

2024 4th Quarter Report

Report 2024

North Troy Quarry

Mill Creek, OK

Vulcan Materials Company

VMC North Troy 2024 Monitoring Report

All volumes are in acre-feet.

	All Water Pumped	Total Stormwater Entering Pit note(a)	Total Groundwater Diverted	Pit Water Sent To Holding Basin	Groundwater Augmentation	Streamwater Augmentation	Defined Elements of Consumptive Use of Pit Water	Streamwater Pumped From Mill Creek	Groundwater Pumped From Wells	Total Annual Groundwater Allocation, Ac-ft
January-24	528.00	22.04	505.96	34.70	208.58	287.00	6.63	0.00	0.00	219.50
February-24	514.60	12.79	501.81	32.50	281.34	207.00	9.22	0.00	0.00	219.50
March-24	594.30	21.39	572.91	37.30	394.90	164.60	11.93	0.00	0.00	219.50
1st QTR Totals	1636.90	56.22	1580.68	104.50	884.81	658.60	27.78	0.00	0.00	N/A
April-24	602.00	131.68	470.32	41.80	566.69	0.00	12.17	0.00	0.00	219.50
May-24	621.00	69.23	551.77	44.20	579.19	0.00	9.33	0.00	0.00	219.50
June-24	587.00	50.81	536.19	43.10	548.89	0.00	13.12	0.00	0.00	219.50
2nd QTR Totals	1810.00	251.71	1558.29	129.10	1694.76	0.00	34.62	0.00	0.00	N/A
July-24	579.56	33.39	546.17	40.77	541.18	0.00	18.03	0.00	0.00	219.50
August-24	593.28	43.94	549.34	38.40	560.12	0.00	18.64	0.00	0.00	219.50
September-24	631.85	1.29	630.56	38.31	595.71	0.00	17.16	0.00	0.00	219.50
3rd QTR Totals	1804.69	78.61	1726.08	117.48	1697.01	0.00	53.83	0.00	0.00	N/A
October-24	595.78	12.26	583.53	37.41	564.11	0.00	20.61	0.00	0.00	219.50
November-24	556.48	127.90	428.58	36.40	522.03	0.00	7.55	0.00	0.00	219.50
December-24	572.00	35.20	536.80	41.30	535.69	0.00	9.92	0.00	0.00	219.50
4th QTR Totals	1724.26	175.36	1548.90	115.11	1621.83	0.00	38.08	0.00	0.00	N/A
2024 Totals	6975.85	561.91	6413.94	466.19	5898.41	658.60	154.32	0.00	0.00	219.50
2024 Total (adj)	6975.85	561.91	6413.94	466.19	5898.41	658.60	154.32	0.00	0.00	219.50

1st Qtr notes Production well electric issue - unable pump / no sample

2nd Qtr notes

3rd Qtr notes

4th Qtr notes

(a) Total Stormwater = Volume of precipitation that falls into producing mine pit and volume of precipitation that falls onto producing mine and flows over the land surface into the mine pit.

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2024 ANNUAL REPORT

Report 2024

North Troy Quarry

Mill Creek, OK

Vulcan Materials Company

VMC North Troy 2024 Monitoring Report

All volumes are in acre-feet.

	All Water Pumped	Total Stormwater Entering Pit note(a)	Total Groundwater Diverted	Pit Water Sent To Holding Basin	Groundwater Augmentation	Streamwater Augmentation	Defined Elements of Consumptive Use of Pit Water	Streamwater Pumped From Mill Creek	Groundwater Pumped From Wells	Total Annual Groundwater Allocation, Ac-ft
January-24	528.00	22.04	505.96	34.70	208.58	287.00	6.63	0.00	0.00	219.50
February-24	514.60	12.79	501.81	32.50	281.34	207.00	9.22	0.00	0.00	219.50
March-24	594.30	21.39	572.91	37.30	394.90	164.60	11.93	0.00	0.00	219.50
1st QTR Totals	1636.90	56.22	1580.68	104.50	884.81	658.60	27.78	0.00	0.00	N/A
April-24	602.00	131.68	470.32	41.80	566.69	0.00	12.17	0.00	0.00	219.50
May-24	621.00	69.23	551.77	44.20	579.19	0.00	9.33	0.00	0.00	219.50
June-24	587.00	50.81	536.19	43.10	548.89	0.00	13.12	0.00	0.00	219.50
2nd QTR Totals	1810.00	251.71	1558.29	129.10	1694.76	0.00	34.62	0.00	0.00	N/A
July-24	579.56	33.39	546.17	40.77	541.18	0.00	18.03	0.00	0.00	219.50
August-24	593.28	43.94	549.34	38.40	560.12	0.00	18.64	0.00	0.00	219.50
September-24	631.85	1.29	630.56	38.31	595.71	0.00	17.16	0.00	0.00	219.50
3rd QTR Totals	1804.69	78.61	1726.08	117.48	1697.01	0.00	53.83	0.00	0.00	N/A
October-24	595.78	12.26	583.53	37.41	564.11	0.00	20.61	0.00	0.00	219.50
November-24	556.48	127.90	428.58	36.40	522.03	0.00	7.55	0.00	0.00	219.50
December-24	572.00	35.20	536.80	41.30	535.69	0.00	9.92	0.00	0.00	219.50
4th QTR Totals	1724.26	175.36	1548.90	115.11	1621.83	0.00	38.08	0.00	0.00	N/A
2024 Totals	6975.85	561.91	6413.94	466.19	5898.41	658.60	154.32	0.00	0.00	219.50
2024 Total (adj)	6975.85	561.91	6413.94	466.19	5898.41	658.60	154.32	0.00	0.00	219.50

