

March 2020 Monthly Report

BJCJSTP Rehabilitation and Restoration Project

The following projects are either nearing completion, in construction, or in the planning stage.

Contract No.	Description	Consent Order Milestone	Status
Contract No. 1	Compost Facility Demolition	Complete	Complete
Contract No. 2	FEMA Mechanical	Complete	Complete
Contract No. 3	BAF Facility Demolition	Complete	Complete
Contract No. 4	MCC HH Emergency Replacement	Complete	Complete
Contract No. 5	BAF Restoration and Rehabilitation Civil Contract	Projected Phase 1 Substantial Completion August 31, 2019. Projected Phase 2 Substantial Completion January 1, 2020.	Projected Phase 1 Substantial Completion August 31, 2019 achieved. Projected Phase 2 Substantial Completion January 2020 ongoing.
Contract No. 6	BAF Electrical	Projected Phase 1 Substantial Completion August 31, 2019. Projected Phase 2 Substantial Completion January 1, 2020.	Projected Phase 1 Substantial Completion August 31, 2019 achieved. Projected Phase 2 Substantial Completion January 2020 still ongoing.
Contract No. 7	BAF HVAC	Projected Phase 1 Substantial Completion August 31, 2019. Projected Phase 2 Substantial Completion January 1, 2020.	Projected Phase 1 Substantial Completion August 31, 2019 achieved. Projected Phase 2 Substantial Completion January 2020 still ongoing.
Contract No. 8	BAF Plumbing	Projected Phase 1 Substantial Completion August 31, 2019. Projected Phase 2 Substantial Completion January 1, 2020.	Projected Phase 1 Substantial Completion August 31, 2019 achieved. Projected Phase 2 Substantial

			Completion January 2020 still ongoing.
Contract No. 9	Secant Pile Contract	Complete	Complete
Contract No. 10	Solids Handling Renovation Civil Contract	Substantial Completion #1 – June 30, 2020; Substantial Completion #2 – June 30, 2020; Substantial Completion #3 – June 30, 2020; Final Completion - August 30, 2020.	Substantial Completion #1 – June 30, 2020; Substantial Completion #2 – June 30, 2020; Substantial Completion #3 – June 30, 2020; Final Completion - August 30, 2020.
Contract No. 11	Solids Handling Electrical	See Contract #10 Completion Dates	See Contract #10 Completion Dates
Contract No. 12	Solids Handling HVAC	See Contract #10 Completion Dates	See Contract #10 Completion Dates
Contract No. 13	Solids Handling Plumbing	See Contract #10 Completion Dates	See Contract #10 Completion Dates
Floodwall	Floodwall and New Diversion Structure		Complete March 1, 2019.

Contract Descriptions

Contract No. 1 - Compost Facility Demolition

Demolition of the upper portion of the compost facility was performed to accommodate the construction of the new Administration Building to house the plant staff as well as provide the new control room to operate the new facilities. Demolition of the lower portion of the Compost Building cleared the way for the construction of a new maintenance facility.

Contract Status: 100% Complete - Contract Closed

Contract No. 2 - FEMA Mechanical

The FEMA Mechanical Project replaces valves, equipment and other miscellaneous items damaged in the 2011 flood. It includes equipment in both the East and West Primary Sludge Pumping Stations, valves and equipment located in the Head House, and equipment associated with Sludge Thickener Pumping Station Nos. 1 and 2. The cost of the work associated with this contract is being reimbursed by FEMA due to the flood of 2011.

Status: Blue Heron has completed all of the work not deleted by change. The elutriate pumps were deleted from the scope of work and will be performed under Contract #5.

Contract Status: 100% Complete - Contract Closed

Contract No. 3 - BAF Facility Demolition

The BAF Demolition Contract removed the existing structures and utilities that conflict with the new construction work included in the BAF Rehabilitation and Restoration Project. Demolition efforts included selective demolition in the existing process tanks (C-Filters, N-Filters, and DN-Filters), buildings, mechanical equipment, and piping to ready the site for new construction.

