

Information Report

Title: Environmental Services
Compliance Report December 2023

Report Number: Environmental Services-2024-01

Director: Infrastructure &
Development

Manager: Environmental Services

Meeting Date:
Wednesday, January 10, 2024

Executive Summary:

The intent of this report is to inform Council of any compliance related issues and general information from the Environmental Services Department for the period of November 22 to December 20, 2023.

Context and Background Information:

This report includes a summary of the Kincardine MECP Inspection results, alarm system issues as well as wastewater exceedances and spills reported to the Ministry in the month of December 2023.

Kincardine MECP Inspection Report

The final report for the Kincardine Drinking Water System annual inspection was received on November 28, 2023. The report included one (1) non-compliance and one (1) best practice with a total rating of 96.28% out of 100%. At the time of the inspection the non-compliance corrective actions and follow up were already completed, however it was a requirement to be noted in the ministry report. No further action is required.

The non-compliance issued was as follows:

Records did not indicate that the treatment equipment was operated in a manner that achieved the design capabilities required under O. Reg 170/03 or a Drinking Water Works Permit and/or Municipal Drinking Water Licence issued under Part V of the SDWA at all times that water was being supplied to consumers.

Records reviewed indicate the drinking water system was operated to achieve the necessary CT requirements and filter performance criteria for primary disinfection purposes during the inspection cycle except for the month of April 2023.

The Kincardine WTP experienced an extreme high turbidity event on April 5 caused by a significant rainfall event. Raw Turbidity (NTU) entering the plant was over 800. Operations

staff ensured there was no adverse event by backwashing the filters more often and directing water to waste. All water directed to users was disinfected.

For the month of April filters did not meet the performance criterion for filtered water turbidity of less than or equal to 0.3 NTU in 95% of the measurements each month as per the Procedure for Disinfection of Drinking Water in Ontario.

The owner notified the provincial officer on May 1, 2023, that the filter performance criteria was not met for the month of April. The municipality notified the spills action center, MOH, and submitted Adverse Water Quality Incident (AWQI) forms 2A and 2B. No action required.

Corrective Actions Taken: SCADA upgrades had been completed prior to the high turbidity event and settings had been changed for the filtration system which functioned well on a daily basis, however, didn't allow the system to run efficiently during the extreme high turbidity event. Changes were made to the SCADA program to run a better backwash cycle for the filters at the treatment plant. Additionally, staff cleaned the Actiflo system at the treatment plant, removing excess sand and allowing it to run more efficiently. Going forward, maintenance on the Actiflo system will be performed more often, particularly after an extreme event to prevent any future issues.

The best management practice noted in the MECP report is as follows:

Although not observed at the time of the physical site inspection due to the reservoir hatches being below grade, the operating authority informed the Inspector that after a recent ROV inspection of the reservoir, some of the access hatches for the reservoir associated with the Kincardine DWS appear to be allowing ground water to enter the reservoir.

It is strongly recommended that the Owner/Operating Authority forthwith assess their reservoir hatch covers and make appropriate modifications to the hatch covers to ensure that they are functioning appropriately and, in a manner, to mitigate the entry of groundwater into the reservoir.

Follow up: Staff have investigated multiple options for sealing the hatches on the reservoir. Staff believe that sealing the outside of the reservoir with a membrane would be the best option and the least disruptive for the drinking water system. This work will require all the topsoil and grass above the reservoir to be removed and will require dry weather to be completed. The work is being planned for the spring of 2024 pending budget approval. Lab results to date have shown no signs of contamination on the drinking water system.

Huronville MECP Inspection Report

The final report for the Huronville Distribution System annual inspection was received on November 28, 2023. The inspection received a rating of 100%. The Huronville Distribution system is owned by the Township of Huron Kinloss but is fed from the Kincardine Drinking Water System and operated by the Kincardine Environmental Services Department. The system is located south of Saratoga Road and feeds 93 properties.

Kincardine DWS SCADA Issues

On November 20, 2023 an operator noticed there was an alarm flashing on the SCADA computer screen that did not call out to staff through the Win911 alarm system. Under O. Reg 170 Drinking Water Systems a drinking water system must be equipped with an alarm system that will notify staff if the continuous monitoring equipment loses power or a test result for a parameter is above the maximum alarm standard or below the minimum alarm standard specified. The SCADA provider was contacted to troubleshoot the issue and it was found that

the Win911 program had faulted to Demo mode on November 15 when the SCADA provider was on site performing maintenance. The alarm system has a backup sensaphone unit on site that was programmed to call out if the alarm through Win911 was not acknowledged in 20 minutes. Since staff had noticed the alarm on screen right away and had acknowledged it before the 20-minute mark, the backup alarm was not required to call out. All data for the month was reviewed to ensure there were no other alarms that failed to call out and that there were no adverse drinking water quality incidents to be reported. The issue was reported to the ministry as a courtesy, since the backup alarm should have called out, but it couldn't be verified. The SCADA provider is looking into properly licensing the program so it cannot fault into Demo mode during maintenance, and the backup alarm is now set to call out after 10 minutes to ensure a prompt response if there are future issues with the program.