1st Qtr notes

2nd Qtr notes

3rd Qtr notes

4th Qtr notes

(a) Total Stormwater = Volume of precipitation that falls into producing mine pit and volume of precipitation that falls onto producing mine and flows over the land surface into the mine pit.
(adj) Annual total adjustment for stormwater carried over to next calendar year

Water Balance =	-609.26	Total Net Reported Consumptive Use
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MILL CREEK 2024 AUGMENTATION and GAUGE DATA

Start Date	Stop Date		Augmentation Ac - Ft pumped	Stormwater Pumped AF	Mill Creek Stream gauge Reading	
1/1/2024			105.60			
1/11/2024			47.40			
1/16/2024			1.20			
1/17/2024			12.10			
1/19/2024			14.10			
1/21/2024			21.70			
1/24/2024			15.00			
1/25/2024			10.00			
1/30/2024			59.90			
2/26/2024			46.30			
2/17/2024			41.00			
2/21/2024			59.00			
2/27/2024			60.9			
3/6/2024			53.9			
3/12/2024			39.80			
3/16/2024			25.80			
3/20/2024			45.10			
7/1/2024			No pump to creek			
8/1/2024			No pump to creek			
9/1/2024			No pump to creek			
10/1/2024			No pump to creek			
11/1/2024			No pump to creek			
12/1/2024			No pump to creek			
Total			658.80			

658.80 Pumped to Mill Creek
658.80 Augmented to Mill Creek
Stormwater collected entering pit
0 Stormwater pumped to Mill Creek

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October 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)	1.363636	area draining into pit
S (pit)	0	area with direct interception
Pit - Direct Interception (>95 ft deep)	129.00	subject to refinement
Pit fringe (area drains to pit)	77.00	subject to refinement
Drainage to Pit (total area)	206.00	subject to refinement

Date	Precip, in.	Runoff, in.	Runoff, in.	Daily
1-Oct	0.00	0.00	0.00	0.22
2-Oct	0.00	0.00	0.00	0.21
3-Oct	0.00	0.00	0.00	0.27
4-Oct	0.00	0.00	0.00	0.2
5-Oct	0.00	0.00	0.00	0.19
6-Oct	0.00	0.00	0.00	0.15
7-Oct	0.00	0.00	0.00	0.27
8-Oct	0.00	0.00	0.00	0.23
9-Oct	0.00	0.00	0.00	0.21
10-Oct	0.62	0.62	0.00	0.32
11-Oct	0.00	0.00	0.00	0.35
12-Oct	0.00	0.00	0.00	0.31
13-Oct	0.00	0.00	0.00	0.3
14-Oct	0.00	0.00	0.00	0.29
15-Oct	0.00	0.00	0.00	0.3
16-Oct	0.00	0.00	0.00	0.17
17-Oct	0.00	0.00	0.00	0.22
18-Oct	0.00	0.00	0.00	0.32
19-Oct	0.00	0.00	0.00	0.25
20-Oct	0.00	0.00	0.00	0.17
21-Oct	0.00	0.00	0.00	0.28
22-Oct	0.00	0.00	0.00	0.25
23-Oct	0.00	0.00	0.00	0.19
24-Oct	0.00	0.00	0.00	0.28
25-Oct	0.00	0.00	0.00	0.18
26-Oct	0.00	0.00	0.00	0.2
27-Oct	0.00	0.00	0.00	0.16
28-Oct	0.00	0.00	0.00	0.34
29-Oct	0.00	0.00	0.00	0.32
30-Oct	0.00	0.00	0.00	0.24
31-Oct	0.52	0.52	0.00	0.14
sum	1.14	1.14	0.00	7.53
Volume, ac-ft		12.26	0.00	
Total Vol, ac-ft		12.26		

* Used Mesonet Pan Evaporation - Sulphur
Rainfall data

November 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)	1.363636	area draining into pit
S (pit)	0	area with direct interception
Pit - Direct Interception (>95 ft deep)	129.00	subject to refinement
Pit fringe (area drains to pit)	77.00	subject to refinement
Drainage to Pit (total area)	206.00	subject to refinement

