COMMITMENT & INTEGRITY
DRIVE RESULTS

1111 Nantasket Ave.
Hull, Massachusetts 02045

T 781.925.0906

WOODARD
&CURRAN

September 14, 2015

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 – August 2015 – Discharge 001-A

Dear Ms. McDonald:

Enclosed please find the completed DMR for the month of August 2015. Please note that the facility operated in complete compliance with all NPDES requirements, with the exception of one effluent BOD sample that was collected for 8/19-20, 2015. A notification of violation was sent by email to David Turin and David Burns on 9/1/15, after the results were validated by the contract lab.

The result reported was 53 mg/L. The final effluent BOD result exceeded the maximum daily limit of 50 mg/L. Also, since the facility samples once per week, there was a weekly excursion for effluent BOD. We believe that this was a one-time incident. On the sample collection day, tank cleaning was being performed to one of the final clarifiers for annual inspection and service. Also, one of the off line aeration tanks was being cleaned out. The added hydraulic and solids loading on the system impacted the system and caused a reduction in treatment efficiency.

A change in tank cleaning and dewatering procedures was implemented for future work, to minimize the loading impact on the system.

PERMIT LIMITS –	BOD MAX DAILY - 50 mg/L. BOD AVG WEEKLY - 45 mg/L
ACTUAL RESULTS –	MAX DAILY – 53 mg/L AVG WEEKLY – 53 mg/L

Please find the updated staffing plan and schedule for the Hull WPCF.

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
James Dow – Chief Facility Manager – Town of Hull WPCF
Ryan Joyce – Division of Marine Fisheries

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 J STRUZZIERY CHRMN COMM

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	15	08	01	TO	15	08	31

OMB No. 2040-0004

MAJOR
(SUBR E)
F- FINAL
TREATED SANITARY WASTEWATEF

*** 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)	SAMPLE MEASUREMENT	188	626	LBS/DY	16	53	53	mg/L	2	1/7	24
00310 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	768 MO AVG	1,152 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	2,715	******	LBS/DY	230	******	******	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	******	******	****	6.50	******	6.90	SU	0	~~17~~ 01/01	GR-4
00400 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	******	******	****	6.5 MINIMUM	******	8.5 MAXIMUM	SU		WEEKLY	GRAB-4
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	180	260	LBS/DY	15	22	22	mg/L	0	1/7	24
00530 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	768 MO AVG	1,152 WKLY AVG	LBS/DY	30 MO AVG	45 WKLY AVG	50 DAILY MX	mg/L		WEEKLY	COMP 24
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	4,709	******	LBS/DY	399	******	******	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	1.68	~~7.06~~ 2.41	MGD	******	******	******	****	0	99/99	RC
50050 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	3.07 12 MO AVG	DAILY MX	MGD	******	******	******	****		CONTINUOUS	RCORDR
FLOW, IN CONDUIT OR THRU TREATMENT PLANT	SAMPLE MEASUREMENT	******	******	****	1.42	******	******	MGD	0	~~17~~ 99/99	~~OR~~ RC
50050 0 0 See Comments	PERMIT REQUIREMENT	******	******	****	REQ MO AVG	******	******	MGD		~~WEEKLY~~ CONTIN	~~GRAB~~ RCORDR

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
Aram Varjabedian - PROJ MGR James Dow, Chief Facility Manager	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	15	09	14
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

Facility HULL W P C F
Location HULL MA 02045
Attn: JOHN J STRUZZIERY CHRMN COM

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

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	15	08	01	TO	15	08	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	******	******	******	0.10	******	0.53	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	******	******	******	~~84~~ 93	******	******	%	0	1/30	CA
81010 K 0 0 PERCENTREMOVAL	PERMIT REQUIREMENT	******	******	******	85 MO AVG	******	******	PER-CENT		ONCE/ MONTH	CALCTD
SOLIDS, SUSPENDED PERCENT REMOVAL	SAMPLE MEASUREMENT	******	******	******	96	******	******	%	0	1/30	CA
81011 K 0 0 PERCENTREMOVAL	PERMIT REQUIREMENT	******	******	******	85 MO AVG	******	******	PER-CENT		ONCE/ MONTH	CALCTD
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
Aram Varjabedian - PRO OF MGR James Dow, Chief Facility Manager	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	15	09	14
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 MO

