COMMITMENT & INTEGRITY
DRIVE RESULTS

1111 Nantasket Ave.
Hull, Massachusetts 02045

T 781.925.0906

WOODARD
&CURRAN

June 14, 2017

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 – May 2017 – Discharge 001-A

Dear Ms. McDonald:

Enclosed please find the completed DMR for the month of May 2017. Please note that the facility effluent was in compliance with all NPDES requirements.

Please note that on May 31, 2017 a sanitary system overflow occurred at the Hull WPCF, when the primary clarifier influent distribution box overflowed for a very brief period of time, after a surge of influent flow was seen at the wastewater facility. The surge in flow was the result of a 36-inch sewer plug being released after interceptor cleaning and CCTV work was completed. A sanitary system overflow [SSO] notification was made on 5/31/17 to the EPA and MADEP, and a full report submitted on 6/5/17.

There was one influent BOD sample for the 5/23-24 sampling period that is being reported as an estimated value, since the contract lab's dilution series did not yield valid results for reporting. The reported result was supported by running a duplicate sample with similar results.

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

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DRIVE RESULTS

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HULL, MA WATER POLLUTION CONTROL FACILITY
NPDES NO. MA0101231

Hull Water Pollution Control Facility – Staffing – May 2017

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 – Rick Clark	
Operations/Maintenance Tech 1 – John Currier	MA Grade 2M

Supplemental O&M Personnel supporting/assisting the Hull facility

Pat Owens – Part-time Operator	MA Grade 6C
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
Frank Cavaleri – Area Manager	MA Grade 7C

Hull Water Pollution Control Facility – Schedule – May 2017

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	2M	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	6C	*						*
Part-Time Operator	7C	*					*	*

- Part-time operator schedule is usually one day per week and the day can vary week-to-week. An asterisk denotes those days that the part-time operator could be scheduled.

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	17	05	01	TO	17	05	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 VALUE	QUANTITY OR LOADING VALUE	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION VALUE	QUALITY OR CONCENTRATION VALUE	QUALITY OR CONCENTRATION VALUE	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
BOD, 5-DAY (20 DEG. C)	SAMPLE MEASUREMENT	56	89	LBS/DY	4	8	8	mg/L	0	1/7	24
00310 1 0 0 EFFLUENT GROSS VALUE	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)	SAMPLE MEASUREMENT	1,792	******	LBS/DY	144	******	******	mg/L	0	1/7	24
00310 G 0 0 RAW SEW/INFLUENT	PERMIT REQUIREMENT	REPORT MO AVG	******	LBS/DY	REPORT MO AVG	******	******	mg/L		WEEKLY	COMP 24
PH	SAMPLE MEASUREMENT	******	******	****	6.80	******	7.10	SU	0	01/01	GR
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	****	6.5 MINIMUM	******	8.5 MAXIMUM	SU		WEEKLY	GRAB
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	223	234	LBS/DY	18	20	20	mg/L	0	1/7	24
00530 1 0 0 EFFLUENT GROSS VALUE	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	SAMPLE MEASUREMENT	2,614	******	LBS/DY	200	******	******	mg/L	0	1/7	24
00530 G 0 0 RAW SEW/INFLUENT	PERMIT REQUIREMENT	REPORT MO AVG	******	LBS/DY	REPORT MO AVG	******	******	mg/L		WEEKLY	COMP 24
FLOW, IN CONDUIT OR THRU TREATMENT PLANT	SAMPLE MEASUREMENT	1.55	3.03	MGD	******	******	******	****	0	99/99	RC
50050 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	3.04 12 MO AVG	DAILY MX	MGD	******	******	******	****		CONTINUOUS	RCORDR
FLOW, IN CONDUIT OR THRU TREATMENT PLANT	SAMPLE MEASUREMENT	******	******	****	1.71	******	******	MGD	0	99/99	RC
50050 0 0 See Comments	PERMIT REQUIREMENT	******	******	****	REQ MO AVG	******	******	MGD		CONTIN	RCORDR

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.

