



2205-A Candun Drive
Apex, NC 27523
Telephone 919-363-6310
www.gma-nc.com

May 14, 2020

Mr. Chad M. Threatt
Alamance Aggregates, LLC
PO Box 552
Snow Camp, NC 27349

Mr. Threatt:

Groundwater Management Associates Inc. (GMA) received the laboratory analyses for the water samples collected from OW-2 on Tuesday April 21, 2020. The subcontracted laboratory, Waypoint Analytical, has provided a final report of the analytical results which is attached.

Due to the State's request to analyze for Bacteria, GMA chlorinated well OW-2 prior to sampling. Observation wells, including well OW-2, constructed for an earlier phase of this project were not disinfected when installed because disinfection is not required for observation wells. The disinfection was performed on well OW-2 under the direction of a NC Certified Well Contractor employed by GMA. The process included mixing a granular 73% calcium hypochlorite disinfectant (with 70% available chlorine) in a 35-gallon tank of water and pumping that mixture into the well.

The appropriate dosing volume and hypochlorite concentration were calculated to provide standard well disinfection for the well depth and water column height. Disinfection for the well was based on water supply well construction standard 15A NCAC .0111(b)1(A). Well OW-2 is a 6 inch diameter well, 400 feet deep, with a static water level about 17 feet BLS. Using a water column of 383 feet, and 1.5 gallons of water per foot of casing, means about 575 gallons of water had to be treated. To achieve a chlorine residual of at least 100 ppm in the well, three ounces of hypochlorite containing 70 % available chlorine had to be used for every 100 gallons. So 5.75 multiplied by 3 ounces means we needed about 17.25 ounces of hypochlorite, or 1 pound + 1.25 ounces. Water mixed with hypochlorite was added to the well, allowing the water to rinse and coat the casing from the surface to the water table. Water in the well was then agitated with a pump to distribute the chlorine solution throughout the well.

After an appropriate contact time of about 3 hours, GMA pumped out the contents of the well and monitored the purged water until total chlorine was absent (<0.1 mg/L). Total chlorine was measured using a Hach Model CN-66 Chlorine test kit. The well was then purged until other field water-quality parameters (as measured using a YSI meter) stabilized. Turbidity was also monitored using a Hach 2100Q Turbidimeter. Turbidity increased throughout the well purging, and the ending turbidity was over-range for the meter. Elevated turbidity was also noted from the 24-hour pumping test performed previously on OW2, and elevated turbidity appears to be a persistent condition of the well. More than 3 well volumes were removed from the well prior to sampling. Ending field water-quality data collected immediately prior to sample collection, included the following conditions:

Temperature = 16.5° C
Specific Conductance = 413.2 μ S/cm
pH = 6.26
Dissolved Oxygen = 2.15 mg/L

GMA sampled the well from the discharge point while pumping at a low flow rate of about 1 gallon per minute. The samples were collected at time 13:25 on April 21, 2020. The samples were shipped to a subcontracted laboratory for morning delivery the next day.

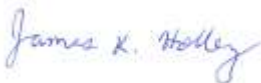
Please call me if you have any questions or concerns.

Sincerely,



Groundwater Management Associates, Inc.
William L. Lyke, P.E., P.G.
Senior Hydrogeologist/Civil Engineer

Richard K. Spruill, PhD, P.G.
Principal Hydrogeologist



James K. Holley, P.G.
Director of Water Resources
N.C. Certified Well Contractor #2867-A

cc: John Wise, P.E., GMA-Apex

Enclosure: Final Laboratory Report from Waypoint Analytical.

Groundwater Manage. Assoc.(Cary)
Bill Lyke
2205A Candun Drive
Apex, NC 27523

Project: 163101 Snow Camp Quarry

Lab Submittal Date: 04/22/2020

Work Order: 0040245

This data package contains the analytical results for the project identified above and includes a Case Narrative, Sample Results and Chain of Custody. Unless otherwise noted, all samples were received in acceptable condition and processed according to the referenced methods.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative.

Narrative Notes:

Radiological analyses were subcontracted to Summit Labs. Laboratory report is attached.

TOC analysis was subcontracted to Pace Analytical. Laboratory report is attached.

Please call if you have any questions relating to this analytical report.

Respectfully,

WAYPOINT ANALYTICAL



Angela D. Overcash

Senior Project Manager

Data Qualifiers Key Reference:

A	Sample less than 100 mL; approx. 80 mL.
DM	Sample diluted and RL increased due to the matrix.
M	Matrix spike outside of the control limits.
MC	Sample concentration too high for recovery evaluation.
BRL	Below Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
*	Results reported to the reporting limit. All other results are reported to the MDL with values between MDL and reporting limit indicated with a J.

Client Sample ID	Lab Sample ID	Matrix	Date/Time Sampled	Date/Time Received
OW-2	0040245-01	Water	04/21/20 13:25	04/22/20 10:00

Samples were received in good condition at 2.0 degrees C unless otherwise noted.

Groundwater Manage. Assoc.(Cary)
Attn: Bill Lyke
2205A Candun Drive
Apex, NC 27523

Project: 163101 Snow Camp Quarry

Sample Matrix: Water

Client Sample ID: OW-2
Sample ID: 0040245-01
Work Order: 0040245
Time Collected: 04/21/20 13:25
Time Submitted: 04/22/20 10:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Anions by Ion Chromatography									
Bromide	BRL	mg/L	0.20	0.063	1	*9056A	4/23/20 21:09	BMS	P0D0398
Chloride	37	mg/L	1.0	0.38	1	*9056A	4/23/20 21:09	BMS	P0D0398
Fluoride	BRL	mg/L	0.20	0.060	1	*9056A	4/23/20 21:09	BMS	P0D0398
Sulfate	9.5	mg/L	2.0	0.48	1	*9056A	4/23/20 21:09	BMS	P0D0398
Dissolved Metals									
Aluminum	BRL	mg/L	0.10	0.021	1	*6020B	4/29/20 4:33	MMR	P0D0369
Antimony	BRL	mg/L	0.0030	0.00093	1	*6020B	4/29/20 4:33	MMR	P0D0369
Arsenic	0.0012	mg/L	0.0010	0.00034	1	*6020B	4/29/20 4:33	MMR	P0D0369
Barium	0.13	mg/L	0.010	0.0032	1	*6020B	4/29/20 4:33	MMR	P0D0369
Beryllium	BRL	mg/L	0.0010	0.00030	1	*6020B	4/30/20 19:09	MMR	P0D0369
Boron	BRL	mg/L	0.50	0.30	1	*6010D	4/23/20 12:02	JAB	P0D0367
Cadmium	BRL	mg/L	0.0020	0.00063	1	*6020B	4/29/20 4:33	MMR	P0D0369
Calcium	55	mg/L	0.10	0.070	1	*6020B	5/4/20 15:02	MMR	P0D0369
Chromium	BRL	mg/L	0.0030	0.00090	1	*6020B	4/29/20 4:33	MMR	P0D0369
Cobalt	BRL	mg/L	0.0020	0.00070	1	*6020B	4/29/20 4:33	MMR	P0D0369
Copper	BRL	mg/L	0.010	0.0047	1	*6020B	4/29/20 4:33	MMR	P0D0369
Iron	BRL	mg/L	0.20	0.062	1	*6020B	4/29/20 4:33	MMR	P0D0369
Lead	BRL	mg/L	0.0010	0.00044	1	*6020B	4/30/20 19:09	MMR	P0D0369
Lithium	BRL	mg/L	0.025	0.00048	1	*6010D	4/23/20 12:02	JAB	P0D0367
Magnesium	12	mg/L	0.20	0.056	1	*6020B	4/29/20 4:33	MMR	P0D0369
Manganese	0.082	mg/L	0.010	0.0038	1	*6020B	4/29/20 4:33	MMR	P0D0369
Molybdenum	BRL	mg/L	0.0010	0.00012	1	*6020B	4/29/20 4:33	MMR	P0D0369
Nickel	BRL	mg/L	0.0030	0.00083	1	*6020B	4/29/20 4:33	MMR	P0D0369
Potassium	2.4	mg/L	0.30	0.096	1	*6020B	4/29/20 4:33	MMR	P0D0369
Selenium	BRL	mg/L	0.0050	0.00098	1	*6020B	4/29/20 4:33	MMR	P0D0369
Silver	BRL	mg/L	0.0010	0.00034	1	*6020B	4/29/20 4:33	MMR	P0D0369
Sodium	18	mg/L	0.30	0.11	1	*6020B	4/30/20 19:09	MMR	P0D0369
Strontium	0.59	mg/L	0.0020	0.00081	1	*6020B	4/29/20 4:33	MMR	P0D0369
Thallium	BRL	mg/L	0.0020	0.00084	1	*6020B	4/30/20 19:09	MMR	P0D0369
Tin	BRL	mg/L	0.0050	0.0019	1	*6020B	4/29/20 4:33	MMR	P0D0369
Titanium	BRL	mg/L	0.0050	0.0025	1	*6020B	4/29/20 4:33	MMR	P0D0369
Vanadium	BRL	mg/L	0.0050	0.0015	1	*6020B	4/29/20 4:33	MMR	P0D0369
Zinc	BRL	mg/L	0.020	0.010	1	*6020B	4/29/20 4:33	MMR	P0D0369
General Chemistry Parameters									
Nitrate/Nitrite as N	19	mg-N/L	1.0	0.33	10	*353.2	5/1/20 9:37	CLB	P0D0464
Phosphorus-Total	0.88	mg/L	0.10	0.037	1	*SM4500-P F	4/30/20 8:42	CLB	P0D0448
Sulfide	BRL	mg/L	4.0	0.83	1	*SM4500-S F	4/28/20 15:37	ENM	P0D0440
Total Alkalinity to pH 4.5	61	mg/L	5.0	0.77	1	*SM2320 B	4/28/20 10:30	CLB	P0D0428
Total Dissolved Solids	2400	mg/L	50	21	1	*SM2540 C	4/22/20 22:05	SLS	P0D0354

