

November 30, 2015

Mr. Gary Latsha
Pottsville District Mining Operations
PA Department of Environmental Protection
5 West Laurel Boulevard
Pottsville, PA 17901-2522

Orig: FILE
cc: GARY L.
NATE H.
MJM
MIKE K.
TOM B.

**RE: Responses to Compliance Order 15-5-048-N
and amended Compliance Order 15-5-048-N(A)
Reclamation Plan, Cost, Timing and Sequence
New Hope Crushed Stone & Lime Co.
SMP No.: 7974SM3
Solebury Township, Bucks County
EarthRes Project Number: 011012.015**

Dear Mr. Latsha:

On behalf of NHCS, EarthRes is responding to the above listed initial and amended Compliance Orders received from the Department. The submittal is responsive to all listed Items (#1 through #3, on Pages 2 and 3 of the original Order) and provides detailed costs, sequencing, volumes and other items as requested that specify quarry reclamation. The items provided herein include:

- Drawing E-001: Mine & Reclamation Phase Development Plan;
- Attachment 1: Reclamation Timeline;
- Attachment 2: Reclamation Cost Summary; and
- Attachment 3: Monitoring Well Drilling Quote.

Please find the information requested in the Compliance Order within the following attachments of this submittal. The section numbers correspond to the Compliance Order listed items.

1. Reclamation Plan – Refer to Drawing E-001.
 - A. Quarry Reclamation Timetable – Refer to Attachment 1: Reclamation Timeline.
 1. Blasting Requirements – Refer to Attachment 1: Reclamation Timeline.
 2. Excavation, Filling and/or Grading Work – Refer to Attachment 1: Reclamation Timeline.
 3. Map with Stages of Reclamation – Refer to Drawing E-001: Mine & Reclamation Phase Development Plan.
 4. Detailed Cost Estimate – Refer to Attachment 2: Reclamation Cost Summary.

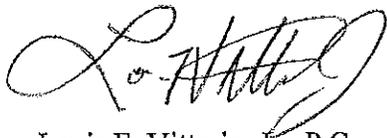
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- B. Timetable for Stream Restoration – Refer to Attachment 1: Reclamation Timeline. The timeline for stream restoration is also specifically detailed in the Consent Order (restoration work has started, see below)
2. Water Table Restoration Schedule – Refer to Attachment 1: Reclamation Timeline.
3. Monitoring Well Installation – Refer to Attachments 2 and 3. Upon agreement with Solebury School on well location, Garber is scheduling drilling work approximately 3 weeks in advance.

NHCS formally requests a meeting with the Department to go over the details of this submittal. We further ask that the compliance order (original and amended) be lifted so that NHCS may proceed in good faith with reclamation and meeting with the Department to adjust any details and timing that would be beneficial to the reclamation. To that end, the first phase of reclamation, which includes abatement of the instream sinkholes, commenced on November 16, 2015.

Should you have any questions regarding the enclosed information, detailing NHCS' current and futures actions towards full reclamation, please contact me at 215-766-1211.

Sincerely,
EarthRes Group, Inc.



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

Enclosures: As Stated

Copied via Electronic Mail:

Mike Menghini, DMM, PA DEP, mmenghini@pa.gov
Mike Kutney, Hydrogeologist, PA DEP, mkutney@pa.gov
Nate Houtz, P.G., Permit Chief, PA DEP, nhoutz@pa.gov
Amiee Bollinger, SMCI, PA DEP, ambollinge@pa.gov
Christina Cursley, General Manager, NHCS, christina@newhopestone.com



*New Hope Crushed Stone & Lime Co.
Response to Compliance Order
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ATTACHMENT 1