Aram Varjabedian
SIGNATURE OF PRICIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE		DATE		
781	925-1207	17	06	14
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

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)

OMB No. 2040-0004

MAJOR
(SUBR E)
F- FINAL
TREATED SANITARY WASTEWATER

PERMIT NUMBER	DISCHARGE NUMBER
MA0101231	001 A

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	17	05	01	TO	17	05	31

*** NO DISCHARGE ***

NOTE: Read instructions before completing this form

PARAMETER		QUANTITY OR LOADING VALUE	QUANTITY OR LOADING VALUE	QUANTITY OR LOADING UNITS	QUALITY OR CONCENTRATION VALUE	QUALITY OR CONCENTRATION VALUE	QUALITY OR CONCENTRATION VALUE	QUALITY OR CONCENTRATION UNITS	NO. EX	FREQUENCY OF ANALYSIS	SAMPLE TYPE
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 AVG	******	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	******	******	******	97	******	******	%	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	******	******	******	91	******	******	%	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	17	06	14
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
04/30/17	05/06/17	18
05/07/17	05/13/17	18
05/14/17	05/20/17	15
05/21/17	05/27/17	20
	MAX	20

Effluent BOD		
Week Start	Week End	Avg
04/30/17	05/06/17	4
05/07/17	05/13/17	3
05/14/17	05/20/17	5
05/21/17	05/27/17	8
	MAX	8

Data for dates in current month

Date	TSS mg/l	TSS Lbs	BOD mg/l	BOD LBS
05/01/17				
05/02/17	18	170	4	34
05/03/17				
05/04/17				
05/05/17				
05/06/17				
05/07/17				
05/08/17				
05/09/17	18	234	3	43
05/10/17				
05/11/17				
05/12/17				
05/13/17				
05/14/17				
05/15/17				
05/16/17	15	229	5	72
05/17/17				
05/18/17				
05/19/17				
05/20/17				
05/21/17				
05/22/17				
05/23/17	20	229	8	89
05/24/17				
05/25/17				
05/26/17				
05/27/17				
05/28/17				
05/29/17				
05/30/17	17	252	3	45
05/31/17				
MAX	20	252	8	89
AVG	18	223	5	57

Sunday Thru Saturday (avg placed on Saturday date)

Date	TSS mg/l	TSS LBS	BOD mg/l	BOD LBS
05/01/17				
05/02/17				
05/03/17				
05/04/17				
05/05/17				
05/06/17	18	170	4	34
05/07/17				
05/08/17				
05/09/17				
05/10/17				
05/11/17				
05/12/17				
05/13/17	18	234	3	43
05/14/17				
05/15/17				
05/16/17				
05/17/17				
05/18/17				
05/19/17				
05/20/17	15	229	5	72
05/21/17				
05/22/17				
05/23/17				
05/24/17				
05/25/17				
05/26/17				
05/27/17	20	229	8	89
05/28/17				
05/29/17				
05/30/17				
05/31/17				
MAX	20	234	8	89
Avg	18	216	5	60

Influent TSS		
Week Start	**Week End**	**Avg**
04/30/17	05/06/17	92
05/07/17	05/13/17	223
05/14/17	05/20/17	186
05/21/17	05/27/17	272
	Max	**272**

Influent BOD		
Week Start	**Week End**	**Avg**
04/30/17	05/06/17	150
05/07/17	05/13/17	150
05/14/17	05/20/17	110
05/21/17	05/27/17	200
	Max	200

TSS and BOD Loadings Check Sheet

Influent

Data for dates in current month

Date	TSS mg/l	TSS Lbs	BOD mg/l	BOD LBS
05/01/17				
05/02/17	92	867	150	1,414
05/03/17				
05/04/17				
05/05/17				
05/06/17				
05/07/17				
05/08/17				
05/09/17	223	2,901	150	1,952
05/10/17				
05/11/17				
05/12/17				
05/13/17				
05/14/17				
05/15/17				
05/16/17	186	2,839	110	1,679
05/17/17				
05/18/17				
05/19/17				
05/20/17				
05/21/17				
05/22/17				
05/23/17	272	3,108	200	2,285
05/24/17				
05/25/17				
05/26/17				
05/27/17				
05/28/17				
05/29/17				
05/30/17	226	3,355	110	1,633
05/31/17				
MAX	**272**	**3,355**	**200**	**2,285**
AVG	**200**	**2,614**	**144**	**1,793**

