

Compliance Evaluation Inspection Report

Inspection Date(s):	08/02/2022 - 08/03/2022	Announced: Yes			
Time:	Entry: 01:01 PM (ET)	Exit: 09:30 AM (ET)			
Media:	Water				
Statute(s)/Program(s):	Clean Water Act, NPDES, WWTF				
Type of inspection:	CEI - Compliance Evaluation Inspection				
Access:	Granted				
Permittee Name:	GUN LAKE TRIBAL GAMING AUTHORITY WASTEWATER TREATMENT FACILITY				
Facility or Site Name:	GUN LAKE TRIBAL GAMING AUTHORITY WASTEWATER TREATMENT FACILITY				
Facility/Site Physical Address:	1123 129TH AVENUE				
(City, state, zip code)	WAYLAND, MI 49348				
County/Parish:	ALLEGAN				
Facility GPS Coordinates:	42.63042, -85.65445				
Facility/Site Identifier:	110039145430				
Permit Number:	MI0058661				
Persons Participating in Inspection:					
Title	Name	Phone	Email	Present at Opening Conf.	Present at Closing Conf.
Lead Inspector	Dean Maraldo	(312) 353-2098	Maraldo.Dean@epa.gov	Yes	Yes
Inspector	Jake Berger	(312) 353-8024	Berger.Jake@epa.gov	Yes	Yes
Wastewater/Water Manager	Don Row	(269) 792-7734	Donald.Row@gunlakecasino.com	Yes	Yes
Facilities Manager	James Lombard	(269) 792-7697	james.lombard@gunlakecasino.com	Yes	Yes
Environmental Director	Liz Binoniemi-Smith	(269) 397-1780 x1248	Elizabeth.Binoniemi-Smith@glt-nsn.gov	Yes	Yes
Operator	Randy Krause			No	Yes

Lead Inspector:

Dean Maraldo	<i>[Signature]</i>	DINO MARALDO	Digitally signed by DINO MARALDO Date: 2022.08.05 17:01:42 -05'00'
	REGION 5	Maraldo.Dean@epa.gov	(312) 353-2098

Supervisor Review:

Ryan Bahr	<i>[Signature]</i>	Bahr, Ryan	Digitally signed by Bahr, Ryan Date: 2022.08.05 17:07:22 -05'00'
	REGION 5	bahr.ryan@epa.gov	

SECTION I – INTRODUCTION**Site Entry and Inspection Objectives**

I, Dean Maraldo, arrived at the Gun Lake Water Treatment building at 1:01 PM on Tuesday, August 2, 2022, for an announced inspection. I was joined by U.S. EPA inspector Jake Berger. We met Gun Lake Tribal Gaming Authority ("Authority") representatives Don Row (Wastewater/Water Manager) and James Lumbard (Facilities Manager). We were joined by Liz Binoniemi-Smith, the Gun Lake Tribe Environmental Director. We presented our EPA inspector credentials to Mr. Row and informed him that this was a REGION 5 inspection to determine compliance with the Clean Water Act ("CWA") and the National Pollutant Discharge Elimination System ("NPDES") permit program. The inspection was conducted under the authority of the Federal CWA (Section 308). The table above identifies the attendees that participated in the inspection. We conducted the opening conference and interview at the Gun Lake Water Treatment building, instead of the wastewater treatment plant, because the building had a large room with a table.

This report is based on information supplied by Authority representatives, observations made by the REGION 5 inspectors, and records and reports maintained by the Authority and the REGION 5 inspectors, including: direct observations made by the REGION 5 Inspectors, photographs taken by REGION 5 inspectors, physical evidence collected by the REGION 5 inspectors, verbal or written statements and information supplied by Authority representatives during or subsequent to the on-site Inspection, and materials, processes, data, photographs, or documents shown, demonstrated, or submitted to the REGION 5 inspectors by Authority representatives during or subsequent to the on-site Inspection. In addition, information gathered prior to or subsequent to the Inspection from a review of U.S. EPA and public records may be included in this report.

Facility/Site Description

During the opening conference, I asked Authority representatives to confirm the description of the Gun Lake Tribal Gaming Authority Wastewater Treatment Facility ("Facility") included in the latest NPDES Permit ("Permit"), issued on January 29, 2020. Mr. Row confirmed the following description:

- The Gun Lake Tribal Gaming Authority operates a 0.20 mgd (with plans to ultimately expand to 0.350 mgd) wastewater treatment facility to serve a tribal community in Allegan County, Michigan. Recent average daily flow is 0.10 MGD. The plant was built in 2010.
- The facility consists of an influent equalization basin with three influent pumps followed by flow metering and fine screening.
- Following screening, the wastewater enters the activated sludge process at the anoxic basin which provides additional flow equalization, as needed. Chemical addition of alum for phosphorus removal and

sodium hydroxide for pH adjustment occurs in the anoxic basin.

- Activated sludge is pumped from the anoxic basin to one or both pre-aeration basins which flow to one of two membrane bioreactors (MBR) for liquid/solids separation. One side of the MBR has a torn membrane.
- Final effluent is pumped to an ultra-violet light disinfection system (stainless steel, two bank system) and post aeration occurs prior to discharge to Outfall 001 (approximate coordinates N42.635684, W85.652941), to discharge to Buskirk Creek.
- Waste sludge is land applied every two years to a nearby farm.

Mr. Row said they operate one lift station at the casino. Wastewater from the tribal campus flows to the Facility via gravity flow.

I asked about ownership of the casino and Facility. Mr. Row said both the casino and Facility are owned by the Tribe (Match-E-Be-Nash-She-Wish Tribe of Pottawatomi Indians).

Facility/Site Information

Information provided by Don Row.

Responsible official	Don Row
WWTP Design Capacity & Average Daily Flow	Design Capacity 0.20 MGD; Average Daily Flow 0.10 MGD
WWTP Approx. # of residents served	NA. Facility serves casino and tribal government campus
Outfalls	Outfall 001 to Buskirk Creek
Operation schedule	Seven days a week, 7am-3pm; M-Tues, 2 operators; W-F, three operators; weekends, one operator.
Do you use in-house or contract out for laboratory analyses?	In-house for TSS, VSS, DO and pH; lab for all others
Is there currently any portion of the treatment train that is non-operational?	MBR tear
Are there any plans for renovation or additional equipment to allow for increased wastewater flow?	Yes, planned expansion to double capacity. Plan not fully developed, but likely to include new MBR system
Any CBI concerns?	No

Inspection Units

Unit	Description
Flow Monitoring	Interview
Operations and Maintenance	
Self-Monitoring	
Violation History	
Records Review	
Headworks/Primary Treatment	Physical WWTP Inspection
Secondary Treatment	
UV Treatment	
Final Effluent Trough and Outfall 001	
Lift Station	
Wastewater Plant Backup Generator	

SECTION II – OBSERVATIONS

Observations may not be in sequential order.

