



Robin Simmons
Regional Land Manager

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Oklahoma Water Resources Board

May 23, 2022

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

Re: Martin Marietta/Material Producers Davis Quarry Q1 2022 Monitoring Report

Dear Mr. Cogburn:

Attached please find the Q1 2022 monitoring report and associated data and calculations for Martin Marietta/Material Producers' Davis Quarry.

Sincerely,

A handwritten signature in blue ink that reads 'Robin L. Simmons'.

Robin L. Simmons
Regional Land Manager

MMM Davis Quarry 2022 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-22	-0.38	2.01	2.01	1.62	N/A	-0.38	0.00	2.65	0.00	0.00
February-22	-6.91	7.82	7.82	0.92	N/A	-6.91	0.00	2.09	0.00	0.00
March-22	-5.50	4.35	4.35	-1.15	N/A	-5.50	0.00	3.84	0.00	0.00
1st QTR Totals	-12.79	14.18	14.18	1.39	0.00	-12.79	0.00	8.59	0.00	0.00

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


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Davis Water Balance

	Dec-21	Jan-22	Feb-22	Mar-22
Monitoring Period, Days		31	28	31
Monthly Production, tons	90,917	117,157	75,519	127,567
Product Moisture Content		3.5%	3.5%	3.5%
Water Truck Loads		18	12	39
Month End Water Elevs.				
1) Freshwater pond, depth to water	14.899	15.293	16.836	14.479
2) Pit Sump, depth to water	51.109	50.028	49.035	47.565
Pond Surface Acres				
1) Freshwater pond		1.0	1.0	1.0
2) Pit Sump		2.3	2.3	2.3
Total surface acres		3.3	3.3	3.3
Pond Water Volume Change				
1) Freshwater pond		0.394	1.543	-2.357
2) Pit Sump		-2.486	-2.284	-3.381
3) Change in settling pond storage		0.000	0.000	0.000
Net Volume Change		-2.092	-0.741	-5.738
Water Inputs, ac-ft				
Rural Water		0.280	1.111	0.135
Lake Water		0.000	0.000	0.000
Well Water		0.000	0.000	0.000
Precipitation		2.009	7.823	4.346
Total Water Input		2.289	8.934	4.481
Water Usage, ac-ft				
Product moisture content		3.017	1.945	3.285
Haul road dust control		0.552	0.368	0.829
Evaporation losses		0.427	0.456	0.608
Misc usage		-	-	-
Total Water Usage, Ac-ft		3.996	2.769	4.722
Net Water Input		-1.707	6.165	-0.241
emergency storage of precipitation and runoff, ac-ft				
Groundwater Inflow		-0.385	-6.906	-5.497
Groundwater Inflow, Avg Ac-ft/Day		-0.012	-0.247	-0.177
Groundwater Inflow, Avg Gallons/Day		-4,045	-80,371	-57,783

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Consumptive Use

	January	February	March
Water Truck Usage	0.55	0.37	0.83
Moisture Content of Product Shipped	2.10	1.72	3.02
Misc on site use	-	-	-
Misc off site	-	-	-
Total	2.65	2.09	3.84

Shipped Tons	January	February	March
Base	17,299	17,631	31,368
Coarse Aggregate	73,939	59,143	84,918
Fine Aggregate	17,057	12,157	28,695
Total	108,295	88,931	144,980
Moisture Shipped	2.10	1.72	3.02

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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)	65.16	subject to refinement
Pit fringe (area drains to pit)	94.10	subject to refinement
Drainage to Pit (total area)	159.26	subject to refinement

Quarry area Fringe area

Date	Precip, in.	Runoff, in.	Runoff, in.	Evapor, in/day
1-Jan	0.33	0.33	0.00	0.02
2-Jan	0.00	0.00	0.00	0.03
3-Jan	0.00	0.00	0.00	0.04
4-Jan	0.00	0.00	0.00	0.06
5-Jan	0.00	0.00	0.00	0.05
6-Jan	0.00	0.00	0.00	0.03
7-Jan	0.00	0.00	0.00	0.03
8-Jan	0.02	0.02	0.00	0.02
9-Jan	0.00	0.00	0.00	0.04
10-Jan	0.00	0.00	0.00	0.05
11-Jan	0.00	0.00	0.00	0.07
12-Jan	0.00	0.00	0.00	0.07
13-Jan	0.00	0.00	0.00	0.08
14-Jan	0.00	0.00	0.00	0.04
15-Jan	0.00	0.00	0.00	0.02
16-Jan	0.00	0.00	0.00	0.05
17-Jan	0.00	0.00	0.00	0.06
18-Jan	0.00	0.00	0.00	0.07
19-Jan	0.02	0.02	0.00	0.03
20-Jan	0.00	0.00	0.00	0.03
21-Jan	0.00	0.00	0.00	0.04
22-Jan	0.00	0.00	0.00	0.05
23-Jan	0.00	0.00	0.00	0.08
24-Jan	0.00	0.00	0.00	0.06
25-Jan	0.00	0.00	0.00	0.05
26-Jan	0.00	0.00	0.00	0.04
27-Jan	0.00	0.00	0.00	0.03
28-Jan	0.00	0.00	0.00	0.06
29-Jan	0.00	0.00	0.00	0.14
30-Jan	0.00	0.00	0.00	0.08
31-Jan	0.00	0.00	0.00	0.07
		0.37	0.00	
Volume, ac-ft		2.01	0.00	1.552
Total Vol, ac-ft		2.01		