Sunday Thru Saturday (avg placed on Saturday date)

Date	TSS mg/l	TSS Lbs	BOD mg/l	BOD LBS
05/01/17				
05/02/17				
05/03/17				
05/04/17				
05/05/17				
05/06/17	92.00		150.00	
05/07/17				
05/08/17				
05/09/17				
05/10/17				
05/11/17				
05/12/17				
05/13/17	223.00		150.00	
05/14/17				
05/15/17				
05/16/17				
05/17/17				
05/18/17				
05/19/17				
05/20/17	186.00		110.00	
05/21/17				
05/22/17				
05/23/17				
05/24/17				
05/25/17				
05/26/17				
05/27/17	272.00		200.00	
05/28/17				
05/29/17				
05/30/17				
05/31/17				
MAX	**272**		**200**	
AVG	**193**		**153**	

WOODARD & CURRAN

Hull Wastewater Treatment Plant Operations Data

May, 2017

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	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Tue	02	No	On	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Wed	03	No	On	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Thu	04	No	On	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Fri	05	No	On	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Sat	06	No	On	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Sun	07	No	On	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Mon	08	No	On	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Tue	09	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	On
Wed	10	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	On
Thu	11	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	On
Fri	12	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	On
Sat	13	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	On
Sun	14	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	On
Mon	15	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	On
Tue	16	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	On
Wed	17	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	On
Thu	18	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	On
Fri	19	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	On
Sat	20	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	On
Sun	21	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Mon	22	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Tue	23	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Wed	24	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Thu	25	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Fri	26	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Sat	27	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Sun	28	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Mon	29	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Tue	30	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
Wed	31	No	On	On	On	Off	Off	On	Off	On	Off	Off	On	On	On	Off
MIN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MAX		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AVG		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SUM		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Hull Wastewater Treatment Plant Operations Data

May, 2017

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	0.00	46	47	30	0.7			2.17	1.71	2.85	
Tue 02	Off	Off	On	Off	0.18	45	60	35	0.7	92	150	1.45	0.00	3.84	
Wed 03	Off	Off	On	Off	0.00	49	60	30	0.7			2.15	1.41	2.81	
Thu 04	Off	Off	On	Off	0.00	45	56	30	0.7			1.97	1.30	2.57	
Fri 05	Off	Off	On	Off	0.33	46	53	30	0.7			1.85	0.00	3.09	
Sat 06	Off	Off	On	Off	0.10	48	66	30	0.7			2.14	0.00	3.38	
Sun 07	Off	Off	On	Off	0.00	48	60	30	0.7			2.11	1.19	3.01	
Mon 08	Off	Off	On	Off	0.01	43	53	30	0.7			1.95	1.11	2.79	
Tue 09	Off	Off	On	Off	0.00	40	50	30	0.7	223	150	1.78	0.00	5.60	
Wed 10	Off	Off	On	Off	0.00	46	55	30	0.7			1.56	0.95	2.34	
Thu 11	Off	Off	On	Off	0.00	47	52	30	0.7			1.44	0.89	2.71	
Fri 12	Off	Off	On	Off	0.01	46	51	30	0.7			1.44	0.00	3.34	
Sat 13	Off	Off	On	Off	0.00	47	58	30	0.7			1.46	0.00	3.53	
Sun 14	Off	Off	On	Off	1.20	45	49	30	0.7			2.01	0.15	3.66	
Mon 15	Off	Off	On	Off	0.22	46	57	30	0.7			3.23	1.53	2.80	
Tue 16	Off	Off	On	Off	0.00	52	75	35	0.7	186	110	1.90	1.33	2.70	
Wed 17	Off	Off	On	On	0.00	58	88	30	0.7			1.78	0.00	2.67	
Thu 18	Off	Off	On	On	0.00	66	90	30	0.7			1.76	1.23	2.67	
Fri 19	Off	Off	On	On	0.05	58	83	30	0.7			1.62	0.00	2.91	
Sat 20	Off	Off	On	On	0.00	52	63	30	0.7			1.59	0.85	2.65	
Sun 21	Off	Off	On	On	0.00	48	64	30	0.7			1.21	0.00	1.89	
Mon 22	Off	Off	On	On	0.19	51	55	30	0.7			1.34	0.00	2.47	
Tue 23	Off	Off	On	On	0.01	52	63	30	0.7	272	200	1.56	0.81	2.69	
Wed 24	Off	Off	On	On	0.00	54	64	30	0.7			1.68	0.92	2.65	
Thu 25	Off	Off	On	On	0.51	51	54	35	0.7			1.98	0.00	3.40	
Fri 26	Off	Off	On	On	0.60	48	56	35	0.7			2.78	0.00	4.14	
Sat 27	Off	Off	On	On	0.00	52	58	35	0.7			2.45	1.54	3.59	
Sun 28	Off	Off	On	On	0.00	52	65	35	0.7			2.32	0.00	3.59	
Mon 29	Off	Off	On	Off	0.07	48	55	35	0.7			2.02	1.27	2.85	
Tue 30	Off	Off	On	On	0.00	49	57	30	0.7	226	110	1.74	1.11	2.72	
Wed 31	Off	Off	On	Off	0.00	53	70	35	0.70			1.59	0.00	3.84	
MIN	-	-	-	-	0.00	40	47	30	1	92	110	1.21	0.00		
MAX	-	-	-	-	1.20	66	90	35	1	272	200	3.23		5.60	
AVG	-	-	-	-	0.11	49	61	31	1	200	144	1.87			
SUM	-	-	-	-	3.48	-	-	970	22			-	-	-	-