Unit: Interview/Flow Monitoring	Contains CBI: No
Observation #: DM1-OB-001	Date: 08/02/2022
The facility measures influent and effluent flow using magnetic flow meters. According to Mr. Row, the meters are calibrated annually and he presented a receipt showing the last calibration date in August 2021. The influent flow meter measures flow into the primary EQ tank, and the effluent flow meter measures flow after UV treatment.	
Unit: Interview/Operations and Maintenance	Contains CBI: No
Observation #: DM1-OB-002	Date: 08/02/2022
I asked how the plant was running in general. Mr. Row said that other than the MBR issues, they have had some recent problems with blowers and EQ tank pumps. Both issues have been resolved and they now keep spare pump parts on hand to deal with issues if they arise. The Facility uses an electronic O&M program (Hach) that alerts staff of weekly O&M and preventative maintenance tasks. Mr. Row said the staff conduct mixed liquor process testing twice a week, and keep an eye on hydrogen sulfide issues with a monitoring device (hydrogen sulfide is a sign of treatment issues). They also monitor DO in the pre-air tanks. Bench sheets are used for daily operations notes. The facility also maintains an inventory of spare parts. I asked if the facility experienced any bypasses or SSOs within the last few years. Mr. Row said they have never had a bypass, and no SSOs.	

Facility alarms: Mr. Row said they use a SCADA-based alarm system (Win 911). The system provides a phone call, text, or email to Don Row, James Lombard, and Randy Krause. I asked about emergency procedures. Mr. Row said they have written procedures for emergencies including floods and power outages. The plan was recently updated. The facility has a backup diesel generator which is automatically tested every Thursday. The lift station also has backup power.

Facility staff also receive annual OSHA 8-hour safety refresher training.

Unit: Interview/Self-Monitoring	Contains CBI: No
Observation #: DM1-OB-003	Date: 08/02/2022
Mr. Row confirmed that effluent composite samples are pulled from a location prior to UV disinfection and effluent grab samples are collected after UV disinfection. This is consistent with Permit requirements (Part I.A.b). Composite samplers are set up for time-proportioned samples, consistent with Permit Part II.E.6.a. Mr. Row described the grab sample processes for <i>E.coli</i>, DO, and pH. <i>E.coli</i> samples are collected directly into lab-provided and pre-preserved bottles. DO is collected and analyzed immediately with a YSI probe, which is calibrated in the laboratory before each use. Calibration records are kept in the laboratory. pH is analyzed in the laboratory within 15 minutes of collection. Influent and effluent autosamplers are refrigerated. pH, TSS, and VSS are analyzed in the Facility lab. All other parameters analyzed at Prein & Newhof Laboratories in Grand Rapids.	
Unit: Interview/Violation History	Contains CBI: No
Observation #: DM1-OB-004	Date: 08/02/2022
I asked the Facility representatives about the recent self-reported phosphorus effluent limit exceedance in May 2022. Mr. Row said he believes the May 2022 phosphorus effluent limit violation and more recent phosphorus effluent limit exceedances in June and July 2022 were attributed to membrane tears in the MBR treatment unit. He added that they likely contributed to <i>E.coli</i> effluent limit exceedances in June and July as well. Liz Binoniemi-Smith asked why EPA's ECHO database is showing consistent reported violations for the Facility. I said it was likely due to missing permit status or progress reports. Mr. Row added that he should be up to date on all reports, and reports due on January 31, 2022 (O&M Plan report and Mercury Minimization Plan Status report), were submitted on time. I said I would look into the issue and get back to them with an update. Mr. Row also confirmed all Additional Monitoring samples (Permit Part I.C.7) are up to date.	

Unit: Physical WWTF Inspection/Headworks/Primary Treatment	Contains CBI: No
Observation #: DM1-OB-005	Date: 08/03/2022
We arrived at the Facility at 8:06 AM on August 3, 2022, and met Authority representatives Don Row, Liz Binoniemi-Smith, James Lombard, and Randy Krause. Before starting the physical Facility inspection, I asked if the Facility receives any septage waste. Mr. Row said they do not. I also asked if there were any confidential	

business information ("CBI") concerns with regard to the taking of photographs of the Facility. Mr. Row said there were no CBI concerns.

We began the physical inspection at the Equalization Tank ("EQ Tank") area. I observed the influent sampling house and the ISCO Influent Auto Sampler. The sampler was refrigerated and had a thermometer (see Photo Log image GUNL0079). However, Mr. Row said they do not maintain a temperature log.

The EQ basin is covered under a concrete slab and could not be easily observed (see Photo Log image GUNL0080). There is a grinder in the EQ basin, prior to the Fine Screen.

Next, we walked to the fine screen room, where the twin fine screen units are located (see Photo Log image GUNL0081). One of the twin screen units was off line for servicing. Mr. Row said that they only run one fine screen unit under normal operating conditions.

Photo(s)

1. [GUNL0079.JPG](#)
2. [GUNL0080.JPG](#)
3. [GUNL0081.JPG](#)

Unit: Physical WWTF Inspection/Secondary Treatment

Contains CBI: No

Observation #: DM1-OB-006

Date: 08/03/2022

I observed the anoxic tank, which is partially covered by the fine screen room (see Photo Log image GUNL0082), and the two aeration tanks (see Photo Log image GUNL0083). Mr. Row pointed out the various dedicated DO meters used to monitor conditions in the aeration tanks.

After the aeration tanks, effluent flows to the MBR system, consisting of two MBR cassette systems, each with twin cassettes. Mr. Row mentioned that there are tears in both of the cassettes in one of the MBR cassette systems (see Photo Log image GUNL0084). As a result, one of the MBR cassette systems is out of service due to the tears. He confirmed that both of the MBR cassette systems are used under normal operating conditions. I asked when the torn MBR was first noticed. Mr. Row said sometime in June 2022, when they started seeing higher turbidity and phosphorus concentrations. We walked on to the concrete pad above the MBR system and I captured a photograph of the area above the MBRs (see Photo Log image GUNL0085).

