549.2 HPLC Paraquat Diquat	Analytical M	/lethod: EPA 5	49.2 Prepa	aration Meth	od: EP	PA 549.2				
Diquat	<0.30	ug/L	0.40	0.30	1	08/02/17 21:30	08/03/17 08:12	85-00-7		
525.2 Base Neutral Extractable	Analytical N	/lethod: EPA 5	25.2 Prepa	aration Meth	od: EP	A 525.2				
Benzo(a)pyrene	<0.013	ug/L	0.099	0.013	1	08/02/17 21:00	08/03/17 18:56	50-32-8		
bis(2-Ethylhexyl)adipate	<0.38	ug/L	1.6	0.38	1	08/02/17 21:00	08/03/17 18:56	103-23-1		
bis(2-Ethylhexyl)phthalate	<0.49	ug/L	2.0	0.49	1	08/02/17 21:00	08/03/17 18:56	117-81-7		
Metribuzin	<0.15	ug/L	0.30	0.15	1	08/02/17 21:00	08/03/17 18:56	21087-64-9		
Surrogates		-								
1,3-Dimethyl-2-nitrobenzene(S)	100	%	70-130		1	08/02/17 21:00	08/03/17 18:56	81209		
Perylene-d12 (S)	98	%	70-130		1	08/02/17 21:00	08/03/17 18:56	1520963		
Triphenylphosphate (S)	117	%	70-130		1	08/02/17 21:00	08/03/17 18:56	115-86-6		
548.1 GCS Endothall	Analytical M	/lethod: EPA 5	48.1 Prepa	aration Meth	od: EP	A 548.1				
Endothall	<4.3	ug/L	9.0	4.3	1	08/02/17 00:20	08/08/17 07:03			



Pace Project No .: 35326821

Project:

QC Batch:

LBG, Inc.

384072 QC Batch Method: EPA 531.1 Analysis Method: EPA 531.1 Analysis Description: 531.1 HPLC Carbamate

Associated Lab Samples: 35326821001

METHOD BLANK: 2085431 Matrix: Water Associated Lab Samples: 35326821001 Blank Reporting Result Limit MDL Parameter Units Analyzed Qualifiers 3-Hydroxycarbofuran <0.45 2.0 0.45 07/29/17 00:00 ug/L Aldicarb ug/L <0.64 2.0 0.64 07/29/17 00:00 Aldicarb sulfone ug/L <0.37 2.0 0.37 07/29/17 00:00 Aldicarb sulfoxide ug/L <0.59 2.0 0.59 07/29/17 00:00 Carbaryl ug/L <0.27 2.0 0.27 07/29/17 00:00 Carbofuran ug/L < 0.32 2.0 0.32 07/29/17 00:00 Methomyl ug/L <0.57 2.0 0.57 07/29/17 00:00 Oxamyl ug/L <0.55 2.0 0.55 07/29/17 00:00 BDMC (S) % 114 80-120 07/29/17 00:00

LABORATORY CONTROL SAMPLE: 2085432

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
3-Hydroxycarbofuran	ug/L		10.8	108	80-120	
Aldicarb	ug/L	10	11.1	111	80-120	
Aldicarb sulfone	ug/L	10	11.0	110	80-120	
Aldicarb sulfoxide	ug/L	10	9.4	94	80-120	
Carbaryl	ug/L	10	10.2	102	80-120	
Carbofuran	ug/L	10	11.1	111	80-120	
Methomyl	ug/L	10	10.4	104	80-120	
Oxamyl	ug/L	10	10.5	105	80-120	
BDMC (S)	%			104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2085433 2085434												
Parameter	Units	50176222002 Result	MS Spike Conc	MSD Spike Conc	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec	RPD	Max RPD	Qual
												Quui
3-Hydroxycarbofuran	ug/L	ND	10	10	10.5	11.6	105	116	80-120	10	20	
Aldicarb	ug/L	ND	10	10	11.1	11.8	111	118	80-120	6	20	
Aldicarb sulfone	ug/L	ND	10	10	11.0	11.8	110	118	80-120	7	20	
Aldicarb sulfoxide	ug/L	ND	10	10	9.4	9.9	94	99	80-120	6	20	
Carbaryl	ug/L	ND	10	10	10.2	11.0	102	110	80-120	7	20	
Carbofuran	ug/L	ND	10	10	10.7	11.8	107	118	80-120	9	20	
Methomyl	ug/L	ND	10	10	10.3	11.0	103	110	80-120	6	20	
Oxamyl	ug/L	ND	10	10	10.6	10.8	106	108	80-120	2	20	
BDMC (S)	%						109	112	80-120			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Project:	LBG, Inc.											
Pace Project No.:	35326821											
QC Batch:	384078		Analys	sis Method:	: E	PA 547						
QC Batch Method:	EPA 547		Analys	sis Descript	tion: 5	47 HPLC GI	yphosate					
Associated Lab Sar	mples: 3532682	1001										
METHOD BLANK:	2085508		1	Matrix: Wa	ter							
Associated Lab Sar	mples: 3532682	1001										
			Blanl	k R	eporting							
Parar	neter	Units	Resu	lt	Limit	MDL	ŀ	Analyzed	Qua	alifiers		
Glyphosate		ug/L		<4.2	6.0)	4.2 07/2	29/17 04:09)			
LABORATORY CO	NTROL SAMPLE:	2085509										
_			Spike	LCS	6	LCS	% Rec	;				
Parar	neter	Units	Conc.	Resu		% Rec	Limits	Qı	alifiers	_		
Glyphosate		ug/L	50)	47.2	94	80	-120				
MATRIX SPIKE & N	ATRIX SPIKE DU	PLICATE: 2085	510		2085511							
			MS	MSD								
		50176222002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er Ur	nits Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Glyphosate	uç	g/L ND	50	50	49.2	48.5	98	97	80-120	1	30	
MATRIX SPIKE & N	ATRIX SPIKE DU	PLICATE: 2085	512		2085513							
			MS	MSD								
_		35326734008	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er Ur	nits Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Glyphosate	uç	g/L <4.2	50	50	52.8	48.9	106	98	80-120	8	30	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	LBG, Inc.													
Pace Project No.:	35326821													
QC Batch:	384637			Analys	is Method:	EF	PA 504.1							
QC Batch Method:	EPA 504.1			Analys	is Descripti	on: 50	4 EDB D	BCP						
Associated Lab Sam	ples: 35326	6821001												
METHOD BLANK:	2088603			Ν	latrix: Wate	er								
Associated Lab Sam	ples: 35326	6821001												
				Blank	Re	eporting								
Param	eter		Units	Result	t	Limit	M	DL	Analy	zed	Qu	Jalifiers		
1,2-Dibromo-3-chlore	opropane		ug/L	<0.	0064	0.020		0.0064	08/02/17	21:41				
1,2-Dibromoethane (EDB)		ug/L	<0.	0075	0.010		0.0075	08/02/17	21:41				
LABORATORY CON	ITROL SAMPL	E & LCS	D: 2088604		20	089408								
_				Spike	LCS	LCSD	LCS	LCSD	% Rec	_		Max	_	
Param	eter		Units	Conc.	Result	Result	% Rec	% Rec	Limits	RF	PD	RPD	Qua	alifiers
1,2-Dibromo-3-chlore	opropane		ug/L	.25	0.27	0.28	108	110	70-130)	2	40		
1,2-Dibromoethane (EDB)		ug/L	.25	0.26	0.27	104	110	70-130)	5	40		
MATRIX SPIKE & M	ATRIX SPIKE	DUPLICA	ATE: 208924	42		2089243								
				MS	MSD									
		3	5327041001	Spike	Spike	MS	MSD	MS	5 M	SD	% Rec		Max	
Parameter		Units	Result	Conc.	Conc.	Result	Result	% R	ec %	Rec	Limits	RPD	RPD	Qual
1,2-Dibromo-3- chloropropane		ug/L	0.0063U	.44	.44	0.58	0.6	2	134	141	65-13	55	40	M1
1,2-Dibromoethane (EDB)	ug/L	0.0074U	.44	.44	0.52	0.5	57	119	130	65-13	59	40	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: LBG, Inc.

35326821 Pace Project No.:

QC Batch: 33932 QC Batch Method: EPA 505 Analysis Method: EPA 505 Analysis Description: 505 GCS Pesticides

Associated Lab Samples: 35326821001

METHOD BLANK: 157655		Matrix:	Water			
Associated Lab Samples: 353268	321001					
		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Alachlor	ug/L	<0.20	0.20	0.20	08/03/17 15:11	
Aldrin	ug/L	<0.025	0.025	0.025	08/03/17 15:11	
Chlordane (Technical)	ug/L	<0.20	0.20	0.20	08/03/17 15:11	
Dieldrin	ug/L	<0.050	0.050	0.050	08/03/17 15:11	
Endrin	ug/L	<0.010	0.010	0.010	08/03/17 15:11	
gamma-BHC (Lindane)	ug/L	<0.020	0.020	0.020	08/03/17 15:11	
Heptachlor	ug/L	<0.025	0.025	0.025	08/03/17 15:11	
Heptachlor epoxide	ug/L	<0.020	0.020	0.020	08/03/17 15:11	
Hexachlorobenzene	ug/L	<0.10	0.10	0.10	08/03/17 15:11	
Hexachlorocyclopentadiene	ug/L	<0.10	0.10	0.10	08/03/17 15:11	
Methoxychlor	ug/L	<0.10	0.10	0.10	08/03/17 15:11	
PCB Screen	ug/L	<0.40	0.40	0.40	08/03/17 15:11	
Toxaphene	ug/L	<1.0	1.0	1.0	08/03/17 15:11	
Decachlorobiphenyl (S)	%.	90	30-150		08/03/17 15:11	
Tetrachloro-m-xylene (S)	%.	100	30-150		08/03/17 15:11	

LABORATORY CONTROL SAMPLE: 157656

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec	Qualifiers
						Qualmero
Alachlor	ug/L	.48	0.45	94	70-130	
Aldrin	ug/L	.048	0.045	93	70-130	
Chlordane (Technical)	ug/L		<0.20			
Dieldrin	ug/L	.048	< 0.050	87	70-130	
Endrin	ug/L	.048	0.038	80	70-130	
gamma-BHC (Lindane)	ug/L	.048	0.048	101	70-130	
Heptachlor	ug/L	.048	0.044	92	70-130	
Heptachlor epoxide	ug/L	.048	0.043	89	70-130	
Hexachlorobenzene	ug/L	.048	<0.10	90	70-130	
Hexachlorocyclopentadiene	ug/L	.048	<0.10	91	70-130	
Methoxychlor	ug/L	.24	0.21	89	70-130	
PCB Screen	ug/L		<0.40			
Toxaphene	ug/L		<1.0			
Decachlorobiphenyl (S)	%.			97	30-150	
Tetrachloro-m-xylene (S)	%.			105	30-150	

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REPORT OF LABORATORY ANALYSIS

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Project: LBG, Inc. Pace Project No.: 35326821

LABORATORY CONTROL SAMPLE: 157657

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Alachlor	ug/L		<0.20			
Aldrin	ug/L		<0.025			
Chlordane (Technical)	ug/L		<0.20			
Dieldrin	ug/L		<0.050			
Endrin	ug/L		<0.010			
gamma-BHC (Lindane)	ug/L		<0.020			
Heptachlor	ug/L		<0.025			
Heptachlor epoxide	ug/L		<0.020			
Hexachlorobenzene	ug/L		<0.10			
Hexachlorocyclopentadiene	ug/L		<0.10			
Methoxychlor	ug/L		<0.10			
PCB Screen	ug/L		<0.40			
Toxaphene	ug/L	18.3	17.8	98	70-130	
Decachlorobiphenyl (S)	%.			115	30-150	
Tetrachloro-m-xylene (S)	%.			99	30-150	

LABORATORY CONTROL SAMPLE: 157658

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Alachlor	ug/L	.095	<0.20	109	70-130	
Aldrin	ug/L	.0095	<0.025	109	70-130	
Chlordane (Technical)	ug/L		<0.20			
Dieldrin	ug/L	.0095	<0.050	98	70-130	
Endrin	ug/L	.0095	<0.010	95	70-130	
gamma-BHC (Lindane)	ug/L	.0095	<0.020	96	70-130	
Heptachlor	ug/L	.0095	<0.025	100	70-130	
Heptachlor epoxide	ug/L	.0095	<0.020	98	70-130	
Hexachlorobenzene	ug/L	.0095	<0.10	100	70-130	
Hexachlorocyclopentadiene	ug/L	.0095	<0.10	87	70-130	
Methoxychlor	ug/L	.048	<0.10	95	70-130	
PCB Screen	ug/L		<0.40			
Toxaphene	ug/L		<1.0			
Decachlorobiphenyl (S)	%.			87	30-150	
Tetrachloro-m-xylene (S)	%.			97	30-150	

MATRIX SPIKE SAMPLE:	157659						
		7025913001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Alachlor	ug/L	<0.20		<0.20			
Aldrin	ug/L	<0.025		<0.025			
Chlordane (Technical)	ug/L	<0.20		<0.20			
Dieldrin	ug/L	<0.050		<0.050			
Endrin	ug/L	<0.010		<0.010			
gamma-BHC (Lindane)	ug/L	<0.020		< 0.020			

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REPORT OF LABORATORY ANALYSIS

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Project: LBG, Inc. Pace Project No.: 35326821

MATRIX SPIKE SAMPLE:	157659						
		7025913001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Heptachlor	ug/L	<0.025		<0.025			
Heptachlor epoxide	ug/L	<0.020		<0.020			
Hexachlorobenzene	ug/L	<0.10		<0.10			
Hexachlorocyclopentadiene	ug/L	<0.10		<0.10			
Methoxychlor	ug/L	<0.10		0.55			
PCB Screen	ug/L	<0.40		<0.40			
Toxaphene	ug/L	<1.0	18.3	15.8	86	65-135	
Decachlorobiphenyl (S)	%.				117	30-150	
Tetrachloro-m-xylene (S)	%.				101	30-150	

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Project: LBG, Inc.

Pace Project No.: 35326821

QC Batch: 384956 QC Batch Method: EPA 508.1 Analysis Method: EPA 508.1 Analysis Description: 508 GCS Pesticide

Associated Lab Samples: 35326821001

METHOD BLANK: 2090536		Matrix:	Water			
Associated Lab Samples: 35326821001						
		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
Alachlor	ug/L	<0.035	0.20	0.035	08/06/17 00:04	
Atrazine	ug/L	< 0.063	0.10	0.063	08/06/17 00:04	
Butachlor	ug/L	<0.027	0.10	0.027	08/06/17 00:04	
Chlordane (Technical)	ug/L	<0.047	0.20	0.047	08/06/17 00:04	
Dieldrin	ug/L	<0.019	0.10	0.019	08/06/17 00:04	
Endrin	ug/L	<0.0070	0.010	0.0070	08/06/17 00:04	
gamma-BHC (Lindane)	ug/L	< 0.0030	0.020	0.0030	08/06/17 00:04	
Heptachlor	ug/L	<0.012	0.040	0.012	08/06/17 00:04	
Heptachlor epoxide	ug/L	<0.0030	0.020	0.0030	08/06/17 00:04	
Hexachlorobenzene	ug/L	<0.019	0.10	0.019	08/06/17 00:04	
Hexachlorocyclopentadiene	ug/L	< 0.032	0.10	0.032	08/06/17 00:04	
Methoxychlor	ug/L	<0.051	0.10	0.051	08/06/17 00:04	
Metolachlor	ug/L	<0.047	0.10	0.047	08/06/17 00:04	
Propachlor	ug/L	< 0.030	0.10	0.030	08/06/17 00:04	
Simazine	ug/L	<0.069	0.070	0.069	08/06/17 00:04	
Toxaphene	ug/L	<0.61	1.0	0.61	08/06/17 00:04	
Decachlorobiphenyl (S)	%	88	70-130		08/06/17 00:04	

LABORATORY CONTROL SAMPLE: 2090537

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Alachlor	ug/L	1	0.92	92	70-130	
Atrazine	ug/L	1.2	1.2	95	70-130	
Butachlor	ug/L	.5	0.46	93	70-130	
Chlordane (Technical)	ug/L		<0.047			
Dieldrin	ug/L	.5	0.46	91	70-130	
Endrin	ug/L	.05	0.047	94	70-130	
gamma-BHC (Lindane)	ug/L	.1	0.097	97	70-130	
Heptachlor	ug/L	.2	0.16	78	70-130	
Heptachlor epoxide	ug/L	.1	0.092	92	70-130	
Hexachlorobenzene	ug/L	.5	0.42	85	70-130	
Hexachlorocyclopentadiene	ug/L	.5	0.41	82	70-130	
Methoxychlor	ug/L	.5	0.50	100	70-130	
Metolachlor	ug/L	.5	0.47	94	70-130	
Propachlor	ug/L	.5	0.46	91	70-130	
Simazine	ug/L	.88	1.0	117	70-130	
Toxaphene	ug/L		<0.61			
Decachlorobiphenyl (S)	%			93	70-130	

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Project: LBG, Inc. Pace Project No.: 35326821

MATRIX SPIKE & MATRIX SPI	KE DUPLICA	ATE: 20913	31		2091332							
			MS	MSD								
	3	5327017001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Alachlor	ug/L	0.033U	2	2	2.6	2.6	131	129	65-135	2	40	
Atrazine	ug/L	0.060U	2.5	2.5	3.0	2.4	122	98	65-135	22	40	
Butachlor	ug/L	0.026U	1	1	1.3	1.2	131	119	65-135	9	40	
Chlordane (Technical)	ug/L	0.045U			<0.094	<0.094					40	
Dieldrin	ug/L	0.018U	1	1	0.99	0.94	99	94	65-135	5	40	
Endrin	ug/L	0.0067U	.1	.1	0.071	0.20	71	201	65-135	95	40	M1,R1
gamma-BHC (Lindane)	ug/L	0.0029U	.2	.2	0.22	0.22	108	110	65-135	2	40	
Heptachlor	ug/L	0.011U	.4	.4	0.44	0.44	110	109	65-135	1	40	
Heptachlor epoxide	ug/L	0.0029U	.2	.2	0.17	0.17	85	85	65-135	1	40	
Hexachlorobenzene	ug/L	0.018U	1	1	0.92	0.89	92	89	65-135	3	40	
Hexachlorocyclopentadiene	ug/L	0.030U	1	1	1.1	1.1	107	105	65-135	1	40	
Methoxychlor	ug/L	0.049U	1	1	1.3	1.4	135	137	65-135	1	40	M1
Metolachlor	ug/L	0.045U	1	1	1.0	1.3	100	132	65-135	28	40	
Propachlor	ug/L	0.029U	1	1	2.5	2.7	253	268	65-135	6	40	M1
Simazine	ug/L	0.066U	1.8	1.8	3.4	3.3	192	188	65-135	2	40	M1
Toxaphene	ug/L	0.58U			<1.2	<1.2					40	
Decachlorobiphenyl (S)	%						100	99	70-130		40	

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QUALITY CONTROL DATA

EPA 515.3

5153 GCS Herbicides

Project: Pace Project No.: 35326821

LBG, Inc.

QC Batch:	384402	Analysis Method:
QC Batch Method:	EPA 515.3	Analysis Description:

Associated Lab Samples: 35326821001

Matrix: Water

METHOD BLANK:	208695	53
Associated Lab San	nples:	35326821001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
2,4,5-TP (Silvex)	ug/L	<0.16	0.20	0.16	08/04/17 14:32	
2,4-D	ug/L	<0.081	0.10	0.081	08/04/17 14:32	
Dalapon	ug/L	<0.89	1.0	0.89	08/04/17 14:32	
Dicamba	ug/L	<0.067	0.10	0.067	08/04/17 14:32	
Dinoseb	ug/L	<0.16	0.20	0.16	08/04/17 14:32	
Pentachlorophenol	ug/L	< 0.030	0.040	0.030	08/04/17 14:32	
Picloram	ug/L	< 0.094	0.10	0.094	08/04/17 14:32	
2,4-DCAA (S)	%	96	70-130		08/04/17 14:32	

LABORATORY CONTROL SAMPLE: 2086954

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
2,4,5-TP (Silvex)	ug/L	1	1.0	104	70-130	
2,4-D	ug/L	.5	0.55	110	70-130	
Dalapon	ug/L	5	5.1	102	70-130	
Dicamba	ug/L	.5	0.48	97	70-130	
Dinoseb	ug/L	1	1.0	100	70-130	
Pentachlorophenol	ug/L	.2	0.20	99	70-130	
Picloram	ug/L	.5	0.60	120	70-130	
2,4-DCAA (S)	%			91	70-130	

MATRIX SPIKE & MATRIX S	2087343											
			MS	MSD								
	3	35326789001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
2,4,5-TP (Silvex)	ug/L	0.00016U mg/L	1	1	1.1	1.1	111	112	70-130	1	40	
2,4-D	ug/L	0.000081 U mg/L	.5	.5	0.69	0.47	138	95	70-130	37	40	M1
Dalapon	ug/L	0.00089U mg/L	5	5	6.5	6.1	130	122	70-130	6	40	
Dicamba	ug/L	0.067U	.5	.5	0.49	0.47	98	93	70-130	5	40	
Dinoseb	ug/L	0.00016U mg/L	1	1	1.0	0.97	100	97	70-130	3	40	
Pentachlorophenol	ug/L	0.000030 U mg/L	.2	.2	0.20	0.20	100	98	70-130	2	40	
Picloram	ug/L	0.000094 U mg/L	.5	.5	0.71	0.73	142	146	70-130	3	40	M1
2,4-DCAA (S)	%	0					103	101	70-130			

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QUALITY CONTROL DATA

Project: LBG, Inc. Pace Project No.: 35326821

MATRIX SPIKE & MATRIX SPIK	ATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2088993 2088994											
			MS	MSD								
		35327041001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
2,4,5-TP (Silvex)	ug/L	0.16U	1	1	1.2	1.2	117	119	70-130	2	40	
2,4-D	ug/L	0.081U	.5	.5	0.63	0.64	126	128	70-130	2	40	
Dalapon	ug/L	0.89U	5	5	5.8	5.7	116	114	70-130	2	40	
Dicamba	ug/L	0.067U	.5	.5	0.51	0.50	102	101	70-130	1	40	
Dinoseb	ug/L	0.16U	1	1	1.1	1.1	108	107	70-130	0	40	
Pentachlorophenol	ug/L	0.030U	.2	.2	0.21	0.21	106	107	70-130	1	40	
Picloram	ug/L	0.094U	.5	.5	0.61	0.73	121	145	70-130	18	40	M1
2,4-DCAA (S)	%						108	105	70-130			

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Project:

QUALITY CONTROL DATA

 Pace Project No.:
 35326821

 QC Batch:
 384645

LBG, Inc.

QC Batch Method: EPA 525.2

Analysis Method:

Analysis Description: 525.2

: EPA 525.2 tion: 525.2 Base Neutral Extractables

Associated Lab Samples: 35326821001

	Matrix: \	Nater			
	Blank	Reporting			
Units	Result	Limit	MDL	Analyzed	Qualifiers
ug/L	<0.013	0.10	0.013	08/03/17 16:09	
ug/L	<0.38	1.6	0.38	08/03/17 16:09	
ug/L	<0.50	2.0	0.50	08/03/17 16:09	
ug/L	<0.15	0.30	0.15	08/03/17 16:09	
%	100	70-130		08/03/17 16:09	
%	79	70-130		08/03/17 16:09	
%	106	70-130		08/03/17 16:09	
	Units ug/L ug/L ug/L ug/L % % %	Blank Blank ug/L <0.013	Blank Reporting Units Result Limit ug/L <0.013	Blank Reporting Units Result Limit MDL ug/L <0.013	Blank Reporting Units Result Limit MDL Analyzed ug/L <0.013

LABORATORY CONTROL SAMPLE: 2088621

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzo(a)pyrene	ug/L	.4	0.32	80	70-130	
bis(2-Ethylhexyl)adipate	ug/L	6.4	7.9	123	70-130	
bis(2-Ethylhexyl)phthalate	ug/L	8	9.0	112	70-130	
Metribuzin	ug/L	1.2	1.0	85	70-130	
1,3-Dimethyl-2-nitrobenzene(S)	%			97	70-130	
Perylene-d12 (S)	%			83	70-130	
Triphenylphosphate (S)	%			104	70-130	

MATRIX SPIKE & MATRIX SF	2090366											
			MS	MSD								
	3	5326706001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Benzo(a)pyrene	ug/L	0.013U	.8	.8	0.80	0.89	100	111	70-130	11	40	
bis(2-Ethylhexyl)adipate	ug/L	0.39U	12.8	12.8	13.6	13.8	106	108	70-130	2	40	
bis(2-Ethylhexyl)phthalate	ug/L	0.51U	16	16	16.2	16.5	102	103	70-130	1	40	
Metribuzin	ug/L	0.15U	2.4	2.4	<0.30	<0.30	0	11	70-130		40	M1
1,3-Dimethyl-2- nitrobenzene(S)	%						97	97	70-130			
Perylene-d12 (S)	%						97	99	70-130			
Triphenylphosphate (S)	%						93	99	70-130			

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QUALITY CONTROL DATA

Project:	LBG, Inc.											
Pace Project No.:	35326821											
QC Batch:	384603		Analys	sis Method:	: E	PA 548.1						
QC Batch Method:	EPA 548.1		Analys	sis Descript	tion: 5	48 GCS End	lothall					
Associated Lab Sar	mples: 353268210	001										
METHOD BLANK:	2088244		Ν	Matrix: Wa	ter							
Associated Lab Sar	mples: 353268210	001										
			Blank	K R	eporting							
Parar	neter	Units	Resu	t	Limit	MDL	/	Analyzed	Qua	alifiers		
Endothall		ug/L		<4.3	9.0)	4.3 08/0	08/17 03:25				
LABORATORY CO	NTROL SAMPLE:	2088245										
			Spike	LCS	6	LCS	% Rec	;				
Parar	neter	Units	Conc.	Resu	ılt	% Rec	Limits	Qu	alifiers			
Endothall		ug/L	50	1	43.3	87	80	-120				
MATRIX SPIKE & N	ATRIX SPIKE DUP	LICATE: 20886	67		2088668							
			MS	MSD								
_		35326771004	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	- ·
Paramete	er Unit	s Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Endothall	ug/l	_ <4.3	50	50	32.6	28.2	65	56	80-120	14	30	M1
MATRIX SPIKE & N	ATRIX SPIKE DUP	LICATE: 20886	69		2088670							
			MS	MSD								
_		35326771005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	_
Paramete	er Unit	s Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Endothall	ug/l	_ <4.3	50	50	31.8	37.6	64	75	80-120	17	30	M1

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QUALITY CONTROL DATA

Project:	LBG, Inc.											
Pace Project No.:	35326821											
QC Batch:	384638		Analys	sis Method:	E	EPA 549.2						
QC Batch Method:	EPA 549.2		Analys	sis Descript	ion: 5	549 HPLC Pa	araquat Diq	uat				
Associated Lab Sar	nples: 353268210	01										
METHOD BLANK:	2088605		Ν	Matrix: Wa	ter							
Associated Lab Sar	nples: 353268210	01										
_			Blank	K R	eporting				_			
Paran	neter	Units	Resu	t	Limit	MDL	/	Analyzed	Qua	alifiers		
Diquat		ug/L		<0.30	0.40	0	0.30 08/	03/17 06:02				
LABORATORY CO	NTROL SAMPLE:	2088606										
Paran	notor	Lipite	Spike Conc	LCS	; .1+	LCS	% Red		alifiare			
Paran		Units	Conc.	Resu	III	% Rec	Limits		laimers			
Diquat		ug/L	2		1.4	72	70	-130				
MATRIX SPIKE & M	IATRIX SPIKE DUPL	_ICATE: 20903	55		2090356	i						
			MS	MSD								
-		35326734004	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	<u> </u>
Paramete	er Units	s Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD		Qual
Diquat	ug/L	- <0.30	2	2	1.5	5 1.4	77	68	70-130	12	30	M1
MATRIX SPIKE & M	IATRIX SPIKE DUPL	_ICATE: 20903	57		2090358							
			MS	MSD								
		35326734005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	<u> </u>
Paramete	er Units	s Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Diquat	ug/L	- <0.30	2	2	1.4	1.5	70	74	70-130	5	30	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: LBG, Inc.

