

July 31, 2017

Michael J. Menghini
District Mining Manager
Bureau of Mining & Reclamation
PA Department of Environmental Protection
5 West Laurel Boulevard
Pottsville, PA 17901-2454

**RE: New Hope Crushed Stone Quarry Operation
Noncoal Permit No. 7974SM3C12
NPDES Permit No. PA0595853
NPDES 2nd Quarter 2017 Monitoring Report
Solebury Township, Bucks County, PA
EarthRes Project No. 011012.004**

Dear Mr. Menghini:

On behalf of New Hope Crushed Stone Co. (NHCS), EarthRes Group, Inc. (EarthRes) is providing the 2nd Quarter 2017 Monitoring Report. This report includes changes to the reporting requirements per: 1) the Consent Order and Agreement (COA) between NHCS and the PA DEP, Primrose Creek Watershed Association, Inc. (PCWSA), and Citizens for Pennsylvania's Future (PennFuture) executed on May 28, 2013, and 2) the Reclamation Order outlined in the Department's letter to NHCS dated January 29, 2016.

Due to the reclamation order, the quarry has been filling with water (as detailed later in this letter report) with reduction of the daily pumping rate to 0.5 MGD. Basin water inflow is greater than basin outflow as water levels in the quarry continue to rise.

Current Basin Conditions

The Basin received a total of 11.95 inches of precipitation in the 2nd Quarter 2017. The relationship of precipitation, stream flow, and quarry discharge is shown on the attached 2017 2nd Quarter NPDES Discharge / Primrose Stream Flow / Precipitation hydrograph. Due to the reduction in quarry pumping, the quarry is receiving more water than is pumped, causing water levels in the quarry pit to rise.

The budgets previously provided used south sump measurements (volume and level) and were completed to assess potential impacts to the hydrogeological balance from continued mining to deeper levels. However, the south sump has overfilled and the water levels in the south and north pits have joined. Additionally, mining is not occurring in the bottom two lifts of the quarry (-85 MSL and -120 MSL) due to flooding and rising water levels. Accordingly, budget calculations to assess the impacts from mining at depth and dewatering are no longer meaningful or applicable. Overall, the quarry water budget has changed as not all groundwater received by the quarry is being pumped. The quarry is pumping the minimal required volume (0.5 MGD) to provide flow into the Primrose Creek. Monitoring of the quarry discharge is discussed in the following report section.

Discharge Monitoring

NHCS monitors and records the daily minimum and maximum discharge volume, which is updated monthly and submitted on the attached "Minimum/Maximum Discharge Table." There were no "Zero" flow readings in April. There were two "Zero" flow readings in May. The first was on May 16 and the second was on May 26, both were caused by the electricity kicking out, the pump was restored right away and pumping continued as normal. There were three more power outages on June 6th, June 10th, and June 19th, the pump was again restored right away and pumping continued as normal. On June 22nd a lightning arrestor tripped; power was restored shortly and pumping continued as normal.

Consent Order Agreement

Weekly sampling of the NPDES-permitted discharge for Total Suspended Solids (TSS) was completed during the 2nd Quarter 2017. The results of the TSS sampling indicate continued compliance with the NPDES permit. Additionally, the PECO culvert area was inspected by NHCS and EarthRes personnel; flow obstruction through the culvert was not observed.

Well Repairs/Replacements

There were no well complaints in the 2nd quarter of 2017. Well Nest #1 was closed per the approved abandonment plan on July 11, 2017 as required by the Department.

Sinkhole Activity

NHCS was notified by Brad King of Solebury School on June 8, 2017 that sinkholes were found on Solebury School property near Phillips Mill Road. NHCS responded immediately and looked at the features, contacted DEP within 24-hours and called EarthRes to investigate. Solebury

School further responded in legal and technical filings repeatedly indicating that "Collapse Sinkholes" were present. EarthRes viewed the alleged sinkhole area on June 13, 2017 with DEP and Solebury School personnel. Upon review, EarthRes did not agree that the features were collapse sinkholes, but instead were likely rodent holes or minor erosional features from water runoff from Phillips Mill Road. However, as required, NHCS subsequently investigated the alleged sinkholes through excavation and probing on July 11, 2017. The investigation confirmed that the features were merely small rodent holes. No evidence of collapse sinkholes was indicated. The finding was confirmed onsite with the School's geotechnical consultant. EarthRes' field reports on the findings from the site visits conducted on June 13, 2017 and July 11, 2017 are attached to this report.

This is the 5th incident of a non-sinkhole reported by the School that EarthRes has investigated on NHCS behalf in the last several years. There has not been a confirmed sinkhole at the School since those caused by the historic back-to-back storms of Hurricane Irene and Tropical Storm Lee in 2011.

Reclamation Progress Report

Reclamation progress at the quarry is reported monthly. The reclamation progress for the 2nd quarter is contained in the May 2017, June 2017 and July 2017 reports provided to the Department. The above referenced reclamation progress updates are included herein in Attachment 12. The next progress report will be submitted by the 5th of August as requested by the Department.

Summary

Required (weekly) TSS sampling performed per the COA indicates continued compliance with the NPDES permit. Reclamation and water infilling of the quarry is ongoing. The basin is no longer at equilibrium, as basin inflow is currently greater than basin outflow resulting in increasing quarry water levels. The quarry pit water level at the end of June was approximately -59 ft. MSL. As of July 27, 2017 the quarry pit water level is at approximately -52.6 ft. MSL. Access to the quarry remains limited to only the east wall ramp.

Please contact me should you have any questions regarding the enclosed information.

Sincerely,
EarthRes Group, Inc.



Louis F. Vittorio, Jr., P.G.
Vice President / Principal Hydrogeologist



cc: Christina Cursley, NHCS

ATTACHMENTS

- 1.0 – Static Water Level Table
- 2.0 – Quarry Basin Calculations
- 3.0 – Minimum / Maximum Discharge Table
- 4.0 – Discharge Monitoring Report
- 5.0 – Analytical Reports
- 6.0 – Milltronics Data Recording
- 7.0 – Quarry Discharge / Stream Flow / Precipitation Tables
- 8.0 – Quarry Discharge / Stream Flow / Precipitation Graphs
- 9.0 – Discharge / Rainfall / Static Water Level Hydrographs
- 10.0 – Continuous Monitoring Hydrographs: MW-3, MW-6
- 11.0 – Groundwater Contour Map
- 12.0 – Reclamation Information
- 13.0 – Alleged Sinkhole Field Reports

ATTACHMENT 1.0
STATIC WATER LEVEL TABLE

STATIC WATER LEVEL TABLE
New Hope Crushed Stone & Lime Company, Inc.
Year 2017

DATE	MW-1 (ERG 1)		MW-2 (ERG 2)		MW-3		MW-4		MW-5		MW-6	
	TOC (Ft.)	101.72	TOC (Ft.)	101.25	TOC (Ft.)	155.79	TOC (Ft.)	153.11	TOC (Ft.)	148.05	TOC (Ft.)	177.66
	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Transducer Reading (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)
1/9/2014	8.23	93.49	9.30	91.95	*	13.23	134.75	18.36	135.87	12.18	*	113.465
1/20/2014	8.06	93.66	9.00	92.25	*	13.24	135.42	17.69	135.80	12.25	*	115.54
2/4/2014	-	-	-	-	*	11.92	140.75	12.36	-	-	*	112.08
2/10/2014	-	-	9.25	92.00	*	12.84	135.02	18.09	136.00	12.05	*	114.49
2/24/2014	6.41	95.31	8.60	92.65	*	15.78	128.51	24.60	134.22	13.83	*	115.98
3/5/2014	-	-	-	-	*	14.58	133.47	19.64	-	-	*	115.41
3/11/2014	7.10	94.62	8.79	92.46	*	14.88	135.23	17.88	135.00	13.05	*	115.22
3/20/2014	7.30	94.42	8.80	92.45	*	15.56	133.90	19.21	134.43	13.62	*	115.34
4/7/2014	7.38	94.34	8.79	92.46	*	17.39	132.36	20.75	133.71	14.34	-	-
4/14/2014	-	-	-	-	*	16.06	135.20	17.91	-	-	-	-
4/21/2014	7.40	94.32	8.86	92.39	*	16.18	132.86	20.25	134.50	13.55	-	-
5/1/2014	-	-	-	-	*	28.34	110.75	42.36	-	-	*	114.27
5/6/2014	7.10	94.62	8.60	92.65	*	21.76	127.72	25.39	129.83	18.22	*	115.38
5/19/2014	7.27	94.45	8.80	92.45	*	18.92	134.75	18.36	131.57	16.48	*	111.73
5/28/2014	-	-	-	-	*	19.60	131.80	21.31	-	-	*	113.10
6/2/2014	7.71	94.01	9.18	92.07	*	18.65	135.17	17.94	132.60	15.45	*	111.77
6/9/2014	-	-	-	-	*	17.27	138.23	14.88	-	-	*	110.61
6/16/2014	7.80	93.92	9.38	91.87	*	16.38	138.57	14.54	134.42	13.63	*	110.14
6/23/2014	-	-	-	-	*	15.36	139.50	13.61	-	-	*	109.56
7/1/2014	9.66	92.06	10.14	91.11	*	14.50	140.90	12.21	135.98	12.07	*	109.23
7/7/2014	-	-	-	-	*	13.92	141.50	11.61	-	-	*	108.74
7/17/2014	9.80	91.92	10.47	90.78	*	13.07	142.35	10.76	137.11	10.94	*	107.76
7/22/2014	-	-	-	-	*	12.64	142.83	10.28	-	-	*	107.53
8/1/2014	11.15	90.57	11.45	89.80	*	11.96	143.62	9.49	138.07	9.98	*	106.82
8/7/2014	-	-	-	-	*	11.66	143.94	9.17	-	-	*	106.61
8/14/2014	11.80	89.92	12.06	89.19	*	11.35	144.19	8.92	138.62	9.43	*	106.28
8/20/2014	-	-	-	-	*	11.13	144.47	8.64	-	-	*	105.97
8/25/2014	-	-	-	-	*	10.96	144.49	8.62	-	-	*	105.75
9/2/2014	12.20	89.52	12.63	88.62	*	10.77	144.79	8.32	139.10	8.95	*	105.67
9/10/2014	-	-	-	-	*	10.56	145.00	8.11	-	-	*	105.44
9/18/2014	12.53	89.19	12.84	88.41	*	10.41	145.29	7.82	139.47	8.58	*	105.18
9/24/2014	-	-	-	-	*	10.27	145.45	7.66	-	-	*	104.78
10/2/2014	12.78	88.94	12.12	89.13	*	10.15	145.57	7.54	139.69	8.36	*	104.61

STATIC WATER LEVEL TABLE
New Hope Crushed Stone & Lime Company, Inc.
Year 2017

DATE	MW-1 (ERG 1)		MW-2 (ERG 2)		MW-3		MW-4		MW-5		MW-6	
	TOC (Ft.)	101.72	TOC (Ft.)	101.25	TOC (Ft.)	155.79	TOC (Ft.)	153.11	TOC (Ft.)	148.05	TOC (Ft.)	177.66
	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Transducer Reading (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)
10/7/2014	-	-	-	-	*	10.10	145.62	7.49	-	-	*	104.54
10/14/2014	12.55	89.17	12.85	88.40	*	10.02	145.65	7.46	139.79	8.26	*	104.52
10/20/2014	-	-	-	-	*	10.02	144.60	8.51	-	-	*	104.77
10/27/2014	-	-	-	-	*	9.98	144.36	8.75	-	-	*	105.05
11/3/2014	11.60	90.12	11.99	89.26	*	9.93	144.74	8.37	139.86	8.19	*	105.10
11/10/2014	-	-	-	-	*	9.88	144.80	8.31	139.90	8.15	*	105.09
11/20/2014	10.80	90.92	11.33	89.92	*	9.81	142.28	10.83	139.98	8.07	*	105.43
11/24/2014	-	-	-	-	*	9.76	142.65	10.46	-	-	*	105.80
12/1/2014	10.55	91.17	11.10	90.15	*	9.96	140.19	12.92	139.86	8.19	*	106.30
12/8/2014	-	-	-	-	*	10.78	138.20	14.91	-	-	*	107.55
12/15/2014	9.20	92.52	10.14	91.11	*	11.61	138.29	14.82	138.42	9.63	*	**
1/7/2015	8.72	93.00	9.55	91.70	*	10.97	139.39	13.72	139.05	9.00	*	111.15
1/15/2015	9.00	92.72	9.66	91.59	*	11.10	141.30	11.81	138.89	9.16	*	111.58
1/20/2015	-	-	-	-	*	13.79	137.45	15.66	-	-	*	112.19
2/4/2015	8.46	93.26	9.55	91.70	*	12.82	137.19	15.92	137.35	10.70	*	112.39
2/10/2015	-	-	-	-	*	12.38	139.14	13.97	-	-	*	111.67
2/16/2015	-	-	9.82	91.43	*	11.98	141.64	11.47	138.11	9.94	*	111.13
3/3/2015	10.18	91.54	-	-	*	11.16	143.74	9.37	138.83	9.22	*	110.06
3/11/2015	-	-	-	-	*	17.87	131.10	22.01	-	-	*	111.67
3/16/2015	7.37	94.35	8.96	92.29	*	19.24	126.92	26.19	132.42	15.63	*	115.30
3/24/2015	-	-	-	-	*	16.62	131.89	21.22	-	-	*	114.13
4/1/2015	8.02	93.70	9.05	92.20	*	16.88	131.28	21.83	134.30	13.75	*	115.06
4/15/2015	8.10	93.62	9.25	92.00	*	14.73	139.04	14.07	135.95	12.10	*	111.80
5/1/2015	-	-	-	-	*	14.42	136.91	16.20	136.15	11.90	*	111.35
5/13/2015	8.80	92.92	9.73	91.52	*	13.41	141.41	11.70	136.95	11.10	*	110.37
6/2/2015	-	-	-	-	*	12.01	143.19	9.92	138.10	9.95	*	107.27
6/10/2015	8.63	93.09	9.88	91.37	*	12.03	140.05	13.06	138.10	9.95	*	106.57
6/29/2015	-	-	-	-	*	11.55	140.44	12.67	138.52	9.53	*	103.86
7/6/2015	10.37	91.35	10.87	90.38	*	11.054	141.95	11.16	138.95	9.10	*	103.889
7/22/2015	-	-	-	-	*	10.162	-	-	-	-	*	103.069
7/30/2015	-	-	-	-	*	9.699	145.54	7.57	140.2	7.85	*	103.01
8/5/2015	11.8	89.92	12.06	89.19	*	9.402	145.9	7.21	140.47	7.58	*	102.163
9/1/2015	-	-	-	-	*	8.19	147.37	5.74	141.7	6.35	*	101.072

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	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Transducer Reading (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)
9/8/2015	-	-	-	-	*	7.876	-	-	-	-	*	100.987
9/14/2015	12.1	89.62	12.48	88.77	*	7.672	147.75	5.36	142.91	5.14	*	100.874
9/21/2015	-	-	-	-	*	7.43	-	-	-	-	*	100.815
10/1/2015	-	-	-	-	*	7.226	147.93	5.18	142.61	5.44	*	100.775
10/5/2015	11.45	90.27	11.92	89.33	*	7.48	144.45	8.66	142.35	5.70	*	100.908
11/2/2015	-	-	-	-	*	7.006	145.09	8.02	142.8	5.25	*	100.702
11/11/2015	11.26	90.46	11.77	89.48	*	6.874	147.3	5.81	142.95	5.10	*	100.683
11/30/2015	-	-	-	-	*	6.995	145	8.11	142.82	5.23	*	100.802
12/7/2015	10.86	90.86	11.57	89.68	*	6.984	144.3	8.81	142.8	5.25	*	101
12/28/2015	-	-	-	-	*	8.295	139.86	13.25	141.6	6.45	*	103.803
1/6/2016	8.7	93.02	10.09	91.16	*	9.782	139.05	14.06	140.22	7.83	*	107.665
1/28/2016	-	-	-	-	*	10.173	143.35	9.76	139.83	8.22	*	109.166
2/8/2016	7.36	94.36	8.88	92.37	*	14.75	133.85	19.26	135.87	12.18	*	113.649
3/1/2016	-	-	-	-	*	16.17	132.7	20.41	135.05	13	*	116.916
3/7/2016	7.75	93.97	8.92	92.33	*	15.048	136.34	16.77	135.8	12.25	*	115.594
3/30/2016	-	-	-	-	*	13.07	141.35	11.76	137.35	10.7	*	110.058
4/5/2016	8.6	93.12	9.46	91.79	*	12.663	142.14	10.97	137.7	10.35	*	**
4/28/2016	-	-	-	-	*	11.242	143.38	9.73	138.9	9.15	*	**
5/9/2016	8.5	93.22	10.04	91.21	*	11.241	140.17	12.94	138.82	9.23	*	107.388
5/31/2016	-	-	-	-	*	10.525	144.05	9.06	139.51	8.54	*	107.586
6/6/2016	-	-	-	-	*	10.245	144.68	8.43	-	-	*	107.255
6/13/2016	11.05	90.67	11.44	89.81	*	9.936	145.1	8.01	140.05	8	*	106.865
6/30/2016	-	-	-	-	*	9.049	146.45	6.66	140.88	7.17	*	106.343
7/11/2016	10.48	91.24	11.25	90.00	*	9.347	143.86	9.25	140.6	7.45	*	106.78
8/1/2016	-	-	-	-	*	13.528	136.3	16.81	136.86	11.19	*	110.112
8/8/2016	8.43	93.29	10.21	91.04	*	11.836	139.1	14.01	138.34	9.71	*	112.889
8/29/2016	-	-	-	-	*	11.247	143.38	9.73	138.84	9.21	*	111.832
9/6/2016	10.39	91.33	10.8	90.45	*	10.531	144.83	8.28	139.54	8.51	*	110.615
10/3/2016	-	-	-	-	*	8.746	145.57	7.54	140.14	7.91	*	107.593
10/17/2016	10.89	90.83	11.29	89.96	*	8.124	147.44	5.67	141.6	6.45	*	106.919
11/2/2016	-	-	-	-	*	7.496	147.95	5.16	142.19	5.86	*	106.046
11/14/2016	11	90.72	11.24	90.01	*	7.022	148.55	4.56	142.72	5.33	*	105.359
11/28/2016	-	-	-	-	*	6.593	149	4.11	143.09	4.96	*	104.539

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Year 2017

DATE	MW-1 (ERG 1)		MW-2 (ERG 2)		MW-3		MW-4		MW-5		MW-6	
	TOC (Ft.) 101.72		TOC (Ft.) 101.25		TOC (Ft.) 155.79		TOC (Ft.) 153.11		TOC (Ft.) 148.05		TOC (Ft.) 177.66	
	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Transducer Reading (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)
12/13/2016	8.75	92.97	10.17	91.08	*	7.546	145.83	7.28	142.17	5.88	*	105.074
1/12/2017	8	93.72	9.4	91.85	*	8.08	145.45	7.66	141.59	6.46	*	110.232
1/30/2017	-	-	-	-	*	11.396	139.39	13.72	137.25	10.8	*	116.025
2/6/2017	8.33	93.39	9.53	91.72	*	10.828	142.64	10.47	137.84	10.21	*	114.649
2/28/2017	-	-	-	-	*	9.859	145	8.11	140.05	8	*	111.402
3/13/2017	9.38	92.34	10	91.25	*	9.291	145.8	7.31	140.54	7.51	*	110.179
3/29/2017	-	-	-	-	*	12.2	139.85	13.26	137.71	10.34	*	114.993
4/11/2017	7.57	94.15	8.99	92.26	*	17.031	134.22	18.89	133.9	14.15	*	119.829
5/1/2017	-	-	-	-	*	14.386	141.33	11.78	136.09	11.96	*	112.726
5/9/2017	8.17	93.55	9.4	91.85	*	13.886	141.03	12.08	136.45	11.6	*	111.72
5/30/2017	-	-	-	-	*	15.753	135.23	17.88	134.97	13.08	*	114.809
6/15/2017	8.91	92.81	9.72	91.53	*	14.381	140.3	12.81	136.15	11.9	*	113.486

Note: * Readings taken from continuous transducer data reporting.

** Transducer was found unresponsive on 4/29/16. It was evaluated, repaired and replaced on same day.

STATIC WATER LEVEL TABLE
New Hope Crushed Stone & Lime Company, Inc.