Contract Status: 100% Complete - Contract Closed

Contract No. 4 - MCC - HH Emergency Replacement

Contract No. 4 replaced the original existing Motor Control Center (MCC) in the Head House (HH). The MCC is 50 years old and is identified as MCC-HH. The contract was bid as an emergency contract because the electrical system in the Head House was both critical to keeping the BJCJSTP in service, and because the original MCC was extremely unreliable due to the age and deteriorated condition of the gear. MCC HH Emergency replacement also replaced the existing raw sewage pump drives of the existing 50 year old equipment including new electrical feeders from the HH to the Johnson City Grit House No. 1, a new feeder from the HH to the Thickened Sludge Pump Station No. 1, and various other panel boards. The emergency work also included replacement of the existing raw sewage variable frequency drives that were located in the existing MCC HH. The new drives installed are more reliable, more efficient, and will provide better performance of the existing raw sewage pumps.

Status: All work on the MCC- HH project has been completed.

Contract Status: 100% Complete

Contract No. 5 - BAF Restoration and Rehabilitation Civil Contract

When combined with the other BAF contracts (Nos. 6, 7 & 8), Contract No. 5, the General Civil Contract, is intended to provide a functioning automated plant using a BIOSTYR system that can be modified to fit current plant configurations. It is also intended to provide functioning automated headworks and primary clarification processes upstream of the BIOSTYR system and solid handling processes downstream of the BIOSTYR system.

Major components of the work under Contract No. 5 include new coarse screens and ancillary equipment, new piping and valves for the influent pumps, new metering equipment, new fine screens and grit removal with ancillary equipment, a new primary distribution box, new mechanical equipment for primary clarifiers 1-10, new chemical equipment for primary treatment, new Chemical Storage Building, modification of the primary clarifier structural components to replace the aged and deteriorated mechanical equipment, new secondary influent pumps for the new BAF system, a new BAF backwash tank, new CN-BAF and DN-BAF facilities, a new methanol system that will feed the DN-BAF cells, new Ultra Violet Light disinfection system to replace the existing chlorine disinfection system, new sludge thickening equipment and systems, a new Administration Building, new odor control equipment, two new 2MW electric generators, and a new plant outfall to the river.

Status: PC continued work on optimizing the Kruger equipment for SIPS, CN Cells 1-14, and DN Cells. They are still having issues with area velocity flow meters at the CN Influent Channel, but GHD has said that the velocity meter is not necessary to complete the testing of CN Cells 1-14. The velocity meter only helps regulate how many cells are online at a given time. Kruger has been able to determine a reliable signal from the SCADA system to work with their program. We continue meeting with PC, Kriuger, and Matco weekly to coordinate the work efforts of these multi-primers and critical subcontractors as PC continues to lag further and further behind on the PST 1-6 renovation. PC finally received the fiberglass troughs and weirs for the PST's 1, 2,3, & 4. They anticipate receiving the troughs for PST 6 the first week in April. Scum Pump Station #3 is nearing completion. The manufacturer has done the preliminary testing for PST's 1, 2, & 6 equipment. Troughs and weirs are complete for PST's 1 & 2.

They are not following their CPM Schedule, and it has been necessary for some time for us to supplement PC's lack of proper planning.

PC also continued to install the grating and handrail around the site. PC still does not have all of the grating and handrail to complete this work yet, and their subcontractor Raulli did not provide adequate manpower to complete the miscellaneous metals before the end of March 2020. PC has installed the stairs on the south side of the Blower Building, but they have a non-compliance issue because of their subcontractor failing to install the stairs correctly. Again, this will result in rework. PC has provided limited access to the new secondary process, so they are being required to provide the manpower to operate and access these areas as they cannot be turned over to STP staff to operate until all life safety systems are complete. We will not allow PC to start the turn over process for these systems to be operated by the STP staff until the life safety systems are complete.

Conditions of the Final Effluent have been degraded, and Kruger is working to get them into compliance with the permit. The UVT is exceedingly low, but PC had not communicated that to Kruger. We brought this up in our weekly schedule coordination meeting with Kruger. and they were completely surprised. They made adjustments to the air and methanol dosing rates and are hoping that this improves the final effluent conditions. April 1, 2020 begins the full compliance requirements for the permit, and Kruger still needs to get the total nitrogen lower than treatment is currently providing.