Next, we walked into the Plant Building and observed the three MBR system pumps (see Photo Log image GUNL0086) and the two effluent magnetic flow meters (see Photo Log image GUNL0087). Two of the pumps send flow to dedicated effluent flow meters, and the third pump can be used in place of the two other pumps, as needed. Total flow from the two effluent magnetic flow meters are measured every day to provide the Facility's daily total effluent flow. Effluent from the MBR system is pumped to the UV treatment system.

Photo(s)

- | | |
|---------------------------------|---------------------------------|
| 1. GUNL0082.JPG | 4. GUNL0085.JPG |
| 2. GUNL0083.JPG | 5. GUNL0086.JPG |
| 3. GUNL0084.JPG | 6. GUNL0087.JPG |

Unit: Physical WWTF Inspection/UV Treatment	Contains CBI: No
Observation #: DM1-OB-007	Date: 08/03/2022
Final effluent is pumped to the stainless steel, two bank, ultra-violet light ("UV") disinfection system (see Photo Log image GUNL0088). There is a turbidity meter prior to the UV system. The final effluent auto sampler is next to the UV system. The Hach Sigma 1600 auto sampler is refrigerated and I noted a thermometer in the sample bin (see Photo Log image GUNL0089). The effluent auto sampler is set up for time-based composite sampling.	
Photo(s) 1. GUNL0088.JPG 2. GUNL0089.JPG	

Unit: Physical WWTF Inspection/Final Effluent Trough and Outfall 001	Contains CBI: No
Observation #: DM1-OB-008	Date: 08/03/2022
After UV treatment, effluent flows to final Outfall 001 via an effluent trough. We walked out of the Plant Building on top of a metal grated walkway that covered the flowing effluent trough (see Photo Log image GUNL0090). The effluent in the trough is also aerated prior to discharge to Outfall 001. I observed the discharge from Outfall 001 into Buskirk Creek (see Photo Log image GUNL0091). The discharge and receiving water appeared clear. I asked about return flows from the sludge process. Mr. Row said all water from the sludge dewatering process returns to the EQ basin, after the influent flow meter. From here we took a short drive to the casino to observe the lift station.	
Photo(s) 1. GUNL0090.JPG 2. GUNL0091.JPG	

Unit: Physical WWTF Inspection/Lift Station	Contains CBI: No
Observation #: DM1-OB-09	Date: 08/03/2022
I observed the Facility's only lift station which, according to James Lombard, helps to convey flow from the casino buffet area, cafeteria, dish rooms, and administrative areas. Mr. Row said all other flows are conveyed to the wastewater treatment plant via gravity flow. The lift station includes a grinder (Muffin Monster) and two submersible pumps. The grinder controls and manhole are shown in Photo Log image GUNL0092. I captured an image looking down into the lift station wet well (Photo Log image GUNL0093).	

Photo(s)

1. [GUNL0092.JPG](#)
2. [GUNL0093.JPG](#)

Unit: Physical WWTF Inspection/Wastewater Plant Backup Generator **Contains CBI:** No

Observation #: DM1-OB-010

Date: 08/03/2022

The last stop on the physical inspection of the wastewater plant was the backup generator (see Photo Log image GUNL0094). The diesel generator is automatically tested every Thursday.

We concluded the physical inspection of the facility at 9:08 AM on August 3, 2022.

Photo(s)

1. [GUNL0094.JPG](#)

SECTION III – RECORDS REVIEW

Records may not be in sequential order.

Record: DMR Reports

AOC: Yes

Ref #: DM1-RR-001

Reviewed By: Dean Maraldo and Jake Berger

Reviewed Date: 08/02/2022

I requested copies of DMRs for May and June 2022, and sampling results for phosphorus, ammonia, BOD, and *E.coli* for July 2022. Mr. Row provided copies of the requested DMRs and sampling results for the first three weeks of July for phosphorus, ammonia, BOD, and *E.coli*. I also asked for monthly operating reports ("MORs") for May and June 2022. Mr. Row provided binders with MORs for 2022.

We reviewed the requested DMRs and MORs (attached) on the afternoon of August 2, 2022. For the months of review, the Facility conducted all required monitoring pursuant to the Permit. I noted a number of permit effluent limit exceedances, including:

- May 2022: phosphorus monthly concentration limit exceedance (permit limit 0.1 mg/l; reported value of 0.15 mg/l).
- June 2022: phosphorus monthly concentration limit exceedance (permit limit 0.1 mg/l; reported value of 0.31 mg/l). *E.coli* daily limit concentration exceedance (permit limit 410 *E.coli*/100ml; reported value of 470 *E.coli*/100ml).
- July 2022: *E.coli* daily limit concentration exceedance (permit limit 410 *E.coli*/100ml; reported value of 500 *E.coli*/100ml on July 6, 2022; and 430 *E.coli*/100ml on July 20, 2022). Without the results of the last weekly phosphorus sample, a monthly average for phosphorus concentration for July could not be calculated. However, phosphorus concentrations exceeded the monthly limit of 0.1 mg/l each of the first three weeks of July, including on July 5 (0.25 mg/l), July 12 (0.194 mg/l), and July 19 (0.224 mg/l).

During the records review, I also noted an incomplete sampling bench sheet for May 27, 2022 (attached). The sheet was missing sample and analysis time and collector initials.

Mr. Row said that he thinks that the *E.coli* effluent limit exceedances may be attributed to sampling error. He said that he recently resampled effluent after one of his operators collected a effluent sample with elevated *E.coli*. His sample was "non-detect".

With the operations shift coming to an end at 3pm, we concluded the inspection for the day and agreed to reconvene at the wastewater plant at 8 am the next morning (8/3/2022) to complete the physical inspection of the facility and the close out conference.

Document(s)

1. MI0058661_Gun Lake_Facility Records.pdf

SECTION IV – SAMPLING ACTIVITIES AND ANALYTICAL RESULTS

No sampling was conducted.

SECTION V - AREAS OF CONCERN

Areas of Concern may not be in sequential order.

The presentation of areas of concern does not constitute a formal compliance determination or violation.

