CWA COMPLIANCE EVALUATION INSPECTION REPORT
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 5

Purpose: Compliance Evaluation Inspection

Facility: Naval Surface Warfare Center, Crane Division

NPDES Permit Number: IN0021539

Date of Inspection: September 22-24, 2020

EPA Representatives:
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James Huff, Wastewater Operator, 812-854-3257

Inspector: Jonathan Moody, Environmental Engineer

Prepared by:

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Date: 2020.11.24 13:52:14 -06'00'

Jonathan Moody, Environmental Engineer Date

Approved by:

MARK CONTI Digitally signed by MARK CONTI
Date: 2020.11.30 13:52:00 -05'00'

Mark Conti, Team Leader Date
WECAB, Multimedia Section

1.0 BACKGROUND

The purpose of this report is to describe, evaluate, and document the Naval Surface Warfare Center, Crane (Crane) compliance with the Clean Water Act (CWA) at its installation in Martin County, Indiana. The compliance status of the facility was evaluated during an inspection beginning September 22, 2020 through September 24, 2020.

The operations at Crane are covered by the National Pollutant Discharge Elimination System (NPDES) Permit No. IN0021539 with effective date October 1, 2017 and expiration date September 30, 2022. At the time of the inspection, the most recent modification occurred in July 2020 and added the new Outfall 018, which was not yet constructed at the time of the inspection.

This inspection focused on the operations at the Wastewater Treatment Plant (WWTP), sanitary sewer overflow (SSO) monitoring, and discharges from the sedimentation control ponds used to treat runoff from the demolition operations. The inspection did not include evaluation of the industrial wastewater control systems, including the Toxic Organic Management Plan, runoff from legacy operations, biosolids land application, and industrial stormwater requirements.

Wastewater Treatment Plant

The Crane WWTP provides domestic and industrial wastewater treatment for the operations at the Crane installation. Per information provided by James Huff, the WWTP Operator, the plant has a maximum design flow of 2.1 million gallons per day (MGD) and has had been able to fully treat an actual max flow around 2.4 MGD. Prior to the reduction in flow caused by the COVID-19 restrictions, the WWTP was operating between 0.25 and 0.50 MGD. Mr. Huff thought that the flows recently had been as low as 0.10 MGD.

A review of the June and July 2020 Monthly Reports of Operations shows a dry weather flow of approximately 0.25 to 0.30 MGD.

The WWTP has two equalization basins: a 1.5-million-gallon lined basin located northeast of the WWTP and a 0.345-million-gallon basin at the headworks for the WWTP. The full treatment includes grit removal, primary settling and screening, activated sludge, clarification, sand filtration, and an ultraviolet (UV) disinfection system. The system does not require any adjustments to accommodate high flows during wet weather. Per Mr. Huff, the WWTP is unable to bypass the secondary aeration basin but has needed to bypass the sand filters during high flows.

Sanitary Sewer Overflows

Based on self-reporting, Crane attributes the SSOs it has experienced to three main causes: inflow and infiltration, power outages, and other mechanical failures. The Crane installation is supplied power from two independent utilities; however, power distribution throughout the installation is provided by an electrical system operated by Crane only.

Crane has 54 lift stations throughout its collection system, of which 11 are major lift stations that receive flows from the 43 remaining minor lift stations. During the inspection, Crane provided a

table summarizing the lift stations, a copy of which is included in Appendix D. Per the facility representatives present during the inspection, the minor locations primarily receive flows from individual buildings.

Lift Station 17, which has been the location of several SSOs over the last few years, primarily receives flow from a residential area located northwest of the Crane installation. It is equipped with a pump that is manually activated during high flows and fills an approximately 100,000-gallon bladder.

2.0 SITE INSPECTION

Jonathan Moody and Cher Benisek began the field portion of the inspection at 8:30 am on September 22, 2020. Mr. Moody presented credentials to Heather Baladi, the Environmental Protection Manager. Crane provided a summary overview of its history and operations before the inspection moved to the WWTP. At the WWTP, Mr. Huff provided information on the treatment equipment and compliance monitoring activities. Flows enter the WWTP at an equalization pit. Samples of the influent are collected from the grit cell at the front end of the equalization pit using the automatic sampler shown in Photo 3 in the photolog in Appendix E.

