MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

MONTHLY OPERATION REPORT - CLASS D WATER TREATMENT PLANT

Issued under authority of 1976 PA 399 and the Administrative Rules, as amended. Administrative Rule R 325.11512 says in part, "A supplier of water where treatment is employed shall prepare an operation report on a form provided by the department for each month of operation." Failure to submit this form is a violation of the Act and may subject the water supply to enforcement penalties.

Water Supply Information

City of Morenci		004490
Supply Name		WSSN
Kipp Scott	D-3, S-3	Jan
Operator In Charge (OIC)	System Classification	Month
F-2, S-3	Lenawee	2021
Certification Level of OIC	County	Year

Distribution Chlorine Residual Monitoring

(Sampling Conducted per DBPR Monitoring Plan)

Number of chlorine residual measurements taken during the month:	31 - Various Distribution Sites
Number of chlorine residual measurements that exceeded 4 mg/L:	0
Monthly average "free" chlorine residual:	1.13

Comments

Plant tap (which is N/A) residuals are take at the first hydrant downstream from the iron removal water treatment plant (approximately 300' downstream of the IRP filters).

Certification

Kipp Scott - OIC
Name and Title of Authorized Agent

Signature

2/1/2021
Date Submitted

Send Completed Report To:	**Staff and Contact Information**	
Department of Environmental Quality (DEQ)		
Office of Drinking Water and	Taryn Simon, EQA	517-257-7465
Municipal Assistance	Cailtin Bates, District Engineer;	517-262-6795
301 East Louis Glick Highway	Pat Brennan, District Sup'r;	517-581-2769
Jackson, Michigan, 49201	Fax;	517-780-7855
Or submit via email to	PEAS Hotline;	1-800-292-4706
EGLE-DWEH-Jackson@michigan.gov		

City of Morenci | 4490 | Jan 2020

Name of Supply | WSSN

Day of the month	Raw Pumpage in Million of Gallons per Day		Raw Pumpage Daily Total MGD	Raw Water To Iron Removal Plant MG	Raw Water To Iron Removal Plant MLbs	Comments
	Well 1	Well 2				
1	0.101	0.089	0.190	0.190	1.585	
2	0.103	0.088	0.191	0.191	1.593	
3	0.165	0.113	0.278	0.278	2.319	
4	0.093	0.090	0.183	0.183	1.526	
5	0.099	0.090	0.189	0.189	1.576	
6	0.126	0.154	0.280	0.280	2.335	
7	0.255	0.163	0.418	0.418	3.486	flushed part of distribution sys
8	0.099	0.090	0.189	0.189	1.576	
9	0.076	0.021	0.097	0.097	0.809	
10	0.112	0.155	0.267	0.267	2.227	
11	0.095	0.086	0.181	0.181	1.510	
12	0.098	0.089	0.187	0.187	1.560	
13	0.205	0.112	0.317	0.317	2.644	
14	0.099	0.085	0.184	0.184	1.535	
15	0.097	0.084	0.181	0.181	1.510	
16	0.102	0.085	0.187	0.187	1.560	
17	0.106	0.088	0.194	0.194	1.618	
18	0.104	0.086	0.190	0.190	1.585	
19	0.073	0.131	0.204	0.204	1.701	
20	0.100	0.070	0.170	0.170	1.418	
21	0.162	0.107	0.269	0.269	2.243	leak filter 4 effluent pipe
22	0.101	0.085	0.186	0.186	1.551	
23	0.116	0.149	0.265	0.265	2.210	
24	0.127	0.021	0.148	0.148	1.234	
25	0.170	0.057	0.227	0.227	1.893	
26	0.084	0.112	0.196	0.196	1.635	
27	0.082	0.103	0.185	0.185	1.543	
28	0.083	0.105	0.188	0.188	1.568	
29	0.077	0.103	0.180	0.180	1.501	
30	0.078	0.104	0.182	0.182	1.518	
31	0.081	0.106	0.187	0.187	1.560	
Total	3.469	3.021	6.490	6.490	54.127	
Avg	0.112	0.097	0.209	0.209	1.746	
Max	0.255	0.163	0.418	0.418	3.486	
Min	0.073	0.021	0.094	0.094	0.784	