PC continued working on stairs for CN 9-14 this month. Not having these stairs and grating complete is still holding up Matco and Kruger from working effectively on CN 9-14.

According to Kruger, they are still working on the functional demonstration test for CN 1-14, DN, UV, BAF Backwash Treatment, and BAF Backwash Tanks. PST's 7-10, SIPS, CN Cells 1-14, DN, and UV are capable of running in the automatic mode, and processing 60 MGD. Kruger continues to verify the performance of the system and will be doing so for a few more months to come. Flow is unrestricted through the PST's, SIPS, CN Cells 1-14, DN Cells, and UV,

PC completed work on the Thickener Distribution Box and Gravity Thickener #2. Gravity Thickener #2 was put online on March 31, 2020 which met the milestone in the Consent Order. Thickener #3 will be returned to service by April 3, 2020. This will complete all thickener work. Thickener #3 continued to operate until Thickener #2 was brought on line on March 31, 2020.

Headworks continues to operate as intended with the exception of grit accumulation at the fine screens and compactors.

Matco is complete with the electrical work for all process equipment in the PST's and the scum pump stations for the renovation of PST's 1-6. CN, DN, Methanol, and are nearing completion on the first three PST's. They are being held up by PC with their inability to complete the work in PST's 1, 2, & 6 due to the late arrival of their fiberglass troughs. They continue to work on miscellaneous non-process electrical such as receptacles and permanent lighting. DEC continues to assess the stipulate fine for completion of January 1, 2020 milestone for Phase 2, and has confirmed that they will continue the stipulated fines until we complete CN 9-14 in accordance with the Consent Order milestone. We would likely have completed the CN Cells 9-14 operability requirement in March if PC had been willing to apply the proper resources to the work at the influent channel area. They still have life safety issues, which prevent us from allowing the STP Staff to operate these facilities.

PC has completed the repairs to the defective pipe work at the hydrocyclones for the BAF Backwash Treatment Facility. Now that the work has been completed, Kruger has been able to get the BAF Backwash Treatment System to work reliably without significant loss of sand. When we were able to get the sludge reliable off Actiflo, we notified Contract 10 of their need to schedule the testing of the mechanical thickeners.

Because PC is not following any CPM schedule, we are continuing to have weekly schedule meetings with PC and all of the necessary multi-primes and subcontractors to advance the secondary treatment process. This proved instrumental in achieving the DEC August 31, 2019 milestone, and it appears will be required to complete Phase 2 work. We have notified PC that they are not in compliance with the contract for providing a comprehensive CPM schedule. We have resumed holding progress payments to protect liquidated damages.

As discussed briefly above, PC had a major contractor caused delay on the renovation of PST's 1, 2, & 6 this month because they do not have the fiberglass troughs and stainless steel weir plates on site. They failed to order them timely. As stated last month, to minimize the potential of change orders to the coatings, the City agreed to delete the coatings from the remainder of the PST's 1-5. There were some existing conditions that could not have been accounted on encountering at the

bid time that PC would have alleged delayed the work for Phase 2. PC is solely responsible for the delays to phase 2.

PC continued preparing for the spring season to resume site paving around the site.

Contract Status: 95% Complete through November 2019. Payments held beyond November to protect Liquidated Damages.

Contract No. 6 - BAF Electrical

The BAF Electrical Contract supports the BAF General Civil Contract and includes all electrical and instrumentation associated with the BAF contracts. The components include installation of the new UV disinfection system, installation of the new generators, installation of the electrical feed throughout the plant, as well as installation of the instrumentation and SCADA System throughout the plant.

Status: Contract No. 6 Notice to Proceed was issued on May 27, 2016 in compliance with the DEC milestone in the Consent Order.

This month the contractor continued ancillary work around the site, and worked extensively on electrical work on PST's 1, 2, and 6 electrical work. They continue miscellaneous site electrical work as well as ancillary electrical work for receptacles and permanent lighting. They continue to support GHD in testing for SCADA Control, and will continue working on the electrical work for PST's this month. The two new 2MW generators have been tested and are available for use when needed. All process power and control conduit and wire for the CN, DN, Blower Buildings, Methanol, BAF Backwash Tanks, BAF Backwash Treatment and UV have been installed and tested by Matco. They resumed site lighting installation and began installing the chemical ground rods for final completion of their work. We are still waiting on Matco to complete their short circuit and coordination study. This is not holding up PC's work, but it could very well hold up Matco's final completion.