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Groundwater Manage. Assoc.(Cary)
Attn: Bill Lyke
2205A Candun Drive
Apex, NC 27523

Project: 163101 Snow Camp Quarry

Sample Matrix: Water

Client Sample ID: OW-2
Sample ID: 0040245-01
Work Order: 0040245
Time Collected: 04/21/20 13:25
Time Submitted: 04/22/20 10:00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Total Kjeldahl Nitrogen	BRL _{DM}	mg-N/L	5.0	2.4	1	*351.2	4/27/20 10:56	CLB	P0D0396
Turbidity	2800	NTU	5.0	1.9	5	*SM2130 B	4/22/20 14:19	ENM	P0D0341
Ammonia as N	BRL	mg-N/L	0.10	0.051	1	*SM4500-NH3 G	4/28/20 8:58	CLB	P0D0412
Carbonate Alkalinity	BRL	mg/L	5.0	0.59	1	*SM2320 B	4/28/20 10:30	CLB	P0D0430
Bicarbonate Alkalinity	61	mg/L	5.0	0.59	1	*SM2320 B	4/28/20 10:30	CLB	P0D0429
Microbiological Parameters									
E. Coli	Absent	N/A	1.0	0.0	1	*SM9223 B	4/22/20 14:08	ENM	P0D0350
Total Coliforms	Present _A	N/A	1.0	0.0	1	*SM9223 B	4/22/20 14:08	ENM	P0D0350
Total Metals									
Silica	170	mg/L	5.3	1.6	5	*6010C	4/24/20 12:04	JAB	[CALC]
Silicon	81	mg/L	2.5	0.75	5	*6010D	4/24/20 12:04	JAB	P0D0360

Groundwater Manage. Assoc.(Cary)
Attn: Bill Lyke
2205A Candun Drive
Apex, NC 27523

Project: 163101 Snow Camp Quarry

Work Order: 0040245

Time Submitted: 4/22/2020 10:00:00AM

Total Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0D0360 - 3010A										
Blank (P0D0360-BLK1)				Prepared: 04/23/20 Analyzed: 04/24/20						
Silicon	BRL	0.50	mg/L							
LCS (P0D0360-BS1)				Prepared: 04/23/20 Analyzed: 04/24/20						
Silicon	9.51	0.50	mg/L	10.00		95	80-120			
Matrix Spike (P0D0360-MS1)				Source: 0040245-01 Prepared: 04/23/20 Analyzed: 04/24/20						
Silicon	1.00E9	0.50	mg/L	10.00	81.5	NR	75-125			MC
Matrix Spike Dup (P0D0360-MSD1)				Source: 0040245-01 Prepared: 04/23/20 Analyzed: 04/24/20						
Silicon	1.00E9	0.50	mg/L	10.00	81.5	NR	75-125	0	20	MC
Post Spike (P0D0360-PS1)				Source: 0040245-01 Prepared: 04/23/20 Analyzed: 04/24/20						
Silicon	1.00E9		mg/L	10.00	81.5	NR	75-125			MC

Groundwater Manage. Assoc.(Cary)
Attn: Bill Lyke
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Apex, NC 27523

Project: 163101 Snow Camp Quarry

Work Order: 0040245

Time Submitted: 4/22/2020 10:00:00AM

Dissolved Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0D0367 - 3010A										
Blank (P0D0367-BLK1)				Prepared & Analyzed: 04/23/20						
Boron	BRL	0.50	mg/L							
Lithium	BRL	0.025	mg/L							
LCS (P0D0367-BS1)				Prepared & Analyzed: 04/23/20						
Boron	9.81	0.50	mg/L	10.00		98	80-120			
Lithium	0.507	0.025	mg/L	0.5003		101	80-120			
Matrix Spike (P0D0367-MS1)				Source: 0040245-01		Prepared & Analyzed: 04/23/20				
Boron	9.94	0.50	mg/L	10.00	BRL	99	75-125			
Lithium	0.513	0.025	mg/L	0.5003	BRL	103	75-125			
Matrix Spike Dup (P0D0367-MSD1)				Source: 0040245-01		Prepared & Analyzed: 04/23/20				
Boron	9.95	0.50	mg/L	10.00	BRL	100	75-125	0.1	20	
Lithium	0.500	0.025	mg/L	0.5003	BRL	100	75-125	3	20	
Post Spike (P0D0367-PS1)				Source: 0040245-01		Prepared & Analyzed: 04/23/20				
Boron	10.0		mg/L	10.00	0.108	99	75-125			
Lithium	0.485		mg/L	0.5003	-0.0147	97	80-120			
Batch P0D0369 - 3005A										
Blank (P0D0369-BLK1)				Prepared: 04/23/20 Analyzed: 04/29/20						
Aluminum	BRL	0.10	mg/L							
Antimony	BRL	0.0030	mg/L							
Arsenic	BRL	0.0010	mg/L							
Barium	BRL	0.010	mg/L							
Beryllium	BRL	0.0010	mg/L							
Cadmium	BRL	0.0020	mg/L							
Calcium	BRL	0.10	mg/L							
Chromium	BRL	0.0030	mg/L							
Cobalt	BRL	0.0020	mg/L							
Copper	BRL	0.010	mg/L							
Iron	BRL	0.20	mg/L							
Lead	BRL	0.0010	mg/L							
Magnesium	BRL	0.20	mg/L							
Manganese	BRL	0.010	mg/L							
Molybdenum	BRL	0.0010	mg/L							
Nickel	BRL	0.0030	mg/L							
Potassium	BRL	0.30	mg/L							
Selenium	BRL	0.0050	mg/L							
Silver	BRL	0.0010	mg/L							
Sodium	BRL	0.30	mg/L							
Strontium	BRL	0.0020	mg/L							
Thallium	BRL	0.0020	mg/L							
Tin	BRL	0.0050	mg/L							
Titanium	BRL	0.0050	mg/L							
Vanadium	BRL	0.0050	mg/L							
Zinc	BRL	0.020	mg/L							