City of Morenci | 004490 | Jan 2021

Name of Supply | WSSN | Iron Removal Plant

Day of the month	Water in Millions of Gallons				Head Loss Thru Filter ft/psi	Oxidant/Chlorine		Plant Tap/Hydrant Chlorine Residual		IRP Filter Chlorine Residual		Plant Tap Analysis	
	Raw Water To Plant	Filter Backwash To WWTP	Total Water To System	Total Million Pounds		Cl_2 Applied Pounds	Cl_2 Applied mg/L	Free	Total	Free	Total	Iron as Fe mg/L	Manganese as Mn mg/L
1	0.190		0.190	1.585		6.4	4.04			0.14	0.31		
2	0.191		0.191	1.593		6.2	3.89			0.19	0.72		
3	0.278		0.278	2.319		9.3	4.01			0.27	0.51		
4	0.183		0.183	1.526		6.0	3.93			0.13	0.46		
5	0.189		0.189	1.576		6.5	4.12			0.13	0.34		
6	0.280	0.020	0.260	2.335		7.2	3.08	0.77	0.89	0.08	0.39	0.22	
7	0.418		0.418	3.486		15.9	4.56			0.28	0.40		
8	0.189		0.189	1.576		6.8	4.31			0.25	0.45		
9	0.097		0.097	0.809		2.9	3.58			0.19	0.47		
10	0.267		0.267	2.227		9.7	4.36			0.13	0.24		
11	0.181		0.181	1.510		6.4	4.24			0.18	0.46		
12	0.187		0.187	1.560		6.4	4.10			0.07	0.43		
13	0.317	0.020	0.297	2.644		10.8	4.09	0.06	0.30	0.06	0.24	0.21	
14	0.184		0.184	1.535		5.9	3.84			0.08	0.46		
15	0.181		0.181	1.510		6.2	4.11			0.12	0.50		
16	0.187		0.187	1.560		6.5	4.17			0.10	0.39		
17	0.194		0.194	1.618		7.1	4.39			0.15	0.35		
18	0.190		0.190	1.585		6.0	3.79			0.21	0.71		
19	0.204	0.020	0.184	1.701		7.4	4.35	1.15	1.32	0.12	0.28	0.14	
20	0.170		0.170	1.418		6.2	4.37			0.11	0.14		
21	0.269		0.269	2.243		8.1	3.61			0.45	0.50		
22	0.186		0.186	1.551		6.2	4.00			0.25	0.29		
23	0.265		0.265	2.210		9.2	4.16			0.15	0.32		
24	0.148		0.148	1.234		4.1	3.32			0.29	0.41		
25	0.227	0.020	0.207	1.893		7.2	3.80	1.05	1.19	0.21	0.37	0.36	
26	0.196		0.196	1.635		6.5	3.98			0.14	0.30		
27	0.185		0.185	1.543		6.6	4.28			0.10	0.22		
28	0.188		0.188	1.568		6.7	4.27			0.08	0.23		
29	0.180		0.180	1.501		6.5	4.33			0.06	0.33		
30	0.182		0.182	1.518		7.4	4.88			0.08	0.28		
31	0.187		0.187	1.560		6.0	3.85			0.21	0.50		
Total	6.490	0.080	6.410	54.127		220.3	125.82	3.03	3.70	5.0	12.0	0.93	
Avg	0.209	0.020	0.207	1.746		7.1	4.06	0.76	0.93	0.16	0.39	0.23	
Max	0.418	0.020	0.418	3.486		15.9	4.88	1.15	1.32	0.45	0.72	0.36	
Min	0.097	0.020	0.097	0.809		2.9	3.08	0.06	0.30	0.06	0.14	0.14	

CHEMICAL ANALYSIS - City of Morenci | 4490 | Iron Removal Plant Raw/Tap | Jan 2021

Name of Supply | WSSN

Day of Month	Conductivity		Temperature		Total - Hardness mg/L		Total - Alkalinity mg/L		Chloride mg/l		Calcium mg/l		Iron mg/l		Manganese mg/L		Sulfate mg/l		pH Analysis		Phosphate mg/l	
	Raw Sample Tap	Plant Tap	Raw Temp°C	Tap Temp°C	Raw Sample Tap	Plant Tap	Raw Sample Tap	Plant Tap	Raw Sample Tap	Plant Tap	Raw Sample Tap	Plant Tap	Raw Sample Tap	Plant Tap	Raw Sample Tap	Plant Tap	Raw Sample Tap	Plant Tap	Raw Sample Tap	Plant Tap	Raw Sample Tap	Plant Tap
1																						
2																						
3																						
4																						
5																						
6		660		11.9		280		274				72.6	0.68	0.22						7.62		
7																						
8																						
9																						
10																						
11																						
12																						
13		661		13.8		280		279		26.3		66.5	0.71	0.21				31.9		7.67		
14																						
15																						
16																						
17																						
18																						
19		655		12.4		278		276				68.9	0.73	0.14						7.51		
20																						
21																						
22																						
23																						
24																						
25		653		12.4		286		278		36.3		86.2		0.36				20.7		7.55		
26																						
27																						
28																						
29																						
30																						
31																						
Total:																						
Average:		657.3		12.6		281.0		276.8		31.3		73.6						26.3		7.59		
Maximum:		661.0		13.8		286.0		279.0		36.3		86.2						31.9		7.67		
Minimum:		653.0		11.9		278.0		274.0		26.3		66.5						20.7		7.51		

Comments:

City of Morenci | 004490 | Jan 2021

Name of Supply | WSSN | Oxidation & Chlorination

Day of the month	Treated Water Metered		Oxidant / Chlorine		Chlorine Residual mg/L							Comments
					Distribution (DPW)		Distribution System		Distribution System Location	Applied IRP Filters		
	Million Gallons	Million lbs	Avail 99.8% Cl_2 Gas in lbs	Cl_2 Applied mg/L	Free	Total	Free	Total		Free	Total	
1	0.190	1.585	6.4	4.04	1.04	1.29			597 W. Chestnut	0.14	0.31	
2	0.191	1.593	6.2	3.89	1.01	1.29			597 W. Chestnut	0.19	0.72	
3	0.278	2.319	9.3	4.01	1.06	1.30			597 W. Chestnut	0.27	0.51	
4	0.183	1.526	6.0	3.93	1.15	1.42			597 W. Chestnut	0.13	0.46	
5	0.189	1.576	6.5	4.12	1.09	1.36			597 W. Chestnut	0.13	0.34	
6	0.280	2.335	7.2	3.08	1.09	1.32			597 W. Chestnut	0.08	0.39	
7	0.418	3.486	15.9	4.56	0.94	1.22			597 W. Chestnut	0.28	0.40	
8	0.189	1.576	6.8	4.31	1.25	1.55			597 W. Chestnut	0.25	0.45	
9	0.097	0.809	2.9	3.58	1.39	1.67			597 W. Chestnut	0.19	0.47	
10	0.267	2.227	9.7	4.36	1.09	1.34			597 W. Chestnut	0.13	0.24	
11	0.181	1.510	6.4	4.24	1.37	1.64			597 W. Chestnut	0.18	0.46	
12	0.187	1.560	6.4	4.10	1.28	1.51			597 W. Chestnut	0.07	0.43	
13	0.317	2.644	10.8	4.09	1.25	1.41			597 W. Chestnut	0.06	0.24	
14	0.184	1.535	5.9	3.84	1.14	1.38			597 W. Chestnut	0.08	0.46	
15	0.181	1.510	6.2	4.11	1.26	1.42			597 W. Chestnut	0.12	0.50	
16	0.187	1.560	6.5	4.17	1.16	1.39			597 W. Chestnut	0.10	0.39	
17	0.194	1.618	7.1	4.39	0.66	0.95			597 W. Chestnut	0.15	0.35	
18	0.190	1.585	6.0	3.79	1.17	1.41			597 W. Chestnut	0.21	0.71	
19	0.204	1.701	7.4	4.35	1.14	1.39			597 W. Chestnut	0.12	0.28	
20	0.170	1.418	6.2	4.37	1.21	1.49			597 W. Chestnut	0.11	0.14	
21	0.269	2.243	8.1	3.61	0.63	0.83			597 W. Chestnut	0.45	0.50	
22	0.186	1.551	6.2	4.00	0.99	1.28			597 W. Chestnut	0.25	0.29	
23	0.265	2.210	9.2	4.16	1.11	1.34			597 W. Chestnut	0.15	0.32	
24	0.148	1.234	4.1	3.32	0.92	1.05			597 W. Chestnut	0.29	0.41	
25	0.227	1.893	7.2	3.80	0.92	1.15			597 W. Chestnut	0.21	0.37	
26	0.196	1.635	6.5	3.98	1.03	1.33			597 W. Chestnut	0.14	0.30	
27	0.185	1.543	6.6	4.28	1.25	1.48			597 W. Chestnut	0.10	0.22	
28	0.188	1.568	6.7	4.27	1.19	1.43			597 W. Chestnut	0.08	0.23	
29	0.180	1.501	6.5	4.33	1.20	1.46			597 W. Chestnut	0.06	0.33	
30	0.182	1.518	7.4	4.88	0.82	1.07			597 W. Chestnut	0.08	0.28	
31	0.187	1.560	6.0	3.85	2.17	2.48			597 W. Chestnut	0.21	0.50	
Total	6.490	54.127	220.3			42.7				5.0	12.0	
Avg	0.209	1.746	7.1	4.07	1.13	1.38				0.16	0.39	
Max	0.418	3.486	15.9	4.88	2.17	2.48				0.45	0.72	
Min	0.094	0.809	2.9	3.08	0.63	0.83				0.06	0.14	

City of Morenci		004490		Jan	2021
Name of Supply		WSSN		Month	Year

2	Routine samples required	0	Repeat samples taken		Cl_2 residuals from routine & repeat	
4	Routine samples taken	0	Repeat samples total colifor 43963.00			
0	Routine samples positive	P/A	Analytical Method	Average	0.92	1.06
				Maximum	0.96	1.06
				Minumum	0.88	1.06

Distribution System - Routine Samples			Chlorine Residual (mg/L)	
Count	Sample Location	Date Collected	Free	Total
1	597 West Chestnut Street	01/06/21	0.88	1.06
2	118 Orchard Street	01/06/21	0.96	1.06
3	485 West Main - Well #1 - Raw	01/06/21	N/A	N/A
4	485 West Main - Well #2 - Raw	01/06/21	N/A	N/A
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
19				

Distribution System - **Repeat** Samples-**Contact District if > one Positive**			Chlorine Residual (mg/L)	
Count	Sample Location	Date Collected	Free	Total
1				
2				
3				
4				
5				
6				
7				
8				
9				

Other: Triggered Source Water Samples, entry point (plant tap) …			Chlorine Residual (mg/L)	
Count	Sample Location	Date Collected	Free	Total
1				
2				
3				
4				
5				
6				
7				
8				
9				