Year 2017

DATE	MW-7A		MW-8		MW-9		MW-11		SS-1	
	<i>TOC (Ft.) 146.81</i>		<i>TOC (Ft.) 143.66</i>		<i>TOC (Ft.) 115.08</i>		<i>TOC (Ft.) 188.74</i>		<i>TOC (Ft.) 158.09</i>	
	Depth to Water <i>(Ft.)</i>	SWL Reading <i>(msl)</i>	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>
1/9/2014	166.05	-19.24	no DTW	***	**	**	30.52	158.22	-	-
1/20/2014	163.87	-17.06	28.22	115.44	**	**	31.40	157.34	-	-
2/10/2014	164.84	-18.03	26.99	116.67	**	**	31.64	157.10	-	-
2/20/2014	164.55	-17.74	-	-	**	**	-	-	-	-
2/24/2014	164.15	-17.34	22.15	121.51	**	**	-	-	-	-
3/11/2014	163.15	-16.34	26.40	117.26	**	**	36.05	152.69	-	-
3/20/2014	161.22	-14.41	25.79	117.87	**	**	32.17	156.57	-	-
4/7/2014	160.39	-13.58	24.11	119.55	**	**	29.92	158.82	-	-
4/21/2014	163.42	-16.61	26.20	117.46	**	**	30.29	158.45	-	-
5/6/2014	162.42	-15.61	21.24	122.42	**	**	26.15	162.59	-	-
5/19/2014	163.35	-16.54	29.30	114.36	**	**	34.69	154.05	-	-
6/2/2014	161.98	-15.17	30.80	112.86	**	**	34.66	154.08	-	-
6/16/2014	165.90	-19.09	37.44	106.22	**	**	44.30	144.44	-	-
7/1/2014	169.03	-22.22	40.02	103.64	**	**	48.95	139.79	-	-
7/17/2014	172.28	-25.47	42.10	101.56	**	**	53.20	135.54	-	-
8/1/2014	173.70	-26.89	43.53	100.13	**	**	58.53	130.21	-	-
8/14/2014	172.99	-26.18	44.18	99.48	**	**	69.50	119.24	-	-
9/2/2014	177.15	-30.34	44.50	99.16	**	**	76.68	112.06	-	-
9/18/2014	175.39	-28.58	45.40	98.26	**	**	80.59	108.15	-	-
10/2/2014	176.35	-29.54	45.90	97.76	**	**	88.15	100.59	-	-
10/14/2014	173.57	-26.76	46.43	97.23	**	**	96.22	92.52	-	-
11/3/2014	173.35	-26.54	46.05	97.61	**	**	93.14	95.60	-	-
11/20/2014	171.75	-24.94	45.63	98.03	**	**	89.66	99.08	-	-
12/1/2014	170.10	-23.29	40.62	103.04	**	**	75.16	113.58	-	-
12/15/2014	168.99	-22.18	32.30	111.36	**	**	51.80	136.94	-	-
1/7/2015	167.30	-20.49	34.15	109.51	**	**	45.65	143.09	-	-
1/15/2015	167.09	-20.28	35.05	108.61	**	**	44.78	143.96	-	-

STATIC WATER LEVEL TABLE
New Hope Crushed Stone & Lime Company, Inc.
Year 2017

DATE	MW-7A		MW-8		MW-9		MW-11		SS-1	
	TOC (Ft.) 146.81		TOC (Ft.) 143.66		TOC (Ft.) 115.08		TOC (Ft.) 188.74		TOC (Ft.) 158.09	
	Depth to Water (Ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)
2/4/2015	165.38	-18.57	31.10	112.56	**	**	39.01	149.73	-	-
2/16/2015	166.45	-19.64	35.43	108.23	**	**	-	-	-	-
3/3/2015	166.11	-19.30	37.50	106.16	**	**	9.75	178.99	-	-
3/16/2015	163.08	-16.27	18.75	124.91	**	**	24.82	163.92	-	-
4/1/2015	162.56	-15.75	24.10	119.56	**	**	29.30	159.44	-	-
4/15/2015	163.55	-16.74	33.68	109.98	**	**	40.12	148.62	-	-
5/1/2015	164.43	-17.62	-	-	**	**	-	-	-	-
5/13/2015	172.99	-26.18	35.20	108.46	**	**	44.57	144.17	-	-
6/10/2015	177.80	-30.99	37.20	106.46	**	**	54.00	134.74	-	-
7/6/2015	172.68	-25.87	37	106.66	**	**	54	134.74	-	-
8/5/2015	178.59	-31.78	41.46	102.20	**	**	78.53	110.21	-	-
9/14/2015	189.6	-42.79	44.1	99.56	**	**	91.2	97.54	-	-
10/5/2015	179.55	-32.74	44.35	99.31	**	**	92.53	96.21	-	-
11/11/2015	175.34	-28.53	44.25	99.41	**	**	82	106.74	-	-
12/7/2015	173.23	-26.42	42.25	101.41	**	**	68.5	120.24	-	-
1/6/2016	172.23	-25.42	33.78	109.88	**	**	44.74	144	-	-
2/8/2016	169.04	-22.23	23.6	120.06	**	**	32.62	156.12	-	-
3/7/2016	164.5	-17.69	28.3	115.36	**	**	36.06	152.68	-	-
4/5/2016	167.25	-20.44	35.1	108.56	**	**	45.25	143.49	-	-
4/28/2016	-	-	-	-	**	**	-	-	-	-
5/9/2016	172.57	-25.76	34.23	109.43	**	**	40.03	148.71	-	-
5/31/2016	-	-	-	-	**	**	-	-	-	-
6/6/2016	-	-	-	-	**	**	-	-	-	-
6/13/2016	179.48	-32.67	38.53	105.13	**	**	52.38	136.36	-	-
6/30/2016	-	-	-	-	**	**	-	-	-	-
7/11/2016	193.47	-46.66	40.28	103.38	**	**	72.63	116.11	-	-
8/1/2016	-	-	-	-	**	**	-	-	-	-
8/8/2016	183.8	-36.99	32.1	111.56	**	**	44.61	144.13	-	-

STATIC WATER LEVEL TABLE
New Hope Crushed Stone & Lime Company, Inc.

Year 2017

DATE	MW-7A		MW-8		MW-9		MW-11		SS-1	
	TOC (Ft.) 146.81		TOC (Ft.) 143.66		TOC (Ft.) 115.08		TOC (Ft.) 188.74		TOC (Ft.) 158.09	
	Depth to Water (Ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)
8/29/2016	-	-	-	-	**	**	-	-	-	-
9/6/2016	188.17	-41.36	38.73	104.93	**	**	53	135.74	-	-
10/17/2016	177.35	-30.54	44.86	98.8	**	**	83.36	105.38	-	-
11/14/2016	177.29	-30.48	43.01	100.65	**	**	91.68	97.06	-	-
12/13/2016	171.66	-24.85	39.32	104.34	**	**	71.42	117.32	-	-
1/12/2017	168.34	-21.53	35.35	108.31	**	**	49.95	138.79	-	-
1/30/2017	-	-	-	-	-	-	-	-	146.23	11.86
2/6/2017	165.84	-19.03	33	110.66	**	**	41.63	147.11	-	-
2/27/2017	-	-	-	-	-	-	-	-	144.56	13.53
3/13/2017	166.12	-19.31	37.12	106.54	**	**	47.2	141.54	-	-
3/31/2017	-	-	-	-	-	-	-	-	145.22	12.87
4/11/2017	166.68	-19.87	22.78	120.88	**	**	28.9	159.84	-	-
4/30/2017	-	-	-	-	-	-	-	-	145.3	12.79
5/9/2017	172.55	-25.74	32.57	111.09	**	**	43	145.74	-	-
5/30/2017	-	-	-	-	-	-	-	-	146.1	11.99
6/15/2017	180.08	-33.27	32.75	110.91	**	**	43	145.74	-	-
6/30/2017	-	-	-	-	-	-	-	-	146.2	11.89

Notes: ** Eliminated - New ramp construction at same location.

*** Unable to measure / Manhole cover over MW-8 frozen.

STATIC WATER LEVEL TABLE
New Hope Crushed Stone & Lime Company, Inc.

Year 2017

DATE	Well Nest 1-S (Pit 1 - Shallow)		Well Nest 1-I (Pit 2 - Intermediate)		Well Nest 1-D (Pit 3 - Deep)	
	<i>TOC (Ft.)</i>	<i>15.57</i>	<i>TOC (Ft.)</i>	<i>15.42</i>	<i>TOC (Ft.)</i>	<i>15.39</i>
	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>
1/9/2014	50.38	-34.81	59.69	-44.27	21.63	-6.24
3/11/2014	50.61	-35.04	65.65	-50.23	22.33	-6.94
4/7/2014	50.33	-34.76	65.99	-50.57	23.44	-8.05
4/21/2014	51.22	-35.65	68.35	-52.93	23.93	-8.54
5/6/2014	48.28	-32.71	57.40	-41.98	23.79	-8.40
5/19/2014	49.50	-33.93	62.65	-47.23	23.35	-7.96
6/2/2014	50.32	-34.75	66.05	-50.63	23.14	-7.75
6/16/2014	51.30	-35.73	68.45	-53.03	23.57	-8.18
7/1/2014	52.78	-37.21	71.74	-56.32	24.25	-8.86
7/17/2014	53.23	-37.66	72.23	-56.81	25.97	-10.58
8/1/2014	54.45	-38.88	74.00	-58.58	27.68	-12.29
8/14/2014	54.89	-39.32	74.99	-59.57	28.95	-13.56
9/2/2014	55.21	-39.64	75.82	-60.40	30.36	-14.97
9/18/2014	55.40	-39.83	75.43	-60.01	31.21	-15.82
10/2/2014	55.62	-40.05	76.03	-60.61	31.80	-16.41
10/14/2014	55.48	-39.91	76.14	-60.72	32.23	-16.84
11/3/2014	54.93	-39.36	75.50	-60.08	32.55	-17.16
11/20/2014	54.20	-38.63	73.95	-58.53	32.70	-17.31
12/1/2014	54.25	-38.68	74.65	-59.23	32.66	-17.27
12/15/2014	53.83	-38.26	73.77	-58.35	32.12	-16.73
1/15/2015	54.37	-38.80	74.96	-59.54	31.27	-15.88
3/16/2015	48.40	-32.83	60.15	-44.73	32.29	-16.90
5/26/2015	58.87	-43.30	79.14	-63.72	32.40	-17.01
6/10/2015	53.55	-37.98	75.95	-60.53	32.85	-17.46

STATIC WATER LEVEL TABLE
New Hope Crushed Stone & Lime Company, Inc.

Year 2017

DATE	Well Nest 1-S (Pit 1 - Shallow)		Well Nest 1-I (Pit 2 - Intermediate)		Well Nest 1-D (Pit 3 - Deep)	
	TOC (Ft.)	15.57	TOC (Ft.)	15.42	TOC (Ft.)	15.39
	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)
7/6/2015	55.65	-40.08	82.12	-66.70	33.90	-18.51
8/12/2015	56.3	-40.73	82.8	-67.38	35.43	-20.04
9/14/2015	56.45	-40.88	83.5	-68.08	38	-22.61
10/5/2015	55.54	-39.97	81.99	-66.57	40	-24.61
11/11/2015	57.1	-41.53	85	-69.58	44.9	-29.51
12/7/2015	56.35	-40.78	84.32	-68.90	47.82	-32.43
1/6/2016	55.63	-40.06	82.96	-67.54	47.3	-31.91
2/8/2016	52.54	-36.97	77.38	-61.96	45.46	-30.07
3/7/2016	53.5	-37.93	78.78	-63.36	41.68	-26.29
4/5/2016	54.71	-39.14	81.37	-65.95	40	-24.61
5/9/2016	54.35	-38.78	80.65	-65.23	51.6	-36.21
6/13/2016	55.66	-40.09	80.75	-65.33	53.2	-37.81
7/11/2016	53.8	-38.23	74.28	-58.86	53.2	-37.81
8/8/2016	54.52	-38.95	74.88	-59.46	49.6	-34.21
9/12/2016	55.2	-39.63	71.66	-56.24	46.77	-31.38
10/17/2016	55.75	-40.18	70.95	-55.53	44.56	-29.17
11/14/2016	56.2	-40.63	70.89	-55.47	40.69	-25.3
1/12/2017	-	-	-	-	-	-
2/6/2017	-	-	-	-	-	-
3/13/2017	-	-	-	-	-	-

Notes: Well Nest 1 inaccessible during February monitoring due to snow conditions, and inaccessible during March due to quarry flooding.

STATIC WATER LEVEL TABLE
New Hope Crushed Stone & Lime Company, Inc.

Year 2017

DATE	Busik 1		Busik Well 2 (Busik #2)		Busik Well Nest #2 (S) (Busik Well Nest 2 (s))		Busik Well Nest #2 (I) (Busik Well Nest 2 (i))		Busik Well Nest #2 (D) (Busik Well Nest 2 (d))	
	<i>TOC (Ft.)</i>	<i>312.47</i>	<i>TOC (Ft.)</i>	<i>189.02</i>	<i>TOC (Ft.)</i>	<i>312.68</i>	<i>TOC (Ft.)</i>	<i>312.65</i>	<i>TOC (Ft.)</i>	<i>312.59</i>
	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>	Transducer Reading <i>(ft.)</i>	SWL Reading <i>(msl)</i>	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>
1/9/2014	-	-	169.93	19.09	-	-	*	235.812	-	-
1/20/2014	72.3	240.17	167.74	21.28	58.31	254.37	*	232.231	267.36	45.23
2/4/2014	-	-	-	-	-	-	*	235.038	-	-
2/10/2014	-	-	-	-	-	-	*	237.746	-	-
2/24/2014	69.77	242.7	166.78	22.24	55.57	257.11	*	240.573	264.48	48.11
3/5/2014	-	-	-	-	-	-	*	241.153	-	-
3/11/2014	-	-	163.54	25.48	-	-	*	245.733	-	-
3/20/2014	70.71	241.76	161.75	27.27	57.41	255.27	*	242.906	259.92	52.67
4/7/2014	-	-	157.14	31.88	-	-	*	242.78	-	-
4/21/2014	69.92	242.55	158.22	30.8	56.68	256.00	-	-	258.57	54.02
5/6/2014	-	-	150.55	38.47	-	-	-	-	-	-
5/19/2014	69.8	242.67	152	37.02	57.05	255.63	** 74.5	238.15	257.33	55.26
6/2/2014	-	-	153.91	35.11	-	-	-	-	-	-
6/16/2014	72.39	240.08	159.93	29.09	59.87	252.81	72.65	240	261.18	51.41
7/1/2014	-	-	165.15	23.87	-	-	-	-	-	-
7/17/2014	77.06	235.41	169.35	19.67	62.83	249.85	77.18	235.47	265.69	46.9
8/1/2014	-	-	172.04	16.98	-	-	-	-	-	-
8/14/2014	80.25	232.22	173.7	15.32	64.46	248.22	80.29	232.36	268.9	43.69
9/2/2014	-	-	175.28	13.74	-	-	-	-	-	-
9/18/2014	83.18	229.29	176.2	12.82	66.46	246.22	83.28	229.37	272.19	40.4
10/2/2014	-	-	176.9	12.12	-	-	-	-	-	-
10/14/2014	84.85	227.62	177.3	11.72	67.74	244.94	84.97	227.68	272.37	40.22
11/3/2014	-	-	177.78	11.24	-	-	-	-	-	-
11/20/2014	85.5	226.97	178.09	10.93	68.39	244.29	85.6	227.05	272.5	40.09
12/1/2014	-	-	177.87	11.15	-	-	-	-	-	-
12/15/2014	77.45	235.02	175.36	13.66	61.4	251.28	77.65	235	272.07	40.52
1/7/2015	-	-	175.65	13.37	62.57	250.11	72.43	240.22	271.95	40.64
1/15/2015	77.07	235.4	175.54	13.48	-	-	-	-	-	-

STATIC WATER LEVEL TABLE
New Hope Crushed Stone & Lime Company, Inc.

Year 2017

DATE	Busik 1		Busik Well 2 (Busik #2)		Busik Well Nest #2 (S) (Busik Well Nest 2 (s))		Busik Well Nest #2 (I) (Busik Well Nest 2 (i))		Busik Well Nest #2 (D) (Busik Well Nest 2 (d))	
	<i>TOC (Ft.)</i> 312.47		<i>TOC (Ft.)</i> 189.02		<i>TOC (Ft.)</i> 312.68		<i>TOC (Ft.)</i>	312.65	<i>TOC (Ft.)</i>	312.59
	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>	Transducer Reading <i>(ft.)</i>	SWL Reading <i>(msl)</i>	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>
2/4/2015	-	-	173.42	15.6	-	-	-	-	-	-
2/16/2015	75.5	236.97	-	-	61.83	250.85	75.8	236.85	269.38	43.21
3/16/2015	68.9	243.57	167.3	21.72	54.25	258.43	68.9	243.75	266.93	45.66
4/1/2015	-	-	162.8	26.22	-	-	-	-	-	-
4/15/2015	72.3	240.17	165.23	23.79	59.66	253.02	72.66	239.99	261.18	51.41
5/13/2015	73.7	238.77	168.82	20.2	60.88	251.8	70.40	242.25	263.17	49.42
6/10/2015	76.61	235.86	173.17	15.85	62.27	250.41	76.88	235.77	266.83	45.76
7/6/2015	78	234.47	174.57	14.45	62.98	249.7	78.23	234.42	268.7	43.89
8/5/2015	81.4	231.07	177.23	11.79	65.52	247.16	81.53	231.12	271.54	41.05
9/14/2015	84.03	228.44	180.04	8.98	67.56	245.12	84.29	228.36	272.63	39.96
10/5/2015	84.62	227.85	180.56	8.46	68.18	244.5	84.9	227.75	272.55	40.04
11/11/2015	86.86	225.61	181.36	7.66	69.37	243.31	86.44	226.21	272.66	39.93
12/7/2015	84.73	227.74	181.25	7.77	68.43	244.25	85.16	227.49	272.86	39.73
1/6/2016	77.1	235.37	177.8	11.22	61.82	250.86	77.27	235.38	272.27	40.32
2/8/2016	70.56	241.91	172.41	16.61	56.23	256.45	70.23	242.42	270.7	41.89
3/7/2016	71.69	240.78	166.42	22.6	59.08	253.6	71.84	240.81	263.22	49.37
4/5/2016	75	237.47	171.24	17.78	62.14	250.54	75.28	237.37	265.25	47.34
5/9/2016	75.14	237.33	174.55	14.47	61	251.68	75.68	236.97	267.51	45.08
6/13/2016	78.73	233.74	176.25	12.77	64.1	248.58	78.8	233.85	268.4	44.19
7/11/2016	80.46	232.01	178.1	10.92	65.5	247.18	81.1	231.55	271.35	41.24
8/8/2016	76.22	236.25	174.54	14.48	62.85	249.83	77.55	235.1	271.6	40.99
9/6/2016	80.38	232.09	175.61	13.41	66.05	246.63	80.93	231.72	272	40.59
10/17/2016	83.62	228.85	177.88	11.14	68.24	244.44	83.87	228.78	272.12	40.47
11/14/2016	85.15	227.32	179.52	9.5	69.57	243.11	85.55	227.1	272.25	40.34
12/13/2016	82.77	229.7	179.1	9.92	67.32	245.36	83.08	229.57	272.42	40.17
1/12/2017	79.08	233.39	178.33	10.69	63.96	248.72	79.29	233.36	271.83	40.76
2/6/2017	75.11	237.36	173.95	15.07	62	250.68	75.24	237.41	270.92	41.67
3/13/2017	76.72	235.75	175.86	13.16	64.23	248.45	78.27	234.38	271.33	41.26

STATIC WATER LEVEL TABLE
New Hope Crushed Stone & Lime Company, Inc.

Year 2017

DATE	Busik 1		Busik Well 2 (Busik #2)		Busik Well Nest #2 (S) (Busik Well Nest 2 (s))		Busik Well Nest #2 (I) (Busik Well Nest 2 (i))		Busik Well Nest #2 (D) (Busik Well Nest 2 (d))	
	<i>TOC (Ft.)</i>		<i>TOC (Ft.)</i>		<i>TOC (Ft.)</i>		<i>TOC (Ft.)</i>		<i>TOC (Ft.)</i>	
	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>	Transducer Reading <i>(ft.)</i>	SWL Reading <i>(msl)</i>	Depth to Water <i>(ft.)</i>	SWL Reading <i>(msl)</i>
4/11/2017	69.19	243.28	166.5	22.52	55.99	256.69	69.05	243.6	263.36	49.23
5/9/2017	73.2	239.27	168.79	20.23	60.6	252.08	73.5	239.15	263.44	49.15
6/15/2017	73.41	239.06	167.6	21.42	60.8	251.88	73.68	238.97	262.29	50.3

Notes: * Readings taken from continuous transducer data reporting.

** Readings taken manually on or about date noted

STATIC WATER LEVEL TABLE
New Hope Crushed Stone & Lime Company, Inc.

Year 2017

DATE	Ely		Gerold - Old (6920 Ely)		Vehling (6908 Ely)		Depamphillis (2771 Sagan Road)		Worthington (6967 Phillips Mill Road)		Mihalich (6962 Ely Road)	
	TOC (Ft.) 255.20		TOC (Ft.) 248.01		TOC (Ft.) 221.28		TOC (Ft.) 186.33		TOC (Ft.) 222.08		TOC (Ft.)	266.95
	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)
1/20/2014	**	**	***	47.29	140.32	80.96	166.80	19.53	59.77	162.31		
1/23/2014	**	**	***	43.75	-	-	-	-	-	-	246.40*	20.55
2/24/2014	**	**	***	47.24	113.40	107.88	161.80	24.53	-	-		
3/20/2014	**	**	***	48.32	133.68	87.60	159.28	27.05	59.71	162.37		
3/31/2014	**	**	***	47.99	-	-	-	-	-	-	238.2*	28.75
4/7/2014	**	**	***	48.86	-	-	-	-	-	-		
4/21/2014	**	**	***	-11.01	127.80	93.48	158.98	27.35	59.50	162.58		
4/28/2014	**	**	***	40.95	-	-	-	-	-	-	235.46*	31.49
5/6/2014	**	**	***	49.02	-	-	-	-	-	-		
5/19/2014	**	**	***	49.42	130.80	90.48	157.50	28.83	59.50	162.58		
5/29/2014	**	**	***	48.63	-	-	-	-	-	-	228.9*	38.05
6/2/2014	**	**	***	48.28	-	-	-	-	-	-		
6/16/2014	**	**	***	47.98	143.42	77.86	163.10	23.23	59.60	162.48		
6/30/2014	**	**	***	48.46	-	-	-	-	-	-	232.6*	34.35
7/1/2014	**	**	***	48.00	-	-	-	-	-	-	-	-
7/7/2014	**	**	***	48.30	-	-	-	-	-	-	-	-
7/17/2014	**	**	***	47.10	160.16	61.12	171.20	15.13	59.59	162.49	-	-
7/22/2014	**	**	***	47.98	-	-	-	-	-	-	*251.45	15.50
8/1/2014	**	**	***	46.86	-	-	-	-	-	-	-	-
8/7/2014	**	**	***	47.06	-	-	-	-	-	-	-	-
8/14/2014	**	**	***	11.89	169.79	51.49	172.88	13.45	59.61	162.47	-	-
8/20/2014	**	**	***	54.82	-	-	-	-	-	-	-	-
8/25/2014	**	**	***	53.72	-	-	-	-	-	-	*254.48	12.47
9/2/2014	**	**	***	51.46	-	-	-	-	-	-	-	-
9/10/2014	**	**	***	50.23	-	-	-	-	-	-	-	-
9/18/2014	**	**	***	47.94	183.57	37.71	174.92	11.41	59.62	162.46	-	-
9/24/2014	**	**	***	38.05	-	-	-	-	-	-	*256.38	10.57
10/14/2014	**	**	***	40.63	175.99	45.29	175.60	10.73	59.84	162.24	*255.54	11.41
11/20/2014	**	**	***	45.86	174.84	46.44	176.30	10.03	59.69	162.39	*257.14	9.81
12/15/2014	**	**	***	46.43	166.72	54.56	176.60	9.73	59.68	162.40	*254.65	12.30

STATIC WATER LEVEL TABLE
New Hope Crushed Stone & Lime Company, Inc.