MATCO is providing input for the Project CPM baseline schedule.

Contract Status: 96% Complete through March 2020

Contract No. 7 - BAF HVAC

The BAF HVAC Contract supports the BAF General Civil Contract and includes installation of all HVAC Systems in all STP Facilities as well as revisions to the odor control systems throughout the plant. The odor control improvements are intended to alleviate the odors that have been prevalent in the past in and around the plant.

Status: Contract No. 7 had no significant work this month. They continue to provide supporting information for the development of the CPM schedule.

Contract Status: 100% Complete through March 2020

Contract No. 8 - BAF Plumbing

The BAF Plumbing Contract supports the BAF General Civil Contract and includes installing plumbing systems for the new and existing facilities included in Contract No. 5.

Status: Contract No. 8 Notice to Proceed was issued in compliance with the May 27, 2016 milestone for issuing the NTP in the Consent Order. The contractor has continued providing the supporting information for the overall CPM schedule this month and they have confirmed that they can meet the required milestones of the Consent Order.

No significant work this month.

Contract Status: 100% Complete through March 2020

Contract No. 9 - Secant Pile Contract

The Secant Pile Contract includes installation of the secant piles that support the excavation for the new BAF Backwash tank as well as supporting the new CN Cells 9-14. Construction also includes excavation to the final grade for the BAF backwash tank. This project was bid separately from Contracts 5-8. In doing so, a minimum of four months on the critical path schedule was saved.

Status: The installation of the secant pile wall is complete. Close out documents have been prepared and are being submitted to close out this project.

Contract Status: 100% Complete - Contract Closed

Contract No. 10 -Solids Handling Renovation Civil

Contract No. 10 is intended to renovate and improve the solids handling systems including the existing Digester Control Building, existing digesters, solids dewatering systems, and all ancillary equipment. As part of the improvement to the solids handling process, the following components will be constructed or installed. The new structures include a new Solids Handling Building, a new Gas Conditioning Building, and a new Sludge Loading Facility. The new equipment being installed includes new centrifuges, new mechanical thickeners, new gas processing equipment, new microturbines, and new scum screening equipment. The scope was further developed during the design processes to include sludge blend tanks. Additionally, the contract renovates the existing laboratory facilities at the STP. The contract was bid as a multi-prime contract consistent with New York State Construction Contract Requirements.

Status: Renovation for the Lab at the Headhouse is complete and we working to get the final code inspection to allow the issuance of a final Certificate of Occupancy. We are coordinating with the Vestal Code office to get the requested documentation for the fire alarm tests that have been performed.

Quandel has finally got at least two of the centrifuges reliably operable. They are needing to remove the malfunctioning gate on centrifuge 2 to have it repaired. They are nearing completion on the installation of the mechanical thickener systems at the Headhouse. We have been trying to get them to get their supplier on-site to do the functional testing now that we have Actiflo sludge. We notified Quandel that they needed to have their vendor onsite March 11, 2020 to do their testing, but Quandel did not comply. They are making ridiculous demands that the Owner prove that the sludge meets the 0.5% minimum sludge level the system was designed around before they will mobilize their vendor.

Digester #3 is fully operational, and Digesters #1 and #2 are complete and ready for service. The STP Staff are nearing completion of the replacement of the leaking buried gas line to the existing flare. We have not been able to startup the remaining two digesters because we do not produce sufficient sludge to feed more than Digester #3. We are now seeing an increase in the secondary sludge, and were attempting to prepare for startup of Digester #1, but determined that the gas line to the existing flare was not suitable for service. STP Staff are preparing to replace the buried line as a maintenance item to allow Digesters #1 & #2 to be operable.

We believe that Quandel has numerous contractual obligations that they are refusing to complete and will be arguing these items before the DRB.

Contract Status: 95% Complete through September 2019. We are holding payments due to the failure of Quandel to complete their contractual obligations.