Scott's Point DWS Alarm System Issues

On November 29 there was a power outage for a large area of the municipality. While checking the status of alarms staff noticed the Scott's Point water system was not visible on the SCADA system and they were unable to reach the site by phone, this indicated the power was out to the site and the alarm system was not functioning. Staff responded to the site, the generator was running, the backup datalogger on site was trending and recording and all equipment functioning as it should. Bruce Telecom was notified of the issue with the phone line. The operator received a call from the site at 2110 indicating the generator was off and the site was back on main power. The power outage occurred from 1941 to 2110 for a total of 1 hour and 29 minutes. After reviewing all data for the month, it was found that there were also issues on November 13 and November 27 where the SCADA did not record data from this site and operators did not receive an alarm phone call indicating the alarm system was not functioning for a period of time. The alarm system failure was reported to the Ministry as required under O. Reg 170. All backup data was retrieved from the site and reviewed with no issues found.

Bruce Telecom was contacted to see if they had a plan for backup equipment on their end to ensure the telephone and internet would not be interrupted during power outages. They indicated the equipment on their end is aging and parts are no longer available. They have a vendor looking at alternative equipment but currently no timeline for repairs. Our SCADA provider was contacted to set up a backup heartbeat alarm from the Win911 system to the Scott's Point site. In the future when the system loses communication, a COMM failure alarm will call out to staff to let them know there is an issue with the site so they can investigate and monitor. Each time the Scott's Point alarm system is down, this will be reportable to the ministry until a permanent solution can be found for the telephone and internet on site.

On December 12, 2023 at 08:49am an operator received a COMM failure alarm from the Scott's Point site indicating the power was out and the telephone line was down again causing failure of the alarm system. An operator went to the site to monitor. The generator was running, the backup data system on site was trending and recording, and there were no treatment issues. The power and telephone came back online at 12:00 noon the same day. The power issue was a tree branch on the hydro line. The alarm system failure was reported to the Ministry.

Scott's Point DWS Annual Inspection

The annual inspection for the Scott's Point Drinking Water System was performed by the Ministry of the Environment, Conservation and Parks on December 19, 2023. No issues were

found on site during the inspection. Documentation has been sent to the ministry for review before the final report can be completed.

Bruce Energy Center Lagoons Phosphorous Exceedance

An exceedance of Total Phosphorus in the month of November was reported to the ministry on December 5, 2023. The monthly average limit for Total Phosphorus is 1.0mg/L and our results came to 1.23mg/L. Staff were aware the phosphorus levels were slowly increasing since the October 31 sample. Adjustments to alum dosages were being made onsite to try and bring the phosphorus levels down. Staff have started sampling and monitoring the sewage output from the individual businesses at the Bruce Energy Center Industrial Park to confirm the strength of the sewage being sent to our site for treatment. Staff will be following up with individual businesses that exceed the sewage strength limits in the Municipal Sewer Use Bylaw to ensure our monthly compliance limits can be met going forward.

Bruce Energy Center Lagoons Wastewater Spill

A spill of raw wastewater at the BEC Lagoons was reported to the Spills Action Center and the Ministry of Health on December 12, 2023. Staff were using the vactor truck to clean the influent chamber and had a spill of approximately 0.5m³ from the equipment onto the ground beside lagoon cell #1. The water hose on the truck was used to wash the spilled sewage into the lagoon cell. There were no adverse effects from the spilled sewage.

Leachate Treatment Facility Ammonia and CBOD Exceedances

The Leachate Treatment Facility located at the Kincardine Waste Management Center in Armow had an exceedance of Ammonia and CBOD on samples taken November 28. The exceedances were reported to the ministry and the system was resampled. Resample results came back below the ministry limits. The exceedance is believed to be caused by a power outage that tripped the blowers on site and not enough air was supplied to the treatment plant before the sample was taken. Staff were reminded that blowers will need to be manually restarted as soon as possible after power outages.

Consultation Overview:

The Ministry of the Environment, Conservation and Parks performs annual inspections of the drinking water systems to ensure compliance with Ministry Regulation and Legislation.

Origin:

The Drinking Water Quality Management Standard requires relevant aspects of the Quality Management System to be communicated to the Owner of the system.

Attachments: 2023-24 Kincardine DWS Final Report, 2023-24 Kincardine DWS IRR, 2023-24 Huronville DWS Final Inspection Report

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