Martin Marietta

Jesse Martindale
Sr. Environmental Engineer

June 17, 2024

RECEIVED
DEC 06 2024
OKLAHOMA WATER RESOURCES BOARD

Matt Cogburn
Oklahoma Water Resources Board
3800 N. Classen
Oklahoma City, OK 73118

Re: Martin Marietta Davis Quarry 2024 Q1 Report

Dear Mr. Cogburn:

Attached please find the Q1 monitoring report and associated data and calculations for the Martin Marietta Davis Quarry with the requested updated information.

We had some issues issues in previous months with the transducer in the main pit, but it has been corrected and confirmed to be working as intended. This data correction is demonstrated by the abnormal amount of groundwater influx for January in this Q1 report. Again, this is more of a data correction and not an actual increase in the amount of groundwater entering the pit. The data for Q2 appears to be back in line with its normal trend and I don't anticipate any further issues going forward.

Regards,

Jesse Martindale

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Sr. Environmental Engineer

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MM Davis Quarry 2024 Monitoring Report

All volumes are in acre-feet.

	Total Groundwater Entering Pit	Total Stormwater Entering Pit	Total Stormwater Diverted from Pit	Total Water Diverted	Water Sent To Holding Basin	Groundwater Augmentation	Streamwater Augmentation	Consumptive Use of Stormwater	Consumptive Use of Groundwater	Groundwater Pumped From Well
January-24	24.35	13.23	13.23	37.58	N/A	24.35	0.00	5.48	0.00	0.00
February-24	5.55	7.55	7.55	13.11	N/A	5.55	0.00	3.80	0.00	0.00
March-24	2.11	7.93	7.93	10.03	N/A	2.11	0.00	3.06	0.00	0.00
1st QTR Totals	32.01	28.72	28.72	60.72	0.00	32.01	0.00	12.35	0.00	0.00

Note: Negative entries for Total Groundwater Entering Pit indicate that stormwater is entering the rock formation via the pit.

Total groundwater entering the pit = total stormwater entering the pit - total water diverted

Groundwater Right Value (MEPS): 68 acre-feet

Davis Water Balance

	Dec-23	Jan-24	Feb-24	Mar-24
Monitoring Period, Days		31	28	31
Monthly Production, tons	136,592	94,734	127,943	173,248
Product Moisture Content		3.5%	3.5%	3.5%
Water Truck Loads		0	28	13
***Month End* Water Elevs.**				
1) Freshwater pond, depth to water	15.16725	13.74254	17.05114	15.769906
2) Pit Sump, depth to water	46.13844	51.65115	52.3859	53.20305
Pond Surface Acres				
1) Freshwater pond		1.0	1.0	1.0
2) Pit Sump		5.79	5.79	5.79
Total surface acres		6.794314	6.794314	6.794313535
Pond Water Volume Change				
1) Freshwater pond		-1.425	3.309	-1.281
2) Pit Sump		31.942	4.257	4.735
3) Change in settling pond storage		0.000	0.000	0.000
Net Volume Change		**30.518**	**7.566**	**3.454**
Water Inputs, ac-ft				
Rural Water		0.044	0.037	0.028
Lake Water		0.000	0.000	0.000
Well Water		0.000	0.000	0.000
Precipitation		13.234	7.553	7.928
Total Water Input		**13.279**	**7.590**	**7.956**
Water Usage, ac-ft				
Product moisture content		2.440	3.295	4.462
Haul road dust control		0.000	0.773	0.359
Evaporation losses		0.828	1.508	1.788
Misc usage		3.84	-	-
Total Water Usage, Ac-ft		**7.111**	**5.576**	**6.609**
Net Water Input		**6.168**	**2.014**	**1.347**
emergency storage of precipitation and runoff, ac-ft				
Groundwater Inflow		24.350	5.552	2.106
Groundwater Inflow, Avg Ac-ft/Day		0.785	0.198	0.068
Groundwater Inflow, Avg Gallons/Day		255,951	64,608	22,138

Consumptive Use

	January	February	March
Water Truck Usage	-	0.77	0.36
Moisture Content of Product Shipped	1.64	3.03	2.71
Misc on site use	-	-	-
Misc off site	3.84	-	-
Total	5.48	3.80	3.06

Shipped Tons	January	February	March
Base	24,368	43,442	37,707
Coarse Aggregate	40,165	71,882	80,801
Fine Aggregate	12,687	25,500	16,713
Total	77,220	140,824	135,222
Moisture Shipped	1.64	3.03	2.71

January Precipitation Data

PIT RUNOFF ASSUMPTIONS		
Hydrologic Soil Group	D	
Land Use	"gravel road"	
AMC Condition	II (ave)	
CN (pit fringe)	88	area draining into pit
CN (pit)	100	area with direct interception
S (pit fringe)	1.364	area draining into pit
S (pit)	0.000	area with direct interception
Pit - Direct Interception (>95 ft deep)	74.91	subject to refinement
Pit fringe (area drains to pit)	90.41	subject to refinement
Drainage to Pit (total area)	165.32	subject to refinement