Year 2017

DATE	Ely		Gerold - Old (6920 Ely)		Vehling (6908 Ely)		Depamphillis (2771 Sagan Road)		Worthington (6967 Phillips Mill Road)		Mihalich (6962 Ely Road)	
	TOC (Ft.) 255.20		TOC (Ft.) 248.01		TOC (Ft.) 221.28		TOC (Ft.) 186.33		TOC (Ft.) 222.08		TOC (Ft.)	266.95
	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)
1/15/2015	**	**	***	46.36	163.86	57.42	172.55	13.78	59.67	162.41	*252.85	14.10
2/16/2015	**	**	***	47.12	-	-	171.45	14.88	-	-	*254.80	12.15
3/16/2015	**	**	***	48.42	120.22	101.06	159.72	26.61	59.48	162.60	*239.65	27.30
4/15/2015	**	**	***	42.21	146.45	74.83	165.50	20.83	59.60	162.48	*244.14	22.81
5/13/2015	**	**	***	45.56	-	-	173.08	13.25	59.55	162.53	*250.51	16.44
6/10/2015	**	**	***	41.82	-	-	187.50	-1.17	59.60	162.48	*247.26	19.69
7/6/2015	**	**	***	44.95	-	-	174.05	12.28	59.65	162.43	*255.00	11.95
8/5/2015	**	**	***	38.02	-	-	190.73	-4.40	59.68	162.40	*258.58	8.37
9/14/2015	**	**	***	33.33	-	-	182.37	3.96	59.68	162.40	*254.89	12.06
10/5/2015	**	**	***	32.63	-	-	178.3	8.03	59.71	162.37	*260.16	6.79
11/11/2015	**	**	***	35.51	-	-	178.75	7.58	59.68	162.40	*260.42	6.53
12/7/2015	**	**	***	38.88	-	-	178.08	8.25	59.67	162.41	*257.8	9.15
1/6/2016	**	**	***	35.88	-	-	188.1	-1.77	59.62	162.46	*255.32	11.63
2/8/2016	**	**	***	38.74	-	-	164.92	21.41	59.63	162.45	*244.36	22.59
3/7/2016	**	**	****	44.86	-	-	163.61	22.72	59.59	162.49	*247.66	19.29
4/5/2016	**	**	****	46.59	-	-	169.8	16.53	59.84	162.24	*252.64	14.31
5/9/2016	**	**	****	39.45	-	-	172.11	14.22	59.59	162.49	*261.47	5.48
6/13/2016	**	**	****	42.15	-	-	174.81	11.52	59.65	162.43	*257.19	9.76
7/11/2016	**	**	****	41.75	-	-	175.47	10.86	59.67	162.41	*245.81	21.14
8/8/2016	**	**	****	34.28	-	-	171.24	15.09	59.61	162.47	*252.88	14.07
9/6/2016	**	**	****	39.67	-	-	172.78	13.55	59.66	162.42	*260.1	6.85
10/17/2016	**	**	****	40.63	-	-	176.8	9.53	59.6	162.48	*240.55	26.40
11/14/2016	**	**	****	41.82	-	-	178.65	7.68	59.6	162.48	*244.41	22.54
12/13/2016	**	**	****	41.64	-	-	177.75	8.58	59.62	162.46	*251.4	15.55
1/12/2017	**	**	****	40.21	-	-	175.95	10.38	59.62	162.46	*250.17	16.78
2/6/2017	**	**	****	38.57	-	-	172	14.33	59.62	162.46	*255.35	11.60
3/13/2017	**	**	****	39.72	-	-	174.41	11.92	59.6	162.48	*252.36	14.59
4/11/2017	**	**	****	43.84	-	-	159.73	26.60	59.50	162.58	*247.39	19.56
5/9/2017	**	**	****	42.77	-	-	167.45	18.88	59.61	162.47	*248.34	18.61
6/15/2017	**	**	****	40.84	-	-	166.17	20.16	59.54	162.54	*250.21	16.74

STATIC WATER LEVEL TABLE
New Hope Crushed Stone & Lime Company, Inc.

Year 2017

DATE	Ely		Gerold - Old (6920 Ely)		Vehling (6908 Ely)		Depamphillis (2771 Sagan Road)		Worthington (6967 Phillips Mill Road)		Mihalich (6962 Ely Road)	
	TOC (Ft.)	255.20	TOC (Ft.)	248.01	TOC (Ft.)	221.28	TOC (Ft.)	186.33	TOC (Ft.)	222.08	TOC (Ft.)	266.95
	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)

Notes: * Readings taken manually on or about date as noted.

** Obstruction.

*** Readings take from a continuous logging device

**** Continuous logging device failed, manual measurements taken

STATIC WATER LEVEL TABLE
New Hope Crushed Stone & Lime Company, Inc.

Year 2017

DATE	Diodati (2759 Sagan Road)		Friends (Solebury Friends Well)		Holbrow (7022 Ely Road)		Ammirati (2830 Sagan Road)		Rogan (2877 Sagan Road)		Winterbottom		Bucciarelli-1	
	TOC (Ft.)	157.97	TOC (Ft.)	241.09	TOC (Ft.)	189.86	TOC (Ft.)	172.49	TOC (Ft.)	224.17	TOC (Ft.)	178.05	TOC (Ft.)	193.03
	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)
1/9/2014	-	-	-	-	**	**	-	-	-	-	-	-	81.84	111.19
1/20/2014	140.37	17.6	192.48	48.61	**	**	140.69	31.8	200.37	23.8	-	-		
2/20/2014	-	-	191.52	49.57	**	**	-	-	-	-	-	-		
2/24/2014	-	-	190.66	50.43	**	**	-	-	198.15	26.02	-	-		
3/20/2014	136.72	21.25	186.1	54.99	**	**	134.93	37.56	195.14	29.03	-	-		
3/31/2014	-	-	-	-	**	**	-	-	-	-	-	-	76.1	116.93
4/7/2014	-	-	-	-	**	**	-	-	-	-	-	-		
4/21/2014	135.93	22.04	189.1	51.99	**	**	134.86	37.63	194	30.17	-	-		
4/28/2014	-	-	-	-	**	**	-	-	-	-	-	-	88.29	104.74
5/6/2014	-	-	-	-	**	**	-	-	-	-	-	-		
5/19/2014	132.95	25.02	192.29	48.80	**	**	132.16	40.33	190.45	33.72	-	-		
5/29/2017	-	-	-	-	**	**	-	-	-	-	-	-	77.2	115.83
6/2/2014	-	-	-	-	**	**	-	-	-	-	-	-		
6/16/2014	138.2	19.77	200.6	40.49	**	**	139.79	32.7	197.59	26.58	-	-		
6/30/2014	-	-	-	-	**	**	-	-	-	-	-	-	79.8	113.23
7/1/2014	-	-	-	-	**	**	-	-	-	-	-	-	-	-
7/7/2014	-	-	-	-	**	**	-	-	-	-	-	-	-	-
7/17/2014	143.63	14.34	212.83	28.26	**	**	147.2	25.29	204.7	19.47	-	-	-	-
7/22/2014	-	-	-	-	**	**	-	-	-	-	-	-	***90.61	102.42
8/1/2014	-	-	-	-	**	**	-	-	-	-	-	-	-	-
8/7/2014	-	-	-	-	**	**	-	-	-	-	-	-	-	-
8/14/2014	146.36	11.61	222.8	18.29	**	**	151.3	21.19	208.5	15.67	-	-	-	-
8/20/2014	-	-	-	-	**	**	-	-	-	-	-	-	-	-
8/25/2014	-	-	-	-	**	**	-	-	-	-	-	-	***91.51	101.52
9/2/2014	-	-	-	-	**	**	-	-	-	-	-	-	-	-
9/10/2014	147.83	10.14	227.66	13.43	**	**	154.04	18.45	210.91	13.26	-	-	-	-
9/18/2014	-	-	-	-	**	**	-	-	-	-	-	-	-	-
9/24/2014	-	-	-	-	**	**	-	-	-	-	-	-	***94.04	98.99
10/14/2014	148.56	9.41	230.2	10.89	**	**	155.69	16.8	211.95	12.22	-	-	***92.87	100.16
11/20/2014	148.8	9.17	234.03	7.06	**	**	156.57	15.92	212.42	11.75	-	-	***92.94	100.09

STATIC WATER LEVEL TABLE
New Hope Crushed Stone & Lime Company, Inc.

Year 2017

DATE	Diodati (2759 Sугan Road)		Friends (Solebury Friends Well)		Holbrow (7022 Ely Road)		Ammirati (2830 Sугan Road)		Rogan (2877 Sугan Road)		Winterbottom		Bucciarelli-1	
	TOC (Ft.)	157.97	TOC (Ft.)	241.09	TOC (Ft.)	189.86	TOC (Ft.)	172.49	TOC (Ft.)	224.17	TOC (Ft.)	178.05	TOC (Ft.)	193.03
	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)
12/15/2014	146.43	11.54	222.44	18.65	**	**	153.2	19.29	209.15	15.02	-	-	***91.89	101.14
1/15/2015	146.96	11.01	215.6	25.49	**	**	152.71	19.78	209.35	14.82	-	-	***79.80	113.23
2/16/2015	145.65	12.32	212.68	28.41	**	**	150.75	21.74	207.38	16.79	-	-	***81.14	111.89
3/16/2015	136	21.97	186.25	54.84	**	**	137.1	35.39	197.95	26.22	-	-	***75.54	117.49
4/15/2015	140.98	16.99	201.01	40.08	**	**	142.95	29.54	200.9	23.27	-	-	***85.03	108
5/13/2015	143.1	14.87	210.33	30.76	**	**	146.03	26.46	204.05	20.12	-	-	***91.67	101.36
6/10/2015	145.44	12.53	218.24	22.85	**	**	150.34	22.15	207.23	16.94	-	-	***87.62	105.41
7/6/2015	146.69	11.28	223.32	17.77	**	**	152	20.49	208.8	15.37	-	-	***92.80	100.23
8/5/2015	148.77	9.2	227.1	13.99	**	**	154.75	17.74	211.63	12.54	-	-	***94.14	98.89
9/14/2015	151.04	6.93	231.27	9.82	**	**	158.48	14.01	214.3	9.87	-	-	***97.23	95.8
10/5/2015	151.2	6.77	234.3	6.79	**	**	158.84	13.65	214.55	9.62	-	-	***95.75	97.28
11/11/2015	151.8	6.17	231.27	9.82	**	**	159.4	13.09	215.27	8.9	-	-	***92.56	100.47
12/7/2015	151.77	6.2	230.37	10.72	**	**	159.08	13.41	215.12	9.05	-	-	***90.6	102.43
1/6/2016	148.14	9.83	214.08	27.01	**	**	153.48	19.01	210.99	13.18	-	-	***88.62	104.41
2/8/2016	142.23	15.74	195.7	45.39	**	**	144.7	27.79	204.16	20.01	-	-	***76.84	116.19
3/7/2016	140.27	17.7	192.82	48.27	**	**	140.27	32.22	199.78	24.39	-	-	***81.54	111.49
4/5/2016	144.15	13.82	210.59	30.5	**	**	146.6	25.89	204.65	19.52	-	-	***85.13	107.9
5/9/2016	146.18	11.79	218.1	22.99	**	**	150.5	21.99	208.08	16.09	-	-	***88.64	104.39
6/13/2016	148	9.97	231.65	9.44	**	**	153.14	19.35	210.15	14.02	-	-	***82.09	110.94
7/11/2016	148.9	9.07	228.1	12.99	**	**	155	17.49	211.85	12.32	-	-	***81.7	111.33
8/8/2016	145.43	12.54	204.35	36.74	**	**	149.25	23.24	207.5	16.67	-	-	***82.4	110.63
9/6/2016	147.03	10.94	217.43	23.66	**	**	151.15	21.34	209.16	15.01	-	-	***84.21	108.82
10/17/2016	149.91	8.06	227.54	13.55	**	**	155.7	16.79	212.88	11.29	-	-	***87.4	105.63
11/14/2016	151.4	6.57	231.46	9.63	**	**	158.95	13.54	214.55	9.62	-	-	***90.7	102.33
12/13/2016	150.8	7.17	232.05	9.04	**	**	157.77	14.72	214	10.17	-	-	***91.2	101.83
1/12/2017	150.22	7.75	226.95	14.14	**	**	155.86	16.63	212.82	11.35	-	-	***89.54	103.49
2/6/2017	146.5	11.47	207	34.09	**	**	149.96	22.53	207.95	16.22	-	-	***88.87	104.16
3/13/2017	148.34	9.63	219.5	21.59	**	**	152.52	19.97	210.33	13.84	-	-	***90.11	102.92
4/11/2017	137.89	20.08	184.62	56.47	**	**	136.91	35.58	197.43	26.74	-	-	***89.17	103.86
5/9/2017	142.23	15.74	206.66	34.43	**	**	144.18	28.31	202.8	21.37	-	-	***89.65	103.38
6/15/2017	141.52	16.45	203.4	37.69	**	**	143	29.49	201.56	22.61	-	-	***90.2	102.83

STATIC WATER LEVEL TABLE
New Hope Crushed Stone & Lime Company, Inc.
Year 2017

DATE	Diodati (2759 Suga Road)		Friends (Solebury Friends Well)		Holbrow (7022 Ely Road)		Ammirati (2830 Suga Road)		Rogan (2877 Suga Road)		Winterbottom		Bucciarelli-1	
	TOC (Ft.)	157.97	TOC (Ft.)	241.09	TOC (Ft.)	189.86	TOC (Ft.)	172.49	TOC (Ft.)	224.17	TOC (Ft.)	178.05	TOC (Ft.)	193.03
	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)	Depth to Water (ft.)	SWL Reading (msl)

Note: ** Previous homeowner moved / Permission to enter property not granted by new owner.

*** Readings taken manually on or about date noted

ATTACHMENT 2.0
QUARRY BASIN CALCULATIONS

2nd Quarter 2017

New Hope Crushed Stone, Inc.
Solebury, Bucks Co., PA

Calculation From:		4/1/2017	6/30/2017	91 days	
Measured Component	Variable	Vol. (gallons)	Daily Avg (gpd)	% of Basin	
Quarry Precip IN (Less 20% Evap.)	Pq = Precip. Quarry	24,289,625	266,919		
Basin Precip IN	Pb = Basin Precip.	415,207,260	4,562,717		
Stream Flow IN	Q = Stream Flow	116,680,685	1,282,205	NA	
Quarry Pumped Water	Quarry Pumping & Storage	48,611,865	534,196		
Quarry Water South Sump Level Change (feet) -14.2	Sump Storage + Quarry Storage	NA	NA		
North Pit Water Inflow		NA	NA		
Calculated Groundwater Component	Delta Sg1 = Groundwater	NA	NA		
Calculated Groundwater Base-flow	Delta Sg2 = Base-flow	NA	NA		
Transient Groundwater Flow OUT	Delta Sg	NA	NA	NA	
Calculated ET OUT	ET= Evapotrans.	NA	NA	NA	

1. The change in Sump Storage was calculated by multiplying the change in the sump stage over the period of record by the area of the sump (125,620 square feet) and converting to gallons (multiply by 7.48).
2. A rise in sump level equates to an increased groundwater component as it represents groundwater not pumped by the quarry.
3. The basin area west of the Furlong Fault equals 1.99 square miles.
4. Quarry Precipitation shown assumes evaporation loss of 20 %.

ATTACHMENT 3.0

MINIMUM / MAXIMUM DISCHARGE TABLE

MINIMUM / MAXIMUM DISCHARGE TABLE

New Hope Crushed Stone & Lime Company, Inc.

(Year 2017)

DATE	JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)	(MGD)
1	0.69	0.36	0.86	0.51	0.57	0.35	0.53	0.3	0.78	0.09	0.78	0.14												
2	0.69	0.43	0.85	0.3	0.58	0.33	0.53	0.31	0.63	0.35	0.8	0.13												
3	0.67	0.39	0.56	0.3	0.59	0.34	0.88	0.35	0.62	0.08	0.78	0.45												
4	0.61	0.35	0.55	0.31	0.61	0.36	0.76	0.25	0.6	0.09	0.77	0.48												
5	0.64	0.37	0.54	0.31	0.62	0.32	0.7	0.26	0.52	0.31	0.85	0.47												
6	0.64	0.34	0.83	0	0.6	0.32	0.7	0.44	0.53	0.32	1.18	0												
7	0.76	0	0.93	0	0.57	0.31	0.72	0.44	0.54	0.31	1.2	0.1												
8	0.77	0.47	0.89	0.47	0.55	0.32	0.71	0.4	0.71	0.09	0.65	0.05												
9	0.78	0.46	0.81	0.48	0.55	0.32	0.75	0.41	0.77	0.09	0.5	0.02												
10	0.77	0.44	0.79	0.47	0.59	0.34	0.72	0.08	0.69	0.1	0.69	0												
11	0.68	0.41	0.75	0.45	0.62	0.37	0.66	0.39	0.71	0.05	0.62	0.36												
12	0.67	0.41	0.76	0.48	0.61	0.35	0.71	0.06	0.52	0.06	0.64	0.07												
13	0.68	0.39	0.76	0.22	0.6	0.28	0.75	0.08	0.48	0.28	0.62	0.09												
14	0.7	0.4	0.41	0.19	0.57	0.32	0.78	0.08	0.48	0.24	0.62	0.05												
15	0.66	0.36	0.57	0.22	0.58	0.31	0.66	0.12	0.45	0.24	0.62	0.08												
16	0.69	0.34	0.58	0.33	0.58	0.32	0.65	0.41	0.68	0	0.66	0.07												
17	0.65	0.38	0.6	0.33	0.57	0.3	0.65	0.09	0.77	0.12	0.61	0.36												
18	0.65	0.4	0.6	0.3	0.55	0.34	0.67	0.06	0.7	0.15	0.6	0.35												
19	0.63	0.35	0.58	0.34	0.56	0.3	0.66	0.08	0.72	0.14	0.71	0												
20	0.6	0.35	0.72	0.05	0.57	0.29	0.61	0.01	0.73	0.46	0.64	0.36												
21	0.59	0.38	0.75	0.05	0.54	0.26	0.67	0.26	0.75	0.43	0.65	0.08												
22	0.58	0.36	0.57	0.32	0.57	0.28	0.68	0.44	0.73	0.48	0.64	0												
23	0.58	0.29	0.57	0.33	0.58	0.31	0.72	0.41	0.71	0.16	0.65	0.14												
24	0.58	0.31	0.67	0.07	0.58	0.31	0.73	0.47	0.77	0.13	0.64	0.2												
25	0.52	0.28	0.86	0	0.53	0.3	0.7	0.2	0.71	0.45	0.65	0.39												
26	0.53	0.29	0.87	0.57	0.56	0.34	0.51	0.2	0.95	0	0.71	0.12												
27	0.58	0.06	0.9	0.19	0.55	0.3	0.44	0.25	0.94	0.64	0.67	0.16												
28	0.53	0.31	0.57	0.16	0.9	0.33	0.76	0.2	0.98	0.63	0.73	0.16												
29	0.52	0.3			0.91	0.21	0.79	0.52	0.94	0.64	0.75	0.09												
30	0.88	0.3			0.51	0.22	0.8	0.5	0.95	0.51	0.67	0.1												
31	0.89	0.55			0.52	0.3			0.78	0.19														

* Minimum/Maximum Discharge Volumes are discussed in the Report Text.

ATTACHMENT 4.0
DISCHARGE MONITORING REPORT

PERMITTEE NAME/ADDRESS (Include

Facility Name/Location if different)

NAME New Hope Crushed Stone & Lime Co.

ADDRESS 6970 Phillips Mill Road
P.O. Box 248

New Hope, PA 18938

FACILITY New Hope Crushed Stone Quarry SMP #7974SM3

LOCATION Solebury Township, Bucks County

National Pollutant Discharge Elimination System (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16)

PA0595853
Permit Number

(17-19)

001
Discharge Number

Form Approved.

OMB No. 2040-0004

Monitoring Period

Year	Mo	Day		Year	Mo	Day
17	04	01	From	17	06	30
			To			

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		Average	Maximum	Units	Minimum	Average	Maximum	Units			
Acidity	SAMPLE MEASUREMENT				22.5	22.5	22.5		0	1/31	Grab
	PERMIT REQUIREMENT				---	---	---	mg/l			
Alkalinity	SAMPLE MEASUREMENT				148	151	153		0	1/31	Grab
	PERMIT REQUIREMENT				---	---	---	mg/l			
Chloride	SAMPLE MEASUREMENT				23.4	24.0	24.4		0	1/31	Grab
	PERMIT REQUIREMENT				---	---	---	mg/l			
Total Dissolved Solids	SAMPLE MEASUREMENT				261	286	316		0	1/31	Grab
	PERMIT REQUIREMENT				---	---	---	mg/l			
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER DAN ADAMCZYK TYPED OR PRINTED	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 SIGNATURE OF EXECUTIVE OFFICER OR AUTHORIZED AGENT	TELEPHONE (215) 862-5289		DATE 17 7 31		
			AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMITTEE NAME/ADDRESS (Include

Facility Name/Location if different)

NAME New Hope Crushed Stone & Lime Co.

ADDRESS 6970 Phillips Mill Road
P.O. Box 248
New Hope, PA 18938

FACILITY New Hope Crushed Stone Quarry SMP #7974SM3

LOCATION Solebury Township, Bucks County

National Pollutant Discharge Elimination System (NPDES)

DISCHARGE MONITORING REPORT (DMR)

(2-16)

PA0595853
Permit Number

(17-19)

001
Discharge Number

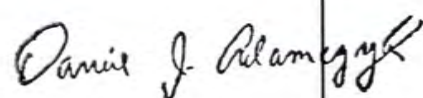
Form Approved.

OMB No. 2040-0004

Monitoring Period

	Year	Mo	Day		Year	Mo	Day
From	17	04	01	To	17	06	30

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		Average	Maximum	Units	Minimum	Average	Maximum	Units			
pH (Field)	SAMPLE MEASUREMENT				7.86	8.01	8.20		0	1/31	Grab
	PERMIT REQUIREMENT				6.0	---	9.0	Std. Units			
Total Suspended Solids	SAMPLE MEASUREMENT				1.50	2.21	8.96		0	Weekly	Grab
	PERMIT REQUIREMENT				---	35.0	70.0	mg/l			
Total Iron	SAMPLE MEASUREMENT				0.200*	0.200*	0.200*		0	1/31	Grab
	PERMIT REQUIREMENT				---	---	---	mg/l			
Manganese	SAMPLE MEASUREMENT				0.005*	0.005*	0.005*		0	1/31	Grab
	PERMIT REQUIREMENT				---	---	---	mg/l			
Aluminum	SAMPLE MEASUREMENT				0.200*	0.200*	0.200*		0	1/31	Grab
	PERMIT REQUIREMENT				---	---	---	mg/l			
Sulfate	SAMPLE MEASUREMENT				40.4	44.3	51.0		0	1/31	Grab
	PERMIT REQUIREMENT				---	---	---	mg/l			
Specific Conductance	SAMPLE MEASUREMENT				448	460	467		0	1/31	Grab
	PERMIT REQUIREMENT				---	---	---	umhos			

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	 (215) 862-5289	TELEPHONE		DATE		
			AREA CODE	NUMBER	YEAR	MO	DAY
TYPED OR PRINTED		SIGNATURE OF EXECUTIVE OFFICER OR AUTHORIZED AGENT					

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

*Half the detection limit utilized for non-detect results

ATTACHMENT 5.0
ANALYTICAL REPORTS

CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Regarding:
CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Account No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS **P.O. No:** **Inv. No:** EOM-04/17 PI
Project No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS **PWSID No:**

Sample ID **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L6722327-1 NEW HOPE CRUSHED STONE QUARRY 0417 04/05/17 10:30am NA C Customer
Received Date/Time/Temp 04/05/17 11:23am 3.3 C **Iced (Y/N):** Y

Parameter	Result	Qual	Units	Method	DF	RL	Test Date, Time, Analyst	
GENERAL CHEMISTRY (EUROFINS LANCASTER)								
Chloride	24.4		mg/l	EPA 300.0	5	2.00	04/07/17 02:17PM	ZWE
Sulfate	51.0		mg/l	EPA 300.0	5	5.00	04/07/17 02:17PM	ZWE
Acidity	ND		mg/l	SM 2310 B-1997	1	45.0	04/13/17 09:33AM	MLL
Alkalinity	148		mg/l	SM 2320 B-1997	1	5.00	04/07/17 08:00PM	NTM
Conductivity @ 25.0 C	466		umhos/cm	SM 2510 B-1997	1	5.00	04/07/17 08:00PM	NTM
Total Dissolved Solids	281		mg/l	SM 2540 C-1997	1	60	04/11/17 09:01AM	NTM
Total Suspended Solids	ND		mg/l	SM 2540 D-1997	1	3.00	04/12/17 09:28AM	ALH
METALS (EUROFINS LANCASTER)								
Aluminum	ND		mg/l	SW-846 6010C	1	0.400	04/14/17 01:18AM	MRM
Iron	ND		mg/l	SW-846 6010C	1	0.400	04/14/17 01:18AM	MRM
Manganese	ND		mg/l	SW-846 6010C	1	0.0100	04/14/17 01:18AM	MRM

Sample Comments | Result Qualifiers:

L6722327-1 :





QC

CHAIN OF CUSTODY

Page 1 of 1

Lab LIMS No:

L6722327

MATRIX CODES

1205 Industrial Blvd. Phone: 215-355-3900
Southampton, PA 18966-0514 Fax: 215-355-7231

Client/Acct. No. C00365
Address Eastern Geotechnical
PO Box 64114
City/State/Zip Souderton, PA 18964
Phone/Fax 215 721 0398
Client Contact: Charles Hartschkin

Sampling Site Address (if different) Include State

New Hope Crushed Stone Quarry

P.O. No.