Unit: Records Review	Area: Effluent Limit Exceedances
DM1-RR-001	
I noted a number of permit effluent limit exceedances, including: May 2022: phosphorus monthly concentration limit exceedance (permit limit 0.1 mg/l; reported value of 0.15 mg/l). June 2022: phosphorus monthly concentration limit exceedance (permit limit 0.1 mg/l; reported value of 0.31 mg/l). <i>E.coli</i> daily limit concentration exceedance (permit limit 410 <i>E.coli</i>/100ml; reported value of 470 <i>E.coli</i>/100ml). July 2022: <i>E.coli</i> daily limit concentration exceedance (permit limit 410 <i>E.coli</i>/100ml; reported value of 500 <i>E.coli</i>/100ml on July 6, 2022; and 430 <i>E.coli</i>/100ml on July 20, 2022). Phosphorus concentrations exceeded the monthly limit of 0.1 mg/l each of the first three weeks of July, including on July 5 (0.25 mg/l), July 12 (0.194 mg/l), and July 19 (0.224 mg/l).	Citations: NPDES Permit Part I.A. (Final Effluent Limitations and Monitoring Requirements)

During the records review, I also noted an incomplete sampling bench sheet for May 27, 2022 (attached). The sheet was missing sample and analysis time and collector initials.	Citations: NPDES Permit Part II.C.5. (Records Contents)
Unit: Interview	Area: Violation History
DM1-OB-004	
Mr. Row said he believes the May 2022 phosphorus effluent limit violation and more recent phosphorus effluent limit exceedances in June and July 2022 were attributed to membrane tears in the MBR treatment unit. He added that they likely exceeded <i>E.coli</i> effluent limits in June and July as well, possibly attributed to the MBR tears. During the physical inspection of the MBRs, Mr. Row mentioned that there are tears in both of the cassettes in one of the MBR cassette systems. As a result, one of the MBR cassette systems is out of service. He confirmed that both MBR cassette systems are used under normal operating conditions.	Citations: NPDES Permit Part I.C.3 (The permittee shall at all times properly operate and maintain all facilities and systems of conveyance, treatment and control)
Unit: Physical WWTF Inspection	Area: Headworks/Primary Treatment
DM1-OB-005	
I observed the influent sampling house and the ISCO Influent Auto Sampler. The sampler was refrigerated and had a thermometer (see PhotoLog image GUNL0079). However, Mr. Row said they do not maintain a temperature log for the influent and effluent auto samplers.	Citations: 40 CFR Part 136 NPDES Permit Part II.C.3 (Monitoring Procedures)

SECTION VI – CLOSING CONFERENCE AND FOLLOW UP

Closing Conference

We conducted the closing conference in the parking lot of the wastewater treatment plant. I reviewed the preliminary areas of concerns, including the recent effluent limit exceedances for *E.coli* and phosphorus, and the tear in one of the MBR cassettes. I also mentioned the importance of correctly filling out daily bench sheets, including date and time of sample collection and analysis. I provided some guidance on conducting quality control testing for *E.coli* sampling, including collection of duplicate samples to rule out sampler error or potential cross contamination issues.

Observations and Areas of Concern have not yet been evaluated for a formal compliance determination.

I provided an estimated timeframe for completion of the inspection report and asked if there were any questions. Liz Binoniemi-Smith asked if she would receive a copy of the report. I said I would make sure to include her in the distribution list for the final report.

Follow Up

The following item was requested by the Tribe during the inspection.

Unit: Interview	Area: Violation History
DM1-OB-004	
Liz Binoniemi-Smith asked why EPA's ECHO database is showing consistent reporting violations for the Facility. I said it was likely due to missing permit status or progress reports. Mr. Row added that he should be up to date on all reports, and reports due on January 31, 2022 (O&M Plan report and Mercury Minimization Plan Status report), were submitted on time. I said I would look into the issue and get back to them with an update after the inspection.	

Communication Log

No additional information received by REGION 5 after exiting the Facility on 08/03/2022.

SECTION VII – LIST OF APPENDICES

1. Photo Log
2. Document Log
3. Records received during inspection (DMR Reports, bench sheets, laboratory reports)

APPENDIX 1: PHOTOLOG

All photos taken by Dean Maraldo, Inspector, U.S. EPA

Camera: Ricoh WG-4

Influent Auto Sampler	
GUNL0079.JPG	
08/03/2022 08:23 AM (ET)	
Dean Maraldo	
Physical WWTP Inspection/Headworks/Primary Treatment	
No CBI	
No PII	
Note the thermometer inside the auto sampler.	
EQ Basin (under concrete slab)	
GUNL0080.JPG	
08/03/2022 08:24 AM (ET)	
Dean Maraldo	
Physical WWTP Inspection/Headworks/Primary Treatment	
No CBI	
No PII	



GUN LAKE TRIBAL GAMING AUTHORITY WWTF
Inspection Date(s):

08/02/2022 - 08/03/2022

Twin Fine Screen Units
GUNL0081.JPG
08/03/2022 08:26 AM (ET)
Dean Maraldo
Physical WWTP Inspection/Headworks/Primary Treatment
No CBI
No PII
The unit on the right of the photo was off line at the time of inspection.



Anoxic Tank
GUNL0082.JPG
08/03/2022 08:28 AM (ET)
Dean Maraldo
Physical WWTP Inspection/Secondary Treatment
No CBI
No PII



Aeration Basins (2)
GUNL0083.JPG
08/03/2022 08:28 AM (ET)
Dean Maraldo
Physical WWTP Inspection/Secondary Treatment
No CBI
No PII



GUN LAKE TRIBAL GAMING AUTHORITY WWTF

Inspection Date(s):

08/02/2022 - 08/03/2022

MBR Cassette

GUNL0084.JPG

08/03/2022 08:31 AM (ET)

Dean Maraldo

Physical WWTP Inspection/Secondary Treatment

No CBI

No PII

Note torn or split membranes on the left side of cassette.



View of the covered MBR system

GUNL0085.JPG

08/03/2022 08:33 AM (ET)

Dean Maraldo

Physical WWTP Inspection/Secondary Treatment

No CBI

No PII



MBR Pumps (3)

GUNL0086.JPG

08/03/2022 08:37 AM (ET)

Dean Maraldo

Physical WWTP Inspection/Secondary Treatment

No CBI

No PII



Effluent Magnetic Flow Meter
GUNL0087.JPG
08/03/2022 08:40 AM (ET)
Dean Maraldo
Physical WWTP Inspection/Secondary Treatment
No CBI
No PII
One of two magnetic flow meters used to provide the facility's total daily effluent flow.