Hull Wastewater Treatment Plant Operations Data

May, 2017

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			1.0	122	550	280	250	2,290	8,052	0.85		4.0			
Tue 02			0.5		500	250	200			0.56		4.5			18.0
Wed 03			1.0	115	540	250	200	2,169	6,996	0.88		4.5			
Thu 04			0.0		570	260	200			0.91		2.0			
Fri 05			0.0	116	450	240	200	2,063	4,742	0.89		1.0			
Sat 06			1.0							0.91		1.0			
Sun 07			1.0							0.91		1.0			
Mon 08			0.6	118	600	300	280	2,522	8,156	0.93		0.6			
Tue 09			0.0		640	280	230			0.91		2.5			18.0
Wed 10			0.0	129	820	340	250	2,625	6,312	0.91		3.0			
Thu 11			0.0		780	350	280			0.89		4.0			
Fri 12			0.0	126	720	340	270	2,692	8,336	0.89		4.5			
Sat 13			0.0							0.89		2.0			
Sun 14			0.0							0.89		2.5			
Mon 15			0.0	103	500	250	250	2,411		1.19		3.0			
Tue 16			0.0		830	370	280			0.87		5.0			15.0
Wed 17			0.0	149	900	450	300	3,020	8,904	0.87		4.5			
Thu 18			0.0		880	490	390			0.87		5.0			
Fri 19			0.0	110	670	300	270	2,717	9,460	0.80		3.0			
Sat 20			0.0							0.80		1.5			
Sun 21			0.0							0.80		2.5			
Mon 22			0.0	145	850	480	400	3,307	9,356	0.80		1.0			
Tue 23			0.0		850	410	300			0.80		1.5			20.0
Wed 24			0.0	127	750	390	390	3,047	7,116	0.80		4.0			
Thu 25			0.0							0.80		1.0			
Fri 26			0.0	94	360	170	150	1,805	8,448	0.78		4.5			
Sat 27			0.0							0.78		3.5			
Sun 28			0.0							0.80		1.5			
Mon 29			0.0							0.82		2.0			
Tue 30			0.0		340	130	120			0.82		2.5			17.0
Wed 31			0.0	96	370	190	170	1,975	8,142	0.82		1.5			
MIN			0.0	94	340	130	120	1,805	4,742	0.56		0.6			15.0
MAX			1.0	149	900	490	400	3,307	9,460	1.19		5.0			20.0
AVG			0.2	119	641	310	256	2,511	7,835	0.85		2.7			17.6
SUM	-	-	-	-	-	-	-	-	-	-	-	-	-		-