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Groundwater Manage. Assoc.(Cary)
Attn: Bill Lyke
2205A Candun Drive
Apex, NC 27523

Project: 163101 Snow Camp Quarry

Work Order: 0040245

Time Submitted: 4/22/2020 10:00:00AM

Dissolved Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0D0369 - 3005A										
LCS (P0D0369-BS1)				Prepared: 04/23/20 Analyzed: 04/29/20						
Aluminum	1.01	0.10	mg/L	1.000		101	80-120			
Antimony	0.101	0.0030	mg/L	0.1000		101	80-120			
Arsenic	0.0926	0.0010	mg/L	0.1000		93	80-120			
Barium	0.0962	0.010	mg/L	0.1000		96	80-120			
Beryllium	0.0890	0.0010	mg/L	0.1000		89	80-120			
Cadmium	0.0996	0.0020	mg/L	0.1000		100	80-120			
Calcium	1.16	0.10	mg/L	1.000		116	80-120			
Chromium	0.0957	0.0030	mg/L	0.1000		96	80-120			
Cobalt	0.0941	0.0020	mg/L	0.1000		94	80-120			
Copper	0.0919	0.010	mg/L	0.1000		92	80-120			
Iron	0.959	0.20	mg/L	1.000		96	80-120			
Lead	0.0954	0.0010	mg/L	0.1000		95	80-120			
Magnesium	1.01	0.20	mg/L	1.000		101	80-120			
Manganese	0.0969	0.010	mg/L	0.1000		97	80-120			
Molybdenum	0.0990	0.0010	mg/L	0.1000		99	80-120			
Nickel	0.0924	0.0030	mg/L	0.1000		92	80-120			
Potassium	0.955	0.30	mg/L	1.000		96	80-120			
Selenium	0.0971	0.0050	mg/L	0.1000		97	80-120			
Silver	0.0996	0.0010	mg/L	0.1000		100	80-120			
Sodium	0.923	0.30	mg/L	1.000		92	80-120			
Strontium	0.104	0.0020	mg/L	0.1000		104	80-120			
Thallium	0.0958	0.0020	mg/L	0.1000		96	80-120			
Tin	0.0959	0.0050	mg/L	0.1000		96	80-120			
Titanium	0.0999	0.0050	mg/L	0.1000		100	80-120			
Vanadium	0.0960	0.0050	mg/L	0.1000		96	80-120			
Zinc	0.0971	0.020	mg/L	0.1000		97	80-120			
Matrix Spike (P0D0369-MS1)				Source: 0040245-01 Prepared: 04/23/20 Analyzed: 04/29/20						
Aluminum	1.04	0.10	mg/L	1.000	BRL	104	75-125			
Antimony	0.108	0.0030	mg/L	0.1000	BRL	108	75-125			
Arsenic	0.0966	0.0010	mg/L	0.1000	0.00117	95	75-125			
Barium	0.224	0.010	mg/L	0.1000	0.125	99	75-125			
Beryllium	0.0889	0.0010	mg/L	0.1000	BRL	89	75-125			
Cadmium	0.102	0.0020	mg/L	0.1000	BRL	102	75-125			
Calcium	52.6	0.10	mg/L	1.000	54.7	NR	75-125			MC
Chromium	0.0956	0.0030	mg/L	0.1000	BRL	96	75-125			
Cobalt	0.0946	0.0020	mg/L	0.1000	BRL	95	75-125			
Copper	0.0939	0.010	mg/L	0.1000	BRL	94	75-125			
Iron	0.979	0.20	mg/L	1.000	BRL	98	75-125			
Lead	0.0956	0.0010	mg/L	0.1000	BRL	96	75-125			
Magnesium	12.8	0.20	mg/L	1.000	12.1	76	75-125			
Manganese	0.178	0.010	mg/L	0.1000	0.0821	95	75-125			
Molybdenum	0.101	0.0010	mg/L	0.1000	0.000679	100	75-125			
Nickel	0.0933	0.0030	mg/L	0.1000	0.000985	92	75-125			
Potassium	3.28	0.30	mg/L	1.000	2.37	90	75-125			
Selenium	0.0992	0.0050	mg/L	0.1000	0.00320	96	75-125			
Silver	0.0489	0.0010	mg/L	0.1000	BRL	49	75-125			M

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Groundwater Manage. Assoc.(Cary)
Attn: Bill Lyke
2205A Candun Drive
Apex, NC 27523

Project: 163101 Snow Camp Quarry

Work Order: 0040245

Time Submitted: 4/22/2020 10:00:00AM

Dissolved Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0D0369 - 3005A										
Matrix Spike (P0D0369-MS1)		Source: 0040245-01		Prepared: 04/23/20		Analyzed: 04/30/20				
Sodium	18.5	0.30	mg/L	1.000	18.2	35	75-125			MC
Strontium	0.683	0.0020	mg/L	0.1000	0.590	93	75-125			
Thallium	0.0970	0.0020	mg/L	0.1000	BRL	97	75-125			
Tin	0.0977	0.0050	mg/L	0.1000	BRL	98	75-125			
Titanium	0.102	0.0050	mg/L	0.1000	BRL	102	75-125			
Vanadium	0.0982	0.0050	mg/L	0.1000	BRL	98	75-125			
Zinc	0.103	0.020	mg/L	0.1000	BRL	103	75-125			
Matrix Spike Dup (P0D0369-MSD1)		Source: 0040245-01		Prepared: 04/23/20		Analyzed: 04/29/20				
Aluminum	1.03	0.10	mg/L	1.000	BRL	103	75-125	1	20	
Antimony	0.111	0.0030	mg/L	0.1000	BRL	111	75-125	3	20	
Arsenic	0.0968	0.0010	mg/L	0.1000	0.00117	96	75-125	0.3	20	
Barium	0.228	0.010	mg/L	0.1000	0.125	103	75-125	2	20	
Beryllium	0.0884	0.0010	mg/L	0.1000	BRL	88	75-125	0.5	20	
Cadmium	0.102	0.0020	mg/L	0.1000	BRL	102	75-125	0.3	20	
Calcium	51.6	0.10	mg/L	1.000	54.7	NR	75-125	2	20	MC
Chromium	0.0964	0.0030	mg/L	0.1000	BRL	96	75-125	0.8	20	
Cobalt	0.0944	0.0020	mg/L	0.1000	BRL	94	75-125	0.2	20	
Copper	0.0940	0.010	mg/L	0.1000	BRL	94	75-125	0.1	20	
Iron	1.00	0.20	mg/L	1.000	BRL	100	75-125	3	20	
Lead	0.0940	0.0010	mg/L	0.1000	BRL	94	75-125	2	20	
Magnesium	12.9	0.20	mg/L	1.000	12.1	79	75-125	0.3	20	
Manganese	0.179	0.010	mg/L	0.1000	0.0821	97	75-125	0.8	20	
Molybdenum	0.101	0.0010	mg/L	0.1000	0.000679	101	75-125	0.4	20	
Nickel	0.0925	0.0030	mg/L	0.1000	0.000985	92	75-125	0.8	20	
Potassium	3.30	0.30	mg/L	1.000	2.37	92	75-125	0.6	20	
Selenium	0.101	0.0050	mg/L	0.1000	0.00320	98	75-125	2	20	
Silver	0.0495	0.0010	mg/L	0.1000	BRL	49	75-125	1	20	M
Sodium	19.1	0.30	mg/L	1.000	18.2	92	75-125	3	20	
Strontium	0.690	0.0020	mg/L	0.1000	0.590	99	75-125	1	20	
Thallium	0.0954	0.0020	mg/L	0.1000	BRL	95	75-125	2	20	
Tin	0.100	0.0050	mg/L	0.1000	BRL	100	75-125	2	20	
Titanium	0.0999	0.0050	mg/L	0.1000	BRL	100	75-125	2	20	
Vanadium	0.100	0.0050	mg/L	0.1000	BRL	100	75-125	2	20	
Zinc	0.100	0.020	mg/L	0.1000	BRL	100	75-125	3	20	

