COMMITMENT & INTEGRITY
DRIVE RESULTS

1111 Nantasket Ave.
Hull, Massachusetts 02045

T 781.925.0906

WOODARD
&CURRAN

November 8, 2018

Ms. Marie J. McDonald
U.S. Environmental Protection Agency
Water Enforcement, OES4-SMR
5 Post Office Square
Boston, MA 02109-3912

Subject: Hull, MA Water Pollution Control Facility (WPCF) – NPDES Permit No. MA0101231
Discharge Monitoring Reports – October 2018 – Discharge 001-A

Dear Ms. McDonald:

Enclosed please find the completed DMR for the month of October 2018. Please note that the facility effluent was in compliance with NPDES requirements.

Per the facility's NPDES permit, Footnote #7 – "Chlorination Systems," we are reporting on the conditions found on the morning of Sunday October 21, 2018. The sodium hypochlorite feed tubing that delivers sodium hypochlorite to the effluent wet well had developed a leak and less than the desired amount of chemical was delivered to the effluent wet well application point. Based upon the trending data, we suspect the issue started around 5am and lasted until approximately 10am, when the line was replaced.

Should you have questions concerning this submittal, please contact the undersigned at 781-925-0906. Thank you for your assistance.

Sincerely,

Aram Varjabedian

Aram Varjabedian – Woodard & Curran
Project Manager

Enc. DMR forms, support documentation

Cc: David Burns, MA DEP (SERO) Lakeville, MA
John J. Struzziery - Director of Wastewater Operations/Assistant Director of Public Works
Ryan Joyce – Division of Marine Fisheries

COMMITMENT & INTEGRITY
DRIVE RESULTS

1111 Nantasket Ave.
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WOODARD &CURRAN

HULL, MA WATER POLLUTION CONTROL FACILITY
NPDES NO. MA0101231

Hull Water Pollution Control Facility – Staffing – October 2018

Project Manager/Chief Operator – Aram Varjabedian	MA Grade 7C
Asst. Project Manager/Asst. Chief Operator – William Boornazian	MA Grade 6C
Lead Operator – Joseph Basler	MA Grade 5C
Operations/Maintenance Tech 2 – Eric Sutton	MA Grade 3M
Operations/Maintenance Tech 2 – David Wilson	
Operations/Maintenance Tech 1 - Cody Piepenbrink	

Supplemental O&M Personnel supporting/assisting the Hull facility

Roger Boltrushek – Part-time Operator	MA Grade 7C
James Gagliard – Sr. Operations Specialist	MA Grade 6C
Jody St. George - Sr. Operations Specialist	MA Grade 7C
Robert Scott – Area Manager	MA Grade 6C

Hull Water Pollution Control Facility – Schedule – October 2018

Schedule for 8 Hour/Day coverage:

	License	Sun	Mon	Tue	Wed	Thur	Fri	Sat
Project Manager	7C			X	X	X	X	X
Asst. Project Manager	6C	X	X	X	X	X		
Lead Operator	5C			X	X	X	X	X
O&M Tech 1				X	X	X	X	X
O&M Tech 2	3M		X	X	X	X	X	
O&M Tech 2		X	X	X	X	X		
Part-Time Operator	7C	*						*
Sr. O&M Specialist	6C	**						

- Part-time operator schedule is usually one day per week and the day can vary. Usually on Saturday or Sunday and can vary week-to-week. An asterisk [*] denotes those days that the part-time operator could be scheduled.
- [**] Sr. O&M Specialists coverage is usually part of the Sunday rotation, and also when licensed operations coverage is needed during the week.

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

Name HULL W P C F
Address 1111 NANTASKET AVE
HULL MA 02045

Facility HULL W P C F
Location HULL MA 02045
Attn: John Struzziery, Director of WW Ops