The sample bottle is contained in a refrigerator with a National Institute of Standards and Technology (NIST)-traceable thermometer. The thermometer could not be read at the time of the inspection since it was not facing forward, but ice was present on the inside of the refrigerator. Mr. Huff said this was the location where NPDES compliance samples are collected for the influent measurements at Outfall 001.

Wastewater is then pumped to a set of hydrosieves which remove more grit. An automatic sampler is present at the hydrosieves and is shown in Photo 1. Mr. Huff said that compliance samples are taken at this location using a time-proportional composite and analyzed for pH, ammonia, biochemical oxygen demand (BOD), and total suspended solids (TSS).

From the hydrosieves, the wastewater flows by gravity to the aeration basins and then to the secondary clarifiers. At the time of the inspection, the WWTP was experiencing low flow, and wastewater was not flowing over the weirs of the secondary clarifiers. After the clarifiers, wastewater goes through sand filters, then through a step aeration, through a flow monitoring flume, and then to the UV disinfection channel.

At the UV disinfection channel, Mr. Huff showed Mr. Moody the readouts from the UV system programmable logic controller (PLC). At the time of the inspection, the flow displayed at the UV PLC was 0.04 MGD. Mr. Moody asked if the flow at the UV PLC was connected to the same flow monitoring device installed at the base of the step aeration system. Mr. Huff was not sure how the flow measurement for the UV system is determined.

At the downstream end of the UV system was a composite sampler in a refrigerator, as shown in Photo 2. A NIST-traceable thermometer was present and appeared to show a temperature slightly above zero degrees Celsius. Mr. Huff said this was the location where composite

samples are taken for the NPDES compliance samples for the effluent at Outfall 001. Mr. Huff also said that pH might be taken from this location by collecting pH measurements out of the bottle used for the composite sample. Mr. Huff clarified that the pH compliance sample is collected as a grab sample from the top of the step aeration channel shown in Photo 5.

The flow measurement for compliance purposes is taken at a flume located east of the building with the sand filters and at the base of the step aeration channel. There was turbulence at the upstream end of the flume near the location where depth is measured. A readout for the flume flow measurement was present inside the filter building. At the time of the inspection, the readout was showing approximately 317 gallons per minute (GPM), which is approximately 456,000 gallons per day.

The inspection of the WWTP ended at Outfall 001. This is the concrete pipe shown in Photo 8.

The inspection continued to Outfalls 002, 003, 004, 008, and 012, which discharge flow from the Demolition Ground Sedimentation Ponds used to treat the stormwater runoff from the demolition activities.

Mr. Moody first went to the sedimentation pond feeding Outfall 002. The discharge from this pond flows through a riser structure and then through a corrugated plastic pipe into a black plastic corrugated manhole typical of what is shown in Photo 14. As needed, a bucket with holes drilled in the bottom is suspended in the manhole and filled with soda ash briquettes to adjust the pH just before the water enters a channel leading to the receiving stream. Compliance samples are grab samples taken from a location near the end of this channel and shown in Photo 11. The discharge structure, soda ash treatment, and compliance sampling location at Outfall 002 is typical of the installations at Outfalls 003, 008, and 012. Outfall 004 was not visited since the facility representative said the discharge pipe had been removed and that discharges were no longer possible at this location.

The flow for the discharge from each of the sedimentation ponds is determined by measuring the surface of the water from the top of the riser structure and comparing the values to a rating table developed by the manufacturer of the riser system. The top of the riser structure at Outfall 002 is shown in Photo 12. This is typical of the riser structures at Outfalls 003, 008, and 012.

The ponds are inspected routinely, and when discharges occur, pH monitoring of the outfall is conducted to determine the amount of soda ash to use. Crane provided copies of the inspection sheets for the period from December 2019 through May 2020.

During the inspection, there was red-brown discolored water in the manhole structure downstream of the sediment pond for Outfall 008 and upstream of where compliance samples are collected. Staining was present in the invert of the discharge pipe, and small pools of discolored water were present at various locations along the channel. These conditions can be seen in Photos 13 through 16.

Mr. Moody used an In-Situ AT600 probe to collect pH measurements in the sediment ponds near

the riser structures. At the time of the inspection, there were no discharges occurring from Outfalls 002, 003, 008, or 012. The table below summarizes the measurements.

Sedimentation Pond pH Measurements	
Location	**pH**
Upstream of 002	4.55
Upstream of 003 Lower Pond	9.50
Upstream of 008	6.71
Upstream of 012*	7.12

*Outfall 004 was not visited during the inspection.

