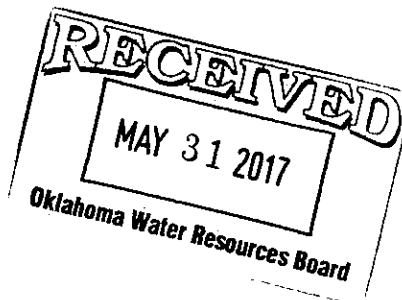




Robin Simmons  
Regional Land Manager

May 31, 2017



Kent Wilkins  
Oklahoma Water Resources Board  
3800 N. Classen  
Oklahoma City, OK 73118

Re: Martin Marietta/Material Producers Davis Quarry Q1 2017 Monitoring Report

Dear Mr. Wilkins:

Attached please find the Q1 2017 monitoring report and associated data and calculations for Martin Marietta/Material Producers' Davis Quarry. During Q3 2016 at the Davis Quarry a new water recovery system was built and brought online to maximize the recovery and reuse of water from the plant. In addition, the in-pit sump has been relocated to a lower level. As a result of these changes, the monitoring of water levels has been temporarily suspended while the new water retention facilities are established. Full monitoring of pond water levels was re-established in April 2017.

As is typical at the Davis Quarry, in Q1 we see more precipitation and runoff entering the pit than the total water we use from the pit. Also typically, we do not see a rise in water levels in the pit that correspond to the additional precipitation and runoff that we know is entering the pit and not being used. Thus we still see a net decrease of water within the pit indicating that we continue to augment groundwater through the pit.

Sincerely,

A handwritten signature in cursive script that reads 'Robin L. Simmons'.

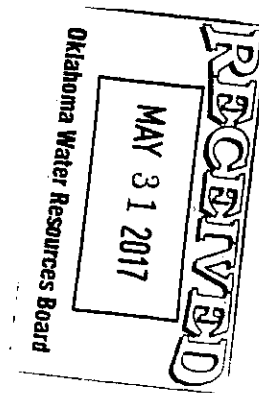
Robin L. Simmons, EIT  
Land Manager

North Texas/Oklahoma District  
1503 LBJ Parkway Suite 400, Dallas, Texas 75234  
t. (972) 350-8228 f. (972) 647-3363 m. (214) 213-6024 e. Robin.Simmons@martinmarietta.com  
www.martinmarietta.com

### MMM Davis Quarry 2017 Monitoring Report

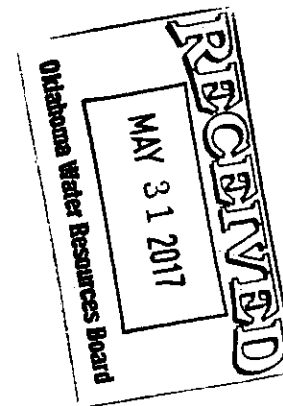
All volumes are in acre-feet.

	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-17		4.08	4.08	4.08	N/A	0.00	0.00	2.68	0.00	0.00
February-17		8.88	8.88	8.88	N/A	0.00	0.00	3.05	0.00	0.00
March-17		4.58	4.58	4.58	N/A	0.00	0.00	3.36	0.00	0.00
<b>1st QTR Totals</b>	0.00	17.53	17.53	17.53	0.00	0.00	0.00	19.09	0.00	0.00



Consumptive Use			
	January	February	March
Water Truck Usage	0.37	0.40	0.71
Moisture Content of Product Shipped	2.31	2.65	2.65
Misc on site use	-	-	-
Misc off site	-	-	-
<b>Total</b>	<b>2.68</b>	<b>3.05</b>	<b>3.36</b>

Shipped Tons			
	January	February	March
Base	27,811	40,538	32,314
Coarse Aggregate	50,585	50,566	55,895
Fine Aggregate	25,282	25,771	29,586
<b>Total</b>	<b>103,678</b>	<b>116,875</b>	<b>117,794</b>
Moisture Shipped	2.31	2.65	2.65