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

MA0101231	001 A
PERMIT NUMBER	DISCHARGE NUMBER

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	18	10	01	TO	18	10	31

OMB No. 2040-0004

MAJOR
(SUBR E)
F- FINAL
TREATED SANITARY WASTEWATE

*** NO DISCHARGE [ ] ***

NOTE: Read instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
BOD, 5-DAY (20 DEG. C) 00310 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	56	76	LBS/DY	4	6	7	mg/L	0	07/30 ~~1/7~~ QW	24
	PERMIT REQUIREMENT	768 MO AVG	WKLY AVG	LBS/DY	30 MO AVG	45 WKLY AVG	50 DAILY MX	mg/L		WEEKLY	COMP 24
BOD, 5-DAY (20 DEG. C) 00310 G 0 0 RAW SEW/INFLUENT	SAMPLE MEASUREMENT	1,080	******	LBS/DY	85	******	******	mg/L	0	07/30 ~~1/7~~ QW	24
	PERMIT REQUIREMENT	REPORT MO AVG	******	LBS/DY	REPORT MO AVG	******	******	mg/L		WEEKLY	COMP 24
PH 00400 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	******	******	****	6.80	******	7.40	SU	0	01/01	GR
	PERMIT REQUIREMENT	******	******	****	6.5 MINIMUM	******	8.5 MAXIMUM	SU		WEEKLY	GRAB
SOLIDS, TOTAL SUSPENDED 00530 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	109	128	LBS/DY	9	10	10	mg/L	0	06/30 ~~1/7~~ QW	24
	PERMIT REQUIREMENT	768 MO AVG	1152 WKLY AVG	LBS/DY	30 MO AVG	45 WKLY AVG	50 DAILY MX	mg/L		WEEKLY	COMP 24
SOLIDS, TOTAL SUSPENDED 00530 G 0 0 RAW SEW/INFLUENT	SAMPLE MEASUREMENT	1,337	******	LBS/DY	106	******	******	mg/L	0	05/30 ~~1/7~~ QW	24
	PERMIT REQUIREMENT	REPORT MO AVG	******	LBS/DY	REPORT MO AVG	******	******	mg/L		WEEKLY	COMP 24
FLOW, IN CONDUIT OR THRU TREATMENT PLANT 50050 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	1.53	3.73	MGD	******	******	******	****	0	99/99	RC
	PERMIT REQUIREMENT	3.04 12 MO AVG	DAILY MX	MGD	******	******	******	****		CONTINUOUS	RCORDR
FLOW, IN CONDUIT OR THRU TREATMENT PLANT 50050 0 0 See Comments	SAMPLE MEASUREMENT	******	******	****	1.64	******	******	MGD	0	99/99	RC
	PERMIT REQUIREMENT	******	******	****	REQ MO AVG	******	******	MGD		CONTIN	RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
Aram Varjabedian - Project Manager John Struzziery, Director of WW Ops	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	Aram Varjabedian	781	925-1207	18	11	08
TYPED OR PRINTED		SIGNATURE OF PRICIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPANATION OF ANY VIOLATIONS (Reference all attachments here)

REPORT MAXIMUM AND MINIMUM DAILY FLOW RATES AND TOTAL FLOW FOR EACH OPERATING DAY WITH DMR EACH MONTH

WET DATA ON DMR 001B

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if different)

Name HULL W P C F
Address 1111 NANTASKET AVE
HULL MA 02045

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

OMB No. 2040-0004

MAJOR
(SUBR E)
F- FINAL
TREATED SANITARY WASTEWATER

MA0101231	001 A
PERMIT NUMBER	DISCHARGE NUMBER

Facility HULL W P C F
Location HULL MA 02045
Attn: John Struzziery, Director of WW Ops

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	18	10	01	TO	18	10	31

*** NO DISCHARGE ***

NOTE: Read instructions before completing this form

PARAMETER		QUANTITY OR LOADING			QUALITY OR CONCENTRATION				NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
		VALUE	VALUE	UNITS	VALUE	VALUE	VALUE	UNITS			
Chlorine, Total Residual	SAMPLE MEASUREMENT	******	******	******	0.08	******	0.35	mg/L	0	03/01	GR
50060 1 0 EFFLUENT GROSS	PERMIT REQUIREMENT	******	******	******	0.7 MO AVG	******	1 DAILY MAX	mg/L		THREE PER DAY	GRAB
ENTEROCOCCI	SAMPLE MEASUREMENT	******	******	******	10	******	<10	CFU/100 ml	0	1/7	GR
61211 1 0 EFFLUENT GROSS	PERMIT REQUIREMENT	******	******	******	35 MO GEO	******	276 DAILY MAX	CFU/100 ml		WEEKLY	GRAB
COLIFORM, FECAL GENERAL	SAMPLE MEASUREMENT	******	******	******	<10	******	<10	#/100 ml	0	1/7	GR
74055 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	******	88 MO GEO	******	260 DAILY MX	#/100 ml		WEEKLY	GRAB
BOD, 5-DAY PERCENT REMOVAL	SAMPLE MEASUREMENT	******	******	******	95	******	******	%	0	1/30	CA
81010 K 0 0 PERCENTREMOVAL	PERMIT REQUIREMENT	******	******	******	85 MO AVG	******	******	PER-CEN T		ONCE/ MONTH	CALCTD
SOLIDS, SUSPENDED PERCENT REMOVA	SAMPLE MEASUREMENT	******	******	******	92	******	******	%	0	1/30	CA
81011 K 0 0 PERCENTREMOVAL	PERMIT REQUIREMENT	******	******	******	85 MO AVG	******	******	PER-CEN T		ONCE/ MONTH	CALCTD
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
Aram Varjabedian - Project Manager
John Struzziery, Director of WW Ops
TYPED OR PRINTED

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

SIGNATURE OF PRICIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
781	925-1207	18	11	08
AREA CODE	NUMBER	YEAR	MO	DAY

COMMENT AND EXPANATION OF ANY VIOLATIONS (Reference all attachments here)
REPORT MAXIMUM AND MINIMUM DAILY FLOW RATES AND TOTAL FLOW FOR EACH OPERATING DAY WITH DMR EACH MO
WET DATA ON DMR 001B

Date

Effluent

Effluent TSS		
Week Start	Week End	Avg
09/30/18	10/06/18	10
10/07/18	10/13/18	9
10/14/18	10/20/18	7
10/21/18	10/27/18	10
	MAX	10

