

Cogburn, Matt

From: Saucedo, Eddie [sucedoe@vmcmail.com]
Sent: Friday, August 04, 2017 11:48 AM
To: Mackey, Anthony; Jennifer Back; Peter Burck; Cogburn, Matt
Subject: 1Q 2017 North Troy Water report _ Vulcan
Attachments: 1.0 1Q 2017 REPORT NTROY _ Vulcan.pdf; 2.0 1Q 2017 Creek Aug Report NTROY_Vulcan.pdf; 3.0 2017 JAN PRECIP_EVAP NTROY_Vulcan.pdf; 4.0 2017 FEB PRECIP_EVAP NTROY_Vulcan.pdf; 5.0 2017 MAR PRECIP_EVAP NTROY_Vulcan.pdf; 6.0 2017 1Q Shipments NTROY_Vulcan.pdf; 7.0 2017 1Q Water Data NTROY_Vulcan.pdf; 8.0 2017 1Q Combine Report Ntroy_OWRB.pdf; 2017 1Q Data.zip

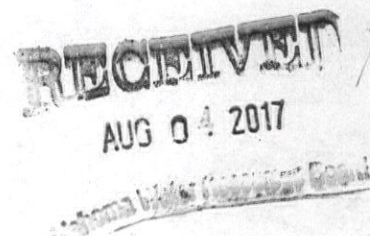
See the attached report documents.

Eddie Saucedo

Environmental Manager | Southwest Division

Vulcan Materials Company

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2017 1st QUARTER REPORT

Report 2017

North Troy Quarry

Mill Creek, OK

Vulcan Materials Company

VMC North Troy 2017 Monitoring Report

All volumes are in acre-feet.

	Total Groundwater Entering Pit	Total Stormwater Entering Pit	Total Pit Stormwater Diverted	Total Pit Water Diverted	Pit Water Sent To Holding Basin	Groundwater Augmentation	Streamwater Augmentation	Consumptive Use of Pit Water	Streamwater Pumped From Mill Creek	Groundwater Pumped From Wells	Total Annual Groundwater Allocation, Ac-ft
January-17	264.75	15.50	15.50	261.59	18.29	260.75	0.00	4.01	0.00	0.00	219.50
February-17	282.41	20.38	20.38	284.48	33.48	276.37	0.00	4.07	0.00	0.00	219.50
March-17	289.88	4.99	4.99	287.69	44.56	220.27	30.35	3.44	0.00	0.00	219.50
1st QTR Totals	837.04	40.87	40.87	833.76	96.33	757.39	30.35	11.53	0.00	0.00	N/A
April-17	#VALUE!	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	219.50
May-17	#VALUE!	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	219.50
June-17	#VALUE!	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	219.50
2nd QTR Totals	#VALUE!	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
July-17	#VALUE!	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	219.50
August-17	#VALUE!	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	219.50
September-17	#VALUE!	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	219.50
3rd QTR Totals	#VALUE!	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
October-17	#VALUE!	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	219.50
November-17	#VALUE!	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	219.50
December-17	#VALUE!	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	219.50
4th QTR Totals	#VALUE!	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
2017 Totals	#VALUE!	40.87	40.87	833.76	96.33	757.39	30.35	11.53	0.00	0.00	219.50

1st Qtr Notes

2nd Qtr Notes

3rd Qtr notes

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MILL CREEK 2017 AUGMENTATION and GAUGE DATA

[illegible]

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PLANTATION

January Precipitation/Evaporation 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)	1.363636364	area draining into pit
S (pit)	0	area with direct interception
Pit - Direct Interception (>95 ft deep)	53.91	subject to refinement
Pit fringe (area drains to pit)	122.04	subject to refinement
Drainage to Pit (total area)	175.95	subject to refinement