Pace Project No.: 35326821

Sample: C-21 PWS:	Lab ID: 35320 Site ID:	5821001 Collected: 07/27/17 08:30 Sample Type:	Received:	07/28/17 10:20 M	Aatrix: Drinking Water		
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual	
Gross Alpha	EPA 900.0	1.64U ± 0.631 (1.64) C:NA T:NA	pCi/L	08/08/17 08:12	12587-46-1		
Gross Beta	EPA 900.0	1.70U ± 0.644 (1.70) C:NA T:NA	pCi/L	08/08/17 08:12	12587-47-2		
Radium-226	EPA 903.1	0.812U ± 0.513 (0.812) C:NA T:97%	pCi/L	08/08/17 11:37	13982-63-3		
Radium-228	EPA 904.0	0.729U ± 0.341 (0.729) C:77% T:81%	pCi/L	08/07/17 11:38	15262-20-1		
Total Uranium	ASTM D5174-97	0.130 ± 0.006 (0.193) C·NA T·NA	ug/L	08/10/17 13:11	7440-61-1		



Project:	LBG, Inc.						
Pace Project No.:	35326821						
QC Batch:	267061		Analysis Method:	EPA 904.0			
QC Batch Method:	EPA 904.0		Analysis Description:	904.0 Radiu	m 228		
Associated Lab Sar	mples: 35326821	001					
METHOD BLANK:	1314773		Matrix: Water				
Associated Lab Sar	mples: 35326821	1001					
Parar	meter	Act ± l	Inc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radium-228		0.470 ± 0.374	(0.743) C:79% T:78%	pCi/L	08/07/17 11:37		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	LBG, Inc.					
Pace Project No .:	35326821					
QC Batch:	267622	Analysis Method:	ASTM D517	4-97		
QC Batch Method:	ASTM D5174-97	Analysis Description:	D5174.97 To	otal Uranium KPA		
Associated Lab San	nples: 35326821	001				
METHOD BLANK:	1317375	Matrix: Water				
Associated Lab San	nples: 35326821	001				
Paran	neter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Total Uranium		0.274 ± 0.012 (0.193) C:NA T:NA	ug/L	08/09/17 17:24		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	LBG, Inc.						
Pace Project No.:	35326821						
QC Batch:	267063		Analysis Method:	EPA 900.0			
QC Batch Method:	EPA 900.0		Analysis Description:	900.0 Gross	Alpha/Beta		
Associated Lab Sam	nples: 35326821	001					
METHOD BLANK:	1314775		Matrix: Water				
Associated Lab Sam	nples: 35326821	001					
Param	neter	Act ±	Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Gross Alpha		0.281 ± 0.459	(0.989) C:NA T:NA	pCi/L	08/08/17 08:11		
Gross Beta		0.578 ± 0.807	(1.77) C:NA T:NA	pCi/L	08/08/17 08:11		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	LBG, Inc.					
Pace Project No.:	35326821					
QC Batch:	267059	Analysis Method:	EPA 903.1			
QC Batch Method:	EPA 903.1	Analysis Description	n: 903.1 Radiu	m-226		
Associated Lab Sar	mples: 3532682 [°]	1001				
METHOD BLANK:	1314770	Matrix: Water	r			
Associated Lab Sai	mples: 3532682 ⁻	1001				
Parar	meter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radium-226		0.0690 ± 0.315 (0.641) C:NA T:99%	pCi/L	08/08/17 11:21		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: LBG, Inc. Pace Project No.: 35326821

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

PASI-PA Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- P4 Sample field preservation does not meet EPA or method recommendations for this analysis.
- R1 RPD value was outside control limits.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LBG, Inc. Pace Project No.: 35326821

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35326821001	C-21	EPA 504.1	384637	EPA 504.1	384898
35326821001	C-21	EPA 505	33932	EPA 505	33984
35326821001	C-21	EPA 508.1	384956	EPA 508.1	385484
35326821001	C-21	EPA 515.3	384402	EPA 515.3	384691
35326821001	C-21	EPA 531.1	384072		
35326821001	C-21	EPA 547	384078		
35326821001	C-21	EPA 549.2	384638	EPA 549.2	384971
35326821001	C-21	EPA 525.2	384645	EPA 525.2	385020
35326821001	C-21	EPA 548.1	384603	EPA 548.1	385377
35326821001	C-21	EPA 900.0	267063		
35326821001	C-21	EPA 903.1	267059		
35326821001	C-21	EPA 904.0	267061		
35326821001	C-21	ASTM D5174-97	267622		

Enviro I est Laboratories, Inc. 315 Fullerton Avenue Newburgh, NY 12550 Phone (845) 562-0890 Fax (845) 562-0841		0	hain of	f Cus	tod	/ Re	cord	-			Env Lab	iroTest	2
Client Information (Sub Contract Lab)	Sampler:		Lab PN Bayer	t; , Debra					Carrier Trac	ting Na(s):	COC No: 420-9160.1		
Client Contact Shipping/Receiving	Phone:		E-Mail; dbaye	er@enviro	otestlab	oratories	Com				Page: Page 1 of 1		-
Company: Pace Analytical Ormond Beach				L.		Ar	alysi	s Req	uested		STL Job #: 420-124221	-1	-
Address: 8 East Tower Circle,	Due Date Requested: 8/6/2017 Stand	9.00				Ma	0240	11.1			Preservation A - HCL	I Codes: M - Hexane	-
City: Ormond Beach	TAT Requested (days):	5		- 11-	d	ics ics	21/ 82				B - NaOH C - Zn Acetate	N - None 0 - AsNaO2	
State, Zip: FL, 32174				sb	IDBCI	oioitee nsgrC	22 AA	2			D - Nitric Acid E - NaHSO4	P - Na204S Q - Na2SO3 P - Na2S2SO3	
Phone: 111-222-3333(Tel)	#O4			(o ioA be	1 EDB	ate Pe o elite	/ 526/			_	G - Amchlor H - Ascorbic A	S - H2SO4 cid T - TSP Dodecahydrate	
Email:	,#OM			V OF V (OV)	.402	msd1 ovim	/ย/ยธ	_	_	_	J - DI Water	U - Acetone V - MCAA	-
Project Name: LBG, Inc.	Project #: 42001269			LE Chio Yes or I Die (Yes	A93 40	21.1 Ca	00 GA/0	14	67 87	nixoi	K - EDIA L - EDA	W - ph 4-5 Z - other (specify)	
Site:	SSOW#:)9 /LC	3 /TC)6 /LC	9 /LO	CT/ 54	a /13	of co		
(1) de la filontification d'Indée	Sample Date Time	Sample Type (C=comp, G=orab)	Matrix (w=water, s=solid, O=waste/oli,	erform M/SM miois M/SM miois M/SM miois	очитка	алвсоитка Аятиозаца	аятиораца	Аятиораиз	аятиораиз Аятиораиз	аятиораца	Total Number N	al Instructions/Note:	
		Preserval	tion Code:	X		Etter Mary		AL.				V	3:02
C-21 (420-124221-1)	7/27/17 8:30		Water	~	×	××	×	×	××	×	8		-
										-	0.0		
10000001								-					
TZOOZCCC: HOM _													
								1			20		
35276821										_			T
4 1 2 2 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2					1						0		T
											Te		1
						2					200		
													1
Possible Hazard Identification				Samp	le Disp	osal (A	fee mi	y be a	ssessed	f samples	are retained longer th	an 1 month)	
On-Hazard Elammable Skin Irritant	Poison B Unknown	Radiological			Return	To Clien	t		isposal B	Lab	Archive For	Months	1
Deliverable Requested: I, II, III, IV, Other (specify)				Speci	al Instru	ctions/Q	C Requ	liremer	ts:				
Empty Kit Relinquished by:	Date:			Time:					Metho	d of Shipmen			
Relinquished by	Date/Time: 7/27/17 103	2	Company	, E	coived by	WUL	Ch	10%	228	Date/Tir	2117 10.30	Company	
Relinquished by:	Date/Time:		Company	Re	sceived by	2				Date/Tir	.eu	Company	1
Relinquished by:	Date/Time:		Company	and	sceived by	2				Date/Tir	le:	Company	
Custody Seals Intact: Custody Seal No.:				ŭ	ooler Tem	perature(s	C and	Other Be	Jerks C				
						ĺ							ŀ

Page 28 of 35

Pace Analytical	Document Name Sample Condition Upon Re Document No.	e: eceipt Form	Document Revised February 6, 2017
	F-FL-C-007 rev. 1	11	Pace Florida Quality Office
	Sample Condition U	pon Receipt Form (SCUR)
Project # Project Manager: Client:	WO#: 3532 PM: VEG Due CLIENT: EVNTES	6821 Date: 08/11/17	Date and Initials of person: Examining contents: Label: Deliver: pH:
Thermometer Used: T286	Date:S/	Time: 10	20 Initials: <u></u> 55
Cooler #1 Temp.°C <u>9.9</u> (Visual) <u>+</u> Cooler #2 Temp.°C (Visual) Cooler #3 Temp.°C (Visual) Cooler #4 Temp.°C (Visual) Cooler #5 Temp.°C (Visual) Cooler #6 Temp.°C (Visual) Cooler #6 Temp.°C (Visual) Cooler #6 Temp.°C (Visual) Cooler #6 Temp.°C (Visual) Billing: □ Recipient □ S	0 . 1 (Correction Factor) (Correction Factor)	(Actual) (Actual) (Actual) (Actual) (Actual) (Actual) (Actual) Commercial □ Pace ndard Overnight □ Groun	 Samples on ice, cooling process has begun Other d
acking Material: UBubble Wrap Buard Buard Buard Buard Buard Buard Buard Buard Barrier Barrier Barrier Barrier B	ubble BagsNone Shorted Date:	Other Shor	ted Time: Qty:
hain of Custody Present		Comments:	
nain of Custody Filled Out			
elinguished Signature & Sampler Name COC			
mples Arrived within Hold Time			
ish TAT requested on COC			
ufficient Volume			
prrect Containers Used			
ontainers Intact		/Δ	
mple Labels match COC (sample IDs & date/time lection) containers needing acid/base preservation have	of	/A	
ecked. Containers needing preservation are found to be mpliance with EPA recommendation: Exceptions: VOA, Coliform, TOC, (in → Yes □ No □N/ → Yes □ No □N/ D&G, Carbamates	/A Preservative Lot #/Trace # Date: Initials:	Preservation Information: :: # Time:
adspace in VOA Vials? (>6mm):	□Yes ⊟-No □N/	'A	
p Blank Present:	□Yes □-No □N/	A	
ent Notification/ Resolution: Person Contacted:		Date/Time:	
mments/ Resolution (use back for addition	nal comments): <u>7/28</u> Surveyed L	17 - Chent 1	athed of rept temp

Project Manager Review	Project	Manager	Review
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Page 29 of 35



www.pacelabs.com

Report Prepared for:

Bo Garcia PASI Florida 8 East Tower Circle Ormond Beach FL 32174

REPORT OF LABORATORY ANALYSIS FOR 2,3,7,8-TCDD

Report Summary:

This report contains results of one drinking water sample analyzed to determine 2,3,7,8-TCDD content. This sample was analyzed according to Method 1613 by High Resolution Gas Chromatography/High Resolution Mass Spectrometry.

Report Prepared Date:

August 7, 2017

Pace Analytical Services, Inc. 1700 Elm Street Minneapolis, MN 55414 Phone: 612.607.1700 Fax: 612.607.6444

Report Information:

Pace Project #: 10397651 Sample Receipt Date: 08/01/2017 Client Project #: 35326821 Client Sub PO #: N/A State Cert #: 11647

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 Drinking Water Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Sarah Platzer, your Pace Project Manager.

This report has been reviewed by:

August 07, 2017 Sarah Platzer, Project Manager 612-607-6451 (612) 607-6444 (fax) sarah.platzer@pacelabs.com



Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.

Report No.....10397651_1613DW

Page 1 of 6

Page 30 of 35



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Pace Analytical Services, Inc. 1700 Elm Street - Suite 200 Minneapolis, MN 55414

> Tel: 612-607-1700 Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Montana	CERT0092
Alabama	40770	Nebraska	NE-OS-18-06
Alaska	MN00064	Nevada	MN00064
Alaska	UST-078	New Jersey (NE	MN002
Arizona	AZ0014	New York (NEL	11647
Arkansas	88-0680	New hampshire	2081
CNMI Saipan	MP0003	North Carolina	27700
California	MN00064	North Carolina	530
Colorado	MN00064	North Dakota	R-036
Connecticut	PH-0256	Ohio	41244
EPA Region 8	8TMS-L	Ohio VAP	CL101
Florida (NELAP	E87605	Oklahoma	9507
Georgia (EDP)	959	Oregon (ELAP)	MN200001
Guam EPA	959	Oregon (OREL	MN300001
Hawaii	MN00064	Pennsylvania	68-00563
Idaho	MN00064	Puerto Rico	MN00064
Illinois	200011	South Carolina	74003001
Indiana	C-MN-01	Tennessee	TN02818
lowa	368	Texas	T104704192
Kansas	E-10167	Utah (NELAP)	MN00064
Kentucky	90062	Virginia	460163
Louisiana	03086	Washington	C486
Louisiana	MN00064	West Virginia #	9952C
Maryland	322	West Virginia D	382
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-L
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

Report No.....10397651_1613DW



Pace Analytical Services, Inc. 1700 Elm Street - Suite 200 Minneapolis, MN 55414

> Tel: 612-607-1700 Fax: 612- 607-6444

Reporting Flags

- A = Reporting Limit based on signal to noise
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- I = Interference present
- J = Estimated value
- Nn = Value obtained from additional analysis
- P = PCDE Interference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X = %D Exceeds limits
- Y = Calculated using average of daily RFs
- * = See Discussion

10397657	Pace Analytical www.pacataba.com	7/28/2017 Results Requested By: 8/11/2017 Requested Aralysis		LAB USE ONLY						Q	of be provided on this COC document.		FMT-ALL-C-002rev.00 24March2009 Page 1 of 1
÷		Owner Received Date:	Minnesota SE 1 55414 -1700	Eb¥	001 Drinking 2 X			ved By Date/Time	- M- C MINque		I Y or N Received on Ice Y of mpling site, sampler's name and signature may i ormation is available in the owner laboratory.		
Chain of Custody		Workorder: 35326821 Workorder Name:LBG, Inc.	Bo GarciaPace Analytical IPace Analytical Ormond Beach1700 Elm StreetB East Tower CircleSuite 200Ormond Beach, FL 32174Minneapolis, MNPhone (386)672-5668Phone (612)607		1 C-21 PS 7/27/2017 08:30 35326821			Transfers Released By Date/Time Receiv	2 MNOURayDupy (Dave Mailin 1709	3	Cooler Temperature on Receipt 2.6. °C Custody Sea ***In order to maintain client confidentiality, location/name of the sau This chain of custody is considered complete as is since this infr	Page	33 of 32 0 0000 31, 2017 2:22:22 PM
	Repo	rt No	10397651_	1613DW	<u></u>	<u></u>	<u>4* </u>	<u>9 1</u>		<u> </u>		Page Page 4 of	33 of 35 6

5	6-1	Do Do	cument	Name:		Đo	cument Revise	ed: 19Dec2016	;]
Pace Analytical*		D	ocumer	it No.:			Page 1 0	hority:	······	-
		F-N	IN-L-21	3-rev.20		Pac	e Minnesota (Quality Office	2]
Sample Condition Upon Receipt PACE FL				Project #	" [WO :	#:1	0397	651		
ourier:	UPS [USPS		lient						1
Commercial Prace Tracking Number: 7422560037	SpeeDee [46	Other:_			10397	651			· · · ·	
Custody Seal on Cooler/Box Present?	Yes - 🕂 🕅 Yo	s	ieals Int	act?	Yes - Lalo	Opti	onal: Proj. C	ue Date:	Proj. N	ame:
Packing Material: 🗌 Bubble Wrap 🛃	Bubble Bags	None	: 🗋	Other:			Temp B	lank?	Yes	(EINO
hermometer 151401163 Used: 151401164		Туре	of Ice:	Wet	Blue	None	Sample	s on ice, cooli	ng proce	ss has beg
ooler Temp Read (°C): <u>2.7</u> Coo	ler Temp Corre	ected (°C):	2.6	·	Bio	ological Ti	ssue Frozen?	Yes	ΠNο	
emp should be above freezing to 6°C Co	rrection Facto	r:0	-	Date	and Initials o	f Person	Examining Cor	itents: 🙋	A[1]	17
id samples originate in a quarantine zone withi C, NM, NY, OK, OR, SC, TN, TX or VA (check ma If Yes to either question,	n the United St ps)? . fill out a Regu	ates: AL, A I lated Soil	R, CA, FL □Y Checkii	., GA, ID, LA 'es 🔄 st (F-MN-(. MS, Did No inc 2-338) and in c	l samples o luding Hav c lude wit l	originate from a vali and Puerto F h SCUR/COC p	foreign source lico)? aperwork.	e (interna □Yes	tionally, No
							COMME	NTS:	••	
hain of Custody Present?		AZPres	□No		1.	••				
hain of Custody Filled Out?	· · · ·		No		2.					
hain of Custody Relinquished?			□No		3.					
ampler Name and/or Signature on COC?					4,					• •
amples Arrived within Hold Time?				-	5.					
nort Hold Time Analysis (<72 hr)?			546		6					
ush Turn Around Time Requested?	· · · · · · · ·				7					
ufficient Volume?		Pres			B.					
prrect Containers Used?		X Nes			9.					
-Pace Containers Used?										
ontainers Intact?					10					
Itered Volume Received for Dissolved Tests?				G-TRUA	11 Note if	codiment	 is visible in the	distohed oor	tainar	-
ample Labels Match COC?					12	seument		dissolved col	itainer	
Includes Date/Time/ID/Analysis Matrix	LI	2 162			12.					
Il containers needing acid/base preservation ha	ave been		- -						Posit	ve for Re
necked?		Yes	□No	ĽΩ,ay/A	13.	∐HNO₃	[_]H₂SO₄	L_NaOH	Chlor	ine? Y I
il containers needing preservation are found to compliance with EPA recommendation?	be in				Sample #					
INO₃, H₂SO₄, <2pH, NaOH >9 Sulfide, NaOH>1.	2 Cyanide)	Yes	🗌 No							
ceptions: VOA, Coliform, TOC/DOC Oil and Gro RO/8015 (water) and Digvid	ease,	Marc			Initial when		Lot # (of added		
eadspace in VOA Vials (>6mm)?	····				14		prese	vative:		
ip Blank Present?					<u>+7.</u> 15.					
rip Blank Custody Seals Present?		Yes								
ace Trip Blank Lot # (if purchased):			••••··-							
CLIENT NOTIFICATION/RESOLUTI	0N			I			Field Data Rev	wired?	Yes 🗆	No
erson Contacted:					Date/Time:					
omments/Resolution:				·						
· · · · · · · · · · · · · · · · · · ·						±1				

hold, incorrect preservative, out of temp, incorrect containers).



Pace Analytical Services, LLC. 1700 Elm Street - Suite 200 Minneapolis, MN, 55414

Drinking Water Analysis Results 2,3,7,8-TCDD -- USEPA Method 1613B

Tel: 612-607-1700 Fax: 612-607-6444

Sample IDC-21			Date Collecte	ed07/27/2017
Client PASI Flo	rida		Date Receive	ed08/01/2017
Lab Sample ID 3532682	21001		Date Extracte	ed08/02/2017
	Sample C-21	Method Blank	Lab Spike	Lab Spike Dup
[2,3,7,8-TCDD]	ND	ND		
EDL	4.3 pg/L	3.8 pg/L		
2,3,7,8-TCDD Recovery			111%	113%
Spike Recovery Limit			73-146%	73-146%
RPD			2.	0%
IS Recovery	52%	59%	65%	55%
IS Recovery Limits	31-137%	31-137%	25-141%	25-141%
CS Recovery	73%	72%	86%	81%
CS Recovery Limits	42-164%	42-164%	37-158%	37-158%
Filename	F170803B_15	F170803B_02	F170803A_09	F170803A_10
Analysis Date	08/04/2017	08/03/2017	08/03/2017	08/03/2017
Analysis Time	03:56	18:42	15:10	15:51
Analyst	SMT	SMT	SMT	SMT
Volume	0.946L	1.019L	1.047L	1.054L
Dilution	NA	NA	NA	NA
ICAL Date	01/11/2017	01/11/2017	01/11/2017	01/11/2017
CCAL Filename	F170803B_01	F170803B_01	F170803A_01	F170803A_01

! = Outside the Control Limits

ND = Not Detected

EDL = Estimated Detection Limit

Analyst:

Limits = Control Limits from Method 1613 (10/94 Revision), Tables 6A and 7A

RPD = Relative Percent Difference of Lab Spike Recoveries

IS = Internal Standard $[2,3,7,8\text{-TCDD-}^{13}C_{12}]$ CS = Cleanup Standard $[2,3,7,8\text{-TCDD-}^{37}Cl_4]$

Report No.....10397651_1613DW

Project No......10397651 Page 35 of 35 Page 6 of 6 C-23



ANALYTICAL REPORT

Job Number: 420-123595-5 SDG Number: Clovewood Job Description: LBG, Inc.

For: Leggette, Brashears & Graham, Inc. 4 Research Drive Shelton, CT 06464

Attention: Stacy Stieber

Debra 60

Debra Bayer Customer Service Manager dbayer@envirotestlaboratories.com 08/24/2017

NYSDOH ELAP does not certify for all parameters. EnviroTest Laboratories does hold certification for all analytes where certification is offered by ELAP unless otherwise specified in the Certification Information section of this report. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval of the laboratory. EnviroTest Laboratories Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our laboratory. All questions regarding this report should be directed to the EnviroTest Customer Service Representative.

Page 1 of 18

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554



METHOD SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-5 SDG Number: Clovewood

Description	Lab Location	Method	Preparation Method
Matrix: Water			
ICP Metals by 200.7 Sample Filtration Total Metals Digestion for 200.7 200 Series Drinking Water Prep Determination Step	EnvTest EnvTest EnvTest EnvTest	EPA 200.7 Re	ev 4.4 FILTRATION EPA 200.7 EPA 200.7/200.8
ICPMS Metals by 200.8 200 Series Drinking Water Prep Determination Step Total Metals Digestion for 200.8	EnvTest EnvTest EnvTest	EPA 200.8 Re	ev.5.4 EPA 200.7/200.8 EPA 200.8
Mercury in Water by CVAA Digestion for CVAA Mercury in Waters	EnvTest EnvTest	EPA 245.1 Re	ev.3.0 EPA 245.1
Anions by Ion Chromatography	EnvTest	MCAWW 300	0.0
Anions by Ion Chromatography	EnvTest	EPA 300.0 Re	ev. 2.1
EPA 504.1 EDB	Pace	EPA 504.1	
EPA 505 Pesticide/PCB	Pace	EPA 505	
EPA 515 Chlorinated Acids	Pace	EPA 515	
Purgeable Organic Compounds in Water by GC/MS	EnvTest	EPA-DW 524	.2
EPA 525.2 Semivolatile Organics	Pace	EPA 525.2	
EPA 531.1 Carbamate Pesticides in Drinki	Pace	EPA 531.1	
EPA 900 Series GA/GB/RA226/RA228/Gamma	Radios	EPA 900	
Uranium	Radios	STL-STL EPA	A
Heterotropic Plate Count	EnvTest	IDEXX SIMPI	LATE
Odor, Threshold Test	EnvTest	SM20 SM 21	50B
Alkalinity, Titration Method	EnvTest	SM21 SM 23	20B-97,-11
Corrosivity LSI Calculation	EnvTest	SM20 SM 23	30B
Hardness by Calculation	EnvTest	SM20 SM 234	40B-97,-11
рН	EnvTest	SM19 SM 45	00 H+ B
Nitrite by Colormetric	EnvTest	SM20 SM 45	00 NO2 B
Total Coliform and Escherichia coli by Colilert - Presence/Absence	EnvTest	SMWW SM 9	0223
Apparent Color	EnvTest	SM21 SM212	20B-01,11
Turbidity	EnvTest	SM21 SM213	30B-01,11
Total Dissolved Solids (Dried at 180 °C)	EnvTest	SM21 SM254	40C-97,11
Cyanide, Total: Colorimetric Method Cyanide: Distillation	EnvTest EnvTest	SM21 SM450	00 CN E-99 SM21 SM 4500 CN C
General Sub Contract Method	Pace	Subcontract	
General Sub Contract Method	Radios	Subcontract	

METHOD SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-5 SDG Number: Clovewood

Descript	ion	Lab Location	Method	Preparation Method

Lab References:

EnvTest = EnviroTest

Pace = Pace Analytical - Ormond Beach

Radios = Pace Analytical Services, Inc.

Method References:

EPA = US Environmental Protection Agency

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

IDEXX =

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM19 = "Standard Methods For The Examination Of Water And Wastewater", 19Th Edition, 1995."

SM20 = "Standard Methods For The Examination Of Water And Wastewater", 20th Edition."

SM21 = "Standard Methods For The Examination Of Water And Wastewater", 21st Edition

SMWW = "Standard Methods for the Examination of Water and Wastewater"

STL-STL = Severn Trent Laboratories, St. Louis, Facility Standard Operating Procedure.

METHOD / ANALYST SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-5 SDG Number: Clovewood

Method	Analyst	Analyst ID
EPA-DW 524.2	Andersen, Eric C	ECA
EPA 200.7 Rev 4.4	Sirico, Derek	DS
EPA 200.8 Rev.5.4	Sirico, Derek	DS
EPA 245.1 Rev.3.0	Sirico, Derek	DS
SM20 SM 2340B-97,-11	Sirico, Derek	DS
MCAWW 300.0	Luis, Carlos	CL
EPA 300.0 Rev. 2.1	Luis, Carlos	CL
IDEXX SIMPLATE	O'Driscoll, Kate	КО
SM20 SM 2150B	O'Driscoll, Kate	КО
SM21 SM 2320B-97,-11	Tramantano, Matt	МТ
SM20 SM 2330B	Cusack, Renee	RC
SM19 SM 4500 H+ B	O'Driscoll, Kate	КО
SM20 SM 4500 NO2 B	Grant, Ameya	AG
SMWW SM 9223	Grant, Ameya	AG
SM21 SM2120B-01,11	O'Driscoll, Kate	КО
SM21 SM2130B-01,11	O'Driscoll, Kate	КО
SM21 SM2540C-97,11	O'Driscoll, Kate	КО
SM21 SM4500 CN E-99	Osborne, Amy	AO

SAMPLE SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-5 SDG Number: Clovewood

			Date/Time	Date/Time
Lab Sample ID	Client Sample ID	Client Matrix	Sampled	Received
420-123595-5	C - 23	Drinking Water	07/13/2017 0800	07/13/2017 1000

Chem. Leggene		, п.с.		Sda Number: Clovewood
Client Sample ID:	C - 23			
Lab Sample ID: Client Matrix:	420-123595-5 Drinking Water		Date Sample Date Receiv	ed: 07/13/2017 0800 ed: 07/13/2017 1000
	5	24.2 Purgeable Organic Compounds in	Water by GC/MS	
Method:	524.2	Analysis Batch: 420-112453	Instrument ID:	Agilent 7890A/5975C
Preparation:	N/A		Lab File ID:	X071422.D
Dilution:	1.0		Initial Weight/Volu	ime: 5 mL
Date Analyzed:	07/14/2017 2020		Final Weight/Volu	me: 5 mL
Date Prepared:	N/A			
Analyte		Result (ug/L)	Qualifier	RL
1,1,1,2-Tetrachloroe	ethane	<0.500		0.500
1,1,1-Trichloroethar	ne	<0.500		0.500
1,1,2,2-Tetrachloroe	ethane	<0.500		0.500
1,1,2-Trichloroethar	ne	<0.500		0.500
1,1-Dichloroethane		<0.500		0.500
1,1-Dichloroethene		<0.500		0.500
1,1-Dichloropropen	e	<0.500		0.500
1,2,3-Trichlorobenz	ene	<0.500		0.500
1,2,3-Trichloropropa	ane	<0.500		0.500
1,2,4-Trichlorobenz	ene	<0.500		0.500
1,2,4-Trimethylbenz	zene	<0.500		0.500
1,2-Dichloroethane		<0.500		0.500
1,2-Dichlorobenzen	e	<0.500		0.500
1,2-Dichloropropan	e	<0.500		0.500
1,3-Dichloropropan	e	<0.500		0.500
1,4-Dichlorobenzen	e	<0.500		0.500
2,2-Dichloropropan	e	<0.500		0.500
Benzene		<0.500		0.500
Bromobenzene		<0.500		0.500
Bromochlorometha	ne	<0.500		0.500
Bromomethane		<0.500		0.500
n-Butylbenzene		<0.500		0.500
cis-1,2-Dichloroethe	ene	<0.500		0.500
cis-1,3-Dichloropro	pene	<0.500		0.500
Carbon tetrachlorid	e	<0.500		0.500
Chlorobenzene		<0.500		0.500
Chloroethane		<0.500		0.500
Chloromethane		<0.500		0.500
Dibromomethane		<0.500		0.500
Ethylbenzene		<0.500		0.500
Dichlorodifluoromet	thane	<0.500		0.500
Hexachlorobutadier	ne	<0.500		0.500
Isopropylbenzene		<0.500		0.500
p-Isopropyltoluene		<0.500		0.500
Methylene Chloride	9	<0.500		0.500
m-Xylene & p-Xyler	ne	<1.00		1.00
Methyl tert-butyl eth	ner	<0.500		0.500
o-Xylene		<0.500		0.500
Tetrachloroethene		<0.500		0.500
Toluene		<0.500		0.500
trans-1,2-Dichloroe	thene	<0.500		0.500
trans-1,3-Dichlorop	ropene	<0.500		0.500
Trichloroethene		<0.500		0.500
tert-Butylbenzene		<0.500		0.500

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-5

Analytical Data

Client: Leggette, Brashears & Graham, Inc.			Jol	b Number: 420-123595-5
Client Sample ID:	C - 23			Sdg Number: Clovewood
Lab Sample ID: Client Matrix:	420-123595-5 Drinking Water		Date Sampled: Date Received:	07/13/2017 0800 07/13/2017 1000
	52	4.2 Purgeable Organic Compounds in V	Water by GC/MS	
Method:	524.2	Analysis Batch: 420-112453	Instrument ID: Agi	ilent 7890A/5975C
Preparation:	N/A		Lab File ID: X0	71422.D
Dilution:	1.0		Initial Weight/Volume:	5 mL
Date Analyzed:	07/14/2017 2020		Final Weight/Volume:	5 mL
Date Prepared:	N/A		-	
Analyte		Result (ug/L)	Qualifier	RL
Trichlorofluorometha	ane	<0.500		0.500
Vinyl chloride		<0.500		0.500
Xylenes, Total		<1.50		1.50
Styrene		<0.500		0.500
sec-Butylbenzene		<0.500		0.500
1,3,5-Trimethylbenz	ene	<0.500		0.500
N-Propylbenzene		<0.500		0.500
1,3-Dichlorobenzen	e	<0.500		0.500
2-Chlorotoluene		<0.500		0.500
4-Chlorotoluene		<0.500		0.500
Surrogate		%Rec	Accepta	nce Limits
4-Bromofluorobenze	ene	97	71 - 12	20
Toluene-d8 (Surr)		118	79 - 12	21
1,2-Dichloroethane-	-d4 (Surr)	124	70 - 12	28

Client: Leggette, Brashears & Graham, Inc.

C - 23

Client Sample ID:

Job Number: 420-123595-5 Sdg Number: Clovewood

Lab Sample ID: Client Matrix:	420-123595-5 Drinking Water		Date Sampled: Date Received:	07/13/2017 0800 07/13/2017 1000
		200.7 Rev 4.4 ICP Metals by	200.7	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.7 Rev 4.4 200.7/200.8 1.0 07/17/2017 1450 07/17/2017 0925	Analysis Batch: 420-112479 Prep Batch: 420-112493	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Thermo ICP N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Iron Manganese Sodium Zinc		6700 1730 4130 <20.0	g g	60.0 10.0 200 20.0
		200.7 Rev 4.4 ICP Metals by 200.7	'-Dissolved	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.7 Rev 4.4 200.7 1.0 07/19/2017 1851 07/17/2017 1505	Analysis Batch: 420-112597 Prep Batch: 420-112501	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Thermo ICP N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Iron Manganese		2970 1740	g g	60.0 10.0

Client: Leggette, Brashears & Graham, Inc.

C - 23

Client Sample ID:

Job Number: 420-123595-5 Sdg Number: Clovewood

Lab Sample ID: Client Matrix:	420-123595-5 Drinking Water		Date Sampled: Date Received:	07/13/2017 0800 07/13/2017 1000
		200.8 Rev.5.4 ICPMS Metals b	oy 200.8	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.8 Rev.5.4 200.7/200.8 1.0 07/17/2017 1332 07/17/2017 0925	Analysis Batch: 420-112457 Prep Batch: 420-112493	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Perkin Elmer ELAN N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Lead Arsenic Beryllium Cadmium Chromium Nickel Antimony Thallium Barium Selenium		<1.00 2.03 <0.300 <1.00 <7.00 0.621 <0.400 <0.300 33.3 <2.00		1.00 1.40 0.300 1.00 7.00 0.500 0.400 0.300 2.00 2.00
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	200.8 Rev.5.4 200.8 1.0 07/18/2017 1737 07/17/2017 1800	Analysis Batch: 420-112536 Prep Batch: 420-112520	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Perkin Elmer ELAN N/A 50 mL 50 mL
Analyte		Result (ug/L)	Qualifier	RL
Silver		<1.00		1.00
		245.1 Rev.3.0 Mercury in Water	by CVAA	
Method: Preparation: Dilution: Date Analyzed: Date Prepared:	245.1 Rev.3.0 245.1 1.0 07/18/2017 1217 07/17/2017 1115	Analysis Batch: 420-112511 Prep Batch: 420-112451	Instrument ID: Lab File ID: Initial Weight/Volume: Final Weight/Volume:	Perkin Elmer FIMS N/A 25 mL 25 mL
Analyte		Result (ug/L)	Qualifier	RL
Mercury		<0.200		0.200

Job Number: 420-123595-5

Sdg Number: Clovewood Client Sample ID: C - 23 07/13/2017 0800 Lab Sample ID: 420-123595-5 Date Sampled: 07/13/2017 1000 Client Matrix: Drinking Water Date Received: SM 2340B-97,-11 Hardness by Calculation SM 2340B-97,-11 Instrument ID: Method: Analysis Batch: 420-112535 None Preparation: N/A Lab File ID: N/A Dilution: 1.0 Initial Weight/Volume: 07/17/2017 1450 Final Weight/Volume: Date Analyzed: Date Prepared: N/A Analyte Result (mg/L) Qualifier RL Calcium hardness as calcium carbonate 23.6 1.25

Client: Leggette, Brashears & Graham, Inc.

Client: Leggette, Brashears & Graham, Inc.