Effluent BOD		
Week Start	Week End	Avg
09/30/18	10/06/18	3
10/07/18	10/13/18	6
10/14/18	10/20/18	3
10/21/18	10/27/18	3
	MAX	6

Data for dates in current month

Date	TSS mg/l	TSS Lbs	BOD mg/l	BOD LBS
10/01/18				
10/02/18	10	128	3	41
10/03/18				
10/04/18				
10/05/18				
10/06/18				
10/07/18			6	78
10/08/18	10	138	7	90
10/09/18	8	98	5	61
10/10/18				
10/11/18				
10/12/18				
10/13/18				
10/14/18				
10/15/18				
10/16/18	7	78	3	33
10/17/18				
10/18/18				
10/19/18				
10/20/18				
10/21/18				
10/22/18				
10/23/18	10	94	3	28
10/24/18				
10/25/18				
10/26/18				
10/27/18				
10/28/18				
10/29/18				
10/30/18	6	116	3	58
10/31/18				
MAX	10	138	7	90
AVG	9	109	4	56

Sunday Thru Saturday (avg placed on Saturday date)

Date	TSS mg/l	TSS LBS	BOD mg/l	BOD LBS
10/01/18				
10/02/18				
10/03/18				
10/04/18				
10/05/18				
10/06/18	10	128	3	41
10/07/18				
10/08/18				
10/09/18				
10/10/18				
10/11/18				
10/12/18				
10/13/18	9	118	6	76
10/14/18				
10/15/18				
10/16/18				
10/17/18				
10/18/18				
10/19/18				
10/20/18	7	78	3	33
10/21/18				
10/22/18				
10/23/18				
10/24/18				
10/25/18				
10/26/18				
10/27/18	10	94	3	28
10/28/18				
10/29/18				
10/30/18				
10/31/18				
MAX	10	128	6	76
Avg	9	105	4	45

Influent TSS		
Week Start	**Week End**	**Avg**
09/30/18	10/06/18	119
10/07/18	10/13/18	109
10/14/18	10/20/18	123
10/21/18	10/27/18	104
	Max	**123**

Influent BOD		
Week Start	**Week End**	**Avg**
09/30/18	10/06/18	60
10/07/18	10/13/18	100
10/14/18	10/20/18	110
10/21/18	10/27/18	72
	Max	110

TSS and BOD Loadings Check Sheet

Influent

Data for dates in current month

Date	TSS mg/l	TSS Lbs	BOD mg/l	BOD LBS
10/01/18				
10/02/18	119	1,518	60	766
10/03/18				
10/04/18				
10/05/18				
10/06/18				
10/07/18			100	1,343
10/08/18			100	1,343
10/09/18	109	1,336	100	1,226
10/10/18				
10/11/18				
10/12/18				
10/13/18				
10/14/18				
10/15/18				
10/16/18	123	1,364	110	1,220
10/17/18				
10/18/18				
10/19/18				
10/20/18				
10/21/18				
10/22/18				
10/23/18	104	980	72	679
10/24/18				
10/25/18				
10/26/18				
10/27/18				
10/28/18				
10/29/18				
10/30/18	77	1,483	51	983
10/31/18				
MAX	**123**	**1,518**	**110**	**1,343**
AVG	**106**	**1,336**	**85**	**1,080**

Sunday Thru Saturday (avg placed on Saturday date)

Date	TSS mg/l	TSS Lbs	BOD mg/l	BOD LBS
10/01/18				
10/02/18				
10/03/18				
10/04/18				
10/05/18				
10/06/18	119.00		60.00	
10/07/18				
10/08/18				
10/09/18				
10/10/18				
10/11/18				
10/12/18				
10/13/18	109.00		100.00	
10/14/18				
10/15/18				
10/16/18				
10/17/18				
10/18/18				
10/19/18				
10/20/18	123.00		110.00	
10/21/18				
10/22/18				
10/23/18				
10/24/18				
10/25/18				
10/26/18				
10/27/18	104.00		72.00	
10/28/18				
10/29/18				
10/30/18				
10/31/18				
MAX	**123**		**110**	
AVG	**114**		**86**	

Hull Wastewater Treatment Plant Operations Data

October, 2018

Date		Manual Screen Used	Mechanical Screen	GRIT CHAMBER	GRIT CLASSIFIER	PRI CLAR #1	PRI CLAR #2	AT #1	AT #2	AT #3	AT #4	SEC CLAR #1	SEC CLAR #2	CL2 BASIN #1	CL2 BASIN #2	GRAVITY THICK #1
		Yes/No	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF	ON/OFF
Mon	01	No	On	On	Yes	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Tue	02	No	On	On	Yes	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Wed	03	No	On	On	Yes	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Thu	04	No	On	On	Yes	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Fri	05	No	On	On	No	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Sat	06	No	On	On	Yes	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Sun	07	No	On	On	Yes	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Mon	08	No	On	On	Yes	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Tue	09	No	On	On	Yes	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Wed	10	No	On	On	Yes	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Thu	11	No	On	On	Yes	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Fri	12	No	On	On	Yes	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Sat	13	No	On	On	Yes	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Sun	14	No	On	On	Yes	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Mon	15	No	On	On	Yes	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Tue	16	No	On	On	Yes	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Wed	17	No	On	On	Yes	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Thu	18	No	On	On	Yes	Off	Off	On	Off	On	Off	On	Off	On	On	Off
Fri	19	No	On	On	Yes	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Sat	20	No	On	On	Yes	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Sun	21	No	On	On	Yes	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Mon	22	No	On	On	Yes	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Tue	23	No	On	On	Yes	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Wed	24	No	On	On	Yes	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Thu	25	No	On	On	yes	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Fri	26	No	On	On	Yes	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Sat	27	No	On	On	yes	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Sun	28	No	On	On	Yes	On	Off	On	Off	On	On	On	On	On	On	Off
Mon	29	No	On	On	Yes	On	Off	On	Off	On	On	On	On	On	On	Off
Tue	30	No	On	On	Yes	Off	Off	On	Off	On	On	On	On	On	On	Off
Wed	31	No	On	On	Yes	Off	Off	On	Off	Off	On	On	On	On	On	Off
MIN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MAX		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AVG		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SUM		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Hull Wastewater Treatment Plant Operations Data