Contract No. 11 - Solids Handling - Electrical

The Solids Handling Electrical Contract supports the Solids Handling General Civil Contract and includes installation of electrical for the new and existing facilities included in Contract No. 10.

Status: MATCO is nearing completion on the electrical work on the project.

Contract Status: 97% Complete through March 2020

Contract No. 12 - Solids Handling - HVAC

The Solids Handling HVAC Contract supports the Solids Handling General Civil Contract and includes installation of HVAC systems for the new and existing facilities included in Contract No. 10.

Status: No significant work this month.

Contract Status: 100% Complete through March 2020

Contract No. 13 - Solids Handling - Plumbing

The Solids Handling Plumbing Contract supports the Solids Handling General Civil Contract and includes installation of plumbing systems for the new and existing facilities included in Contract No. 10.

Status: No significant work this month. JW Danforth is nearing completion on the Solids Handling Building Contract No. 13. Danforth continues to support the General Civil Contractor's schedule. Danforth finished supporting the cleaning of the Sludge and Digester Gas Piping in the Digester Control Building.

Contract Status: 94% Complete through March 2020

Floodwall

The new floodwall being constructed at the STP is intended to protect the plant to an elevation 1.5 feet above the 2011 flood level. The floodwall includes concrete walls on the east and north sides of the STP. The project also includes two new pump stations to pump up stream out of the plant during the storm events. The new floodwall system works in conjunction with new floodwall features included in Contract No.5 BAF General Civil Construction. The floodwall systems are being funded by a FEMA recovery grant.

Status: No significant work was performed this month.

Contract Status: 98% Complete through March 2020

NOTES:

1. SWPPP measures continue to be maintained by all contracts. Any deficiencies noted during daily or weekly inspections are promptly remedied.
2. Weekly meetings are held for each contract to discuss the progress of the work and identify and resolve issues and problems. Meetings between contractors on the various contracts are held as necessary to facilitate any concerns and coordinate work between all contracts.

Third Modification Consent Order
Appendix A Compliance Table as of 3/13/2020

Item No.	Description	Due Date	Status per Respondent on 10/10/19	Appendix A-1 Certification Submission Status	Appendix A-1 Certification Approval Status
3e	Complete construction of new backwash waste treatment system	June 30, 2019	Complete August 31, 2019. The BAF Backwash Treatment Facility was operational on September 16, 2019.	9/6/2019	Accepted
3f	Commence start-up of SIPS Complete construction of SIPS	April 30, 2019 June 30, 2019	Completed before April 30, 2019. Fully operational August 29, 2019.	5/13/2019 8/5/2019	Accepted Accepted
3g	Complete construction and commence start-up of the plant headworks, including the new bar screens and grit removal system	August 1, 2019	Completed June 26, 2019	8/5/2019	Accepted
3h	Complete construction and hydraulic testing of new [BAF] backwash waste tank.	June 30, 2019	June 30, 2019	7/8/2019	Accepted
3i	Complete construction and start-up for all work related to PST 7-10	August 31, 2019	Completed and operating August 29, 2019	9/6/2019	Accepted
3j	Complete construction and retrofit work on two sludge thickeners. A third sludge thickener will be kept in use throughout construction, until the other two are put into operation, and shall be retrofitted.	Two by June 30, 2019. Third one by August 30, 2019 Requested variance until March 31, 2020	Two thickeners are complete, the third should be complete by April 1, 2020. Two thickeners are available for use at all times.	Certification stating compliance should be achieved by April 1, 2020	Variance request is accepted.
3k	Complete construction and start-up of 'CN' BAFs 1-8 and all 'DN' BAFs	August 31, 2019	Completed and operating August 29, 2019	9/6/2019 Revised and resubmitted 12/10/19	Accepted