General Chemistry

Analytical Data

Job Number: 420-123595-5 Sdg Number: Clovewood

		Biology			
Client Sample ID:	C - 23				
Lab Sample ID:	420-123595-5		Date Sampled:	07/1	3/2017 0800
Client Matrix:	Drinking Water		Date Received:	07/1	3/2017 1000
Analyte	Result	Qual Units		Dil	Method
Coliform, Total	Absent	CFU/100mL		1.0	SM 9223
	Anly Batch: 420-112380	Date Analyzed 07/13/2017 1510			
Escherichia coli	Absent	CFU/100mL		1.0	SM 9223
	Anly Batch: 420-112380	Date Analyzed 07/13/2017 1510			
Analyte	Result	Qual Units	RL	Dil	Method
Heterotrophic Plate (Count <2.00	CFU/mL	2.00	1.0	SIMPLATE
	Anly Batch: 420-112413	Date Analyzed 07/13/2017 1550			

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Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-5 Sdg Number: Clovewood

		General Chemistry			
Client Sample ID:	C - 23				
Lab Sample ID: Client Matrix:	420-123595-5 Drinking Water		Date Sampled: Date Received:	07/1 07/1	3/2017 0800 3/2017 1000
Analyte	Result	Qual Units	RL	Dil	Method
Nitrate as N	<0.250 Anly Batch: 420-112412	mg/L Date Analyzed 07/13/2017 1737	0.250	1.0	300.0
Analyte Langelier Index	Result -1.96	Qual Units NONE		Dil 1.0	Method SM 2330B

Anly Batch: 420-112765 Date Analyzed 07/26/2017 1302

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-5 Sdg Number: Clovewood

	General Chemistry					
Client Sample ID:	C - 23					
Lab Sample ID:	420-123595-5			Date Sampled:	07/1	3/2017 0800
Client Matrix:	Drinking Water			Date Received:	07/1	3/2017 1000
Analyte	Result	Qual Uni	ts	RL	Dil	Method
Alkalinity	43.2	mg	/L	5.00	1.0	SM 2320B-97,-11
	Anly Batch: 420-112669	Date Analyzed	07/21/2017 1730			
Total Dissolved Solids	82.0	mg	/L	5.00	1.0	SM2540C-97,11
	Anly Batch: 420-112602	Date Analyzed	07/20/2016 1700			
Chloride	<1.50	mg	/L	1.50	1.0	300.0 Rev. 2.1
	Anly Batch: 420-112412	Date Analyzed	07/13/2017 1737			
Sulfate	11.2	mg	/L	5.00	1.0	300.0 Rev. 2.1
	Anly Batch: 420-112412	Date Analyzed	07/13/2017 1737			
Fluoride	<0.500	mg	/L	0.500	1.0	300.0 Rev. 2.1
	Anly Batch: 420-112412	Date Analyzed	07/13/2017 1737			
Cyanide, Total	<0.00500	mg	/L	0.00500	1.0	SM4500 CN E-99
	Anly Batch: 420-112524	Date Analyzed	07/18/2017 1400			
	Prep Batch:	Date Prepared:	07/15/2017 1130	0.00	4.0	
Apparent Color	75.0 Aply Ratab: 420, 112486	g Pt-0	07/13/2017 17/0	2.00	1.0	SM2120B-01,11
	Any Batch. 420-112400	Date Analyzeu	01110/2011 1140			
pH@color measuremer	nt 6.74	SU		2.00	1.0	SM2120B-01,11
	Anly Batch: 420-112486	Date Analyzed	07/13/2017 1749			
Turbidity	35.7	g NT	U	0.100	1.0	SM2130B-01,11
	Anly Batch: 420-112420	Date Analyzed	07/13/2017 1814			
Odor	1.00	T.C).N.	1.00	1.0	SM 2150B
	Anly Batch: 420-112485	Date Analyzed	07/13/2017 1800			
Temp @ Odor Measure	ment 60.0	Deg	grees C	5.00	1.0	SM 2150B
	Anly Batch: 420-112485	Date Analyzed	07/13/2017 1800			
рН	6.74	H SU		0.200	1.0	SM 4500 H+ B
	Anly Batch: 420-112487	Date Analyzed	07/13/2017 1751			
Temp @ pH Measurem	ent 17.6	Deç	grees C	5.00	1.0	SM 4500 H+ B
	Anly Batch: 420-112487	Date Analyzed	07/13/2017 1751			
Nitrite as N	<0.0100	mg	/L	0.0100	1.0	SM 4500 NO2 B
	Anly Batch: 420-112510	Date Analyzed	07/14/2017 1047			

DATA REPORTING QUALIFIERS

Client: Leggette, Brashears & Graham, Inc.

Job Number: Sdg Number: Clovewood

Lab Section	Qualifier	Description
Metals		
	9	Result fails applicable NYS drinking water standards
General Chemistry		
	g	Result fails applicable NYS drinking water standards
	Н	Sample was prepped or analyzed beyond the specified holding time

Client: Leggette, Brashears & Graham, Inc.

Job Number:

Sdg Number: Clovewood

The following analytes are Not Part of the ELAP scope of accreditation

Sulfur, Tungsten, Silicon, Bicarbonate Alkalinity, 7 Day BOD 5210C, 28 Day BOD, Soluble BOD, Carbon Dioxide, Carbonate Alkalinity, CBOD Soluble, Chlorine, Cyanide (WAD), Ferrous Iron, Ferric Iron, Total Nitrogen, Total Organic Nitrogen, Dissolved Oxygen, pH, Phenolphthalein Alkalinity, Solids (Fixed), Solids (Percent), Solids (Percent Moisture) , Solids (Percent Volatile), Solids (Volatile Suspended), Temperature, TKN (Soluble), COD (Soluble), Total Inorganic Carbon, Volatile Acids as Acetic Acid, 2-Aminopyridine, 3-Picoline, 1-Methyl-2-pyrrilidinone, Aziridine, Dimethyl sulfoxide, 1-Chlorohexane, Iron Bacteria, Salmonella, & Sulfur Reducing Bacteria.

The following analytes are Not Part of ELAP Potable Water scope of accreditation

Cobalt (200.7, 200.8), Tin (200.7), Strontium (200.7), Gold (200.7), Platinum (200.7), Palladium (200.7), Titanium (200.7), Phosphorus (365.3), Nitrate-Nitrite (10-107-4-1C, 353.2), m-Xylene & p-Xylene (502.2, 524), Naphthalene (502.2), o-Xylene (502.2, 524), & Fecal Coliform (9222D).

The following analytes are Not Part of ELAP Solid and Hazardous Waste scope of accreditation

Ammonia (SM 4500NH3G), TKN (351.2), Phosphorus (365.3), 1,2-Dichloro-1,1,2-trifluoroethane (8260), & Chlorodifluoromethane (8260).

The following analytes are Not Part of ELAP Non Potable Water scope of accreditation

Dissolved Organic Carbon (5310C), Mecoprop (8151A), & MCPA (8151A).
Definitions and Glossary

Client: Leggette, Brashears & Graham, Inc.

Job Number:

Sdg Number: Clovewood

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%R	Percent Recovery
DL, RA, RE	Indicates a Dilution, Reanalysis or Reextraction.
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit - an estimate of the minimum amount of a substance that an analytical process can reliably detect. A MDL is analyte- and matrix-specific and may be laboratory-dependent.
ND	Not detected at the reporting limit (or MDL if shown).
QC	Quality Control
RL	Reporting Limit - the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.
RPD	Relative Percent Difference - a measure of the relative difference between two points

EnviroTest Laboratories, T	ရ nc.	CHA Lab Name Address & Phone	Envi 315 I	O roTe: Fuller	F st La	CU borato Avenue	ST ries e, Nev	'O[vburg	DY Ih, Ne	i w Yoi	1 Q 1k 125	50 84	5-562	75 -0890	>	氏)	>	REPORT# (L	ab Use Only)
PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION		MATRI	¢				·-	REQL	JIRED	ANAL	YSES					PAGE 1 of	1
ENVIROTEST PROJECT MANAGER Debra Bayer	P.O. NUMBER					A C/G kit	Vials HCI	um Thio.	um Thio.	/Na2SO3	itric Acid	io(liquid)	er Plastic	ium Hyd.	ic Sterile	știc Nitric	s Unpres		TURNAROUND TIME
LBG, Inc.	203-929-8555		DICATE	tter) Indicat		MP	40ml	Dml Sodi	ber Sodi	nber HC	Plastic N	VSod.Th	Lite	stic Sod	imi Plast	iter Plas	0ml Vial	NORMAL	2
CLIENT NAME Stacy Stieber			(C) INC	aste Wa				Ą	I Am	ter An	OmlF	Mon		nl Pla	125		4	QUICK	
CLIENT ADDRESS 4 Research Drive, Suite 204, Shelton,	CT 06484		OR GRAE ER)	r) or W (W					250m	5	52	40m		250m				VERBAL	
COMPANY CONTRACTING THIS WORK (# applicable):		1	OSITE (C) JUS (WAT	king Water	OR SEMI: Specify													#OF COOLERS	
DATE TIME	SAMPLE IDENTIFICA	TION	COMP	D (Drin				N	UMBE	ROF	CONT	AINER	S SUB	MITTE	Ð				REMARKS
71317 800	(73			D			3	2	1	2	1	2	4	1	2	5	2	Table 8B (Sb,A	s,Ba,Be,Cd,Cr,Cn,Hg,Ni
				Ш														Se,TI,F)	
				Ш												L	ļ	Table 8C (NO3,	NO2)
		·		Ш		2-Liter	Ambe	r Unpre	es.		L							Table 8D (Ci,Fe	,Mn,Ag,Na,SO4,Zn,Odor,Color)
						1-250	nl Amb	er Unp	ores.									524.2 (POC,MT	BE,Vinyl Chloride)
						3-250	ni Plas	tic Unp	ores. (n	io air)								SOCs (504,508,	,515,525,531,547,548,549,Dloxin)
						2-40m	I Ambe	er Sodiu	um Thi	0.								Additional Test	ts (Total coliform
						1-500	ml Amb	er Sod	lium Th	nio.								thru Zinc)	
				\mathbf{K}		1-Liter	Ambe	r Plasti	lc Sodi	um Thi	o.&H2	SO4						Radio(Gross A	lpha/Beta,Radium-226/228,Uranium)
			Π	Ш	Τ	2-Lite	Ambe	r Sodiu	um Thio	э.			1			1		Radon	
				V				[Dissolved Fe, I	Mn
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HELINGUISHED BT: (SIGH) PROV	LB-G	7/13/17		14_	3					UNC)					COMP	AN1			· · · · · · · · · · · · · · · · · · ·
SAMPULLOSY: (SCHUTTORE)	COMPANY	7/13/17		706)	RECE	IVED E	3Y: (SI	GNAT	URE)						ANY		DATE	
RELINQUISHED BY (SIGNATURE)	COMPANY	DATE	TIME			RECE	IVED	BY: (SI	IGNAT	URE)					COMP	ĀNY		DATE	TIME
SUBCONTACT: PACE-SOCs, Ra	idio, Radon; ASI-M	PA/Crypto/Glard	la				<u>.</u>					1						<u></u>	
RECEIVED FOR LABORATORY BY:	DATE 7/13/17 1193	OUSTODY INTACT YES NO	^{Cool}	er Ter	np:. 0	ГАВО Н	HATO	NY RE	MARK	S:	ICE_	ĹΡ	й. <u> </u>	_ CL2	·······	Revel	wed by		

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-123595-5 SDG Number: Clovewood

Login Number: 123595

Question	T/F/NA	Comment
Samples were collected by ETL employee as per SOP-SAM-1	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is recorded.	True	3.5C
Cooler Temp. is within method specified range.(0-6 C PW, 0-8 C NPW, or BAC <10 C $$	True	
If false, was sample received on ice within 6 hours of collection.	NA	
Based on above criteria cooler temperature is acceptable.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	False	рН
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	



Pace Analytical Services, LLC 1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

August 03, 2017

Ms. Debra Bayer EnviroTest Laboratories, Inc. 315 Fullerton Avenue Newburgh, NY 12550

RE: Project: 42001269 Pace Project No.: 30224097

Dear Ms. Bayer:

Enclosed are the analytical results for sample(s) received by the laboratory on July 14, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sugnalylillins

Jacquelyn Collins jacquelyn.collins@pacelabs.com (724)850-5612 Project Manager

Enclosures

cc: Janine Rader, EnviroTest Laboratories, Inc.



Pace Analytical www.pacelabs.com

Pace Analytical Services, LLC 1638 Roseytown Road - Suites 2,3,4 Greensburg, PA 15601 (724)850-5600

CERTIFICATIONS

Project:	42001269
Pace Project No.:	30224097

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601 L-A-B DOD-ELAP Accreditation #: L2417 Alabama Certification #: 41590 Arizona Certification #: AZ0734 Arkansas Certification California Certification #: 04222CA Colorado Certification Connecticut Certification #: PH-0694 **Delaware Certification** Florida/TNI Certification #: E87683 Georgia Certification #: C040 **Guam Certification** Hawaii Certification Idaho Certification **Illinois Certification** Indiana Certification Iowa Certification #: 391 Kansas/TNI Certification #: E-10358 Kentucky Certification #: 90133 Louisiana DHH/TNI Certification #: LA140008 Louisiana DEQ/TNI Certification #: 4086 Maine Certification #: PA00091 Maryland Certification #: 308 Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification Missouri Certification #: 235

Montana Certification #: Cert 0082 Nebraska Certification #: NE-05-29-14 Nevada Certification #: PA014572015-1 New Hampshire/TNI Certification #: 2976 New Jersey/TNI Certification #: PA 051 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190 Oregon/TNI Certification #: PA200002 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282 South Dakota Certification Tennessee Certification #: TN2867 Texas/TNI Certification #: T104704188-14-8 Utah/TNI Certification #: PA014572015-5 USDA Soil Permit #: P330-14-00213 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 460198 Washington Certification #: C868 West Virginia DEP Certification #: 143 West Virginia DHHR Certification #: 9964C Wisconsin Certification Wyoming Certification #: 8TMS-L



SAMPLE SUMMARY

30224097001	C-23 (420-123595-5)	Drinking Water	07/13/17 08:00	07/14/17 10:20
Lab ID	Sample ID	Matrix	Date Collected	Date Received
Pace Project No	o.: 30224097			
Project:	42001269			



SAMPLE ANALYTE COUNT

 Project:
 42001269

 Pace Project No.:
 30224097

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30224097001	C-23 (420-123595-5)	SM7500RnB-07	NEG	1
		EPA 900.0	NEG	2
		EPA 903.1	WRR	1
		EPA 904.0	VAL	1
		ASTM D5174-97	RMK	1



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 42001269

Pace Project No.: 30224097

Sample: C-23 (420-123595-5) PWS:	Lab ID: 30224097 Site ID:	7001 Collected: 07/13/17 08:00 Sample Type:	Received:	07/14/17 10:20 N	/latrix: Drinking	Water
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radon	SM7500RnB-07	78.3 ± 30.0 (46.0) C:NA T:NA	pCi/L	07/15/17 05:27	10043-92-2	
Gross Alpha	EPA 900.0	0.246 ± 0.830 (2.08) C:NA T:NA	pCi/L	07/24/17 08:36	12587-46-1	
Gross Beta	EPA 900.0	-0.028 ± 0.682 (1.70) C:NA T:NA	pCi/L	07/24/17 08:36	12587-47-2	
Radium-226	EPA 903.1	0.439 ± 0.317 (0.359) C:NA T:106%	pCi/L	07/26/17 12:51	13982-63-3	
Radium-228	EPA 904.0	0.249 ± 0.281 (0.596) C:78% T:91%	pCi/L	07/27/17 11:15	15262-20-1	
Total Uranium	ASTM D5174-97	0.084 ± 0.005 (0.193) C:NA T:NA	ug/L	08/03/17 16:21	7440-61-1	



Project:	42001269					
Pace Project No.:	30224097					
QC Batch:	265143	Analysis Method:	ASTM D517	4-97		
QC Batch Method:	ASTM D5174-97	Analysis Description:	D5174.97 To	otal Uranium KPA		
Associated Lab Sar	mples: 302240970	01				
METHOD BLANK:	1306496	Matrix: Water				
Associated Lab Sa	mples: 302240970	01				
Para	meter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Total Uranium	0	0.064 ± 0.004 (0.193) C:NA T:NA	ug/L	08/03/17 11:33		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	42001269					
Pace Project No.:	30224097					
QC Batch:	265053	Analysis Method:	SM7500RnB	-07		
QC Batch Method:	SM7500RnB-07	Analysis Description:	7500Rn B Radon			
Associated Lab Sar	nples: 30224097	001				
METHOD BLANK:	1305441	Matrix: Water				
Associated Lab Sar	nples: 30224097	001				
Parar	neter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radon		2.8 ± 18.8 (32.7) C:NA T:NA	pCi/L	07/15/17 02:40	-	-

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	42001269					
Pace Project No.:	30224097					
QC Batch:	265152	Analysis Method:	EPA 903.1			
QC Batch Method:	EPA 903.1	Analysis Description:	903.1 Radiu			
Associated Lab Sar	mples: 3022409 ⁻	7001				
METHOD BLANK:	1306510	Matrix: Water				
Associated Lab Sar	mples: 3022409 ⁻	7001				
Parar	meter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radium-226		0.159 ± 0.312 (0.570) C:NA T:95%	pCi/L	07/26/17 12:14		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	42001269						
Pace Project No.:	30224097						
QC Batch:	265148		Analysis Method:	EPA 900.0			
QC Batch Method:	EPA 900.0		Analysis Description:	900.0 Gross	Alpha/Beta		
Associated Lab Sar	mples: 3022409	7001					
METHOD BLANK:	1306505		Matrix: Water				
Associated Lab Sar	mples: 3022409	7001					
Parar	neter	Act ± Uno	: (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Gross Alpha		-0.333 ± 0.399 (1.52) C:NA T:NA	pCi/L	07/24/17 08:35		
Gross Beta		-0.362 ± 0.578 (1.62) C:NA T:NA	pCi/L	07/24/17 08:35		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	42001269					
Pace Project No.:	30224097					
QC Batch:	265158	Analysis Method:	EPA 904.0			
QC Batch Method:	EPA 904.0	Analysis Description:	904.0 Radiu			
Associated Lab Sar	mples: 3022409	7001				
METHOD BLANK:	1306521	Matrix: Water				
Associated Lab Sar	mples: 3022409	7001				
Parar	neter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers	
Radium-228		0.0810 ± 0.316 (0.717) C:75% T:85%	pCi/L	07/27/17 11:14		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

 Project:
 42001269

 Pace Project No.:
 30224097

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

EnviroTest Laboratories, Inc.	· · · · · · · · · · · · · · · · · · ·				the second s					and the second secon
315 Fullerton Avenue Newburgh , NY 12550			Chair	l of Cu	stody	Record			Enviro,	lest
Phone (845) 562-0890 Fax (845) 562-0841									[a007.	atories Inc.
Client Information (Sub Contract Lab)	Sampler Are Co	Sufo-	و	.ab PM: 3ayer, Debra			Carrier Tracking	Na(s):	COC No: 420-9121 1	
Client Contact. Shipping/Receiving	Phone:		7131005	e-Mait: dbayer@env	irotestlabora	tories.com	1		Page: Page:	
Company: Pace Analytical Services, Inc.)		Analvsis F	tequested		5TL Job # 8TL Job # 490-193465.6	
Address: 1638 Roseytown Rd, Suites 2,3,4,	Due Date Requested: 7/27/2017								Preservation Cod	ŝ
city: Greensburg	TAT Requested (days):								A - HCL B - NaOH C - 70 Acetate	M - Hexane N - None O - A¢NaOO
State, Zip: PA, 15601	T				22 AF				E - NaHSO4	C - 2000 P - Na204S Q - Na203
Phone:	₩04			(c	/ 526/1				F - MeOH G - Amchior	R - Na2S2SO3 S - H2SO4
Email:	#Q%			01 NC	AA\82 muine				H - Ascorbic Acid I - Ice J - DI Water	T - TSP Dodecahydrate U - Acatone V - MCAA
Project Name: LBG, Inc.	Project #: 42001269		:	(10 sa 69,5) 9	don don don				K-EDTA L-EDA	W - ph 4-5 Z - other (specify)
Ste:	SSOV#;			AV dis Idwes	06 \TC oT \TC 6月 \TC				Other:	<u>//2014</u>
Sample Identification Client ID (Lab ID)	Sample Date S.	ample (C=)	Tiple Matri pe (w-wat comp, o-waster rash)	· 변주을 것 bore)[북bie] #\온베 mhotae	ARTNOSBUS MATNOSBUS MATNOSBUS					Des 1/3/1703
		ha N	eservation Cor		5 5 5					structions/Note:
C - 23 (420-123595-5)	7/13/17	8:00	Wate		× × ×				-	5
							₩0#:3	0224	097	
							anzzzlog7			
Possible Hazard Identification	ison B [Unknow		intonical	San	iple Dispos □ Peture To	al (A fee may I	Dispersed if s	amples are reta	ined longer than 1	month)
Deliverable Requested: I, II, III, IV, Other (specify)				Spe	cial Instruction	ons/QC Require	ments:	ζ.	ICHINE FUI	SUIUOM
Empty Kit Relinquished by:	Da	te:		Time:			Method of	Shipment:		
Relinquistigatory	Date/Time:	343	Company	N	separad by			Date/Time:	020/ 4	Company
Definiquished by:	Date/Time:		Company		Received by.			Date/Time:)	Company
	Date/Time:		Company	_	Received by:			.Date/Time:		Company
Custody Seals Intact: Custody Seal No.:					Cooler Temper	ature(s) °C and Oth	er Remarks:			

	,	1 1.00	spur	3.7	3022403
Pace Analytical Client Name:	Ê	Env		Test-Labos.	Project #
Courler: Fed Ex DUPS DUSPS C	lient [よろむ	Domi	nercia	i Pace Other	Label <u>24.</u> LIMS Login A.M.
Custodu Sanlan Coolsr/Hox Present:	-s 🔽	- I no	Se	als_Intact: 🗌 yes	no
- S		n of la	(n	/et Blue None	
	יזעי הי בי	~ °C			ం ్ Final Temp: 3్ర °ం
Cooler Temperature Observed Jemp	<u>, , , ,</u>				
					Date and Initials of person examining contents: 24 7/14117
Comments:	Ye	s No	5 N/	Α	
Chain of Cuslody Present:	1			1	
Chain of Custody Filled Oul:				2.	
Chain of Custody Relinguished:	1	·		3	·
Sampler Name & Signature on COC:		1		4	
Sample I shelt match COC:	1		1	5.	
Josh right Cased a le/lime/ID Malrix:	1~1				· · · · · · · · · · · · · · · · · · ·
Paralog Arrived within Hold Time'	17		T	6,	
Samples Artived warm from the	17	1		7,	
Short Hold Time Analysis (<72ar semanoly)		17		8.	
Rush Turn Around Time Requested.	17	1 ·	1	9	
	17		1	10.	
Correct Containers Used:	<u> </u>	1			
-Pace Containers Used:	+	<u> </u>		41	
Containers Intact:	+-	<u> </u>		40	
Drihophosphate field filtered				49	
Organic Samples checked for dechlorination:			17	13	
Illered volume received for Dissolved tests	+		<u> </u>	14	
It opinalizets have been officially for Freezer	$\left \right $			15.	
li containers needing preservation are jound to be in	/				
				Initial when Al	Date/lime of
ceptions: VOA, coliform, TOC, O&G, Phenolics				completed <u>tri</u>	Thicaglaniou
				preservative	
eadspace in VOA Vials (>6mm):			1	16	
io Blank Present:	·		/	17.	
in Blank Custody Seals Present			/		
d Aqueous Samples Screened > 0.5 mrem/hr		1		Initial when completed: 74	Dale: 7/14/17
lent Notification/ Resolution;					
Person Contacled:		l	Dale/T	lme:	Contacled By:
Comments/ Resolution:					
		•			

Certification Office (i.e. put of hold, incorrect preservative, out of temp, incorrect containers) *PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

J:\QAQC\Master\Document Management\Sample Mgt\Sample Condition Upon Receipt Pittsburgh (C056-5 5July2017)



Pace Analytical Services, LLC 8 East Tower Circle Ormond Beach, FL 32174 (386)672-5668

August 07, 2017

Ron Bayer EnviroTest Laboratories Inc. 315 Fullerton Avenue Newburgh, NY 12550

RE: Project: LBG,Inc 42001269 Pace Project No.: 35324057

Dear Ron Bayer:

Enclosed are the analytical results for sample(s) received by the laboratory on July 14, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Bo Garcia bo.garcia@pacelabs.com (386)672-5668 Project Manager

Enclosures

cc: Debra Bayer, EnviroTest Laboratories Inc.
 Renee Cusack, EnviroTest Laboratories Inc.
 Laura Marciano, EnviroTest Laboratories Inc.
 Janine Rader, EnviroTest Laboratories Inc.
 Meredith Ruthven, EnviroTest Laboratories Inc.





Pace Analytical Services, LLC 8 East Tower Circle Ormond Beach, FL 32174 (386)672-5668

CERTIFICATIONS

Project: LBG,Inc 42001269 Pace Project No.: 35324057

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174 Alabama Certification #: 41320 Connecticut Certification #: PH-0216 Delaware Certification: FL NELAC Reciprocity Florida Certification #: E83079 Georgia Certification #: 955 Guam Certification: FL NELAC Reciprocity Hawaii Certification: FL NELAC Reciprocity Illinois Certification #: 200068 Indiana Certification: FL NELAC Reciprocity Kansas Certification #: E-10383 Louisiana Certification #: FL NELAC Reciprocity Louisiana Environmental Certificate #: 05007 Maryland Certification: #346 Michigan Certification #: 9911 Mississippi Certification: FL NELAC Reciprocity Missouri Certification #: 236 Montana Certification #: Cert 0074

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747 New York Certification #: 10478 Primary Accrediting Body New Jersey Certification #: NY158 Pennsylvania Certification #: 68-00350 Connecticut Certification #: PH-0435 Nebraska Certification: NE-OS-28-14 Nevada Certification: FL NELAC Reciprocity New York Certification #: 11608 North Carolina Environmental Certificate #: 667 North Carolina Certification #: 12710 Oklahoma Certification #: D9947 Pennsylvania Certification #: 68-00547 Puerto Rico Certification #: FL01264 South Carolina Certification: #96042001 Tennessee Certification #: TN02974 Texas Certification: FL NELAC Reciprocity US Virgin Islands Certification: FL NELAC Reciprocity Virginia Environmental Certification #: 460165 Wyoming Certification: FL NELAC Reciprocity West Virginia Certification #: 9962C Wisconsin Certification #: 399079670 Wyoming (EPA Region 8): FL NELAC Reciprocity

Maryland Certification #: 208 Rhode Island Certification #: LAO00340 Massachusetts Certification #: M-NY026 New Hampshire Certification #: 2987



SAMPLE SUMMARY

Project:LBG,Inc 42001269Pace Project No.:35324057

Lab ID	Sample ID	Matrix	Date Collected	Date Received
35324057001	C-23	Drinking Water	07/13/17 08:00	07/14/17 11:10



SAMPLE ANALYTE COUNT

Project:LBG,Inc 42001269Pace Project No.:35324057

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
35324057001	C-23	EPA 504.1	BP1	2	PASI-O
		EPA 505	MMR	3	
		EPA 508.1	LJM	18	PASI-O
		EPA 515.3	LJM	8	PASI-O
		EPA 531.1	WFH	9	PASI-O
		EPA 547	NMB	1	PASI-O
		EPA 549.2	NMB	1	PASI-O
		EPA 525.2	NS1	7	PASI-O
		EPA 548.1	JDT	1	PASI-O