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			2.32	1.12	1.71	6.90	0.04	0.03	0.05	0.04	4.9	7.0				
Tue	02	3.6		2.46	1.11	1.13	6.90	0.03	0.03	0.01	0.02	5.0	7.5				
Wed	03		10	2.32	1.10	1.69	7.00	0.98	0.03	0.04	0.35	5.0	7.5				
Thu	04			2.21	1.05	1.51	7.00	0.46	0.34	0.16	0.32		8.0				
Fri	05			2.40	0.00	1.41	6.90	0.10	0.03	0.49	0.21	5.1	7.0				
Sat	06			3.96	1.06	1.78	6.90	0.03	0.02	0.02	0.02		7.5				
Sun	07			2.54	1.14	1.78	6.90	0.04	0.03	0.03	0.03		8.0				
Mon	08			2.31	1.07	1.68	7.00	0.04	0.03	0.10	0.06	5.0	7.0				
Tue	09	3.3		2.31	1.09	1.56	6.90	0.04	0.04	0.02	0.03		7.5				
Wed	10		10	2.02	1.05	1.56	6.90	0.07	0.04	0.03	0.05	5.2	7.0				
Thu	11			2.29	1.04	1.47	6.90	0.04	0.03	0.05	0.04		7.5				
Fri	12			2.25	1.09	1.47	7.00	0.35	0.03	0.03	0.14	4.7	7.0				
Sat	13			4.40	0.00	1.47	6.90	0.02	0.04	0.03	0.03		7.5				
Sun	14			3.19	1.14	1.93	6.80	0.00	0.00	0.02	0.01		8.5				
Mon	15			2.75	1.85	3.03	7.10	0.03	0.02	0.01	0.02	3.9	9.0				
Tue	16	4.7		4.21	0.00	1.83	7.00	0.04	0.05	0.06	0.05		7.5				
Wed	17		10	2.09	1.12	1.60	6.80	0.06	0.04	0.00	0.03	3.7	7.0				
Thu	18			2.30	1.09	1.54	6.90	0.03	0.04	0.02	0.03		9.0				
Fri	19			4.48	0.00	1.39	6.90	0.11	0.03	0.02	0.05	3.3	7.0				
Sat	20			2.48	0.00	1.39	7.10	0.04	0.01	0.02	0.02		7.0				
Sun	21			1.99	0.00	1.32	7.10	0.02	0.00	0.01	0.01		7.0				
Mon	22			2.53	0.39	1.32	7.00	0.98	0.01	0.02	0.34	6.7	6.0				
Tue	23	7.8		2.21	0.00	1.37	7.00	0.04	0.21	0.09	0.11	6.9	6.0				
Wed	24		10	2.40	0.00	1.49	7.00	0.08	0.04	0.04	0.05	5.4	5.5				
Thu	25			4.36	1.08	1.76	6.90	0.02	0.02	0.02	0.02	4.1	4.5				
Fri	26			3.86	1.48	2.66	7.00	0.02	0.00	0.03	0.02	5.4	0.0				
Sat	27			3.36	1.42	2.37	7.00	0.24	0.06	0.15	0.15		0.5				
Sun	28			3.10	1.38	2.29	7.00	0.02	0.01	0.00	0.01	6.3	2.0				
Mon	29			2.81	1.43	2.08	7.00	0.06	0.05	0.04	0.05		1.0				
Tue	30	3.0		2.55	1.35	1.78	7.00	0.18	0.03	0.02	0.08	7.2	1.0				
Wed	31		10	6.32	0.00	1.59	6.90	0.02	0.06	0.04	0.04		0.5				
MIN		3.0	10		0.00	1.13	6.80	0.00	0.00	0.00	0.01	3.25	0.00	-	-	-	-
MAX		7.8	10	6.32		3.03	7.10	0.98	0.34	0.49	0.35	7.16	9.00	-	-	-	-
AVG		4.5	10			1.71	6.95	0.14	0.05	0.05	0.08	5.16	5.97	-	-	-	-
SUM		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Hull Wastewater Treatment Plant Operations Data