## Davis Water Balance

	Dec-16	Jan-17	Feb-17	Mar-17
<b>Monitoring Period, Days</b>		31	29	31
<b>Monthly Production, tons</b>		98,920	115,597	153,589
<b>Product Moisture Content</b>		3.5%	3.5%	3.5%
<b>Water Truck Loads</b>		12	13	23
<b>Month End Water Elevs.</b>				
1) Freshwater pond, depth to water				17.769
2) Pit Sump, depth to water				
<b>Pond Surface Acres</b>				
1) Freshwater pond	0.937	0.937	0.937	0.937
2) Pit Sump	0.322	0.322	0.322	0.322
Total surface acres	1.259	1.259	1.259	1.259
<b>Pond Water Volume Change</b>				
1) Freshwater pond				
2) Pit Sump				
3) Change in settling pond storage				
<b>Net Volume Change</b>				
<b>Water Inputs, ac-ft</b>				
Rural Water	0.101	0.000	0.000	0.000
Lake Water	0.000	0.000	0.000	0.000
Well Water	0.000	0.000	0.000	0.000
Precipitation	4.077	8.879	4.575	
<b>Total Water Input</b>	<b>4.178</b>	<b>8.879</b>	<b>4.575</b>	
<b>Water Usage, ac-ft</b>				
Product moisture content	2.547	2.977	3.955	
Haul road dust control	0.368	0.399	0.706	
Evaporation losses	0.234	0.268	0.399	
Misc usage				
<b>Total Water Usage, Ac-ft</b>	<b>3.150</b>	<b>3.643</b>	<b>5.060</b>	
<b>Net Water Input</b>	<b>1.028</b>	<b>5.235</b>	<b>-0.485</b>	
<b>emergency storage of precipitation and runoff, ac-ft</b>				
<b>Groundwater Inflow</b>				
<b>Groundwater Inflow, Avg Ac-ft/Day</b>				
<b>Groundwater Inflow, Avg Gallons/Day</b>				



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)	54.36	subject to refinement
Pit fringe (area drains to pit)	68.34	subject to refinement
Drainage to Pit (total area)	122.70	subject to refinement

Quarry area Fringe area

Date	Precip, in.	Runoff, in.	Runoff, in.	Evapor, in/day
1-Jan	0.00	0.00	0.00	0.06
2-Jan	0.04	0.04	0.00	0.08
3-Jan	0.09	0.09	0.00	0.02
4-Jan	0.07	0.07	0.00	0.05
5-Jan	0.00	0.00	0.00	0.03
6-Jan	0.00	0.00	0.00	0.01
7-Jan	0.08	0.08	0.00	0.04
8-Jan	0.03	0.03	0.00	0.07
9-Jan	0.00	0.00	0.00	0.08
10-Jan	0.00	0.00	0.00	0.11
11-Jan	0.00	0.00	0.00	0.13
12-Jan	0.00	0.00	0.00	0.04
13-Jan	0.09	0.09	0.00	0.01
14-Jan	0.06	0.06	0.00	0.01
15-Jan	0.03	0.03	0.00	0.01
16-Jan	0.06	0.06	0.00	0.06
17-Jan	0.04	0.04	0.00	0.04
18-Jan	0.04	0.04	0.00	0.03
19-Jan	0.02	0.02	0.00	0.06
20-Jan	0.03	0.03	0.00	0.17
21-Jan	0.02	0.02	0.00	0.06
22-Jan	0.02	0.02	0.00	0.08
23-Jan	0.01	0.01	0.00	0.08
24-Jan	0.01	0.01	0.00	0.14
25-Jan	0.00	0.00	0.00	0.07
26-Jan	0.09	0.09	0.00	0.07
27-Jan	0.07	0.07	0.00	0.10
28-Jan	0.00	0.00	0.00	0.11
29-Jan	0.00	0.00	0.00	0.15
30-Jan	0.00	0.00	0.00	0.13
31-Jan	0.00	0.00	0.00	0.16
		0.90	0.00	
<b>Volume, ac-ft</b>		<b>4.08</b>	<b>0.00</b>	<b>2.233</b>
<b>Total Vol, ac-ft</b>		<b>4.08</b>		

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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)	54.36	subject to refinement
Pit fringe (area drains to pit)	68.34	subject to refinement
Drainage to Pit (total area)	122.70	subject to refinement