October, 2018

Date		GRAVITY THICK #2	SLUDGE TANK #1	SLUDGE TANK #2	RST	Rainfall	MIN AIR TEMP	MAX AIR TEMP	GRIT REMOVED	SCREENINGS	INF TSS (Report)	INF BOD (Report)	INF FLOW	INFLUENT Q MINIMUM	INFLUENT Q MAXIMUM	PRI TSS
		ON/OFF	ON/OFF	ON/OFF	ON/OFF	Inches	Deg F	Deg F	LBS	CU FT	MG/L	MG/L	MGD	MGD	MGD	MG/L
Mon	01	Off	Off	On	Off	0.01	57	67	30	0.7			1.78	1.35	2.54	
Tue	02	Off	Off	On	On	0.24	57	64	30	0.7	119	60	1.85	1.29	3.65	
Wed	03	Off	Off	On	Off	0.17	54	60	65	0.7			2.16	0.86	2.81	
Thu	04	Off	Off	On	Off	0.00	58	71	40	0.7			1.93	0.62	3.44	
Fri	05	Off	Off	On	On	0.00	51	66	5	0.7			1.87	0.90	3.52	
Sat	06	Off	Off	On	Off	0.00	50	62	45	0.7			1.85	1.27	3.44	
Sun	07	Off	Off	On	Off	0.20	59	77	40	0.7		100	1.86	1.28	3.45	
Mon	08	Off	Off	On	On	0.00	56	60	40	0.7		100	1.92	1.00	3.85	
Tue	09	Off	Off	On	Off	0.00	57	75	50	0.7	109	100	1.78	0.96	2.40	
Wed	10	Off	Off	On	Off	0.00	66	88	30	0.7			1.73	1.35	2.35	
Thu	11	Off	Off	On	Off	0.28	57	69	30	0.7			2.06	1.36	3.80	
Fri	12	Off	Off	On	On	0.31	51	62	30	0.7			2.72	1.73	3.68	
Sat	13	Off	Off	On	Off	0.11	49	61	30	0.7			2.42	0.79	3.10	
Sun	14	Off	Off	On	Off	0.00	45	59	30	0.7			2.03	0.75	2.90	
Mon	15	Off	Off	On	Off	0.01	45	68	30	0.7			1.76	1.23	2.37	
Tue	16	Off	Off	On	On	0.07	47	68	30	0.7	123	110	1.64	1.33	2.23	
Wed	17	Off	Off	On	Off	0.00	43	61	30	0.7			1.51	1.23	3.11	
Thu	18	Off	Off	On	On	0.00	39	47	30	0.7			1.42	1.03	2.27	
Fri	19	Off	Off	On	On	0.00	36	62	30	0.7			1.33	0.92	2.14	
Sat	20	Off	Off	On	Off	0.10	49	66	30	0.7			1.38	0.93	2.33	
Sun	21	Off	Off	On	On	0.00	37	53	50	0.7			1.47	0.92	2.24	
Mon	22	Off	Off	On	Off	0.00	34	51	35	0.7			1.38	0.95	2.13	
Tue	23	Off	Off	On	Off	0.48	41	55	30	0.7	104	72	1.42	0.91	3.06	
Wed	24	Off	Off	On	Off	0.07	41	47	65	0.7			1.60	0.93	2.19	
Thu	25	Off	Off	On	On	0.00	38	48	5	0.7			1.58	1.20	2.43	
Fri	26	Off	Off	On	Off	0.00	34	47	75	0.7			1.50	1.15	2.29	
Sat	27	Off	Off	On	On	2.04	41	51	30	0.7			2.65	1.08	5.76	
Sun	28	Off	Off	On	Off	0.03	43	53	30	0.7			2.65	0.85	6.24	
Mon	29	Off	Off	On	On	0.14	45	57	45	0.7			2.64	0.79	3.88	
Tue	30	Off	Off	On	Off	0.00	40	47	30	0.7	77	51	2.78	0.86	3.61	
Wed	31	Off	Off	On	On	0.00	38	56	50	0.70			2.42	0.84	3.77	
MIN		-	-	-	-	0.00	34	47	5	1	77	51	1.33	0.62		
MAX		-	-	-	-	2.04	66	88	75	1	123	110	2.78		6.24	
AVG		-	-	-	-	0.14	47	61	36	1	106	85	1.91			
SUM		-	-	-	-	4.26	-	-	1,120	22			-	-	-	-