Reclamation Timeline

Attachment 1: Re

Phase	Start Date	End Date	Start Water Elev., ft.	End Water Elev., ft.	Reclamation Blasting, tons	Relocated Overburden/Waste, cu. yds.	Overburden rer cu. yds./ft
Phase 1: Stream Restoration Activities	Nov. 2015	May 2017	-142 msl	-138.5 msl	**** Per Consent Order		
Phase 2: Excess Overburden Relocation	May 2017	Dec. 2020	-138.5 msl	-130 msl	0	493,356	100
Phase 3: West Highwall Reclamation	Dec. 2020	Feb. 2021	-130 msl	-117 msl	0	23,202	100
Phase 4: North Highwall Reclamation	Feb. 2021	Jun. 2021	-117 msl	-91 msl	91,500	45,348	100
Phase 5: East Highwall Reclamation	Jun. 2021	Mar. 2022	-91 msl	-31 msl	35,600	104,369	100
Phase 6: Site Grading/Demolition	Mar. 2022	Jul. 2022	-31 msl	-2 msl	0	50,000	100
Total					127,100	716,275	

Notes: 1. Quarry blasting for highwall reclamation to occur in parallel with overburden rate of two (2) shots per week.

2. Water level will recover to 98' msl as outlined in the reclamation plan once the per day based upon long term pumping data and maintaining 500,000 gallons per

Given Assumptions:

*Scheduled Reclamation Activities, weeks/year	46
Reclamation Availability, %	85%
Scheduled Shift, hours	8
**Scheduled Operation each Shift, hours	7
Annual Operating Hours	1368.5
Volume per truckload, cu. yds.	25
***# of Truckloads, loads/hour	4
Date Emergency Permit issued: 11/16/2015	11/16/2015
****Scheduled Stream Restoration Activities, months	18
Reclamation Crew: 1 Loader/Excavator & 1 Truck	
See table above for reclamation phases & timeline	
*No operation for 6 weeks each year (2 weeks-holidays/2 weeks-vacation/2 weeks-inclement weather)	
**Scheduled downtime of 1 hour for each shift for start-up, shut-down and lunch/break	
***# of Truckloads per hour estimate is subject to revision based on actual operating conditions encountered during reclamation activities	

ation Timeline

rate,	# of working hours	# of working days	# of working weeks	# of working years	total # of calendar years for reclamation (85% availability and 46 operating weeks per year)
	4,934	705	141.0	2.71	3.61
	232	33	6.6	0.13	0.17
	453	65	13.0	0.25	0.33
	1,044	149	29.8	0.57	0.76
	500	71	14.3	0.27	0.37
	7,163	1,023	204.7	3.94	5.23

elocation. Average reclamation blasts estimated at 7,000 - 10,000 tons and completed at a

ned highwalls have been approved by PA DEP. In-flow rate is estimated at 1.5 million gallons
stream outflow.

*New Hope Crushed Stone & Lime Co.
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ATTACHMENT 2
Reclamation Cost Summary