May, 2017

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			40	9,000	3,658	2.2	0.0	12.2			38	54	1.2	0.031
Tue 02			88	9,000	3,730	2.2	0.0	12.8			38	50	2.0	0.029
Wed 03			145	9,000	3,743	2.2	0.2	12.9	<10		38	61	0.4	0.027
Thu 04			113	0		2.2	0.3	12.6			38	34	1.6	0.028
Fri 05			105	9,000	3,854	2.2	2.1	12.9			38	45	2.0	0.026
Sat 06			75	0		2.2	6.5	13.2			38	38	2.0	0.030
Sun 07			53	0		2.2	11.6	13.8			38	45	1.2	0.031
Mon 08			68	9,000	3,748	2.3	11.7	13.0			38	53	0.8	0.032
Tue 09			28	0		2.2	11.7	13.1			38	37	1.4	0.028
Wed 10			199	9,000	3,890	2.3	11.7	13.2	<10		38	60	1.0	0.028
Thu 11			83	0		2.2	11.7	13.2			38	70	1.6	0.025
Fri 12			72	9,000	3,562	2.2	0.0	13.5			37	76	1.6	0.025
Sat 13			51	0		2.2	4.5	13.6			37	62	1.4	0.023
Sun 14			39	0		2.2	2.9	12.2			37	50	1.0	0.035
Mon 15			38	9,000	2,957	2.2	2.9	12.1			37	55	1.4	0.038
Tue 16			57	0		2.2	3.3	13.8			37	46	0.6	0.040
Wed 17			68	9,000	2,773	2.2	10.2	14.9	<10		37	82	2.0	0.035
Thu 18			84	0		2.3	6.5	16.1			37	45	1.2	0.031
Fri 19			93	9,000	2,440	2.3	7.7	16.4			37	44	2.8	0.025
Sat 20			51	0		2.4	4.4	15.0			37	71	0.0	0.024
Sun 21			36	0		2.4	5.6	15.5			37	31	1.4	0.025
Mon 22			49	9,000	4,993	2.4	4.8	14.7			37	41	1.4	0.025
Tue 23			186	9,000	5,172	2.5	7.2	15.1			37	38	1.2	0.024
Wed 24			165	9,000	4,023	2.5	6.4	14.9	<10		37	96	2.0	0.022
Thu 25			167	9,000	3,068	2.5	10.8	14.4			37	82	2.0	0.023
Fri 26			106	9,000	4,054	2.5	8.2	14.1			37	88	2.0	0.028
Sat 27			85	9,000	4,750	2.4	8.4	15.1			37	72	1.0	0.030
Sun 28			31	0		2.5	3.9	15.2			37	106	1.0	0.030
Mon 29			19	0		2.5	2.5	14.4			37	67	1.2	0.027
Tue 30			45	9,000	5,376	2.5	2.7	14.9			37	65	1.5	0.028
Wed 31			96	0		2.6	6.4	15.2	<10		37	85	1.3	0.025
MIN	-	-	19	0	2,440	2	0	12	<10	-	37	31	0.0	0.022
MAX	-	-	199	9,000	5,376	3	12	16	<10	-	38	106	2.8	0.040
AVG	-	-	82	4,935	3,870	2	6	14	<10	-	37	60	1.4	0.028
SUM	-	-	2,536	153,000	65,791	-	-	-		-	-	-	-	0.877