Groundwater Manage. Assoc.(Cary)
Attn: Bill Lyke
2205A Candun Drive
Apex, NC 27523

Project: 163101 Snow Camp Quarry

Work Order: 0040245

Time Submitted: 4/22/2020 10:00:00AM

Dissolved Metals - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0D0369 - 3005A										
Post Spike (P0D0369-PS1)										
Source: 0040245-01			Prepared: 04/23/20 Analyzed: 04/29/20							
Aluminum	1080		ug/L	1000	2.58	108	80-120			
Antimony	111		ug/L	100.0	0.656	110	80-120			
Arsenic	99.8		ug/L	100.0	1.17	99	80-120			
Barium	226		ug/L	100.0	125	101	80-120			
Beryllium	91.6		ug/L	100.0	0.0100	92	80-120			
Cadmium	106		ug/L	100.0	0.0180	106	80-120			
Calcium	52900		ug/L	1000	54700	NR	80-120			MC
Chromium	99.1		ug/L	100.0	-0.0310	99	80-120			
Cobalt	96.4		ug/L	100.0	0.233	96	80-120			
Copper	97.2		ug/L	100.0	1.89	95	80-120			
Iron	1030		ug/L	1000	6.50	102	80-120			
Lead	98.1		ug/L	100.0	0.0220	98	80-120			
Magnesium	13000		ug/L	1000	12100	90	80-120			
Manganese	182		ug/L	100.0	82.1	100	80-120			
Molybdenum	103		ug/L	100.0	0.679	103	80-120			
Nickel	95.4		ug/L	100.0	0.985	94	80-120			
Potassium	3310		ug/L	1000	2370	94	80-120			
Selenium	106		ug/L	100.0	3.20	103	80-120			
Silver	68.7		ug/L	100.0	0.00	69	80-120			M
Sodium	18800		ug/L	1000	18200	62	80-120			MC
Strontium	676		ug/L	100.0	590	85	80-120			
Thallium	100		ug/L	100.0	0.0180	100	80-120			
Tin	100		ug/L	100.0	-0.529	100	80-120			
Titanium	100		ug/L	100.0	0.153	100	80-120			
Vanadium	103		ug/L	100.0	1.01	102	80-120			
Zinc	111		ug/L	100.0	4.33	106	80-120			

Groundwater Manage. Assoc.(Cary)
Attn: Bill Lyke
2205A Candun Drive
Apex, NC 27523

Project: 163101 Snow Camp Quarry

Work Order: 0040245

Time Submitted: 4/22/2020 10:00:00AM

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0D0398 - NO PREP										
Blank (P0D0398-BLK1)				Prepared & Analyzed: 04/23/20						
Bromide	BRL	0.20	mg/L							
Chloride	BRL	1.0	mg/L							
Fluoride	BRL	0.20	mg/L							
Sulfate	BRL	2.0	mg/L							
LCS (P0D0398-BS1)				Prepared & Analyzed: 04/23/20						
Bromide	3.84	0.21	mg/L	4.000		96	80-120			
Chloride	40.4	1.0	mg/L	40.00		101	80-120			
Fluoride	4.12	0.21	mg/L	4.000		103	80-120			
Sulfate	41.2	2.1	mg/L	40.00		103	80-120			
Matrix Spike (P0D0398-MS1)				Source: 0040245-01		Prepared & Analyzed: 04/23/20				
Bromide	3.74	0.21	mg/L	4.000	0.122	90	80-120			
Chloride	76.2	1.0	mg/L	40.00	36.6	99	80-120			
Fluoride	4.04	0.21	mg/L	4.000	0.126	98	80-120			
Sulfate	49.8	2.1	mg/L	40.00	9.54	101	80-120			
Matrix Spike Dup (P0D0398-MSD1)				Source: 0040245-01		Prepared & Analyzed: 04/23/20				
Bromide	3.83	0.21	mg/L	4.000	0.122	93	80-120	2	15	
Chloride	76.7	1.0	mg/L	40.00	36.6	100	80-120	0.8	15	
Fluoride	4.16	0.21	mg/L	4.000	0.126	101	80-120	3	15	
Sulfate	50.5	2.1	mg/L	40.00	9.54	103	80-120	1	15	

Groundwater Manage. Assoc.(Cary)
Attn: Bill Lyke
2205A Candun Drive
Apex, NC 27523

Project: 163101 Snow Camp Quarry

Work Order: 0040245

Time Submitted: 4/22/2020 10:00:00AM

General Chemistry Parameters - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0D0341 - NO PREP										
Blank (P0D0341-BLK1)				Prepared & Analyzed: 04/22/20						
Turbidity	BRL	1.0	NTU							
LCS (P0D0341-BS1)				Prepared & Analyzed: 04/22/20						
Turbidity	19.9	1.0	NTU	19.10		104	90-110			
Duplicate (P0D0341-DUP1)				Source: 0040245-01		Prepared & Analyzed: 04/22/20				
Turbidity	2750	5.0	NTU		2750			0	20	
Batch P0D0354 - NO PREP										
Blank (P0D0354-BLK1)				Prepared & Analyzed: 04/22/20						
Total Dissolved Solids	BRL	50	mg/L							
LCS (P0D0354-BS1)				Prepared & Analyzed: 04/22/20						
Total Dissolved Solids	1010	50	mg/L	1000		101	90-110			
Batch P0D0396 - 351.2										
Blank (P0D0396-BLK1)				Prepared: 04/24/20 Analyzed: 04/27/20						
Total Kjeldahl Nitrogen	BRL	0.50	mg-N/L							
LCS (P0D0396-BS1)				Prepared: 04/24/20 Analyzed: 04/27/20						
Total Kjeldahl Nitrogen	2.49	0.50	mg-N/L	2.500		99	90-110			
Batch P0D0412 - NO PREP										
Blank (P0D0412-BLK1)				Prepared: 04/27/20 Analyzed: 04/28/20						
Ammonia as N	BRL	0.10	mg-N/L							

Groundwater Manage. Assoc.(Cary)
Attn: Bill Lyke
2205A Candun Drive
Apex, NC 27523

Project: 163101 Snow Camp Quarry

Work Order: 0040245

Time Submitted: 4/22/2020 10:00:00AM

General Chemistry Parameters - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0D0412 - NO PREP										
LCS (P0D0412-BS1)				Prepared: 04/27/20 Analyzed: 04/28/20						
Ammonia as N	2.53	0.10	mg-N/L	2.500		101	90-110			
Batch P0D0428 - NO PREP										
Blank (P0D0428-BLK1)				Prepared & Analyzed: 04/28/20						
Total Alkalinity to pH 4.5	BRL	5.0	mg/L							
LCS (P0D0428-BS1)				Prepared & Analyzed: 04/28/20						
Total Alkalinity to pH 4.5	249	5.0	mg/L	250.0		99	90-110			
Duplicate (P0D0428-DUP1)				Source: 0040245-01		Prepared & Analyzed: 04/28/20				
Total Alkalinity to pH 4.5	62.1	5.0	mg/L		61.3			1	20	
Batch P0D0429 - NO PREP										
Blank (P0D0429-BLK1)				Prepared & Analyzed: 04/28/20						
Bicarbonate Alkalinity	BRL	5.0	mg/L							
LCS (P0D0429-BS1)				Prepared & Analyzed: 04/28/20						
Bicarbonate Alkalinity	249	5.0	mg/L	250.0		99	90-110			
Duplicate (P0D0429-DUP1)				Source: 0040245-01		Prepared & Analyzed: 04/28/20				
Bicarbonate Alkalinity	62.1	5.0	mg/L		61.3			1	20	
Batch P0D0430 - NO PREP										
Blank (P0D0430-BLK1)				Prepared & Analyzed: 04/28/20						
Carbonate Alkalinity	BRL	5.0	mg/L							

Groundwater Manage. Assoc.(Cary)
Attn: Bill Lyke
2205A Candun Drive
Apex, NC 27523