Attachment 2: Rec

	Item Description	Units	Unit Rate	Phase 1 - Stream Restoration		Phase 2 - Excess Overburden Re	
				Quantity	Cost	Quantity	Cost
1	Stream Restoration / Offsite Projects						
2	CLEARING AND GRUBBING (SELECTIVE MATERIAL HARVESTING)	SF	\$0.26	109,860.00	\$27,463		0
3	TEMPORARY CONSTRUCTION ENTRANCE	SF	\$2.00	3,000.00	\$6,000		0
4	HAUL ROAD	SF	\$1.00	6,000.00	\$6,000		0
5	SUBSIDED SOIL EXCAVATION	CY	\$4.00	500.00	\$2,000		0
6	ROCK EXCAVATION	CY	\$30.00	20.00	\$600		0
7	ROCK FILL (FOR SINKHOLE)	CY	\$30.00	7,250.00	\$217,500		0
8	GEOTEXTILE (FOR SINKHOLE)	SY	\$2.80	1,390.00	\$3,892		0
9	ROOTWAD REVETMENT	LF	\$150.00	160.00	\$24,000		0
10	LOG CRIB WALL	EA	\$1,364.00	5.00	\$6,820		0
11	STABILIZATION (LIVE STAKES/FASCINES/PLANTS/SEEDING)	LF	\$30.00	576.00	\$17,280		0
12	FINAL GRADING	ACRE	\$1,250.00	0.52	\$645		0
13	FINAL SEEDING	ACRE	\$1,800.00	0.00	\$0		0
14	MONITORING WELL INSTALLATION	LS	\$11,000.00	1.00	\$11,000		0
15							
16	TOTAL STREAM RESTORATION / OFFSITE PROJECTS				\$323,200		
17							
18	Site Development						
19	MOBILIZATION & DEMOBILIZATION	LS	\$40,000.00	1.00	\$40,000		0
20	FINAL SITE GRADING	ACRE	\$1,250.00	0.00	\$0		0
21	FINAL SITE SEEDING	ACRE	\$1,800.00	0.00	\$0		0
22	SAFETY BARRIER/BERM	LF	\$18.00	0.00	\$0		0
23	DEMOLITION	SF	\$3.00	0.00	\$0		0
24							
25	TOTAL SITE DEVELOPMENT				\$40,000		
26							
27	Reclamation Earthwork						
28	CLEARING AND GRUBBING	ACRE	\$4,600.00	0.00	\$0		0
29	RECLAMATION BLASTING	TON	\$2.20	0.00	\$0		0
30	RECLAMATION BACKFILL RELOCATION (<500-foot push)	CY	\$0.95	0.00	\$0	493,356	0
31	RECLAMATION SLOPE GRADING	ACRE	\$1,250.00	0.00	\$0		0
32	RECLAMATION SLOPE SEEDING	ACRE	\$1,800.00	0.00	\$0		0
33							
34	TOTAL RECLAMATION EARTHWORK				\$0		
35							
36	STREAM CONNECTION						
37	BLASTED TRENCH	LS	\$40,000.00	0.00	\$0		0
38	INFLOW WEIR W/ MONITORING EQUIPMENT	LS	\$10,000.00	0.00	\$0		0
39	OUTFLOW WEIR W/ MONITORING EQUIPMENT	LS	\$10,000.00	0.00	\$0		0
40							
41	TOTAL STREAM CONNECTION				\$0		
42							
43	SUBTOTAL				\$363,200		
44	ENGINEERING AND CONTINGENCY (10% + 10%)	20%			\$72,640		
45	TOTAL COSTS				\$435,839		
46							

on Cost Summary

Phase 3 - West Wall Reclamation		Phase 4 - North Wall Reclamation		Phase 5 - East Wall Reclamation		Phase 6 - Site and Outfall		Overall
Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Cost
0	\$0	0	\$0	0	\$0	0	\$0	\$27,483
0	\$0	0	\$0	0	\$0	0	\$0	\$6,000
0	\$0	0	\$0	0	\$0	0	\$0	\$6,000
0	\$0	0	\$0	0	\$0	0	\$0	\$2,000
0	\$0	0	\$0	0	\$0	0	\$0	\$600
0	\$0	0	\$0	0	\$0	0	\$0	\$217,500
0	\$0	0	\$0	0	\$0	0	\$0	\$3,892
0	\$0	0	\$0	0	\$0	0	\$0	\$24,000
0	\$0	0	\$0	0	\$0	0	\$0	\$6,820
0	\$0	0	\$0	0	\$0	0	\$0	\$17,280
0	\$0	0	\$0	0	\$0	0	\$0	\$645
0	\$0	0	\$0	0	\$0	0	\$0	\$0
0	\$0	0	\$0	0	\$0	0	\$0	\$11,000
0	\$0	0	\$0	0	\$0	0	\$0	
0	\$0	0	\$0	0	\$0	0	\$0	\$323,290
0	\$0	0	\$0	0	\$0	0	\$0	\$40,000
0	\$0	0	\$0	0	\$0	41	\$51,663	\$51,663
0	\$0	0	\$0	0	\$0	41	\$78,512	\$78,512
1,150	\$20,700	1,500	\$27,000	2,600	\$46,800	0	\$0	\$94,500
0	\$0	0	\$0	0	\$0	15,000	\$45,000	\$45,000
0	\$20,700	0	\$27,000	0	\$46,800	0	\$175,165	\$309,665
1.58	\$7,110	0.53	\$2,388	0	\$0	0	\$0	\$9,498
0	\$0	91,600	\$201,300	35,600	\$78,320	0	\$0	\$279,620
23,202	\$22,042	46,348	\$43,081	104,369	\$99,151	50,000	\$47,500	\$680,451
5.6	\$7,000	4.18	\$5,228	6.16	\$7,702	0	\$0	\$19,930
5.6	\$10,640	4.18	\$7,946	6.16	\$11,707	0	\$0	\$30,293
0	\$46,792	0	\$269,942	0	\$166,880	0	\$47,500	\$1,019,803
0	\$0	0	\$0	0	\$0	1	\$40,000	\$40,000
0	\$0	0	\$0	0	\$0	1	\$10,000	\$10,000
0	\$0	0	\$0	0	\$0	1	\$10,000	\$10,000
0	\$0	0	\$0	0	\$0	0	\$80,000	\$80,000
0	\$67,492	0	\$286,942	0	\$243,680	0	\$282,665	\$1,712,668
0	\$13,498	0	\$57,388	0	\$48,736	0	\$56,533	\$342,534
0	\$80,990	0	\$344,331	0	\$282,418	0	\$339,198	\$2,056,201