UV Treatment System
GUNL0088.JPG
08/03/2022 08:41 AM (ET)
Dean Maraldo
Physical WWTP Inspection/UV Treatment
No CBI
No PII



Effluent Autosampler (Hach Sigma 1600)
GUNL0089.JPG
08/03/2022 08:45 AM (ET)
Dean Maraldo
Physical WWTP Inspection/UV Treatment
No CBI
No PII
Note the thermometer inside the auto sampler.



Effluent trough to Outfall 001
GUNL0090.JPG
08/03/2022 08:47 AM (ET)
Dean Maraldo
Physical WWTP Inspection/Final Effluent Trough and Outfall 001
No CBI
No PII
Trough conveys effluent from UV treatment to final outfall 001. The trough is covered by a metal grate.



Final Outfall 001
GUNL0091.JPG
08/03/2022 08:49 AM (ET)
Dean Maraldo
Physical WWTP Inspection/Final Effluent Trough and Outfall 001
No CBI
No PII
Effluent discharge and Buskirk Creek appeared clear.



Lift Station Grinder
GUNL0092.JPG
08/03/2022 09:00 AM (ET)
Dean Maraldo
Physical WWTP Inspection/Lift Station
No CBI
No PII
The lift station includes a grinder (Muffin Monster). The grinder controls and manhole are captured in this image.



View inside Lift Station wet well	
GUNL0093.JPG	
08/03/2022 09:01 AM (ET)	
Dean Maraldo	
Physical WWTP Inspection/Lift Station	
No CBI	
No PII	
Wastewater Treatment Plant Backup Generator	
GUNL0094.JPG	
08/03/2022 09:07 AM (ET)	
Dean Maraldo	
Physical WWTP Inspection/Wastewater Plant Backup Generator	
No CBI	
No PII	
Diesel powered generator.	

APPENDIX 2: DOCUMENT LOG (documents included in Appendix 3)

Document Type	Document Name	Contains CBI	Contains PII	Pages	Date Received
DMR Reports, bench sheets, laboratory reports	MI0058661_GunLake_Facility Records.pdf	No	No	14	08/03/2022

Appendix 3: Records received during inspection (DMR Reports, bench sheets, laboratory reports)

crml

Permit ID: M10058661
 Permittee: GUN LAKE GAMING/ENTERTAINMENT
 Facility: GUN LAKE GAMING/ENTERTAINMENT
 Permitted Feature: 001 - External Outfall
 Report Dates & Status: From 06/01/22 to 06/30/22
 Monitoring Period: NetDMR Validated
 Status: Considerations for Form Completion

Major: WASTEWATER TREATMENT FACILITY
 Permittee Address: WAYLAND, MI49348
 Facility Location: 1123 129TH AVENUE
 Discharge: WAYLAND, MI49348
 DMR Due Date: 001-A - CONTINUOUS DISCHARGE 2 BUSKIRK
 07/21/22

Principal Executive Officer

First Name: Sal
 Title: CEO
 Telephone: 269-792-7594

No Data Indicator (NODI)

Form NODI:

Code	Parameter Name	NODI	Quantity or Loading			Quality or Concentration			Units	# of Ex.	Freq. of Analysis
			Value 1	Value 2	Units	Value 1	Value 2	Value 3			
00300	Oxygen, dissolved [DO]	Smpl.									
A - Disinfection, Process Complete											
Season: 0		Req.									
NODI: -		NODI									
00400	pH	Smpl.									
A - Disinfection, Process Complete											
Season: 0		Req.									
NODI: -		NODI									
00400	pH	Smpl.									
G - Raw Sewage Influent											
Season: 0		Req.									
NODI: -		NODI									
00530	Solids, total suspended	Smpl.									
B - Prior to Disinfection											
Season: 0		Req.									
NODI: -		NODI									
00530	Solids, total suspended	Smpl.									
G - Raw Sewage Influent											
Season: 0		Req.									
NODI: -		NODI									
00610	Nitrogen, ammonia total [as N]	Smpl.									
B - Prior to Disinfection											
Season: 0		Req.									
NODI: -		NODI									
00665	Phosphorus, total [as P]	Smpl.									

Code	Parameter Name	NODI	Quantity or Loading		Units	Quality or Concentration		Units	# of Ex.	Freq. of Analysis
			Value 1	Value 2		Value 1	Value 2			
1 - Effluent Gross										
Season: 0	Req. Mon 30DA AVG	Req.	Req Mon DAILY MX		03 - MGD					01 01 - Daily
NODI: -	NODI									
50050	Flow in conduit or thru treatment plant									
G - Raw Sewage Influent		Smpl.	-0.107	-0.15	03 - MGD				0	99 99 - Continuous
Season: 0	Req. Mon 30DA AVG	Req.	Req Mon DAILY MX		03 - MGD					99 99 - Continuous
NODI: -	NODI									
X	E. coli									
51040	A - Disinfection, Process Complete	Smpl.								
Season: 0	Req.	Req.	Req Mon 30DA AVG							
NODI: -	NODI									
80082	BOD, carbonaceous [5 day, 20 C]									
B - Prior to Disinfection		Smpl.	=1.3	<1.7	26 - lb/d					
Season: 0	Req. <=12.0 30DA AVG	Req.	<=29.0 DAILY MX		26 - lb/d					
NODI: -	NODI									
80082	BOD, carbonaceous [5 day, 20 C]									
G - Raw Sewage Influent		Smpl.	-195.0		26 - lb/d					
Season: 0	Req. Mon 30DA AVG	Req.	Req Mon 30DA AVG		26 - lb/d					
NODI: -	NODI									
84130	Outfall observation, visual, y/n response									
1 - Effluent Gross		Smpl.								
Season: 0	Req.	Req.	Req Mon 7 DA AVG							
NODI: -	NODI									
9P - N=0,Y=1										
9P - N=0,Y=1										

Submission Note
If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

Code	Parameter Name	Monitoring Location	Field	Type	Description	Acknowledge
51040	E. coli	A - Disinfection, Process Complete	Quality or Concentration Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	☒
00665	Phosphorus, total [as P]	B - Prior to Disinfection	Quality or Concentration Value 2	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	☒

Comments

We have ruptured membranes in our MBR units. This has resulted in high bacti and phosphorus levels.