Hull Wastewater Treatment Plant Operations Data

October, 2018

Date		PRI BOD MG/L	PRI #1 BLANKET FT	PRI #2 BLANKET FT	MLS SVI MG/L	MLSS 5 MIN SET MIN	MLSS 30 MIN SET	MLSS 60 MIN SET	MLSS	RAS TSS	RAS FLOW	SEC #1 BLANKET	SEC #2 BLANKET	WAS TSS THCK	WAS FLOW GALLONS THCK	EFF TSS (Report)
		MG/L	FT	FT	MG/L	MG/L	ML	ML	MG/L	MG/L	MGD	FT	FT	MG/L	GAL	MG/L
Mon	01										0.74	1.5			9,850	
Tue	02					220	160	150			0.72	1.5			9,820	10.0
Wed	03				63	230	160	150	2,518		0.69	1.5			9,620	
Thu	04					260	180	170			0.73	1.5			9,370	
Fri	05				65	280	175	170	2,666		0.76	1.8			9,050	
Sat	06										0.72	2.0			9,310	
Sun	07										0.72	2.5			9,180	
Mon	08				77	300	210	200	2,700		0.72	2.8			8,780	10.3
Tue	09					300	220	200			0.72	2.5			8,480	8.0
Wed	10				70	280	200	200	2,848		0.77	2.3			8,180	
Thu	11					320	200	200			0.82	2.3			7,770	
Fri	12				70	300	210	200	2,977		0.82	3.3			7,460	
Sat	13										0.82	2.3			7,750	
Sun	14										0.82	3.0			7,956	
Mon	15								3,263		0.82	2.5			7,990	
Tue	16					360	230	220			0.77	1.5			8,800	7.0
Wed	17				77	370	240	230	3,099		0.80	2.3			9,470	
Thu	18				79	410	250	240	3,145		0.91	2.3		7	10,910	
Fri	19				77	390	220	210	2,828		1.04		2.3		9,660	
Sat	20										0.87		2.5		7,610	
Sun	21										0.85		2.1		7,950	
Mon	22				77	550	300	300	3,859		0.85		3.5		9,590	
Tue	23				78	540	300	280	3,799		0.85		2.5		11,630	10.0
Wed	24				77	540	300	290	3,886		0.82		2.1		13,350	
Thu	25					600	310	290			0.76		2.5		15,530	
Fri	26				90	550	325	300	3,581		0.74		2.3		15,700	
Sat	27										0.77		3.0		14,170	
Sun	28		1.3								0.77	3.0	3.3		15,570	
Mon	29		1.0		99	360	220	180	2,105		0.84	2.0	1.8		13,890	
Tue	30					280	180	170			0.84	2.0	3.5		3,090	6.0
Wed	31				88	350	210	200	2,385		0.79	1.3	2.5		6,020	
MIN			1.0		63	220	160	150	2,105		0.69	1.3	1.8	7	3,090	6.0
MAX			1.3		99	600	325	300	3,886		1.04	3.3	3.5	7	15,700	10.3
AVG			1.2		78	371	229	217	3,044		0.80	2.2	2.6	7	9,791	8.6
SUM		-	-	-	-	-	-	-	-	-	-	-	-	-	303,506	-