The first day of the inspection ended at approximately 4:00 pm. The second day, September 23, 2020, began at Lift Station 17 located just west of the Crane gate on Highway 5. This lift station receives flows from Crane Village, a residential area located northwest of the facility.

There is a bypass pump connected to Lift Station 17 and shown in Photo 26. Per the facility representative, the pump is activated manually when there are high flows at Lift Station 17, and an operator will stay at the pump while it is in operation. The lift station is connected to an alarm. The pump will fill a bladder contained in a shallow box as shown in Photo 27. Crane estimates the volume of the bladder to be 100,000 gallons. After the high flow subsides, the bladder can be drained back into Lift Station 17. Mr. Moody walked around the perimeter of the box containing the bladder and did not find any flow paths, nor signs of erosion around the box. Culpepper Creek runs along the south side of the box and had a pronounced red or brown discoloration as shown in Photo 29. The discoloration appeared to start at a location upstream of the bladder located at Lift Station 17.

The site portion of the NPDES inspection ended at approximately 1:00 pm on September 23, 2020.

3.0 CLOSING CONFERENCE

A closing conference was held at 2:00 pm on September 24, 2020. Mr. Moody reviewed the scope of the inspection and shared a preliminary list of areas of concern. Mr. Moody stated that additional areas of concern may be identified after a further review of the inspection notes and documents received during the inspection.

4.0 DOCUMENT REVIEW

Crane provided documents related to the compliance inspection and activities during the inspection. A list of the documents is provided below.

One set of documents reviewed as part of this inspection was the laboratory records for the Outfall 001 cyanide analysis. Beginning in 2018 until April 2019, the lab reports do not include

a Method Detection Limit (MDL), only a Reporting Limit at 0.01 mg/L. In January and February 2019 the laboratory records have a Reporting Limit of 0.02 mg/L. The NPDES permit requires a level of detection of 0.005 mg/l and a level of quantification of 0.016 mg/l.

Recent reports from 2020 appear to use MDLs below this limit. However, there appear to be two different lab records for the cyanide analysis in September 2020. Both records appear to be for a sample collected on September 2, 2020 at 9:50 am. One analysis was done on September 9, 2020, with the result being non-detect with an MDL of 0.0018 mg/l. The other analysis was done on September 10, 2020 and does not list a method of analysis or MDL and is flagged as being conducted by a subcontractor.

6.0 AREAS OF CONCERN

1. The facility did not have clear procedures for NPDES compliance monitoring at the WWTP. The operator indicated that there were multiple locations at the WWTP where composite

2. The flow at the UV channel appeared to be different than the flow rate measured at the flume. The operator also did not know how the UV system determined flow, and if the system had its own flow measurement capability. Turbulence at the flume can contribute to inaccurate flow measurements. Per Mr. Huff, the flow measurement at the flume was the flow measurement reported for NPDES compliance purposes. At the time of the inspection, the UV system was displaying a flow rate of 0.04 MGD, and the readout at the flume was displaying over 0.40 MGD. Both readings were taken during low flow at the WWTP when water was not flowing over the weirs of the secondary clarifiers.

3. Prior to April 2019, it is possible that at least some of the cyanide measurements may not have been sensitive enough to determine the concentration at a level equal to or less than the requirement in the NPDES permit. More recent laboratory records appear to have a detection level below the permit requirements, but the laboratory records are unclear about which method was used to conduct the analysis.

LIST OF DOCUMENTS RECEIVED DURING INSPECTION

1. NPDES and Stormwater Permits
2. NPDES Permit Applications
3. Stormwater Management Plan
4. Toxic Organic Management Plan
5. Annual Best Management Plan Reports
6. Stormwater Annual Reports and DMRs
7. Correspondence for NPDES Exceedances
8. Slug Discharge Control Plan Documents
9. Industrial Stormwater Pollution Prevention Plan
10. WWTP Schematic
11. Wastewater Treatment Chemical Additives
12. Sewer System Maps
13. Corrective Action Sites Map
14. Daily inspection sheets for Demolition Grounds Sedimentation Ponds
15. Laboratory reports for cyanide results
16. Summary table of lift stations
17. Summary table of NPDES Exceedances
18. Documentation referenced in the June 14, 2019 response letter
19. Site Specific Biosolids Land Application Permit – February 20, 2020
20. Accounting for ongoing NPDES I&I Study
21. Permit and Post Closure Plan for Warfare Center Landfill
22. Description of the Defense Community Infrastructure Pilot Program