Item No.	Description	Due Date	Status per Respondent on 10/10/19	Appendix A-1 Certification Submission Status	Appendix A-1 Certification Approval Status
3l	Commence Operation of BAF CN cells 1-8, BAF DN cells 1-4, backwash tank, [BAF] backwash treatment system, headworks modifications, primary clarifier modifications, permanent CEPT system, UV disinfection, sludge thickeners and all related appurtenances.	August 31, 2019 Requested a variance for the sludge thickeners as they are part of Phase 2 construction work.	All processes related to primary and secondary treatment are operational sufficiently to process 60MGD peak wet weather flow. PST 1, 2, & 6 are nearing completion. Coatings were eliminated in PST's 1-5, after discussion with DEC that they are considered a maintenance.	10/10/2019	PST 1-6 are overdue; only primary clarifiers 7-10 have commenced operation
3m	Substantially complete construction of BAF C/N cells 9-14	January 1, 2020	Requested Variance on 1/9/2020 CN Cells 9-14 have been in full service since February 28, 2020 and are in full service and under the control of Kruger during process development.	Kruger making adjustments to optimize performance. A-1 to be submitted after completing agreed list with DEC.	Variance request pending review.
3n	Operate the Facility in compliance with SPDES permit effluent limits	April 1, 2020	April 1, 2020		
4d	Achieve substantial completion of the repair and restoration of Anaerobic Digesters 1-3	June 30, 2019. Request a variance until September 20, 2019 to allow the expansion tanks and compressors to be installed. Insufficient sludge to start up digester until after BAF is processing sludge.	Construction for Digesters 1-3 are complete. Replacement of the existing Digester gas line between Digesters 1 & 2 to be completed as maintenance.	10/10/2019	Accepted

Item No.	Description	Due Date	Status per Respondent on 10/10/19	Appendix A-1 Certification Submission Status	Appendix A-1 Certification Approval Status
4e	Commence operation of Anaerobic Digesters 1-3	August 31, 2019 On 10/10/2019 requested variance due to insufficient sludge produced to startup Digesters 1 & 2; no new compliance date provided.	Sludge volume is increasing. Digester 1 & 2 will start operation when the gas line repair is complete and after the thickener distribution box goes online at the end of March.	Complete pending maintenance repair of existing gas line.	Variance request accepted
5b	<ul style="list-style-type: none"> Modify the approved interim operating strategy to provide for operation of the new processes coming online by August 31, 2019. Modify the approved interim operating strategy to provide for operation of the new processes coming online by January 1, 2020. 	<ul style="list-style-type: none"> July 31, 2019 December 1, 2019 	<ul style="list-style-type: none"> Interim Operating Strategy was completed for Phase 1 by July 31, 2019 Interim Operating Strategy was completed for Phase 1 by Dec 1, 2019 	<ul style="list-style-type: none"> 8/5/2019 for Phase 1 12/10/2019 for Phase 2 	<ul style="list-style-type: none"> Accepted Accepted
7	Complete construction on Flood Mitigation Phase II, completion of the flood wall and flood protection system to elevation 845 for the entire Facility	February 28, 2019	Completed March 1, 2019 for use on temporary power Completed April 19, 2019 for use on permanent power	11/7/19	Accepted
Sch. B-2	Compliance with Interim Permit Limits, Levels and Monitoring	Effective September 1, 2019	On 8/30/2019, requested extension of Schedule B-1 Interim Permit Limits until November 30, 2019 and start of Schedule B-2 on December 2, 2019	12/11/19	DEC waiting to see December 2019 DMR submittal

Contract 5 – BJCSTP
Restoration and
Rehabilitation, March 2020
Construction Progress
Photos



42.09743N 75.96305W
United States

Binghamton / Johnson City WWTP
Mar 3, 2020 08:48:47

New Fiberglass Handrail for Methanol Storage Tanks

Contract 5 – BJCSTP
Restoration and
Rehabilitation, March 2020
Construction Progress
Photos



42.09717N 75.96205W
United States
Binghamton / Johnson City WWTP
Mar 6, 2020 10:35:42

Weir Installation in Sludge Thickener #3

Contract 5 – BJCSTP
Restoration and
Rehabilitation, March 2020
Construction Progress
Photos