Woodard and Curran

May, 2017

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	ENE-9	47	Cloudy	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tue	02	SE-9	56	Cloudy	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wed	03	SW-8	50	Cloudy	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Thu	04	NW-5	45	Sunny	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fri	05	SE-8	48	Cloudy	0.000	0.000	0.000	0.000	0.000	0.001	0.000
Sat	06	SE-9	53	Cloudy	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sun	07	N-5	52	Sunny	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mon	08	WSW-14	45	Cloudy	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Tue	09	W-3	43	Cloudy	0.004	0.004	0.004	0.004	0.004	0.004	0.004
Wed	10	W-8	47	Cloudy	0.003	0.004	0.004	0.005	0.005	0.004	0.003
Thu	11	NNW-8	48	loudy	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fri	12	N-7	49	Rain	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sat	13	SE-7	47	Cloudy	0.002	0.002	0.002	0.002	0.002	0.003	0.002
Sun	14	NNE-17	47	Showers	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mon	15	WNW-10	49	Rain	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tue	16	WNW-12	65	Sunny	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Wed	17	SW-13	88	Sunny	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Thu	18	W-12	88	Sunny	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fri	19	WSW-10	69	Sunny	0.000	0.000	0.001	0.001	0.002	0.002	0.000
Sat	20	NNE-12	55	Sunny	0.002	0.002	0.002	0.002	0.002	0.004	0.002
Sun	21	N-0	53	Sunny	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Mon	22	SSE-5	55	Cloudy	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Tue	23	NW-7	52	Cloudy	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wed	24	SE-4	55	Cloudy	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Thu	25	ENE-7	52	Cloudy	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fri	26	N-12	49	Light rain	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sat	27	N-0	60	Mostly cloudy	0.110	0.012	0.120	0.110	0.110	0.004	0.120
Sun	28	NE-5	58	Sunny	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Mon	29	ESE-13	50	Cloudy	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Tue	30	NE-2	49	Cloudy	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wed	31	E-5	57	Fog	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Min.			43		0.000	0.000	0.000	0.000	0.000	0.000	0.000
Max.			88		0.110	0.012	0.120	0.110	0.110	0.004	0.120
Ave.			54		0.004	0.001	0.005	0.004	0.004	0.001	0.005
Target					<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Woodard and Curran