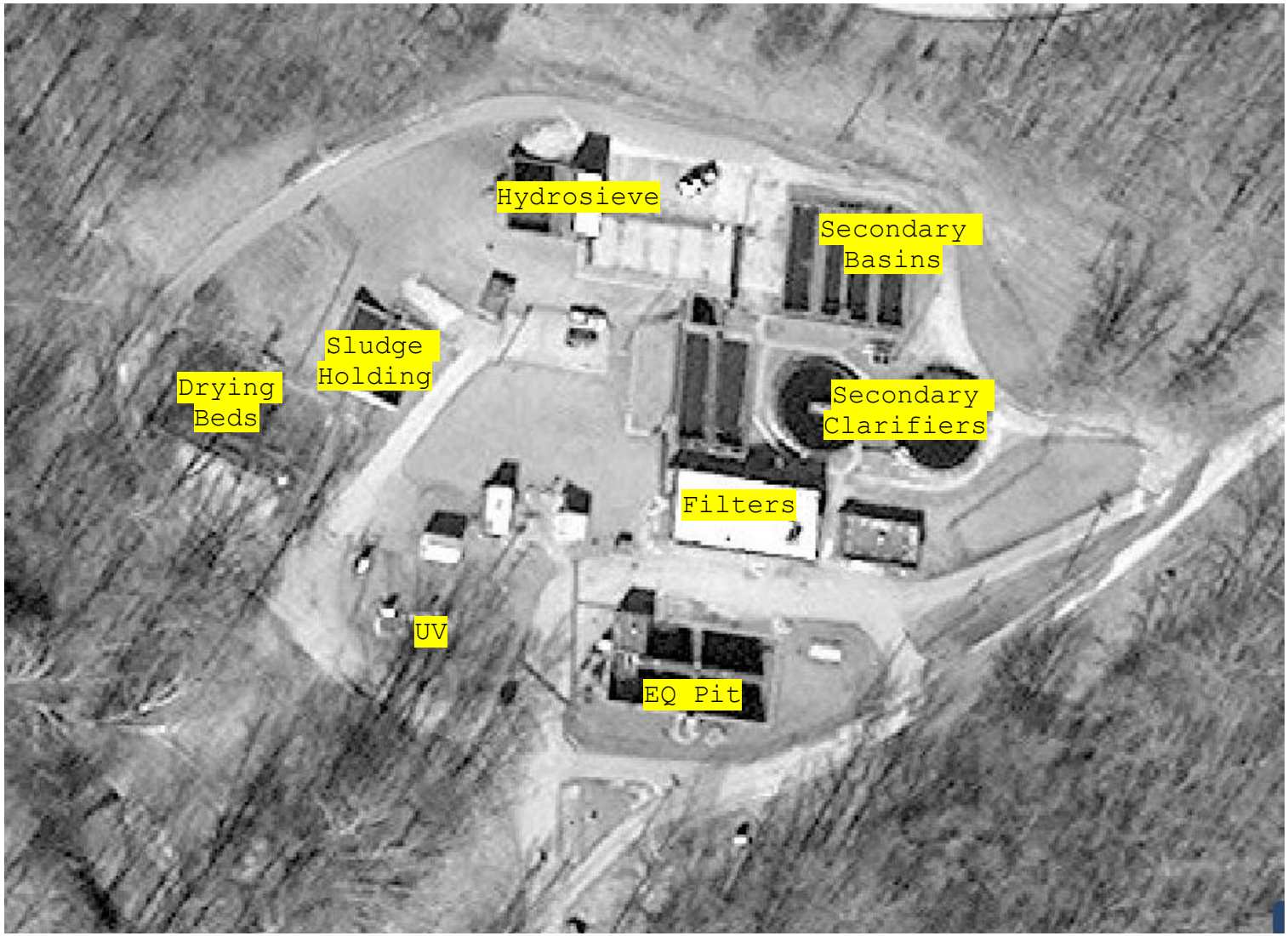
APPENDIX

A. Aerial of WWTP and Equalization Basin from Digital Globe, January 26, 2020
B. Annotated Aerial of WWTP from Digital Globe, February 16, 2020
C. WWTP Schematic
D. Summary of the Crane Lift Stations
E. Photolog