ANALYTICAL RESULTS

Project: LBG,Inc 42001269

Pace Project No.: 35324057

Parameters Results Units POL MDL DF Prepared Analyzed CAS No. Qual 504.1 GCS EDB and DBCP Analytical Method: EPA 504.1 -	Sample: C-23	Lab ID:	35324057001	Collecte	d: 07/13/17	7 08:00	Received: 07/	14/17 11:10 Ma	atrix: Drinking	Water
S04.1 GCS EDB and DBCP Analytical Method: EPA 504.1 UPID #101/101/101/101/101/101/101/101/101/101	Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
1.2-Dibrome-3-chloropropane -0.0055 ug/L 0.0046 0.0055 1 07/18/17 07:5 07/18/17 18:37 168-34. 1.2-Dibromechane (EDB) -0.0056 0.0056 0.0056 0.0071/17 10:57 07/18/17 07:57 07/18/17 07:58 106-39.4 505 GCS Pesticides/PCBs Analytical Method: EPA 505 Preparation 0.025 1 07/20/17 16:38 07/20/17 23:03 2051-24.3 S01 GCS Pesticides Analytical Method: EPA 508.1 Preparation 0.026 1 07/24/17 10:58 07/20/17 16:38 07/20/17 10:58 1972-26-8 Atachic -0.034 ug/L 0.19 0.034 1 07/24/17 10:51 07/28/17 10:58 1972-26-8 Atazine -0.0041 ug/L 0.096 0.062 1 07/24/17 10:51 07/28/17 10:58 1972-26-8 Atazine -0.0029 ug/L 0.096 0.022 1 07/24/17 10:51 07/28/17 10:58 1972-26-8 Atazine -0.0029 ug/L 0.096 0.0061 1 07/24/17 10:51 07/28/17 10:58 1972-46-8 Deletinin -0.0067 ug/L 0.096 <	504.1 GCS EDB and DBCP	Analytical	Method: EPA 5	04.1 Prepa	aration Meth	nod: EP	A 504.1			
SoG GC S Pesicides/PCBs Analytical Method: EPA 505 Preparation Method: EPA 505 View and the solution of the solut	1,2-Dibromo-3-chloropropane 1,2-Dibromoethane (EDB)	<0.0055 <0.0064	ug/L ug/L	0.017 0.0086	0.0055 0.0064	1 1	07/18/17 07:15 07/18/17 07:15	07/18/17 18:37 07/18/17 18:37	96-12-8 106-93-4	
Adrin -0.025 ug/L 0.025 0.025 1 07/20/17 16:38 07/20/17 23:03 030-02 Surrogates 0 07/20/17 16:38 07/20/17 23:03 07/20/17 23:03 07/20/17 23:03 07/20/17 23:03 07/20/17 23:03 07/20/17 23:03 07/20/17 23:03 07/20/17 23:03 05/12 Sole CCS Pesticides Analytical Method: EPA 508.1 Preparation 1 07/20/17 16:35 1972-60-8 1972-60-8 Atrazine -0.004 ug/L 0.096 0.034 1 07/24/17 10:15 07/28/17 10:58 1972-20-8 12 Atrazine -0.0026 ug/L 0.096 0.0026 1 07/24/17 10:15 07/28/17 10:58 1972-20-8 12 Butachlor -0.0026 ug/L 0.096 0.0026 1 07/24/17 10:15 07/28/17 10:58 12 23/14-66 Districhtion -0.0067 ug/L 0.0096 0.0067 1 07/24/17 10:15 07/28/17 10:58 12 12/28/17 10:58 12 12 12	505 GCS Pesticides/PCBs	Analytical	Method: EPA 5	05 Prepara	ation Metho	d: EPA	505			
Tertracino-m-sylene (s) 105 %. 30-150 1 07/20/17 16:38 07/20/17 23:03 2051-24-3 Decachlorobiphenyl (S) 83 %. 30-150 1 07/20/17 16:38 07/20/17 23:03 2051-24-3 S08.1 GCS Pesticides Analytical Method: EPA 508.1 I 07/24/17 10:15 07/28/17 10:58 15972-60-8 127 Atrazine <0.061 ug/L 0.096 0.061 1 07/24/17 10:15 07/28/17 10:58 15972-60-8 218 Butachlor <0.0029 ug/L 0.096 0.026 1 07/24/17 10:15 07/28/17 10:58 23184 66-9 Chiordane (Technical) <0.026 ug/L 0.096 0.0067 1 07/24/17 10:15 07/28/17 10:58 75-74-9 Endrin <0.0067 ug/L 0.096 0.0018 1 07/24/17 10:15 07/28/17 10:58 75-74-9 Endrin <0.0029 ug/L 0.019 0.0029 1 07/28/17 10:51 07/28/17 10:58 75-74-9 Heptachlor opxide <0.0029	Aldrin Surrogates	<0.025	ug/L	0.025	0.025	1	07/20/17 16:38	07/20/17 23:03	309-00-2	
Decachlorobiphenyl (S) 83 %. 30-150 1 07/20/17 16:38 07/20/17 23:03 2051-24-3 508.1 GCS Pesticides Analytical Method: EPA 508.1 Preparation Method: EPA 508.1 07/28/17 10:58 15972-60-8 Atrazine <0.034 ug/L 0.19 0.034 1 07/28/17 10:58 15972-60-8 Atrazine <0.0029 ug/L 0.019 0.0026 1 07/28/17 10:58 598-9-9 23184-66-9 Chiodane (Technical) <0.045 ug/L 0.19 0.045 1 07/24/17 10:15 07/28/17 10:58 57-74-9 L2 Dieldrin <0.0057 ug/L 0.096 0.018 1 07/24/17 10:15 07/28/17 10:58 75-74-9 Liedrin <0.012 ug/L 0.096 0.018 1 07/24/17 10:15 07/28/17 10:58 75-74-9 Liedrin <0.012 ug/L 0.096 0.012 1 07/24/17 10:15 07/28/17 10:58 12-24-5 Heptachlor ochoide <0.0029 ug/L 0.096 0.049<	Tetrachloro-m-xylene (S)	105	%.	30-150		1	07/20/17 16:38	07/20/17 23:03	877-09-8	
508.1 GCS Pesiticides Analytical Method: EPA 508.1 Preparation Method: EPA 508.1 Verparation Method: EPA 508.1 Preparation Method: EPA 508.1 Alachlor <0.0034	Decachlorobiphenyl (S)	83	%.	30-150		1	07/20/17 16:38	07/20/17 23:03	2051-24-3	
Alachlor <0.034 ug/L 0.19 0.034 1 07/24/17 10:15 07/28/17 10:58 19/12-24-9 L2 Atrazine <0.061	508.1 GCS Pesticides	Analytical	Method: EPA 5	08.1 Prepa	aration Meth	nod: EP	A 508.1			
Atrazine <0.061 ug/L 0.096 0.061 1 07/24/17 10:15	Alachlor	<0.034	ug/L	0.19	0.034	1	07/24/17 10:15	07/28/17 10:58	15972-60-8	
gamma-BHC (Lindane) <0.0029 ug/L 0.019 0.0029 1 07/24/17 10:15 07/28/17 10:58 58-89-9 Butachior <0.026	Atrazine	<0.061	ug/L	0.096	0.061	1	07/24/17 10:15	07/28/17 10:58	1912-24-9	L2
Butachlor <0.026 ug/L 0.096 0.026 1 07/24/17 10:15 07/28/17 10:58 23184-66-9 Chlordane (Technical) <0.045	gamma-BHC (Lindane)	<0.0029	ug/L	0.019	0.0029	1	07/24/17 10:15	07/28/17 10:58	58-89-9	
Chlordane (Technical) -0.045 ug/L 0.096 0.048 1 07/24/17 10:15 07/28/17 10:58 67-74-9 Dieldrin <0.0067 ug/L 0.096 0.0067 1 07/24/17 10:15 07/28/17 10:58 75-74-9 Dieldrin <0.0067 ug/L 0.0096 0.0067 1 07/24/17 10:15 07/28/17 10:58 75-44-8 Heptachlor <0.0012 ug/L 0.039 0.012 1 07/24/17 10:15 07/28/17 10:58 178-41-8 Heptachlor obenzene <0.013 ug/L 0.096 0.018 1 07/24/17 10:15 07/28/17 10:58 178-74-1 Hexachlorocyclopentadiene <0.031 ug/L 0.096 0.031 1 07/24/17 10:15 07/28/17 10:58 178-74-1 Methoxychlor <0.049 ug/L 0.096 0.045 1 07/24/17 10:15 07/28/17 10:58 178-74-9 L2 PCB, Total <0.077 ug/L 0.096 0.045 1 07/24/17 10:15 07/28/17 10:58 128-43-2 L2 Simazine <0.066 ug/L 0.067 0.067	Butachlor	<0.026	ug/L	0.096	0.026	1	07/24/17 10:15	07/28/17 10:58	23184-66-9	
Dieldrin <.0.018 ug/L 0.096 0.018 1 07/24/17 10:15 07/28/17 10:58 06-57-1 Endrin <.0.0067	Chlordane (Technical)	<0.045	ug/L	0.19	0.045	1	07/24/17 10:15	07/28/17 10:58	57-74-9	
Endrin <0.0067 ug/L 0.0096 0.0067 1 07/24/17 10:15 07/28/17 10:58 72-20-8 Heptachlor epoxide <0.0029 ug/L 0.039 0.012 1 07/24/17 10:15 07/28/17 10:58 10:24-17 Heptachlor epoxide <0.0029 ug/L 0.0096 0.018 1 07/24/17 10:15 07/28/17 10:58 12/24-17 Hexachlorocyclopentadiene <0.031 ug/L 0.096 0.018 1 07/24/17 10:15 07/28/17 10:58 72-74-4 Methoxychlor <0.045 ug/L 0.096 0.047 1 07/24/17 10:15 07/28/17 10:58 1218-45-2 Methoxychlor <0.045 ug/L 0.096 0.077 1 07/24/17 10:15 07/28/17 10:58 1218-45-2 138-36-3 PCB, Total <0.0077 ug/L 0.096 0.077 1 07/24/17 10:15 07/28/17 10:58 128-34-9 L2 Stamane <0.066 ug/L 0.066 0.59 1	Dieldrin	<0.018	ug/L	0.096	0.018	1	07/24/17 10:15	07/28/17 10:58	60-57-1	
Heptachlor <0.012 ug/L 0.039 0.012 1 07/24/17 10:15 07/28/17 10:28 76:44-8 Heptachlor epoxide <0.0029	Endrin	<0.0067	ug/L	0.0096	0.0067	1	07/24/17 10:15	07/28/17 10:58	72-20-8	
Heptachlor epoxide <0.0029 ug/L 0.019 0.0029 1 07/24/17 10:15 07/28/17 10:58 1024-57-3 Hexachlorocyclopentadiene <0.018	Heptachlor	<0.012	ug/L	0.039	0.012	1	07/24/17 10:15	07/28/17 10:58	76-44-8	
Hexachlorobenzene <0.018 ug/L 0.096 0.018 1 07/24/17 10:15 07/28/17 10:58 118-74-1 Hexachlorocyclopentadiene <0.031	Heptachlor epoxide	<0.0029	ug/L	0.019	0.0029	1	07/24/17 10:15	07/28/17 10:58	1024-57-3	
Hexachlorocyclopentadiene <0.031 ug/L 0.096 0.031 1 07/24/17 10:15 07/28/17 10:58 77-47-4 Methoxychlor <0.049	Hexachlorobenzene	<0.018	ug/L	0.096	0.018	1	07/24/17 10:15	07/28/17 10:58	118-74-1	
Methoxychlor <0.049 ug/L 0.096 0.049 1 07/24/17 10:15 07/28/17 10:58 72-43-5 Metolachlor +0.045 ug/L 0.096 0.045 1 07/24/17 10:15 07/28/17 10:58 1218-45-2 PCB, Total +0.007 ug/L 0.096 0.029 1 07/24/17 10:15 07/28/17 10:58 138-36-3 Propachlor +0.029 ug/L 0.066 0.029 1 07/24/17 10:15 07/28/17 10:58 138-36-3 Propachlor +0.066 ug/L 0.067 0.066 1 07/24/17 10:15 07/28/17 10:58 122-34-9 L2 Toxaphene +0.59 ug/L 0.96 0.59 1 07/24/17 10:15 07/28/17 10:58 122-34-9 L2 Surrogates - - 0.061 1 07/24/17 10:15 07/28/17 10:58 122-34-9 L2 Stass Chlorinated Herbicides Analytical Method: EPA 515.3 Preparation Method: EPA 515.3 1 07/20	Hexachlorocyclopentadiene	<0.031	ug/L	0.096	0.031	1	07/24/17 10:15	07/28/17 10:58	77-47-4	
Metolachlor <0.045 ug/L 0.096 0.045 1 07/24/17 10:15 07/28/17 10:58 51218-45-2 PCB, Total <0.077 ug/L 0.096 0.077 1 07/24/17 10:15 07/28/17 10:58 1336-36-3 Propachlor <0.029 ug/L 0.096 0.029 1 07/24/17 10:15 07/28/17 10:58 1218-45-2 L2 Simazine <0.066 ug/L 0.067 0.066 1 07/24/17 10:15 07/28/17 10:58 1218-45-2 L2 Simazine <0.066 ug/L 0.067 0.066 1 07/24/17 10:15 07/28/17 10:58 1218-45-2 L2 Sumzine <0.066 ug/L 0.067 0.066 1 07/24/17 10:15 07/28/17 10:58 1218-45-2 L2 Sumzine <0.061 ug/L 0.067 1 07/24/17 10:15 07/28/17 10:58 2051-24-3 Sumzine <0.081 ug/L 0.10 0.081 1 07/24/17 09:35 07/22/17 08:11 94-75-7 Dalapon <0.081 ug/L 0.10 0.067 1 07/20/1	Methoxychlor	<0.049	ug/L	0.096	0.049	1	07/24/17 10:15	07/28/17 10:58	72-43-5	
PCB, Total <0.077 ug/L 0.096 0.077 1 07/24/17 10:15 07/28/17 10:58 1336-36-3 Propachlor <0.029 ug/L 0.096 0.029 1 07/24/17 10:15 07/28/17 10:58 1336-36-3 1236-36-3 Simazine <0.066 ug/L 0.067 0.066 1 07/24/17 10:15 07/28/17 10:58 122-34-9 L2 Toxaphene <0.59 ug/L 0.96 0.59 1 07/24/17 10:15 07/28/17 10:58 122-34-9 L2 Sumrogates 0 07/24/17 10:15 07/28/17 10:58 2051-24-3 S15.3 Chlorinated Herbicides Analytical Method: EPA 515.3 Preparation Method: EPA 515.3 07/20/17 09:35 07/22/17 08:11 94-75-7 Dalapon <0.067 ug/L 0.10 0.89 1 07/20/17 09:35 07/22/17 08:11 94-75-7 Dicamba <0.067 ug/L 0.10 0.89 1 07/20/17 09:35 07/22/17 08:11 94-75-7 Dicamba <0.067 ug/L 0.10 0.94 1 07/20/17 09:35 07/22/17 08:11	Metolachlor	<0.045	ua/L	0.096	0.045	1	07/24/17 10:15	07/28/17 10:58	51218-45-2	
Propachlor <0.029 ug/L 0.096 0.029 1 07/24/17 10:15 07/28/17 10:58 1918-16-7 Simazine <0.066 ug/L 0.067 0.066 1 07/24/17 10:15 07/28/17 10:58 122-34-9 L2 Toxaphene <0.59 ug/L 0.96 0.59 1 07/24/17 10:15 07/28/17 10:58 122-34-9 L2 Surrogates Decachlorobiphenyl (S) 83 % 70-130 1 07/24/17 10:15 07/28/17 10:58 2051-24-3 St3.3 Chlorinated Herbicides Analytical Method: EPA 515.3 Preparation Method: EPA 515.3 07/22/17 08:11 94-75-7 Dalapon <0.081 ug/L 0.10 0.081 1 07/20/17 09:35 07/22/17 08:11 94-75-7 Dicamba <0.067 ug/L 0.10 0.067 1 07/20/17 09:35 07/22/17 08:11 94-75-7 Diacabb <0.16 ug/L 0.20 0.16 1 07/20/17 09:35 07/22/17 08:11	PCB. Total	< 0.077	ua/L	0.096	0.077	1	07/24/17 10:15	07/28/17 10:58	1336-36-3	
Simazine <0.066 ug/L 0.067 0.066 1 07/24/17 10:15 07/28/17 10:58 122-34-9 L2 Toxaphene <0.59 ug/L 0.96 0.59 1 07/24/17 10:15 07/28/17 10:58 122-34-9 L2 Surrogates Becachlorobiphenyl (S) 83 % 70-130 1 07/24/17 10:15 07/28/17 10:58 2051-24-3 515.3 Chlorinated Herbicides Analytical Method: EPA 515.3 Preparation Method: EPA 515.3 07/20/17 09:35 07/22/17 08:11 94-75-7 Dalapon <0.081 ug/L 0.10 0.081 1 07/20/17 09:35 07/22/17 08:11 94-75-7 Dalapon <0.089 ug/L 0.10 0.067 1 07/20/17 09:35 07/22/17 08:11 1918-00-9 L1 Dinoseb <0.16 ug/L 0.20 0.16 1 07/20/17 09:35 07/22/17 08:11 878-5 Pictoram <0.030 ug/L 0.10 0.094 1 07/20/17 <th< td=""><td>Propachlor</td><td><0.029</td><td>ua/L</td><td>0.096</td><td>0.029</td><td>1</td><td>07/24/17 10:15</td><td>07/28/17 10:58</td><td>1918-16-7</td><td></td></th<>	Propachlor	<0.029	ua/L	0.096	0.029	1	07/24/17 10:15	07/28/17 10:58	1918-16-7	
Toxaphene 0.59 ug/L 0.96 0.59 1 07/24/17 0.15 07/28/17 10:58 8001-35-2 Surrogates 0 0 0.96 0.59 1 07/24/17 10:15 07/28/17 10:58 8001-35-2 Strongates 0 0 0 0 0 07/24/17 10:15 07/28/17 10:58 8001-35-2 St5.3 Chlorinated Herbicides Analytical Method: EPA 515.3 Preparation Method: EPA 515.3 07/20/17 09:35 07/22/17 08:11 94-75-7 Dalapon <0.067 ug/L 0.10 0.081 1 07/20/17 09:35 07/22/17 08:11 94-75-7 Dicamba <0.067 ug/L 0.10 0.067 1 07/20/17 09:35 07/22/17 08:11 94-75-7 Dicamba <0.067 ug/L 0.10 0.067 1 07/20/17 09:35 07/22/17 08:11 84-85-7 Pictoram <0.030 ug/L 0.20	Simazine	<0.066	ug/l	0.067	0.066	1	07/24/17 10:15	07/28/17 10:58	122-34-9	12
Surrogates One of the order of the or	Toxaphene	<0.59	ug/l	0.96	0.59	1	07/24/17 10:15	07/28/17 10:58	8001-35-2	
Decachlorobiphenyl (S) 83 % 70-130 1 07/24/17 10:15 07/28/17 10:58 2051-24-3 515.3 Chlorinated Herbicides Analytical Method: EPA 515.3 Preparation Method: EPA 515.3 2,4-D <0.081 ug/L 0.10 0.81 1 07/20/17 09:35 07/22/17 08:11 94-75-7 Dalapon <0.89 ug/L 1.0 0.89 1 07/20/17 09:35 07/22/17 08:11 94-75-7 Dicamba <0.067 ug/L 0.10 0.89 1 07/20/17 09:35 07/22/17 08:11 94-75-7 Dicamba <0.067 ug/L 0.10 0.89 1 07/20/17 09:35 07/22/17 08:11 94-75-7 Dinoseb <0.067 ug/L 0.10 0.067 1 07/20/17 09:35 07/22/17 08:11 88-85-7 Pentachlorophenol <0.030 ug/L 0.10 0.094 1 07/20/17 09:35 07/22/17 08:11 93-72-1 Surrogates <0.16 ug/L 0.20 0.16 1 07/20/17 09:35	Surrogates	40100	ug/L	0.00	0.00		01/2 // 10.10	01720/11 10:00	0001 00 2	
515.3 Chlorinated Herbicides Analytical Method: EPA 515.3 Preparation Method: EPA 515.3 2,4-D <0.081	Decachlorobiphenyl (S)	83	%	70-130		1	07/24/17 10:15	07/28/17 10:58	2051-24-3	
2,4-D <0.081	515.3 Chlorinated Herbicides	Analytical	Method: EPA 5	15.3 Prepa	aration Meth	nod: EP	A 515.3			
Dalapon <0.89 ug/L 1.0 0.89 1 07/20/17 09:35 07/22/17 08:11 75-99-0 Dicamba <0.067 ug/L 0.10 0.067 1 07/20/17 09:35 07/22/17 08:11 1918-00-9 L1 Dinoseb <0.16 ug/L 0.20 0.16 1 07/20/17 09:35 07/22/17 08:11 88-85-7 Pentachlorophenol <0.030 ug/L 0.040 0.030 1 07/20/17 09:35 07/22/17 08:11 88-85-7 Picloram <0.030 ug/L 0.040 0.030 1 07/20/17 09:35 07/22/17 08:11 87-86-5 Picloram <0.094 ug/L 0.10 0.094 1 07/20/17 09:35 07/22/17 08:11 1918-02-1 2,4,5-TP (Silvex) <0.16 ug/L 0.20 0.16 1 07/20/17 09:35 07/22/17 08:11 93-72-1 Surrogates 0.16 ug/L 0.20 0.16 1 07/20/17 09:35 07/22/17 08:11 1919-28-9 531.1 HPLC Carbamates Analytical Method: EPA 531.1 <	2,4-D	<0.081	ug/L	0.10	0.081	1	07/20/17 09:35	07/22/17 08:11	94-75-7	
Dicamba <0.067 ug/L 0.10 0.067 1 07/20/17 09:35 07/22/17 08:11 1918-00-9 L1 Dinoseb <0.16	Dalapon	<0.89	ug/L	1.0	0.89	1	07/20/17 09:35	07/22/17 08:11	75-99-0	
Dinoseb <0.16 ug/L 0.20 0.16 1 07/20/17 09:35 07/22/17 08:11 88-85-7 Pentachlorophenol <0.030 ug/L 0.040 0.030 1 07/20/17 09:35 07/22/17 08:11 87-86-5 Picloram <0.094 ug/L 0.10 0.094 1 07/20/17 09:35 07/22/17 08:11 1918-02-1 2,4,5-TP (Silvex) <0.16 ug/L 0.20 0.16 1 07/20/17 09:35 07/22/17 08:11 93-72-1 Surrogates 07/20/17 09:35 07/22/17 08:11 93-72-1 Surrogates 07/20/17 09:35 07/22/17 08:11 19719-28-9 531.1 HPLC Carbamates Analytical Method: EPA 531.1 Aldicarb Aldicarb sulfone	Dicamba	<0.067	ug/L	0.10	0.067	1	07/20/17 09:35	07/22/17 08:11	1918-00-9	L1
Pentachlorophenol <0.030 ug/L 0.040 0.030 1 07/20/17 09:35 07/22/17 08:11 87-86-5 Picloram <0.094 ug/L 0.10 0.094 1 07/20/17 09:35 07/22/17 08:11 1918-02-1 2,4,5-TP (Silvex) <0.16 ug/L 0.20 0.16 1 07/20/17 09:35 07/22/17 08:11 93-72-1 Surrogates	Dinoseb	<0.16	ug/L	0.20	0.16	1	07/20/17 09:35	07/22/17 08:11	88-85-7	
Picloram <0.094 ug/L 0.10 0.094 1 07/20/17 09:35 07/22/17 08:11 1918-02-1 2,4,5-TP (Silvex) <0.16 ug/L 0.20 0.16 1 07/20/17 09:35 07/22/17 08:11 93-72-1 Surrogates 95 % 70-130 1 07/20/17 09:35 07/22/17 08:11 1917-928-9 531.1 HPLC Carbamates Analytical Method: EPA 531.1 07/20/17 09:35 07/22/17 08:11 19719-28-9 Aldicarb Aldicarb Aldicarb sulfone Aldicarb sulfoxide	Pentachlorophenol	<0.030	ug/L	0.040	0.030	1	07/20/17 09:35	07/22/17 08:11	87-86-5	
2,4,5-TP (Silvex) <0.16 ug/L 0.20 0.16 1 07/20/17 09:35 07/22/17 08:11 93-72-1 Surrogates 95 % 70-130 1 07/20/17 09:35 07/22/17 08:11 193-72-1 Saurogates 95 % 70-130 1 07/20/17 09:35 07/22/17 08:11 193-72-1 Saurogates 95 % 70-130 1 07/20/17 09:35 07/22/17 08:11 19719-28-9 Saurogates Analytical Method: EPA 531.1 07/18/17 17:42 116-06-3 Aldicarb <0.64 ug/L 2.0 0.64 1 07/18/17 17:42 116-06-3 Aldicarb sulfone <0.37 ug/L 2.0 0.37 1 07/18/17 17:42 1646-88-4 Aldicarb sulfoxide <0.59 ug/L 2.0 0.59 1 07/18/17 17:42 1646-87-3	Picloram	<0.094	ug/L	0.10	0.094	1	07/20/17 09:35	07/22/17 08:11	1918-02-1	
Surrogates 95 % 70-130 1 07/20/17 09:35 07/22/17 08:11 19719-28-9 531.1 HPLC Carbamates Analytical Method: EPA 531.1 07/18/17 17:42 116-06-3 Aldicarb <0.64 ug/L 2.0 0.64 1 07/18/17 17:42 116-06-3 Aldicarb sulfone <0.37 ug/L 2.0 0.37 1 07/18/17 17:42 1646-88-4 Aldicarb sulfoxide <0.59 ug/L 2.0 0.59 1 07/18/17 17:42 1646-87-3	2,4,5-TP (Silvex)	<0.16	ug/L	0.20	0.16	1	07/20/17 09:35	07/22/17 08:11	93-72-1	
531.1 HPLC Carbamates Analytical Method: EPA 531.1 Aldicarb <0.64 ug/L 2.0 0.64 1 07/18/17 17:42 116-06-3 Aldicarb sulfone <0.37 ug/L 2.0 0.37 1 07/18/17 17:42 1646-88-4 Aldicarb sulfoxide <0.59 ug/L 2.0 0.59 1 07/18/17 17:42 1646-87-3	Surrogates 2,4-DCAA (S)	95	%	70-130		1	07/20/17 09:35	07/22/17 08:11	19719-28-9	
Aldicarb <0.64 ug/L 2.0 0.64 1 07/18/17 17:42 116-06-3 Aldicarb sulfone <0.37	531.1 HPLC Carbamates	Analytical	Method: EPA 5	31.1						
Aldicarb sulfone <0.37 ug/L 2.0 0.37 1 07/18/17 17:42 1646-88-4 Aldicarb sulfoxide <0.59	Aldicarb	<0.64	ua/L	2.0	0.64	1		07/18/17 17:42	116-06-3	
Aldicarb sulfoxide <0.59 ug/L 2.0 0.59 1 07/18/17 17:42 1646-87-3	Aldicarb sulfone	<0.37	ug/l	2.0	0.37	1		07/18/17 17:42	1646-88-4	
	Aldicarb sulfoxide	~0.57	ug/L	2.0	0.07 N 50	1		07/18/17 17:42	1646-87-3	
Carbofuran <0.32 ug/L 2.0 0.32 1 07/18/17 17:42 1563-66-2	Carbofuran	<0.32	ug/L	2.0	0.32	1		07/18/17 17:42	1563-66-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: LBG,Inc 42001269

Pace Project No.: 35324057

Sample: C-23	Lab ID:	35324057001	Collecte	d: 07/13/17	08:00	Received: 07/	14/17 11:10 Ma	atrix: Drinking	Water
Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
531.1 HPLC Carbamates	Analytical	Method: EPA 5	31.1						
3-Hydroxycarbofuran	<0.45	ug/L	2.0	0.45	1		07/18/17 17:42	16655-82-6	
Methomyl	<0.57	ug/L	2.0	0.57	1		07/18/17 17:42	16752-77-5	
Oxamyl	<0.55	ug/L	2.0	0.55	1		07/18/17 17:42	23135-22-0	
Carbaryl	<0.27	ug/L	2.0	0.27	1		07/18/17 17:42	63-25-2	
Surrogates									
BDMC (S)	103	%	80-120		1		07/18/17 17:42		
547 HPLC Glyphosate	Analytical	Method: EPA 5	47						
Glyphosate	<4.2	ug/L	6.0	4.2	1		07/20/17 05:28		
549.2 HPLC Paraquat Diquat	Analytical	Method: EPA 5	49.2 Prepa	aration Meth	od: EP	A 549.2			
Diquat	<0.30	ug/L	0.40	0.30	1	07/19/17 11:00	07/20/17 02:43	85-00-7	
525.2 Base Neutral Extractable	Analytical	Method: EPA 5	25.2 Prepa	aration Meth	od: EP	A 525.2			
Benzo(a)pyrene	0.032J	ug/L	0.096	0.013	1	07/25/17 10:15	07/25/17 17:21	50-32-8	
bis(2-Ethylhexyl)adipate	<0.37	ug/L	1.5	0.37	1	07/25/17 10:15	07/25/17 17:21	103-23-1	
bis(2-Ethylhexyl)phthalate	<0.48	ug/L	1.9	0.48	1	07/25/17 10:15	07/25/17 17:21	117-81-7	
Metribuzin	<0.14	ug/L	0.29	0.14	1	07/25/17 10:15	07/25/17 17:21	21087-64-9	
Surrogates									
1,3-Dimethyl-2-nitrobenzene(S)	106	%	70-130		1	07/25/17 10:15	07/25/17 17:21	81209	
Perylene-d12 (S)	101	%	70-130		1	07/25/17 10:15	07/25/17 17:21	1520963	
Triphenylphosphate (S)	93	%	70-130		1	07/25/17 10:15	07/25/17 17:21	115-86-6	
548.1 GCS Endothall	Analytical	Method: EPA 5	48.1 Prepa	aration Meth	od: EP	A 548.1			
Endothall	<4.3	ug/L	9.0	4.3	1	07/19/17 17:00	07/25/17 00:08		L2,L5



Project: LBG,Inc 42001269

Pace Project No.:

35324057

QC Batch: 381535		Analysis Met	hod:	EPA 531.1		
QC Batch Method: EPA 531.1		Analysis Des	cription:	531.1 HPLC Carba	imate	
Associated Lab Samples: 35324057001						
METHOD BLANK: 2070180		Matrix:	Water			
Associated Lab Samples: 35324057001						
		Blank	Reporting			
Parameter	Units	Result	Limit	MDL	Analyzed	Qualifiers
3-Hydroxycarbofuran	ug/L	<0.45	2	.0 0.45	07/18/17 12:36	

Aldicarb	ug/L	<0.64	2.0	0.64	07/18/17 12:36	
Aldicarb sulfone	ug/L	<0.37	2.0	0.37	07/18/17 12:36	
Aldicarb sulfoxide	ug/L	<0.59	2.0	0.59	07/18/17 12:36	
Carbaryl	ug/L	<0.27	2.0	0.27	07/18/17 12:36	
Carbofuran	ug/L	<0.32	2.0	0.32	07/18/17 12:36	
Methomyl	ug/L	<0.57	2.0	0.57	07/18/17 12:36	
Oxamyl	ug/L	<0.55	2.0	0.55	07/18/17 12:36	
BDMC (S)	%	120	80-120		07/18/17 12:36	

LABORATORY CONTROL SAMPLE: 2070181

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
3-Hydroxycarbofuran	ug/L		10.3	103	80-120	
Aldicarb	ug/L	10	11.2	112	80-120	
Aldicarb sulfone	ug/L	10	10.9	109	80-120	
Aldicarb sulfoxide	ug/L	10	12.0	120	80-120	
Carbaryl	ug/L	10	12.0	120	80-120	
Carbofuran	ug/L	10	11.7	117	80-120	
Methomyl	ug/L	10	10.6	106	80-120	
Oxamyl	ug/L	10	11.8	118	80-120	
BDMC (S)	%			118	80-120	

MATRIX SPIKE & MATRIX SP	IKE DUPLICA	ATE: 207018	82		2070183							
Parameter	3 Units	5323850001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
3-Hydroxycarbofuran	ug/L	0.45U	10	10	10	10.2	100	102	80-120	2	20	
Aldicarb	ug/L	0.64U	10	10	10.5	10.3	105	103	80-120	3	20	
Aldicarb sulfone	ug/L	0.37U	10	10	9.5	9.8	95	98	80-120	4	20	
Aldicarb sulfoxide	ug/L	0.59U	10	10	11.2	11.0	112	110	80-120	2	20	
Carbaryl	ug/L	0.27U	10	10	12.0	11.5	120	115	80-120	4	20	
Carbofuran	ug/L	0.32U	10	10	11.3	10.5	113	105	80-120	7	20	
Methomyl	ug/L	0.57U	10	10	10.5	11.1	105	111	80-120	6	20	
Oxamyl	ug/L	0.55U	10	10	10.2	10.0	102	100	80-120	2	20	
BDMC (S)	%						103	98	80-120			

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Project:	LBG,Inc 420012	69											
Pace Project No.:	35324057												
QC Batch:	382091			Analys	sis Method:	: 6	EPA 547						
QC Batch Method:	EPA 547			Analys	sis Descript	tion: 5	547 HPLC GI	yphosate					
Associated Lab Sar	nples: 3532405	7001											
METHOD BLANK:	2073233			1	Matrix: Wa	ter							
Associated Lab Sar	nples: 3532405	7001											
				Blanl	k R	eporting							
Parar	neter		Units	Resu	lt	Limit	MDL		Analyzed	Qua	alifiers		
Glyphosate			ug/L		<4.2	6.0	0	4.2 07/	20/17 02:06	i			
LABORATORY CO	NTROL SAMPLE:	20	73234										
Parar	neter		Units	Spike Conc.	LCS Resu	S Ilt	LCS % Rec	% Re Limits	c S Qu	alifiers			
Glyphosate			ug/L	50)	52.3	105	80)-120		-		
MATRIX SPIKE & N	IATRIX SPIKE DU	IPLIC	ATE: 20732	35		2073236	;						
				MS	MSD								
Paramete	er U	nits	35324897001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Glyphosate	u	g/L	0.0042U mg/L	50	50	48.2	48.4	96	97	80-120	0	30	
MATRIX SPIKE & N	IATRIX SPIKE DU	IPLIC	ATE: 20732	37		2073238	;						
			25224066004	MS	MSD	MC	MCD	MC	MCD	0/ Dec		Mov	
Paramete	er U	nits	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	70 Rec	RPD	RPD	Qual
Glyphosate	u	g/L	<4.2	50	50	51.2	49.9	102	100	80-120	3	30	

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Project:	LBG,Inc 4200126	9											
Pace Project No.:	35324057												
QC Batch:	381399		Analys	is Method:	EF	PA 504.1							
QC Batch Method:	EPA 504.1		Analys	is Descripti	ion: 50	4 EDB D	DBCP						
Associated Lab Sar	nples: 3532405	7001											
METHOD BLANK:	2069376		N	Aatrix: Wat	er								
Associated Lab Sar	nples: 3532405	7001											
Paran	neter	Units	Blank Resul	t Re	eporting Limit	M	DL	Analyz	ed	Qu	alifiers		
1,2-Dibromo-3-chlor	ropropane	ug/L	<0.	0064	0.020		0.0064	07/18/17	13:43			_	
1,2-Dibromoethane	(EDB)	ug/L	<0.	0075	0.010		0.0075	07/18/17 ⁻	13:43				
LABORATORY COI	NTROL SAMPLE &	LCSD: 2069377		2	070238								
			Spike	LCS	LCSD	LCS	LCSD	% Rec		1	Max		
Paran	neter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPI	D F	RPD	Qu	alifiers
1,2-Dibromo-3-chlor	ropropane	ug/L	.25	0.27	0.24	109	96	70-130		12	40		
1,2-Dibromoethane	(EDB)	ug/L	.25	0.29	0.25	116	101	70-130		13	40		
MATRIX SPIKE & M	IATRIX SPIKE DU	PLICATE: 20702	39		2070240								
			MS	MSD									
Paramete	er Ur	35324127010 hits Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % R	S MS lec % R	D ' ec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromo-3- chloropropane	uç	g/L <0.0055	.44	.44	0.64	0.6	3	146	143	65-135	2	40	M1
1,2-Dibromoethane	(EDB) ug	g/L <0.0064	.44	.44	0.64	0.6	3	146	145	65-135	1	40	M1

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Project: LBG,Inc 42001	269						
QC Batch: 32255		Analysis Me	thod.	EPA 505			
QC Batch Method: EPA 505		Analysis De	scription:	505 GCS Pestici	ides		
Associated Lab Samples: 353240	57001	·					
METHOD BLANK: 149103		Matrix	: Water				
Associated Lab Samples: 353240	057001						
		Blank	Reporting				
Parameter	Units	Result	Limit	MDL	Analyz	ed Qualifie	rs
Aldrin	ug/L	<0.025	0.02	5 0.02	25 07/20/17	18:40	
Decachlorobiphenyl (S)	%.	75	30-15	0	07/20/17	18:40	
Tetrachloro-m-xylene (S)	%.	85	30-15	0	07/20/17 ?	18:40	
LABORATORY CONTROL SAMPLE	: 149104						
		Spike	LCS	LCS	% Rec	o	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers	
Aldrin	ug/L	.048	0.047	98	70-130		
Decachlorobiphenyl (S)	%.			95	30-150		
letrachioro-m-xylene (S)	%.			94	30-150		
LABORATORY CONTROL SAMPLE	: 149105						
		Spike	LCS	LCS	% Rec		
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers	
Aldrin	ug/L	.0095	<0.025	97	70-130		
Decachlorobiphenyl (S)	%.			89	30-150		
Tetrachloro-m-xylene (S)	%.			95	30-150		
MATRIX SPIKE SAMPLE:	149106						
		7024421001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Aldrin	ug/L	<0.0	.095	0.092	9	6 65-135	
Decachlorobiphenyl (S)	%.				7	5 30-150	
Tetrachloro-m-xylene (S)	%.				9	7 30-150	

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Project: LBG,Inc 42001269

Pace Project No.:

35324057

QC Batch:	382602	Analysis Method:	EPA 508.1
QC Batch Method:	EPA 508.1	Analysis Description:	508 GCS Pesticide
Associated Lab Samp	bles: 35324057001		

