North Dakota Department of Environmental Quality Public Notice
Reissue of an NDPDES Permit

Public Notice Date: 5/26/2022 Public Notice Number: ND-2022-008

Purpose of Public Notice

The Department intends to reissue the following North Dakota Pollutant Discharge Elimination System (NDPDES) Discharge Permit under the authority of Section 61-28-04 of the North Dakota Century Code.

Permit Information

Application Date: 4/4/2022 Application Number: ND0026603

Applicant Name: Civeo Regional WWTP

Mailing Address: 53021 Range Road 263A, Acheson, AB T7X 5A5, AB Canada

Telephone Number: 780.995.5493

Proposed Permit Expiration Date: 6/30/2027

Facility Description

This reapplication is for a three-train Newterra Microclear MBR system that flows into two treated effluent storage ponds. The facility services the Killdeer Lodge and any hauled domestic waste. The facility is located in Section 21 of Township 145 North and Range 95 West in Dunn county. Any discharge would be to Spring Creek, a Class IA stream.

Tentative Determinations

Proposed effluent limitations and other permit conditions have been made by the Department. They assure that State Water Quality Standards and applicable provisions of the FWPCAA will be protected.

Information Requests and Public Comments

Copies of the application, draft permit, and related documents are available for review. For further information on making public comments/public comment tips please visit: https://deq.nd.gov/PublicCommentTips.aspx. Comments or requests should be directed to the ND Dept of Env Quality, Div of Water Quality, 4201 Normandy Street, Bismarck ND 58503-1324 or by calling 701.328.5210.

All comments received by June 27, 2022 will be considered prior to finalizing the permit. If there is significant interest, a public hearing will be scheduled. Otherwise, the Department will issue the final permit within sixty (60) days of this notice. If you require special facilities or assistance relating to a disability, call TDD at 1.800.366.6868.

FACT SHEET FOR NDPDES PERMIT
ND0026603

Civeo Regional Wastewater Treatment Plant
Killdeer, ND

DATE OF THIS FACT SHEET – April 2022

INTRODUCTION

The Federal Clean Water Act (CWA, 1972, and later amendments in 1977, 1981, and 1987, etc.) established water quality goals for the navigable (surface) waters of the United States. One mechanism for achieving the goals of the CWA is the National Pollutant Discharge Elimination System (NPDES), which the US Environmental Protection Agency (EPA) oversees. In 1975, the State of North Dakota was delegated primacy of the NPDES program by EPA. The North Dakota Department of Environmental Quality, hereafter referred to as "department", has been designated the state water pollution control agency for all purposes of the Federal Water Pollution Control Act, as amended [33 U.S.C. 1251, et seq.], and is authorized to take all action necessary or appropriate to secure to this state the benefits of the act and similar federal acts. The department's authority and obligations for the wastewater discharge permit program is in the North Dakota Administrative Code (NDAC) 33.1-16 which was adopted under North Dakota Century Code (NDCC) chapter 61-28. In North Dakota, these permits are referred to as North Dakota Pollutant Discharge Elimination System (NDPDES) permits.

The following rules or regulations apply to NDPDES permits:

- Procedures the department follows for issuing NDPDES permits (NDAC chapter 33-16-01),
- Standards of Quality for Waters of the State (NDAC chapter 33-16-02.1).

These rules require any treatment facility operator to obtain an NDPDES permit before discharging wastewater to state waters. They also define the basis for limits on each discharge and for other requirements imposed by the permit.

According to NDAC section 33.1-16-01-08, the department must prepare a draft permit and accompanying fact sheet and make it available for public review. The department must also publish an announcement (public notice) during a period of thirty days, informing the public where a draft permit may be obtained and where comments regarding the draft permit may be sent (NDAC section 33.1-16-01-07). For more information regarding preparing and submitting comments about the fact sheet and permit, please see **Appendix A – Public Involvement**. Following the public comment period, the department may make changes to the draft NDPDES permit. The department will summarize the responses to comments and changes to the permit in **Appendix D – Response to Comments**.

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BACKGROUND INFORMATION

Table 1 - General Facility Information

Applicant:	Civeo
Facility Name and Address:	Civeo Regional WWTP 304 106th Ave. SW Killdeer, ND 58640
Permit Number:	ND0026603
Permit Type:	Minor, Non-POTW
Type of Treatment:	Mechanical Wastewater Treatment System (Membrane Biological Reactor (MBR))
SIC Code:	4952 – Sewerage Systems
NAICS Code:	221320 – Sewage Treatment Facilities
Discharge Location:	Outfall 001: Spring Creek, Class IA Stream Latitude: 47.366750 Longitude: -102.799306
Hydrological Code:	10130201 – Knife

Figure 1 - Aerial Photograph of the Civeo Regional WWTP - Killdeer, ND (ND GIS Hub Explorer, 2020)

FACILITY DESCRIPTION

History

This facility was built in 2013 and first covered under NDG420000 in August of 2013. The facility was transferred to an individual permit in 2018 as it no longer met the requirements of NDG420000 due to accepting backwash water from the reverse osmosis (RO) drinking water plant at the Killdeer Lodge Water Treatment Plant.

This facility treats domestic wastewater from the Killdeer Lodge, hauled domestic wastewater brought by other companies from crew camps and other domestic wastewater sources, and backwash water from the potable water treatment plant at the Killdeer Lodge. The facility began accepting wastewater in 2014 and consists of a wastewater receiving station, a membrane biological reactor (MBR) wastewater treatment package plant and two holding ponds. There is space at the site for a third holding pond, should the need arise. The wastewater facility is a Newterra Microclear™ MBR system with three different wastewater treatment trains that are run in parallel. Each treatment train is capable of treating up to 33,462 gallons per day.

Treatment Process

Wastewater from the Killdeer Lodge, which has the capacity to house 235 people, and the water treatment plant is piped into the plant. Hauled wastewater is discharged into the plant through a wastewater receiving station located at the northwest corner of the plant. This water goes into one of four receiving tanks with a total capacity of 55,000 gallons. Three of the tanks are 15,000 gallons and one is 10,000 gallons. Flow from the receiving tanks is pumped and split between two rotary screens to remove any debris. The discharge from the two rotary screens is collected, pumped, and split between three downstream process trains, starting with the equalization tanks. Each equalization tank has a capacity of 20,000 gallons for a total capacity of 60,000 gallons.

The equalization tanks are used to buffer the flow between the rotary screens and the aeration tanks so that the water levels in the aeration tanks can be maintained at a desirable level. Equalized loadings distributed among the three process trains also optimize biological performance. Fine-bubble air diffusers are used in the aeration and equalization tanks to maintain complete mixed conditions, to prevent unpleasant odorous conditions, and to help the plant meet the biological demand. Each aeration basin's capacity is 20,000 for a total capacity of 60,000 gallons. Should the alkalinity become below the optimal operation range, alkalinity can be added. This prevents any acidic conditions inside the aeration basin.

Finally, the flow from the aeration tanks is pumped to the membrane tanks for solid-liquid separation. The mixed liquor in the membrane tanks is constantly recycled to the aeration tanks to maintain even biomass distribution between the aeration and membrane tanks and to minimize the solids build-up in the membrane tanks for membrane fouling control. Permeate is

withdrawn through the membrane filters to produce the effluent and is discharged into the holding pond.

Excess sludge from the three process trains is wasted and combined in a sludge inlet tank for sludge processing. Sludge is then pumped into a flocculation tank where polymer is added to assist in sludge thickening and dewatering. Sludge thickening and dewatering is achieved using a Volute press to reduce the volume of sludge needing disposal. The filtrate produced during this process is recycled upstream of the equalization tanks, and the dewatered solids are conveyed to an exterior storage bin.

The effluent in the holding ponds can be pumped into water trucks from a truck filling station for non-potable water use. The facility has a reverse osmosis (RO) water system which is used for system wash downs. Each compartment of the package wastewater plant has a drain that leads to the facility lift station. The office wastewater is also discharged to the lift station. The lift station is pumped to the receiving tanks.