WET DATA ON DMR 001B

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DRIVE RESULTS

1111 Nantasket Ave.
Hull, Massachusetts 02045

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&CURRAN

HULL, MA WATER POLLUTION CONTROL FACILITY
NPDES NO. MA0101231

Hull Water Pollution Control Facility – Staffing – August 2015

Project Manager/Chief Operator – Aram Varjabedian	MA Grade 7C
Asst. Project Manager/Asst. Chief Operator – Kevin Stetson	MA Grade 6C
Operations/Maintenance Tech 2 – Joseph Basler	MA Grade 4M
Operations/Maintenance Tech 1 – Eric Sutton	MA Grade 3M
Operations/Maintenance Tech 2 – Rick Clark	
Operator-In-Training – John Currier	

Supplemental O&M Personnel supporting/assisting the Hull facility

Pat Owens – Part-time Weekend Operator	MA Grade 5C
James Gagliard – Sr. Operations Specialist	MA Grade 6C
Harvey King – Sr. Operations Specialist	MA Grade 6C
Bill Boornazian – Engineer / Operator	MA Grade 6C
Frank Cavaleri – Area Manager	MA Grade 7C

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Hull Water Pollution Control Facility – Schedule – August 2015

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		
O&M Tech 2	4M			X	X	X	X	X
O&M Tech 1	3M	X	X	X	X	X		
O&M Tech 2			X	X	X	X	X	
Oper-In-Training			X	X	X	X	X	
Part-Time Operator	5C	X						X

Hull WWTF
Monthly Rain, Temperature and Flow
August, 2015

Date	Rainfall	Minimum Air Temp	Maximum Air Temp	Effluent Flow
	Inches	F	F	MGD
08/01/15	0.00	68	90	1.634
08/02/15	0.00	60	81	1.691
08/03/15	0.00	68	85	1.691
08/04/15	0.11	68	84	1.610
08/05/15	0.00	65	84	1.566
08/06/15	0.00	64	80	1.461
08/07/15	0.00	61	76	1.370
08/08/15	0.00	61	77	1.400
08/09/15	0.00	58	67	1.443
08/10/15	0.00	61	84	1.443
08/11/15	0.30	63	70	1.391
08/12/15	0.00	68	84	1.391
08/13/15	0.00	65	80	1.367
08/14/15	0.00	64	87	1.322
08/15/15	0.08	68	91	1.423
08/16/15	0.01	67	90	1.493
08/17/15	0.00	70	89	1.493
08/18/15	0.08	71	86	1.395
08/19/15	0.00	70	85	1.395
08/20/15	0.00	70	78	1.255
08/21/15	0.13	69	81	1.298
08/22/15	0.00	67	73	1.298
08/23/15	0.02	67	71	1.293
08/24/15	0.00	68	75	1.237
08/25/15	0.00	68	80	1.209
08/26/15	0.00	69	85	1.217
08/27/15	0.00	66	82	1.249
08/28/15	0.00	64	79	1.328
08/29/15	0.00	64	81	1.425
08/30/15	0.00	69	88	1.542
08/31/15	0.00	70	86	1.542
Min	0.00	58	67	1.21
Max	0.30	71	91	1.69
Avg	0.02	66	82	1.42
Sum	0.73			43.87