Date	Precip, in.	Quarry area Runoff, in.	Fringe area Runoff, in.	Daily Evaporation, in.	
1-Jan		0.00	0.00	0.06	Runoff formula
2-Jan	0.16	0.16	0.00	0.08	$Pe = (P - 0.2S)^2 / (P + 0.8S)$
3-Jan		0.00	0.00	0.06	$S = (1000/CN) - 10$
4-Jan		0.00	0.00	0.07	
5-Jan		0.00	0.00	0.06	Blue cells contain formulas
6-Jan		0.00	0.00	0.02	
7-Jan		0.00	0.00	0.03	
8-Jan		0.00	0.00	0.09	
9-Jan		0.00	0.00	0.13	
10-Jan		0.00	0.00	0.17	
11-Jan		0.00	0.00	0.17	
12-Jan		0.00	0.00	0.2	
13-Jan	0.68	0.68	0.00	0.04	
14-Jan	0.48	0.48	0.00	0.02	
15-Jan	1.34	1.34	0.00	0.04	
16-Jan	0.71	0.71	0.00	0.06	
17-Jan	0.04	0.04	0.00	0.05	
18-Jan	0.04	0.04	0.00	0.03	
19-Jan		0.00	0.00	0.07	
20-Jan		0.00	0.00	0.21	
21-Jan		0.00	0.00	0.08	
22-Jan		0.00	0.00	0.12	
23-Jan		0.00	0.00	0.1	
24-Jan		0.00	0.00	0.22	
25-Jan		0.00	0.00	0.15	
26-Jan		0.00	0.00	0.08	
27-Jan		0.00	0.00	0.09	
28-Jan		0.00	0.00	0.1	
29-Jan		0.00	0.00	0.16	
30-Jan		0.00	0.00	0.14	
31-Jan		0.00	0.00	0.16	
sum	3.45	3.45	0.00	3.06	
Volume, ac-ft		15.50	0.00		
Total Vol, ac-ft		15.50			Pan Evaporation from Sulphur Mesonet

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Water Resources Dept.

February Precipitation/Evaporation 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)	1.36363636	area draining into pit
S (pit)	0	area with direct interception
Pit - Direct Interception (>95 ft deep)	53.91	subject to refinement
Pit fringe (area drains to pit)	122.04	subject to refinement
Drainage to Pit (total area)	175.95	subject to refinement

Date	Precip, in.	Quarry area Runoff, in.	Fringe area Runoff, in.	Daily Evaporation, in.	
1-Feb		0.00	0.00	0.16	Runoff formula
2-Feb		0.00	0.00	0.12	$Pe = (P-0.2S)^2 / (P+0.8S)$
3-Feb		0.00	0.00	0.16	$S = (1000/CN) - 10$
4-Feb		0.00	0.00	0.11	
5-Feb		0.00	0.00	0.09	Blue cells contain formulas
6-Feb		0.00	0.00	0.17	
7-Feb		0.00	0.00	0.18	
8-Feb		0.00	0.00	0.17	
9-Feb		0.00	0.00	0.14	
10-Feb		0.00	0.00	0.24	
11-Feb		0.00	0.00	0.27	
12-Feb		0.00	0.00	0.33	
13-Feb	0.39	0.39	0.00	0.14	
14-Feb	1.76	1.76	0.78	0.02	
15-Feb		0.00	0.00	0.11	
16-Feb		0.00	0.00	0.15	
17-Feb		0.00	0.00	0.18	
18-Feb		0.00	0.00	0.11	
19-Feb		0.00	0.00	0.04	
20-Feb	0.59	0.59	0.00	0.04	
21-Feb	0.04	0.04	0.00	0.15	
22-Feb		0.00	0.00	0.22	
23-Feb		0.00	0.00	0.32	
24-Feb		0.00	0.00	0.27	
25-Feb		0.00	0.00	0.12	
26-Feb		0.00	0.00	0.16	
27-Feb		0.00	0.00	0.05	
28-Feb		0.00	0.00	0.11	
		0.00	0.00		
		0.00	0.00		
sum	2.78	2.78	0.78	4.33	
Volume, ac-ft		12.49	7.89		
Total Vol, ac-ft		20.38			

Pan Evaporation from Sulphur Mesonet

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February Precipitation/Evaporation Data

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Pit fringe (area drains to pit)	122.04	subject to refinement
Drainage to Pit (total area)	175.95	subject to refinement

Date	Precip, in.	Quarry area Runoff, in.	Fringe area Runoff, in.	Daily Evaporation, in.
1-Feb		0.00	0.00	0.16
2-Feb		0.00	0.00	0.12
3-Feb		0.00	0.00	0.16
4-Feb		0.00	0.00	0.11
5-Feb		0.00	0.00	0.09
6-Feb		0.00	0.00	0.17
7-Feb		0.00	0.00	0.18
8-Feb		0.00	0.00	0.17
9-Feb		0.00	0.00	0.14
10-Feb		0.00	0.00	0.24
11-Feb		0.00	0.00	0.27
12-Feb		0.00	0.00	0.33
13-Feb	0.39	0.39	0.00	0.14
14-Feb	1.76	1.76	0.78	0.02
15-Feb		0.00	0.00	0.11
16-Feb		0.00	0.00	0.15
17-Feb		0.00	0.00	0.18
18-Feb		0.00	0.00	0.11
19-Feb		0.00	0.00	0.04
20-Feb	0.59	0.59	0.00	0.04
21-Feb	0.04	0.04	0.00	0.15
22-Feb		0.00	0.00	0.22
23-Feb		0.00	0.00	0.32
24-Feb		0.00	0.00	0.27
25-Feb		0.00	0.00	0.12
26-Feb		0.00	0.00	0.16
27-Feb		0.00	0.00	0.05
28-Feb		0.00	0.00	0.11
		0.00	0.00	
		0.00	0.00	
sum	2.78	2.78	0.78	4.33
Volume, ac-ft		12.49	7.89	
Total Vol, ac-ft		20.38		