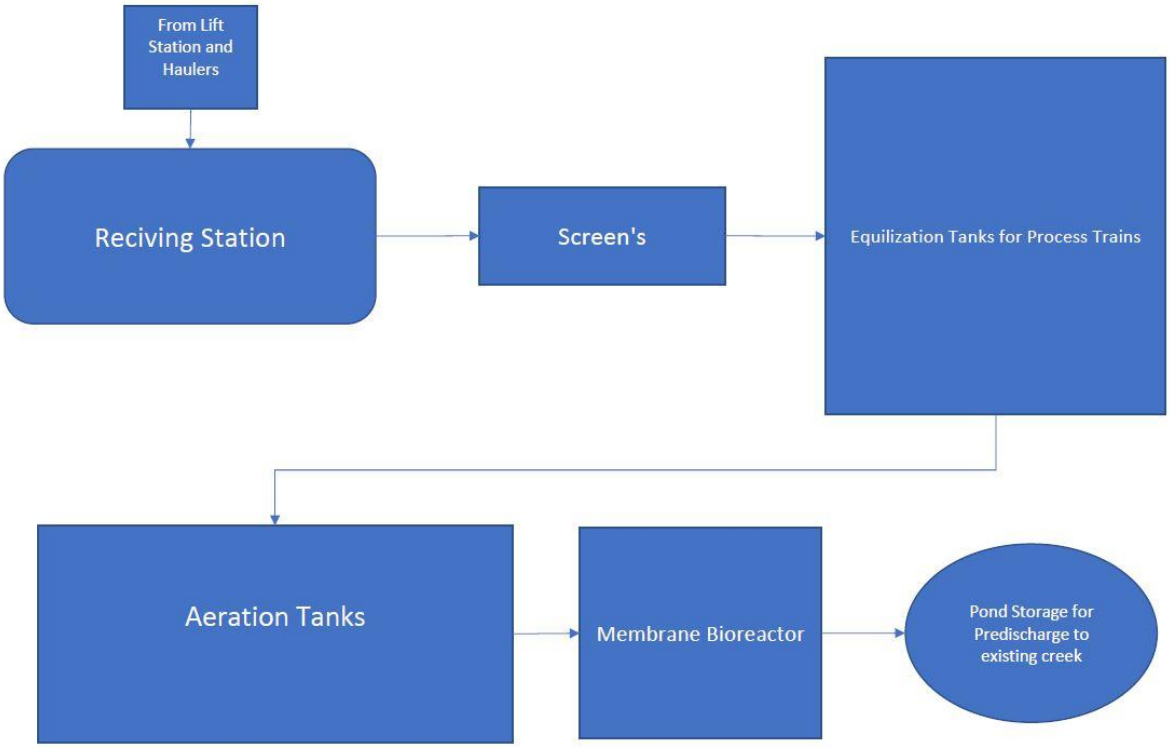

Figure 2 - Facility Flow Diagram

Outfall Description

The authorization to discharge provided under this permit is limited to those outfalls specifically designated below as discharge locations. Discharges at any location not authorized under a NDPDES permit is a violation of the Clean Water Act (CWA) and could subject the person(s) responsible for such discharge to penalties under section 309 of the CWA. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge within the specified timeframe outlined in this permit could subject such person(s) to criminal penalties as provided under the CWA.

There is one active outfall for this facility.

Outfall 001. Active. Final.			
Latitude: 47.366750	Longitude: -102.799306	County: Dunn	
Township: 145N	Range: 95W	Section: 21	QQ: BC
Receiving Stream: Spring Creek		Classification: Class IA	
Outfall Description: The effluent flows from the treated effluent storage ponds to Spring Creek, a Class IA stream. This system utilizes a discharge termed a “controlled discharges” and is deemed to be non-continuous.			

PERMIT STATUS

The department issued the current permit to Civeo Regional WWTP on January 1, 2018. This permit placed limits on biochemical oxygen demand (BOD_5), total suspended solids (TSS), pH, *Escherichia coli* (*E.coli*), ammonia as N, oil and grease, chlorides, total residual chlorine (TRC), total sulfate, dissolved oxygen, and total metals. Additionally, this permit included monitoring requirements for bromide, conductivity, and flow.

The department has been in contact with Civeo Regional WWTP to obtain information to reissue this permit. The department received EPA Form 1 and 2C on April 4, 2022. The application was accepted by the department on April 4, 2022. Effluent sample data has been provided to the department through official laboratory reports, discharge monitoring reports, and the permit application.

SUMMARY OF COMPLIANCE WITH PREVIOUS PERMIT ISSUED

Department staff last conducted a non-sampling compliance inspection on July 2, 2019, with reconnaissance inspections conducted on March 18, 2020, and June 21, 2021. The department’s assessment of compliance is based on a review of the facility’s Discharge Monitoring Reports (DMRs) and physical inspections conducted by department staff. The most recent compliance inspection had two deficiencies which included identifying missing parameters during the DMR review and hold time exceedances. These will be corrected on discharges going forward.

Past Discharge Data

The concentration of pollutants from Outfall 001 were reported on DMRs. The data are characterized as shown in the below table:

Table 2 - DMR Data for Outfall 001 (January 1, 2018 - March 31, 2022)

Parameter	Range	Average	Permit Limit	Number of Exceedances	TRC Exceedances
Biochemical Oxygen Demand (BOD_5), mg/l	2 – 2	2	25 MONTHLY AVG. 45 WEEKLY AVG.	0	0
Total Suspended Solids (TSS), mg/l	2 – 4	3	30 MONTHLY AVG. 45 WEEKLY AVG.	0	0
pH, s.u.	8.76 – 8.76	N/A	7.0 to 9.0	0	0
Escherichia coli *(E. coli)*, #/100 ml	1 – 3.1	1.76	126 MONTHLY AVG. 409 DAILY MAX	0	0
Ammonia as N, mg/l	0.2 – 0.28	0.24	Calculated	0	0
Oil & Grease, mg/l	1.4 – 1.4	1.4	10 DAILY MAX	0	0
Bromide, mg/l	0.5 – 0.5	0.05	N/A	N/A	N/A
Chloride, mg/l	50.7 – 60.1	55.4	175 MONTHLY AVG	0	0
Total Residual Chlorine (TRC), mg/l	0.1 – 0.17	0.135	0.10 DAILY MAX	1	1
Total Sulfate, mg/l	224 – 274	249	450 MONTHLY AVG	0	0
Dissolved Oxygen, mg/l	No data available		≥5 DAILY MAX	N/A	N/A
Conductivity, umho/cm	1325 – 1524	1424.5	N/A	N/A	N/A
Flow Effluent, mgd	0.316 – 2.356	1.336	N/A	N/A	N/A
Total Days Discharging	7 – 21	14	N/A	N/A	N/A
Drain Total, MG	1.85 – 2.357	2.1035	N/A	N/A	N/A
Total Antimony, mg/l	0.004 – 0.0062	0.0051	WQS	1	0
Total Arsenic, mg/l	0.0023 – 0.0054	0.0039	WQS	0	0
Total Beryllium,	0.0005 –	0.0005	WQS	0	0

mg/l	0.0005				
Total Cadmium, mg/l	0.0005 – 0.0005	0.0005	WQS	0	0
Total Chromium, mg/l	0.002 – 0.002	0.002	WQS	0	0
Total Copper, mg/l	0.05 – 0.05	0.05	WQS	2	0
Total Lead, mg/l	0.0005 – 0.0005	0.0005	WQS	0	0
Total Mercury, mg/l	0.0002 – 0.0002	0.0002	WQS	2	0
Total Nickel, mg/l	0.006 – 0.0097	0.0079	WQS	0	0
Total Selenium, mg/l	No data available		WQS	---	---
Total Silver, mg/l	0.0005 – 0.0005	0.0005	WQS	0	0
Total Thallium, mg/l	0.0005 – 0.0005	0.0005	WQS	2	0
Total Zinc, mg/l	0.05 – 0.08	0.065	WQS	0	0
Total Cyanide, mg/l	0.02 – 0.02	0.02	WQS	2	0
Total Phenols, mg/l	0.01 – 0.01	0.01	WQS	0	0
Total Hardness, mg/l	165 – 182	173.5	WQS	N/A	N/A
Notes:					
All metal exceedances except for antimony were below the method detection level.					

PROPOSED PERMIT LIMITS

Technology-Based Effluent Limits

Federal and state regulations define technology-based effluent limits for municipal wastewater treatment plants. These effluent limits are given in 40 CFR 133 and in NDAC Chapter 33-16-01-30. These regulations are performance standards that constitute all known, available, and reasonable methods of prevention, control, and treatment for municipal wastewater. Using BPJ, the department incorporated the technology-based effluent limits into this permit.

Table 3 - Technology-based Limits

Parameter	30-Day Average	7-Day Average
BOD_5	30 mg/l	45 mg/l
TSS	30 mg/l	45 mg/l
pH	Remain between 6.0 to 9.0 s.u.	
Percent Removal	Not less than 85% BOD_5 and TSS	

NDAC section 33.1-16-01-14(3)(c)(1) allows for the adjustment of the secondary treatment criteria to reflect site specific considerations. A five-day biochemical oxygen demand limit of twenty-five milligrams permit liter may be applied in instances in which limits expressed in terms of secondary treatment standards would be impractical or deemed inappropriate to protect receiving waters.

The department acknowledges that 40 CFR 133 requires an 85% removal for BOD_5 and TSS. The percent removal rate in 40 CFR 133 is dependent upon the influent and effluent samples being taken at approximately the same time. The treated effluent from this system is discharged into a holding pond, where it is held for an undetermined length of time. Due to the inconsistent nature of the influent, and the detention time of the effluent, influent and effluent samples would not be representative of the same wastewater. Therefore, the department has determined not to include the percent removal requirements in the proposed permit for Outfall 001 based on the infeasibility to determine percent removal.

Effluent Limitations

The following limitations are based on promulgated guidelines as outlined in the Code of Federal Regulations (40 CFR), the North Dakota Administrative Code (NDAC), the North Dakota Standards of Quality for Waters of the State (WQS) and Best Professional Judgment (BPJ), as determined by the North Dakota Department of Environmental Quality (department).