Matrix: Water

Associated Lab Samples: 35324057001

Parameter	Blar neter Units Res		Reporting Limit	MDL	Analyzed	Qualifiers
Alachlor	ua/l	<0.035	0.20	0.035	07/28/17 05:11	
Atrazine	ug/L	< 0.063	0.10	0.063	07/28/17 05:11	
Butachlor	ug/L	<0.027	0.10	0.027	07/28/17 05:11	
Chlordane (Technical)	ug/L	<0.047	0.20	0.047	07/28/17 05:11	
Dieldrin	ug/L	<0.019	0.10	0.019	07/28/17 05:11	
Endrin	ug/L	<0.0070	0.010	0.0070	07/28/17 05:11	
gamma-BHC (Lindane)	ug/L	<0.0030	0.020	0.0030	07/28/17 05:11	
Heptachlor	ug/L	<0.012	0.040	0.012	07/28/17 05:11	
Heptachlor epoxide	ug/L	<0.0030	0.020	0.0030	07/28/17 05:11	
Hexachlorobenzene	ug/L	<0.019	0.10	0.019	07/28/17 05:11	
Hexachlorocyclopentadiene	ug/L	<0.032	0.10	0.032	07/28/17 05:11	
Methoxychlor	ug/L	<0.051	0.10	0.051	07/28/17 05:11	
Metolachlor	ug/L	<0.047	0.10	0.047	07/28/17 05:11	
Propachlor	ug/L	< 0.030	0.10	0.030	07/28/17 05:11	
Simazine	ug/L	<0.069	0.070	0.069	07/28/17 05:11	
Toxaphene	ug/L	<0.61	1.0	0.61	07/28/17 05:11	
Decachlorobiphenyl (S)	%	93	70-130		07/28/17 05:11	

LABORATORY CONTROL SAMPLE: 2076396

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Alachlor	ug/L	1	0.93	93	70-130	
Atrazine	ug/L	1.2	<0.063	0	70-130 l	2
Butachlor	ug/L	.5	0.50	99	70-130	
Chlordane (Technical)	ug/L		<0.047			
Dieldrin	ug/L	.5	0.45	90	70-130	
Endrin	ug/L	.05	0.044	87	70-130	
gamma-BHC (Lindane)	ug/L	.1	0.090	90	70-130	
Heptachlor	ug/L	.2	0.17	86	70-130	
Heptachlor epoxide	ug/L	.1	0.10	100	70-130	
Hexachlorobenzene	ug/L	.5	0.63	125	70-130	
Hexachlorocyclopentadiene	ug/L	.5	0.78	155	70-130	
Methoxychlor	ug/L	.5	0.55	110	70-130	
Metolachlor	ug/L	.5	0.43	87	70-130	
Propachlor	ug/L	.5	0.48	97	70-130	
Simazine	ug/L	.88	0.43	49	70-130 l	_2
Toxaphene	ug/L		<0.61			
Decachlorobiphenyl (S)	%			96	70-130	

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Project: LBG,Inc 42001269 Pace Project No.: 35324057

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2077205												
			MS	MSD								
	;	35324367001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Alachlor	ug/L				0.96	0.95				1	40	M1
Atrazine	ug/L				<0.13	<0.13					40	MO
Butachlor	ug/L				0.50	0.50				1	40	M1
Chlordane (Technical)	ug/L				<0.094	<0.094					40	
Dieldrin	ug/L				0.44	0.43				1	40	M1
Endrin	ug/L				0.043	0.043				0	40	M1
gamma-BHC (Lindane)	ug/L				0.092	0.091				1	40	M1
Heptachlor	ug/L				0.18	0.16				9	40	M1
Heptachlor epoxide	ug/L				0.098	0.097				2	40	M1
Hexachlorobenzene	ug/L				0.64	0.60				8	40	M1
Hexachlorocyclopentadiene	ug/L				0.80	0.69				15	40	
Methoxychlor	ug/L				0.52	0.52				1	40	
Metolachlor	ug/L				0.46	0.46				1	40	M1
Propachlor	ug/L				0.52	0.51				2	40	M1
Simazine	ug/L				1.1	1.2				8	40	
Toxaphene	ug/L				<1.2	<1.2					40	
Decachlorobiphenyl (S)	%						46	46	70-130		40	S0

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Project: LBG,Inc 42001269

Pace Project No.: 35324057

QC Batch:	382064		Analysis Meth	od:	EPA 515.3			
QC Batch Method:	EPA 515.3		Analysis Desc	cription:	5153 GCS Herbicio	les		
Associated Lab Samp	oles: 35324057001							
METHOD BLANK: 2	2073155		Matrix:	Water				
Associated Lab Samp	oles: 35324057001							
			Blank	Reporting				
Parameter		Units	Result	Limit	MDL	Analyzed	Qualifiers	
2,4,5-TP (Silvex)		ug/L	<0.16	0.	20 0.16	07/22/17 00:29		
2,4-D		ug/L	<0.081	0.	10 0.081	07/22/17 00:29		
Dalapon		ug/L	<0.89		0.89	07/22/17 00:29		
Dicamba		ug/L	<0.067	0.	10 0.067	07/22/17 00:29		
Dinoseb		ug/L	<0.16	0.	20 0.16	07/22/17 00:29		
Pentachlorophenol		ug/L	< 0.030	0.0	40 0.030	07/22/17 00:29		
Picloram		ug/L	<0.094	0.	10 0.094	07/22/17 00:29		
2,4-DCAA (S)		%	88	70-1	30	07/22/17 00:29		

LABORATORY CONTROL SAMPLE: 2073156

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
2,4,5-TP (Silvex)	ug/L	1	1.0	103	70-130	
2,4-D	ug/L	.5	0.39	78	70-130	
Dalapon	ug/L	5	4.5	90	70-130	
Dicamba	ug/L	.5	0.66	132	70-130 L	1
Dinoseb	ug/L	1	1.1	114	70-130	
Pentachlorophenol	ug/L	.2	0.20	98	70-130	
Picloram	ug/L	.5	0.50	99	70-130	
2,4-DCAA (S)	%			93	70-130	

MATRIX SPIKE & MATRIX SP	IKE DUPLICA	TE: 20734	78		2073479							
			MS	MSD								
	9	2347613003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
2,4,5-TP (Silvex)	ug/L	ND	1	1	1.1	1.1	108	111	70-130	3	40	
2,4-D	ug/L	ND	.5	.5	0.42	0.47	84	94	70-130	11	40	
Dalapon	ug/L	ND	5	5	5.7	6.0	115	120	70-130	5	40	
Dicamba	ug/L	ND	.5	.5	0.58	0.63	117	126	70-130	7	40	
Dinoseb	ug/L	ND	1	1	1.1	1.1	105	113	70-130	7	40	
Pentachlorophenol	ug/L	ND	.2	.2	0.18	0.19	91	95	70-130	4	40	
Picloram	ug/L	ND	.5	.5	0.65	0.70	130	140	70-130	7	40	M1
2,4-DCAA (S)	%						98	99	70-130			

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Project: LBG,Inc 42001269 Pace Project No.: 35324057

MATRIX SPIKE & MATRIX SPIK		ATE: 207348	30		2073481							
			MS	MSD								
	3	5323949005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
2,4,5-TP (Silvex)	ug/L	<0.16	1	1	1.1	1.1	108	110	70-130	1	40	
2,4-D	ug/L	<0.081	.5	.5	0.40	0.41	79	82	70-130	3	40	
Dalapon	ug/L	<0.89	5	5	4.7	4.8	94	95	70-130	1	40	
Dicamba	ug/L	<0.067	.5	.5	0.51	0.63	103	127	70-130	21	40	
Dinoseb	ug/L	<0.16	1	1	1.1	1.1	110	111	70-130	1	40	
Pentachlorophenol	ug/L	<0.030	.2	.2	0.19	0.19	96	97	70-130	1	40	
Picloram	ug/L	<0.094	.5	.5	0.55	0.57	110	115	70-130	5	40	
2,4-DCAA (S)	%						95	93	70-130			

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REPORT OF LABORATORY ANALYSIS

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Project: LBG,Inc 42001269

Pace Project No.: 35324057

QC Batch: 382603			Analys	is Method:	E	PA 525.2						
QC Batch Method: EPA 525	.2		Analys	is Descripti	ion: 52	25.2 Base N	eutral Ext	ractables				
Associated Lab Samples: 35	5324057001											
METHOD BLANK: 2076402			N	Atrix: Wat	er							
Associated Lab Samples: 35	324057001											
			Blank	Re	eporting							
Parameter		Units	Resul	t	Limit	MDL		Analyzed	Qua	alifiers		
Benzo(a)pyrene		ug/L	<().013	0.10	0	.013 07/	/25/17 15:37	,			
bis(2-Ethylhexyl)adipate		ug/L	<	:0.38	1.6		0.38 07/	/25/17 15:37	,			
bis(2-Ethylhexyl)phthalate		ug/L	<	<0.50	2.0		0.50 07/	/25/17 15:37	,			
Metribuzin		ug/L	<	:0.15	0.30		0.15 07/	/25/17 15:37	,			
1,3-Dimethyl-2-nitrobenzene(S)	%		85	70-130		07/	/25/17 15:37	,			
Perylene-d12 (S)		%		109	70-130		07/	/25/17 15:37	•			
Triphenylphosphate (S)		%		85	70-130		07/	/25/17 15:37	,			
LABORATORY CONTROL SAM	MPLE: 20	76403										
			Spike	LCS		LCS	% Re	C				
Parameter		Units	Conc.	Resu	lt	% Rec	Limit	s Qu	alifiers			
Benzo(a)pyrene		ug/L	.4		0.30	76	7	0-130				
bis(2-Ethylhexyl)adipate		ug/L	6.4		4.9	77	7	0-130				
bis(2-Ethylhexyl)phthalate		ug/L	8		6.8	85	7	0-130				
Metribuzin		ug/L	1.2		1.0	83	7	0-130				
1,3-Dimethyl-2-nitrobenzene(S)	%				101	7	0-130				
Perylene-d12 (S)		%				94	7	0-130				
Triphenylphosphate (S)		%				86	70	0-130				
MATRIX SPIKE & MATRIX SPI	KE DUPLIC	ATE: 207720)3		2077204							
			MS	MSD								
		35323929005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Benzo(a)pyrene	ug/L		.8	.8	0.66	0.67	83	84	70-130	1	40	
bis(2-Ethylhexyl)adipate	ug/L	<0.37	12.8	12.8	9.7	10.4	76	81	70-130	6	40	
bis(2-Ethylhexyl)phthalate	ug/L	<0.49	16	16	12.6	13.7	79	86	70-130	9	40	
Metribuzin	ug/L	<0.15	2.4	2.4	1.7	1.7	71	72	70-130	2	40	
1,3-Dimethyl-2- nitrobenzene(S)	%						100	99	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

88

80

93 70-130

70-130

87

REPORT OF LABORATORY ANALYSIS

Perylene-d12 (S)

Triphenylphosphate (S)

%

%

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Project:	LBG,Inc 4200)1269											
Pace Project No.:	35324057												
QC Batch:	381974			Analys	is Method:	E	PA 548.1						
QC Batch Method:	EPA 548.1			Analys	is Descript	ion: 5	548 GCS End	lothall					
Associated Lab Sar	mples: 35324	405700 [,]	1										
METHOD BLANK:	2072291			Ν	Aatrix: Wat	ter							
Associated Lab Sar	mples: 35324	405700 [,]	1										
				Blank Reporting		eporting							
Para	neter		Units	Resul	t	Limit	MDL	/	Analyzed	Qua	alifiers		
Endothall			ug/L		<4.3	9.0)	4.3 07/2	24/17 19:29				
LABORATORY CO	NTROL SAMPI	_E: 20)72292										
_				Spike	LCS	5	LCS	% Red	;				
Para	neter		Units	Conc.	Resu	llt	% Rec	Limits	Qu	alifiers	-		
Endothall			ug/L	50		39.6	79	80	-120				
MATRIX SPIKE & M	ATRIX SPIKE	DUPLIC	CATE: 20723	47		2072348							
				MS	MSD								
			35324386001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	. .
Paramete	er	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Quai
Endothall		ug/L	4.3U	50	50	45.0	44.4	90	89	80-120	1	30	
MATRIX SPIKE & M	ATRIX SPIKE	DUPLIC	CATE: 20723	58		2072359							
				MS	MSD								
			35324386002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	<u> </u>
Paramete	er	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Endothall		ug/L	4.3U	50	50	34.3	41.0	69	82	80-120	18	30	M0

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	LBG,Inc 420	01269											
Pace Project No.:	35324057												
QC Batch:	381794			Analys	sis Method:	E	EPA 549.2						
QC Batch Method:	EPA 549.2			Analys	sis Descript	tion: 5	549 HPLC Pa	araquat Diq	uat				
Associated Lab Sa	mples: 353	24057001	I										
METHOD BLANK:	2071478			Ν	Matrix: Wa	ter							
Associated Lab Sa	mples: 353	24057001	1										
				Blank	K R	eporting							
Para	ameter		Units	Resu	t	Limit	MDL	ŀ	Analyzed	Qua	alifiers		
Diquat			ug/L		<0.30	0.40	0	0.30 07/2	20/17 00:32				
LABORATORY CO	ONTROL SAMI	PLE: 20)71479										
Para	ameter		Units	Spike Conc.	LCS Resu	; Ilt	LCS % Rec	% Rec Limits	; Qu	alifiers			
Diquat			ug/L	2		1.6	82	70	-130		-		
MATRIX SPIKE &	MATRIX SPIK	E DUPLIC	CATE: 20718	82		2071883							
				MS	MSD								
Parame	ter	Units	35324366001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Diquat		ug/L	0.30U	2	2	1.7	1.7	84	84	70-130	0	30	
MATRIX SPIKE &	MATRIX SPIK	E DUPLIC	CATE: 20718	84		2071885							
				MS	MSD								
Parame	ter	Units	35324454001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Diquat		ug/L	0.00030U mg/L	2	2	0.60	0.84	30	42	70-130	35	30	M1,R1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: LBG,Inc 42001269

Pace Project No.: 35324057

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-O Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

- L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.
- L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
- L5 LCS recovery exceeded QC limits. Batch accepted based on matrix spike recovery within LCS limits.
- M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- R1 RPD value was outside control limits.
- S0 Surrogate recovery outside laboratory control limits.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LBG,Inc 42001269 Pace Project No.: 35324057

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
35324057001	C-23	EPA 504.1	381399	EPA 504.1	381607
35324057001	C-23	EPA 505	32255	EPA 505	32334
35324057001	C-23	EPA 508.1	382602	EPA 508.1	383798
35324057001	C-23	EPA 515.3	382064	EPA 515.3	382572
35324057001	C-23	EPA 531.1	381535		
35324057001	C-23	EPA 547	382091		
35324057001	C-23	EPA 549.2	381794	EPA 549.2	382025
35324057001	C-23	EPA 525.2	382603	EPA 525.2	382996
35324057001	C-23	EPA 548.1	381974	EPA 548.1	382933

EnviroTest Laboratories, Inc. 315 Fullerton Avenue	M0#:353	240	121		"uctodu	2000	-			Env	iroTest	100
Newburgh, NY 12550 Phone (845) 562-0890 Fax (845) 562-0841					noish	שבר	5			Lab	oratories	s Inc.
Client Information (Sub Contract Lab)	35324057				Jebra			Carrier Track	ing No(s):	COC No: 420-9126.1		
Client Contact Shipping/Receiving	Phone:			dbayer	Genvirotestlabor	atories.co	E			Page: Page 1 of 1		
Company: Pace Analytical Ormond Beach						Anal	vsis Re	quested		STL Job #: 420-123595	5	
Address: 8 East Tower Circle,	Due Date Requeste 7/25/2017	÷		12000	MO					Preservation	n Codes: M House	
City: Ormond Beach	TAT Requested (da	ys):		-7	ui sei	soj				B - NaOH C - Zn Acetate	N - None N - None O - AsNaO2	
State, Zip. FL, 32174	610		713	1003	,DBCF DBCF Ids	ուցու				D - Nitric Acid E - NaHSO4	P - Na204S Q - Na2S03	
Phone: 111-222-3333(Tel)	;# Od			(0	oA be 803 I 816 Pe) elite				G - Amchlor H - Ascorbic /	K - Na2S2SU S - H2SO4 Acid T - TSP Dode	cahvdrate
Email:	:# OM			N 10 6	(oV) tenho , 504. (04.	lovim			_	J - DI Water	U - Acetone V - MCAA	
Project Name: LBG, Inc.	Project #: 42001269			56 <u>7</u>) 9	110 ea 0110 a 4 EPA	8 5.2 Se	8 2	ujxo 6		K-EDTA L-EDA	W - ph 4-5 Z - other (spe	cify)
Sile:	:#MOSS			Iame2	Y) d8 ra \TC 0a \TC 0a \TC	25 /TC	79 /LC	910 /1C		of col		
		Sample	Sample Type (C=comp,	Matrix (w-water, s-solid, 0-wasteioli, 0-wasteioli,	апота Мами и мами ивсоитка ивсоитка и	овсоитка Овсоитка Овсоитка	овсоитка Овсоитка	ивсоитка ивсоитка	_	otal Number		
Sample Identification Client ID (Lab ID)	Sample Date		Preserva	tion Code:	s s s	s s	s s	s s				alore
C - 23 (420-123595-5)	7/13/17	8:00		Water	× × ×	××	××	××		13		
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										142		
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						-						
Possible Hazard Identification	Deison B	[] umo	Radiologica	Je	Sample Dispo	sal (A fee o Client	may be	assessed in Disposal By	f samples ar	e retained longer t	han 1 month) Months	
Deliverable Requested: I, II, III, IV, Other (specify)			0		Special Instruct	ions/QC F	Requireme	nts:				
Empty Kit Relinquished by:		Date:		T	me:			Method	d of Shipment:			
Reinquished by:	Datedipte: 17	141	40	Company	Received by:	1	SUCE		Date/Time:	(1)11 (1)	Company	10.4
Relinquished by:	Date/Time:			Company	Received by: ¹				Date/Time:		Company	-
Reinquished by:	Date/Time:			Company	Received by:				Date/Time:		Company	
Custody Seals Intact: Custody Seal No.:					Cooler Temper	ature(s) °C	and Other R	emarks:	-			Τ

(
Pace Analytical	Sample Condition Upon Receipt	Form	Dodu Feb	iment Revised: pruary 6, 2017
Flotida Laboratory	Document No.: F-FL-C-007 rev. 11		Issue Pace Figure Figur	uing Authority:
	Sample Condition Upor	Receipt Form (SCUR)	
	104.2522105	57	SCON)	
Project #	WU# · 333240)/	Date and I	nitials of person:
Project Manager:	PM: VEG Due Date:	07/28/17	Examining o	contents:
Client:	CLIENT: EVNTES		Deliver: pH:	TU
Thermometer Used:	36 Date: 3/14/	Time:		
Cooler #1 Temp. O. Visua	1 +0.1 (Correction Easter)	17		
Cooler #2 Temp.°C 10.3 (Visual	1 + 0 + 1 (Correction Factor) 1	(Actual)	Samples b	n ice, cooling process has begu
Cooler #3 Temp. °C 9.4 (Visual	1 + 0 (Correction Factor)	$\int \frac{1}{2} $	Samples b	n ice, cooling process has begu
Cooler #4 Temp.°C (Visual		(Actual)	Samples b	n ice, cooling process has begu
Cooler #5 Temp.°C (Visual	(Correction Factor)			n ice, cooling process has begu
Cooler #6 Temp.°C (Visual	(Correction Factor)	(Actual)	Samples of	n ice, cooling process has begu
,		(Actual)	Samples or	n ice, cooling process has begu
Courier: Fed Ex U	PS USPS Client Co	mmercial 🗌 Pace	Other	
Shipping Method: □ First Overnig	ht D Priority Overnight D Standard	Overnight	d 🗆 Other	
Billing: DRecipient	Sender Third Party	Unknown	1	· · · · · · · · · · · · · · · · · · ·
Tracking #96 26	10 4340/22962	4009 3484	= /angla	JUNK SIZE
Custody Seal on Cooler/Box Present Packing Material: Bubble Wrap Samples shorted to lab (If Yes, comp	t: _Yes _No Seals in Bubble BagsNoneOti plete) Shorted Date:	htact: Yes No	Ice: Wet B	ue None
Custody Seal on Cooler/Box Present Packing Material: Bubble Wrap Samples shorted to lab (If Yes, comp	t: Yes No Seals in Bubble Bags None Ott plete) Shorted Date:	htact: Yes No her Short	Ice: Wet B	ue NoneQty:
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www.pacelabs.com

Report Prepared for:

Jeff Baylor PASI Florida 8 East Tower Circle Ormond Beach FL 32174

REPORT OF LABORATORY ANALYSIS FOR 2,3,7,8-TCDD

Report Summary:

This report contains results of one drinking water sample analyzed to determine 2,3,7,8-TCDD content. This sample was analyzed according to Method 1613 by High Resolution Gas Chromatography/High Resolution Mass Spectrometry.

Report Prepared Date:

July 28, 2017

Pace Analytical Services, Inc. 1700 Elm Street Minneapolis, MN 55414 Phone: 612.607.1700 Fax: 612.607.6444

Report Information:

Pace Project #: 10396096 Sample Receipt Date: 07/18/2017 Client Project #: 35324057 Client Sub PO #: N/A State Cert #: 11647

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 Drinking Water Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Sarah Platzer, your Pace Project Manager.

This report has been reviewed by:

July 28, 2017 Sarah Platzer, Project Manager 612-607-6451 (612) 607-6444 (fax) sarah.platzer@pacelabs.com



Report of Laboratory Analysis

This report should not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc.

The results relate only to the samples included in this report.



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Pace Analytical Services, Inc. 1700 Elm Street - Suite 200 Minneapolis, MN 55414

> Tel: 612-607-1700 Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Montana	CERT0092
Alabama	40770	Nebraska	NE-OS-18-06
Alaska	MN00064	Nevada	MN00064
Alaska	UST-078	New Jersey (NE	MN002
Arizona	AZ0014	New York (NEL	11647
Arkansas	88-0680	New hampshire	2081
CNMI Saipan	MP0003	North Carolina	27700
California	MN00064	North Carolina	530
Colorado	MN00064	North Dakota	R-036
Connecticut	PH-0256	Ohio	41244
EPA Region 8	8TMS-L	Ohio VAP	CL101
Florida (NELAP	E87605	Oklahoma	9507
Georgia (EDP)	959	Oregon (ELAP)	MN200001
Guam EPA	959	Oregon (OREL	MN300001
Hawaii	MN00064	Pennsylvania	68-00563
Idaho	MN00064	Puerto Rico	MN00064
Illinois	200011	South Carolina	74003001
Indiana	C-MN-01	Tennessee	TN02818
lowa	368	Texas	T104704192
Kansas	E-10167	Utah (NELAP)	MN00064
Kentucky	90062	Virginia	460163
Louisiana	03086	Washington	C486
Louisiana	MN00064	West Virginia #	9952C
Maryland	322	West Virginia D	382
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-L
Mississippi	MN00064		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc. 1700 Elm Street - Suite 200 Minneapolis, MN 55414

> Tel: 612-607-1700 Fax: 612- 607-6444

Reporting Flags

- A = Reporting Limit based on signal to noise
- B = Less than 10x higher than method blank level
- C = Result obtained from confirmation analysis
- D = Result obtained from analysis of diluted sample
- E = Exceeds calibration range
- I = Interference present
- J = Estimated value
- Nn = Value obtained from additional analysis
- P = PCDE Interference
- R = Recovery outside target range
- S = Peak saturated
- U = Analyte not detected
- V = Result verified by confirmation analysis
- X = %D Exceeds limits
- Y = Calculated using average of daily RFs
- * = See Discussion

REPORT OF LABORATORY ANALYSIS

Chain of Custody

Cł	າain	of Custod	у —		an an an Martin an						4a , a						()3º Analyi	i609k tical							
Wo	rkorde	r: 35324057	Workorder	Name:LBG,Inc	42001269		11555065	11.11.20 11.11	Ow	/леі	Rece	ived	Date	e:	7/14	4/20)17	Re	sult	/ s Re	que	stec	<u>l By:</u>	7/28/2	017
Bo Garcia Pace Analyti 8 East Towe Ormond Bea Phone (386)		tical Ormond Beach er Circle ach, FŁ 32174)672-5668		Pace 1700 Suite Minne Phone	Pace Analytical Minne 1700 Elm Street SE Suite 200 Minneapolis, MN 554 Phone (612)607-1700			NetworkContaine			112Inors		EPA 1613												
ttem.	Samo		in part in the state Scherichter Typerate	Solicol (March 1995) Derettingen (March 1995)	A Parts	Matrix	Unpreserved		200																ONLY
1	C-23		PS	7/13/2017 08:00	35324057001	Drinking	A)	•				x												001	
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Tran	sfers	Released By		Date/Time	Received	By 🦯				<u> </u>	Date/Tin	1e	675 589 19885 <u>6</u> 1			Kittar antra	ki elitette.	. X X					X38-68-6		
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Coo	ler Ter	nperature on Rec	eipt & S	<u>°C Cus</u>	tody Seal	<u>or</u> N	<u> </u>		Re	cei	ved on	ı icę	T	O r	N				Sa	mpl	<u>es Ir</u>	ntaç	t Y	∑or N	

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.

Report No.....10396096_1613DW

Saturday, July 15, 2017 11:34:09 AM

()	Document Name:		Document Revised: 19Dec201	6
Pace Analytical	Sample Condition Upon Rece	ipt Form	Page 1 of 2	
	F-MN-L-213-rev.20		Issuing Authority: Pace Minnesota Quality Offic	e .
		·		
Sample Condition Upon Receipt Pace Ocm	and Brach Project	: #: WO	#:10396096	
Courier: Fed Ex UPS	USPS Client			
Commercial	Dee Other:			
Tracking Number: <u>7422-559</u> 0	9-7564	10396	096	
Custody Seal on Cooler/Box Present? Yes	Seals Intact?	Yes XNo	Optional: Proj. Due Date:	Proj. Name:
Packing Material: 🗌 Bubble Wrap 🕅 Bubbl	ie Bags 🗌 None 🕵 Other: 🚺	15	Temp Blank?]Yes 🕅 No
Thermometer 151401163 Used: 151401164		et 🗌 Blue	None Samples on ice, cool	ing process has begun
Cooler Temp Read (°C): 2.5 Cooler Te	mp Corrected (°C): 3.5	Bi	ological Tissue Frozen? 🗌 Yes	
Temp should be above freezing to 6°C Correcti	on Factor: True Dat	te and Initials o	of Person Examining Contents:	18/15 20
Did samples originate in a quarantine zone within the	United States: AL. AR. CA. FL. GA. ID.	LA MS Di	d samples originate from a foreign source	
NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)?	Yes [No in	fuding Hawaii and Puerto Rico)?	Yes No
If Yes to either question, fill o	ut a Regulated Soil Checklist (F-MN	I-Q-338) and in	clude with SCUR/COC paperwork.	
	N		COMMENTS:	····
Chain of Custody Present?	Yes No	1.	·····	
Chain of Custody Filled Out?	Yes No	2.		
Chain of Custody Relinquished?	Yes No	3.	· · · · · · · · · · · · · · · · · · ·	
Sampler Name and/or Signature on COC?	Yes No N/A	4.	······································	
Samples Arrived within Hold Time?	Yes 🗍 No	5.		
Short Hold Time Analysis (<72 hr)?	Yes No	6.		
Rush Turn Around Time Requested?	Yes 🕅 No	7.	··· • •••••	
Sufficient Volume?	Yes 🗋 No	8.		
Correct Containers Used?	Yes 🔲 No	9.		
-Pace Containers Used?	Yes 🗆 No			
Containers Intact?	Yes 🗆 No	10.	······································	
Filtered Volume Received for Dissolved Tests?	Yes No N/A	11. Note if	sediment is visible in the dissolved co	ntainer
Sample Labels Match COC?		12.		
-Includes Date/Time/ID/Analysis Matrix:				
All containers needing acid/base preservation have be	een .	12		Positive for Res.
checked?	∐Yes □No AN/A	LJ.		Chlorine? Y N
compliance with EPA recommendation?		Sampie #		
(HNO ₃ , H ₂ SO ₄ , <2pH, NaOH >9 Sulfide, NaOH>12 Cyar	nide) 🗋 Yes 🖾 No 🔀 N/A			
DRO/8015 (water) and Dioxin.		Initial when	Lot # of added	
Headspace in VOA Vials (>6mm)?		14.	preservative	<u> </u>
Trip Blank Present?		15.		
Trip Blank Custody Seals Present?				
Pace Trip Blank Lot # (if purchased):	, /			
CLIENT NOTIFICATION/RESOLUTION			Field Data Required?	Yes No
Person Contacted:		Date/Time:		
Comments/Resolution:				
Project Manager Review	Paker.	D	ate: 7/19/2017	<u> </u>

Note: Whenever there is a discrepancy affecting North Carolina corpatiance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers).

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Pace Analytical Services, LLC. 1700 Elm Street - Suite 200 Minneapolis, MN, 55414

Drinking Water Analysis Results 2,3,7,8-TCDD -- USEPA Method 1613B

Tel: 612-607-1700 Fax: 612-607-6444

Sample IDC-23 Client PASI Flo Lab Sample ID 3532405	rida 7001		Date Collected07/13/2017 Date Received07/18/2017 Date Extracted07/25/2017			
	Sample C-23	Method Blank	Lab Spike	Lab Spike Dup		
[2,3,7,8-TCDD]	ND	ND				
EDL	4.7 pg/L	3.1 pg/L				
2,3,7,8-TCDD Recovery			102%	118%		
Spike Recovery Limit			73-146%	73-146%		
RPD			14	4.4%		
IS Recovery	55%	65%	68%	71%		
IS Recovery Limits	31-137%	31-137%	25-141%	25-141%		
CS Recovery	77%	82%	74%	90%		
CS Recovery Limits	42-164%	42-164%	37-158%	37-158%		
	N120225 01	N120222D 14	N/170707D 10	N120222D 12		
Analysia Data	11/0/2/B_31 07/28/2017	11/0/2/B_14 07/07/2017	Y1/0/2/B_12 07/27/2017	11/0/2/B_13 07/07/2017		
Analysis Dale	07/28/2017	07/27/2017	07/27/2017	07/27/2017		
Analysis Time	00:49 SMT	22:43 SMT	21:43 SMT	22.14 SMT		
Nohmo			31VI I 1 0491			
Volume	1.040L		1.048L NA	1.04/L NA		
	INA 07/27/2017	INA 07/07/0017	INA 07/27/2017	INA 07/27/2017		
ICAL Date	0//2//201/	U//2//201/ V170707D 11	U//2//201/ V170727D 11	$\frac{U}{2}$		
CCAL Filename	Y1/0/2/B_11	¥1/0/2/В_11	¥1/0/2/В_11	11/0/2/B_11		

! = Outside the Control Limits

ND = Not Detected EDL = Estimated Detection Limit

hegen M. Chora Analyst:

Limits = Control Limits from Method 1613 (10/94 Revision), Tables 6A and 7A

RPD = Relative Percent Difference of Lab Spike Recoveries

IS = Internal Standard $[2,3,7,8-TCDD-\frac{13}{2}C_{12}]$

CS = Cleanup Standard [2,3,7,8-TCDD-³⁷Cl₄]

Project No.....10396096

MPA SAMPLE RESULTS

WELLS C-6, C-12, C-14, C-16, C-21 AND C-23

ANALYTICAL SERVICES, INC.

Microbiological Testing, Research and Consulting

130 Allen Brook Ln., PO Box 515, Williston, VT 05495 USA 1.800.723.4432 / 802.878.5138 Fax: 802.878.6765 www.analyticalservices.com

8/18/2017

Ron Bayer **EnviroTest Laboratories** 315 Fullerton Ave. Newburgh, NY 12550

Subj.: ASI Report 57773

Dear Ron,

Enclosed please find the results of Microscopic Particulate Analysis (MPA) performed by Analytical Services, Inc. (ASI).

Sample(s) covered in this report were received at ASI on: 7/13/2017

This report contains the following number of pages (total): 14

This report concerns only the samples referenced herein. These results were generated under ASI's quality system, which is in accordance with the NELAC (TNI) standard. Deviations, if any, are noted.

Exceptions: ASI processed, these six (6) samples and performed the Crypto/Giardia analyses; the MPA microscopic examinations were performed by Dr. R. Danielson of IEH-BioVir, an ASI affiliate with extensive MPA experience and expertise.