Pan Evaporation from Sulphur Mesonet

PRECIPITATION
AUG 04 2017

January Shipments			February Shipments			March Shipments		
	Tons Shipped	Ac-ft of water shipped		Tons Shipped	Ac-ft of water shipped		Tons Shipped	Ac-ft of water shipped
Base Products	1,654	0.041	Base Products	1,911	0.047	Base Products	776	0.019
Coarse			Coarse			Coarse		
Aggregates	190,910	2.295	Aggregates	195,699	2.352	Aggregates	197,507	2.374
			Fine					
Fine Aggregates	5,348	0.170	Aggregates	22,481	0.714	Fine Aggregates	5,270	0.167
	197,913	2.505		220,091	3.113		203,553	2.560

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Monthly Water Data, ac-ft

	Water Diverted From Pit	Storm Water Entering Pit	Net Sump Volume Change	Groundwater Sent To Holding Basin	Groundwater Sent To Infiltration Areas	Groundwater Used For Stream Augmentation	Evaporation	Moisture Content of Product Shipped	Water Truck Usage	Misc Pit Water Use On Site	Misc Pit Water Use Off Site	Production Well Permit 2002-602	North Well Permit 20060601A
January-17	277.09	15.50	3.16	18.29	258.80	0.00	0.00	2.50	1.51	0.00	0.00	0.00	0.00
February-17	304.86	20.38	-2.07	33.48	271.38	0.00	0.00	3.11	0.96	0.00	0.00	0.00	0.00
March-17	292.68	4.99	2.18	44.56	217.77	30.35	0.00	2.56	0.88	0.00	0.00	0.00	0.00
April-17		0.00					0.00	0.00		0.00	0.00		0.00
May-17		0.00					0.00	0.00		0.00	0.00		0.00
June-17		0.00					0.00	0.00		0.00	0.00		0.00
July-17		0.00					0.00	0.00		0.00	0.00		0.00
August-17		0.00					0.00	0.00		0.00	0.00		0.00
September-17		0.00					0.00	0.00		0.00	0.00		0.00
October-17		0.00					0.00	0.00		0.00	0.00		0.00
November-17		0.00					0.00	0.00		0.00	0.00		0.00
December-17		0.00					0.00	0.00		0.00	0.00		0.00

Pit Sump Volumes

Fit Sump Volumes	West Sump					905 Sump					New Freshwater Pond					Total Evaporation, ac-ft
	Month End Depth-to-Water, Ft	Width, Ft	Length, Ft	Sump Volume Change, Ac-ft	Evaporation, ac-ft	Month End Depth-to-Water, Ft	Width, Ft	Length, Ft	Sump Volume Change, Ac-ft	Evaporation, ac-ft	Month End Depth-to-Water, Ft	Width, Ft	Length, Ft	Pond Volume Change, Ac-ft	Evaporation, ac-ft	
January-17	11.432	125	325	3.16	0.24	4	50	50	0.00	0.01	4.29		750	0.00	0.00	0.25
February-17	13.649	125	325	-2.07	0.34	4	50	50	0.00	0.02	4.036		750	0.00	0.00	0.36
March-17	11.309	125	325	2.18	0.51	4	50	50	0.00	0.03	2.996		750	0.00	0.00	0.54
April-17		125	325		0.00	4	50	50	0.00	0.00			750		0.00	0.00
May-17		125	325		0.00	4	50	50	0.00	0.00			750		0.00	0.00
June-17		125	325		0.00	4	50	50	0.00	0.00			750		0.00	0.00
July-17		125	325		0.00	4	50	50	0.00	0.00			750		0.00	0.00
August-17		125	325		0.00	4	50	50	0.00	0.00			750		0.00	0.00
September-17		125	325		0.00	4	50	50	0.00	0.00			750		0.00	0.00
October-17		125	325		0.00	4	50	50	0.00	0.00			750		0.00	0.00
November-17		125	325		0.00	4	50	50	0.00	0.00			750		0.00	0.00
December-17		125	325		0.00	4	50	50	0.00	0.00			750		0.00	0.00

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