PWSID #:

Quote #

e-mail:

LAB USE ONLY:

Ascorbic/HCL Vials # HCL Vials

Na₂S₂O₃

Na OH/Zn acetate pH

HNO₃ pH 4.2# H₂SO₄ pH

NaOH pH

3 Unpreserved 4.2

HCL # NH₄Cl # MeOH

DI Water

DW: DRINKING WATER

GW: GROUND WATER

WW: WASTEWATER

SO: SOIL

SL: SLUDGE

OIL: OIL

SOL: NON SOIL SOLID

MI: MISCELLANEOUS

X: OTHER

ANALYSIS REQUESTED

Field pH, Temp (°C),
DO, Cl₂, Cond. etc.

PROJECT

Collection

Number of Containers

FIELD ID

Date

Military
TimeG
R
A
BC
O
M
PMatrix
Code

Total

H
2
S
O
4H
C
lV
i
a
l
sH
N
O
3N
a
O
HZ
n
a
cU
N
P
R
EB
A
C
T

AL, Fe, Mn

TOTAL Suspended Solids

TDS

ALKALINITY, ACIDITY,
SULFATE, CHLORIDE,
CONDUCTIVITYby customer
pH = 8.20
T = 16.3°C

SAMPLED BY: (Name/Company)

Eastern Geotechnical, Inc

TAT: ☐ STANDARD (10 DAY)

or DUE DATE / /

Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD☐ Standard + QC ☐ Forms ☐ EDD

Field Parameters Analyzed By:

Initials

Cmpt

Date/Time: 04/05/17

1030

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER

1. C. Hartschkin

DATE

4/5/17 11:23

TIME

RECEIVED BY

1. [Signature]

DATE

4/5/17 11:23

TIME

DELIVERY: ☐ EQC COURIER ☐ CLIENT☐ UPS ☐ FEDEX ☐ OTHER

Custody Seal Number

RELINQUISHED BY

2. [Signature]

DATE

4/5/17 11:23

TIME

RECEIVED BY

2. [Signature]

DATE

4/5/17 11:23

TIME

Rec'd Temp.: 3.3 Initials: ELS Ice ON Location: S/H

RELINQUISHED BY

3.

DATE

TIME

RECEIVED BY

3.

DATE

TIME

COMMENTS:

RELINQUISHED BY

4.

DATE

TIME

RECEIVED BY

4.

DATE

TIME

RELINQUISHED BY

5.

DATE

TIME

RECEIVED BY

5.

DATE

TIME

Hazardous: yes/no

Eurofins QC, Inc.

Analytical Report

Printed 04/18/17 15:35 QC36

CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Regarding:
CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Account No:C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS **P.O. No:** **Inv. No:** EOM-04/17 PI
Project No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS **PWSID No:**

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L6759325-1	NEW HOPE CRUSHED STONE QUARRY, 041117 GRAB	04/11/17 12:20pm NA C	Customer
	Received Date/Time/Temp 04/11/17 01:25pm 2.9 C	Iced (Y/N): Y	

Parameter	Result	Qual	Units	Method	DF	RL	Test Date, Time, Analyst
GENERAL CHEMISTRY (EUROFINS LANCASTER)							
Total Suspended Solids	ND		mg/l	SM 2540 D-1997	1	3.00	04/13/17 02:20PM ALH

Sample Comments | Result Qualifiers:

L6759325-1 :



PIN: 62766

Serial Number: 6245292

Eurofins QC, Inc.

Analytical Report

Printed 04/26/17 09:58 QC36

CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Regarding:
CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Account No:C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS **P.O. No:** **Inv. No:** EOM-04/17 PI
Project No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS **PWSID No:**

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L6767296-1	NEW HOPE CRUSHED STONE QUARRY 041817 GRAB	04/18/17 10:12am NA C	Customer
	Received Date/Time/Temp 04/18/17 10:53am 4.5 C	Iced (Y/N): Y	

Parameter	Result	Qual	Units	Method	DF	RL	Test Date, Time, Analyst
GENERAL CHEMISTRY (EUROFINS LANCASTER)							
Total Suspended Solids	ND		mg/l	SM 2540 D-1997	1	3.00	04/21/17 01:53PM LCP

Sample Comments | Result Qualifiers:

L6767296-1 :



PIN: 62766

Serial Number: 6260162



QC

CHAIN OF CUSTODY

Page 1 of 1

Lab LIMS No:

C6767296

MATRIX CODES

1205 Industrial Blvd. Phone: 215-355-3900

Southampton, PA 18966-0514 Fax: 215-355-7231

Client/Acct. No. C00363

Address EASTERN Geotechnical
PO Box 64114

City/State/Zip Souderton, PA 18966

Phone/Fax 215 721 0398

Client Contact: CHARLES HANDSCHIN

Bill to/Report to (if different)

Sampling Site Address (if different) Include State

New Hope Crushed Stone Quarry

P.O. No.

PWSID #:

Quote #

e-mail:

LAB USE ONLY:

___ Ascorbic/HCL Vials # ___ HCL Vials

___ Na₂S₂O₃ ___

___ Na OH/Zn acetate pH ___

___ HNO₃ pH ___# ___ H₂SO₄ pH ___

___ NaOH pH ___

1 Unpreserved E+PI

___ HCL # ___ NH₄Cl # ___ MeOH

___ DI Water

ANALYSIS REQUESTED

TOTAL SUSPENDED SOLIDS

DW: DRINKING WATER

GW: GROUND WATER

WW: WASTEWATER

SO: SOIL

SL: SLUDGE

OIL: OIL

SOL: NON SOIL SOLID

MI: MISCELLANEOUS

X: OTHER

Field pH, Temp (°C),
DO, Cl₂, Cond. etc.

PROJECT

Collection

G

C

R

A

B

M

P

Matrix

Code

Number of Containers

Total

H

Z

S

O

4

H

C

I

V

I

A

S

H

N

O

3

H

A

O

H

C

Z

N

A

C

U

N

P

R

E

B

A

C

T

FIELD ID

041817

4/18/17

1012

X

G

W

1

1

1

1

1

1

1

1

1

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1

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1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

1

SAMPLED BY: (Name/Company)

TAT: ☐ STANDARD (10 DAY)

or DUE DATE ___/___/___

Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD☐ Standard + QC ☐ Forms ☐ EDD

Field Parameters Analyzed By:

Initials

Date/Time:

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW: USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER:

1. C. M. Handschin

DATE

4/18/17

TIME

10:58

RECEIVED BY

1. C. M. Handschin

DATE

4/18/17

TIME

10:53

DELIVERY: ☐ EQC COURIER ☐ CLIENT☐ UPS ☐ FEDEX ☐ OTHER

Custody Seal Number

RELINQUISHED BY

2. C. M. Handschin

DATE

4/18/17

TIME

10:58

RECEIVED BY

2. C. M. Handschin

DATE

4/18/17

TIME

10:53

Rec'd Temp.: 4.5 Initials: CMB Ice Y/N Location: SH

RELINQUISHED BY

3.

DATE

TIME

RECEIVED BY

3.

DATE

TIME

RELINQUISHED BY

4.

DATE

TIME

RECEIVED BY

4.

DATE

TIME

RELINQUISHED BY

5.

DATE

TIME

RECEIVED BY

5.

DATE

TIME

Hazardous Materials

DELIVERED

BY CUSTOMER

CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Regarding:
CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Account No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS	P.O. No:	Inv. No: EOM-05/17 PI
Project No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS		PWSID No:

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L6775265-1	NEW HOPE CRUSHED STONE QUARRY 042617	04/26/17 10:19am NA C	Customer
	Received Date/Time/Temp 04/26/17 11:06am 3.8 C	Iced (Y/N): Y	

--SUBCONTRACTED RESULT REFERENCES--

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)
TOTAL SUSPENDED SOLIDS

Sample Comments | Result Qualifiers:

L6775265-1 :



Sample Description: L6775265-1 Grab Groundwater
New Hope Crushed Stone Quarry
NEW HOPE CRUSHED STONE QUARRY 042617

LL Sample # GW 8960494
LL Group # 1793884
Account # 22277

Project Name: L6775265

Collected: 04/26/2017 10:19
Submitted: 04/26/2017 17:40
Reported: 05/03/2017 14:33

Eurofins QC Laboratories
1205 Industrial Blvd.
P.O. Box 514
Southampton, PA 18966-0514

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry					
13858	Total Suspended Solids	SM 2540 D-1997 n.a.	mg/l N.D. Q8	mg/l 3.00	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13858	Total Suspended Solids	SM 2540 D-1997	1	17122385803A	05/02/2017 14:29	Leroy C Poole	1



QC

CHAIN OF CUSTODY

Page 1 of 1

Lab LIMS No:

L6975265

MATRIX CODES

1205 Industrial Blvd.

Phone: 215-355-3900

Southampton, PA 18966-0514

Fax: 215-355-7231

Client/Acct. No.

C00365

Address

EASTERN Geotechnical Svs

PO Box 64114

City/State/Zip

Souderton, PA 18964

Phone/Fax

215 721 0398

Client Contact:

CHARLES HAVOSCHIN

Bill to/Report to (if different)

Sampling Site Address (if different) Include State

P.O. No.

PWSID #:

Quote #

e-mail:

LAB USE ONLY:

____ Ascorbic/HCL Vials # ____ HCL Vials

____ Na₂S₂O₃ ____

____ Na OH/Zn acetate pH ____

____ HNO₃ pH ____# ____ H₂SO₄ pH ____

____ NaOH pH ____

____ Unpreserved

____ HCl # ____ NH₄Cl # ____ MeOH

____ DI Water

DW: DRINKING WATER

GW: GROUND WATER

WW: WASTEWATER

SO: SOIL

SL: SLUDGE

OIL: OIL

SOL: NON SOIL SOLID

MI: MISCELLANEOUS

X: OTHER

ANALYSIS REQUESTED

Field pH, Temp (°C),
DO, Cl₂, Cond. etc.

TOTAL Suspended Solids

PROJECT

Collection

G

R

A

B

C

O

M

P

Matrix

Code

Total

H

2

S

O

4

H

C

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FIELD ID

Date

Military
Time

Gw

1

X

042617

4/26/17

1019X

USE ONLY

SAMPLED BY: (Name/Company)

TAT: ☐ STANDARD (10 DAY)

or DUE DATE ____/____/____

Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD☐ Standard + QC ☐ Forms ☐ EDD

Field Parameters Analyzed By:

Initials

Date/Time:

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER

1. C. Havoschin

DATE

TIME

4/26/17

11:06

RECEIVED BY

1. E. Havoschin

DATE

TIME

4/26/17

11:06

DELIVERY: ☐ EQC COURIER ☐ CLIENT

Custody Seal Number

☐ UPS ☐ FEDEX ☐ OTHER

RELINQUISHED BY

2. E. Havoschin

DATE

TIME

4/26/17

11:06

RECEIVED BY

2. E. Havoschin

DATE

TIME

4/26/17

11:06

Rec'd Temp.: 38

Initials: ELS

Ice Y/N

Location: SH

RELINQUISHED BY

3.

DATE

TIME

RECEIVED BY

3.

DATE

TIME

COMMENTS:

RELINQUISHED BY

4.

DATE

TIME

RECEIVED BY

4.

DATE

TIME

RELINQUISHED BY

5.

DATE

TIME

RECEIVED BY

5.

DATE

TIME

DELIVERED

BY CUSTOMER

Hazardous Waste

CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Regarding:
CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Account No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS	P.O. No:	Inv. No: EOM-05/17 PI
Project No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS		PWSID No:

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L6761820-1	NEW HOPE CRUSHED STONE QUARRY, #0517	05/01/17 10:52am NA C	Customer
	Received Date/Time/Temp 05/01/17 11:48am 3.9 C	Iced (Y/N): Y	

--SUBCONTRACTED RESULT REFERENCES--

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)

ACIDITY
ALUMINUM
Alkalinity as CaCO₃
CHLORIDE
CONDUCTIVITY
IRON
MANGANESE
SULFATE
TOTAL DISSOLVED SOLIDS
TOTAL SUSPENDED SOLIDS

Sample Comments | Result Qualifiers:

L6761820-1 :



Sample Description: L6761820-1 Groundwater

LL Sample # GW 8968847

Project Name: L6761820

LL Group # 1795762

Account # 22277

Collected: 05/01/2017 10:52

Eurofins QC Laboratories

Submitted: 05/01/2017 19:50

1205 Industrial Blvd.

Reported: 05/15/2017 09:13

P.O. Box 514

Southampton, PA 18966-0514

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
Metals		SW-846 6010C	mg/l	mg/l	
01743	Aluminum	7429-90-5	N.D.	0.400	1
01754	Iron	7439-89-6	N.D.	0.400	1
07058	Manganese	7439-96-5	N.D.	0.0100	1
Wet Chemistry		EPA 300.0	mg/l	mg/l	
00224	Chloride	16887-00-6	23.4	2.0	5
00228	Sulfate	14808-79-8	41.4 Q4	5.0	5
		SM 2310 B-1997	mg/l as CaCO3	mg/l as CaCO3	
04530	Total Acidity to pH 8.3	n.a.	N.D.	45.0	1
		SM 2320 B-1997	mg/l as CaCO3	mg/l as CaCO3	
12150	Total Alkalinity to pH 4.5	n.a.	153	5.0	1
		SM 2510 B-1997	umhos/cm	umhos/cm	
12146	Specific Conductance	n.a.	467	5.0	1
		SM 2540 C-1997	mg/l	mg/l	
06649	Total Dissolved Solids	n.a.	316 Q8	60.0	1
		SM 2540 D-1997	mg/l	mg/l	
13858	Total Suspended Solids	n.a.	N.D.	3.00	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01743	Aluminum	SW-846 6010C	1	171231063501	05/06/2017 19:48	Elaine F Stoltzfus	1
01754	Iron	SW-846 6010C	1	171231063501	05/06/2017 19:48	Elaine F Stoltzfus	1
07058	Manganese	SW-846 6010C	1	171231063501	05/06/2017 19:48	Elaine F Stoltzfus	1
10635	ICP-WW, 3005A (tot rec) - U4	SW-846 3005A	1	171231063501	05/04/2017 05:34	James L Mertz	1
00224	Chloride	EPA 300.0	1	17123120115A	05/03/2017 15:54	Hallie A Burnett	5
00228	Sulfate	EPA 300.0	1	17123120115A	05/03/2017 15:54	Hallie A Burnett	5
04530	Total Acidity to pH 8.3	SM 2310 B-1997	1	17123134141A	05/04/2017 01:13	Michelle L Lalli	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	17128002104A	05/09/2017 03:39	Ian D Toomey	1
12146	Specific Conductance	SM 2510 B-1997	1	17132004101A	05/12/2017 12:24	Ian D Toomey	1
06649	Total Dissolved Solids	SM 2540 C-1997	1	17124664901A	05/04/2017 09:04	Nathan T Morgan	1



QC

1205 Industrial Blvd. Phone: 215-355-3900
Southampton, PA 18966-0514 Fax: 215-355-7231

Client/Acct. No. C00365
Address EASTERN GEOTECHNICALS
PO Box 64114
City/State/Zip SOUDERTON, PA 18964
Phone/Fax 215 721 0398
Client Contact CHARLES HANDSCHIN

CHAIN OF CUSTODY

Page 1 of 1

Bill to/Report to (if different)

Sampling Site Address (if different) Include State

P.O. No.

PWSID #:

Quote #

e-mail:

Lab LIMS No:

LAB USE ONLY:

Ascorbic/HCL Vials # HCL Vials# Na₂S₂O₃# Na OH/Zn acetate pH# 1 HNO₃ pH 3.9# H₂SO₄ pH# NaOH pH# 3 Unpreserved 0.4# HCL # NH₄Cl # MeOH# DI Water

ANALYSIS REQUESTED

MATRIX CODES

DW: DRINKING WATER

GW: GROUND WATER

WW: WASTEWATER

SO: SOIL

SL: SLUDGE

OIL: OIL

SOL: NON SOIL SOLID

MI: MISCELLANEOUS

X: OTHER

Field pH, Temp (°C),
DO, Cl₂, Cond. etc.

PROJECT

Collection

FIELD ID

Date

Military
TimeG
R
A
BC
O
M
PMatrix
Code

Total

Number of Containers

H
2
S
O
4H
C
lV
i
a
l
sH
N
O
3N
a
O
HZ
n
A
cU
N
P
R
EB
A
C
T

AL, Fe, Mn

TOTAL Suspended Solids

TDS

ALKALINITY, ACIDITY,
SULFATE, CHLORIDE,
CONDUCTIVITY6 Y CUSTOMER
pH = 7.98
T = 16.8°C

SAMPLED BY: (Name/Company)

TAT: ☐ STANDARD (10 DAY)or DUE DATE / / Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD☐ Standard + QC ☐ Forms ☐ EDD

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

Field Parameters Analyzed By:

Initials

CJH

Date/Time: 5/1/171052

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER

1. CJH

DATE

5/1/17

TIME

11:48

RECEIVED BY

1. Cooler

DATE

5/1/17

TIME

11:48DELIVERY: ☐ EQC COURIER ☐ CLIENT☐ UPS ☐ FEDEX ☐ OTHER

Custody Seal Number

RELINQUISHED BY

2. Cooler

DATE

5/1/17

TIME

11:48

RECEIVED BY

2. Cooler

DATE

5/1/17

TIME

11:48Rec'd Temp.: 3.9Initials: ELS Ice ☒ N Location: SH

RELINQUISHED BY

3.

DATE

TIME

RECEIVED BY

3.

DATE

TIME

COMMENTS:

RELINQUISHED BY

4.

DATE

TIME

RECEIVED BY

4.

DATE

TIME

RELINQUISHED BY

5.

DATE

TIME

RECEIVED BY

5.

DATE

5/1/17

TIME

1950

If a loss, yes/no

DELIVERED
BY CUSTOMER

CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Regarding:
CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Account No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS	P.O. No:	Inv. No: EOM-05/17 PI
Project No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS		PWSID No:

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L6800116-1	NEW HOPE CRUSHED STONE QUARRY, 05917	05/09/17 12:45pm NA C	Customer
	Received Date/Time/Temp 05/09/17 01:53pm 3.0 C	Iced (Y/N): Y	

--SUBCONTRACTED RESULT REFERENCES--

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)
TOTAL SUSPENDED SOLIDS

Sample Comments | Result Qualifiers:

L6800116-1 :



Sample Description: L6800116-1 Grab Groundwater
New Hope Crushed Stone Quarry

LL Sample # GW 8986402
LL Group # 1799676
Account # 22277

Project Name: L6800116

Collected: 05/09/2017 12:45

Eurofins QC Laboratories

702 Electric Avenue

Horsham PA 19044

Submitted: 05/10/2017 19:25

Reported: 05/16/2017 14:38

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry					
13858	Total Suspended Solids	SM 2540 D-1997 n.a.	mg/l N.D. Q8	mg/l 3.00	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13858	Total Suspended Solids	SM 2540 D-1997	1	17135385802A	05/15/2017 12:30	Karen D Lausch	1

1799676



QC

CHAIN OF CUSTODY

Page 1 of 1

Lab LIMS No:

6866116

MATRIX CODES

1205 Industrial Blvd.

Phone: 215-355-3900

Southampton, PA 18966-0514

Fax: 215-355-7231

Client/Acct. No.

C00365

Address

EASTERN Geotechnical Svs

PO Box 64114

City/State/Zip

Souderton, PA 18986

Phone/Fax

215 721 0398

Client Contact:

Charles HANDSCHIN

Bill to/Report to (if different)

Sampling Site Address (if different) Include State

New Hope Crushed Stone Quarry

P.O. No.

PWSID #:

Quote #

e-mail:

LAB USE ONLY:

_____ Ascorbic/HCL Vials # _____ HCL Vials

_____ Na₂S₂O₃ _____

_____ Na OH/Zn acetate pH _____

_____ HNO₃ pH _____# _____ H₂SO₄ pH _____

_____ NaOH pH _____

1 Unpreserved Qtp# _____ HCL # _____ NH₄Cl # _____ MeOH

_____ DI Water

DW: DRINKING WATER

GW: GROUND WATER

WW: WASTEWATER

SO: SOIL

SL: SLUDGE

OIL: OIL

SOL: NON SOIL SOLID

MI: MISCELLANEOUS

X: OTHER

ANALYSIS REQUESTED

Field pH, Temp (°C),
DO, Cl₂, Cond. etc.

PROJECT

Collection

Number of Containers

FIELD ID

Date

Military
TimeG
R
A
BC
O
M
PMatrix
Code

Total

H
2
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4H
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3N
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HZ
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A
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A
C
T

TOTAL Suspended Solids

SAMPLED BY: (Name/Company)

TAT: ☐ STANDARD (10 DAY)Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD

Field Parameters Analyzed By:

or DUE DATE / /☐ Standard + QC ☐ Forms ☐ EDD

Initials

Date/Time:

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER

1. C. M. Handschin

DATE

5/9/17

TIME

13:53

RECEIVED BY

1. E. Malowik

DATE

5/9/17

TIME

13:53

DELIVERY: ☐ EQC COURIER ☐ CLIENT

Custody Seal Number

☐ UPS ☐ FEDEX ☐ OTHER

RELINQUISHED BY

2. E. Malowik

DATE

5/9/17

TIME

13:53

RECEIVED BY

2. Cooler

DATE

5/9/17

TIME

13:53

Rec'd Temp.: 3.0 Initials: EC Ice Y/N 0 Location: S/H

RELINQUISHED BY

3.

DATE

TIME

RECEIVED BY

3.

DATE

TIME

COMMENTS:

RELINQUISHED BY

4.

DATE

TIME

RECEIVED BY

4.

DATE

TIME

RELINQUISHED BY

5.

DATE

TIME

RECEIVED BY

5.