The proposed effluent limitations shall take effect once the permit becomes active. Prior to discharging, a review of pre-discharge parameters must be made with the department. Sampling shall be performed before a discharge and weekly during the discharge. The effluent limitations and monitoring requirements for Outfall 001 are listed in the below table:

Table 4 - Proposed Effluent Limitations

Parameter	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit	Basis [a]
Biochemical Oxygen Demand (BOD_5)	25 mg/l	45 mg/l	*	NDAC 33.1-16-01-14(3)(c)(1); 40 CFR 133.102(a)(2); Previous Permit; BPJ
Total Suspended Solids (TSS)	30 mg/l	45 mg/l	*	40 CFR 133.102(b); NDAC 33.1-16-01-14(3)(b); Previous Permit, BPJ

Parameter	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit	Basis [a]
pH [b]	Shall remain between 6.5 and 9.0 s.u.			40 CFR 133.102(b); WQS; Previous Permit
Escherichia coli (*E. coli*) [c]	126/100 ml	*	409/100 ml	WQS; Previous Permit
Ammonia as N, mg/l	Refer to Table 5 – Ammonia Effluent Limitations			WQS; Previous Permit
Oil & Grease [d]	*	*	10 mg/l	BPJ; Previous Permit
Chloride	175 mg/l	*	*	WQS; Previous Permit
Total Residual Chlorine (TRC) [e]	0.011 mg/l	*	0.019 mg/l	WQS
Total Sulfate	450 mg/l	*	*	WQS; Previous Permit
Dissolved Oxygen	*	*	≥ 5	WQS; Previous Permit
Metals, mg/l	Refer to Table 6 – Metals			WQS; Previous Permit

Notes:

* The parameter is not limited. However, the department may impose limitations based on sample history to protect receiving waters.

a. The basis of the effluent limitations is given below:

"Previous permit" refers to limitations in the previous permit. The NPDES regulations **40 CFR Part 122.44(1)(1) Reissued Permits** require that when a permit is renewed or reissued, interim limitations, standards, or conditions must be at least as stringent as the final effluent limitations, standard, or conditions in the previous permit unless the circumstances on which the previous permit was issued have materially and substantially changed since the previous permit was issued and would constitute cause for permit modification or revocation and reissuance under **40 CFR Part 122.62**.

"WQS" refers to effluent limitations based on the state of North Dakota's "Standards of Quality for Waters of the State", NDAC Chapter 33.1-16-02.1.

"BPJ" refers to best professional judgement.

b. The pH, an instantaneous limitation, shall be between 6.5 s.u. and 9.0 s.u. Any single analysis and/or measurement outside of this limitation shall be considered a violation.

c. The limitation for *E. coli* shall be in effect for discharges which may occur from April 1 through October 31. Averages for *E. coli* shall be determined as a geometric mean.

Parameter	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit	Basis [a]
d. A daily visual check shall be performed. There shall be no discharge of oily wastes that produce a visible sheen on the surface of the receiving water. If present, a grab sample shall be analyzed for oil and grease to ensure compliance with the concentration limitation.				
e. Testing required only during periods when effluent is chlorinated.				

Table 5 - Ammonia Effluent Limitations

Outfall 001			
	Effluent Limitations		
Parameter	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit
Ammonia [a]	†	*	‡
Notes:			
a. Calculations must be performed for each discharge sample. If an exceedance is detected on any single sample, the exceedance must be reported on the DMR.			
† Chronic Standard (Average Monthly Limit) The 30-day average concentration of total ammonia (expressed as N in mg/L) does not exceed, more often than once every three years on the average, the numerical value given by the following formula and the highest 4-day average concentration of total ammonia within the 30-day averaging period does not exceed 2.5 times the numerical value given by the following formula: $$0.8876 \times \left(\frac{0.0278}{1+10^{7.688-pH}} + \frac{1.1994}{1+10^{pH-7.688}}\right) \times \left(2.126 \times 10^{0.028\times(20-MAX(T,7))}\right)$$ Effluent pH and Temperature is used for the calculation			
‡ Acute Standard (Daily Maximum Limit) The one-hour average concentration of total ammonia (expressed as N in mg/l) does not exceed, more often than once every three years on the average, the numerical value given by the following formula: $$0.7249 \times \left(\frac{0.0114}{1+10^{7.204-pH}} + \frac{1.6181}{1+10^{pH-7.204}}\right) \times MIN\left(51.93, 23.12 \times 10^{0.036\times(20-T)}\right)$$ Effluent pH and Temperature is used for the calculation			

Outfall 001			
	Effluent Limitations		
Parameter	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit
Stipulations The effluent limitation shall be met at end-of-pipe.			

Table 6 - Metals

40 CRF 122 Appendix D Table III				
Antimony, Total	Arsenic, Total	Beryllium, Total	Cadmium, Total	Chromium, Total
Copper, Total	Lead, Total	Mercury, Total	Nickel, Total	Selenium, Total
Silver, Total	Thallium, Total	Zinc, Total	Cyanide, Total	Phenols, Total
Hardness, Total [a]				
Notes: a. A total hardness of the receiving stream needs to be determined every time the above parameters are tested. The hardness is used to calculate parameter criterion(s) according to the North Dakota State Water Quality Standards.				

Self-Monitoring Requirements

All effluent shall be sampled at a point following the treatment system but prior to entering waters of the state. The beginning and ending dates of the discharge shall be recorded.

Table 7 - Self-Monitoring Requirements

Effluent Parameter	Frequency	Sample Type [a]
BOD_5, mg/l	Weekly [b]	Grab
TSS, mg/l	Weekly [b]	Grab
pH, SU	Weekly [b]	Grab
E. coli, #/100 ml [c]	Weekly [b]	Grab
Ammonia as N, mg/l	Weekly [b]	Grab
Temperature, °C	Weekly [b]	Grab
Oil & Grease – Visual	Daily	Visual
Oil & Grease	Weekly [b]	Grab
Bromide, mg/l	Weekly [b]	Grab
Chloride, mg/l	Weekly [b]	Grab
Total Residual Chlorine (TRC), mg/l	Daily [d]	Grab
Total Sulfate, mg/l	Monthly	Grab
Dissolved Oxygen	Weekly [b]	Grab
Conductivity, umho/cm	Monthly	Grab
Total Nitrogen, mg/l [e]	Monthly	Grab

Total Phosphorus, mg/l	Monthly	Grab
Total Metals, mg/l	Yearly	Composite
Flow, MGD	Semiannually	Calculated
Total Drain, MG [f]	Semiannually	Calculated

Notes:	
a.	Refer to Appendix B for definitions.
b.	Sampling shall consist of one (1) grab sample to be taken and analyzed prior to any discharge. This analysis shall be reported to the department prior to discharge and used for the first week of discharge. In addition, one (1) grab sample of the actual discharge shall be taken and analyzed on a weekly basis for each additional week of the discharge.
c.	The monitoring requirements for *E. coli* shall be in effect for discharges which may occur from April 1 through October 31.
d.	Sampling only required during periods when effluent is chlorinated.
e.	Total nitrogen is a combination of Nitrate, Nitrite, and Total Kjeldahl Nitrogen (TKN).
f.	The total amount of water discharged shall be determined either by using a flow-measuring device or by recording the water level drop in the pond.

Stipulations:
Discharges may only occur during the open-water season. There shall be no discharge when the receiving water is ice covered.
Best Management Practices (BMPs) are to be utilized so that there shall be no discharge of floating debris, oil, scum, and other floating materials in sufficient amounts to be unsightly or deleterious, or oil wastes that produce a visible sheen on the surface of the receiving water.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITS

The North Dakota State Water Quality Standards (NDAC Chapter 33.1-16-02.1) are designed to protect existing water quality and preserve the beneficial uses of North Dakota's surface waters. Wastewater discharge permits must include conditions that ensure the discharge will meet the surface water quality standards. Water quality-based effluent limits may be based on an individual waste load allocation or on a waste load allocation developed during a basin wide total maximum daily load (TMDL) study. TMDLs result from a scientific study of the water body and are developed in order to reduce pollution from all sources.

The receiving stream is not listed in the North Dakota 2018 Integrated Section 305(b) Water Quality Assessment Report and Section 303(d) List of Waters Needing Total Maximum Daily Loads as impaired or needing a TMDL.

Spring Creek is a Class IA stream. Under NDAC 33.1-16-02.1-09(d), the quality of waters in this class shall be the same as the quality of Class I streams, which shall be suitable for propagation or protection, or both, of resident fish species and other aquatic biota and for

swimming, boating, and other water recreation. The quality of the waters shall be suitable for irrigation, stock watering, and wildlife without injurious effects. Class IA streams shall be the same as the quality of Class I streams, except that where natural conditions exceed Class I criteria for municipal and domestic use, the availability of softening or other treatment methods may be considered in determining whether ambient water quality meets the drinking water requirements of the department.

Numerical Criteria for the Protection of Aquatic Life and Recreation

Numerical water quality criteria for the protection of aquatic life and recreation are listed in the water quality standards for surface waters (NDAC Chapter 33.1-16-02.1). They specify the maximum levels of pollutants allowed in receiving water to protect aquatic life and recreation in and on the water. The department uses numerical criteria along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limits, the discharge must meet the water quality-based limits.

Numerical Criteria for the Protection of Human Health

The U.S. EPA has published numeric water quality criteria for the protection of human health that are applicable to dischargers. These criteria are designed to protect humans from exposure to pollutants linked to cancer and other diseases, based on consuming fish and shellfish and drinking contaminated surface waters. The Water Quality Standards also include radionuclide criteria to protect humans from the effects of radioactive substances.

Narrative Criteria

Narrative water quality criteria (NDAC section 33.1-16-02.1-08) limit concentrations of pollutants from exceeding applicable standards of the receiving waters. The department adopted a narrative biological goal solely to provide an additional assessment method that can be used to identify impaired surface waters.

Antidegradation

The purpose of North Dakota's Antidegradation Policy (NDAC Chapter 33.1-16-02(Appendix IV)) is to:

- Provide all waters of the state one of three levels of antidegradation protection.
- Determine whether authorizing the proposed regulated activity is consistent with antidegradation requirements.

The department's fact sheet demonstrates that the existing and designated uses of the receiving water will be protected under the conditions of the proposed permit.