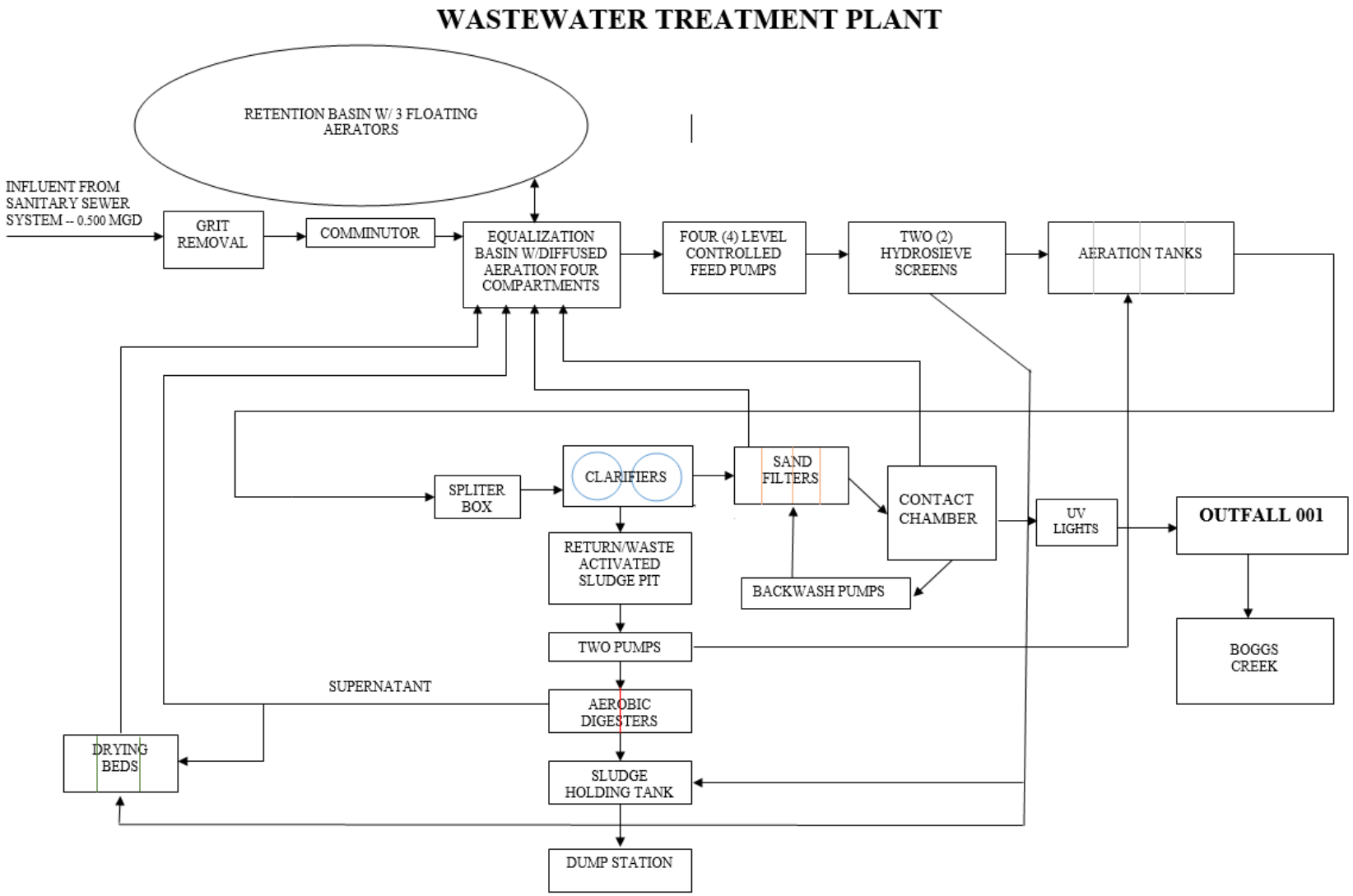
Naval Surface Warfare Center, Crane Division IN0021539
September 22 to 24, 2020.
Appendix A: Aerial of WWTP

From Digital Globe, Date of Photo: 1/26/2020

Naval Surface Warfare Center, Crane Division IN0021539
September 22 to 24, 2020.
Appendix B: Annotated Aerial of WWTP