	Daily Com	100011 - Hingham Flow KGAL
1 Sat		62.00
2 Sun		63.00
3 Mon		65.00
4 Tue		61.00
5 Wed		60.00
6 Thu		62.00
7 Fri		67.00
8 Sat		67.00
9 Sun		69.00
10 Mon		65.00
11 Tue		63.00
12 Wed		60.00
13 Thu		58.00
14 Fri		58.00
15 Sat		61.00
16 Sun		65.00
17 Mon		60.00
18 Tue		40.00
19 Wed		49.00
20 Thu		40.00
21 Fri		43.00
22 Sat		40.00
23 Sun		38.00
24 Mon		39.00
25 Tue		39.00
26 Wed		38.00
27 Thu		39.00
28 Fri		38.00
29 Sat		38.00
30 Sun		38.00
31 Mon		38.00
MIN		38.00
MAX		69.00
AVG		52.35
SUM		1,623.00
GeoMean		50.97

← ESTIMATED FLOW

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Hull Wastewater Treatment Plant Operations Data

August, 2015

Date		Manual Screen Used	FINE BAR RACK	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
Sat	01	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	Off	On	On	On
Sun	02	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	Off	On	On	On
Mon	03	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	Off	On	On	On
Tue	04	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	Off	On	On	On
Wed	05	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	Off	On	On	On
Thu	06	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	Off	On	On	On
Fri	07	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	Off	On	On	On
Sat	08	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	Off	On	On	On
Sun	09	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	Off	On	On	On
Mon	10	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	Off	On	On	On
Tue	11	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	Off	On	On	On
Wed	12	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	Off	On	On	On
Thu	13	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	On	On	On	On
Fri	14	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	On	On	On	On
Sat	15	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	On	On	On	On
Sun	16	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	On	On	On	On
Mon	17	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	On	On	On	On
Tue	18	Yes	Off Line	On	On	Off	On	On	Off	On	Off	On	On	On	On	On
Wed	19	Yes	Off Line	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Thu	20	Yes	Off Line	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Fri	21	Yes	Off Line	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Sat	22	Yes	Off Line	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Sun	23	Yes	Off Line	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Mon	24	Yes	Off Line	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Tue	25	Yes	Off Line	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Wed	26	Yes	Off Line	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Thu	27	Yes	Off Line	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Fri	28	Yes	Off Line	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Sat	29	Yes	Off Line	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Sun	30	Yes	Off Line	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
Mon	31	Yes	Off Line	On	On	Off	On	On	Off	On	Off	Off	On	On	On	On
MIN		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MAX		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AVG		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SUM		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Hull Wastewater Treatment Plant Operations Data