DATE

5/10/17

TIME

1925

Hazardous Yes/No

DELIVERED

BY CUSTOMER

CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Regarding:
CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Account No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS	P.O. No:	Inv. No: EOM-05/17 PI
Project No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS		PWSID No:

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L6805839-1	NEW HOPE CRUSHED STONE QUARRY 051517	05/15/17 10:15am NA C	Customer
	Received Date/Time/Temp 05/15/17 05:00pm 4.5 C	Iced (Y/N): Y	

--SUBCONTRACTED RESULT REFERENCES--

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)
TOTAL SUSPENDED SOLIDS

Sample Comments | Result Qualifiers:

L6805839-1 :



Sample Description: L6805839-1 Grab Groundwater
New Hope Crushed Stone Quarry

LL Sample # GW 8994573
LL Group # 1801665
Account # 22277

Project Name: L6805839

Collected: 05/15/2017 10:15

Eurofins QC Laboratories

Submitted: 05/16/2017 04:50

702 Electric Avenue

Reported: 05/20/2017 16:41

Horsham PA 19044

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	SM 2540 D-1997		mg/l	mg/l	
13858	Total Suspended Solids	n.a.	N.D. Q8	3.00	1

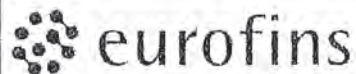
Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13858	Total Suspended Solids	SM 2540 D-1997	1	17138385802A	05/18/2017 23:15	Hannah M Royer	1



QC

1205 Industrial Blvd. Phone: 215-355-3900
Southampton, PA 18966-0514 Fax: 215-355-7231

Client/Acct. No. C00365
Address EASTMAN GECTECHNICALS
PO BOX 64114
City/State/Zip SCUDERTON, PA 18964
Phone/Fax 215 721 0398
Client Contact: CHARLES HANDSCHEN

CHAIN OF CUSTODY

Page 1 of 1

Bill to/Report to (if different)

Sampling Site Address (if different) Include State

NEW HOPE CRUSHED STONE QUARRY

P.O. No.

PWSID #:

Quote #

e-mail:

Lab LIMS No:

L6905839

MATRIX CODES

LAB USE ONLY:

Ascorbic/HCL Vials # HCL Vials# Na₂S₂O₃# Na OH/Zn acetate pH# HNO₃ pH# H₂SO₄ pH# NaOH pH# 1 Unpreserved PLOT# HCL # NH₄Cl # MeOH# DI Water

DW: DRINKING WATER

GW: GROUND WATER

WW: WASTEWATER

SO: SOIL

SL: SLUDGE

OIL: OIL

SOL: NON SOIL SOLID

MI: MISCELLANEOUS

X: OTHER

ANALYSIS REQUESTED

Field pH, Temp (°C),
DO, Cl₂, Cond. etc.

PROJECT

Collection

Number of Containers

FIELD ID

Date

Military
TimeG
R
A
BC
O
M
PMatrix
Code

Total

H
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4H
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sH
N
O
3N
a
O
HZ
n
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cU
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P
R
EB
A
C
T5 15 175/15/17 1015XGW1XTOTAL Suspended Solids

SAMPLED BY: (Name/Company)

TAT: ☐ STANDARD (10 DAY)Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDDor DUE DATE / / ☐ Standard + QC ☐ Forms ☐ EDD

Field Parameters Analyzed By:

Initials

Date/Time:

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME	DELIVERY: ☐ EQC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER	Custody Seal Number
1. <u>Charles Handschen</u>	<u>5/15/17</u>	<u>11:00</u>	<u>[Signature]</u>	<u>5/15/17</u>	<u>11:00</u>		
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME		
2. <u>[Signature]</u>	<u>5/15/17</u>	<u>11:00</u>	<u>[Signature]</u>	<u>5/15/17</u>	<u>11:00</u>		
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME		
3. <u>Coder</u>	<u>5/15/17</u>	<u>1300</u>	<u>[Signature]</u>	<u>5/15</u>	<u>1700</u>		
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME		
4. <u>/</u>			<u>[Signature]</u>				
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME		
5. <u>/</u>			<u>[Signature]</u>	<u>5/16/17</u>	<u>0450</u>		

Rec'd Temp.: 4.5 Initials: EUS Ice Y Location: S/H
COMMENTS:

DELIVERED**BY CUSTOMER**Hazardous: Yes / No

CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Regarding:
CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Account No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS	P.O. No:	Inv. No: EOM-06/17 PI
Project No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS		PWSID No:

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L6812889-1	52217 NEW HOPE CRUSHED STONE QUARRY GRAB	05/22/17 10:32am NA C	Customer
	Received Date/Time/Temp 05/22/17 11:51am 2.9 C	Iced (Y/N): Y	

--SUBCONTRACTED RESULT REFERENCES--

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)
TOTAL SUSPENDED SOLIDS

Sample Comments | Result Qualifiers:

L6812889-1 :



Sample Description: L6812889-1 Grab Groundwater
New Hope Crushed Stone Quarry
52217 NEW HOPE CRUSHED STONE QUARRY

LL Sample # GW 9008897
LL Group # 1804563
Account # 22277

Project Name: L6812889

Collected: 05/22/2017 10:32

Eurofins QC Laboratories

702 Electric Avenue

Horsham PA 19044

Submitted: 05/22/2017 19:24

Reported: 05/26/2017 15:46

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	SM 2540 D-1997		mg/l	mg/l	
13858	Total Suspended Solids	n.a.	N.D. Q8	3.00	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13858	Total Suspended Solids	SM 2540 D-1997	1	17145385801A	05/25/2017 09:34	Karen D Lausch	1



QC

1205 Industrial Blvd. Phone: 215-355-3900
Southampton, PA 18966-0514 Fax: 215-355-7231

Client/Acct. No. C00365
Address EASTERN GEOTECHNICALS
PO Box 64114

City/State/Zip SOUDERTON, PA 19084
Phone/Fax 215 721 0398

Client Contact: CHARLES HANDSCHIN

CHAIN OF CUSTODY

Page 1 of 1

Bill to/Report to (if different)

Sampling Site Address (if different) Include State

NEW HOPE CRUSHED STONE QUARRY

P.O. No.

PWSID #:

Quote #

e-mail:

Lab LIMS No:

LAB USE ONLY:

Ascorbic/HCL Vials # HCL Vials# Na₂S₂O₃# Na OH/Zn acetate pH# HNO₃ pH# H₂SO₄ pH# NaOH pH# 1 Unpreserved 8+1# HCL # NH₄CL # MeOH# DI Water

MATRIX CODES

DW: DRINKING WATER

GW: GROUND WATER

WW: WASTEWATER

SO: SOIL

SL: SLUDGE

OIL: OIL

SOL: NON SOIL SOLID

MI: MISCELLANEOUS

X: OTHER

PROJECT

Collection

Number of Containers

FIELD ID

Date

Military Time

G
R
A
BC
O
M
PMatrix
Code

Total

H
2
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4H
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N
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3N
a
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HZ
n
A
cU
N
P
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EB
A
C
T

ANALYSIS REQUESTED

Field pH, Temp (°C),
DO, Cl₂, Cond. etc.TOTAL SUSPENDED SOLIDS

SAMPLED BY: (Name/Company)

TAT: ☐ STANDARD (10 DAY)or DUE DATE / / Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD☐ Standard + QC ☐ Forms ☐ EDD

Field Parameters Analyzed By:

Initials

Date/Time:

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER

1. Charles Handschin

DATE

TIME

5/22/17 11:51

RECEIVED BY

Charles Handschin

DATE

TIME

5/22/17 11:51DELIVERY: ☐ EQC COURIER ☐ CLIENT
☐ UPS ☐ FEDEX ☐ OTHER

Custody Seal Number

RELINQUISHED BY

2. Charles Handschin

DATE

TIME

5/22/17 11:51

RECEIVED BY

Charles Handschin

DATE

TIME

5/22/17 11:51Rec'd Temp.: 2.9 Initials: ECS Ice Y Location: S/L
COMMENTS:

RELINQUISHED BY

3. Charles Handschin

DATE

TIME

5/22/17 11:51

RECEIVED BY

Charles Handschin

DATE

TIME

5/22/17 11:51

RELINQUISHED BY

4. Charles Handschin

DATE

TIME

5/22/17 11:51

RECEIVED BY

Charles Handschin

DATE

TIME

5/22/17 11:51

RELINQUISHED BY

5. Charles Handschin

DATE

TIME

5/22/17 11:51

RECEIVED BY

Charles Handschin

DATE

TIME

5/22/17 11:51

Hazardous / no

**DELIVERED
BY CUSTOMER**

CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Regarding:
CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Account No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS	P.O. No:	Inv. No: EOM-06/17 PI
Project No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS		PWSID No:

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L6715698-1	NEW HOPE CRUSHED STONE QUARRY 053017	05/30/17 10:57am NA C	Customer
	Received Date/Time/Temp 05/30/17 12:12pm 2.7 C	Iced (Y/N): Y	

--SUBCONTRACTED RESULT REFERENCES--

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)
TOTAL SUSPENDED SOLIDS

Sample Comments | Result Qualifiers:

L6715698-1 :



**Sample Description: L6715698-1 Grab Groundwater
053017**

**LL Sample # GW 9021415
LL Group # 1807439
Account # 22277**

Project Name: L6715698

Collected: 05/30/2017 10:57 by CMH

Eurofins QC Laboratories
702 Electric Avenue
Horsham PA 19044

Submitted: 05/30/2017 18:40

Reported: 06/02/2017 21:01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	SM 2540 D-1997		mg/l	mg/l	
13858	Total Suspended Solids	n.a.	N.D.	3.00	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13858	Total Suspended Solids	SM 2540 D-1997	1	17152385803A	06/01/2017 12:53	Karen D Lausch	1

CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Regarding:
CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Account No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS	P.O. No:	Inv. No: EOM-06/17 PI
Project No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS		PWSID No:

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L6808632-1	NEW HOPE CRUSHED STONE QUARRY 617 GRAB	06/05/17 10:10am NA C	Customer
	Received Date/Time/Temp 06/05/17 11:17am 3.2 C	Iced (Y/N): Y	

--SUBCONTRACTED RESULT REFERENCES--

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)

ACIDITY
ALUMINUM
Alkalinity as CaCO3
CHLORIDE
CONDUCTIVITY
IRON
MANGANESE
SULFATE
TOTAL DISSOLVED SOLIDS
TOTAL SUSPENDED SOLIDS

Sample Comments | Result Qualifiers:

L6808632-1 :



Sample Description: L6808632-1 Grab Groundwater
New Hope Crushed Stone Quarry

LL Sample # GW 9028746
LL Group # 1809149
Account # 22277

Project Name: L6808632

Collected: 06/05/2017 10:10

Eurofins QC Laboratories

Submitted: 06/05/2017 19:45

702 Electric Avenue

Reported: 06/14/2017 11:54

Horsham PA 19044

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
Metals					
		SW-846 6010C	mg/l	mg/l	
01743	Aluminum	7429-90-5	N.D.	0.400	1
01754	Iron	7439-89-6	N.D.	0.400	1
07058	Manganese	7439-96-5	N.D.	0.0100	1
Wet Chemistry					
		EPA 300.0	mg/l	mg/l	
00224	Chloride	16887-00-6	24.2	2.0	5
00228	Sulfate	14808-79-8	40.4	5.0	5
		SM 2310 B-1997	mg/l as CaCO3	mg/l as CaCO3	
04530	Total Acidity to pH 8.3	n.a.	N.D. Q4	45.0	1
		SM 2320 B-1997	mg/l as CaCO3	mg/l as CaCO3	
12150	Total Alkalinity to pH 4.5	n.a.	152 Q8	5.0	1
		SM 2510 B-1997	umhos/cm	umhos/cm	
12146	Specific Conductance	n.a.	448	5.0	1
		SM 2540 C-1997	mg/l	mg/l	
06649	Total Dissolved Solids	n.a.	261 Q8	60.0	1
		SM 2540 D-1997	mg/l	mg/l	
13858	Total Suspended Solids	n.a.	N.D.	3.00	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01743	Aluminum	SW-846 6010C	1	171581063501	06/09/2017 05:58	Jonathan Allen	1
01754	Iron	SW-846 6010C	1	171581063501	06/09/2017 05:58	Jonathan Allen	1
07058	Manganese	SW-846 6010C	1	171581063501	06/09/2017 05:58	Jonathan Allen	1
10635	ICP-WW, 3005A (tot rec) - U4	SW-846 3005A	1	171581063501	06/08/2017 01:20	Denise L Trimby	1
00224	Chloride	EPA 300.0	1	17157249215A	06/07/2017 03:26	Zachary W Enck	5
00228	Sulfate	EPA 300.0	1	17157249215A	06/07/2017 03:26	Zachary W Enck	5
04530	Total Acidity to pH 8.3	SM 2310 B-1997	1	17160134141A	06/09/2017 22:06	Michelle L Lalli	1
12150	Total Alkalinity to pH 4.5	SM 2320 B-1997	1	17159004105A	06/09/2017 05:51	Ian D Toomey	1
12146	Specific Conductance	SM 2510 B-1997	1	17164005105A	06/13/2017 18:59	Ian D Toomey	1
06649	Total Dissolved Solids	SM 2540 C-1997	1	17158664901A	06/07/2017 12:26	Amy L Hankins	1
13858	Total Suspended Solids	SM 2540 D-1997	1	17158385803A	06/07/2017 18:39	Leroy C Poole	1
13414	Total Acidity - Prep	SM 2310 B-1997	1	17160134141A	06/09/2017 17:45	Michelle L Lalli	1



QC

CHAIN OF CUSTODY

Page 1 of 1

1205 Industrial Blvd. Phone: 215-355-3900
Southampton, PA 18966-0514 Fax: 215-355-7231

Client/Acct. No. C00365
Address EASTERN Geotechnics
PO BOX 64114
City/State/Zip SOODERTON, PA 18966
Phone/Fax 215 721 0398
Client Contact: CHARLES HANDSCHIN

Bill to/Report to (if different)

Sampling Site Address (if different) Include State

P.O. No.

PWSID #:

Quote #

e-mail:

Lab LIMS No:

LAB USE ONLY

_____ Ascorbic/HCL Vials # _____ HCL Vials

_____ Na₂S₂O₃

_____ Na OH/Zn acetate pH

1 HNO₃ pH 15.00 pl# _____ H₂SO₄ pH

_____ NaOH pH

3 Unpreserved 870# _____ HCL # _____ NH₄Cl # _____ MeOH

_____ DI Water

MATRIX CODES

DW: DRINKING WATER

GW: GROUND WATER

WW: WASTEWATER

SO: SOIL

SL: SLUDGE

OIL: OIL

SOL: NON SOIL SOLID

MI: MISCELLANEOUS

X: OTHER

LAB USE ONLY

PROJECT	Collection		G R A B	C O M P	Matrix Code	Number of Containers										
FIELD ID	Date	Military Time				Total	H 2 S O 4	H C l	V i a l s	H N O 3	N a O H	Z n A c	U N P R E	B A C T		
#1 617	6/5/17	1010	X		GW	1			X							
#2 617	6/5/17	1010	X		GW	1								X		
#3 617	6/5/17	1010	X		GW	1								X		
#4 617	6/5/17	1010	X		GW	1								X		

Field pH, Temp (°C),
DO, Cl₂, Cond. etc.

SAMPLED BY: (Name/Company)

TAT: ☐ STANDARD (10 DAY)or DUE DATE / / Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD☐ Standard + QC ☐ Forms ☐ EDD

Field Parameters Analyzed By:

Initials

Date/Time: 06/05/17

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME	DELIVERY: ☐ EQC COURIER ☐ CLIENT	Custody Seal Number
1. <u>Charles Handschin</u>	<u>6/5/17</u>	<u>11:17</u>	1. <u>[Signature]</u>	<u>6/5/17</u>	<u>11:17</u>	☐ UPS ☐ FEDEX ☐ OTHER	
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME	Rec'd Temp.: <u>32</u> Initials: <u>EAS</u> Ice ☒ Y/N Location: <u>EQC</u>	
2. <u>[Signature]</u>	<u>6/5/17</u>	<u>11:17</u>	2. <u>[Signature]</u>	<u>6/5/17</u>	<u>11:17</u>	COMMENTS:	
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME		
3.			3.				
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME		
4.			4.				
RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME		
5.			5. <u>[Signature]</u>	<u>6/5/17</u>	<u>1945</u>		

DELIVERED
BY CUSTOMER

Hazardous: yes / no

CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Regarding:
CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Account No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS	P.O. No:	Inv. No: EOM-06/17 PI
Project No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS		PWSID No:

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L6858942-1	NEW HOPE CRUSHED STONE QUARRY 61517	06/15/17 12:12pm NA C	Customer
	Received Date/Time/Temp 06/15/17 04:45pm 3.6 C	Iced (Y/N): Y	

--SUBCONTRACTED RESULT REFERENCES--

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)
TOTAL SUSPENDED SOLIDS

Sample Comments | Result Qualifiers:

L6858942-1 :



Sample Description: L6858942-1 Groundwater
New Hope Crushed Stone Quarry

LL Sample # GW 9052376
LL Group # 1814189
Account # 22277

Project Name: L6858942

Collected: 06/15/2017 12:12

Eurofins QC Laboratories

Submitted: 06/16/2017 06:20

702 Electric Avenue

Reported: 06/21/2017 15:14

Horsham PA 19044

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry					
13858	Total Suspended Solids	SM 2540 D-1997 n.a.	mg/l N.D.	mg/l 3.00	1

Sample Comments

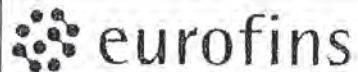
PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13858	Total Suspended Solids	SM 2540 D-1997	1	17171385804A	06/20/2017 14:40	Leroy C Poole	1

G # 1814189



QC

1205 Industrial Blvd. Phone: 215-355-3900
 Southampton, PA 18966-0514 Fax: 215-355-7231

Client/Acct. No. C00365
 Address EASTERN Geotechnical SCS
PO Box 64117

City/State/Zip Souderton, PA 18964

Phone/Fax 215 721 0398

Client Contact: CHARLES HAROSCHIK

CHAIN OF CUSTODY

Page 1 of 1

Bill to/Report to (if different)

Sampling Site Address (if different) Include State

New Hope Crushed Stone Quarry

P.O. No.

PWSID #:

Quote #

e-mail:

Lab LIMS No:

L6858942

MATRIX CODES

LAB USE ONLY:

Ascorbic/HCL Vials # HCL Vials# Na₂S₂O₃# Na OH/Zn acetate pH# HNO₃ pH# H₂SO₄ pH# NaOH pH# 1 Unpreserved PUCET# HCl # NH₄Cl # MeOH# DI Water

DW: DRINKING WATER

GW: GROUND WATER

WW: WASTEWATER

SO: SOIL

SL: SLUDGE

OIL: OIL

SOL: NON SOIL SOLID

MI: MISCELLANEOUS

X: OTHER

ANALYSIS REQUESTED

Field pH, Temp (°C),
DO, Cl₂, Cond. etc.Total Suspended Solids

PROJECT

FIELD ID

G 15 17

Collection

Date

Military
TimeG
R
A
BC
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M
PMatrix
Code

Total

Number of Containers

H
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EB
A
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T

SAMPLED BY: (Name/Company)

TAT: ☐ STANDARD (10 DAY)or DUE DATE / / Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD☐ Standard + QC ☐ Forms ☐ EDD

Field Parameters Analyzed By:

Initials

Date/Time:

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER

1. Charles Haroschik

DATE

TIME

6/15/17 1316

RECEIVED BY

1. Dea B...

DATE

TIME

6/15/17 1316DELIVERY: ☐ EQC COURIER ☐ CLIENT☐ UPS ☐ FEDEX ☐ OTHER

Custody Seal Number

RELINQUISHED BY

2. Dea B...

DATE

TIME

6/15/17 1316

RECEIVED BY

2. Carter / Fridge

DATE

TIME

6/15/17 1316Rec'd Temp.: 3.10°C Initials: TAB Ice ☒ Y ☐ N Location: EQC

RELINQUISHED BY

3. Fridge

DATE

TIME

6/15 1645

RECEIVED BY

3. jm

DATE

TIME

6/15 1645

COMMENTS:

RELINQUISHED BY

4. /

DATE

TIME

RECEIVED BY

4. /

DATE

TIME

RELINQUISHED BY

5. /

DATE

TIME

RECEIVED BY

5. /

DATE

TIME

6/16/17 0620

Hazardous: yes/no

**DELIVERED
BY CUSTOMER**

CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Regarding:
CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Account No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS	P.O. No:	Inv. No: EOM-06/17 PI
Project No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS		PWSID No:

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L6862656-1	NEW HOPE CRUSHED STONE QUARRY 62015	06/20/17 10:09am NA C	Customer
	Received Date/Time/Temp 06/20/17 10:55am 5.6 C	Iced (Y/N): Y	

--SUBCONTRACTED RESULT REFERENCES--

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)
TOTAL SUSPENDED SOLIDS

Sample Comments | Result Qualifiers:

L6862656-1 :



Sample Description: L6862656-1 Grab Groundwater
NEW HOPE CRUSHED STONE QUARRY 62015

LL Sample # GW 9058919
LL Group # 1815621
Account # 22277

Project Name: L6862656

Collected: 06/20/2017 10:09

Eurofins QC Laboratories

702 Electric Avenue

Horsham PA 19044

Submitted: 06/20/2017 18:35

Reported: 06/26/2017 10:25

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry SM 2540 D-1997					
13858	Total Suspended Solids	n.a.	8.96 Q8	3.00	1

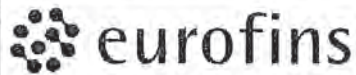
Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13858	Total Suspended Solids	SM 2540 D-1997	1	17172385803A	06/21/2017 16:00	Angelica Cintron	1



QC

1205 Industrial Blvd. Phone: 215-355-3900
Southampton, PA 18966-0514 Fax: 215-355-7231

Client/Acct. No. C00365
Address EASTERN Geoteknics
PO Box 64114
City/State/Zip Souderton, PA 18964
Phone/Fax 215 721 0398
Client Contact: Charles Harsch

CHAIN OF CUSTODY

Page 1 of 1

Bill to/Report to (if different)

Sampling Site Address (if different) Include State

P.O. No.

PWSID #:

Quote #

e-mail:

Lab LIMS No:

LAB USE ONLY:

Ascorbic/HCL Vials # HCL Vials# Na₂S₂O₃# Na OH/Zn acetate pH# HNO₃ pH# H₂SO₄ pH# NaOH pH# 1 Unpreserved# HCL # NH₄Cl # MeOH# DI Water

MATRIX CODES

DW: DRINKING WATER

GW: GROUND WATER

WW: WASTEWATER

SO: SOIL

SL: SLUDGE

OIL: OIL

SOL: NON SOIL SOLID

MI: MISCELLANEOUS

X: OTHER

ANALYSIS REQUESTED

Field pH, Temp (°C),
DO, Cl₂, Cond. etc.