Hull Wastewater Treatment Plant Operations Data

Date		EFF BOD (Report)	EFF FECAL #/100	EFF MAX DAILY FLOW MGD	EFF MIN DAILY FLOW MGD	EFF FLOW MGD	EFF #1pH	CL2 RES #1	CL2 RES #2	CL2 RES #3	CL2 RES Daily Avg	THICKENED SLUDGE TS	THICKENER #1 BLANKET	THICKENER #2 BLANKET	LEACHATE TSS	LEACHATE BOD	LEACHATE COD
		MG/L	ML	MGD	MGD	MGD	SU	MG/L	MG/L	MG/L	MG/L	%	FT	FT	MG/L	MG/L	MG/L
Mon	01			4.14	0.70	1.51	7.10	0.06	0.05	0.08	0.06						
Tue	02	3.2		4.22	0.70	1.53	7.30	0.13	0.04	0.04	0.07						
Wed	03		10	4.14	0.71	1.88	7.30	0.11	0.17	0.21	0.16						
Thu	04			4.05	0.70	1.65	7.30	0.98	0.03	0.04	0.35						
Fri	05			4.24	0.68	1.61	7.40	0.04	0.02	0.00	0.02						
Sat	06			4.07	0.71	1.61	7.30	0.04	0.05	0.03	0.04	7.3					
Sun	07	5.8		4.14	0.71	1.61	7.20	0.01	0.07	0.10	0.06						
Mon	08	6.7		4.20	0.69	1.61	7.10	0.00	0.02	0.01	0.01						
Tue	09	5.0		4.09	0.72	1.47	7.00	0.00	0.03	0.02	0.02						
Wed	10		10	4.16	0.73	1.40	7.20	0.11	0.11	0.01	0.08						
Thu	11			4.03	1.09	1.77	7.10	0.04	0.01	0.03	0.03						
Fri	12			4.10	0.71	2.40	7.10	0.14	0.04	0.01	0.06						
Sat	13			2.86	0.73	2.12	7.10	0.07	0.03	0.03	0.04	6.8					
Sun	14			3.94	0.00	1.71	7.20	0.27	0.09	0.15	0.17						
Mon	15			1.82	1.06	1.47	7.10	0.13	0.12	0.08	0.11						
Tue	16	3.0		1.71	0.96	1.33	7.10	0.20	0.07	0.04	0.10						
Wed	17		10	1.70	0.65	1.18	7.10	0.04	0.08	0.01	0.04						
Thu	18			1.58	0.00	0.89	7.20	0.08	0.00	0.03	0.04						
Fri	19			1.74	0.63	1.19	7.00	0.02	0.01	0.04	0.02						
Sat	20			1.48	0.63	1.06	6.90	0.07	0.03	0.05	0.05	7.4					
Sun	21			1.78	0.63	1.16	7.10	0.03	0.05	0.04	0.04						
Mon	22			1.53	0.66	1.05	7.10	0.27	0.33	0.18	0.26						
Tue	23	3.0		1.60	0.61	1.13	7.10	0.08	0.05	0.05	0.06						
Wed	24		10	1.82	0.82	1.29	7.20	0.05	0.05	0.06	0.05						
Thu	25			1.82	0.61	1.24	6.90	0.04	0.04	0.01	0.03						
Fri	26			1.58	0.73	1.16	6.90	0.04	0.02	0.01	0.02						
Sat	27			6.55	0.72	2.22	6.90	0.06	0.04	0.04	0.05						
Sun	28			7.87	2.63	3.73	6.80	0.06	0.08	0.08	0.07						
Mon	29			3.41	2.19	2.67	7.00	0.06	0.04	0.02	0.04	6.1					
Tue	30	3.0		3.91	1.73	2.31	7.10	0.04	0.05	0.50	0.20						
Wed	31		10	4.20	0.69	1.97	7.40	0.34	0.03	0.30	0.22						
MIN		3.0	10		0.00	0.89	6.80	0.00	0.00	0.00	0.01	6.05		-	-	-	-
MAX		6.7	10	7.87		3.73	7.40	0.98	0.33	0.50	0.35	7.38		-	-	-	-
AVG		4.2	10			1.64	7.12	0.12	0.06	0.07	0.08	6.90		-	-	-	-
SUM		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Hull Wastewater Treatment Plant Operations Data

Date		LEACHATE	Groundwater Underdrain	Potable H2O Calc.	Thickened Feed Sludge Gallons to truck	THICKENED SLDG	Sludge Holding Tank Level	Thickened Sludge Holding Tank Level	EFF TEMP	Enterococci	Toxicity	GALS HEATING OIL	NaOCl	NaOH	Hingham Flow
		GAL	GAL	GAL	GAL	LBS/DAY	FT	FT	DEG C	No/100ml	%	Inches	Gallons	Gallons	MGD
Mon	01			30	0		4.6	8.2	20.1			55	102	2.0	
Tue	02			50	0		4.6	7.4	19.6			55	123	3.0	
Wed	03			96	0		4.6	5.1	19.4	<10		55	128	5.0	
Thu	04			68	0		4.6	6.8	19.8			55	123	2.0	
Fri	05			57	0		4.5	5.4	19.7			55	143	2.0	
Sat	06			99	9,000	5,479	4.6	6.9	19.2			55	100	4.0	
Sun	07			75	0		4.6	9.3	19.9			55	97	2.0	
Mon	08			49	0		4.6	8.0	18.8			55	91	3.0	
Tue	09			27	0		4.6	5.8	18.4			55	103	3.0	
Wed	10			111	0		4.5	7.5	19.9	<10		55	94	4.0	
Thu	11			57	0		4.6	8.7	19.9			55	96	2.0	
Fri	12			126	0		4.6	4.9	19.1			55	147	4.0	
Sat	13			69	9,000	5,136	4.6	5.5	18.3			55	139	2.0	
Sun	14			42	0		4.5	6.8	17.2			55	115	6.0	
Mon	15			52	0		4.6	8.1	18.4			55	107	2.0	
Tue	16			177	0		4.1	8.2	17.8			55	107	4.0	
Wed	17			241	0		4.5	7.4	17.8	<10		55	124	2.0	
Thu	18			243	0		4.4	7.6	16.4			55	81	2.0	
Fri	19			39	0		4.5	4.5	16.5			55	88	4.0	
Sat	20			46	9,000	5,539	4.5	6.1	18.3			55	115	2.0	
Sun	21			187	0		4.5	2.9	16.9			55	79	4.0	
Mon	22			28	0		4.5	4.0	16.2			55	92	2.0	
Tue	23			66	0		4.5	5.5	17.3			55	79	2.0	
Wed	24			74	0		4.5	7.5	17.5	<10		54	104	2.0	
Thu	25			124	0		4.5	6.9	16.6			53	101	4.0	
Fri	26			86	0		4.5	7.8	15.1			53	95	4.0	
Sat	27			55	0		4.5	8.1	16.1			53	87	2.0	
Sun	28			140	0		4.5	10.3	16.0			53	111	2.0	
Mon	29			60	9,000	4,544	4.5	11.4	16.2			53	119	4.0	
Tue	30			38	0		4.5	11.7	15.6			53	98	4.0	
Wed	31			68	0		4.5	10.8	15.3	<10		53	101	2.0	
MIN		-	-	27	0	4,544	4	3	15	<10	-	53	79	2.0	
MAX		-	-	243	9,000	5,539	5	12	20	<10	-	55	147	6.0	
AVG		-	-	86	1,161	5,175	5	7	18	<10	-	55	106	3.0	
SUM		-	-	2,684	36,000	20,698	-	-	-		-	-	-	-	