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) MG/L	INF FLOW MGD	INFLUENT Q MINIMUM MGD	INFLUENT Q MAXIMUM MGD	PRI TSS MG/L
		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
Sat	01	Off	Off	On	On	0.00	68	90	20	0.70			1.680	0.200	4.100	
Sun	02	Off	Off	On	On	0.00	60	81	20	0.70			1.729	0.000	4.200	
Mon	03	Off	Off	On	On	0.00	68	85	20	0.70			1.826	0.000	5.000	
Tue	04	Off	Off	On	On	0.11	68	84	20	0.70			1.936	0.000	4.600	
Wed	05	Off	Off	On	On	0.00	65	84	20	0.70			1.942	0.500	1.700	
Thu	06	Off	Off	On	On	0.00	64	80	20	0.70	341	310	1.460	0.000	0.000	
Fri	07	Off	Off	On	On	0.00	61	76	20	0.70			1.297	0.000	0.000	
Sat	08	Off	Off	On	On	0.00	61	77	20	0.70			1.343	0.000	2.200	
Sun	09	Off	Off	On	On	0.00	58	67	20	0.70			1.215	0.000	2.600	
Mon	10	Off	Off	On	On	0.00	61	84	20	0.70			1.360	0.000	3.500	
Tue	11	Off	Off	On	On	0.30	63	70	20	0.70			1.395	0.000	1.900	
Wed	12	Off	Off	On	On	0.00	68	84	20	0.70			1.872	0.000	0.000	
Thu	13	Off	Off	On	On	0.00	65	80	20	0.70	394	270	1.366	0.000	0.000	
Fri	14	Off	Off	On	On	0.00	64	87	20	0.70			1.609	0.000	0.000	
Sat	15	Off	Off	On	On	0.08	68	91	20	0.70			1.394	0.000	4.200	
Sun	16	Off	Off	On	Off	0.01	67	90	20	0.70			1.182	0.000	1.700	
Mon	17	Off	Off	On	On	0.00	70	89	20	0.70			1.417	0.000	1.500	
Tue	18	Off	Off	On	Off	0.08	71	86	20	0.70			1.168	0.000	0.000	
Wed	19	Off	Off	On	Off	0.00	70	85	20	0.70			1.204	0.000	0.000	
Thu	20	Off	Off	On	On	0.00	70	78	20	0.70	474	90	1.219	0.000	0.000	
Fri	21	Off	Off	On	Off	0.13	69	81	20	0.70			1.120	0.000	0.000	
Sat	22	Off	Off	On	On	0.00	67	73	20	0.70			1.169	0.000	1.600	
Sun	23	Off	Off	On	On	0.02	67	71	20	0.70			1.198	0.000	1.600	
Mon	24	Off	Off	On	On	0.00	68	75	20	0.70			1.163	0.000	4.100	
Tue	25	Off	Off	On	Off	0.00	68	80	20	0.70			1.193	0.000	4.500	
Wed	26	Off	Off	On	Off	0.00	69	85	20	0.70			1.111	0.000	4.300	
Thu	27	Off	Off	On	Off	0.00	66	82	20	0.70	387	250	1.188	0.000	3.300	
Fri	28	Off	Off	On	On	0.00	64	79	20	0.70			1.271	0.000	4.500	
Sat	29	Off	Off	On	Off	0.00	64	81	20	0.70			1.050	0.000	4.400	
Sun	30	Off	Off	On	On	0.00	69	88	20	0.70			1.362	0.000	4.400	
Mon	31	Off	Off	On	Off	0.00	70	86	20	0.70			1.299	0.000	3.400	
MIN		-	-	-	-	0.00	58	67	-	-	341	90	-	-	-	
MAX		-	-	-	-	0.30	71	91	-	-	474	310	-	-	-	
AVG		-	-	-	-	0.02	66	82	-	-	399	230	-	-	-	
SUM		-	-	-	-	0.73	-	-	-	-	1,596	920	-	-	-	-

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Hull Wastewater Treatment Plant Operations Data