PROJECT

Collection

Number of Containers

FIELD ID

Date

Military
TimeG
R
A
BC
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M
PMatrix
Code

Total

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4H
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A
C
T

TOTAL Suspended Solids

SAMPLED BY: (Name/Company)

TAT: ☐ STANDARD (10 DAY)or DUE DATE 1/1/11Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD☐ Standard + QC ☐ Forms ☐ EDD

Field Parameters Analyzed By:

Initials

Date/Time:

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME	DELIVERY: ☐ EQC COURIER ☐ CLIENT	Custody Seal Number
1. <u>Charles Harsch</u>	<u>6/20/11</u>	<u>10:55</u>	1. <u>Charles Harsch</u>	<u>6/20/11</u>	<u>10:55</u>	☐ UPS ☐ FEDEX ☐ OTHER	
2. <u>Charles Harsch</u>	<u>6/20/11</u>	<u>10:55</u>	2. <u>Charles Harsch</u>	<u>6/20/11</u>	<u>10:55</u>	Rec'd Temp.: <u>5.6</u> Initials: <u>CHS</u> Ice <u>Y/N</u> Location: <u>EQC</u>	
3.	DATE	TIME	RECEIVED BY	DATE	TIME	COMMENTS:	
4.	DATE	TIME	RECEIVED BY	DATE	TIME		
5.	DATE	TIME	RECEIVED BY	DATE	TIME		

DELIVERED

BY CUSTOMER

Hazardous ☐ Yes ☐ No

CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Regarding:
CHARLES HANDSCHIN
EASTERN GEOTECHNICAL SERVICES, INC.
PO BOX 64114
SOUDERTON, PA 18964

Account No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS	P.O. No:	Inv. No: EOM-07/17 PI
Project No: C00365, EASTERN GEOTECHNICAL SVCS SOUDERTON EGS		PWSID No:

Sample ID	Sample Description	Samp. Date/Time/Temp	Sampled by
L6873145-1	NEW HOPE CRUSHED STONE QUARRY 062917	06/29/17 10:08am NA C	Customer
	Received Date/Time/Temp 06/29/17 11:17am 5.9 C	Iced (Y/N): Y	

--SUBCONTRACTED RESULT REFERENCES--

See attached reports for the following Subcontract Laboratories:

Eurofins - Lancaster Laboratories, Environmental (ELLE)
TOTAL SUSPENDED SOLIDS

Sample Comments | Result Qualifiers:

L6873145-1 :



Sample Description: L6873145-1 Grab Groundwater
New Hope Crushed Stone Quarry

LL Sample # GW 9079460
LL Group # 1819836
Account # 22277

Project Name: L6873145

Collected: 06/29/2017 10:08

Eurofins QC Laboratories

Submitted: 06/29/2017 19:30

702 Electronic Drive

Reported: 07/06/2017 20:43

Horsham PA 19044

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	SM 2540 D-1997		mg/l	mg/l	
13858	Total Suspended Solids	n.a.	3.28 Q8	3.00	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13858	Total Suspended Solids	SM 2540 D-1997	1	17186385803A	07/05/2017 15:54	Angelica Cintron	1

CHAIN OF CUSTODY
Page 1 of 1

1819036

Lab LIMS No: 6873145

MATRIX CODES

1205 Industrial Blvd. Phone: 215-355-3900
Southampton, PA 18966-0514 Fax: 215-355-7231Client/Acct. No. C00365
Address Eastern Geotechnical
PO Box 6414City/State/Zip Souderton, PA 18964
Phone/Fax 215 721 0398

Client Contact: Charles HANSEN

Sampling Site Address (if different) Include State

New Hope Crushed Stone Quarry

P.O. No.

PWSID #:

Quote #

e-mail:

LAB USE ONLY:

Ascorbic/HCL Vials # HCL Vials

Na₂S₂O₃

Na OH/Zn acetate pH

HNO₃ pH# H₂SO₄ pH

NaOH pH

1 Unpreserved PL QT

HCL # NH₄CL # MeOH

DI Water

DW: DRINKING WATER

GW: GROUND WATER

WW: WASTEWATER

SO: SOIL

SL: SLUDGE

OIL: OIL

SOL: NON SOIL SOLID

MI: MISCELLANEOUS

X: OTHER

ANALYSIS REQUESTED

Field pH, Temp (°C),
DO, Cl₂, Cond. etc.

PROJECT

Collection

Number of Containers

FIELD ID

Date

Military
TimeG
R
A
BC
O
M
PMatrix
Code

Total

H
2
S
O
4H
C
IV
i
a
l
sH
N
O
3N
a
O
HZ
n
A
cU
N
P
R
EB
A
C
T

TOTAL Suspended Solids

SAMPLED BY: (Name/Company)

TAT: ☐ STANDARD (10 DAY)

or DUE DATE / /

Report Format: ☐ Standard ☐ NJ-RDD ☐ SRP-RDD☐ Standard + QC ☐ Forms ☐ EDD

Field Parameters Analyzed By:

Initials

Date/Time:

Please call for pricing and availability for rush (<10 day) turnaround and for all but standard reporting format.

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME	DELIVERY: ☐ EQC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER	Custody Seal Number
1. Charles Hansen	6/29/17	11:17	1. [Signature]	6/29/17	11:17		
2. [Signature]	6/29/17	11:17	2. Charles	6/29/17	11:17		
3. [Signature]			3. [Signature]				
4. [Signature]			4. [Signature]				
5. [Signature]			5. [Signature]				

Rec'd Temp.: 5.9 Initials: [Signature] Ice: [Signature] Location: EQC

COMMENTS: DELIVERED BY CUSTOMER

Hazardous: yes/no

ATTACHMENT 6.0
MILTRONICS DATA RECORDING

NEW HOPE CRUSHED STONE

Milltronics Data Recording

Date	Rainfall (In.)	Million Gallons Per Day (MGD)	Gallons Per Day (GPD)
04/01/17	0.02	0.42	422353
04/02/17	0.00	0.42	422646
04/03/17	0.02	0.57	568784
04/04/17	0.37	0.47	467526
04/05/17	0.00	0.49	489591
04/06/17	1.00	0.58	575091
04/07/17	0.01	0.57	569242
04/08/17	0.00	0.57	570993
04/09/17	0.00	0.57	573946
04/10/17	0.00	0.55	547444
04/11/17	0.00	0.53	528740
04/12/17	0.00	0.55	546466
04/13/17	0.00	0.57	569153
04/14/17	0.00	0.54	541987
04/15/17	0.00	0.53	527842
04/16/17	0.00	0.53	527503
04/17/17	0.00	0.52	521761
04/18/17	0.00	0.52	518225
04/19/17	0.00	0.52	520878
04/20/17	0.02	0.40	395365
04/21/17	0.08	0.49	489294
04/22/17	0.04	0.57	570504
04/23/17	0.00	0.58	576592
04/24/17	0.00	0.60	596035
04/25/17	0.32	0.46	455499
04/26/17	0.02	0.32	323330
04/27/17	0.00	0.35	351837
04/28/17	0.01	0.56	558198
04/29/17	0.37	0.66	656156
04/30/17	0.00	0.66	655201
05/01/17	0.00	0.48	484017
05/02/17	0.10	0.50	498403
05/03/17	0.00	0.45	448308
05/04/17	0.00	0.43	427350
05/05/17	1.11	0.43	425957
05/06/17	0.00	0.42	416699
05/07/17	0.04	0.44	437402
05/08/17	0.00	0.51	509272
05/09/17	0.00	0.56	558247
05/10/17	0.00	0.56	562034
05/11/17	0.00	0.46	464488
05/12/17	0.00	0.38	378573
05/13/17	1.60	0.39	391433
05/14/17	0.11	0.36	364333
05/15/17	0.00	0.35	346775
05/16/17	0.00	0.45	450048
05/17/17	0.00	0.56	561623
05/18/17	0.00	0.56	562018

April 2017
Avg. = 0.52 MGD

NEW HOPE CRUSHED STONE

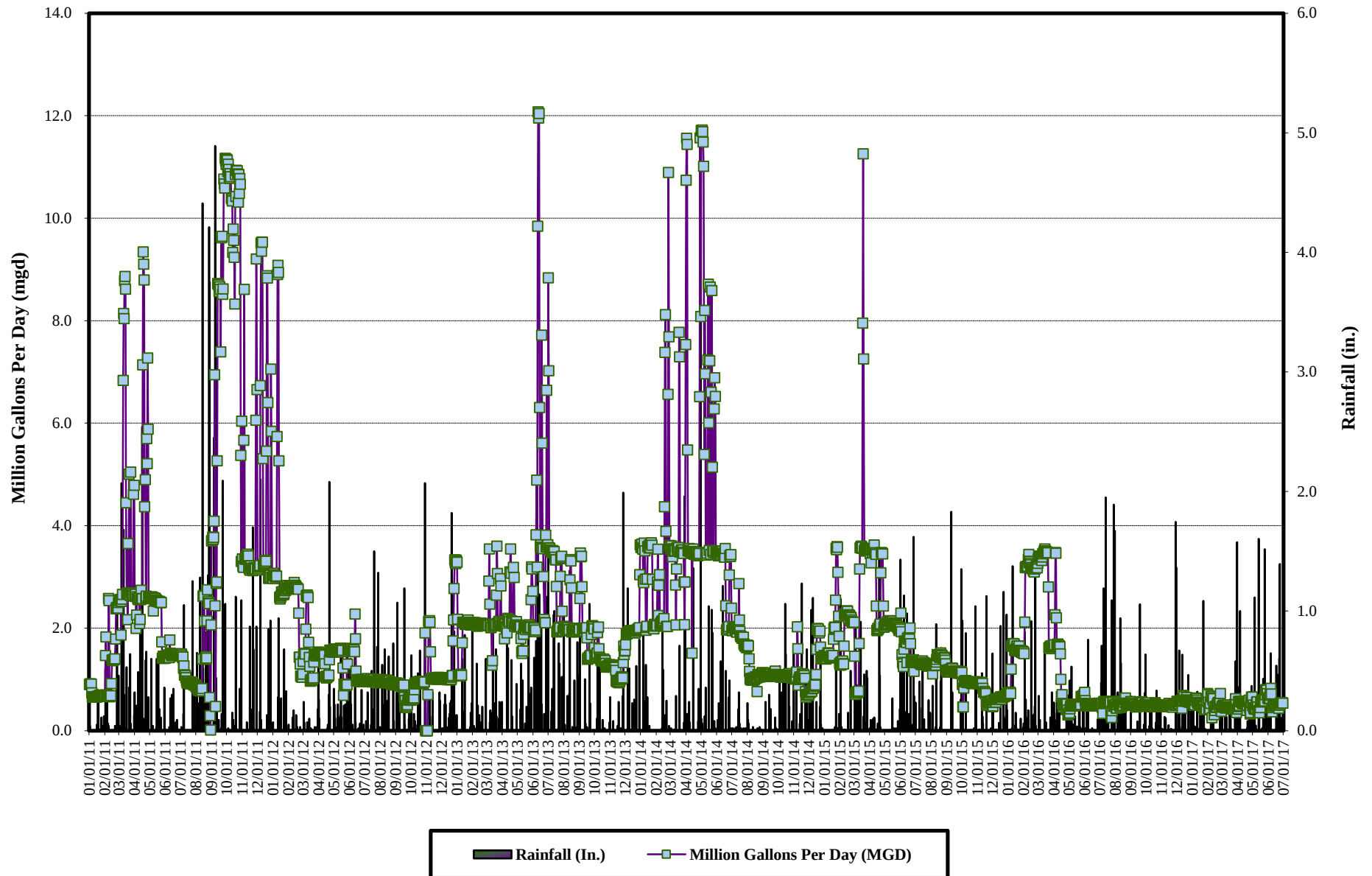
Milltronics Data Recording

Date	Rainfall (In.)	Million Gallons Per Day (MGD)	Gallons Per Day (GPD)
05/19/17	0.00	0.58	582310
05/20/17	0.02	0.60	602819
05/21/17	0.00	0.59	594308
05/22/17	0.43	0.61	605977
05/23/17	0.00	0.59	587203
05/24/17	0.03	0.60	595397
05/25/17	1.52	0.58	579245
05/26/17	0.01	0.70	703543
05/27/17	0.00	0.80	798611
05/28/17	0.06	0.80	795706
05/29/17	0.32	0.79	787599
05/30/17	0.17	0.72	718114
05/31/17	0.05	0.64	642096
06/01/17	0.00	0.63	625769
06/02/17	0.00	0.62	620639
06/03/17	0.16	0.63	633603
06/04/17	0.00	0.63	628479
06/05/17	0.07	0.69	687954
06/06/17	0.65	0.83	826011
06/07/17	0.01	0.72	716486
06/08/17	0.00	0.43	434147
06/09/17	0.00	0.37	366082
06/10/17	0.00	0.45	447554
06/11/17	0.00	0.50	502101
06/12/17	0.00	0.49	489384
06/13/17	0.00	0.48	480575
06/14/17	0.00	0.48	483339
06/15/17	0.00	0.48	477925
06/16/17	0.01	0.49	487073
06/17/17	0.54	0.50	503964
06/18/17	0.03	0.49	491573
06/19/17	0.47	0.48	484158
06/20/17	0.00	0.51	510056
06/21/17	0.03	0.51	507991
06/22/17	0.00	0.44	435843
06/23/17	0.60	0.52	523245
06/24/17	1.39	0.49	493772
06/25/17	0.00	0.53	525704
06/26/17	0.00	0.54	544936
06/27/17	0.11	0.54	544976
06/28/17	0.00	0.54	542412
06/29/17	0.00	0.54	540569
06/30/17	0.00	0.54	537455

May 2017
Avg. = 0.54 MGD

June 2017
Avg. = 0.52 MGD

NEW HOPE CRUSHED STONE & LIME COMPANY, INC.
Rainfall vs. Discharge (Milltronics Data Recording)
(Updated 6/30/17)



ATTACHMENT 7.0

QUARRY DISCHARGE / STREAM FLOW / PRECIPITATION TABLES

MONTHLY AVERAGE DISHCARGE / STREAM FLOW/ PRECIPITATION

Month	Avg. Daily Stream Flow (MGD)	Avg. Daily Quarry Discharge (MGD)	Precipitation (In.)
January-17	1.30	0.52	2.65
February-17	0.83	0.51	1.06
March-17	1.28	0.46	3.52
April-17	2.52	0.52	2.28
May-17	0.98	0.54	5.59
June-17	0.37	0.54	4.08
July-17			
August-17			
September-17			
October-17			
November-17			
December-17			

2017 DAILY DISCHARGE / STREAM FLOW / PRECIPITATION

Date	Stream Flow (MGD)	Quarry Discharge (MGD)	Precipitation (In.)
1/1/2017	0.28	0.54	0.00
1/2/2017	0.35	0.56	0.16
1/3/2017	1.12	0.53	0.22
1/4/2017	1.23	0.50	0.00
1/5/2017	0.63	0.52	0.00
1/6/2017	0.64	0.51	0.04
1/7/2017	0.59	0.59	0.00
1/8/2017	0.54	0.64	0.00
1/9/2017	0.45	0.63	0.00
1/10/2017	0.48	0.60	0.01
1/11/2017	0.74	0.56	0.33
1/12/2017	2.09	0.54	0.02
1/13/2017	0.73	0.54	0.00
1/14/2017	0.62	0.54	0.00
1/15/2017	0.62	0.53	0.02
1/16/2017	0.56	0.52	0.01
1/17/2017	0.69	0.53	0.20
1/18/2017	1.19	0.52	0.01
1/19/2017	0.64	0.49	0.00
1/20/2017	0.70	0.49	0.22
1/21/2017	0.76	0.49	0.01
1/22/2017	0.64	0.49	0.04

2017 DAILY DISCHARGE / STREAM FLOW / PRECIPITATION

Date	Stream Flow (MGD)	Quarry Discharge (MGD)	Precipitation (In.)
1/23/2017	1.67	0.46	1.09
1/24/2017	5.05	0.46	0.29
1/25/2017	4.67	0.41	0.00
1/26/2017	3.20	0.41	0.02
1/27/2017	2.48	0.42	0.00
1/28/2017	2.19	0.43	0.00
1/29/2017	1.80	0.42	0.00
1/30/2017	1.48	0.58	0.00
1/31/2017	1.38	0.73	0.00
2/1/2017	1.29	0.70	0.00
2/2/2017	1.07	0.55	0.00
2/3/2017	0.92	0.44	0.00
2/4/2017	4.50	0.44	0.00
2/5/2017	2.24	0.42	0.00
2/6/2017	0.39	0.53	0.00
2/7/2017	0.18	0.67	0.23
2/8/2017	0.01	0.67	0.02
2/9/2017	0.49	0.25	0.15
2/10/2017	0.94	0.64	0.01
2/11/2017	0.67	0.60	0.18
2/12/2017	0.91	0.62	0.20
2/13/2017	1.01	0.45	0.01
2/14/2017	0.83	0.31	0.00
2/15/2017	0.91	0.39	0.00
2/16/2017	0.81	0.47	0.00
2/17/2017	0.77	0.47	0.00
2/18/2017	0.74	0.45	0.00
2/19/2017	0.62	0.45	0.00
2/20/2017	0.50	0.52	0.00
2/21/2017	0.43	0.54	0.00
2/22/2017	0.44	0.55	0.00
2/23/2017	0.43	0.46	0.00
2/24/2017	0.34	0.51	0.00
2/25/2017	0.47	0.57	0.26
2/26/2017	0.61	0.73	0.00
2/27/2017	0.32	0.43	0.00
2/28/2017	0.28	0.38	0.00
3/1/2017	0.34	0.47	0.11
3/2/2017	0.24	0.46	0.01
3/3/2017	0.21	0.49	0.00

2017 DAILY DISCHARGE / STREAM FLOW / PRECIPITATION

Date	Stream Flow (MGD)	Quarry Discharge (MGD)	Precipitation (In.)
3/4/2017	0.21	0.50	0.00
3/5/2017	0.20	0.48	0.00
3/6/2017	0.25	0.46	0.00
3/7/2017	0.30	0.46	0.12
3/8/2017	0.26	0.45	0.01
3/9/2017	0.18	0.44	0.00
3/10/2017	0.27	0.47	0.12
3/11/2017	0.26	0.50	0.01
3/12/2017	0.19	0.49	0.00
3/13/2017	0.18	0.46	0.00
3/14/2017	1.44	0.46	0.01
3/15/2017	0.40	0.46	0.00
3/16/2017	0.30	0.46	0.24
3/17/2017	0.42	0.44	0.26
3/18/2017	0.50	0.45	0.10
3/19/2017	1.20	0.43	0.02
3/20/2017	2.43	0.43	0.00
3/21/2017	3.54	0.42	0.01
3/22/2017	4.32	0.45	0.00
3/23/2017	2.20	0.45	0.00
3/24/2017	2.04	0.44	0.00
3/25/2017	1.74	0.43	0.00
3/26/2017	1.49	0.44	0.01
3/27/2017	1.46	0.43	0.19
3/28/2017	3.31	0.62	0.58
3/29/2017	3.94	0.51	0.01
3/30/2017	1.88	0.35	0.17
3/31/2017	4.12	0.43	1.58
4/1/2017	6.46	0.42	0.02
4/2/2017	6.19	0.42	0.00
4/3/2017	4.76	0.57	0.02
4/4/2017	5.25	0.47	0.37
4/5/2017	3.41	0.49	0.00
4/6/2017	4.36	0.58	1.00
4/7/2017	6.46	0.57	0.01
4/8/2017	6.27	0.57	0.00
4/9/2017	4.87	0.57	0.00
4/10/2017	3.60	0.55	0.00
4/11/2017	3.30	0.53	0.00
4/12/2017	2.36	0.55	0.00

2017 DAILY DISCHARGE / STREAM FLOW / PRECIPITATION

Date	Stream Flow (MGD)	Quarry Discharge (MGD)	Precipitation (In.)
4/13/2017	1.98	0.57	0.00
4/14/2017	1.78	0.54	0.00
4/15/2017	1.65	0.53	0.00
4/16/2017	1.43	0.53	0.00
4/17/2017	1.22	0.52	0.00
4/18/2017	1.07	0.52	0.00
4/19/2017	1.00	0.52	0.00
4/20/2017	0.98	0.40	0.02
4/21/2017	0.93	0.49	0.08
4/22/2017	0.89	0.57	0.04
4/23/2017	0.76	0.58	0.00
4/24/2017	0.67	0.60	0.00
4/25/2017	0.70	0.46	0.32
4/26/2017	0.72	0.32	0.02
4/27/2017	0.57	0.35	0.00
4/28/2017	0.45	0.56	0.01
4/29/2017	1.09	0.66	0.37
4/30/2017	0.40	0.66	0.00
5/1/2017	0.40	0.48	0.00
5/2/2017	0.41	0.50	0.10
5/3/2017	0.31	0.45	0.00
5/4/2017	0.31	0.43	0.00
5/5/2017	2.07	0.43	1.11
5/6/2017	0.66	0.42	0.00
5/7/2017	0.49	0.44	0.04
5/8/2017	0.43	0.51	0.00
5/9/2017	0.39	0.56	0.00
5/10/2017	0.35	0.56	0.00
5/11/2017	0.31	0.46	0.00
5/12/2017	0.30	0.38	0.00
5/13/2017	3.07	0.39	1.60
5/14/2017	1.43	0.36	0.11
5/15/2017	2.16	0.35	0.00
5/16/2017	3.91	0.45	0.00
5/17/2017	2.26	0.56	0.00
5/18/2017	0.46	0.56	0.00
5/19/2017	0.38	0.58	0.00
5/20/2017	0.32	0.60	0.02
5/21/2017	0.29	0.59	0.00
5/22/2017	0.42	0.61	0.43