This report shall not be reproduced, except in full, without ASI's written permission.

Thank you for using ASI for your microbiological testing needs. If you have any questions, please contact us at 800-723-4432.

Sincerely, ANALYTICAL SERVICES, INC. (ASI)

mEn Harry D. Christman, Ph.D. (1-

Technical Director

Sample Information

Client	EnviroTest (LBG)	Volume Sampled (gal)	571.73
Site	Clovewood	Filter Color	Brown
Water Type	Raw/Well	Sediment Volume (mL)	1.4
Client Sample ID	C-6	Analysis Start	7/17/17 9:59
ASI Sample #	57773-01	Analysis End	11-Aug-17

MPA Data (data per 100 gal.)

1.0	Detection Limit at 150X =	100	Vol. Examined at 150x (gal.)
NA	Detection Limit at 300X =	NA	Vol. Examined at 300x (gal.)
No Data	Iron Bacteria	No Data	Amorphous Debris
ND	Crustaceans	ND	Vegetative Debris w/ chlorophyll
ND	Crustacean Parts/Eggs	ND	Veg. Debris w/o chlorophyll
No Data	Water Mites	ND	Diatoms w/ chlorophyll (300X)
No Data	Gastrotrichs	ND	Diatoms w/o chlorophyll (300X)
No Data	Tardigrades	ND	Other Algae (300X, see below)
ND	Nematodes/N. Eggs	ND	Rotifers
No Data	Invertebrate Eggs	No Data	Rotifer Eggs
No Data	Annelids	No Data	Spores
ND	Amoeba	ND	Pollen
No Data	Protozoa (300X, non-Crypto/Giardia)	ND	Insects/Larvae

Cryptosporidium and Giardia Data

Provide the second second second	Volume Examined (L)	726.5		RESUL	TS
				per Vol.	
				Examined	Per 100L
N			Cryptosporidium Oocysts:	0	<0.14
			Giardia Cysts:	0	<0.14

Numerical Scor	e 0	Risk Rating	Low

Other	
Algae Observed	NA
Comments	NA = Not Applicable
	No Data = Not recorded; not relevant in MPA Risk Rating score.
	ND = None Detected
Methods:	MPA - SOP based on EPA Consensus Method (EPA 910/9-92-029)
	Cryptosporidium & Giardia - SOP based on purification, staining & exam procedures in EPA 1623/1623.1
Notes	MPA Risk Rating Tables were developed by USEPA Region 10 from limited data; interpret with caution.
	MPA Risk Rating Score - if less than 100 gallons was examined, interpret with caution.

Sample Information

Client	EnviroTest (LBG)	Volume Sampled (gal)	508.83
Site	Clovewood	Filter Color	Black
Water Type	Raw/Well	Sediment Volume (mL)	10
Client Sample ID	C-12	Analysis Start	7/13/17 13:07
ASI Sample #	57773-02	Analysis End	8/11/17

MPA Data (data per 100 gal.)

1.0	Detection Limit at 150X =	100	Vol. Examined at 150x (gal.)
NA	Detection Limit at 300X =	NA	Vol. Examined at 300x (gal.)
1.2			
No Data	Iron Bacteria	No Data	Amorphous Debris
ND	Crustaceans	ND	Vegetative Debris w/ chlorophyll
ND	Crustacean Parts/Eggs	ND	Veg. Debris w/o chlorophyll
No Data	Water Mites	ND	Diatoms w/ chlorophyll (300X)
No Data	Gastrotrichs	ND	Diatoms w/o chlorophyll (300X)
No Data	Tardigrades	ND	Other Algae (300X, see below)
ND	Nematodes/N. Eggs	ND	Rotifers
No Data	Invertebrate Eggs	No Data	Rotifer Eggs
No Data	Annelids	No Data	Spores
ND	Amoeba	ND	Pollen
No Data	Protozoa (300X, non-Crypto/Giardia)	ND	Insects/Larvae

Cryptosporidium and Giardia Data

 Volume Examined (L)	96.3		RESUL	TS
			per Vol.	
			Examined	Per 100l
		Cryptosporidium Oocysts:	o	<1.04
		Giardia Cysts:	0	<1.04

	Numerical Score	0 Risk Rating	Low
--	-----------------	---------------	-----

Other Algae Observed	NA	ľ
Comments	NA = Not Applicable No Data = Not recorded; not relevant in MPA Risk Rating score. ND = None Detected	
Methods:	MPA - SOP based on EPA Consensus Method (EPA 910/9-92-029) Cryptosporidium & Giardia - SOP based on purification, staining & exam procedures in EPA 1623/1623.1	
Notes	MPA Risk Rating Score - if less than 100 gallons was examined, interpret with caution.	

Sample Information

Client	EnviroTest (LBG)	Volume Sampled (gal)	1010.13
Site	Clovewood	Filter Color	Gray
Water Type	Raw/Well	Sediment Volume (mL)	25
Client Sample ID	C-14	Analysis Start	7/13/17 13:14
ASI Sample #	57773-03	Analysis End	8/11/17

MPA Data (data per 100 gal.)

1.0	Detection Limit at 150X =	100	Vol. Examined at 150x (gal.)
NA	Detection Limit at 300X =	NA	Vol. Examined at 300x (gal.)
No Data	Iron Bacteria	No Data	Amorphous Debris
ND	Crustaceans	ND	Vegetative Debris w/ chlorophyll
ND	Crustacean Parts/Eggs	ND	Veg. Debris w/o chlorophyll
No Data	Water Mites	ND	Diatoms w/ chlorophyll (300X)
No Data	Gastrotrichs	ND	Diatoms w/o chlorophyll (300X)
No Data	Tardigrades	ND	Other Algae (300X, see below)
ND	Nematodes/N. Eggs	ND	Rotifers
No Data	Invertebrate Eggs	No Data	Rotifer Eggs
No Data	Annelids	No Data	Spores
ND	Amoeba	ND	Pollen
No Data	Protozoa (300X, non-Crypto/Giardia)	ND	Insects/Larvae

Cryptosporidium and Giardia Data

A R M C C C C C C C C C C C C C C C C C C	Volume Examined (L)	76.5		RESUL	TS
				per Vol.	
				Examined	Per 100L
			Cryptosporidium Oocysts:	0	<1.31
			Giardia Cysts:	0	<1.31

Numerical Score U Risk Rating Low

Other	
Algae Observed	NA
Comments	NA = Not Applicable No Data = Not recorded; not relevant in MPA Risk Rating score. ND = None Detected
Methods:	MPA - SOP based on EPA Consensus Method (EPA 910/9-92-029) Cryptosporidium & Giardia - SOP based on purification, staining & exam procedures in EPA 1623/1623.1
Notes	MPA Risk Rating Tables were developed by USEPA Region 10 from limited data; interpret with caution.
	MPA Risk Rating Score - if less than 100 gallons was examined, interpret with caution.

Sample Information

Client	EnviroTest (LBG)	Volume Sampled (gal)	869.79
Site	Clovewood	Filter Color	Orange/Tan
Water Type	Raw/Well	Sediment Volume (mL)	0.8
Client Sample ID	C-16	Analysis Start	7/14/17 10:33
ASI Sample #	57773-04	Analysis End	8/11/17

MPA Data (data per 100 gal.)

1.0	Detection Limit at 150X =	100	Vol. Examined at 150x (gal.)
NA	Detection Limit at 300X =	NA	Vol. Examined at 300x (gal.)
No Data	Iron Bacteria	No Data	Amorphous Debris
ND	Crustaceans	ND	Vegetative Debris w/ chlorophyll
ND	Crustacean Parts/Eggs	ND	Veg. Debris w/o chlorophyll
No Data	Water Mites	ND	Diatoms w/ chlorophyll (300X)
No Data	Gastrotrichs	ND	Diatoms w/o chlorophyll (300X)
No Data	Tardigrades	ND	Other Algae (300X, see below)
ND	Nematodes/N. Eggs	ND	Rotifers
No Data	Invertebrate Eggs	No Data	Rotifer Eggs
No Data	Annelids	No Data	Spores
ND	Amoeba	ND	Pollen
No Data	Protozoa (300X, non-Crypto/Giardia)	ND	Insects/Larvae

Cryptosporidium and Giardia Data

	Volume Examined (L)	1646.1		RESUL	TS
				per Vol.	
				Examined	Per 100L
			Cryptosporidium Oocysts:	0	<0.06
()			Giardia Cysts:	0	<0.06

Numerical Score	o	Risk Rating	Low	

Algae Observed	NA
Comments	NA = Not Applicable No Data = Not recorded: not relevant in MPA Risk Rating score.
	ND = None Detected
Methods:	MPA - SOP based on EPA Consensus Method (EPA 910/9-92-029)
	Cryptosporidium & Giardia - SOP based on purification, staining & exam procedures in EPA 1623/1623.1
Notes	MPA Risk Rating Tables were developed by USEPA Region 10 from limited data; interpret with caution.
	MPA Risk Rating Score - if less than 100 gallons was examined, interpret with caution.

Sample Information

Client	EnviroTest (LBG)	Volume Sampled (gal)	988.3
Site	Clovewood	Filter Color	Tan
Water Type	Raw/Well	Sediment Volume (mL)	1.5
Client Sample ID	C-21	Analysis Start	7/13/17 11:37
ASI Sample #	57773-05	Analysis End	8/11/17

MPA Data (data per 100 gal.)

1.0	Detection Limit at 150X =	100	Vol. Examined at 150x (gal.)
NA	Detection Limit at 300X =	NA	Vol. Examined at 300x (gal.)
No Data	Iron Bacteria	No Data	Amorphous Debris
ND	Crustaceans	ND	Vegetative Debris w/ chlorophyll
ND	Crustacean Parts/Eggs	ND	Veg. Debris w/o chlorophyll
No Data	Water Mites	ND	Diatoms w/ chlorophyll (300X)
No Data	Gastrotrichs	ND	Diatoms w/o chlorophyll (300X)
No Data	Tardigrades	ND	Other Algae (300X, see below)
ND	Nematodes/N. Eggs	ND	Rotifers
No Data	Invertebrate Eggs	No Data	Rotifer Eggs
No Data	Annelids	No Data	Spores
ND	Amoeba	ND	Pollen
No Data	Protozoa (300X, non-Crypto/Giardia)	ND	Insects/Larvae

Cryptosporidium and Giardia Data

	Volume Examined (L)	1246.8		RESUL	TS
6				per Vol.	
				Examined	Per 100L
0			Cryptosporidium Oocysts:	0	<0.08
			Giardia Cysts:	0	<0.08

MPA Risk Rating Score (per EPA Consensus Method)

Numerical Score 0	Risk Rating	Low

Other

Algae Observed	NA
Comments	NA = Not Applicable No Data = Not recorded; not relevant in MPA Risk Rating score.
Methods:	MPA - SOP based on EPA Consensus Method (EPA 910/9-92-029) Cryptosporidium & Giardia - SOP based on purification, staining & exam procedures in EPA 1623/1623.1
Notes	MPA Risk Rating Tables were developed by USEPA Region 10 from limited data; interpret with caution.
	MPA Risk Rating Score - if less than 100 gallons was examined, interpret with caution.

Sample Information

Client	EnviroTest (LBG)	Volume Sampled (gal)	1092.03
Site	Clovewood	Filter Color	Orange/Brown
Water Type	Raw/Well	Sediment Volume (mL)	0.4
Client Sample ID	C-23	Analysis Start	7/13/17 11:25
ASI Sample #	57773-06	Analysis End	8/11/17

MPA Data (data per 100 gal.)

1.0	Detection Limit at 150X =	100	Vol. Examined at 150x (gal.)
NA	Detection Limit at 300X =	NA	Vol. Examined at 300x (gal.)
No Data	Iron Bacteria	No Data	Amorphous Debris
ND	Crustaceans	ND	Vegetative Debris w/ chlorophyll
ND	Crustacean Parts/Eggs	ND	Veg. Debris w/o chlorophyll
No Data	Water Mites	ND	Diatoms w/ chlorophyll (300X)
No Data	Gastrotrichs	ND	Diatoms w/o chlorophyll (300X)
No Data	Tardigrades	ND	Other Algae (300X, see below)
ND	Nematodes/N. Eggs	ND	Rotifers
No Data	Invertebrate Eggs	No Data	Rotifer Eggs
No Data	Annelids	No Data	Spores
ND	Amoeba	ND	Pollen
No Data	Protozoa (300X, non-Crypto/Giardia)	ND	Insects/Larvae

Cryptosporidium and Giardia Data

RESULTS		0	Volume Examined (L)
per Vol.			
Examined Per 10			
0 <0.0	Cryptosporidium Oocysts		
0 <0.0	Giardia Cysts		

MPA Risk Rating Score (per EPA Consensus Method)

Numerical Score 0	Risk Rating Low
-------------------	-----------------

Other

Algae Observed	NA
Comments	NA = Not Applicable No Data = Not recorded; not relevant in MPA Risk Rating score. ND = None Detected
Methods:	MPA - SOP based on EPA Consensus Method (EPA 910/9-92-029) Cryptosporidium & Giardia - SOP based on purification, staining & exam procedures in EPA 1623/1623.1
Notes	MPA Risk Rating Score - if less than 100 gallons was examined, interpret with caution.



123563-1

CHAIN OF CUSTODY RECORD

Analytical Services, Inc., 130 Allen Brook Lane, Williston, VT 05495, Attn: Sample Management Ship to: Phone: 1-800-723-4432 or 802-878-5138 . Fax: 802-878-6765 Web site: www.analyticalservices.com

Submitted By: 136, JAC. <u>UResearch D. Suik # 204</u> Shelton, CT 06484		Report To: <u>LBG</u> , <u>Thc</u>
Phone: 203-129-855 Email: sstiaberelbsct.com		Phone: Email:
Project Name	Cloucwood	Invoice To: Simon Gelb
Job Site	Clovewast	
P.O. Number	LakeAnn	Phone: Email:

	Sample Collection			Sample Matrix							Lab Use
Sample Identification*	Date (Start)	Time (Start)	Sampler Initials	Water - Raw	Water - Finished	Waste Water	Biosolids	Soil/Sediment	Other	Analysis Requested	Only Temp (°C)
C-6	7/11/17	1850	D	X						MPA, giardia, crypto	4.4
					_	_	_				
				-	-	_			_		-
				-		-	_	_	-		
	10000					-		-			
				-		-	-	-	_		
					_	-	-		-		-
		in									

Relinquished By (signature)	Date/Time	Received By (sig	Date/	Time	
fact they	7/12/17 1432	Beyer	4.8°	7/12/171	432 4.24 10:10 IR#
Field Comments:		Lab Comments:	-u		an ic
White	- To accompany samples	• Yellow – Sampl	er Copy		P 8/14



123563-2 Page ____ of _

CHAIN OF CUSTODY RECORD

Analytical Services, Inc., 130 Allen Brook Lane, Williston, VT 05495, Attn: Sample Management Ship to: Phone: 1-800-723-4432 or 802-878-5138 • Fax: 802-878-6765 Web site: www.analyticalservices.com

Submitted By:	Leggette, Brashears & Graham 4 Research Dr. Smite 204 Shelton, CT 06484	Report To: Stacy Sheber Leggette, Brashears & Graham Y Research Dr. Suite 204
Phone: 203-92	98555Email: Stieber@Ubgct.com	Phone: 203-929-855Email: 55tieber@Ubgct.com
Project Name	Clovewood	Invoice To: Simon Gelb
Job Site	Clovewood	
P.O. Number	Lakann	Phone: Email:

	Sample Collection		Sample Matrix							Lab	
				1		check	< one				Use
Sample Identification*	Date (Start)	Time (Start)	Sampler Initials	Water - Raw	Water - Finished	Waste Water	Biosolids	Soil/Sediment	Other	Analysis Requested	Only Temp (°C)
1-12	7/11/17	1413	63	X		6.1				MPA giaskin asysta	3.1

Relinquished By (signature)	Date/Time	Received By (sigr	nature)	Date/Time		
AHUY HO EPUlhaso	7/12/17/430	Rey Unit England	4.84	7/12/17 1430	4.200 IR#	
Field Comments:		Lab Comments:			onic	
White	- To accompany samples	• Yellow – Sample	г Сору	P 9/14	ţ	



123563-3

CHAIN OF CUSTODY RECORD

Analytical Services, Inc., 130 Allen Brook Lane, Williston, VT 05495, Attn: Sample Management Ship to: Phone: 1-800-723-4432 or 802-878-5138 • Fax: 802-878-6765 Web site: www.analyticalservices.com

Submitted By: Shelton	236, Inc a Dr. Suik #204 CT 06484 Sticher	Report To: LBG, Inc. Stacy Stieber
Phone: 203 98	9-555 Email: Stieber@Lkyct.com	Phone: Email:
Project Name	Cloverood	Invoice To: Simon Gelb
Job Site	Clowensol	
P.O. Number	CakeAn	Phone: Email:

	Sample	Collectio	n	Sample Matrix			trix			Lab Use		
Sample Identification*	Date (Start)	Time (Start)	Sampler Initials	Water - Raw	Water - Finished	Waste Water	Biosolids	Soil/Sediment	Other	Analysis Requested	Only Temp (°C)	
C-14	7/11/17	18300	B	Х						MBA, giandia, crypt	0	2.
						-						
			-	-	1	-	-					
			-						-			
					-				-			
							-					

Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time	
Matt	1/12/17/4300	Bayes 4.40	7/12/17/1430	4.2°C
Field Comments:	1/12/17 15 95	Lab Comments:	+/13/17 10.10	on ice
	-		810/14	



123563-4

Page ____ of

CHAIN OF CUSTODY RECORD

Ship to: Analytical Services, Inc., 130 Allen Brook Lane, Williston, VT 05495, Attn: Sample Management Phone: 1-800-723-4432 or 802-878-5138 • Fax: 802-878-6765 *Web site: www.analyticalservices.com*

Submitted By: _	UBG, Inc. Stacy Stieber 4 Research Dr. Suite204	Report To: LBG, Inc. Same
Phone: 203.93	Shellon, CT 06984 1989 Email: SSFicher@Uwj.cf.	COPPhone: Email:
Project Name	Clove wood	Invoice To: Simon Gelb
Job Site	Clovewood	
P.O. Number	Lakann	

	Sample	Collectio	on		Sample Matrix			Sample Matrix					Lab
Sample Identification*	Date (Start)	Time (Start)	Sampler Initials	Water - Raw	Water - Finished	Waste Water	Biosolids	Soil/Sediment	Other	Analysis Requested	Only Temp (°C)		
C-16	7/11/17	1650	(58)	X						MPA, giardia, Crypto	14,0		
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	-												
101-001-00-00-00-00-00-00-00-00-00-00-00							1-1-1						

Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time	1
A that a strang	7/12/17 1435	Bay 4.5	7/12/17 1435	4.2
Field Comments:		Lab Comments:		_
		2		PI

analy Serv	ytical vices, Inc.	123563-5 Page of CHAIN OF CUSTODY RECORD
Ship to: Anal Pho	lytical Services, Inc., 130 Allen Brook Lane, \ ne: 1-800-723-4432 or 802-878-5138 ● Fa	Williston, VT 05495, Attn: Sample Management x: 802-878-6765 Web site: www.analyticalservices.com
Submitted By:	Leggette, Brostears & Gra A Research Dr. Suite 204 Shelton, CT 06484 A-855Email: SSticker Olbych	ManReport To: <u>Leggette</u> , Brashears & Grahann Stacy Stieber <u>4 Research Dr. Saile 204</u> Shelton, CT Oby84 (Im Phone: 2039298555 Email: <u>SSFieber@Uby</u> ct. om
Project Name	Clovewood	Invoice To: Simon Gelb
Job Site	Clovewood	
P.O. Number	Lakann	Phone: Email:

	Sample Collection				Sa	nple	Ma	trix			Lab
Sample Identification*	Date (Start)	Time (Start)	Sampler Initials	Water - Raw	Water - Finished	Waste Water	Biosolids	Soil/Sediment	Other	Analysis Requested	Only Temp (°C)
C-21	7/11/17	1 1749 5								MPA, giundin, crypto	5.0

Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time	
Hay Allow	7/12/17 1430	Bey 4.6°	7/13/17 1430	4.2 ×3
Field Comments:		Lab Comments:		000
14 Paito		A Vollow Sempler Copy	P12/14	



123563-6 Page ____ of _

CHAIN OF CUSTODY RECORD

Analytical Services, Inc., 130 Allen Brook Lane, Williston, VT 05495, Attn: Sample Management Ship to: Phone: 1-800-723-4432 or 802-878-5138 • Fax: 802-878-6765 Web site: www.analyticalservices.com

Submitted By: Leagette, Brashenrs & Graha 4 Research Dr. Suite 204 Shelfon, CT 06484	M Report To: Stacy Stieber Leggette, Brushears & Graham Inc. 4 Research Dr. Smite 204
Phone: 203-929-8555 Email: 25heber@Lbgct.Con	Phone: 203-929-855 Email: Satieber Olbgot.com
Project Name CLOVE WOOD	Invoice To: Simon Gelb
Job Site CLOVEWOOD	
P.O. Number Lakann	Phone: Email:

	Sample		Sa	mple	Ma	trix					
Sample Identification*	Date (Start)	Time (Start)	Sampler Initials	Water - Raw	Water - Finished	Waste Water	Biosolids	Soil/Sediment	Other	Analysis Requested	Only Temp (°C)
(-23	7/11/17	1753	53)	X						MPA, giardia, Coypto	11,2
	1 1			-	_						
			-	-	-	-			-		
			-	-	-		-				
											1
			1								
									1		-

Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time	
Field Comments:	7/2/17 1431	Lab Comments:	7/12/17 143) 7/13/13 10:10	4.200 IR#?
\\/bito		Vellow – Sampler Conv	P13/14	1

A naly Serv	tical vices, Inc.							Cł	HA	IN	OF CUSTO	Page DDY REC	of ORD	
hip to: Analy Phon	/tical Services, Inc., ne: 1-800-723-443	130 Allen 2 or 802-8	Brook Lar 78-5138	ne, W • Fax	/illisto c: 80	on, V 2-87	т 05 8-6'	5495 765	5, At 11/	tn: S éb sii	ample Manageme e: www.analytica	ent Iservices.com		
Submitted By: 1	eggette Bra 1 Research Dr. helton, CT 9-855FEmail: 55	shears Suite 06484	ZOY 204	4.10	34	Rep Pho	ort T	0:	Steg 12 Steg	ge ge Re Nel	Stieber He Brasher Search pr. S Da, CT 0	urs \$ (ra cuite 204 idsu	ham	
Project Name	Clovewoo	d	ougo		-	Invoi	ce T	o:	MC	r. PC	Simon Gel	b		
Job Site	Clovewoo	d				-	7	_	-	-				
P.O. Number	Lakann					Pho	he:				Email:			
Sa Identi	Imple fication*	Sample Date (Start)	X Water - Raw	Vater - Finished	Maste Mater Nater	< one spilosoild	Soll/Sediment	Other	Anal Requi	lysis ested	Lab Use Only Temp (°C)			
	0	alled as por	3 au	2 0 1	~~~~	S.								
Sample ID shoul	d match ID written o	on the samp	ole contain	iers a	and d	ata s	heet	ts. S	amp	le ID	will appear on th	e report for ider	itification.	
Relinquishe	ed By (signature)	-	Date/Time	•	Received By (signature) Date/Time									
							Zy	Mr	l			+113/17 1	0:10	

Lab Comments:

Cancelled per Client reguest.

Field Comments:

P14/14

APPENDIX XI

C-12 SEPTEMBER 2017

LBG Hydrogeologic & Engineering Services, P.C.



ANALYTICAL REPORT

Job Number: 420-126731-1 SDG Number: Clovewood Job Description: LBG, Inc.

For: Leggette, Brashears & Graham, Inc. 4 Research Drive Shelton, CT 06464

Attention: Stacy Stieber

Debra Ba

Debra Bayer Customer Service Manager dbayer@envirotestlaboratories.com 09/28/2017

NYSDOH ELAP does not certify for all parameters. EnviroTest Laboratories does hold certification for all analytes where certification is offered by ELAP unless otherwise specified in the Certification Information section of this report. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval of the laboratory. EnviroTest Laboratories Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our laboratory. All questions regarding this report should be directed to the EnviroTest Customer Service Representative.

Page 1 of 10

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554



METHOD SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-126731-1 SDG Number: Clovewood

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Total Coliform and Escherichia coli by Colilert - Presence/Absence	EnvTest	SMWW SM 9223	1
Lab References:			
EnvTest = EnviroTest			
Method References:			

SMWW = "Standard Methods for the Examination of Water and Wastewater"

METHOD / ANALYST SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-126731-1 SDG Number: Clovewood

Method

SMWW SM 9223

O'Driscoll, Kate

Analyst

Analyst ID

KO

SAMPLE SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-126731-1 SDG Number: Clovewood

			Date/Time	Date/Time
Lab Sample ID	Client Sample ID	Client Matrix	Sampled	Received
420-126731-1	C-12	Drinking Water	09/20/2017 1320	09/20/2017 1440

EnviroTest Laboratories, Inc.

Analytical Data

Job Number: 420-126731-1 Sdg Number: Clovewood

Client: Leggette, Brashears & Graham, Inc.

			Bio	ology			
Client Sample ID:	C-12						
Lab Sample ID: Client Matrix:	420-126731-1 Drinking Water				Date Sampled: Date Received:	09/2 09/2	0/2017 1320 0/2017 1440
Analyte		Result	Qual Ur	nits		Dil	Method
Coliform, Total	Anly Batch:	Absent	CF Date Analyzed	FU/100mL 09/20/2017 1658		1.0	SM 9223
Escherichia coli	Anly Batch:	Absent	CF Date Analyzed	U/100mL 09/20/2017 1658		1.0	SM 9223

DATA REPORTING QUALIFIERS

Lab Section

Qualifier

Description

The following analytes are Not Part of the ELAP scope of accreditation:

Sulfur, Tungsten, Silicon, Bicarbonate Alkalinity, 7 Day BOD 5210C, 28 Day BOD, Soluble BOD, Carbon Dioxide, Carbonate Alkalinity, CBOD Soluble, Chlorine, Cyanide (WAD), Ferrous Iron, Ferric Iron, Total Nitrogen, Total Organic Nitrogen, Dissolved Oxygen, pH, Phenolphthalein Alkalinity, Solids (Fixed), Solids (Percent), Solids (Percent Moisture), Solids (Percent Volatile), Solids (Volatile Suspended), Temperature, TKN (Soluble), COD (Soluble), Total Inorganic Carbon, Volatile Acids as Acetic Acid, 2-Aminopyridine, 3-Picoline, 1-Methyl-2-pyrrilidinone, Aziridine, Dimethyl sulfoxide, 1-Chlorohexane, Iron Bacteria, Salmonella, & Sulfur Reducing Bacteria.

The following analytes are Not Part of ELAP Potable Water scope of accreditation:

Cobalt (200.7, 200.8), Tin (200.7), Strontium (200.7), Gold (200.7), Platinum (200.7), Palladium (200.7), Titanium (200.7), Phosphorus (365.3), Nitrate-Nitrite (10-107-4-1C, 353.2), m-Xylene & p-Xylene (502.2, 524), Naphthalene (502.2), o-Xylene (502.2, 524), & Fecal Coliform (9222D).

The following analytes are Not Part of ELAP Solid and Hazardous Waste scope of accreditation:

Ammonia (SM 4500NH3G), TKN (351.2), Phosphorus (365.3), 1,2-Dichloro-1,1,2-trifluoroethane (8260), & Chlorodifluoromethane (8260).

The following analytes are Not Part of ELAP Non Potable Water scope of accreditation:

Dissolved Organic Carbon (5310C), Mecoprop (8151A), & MCPA (8151A).

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%R	Percent Recovery
DL, RA, RE	Indicates a Dilution, Reanalysis or Reextraction.
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit - an estimate of the minimum amount of a substance that an analytical process can reliably detect. A MDL is analyte- and matrix-specific and may be laboratory-dependent.
ND	Not detected at the reporting limit (or MDL if shown).
QC	Quality Control
RL	Reporting Limit - the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.
RPD	Relative Percent Difference - a measure of the relative difference between two points.

EnviroTest Laboratories		CHA Lab Name		C iroTe)F ∍st L	.abc	CU	ST	0[ΟY		12	6	7.	3	,			REPORT# (Lab Use Only)
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PROJECT REFERENCE Clovewood	PROJECT NO.			MATR TYPE	iX E						REQ	UIREC	ANAL	YSES					PAGE 1 of	<u>1</u>
ENVIROTEST PROJECT MANAGER Debra Bayer							ain	ials HCL	um Thio.	um Thio.	/Na2SO3	tric Acid	io(liquid)	r Plastic	ium Hyd.	ic Sterile	tic Nitric	s Unpres		
	203-929-8555		DICATE	tter) Indicale			Vmber Pi	40ml V	0ml Sodi	ber Sodi	ber HCI	lastic Ni	/Sod.Th	Lite	stic Sod	mi Plasti	llon Plas	oml Vials	NORMAL	<u> </u>
CLIENT NAME Stacy Stieber			AB (G) IN	Naste Wi			Liter /		4	mlAm	iter An	50ml F	mì Mor		ml Pla	125	Ga	4	QUICK	
CLIENT ADDRESS 4 Research Drive, Suite 301, Shelton	n, CT 06484		OR GR	sr) or W (SoLID					250			4		25(VERBAL	
COMPANY CONTRACTING THIS WORK (if applicable):		1	DSITE (C	ang Wate	OR SEM	Specify													#OF COOLERS	S
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.

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-126731-1 SDG Number: Clovewood

Login Number: 126731

Question	T/F/NA	Comment
Samples were collected by ETL employee as per SOP-SAM-1	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is recorded.	True	2.9 C
Cooler Temp. is within method specified range.(0-6 C PW, 0-8 C NPW, or BAC <10 C	True	
If false, was sample received on ice within 6 hours of collection.	NA	
Based on above criteria cooler temperature is acceptable.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	NA	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

C-23 SEPTEMBER 2017

LBG Hydrogeologic & Engineering Services, P.C.



ANALYTICAL REPORT

Job Number: 420-126741-1 SDG Number: Clovewood Job Description: LBG, Inc.

For: Leggette, Brashears & Graham, Inc. 4 Research Drive Shelton, CT 06464

Attention: Stacy Stieber

Debra Ba

Debra Bayer Customer Service Manager dbayer@envirotestlaboratories.com 10/03/2017

NYSDOH ELAP does not certify for all parameters. EnviroTest Laboratories does hold certification for all analytes where certification is offered by ELAP unless otherwise specified in the Certification Information section of this report. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval of the laboratory. EnviroTest Laboratories Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our laboratory. All questions regarding this report should be directed to the EnviroTest Customer Service Representative.