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
Sat 01			1.0							1.5460	2.0			35,000	
Sun 02			2.0							1.5460	2.0			35,000	
Mon 03			1.0	98	300	200	180	2,033	5,082	1.5460	2.0			35,000	
Tue 04			0.0	88	200	150	150	1,693	6,378	1.5420	1.0			35,000	
Wed 05			1.0	83	190	150	150	1,802	5,142	1.5370	1.0			35,000	
Thu 06			1.0	84	200	150	150	1,777	4,328	1.5390	1.0			35,000	22.0
Fri 07			0.5	91	200	150	140	1,648	4,308	1.5390	1.5			35,000	
Sat 08			1.5							1.5530	2.0			35,100	
Sun 09			1.3							1.5530	1.0			35,000	
Mon 10			1.0	136	300	200	180	1,463	4,446	1.5500	1.0			35,000	
Tue 11			1.0	77	220	150	150	1,931	4,120	1.7130	1.0			35,000	
Wed 12			1.0	85	175	140	140	1,632	3,562	1.9250	1.0			32,000	
Thu 13			1.0	88	200	140	140	1,584	4,008	1.9250	0.5	0.0		24,000	15.0
Fri 14			1.0	92	190	130	130	1,412	4,234	1.9030		3.0		25,000	
Sat 15			1.0							2.0372	1.5	2.0		25,000	
Sun 16			3.5							2.0370	1.0	3.5		8,000	
Mon 17			2.0							2.0020	1.0	2.0		8,000	
Tue 18			1.0	91	270	160	160	1,759	3,926	2.0020	1.5	2.0		8,000	
Wed 19			1.0	91	260	160	150	1,748	4,218	1.7070		2.5		8,000	
Thu 20			1.0	97	280	180	170	1,853	4,506	1.3600		2.5		8,000	17.0
Fri 21			1.0	95	300	180	180	1,877	4,466	1.2630		1.5		8,000	
Sat 22			0.5							1.2630		1.5		8,000	
Sun 23			1.0							1.2610		0.5		8,000	
Mon 24			1.5	115	350	230	230	2,006	5,200	1.2650		1.5		8,000	
Tue 25			1.5	111	390	250	230	2,252	4,556	1.2650		1.0		8,000	
Wed 26			0.5	105	330	240	240	2,282	4,646	1.2670		1.5		8,000	
Thu 27			1.0	110	490	260	240	2,365	5,012	1.2890		1.5		8,000	7.0
Fri 28			1.0	105	420	250	250	2,361	5,174	1.2980		2.0		14,000	
Sat 29			1.0							1.2980		1.5		17,000	
Sun 30			1.0							1.2960		2.0		17,000	
Mon 31			1.0	123	400	300	300	2,435	5,868	1.2970		2.0		17,000	
MIN			0	77	175	130	130	1,412	3,562	1.2610	0.5	0.0		8,000	7.0
MAX			4	136	490	300	300	2,435	6,378	2.0372	2.0	3.5		35,100	22.0
AVG			1	98	283	189	183	1,896	4,659	1.5524	1.3	1.8		21,035	15.3
SUM	-	-	-	-	-	-	-	-	-	-	-	-	-	652,100	-

