



August 4, 2017 Update

On August 4, 2017, Niagara Falls Water Board ("NFWB") staff held another meeting with representatives of the New York State Department of Environmental Conservation ("NYSDEC"), including engineers from the NYSDEC Division of Water and the Regional Attorney. The NFWB continues to be candid, open, and cooperative in its discussions with the NYSDEC regarding the wastewater discharge on July 29, 2017. The NFWB provided the NYSDEC with updated information from its internal inquiry, including the information that follows.

On the morning of July 25, 2017, at a meeting of the NFWB, the New York Power Authority, and Wendel engineers, it was decided that the NFWB wastewater treatment staff would take sedimentation basin #5 out of service (the "Work") on Friday, July 28, 2017 in order to allow a contractor to enter and start installing a baffling system at sedimentation basin #5. The Work was being done pursuant to a contract, which had been previously reviewed by the NYSDEC prior to construction. The project involves many energy-related improvements at the facility, including lighting and heating upgrades, computer control of primary sludge and grit pumps, relocating the primary polymer injection points for better mixing, and replacing the primary electric mixers with hydraulic baffles for better flocculation. In addition to energy savings, the completed project will result in cleaner wastewater discharges to the Niagara River by facilitating more complete removal of suspended solids from the treated wastewater. In turn, improving solids removal in the sedimentation basins allows the carbon filters to run better and longer before backwashing, reducing the volume of backwash water to be treated and discharged.

In order to accomplish the Work, the water present in sedimentation basin #5 needed to be emptied. The liquid consisted of "backwash water" from the cleaning of the carbon filters at the wastewater treatment plant. The "backwash water" in sedimentation basin #5 already had been treated with coagulants to precipitate solids, which are co-dewatered with primary solids, lime stabilized, and landfilled.

In preparation for emptying sedimentation basin #5, NFWB maintenance staff tested all valves involved on Thursday, July 27, 2017. Because of staffing considerations, the Work was rescheduled to Saturday, July 29, 2017. The Chief Operator reported to work at 6:00 am on July 29, 2017 to commence the Work, along with two employees. These employees are believed to have had the job title "trainee," in part because the Civil Service examination required to advance beyond the

“trainee” job title is offered infrequently. The “trainee” employees nevertheless are trained on the aspects of plant operations for which they were responsible.

After an issue with valves was resolved with the assistance of maintenance, the Work was commenced on July 29, 2017 at about 9:00 am. The submersible pump in sedimentation basin #5 continued to operate, and the Chief Operator instructed both of the employees to pay close attention to the process changes. He instructed them to turn off the submersible pump in sedimentation basin #5, which pumps to the treatment plant’s chlorine contact tank, when the color of the water in the chlorine contact tank began to darken. The Chief Operator left the facility in the late morning. He made contact with the operations employees after 1:00 pm. No issues were reported at that time. At about 2:30 pm, one of the employees observed that the water being pumped from sedimentation basin #5 to the chlorine contact tank was still light in color.

These two employees remained working second shift along with the Assistant Operator. At about 5 pm, the employees left a telephone message with the Chief Operator that the submersible pump in sedimentation basin #5 had been turned off after one of the employees observed that water being pumped from sedimentation basin #5 had become darker in color. The Chief Operator was told at that time by the Assistant Operator on duty that plant was running under normal operational conditions. Apparently around the same time, several telephone calls about the appearance of dark water in the Lower Niagara River were received by the wastewater treatment plant and were forwarded to the wastewater control room. The Chief Operator also contacted the third shift operator with regard to plant operations. The third shift operator advised that, to his knowledge, operations are running well with no known issues.

Shortly thereafter, the NFWB received a large number of telephone calls and text messages about the discharge of dark water into the Lower Niagara River. In addition to fielding and responding to these telephone calls and text messages, the Chief Operator contacted a NYSDEC Division of Water representative on Monday morning, July 31, 2017, to discuss the matter. We understand, further, that the NYSDEC was known to be aware of the discharge on July 29, 2017 as NYSDEC representatives were observed near the discharge location that day.

Since the discharge of dark water into the Lower Niagara River, the NFWB has learned that, during some portion of the time period when one of the employees was charged with the task of monitoring the outflow from sedimentation basin #5, he had been called away by another employee to another section of the wastewater treatment plant to assist with another task. When he returned and observed that outflow from sedimentation basin #5 had grown darker in color, he reported this observation to the Assistant Operator and the submersible pump in sedimentation basin was #5 shut off. Based on all of the above, it is our preliminary belief that the submersible pump in sedimentation basin #5 was allowed to run longer than was intended, which caused a higher concentration of backwash water to enter the chlorine contact tank than occurs under normal conditions.

It should be noted that water from sedimentation basin #5 is continually discharged (24/7) to the chlorine contact tank where it is mixed with disinfected carbon filter effluent which has been treated

with hydrogen peroxide and sodium hypochlorite. All water discharged from the contact tank passes through the wastewater treatment plant's monitoring station (sampling station) for regular sampling before discharge to the Niagara River. These water samples are tested for mandated State Pollutant Discharge Elimination System ("SPDES") permit parameters and reported to the NYSDEC as required.

Pursuant to the design of the wastewater treatment plant, the discharge of backwash water from the carbon filters to sedimentation basin #5 is the usual mode of treatment. Approximately once a year since the commencement of operations of the wastewater treatment plant in April 1977 the carbon filter backwash is rerouted to the rapid mix basins, preceding primary treatment. Typically, this is done to facilitate repairs, inspections, or improvements to the sedimentation basin. The discharge of backwash water from the carbon filters via sedimentation basin #5 to the chlorine contact tank is a feature of the design of the wastewater treatment plant. The procedure followed by the NFWB for the discharge of backwash water has been reviewed and discussed frequently during inspections by the NYSDEC.

The NFWB will continue to provide periodic updates on this matter as information becomes available.

Updates will be available on the NFWB's website at www.NFWB.org.