Page 1 of 10

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554


METHOD SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-126741-1 SDG Number: Clovewood

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Semivolatile Organic Compounds in Drinking Water by GCMS Determination of Semivolatile Organic Compounds in	EnvTest EnvTest	EPA 525.2	EPA 525.2
Lab References:			
EnvTest = EnviroTest			

Method References:

EPA = US Environmental Protection Agency

METHOD / ANALYST SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-126741-1 SDG Number: Clovewood

Method

EPA 525.2

Analyst

Labare, Alicia M

SAMPLE SUMMARY

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-126741-1 SDG Number: Clovewood

			Date/Time	Date/Time
Lab Sample ID	Client Sample ID	Client Matrix	Sampled	Received
420-126741-1	C-23	Drinking Water	09/20/2017 1340	09/20/2017 1440

Analytical Data

Client: Leggette	, Brashears & Graham, Inc.			Job Number: 420-126741-1
Client Sample ID:	C-23			Sag Number. Clovewood
Lab Sample ID:	420-126741-1		Date Sampled	: 09/20/2017 1340
Client Matrix:	Drinking Water		Date Received	l: 09/20/2017 1440
	525.2 Semivo	blatile Organic Compounds in Dr	inking Water by GCMS	
Method:	525.2	Analysis Batch: 420-114790	Instrument ID:	Hewlett Packard 5890
Preparation:	525.2	Prep Batch: 420-114787	Lab File ID:	A0927007.D
Dilution:	1.0		Initial Weight/Volum	ne: 1040 mL
Date Analyzed:	09/27/2017 2047		Final Weight/Volum	e: 1 mL
Date Prepared:	09/27/2017 1515		Injection Volume:	
Analyte		Result (ug/L)	Qualifier	MDL
Benzo[a]pyrene		<0.0192		0.0192
Di(2-ethylhexyl)adip	pate	<0.0577		0.0577
Bis(2-ethylhexyl) ph	nthalate	<0.0481		0.0481
Metribuzin		<0.0865		0.0865
Aldrin		<0.135		0.135
Surrogate		%Rec	Acce	eptance Limits
2-Nitro-m-xylene		101	70	- 130
Perylene-d12		116	70	- 130
Triphenylphosphate	9	121	70	- 130

DATA REPORTING QUALIFIERS

Lab Section

Qualifier

Description

The following analytes are Not Part of the ELAP scope of accreditation

Sulfur, Tungsten, Silicon, Bicarbonate Alkalinity, 7 Day BOD 5210C, 28 Day BOD, Soluble BOD, Carbon Dioxide, Carbonate Alkalinity, CBOD Soluble, Chlorine, Cyanide (WAD), Ferrous Iron, Ferric Iron, Total Nitrogen, Total Organic Nitrogen, Dissolved Oxygen, pH, Phenolphthalein Alkalinity, Solids (Fixed), Solids (Percent), Solids (Percent Moisture), Solids (Percent Volatile), Solids (Volatile Suspended), Temperature, TKN (Soluble), COD (Soluble), Total Inorganic Carbon, Volatile Acids as Acetic Acid, 2-Aminopyridine, 3-Picoline, 1-Methyl-2-pyrrilidinone, Aziridine, Dimethyl sulfoxide, 1-Chlorohexane, Iron Bacteria, Salmonella, & Sulfur Reducing Bacteria.

The following analytes are Not Part of ELAP Potable Water scope of accreditation

Cobalt (200.7, 200.8), Tin (200.7), Strontium (200.7), Gold (200.7), Platinum (200.7), Palladium (200.7), Titanium (200.7), Phosphorus (365.3), Nitrate-Nitrite (10-107-4-1C, 353.2), m-Xylene & p-Xylene (502.2, 524), Naphthalene (502.2), o-Xylene (502.2, 524), & Fecal Coliform (9222D).

The following analytes are Not Part of ELAP Solid and Hazardous Waste scope of accreditation

Ammonia (SM 4500NH3G), TKN (351.2), Phosphorus (365.3), 1,2-Dichloro-1,1,2-trifluoroethane (8260), & Chlorodifluoromethane (8260).

The following analytes are Not Part of ELAP Non Potable Water scope of accreditation

Dissolved Organic Carbon (5310C), Mecoprop (8151A), & MCPA (8151A).

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%R	Percent Recovery
DL, RA, RE	Indicates a Dilution, Reanalysis or Reextraction.
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit - an estimate of the minimum amount of a substance that an analytical process can reliably detect. A MDL is analyte- and matrix-specific and may be laboratory-dependent.
ND	Not detected at the reporting limit (or MDL if shown).
QC	Quality Control
RL	Reporting Limit - the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.
RPD	Relative Percent Difference - a measure of the relative difference between two points

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PROJECT REFERENCI	e Clovewood	PROJECT NO.			MATR	IX E	Т					REQ	UIREC	ANAL	YSES					PAGE 1 of		1
ENVIROTEST PROJEC	ebra Bayer	P.O. NUMBER	TOWN					ain	ials HCL	um Thio.	um Thio.	Na2SO3	tric Acid	o(liquid)	r Plastic	um Hyd.	c Sterile	tic Nitric	: Unpres		TURNAROUND	TIME
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4 Research Dr	rive, Suite 301, Shelt	on, CT 06484		C) OR C	ter) or V	VISOLI	~				~	I	<u> </u>			<u> </u>					i	
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LOGIN SAMPLE RECEIPT CHECK LIST

Client: Leggette, Brashears & Graham, Inc.

Job Number: 420-126741-1 SDG Number: Clovewood

Login Number: 126741

Question	T/F/NA	Comment
Samples were collected by ETL employee as per SOP-SAM-1	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is recorded.	True	2.9 C
Cooler Temp. is within method specified range.(0-6 C PW, 0-8 C NPW, or BAC <10 C	True	
If false, was sample received on ice within 6 hours of collection.	NA	
Based on above criteria cooler temperature is acceptable.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	NA	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

APPENDIX XII



LBG Hydrogeologic & Engineering Services, P.C.







K:\Jobs\Lake Anne\Clovewood\2017\Hydrographs\Physical Parameters\C-16 Multi PP Simultaneous.grf



Graphs of Physical Parameter Measurements Collected from Pumping Well C-21 and Surface Water near Pumping Well C-21 During Pumping Test Program Conducted on Well C-21, July 25, 2017 Through July 28, 2017



Date	Time	pH (S.U.)	Conductivity (mS/cm)	pH (S.U.)	Conductivity (mS/cm)
		C-6 D	Jischarge	Surfac	e Water Near C-6
7/10/2017	20:53	6.93	0.320	7.09	0.143
7/10/2017	23:40	7.21	0.322	7.21	0.137
7/11/2017	1:29	7.34	0.319	7.19	0.142
7/11/2017	3:18	7.24	0.317	7.12	0.142
7/11/2017	6:06	7.37	0.321	7.27	0.140
7/11/2017	6:25	7.42	0.322	7.56	0.154
7/11/2017	8:32	7.11	0.289	7.11	0.141
7/11/2017	10:30	7.79	0.282	7.89	0.115
7/11/2017	11:45	7.52	0.294	7.65	0.112
7/11/2017	13:16	7.87	0.281	7.91	0.119
7/11/2017	14:25	7.77	0.285	7.78	0.119
7/11/2017	15:22	7.76	0.281	7.88	0.125
7/11/2017	16:24	7.74	0.283	7.93	0.127
7/11/2017	17:26	7.82	0.286	7.90	0.123
7/11/2017	18:44	7.76	0.283	7.83	0.116
7/11/2017	22:25	6.72	0.322	6.97	0.132
7/12/2017	3:20	7.57	0.286	7.55	0.122
7/12/2017	5:58	7.16	0.289	7.31	0.122
7/12/2017	8:16	7.68	0.288	7.72	0.123
7/12/2017	12:27	7.78	0.285	7.94	0.113
7/12/2017	15:12	7.65	0.282	6.77	0.117
7/12/2017	16:21	7.84	0.279	7.87	0.119
7/12/2017	17:48	7.90	0.284	7.91	0.119
7/12/2017	21:35	7.34	0.285	7.39	0.123
7/13/2017	0:20	7.52	0.282	7.57	0.120
7/13/2017	3:16	7.60	0.282	7.71	0.117
7/13/2017	5:59	7.51	0.286	7.80	0.123
7/13/2017	7:41	7.97	0.280	7.99	0.122
7/13/2017	8:41	7.94	0.285	7.93	0.130
7/13/2017	11:08	7.87	0.284	7.91	0.131
7/13/2017	14:08	7.93	0.285	7.90	0.128
7/13/2017	18:25	7.89	0.286	7.63	0.119
7/13/2017	21:57	7.43	0.284	7.57	0.106
7/14/2017	1:11	7.60	0.280	7.75	0.105
7/14/2017	4:05	7.61	0.284	7.78	0.109
7/14/2017	6:05	7.53	0.284	7.57	0.095
7/14/2017	9:26	7.91	0.285	8.27	0.080
7/14/2017	12:54	7.64	0.298	7.85	0.076
7/14/2017	16:16	7.78	0.283	7.90	0.067
7/14/2017	22:53	7.61	0.281	7.78	0.084
7/15/2017	2:35	7.59	0.295	7.75	0.081
7/15/2017	6:04	7.46	0.281	7.63	0.083
7/15/2017	8:22	7.62	0.276	7.76	0.084
7/15/2017	10:59	7.64	0.275	7.82	0.089
7/15/2017	15:38	7.36	0.272	7.61	0.082
7/15/2017	17:48	7.23	0.270	7.35	0.079

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Date	Time	pH (S.U.)	Conductivity (mS/cm)	pH (S.U.)	Conductivity (mS/cm)
		C-12 I	Discharge	Surfac	e Water Near C-12
7/10/2017	22:06	7.47	0.301	7.51	0.151
7/10/2017	23:55	7.33	0.317	7.48	0.155
7/11/2017	1:55	7.36	0.317	7.53	0.160
7/11/2017	4:00	7.39	0.320	7.51	0.156
7/11/2017	7:50	7.16	0.287	7.48	0.149
7/11/2017	10:10	7.83	0.290	7.96	0.139
7/11/2017	12:38	7.94	0.292	7.97	0.135
7/11/2017	14:01	7.85	0.287	7.84	0.138
7/11/2017	15:03	7.77	0.290	7.85	0.147
7/11/2017	16:03	7.89	0.288	7.94	0.147
7/11/2017	17:06	7.91	0.289	7.99	0.145
7/11/2017	18:23	7.82	0.287	7.81	0.144
7/11/2017	22:58	7.40	0.315	7.39	0.157
7/12/2017	3:48	7.60	0.283	7.60	0.144
7/12/2017	6:27	7.41	0.282	7.25	0.139
7/12/2017	7:55	7.81	0.287	7.73	0.148
7/12/2017	9:07	7.90	0.286	7.88	0.146
7/12/2017	11:50	7.67	0.285	7.79	0.142
7/12/2017	12:53	8.03	0.285	7.98	0.144
7/12/2017	15:35	7.88	0.286	7.94	0.139
7/12/2017	16:49	7.98	0.283	7.97	0.147
7/12/2017	21:50	7.47	0.278	7.40	0.143
7/13/2017	0:54	7.71	0.276	7.77	0.143
7/13/2017	3:44	7.75	0.282	7.78	0.144
7/13/2017	6:18	7.73	0.275	7.87	0.143
7/13/2017	8:14	7.83	0.284	7.74	0.143
7/13/2017	9:09	7.93	0.282	7.86	0.146
7/13/2017	11:28	7.97	0.283	7.87	0.147
7/13/2017	14:20	7.75	0.283	7.86	0.148
7/13/2017	18:37	7.91	0.284	7.81	0.144
7/13/2017	22:34	7.61	0.270	7.57	0.140
7/14/2017	1:36	7.75	0.278	7.75	0.128
7/14/2017	4:21	7.76	0.270	7.73	0.132
7/14/2017	6:29	7.43	0.278	7.53	0.144
7/14/2017	10:06	7.94	0.278	7.67	0.146
7/14/2017	14:00	8.00	0.273	7.81	0.055
7/14/2017	17:11	7.80	0.281	7.33	0.108
7/14/2017	23:08	7.76	0.269	7.64	0.120
7/15/2017	3:17	7.63	0.274	7.63	0.116
7/15/2017	6:20	7.70	0.269	7.65	0.119
7/15/2017	10:06	7.85	0.280	7.62	0.122
7/15/2017	12:54	7.93	0.278	7.73	0.122
7/15/2017	15:55	7.73	0.278	7.62	0.124
7/15/2017	18:13	7.60	0.269	7.37	0.121

Date	Time	pH (S.U.)	Conductivity (mS/cm)	pH (S.U.)	Conductivity (mS/cm)
		C-14 I	Discharge	Surface V	Vater Near Well C-14
7/10/2017	17:20	6.34	0.281	5.91	0.084
7/10/2017	20:15	6.23	0.302	6.33	0.096
7/10/2017	23:07	7.10	0.265	6.94	0.082
7/11/2017	0:58	6.89	0.284	7.45	0.092
7/11/2017	3:18	7.01	0.295	7.16	0.100
7/11/2017	5:33	6.87	0.281	7.42	0.083
7/11/2017	8:37	6.70	0.286	6.03	0.083
7/11/2017	12:30	6.94	0.286	6.67	0.088
7/11/2017	15:03	7.29	0.296	6.82	0.080
7/11/2017	17:13	7.08	0.298	6.31	0.087
7/11/2017	21:42	6.82	0.285	6.51	0.097
7/12/2017	4:43	6.75	0.284	6.83	0.097
7/12/2017	5:31	6.88	0.259	6.85	0.077
7/12/2017	9:46	7.61	0.270	6.76	0.075
7/12/2017	14:02	7.63	0.271	6.74	0.075
7/12/2017	18:10	7.54	0.263	6.81	0.074
7/12/2017	21:09	7.36	0.258	6.84	0.086
7/12/2017	23:39	7.34	0.253	7.06	0.083
7/13/2017	2:36	7.31	0.251	7.05	0.090
7/13/2017	10:10	7.34	0.258	6.79	0.085
7/13/2017	16:18	7.56	0.254	7.47	0.066
7/13/2017	21:15	7.08	0.224	6.94	0.063
7/14/2017	0:23	7.33	0.252	7.10	0.074
7/14/2017	3:05	7.48	0.246	7.25	0.077
7/14/2017	5:19	7.51	0.249	7.19	0.083
7/14/2017	8:20	7.51	0.239	7.19	0.064
7/14/2017	11:58	7.48	0.254	7.26	0.050
7/14/2017	15:13	7.50	0.253	7.21	0.054
7/14/2017	18:23	7.54	0.264	7.47	0.066
7/14/2017	21:47	7.49	0.251	7.22	0.063
7/15/2017	2:04	7.44	0.251	7.45	0.067
7/15/2017	5:23	7.48	0.247	7.48	0.069
7/15/2017	9:49	7.32	0.253	7.09	0.067
7/15/2017	12:18	7.37	0.255	7.43	0.068
7/15/2017	16:45	7.41	0.252	6.87	0.068

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Date	Time	pH (S.U.)	Conductivity (mS/cm)	pH (S.U.)	Conductivity (mS/cm)
		C-16 I	Discharge	No Surface	Present Near Well C-16
7/10/2017	20:36	6.79	0.402		
7/10/2017	23:24	7.08	0.388		
7/11/2017	1:15	6.98	0.391		
7/11/2017	3:32	7.05	0.394		
7/11/2017	5:47	7.05	0.396		
7/11/2017	9:00	7.34	0.395		
7/11/2017	14:10	7.14	0.399		
7/11/2017	16:57	7.04	0.390		
7/11/2017	22:02	7.02	0.386		
7/12/2017	3:02	7.45	0.358		
7/12/2017	5:45	7.03	0.360		
7/12/2017	9:32	7.54	0.359		
7/12/2017	13:37	7.61	0.361		
7/12/2017	18:05	7.61	0.348		
7/12/2017	21:25	7.24	0.351		
7/12/2017	23:58	7.32	0.345		
7/13/2017	3:02	7.22	0.345		
7/13/2017	5:50	7.38	0.348		
7/13/2017	10:43	7.39	0.346		
7/13/2017	14:48	7.35	0.347		
7/13/2017	18:16	7.38	0.347		
7/13/2017	21:35	7.38	0.345		
7/14/2017	0:48	7.51	0.335		
7/14/2017	3:23	7.52	0.342		
7/14/2017	5:49	7.44	0.347		
7/14/2017	8:50	7.81	0.322		
7/14/2017	12:11	7.40	0.399		
7/14/2017	15:51	7.61	0.356		
7/14/2017	22:17	7.30	0.344		
7/15/2017	2:14	7.39	0.341		
7/15/2017	5:42	7.46	0.341		
7/15/2017	9:46	7.41	0.348		
7/15/2017	12:40	7.51	0.344		
7/15/2017	16:35	7.43	0.337		

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Date	Time	pH (S.U.)	Conductivity (mS/cm)	pH (S.U.)	Conductivity (mS/cm)	
		C-21 I	Discharge	Surface V	Vater Near Well C-21	
7/25/2017	12:00	5.11	0.112	4.29	0.045	
7/25/2017	13:00	5.15	0.116	4.22	0.045	
7/25/2017	14:00	5.22	0.115	4.09	0.046	
7/25/2017	15:00	5.32	0.115	4.06	0.048	
7/25/2017	16:00	5.21	0.113	4.20	0.042	
7/25/2017	17:00	5.33	0.114	4.31	0.042	
7/25/2017	18:00	5.32	0.115	4.14	0.046	
7/25/2017	19:00	5.49	0.120	4.52	0.046	
7/25/2017	20:00	5.53	0.117	4.55	0.046	
7/25/2017	21:00	5.69	0.113	4.62	0.047	
7/25/2017	22:00	5.55	0.114	4.65	0.047	
7/25/2017	23:00	5.59	0.115	4.67	0.047	
7/26/2017	0:00	5.58	0.115	4.73	0.046	
7/26/2017	1:00	5.58	0.115	4.80	0.046	
7/26/2017	2:00	5.59	0.114	4.88	0.047	
7/26/2017	3:00	5.64	0.112	4.91	0.047	
7/26/2017	4:00	5.68	0.113	4.93	0.047	
7/26/2017	5:00	5.74	0.112	5.15	0.047	
7/26/2017	6:00	5.85	0.110	5.23	0.047	
7/26/2017	7:00	5.86	0.110	5.25	0.043	
7/26/2017	8:00	6.23	0.118	5.31	0.042	
7/26/2017	9:00	6.70	0.117	5.68	0.042	
7/26/2017	10:00	6.85	0.113	5.77	0.040	
7/26/2017	12:00	6.89	0.116	5.76	0.041	
7/26/2017	13:00	6.78	0.114	5.88	0.040	
7/26/2017	14:00	6.93	0.115	5.69	0.041	
7/26/2017	15:00	6.77	0.115	5.75	0.040	
7/26/2017	16:00	6.73	0.115	5.65	0.040	
7/26/2017	17:00	6.61	0.115	5.43	0.040	
7/26/2017	18:00	6.65	0.116	5.35	0.040	
7/26/2017	19:00	6.58	0.114	5.47	0.040	
7/26/2017	20:00	6.68	0.113	5.94	0.047	
7/26/2017	21:00	6.71	0.114	6.00	0.046	
7/26/2017	22:00	6.74	0.114	6.02	0.046	
7/26/2017	23:00	6.59	0.115	5.97	0.047	
7/27/2017	0:00	6.57	0.115	5.88	0.047	
7/27/2017	1:00	6.55	0.112	5.87	0.049	
7/27/2017	2:00	6.34	0.109	5.85	0.051	
7/27/2017	3:00	6.58	0.112	5.93	0.050	
7/27/2017	4:00	6.77	0.114	6.00	0.049	
7/27/2017	5:00	6.78	0.114	6.02	0.048	
7/27/2017	6:00	6.80	0.114	6.04	0.047	
7/27/2017	7:00	6.81	0.114	6.08	0.047	
7/27/2017	8:00	6.89	0.119	5.82	0.042	
7/27/2017	10:00	6.93	0.118	5.94	0.040	
7/27/2017	11:00	6.94	0.118	5.83	0.039	
7/27/2017	12:00	6.98	0.118	5.95	0.040	
7/27/2017	13:00	6.88	0.118	6.00	0.042	
7/27/2017	14:00	6.92	0.118	6.04	0.042	

Date	Time	pH (S.U.)	Conductivity (mS/cm)	pH (S.U.)	Conductivity (mS/cm)		
		C-21 Discha	rge (continued)	Surface V	ace Water Near Well C-21 (continued)		
7/27/2017	16:00	6.93	0.117	5.77	0.040		
7/27/2017	17:00	6.83	0.116	5.60	0.039		
7/27/2017	18:00	6.85	0.118	5.58	0.040		
7/27/2017	19:00	6.82	0.116	5.53	0.039		
7/27/2017	20:00	6.81	0.117	5.81	0.042		
7/27/2017	21:00	6.79	0.117	5.87	0.043		
7/27/2017	22:00	6.77	0.117	6.04	0.045		
7/27/2017	23:00	6.71	0.116	5.81	0.044		
7/28/2017	0:00	6.56	0.115	5.77	0.044		
7/28/2017	1:00	6.51	0.113	5.79	0.047		
7/28/2017	2:00	6.46	0.111	5.87	0.049		
7/28/2017	3:00	6.51	0.114	5.94	0.051		
7/28/2017	4:00	6.56	0.117	6.02	0.054		
7/28/2017	5:00	6.64	0.118	6.07	0.054		
7/28/2017	6:00	6.75	0.120	6.13	0.054		
7/28/2017	7:00	6.77	0.120	6.14	0.055		
7/28/2017	8:00	6.85	0.118	5.52	0.038		
7/28/2017	9:00	6.70	0.118	5.51	0.040		
7/28/2017	11:00	6.71	0.118	5.49	0.040		
7/28/2017	12:00	6.65	0.114	5.49	0.040		

Physical Parameter Measurements of pH, Conductivity and Total Dissolved Solids Collected from the Pumping Well Discharge Water and Nearby Surface Water During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	pH (S.U.)	Conductivity (mS/cm)	pH (S.U.)	Conductivity (mS/cm)	
		Well C-23		Surface Water Near Well C-23		
7/10/2017	13:35	5.57	0.143	7.23	0.059	
7/10/2017	15:13	6.39	0.142	7.31	0.057	
7/10/2017	16:26	6.44	0.142	7.27	0.057	
7/10/2017	18:25	6.35	0.143	7.14	0.052	
7/10/2017	20:32	6.93	0.132	6.33	0.056	
7/11/2017	0:32	7.31	0.145	6.56	0.052	
7/11/2017	2:30	7.35	0.146	6.03	0.057	
7/11/2017	5:04	7.43	0.144	6.44	0.058	
7/11/2017	9:45	7.41	0.140	6.06	0.060	
7/11/2017	10:05	7.13	0.143	6.55	0.045	
7/11/2017	12:04	6.72	0.141	6.54	0.047	
7/11/2017	13:59	6.68	0.142	6.65	0.048	
7/11/2017	18:08	6.70	0.144	7.25	0.035	
7/11/2017	20:41	6.71	0.141	Dry	Dry	
7/12/2017	2:00	7.20	0.148	Dry	Dry	
7/12/2017	4:58	7.26	0.136	Dry	Dry	
7/12/2017	10:55	6.86	0.125	Dry	Dry	
7/12/2017	14:27	7.22	0.135	Dry	Dry	
7/12/2017	18:20	7.30	0.136	Dry	Dry	
7/12/2017	20:30	6.98	0.138	Dry	Dry	
7/12/2017	23:10	7.18	0.134	6.44	0.057	
7/13/2017	1:49	7.15	0.133	7.33	0.037	
7/13/2017	4:00	7.15	0.134	6.85	0.040	
7/13/2017	8:00	6.14	0.164	6.89	0.040	
7/13/2017	9:40	7.35	0.134	7.11	0.042	
7/13/2017	12:35	6.92	0.131	7.21	0.037	
7/13/2017	16:40	7.03	0.129	7.18	0.040	
7/13/2017	20:40	7.29	0.142	7.44	0.039	
7/13/2017	23:25	7.18	0.131	7.07	0.043	
7/14/2017	2:25	7.21	0.129	7.16	0.040	
7/14/2017	5:02	7.49	0.116	7.29	0.038	
7/14/2017	10:55	7.22	0.134	7.55	0.031	
7/14/2017	14:29	7.58	0.136	6.89	0.044	
7/14/2017	18:30	7.25	0.131	6.75	0.043	
7/14/2017	21:24	7.15	0.129	6.78	0.042	
7/15/2017	0:47	7.26	0.132	6.37	0.041	
7/15/2017	4:19	7.18	0.130	7.23	0.059	
7/15/2017	8:46	7.22	0.134	7.31	0.057	
7/15/2017	11:17	7.16	0.133	7.27	0.057	
7/15/2017	14:00	7.00	0.135	7.14	0.052	
7/15/2017	17:15	6.91	0.122	6.33	0.056	

S.U. standard units

mS/cm millisiemen per centimeter

K:\Jobs\Lake Anne\Clovewood\2017\Report\Physical Parameter Table.doc

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Date	Time	Temperature (degrees Celsius) Well C-6	Temperature (degrees Celsius) Surface Water Near Well C-6	Date	Time	Temperature (degrees Celsius) Well C-12	Temperature (degrees Celsius) Piezometer Shallow Groundwater Near Well C- $12^{\frac{1}{\nu}}$
7/10/2017	19:00	10.58	18.97	7/10/2017	20:00	11.03	16.53
7/10/2017	20:00	10.62	18.85	7/10/2017	21:00	11.84	16.51
7/10/2017	21:00	10.65	18.76	7/10/2017	22:00	12.18	16.50
7/10/2017	22:00	10.64	18.66	7/10/2017	23:00	12.34	16.49
7/10/2017	23:00	10.65	18.57	7/11/2017	0:00	12.40	16.48
7/11/2017	0:00	10.66	18.57	7/11/2017	1:00	12.43	16.47
7/11/2017	1:00	10.65	18.57	7/11/2017	2:00	12.46	16.47
7/11/2017	2:00	10.66	18.53	7/11/2017	3:00	12.47	16.46
7/11/2017	3:00	10.64	18.45	7/11/2017	4:00	12.46	16.45
7/11/2017	4:00	10.64	18.33	7/11/2017	5:00	12.49	16.44
7/11/2017	5:00	10.66	18.23	7/11/2017	6:00	12.53	16.43
7/11/2017	6:00	10.65	18.16	7/11/2017	7:00	12.51	16.42
7/11/2017	7:00	10.66	18.08	7/11/2017	8:00	12.53	16.42
7/11/2017	8:00	10.63	18.07	7/11/2017	9:00	12.53	16.41
7/11/2017	9:00	10.66	18.19	7/11/2017	10:00	12.51	16.39
7/11/2017	10:00	10.63	18.30	7/11/2017	11:00	12.59	16.38
7/11/2017	11:00	10.65	18.48	7/11/2017	12:00	12.56	16.36
7/11/2017	12:00	10.65	18.67	7/11/2017	13:00	12.56	16.35
7/11/2017	13:00	10.66	18.87	7/11/2017	14:00	12.60	16.33
7/11/2017	14:00	10.63	18.99	7/11/2017	15:00	12.57	16.32
7/11/2017	15:00	10.65	19.17	7/11/2017	16:00	12.59	16.30
7/11/2017	16:00	10.63	19.06	7/11/2017	17:00	12.81	16.28
7/11/2017	17:00	10.66	19.11	7/11/2017	18:00	12.77	16.27
7/11/2017	18:00	10.66	19.17	7/11/2017	19:00	12.69	16.25
7/11/2017	19:00	10.64	19.13	7/11/2017	20:00	12.70	16.24
7/11/2017	20:00	10.64	19.11	7/11/2017	21:00	12.70	16.23
7/11/2017	21:00	10.64	19.01	7/11/2017	22:00	12.63	16.23
7/11/2017	22:00	10.67	18.95	7/11/2017	23:00	12.67	16.22
7/11/2017	23:00	10.63	18.74	7/12/2017	0:00	12.64	16.21
7/12/2017	0:00	10.65	18.71	7/12/2017	1:00	12.64	16.21
7/12/2017	1:00	10.65	18.60	7/12/2017	2:00	12.68	16.21
7/12/2017	2:00	10.68	18.47	7/12/2017	3:00	12.67	16.21
7/12/2017	3:00	10.64	18.39	7/12/2017	4:00	12.72	16.22
7/12/2017	4:00	10.67	18.34	7/12/2017	5:00	12.73	16.22
7/12/2017	5:00	10.66	18.27	7/12/2017	6:00	12.69	16.22
7/12/2017	6:00	10.75	18.25	7/12/2017	7:00	12.73	16.23
7/12/2017	7:00	10.66	18.23	7/12/2017	8:00	12.75	16.23
7/12/2017	8:00	10.66	18.26	7/12/2017	9:00	12.73	16.24
7/12/2017	9:00	10.64	18.40	7/12/2017	10:00	12.67	16.25
7/12/2017	10:00	10.63	18.63	7/12/2017	11:00	12.68	16.26
7/12/2017	11:00	10.65	18.85	7/12/2017	12:00	12.66	16.26
7/12/2017	12:00	10.64	19.12	7/12/2017	13:00	12.69	16.27
7/12/2017	13:00	10.67	19.53	7/12/2017	14:00	12.67	16.28
7/12/2017	14:00	10.64	19.69	7/12/2017	15:00	12.69	16.28
7/12/2017	15:00	10.63	20.10	7/12/2017	16:00	12.69	16.29
7/12/2017	16:00	10.65	20.37	7/12/2017	17:00	12.71	16.29
7/12/2017	17:00	10.66	20.46	7/12/2017	18:00	12.67	16.30
7/12/2017	18:00	10.64	20.00	7/12/2017	19:00	12.72	16.31
7/12/2017	19:00	10.65	20.36	7/12/2017	20:00	12.71	16.31
7/12/2017	20:00	10.66	20.30	7/12/2017	21:00	12.72	16.32
7/12/2017	21:00	10.65	20.14	7/12/2017	22:00	12.70	16.32
7/12/2017	22:00	10.66	19.97	7/12/2017	23:00	12.71	16.33

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Date	Time	Temperature (degrees Celsius) Well C-6	Temperature (degrees Celsius) Surface Water Near Well C-6	Date	Time	Temperature (degrees Celsius) Well C-12	Temperature (degrees Celsius) Piezometer Shallow Groundwater Near Well C- $12^{\underline{\mathcal{V}}}$
7/12/2017	23:00	10.63	19.82	7/13/2017	0:00	12.71	16.33
7/13/2017	0:00	10.65	19.69	7/13/2017	1:00	12.72	16.34
7/13/2017	1:00	10.67	19.58	7/13/2017	2:00	12.71	16.35
7/13/2017	2:00	10.67	19.56	7/13/2017	3:00	12.72	16.35
7/13/2017	3:00	10.67	19.53	7/13/2017	4:00	12.70	16.36
7/13/2017	4:00	10.66	19.47	7/13/2017	5:00	12.70	16.37
7/13/2017	5:00	10.66	19.44	7/13/2017	6:00	12.71	16.37
7/13/2017	6:00	10.68	19.45	7/13/2017	7:00	12.72	16.38
7/13/2017	7:00	10.64	19.51	7/13/2017	8:00	12.71	16.39
7/13/2017	8:00	10.64	19.59	7/13/2017	9:00	12.72	16.39
7/13/2017	9:00	10.66	19.74	7/13/2017	10:00	12.73	16.40
7/13/2017	10:00	10.66	19.97	7/13/2017	11:00	12.72	16.40
7/13/2017	11:00	10.66	20.14	7/13/2017	12:00	12.72	16.41
7/13/2017	12:00	10.67	20.24	7/13/2017	13:00	12.73	16.41
7/13/2017	13:00	10.64	20.39	7/13/2017	14:00	12.73	16.41
7/13/2017	14:00	10.64	20.52	7/13/2017	15:00	12.75	16.34
7/13/2017	15:00	10.69	20.77	7/13/2017	16:00	12.72	16.40
7/13/2017	16:00	10.68	20.42	7/13/2017	17:00	12.75	16.44
7/13/2017	17:00	10.64	20.15	7/13/2017	18:00	12.72	16.48
7/13/2017	18:00	10.63	20.05	7/13/2017	19:00	12.73	16.51
7/13/2017	19:00	10.62	19.85	7/13/2017	20:00	12.75	16.54
7/13/2017	20:00	10.67	19.70	7/13/2017	21:00	12.72	16.57
7/13/2017	21:00	10.65	19.56	7/13/2017	22:00	12.74	16.59
7/13/2017	22:00	10.67	19.47	7/13/2017	23:00	12.74	16.61
7/13/2017	23:00	10.66	19.44	7/14/2017	0:00	12.76	16.63
7/14/2017	0:00	10.63	19.39	7/14/2017	1:00	12.74	16.66
7/14/2017	1:00	10.65	19.27	7/14/2017	2:00	12.74	16.68
7/14/2017	2:00	10.66	19.21	7/14/2017	3:00	12.74	16.70
7/14/2017	3:00	10.65	19.10	7/14/2017	4:00	12.74	16.72
7/14/2017	4:00	10.65	18.94	7/14/2017	5:00	12.77	16.73
7/14/2017	5:00	10.67	18.74	7/14/2017	6:00	12.75	16.75
7/14/2017	6:00	10.66	18.62	7/14/2017	7:00	12.75	16.77
7/14/2017	7:00	10.66	18.43	7/14/2017	8:00	12.76	16.78
7/14/2017	8:00	10.64	18.22	7/14/2017	9:00	12.78	16.81
7/14/2017	9:00	10.65	18.17	7/14/2017	10:00	12.75	16.83
7/14/2017	10:00	10.64	18.24	7/14/2017	11:00	12.73	16.85
7/14/2017	11:00	10.65	18.31	7/14/2017	12:00	12.73	16.87
7/14/2017	12:00	10.66	18.36	7/14/2017	13:00	12.77	16.89
7/14/2017	13:00	10.67	18.37	7/14/2017	14:00	12.77	16.91
7/14/2017	14:00	10.66	18.42	7/14/2017	15:00	12.77	16.93
7/14/2017	15:00	10.66	18.43	7/14/2017	16:00	12.76	16.96
7/14/2017	16:00	10.65	18.40	7/14/2017	17:00	12.77	16.98
7/14/2017	17:00	10.66	18.39	7/14/2017	18:00	12.77	17.01
7/14/2017	18:00	10.66	18.36	7/14/2017	19:00	12.77	17.03
7/14/2017	19:00	10.66	18.31	7/14/2017	20:00	12.78	17.06
7/14/2017	20:00	10.65	18.23	7/14/2017	21:00	12.78	17.09
7/14/2017	21:00	10.64	18.13	7/14/2017	22:00	12.76	17.12
7/14/2017	22:00	10.65	18.07	7/14/2017	23:00	12.81	17.15
7/14/2017	23:00	10.66	17.99	7/15/2017	0:00	12.81	17.18
7/15/2017	0:00	10.64	17.96	7/15/2017	1:00	12.78	17.20
7/15/2017	1:00	10.66	17.94	7/15/2017	2:00	12.76	17.23
7/15/2017	2:00	10.65	17.89	7/15/2017	3:00	12.77	17.25