WOODARD & CURRAN

Hull Wastewater Treatment Plant Operations Data

August, 2015

Date	EFF BOD (Report)	EFF FECAL #/100	EFF MAX DAILY FLOW MGD	EFF MIN DAILY FLOW MGD	EFF FLOW MGD	EFF #1 PH SU	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
Sat 01			4.900	0.700	1.634	6.70	0.00	0.01	0.02	0.01		1.5				
Sun 02			5.000	0.700	1.691	6.70	0.01	0.04	0.04	0.03		2.0				
Mon 03			2.100	0.000	1.691	6.90	0.01	0.02	0.03	0.02	6.4	2.0				
Tue 04			4.900	0.700	1.610	6.70	0.05	0.04	0.05	0.05		4.0				
Wed 05			2.100	0.800	1.566	6.60	0.89	0.57	0.12	0.53	6.5	1.0				
Thu 06	3.2	10	2.100	0.800	1.461	6.70	0.43	0.22	0.09	0.25		1.0				
Fri 07			2.100	0.700	1.370	6.80	0.03	0.04	0.06	0.04	6.9	5.0				
Sat 08			4.800	0.700	1.400	6.70	0.03	0.08	0.07	0.06		2.5				
Sun 09			4.900	0.800	1.443	6.80	0.00	0.01	0.02	0.01		3.0				
Mon 10			4.800	0.700	1.443	6.70	0.01	0.01	0.01	0.01	7.7	2.5				
Tue 11			2.100	0.800	1.391	6.60	0.02	0.06	0.07	0.05		6.0				
Wed 12			1.900	0.800	1.391	6.70	0.05	0.06	0.27	0.13	7.1	2.0				
Thu 13	4.4	10	1.800	0.800	1.367	6.80	0.04	0.06	0.02	0.04		2.0				
Fri 14			1.700	0.800	1.322	6.90	0.06	0.03	0.09	0.06		6.0				
Sat 15			6.800	0.700	1.423	6.70	0.22	0.06	0.09	0.12	7.6	6.0				
Sun 16			1.800	0.800	1.493	6.90	0.04	0.04	0.06	0.05		1.5				
Mon 17			1.600	0.800	1.493	6.80	0.04	0.03	0.04	0.04	9.1	3.0				
Tue 18			1.600	0.800	1.395	6.70	0.10	0.04	0.12	0.09		4.0				
Wed 19			1.600	0.800	1.395	6.60	0.08	0.10	0.09	0.09	7.7	2.0				
Thu 20	53.0	10	1.600	0.700	1.255	6.50	0.08	0.08	0.04	0.07		5.0				
Fri 21			1.700	0.800	1.298	6.50	0.07	0.82	0.05	0.31		3.0				
Sat 22			1.600	0.700	1.298	6.50	0.04	0.07	0.05	0.05	6.7	3.0				
Sun 23			1.800	0.700	1.293	6.50	0.03	0.02	0.00	0.02		3.0				
Mon 24			6.700	0.700	1.237	6.50	0.03	0.02	0.05	0.03	5.5	2.0				
Tue 25			7.600	0.700	1.209	6.50	0.07	0.10	0.91	0.36		1.0				
Wed 26			7.700	0.800	1.217	6.50	0.06	0.05	0.08	0.06	6.9	0.5				
Thu 27	3.0	10	5.000	0.800	1.249	6.60	0.06	0.10	0.08	0.08		1.0				
Fri 28			5.000	0.800	1.328	6.50	0.07	0.06	0.92	0.35	4.6	1.0				
Sat 29			5.000	0.800	1.425	6.50	0.06	0.07	0.08	0.07		0.5				
Sun 30			4.900	0.800	1.542	6.60	0.07	0.05	0.09	0.07		2.5				
Mon 31			5.000	0.800	1.542	6.60	0.04	0.02	0.01	0.02	5.5	2.0				
MIN	3.0	10	1.600	0.000	1.209	6.50	0.00	0.01	0.00	0.01	-	-	-	-	-	-
MAX	53.0	10	7.700	0.800	1.691	6.90	0.89	0.82	0.92	0.53	-	-	-	-	-	-
AVG	15.9	10	3.619	0.735	1.415	6.65	0.09	0.10	0.12	0.10	-	-	-	-	-	-
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
		GAL	GAL	GDP	GAL	LBS/DAY	FT	FT	DEG C	No/100ml	%	Inches
Sat	01			420	0		7.0	8.9	22.1			43
Sun	02			263	0		7.0	7.5	21.8			43
Mon	03			338	9,000	4,823	7.0	7.8	21.7			43
Tue	04			405	0		7.0	7.0	21.7			43
Wed	05			338	9,000	4,928	6.9	7.5	21.8			43
Thu	06			360	0		7.0	7.4	21.6	<10		43
Fri	07			368	9,000	5,190	7.0	8.1	21.6			43
Sat	08			383	0		6.9	8.3	21.7			43
Sun	09			383	0		6.9	7.8	21.7			43
Mon	10			375	9,000	5,784	7.0	7.0	21.7			43
Tue	11			458	0		7.0	4.8	21.4			43
Wed	12			390	9,000	5,370	7.0	6.6	21.8			43
Thu	13			390	0		7.1	3.2	22.2	<10		43
Fri	14			435	0		7.0	5.8	22.2			43
Sat	15			413	9,000	5,715	6.9	4.3	22.7			43
Sun	16			443	0		6.9	4.0	22.4			43
Mon	17			518	9,000	6,844	6.9	2.4	23.3			43
Tue	18			465	0		7.0	3.9	23.5			43
Wed	19			360	9,000	5,796	6.9	5.2	22.7			42
Thu	20			465	0		7.0	6.6	22.8	<10		42
Fri	21			240	0		7.0	4.8	22.3			42
Sat	22			428	9,000	5,029	6.9	4.6	22.3			42
Sun	23			353	0		6.9	6.4	22.2			42
Mon	24			398	9,000	4,185	6.9	3.2	22.9			42
Tue	25			713	0		6.9	6.4	22.3			42
Wed	26			600	9,000	5,189	7.0	4.1	22.5			42
Thu	27			180	0		7.0	5.9	21.9	<10		42
Fri	28			855	9,000	3,489	6.9	5.8	21.7			42
Sat	29			473	0		6.6	4.6	22.2			42
Sun	30			353	0		6.9	4.4	21.9			42
Mon	31			278	9,000	4,181	6.8	5.3	22.7			42
MIN		-	-	-	0	3,489	7	2	21	<10	-	-
MAX		-	-	-	9,000	6,844	7	9	24	<10	-	-
AVG		-	-	-	3,774	5,117	7	6	22	<10	-	42
SUM		-	-	-	117,000	66,523	-	-	-	<40	-	-