From Digital Globe, Date of Photo: 2/16/2020


WASTEWATER TREATMENT PLANT
RETENTION BASIN W/ 3 FLOATING AERATORS
INFLUENT FROM SANITARY SEWER SYSTEM -- 0.500 MGD
GRIT REMOVAL
COMMINUTOR
EQUALIZATION BASIN W/DIFFUSED AERATION FOUR COMPARTMENTS
FOUR (4) LEVEL CONTROLLED FEED PUMPS
TWO (2) HYDROSIEVE SCREENS
AERATION TANKS
SPLITER BOX
CLARIFIERS
SAND FILTERS
CONTACT CHAMBER
UV LIGHTS
OUTFALL 001
BOGGS CREEK
RETURN/WASTE ACTIVATED SLUDGE PIT
BACKWASH PUMPS
TWO PUMPS
SUPERNATANT
AEROBIC DIGESTERS
DRYING BEDS
SLUDGE HOLDING TANK
DUMP STATION

ID Number	Major/Minor	Location	Pumps			Back-up Equipment	Alarms	Connected to SCADA?	Hookups Available for Backup Power?
			#	Size (in)	HP	Pump and/or Electrical	Visible/ Audible	Y/N	Y/N
1	Major	Near Quarters C	2	1.5	5	Battery Backup for SCADA	Both	Y	N
2	Major	West of B4	2	4	40	Hookup available for portable pump / Battery Backup for SCADA	Both	Y	N
3	Minor	B3319	2	4	40	Battery Backup for SCADA	Both	Y	N
4	Minor	B36	2	4	5	Battery Backup for SCADA	Both	Y	N
5	Minor	B143	2	4	7.5	Battery Backup for SCADA	Both	Y	N
6	Minor	HWY 445 Near WWTP	2	4	30	Battery Backup for SCADA	Both	Y	N

7	Major	B2516	2	4	5	Battery Backup for SCADA	Both	Y	N
8	Minor	B3219	2	2	3		Both	N	N
9	Major	B2044	2	6	30	Battery Backup for SCADA	Both	Y	N
10	Major	B41 E	2	2.5	1.5	Battery Backup for SCADA	Both	Y	N
11	Minor	Camp Ground Near B3206	2	4	23	Battery Backup for SCADA	Both	Y	N
12	Major	B3029	2	4	25	Battery Backup for SCADA	Both	Y	N
13	Major	B3330 S	2	4	30	Battery Backup for SCADA	Both	Y	N
14	Minor	B356	2	1.5	2		Both	N	N
16	Minor	B3025	2	4	10		Both	N	N
17	Major	West of Crane Gate	2	4	30	Hookup available for portable pump / Battery Backup for SCADA	Both	Y	N
19	Minor	B2805	2	1.5	2		Both	N	N

20	Minor	East of B69	2	4	15	Battery Backup for SCADA	Both	Y	N
21	Minor	Burns City Gate	2	1.5	2		Both	N	N
22	Major	B3282	2	4	10	Battery Backup for SCADA	Both	Y	N
23	Minor	B2990	2	1.5	3		Both	N	N
26	Minor	B224	2	1.5	3	Battery Backup for SCADA	Both	Y	N
28	Minor	B2703	2	1.5	2		Both	N	N
29	Minor	B150	2	1.5	2		Both	N	N
32	Minor	Landfill	2	2	3	Battery Backup for SCADA	Both	Y	N
33	Minor	Landfill	2	2	3	Battery Backup for SCADA	Both	Y	N
34	Major	Quarters Z	2	4	40	Battery Backup for SCADA	Both	Y	N
35	Major	HWY 5 Near 2537B	2	4	5	Battery Backup for SCADA	Both	Y	N

36	Minor	B2723	2	4	10	Hookup available for portable pump / Battery Backup for SCADA	Both	Y	N
37	Minor	B3149	2	4	1		Both	N	N
38	Minor	B41 NW	2	4	1.5		Both	N	N
39	Minor	B2699	2	1.5	3		Both	N	N
40	Minor	B2068	2	1.5	2		Both	N	N
41	Minor	Quarters W	2	1.5	2		Both	N	N
42	Minor	B2074	2	1.5	2		Both	N	N
44	Minor	B3162	2	1.5	2		Both	N	N
45	Minor	B365	2	2	1.5		Both	N	N
49	Minor	B3230	2	2	3		Both	N	N
51	Minor	B2987	2	2	1.5		Both	N	N
53	Minor	B3294	2	2	5		Both	N	N
54	Minor	B3245	2	1.5	2		Both	N	N
56	Minor	B3234	2	1.5	2		Both	N	N
57	Minor	B2390	2	2	3		Both	N	N
58	Minor	B3260	2	2	1		Both	N	N
61	Minor	B480	2	1.5	2		Both	N	N
62	Minor	B3284	2	1.5	2		Both	N	N
63	Minor	B3285	2	1.5	2		Both	N	N
64	Minor	B3291	2	1.5	2		Both	N	N
65	Minor	B2045	2	1.5	2		Both	N	N
66	Minor	B3304	2	2	5		Both	N	N
68	Minor	B3157	2	2	5		Both	N	N