		Quarry are	Fringe area	
Date	**Precip, in.**	**Runoff, in.**	**Runoff, in.**	**Evapor, in/day**
1-Jan	0.00	0.00	0.00	0.04
2-Jan	0.00	0.00	0.00	0.04
3-Jan	0.00	0.00	0.00	0.06
4-Jan	0.01	0.01	0.00	0.05
5-Jan	0.27	0.27	0.00	0.01
6-Jan	0.01	0.01	0.00	0.05
7-Jan	0.00	0.00	0.00	0.07
8-Jan	0.62	0.62	0.00	0.03
9-Jan	0.01	0.01	0.00	0.06
10-Jan	0.00	0.00	0.00	0.10
11-Jan	0.00	0.00	0.00	0.09
12-Jan	0.00	0.00	0.00	0.07
13-Jan	0.00	0.00	0.00	0.04
14-Jan	0.00	0.00	0.00	0.01
15-Jan	0.00	0.00	0.00	0.03
16-Jan	0.00	0.00	0.00	0.04
17-Jan	0.00	0.00	0.00	0.07
18-Jan	0.00	0.00	0.00	0.08
19-Jan	0.00	0.00	0.00	0.04
20-Jan	0.00	0.00	0.00	0.04
21-Jan	0.03	0.03	0.00	0.02
22-Jan	0.02	0.02	0.00	0.01
23-Jan	0.06	0.06	0.00	0.01
24-Jan	0.03	0.03	0.00	0.01
25-Jan	0.00	0.00	0.00	0.02
26-Jan	0.85	0.85	0.00	0.00
27-Jan	0.21	0.21	0.00	0.01
28-Jan	0.00	0.00	0.00	0.08
29-Jan	0.00	0.00	0.00	0.11
30-Jan	0.00	0.00	0.00	0.10
31-Jan	0.00	0.00	0.00	0.09
		2.12	0.00	
Volume, ac-ft		**13.23**	**0.00**	**1.462**
Total Vol, ac-ft		**13.23**		

February Precipitation Data

PIT RUNOFF ASSUMPTIONS		
Hydrologic Soil Group	D	
Land Use	gravel road	
AMC Condition	II (ave)	
CN (pit fringe)	88	area draining into pit
CN (pit)	100	area with direct interception
S (pit fringe)	1.364	area draining into pit
S (pit)	0.000	area with direct interception
Pit - Direct Interception (>95 ft deep)	74.91	subject to refinement
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		Quarry area	**Fringe area**	
Date	**Precip, in.**	**Runoff, in.**	**Runoff, in.**	**Evapor, in/day**
1-Feb	0.00	0.00	0.00	0.04
2-Feb	0.00	0.00	0.00	0.04
3-Feb	0.00	0.00	0.00	0.11
4-Feb	0.07	0.07	0.00	0.03
5-Feb	0.29	0.29	0.00	0.04
6-Feb	0.01	0.01	0.00	0.02
7-Feb	0.00	0.00	0.00	0.07
8-Feb	0.00	0.00	0.00	0.07
9-Feb	0.00	0.00	0.00	0.08
10-Feb	0.00	0.00	0.00	0.16
11-Feb	0.00	0.00	0.00	0.11
12-Feb	0.00	0.00	0.00	0.04
13-Feb	0.76	0.76	0.00	0.01
14-Feb	0.08	0.08	0.00	0.08
15-Feb	0.00	0.00	0.00	0.10
16-Feb	0.00	0.00	0.00	0.11
17-Feb	0.00	0.00	0.00	0.09
18-Feb	0.00	0.00	0.00	0.08
19-Feb	0.00	0.00	0.00	0.05
20-Feb	0.00	0.00	0.00	0.10
21-Feb	0.00	0.00	0.00	0.12
22-Feb	0.00	0.00	0.00	0.12
23-Feb	0.00	0.00	0.00	0.15
24-Feb	0.00	0.00	0.00	0.14
25-Feb	0.00	0.00	0.00	0.14
26-Feb	0.00	0.00	0.00	0.16
27-Feb	0.00	0.00	0.00	0.19
28-Feb	0.00	0.00	0.00	0.23
		0.00	0.00	
		0.00	0.00	
		0.00	0.00	
		1.21	0.00	
Volume, ac-ft		**7.55**	**0.00**	**2.663**
Total Vol, ac-ft		**7.55**		

February Precipitation Data

PIT RUNOFF ASSUMPTIONS		
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Land Use	gravel road	
AMC Condition	II (ave)	
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		Quarry are	Fringe area	
Date	**Precip, in.**	**Runoff, in.**	**Runoff, in.**	**Evapor, in/day**
1-Feb	0.00	0.00	0.00	0.04
2-Feb	0.00	0.00	0.00	0.04
3-Feb	0.00	0.00	0.00	0.11
4-Feb	0.07	0.07	0.00	0.03
5-Feb	0.29	0.29	0.00	0.04
6-Feb	0.01	0.01	0.00	0.02
7-Feb	0.00	0.00	0.00	0.07
8-Feb	0.00	0.00	0.00	0.07
9-Feb	0.00	0.00	0.00	0.08
10-Feb	0.00	0.00	0.00	0.16
11-Feb	0.00	0.00	0.00	0.11
12-Feb	0.00	0.00	0.00	0.04
13-Feb	0.76	0.76	0.00	0.01
14-Feb	0.08	0.08	0.00	0.08
15-Feb	0.00	0.00	0.00	0.10
16-Feb	0.00	0.00	0.00	0.11
17-Feb	0.00	0.00	0.00	0.09
18-Feb	0.00	0.00	0.00	0.08
19-Feb	0.00	0.00	0.00	0.05
20-Feb	0.00	0.00	0.00	0.10
21-Feb	0.00	0.00	0.00	0.12
22-Feb	0.00	0.00	0.00	0.12
23-Feb	0.00	0.00	0.00	0.15
24-Feb	0.00	0.00	0.00	0.14
25-Feb	0.00	0.00	0.00	0.14
26-Feb	0.00	0.00	0.00	0.16
27-Feb	0.00	0.00	0.00	0.19
28-Feb	0.00	0.00	0.00	0.23
		0.00	0.00	
		0.00	0.00	
		0.00	0.00	
		1.21	0.00	
Volume, ac-ft		**7.55**	**0.00**	**2.663**
Total Vol, ac-ft		**7.55**		