Project: 163101 Snow Camp Quarry

Work Order: 0040245

Time Submitted: 4/22/2020 10:00:00AM

General Chemistry Parameters - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0D0430 - NO PREP										
Duplicate (P0D0430-DUP1)		Source: 0040245-01		Prepared & Analyzed: 04/28/20						
Carbonate Alkalinity	BRL	5.0	mg/L		BRL				20	
Batch P0D0440 - SM4500-S C										
Blank (P0D0440-BLK1)		Prepared & Analyzed: 04/28/20								
Sulfide	BRL	2.0	mg/L							
LCS (P0D0440-BS1)		Prepared & Analyzed: 04/28/20								
Sulfide	7.80	2.0	mg/L	10.00		78	70-130			
Matrix Spike (P0D0440-MS1)		Source: 0040245-01		Prepared & Analyzed: 04/28/20						
Sulfide	10.8	4.0	mg/L	20.00	BRL	54	70-130			M
Matrix Spike Dup (P0D0440-MSD1)		Source: 0040245-01		Prepared & Analyzed: 04/28/20						
Sulfide	9.00	4.0	mg/L	20.00	BRL	45	70-130	18	20	M
Batch P0D0448 - NO PREP										
Blank (P0D0448-BLK1)		Prepared: 04/29/20 Analyzed: 04/30/20								
Phosphorus-Total	BRL	0.10	mg/L							
LCS (P0D0448-BS1)		Prepared: 04/29/20 Analyzed: 04/30/20								
Phosphorus-Total	2.09	0.10	mg/L	2.000		104	90-110			
Batch P0D0464 - NO PREP										
Blank (P0D0464-BLK1)		Prepared: 04/30/20 Analyzed: 05/01/20								
Nitrate/Nitrite as N	BRL	0.10	mg-N/L							

Groundwater Manage. Assoc.(Cary)
Attn: Bill Lyke
2205A Candun Drive
Apex, NC 27523

Project: 163101 Snow Camp Quarry

Work Order: 0040245

Time Submitted: 4/22/2020 10:00:00AM

General Chemistry Parameters - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch P0D0464 - NO PREP										
LCS (P0D0464-BS1)				Prepared: 04/30/20 Analyzed: 05/01/20						
Nitrate/Nitrite as N	1.03	0.10	mg-N/L	1.000		103	90-110			
Matrix Spike (P0D0464-MS1)				Source: 0040245-01		Prepared: 04/30/20 Analyzed: 05/01/20				
Nitrate/Nitrite as N	20.7	1.0	mg-N/L	1.000	19.3	144	80-120			M
Matrix Spike Dup (P0D0464-MSD1)				Source: 0040245-01		Prepared: 04/30/20 Analyzed: 05/01/20				
Nitrate/Nitrite as N	20.2	1.0	mg-N/L	1.000	19.3	96	80-120	2	20	

Sample Extraction Data

Prep Method: 3005A

Lab Number	Batch	Initial	Final	Date/Time
0040245-01	P0D0369	50 mL	50 mL	04/23/20 9:25
0040245-01	P0D0369	50 mL	50 mL	04/23/20 9:25
0040245-01	P0D0369	50 mL	50 mL	04/23/20 9:25

Prep Method: 3010A

Lab Number	Batch	Initial	Final	Date/Time
0040245-01	P0D0367	50 mL	50 mL	04/23/20 9:08

Prep Method: 351.2

Lab Number	Batch	Initial	Final	Date/Time
0040245-01	P0D0396	2.5 mL	25 mL	04/24/20 15:50

Prep Method: SM4500-S C

Lab Number	Batch	Initial	Final	Date/Time
0040245-01	P0D0440	200 mL	200 mL	04/28/20 15:37

Prep Method: 3010A

Lab Number	Batch	Initial	Final	Date/Time
0040245-01	P0D0360	50 mL	50 mL	04/23/20 6:36

Subcontracted Analyses

The following analyses were subcontracted to Pace Analytical Gulf Coast

Lab Number	Analysis
0040245-01	TOC (Sub Method 5310)

The following analyses were subcontracted to Summit Environmental Technologies , Inc.

Lab Number	Analysis
0040245-01	Radiological (Sub)



449 Springbrook Road • Charlotte, NC 28217
Phone 704/529-6364 • Fax: 704/529-0409

Client Company Name: GMA

Report To/Contact Name: Bill Lyke

Reporting Address: 2205A Camden Drive

Apex NC 27513

Phone: 919-343-6310 Fax (Yes)(No): NO

Email Address: Bill@gma-nc.com

EDD Type: PDF Excel Other

Site Location Name: SNOW CAMP QUARRY

Site Location Physical Address: Clark Rd, Snow Camp NC

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1 QUOTE # TO ENSURE PROPER BILLING:

Project Name: Snow Camp Quarry

Short Hold Analysis: (Yes) (No) NO UST Project: (Yes) (No) NO

*Please ATTACH any project specific reporting (QC LEVEL I II III IV)

provisions and/or QC Requirements

Invoice To: GMA

Address: 2205A Camden Drive

Apex NC 27513

Purchase Order No./Billing Reference: 163101

Requested Due Date ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days ☐ 5 Days

"Working Days" ☐ 6-9 Days ☒ Standard 10 days ☐ Rush Work Must Be

Samples received after 14:00 will be processed next business day.

Turnaround time is based on business days, excluding weekends and holidays.

(SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY WAYPOINT ANALYTICAL, LLC TO CLIENT)

LAB USE ONLY

YES NO N/A

Samples INTACT upon arrival?

Received ON WET ICE?

PROPER PRESERVATIVES indicated?

Received WITHIN HOLDING TIMES?

CUSTODY SEALS INTACT?

VOLATILES rec'd W/OUT HEADSPACE?

PROPER CONTAINERS used?

TEMP: Therm ID: 112-14 Observed 1.9 °C (corr. 2.0 °C)

TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL

Certification: NELAC FL NC TX

SC OTHER N/A

Water Chlorinated: YES NO NOX

Sample Iced Upon Collection: YES NO

REMARKS

ANALYSIS REQUESTED

REMARKS

ID NO.

CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER, OR SLUDGE)	SAMPLE CONTAINER TYPE SEE BELOW	NO.	SIZE	PRESERVATIVES	ANALYSIS REQUESTED	REMARKS	ID NO.
---------------------------	----------------	-------------------------------	---------------------------------	---------------------------------	-----	------	---------------	--------------------	---------	--------

OW-2 4-21-20 1325 Water A.C. 3 40 ml HCl ✓

TDC TDC TDC P 1 500 ml WGL ✓

Metals P 1 500 ml WGL ✓

Tot. Chlorine CP 1 120 ml WGL ✓

Fe, Cl CP 1 120 ml WGL ✓

Alkalinity, etc P 1 1 liter WGL ✓

Sulfide P 1 1 liter 3% Acetic Acid + HNO3 ✓

Endotoxins P 2 1 liter HNO3 ✓

Ammonia, etc P 1 1 liter HNO3 ✓

Ammonia, etc P 1 1 liter HNO3 ✓

Ammonia, etc P 1 1 liter HNO3 ✓

Ammonia, etc P 1 1 liter HNO3 ✓

Ammonia, etc P 1 1 liter HNO3 ✓

Ammonia, etc P 1 1 liter HNO3 ✓

Ammonia, etc P 1 1 liter HNO3 ✓

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Ammonia, etc P 1 1 liter HNO3 ✓

Ammonia, etc P 1 1 liter HNO3 ✓

Ammonia, etc P 1 1 liter HNO3 ✓

Ammonia, etc P 1 1 liter HNO3 ✓

Ammonia, etc P 1 1 liter HNO3 ✓

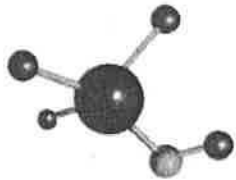
Ammonia, etc P 1 1 liter HNO3 ✓

Ammonia, etc P 1 1 liter HNO3 ✓

Ammonia, etc P 1 1 liter HNO3 ✓

Ammonia, etc P 1 1 liter HNO3 ✓

Ammonia, etc P 1 1 liter HNO3 ✓



ACCESS
ANALYTICAL, INC.