Mixing Zones

The department's WQS contain a Mixing Zone and Dilution Policy and Implementation Procedure, NDAC Chapter 33.1-16-02.1 (Appendix III). This policy addresses how mixing and dilution of point source discharges with receiving waters will be addressed in developing chemical-specific and whole effluent toxicity discharge limitations for point source discharges. Depending upon site-specific mixing patterns and environmental concerns, some pollutants/criteria may be allowed a mixing zone or dilution while others may not. In all cases, mixing zone and dilution allowances shall be limited, as necessary, to protect the integrity of the receiving water's ecosystem and designated uses.

EVALUATION OF SURFACE WATER QUALITY-BASED EFFLUENT LIMITS FOR NUMERIC CRITERIA

BOD_5

The department reviewed the BOD_5 data and sampling frequency. No exceedances occurred for this parameter during the current permit. The department proposes to continue with 25 mg/l as an average monthly limit, and an average weekly limit of 45 mg/l, with a sampling frequency of weekly.

TSS

The department has reviewed the TSS data and sampling frequency. No exceedances occurred for this parameter during the current permit. The department proposes to continue with 30 mg/l as an average monthly limit, and an average weekly limit of 45 mg/l, with a sampling frequency of weekly.

pH

The department has reviewed the pH data and sampling frequency. No exceedances occurred for this parameter during the current permit. The current permit reflects the WQS for pH. The WQS for pH were updated for Class I and IA streams from between 7.0 s.u. and 9.0 s.u. to be between 6.5 s.u. and 9.0 s.u. The department proposes to update the permit to the current WQS limitation of shall remain between 6.5 s.u. and 9.0 s.u. with a sample frequency of weekly.

E. coli

Based on the WQS, the department has determined that an *E. coli* limitation of 126 organisms per 100 mL as a monthly geometric mean and 409 organisms per 100 mL as a daily maximum is appropriate for this type of facility. The water quality standard only applies during the recreation season from May 1 through September 30. The limitation in the permit is meant to cover the period one month before and one month after the recreation season, from April 1 through October 31.

The department has reviewed the *E. coli* data and sampling frequency. No exceedances occurred for this parameter during the current permit. The department proposes to continue with a limit of 126 organisms per 100 mL as a monthly geometric mean and 409 organisms per 100 ml as a daily maximum limit with a sampling frequency of once per week.

Ammonia as Nitrogen

The department has reviewed the ammonia data and sampling frequency. No exceedances occurred for this parameter during the current permit. The department proposes to continue with calculated limit from the most recent revision of the WQS with a sampling frequency of weekly.

Ammonia presents both acute and chronic toxicity to aquatic life at variable levels depending on in-stream conditions (pH, temperature, and ammonia). Federal regulations (40 CFR 122.44) require the department to place limits in NDPDES permits on pollutants in an effluent whenever there is a reasonable potential for those pollutants to cause an excursion of the surface water quality criteria. No flow information was available for this reach of Spring Creek, therefore no reasonable potential analysis was conducted. The permittee will need to comply with the ammonia as N water quality standard at the end-of-pipe. The department and the permittee will verify compliance with the state water quality standard using an ammonia spreadsheet. Any ammonia as N effluent values exceeding the applicable ammonia as N calculation shall be reported on the DMR submitted to the department. It is the intent of the department to ensure that state water quality standards are not violated, and the permittee optimizes the efficiency of its treatment facility.

The department proposes that using the 4-day chronic standard over the 30-day average standard is appropriate for determining compliance. This facility, when discharging, will discharge for less than seven days and is a controlled discharger. Thus, a 30-day average was deemed impractical.

Temperature

The department proposes to add temperature monitoring. Temperature information is used when calculating ammonia as N.

Total Residual Chlorine

Monitoring for total residual chlorine (TRC) is only required when the facility is chlorinating. The current permit includes a TRC limitation of 0.1 mg/l. The department reviewed the TRC data and sampling frequency, and one exceedance occurred for this parameter during the current permit. The WQS list an acute standard of 0.019 mg/l and a chronic standard of 0.011 mg/l. The minimum limit of analytical reliability for TRC is considered to be 0.05 mg/l. The analysis for TRC shall be conducted using reliable devices equivalent to EPA Method 4500-Cl,

spectrophotometric, DPD. The method achieves a method detection limit of less than 0.05 mg/l. For purposes of this permit and reporting on the DMR form, analytical values of less than 0.05 mg/l shall be considered in compliance with this permit. Therefore, the department proposes a monthly average limit of 0.011 mg/l with a daily maximum limit of 0.019 mg/l with a sample frequency of daily.

Sulfates

The department reviewed the sulfates data and sampling frequency. No exceedances occurred for this parameter during the current permit. The department proposes to continue with 450 mg/l as an average monthly limit with a sampling frequency of monthly.

Chloride

The department reviewed the chloride data and sampling frequency. No exceedances occurred for this parameter during the current permit. The department proposes to continue with 175 mg/l as an average monthly limit with a sampling frequency of weekly.

Phosphorus and Nitrogen (Nutrients)

Nutrient monitoring was included in this permit. According to the North Dakota Nutrient Reduction Strategy for Surface Waters, Civeo Regional WWTP would be classified as a Category I facility. The first step in implementing the nutrient reduction strategy for Category I facilities is to include effluent monitoring for Total Nitrogen and Total Phosphorus. Therefore, this permit renewal will include monitoring for Total Nitrogen and Total Phosphorus to be consistent with other Category I facilities under the Nutrient Reduction Strategy. Total nitrogen is a combination of Nitrite, Nitrate, and Total Kjeldahl Nitrogen.

Metals

The department has reviewed the metals data and sampling frequency for Civeo Regional WWTP and performed a metals analysis (**Appendix C**) to compare the effluent results to the limits listed in the WQS.

Antimony: Antimony exceeded human health criteria for Class I, IA, and II streams.

Copper: Copper exceeded the acute and chronic WQS. All results were below the method detection level.

Mercury: Mercury exceeded the human health criteria for Class I, IA, II, and III streams. All results were below the method detection level.

Thallium: Thallium exceeded the human health criteria for Class I, IA, II, and III streams. All results were below the method detection level.

Cyanide: Cyanide exceeded the chronic WQS and the human health criteria for Class I, IA, and II streams. All results were below the method detection level.

With the exception of antimony, all metal parameters that exceeded the WQS limits had sample results that were below the method detection level. Antimony was further evaluated; however, the department has determined that two (2) datapoints are not sufficient to conduct a reliable reasonable potential analysis in this case. The department will continue to evaluate the effluent for antimony. The department proposes to continue monitoring the effluent for metals with a sample frequency of annually.

Human Health

North Dakota's water quality standards include numeric human health-based criteria that the department must consider when writing NDPDES permits. These criteria were established in 1992 by the U.S. EPA in its National Toxics Rule (40 CFR 131.36). The National Toxics Rule allows states to use mixing zones to evaluate whether discharges comply with human health criteria. The department determined the applicant's discharge is unlikely to contain chemicals regulated to protect human health. The department will re-evaluate this discharge for impacts to human health at the next permit reissuance.

Biosolids

Currently the department does not have the authority to regulate biosolids. Therefore, the permittee is required under the Direct Enforceability provision of 40 CFR §503.3(b) to meet the applicable requirements of the regulation.

MONITORING REQUIREMENTS

The department requires monitoring, recording, and reporting (NDAC section 33.1-16-01-(21 through 23) and 40 CFR 122.41) to verify that the treatment process is functioning correctly and that the discharge complies with the permit's limits.

The permittee must notify the department prior to any discharge. Approximately two weeks prior to a planned discharge, a representative pre-discharge grab sample must be collected and analyzed for the parameters listed in the permit. The pre-discharge sample results must be provided when notifying the department of a planned discharge.

The permittee shall collect one grab sample of the discharge every calendar week and have it analyzed while discharging.

Test Procedures

The collection and transportation of all samples shall conform to EPA preservation techniques and holding times. All laboratory tests shall be performed by a North Dakota certified laboratory in conformance with test procedures pursuant to 40 CFR 136, unless other test procedures have been specified or approved by EPA as an alternate test procedure under 40 CFR 136.5. The method of determining the total amount of water discharged shall provide results within 10 percent of the actual amount.

OTHER PERMIT CONDITIONS

Beneficial Reuse

Wastewater that has met secondary or tertiary treatment standards may be beneficially reused in lieu of discharging. The proposed permit contains conditions for the beneficial reuse of wastewater for irrigation, construction, and oil and gas production.

If wastewater is being taken by another party for use, the facility must provide the other party with an analysis of the wastewater. The analysis must include the applicable parameters the facility is responsible for monitoring in accordance with this permit. The facility must keep a record of all wastewater transferred to another entity which shall include the location the water was transferred to, the usage of the water, and the amount transferred.

Accepting Waste

The facility may only accept waste from permitted septic haulers unless the facility has written approval from the department. Production wastewater from oil and gas operations, such as produced water, may not be accepted. Sanitary wastewater from oil and gas operations is acceptable. The facility also must ensure hauled waste does not inhibit, cause pass-through interference, or is incompatible with the operation of the treatment works.