Hull WWTF
Monthly Rain, Temperature and Flow
October, 2018

Date	Rainfall	Minimum Air Temp	Maximum Air Temp	Effluent Flow
	Inches	F	F	MGD
10/01/18	0.01	57	67	1.510
10/02/18	0.24	57	64	1.530
10/03/18	0.17	54	60	1.880
10/04/18	0.00	58	71	1.650
10/05/18	0.00	51	66	1.610
10/06/18	0.00	50	62	1.610
10/07/18	0.20	59	77	1.610
10/08/18	0.00	56	60	1.610
10/09/18	0.00	57	75	1.470
10/10/18	0.00	66	88	1.400
10/11/18	0.28	57	69	1.770
10/12/18	0.31	51	62	2.400
10/13/18	0.11	49	61	2.120
10/14/18	0.00	45	59	1.710
10/15/18	0.01	45	68	1.470
10/16/18	0.07	47	68	1.330
10/17/18	0.00	43	61	1.180
10/18/18	0.00	39	47	0.890
10/19/18	0.00	36	62	1.190
10/20/18	0.10	49	66	1.060
10/21/18	0.00	37	53	1.160
10/22/18	0.00	34	51	1.050
10/23/18	0.48	41	55	1.130
10/24/18	0.07	41	47	1.290
10/25/18	0.00	38	48	1.240
10/26/18	0.00	34	47	1.160
10/27/18	2.04	41	51	2.220
10/28/18	0.03	43	53	3.730
10/29/18	0.14	45	57	2.670
10/30/18	0.00	40	47	2.310
10/31/18	0.00	38	56	1.970
Min	0.00	34	47	0.89
Max	2.04	66	88	3.73
Avg	0.14	47	61	1.64
Sum	4.26			50.93

Woodard and Curran
October, 2018
In Plant Sulfide Readings

Date		Wind Direction	Outside Temp	Outside Condition	Front Door	Head Works	Primary Tank No. 1	Primary Tank No. 2	Gravity Thickener	Aeration Tanks	Rotory Sludge Thickener Room	Scrubber In	Roof Exhaust Scrubber Out	% Removal
		Direction	Deg F	Condition	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
Mon	01	SE-10	52	Partly cloudy	0.001	0.035		0.001	0.002	0.002	0.001	0.310	0.003	99.0
Tue	02	ENE-7	57	Cloudy	0.000	0.011			0.001	0.004	0.000	0.032	0.004	87.5
Wed	03	N-9	55	Cloudy	0.001	1.320			0.000	0.002	0.000	0.020	0.006	70.0
Thu	04	S-4	58	Cloudy	0.001	2.300			0.000	0.002	0.001	0.062	0.007	88.7
Fri	05	N-12	59	Partly cloudy	0.001	1.300			0.000	0.002	0.002	0.610	0.007	98.9
Sat	06	N-4	51	Partly cloudy	0.001	1.100			0.000	0.001	0.001	0.610	0.007	98.9
Sun	07	NW-7	64	Cloudy	0.006	0.008		0.000	0.000	0.004	0.001	0.088	0.006	93.2
Mon	08	NE-12	59	Cloudy	0.000	0.054				0.000		0.430	0.003	99.3
Tue	09	SSE-8	63	Cloudy	0.000	0.022			0.001	0.001	0.000	0.069	0.005	92.8
Wed	10	SW-10	66	Sunny	0.004	0.890			0.002	0.004	0.000	0.220	0.004	98.2
Thu	11	E-7	62	Cloudy	0.001	0.160			0.000	0.002	0.001	0.210	0.004	98.1
Fri	12	NW-10	57	Rain		1.300					0.000	0.016	0.001	93.8
Sat	13	WNW-5	50	Partly cloudy		3.200				0.000	0.000	0.061	0.002	96.7
Sun	14	W-9	51	Sunny	0.003	0.086			0.001	0.001	0.000	0.054	0.004	92.6
Mon	15	S-15	53	Cloudy/Rain	0.002	0.130			0.000	0.001	0.002	0.410	0.006	98.5
Tue	16	W-18	48	Sunny	0.002	0.001				0.000	0.002	0.160	0.006	96.3
Wed	17	SSW-7	41	Clear	0.000	0.001				0.001	0.000	0.090	0.012	86.7
Thu	18	WNW-18	39	Clear	0.000	0.001				0.000	0.000	0.110	0.004	96.4
Fri	19	SW-7	34	Clear	0.002	0.001				0.002	0.001	0.630	0.056	91.1
Sat	20	SSW-14	57	Cloudy	0.001	0.004				0.002	0.001	0.120	0.008	93.3
Sun	21	NE-5	49	Rain	0.001	0.000			0.000	0.001	0.006	0.200	0.009	95.5
Mon	22	W-6	36	Sunny	0.003	0.001			0.001	0.004	0.004	0.200	0.028	86.0
Tue	23	S-4	44	Cloudy	0.001	0.017				0.000	0.001	0.160	0.008	95.0
Wed	24	WSW-12	46	Cloudy	0.002	0.017				0.002	0.001	0.071	0.013	81.7
Thu	25	W-11	38	Clear	0.002	1.200				0.002	0.001	0.410	0.002	99.5
Fri	26	WNW-10	34	Clear										
Sat	27	E-19	47	Rain										
Sun	28	WNW-3	49	Cloudy		~~0.100~~								
Mon	29	ESE-6	47	Cloudy										
Tue	30	W-15	42	Mostly cloudy										
Wed	31	W-6	39	Fair										
Min.			34		0.000	0.000			0.000	0.000	0.000	0.016	0.001	70.0
Max.			66		0.006	3.200			0.002	0.004	0.006	0.630	0.056	99.5
Ave.			50		0.002	0.510			0.001	0.002	0.001	0.214	0.009	93.1
Target					<.01	<10.0	<10.0	<10.0	<10.0	.050	.050	<10.0	<1.0	95%