August 2015

Hydrogen Sulfide Data

		Hydrogen Sulfide Weather Data			Hydrogen Sulfide Inside Plant Data								
	03 Hydorgen Sulfide Log	400011 - Wind Direction Direction	400012 - Outside Temp Deg F	400013 - Outside Condition Condition	400021 - Front Door ppm	400022 - Head Works ppm	400023 - Primary Tank No. 1 ppm	400024 - Primary Tank No. 2 ppm	400025 - Gravity Thickener ppm	400026 - Aeration Tanks ppm	400027 - Rotory Sludge Thickener Room ppm	400028 - Scrubber In ppm	400029 - Roof Exhaust Scrubber Out ppm
1 Sat		SSW-6	62	partly cloudy	0.003	4.000		1.500	13.000	0.010	0.004	9.600	0.150
2 Sun		WSW-9	67	Sunny	0.003	11.150		4.200	50.000	0.015	0.028	40.000	5.100
3 Mon		SSW-15	69	P/C	0.003	0.130		7.400	50.000	0.023	0.014	7.000	2.800
4 Tue		S-8	72	Lt Rain	0.003	7.800		20.000	36.000	0.140	0.007	35.000	1.300
5 Wed		SSW-9	64	P/C	0.003	9.100		4.200	37.000	0.007	0.007	12.000	0.018
6 Thu		WNW-7	63	Sunny	0.003	0.130		7.500	11.000	0.014	0.049	4.000	0.006
7 Fri		NNW-6	63	Sunny	0.003	5.000		11.000	16.000	0.014	0.024	8.300	0.290
8 Sat		Nnw	63	Sunny	0.005	3.000		4.000	39.000	0.023	0.026	9.400	0.380
9 Sun		NNE 10 mph	65	Partly sunny	0.003	5.000		8.000	50.000	0.027	0.002	27.000	1.800
10 Mon		S-13	80	P.cloudy	0.012	11.120		4.200	48.000	0.008	0.040	4.100	2.500
11 Tue		SSE-9	65	P/C	0.002	5.000		0.430	11.000	0.003	0.001	6.600	0.300
12 Wed		w-10	68	partly cloudy		4.500							
13 Thu		w-8	64	sunny									
14 Fri		S-10	62	Sunny									
15 Sat		West 7 mph	67	Partly Cloudy		12.000							
16 Sun		West 8 mph	67	Partly Sunny		20.000							
17 Mon		S se 9	88	Sunny		0.130							
18 Tue		Sw-6	72	P/c		4.000							
19 Wed		sw-3	70	p/c		5.000							
20 Thu		ESE-5	70	Cloudy		0.100							
21 Fri		ESE-9	69	Cloudy		5.000							
22 Sat		Ssw-2	66	mostly cloudy									
23 Sun		NNE-11	75	Cloudy		18.000							
24 Mon		E8	79	Cloudy		0.130							
25 Tue		Sse-10	81	sunny		0.100							
26 Wed		SE-1	68	Cloudy	0.002	7.120							
27 Thu		WNW-7	81	Pc	0.002	0.130		8.000	10.000	0.062	0.001	8.400	2.200
28 Fri		WNW-5	61	Sunny	0.002	0.130		3.200	10.000	0.014		10.000	4.700
29 Sat		w-7	61	partly cloudy	0.000	1.942		2.213	8.113	0.004	0.006	3.930	0.360
30 Sun		SW-10	69	Partly cloudy	0.004	0.100		1.670	10.000	0.005	0.005	10.000	1.170
31 Mon		sw-8	69	partly cloudy	0.004	3.110		10.000	10.000	0.004		10.000	1.770
MIN		-	61	-	0.000	0.100	-	0.430	8.113	0.003	0.001	3.930	0.006
MAX		-	88	-	0.012	20.000	-	20.000	50.000	0.140	0.049	40.000	5.100
AVG		-	69	-	0.003	5.104	-	6.095	25.570	0.023	0.015	12.833	1.553
SUM		-	2,140	-	0.057	142.922	-	97.513	409.113	0.373	0.214	205.330	24.844
GeoMean		-	69	-	0.004	1.739	-	4.370	19.963	0.013	0.008	9.899	0.608