Additional Monitoring

The facility must monitor for any additional pollutants added during the treatment process. This includes water treatment additives. In the event the permittee proposes to discharge water additives, the permittee shall submit a request to discharge water to the department as described in this section. Water treatment systems which utilize membrane filtration equipment require routine cleaning and conditioning as part of normal operation. This facility accepts the wastewater from water treatment using membrane filtration. Care should be used in the selection and management of the chemicals used in routine cleaning and conditioning, such as the control of scaling, coagulants, flocculants, and bio-fouling. To ensure selection and management of chemicals minimize the potential for harmful effects in the discharge or sewering, the permittee will be required to provide the following information on all chemical

additives which do not follow under American National Standards Institute/National Sanitation Foundation (ANSI/NSF) Standard 60:

- Safety Data Sheets (SDS)
- Proposed water additive discharge concentration
- Discharge frequency (i.e., number of hours per day and number of days per year)
- Monitoring point for product discharge
- Type of removal treatment, if any, that the water additive receives prior to discharge
- Product function (e.g., microbiocide, flocculant, etc.)
- A 48-hour LC50 or EC50 for North American freshwater planktonic crustacean (*Ceriodaphnia* sp., *Daphnia* sp., or *Simocephalus* sp.)
- Results for a toxicity test for one other North American freshwater aquatic species (other than a plantonic crustacean)

Water treatment additives which are approved under ANSI/NSF Standard 60 (Drinking Water Treatment Chemicals) are recognized for use and are authorized by the permit.

Industrial Waste Management

The facility must be protected from any source of non-domestic wastewater which causes Pass Through or Interference; creates a fire or explosion hazard; causes corrosive structural damage; causes obstruction; interferes with the treatment process; includes excessive heat; contains petroleum oil and other products which causes Interference or Pass Through; results in the presence of toxic gases, vapors or fumes in the facility; and is any trucked or hauled pollutant except at designated discharge points.

PERMIT ISSUANCE PROCEDURES

Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. This includes the establishment of limitations or prohibitions based on changes to Water Quality Standards, the development and approval of waste load allocation plans, the development or revision to water quality management plans, changes in sewage sludge practices, or the establishment of prohibitions or more stringent limitations for toxic or conventional pollutants and/or sewage sludges. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Proposed Permit Issuance

This proposed permit meets all statutory requirements for the department to authorize a wastewater discharge. The permit includes limits and conditions to protect human health and

aquatic life, and the beneficial uses of waters of the State of North Dakota. The department proposes to issue this permit for a term of five (5) years.

APPENDIX A – PUBLIC INVOVLEMENT INFORMATION

The department proposes to reissue a permit to the **Civeo Regional Wastewater Treatment Plant**. The permit includes wastewater discharge limits and other conditions. This fact sheet describes the facility and the department's reasons for requiring permit conditions.

The department will place a Public Notice of Draft on **May 26, 2022** in the **Beulah Beacon** to inform the public and to invite comment on the proposed draft North Dakota Pollutant Discharge Elimination System permit and fact sheet.

The Notice –

- Indicates where copies of the draft Permit and Fact Sheet are available for public evaluation.
- Offers to provide assistance to accommodate special needs.
- Urges individuals to submit their comments before the end of the comment period.
- Informs the public that if there is significant interest, a public hearing will be scheduled.

You may obtain further information from the department by telephone, 701.328.5210, or by writing to the address listed below.

North Dakota Department of Environmental Quality
Division of Water Quality
4201 Normandy Street
Bismarck, ND 58503

The primary author of this permit and fact sheet is Sarah Waldron Feld.

North Dakota Department of Environmental Quality Public Notice
Reissue of an NDPDES Permit

Public Notice Date: 5/26/2022 Public Notice Number: ND-2022-008

Purpose of Public Notice
The Department intends to reissue the following North Dakota Pollutant Discharge Elimination System (NDPDES) Discharge Permit under the authority of Section 61-28-04 of the North Dakota Century Code.

Permit Information
Application Date: 4/4/2022 Application Number: ND0026603

Applicant Name: Civeo Regional WWTP
Mailing Address: 53021 Range Road 263A, Acheson, AB T7X 5A5, AB Canada
Telephone Number: 780.995.5493

Proposed Permit Expiration Date: 6/30/2027

Facility Description
This reapplication is for a three-train Newterra Microclear MBR system that flows into two treated effluent storage ponds. The facility services the Killdeer Lodge and any hauled domestic waste. The facility is located in Section 21 of Township 145 North and Range 95 West in Dunn county. Any discharge would be to Spring Creek, a Class IA stream.

Tentative Determinations
Proposed effluent limitations and other permit conditions have been made by the Department. They assure that State Water Quality Standards and applicable provisions of the FWPCAA will be protected.

Information Requests and Public Comments
Copies of the application, draft permit, and related documents are available for review. For further information on making public comments/public comment tips please visit: https://deq.nd.gov/PublicCommentTips.aspx. Comments or requests should be directed to the ND Dept of Env Quality, Div of Water Quality, 4201 Normandy Street, Bismarck ND 58503-1324 or by calling 701.328.5210.

All comments received by June 27, 2022 will be considered prior to finalizing the permit. If there is significant interest, a public hearing will be scheduled. Otherwise, the Department will issue the final permit within sixty (60) days of this notice. If you require special facilities or assistance relating to a disability, call TDD at 1.800.366.6868.

APPENDIX B – DEFINITIONS

DEFINITIONS Standard Permit BP 2019.05.29

1. "**Act**" means the Clean Water Act.

2. "**Average monthly discharge limitation**" means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

3. "**Average weekly discharge limitation**" means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

4. "**Best management practices**" (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage areas.

5. "**Bypass**" means the intentional diversion of waste streams from any portion of a treatment facility.

6. "**Composite**" sample means a combination of at least 4 discrete sample aliquots, collected over periodic intervals from the same location, during the operating hours of a facility not to exceed a 24 hour period. The sample aliquots must be collected and stored in accordance with procedures prescribed in the most recent edition of Standard Methods for the Examination of Water and Wastewater.

7. "**Daily discharge**" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

8. "**Department**" means the North Dakota Department of Environmental Quality, Division of Water Quality.

9. "**DMR**" means discharge monitoring report.

10. "**EPA**" means the United States Environmental Protection Agency.

11. "**Geometric mean**" means the n^{th} root of a product of n factors, or the antilogarithm of the arithmetic mean of the logarithms of the individual sample values.

12. "**Grab**" for monitoring requirements, means a single "dip and take" sample collected at a representative point in the discharge stream.

13. "**Instantaneous**" for monitoring requirements, means a single reading, observation, or measurement. If more than one sample is taken during any calendar day, each result obtained shall be considered.

14. "**Maximum daily discharge limitation**" means the highest allowable "daily discharge."

15. "**Salmonid**" means of, belonging to, or characteristic of the family Salmonidae, which includes the salmon, trout, and whitefish.

16. "**Sanitary Sewer Overflows (SSO)**" means untreated or partially treated sewage overflows from a sanitary sewer collection system.

17. "**Severe property damage**" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

18. "**Total drain**" means the total volume of effluent discharged.

19. "**Upset**" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

DEFINITIONS Permit Specific

1. "**Domestic Hauled Waste**" means the transport of domestic septage.

2. "**Domestic Septage**" means the liquid or solid material removed from a septic tank, holding tank, cesspool, portable toilet, type III marine sanitation device, or a similar system that receives only domestic septage (household, non-commercial, non-industrial sewage).

3. "**Interference**" means an indirect discharge which, alone or in conjunction with any other indirect discharges, both:

a. Inhibits or disrupts the publicly owned treatment works processes or operations, or its sludge processes, use or disposal; and

b. Causes a violation of any requirement of the publicly owned treatment works North Dakota pollutant discharge elimination system permit, including an increase in the magnitude or duration of a violation or prevents sewage sludge use or disposal in compliance with federal or state law or statute.

4. "**Pass Through**" means a discharge which exits the publicly owned treatment works into waters of the state in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the publicly owned treatment works North Dakota pollutant discharge elimination system permit, including an increase in the magnitude or duration of a violation.

APPENDIX C – DATA AND TECHNICAL CALCULATIONS

DFLOW

Critical low flow calculations were unavailable and therefore, were not utilized in this permit renewal.

Metals Review

The department reviewed the two metals samples from Outfall 001 for the potential to cause exceedances to the water quality standards. There was not enough data during this permit reissuance cycle to conduct an accurate reasonable potential. Below is the review of the highest metal levels compared to the water quality standards.

The NDDEQ has developed the following tool to evaluate a single sample result to the North Dakota Standards of Quality for Waters of the State. A detailed explanation of the calculations and limits for the parameters listed can be found in ch 33.1-16-02.1-9, Table 1.

Parameters indicated as "HD-Hardness Dependent" are less toxic as the calcium carbonate hardness of the receiving stream increases. The calcium carbonate hardness of the effluent or the receiving stream is entered above. A hardness value in grains per gallon can also be entered.