Jerome meter out of service for repairs

Woodard and Curran

October, 2018

Outside Plant Sulfide Readings

Date		Wind Direction	Outside Temp	Outside Condition	Cemetery Flag Pole	Garage At Cemetery	Duck Lane	Duck Lane And Nantasket Ave	Seawall Across From Plant	Fire Hydrant Across Inland Bay Side	Front Of Aeration Bayside
		Direction	Deg F	Condition	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Mon	01	SE-10	52	Partly cloudy							
Tue	02	ENE-7	57	Cloudy	0.002	0.001	0.000	0.001	0.001	0.000	0.000
Wed	03	N-9	55	Cloudy	0.001	0.001	0.000	0.000	0.000	0.002	0.001
Thu	04	S-4	58	Cloudy	0.001	0.001	0.001	0.000	0.000	0.001	0.000
Fri	05	N-12	59	Partly cloudy	0.001	0.001	0.002	0.001	0.001	0.001	0.000
Sat	06	N-4	51	Partly cloudy	0.002	0.002	0.000	0.001	0.001	0.001	0.001
Sun	07	NW-7	64	Cloudy	0.002	0.002	0.003	0.003	0.003	0.004	0.010
Mon	08	NE-12	59	Cloudy							
Tue	09	SSE-8	63	Cloudy	0.001	0.001	0.001	0.000	0.000	0.000	0.002
Wed	10	SW-10	66	Sunny	0.004	0.004	0.003	0.004	0.004	0.004	0.003
Thu	11	E-7	62	Cloudy	0.001	0.000	0.000	0.001	0.001	0.001	0.000
Fri	12	NW-10	57	Rain							
Sat	13	WNW-5	50	Partly cloudy							
Sun	14	W-9	51	Sunny	0.004	0.004	0.004	0.004	0.004	0.002	0.004
Mon	15	S-15	53	Cloudy/Rain	0.001	0.002	0.002	0.001	0.001	0.002	0.002
Tue	16	W-18	48	Sunny	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Wed	17	SSW-7	41	Clear	0.001	0.001	0.001	0.000	0.000	0.000	0.000
Thu	18	WNW-18	39	Clear	0.002	0.002	0.002	0.002	0.002	0.000	0.002
Fri	19	SW-7	34	Clear	0.002	0.002	0.001	0.002	0.002	0.001	0.001
Sat	20	SSW-14	57	Cloudy	0.002	0.001	0.000	0.000	0.000	0.001	0.000
Sun	21	NE-5	49	Rain	0.001	0.002	0.002	2.000	2.000	0.002	0.002
Mon	22	W-6	36	Sunny	0.002	0.003	0.004	0.004	0.004	0.009	0.003
Tue	23	S-4	44	Cloudy	0.001	0.001	0.001	0.000	0.000	0.001	0.002
Wed	24	WSW-12	46	Cloudy	0.001	0.001	0.002	0.002	0.002	0.002	0.001
Thu	25	W-11	38	Clear	0.002	0.002	0.001	0.001	0.001	0.001	0.001
Fri	26	WNW-10	34	Clear							
Sat	27	E-19	47	Rain							
Sun	28	WNW-3	49	Cloudy							
Mon	29	ESE-6	47	Cloudy							
Tue	30	W-15	42	Mostly cloudy							
Wed	31	W-6	39	Fair							
Min.			34		0.001	0.000	0.000	0.000	0.000	0.000	0.000
Max.			66		0.004	0.004	0.004	2.000	2.000	0.009	0.010
Ave.			50		0.002	0.002	0.002	0.097	0.097	0.002	0.002
Target					<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005