May, 2017

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	ENE-9	47	Cloudy	0.000	0.130		0.280	0.460	0.000		0.330	0.160	51.5
Tue	02	SE-9	56	Cloudy	0.001	0.003		0.024	0.260	0.001	0.000	0.180	0.004	97.8
Wed	03	SW-8	50	Cloudy	0.000	0.130		0.930	0.200	0.001		0.093	0.013	86.0
Thu	04	NW-5	45	Sunny	0.000	0.130		1.100	0.570	0.000		0.110	0.007	93.6
Fri	05	SE-8	48	Cloudy	0.001	0.027		1.100	0.440	0.002	0.000	0.101	0.007	93.1
Sat	06	SE-9	53	Cloudy	0.000	0.150		1.100	0.640	0.000	0.000	0.083	0.009	89.2
Sun	07	N-5	52	Sunny	0.000	0.130		0.380	7.200	0.004	0.000	0.320	0.116	63.8
Mon	08	WSW-14	45	Cloudy	0.000	0.130		0.084	7.200	0.000		0.290	0.011	96.2
Tue	09	W-3	43	Cloudy	0.001	0.130		0.340	5.000	0.016	0.002	0.190	0.036	81.1
Wed	10	W-8	47	Cloudy	0.003	0.760		0.018	0.350	0.004	0.001	0.110	0.008	92.7
Thu	11	NNW-8	48	loudy					0.560	0.012	0.002	0.220	0.036	83.6
Fri	12	N-7	49	Rain	0.000	0.001			0.670	0.007	0.000	0.640	0.002	99.7
Sat	13	SE-7	47	Cloudy	0.000	0.460			15.000	0.016	0.000	0.120	0.049	59.2
Sun	14	NNE-17	47	Showers	0.000	0.130			14.000	0.000	0.004	0.310	0.016	94.8
Mon	15	WNW-10	49	Rain	0.000	0.130			6.100	0.000	0.001	0.130	0.024	81.5
Tue	16	WNW-12	65	Sunny	0.000	0.130			4.200	0.002	0.170	0.120	0.010	91.7
Wed	17	SW-13	88	Sunny	0.000	0.130			0.470	0.001	0.016	0.120	0.011	90.8
Thu	18	W-12	88	Sunny	0.000	0.130			0.000	0.000	0.001	0.002	0.001	50.0
Fri	19	WSW-10	69	Sunny	0.004	0.120			2.300	0.005	0.001	0.200	0.006	97.0
Sat	20	NNE-12	55	Sunny	0.004	0.250			2.000	0.004	0.130	0.200	0.130	35.0
Sun	21	N-0	53	Sunny	0.000	0.130			0.390	0.022	0.001	0.024	0.018	25.0
Mon	22	SSE-5	55	Cloudy	0.000	0.130			8.800	0.000	0.000	0.280	0.011	96.1
Tue	23	NW-7	52	Cloudy	0.000	0.130			6.300	0.100	0.012	0.260	0.035	86.5
Wed	24	SE-4	55	Cloudy	0.000	0.130			7.200	0.000	0.230	0.260	0.120	53.8
Thu	25	ENE-7	52	Cloudy	0.000	0.130			7.600	0.026	0.001	0.370	0.140	62.2
Fri	26	N-12	49	Light rain	0.000	0.002			0.002	0.004	0.001	0.057	0.004	93.0
Sat	27	N-0	60	Mostly cloudy	0.003	0.013			0.015	0.007	0.120	0.130	0.009	93.1
Sun	28	NE-5	58	Sunny	0.000	0.100			0.670	0.000	0.009	0.320	0.120	62.5
Mon	29	ESE-13	50	Cloudy	0.000	0.130			3.000	0.000	0.000	0.240	0.110	54.2
Tue	30	NE-2	49	Cloudy	0.000	0.130			0.350	0.000	0.240	0.028	0.014	50.0
Wed	31	E-5	57	Fog	0.001	0.110			2.000	0.003	0.000	0.060	0.006	90.0
Min.			43		0.000	0.001			0.000	0.000	0.000	0.002	0.001	25.0
Max.			88		0.004	0.760			15.000	0.100	0.240	0.640	0.160	99.7
Ave.			54		0.001	0.145			3.353	0.008	0.035	0.190	0.040	77.2
Target					<.01	<10.0	<10.0	<10.0	<10.0	.050	.050	<10.0	<1.0	95%

Hull WWTF
Monthly Rain, Temperature and Flow
May, 2017

Date	Rainfall	Minimum Air Temp	Maximum Air Temp	Effluent Flow
	Inches	F	F	MGD
05/01/17	0.00	46	47	1.710
05/02/17	0.18	45	60	1.130
05/03/17	0.00	49	60	1.690
05/04/17	0.00	45	56	1.510
05/05/17	0.33	46	53	1.410
05/06/17	0.10	48	66	1.780
05/07/17	0.00	48	60	1.780
05/08/17	0.01	43	53	1.680
05/09/17	0.00	40	50	1.560
05/10/17	0.00	46	55	1.560
05/11/17	0.00	47	52	1.470
05/12/17	0.01	46	51	1.470
05/13/17	0.00	47	58	1.470
05/14/17	1.20	45	49	1.930
05/15/17	0.22	46	57	3.030
05/16/17	0.00	52	75	1.830
05/17/17	0.00	58	88	1.600
05/18/17	0.00	66	90	1.540
05/19/17	0.05	58	83	1.390
05/20/17	0.00	52	63	1.390
05/21/17	0.00	48	64	1.320
05/22/17	0.19	51	55	1.320
05/23/17	0.01	52	63	1.370
05/24/17	0.00	54	64	1.490
05/25/17	0.51	51	54	1.760
05/26/17	0.60	48	56	2.660
05/27/17	0.00	52	58	2.370
05/28/17	0.00	52	65	2.290
05/29/17	0.07	48	55	2.080
05/30/17	0.00	49	57	1.780
05/31/17	0.00	53	70	1.590
Min	0.00	40	47	1.13
Max	1.20	66	90	3.03
Avg	0.11	49	61	1.71
Sum	3.48			52.96