Installation of Pedestal for Thickener #2

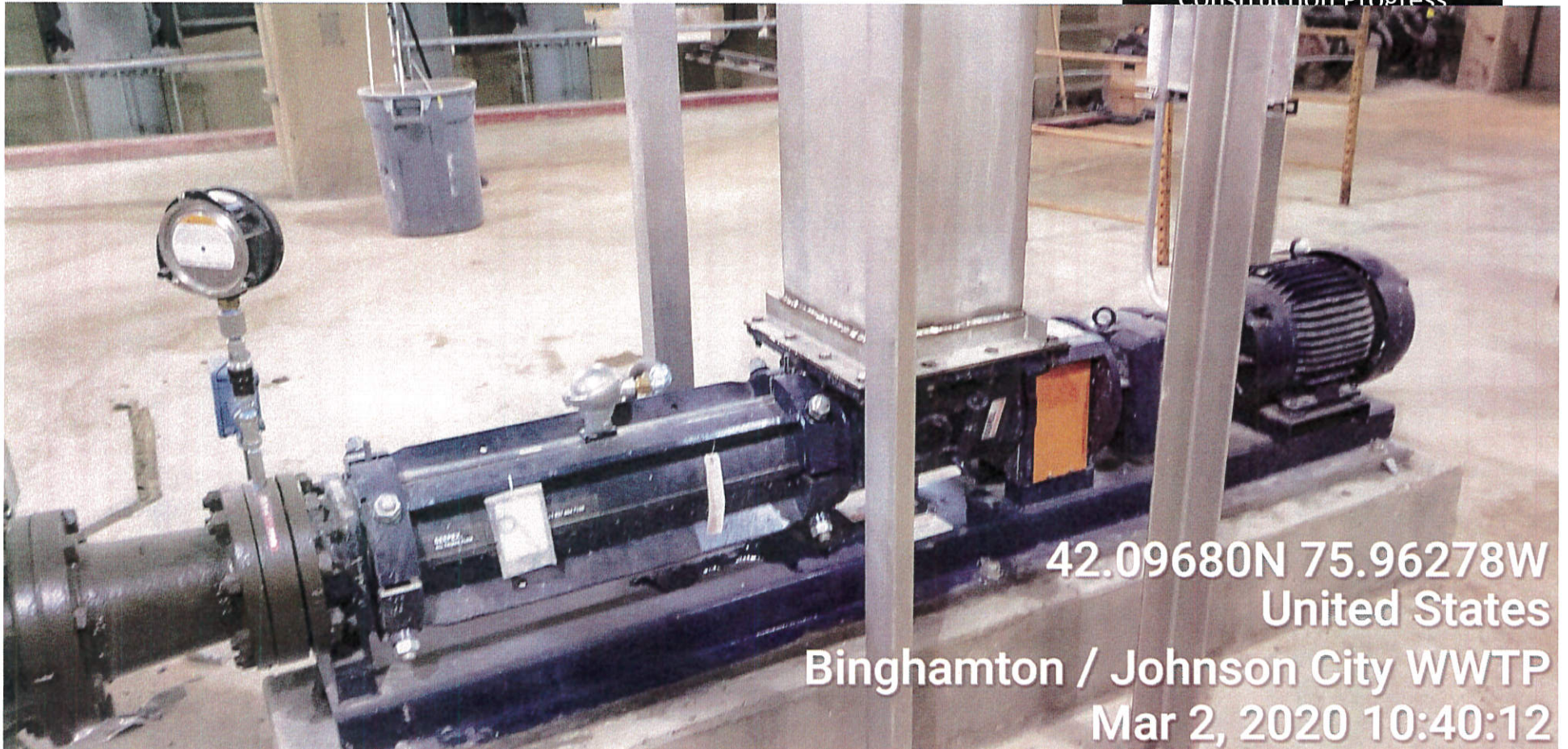
Contract 6 – BJCJSTP
Restoration and
Rehabilitation, March 2020
Construction Progress
Photos



42.09688N 75.96185W
United States
Binghamton / Johnson City WWTP
Mar 10, 2020 10:20:50