Attachments

No attachments

Report Last Saved By:

GUN LAKE GAMING ENTERTAINMENT

User: don.row@stservices.com

Name: Don Row

E-Mail: donald.row@gunlakecasino.com

Date Time: 2022-07-12 11:48 (Time Zone: -05:00)

Permit ID:
M10058661

Permittee:
GUN LAKE GAMING/ENTERTAINMENT

Facility:
GUN LAKE GAMING/ENTERTAINMENT

Permitted Feature:
Report Dates & Status

Monitoring Period:
From 05/01/22 to 05/31/22

Status:
NetDMR Validated

Considerations for Form Completion

Major:
WASTEWATER TREATMENT FACILITY
WAYLAND , M149348
1123 129TH AVENUE
WAYLAND , M149348
001-A - CONTINUOUS DISCHARGE 2 BUSKIRK

Discharge:
07/21/22

DMR Due Date:
07/21/22

Principal Executive Officer
First Name:
Title:
No Data Indicator (NODI)
Form NODI:

Sal
CEO7594

Last Name:
Telephone:

Semola
269-792-7594

Code	Parameter Name	NODI	Quantity or Loading		Units	Value 1	Value 2	Quality or Concentration		Units	# of Ex.	Freq. of Analysis	Sample Type
			Value 1	Value 2				Value 3	Value 4				

Code	Parameter Name	NODI	Quantity or Loading		Units	Quality or Concentration		Units	# of Ex.	Freq. of Analysis	Smpl. Type
			Value 1	Value 2		Value 1	Value 2				
00300	Oxygen, dissolved [DO] A - Disinfection, Process Complete	Smpl.			=8.2			19 - mg/L	0	02/07 - Twice Every Week	GR - GRAB
	Season: 0	Req.			>=7.0 DAILY MIN			19 - mg/L		02/07 - Twice Every Week	GR - GRAB
	NODI: -	NODI									
00400	pH A - Disinfection, Process Complete	Smpl.			=7.3		=8.2	12 - SU	0	02/07 - Twice Every Week	GR - GRAB
	Season: 0	Req.			>=6.5 MINIMUM		<=9.0 MAXIMUM	12 - SU		02/07 - Twice Every Week	GR - GRAB
	NODI: -	NODI									
00400	pH G - Raw Sewage Influent	Smpl.			=6.3		=8.6	12 - SU	0	02/07 - Twice Every Week	GR - GRAB
	Season: 0	Req.			Req Mon DAILY MN		Req Mon DAILY MX	12 - SU		02/07 - Twice Every Week	GR - GRAB
	NODI: -	NODI									
00530	Solids, total suspended B - Prior to Disinfection	Smpl. =0.4		=0.7	26 - lb/d		=0.6	19 - mg/L	0	01/07 - Weekly	24 - COMP24
	Season: 0	Req. <=56.0 30DA AVG		<=88.0 7 DA AVG	26 - lb/d		<=20.0 30DA AVG	19 - mg/L		01/07 - Weekly	24 - COMP24
	NODI: -	NODI									
00530	Solids, total suspended G - Raw Sewage Influent	Smpl. =199.0			26 - lb/d		=262.0	19 - mg/L	0	01/07 - Weekly	24 - COMP24
	Season: 0	Req. Req Mon 30DA AVG			26 - lb/d		Req Mon 30DA AVG	19 - mg/L		01/07 - Weekly	24 - COMP24
	NODI: -	NODI									
00610	Nitrogen, ammonia total [as N] B - Prior to Disinfection	Smpl. =0.056		=0.084	26 - lb/d		=0.088	19 - mg/L	0	01/07 - Weekly	24 - COMP24
	Season: 0	Req. <=1.4 30DA AVG		<=5.8 DAILY MX	26 - lb/d		<=0.5 30DA AVG	19 - mg/L		01/07 - Weekly	24 - COMP24
	NODI: -	NODI									
X 00665	Phosphorus, total [as P] B - Prior to Disinfection	Smpl. =0.095		=0.25	26 - lb/d		=0.15	19 - mg/L	1	01/07 - Weekly	24 - COMP24
	Season: 0	Req. <=0.29 30DA AVG		<=0.58 7 DA AVG	26 - lb/d		<=0.1 30DA AVG	19 - mg/L		01/07 - Weekly	24 - COMP24
	NODI: -	NODI									
50050	Flow, in conduit or thru treatment plant 1 - Effluent Gross	Smpl. =0.082		=0.132	03 - MGD						
	Season: 0	Req. Req Mon 30DA AVG		Req Mon DAILY MX	03 - MGD				0	01/01 - Daily	RT - RCOTOT
	NODI: -	NODI								01/01 - Daily	RT - RCOTOT
50050	Flow, in conduit or thru treatment plant G - Raw Sewage Influent	Smpl. =0.094		=0.153	03 - MGD				0	09/09 - Continuous	RT - RCOTOT
	Season: 0	Req. Req Mon 30DA AVG		Req Mon DAILY MX	03 - MGD					09/09 - Continuous	RT - RCOTOT
	NODI: -	NODI									
51040	E. coli A - Disinfection, Process Complete	Smpl.					=8.0	13 - #/100mL	0	01/07 - Weekly	GR - GRAB
	Season: 0	Req.					<=126.0 30DA GM	13 - #/100mL		01/07 - Weekly	GR - GRAB
	NODI: -	NODI									
80082	BOD, carbonaceous [5 day, 20 C] B - Prior to Disinfection	Smpl. =1.4		=1.8	26 - lb/d		=2.2	19 - mg/L	0	01/07 - Weekly	24 - COMP24
	Season: 0	Req. <=12.0 30DA AVG		<=29.0 DAILY MX	26 - lb/d		<=4.0 30DA AVG	19 - mg/L		01/07 - Weekly	24 - COMP24
	NODI: -	NODI									
80082	BOD, carbonaceous [5 day, 20 C] G - Raw Sewage Influent	Smpl. =173.0			26 - lb/d		=232.0	19 - mg/L	0	01/07 - Weekly	24 - COMP24

Code	Season	Parameter Name	NODI	Quantity or Loading		Quality or Concentration		Units	# of Ex.	Freq. of Analysis	Smpl. Type
				Value 1	Value 2	Value 1	Value 2				
0			Req.	Req Mon 30DA AVG			Req Mon 30DA AVG	19 - mg/L	0	01/07 - Weekly	24 - COMP24
NODI: -			NODI								
84130		Outfall observation/visual, V/N response	Smpl.								
1 - Effluent Gross			Req.								
0			Req.								
NODI: -			NODI								