Date	Precip, in.	Runoff, in.	Runoff, in.	Daily
1-Nov	0.00	0.00	0.00	0.09
2-Nov	0.08	0.08	0.00	0.06
3-Nov	5.01	5.01	3.68	0.04
4-Nov	0.36	0.36	0.00	0.07
5-Nov	0.01	0.01	0.00	0.06
6-Nov	0.00	0.00	0.00	0.11
7-Nov	0.00	0.00	0.00	0.1
8-Nov	0.58	0.58	0.00	0.03
9-Nov	0.00	0.00	0.00	0.09
10-Nov	0.00	0.00	0.00	0.09
11-Nov	0.00	0.00	0.00	0.08
12-Nov	0.00	0.00	0.00	0.12
13-Nov	0.05	0.05	0.00	0.13
14-Nov	0.00	0.00	0.00	0.08
15-Nov	0.00	0.00	0.00	0.14
16-Nov	0.00	0.00	0.00	0.16
17-Nov	0.00	0.00	0.00	0.07
18-Nov	2.69	2.69	1.55	0.07
19-Nov	0.00	0.00	0.00	0.11
20-Nov	0.00	0.00	0.00	0.11
21-Nov	0.00	0.00	0.00	0.08
22-Nov	0.00	0.00	0.00	0.07
23-Nov	0.00	0.00	0.00	0.18
24-Nov	0.00	0.00	0.00	0.18
25-Nov	0.00	0.00	0.00	0.13
26-Nov	0.00	0.00	0.00	0.09
27-Nov	0.00	0.00	0.00	0.17
28-Nov	0.00	0.00	0.00	0.08
29-Nov	0.00	0.00	0.00	0.05
30-Nov	0.00	0.00	0.00	0.13
sum	8.78	8.78	5.22	2.97
Volume, ac-ft		94.39	33.52	
Total Vol, ac-ft		127.90		

* Used Mesonet Pan Evaporation - Sulphur
Rainfall data

December 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)	1.363636	area draining into pit
S (pit)	0	area with direct interception
Pit - Direct Interception (>95 ft deep)	129.00	subject to refinement
Pit fringe (area drains to pit)	77.00	subject to refinement
Drainage to Pit (total area)	206.00	subject to refinement

Date	Precip, in.	Runoff, in.	Runoff, in.	Daily
1-Dec	0.00	0.00	0.00	0.07
2-Dec	0.00	0.00	0.00	0.09
3-Dec	0.00	0.00	0.00	0.09
4-Dec	0.00	0.00	0.00	0.06
5-Dec	0.00	0.00	0.00	0.1
6-Dec	0.00	0.00	0.00	0.08
7-Dec	0.01	0.01	0.00	0.09
8-Dec	0.07	0.07	0.00	0.03
9-Dec	0.00	0.00	0.00	0.04
10-Dec	0.00	0.00	0.00	0.06
11-Dec	0.00	0.00	0.00	0.07
12-Dec	0.00	0.00	0.00	0.21
13-Dec	0.08	0.08	0.00	0.08
14-Dec	0.10	0.10	0.00	0.08
15-Dec	0.00	0.00	0.00	0.06
16-Dec	0.00	0.00	0.00	0.13
17-Dec	0.62	0.62	0.00	0.07
18-Dec	0.00	0.00	0.00	0.11
19-Dec	0.00	0.00	0.00	0.06
20-Dec	0.00	0.00	0.00	0.07
21-Dec	0.00	0.00	0.00	0.07
22-Dec	0.00	0.00	0.00	0.12
23-Dec	0.00	0.00	0.00	0.09
24-Dec	0.34	0.34	0.00	0.04
25-Dec	0.01	0.01	0.00	0.02
26-Dec	1.63	1.63	0.68	0.03
27-Dec	0.00	0.00	0.00	0.05
28-Dec	0.00	0.00	0.00	0.03
29-Dec	0.01	0.01	0.00	0.05
30-Dec	0.00	0.00	0.00	0.2
31-Dec	0.00	0.00	0.00	0.09
sum	2.87	2.87	0.68	2.44
Volume, ac-ft		30.85	4.34	
Total Vol, ac-ft		35.20		