69	Minor	B3333	2	1.5	2		Both	N	N
70	Minor	B2920	2	1.5	2		Both	N	N
71	Minor	B2167	2	1.5	2		Both	N	N

1: DSCN0037.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 9:02 AM
Camera Direction: Inside
Description: Automatic sampler at the hydrosieve screens. Per the facility representative, this is a time-based composite where pH, Ammonia, BOD, TSS is monitored for what is called the 'pre-plant' measurement.

2: DSCN0038.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 9:32 AM
Camera Direction: South
Description: Autosampler at the effluent channel at the UV treatment system. Per the facility representative, TSS, D.O., BOD, Ammonia, and some metals are collected at this location.

A NIST thermometer was present, and at the time of the inspection the reading was just above 0 degrees C.

3: DSCN0039.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 9:34 AM
Camera Direction: East
Description: Automatic sampling at the influent location just west of the grit chamber and pulling flow out of the first cell in the grit chamber. Per the facility representative, pH was collected from a grab from the first cell.

A NIST thermometer was present, and at the time of the inspection the reading was just above 0 degrees C.

4: DSCN0040.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 9:39 AM
Camera Direction: North
Description: At the flume, downstream of the sand filters, where flow is monitored. Looking upstream at a step aeration system.

5: DSCN0041.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 9:39 AM
Camera Direction: South
Description: At the flume, downstream of the sand filters, where flow is monitored. Looking downstream at a step aeration system.

6: DSCN0042.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 9:42 AM
Camera Direction: Inside, South
Description: Inside the building with the filters with the readout from the flow measurement flume shown in DSCN0039.JPG and DSCN0040.JPG. At the time of the inspection, the reading was fluctuating around 317 GPM, or 456,000 Gallons/day.

7: DSCN0043.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 10:25 AM
Camera Direction: South
Description: Looking at the receiving channel at Outfall 001. This is Boggs Creek, and the flow is away from the camera.

8: DSCN0044.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 10:26 AM
Camera Direction: Northeast
Description: Outfall 001.

9: DSCN0045.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 10:27 AM
Camera Direction: Northeast
Description: Riprap and discoloration in the stream bed near outfall 001.

10: DSCN0046.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 12:53 PM
Camera Direction: Inside
Description: In the discharge structure at Pond 2, Outfall 002. The hanging bucket has holes drilled in it and soda ash is placed in the buckets to mix with the wastewater discharge. This location is downstream of the sediment basin.

11: DSCN0047.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 12:55 PM
Camera Direction: Southwest
Description: At the discharge channel at Outfall 002. This is the location where grab samples are taken.

12: DSCN0048.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 1:00 PM
Camera Direction: Down, Northeast
Description: Pond 2, Riser, or weir structure. The camera is looking down at the removable baffle weir system used to control the flow from Pond 2, Outfall 002. This the location where flow is measured. At the time of the inspection, no discharge was occurring.

13: DSCN0049.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 1:16 PM
Camera Direction: Down, North
Description: looking inside the manhole downstream of Pond 8. Flow enters this manhole from the center pipe and exits out the two side pipes. If soda ash treatment is needed, it is done in this manhole using a suspended bucket similar to Outfall 002. At the time of the inspection, this discharge was not flowing, but the water in the manhole and water in the downstream channel had an orange discoloration.

14: DSCN0050.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 1:17 PM
Camera Direction: East
Description: Looking upstream in the discharge channel at Outfall 008. The manhole downstream of Pond 8. At the time of the inspection, this discharge was not flowing, but the water in the discharge channel had an orange discoloration.

15: DSCN0051.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 1:17 PM
Camera Direction: North
Description: Looking at the manhole and discharge pipe at Outfall 008. This manhole is downstream of pond 8. At the time of the inspection, this discharge was not flowing, but the water in the discharge channel had an orange discoloration.