Items in bold italic and underline indicate a parameter that needs further evaluation. Parameters listed above must be analyzed using an EPA approved method (40 CFR 136) that has a detection limit at or below the limits listed in 40 CFR 136 or the current version of the North Dakota Standards of Quality for Waters of

Facility Name			Civeo Regional WWTP				Print Date:	4/29/2022		
Location			Outfall 001				Below are the current or calculated acute, chronic and human health standards based on the data entered.			
Enter Grains/Gallon or					0					
Hardness - Total (CaCO3) mg/l					182					
Safety Factor(multiplier):										
Enter Concentration Values							µg/l	µg/l	µg/l	µg/l
Parameter		Detect	MDL/DL /RL	mg/l	µg/l	µg/l	Acute	Chronic	Human Health Class I ,IA,II	Human Health Class III
Antimony			0.001	0.0062		6.2			***5.6***	640
Arsenic			0.002	0.0054		5.4	340	150	10	
Beryllium		<	0.0005	0.0005		0.5			4	
Cadmium	HD	<	0.0005	0.0005		0.5	3.4	1.27	5.00	
Chromium - Total		<	0.002	0.002		2			100	
Chromium (III)	HD					0	2944	141		
Chromium (VI)						0	16	11		
Copper	HD	<	0.05	0.05		50	25	15.6	1000.0	
Lead	HD	<	0.0005	0.0005		0.5	175	6.8	15.0	
Mercury		<	0.0002	0.0002		0.2	1.7	0.88	0.05	***0.051***
Molybdenum - Total						0				
Nickel	HD		0.002	0.0097		9.7	779	86.6	100.0	4200
Selenium						0	20	5	50	
Silver	HD	<	0.0005	0.0005		0.5	11			
Thallium		<	0.0005	0.0005		0.5			***0.24***	***0.47***
Zinc	HD		0.05	0.08		80	199	199.0	7400.0	26000
Cyanide - Total		<	0.02	0.02		20	22	5.2	4	400
Phenols		<	10	0.01		10		300	4000	3E+05

Comments:
The maximum values reported for each parameter from the two (2) discharges that occurred between January 1, 2018 and March 31, 2022 were used. Non-detects were entered at the detection limit value.

Antimony: Antimony exceeded human health criteria for Class I, IA, and II streams.
Copper: All results were below the method detection level.
Mercury: All results were below the method detection level.
Thallium: All results were below the method detection level.
Cyanide: All results were below the method detection level.

APPENDIX D – RESPONSE TO COMMENTS

Any comments received by the department during the public comment period will be addressed here.

Permit No: ND0026603
Effective Date: July 1, 2022
Expiration Date: June 30, 2027

AUTHORIZATION TO DISCHARGE UNDER THE

NORTH DAKOTA POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with Chapter 33.1-16-01 of the North Dakota Department of Environmental Quality rules as promulgated under Chapter 61-28 (North Dakota Water Pollution Control Act) of the North Dakota Century Code,

Civeo Regional Wastewater Treatment Plant

is authorized to discharge from its wastewater treatment plant

to Spring Creek, a Class IA stream

provided all the conditions of this permit are met.

This permit and the authorization to discharge shall expire at midnight,

June 30, 2027.

Signed this _____ day of _____, _____.

_____

Karl H. Rockeman, P.E.
Director
Division of Water Quality

BP 2019.05.29

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3. "**Interference**" means an indirect discharge which, alone or in conjunction with any other indirect discharges, both:

    a. Inhibits or disrupts the publicly owned treatment works processes or operations, or its sludge processes, use or disposal; and

    b. Causes a violation of any requirement of the publicly owned treatment works North Dakota pollutant discharge elimination system permit, including an increase in the magnitude or duration of a violation or prevents sewage sludge use or disposal in compliance with federal or state law or statute.

4. "**Pass Through**" means a discharge which exits the publicly owned treatment works into waters of the state in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the publicly owned treatment works North Dakota pollutant discharge elimination system permit, including an increase in the magnitude or duration of a violation.

OUTFALL DESCRIPTION

Outfall 001. Active. Final.			
Latitude: 47.366750	Longitude: -102.799306	County: Dunn	
Township: 145N	Range: 95W	Section: 21	QQ: BC
Receiving Stream: Spring Creek		Classification: Class IA	
Outfall Description: The effluent flows from the treated effluent storage ponds to Spring Creek, a Class IA stream.			

PERMIT SUBMITTALS SUMMARY

Coverage Point	Submittal	Frequency	First Submittal Date
001A	Discharge Monitoring Report	Quarterly	October 31, 2022
001M	Discharge Monitoring Report	Yearly	July 31, 2023
Application Renewal	NDPDES Application Renewal	1/permit cycle	December 31, 2026

SPECIAL CONDITIONS

Water Treatment Additives

In the event the permittee proposes to discharge water additives, the permittee shall submit a request to discharge water to the Department as described in this section. Water treatment systems which utilize membrane filtration equipment require routine cleaning and conditioning as part of normal operation. This facility accepts the wastewater from water treatment using membrane filtration. Care should be used in the selection and management of the chemicals used in routine cleaning and conditioning, such as the control of scaling, coagulants, flocculants, and bio-fouling. To ensure selection and management of chemicals minimize the potential for harmful effects in the discharge or sewering, the permittee will be required to provide the following information on all chemical additives which do not follow under American National Standards Institute/National Sanitation Foundation (ANSI/NSF) Standard 60:

- Safety Data Sheets (SDS)
- Proposed water additive discharge concentration
- Discharge frequency (i.e., number of hours per day and number of days per year)
- Monitoring point for product discharge
- Type of removal treatment, if any, that the water additive receives prior to discharge
- Product function (e.g., microbiocide, flocculant, etc.)
- A 48-hour LC50 or EC 50 for North American freshwater planktonic crustacean (*Ceriodaphnia* sp., *Daphnia* sp., or *Simocephalus* sp.)
- Results for a toxicity test for one other North American freshwater aquatic species (other than a planktonic crustacean)

Water treatment additives which are approved under ANSI/NSF Standard 60 (Drinking Water Treatment Chemicals) are recognized for use and are authorized by this permit.

I. LIMITATIONS AND MONITORING REQUIREMENTS

A. Discharge Authorization

During the effective period of this permit, the permittee is authorized to discharge pollutants from the outfalls as specified to the following: **Spring Creek**.

No discharge shall occur from the treated effluent storage ponds until all pre-discharge parameters have been reviewed by the department. After the review process has been completed the permittee shall comply with the limitations of this permit.

This permit authorizes the discharge of only those pollutants resulting from facility processes, waste streams, and operations that have been clearly identified in the permit application process.

B. Effluent Limitations and Monitoring

1. The permittee must limit and monitor all discharges as specified below:

Table 1: Effluent Limitations and Monitoring Requirements Outfall 001					
Parameter	Effluent Limitations			Monitoring Requirements	
	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit	Sample Frequency	Sample Type
Biological Oxygen Demand (BOD_5) [a]	25 mg/l	45 mg/l	*	Weekly	Grab
Total Suspended Solids (TSS) [a]	30 mg/l	45 mg/l	*	Weekly	Grab
pH [a, b]	Shall remain between 6.5 to 9.0 s.u.			Weekly	Grab
Escherichia coli (*E. coli*) [a, c]	126/100 ml	*	409/100 ml	Weekly	Grab
Ammonia as N, mg/l [a]	Refer to Ammonia Table: **Table 2**			Weekly	Grab
Temperature, ˚C [a]	*	*	*	Weekly	Grab
Oil & Grease – Visual [d]	*	*	*	Daily	Visual
Oil & Grease [d]	*	*	10 mg/l	Conditional/Weekly	Grab
Bromide, mg/l	*	*	*	Weekly	Grab
Chloride [a]	175 mg/l	*	*	Weekly	Grab
Total Residual Chlorine (TRC) [a, e, f, g]	0.011 mg/l	*	0.019 mg/l	Daily	Grab
Total Sulfate	450 mg/l	*	*	Monthly	Grab
Dissolved Oxygen	*	*	$\geq$ 5	Weekly	Grab
Conductivity, umho/com	*	*	*	Monthly	Grab
Total Nitrogen, mg/l [h]	*	*	*	Monthly	Grab
Total Phosphorus, mg/l	*	*	*	Monthly	Grab
Effluent Flow, mgd	Report	*	Report Max. Daily Value	Daily	Calculated
Drain, Total	*	*	Report Total	Semiannually	Calculated
Metals, Total [i]	Refer to Metals Table: **Table 3**			1/year	Composite

Table 1: Effluent Limitations and Monitoring Requirements Outfall 001

Parameter	Effluent Limitations			Monitoring Requirements	
	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit	Sample Frequency	Sample Type

Notes:

*. This parameter is not limited. However, the department may impose limitations based on sample history and to protect the receiving waters.

a. A pre-discharge sample must be analyzed and reported to the department prior to the start of any discharge. A pre-discharge grab sample shall be tested for BOD_5, TSS, pH, *E. coli*, Ammonia as N, Chloride, and TRC. This pre-discharge sample shall represent the first week of discharge. An additional grab sample of the actual discharge shall be taken and analyzed on a weekly basis for the duration of the discharge.

b. The pH, an instantaneous limitation, shall be between 6.5 (s.u.) and 9.0 (s.u.). Any single analysis and/or measurement outside of this limitation shall be considered a violation.

c. The limitation for *E. coli* shall be in effect for discharges which may occur from April 1 through October 31. Averages for *E. coli* shall be determined as a geometric mean.

d. There shall be no discharge of oily wastes that produce a visible sheen on the surface of the receiving water. A daily visual check shall be performed. If present, a grab sample shall be analyzed for oil and grease to ensure compliance with the concentration limitation.

e. The limitation for TRC shall be in effect only when effluent is chlorinated.

f. The minimum limit of analytical reliability for TRC is considered to be 0.05 mg/l. The analysis for TRC shall be conducted using reliable devices equivalent to EPA method 4500-Cl G, Spectrophotometric, DPD. This method achieves a method detection limit of less than 0.05 mg/l. For purposes of this permit and reporting on the DMR form, analytical values less than 0.05 mg/l shall be considered in compliance with this permit.

g. In the calculation of average TRC concentrations, analytical results that are less than the method detection limit shall be considered the value of the detection limit for calculation purposes. If all analytical results used in the calculation are below the method detection limit, then the method detection limit shall be reported on the DMR; other report the calculated average value.

h. Total nitrogen is a combination of nitrate, nitrite, and Total Kjeldahl Nitrogen (TKN).

i. A total hardness of the receiving stream needs to be determined every time metals are sampled and analyzed. The hardness is used to calculate parameter criterion(s) according to the WQS. This sample shall be collected upstream of the final discharge site.