ANALYTICAL REPORT

CLIENT

Waypoint Analytical
PO BOX 240543
Charlotte, NC 28224

ATTENTION

Angela Overcash

PROJECT ID

0040245

LABORATORY REPORT NUMBER

220042437

DATE

04/28/2020

Primary Data Review By

Authorized Signature

Secondary Data Review By

Ashley B. Amick

Project Manager, Access Analytical, Inc.
aamick@accessanalyticalinc.com

PLEASE NOTE:

- Unless otherwise noted, all analysis on this report performed at Pace Analytical Gulf Coast, 7979 Innovation Park Dr., Baton Rouge, LA 70820.
- Pace Gulf Coast is SCDHEC certified laboratory # 73006, NCDENR certified lab # 618, GA certified lab # LA-01955, NELAP certified laboratory # 01955
- Local support services for this project are provided by Access Analytical, Inc.. Access Analytical is a representative of Pace Gulf Coast serving clients in the SC/NC/GA areas. All questions regarding this report should be directed to your local Access Analytical representative at 803.781.4243 or toll free at 888.315.4243.



LELAP CERTIFICATE NUMBER: 01955
DOD-ELAP ACCREDITATION NUMBER: 74960

ANALYTICAL RESULTS

PERFORMED BY

Pace Analytical Gulf Coast
7979 Innovation Park Dr.
Baton Rouge, LA 70820
(225) 769-4900

Report Date 04/28/2020

Report # 220042437



Project 0040245

<i>Deliver To</i>	<i>Additional Recipients</i>
Angela Overcash Waypoint Analytical PO BOX 240543 Charlotte, NC 28224 706-529-6364	NONE





Report#: 220042437

Project ID: 0040245

Report Date: 04/28/2020

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with Pace Gulf Coast's Standard Operating Procedures.

Common Abbreviations that may be Utilized in this Report

ND	Indicates the result was Not Detected at the specified reporting limit
NO	Indicates the sample did not ignite when preliminary test performed for EPA Method 1030
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
RE	Re-analysis
CF	HPLC or GC Confirmation
00:01	Reported as a time equivalent to 12:00 AM

Reporting Flags that may be Utilized in this Report

J or I	Indicates the result is between the MDL and LOQ
J	DOD flag on analyte in the parent sample for MS/MSD outside acceptance criteria
U	Indicates the compound was analyzed for but not detected
B or V	Indicates the analyte was detected in the associated Method Blank
Q	Indicates a non-compliant QC Result (See Q Flag Application Report)
*	Indicates a non-compliant or not applicable QC recovery or RPD – see narrative
E	Organics - The result is estimated because it exceeded the instrument calibration range
E	Metals - % difference for the serial dilution is > 10%
L	Reporting Limits adjusted to meet risk-based limit.
P	RPD between primary and confirmation result is greater than 40
DL	Diluted analysis – when appended to Client Sample ID

Sample receipt at Pace Gulf Coast is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of Pace Gulf Coast. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with The NELAC Institute (TNI) Standard 2009 and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

Authorized Signature
Pace Gulf Coast Report 220042437

Certifications

Certification	Certification Number
DOD ELAP	74960
Alabama	01955
Arkansas	88-0655
Colorado	01955
Delaware	01955
Florida	E87854
Georgia	01955
Hawaii	01955
Idaho	01955
Illinois	200048
Indiana	01955
Kansas	E-10354
Kentucky	95
Louisiana	01955
Maryland	01955
Massachusetts	01955
Michigan	01955
Mississippi	01955
Missouri	01955
Montana	N/A
Nebraska	01955
New Mexico	01955
North Carolina	618
North Dakota	R-195
Oklahoma	9403
South Carolina	73006001
South Dakota	01955
Tennessee	01955
Texas	T104704178
Vermont	01955
Virginia	460215
Washington	C929
USDA Soil Permit	P330-16-00234



Report#: 220042437

Project ID: 0040245

Report Date: 04/28/2020

Case Narrative

Client: Access Analytical **Report:** 220042437

Pace Analytical Gulf Coast received and analyzed the sample(s) listed on the Report Sample Summary page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

No anomalies were found for the analyzed sample(s).



Report#: 220042437

Project ID: 0040245

Report Date: 04/28/2020

Sample Summary

LAB ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
22004243701	OW-2	Water	04/21/2020 13:25	04/24/2020 09:47



Report#: 220042437

Project ID: 0040245

Report Date: 04/28/2020

Summary of Compounds Detected

OW-2	Collect Date	04/21/2020 13:25	LAB ID	22004243701
	Receive Date	04/24/2020 09:47	Matrix	Water

SM 5310 B-2011

CAS#	Parameter	Result	DL	LOQ	Units
C-012	Total Organic Carbon	3.58	0.300	2.00	mg/L



Report#: 220042437

Project ID: 0040245

Report Date: 04/28/2020

Sample Results

OW-2

Collect Date 04/21/2020 13:25

LAB ID 22004243701

Receive Date 04/24/2020 09:47

Matrix Water

SM 5310 B-2011

Prep Date	Prep Batch	Prep Method	Dilution	Analysis Date	By	Analytical Batch
NA	NA	NA	1	04/27/2020 14:32	AJE	682343
CAS#	Parameter	Result	DL	LOQ	Units	
C-012	Total Organic Carbon	3.58	0.300	2.00	mg/L	



Report#: 220042437

Project ID: 0040245

Report Date: 04/28/2020

General Chemistry QC Summary

Analytical Batch 682343	Client ID	MB682343	LCS682343					
	LAB ID	2033687	2033688					
	Sample Type	MB	LCS					
	Prep Date	NA	NA					
	Analysis Date	04/27/2020 04:53	04/27/2020 04:13					
	Matrix	Water	Water					
SM 5310 B-2011			Units Result	mg/L DL	Spike Added	Result	%R	Control Limits%R
Total Organic Carbon	C-012		0.300U	0.300	50.0	52.6	105	90 - 110



Client ID: 4565 - Access Analytical

SDG: 220042437

PM: DLH



SUBCONTRACT ORDER

Waypoint Analytical

0040245

7763 6746 6746 0.7500

Certification: NELAC		USACE	
NC	☒	SC	☐
N/A	☐	Other	☐

SENDING LABORATORY:

Waypoint Analytical
P. O. Box 240543
Charlotte, NC 28224-0543
Phone: 800-529-6364
Fax: 704-525-0409
Project Manager: Angela D. Overcash

RECEIVING LABORATORY:

Pace Analytical Gulf Coast
10781 Coursey Blvd
Baton Rouge, LA 70816
Phone: (225) 769-4900
Fax: (225) 767-5717

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: 0040245-01	Water	Sampled: 04/21/20 13:25	Water OW-2	-1
TOC (Sub Method 5310)		05/19/20 13:25		
Containers Supplied: 3x Aqua HCL				

Released By:	Date: 4-23-20	Received By: Fedex	Date:
Released By: Fedex	Date: 4-24-20 9:47	Received By: Documcenne	Date: 4-24-20 9:47
Released By:	Date:	Received By:	Date:
Released By:	Date:	Received By:	Date:



SAMPLE RECEIVING CHECKLIST



SAMPLE DELIVERY GROUP 220042437		CHECKLIST		YES	NO		
Client 4565 - Access Analytical	PM DLH FEDEX	Samples received with proper thermal preservation?				☒	☐
Profile Number 80251	Received By Savage, Tiffany R	Radioactivity is <1600 cpm? If no, record cpm value in notes section.				☒	☐
Line Item(s) 1 - Water	Receive Date(s) 04/24/20	COC relinquished and complete (including sampleIDs, collect times, and sampler)?				☒	☐
		All containers received in good condition and within hold time?				☒	☐
		All sample labels and containers received match the chain of custody?				☒	☐
		Preservative added to any containers?				☐	☒
		If received, was headspace for VOC water containers < 6mm?				☒	☐
		Samples collected in containers provided by Pace Gulf Coast?				☐	☒
COOLERS		DISCREPANCIES		LAB PRESERVATIONS			
Airbill 7703-0746-6746	Thermometer ID: E26	Temp °C 0.7		None			
NOTES							

Revision 1.6

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Lab Report#: 220042437

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SUMMIT
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Analytical Laboratories

Summit Environmental Technologies, Inc.