Submission Note
If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row. Units, Number of Excursions, Frequency of Analysis, and Sample Type.
Edit Check Errors

Code	Parameter	Name	Monitoring Location	Field	Type	Description	Acknowledge
00665	Phosphorus, total [as P]	B - Prior to Disinfection	Quality or Concentration Sample Value 2	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	☒	
Comments:							
Lab results are questionable, we have since turned alum feed up.							
Attachments							
No attachments							
Report Last Saved By							
GUN LAKE GAMING/ENTERTAINMENT							
User:	don.row@stservices.com						
Name:	Don Row						
E-Mail:	donald.row@gunlakecasino.com						
Date/Time:	2022-06-10 09:45 (Time Zone: -05:00)						
Report Last Signed By							
User:	don.row@stservices.com						
Name:	Don Row						
E-Mail:	donald.row@gunlakecasino.com						
Date/Time:	2022-06-10 09:46 (Time Zone: -05:00)						

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June 2022

Parameter													
Effluent													
Date	Day of Week	Flow	CBOD	CBOD lbs	TSS	TSS lbs	NH ₃	NH ₃ lbs	P	P lbs	E-Coli	D.O.	pH
6/1/2022	Wed	0.085											
6/2/2022	Thu	0.081											
6/3/2022	Fri	0.096											
6/4/2022	Sat	0.094										7.5	8.31
6/5/2022	Sun	0.098											
6/6/2022	Mon	0.085											
6/7/2022	Tue	0.071	<2.0	1.2	1	0.6	0.078	0.05	0.35	0.21			
6/8/2022	Wed	0.092									<1	8.3	7.25
6/9/2022	Thu	0.091											
6/10/2022	Fri	0.098										7.7	7.33
6/11/2022	Sat	0.103											
6/12/2022	Sun	0.102											
6/13/2022	Mon	0.084											
6/14/2022	Tue	0.100	<2.0	1.7	0.5	0.4	0.109	0.09	0.365	0.30			
6/15/2022	Wed	0.108									14	7.6	7.51
6/16/2022	Thu	0.108											
6/17/2022	Fri	0.121											
6/18/2022	Sat	0.120										9.0	7.52
6/19/2022	Sun	0.086											
6/20/2022	Mon	0.084											
6/21/2022	Tue	0.084	<2.0	1.4	0.5	0.4	0.0936	0.07	0.141	0.10	242		
6/22/2022	Wed	0.077										9.1	7.48
6/23/2022	Thu	0.085											
6/24/2022	Fri	0.101										8.0	7.52
6/25/2022	Sat	0.091											
6/26/2022	Sun	0.092											
6/27/2022	Mon	0.069											
6/28/2022	Tue	0.050	2.12	0.9	1.2	0.5	0.124	0.05	0.39	0.16			
6/29/2022	Wed	0.057									470	8.9	7.31
6/30/2022	Thu	0.100											
	Total	2.713											
	Average	0.090	2.0	1.3	0.8	0.5	0.101	0.064	0.31	0.193	117		
	Min	0.050	2.0	0.9	0.5	0.4	0.078	0.046	0.14	0.10		7.5	7.3
	Max	0.121	2.1	1.7	1.2	0.6	0.124	0.091	0.39	0.30	470		8.3
	# Data	30	4	4	4	4	4	4	4	4	3	8	8
	%Removal		99.2%		99.5%		#DIV/0!		#DIV/0!				

May 2022

Parameter													
Effluent													
Date	Day of Week	Flow	CBOD	CBOD lbs	TSS	TSS lbs	NH ₃	NH ₃ lbs	P	P lbs	E-Coli	D.O.	pH
5/1/2022	Sun	0.089											
5/2/2022	Mon	0.074											
5/3/2022	Tue	0.076	2.59	1.6	0.6	0.4	0.0744	0.05	0.067	0.04	<1		
5/4/2022	Wed	0.081										9.9	7.67
5/5/2022	Thu	0.091											
5/6/2022	Fri	0.095										9.9	7.5
5/7/2022	Sat	0.099											
5/8/2022	Sun	0.101											
5/9/2022	Mon	0.074											
5/10/2022	Tue	0.085	2.52	1.8	1	0.7	0.071	0.05	0.05	0.04	2		
5/11/2022	Wed	0.092										9.7	7.54
5/12/2022	Thu	0.128											
5/13/2022	Fri	0.132										10.1	7.3
5/14/2022	Sat	0.101											
5/15/2022	Sun	0.088											
5/16/2022	Mon	0.063											
5/17/2022	Tue	0.067	<2.0	1.1	0.3	0.2	0.075	0.04	0.066	0.04	39		
5/18/2022	Wed	0.074										9.9	7.51
5/19/2022	Thu	0.077											
5/20/2022	Fri	0.101										8.2	7.48
5/21/2022	Sat	0.089											
5/22/2022	Sun	0.085											
5/23/2022	Mon	0.004											
5/24/2022	Tue	0.000											
5/25/2022	Wed	0.094										8.9	
5/26/2022	Thu	0.081	<2.0	1.4	0.6	0.4	0.0853	0.06	0.363	0.25	9		
5/27/2022	Fri	0.089										9.0	8.17
5/28/2022	Sat	0.098											
5/29/2022	Sun	0.075											
5/30/2022	Mon	0.073											
5/31/2022	Tue	0.076	<2.0	1.3	0.6	0.4	0.132	0.08	0.18	0.12			
	Total	2.552											
	Average	0.082	2.2	1.4	0.6	0.4	0.088	0.056	0.15	0.095	9		
	Min	0.000	2.0	1.1	0.3	0.2	0.071	0.042	0.05	0.04		8.2	7.3
	Max	0.132	2.6	1.8	1.0	0.7	0.132	0.084	0.36	0.25	39		8.2
	#Data	31											
	%Removal		99.0%		99.8%		99.7%		97.5%				

NPDES Permit No. MI0058661

pH

Standard Methods for the Examination of Water and Wastewater, Method 4500 - H+ B (Electrometric Method), 2000

Analysis Date:	Analyst: <i>G.L.</i>
Comments:	Slope <i>92.2</i>

Buffer	Manufacturer	Lot Number	Date Received	Date Opened	Expiration Date
pH 4.00					
pH 7.00					
pH 10.00					
pH 7.00 for Calib Check					