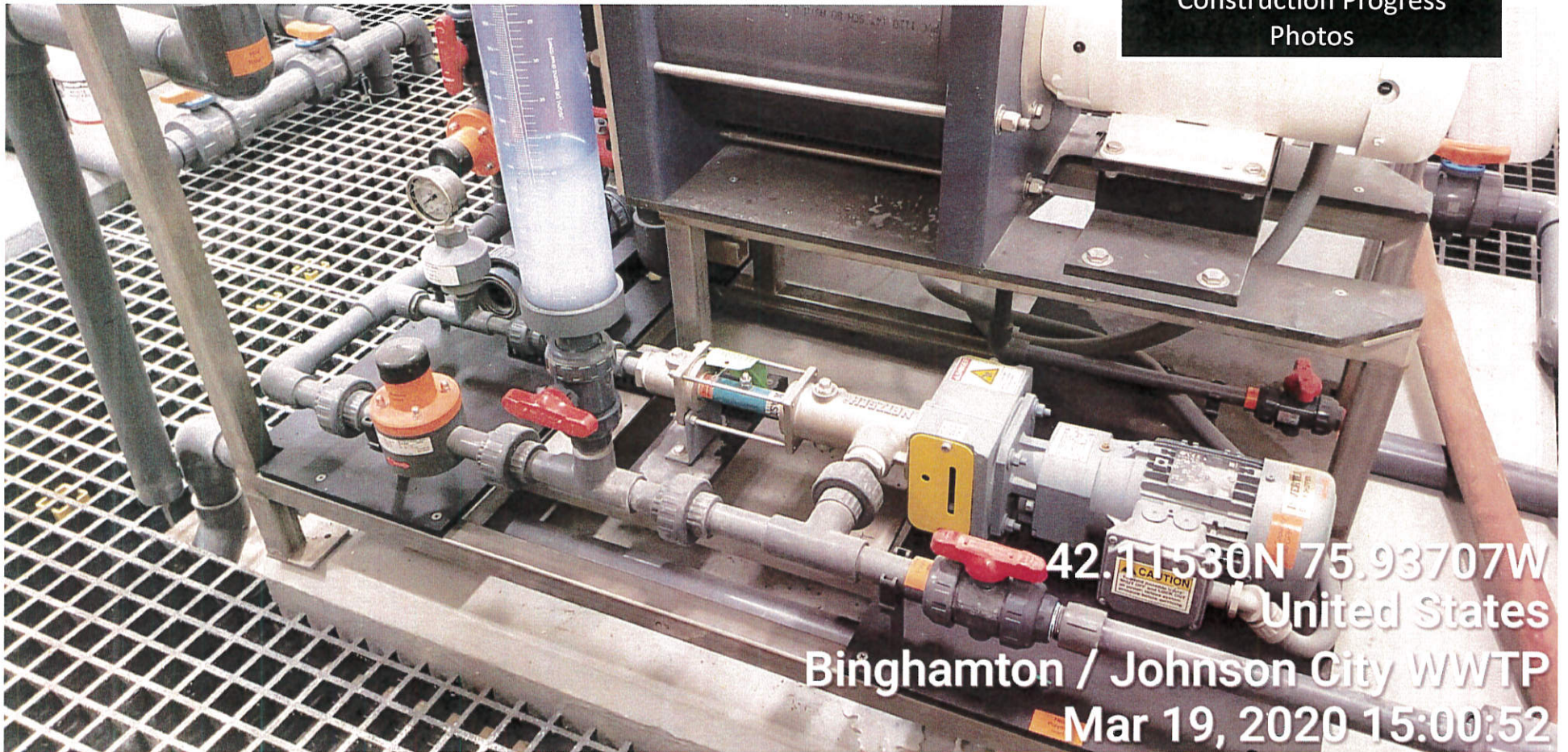
Light Pole Base East of Digester #3

Contract 10 – BJCSTP
Restoration and
Rehabilitation, March 2020
Construction Progress



Thickener Sludge Pump #2 Mid Level of the Head House

Contract 10 – BJCSTP
Restoration and
Rehabilitation, March 2020
Construction Progress
Photos



Solids Handling Building East Makeup Polymer Unit

Contract 12 – BJCJSTP
Restoration and
Rehabilitation, March 2020
Construction Progress
Photos



42.09799N 75.96610W
United States
Binghamton / Johnson City WWTP
Mar 3, 2020 11:14:59

Removal of Cooling Pumps to Change Impellers and Seal