

October 27, 2023

Mr. Rick Allison
Colorado Oil and Gas Commission
1120 Lincoln Street
Denver, CO 80203

Subject: **Discharge Monitoring Report for September 2023 for Wellington Operating Co. –
COGCC Permit Numbers 281818, 281824, & 416077**

Dear Mr. Allison:

Attached please find the Discharge Monitoring Reports (DMRs) for the subject Wellington Operating Company (WOC) facility for September 2023.

The facility did operate and discharge treated wastewater during the month of September 2023. A compliance sample was collected at Outfall 001A on September 14th, submitted to PACE Laboratory, analyzed, and the laboratory data is attached. All parameters at Outfall 001A were in compliance. An additional sample was collected at Outfall 001A on September 27th. The additional sample was only analyzed for specific parameters that indicate the performance of the reverse osmosis system. The laboratory results for the additional sample indicate that the sample was in compliance with the discharge limits at Outfall 001A, and the laboratory data is attached.

Monthly water samples were collected from the existing five monitoring wells on September 14, 2023, analyzed, and the laboratory data is attached. Boron exceeded the permit limits at monitoring well Outfall 050B, all other parameters were within the permit limits.

An additional sample was collected on September 27th from Outfall 050B and analyzed for boron, barium, sodium, TDS, chloride, fluoride, and sulfate. The analysis of the sample indicated that all parameters were within the required permit limits.

Noncompliance Notification Required by;

PART II, A. Management Requirements, 3. Noncompliance Notification;

The September 2023 Outfall 050B samples analyzed for boron detected the following result:

Parameter	Date	Result
Boron	09/14/2023	0.802 mg/L

Permit Limit for boron is 0.75 mg/L; the reported results, result in a permit exceedance for boron.

- a) *If, for any reason, the permittee does not comply with or will be unable to comply with any discharge limitations or standards specified in this permit, the permittee shall, at a minimum, provide the Oil and Gas Conservation Commission, the Water Quality Control Division, and with the following information:*

(i) A description of the discharge and cause of noncompliance;

WOC Response – During the history of operation and discharge to the rapid infiltration basins (RIBs) since operations began in 2006, boron has only been required to be reported and did not have a discharge limit. Boron maintained a discharge level of 2 to 3 mg/L during those years of operation. The results could be expected to have a buildup of boron in the soils below the RIBs. The boron is now being leached out of the soils by the treated water discharged by the RO system installed at the Wellington Produced Water Treatment plant and as a result is being carried by the water from the soils under the RIBs to the monitoring well at Outfall 050B. The water currently being discharged by the RO system since the membrane and process changes in November 2022 has ranged from 0.75 to 1.0 mg/L. Any water that infiltrates through the bottoms of the RIB can be expected to carry the boron present in the soils to Outfall 050B.

Compliance samples collected at Outfall 001A during September 2023 had boron results below the discharge limit of 0.75 ppm.

WOC has also increased the amount of treated water discharged due to the system being able to operate unattended with the automated control system. The facility is operating at approximately 50 gpm from Monday morning until Friday afternoon and can operated continuously seven days per week, if necessary, provided time is allowed to complete any required chemical cleaning procedures. The additional water being discharged could increase the rate the boron is being leached out of the soils beneath the RIBs and transferred to Outfall 050B.

(ii) The period of noncompliance, including exact dates and times and/or the anticipated time when the discharge will return to compliance; and

WOC Response – It appears that the leaching of boron from the soils will be an ongoing condition at Outfall 050B for an unknown period of time even with water discharged with boron results of less than the 0.75 ppm limit at Outfall 050B.

(iii) Steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge, including, but not limited to temporary suspension of discharge.

WOC Response - WOC is taking the following steps to prevent exceedances in the boron discharge from the facility;

- 1. The RO filter membranes were changed out in November 2022 to membranes that reject more of the boron in the wastewater. Additionally, the process is being modified by increasing the pH of the water processing through the RO which increases the amount of boron being rejected by the membranes. The process has shown that a pH of 10.0 and greater entering the RO results in a discharge of water at less than the 0.75 permit limit at outfall 050B. Additionally, there has been a piping change in the treatment plant that circulates a slip stream of RO permeate water back into the RO supply water tank to reduce the actual boron level in the supply water.**

b) The permittee shall report the following instances of noncompliance orally within twenty-four (24) hours from the time the permittee becomes aware of the noncompliance, and shall submit

to the COGCC a written report on COGCC Form 19 Initial Spill/Release Report within seventy-two (72) hours after becoming aware of the noncompliance:

WOC Response – This Section does not apply

(i) Any instance of noncompliance which September endanger health or the environment regardless of the cause of the incident;

(ii) Any unanticipated bypass;

(iii) Any upset or spill which causes an exceedance of any effluent limitation in the permit;

(iv) Daily maximum violations for any toxic pollutants or hazardous substances limited by PART I-A of this permit and specified as requiring 24-hour notification.

- c) The permittee shall report all other instances of non-compliance which are not required to be reported within 24 hours at the time Discharge Monitoring Reports are submitted. The reports shall contain the information listed in sub-paragraph (a) of this section.

WOC Response –This report is providing the information of the noncompliance.

As requested, WOC has prepared and attached a copy of a water balance sheet for the Wellington Produced Treatment facility and the Wellington Muddy Sand Stone Unit – South Battery for September 2023. This water balance is being submitted voluntarily and is not required by the current discharge permit.

WOC is also submitting a summary of the permeate data for conductivity for the combined discharge water from the reverse osmosis system.

Mr. Randy Evans is the current operator in responsible charge for the facility.

If you have questions regarding facility operations, please contact Randy Evans at cell 970-402-0418; email: rgrevans477@gmail.com.

Sincerely,



Randy R. Evans
Operator in Responsible Charge