3310 Win St.

Cuyahoga Falls, Ohio 44223

TEL: (330) 253-8211 FAX: (330) 253-4489

Website: <http://www.settek.com>

May 12, 2020

Angela D. Overcash
Waypoint Analytical
P.O. Box 240543
449 Springbrook Rd
Charlotte, NC 28224
TEL: (800) 529-6364
FAX:

RE: 0040245

Dear Angela D. Overcash:

Order No.: 20041368

Summit Environmental Technologies, Inc. received 1 sample(s) on 4/24/2020 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Brian J. Fackelman

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado. Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 011, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C

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Case Narrative

WO#: 20041368

Date: 5/12/2020

CLIENT: Waypoint Analytical

Project: 0040245

WorkOrder Narrative:

20041368: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

Analytical Sequence Sample Notes:

20041368-001A Radon_DW(7500-Rn-B): Radon analyzed past hold time per client's request.

Please note: Radon was analyzed after the holding time had expired due to an error during sample receipt. The sample was not processed immediately after receipt as our receiving staff did not take notice of the request for Radon. By the time the sample was processed the sample's holding time had already expired.

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Workorder Sample Summary

WO#: 20041368
12-May-20

CLIENT: Waypoint Analytical
Project: 0040245

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
20041368-001	0040245-01 OW-2		4/21/2020 1:25:00 PM	4/24/2020 10:00:00 AM	Drinking Water
20041368-001	0040245-01 OW-2		4/21/2020 1:25:00 PM	4/24/2020 10:00:00 AM	Drinking Water



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DATES REPORT

WO#: 20041368
12-May-20

Client: Waypoint Analytical
Project: 0040245

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
20041368-001A	0040245-01 OW-2	4/21/2020 1:25:00 PM	Drinking Water	Radon (7500-Rn-B)			4/28/2020 4:21:00 PM
20041368-001B				Gross Alpha / Gross Beta Radioactivity 900.0)		5/1/2020 7:30:00 AM	5/4/2020 3:36:00 PM
				Gross Alpha / Gross Beta Radioactivity 900.0)		5/1/2020 7:30:00 AM	5/7/2020 3:14:00 PM
				Gross Alpha / Gross Beta Radioactivity 900.0)		5/1/2020 7:30:00 AM	5/4/2020 3:36:00 PM
				Metals (200.8)		4/30/2020 1:00:00 PM	5/1/2020 3:37:43 PM



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Analytical Report

(consolidated)

WO#: 20041368

Date Reported: 5/12/2020

CLIENT: Waypoint Analytical

Collection Date: 4/21/2020 1:25:00 PM

Project: 0040245

Lab ID: 20041368-001

Matrix: DRINKING WATER

Client Sample ID: 0040245-01 OW-2

Analyses	Result	PQL	Qual	Units	Uncertainty	DF	Date Analyzed
GROSS ALPHA / GROSS BETA RADIOACTIVITY (EPA 900.0)				E900.0	E900	Analyst: HDJ	
ALPHA, Gross	206	3.00	*	pCi/L	± 30.2	1	5/4/2020 3:36:00 PM
BETA, Gross	80.7	4.00	*	pCi/L	± 11.8	1	5/4/2020 3:36:00 PM
RADON (7500-RN-B)				A7500RN	Analyst: CXS		
Radon	1050	107	H	pCi/L	± 56.4	1	4/28/2020 4:21:00 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
	MC	Value is below Minimum Compound Limit.	N	Tentatively identified compounds
	ND	Not Detected	P	Second column confirmation exceeds
	PL	Permit Limit	R	RPD outside accepted recovery limits
				Page 5 of 14



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Analytical Report

(consolidated)

WO#: 20041368

Date Reported: 5/12/2020

CLIENT: Waypoint Analytical

Collection Date: 4/21/2020 1:25:00 PM

Project: 0040245

Lab ID: 20041368-001

Matrix: DRINKING WATER

Client Sample ID: 0040245-01 OW-2

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
METALS (200.8)					E200.8	E200.8 Analyst: DNS
Uranium(U)	0.0118	0.00100		mg/L	1	5/1/2020 3:37:43 PM

Qualifiers:

H	Holding times for preparation or analysis exceeded	M	Manual Integration used to determine area response
ND	Not Detected	PL	Permit Limit
RL	Reporting Detection Limit	W	Sample container temperature is out of limit as specified at testcode

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QC SUMMARY REPORT

WO#: 20041368
12-May-20

Client: Waypoint Analytical
Project: 0040245

BatchID: 43221

Sample ID: LCS-43221	SampType: LCS	TestCode: MtlHCPMS_N	Units: mg/L	Prep Date: 4/30/2020	RunNo: 112464						
Client ID: LCSW	Batch ID: 43221	TestNo: E200.8	E200.8	Analysis Date: 5/1/2020	SeqNo: 2759648						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium(U)	0.0499	0.00100	0.0500	0	99.8	85	115				

Sample ID: MB-43221	SampType: MBLK	TestCode: MtlHCPMS_N	Units: mg/L	Prep Date: 4/30/2020	RunNo: 112464						
Client ID: PBW	Batch ID: 43221	TestNo: E200.8	E200.8	Analysis Date: 5/1/2020	SeqNo: 2759653						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium(U)	ND	0.00100									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
ND	Not Detected	P	Second column confirmation exceeds	PL	Permit Limit
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	S	Spike Recovery outside accepted reco

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QC SUMMARY REPORT

WO#: 20041368
12-May-20

Client: Waypoint Analytical
Project: 0040245

BatchID: 43221

Sample ID: 20041385-001AMS	SampType: MS	TestCode: Mtl-ICPMS_D	Units: mg/L	Prep Date: 4/30/2020	RunNo: 112464						
Client ID: BatchQC	Batch ID: 43221	TestNo: E200.8	E200.8	Analysis Date: 5/1/2020	SeqNo: 2760806						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium(U)	0.0262	0.00100	0.0250	0.00106	101	70	130				

Sample ID: 20041385-001AMSD	SampType: MSD	TestCode: Mtl-CPMS_D	Units: mg/L	Prep Date: 4/30/2020	RunNo: 112464						
Client ID: BatchQC	Batch ID: 43221	TestNo: E200.8	E200.8	Analysis Date: 5/1/2020	SeqNo: 2760807						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium(U)	0.0278	0.00100	0.0250	0.00106	107	70	130	0.0262	5.77	20	

Sample ID: 20041386-001ADUP	SampType: DUP	TestCode: Mtl-ICPMS_D	Units: mg/L	Prep Date: 4/30/2020	RunNo: 112464						
Client ID: BatchQC	Batch ID: 43221	TestNo: E200.8	E200.8	Analysis Date: 5/1/2020	SeqNo: 2760809						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Uranium(U)	ND	0.00100				0	0	0	0	20	

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
	ND	Not Detected	P	Second column confirmation exceeds	PL	Permit Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	S	Spike Recovery outside accepted reco

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QC SUMMARY REPORT

WO#: 20041368
12-May-20

Client: Waypoint Analytical
Project: 0040245

BatchID: 43238

Sample ID: mb-43238	SampType: MBLK	TestCode: AlphaBeta_D	Units: pCi/L	Prep Date: 5/1/2020	RunNo: 112608
Client ID: PBW	Batch ID: 43238	TestNo: E900.0	E900	Analysis Date: 5/1/2020	SeqNo: 2764248
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
ALPHA, Gross	ND	3.00			
BETA, Gross	ND	4.00			