Jerome H_2S meter out for repairs.
LOANER UNIT IN SERVICE 8/27/15 10 ppm MAX

August 2015

Hydrogen Sulfide Data

		Hydrogen Sulfide Outside Plant Data							
	03 Hydorgen Sulfide Log	400030 - % Removal %	400031 - Cemetery Flag Pole ppm	400032 - Garage At Cemetery ppm	400033 - Duck Lane ppm	400034 - Duck Lane And Nantasket Ave ppm	400035 - Seawall Across From Plant ppm	400036 - Fire Hydrant Across Inland Bay Side ppm	400037 - Front Of Aeration Bayside ppm
1 Sat		98.4	0.008	0.008	0.005	0.005	0.005	0.011	0.008
2 Sun		87.3	0.003	0.004	0.004	0.004	0.004	0.003	0.003
3 Mon		60.0	0.004	0.005	0.005	0.007	0.007	0.014	0.004
4 Tue		96.3	0.002	0.002	0.004	0.010	0.010	0.110	0.002
5 Wed		99.9	0.003	0.002	0.002	0.004	0.004	0.004	0.004
6 Thu		99.9	0.001	0.002	0.003	0.003	0.003	0.005	0.003
7 Fri		96.5	0.002	0.002	0.001	0.001	0.001	0.003	0.004
8 Sat		96.0	0.005	0.005	0.004	0.004	0.004	0.005	0.004
9 Sun		93.3	0.002	0.000	0.000	0.000	0.000	0.001	0.001
10 Mon		39.0	0.001	0.002	0.002	0.003	0.003	0.004	0.002
11 Tue		95.5	0.002	0.002	0.002	0.002	0.002	0.002	0.002
12 Wed									
13 Thu									
14 Fri									
15 Sat									
16 Sun									
17 Mon									
18 Tue									
19 Wed									
20 Thu									
21 Fri									
22 Sat									
23 Sun									
24 Mon									
25 Tue									
26 Wed									
27 Thu		73.8	0.003	0.003	0.002	0.003	0.003	0.001	0.004
28 Fri		53.0	0.001	0.001	0.001	0.001	0.001	0.001	0.001
29 Sat		90.8	0.000	0.000	0.000	0.000	0.004	0.000	0.000
30 Sun		88.3	0.000	0.003	0.003	0.003	0.003	0.003	0.004
31 Mon		82.3	0.003	0.003	0.003	0.003	0.003	0.004	0.003
MIN		39.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MAX		99.9	0.008	0.008	0.005	0.010	0.010	0.110	0.008
AVG		84.4	0.003	0.003	0.003	0.003	0.004	0.011	0.003
SUM		1,350.2	0.040	0.044	0.041	0.053	0.057	0.171	0.049
GeoMean		81.9	0.005	0.006	0.005	0.007	0.005	0.006	0.004

Jerome H_2S meter out for repairs.