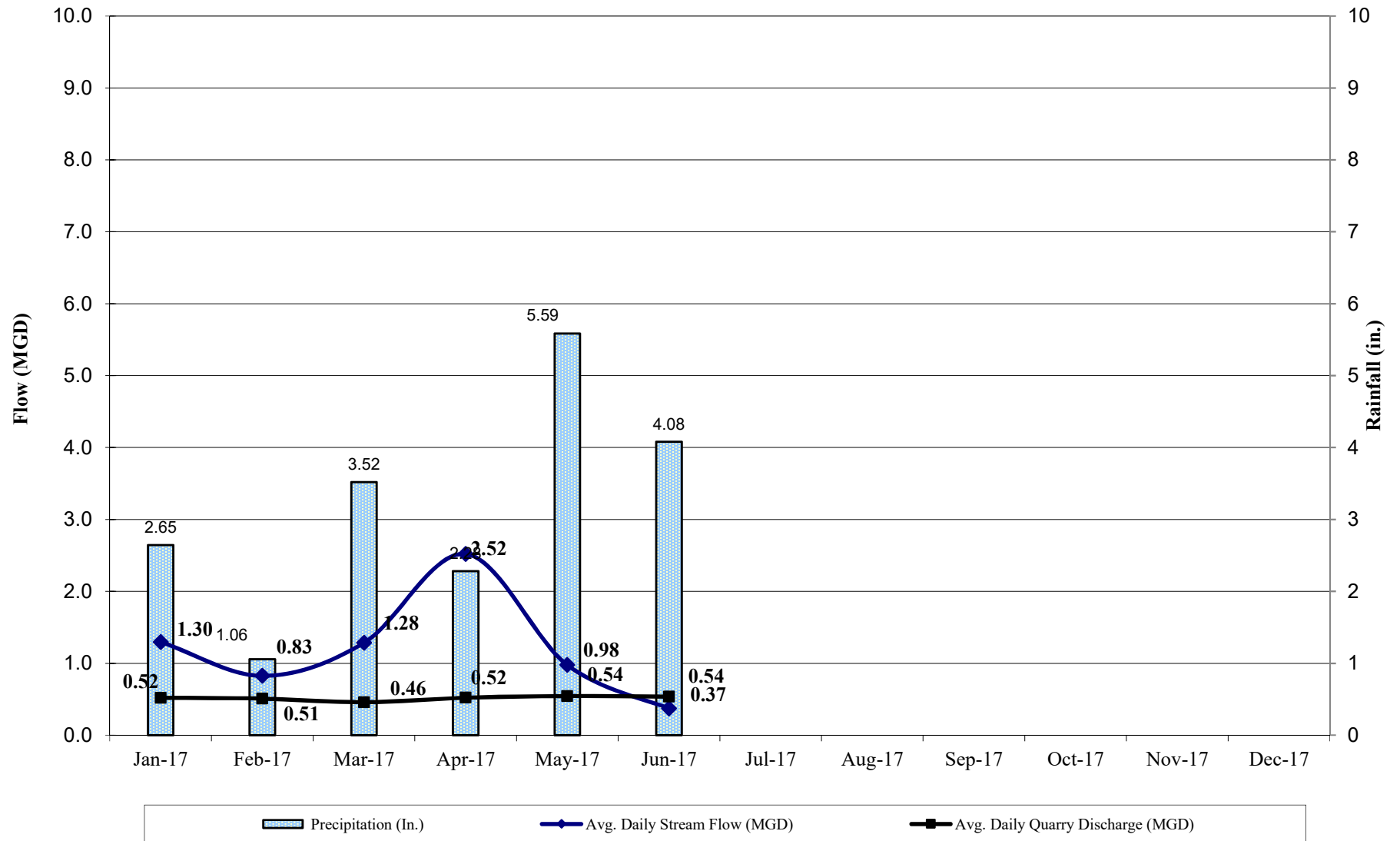
2017 DAILY DISCHARGE / STREAM FLOW / PRECIPITATION

Date	Stream Flow (MGD)	Quarry Discharge (MGD)	Precipitation (In.)
5/23/2017	0.34	0.59	0.00
5/24/2017	0.28	0.60	0.03
5/25/2017	2.27	0.58	1.52
5/26/2017	2.94	0.70	0.01
5/27/2017	0.87	0.80	0.00
5/28/2017	0.68	0.80	0.06
5/29/2017	0.80	0.79	0.32
5/30/2017	0.53	0.72	0.17
5/31/2017	0.43	0.64	0.05
6/1/2017	0.33	0.63	0.00
6/2/2017	0.29	0.62	0.00
6/3/2017	0.29	0.63	0.16
6/4/2017	0.27	0.63	0.00
6/5/2017	0.32	0.69	0.07
6/6/2017	1.80	0.83	0.65
6/7/2017	3.68	0.72	0.01
6/8/2017	0.25	0.43	0.00
6/9/2017	0.23	0.37	0.00
6/10/2017	0.21	0.45	0.00
6/11/2017	0.18	0.50	0.00
6/12/2017	0.14	0.49	0.00
6/13/2017	0.12	0.48	0.00
6/14/2017	0.10	0.48	0.00
6/15/2017	0.08	0.48	0.00
6/16/2017	0.08	0.49	0.01
6/17/2017	0.10	0.50	0.54
6/18/2017	0.09	0.49	0.03
6/19/2017	0.07	0.48	0.47
6/20/2017	0.07	0.51	0.00
6/21/2017	0.05	0.51	0.03
6/22/2017	0.04	0.44	0.00
6/23/2017	0.08	0.52	0.60
6/24/2017	1.68	0.49	1.39
6/25/2017	0.08	0.53	0.00
6/26/2017	0.06	0.54	0.00
6/27/2017	0.06	0.54	0.11
6/28/2017	0.04	0.54	0.00
6/29/2017	0.04	0.54	0.00
6/30/2017		0.54	0.00

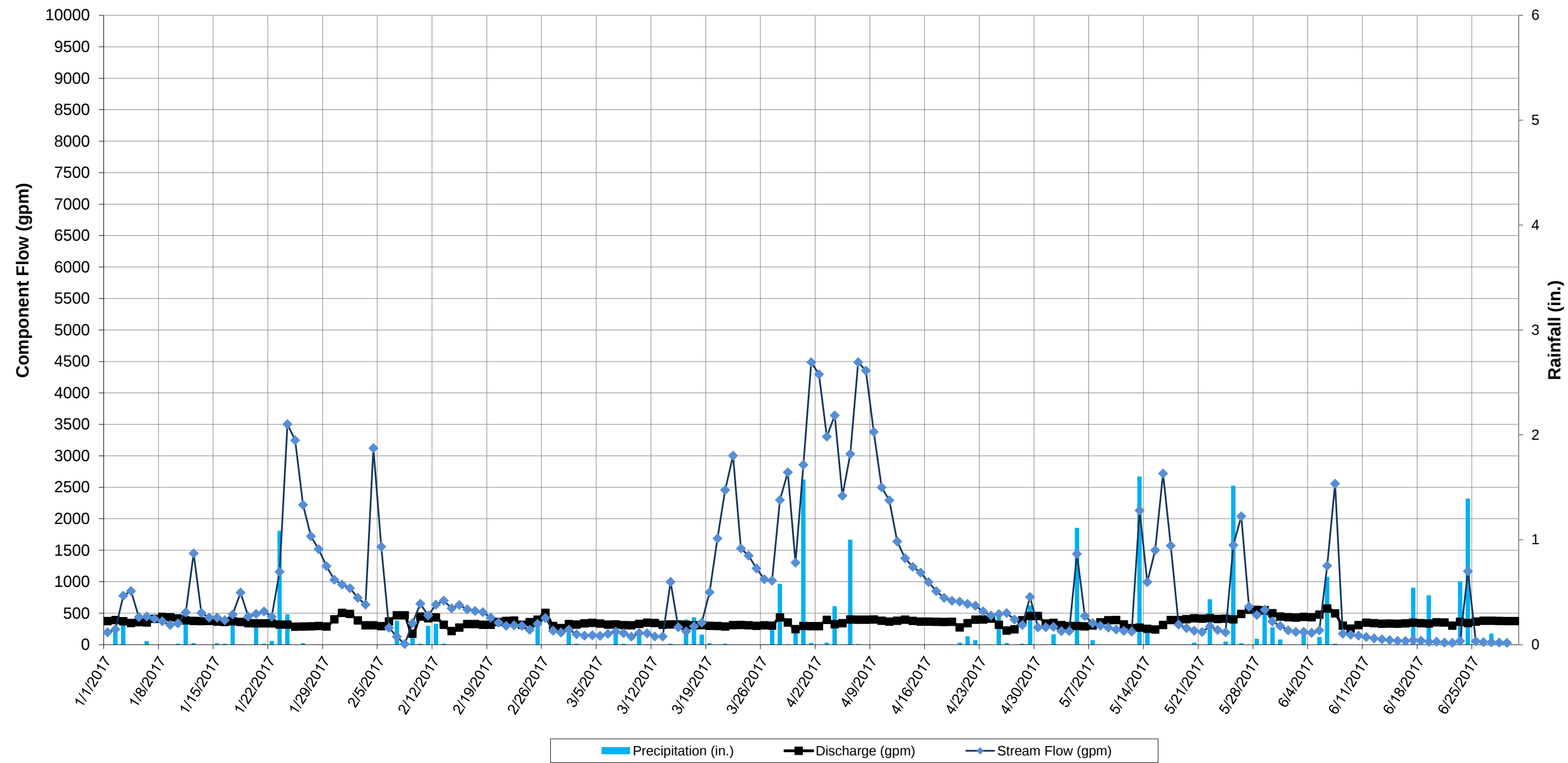
ATTACHMENT 8.0

QUARRY DISCHARGE / STREAM FLOW / PRECIPITATION GRAPHS

2017 AVERAGE MONTHLY DISCHARGE / AVERAGE MONTHLY STREAM FLOW / PRECIPITATION



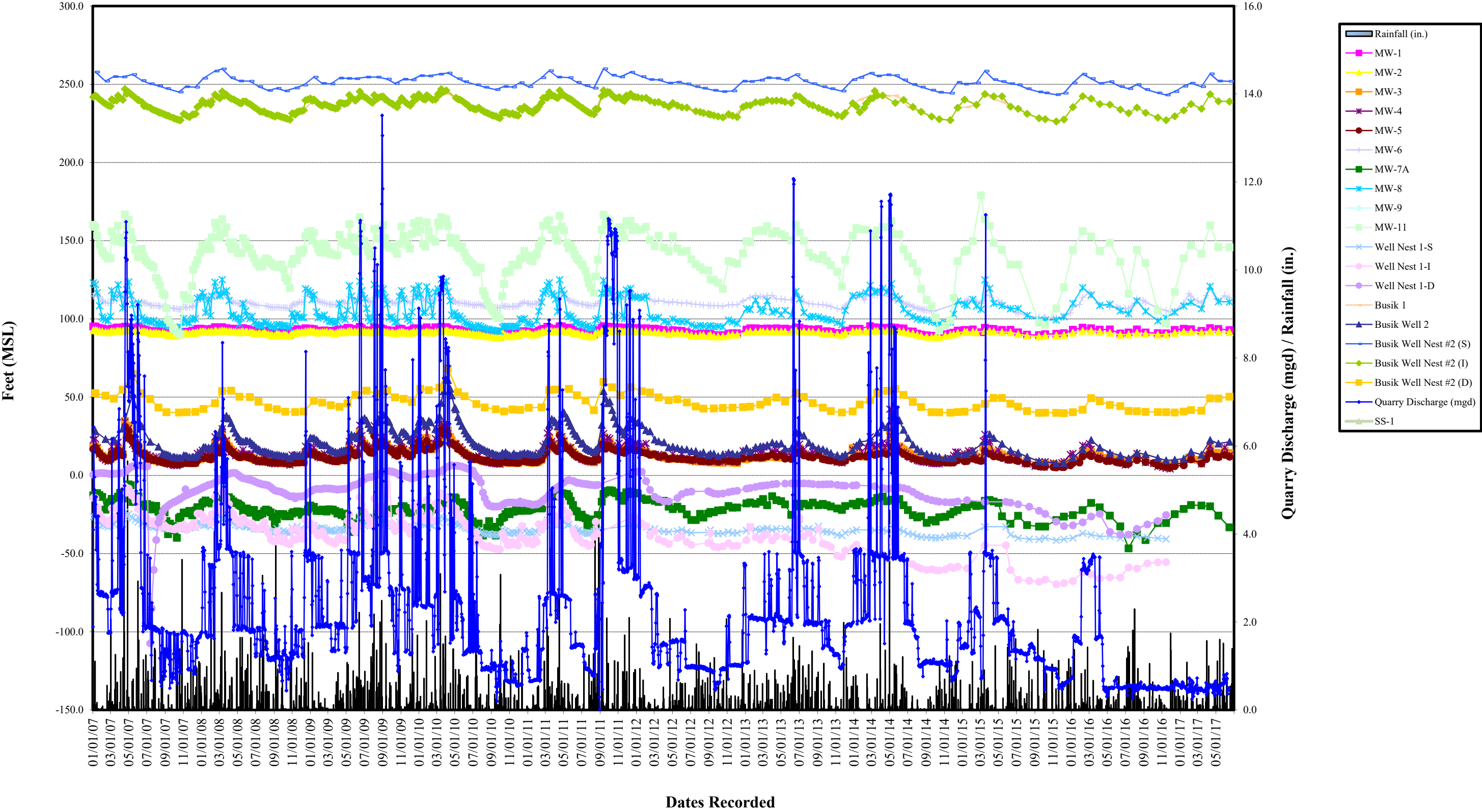
2017 2nd QTR NPDES Discharge / Primrose Stream Flow / Precipitation



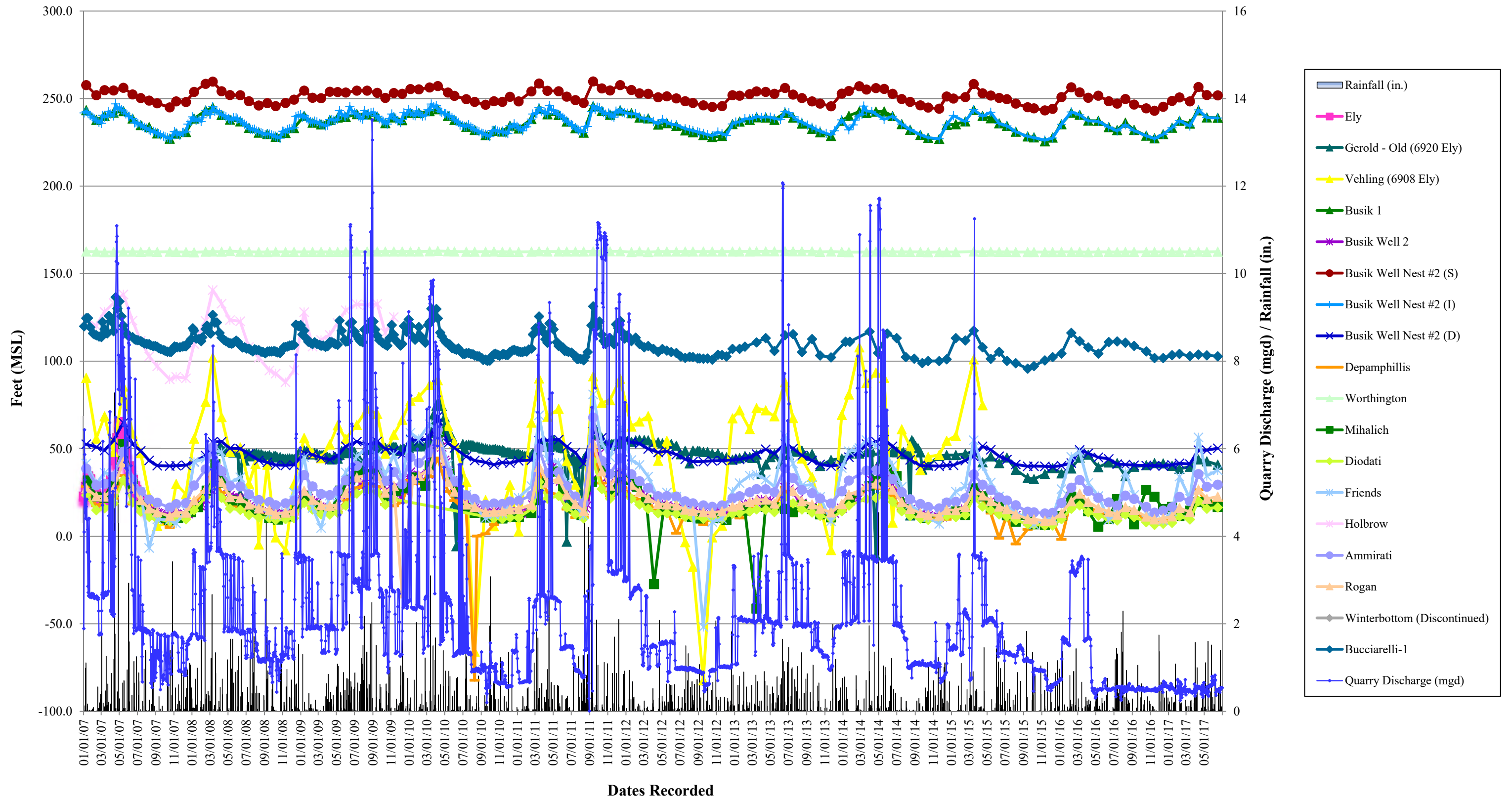
ATTACHMENT 9.0

DISCHARGE / RAINFALL / STATIC WATER LEVEL HYDROGRAPHS

NEW HOPE CRUSHED STONE & LIME COMPANY, INC.
Discharge/Rainfall/Static Water Level Readings
January 1, 2007 through June 30, 2017

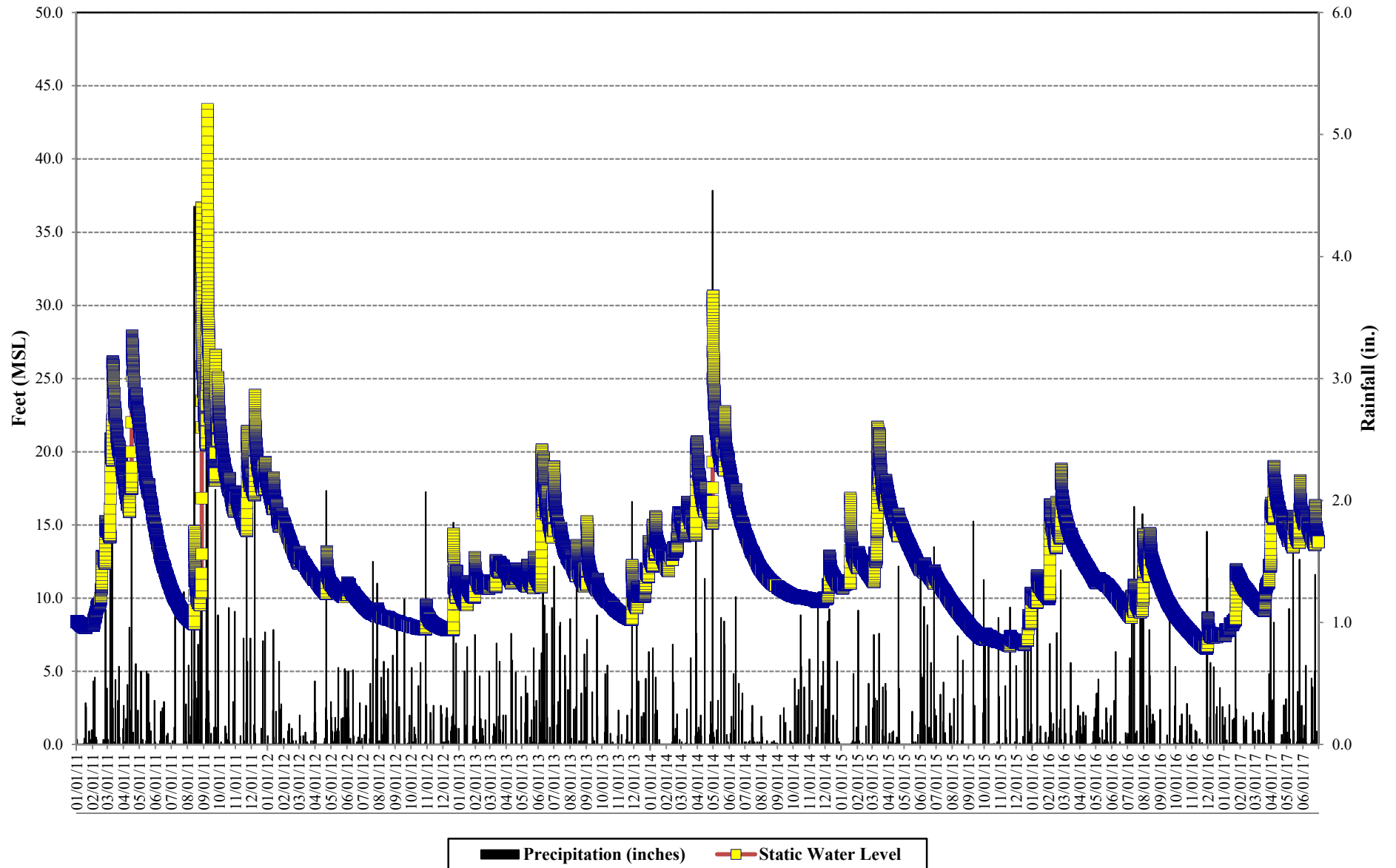


NEW HOPE CRUSHED STONE & LIME COMPANY, INC.
Discharge/Rainfall/Static Water Level Readings
January 1, 2007 through June 30, 2017