Stipulations:

Best Management Practices (BMPs) are to be utilized so that there shall be no discharge of floating debris, oil, scum, and other floating materials in sufficient amounts to be unsightly or deleterious, or oil wastes that produce a visible sheen on the surface of the receiving water.

Samples taken in compliance with the monitoring requirements specified in this permit shall be taken prior to leaving company property or entering the receiving stream.

Table 2: Ammonia Effluent Limitations Outfall 001

	Effluent Limitations		
Parameter	Avg. Monthly Limit	Avg. Weekly Limit	Daily Maximum Limit
Ammonia [a]	†	*	‡

Notes:

a. Calculations must be performed for each discharge sample. If an exceedance is detected on any single sample, the exceedance must be reported on the DMR.

† Chronic Standard (Average Monthly Limit)
The 30-day average concentration of total ammonia (expressed as N in mg/L) does not exceed, more often than once every three years on the average, the numerical value given by the following formula and the highest 4-day average concentration of total ammonia within the 30-day averaging period does not exceed 2.5 times the numerical value given by the following formula:

$$0.8876 \times \left(\frac{0.0278}{1+10^{7.688-pH}} + \frac{1.1994}{1+10^{pH-7.688}}\right) \times \left(2.126 \times 10^{0.028\times(20-MAX(T,7))}\right)$$

Effluent pH and Temperature is used for the calculation

‡ Acute Standard (Daily Maximum Limit)
The one-hour average concentration of total ammonia (expressed as N in mg/l) does not exceed, more often than once every three years on the average, the numerical value given by the following formula:

$$0.7249 \times \left(\frac{0.0114}{1+10^{7.204-pH}} + \frac{1.6181}{1+10^{pH-7.204}}\right) \times MIN\left(51.93, 23.12 \times 10^{0.036\times(20-T)}\right)$$

Effluent pH and Temperature is used for the calculation

Stipulations

The effluent limitation shall be met at end-of-pipe.

Table 3: Metals 40 CRF 122 Appendix D Table III Outfall 001				
Antimony, Total	Arsenic, Total	Beryllium, Total	Cadmium, Total	Chromium, Total
Copper, Total	Lead, Total	Mercury, Total	Nickel, Total	Selenium, Total
Silver, Total	Thallium, Total	Zinc, Total	Cyanide, Total	Phenols, Total
Hardness, Total [a]				

Notes:

a. A total hardness of the receiving stream needs to be determined every time the above parameters are tested. The hardness is used to calculate parameter criterion(s) according to the North Dakota State Water Quality Standards.

Stipulations:

The results of all analyses shall be attached to and reported along with the Discharge Monitoring Report (DMR) submitted at for the end of that reporting period.

Sampling and analytical procedures shall be in accordance with guidelines established in 40 CFR Part 136. Composite samples shall consist of at least twelve (12) aliquots collected at approximately equal intervals over a representative 24-hour period and composited according to flow. Where a flow proportioned composite sample is not practical, the permittee shall collect at least four (4) grab samples, taken and proportioned as to flow.

II. MONITORING, RECORDING, AND REPORTING REQUIREMENTS BP 2021.09.09

A. Representative Sampling (Routine and Non-Routine Discharges)

All samples and measurements taken shall be representative of the monitored discharge.

In order to ensure that the effluent limits set forth in this permit are not violated at times other than when routine samples are taken, the permittee must collect additional samples at the appropriate outfall whenever any discharge occurs that may reasonably be expected to cause or contribute to a violation that is unlikely to be detected by a routine sample. The permittee must analyze the additional samples for those parameters limited under **Part I Effluent Limitations and Monitoring** requirements of this permit that are likely to be affected by the discharge.

The permittee must collect such additional samples as soon as the spill, discharge, or bypassed effluent reaches the outfall. The samples must be analyzed in accordance with B. Test Procedures. The permittee must report all additional monitoring in accordance with D. Additional Monitoring.

B. Test Procedures

The collection and transportation of all samples shall conform with EPA preservation techniques and holding times found in 40 CFR 136. All laboratory tests shall be performed by a North Dakota certified laboratory in conformance with test procedures pursuant to 40 CFR 136, unless other test procedures have been specified in this permit or approved by EPA as an alternate test procedure under 40 CFR 136.5. The method of determining the total amount of water discharged shall provide results within 10 percent of the actual amount.

C. Recording of Results

Records of monitoring information shall include:

1. the date, exact place and time of sampling or measurements;

2. the name(s) of the individual(s) who performed the sampling or measurements;

3. the name of the laboratory;

4. the date(s) and time(s) analyses were performed;

5. the name(s) of the individual(s) who performed the analyses;

6. the analytical techniques or methods used; and

7. the results of such analyses.

D. Additional Monitoring

If the discharge is monitored more frequently than this permit requires, all additional results, if in compliance with B. Test Procedures, shall be included in the summary on the Discharge Monitoring Report.

E. Reporting of Monitoring Results

1. Monitoring results shall be summarized and reported to the department using Discharge Monitoring Reports (DMRs). If no discharge occurs during a reporting period, "No Discharge" shall be reported. The permittee must submit DMRs electronically using the electronic information reporting system unless requirements in subsection 3 are met.

2. Prior to December 21, 2025, the permittee may elect to electronically submit the following compliance monitoring data and reports instead of mailing paper forms. Beginning December 21, 2025, the permittee must report the following using the electronic reporting system:

   a. General permits reports [e.g., notices of intent (NOI); notices of termination (NOT); no exposure certifications (NOE)];

   b. Municipal separate storm sewer system program reports;

   c. Pretreatment program reports;

   d. Sewer overflow/bypass event reports; and

   e. Clean Water Act 316(b) annual reports

3. The permittee permittee may seek a waiver from electronic reporting. To obtain a waiver, the permittee must complete and submit an Application for Temporary Electronic Reporting Waiver form (SFN 60992) to the department. The department will have 120 days to approve or deny the waiver request. Once the waiver is approved, the permittee may submit paper versions of monitoring data and reports to the department.

   a. One of the following criteria must be met in order to obtain a waiver. The department reserves the right to deny any waiver request, even if they meet one of the criteria below:

      1. No internet access,

      2. No computer access,

3. Annual DMRs (upon approval of the department),

4. Employee turnover (3-month periods only), or

5. Short duration permits (upon approval of the department)

All reports must be postmarked by the last day of the month following the end of each reporting period. All original documents and reports required herein shall be signed and submitted to the department at the following address:

ND Department of Environmental Quality
Division of Water Quality
4201 Normandy Street
Bismarck ND 58503-1324

F. Records Retention

All records and information (including calibration and maintenance) required by this permit shall be kept for at least three years or longer if requested by the department or EPA.

III. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

B. Proper Operation and Maintenance

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. If necessary to achieve compliance with the conditions of this permit, this shall include the operation and maintenance of backup or auxiliary systems.

C. Planned Changes

The department shall be given advance notice of any planned changes at the permitted facility or of an activity which may result in permit noncompliance. Any anticipated facility expansions, production increase, or process modifications which might result in new, different, or increased discharges of pollutants shall be reported to the department as soon as possible. Changes which may result in a facility being designated a "new source" as determined in 40 CFR 122.29(b) shall also be reported.

D. Duty to Provide Information

The permittee shall furnish to the department, within a reasonable time, any information which the department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the department, upon request, copies of records required to be kept by this permit. When a permittee becomes aware that it failed to submit any relevant facts or submitted incorrect information in a permit application or any report, it shall promptly submit such facts or information.

E. Signatory Requirements

All applications, reports, or information submitted to the department shall be signed and certified.

All permit applications shall be signed by a responsible corporate officer, a general partner, or a principal executive officer or ranking elected official.

All reports required by the permit and other information requested by the department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

The authorization is made in writing by a person described above and submitted to the department; and

The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.

If an authorization under E. Signatory Requirements is no longer accurate for any reason, a new authorization satisfying the above requirements must be submitted to the department prior to or together with any reports, information, or applications to be signed by an authorized representative.

Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

F. Twenty-four Hour Notice of Noncompliance Reporting

1. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of the circumstances. The following occurrences of noncompliance shall be included in the oral report to the department at 701.328.5210:

   a. Any lagoon cell overflow or any unanticipated bypass which exceeds any effluent limitation in the permit under G. Bypass of Treatment Facilities;

   b. Any upset which exceeds any effluent limitation in the permit under H. Upset Conditions; or

   c. Violation of any daily maximum effluent or instantaneous discharge limitation for any of the pollutants listed in the permit.

2. A written submission shall also be provided within five days of the time that the permittee became aware of the circumstances. The written submission shall contain:

   a. A description of the noncompliance and its cause;

   b. The period of noncompliance, including exact dates and times;

   c. The estimated time noncompliance is expected to continue if it has not been corrected; and

   d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

Reports shall be submitted to the address in **Part II.E. Reporting of Monitoring Results**. The department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the department at 701.328.5210 as identified above.

All other instances of noncompliance shall be reported no later than at the time of the next Discharge Monitoring Report submittal. The report shall include the four items listed in this subsection.

G. Bypass of Treatment Facilities

1. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to any of the following provisions in this section.

2. Bypass exceeding limitations-notification requirements.

   a. Anticipated Bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten (10) days before the date of bypass.

   b. Unanticipated Bypass. The permittee shall submit notice of an unanticipated bypass as required under F. Twenty-four Hour Notice of Noncompliance Reporting.