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November 30, 2015*

ATTACHMENT 3

Garber Well Drilling Quote



C. S. Garber & Sons, Inc.
7928 Boyertown Pike
Boyertown, PA 19512
(610) 367-2861
Fax (610) 367-5560
Email: csgarber.com
PA Contractor Reg. #PA013293

Louis Vittorio, Jr. P.G.
EarthRes Group, Inc.
6912 Old Easton Road
PO Box 468
Pipersville, PA 18947

REFERENCE: Monitoring Well – Solebury School for NHCS

Dear Mr. Vittorio,

The following estimate is based on drilling 10" air rotary to an estimated total depth of 100 feet for installation of 6 5/8" O.D. steel casing grouted in place. Then drill below casing using 6" air rotary to an estimated total depth of 200 feet. Well will be stickup finish with locking well cap and keyed alike padlock. I have included drums for drill cuttings, just subtract if not needed.

Mobilization and Demobilization = \$ 500.00

Each 200' T.D. 6" Open Hole Monitoring Well

Estimated 20 Hours - Drill, Service Truck & Crew	@ \$265.00/hour	= \$ 5,300.00
Estimated 100' of 6 5/8" Steel Casing –Heavy Wall	@ \$ 22.00/foot	= \$ 2,200.00
Estimated 30 Bags of Cement Grout	@ \$ 33.00/bag	= \$ 990.00
1- 6 5/8" Drive Shoe	@ \$125.00/each	= \$ 125.00
1- 6 5/8" Locking Well Cap	@ \$ 37.00/each	= \$ 37.00
1- Keyed Alike Padlock	@ \$ 17.00/each	= \$ 17.00
Estimated 18 H-17 Drums	@ \$ 50.00/each	= \$ 900.00
Estimated Total for Each Monitoring Well		= \$ 9,569.00

Total Estimated Cost for 1- 200' Total Depth 6" Open-Hole Monitoring Well
As Described Above, Including Mobilization and Demobilization = \$10,069.00

Steam Cleaner Rental, if needed	@ \$100.00/day
Standby for Access or Engineering Time	@ \$265.00/hour
Skid Loader Rental (with Drill Rig & Crew On Site)	@ \$ 35.00/hour
Skid Loader & Operator – Portal to Portal	@ \$ 85.00/hour

PRICES FIRM FOR 60 DAYS.

You must furnish access, utility clearance, well placement, permits if needed, and clean up.

Should safety environment be upgraded from Level D to Level C, add 15% to the hourly rate.

Continued on Page 2

"Water is Essential to Life"

EarthRes Group, Inc.

Louis Vittorio, Jr.

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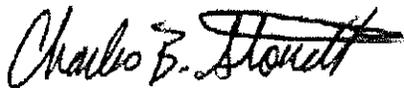
REFERENCE: Monitoring Well – Solebury School for NHCS

All work to be performed under this proposal is subject to C. S. Garber & Sons, Inc. Standard Terms and Conditions as enclosed.

PAYMENT TERMS: Net 30 Days

If this estimate meets with your approval, please sign below and return the original to us, or forward your purchase order.

Sincerely,



Charles B. Stoudt
Manager -Monitoring Well Department

CBS/pmc

Enclosure

November 3, 2015

Date _____

Approval _____
EarthRes Group, Inc.