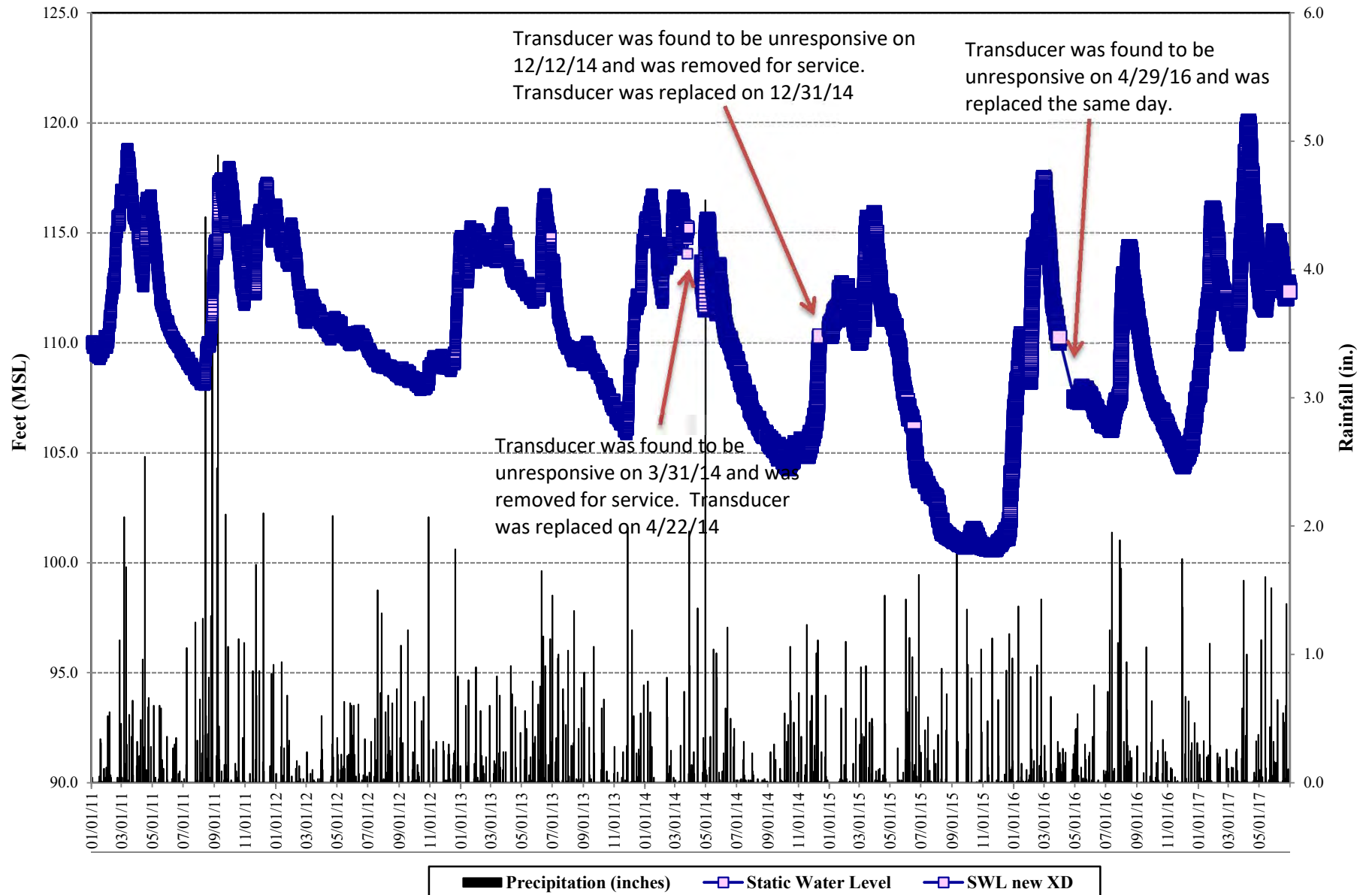


ATTACHMENT 10.0
CONTINUOUS MONITORING HYDROGRAPHS

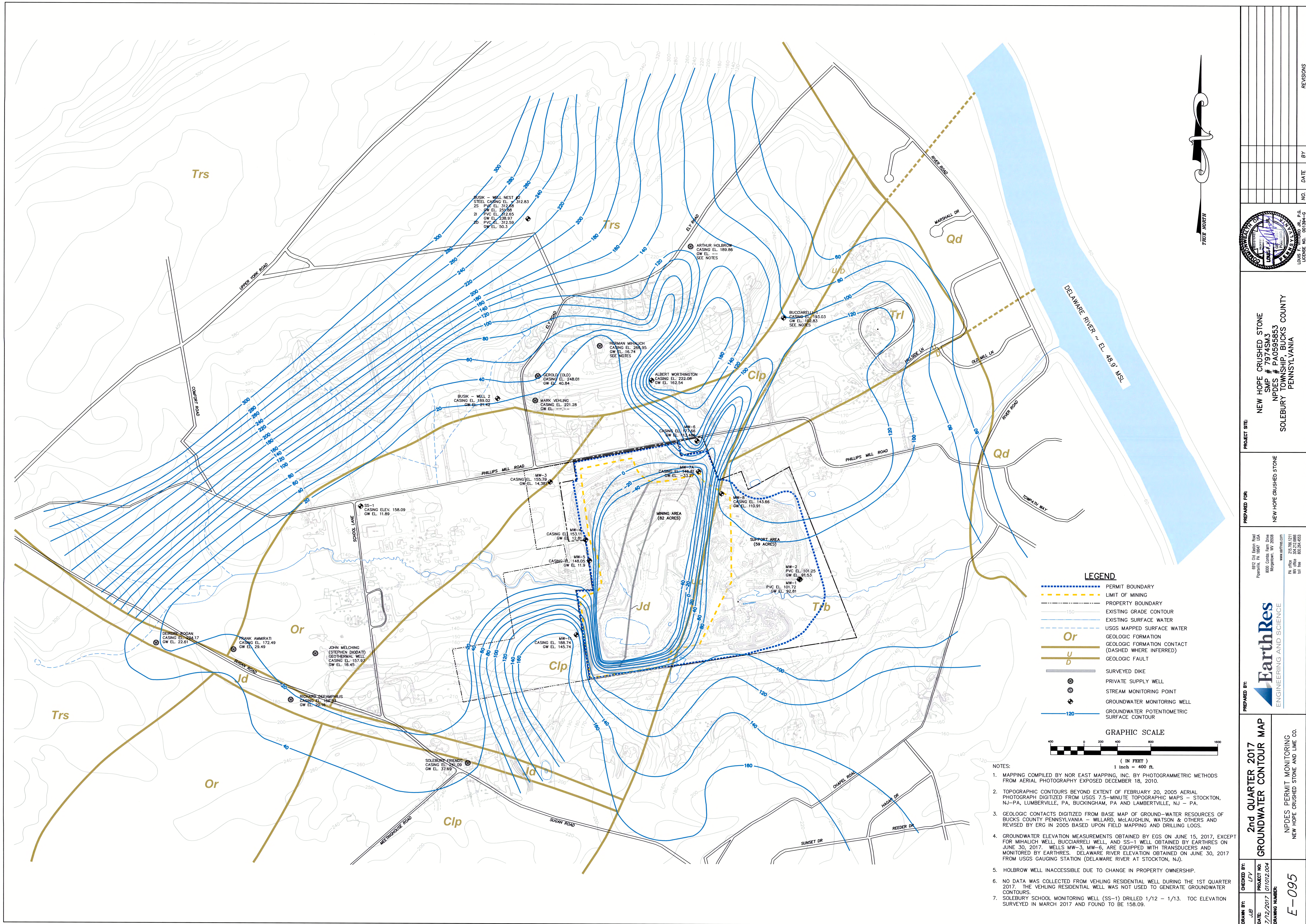
MW-3 STATIC WATER LEVEL READINGS
New Hope Crushed Stone & Lime Company, Inc.
(Updated 6/30/17)



MW-6 STATIC WATER LEVEL READINGS
New Hope Crushed Stone & Lime Company, Inc.
(Updated 6/30/17)



ATTACHMENT 11.0
GROUNDWATER CONTOUR MAP



PROJECT SITE: NEW HOPE CRUSHED STONE SVP # 7074343 NPDES # PA0555853 SOLEBURY TOWNSHIP, BUCKS COUNTY PENNSYLVANIA			
PREPARED FOR: NEW HOPE CRUSHED STONE		DATE: 7/12/2017	
PREPARED BY: EarthRes ENGINEERING AND SCIENCE		DATE: 7/12/2017	
2d QUARTER 2017 GROUNDWATER CONTOUR MAP		DATE: 7/12/2017	
PROJECT NO.: 010102.004		DATE: 7/12/2017	
DRAWING NUMBER: E-095		DATE: 7/12/2017	
NPDES PERMIT MONITORING NEW HOPE CRUSHED STONE AND LIME CO.		DATE: 7/12/2017	
CHECKED BY: LTY		DATE: 7/12/2017	
DRAWN BY: JAB		DATE: 7/12/2017	
REVISIONS		REVISIONS	

ATTACHMENT 12.0
RECLAMATION INFORMATION

May 5, 2017

Mr. Gary Latsha
Inspector Supervisor
PA Department of Environmental Protection
Pottsville District Mining Operations
5 West Laurel Boulevard
Pottsville, PA 17901

**SUBJECT: New Hope Crushed Stone Quarry
April 2017 CAP Monthly Report
Compliance Order No. 16-5-032-N
Noncoal Permit No. 7974SM3
Solebury Township, Bucks County
EarthRes Project No. 011012.015**

Dear Mr. Latsha:

On behalf of New Hope Crushed Stone & Lime Company (NHCS), EarthRes Group, Inc. (EarthRes) is providing the monthly Corrective Action Plan (CAP) update in response to Compliance Order No. 16-5-032-N issued by the Department and dated August 26, 2016. This letter and attached table details activities completed by NHCS during the month of April 2017.

There were 20 working days in April. Rain was observed on approximately 12 days (9 work days) throughout the month, with significant precipitation occurring on April 4th (0.42 in.), 6th (0.97 in.), 20th through 22nd (0.17 in), 25th and 26th (0.41 in.), and the 29th (0.22 in).

Due to the MSHA citations received on March 6, 2017, reclamation activities were focused on compliance with the order preparation of the east wall for final reclamation and staging of reclamation fill material. Additional work included west wall access road construction and widening of the haul road for staging of reclamation fill. Working days add up to more than 20 days as work was completed during inclement weather, when possible, and crews worked on separate reclamation projects, as indicated on the attached table. Stream reclamation was not completed in April due to lack of current west wall access.

Conclusion

NHCS completed significant work towards reclamation in April as indicated on the attached table. Work efforts on stream restoration and/or reclamation will continue in the coming months as scheduled, noting potential limitations due to weather, safety and other factors as indicated in the September 23, 2016 CAP and November 4, 2016 CAP update filed with the Department.

If you have any questions or need any additional information, please contact me at (215) 766-1211.

Sincerely,
EarthRes Group, Inc.

A handwritten signature in black ink, appearing to read "Louis F. Vittorio, Jr.", enclosed in a thin black rectangular border.

Louis F. Vittorio, Jr., P.G.
Vice President

Enclosure: April Reclamation and Restoration Efforts

cc: Ms. Christina Cursley, NHCS

April 2017 Reclamation and Restoration Work

Days Worked:

Days working on Reclamation*	16
Days working in Stream	0
Inclement Weather	3
Access Road Construction**	2
Widening Road for Material Staging**	<u>2</u>
Total Working Days	20

* Includes days with shortened hours due to rain

** Days on/surrounding inclement weather

Hours Worked:

Working days per month*	16
Number of employees	4
Hours allotted per day	<u>7</u>

Hours to be worked for
reclamation days 448

Dirt Moved:

	<u>Yards</u>	<u>Tons</u>
Days working on Reclamation	16	
Cubic Yards per hour	200	300
Hours allotted per day	7	7

Actual hours worked on Rec.* 433

Required Yards/Tons to be moved 22,400 33,600

Actual Dirt moved by trucks	13,114	19,671
Reclamation Berm	<u>-</u>	<u>-</u>

Total moved 13,114 19,671
Make-Up Reclamation Completed (9,286) (13,929)

Truck loads moved 365

Cumulative Stream Days

	<u>Hours</u>	<u>Days</u>
Miscellaneous Repairs	-	-
Actual Stream Work	-	-

June 5, 2017

Mr. Gary Latsha
Inspector Supervisor
PA Department of Environmental Protection
Pottsville District Mining Operations
5 West Laurel Boulevard
Pottsville, PA 17901

**SUBJECT: New Hope Crushed Stone Quarry
May 2017 CAP Monthly Report
Compliance Order No. 16-5-032-N
Noncoal Permit No. 7974SM3
Solebury Township, Bucks County
EarthRes Project No. 011012.015**

Dear Mr. Latsha:

On behalf of New Hope Crushed Stone & Lime Company (NHCS), EarthRes Group, Inc. (EarthRes) is providing the monthly Corrective Action Plan (CAP) update in response to Compliance Order No. 16-5-032-N issued by the Department and dated August 26, 2016. This letter and attached table details activities completed by NHCS during the month of May 2017.

There were 22 working days in May. Rain was observed on approximately 14 days (9 work days) throughout the month, with significant precipitation occurring on May 5th (0.99"), 13th (1.82"), 22nd (0.45"), 25th (1.3"), and between the 28th and 31st (0.68").

Reclamation was completed on the East and Southeast wall. Reclamation work included west wall access road construction and widening of the haul road for staging of reclamation fill. When possible, work was completed during inclement weather, and crews worked on separate reclamation projects, as indicated on the attached table. Stream reclamation was not completed in May due to the lack of current west wall access and wet weather conditions. However, stream construction meetings were held in May with the Department and NHCS' consultant and contractor to assure timely work startup when favorable weather conditions return.

Conclusion

NHCS completed significant work towards reclamation in May as indicated on the attached table. Work efforts on stream restoration and/or reclamation will continue in the coming months as scheduled, noting potential limitations due to weather, safety and other factors as indicated in the September 23, 2016 CAP and November 4, 2016 CAP update filed with the Department.

If you have any questions or need any additional information, please contact me at (215) 766-1211.

Sincerely,
EarthRes Group, Inc.

A handwritten signature in black ink, reading "Louis F. Vittorio, Jr.", enclosed in a thin black rectangular border.

Louis F. Vittorio, Jr., P.G.
Vice President

Enclosure: May Reclamation and Restoration Efforts

cc: Ms. Christina Cursley, NHCS

May 2017 Reclamation and Restoration Work

Days Worked:

Days working on Reclamation*	14
Days working in Stream**	1
Inclement Weather	4
Access Road Construction***	8
Total Working Days	22
* Includes days with shortened hours due to rain	
** Field Planning meetings held with DEP, NHCS and Contractors	
*** Days on/surrounding inclement weather	

Hours Worked:

Working days per month*	22
Number of employees	4
Hours allotted per day	<u>7</u>
Hours to be worked for reclamation days	616

Dirt Moved:

	<u>Yards</u>	<u>Tons</u>		
Days working on Reclamation	14			
Cubic Yards per hour	200	300	Actual hours worked on Rec.*	596
Hours allotted per day	7	7		
Required Yards/Tons to be moved	19,600	29,400		
Actual Dirt moved by trucks	11,237	16,855		
Reclamation Berm	<u>-</u>	<u>-</u>		
Total moved	11,237	16,855		
Make-Up Reclamation Completed				
Truck loads moved		301		

Cumulative Stream Days

	<u>Hours</u>	<u>Days</u>
Miscellaneous Repairs	-	-
Actual Stream Work	-	-

July 5, 2017

Mr. Gary Latsha
Inspector Supervisor
PA Department of Environmental Protection
Pottsville District Mining Operations
5 West Laurel Boulevard
Pottsville, PA 17901

**SUBJECT: New Hope Crushed Stone Quarry
June 2017 CAP Monthly Report
Compliance Order No. 16-5-032-N
Noncoal Permit No. 7974SM3
Solebury Township, Bucks County
EarthRes Project No. 011012.015**

Dear Mr. Latsha:

On behalf of New Hope Crushed Stone & Lime Company (NHCS), EarthRes Group, Inc. (EarthRes) is providing the monthly Corrective Action Plan (CAP) update in response to Compliance Order No. 16-5-032-N issued by the Department and dated August 26, 2016. This letter and attached table details activities completed by NHCS during the month of June 2017.

There were 22 working days in June. Rain was observed on approximately 9 days (7 work days) throughout the month, with significant precipitation occurring on June 6th (0.69"), 19th (0.24"), 23rd (1.16"), and 30th (0.23").

Reclamation work primarily included stream work, removal of the Hazemag, fence removal and relocation, and electrical panel relocation. These items were completed per reclamation requirements, site security issues and rising water levels, respectively. As such, total reclamation hours required for the month were met by the above listed reclamation activities. Therefore, the total volume of reclamation fill placement during the month has been counted as make-up volume. Fill placement primarily included moving of the fill in the northern berm onto the reclamation slope.

When possible, work was completed during inclement weather, and crews worked on separate reclamation projects, as indicated on the attached table. Stream restoration activities completed in June included working on the inlet structure and general access to the inlet area.

Conclusion

NHCS completed significant work towards reclamation in June as indicated on the attached table. Work efforts on stream restoration and/or reclamation will continue in the coming months as scheduled, noting potential limitations due to weather, safety and other factors as indicated in the September 23, 2016 CAP and November 4, 2016 CAP update filed with the Department.

NHCS is committed to completion of the work as indicated by the excess hours worked in June on reclamation efforts. Additionally, in early July leading up to this report, NHCS worked Saturday July 1st and Monday July 3rd, which for most of the work force was an extended holiday weekend.

If you have any questions or need any additional information, please contact me at (215) 766-1211.

Sincerely,
EarthRes Group, Inc.



Louis F. Vittorio, Jr., P.G.
Vice President

Enclosure: June Reclamation and Restoration Efforts

cc: Ms. Christina Cursley, NHCS

June 2017

Reclamation and Restoration Work

Days Worked:

Days working on Reclamation	0
Days working in Stream	6
Inclement Weather	2
MSHA Inspections	2
Hazemag, Fence and Panel Moving	18
Total Days Working*	28

*Actual hours worked equals 28 days

Hours Worked:

Working days per month*	22
Number of employees	4
Hours allotted per day	<u>7</u>
Hours to be worked for reclamation days	616
Actual hours worked*	797

Dirt Moved:

	<u>Yards</u>	<u>Tons</u>
Days working on Reclamation	0	
Cubic Yards per hour	200	300
Hours allotted per day	7	7
Required Yards/Tons to be moved	-	-
Actual Dirt moved by trucks	5,493	8,240
Excess days (6) to Tons Conversion	8,400	12,600
Reclamation Berm**	<u>25,284</u>	<u>37,926</u>
Total moved		
Make-Up Reclamation Completed	39,177	58,766
Truck loads moved***		126

** Estimated

*** Most dirt Moved by pushing Berms

Cumulative Stream Days

	<u>Hours</u>	<u>Days</u>
Miscellaneous Repairs	-	-
Actual Stream Work	41.00	6.00

ATTACHMENT 13.0

ALLEGED SINKHOLE FIELD REPORTS

ATTACHMENT TO DAILY FIELD REPORT – JUNE 13, 2017 SITE VISIT
EarthRes Project No: 011012.015



Figure 1
Suspected Sinkhole Area Looking
Southeast from Phillips Mill Road



Figure 2
Suspected Sinkhole Area Looking
Northwest from Phillips Mill Road



Figure 3
Feature "A"

ATTACHMENT TO DAILY FIELD REPORT – JUNE 13, 2017 SITE VISIT
EarthRes Project No: 011012.015



Figure 4
2013 Google Street View. Looking SW. Feature “A” by tree on Right,
Feature “C” on left by tree. Similar to as observed in 2017.
Line in ground appears to be runoff from Phillips Mill Road

Date: 7/11/17

Project I.D.: NHCS - Field Support

ERG Project No.: 011012.015

Weather Conditions: a.m. _____

p.m. 83°F SUNNY

Summary of Events	
1400	ARRIVE ON SITE AND CHECKIN W/ CHRISTINA OF NHCS
1415	DRIVE TO THE END OF JACK'S W'S DRIVEWAY TO PARK AND WALK TO SUSPECTED 'DEPRESSIONS. UPON ARRIVAL AT SUSPECTED DEPRESSIONS A & B THE AREA WAS PHOTOGRAPHED AND I PROBED THE AREA AROUND MARKER PLACED BY THE SCHOOL (3' RADIUS) OR TETRA TECH WITH A 4-FT LONG 1/2" ϕ PIECE OF REBAR.
	WITH GREAT FORCE I COULD PENETRATE THE ROD APPROX. 3" TO 6" INTO THE GROUND. THE DEPTH OF PENETRATION WAS IN LINE WITH VEGETATED SOIL AFTER A HIGH PRECIPITATION PERIOD. PREVIOUS WEEKS YIELDED HIGH PRECIPITATION EVENTS AND MOST RECENTLY THREE DAYS PRIOR ON SATURDAY JULY 8, 2017.
1430	VIEWED SUSPECTED DEPRESSION A. SUSPECTED DEPRESSION A APPEARED TO BE AN ANIMAL HOLE CLEARLY IDENTIFIED BY THE DEAD GRASS DIRECTLY AROUND THE OPENING ON THE $\approx$ 3" ϕ HOLE WITH A SINGLE SIDE WORN DOWN TO BARE SOIL BY THE ANIMAL ENTERING AND EXITING THE HOLE.
	STARTED EXCAVATION AT SUSPECTED DEPRESSION A. WITH CASE SBD SUPER L.
Distribution:	Signature <u>Robert L Worley II</u> Name <u>ROBERT L. WORLEY II</u>
<u>EARTH RES</u>	

Date: 7/11/17

Project I.D.: NHCS - FIELD SUPPORT

ERG Project No.: 011012.015

Weather Conditions: a.m. _____

p.m. 8:30^{PM} SUNNY

Summary of Events	
	THE TOP 6" OF TOP SOIL WITH ROOTS IN TOP 18" OF SOIL.
	AT THE 3 RD BUCKET A LARGE MOLE RAN OUT OF THE EXCAVATION. POKED AROUND EXCAVATION; STEVE W/ TETRA TECH INDICATED A SOFT SPOT. EXCAVATED ANOTHER BUCKET IN THE AREA TO EXPOSE A MOLES NEST WITH 10-16 BABY MOLES AND THE MULE. WE REMOVED THE BABY MOLES AND PUT THEM IN THE TALL GRASS OUTSIDE OF THE EXCAVATION AREA.
	WE CONTINUED THE EXCAVATION TO APPROX. 4-FT DEEP BY 4-FT X 4-FT TOP. CONTINUED PROBING DOES NOT INDICATE ANY SOFT SOILS AND NO VISUAL INDICATIONS OF SINK HOLES WERE OBSERVED. STEVE OF TETRA TECH AGREED THERE IS NO SOFT SOILS OR VISUAL INDICATIONS OF A SINKHOLE.
	CONTINUED THE EXCAVATION TO SUSPECTED DEPRESSION B WITH NO INDICATION OF SOFT SOILS THROUGH PROBING OF THE EXCAVATION OR SOIL MIGRATION FROM VISUAL OBSERVATIONS. STEVE OF TETRA TECH AGREED THERE IS NO INDICATION OF A SINKHOLE AND WE AGREE TO STOP EXCAVATION AT
Distribution:	Signature <u>Robert L. Worley II</u> Name <u>ROBERT L. WORLEY II</u>
<u>EARTH RES</u>	

Date: 7/11/17

Project I.D.: NHCS-Field Support

ERG Project No.: 011012.015

Weather Conditions: a.m. _____

p.m. 83°F SUNNY

Summary of Events			
	SUSPECTED DEPRESSIONS A AND B.		
	MOVED EQUIPMENT TO AREA OF INTEREST C NOT INCLUDED IN TETRA TECH REPORT 6/9/17 BUT WAS MARKED OUT DURING 6/8/17 TETRA TECH FIELD VISIT. EXCAVATION OF THAT AREA $\approx$ 4.5'x6' TOP BY 2.5' DEEP INDICATED COMPETENT MATERIAL AND NO SOFT SOILS OR VISUAL INDICATIONS OF MIGRATING SOILS.		
	LOU OF EARTHRES ARRIVED ON SITE TO INSPECT THE EXCAVATIONS. LOU WAS IN AGREEMENT W/ STEVE OF TETRA TECH AND I THAT MATERIAL APPEARS COMPETENT AND THERE IS NO VISUAL INDICATIONS OF MIGRATING SOILS.		
	WE BACKFILLED AND COMPACTED THE EXCAVATIONS IN $\approx$ 1-FT LOOSE STEPPED LIFTS. THE SCHOOL IN DILATED THEY WILL PARE AND SEED THE AREA.		
1815	LEFT SITE.		
<table border="1"> <tr> <td> Distribution: <u>EARTHRES</u> </td> <td> Signature <u>Robert L Worley II</u> Name <u>ROBERT L. WORLEY II</u> </td> </tr> </table>		Distribution: <u>EARTHRES</u>	Signature <u>Robert L Worley II</u> Name <u>ROBERT L. WORLEY II</u>
Distribution: <u>EARTHRES</u>	Signature <u>Robert L Worley II</u> Name <u>ROBERT L. WORLEY II</u>		



Figure 1

Suspected
Depressions
“A” (left) and
“B” (right)



Figure 2

Suspected
Depression “A”
(Rodent Made
Hole)



Figure 3

First Encounter
of Baby
Rodents at
Suspected
Depression “A”



Figure 4

Rodent Den at
Suspected
Depression “A”



Figure 5

Rodent Den and
Baby Rodents at
Suspected
Depression "A"



Figure 6

Baby Rodent
Exhumed from
Suspected
Depression "A"
(Photo 1)



Figure 7

Baby Rodent
Exhumed from
Suspected
Depression "A"
(Photo 2)



Figure 8

Probing of
Suspected
Depression "A"



Figure 9

Suspected
Depression "B"
(Man-Made
Hole)



Figure 10

Excavation of
Suspected
Depression "B"



Figure 11

Completed
Excavation of
Suspected
Depressions
"A" and "B"



Figure 12

Excavation of
Area of
Interest "C"