16: DSCN0052.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 1:17 PM
Camera Direction: West
Description: Looking downstream in the discharge channel at Outfall 008. At the time of the inspection, this discharge was not flowing, but the water in the discharge channel had an orange discoloration.

17: DSCN0053.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 1:24 PM
Camera Direction: East
Description: At Pond 8, looking at the discharge riser system for controlling the discharge to Outfall 008. At the time of the inspection, Pond 8 was not discharging.

18: DSCN0054.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 1:24 PM
Camera Direction: Northwest
Description: At Pond 8. At the time of the inspection, Pond 8 was not discharging.

19: DSCN0055.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 1:24 PM
Camera Direction: Northwest
Description: At Pond 8. At the time of the inspection, the pond was not discharging.

20: DSCN0056.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 1:25 PM
Camera Direction: Down, Northwest
Description: At Pond 8. At the time of the inspection, Pond 008 was not discharging. A pH measurement at this location was 6.71 S.U.

21: DSCN0057.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 1:40 PM
Camera Direction: Down, South
Description: At Outfall 012 from Pond 4. At the time of the inspection, this outfall was not discharging.

22: DSCN0058.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 2:00 PM
Camera Direction: West
Description: Pond 3, which drains to Pond 3A with Outfall 003. At the time of the inspection, the pH of Pond 3 was 8.00 S.U.

23: DSCN0059.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 2:00 PM
Camera Direction: Down
Description: The control structure at Pond 3 which drains to Pond 3A. At the time of the inspection, the trash rack was off the control structure.

24: DSCN0060.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/22/2020 2:12 PM
Camera Direction: Northwest
Description: Pit #1 and Pit #3 where ammunition boxes and treated wood are burned. Runoff from these sites flows into the blind sump under the grate in the foreground. Outfalls 016 and 017 are monitored when the sumps are emptied.

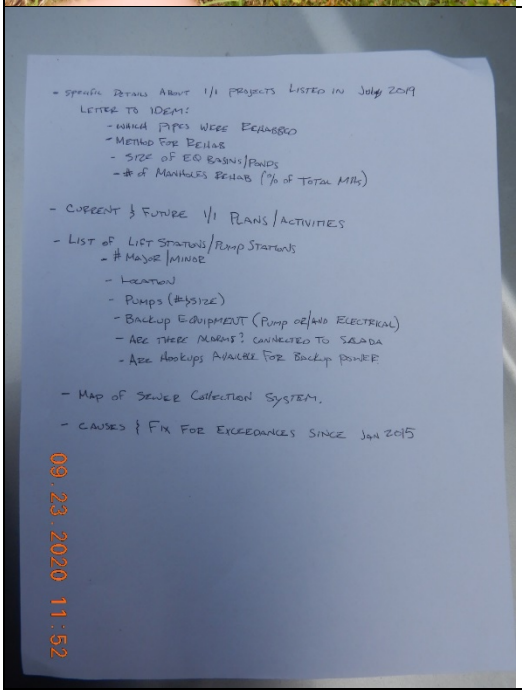
25: DSCN0061.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/23/2020 11:37 AM
Camera Direction: West
Description: Lift Station 17, located on the southside of Highway 5 and ½ mile west of the Crane Naval Surface Warfare gate.

26: DSCN0062.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/23/2020 11:38 AM
Camera Direction: South
Description: Pump at Lift Station 17. This pump is activated manually during wet weather to bypass Lift Station 17 and fill a 'bladder' used for equalization.

27: DSCN0063.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/23/2020 11:39 AM
Camera Direction: South
Description: Looking at the bypass pump at Lift Station 17 and the containment 'bladder'.

28: DSCN0064.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/23/2020 11:39 AM
Camera Direction: South
Description: Looking over the edge of the walls containing the 'bladder' used for equalization volume at Lift Station 17. This is the top of the 'bladder,' the water on the surface is from precipitation.

29: DSCN0065.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/23/2020 11:41 AM
Camera Direction: Southeast
Description: Culpepper Creek, looking downstream. This creek flowed to the south of Lift Station 17. At the time of the inspection, the creek had a red/brown discoloration which started at some location upstream of Lift Station 17.



30: DSCN0066.JPG
Location: Crane Naval Surface Warfare Center
Photographer: Jonathan Moody
Date/Time: 9/23/2020 11:52 AM
Camera Direction: Inside
Description: Photo of a list of documents requested during the inspection.