3. Prohibition of Bypass. Bypass is prohibited, and the department may take enforcement action against a permittee for bypass, unless:

   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

   c. The permittee submitted notices as required under the 1. Anticipated Bypass subsection of this section.

The department may approve an anticipated bypass, after considering its adverse effects, if the department determines that it will meet the three (3) conditions listed above.

H. Upset Conditions

An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based permit effluent limitations if the requirements of the following paragraph are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

1. An upset occurred and the permittee can identify its cause(s);

2. The permitted facility was, at the time being, properly operated;

3. The permittee submitted notice of the upset as required under F. Twenty-four Hour Notice of Noncompliance Reporting and

4. The permittee complied with any remedial measures required under I. Duty to Mitigate.

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

I. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. The permittee, at the department's request, shall provide accelerated or additional monitoring as necessary to determine the nature and impact of any discharge.

J. Removed Materials

Collected screenings, grit, solids, sludges, or other pollutants removed in the course of treatment shall be buried or disposed of in such a manner to prevent any pollutant from entering any waters of the state or creating a health hazard. Sludge/digester supernatant and filter backwash shall not be directly blended with or enter either the final plant discharge and/or waters of the state. The permit issuing authority shall be contacted prior to the disposal of any sewage sludges. At that time, concentration limitations and/or self-monitoring requirements may be established.

K. Duty to Reapply

Any request to have this permit renewed should be made six months prior to its expiration date.

IV. GENERAL PROVISIONS

A. Inspection and Entry

The permittee shall allow department and EPA representatives, at reasonable times and upon the presentation of credentials if requested, to enter the permittee's premises to inspect the wastewater treatment facilities and monitoring equipment, to sample any discharges, and to have access to and copy any records required to be kept by this permit.

B. Availability of Reports

Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the department and EPA. As required by the Act, permit applications, permits, and effluent data shall not be considered confidential.

C. Transfers

This permit is not transferable except upon the filing of a Statement of Acceptance by the new party and subsequent department approval. The current permit holder should inform the new controller, operator, or owner of the existence of this permit and also notify the department of the possible change.

D. New Limitations or Prohibitions

The permittee shall comply with any effluent standards or prohibitions established under Section 306(a), Section 307(a), or Section 405 of the Act for any pollutant (toxic or conventional) present in the discharge or removed substances within the time identified in the regulations even if the permit has not yet been modified to incorporate the requirements.

E. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. This includes the establishment of limitations or prohibitions based on changes to Water Quality Standards, the development and approval of waste load allocation plans, the development or revision to water quality management plans, changes in sewage sludge practices, or the establishment of prohibitions or more stringent limitations for toxic or conventional pollutants and/or sewage sludges. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

F. Need to Halt or Reduce Activity Not a Defense
It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

G. State Laws
Nothing in this permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation preserved under Section 510 of the Act.

H. Oil and Hazardous Substance Liability
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

I. Property Rights
The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

J. Severability
The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

VI. BENEFICIAL REUSES BP 2015.09.03

A. Irrigation
Only wastewater that has received secondary or tertiary treatment may be used for irrigation provided soil and water compatibility testing confirms the water is suitable for irrigation. Wastewater used for irrigation shall be applied at a rate which would allow complete infiltration and not result in ponding or runoff from the irrigated area.

Agricultural land may be irrigated provided the crop is not used for human consumption. Forage crops used for livestock consumption or pastures irrigated with wastewater shall not be harvested or grazed within 30 days of a wastewater application.

Public properties such as golf courses or parks may be irrigated provided the treated wastewater meets the following quality criteria.

Table 4: Irrigation Limitations

Parameter	Daily Max Limitation	Measurement Frequency	Sample Type
BOD_5 (mg/l)	30.0	1 per 14 days	Grab
TSS (mg/l)	45.0	1 per 14 days	Grab
E. Coli (number/100 ml)	126	Weekly	Grab

Whenever possible, irrigation shall take place during hours when the public does not have access to the area being irrigated. If the public has constant access to an area, signs must be posted in visible areas during irrigation and for two hours after irrigation is completed. The signs must advise people that the water could pose a health concern and to avoid the irrigated area.

Worker and public contact with treated wastewater should be minimized. Where frequent contact is likely, a higher level of disinfection should be provided such as achieving *E. coli* counts less than 14 colonies per 100 ml.

Avoid application within 100 feet of areas which have unlimited access (i.e., yards) or within 300 feet of potable water supply wells.

Runoff that occurs from irrigated areas shall be monitored at the frequencies and with the types of measurements described in Part I(B).

The permittee shall maintain monitoring records indicating the location and usage (e.g., park or agricultural) of the land being irrigated, the dates irrigation occurred, the amount of wastewater used, and the total flow. In addition, monitoring records must include results from collected samples.

B. Construction

Treated domestic wastewater may be used for construction purposes such as soil compaction, dust suppression and washing aggregate, provided the following conditions are met.

The wastewater intended for use in construction, must at a minimum, receive secondary treatment.

Prior to using treated wastewater a sample from the prospective source must be tested and meet the criteria set below. In addition, the test results for *E. coli* must be provided to the department prior to use. Results from samples up to two (2) weeks old will be considered valid. The water quality limitations and minimum sampling frequencies recommended for wastewater used in construction are provided in the following table.

Table 5: Construction Limitations

Parameter	Daily Max Limitation	Measurement Frequency	Sample Type
BOD_5 (mg/l)	30	Monthly	Grab
TSS (mg/l)	100	Monthly	Grab
E. Coli (number/100 ml)	126	Weekly	Grab

In some systems chlorination is available. Chlorination is particularly desirable when frequent worker contact with the treated wastewater is likely or when the public may have constant access to areas where the wastewater is being used. Maintaining a chlorine residual of at least 0.1 mg/l is recommended.

While the conventional methods for treating domestic wastewater are generally effective in reducing infectious agents (bacteria, viruses, parasites) to acceptable levels, direct reuse of treated wastewater can pose a health concern. Additional precautions to consider are:

1. Worker and public contact with treated wastewater should be minimized.

2. Where frequent worker contact is likely a higher level of disinfection should be provided, such as achieving *E. coli* counts less than 14/100 ml.

3. Work closely with the treatment system operator to ensure treated wastewater quality is suitable when it is drawn for construction purposes.

4. Apply the treated wastewater in a manner that does not result in runoff or ponding.

Runoff that occurs from application areas shall be monitored at the frequencies and with the types of measurements described in Part I(B).

The permittee shall maintain monitoring records indicating the location and usage of the land where application occurs, the dates application occurred, the amount of wastewater used, and the total flow. In addition, monitoring records must include results from collected samples.

C. Oil and Gas Production (including Hydraulic Fracturing)
The specific user of the wastewater may determine the specific treatment requirements for receiving wastewater.

The permittee shall maintain monitoring records indicating the specific user, the amount of wastewater used, and the total flow. In addition, monitoring records must include results from collected samples.

D. Other Uses as Approved
The permittee must consult with the department before beneficially reusing wastewater for purposes not identified in this permit.

VII. ACCEPTING HAULED WASTE

A. The permittee may only accept wasted from permitted septic haulers unless the permittee has written from the department.

B. The permittee may not accept production wastewater from oil and gas operations (i.e. produced water).

C. A monitoring plan shall be developed to ensure accepted hauled waste meets the requirements of part **VIII. Industrial Waste Management**.

D. The permittee shall maintain records indicating the hauler transporting the load, the source of the wastewater, the date and time waste was accepted, the volume of waste accepted and any sample results from these loads.

VIII. INDUSTRIAL WASTE MANAGEMENT

A. General Responsibilities
The permittee has the responsibility to protect the wastewater treatment facility from pollutants which would inhibit, interfere, or otherwise be incompatible with operation of the treatment works including interference with the use or disposal of municipal sludge.

B. Pollutant Restrictions
The permittee shall not allow, under any circumstances, the introduction of the following pollutants to the wastewater treatment facility from any source of nondomestic discharge:

1. Any other pollutant which may cause Pass Through or Interference;

2. Pollutants which create a fire or explosion hazard in the wastewater treatment facility, including, but not limited to, waste streams with a closed cup flashpoint of less than sixty (60) degrees Centigrade (140 degrees Fahrenheit) using the test methods specified in 40 CFR Section 261.21;

3. Pollutants which will cause corrosive structural damage to the wastewater treatment facility but in no case discharges with a pH of lower than 5.0 s.u., unless the treatment facilities are specifically

designed to accommodate such discharges;

4. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the wastewater treatment facility, or other interference with the operation of the wastewater treatment facility;

5. Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with any treatment process at the wastewater treatment facility;

6. Heat in amounts which will inhibit biological activity in the wastewater treatment facility resulting in Interference, but in no case heat in such quantities that the temperature at the treatment plant exceeds forty (40) degrees Centigrade (104 degrees Fahrenheit) unless the department, upon request of the wastewater treatment facility, approves alternate temperature limits;

7. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through at the wastewater treatment facility;

8. Pollutants which result in the presence of toxic gases, vapors, or fumes within the wastewater treatment facility in a quantity that may cause acute worker health and safety problems;

9. Any trucked or hauled pollutants, except at discharge points designated by the wastewater treatment facility; and

10. Any specific pollutant which exceeds a local limitation established by the permittee in accordance with the requirements of 40 CFR Section 403.5 (c) and (d).

C. Notification Requirements

The permittee must notify the department, of any new introductions by new or existing industrial users or any substantial change in pollutants from any industrial user within sixty (60) days following the introduction or change.