Sample ID: lcs-43238	SampType: LCS	TestCode: AlphaBeta_D	Units: pCi/L	Prep Date: 5/1/2020	RunNo: 112608
Client ID: LCSW	Batch ID: 43238	TestNo: E900.0	E900	Analysis Date: 5/1/2020	SeqNo: 2764249
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
ALPHA, Gross	16.3	3.00	15.00	0	108 70 130
BETA, Gross	21.2	4.00	20.00	0	106 70 130

Sample ID: lcsd-43238	SampType: LCSD	TestCode: AlphaBeta_D	Units: pCi/L	Prep Date: 5/1/2020	RunNo: 112608
Client ID: LCSS02	Batch ID: 43238	TestNo: E900.0	E900	Analysis Date: 5/1/2020	SeqNo: 2764250
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
ALPHA, Gross	16.3	3.00	15.00	0	109 70 130 16.27 0.484 20
BETA, Gross	21.6	4.00	20.00	0	108 70 130 21.16 2.29 20

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
	ND	Not Detected	P	Second column confirmation exceeds	PL	Permit Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	S	Spike Recovery outside accepted reco

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QC SUMMARY REPORT

WO#: 20041368
12-May-20

Client: Waypoint Analytical
Project: 0040245

BatchID: 43238

Sample ID: rlc-43238	SampType: RLC	TestCode: AlphaBeta_D	Units: pCi/L	Prep Date: 5/1/2020	RunNo: 112608						
Client ID: BatchQC	Batch ID: 43238	TestNo: E900.0	E900	Analysis Date: 5/1/2020	SeqNo: 2764252						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: 20041130-001adup		SampType: DUP	TestCode: AlphaBeta_D		Units: pCi/L	Prep Date: 5/1/2020		RunNo: 112608			
Client ID: BatchQC	Batch ID: 43238		TestNo: E900.0		E900	Analysis Date: 5/1/2020		SeqNo: 2764260			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
ALPHA, Gross	ND	3.00						0	0	30	
BETA, Gross	ND	4.00						0	0	30	

Sample ID: 20041272-001adup	SampType: DUP	TestCode: AlphaBeta_D	Units: pCi/L	Prep Date: 5/1/2020	RunNo: 112608						
Client ID: BatchQC	Batch ID: 43238	TestNo: E900.0	E900	Analysis Date: 5/4/2020	SeqNo: 2764265						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
ALPHA, Gross	ND	3.00						0	0	30	
BETA, Gross	ND	4.00						0	0	30	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
ND Not Detected
R RPD outside accepted recovery limits
E Value above quantitation range
M Manual Integration used to determine area response
P Second column confirmation exceeds
RL Reporting Detection Limit
H Holding times for preparation or analy
MC Value is below Minimum Compound
PL Permit Limit
S Spike Recovery outside accepted reco

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QC SUMMARY REPORT

WO#: 20041368
12-May-20

Client: Waypoint Analytical
Project: 0040245

BatchID: R112309

Sample ID: RLC-R112309	SampType: RLC	TestCode: Radon_DW(7	Units: pCi/L	Prep Date:	RunNo: 112309
Client ID: BatchQC	Batch ID: R112309	TestNo: A7500RN		Analysis Date: 4/28/2020	SeqNo: 2753984
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Radon	106	100	103.0	0	103 80 120

Sample ID: LCS-R112309	SampType: LCS	TestCode: Radon_DW(7	Units: pCi/L	Prep Date:	RunNo: 112309
Client ID: LCSW	Batch ID: R112309	TestNo: A7500RN		Analysis Date: 4/28/2020	SeqNo: 2753986
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Radon	2390	100	2554	0	93.7 90 110

Sample ID: MB-R112309	SampType: MBLK	TestCode: Radon_DW(7	Units: pCi/L	Prep Date:	RunNo: 112309
Client ID: PBW	Batch ID: R112309	TestNo: A7500RN		Analysis Date: 4/28/2020	SeqNo: 2753987
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Radon	ND	100			

Sample ID: 20041368-001ADUP	SampType: DUP	TestCode: Radon_DW(7	Units: pCi/L	Prep Date:	RunNo: 112309
Client ID: 0040245-01 OW-2	Batch ID: R112309	TestNo: A7500RN		Analysis Date: 4/28/2020	SeqNo: 2753990
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Radon	1140	107			1054 7.65 20 H

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
	ND	Not Detected	P	Second column confirmation exceeds	PL	Permit Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	S	Spike Recovery outside accepted reco

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QC SUMMARY REPORT

WO#: 20041368
12-May-20

Client: Waypoint Analytical
Project: 0040245

BatchID: R112309

Sample ID: 20041368-001ADUP	SampType: DUP	TestCode: Radon_DW(7	Units: pCi/L	Prep Date:	RunNo: 112309						
Client ID: 0040245-01 OW-2	Batch ID: R112309	TestNo: A7500RN		Analysis Date: 4/28/2020	SeqNo: 2753990						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
	ND	Not Detected	P	Second column confirmation exceeds	PL	Permit Limit
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	S	Spike Recovery outside accepted reco

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Qualifiers and Acronyms

WO#: 20041368
Date: 5/12/2020

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B/MB+	The analyte was detected in the associated blank.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	RL	Reporting Limit
QC	Quality Control	MDL	Method Detection Limit
MB	Method Blank	LOD	Level of Detection
LCS	Laboratory Control Sample	LOQ	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	PQL	Practical Quantitation Limit
QCS	Quality Control Sample	CRQL	Contract Required Quantitation Limit
DUP	Duplicate	PL	Permit Limit
MS	Matrix Spike	RegLvl	Regulatory Limit
MSD	Matrix Spike Duplicate	MCL	Maximum Contamination Limit
RPD	Relative Percent Different	MinCL	Minimum Compound Limit
ICV	Initial Calibration Verification	RA	Reanalysis
ICB	Initial Calibration Blank	RE	Reextraction
CCV	Continuing Calibration Verification	TIC	Tentatively Identified Compound
CCB	Continuing Calibration Blank	RT	Retention Time
RLC	Reporting Limit Check	CF	Calibration Factor
DF	Dilution Factor	RF	Response Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.



20041368

SUBCONTRACT ORDER
Waypoint Analytical
0040245

7763 0824 7671

Certification: NELAC		USACE
NC	SC	Other
N/A		

SENDING LABORATORY:

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P O. Box 240543
Charlotte, NC 28224-0543
Phone: 800-529-6364
Fax: 704-525-0409
Project Manager: Angela D Overcash

RECEIVING LABORATORY:

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Fax:

Non-potable

Analysis	Due	Expires	Laboratory ID	Comments
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Sample ID: 0040245-01	Water	Sampled: 04/21/20 13:25	Water OW-2	Radon, Uranium, Gross alpha and beta
Radiological (Sub)		10/18/20 13:25		

Containers Supplied

2x Liter P HNO₃, 2x unp. voa

cpm 24, 24
pH

Released By	Date	Received By	Date
Fedex	4.23.20	Fedex	
Released By	Date	Received By	Date
Released By	Date	Received By	Date
Released By	Date	Received By	Date

4/24/20 1000
Fedex cool 3.4 to 2 = 8.7
Page 1 of 1

DBPix Evaluation



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

Sample Log-In Check List

Client Name: **WAY-NC-28224**

Work Order Number: **20041368**

RcptNo: **1**

Logged by: **Jesseca E. Westfall** **4/24/2020 10:00:00 AM**
Completed By: **Jesseca E. Westfall** **4/27/2020 4:17:56 PM**
Reviewed By: **Brian J. Fackelman** **4/28/2020 6:35:19 PM**

Jesseca E. Westfall
Jesseca E. Westfall
Brian J. Fackelman

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? FedEx

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☒ No ☐
Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒
No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☐ No ☒ NA ☐
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☐ No ☒ NA ☐
Not required
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☒
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels? Yes ☒ No ☐
(Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met? Yes ☒ No ☐
(If no, notify customer for authorization.)

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

18. Additional remarks:

OK to proceed per client. BF 04/28/2020

Radon was missed in receiving, and is out of hold time.

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.7	Good	Not Present			