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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)	65.19	subject to refinement
Pit fringe (area drains to pit)	94.06	subject to refinement
Drainage to Pit (total area)	159.26	subject to refinement

Date	Precip, in.	Quarry area		Evapor, in/day
		Runoff, in.	Fringe area Runoff, in.	
1-Feb	0.00	0.00	0.00	0.04
2-Feb	0.01	0.01	0.00	0.01
3-Feb	0.00	0.00	0.00	0.01
4-Feb	0.13	0.13	0.00	0.03
5-Feb	0.27	0.27	0.00	0.05
6-Feb	0.16	0.16	0.00	0.05
7-Feb	0.00	0.00	0.00	0.07
8-Feb	0.00	0.00	0.00	0.12
9-Feb	0.00	0.00	0.00	0.09
10-Feb	0.00	0.00	0.00	0.09
11-Feb	0.00	0.00	0.00	0.10
12-Feb	0.00	0.00	0.00	0.06
13-Feb	0.00	0.00	0.00	0.08
14-Feb	0.00	0.00	0.00	0.11
15-Feb	0.00	0.00	0.00	0.08
16-Feb	0.00	0.00	0.00	0.07
17-Feb	0.29	0.29	0.00	0.02
18-Feb	0.00	0.00	0.00	0.06
19-Feb	0.00	0.00	0.00	0.09
20-Feb	0.00	0.00	0.00	0.09
21-Feb	0.12	0.12	0.00	0.06
22-Feb	0.00	0.00	0.00	0.05
23-Feb	0.00	0.00	0.00	0.01
24-Feb	0.00	0.00	0.00	0.01
25-Feb	0.13	0.13	0.00	0.03
26-Feb	0.19	0.19	0.00	0.03
27-Feb	0.14	0.14	0.00	0.07
28-Feb	0.00	0.00	0.00	0.10
		0.00	0.00	
		0.00	0.00	
		0.00	0.00	
		1.44	0.00	
Volume, ac-ft		7.82	0.00	1.658
Total Vol, ac-ft		7.82		

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March 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)	65.19	subject to refinement
Pit fringe (area drains to pit)	94.06	subject to refinement
Drainage to Pit (total area)	159.26	subject to refinement

Date	Precip, in.	Quarry area		Evapor, in/day
		Runoff, in.	Fringe area Runoff, in.	
1-Mar	0.00	0.00	0.00	0.12
2-Mar	0.00	0.00	0.00	0.11
3-Mar	0.00	0.00	0.00	0.10
4-Mar	0.00	0.00	0.00	0.08
5-Mar	0.00	0.00	0.00	0.15
6-Mar	0.03	0.03	0.00	0.02
7-Mar	0.00	0.00	0.00	0.04
8-Mar	0.00	0.00	0.00	0.00
9-Mar	0.00	0.00	0.00	0.08
10-Mar	0.00	0.00	0.00	0.06
11-Mar	0.00	0.00	0.00	0.03
12-Mar	0.00	0.00	0.00	0.08
13-Mar	0.00	0.00	0.00	0.08
14-Mar	0.08	0.08	0.00	0.03
15-Mar	0.00	0.00	0.00	0.07
16-Mar	0.00	0.00	0.00	0.08
17-Mar	0.12	0.12	0.00	0.09
18-Mar	0.00	0.00	0.00	0.06
19-Mar	0.00	0.00	0.00	0.09
20-Mar	0.00	0.00	0.00	0.08
21-Mar	0.00	0.00	0.00	0.01
22-Mar	0.00	0.00	0.00	0.04
23-Mar	0.00	0.00	0.00	0.08
24-Mar	0.00	0.00	0.00	0.09
25-Mar	0.00	0.00	0.00	0.08
26-Mar	0.00	0.00	0.00	0.07
27-Mar	0.00	0.00	0.00	0.13
28-Mar	0.00	0.00	0.00	0.05
29-Mar	0.10	0.10	0.00	0.11
30-Mar	0.47	0.47	0.00	0.06
31-Mar	0.00	0.00	0.00	0.07
		0.80	0.00	
Volume, ac-ft		4.35	0.00	2.212
Total Vol, ac-ft		4.35		

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