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Date	Time	Temperature (degrees Celsius) Well C-6	Temperature (degrees Celsius) Surface Water Near Well C-6	Date	Time	Temperature (degrees Celsius) Well C-12	Temperature (degrees Celsius) Piezometer Shallow Groundwater Near Well C-12 ^{1/}
7/15/2017	3:00	10.67	17.87	7/15/2017	4:00	12.77	17.27
7/15/2017	4:00	10.66	17.82	7/15/2017	5:00	12.79	17.29
7/15/2017	5:00	10.65	17.79	7/15/2017	6:00	12.79	17.31
7/15/2017	6:00	10.66	17.75	7/15/2017	7:00	12.80	17.33
7/15/2017	7:00	10.67	17.74	7/15/2017	8:00	12.79	17.35
7/15/2017	8:00	10.64	17.74	7/15/2017	9:00	12.78	17.36
7/15/2017	9:00	10.63	17.87	7/15/2017	10:00	12.78	17.37
7/15/2017	10:00	10.66	18.06	7/15/2017	11:00	12.79	17.39
7/15/2017	11:00	10.63	18.32	7/15/2017	12:00	12.80	17.40
7/15/2017	12:00	10.63	18.71	7/15/2017	13:00	12.78	17.41
7/15/2017	13:00	10.67	19.15	7/15/2017	14:00	12.76	17.42
7/15/2017	14:00	10.64	19.32	7/15/2017	15:00	12.78	17.42
7/15/2017	15:00	10.64	19.35	7/15/2017	16:00	12.77	17.43
7/15/2017	16:00	10.65	19.46	7/15/2017	17:00	12.79	17.43
7/15/2017	17:00	10.67	19.49	7/15/2017	18:00	12.81	17.44
7/15/2017	18:00	10.64	19.40	7/15/2017	19:00	12.81	17.44
7/15/2017	19:00	10.64	19.21	7/15/2017	20:00	12.78	17.44
7/15/2017	20:00	10.64	19.02	7/15/2017	21:00	12.80	17.44
7/15/2017	21:00	10.68	18.76	7/15/2017	22:00	12.80	17.44
7/15/2017	22:00	10.63	18.46	7/15/2017	23:00	12.81	17.44
7/15/2017	23:00	10.64	18.22	7/16/2017	0:00	12.80	17.44
7/16/2017	0:00	10.64	18.02				
Date	Time	Temperature (degrees Celsius)	Temperature (degrees Celsius)	Date	Time	Temperature (degrees Celsius)	Temperature (degrees Celsius) Piezometer
		Well C-14	Well C-14			Well C-16	Shallow Groundwater Near Well C-16 ^{1/}
7/10/2017	17:00	Well C-14 10.52	Well C-14 17.99	7/10/2017	18:00	Well C-16	Shallow Groundwater Near Well C-16 ^{1/} 16.16
7/10/2017 7/10/2017	17:00 18:00	Well C-14 10.52 10.51	Well C-14 17.99 18.27	7/10/2017 7/10/2017	18:00 19:00	Well C-16 10.63 10.63	Shallow Groundwater Near Well C- $16^{\underline{\nu}}$ 16.16 16.16
7/10/2017 7/10/2017 7/10/2017	17:00 18:00 19:00	Well C-14 10.52 10.51 10.52	Well C-14 17.99 18.27 17.87	7/10/2017 7/10/2017 7/10/2017	18:00 19:00 20:00	Well C-16 10.63 10.63 10.62	Shallow Groundwater Near Well C-16 ^{⊥/} 16.16 16.16 16.16 16.16
7/10/2017 7/10/2017 7/10/2017 7/10/2017	17:00 18:00 19:00 20:00	Well C-14 10.52 10.51 10.52 10.52	Well C-14 17.99 18.27 17.87 17.79	7/10/2017 7/10/2017 7/10/2017 7/10/2017	18:00 19:00 20:00 20:00	Well C-16 10.63 10.63 10.62 10.62	Shallow Groundwater Near Well C-16 ^{⊥/} 16.16 16.16 16.16 16.16 16.16
7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017	17:00 18:00 19:00 20:00 20:00	Well C-14 10.52 10.51 10.52 10.52 10.52 10.52	Well C-14 17.99 18.27 17.87 17.79 17.70	7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017	18:00 19:00 20:00 20:00 21:00	Well C-16 10.63 10.63 10.62 10.62 10.62 10.66	Shallow Groundwater Near Well $C-16^{\underline{l}'}$ 16.16 16.16 16.16 16.16 16.16 16.16
7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017	17:00 18:00 19:00 20:00 20:00 21:00	Well C-14 10.52 10.51 10.52 10.52 10.52 10.52 10.52 10.52	Well C-14 17.99 18.27 17.87 17.79 17.70 17.68	7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017	18:00 19:00 20:00 20:00 21:00 22:00	Well C-16 10.63 10.63 10.62 10.62 10.62 10.66 10.66	Shallow Groundwater Near Well C-16 $^{\underline{l}'}$ 16.16 16.16 16.16 16.16 16.16 16.16 16.16
7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017	17:00 18:00 19:00 20:00 20:00 21:00 22:00	Well C-14 10.52 10.51 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.52	Well C-14 17.99 18.27 17.87 17.79 17.70 17.68 17.82	7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017	18:00 19:00 20:00 20:00 21:00 22:00 23:00	Well C-16 10.63 10.63 10.62 10.62 10.66 10.66 10.66 10.65	Shallow Groundwater Near Well C-16 $^{\underline{l}'}$ 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16
7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017	17:00 18:00 19:00 20:00 21:00 22:00 23:00	Well C-14 10.52 10.51 10.52 10.5 10.5 10.5 10.5 10.5 10.5 10.5 10.5	Well C-14 17.99 18.27 17.87 17.79 17.70 17.68 17.82 17.84	7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/11/2017	18:00 19:00 20:00 21:00 22:00 23:00 0:00	Well C-16 10.63 10.62 10.62 10.66 10.66 10.65 10.62	Shallow Groundwater Near Well C-16 $^{\underline{l}'}$ 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16
7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/11/2017	17:00 18:00 19:00 20:00 21:00 22:00 23:00 0:00	Well C-14 10.52 10.51 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.53	Well C-14 17.99 18.27 17.87 17.79 17.70 17.68 17.82 17.84 17.87	7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/11/2017 7/11/2017	18:00 19:00 20:00 21:00 22:00 23:00 0:00 1:00	Well C-16 10.63 10.62 10.62 10.66 10.66 10.65 10.62	Shallow Groundwater Near Well C-16 $^{\underline{l}'}$ 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16
7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/11/2017 7/11/2017	17:00 18:00 20:00 20:00 21:00 22:00 23:00 0:00 1:00	Well C-14 10.52 10.51 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.53 10.53	Well C-14 17.99 18.27 17.87 17.79 17.70 17.68 17.82 17.84 17.87	7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017	18:00 19:00 20:00 21:00 22:00 23:00 0:00 1:00 2:00	Well C-16 10.63 10.62 10.62 10.62 10.66 10.65 10.65 10.65 10.65	Shallow Groundwater Near Well C-16 $^{\underline{U}}$ 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.15 16.15
7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/11/2017 7/11/2017 7/11/2017	17:00 18:00 20:00 20:00 21:00 22:00 23:00 0:00 1:00 2:00	Well C-14 10.52 10.51 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.53 10.53	Well C-14 17.99 18.27 17.87 17.79 17.70 17.68 17.82 17.84 17.87 17.84 17.87	7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017	18:00 19:00 20:00 21:00 22:00 23:00 0:00 1:00 2:00 3:00	Well C-16 10.63 10.62 10.62 10.62 10.66 10.65 10.65 10.65 10.65 10.65	Shallow Groundwater Near Well C-16 $^{\underline{l}'}$ 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16
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7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017	17:00 18:00 20:00 21:00 22:00 23:00 0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00	Well C-14 10.52 10.51 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.53 10.53 10.53 10.53 10.53 10.53 10.53 10.53 10.53 10.53 10.53 10.53 10.53 10.54 10.54 10.54 10.53	Well C-14 17.99 18.27 17.87 17.79 17.70 17.68 17.82 17.84 17.87 17.61 17.42 16.76 16.76 16.76 18.05 18.14 18.48 18.50 19.12 18.74 18.34	7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017	18:00 19:00 20:00 20:00 21:00 22:00 23:00 0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00	Well C-16 10.63 10.62 10.62 10.62 10.62 10.66 10.66 10.65 10.65 10.65 10.65 10.65 10.65 10.65 10.65 10.65 10.65 10.65 10.65 10.65 10.66 10.66 10.66 10.66 10.66 10.66 10.66 10.66 10.67 10.69 10.67 10.68	Shallow Groundwater Near Well C-16 $^{\underline{U}}$ 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.16 16.17 16.17 16.17 16.17 16.18 16.18 16.18 16.18 16.19 16.19 16.20 16.20
7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017 7/11/2017	17:00 18:00 20:00 21:00 22:00 23:00 0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 10:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00	Well C-14 10.52 10.51 10.52 10.52 10.52 10.52 10.52 10.52 10.52 10.53 10.53 10.53 10.53 10.53 10.53 10.53 10.53 10.53 10.53 10.53 10.53 10.53 10.54 10.54 10.54 10.54 10.54 10.54 10.54	Well C-14 17.99 18.27 17.87 17.79 17.70 17.68 17.82 17.84 17.87 17.68 17.82 17.84 17.61 17.42 16.93 16.76 16.76 16.76 18.05 18.14 18.48 18.50 19.12 18.74 18.34 18.34 18.62	7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/10/2017 7/11/2017	18:00 19:00 20:00 20:00 21:00 22:00 23:00 0:00 1:00 2:00 3:00 4:00 5:00 6:00 7:00 8:00 9:00 11:00 12:00 13:00 14:00 15:00 16:00 17:00	Well C-16 10.63 10.62 10.62 10.62 10.62 10.66 10.66 10.65 10.65 10.65 10.65 10.65 10.65 10.65 10.65 10.65 10.65 10.65 10.65 10.65 10.66 10.66 10.66 10.66 10.66 10.66 10.67 10.69 10.67 10.68 10.67	Shallow Groundwater Near Well C-16 $^{L'}$ 16.16 16.17 16.17 16.17 16.17 16.17 16.18 16.18 16.19 16.20 16.20

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Date	Time	Temperature (degrees Celsius) Well C-14	Temperature (degrees Celsius) Surface Water Near Well C-14	Date	Time	Temperature (degrees Celsius) Well C-16	Temperature (degrees Celsius) Piezometer Shallow Groundwater Near Well C-16 ^{⊥/}
7/11/2017	19:00	10.54	17.96	7/11/2017	20:00	10.70	16.21
7/11/2017	20:00	10.54	17.78	7/11/2017	21:00	10.69	16.21
7/11/2017	21:00	10.54	17.50	7/11/2017	22:00	10.71	16.22
7/11/2017	22:00	10.54	17.28	7/11/2017	23:00	10.70	16.22
7/11/2017	23:00	10.54	17.21	7/12/2017	0:00	10.70	16.23
7/12/2017	0:00	10.55	17.06	7/12/2017	1:00	10.70	16.23
7/12/2017	1:00	10.54	17.01	7/12/2017	2:00	10.68	16.24
7/12/2017	2:00	10.54	17.03	7/12/2017	3:00	10.73	16.24
7/12/2017	3:00	10.54	17.34	7/12/2017	4:00	10.72	16.29
7/12/2017	4:00	10.55	17.05	7/12/2017	5:00	10.70	16.29
7/12/2017	5:00	10.55	16.91	7/12/2017	6:00	10.71	16.26
7/12/2017	6:00	10.55	17.38	7/12/2017	7:00	10.70	16.27
7/12/2017	7:00	10.55	17.74	7/12/2017	8:00	10.72	16.27
7/12/2017	8:00	10.55	18.42	7/12/2017	9:00	10.71	16.28
7/12/2017	9:00	10.55	18.79	7/12/2017	10:00	10.74	16.29
7/12/2017	10:00	10.56	18.97	7/12/2017	11:00	10.70	16.29
7/12/2017	11:00	10.56	19.66	7/12/2017	12:00	10.70	16.30
7/12/2017	12:00	10.55	19.79	7/12/2017	13:00	10.74	16.31
7/12/2017	13:00	10.56	20.36	7/12/2017	14:00	10.70	16.31
7/12/2017	14:00	10.56	21.68	7/12/2017	15:00	10.70	16.31
7/12/2017	15:00	10.56	21.89	7/12/2017	16:00	10.70	16.32
7/12/2017	16:00	10.56	21.71	7/12/2017	17:00	10.71	16.31
7/12/2017	17:00	10.56	20.18	7/12/2017	18:00	10.70	16.32
7/12/2017	18:00	10.56	19.54	7/12/2017	19:00	10.71	16.32
7/12/2017	19:00	10.56	18.73	7/12/2017	20:00	10.71	16.33
7/12/2017	20:00	10.56	18.48	7/12/2017	21:00	10.73	16.33
7/12/2017	21:00	10.56	18.51	7/12/2017	22:00	10.72	16.34
7/12/2017	22:00	10.56	18.13	7/12/2017	23:00	10.74	16.33
7/12/2017	23.00	10.56	10.42	7/13/2017	1:00	10.71	16.34
7/13/2017	1.00	10.56	18.20	7/13/2017	2.00	10.73	16.34
7/13/2017	2.00	10.56	18.60	7/13/2017	2.00	10.73	16.35
7/13/2017	2.00	10.56	18.60	7/13/2017	4.00	10.70	16.38
7/13/2017	4.00	10.56	18.97	7/13/2017	5.00	10.71	16.39
7/13/2017	5:00	10.58	19.18	7/13/2017	6.00	10.73	16.46
7/13/2017	6:00	10.55	19.41	7/13/2017	7:00	10.71	16.47
7/13/2017	7:00	10.55	19.54	7/13/2017	8:00	10.72	16.48
7/13/2017	8:00	10.55	20.08	7/13/2017	9:00	10.73	16.48
7/13/2017	9:00	10.55	20.68	7/13/2017	10:00	10.74	16.49
7/13/2017	10:00	10.56	20.67	7/13/2017	11:00	10.74	16.45
7/13/2017	11:00	10.56	20.43	7/13/2017	12:00	10.73	16.46
7/13/2017	12:00	10.56	20.34	7/13/2017	13:00	10.73	16.48
7/13/2017	13:00	10.56	19.77	7/13/2017	14:00	10.72	16.48
7/13/2017	14:00	10.56	19.33	7/13/2017	15:00	10.69	16.48
7/13/2017	15:00	10.56	19.47	7/13/2017	16:00	10.74	16.50
7/13/2017	16:00	10.56	19.46	7/13/2017	17:00	10.73	16.51
7/13/2017	17:00	10.56	19.47	7/13/2017	18:00	10.73	16.52
7/13/2017	18:00	10.56	19.43	7/13/2017	19:00	10.72	16.53
7/13/2017	19:00	10.56	19.24	7/13/2017	20:00	10.74	16.54
7/13/2017	20:00	10.56	19.11	7/13/2017	21:00	10.73	16.55
7/13/2017	21:00	10.58	19.08	7/13/2017	22:00	10.72	16.56
7/13/2017	22:00	10.55	19.08	7/13/2017	23:00	10.71	16.57
7/13/2017	23:00	10.56	18.97	7/14/2017	0:00	10.76	16.58

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Date	Time	Temperature (degrees Celsius) Well C-14	Temperature (degrees Celsius) Surface Water Near Well C-14	Date	Time	Temperature (degrees Celsius) Well C-16	Temperature (degrees Celsius) Piezometer Shallow Groundwater Near Well C-16 [⊥]
7/14/2017	0:00	10.56	18.89	7/14/2017	1:00	10.74	16.59
7/14/2017	1:00	10.56	18.88	7/14/2017	2:00	10.72	16.60
7/14/2017	2:00	10.56	18.52	7/14/2017	3:00	10.74	16.62
7/14/2017	3:00	10.56	18.25	7/14/2017	4:00	10.75	16.63
7/14/2017	4:00	10.57	18.02	7/14/2017	5:00	10.73	16.64
7/14/2017	5:00	10.56	17.82	7/14/2017	6:00	10.71	16.65
7/14/2017	6:00	10.56	17.67	7/14/2017	7:00	10.75	16.66
7/14/2017	7:00	10.56	17.95	7/14/2017	8:00	10.72	16.68
7/14/2017	8:00	10.56	18.28	7/14/2017	9:00	10.72	16.69
7/14/2017	9:00	10.56	18.22	7/14/2017	10:00	10.72	16.70
7/14/2017	10:00	10.56	18.27	7/14/2017	11:00	10.71	16.71
7/14/2017	11:00	10.57	18.32	7/14/2017	12:00	10.73	16.72
7/14/2017	12:00	10.57	18.29	7/14/2017	13:00	10.73	16.73
7/14/2017	13:00	10.57	18.33	7/14/2017	14:00	10.74	16.74
7/14/2017	14:00	10.57	18.30	7/14/2017	15:00	10.75	16.75
7/14/2017	15:00	10.57	18.26	7/14/2017	16:00	10.75	16.75
7/14/2017	16:00	10.57	18.27	7/14/2017	17:00	10.73	16.76
7/14/2017	17:00	10.57	18.24	7/14/2017	18:00	10.70	16.77
7/14/2017	18:00	10.57	18.17	7/14/2017	19:00	10.71	16.87
7/14/2017	19:00	10.57	18.10	7/14/2017	20:00	10.75	16.87
7/14/2017	20:00	10.57	18.01	7/14/2017	21:00	10.71	16.87
7/14/2017	21:00	10.57	17.96	7/14/2017	22:00	10.74	16.88
7/14/2017	22:00	10.57	17.92	7/14/2017	23:00	10.74	16.80
7/14/2017	23:00	10.57	17.87	7/15/2017	0:00	10.72	16.80
7/15/2017	0:00	10.57	17.85	7/15/2017	1:00	10.73	16.80
7/15/2017	1:00	10.55	17.82	7/15/2017	2:00	10.74	16.81
7/15/2017	2:00	10.57	17.76	7/15/2017	3:00	10.71	16.81
7/15/2017	3:00	10.56	17.73	7/15/2017	4:00	10.72	16.82
7/15/2017	4:00	10.57	17.69	7/15/2017	5:00	10.70	16.82
7/15/2017	5:00	10.57	17.69	7/15/2017	6:00	10.70	16.82
7/15/2017	6:00	10.57	17.69	7/15/2017	7:00	10.72	16.82
7/15/2017	7:00	10.57	17.73	7/15/2017	8:00	10.73	16.82
7/15/2017	8:00	10.57	17.97	7/15/2017	9:00	10.74	16.82
7/15/2017	9:00	10.57	18.17	7/15/2017	10:00	10.72	16.82
7/15/2017	10:00	10.57	18.37	7/15/2017	11:00	10.71	16.82
7/15/2017	11:00	10.57	18.48	7/15/2017	12:00	10.73	16.82
7/15/2017	12:00	10.57	18.64	7/15/2017	13:00	10.74	16.83
7/15/2017	13:00	10.57	18.59	7/15/2017	14:00	10.74	16.83
7/15/2017	14:00	10.57	18.75	7/15/2017	15:00	10.72	16.83
7/15/2017	15:00	10.57	19.40	7/15/2017	16:00	10.75	16.83
7/15/2017	16:00	10.57	19.02	7/15/2017	17:00	10.73	16.82
7/15/2017	17:00	10.57	18.70	7/15/2017	18:00	10.74	16.82
7/15/2017	18:00	10.57	18.28	7/15/2017	19:00	10.71	16.82
7/15/2017	19:00	10.57	17.91	7/15/2017	20:00	10.72	16.81
7/15/2017	20:00	10.57	17.63	7/15/2017	21:00	10.77	16.81
7/15/2017	21:00	10.57	17.43	7/15/2017	22:00	10.71	16.81
7/15/2017	22:00	10.58	17.32	7/15/2017	23:00	10.72	16.81
7/15/2017	23:00	10.57	17.24	7/16/2017	0:00	10.75	16.81
7/16/2017	0:00	10.57	17.99				

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Date	Time	Temperature (degrees Celsius) Well C-21	Temperature (degrees Celsius) Surface Water Near Well C-21	Date	Time	Temperature (degrees Celsius) Well C-23	Temperature (degrees Celsius) Piezometer Shallow Groundwater Near Well C-23 [⊥]
7/25/2017	12:00	9.98	16.86	7/10/2017	13:00	9.80	16.28
7/25/2017	13:00	10.00	16.93	7/10/2017	14:00	9.99	16.28
7/25/2017	14:00	10.01	17.02	7/10/2017	15:00	10.00	16.24
7/25/2017	15:00	10.01	17.13	7/10/2017	16:00	9.97	16.25
7/25/2017	16:00	10.01	17.25	7/10/2017	17:00	10.00	16.27
7/25/2017	17:00	10.01	17.28	7/10/2017	18:00	9.97	16.26
7/25/2017	18:00	10.02	17.34	7/10/2017	19:00	10.00	16.24
7/25/2017	19:00	10.02	17.25	7/10/2017	20:00	9.99	16.26
7/25/2017	20:00	10.02	17.18	7/10/2017	20:00	9.99	16.26
7/25/2017	20:00	10.02	17.18	7/10/2017	21:00	10.03	16.25
7/25/2017	21:00	10.02	17.12	7/10/2017	22:00	10.02	16.27
7/25/2017	22:00	10.02	17.03	7/10/2017	23:00	10.01	16.27
7/25/2017	23:00	10.02	16.96	7/11/2017	0:00	10.02	16.30
7/26/2017	0:00	10.02	16.88	7/11/2017	1:00	10.00	16.26
7/26/2017	1:00	10.03	16.83	7/11/2017	2:00	9.98	16.30
7/26/2017	2:00	10.03	16.81	7/11/2017	3:00	10.02	16.32
7/26/2017	3:00	10.03	16.71	7/11/2017	4:00	10.00	16.30
7/26/2017	4:00	10.03	16.61	7/11/2017	5:00	10.02	16.34
7/26/2017	5:00	10.03	16.48	7/11/2017	6:00	9.99	16.34
7/26/2017	6:00	10.03	16.37	7/11/2017	7:00	10.00	16.33
7/26/2017	7:00	10.03	16.27	7/11/2017	8:00	9.99	16.37
7/26/2017	8:00	10.03	16.26	7/11/2017	9:00	10.00	16.35
7/26/2017	9:00	10.03	16.36	7/11/2017	10:00	10.00	16.36
7/26/2017	10:00	10.03	16.48	7/11/2017	11:00	10.00	16.38
7/26/2017	11:00	10.03	16.71	7/11/2017	12:00	10.02	16.39
7/26/2017	12:00	10.04	16.94	7/11/2017	13:00	9.99	16.38
7/26/2017	13:00	10.03	17.28	7/11/2017	14:00	10.04	16.38
7/26/2017	14:00	10.03	17.55	7/11/2017	15:00	10.01	16.40
7/26/2017	15:00	10.03	17.79	7/11/2017	16:00	10.01	16.40
7/26/2017	16:00	10.04	17.93	7/11/2017	17:00	10.00	16.42
7/26/2017	17:00	10.04	17.98	7/11/2017	18:00	10.05	16.42
7/26/2017	18:00	10.03	17.99	7/11/2017	19:00	10.02	16.45
7/26/2017	19:00	10.04	18.00	7/11/2017	20:00	10.03	16.44
7/26/2017	20:00	10.03	17.94	7/11/2017	21:00	10.03	16.47
7/26/2017	21:00	10.03	17.78	7/11/2017	22:00	10.02	16.44
7/26/2017	22:00	10.04	17.57	7/11/2017	23:00	10.00	16.48
7/26/2017	23:00	10.03	17.41	7/12/2017	0:00	10.02	16.45
7/27/2017	0:00	10.04	17.26	7/12/2017	1:00	10.01	16.50
7/27/2017	1:00	10.03	17.04	7/12/2017	2:00	10.01	16.51
7/27/2017	2:00	10.04	16.90	7/12/2017	3:00	10.05	16.53
7/27/2017	3:00	10.04	16.81	7/12/2017	4:00	10.02	16.52
7/27/2017	4:00	10.04	16.66	7/12/2017	5:00	10.07	16.54
7/27/2017	5:00	10.04	16.58	7/12/2017	6:00	10.00	16.52
7/27/2017	6:00	10.04	16.54	7/12/2017	7:00	10.02	16.54
7/27/2017	7:00	10.04	16.55	7/12/2017	8:00	10.02	16.54
7/27/2017	8:00	10.04	16.58	7/12/2017	9:00	10.01	16.58
7/27/2017	9:00	10.04	16.65	7/12/2017	10:00	10.03	16.58
7/27/2017	10:00	10.04	16.70	7/12/2017	11:00	10.02	16.58
7/27/2017	11:00	10.04	16.84	7/12/2017	12:00	10.03	16.59
7/27/2017	12:00	10.04	16.94	7/12/2017	13:00	10.01	16.56
7/27/2017	13:00	10.04	17.02	7/12/2017	14:00	10.00	16.57

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Date	Time	Temperature (degrees Celsius) Well C-21	Temperature (degrees Celsius) Surface Water Near Well C-21	Date	Time	Temperature (degrees Celsius) Well C-23	Temperature (degrees Celsius) Piezometer Shallow Groundwater Near Well C-23 ^{⊥/}
7/27/2017	14:00	10.04	17.23	7/12/2017	15:00	10.01	16.59
7/27/2017	15:00	10.04	17.27	7/12/2017	16:00	10.00	16.61
7/27/2017	16:00	10.04	17.37	7/12/2017	17:00	10.02	16.64
7/27/2017	17:00	10.04	17.57	7/12/2017	18:00	10.01	16.64
7/27/2017	18:00	10.04	17.70	7/12/2017	19:00	10.01	16.66
7/27/2017	19:00	10.04	17.85	7/12/2017	20:00	10.00	16.65
7/27/2017	20:00	10.04	17.88	7/12/2017	21:00	10.05	16.68
7/27/2017	21:00	10.04	17.84	7/12/2017	22:00	10.04	16.66
7/27/2017	22:00	10.04	17.80	7/12/2017	23:00	10.01	16.69
7/27/2017	23:00	10.04	17.81	7/13/2017	0:00	10.02	16.70
7/28/2017	0:00	10.04	17.77	7/13/2017	1:00	10.02	16.69
7/28/2017	1:00	10.04	17.75	7/13/2017	2:00	10.00	16.72
7/28/2017	2:00	10.05	17.72	7/13/2017	3:00	10.01	16.71
7/28/2017	3:00	10.04	17.73	7/13/2017	4:00	10.00	16.75
7/28/2017	4:00	10.04	17.67	7/13/2017	5:00	10.04	16.77
7/28/2017	5:00	10.04	17.64	7/13/2017	6:00	10.02	16.78
7/28/2017	6:00	10.04	17.61	7/13/2017	7:00	10.02	16.77
7/28/2017	7:00	10.04	17.60	7/13/2017	8:00	10.00	16.79
7/28/2017	8:00	10.04	17.62	7/13/2017	9:00	10.00	16.78
7/28/2017	9:00	10.04	17.73	7/13/2017	10:00	10.04	16.83
7/28/2017	10:00	10.04	17.67	7/13/2017	11:00	10.02	16.81
7/28/2017	11:00	10.04	17.72	7/13/2017	12:00	10.00	16.80
7/28/2017	12:00	10.04	18.08	7/13/2017	13:00	10.02	16.85
				7/13/2017	14:00	10.01	16.84
				7/13/2017	15:00	10.01	16.85
				7/13/2017	16:00	9.98	16.88
				7/13/2017	17:00	10.03	16.86
				7/13/2017	18:00	10.04	16.88
				7/13/2017	19:00	10.02	16.91
				7/13/2017	20:00	10.02	16.93
				7/13/2017	21:00	10.02	16.95
				7/13/2017	22:00	10.04	16.94
				7/13/2017	23:00	10.04	16.98
				7/14/2017	0:00	10.00	17.02
				7/14/2017	1:00	10.01	17.04
				7/14/2017	2:00	10.01	17.06
				7/14/2017	3:00	10.02	17.08
				7/14/2017	4:00	9.99	17.12
				7/14/2017	5:00	10.09	17.09
				//14/2017	6:00	10.02	17.10
				7/14/2017	7:00	10.01	17.11
				//14/2017	8:00	10.02	17.14
				7/14/2017	9:00	10.03	17.10
				7/14/2017	10:00	10.02	17.12
				7/14/2017	11:00	10.00	1/.1/
				7/14/2017	12:00	9.98	17.13
				7/14/2017	14.00	10.02	17.13
				7/14/2017	15.00	10.05	17.15
				7/14/2017	16.00	10.01	17.10
				7/14/2017	17.00	10.00	17.10
				7/14/2017	18:00	9.99	17.09

Temperature Measurements from the Pumping Wells and Nearby Surface Water During Pumping Test Program Conducted on Wells C-6, 7B, 12, 14, 16, 21, and 23 During July 2017

Date	Time	Temperature (degrees Celsius) Well C-21	Temperature (degrees Celsius) Surface Water Near Well C-21	Date	Time	Temperature (degrees Celsius) Well C-23	Temperature (degrees Celsius) Piezometer Shallow Groundwater Near Well C-23 ^{⊥/}
				7/14/2017	19:00	10.04	17.05
				7/14/2017	20:00	10.05	17.07
				7/14/2017	21:00	10.05	17.07
				7/14/2017	22:00	10.00	17.03
				7/14/2017	23:00	10.00	17.02
				7/15/2017	0:00	10.02	17.01
				7/15/2017	1:00	10.03	17.00
				7/15/2017	2:00	10.00	16.98
				7/15/2017	3:00	10.04	16.99
				7/15/2017	4:00	10.04	16.95
				7/15/2017	5:00	10.01	16.95
				7/15/2017	6:00	10.00	16.94
				7/15/2017	7:00	10.00	16.91
				7/15/2017	8:00	10.02	16.94
				7/15/2017	9:00	10.04	16.91
				7/15/2017	10:00	10.04	16.89
				7/15/2017	11:00	10.07	16.89
				7/15/2017	12:00	10.05	16.90
				7/15/2017	13:00	10.00	16.85
				7/15/2017	14:00	10.01	16.83
				7/15/2017	15:00	10.02	16.84
				7/15/2017	16:00	10.00	16.81
				7/15/2017	17:00	10.07	16.82
				7/15/2017	18:00	10.05	16.82
				7/15/2017	19:00	10.08	16.81
				7/15/2017	20:00	10.01	16.80
				7/15/2017	21:00	10.03	16.83
				7/15/2017	22:00	10.01	16.85
				7/15/2017	23:00	9.99	16.82
				7/16/2017	0:00	10.01	16.88

<u>1/</u> Temperature measurements from transducer installed in the nearby shallow-screened piezometer were used for comparison.

 $K: \label{eq:loss_label} K: \label{eq:loss_label} Anne \label{eq:loss_label} Clovewood \label{eq:loss_label} 2017 \label{eq:loss_label} Report \label{eq:label_label} Temperature \ Table. \ doc$