* Used Mesonet Pan Evaporation - Sulphur
Rainfall data

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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-24	528.00	22.04	0.00	34.70	206.30	287.00	0.29	3.30	3.04	0.00	0.00	0.00	0.00
February-24	514.60	12.79	0.00	32.50	275.10	207.00	0.58	3.12	5.52	0.00	0.00	0.00	0.00
March-24	594.30	21.39	0.00	37.30	392.40	164.60	0.74	3.18	8.01	0.00	0.00	0.00	0.00
April-24	602.00	131.68	0.00	41.80	560.20	0.00	1.33	3.52	7.32	0.00	0.00	0.00	0.00
May-24	621.00	69.23	0.00	44.20	576.80	0.00	1.47	2.84	5.02	0.00	0.00	0.00	0.00
June-24	587.00	50.81	0.00	43.10	543.90	0.00	1.93	2.67	8.52	0.00	0.00	0.00	0.00
July-24	579.56	33.39	0.00	40.77	538.79	0.00	1.92	3.08	13.03	0.00	0.00	0.00	0.00
August-24	593.28	43.94	0.00	38.40	554.88	0.00	1.92	2.49	14.22	0.00	0.00	0.00	0.00
September-24	631.85	1.29	0.00	38.31	593.54	0.00	2.04	3.38	11.74	0.00	0.00	0.00	0.00
October-24	595.78	12.26	0.00	37.41	558.37	0.00	1.69	2.58	16.34	0.00	0.00	0.00	0.00
November-24	556.48	127.90	0.00	36.40	520.08	0.00	0.67	3.02	3.87	0.00	0.00	0.00	0.00
December-24	572.00	35.20	0.00	41.30	530.70	0.00	0.55	3.98	5.39	0.00	0.00	0.00	0.00

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Settling Cell Evaporation and Infiltration

F02 East							F02 West						F03/FO4 South Settling Cell								Total	Total
	Width, Ft	Length, Ft	Evaporation, ac-ft	Number of Production Days	Infiltration Rate, Ac-ft/day	Total Infiltration, Ac-ft	Width, Ft	Length, Ft	Evaporation, ac-ft	Number of Production Days	Infiltration Rate, Ac-ft/day	Total Infiltration, Ac-ft	Width, Ft	Length, Ft	Evaporation, ac-ft	Number of Production Days	Infiltration Rate, Ac-ft/day	Total Infiltration, Ac-ft	Total Evaporation, ac-ft	Total Infiltration, ac-ft		
January-24	50	330	0.06	21.00	0.08	1.72	50	350	0.00	0.00	0.22	0.00	200	435	0.34	21.00	0.03	0.56	0.40	2.28		
February-24	50	330	0.00	0.00	0.08	0.00	50	350	0.14	25.00	0.22	5.57	200	435	0.68	25.00	0.03	0.67	0.82	6.24		
March-24	50	330	0.17	23.00	0.08	1.88	50	350	0.00	0.00	0.22	0.00	200	435	0.87	23.00	0.03	0.61	1.04	2.50		
April-24	50	330	0.00	0.00	0.08	0.00	50	350	0.20	26.00	0.22	5.79	200	435	0.99	26.00	0.03	0.69	1.19	6.49		
May-24	50	330	0.21	22.00	0.08	1.80	50	350	0.00	0.00	0.22	0.00	200	435	1.05	22.00	0.03	0.59	1.30	2.39		
June-24	50	330	0.00	0.00	0.08	0.00	50	350	0.29	20.00	0.22	4.46	200	435	1.43	20.00	0.03	0.53	1.72	4.99		
July-24	50	330	0.27	22.00	0.08	1.80	50	350	0.00	0.00	0.22	0.00	200	435	1.43	22.00	0.03	0.59	1.70	2.39		
August-24	50	330	0.00	0.00	0.08	0.00	50	350	0.29	21.00	0.22	4.68	200	435	1.43	21.00	0.03	0.56	1.72	5.24		
September-24	50	330	0.29	20.00	0.08	1.64	50	350	0.00	0.00	0.22	0.00	200	435	1.52	20.00	0.03	0.53	1.81	2.17		
October-24	50	330	0.00	0.00	0.08	0.00	50	350	0.25	23.00	0.22	5.13	200	435	1.25	23.00	0.03	0.61	1.51	5.74		
November-24	50	330	0.09	18.00	0.08	1.47	50	350	0.00	0.00	0.22	0.00	200	435	0.49	18.00	0.03	0.48	0.59	1.95		
December-24	50	330	0.00	0.00	0.08	0.00	50	350	0.08	20.00	0.22	4.46	200	435	0.41	20.00	0.03	0.53	0.49	4.99		

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October Shipments			November Shipments			December Shipments		
	Tons Shipped	Ac-ft of water shipped		Tons Shipped	Ac-ft of water shipped		Tons Shipped	Ac-ft of water shipped
Base Products	1,540	0.038	Base Products	836	0.020	Base Products	922	0.023
Coarse			Coarse			Coarse		
Aggregates	200,880	2.414	Aggregates	208,123	2.501	Aggregates	290,027	3.486
Fine			Fine			Fine		
Aggregates	4,116	0.131	Aggregates	15,571	0.495	Aggregates	14,942	0.475
	206,536	2.583		224,530	3.017		305,891	3.983

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