Quarry area Fringe area

Date	Precip, in	Runoff, in	Runoff, in	Evapor, in/day
1-Feb	0.00	0.00	0.00	0.10
2-Feb	0.00	0.00	0.00	0.03
3-Feb	0.00	0.00	0.00	0.07
4-Feb	0.00	0.00	0.00	0.05
5-Feb	0.00	0.00	0.00	0.05
6-Feb	0.01	0.01	0.00	0.13
7-Feb	0.00	0.00	0.00	0.12
8-Feb	0.00	0.00	0.00	0.10
9-Feb	0.00	0.00	0.00	0.08
10-Feb	0.00	0.00	0.00	0.15
11-Feb	0.00	0.00	0.00	0.17
12-Feb	0.00	0.00	0.00	0.11
13-Feb	0.29	0.29	0.00	0.03
14-Feb	0.81	0.81	0.00	0.00
15-Feb	0.29	0.29	0.00	0.09
16-Feb	0.10	0.10	0.00	0.13
17-Feb	0.07	0.07	0.00	0.11
18-Feb	0.05	0.05	0.00	0.08
19-Feb	0.04	0.04	0.00	0.03
20-Feb	0.04	0.04	0.00	0.05
21-Feb	0.03	0.03	0.00	0.12
22-Feb	0.02	0.02	0.00	0.15
23-Feb	0.01	0.01	0.00	0.18
24-Feb	0.01	0.01	0.00	0.11
25-Feb	0.11	0.11	0.00	0.09
26-Feb	0.04	0.04	0.00	0.08
27-Feb	0.02	0.02	0.00	0.07
28-Feb	0.02	0.02	0.00	0.07
		0.00	0.00	
		0.00	0.00	
		0.00	0.00	
		1.96	0.00	
Volume, ac-ft		8.88	0.00	2.55
Total Vol, ac-ft		8.88		

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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)	54.36	subject to refinement
Pit fringe (area drains to pit)	68.34	subject to refinement
Drainage to Pit (total area)	122.70	subject to refinement

Quarry area Fringe area

Date	Precip, in.	Runoff, in.	Runoff, in.	Evapor, in/day
1-Mar	0.00	0.00	0.00	0.13
2-Mar	0.02	0.02	0.00	0.12
3-Mar	0.00	0.00	0.00	0.15
4-Mar	0.00	0.00	0.00	0.07
5-Mar	0.01	0.01	0.00	0.02
6-Mar	0.00	0.00	0.00	0.14
7-Mar	0.00	0.00	0.00	0.15
8-Mar	0.00	0.00	0.00	0.16
9-Mar	0.00	0.00	0.00	0.14
10-Mar	0.00	0.00	0.00	0.08
11-Mar	0.00	0.00	0.00	0.03
12-Mar	0.01	0.01	0.00	0.05
13-Mar	0.03	0.03	0.00	0.11
14-Mar	0.00	0.00	0.00	0.10
15-Mar	0.00	0.00	0.00	0.11
16-Mar	0.00	0.00	0.00	0.08
17-Mar	0.00	0.00	0.00	0.10
18-Mar	0.00	0.00	0.00	0.14
19-Mar	0.00	0.00	0.00	0.16
20-Mar	0.00	0.00	0.00	0.25
21-Mar	0.00	0.00	0.00	0.17
22-Mar	0.00	0.00	0.00	0.08
23-Mar	0.00	0.00	0.00	0.16
24-Mar	0.00	0.00	0.00	0.23
25-Mar	0.00	0.00	0.00	0.11
26-Mar	0.11	0.11	0.00	0.11
27-Mar	0.22	0.22	0.00	0.13
28-Mar	0.01	0.01	0.00	0.07
29-Mar	0.43	0.43	0.00	0.14
30-Mar	0.17	0.17	0.00	0.16
31-Mar	0.00	0.00	0.00	0.15
		1.01	0.00	
<b>Volume, ac-ft</b>		<b>4.58</b>	<b>0.00</b>	<b>3.8</b>
<b>Total Vol, ac-ft</b>		<b>4.58</b>		

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