Sample ID	Sample Date	Sample Time	Sample Type	Collector Initials	Analysis Time	Sample Temp (°C)	pH (S.U.)	QC
Standard #1, pH 4.00	<i>5/20/22</i>	<i>11:30</i>		<i>GL</i>	<i>1200</i>			
Standard #2, pH 7.00	<i>↓</i>	<i>↓</i>		<i>↓</i>	<i>↓</i>			
Standard #3, pH 10.0								% Standard Recovery =
Calibration Check, pH 7.00								
Final Effluent (NPDES)			Grab			<i>23.1</i>	<i>7.48</i>	
Final Effluent Duplicate			Grab					
Raw (NPDES)			Grab			<i>23.6</i>	<i>8.26</i>	
Raw Duplicate	<i>↓</i>	<i>↓</i>	Grab	<i>GL</i>	<i>↓</i>			
<i>Standard #1 7.00</i>	<i>05/27/22</i>						<i>7.01</i>	
<i>Standard #2 10.00</i>	<i>05/27/22</i>						<i>10.05</i>	
<i>Calibration</i>	<i>05/27/22</i>						<i>7.00</i>	
<i>FE</i>							<i>8.17</i>	
<i>RAW</i>							<i>8.61</i>	

NOTE:

% Standard Recovery =

$$\frac{\text{Observed Value (S.U.)}}{\text{Actual Value (S.U.)}} \times 100$$

QUALITY CONTROL CHECKLIST

Slope within QC limits?

☐ Yes ☐ No

UCL _____ LCL _____

Percent Recovery for check sample within QC limits?

☐ Yes ☐ No

UCL _____ LCL _____

Range Between Duplicates for Final acceptable?

☐ Yes ☐ No

UCL _____ LCL _____

Range Between Duplicates for Influent acceptable?

☐ Yes ☐ No

UCL _____ LCL _____

Are data acceptable for reporting?

☐ Yes ☐ No

Reviewed by: _____ Date: _____

CLIENT:	Gun Lake Casino	Collection Date:	7/19/2022 8:30:00 AM
Project:	WTTP	Received Date:	7/20/2022 9:00:00 AM
Lab ID:	2207D65-02	Matrix:	WASTEWATER
Client Sample ID:	Effluent	Sampled By:	AK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

BOD, 5 DAY CARBONACEOUS

SM5210B-2011 A5210B Analyst: **SJ**

Carbonaceous BOD-5 < 2.00 2.00 mg/L 1 7/25/2022 8:00:00 AM

<u>Prep Start</u>	<u>Prep End</u>	<u>Prep Initials</u>
7/20/2022 1:15:00 PM	7/25/2022 8:00:00 AM	SJ

AMMONIA AS N

SM4500NH3D-2011 Analyst: **TE**

Nitrogen, Ammonia 0.0356 0.0300 mg/L 1 7/21/2022 4:28:41 PM

PHOSPHOROUS, TOTAL AS P

SM4500-PE-2011 Analyst: **JS**

Phosphorus, Total (As P) 0.224 0.0100 mg/L 1 7/21/2022 10:00:00 AM

Qualifiers: < Not Detected at the Reporting Limit
MCL Maximum Contaminant Level
RL Reporting Limit

H Holding times for preparation or analysis exceeded
PL Permit Limit

Original
Page 3 of 9

3260 Evergreen Drive, NE Grand Rapids, MI 49525 t.616-364-7600 f. 616-364-4222 www.preinnewhof.com

CLIENT:	Gun Lake Casino	Collection Date:	7/6/2022 10:00:00 AM
Project:	WTTP	Received Date:	7/6/2022 1:10:00 PM
Lab ID:	2207262-03	Matrix:	WASTEWATER
Client Sample ID:	Effluent Grab	Sampled By:	AK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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E. COLI

EPA 1603

Analyst: **CM**

E. coli	500	1.00		Colonies/100ml	1	7/6/2022 3:00:00 PM
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Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit

H	Holding times for preparation or analysis exceeded
PL	Permit Limit
S	Spike Recovery outside accepted recovery limits

Original
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3260 Evergreen Drive, NE Grand Rapids, MI 49525 t.616-364-7600 f. 616-364-4222 www.preinnewhof.com

CLIENT:	Gun Lake Casino	Collection Date:	7/13/2022 9:15:00 AM
Project:	WTTP	Received Date:	7/13/2022 10:55:00 AM
Lab ID:	2207853-03	Matrix:	WASTEWATER
Client Sample ID:	Effluent Grab	Sampled By:	AK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

E. COLI				EPA 1603		Analyst: CM
E. coli	< 1.00	1.00		Colonies/100ml	1	7/13/2022 2:00:00 PM

Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit

H	Holding times for preparation or analysis exceeded
PL	Permit Limit

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3260 Evergreen Drive, NE Grand Rapids, MI 49525 t.616-364-7600 f. 616-364-4222 www.preinnewhof.com

CLIENT:	Gun Lake Casino	Collection Date:	7/20/2022 8:10:00 AM
Project:	WTTP	Received Date:	7/20/2022 9:00:00 AM
Lab ID:	2207D65-03	Matrix:	WASTEWATER
Client Sample ID:	Effluent Grab	Sampled By:	AK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

E. COLI

EPA 1603

Analyst: SJ

E. coli	430	1.00		Colonies/100ml	1	7/20/2022 1:00:00 PM
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Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit

H	Holding times for preparation or analysis exceeded
PL	Permit Limit

Original
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3260 Evergreen Drive, NE Grand Rapids, MI 49525 t.616-364-7600 f. 616-364-4222 www.preinnewhof.com

CLIENT:	Gun Lake Casino	Collection Date:	7/12/2022 8:30:00 AM
Project:	WTTP	Received Date:	7/13/2022 10:55:00 AM
Lab ID:	2207853-02	Matrix:	WASTEWATER
Client Sample ID:	Effluent	Sampled By:	AK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

BOD, 5 DAY CARBONACEOUS

SM5210B-2011 A5210B Analyst: **SJ**

Carbonaceous BOD-5	< 2.00	2.00		mg/L	1	7/18/2022 8:00:00 AM
<u>Prep Start</u>	<u>Prep End</u>	<u>Prep Initials</u>				
7/13/2022 1:10:00 PM	7/18/2022 8:00:00 AM	SJ				

AMMONIA AS N

SM4500NH3D-2011 Analyst: **TE**

Nitrogen, Ammonia	0.0353	0.0300		mg/L	1	7/15/2022 2:22:48 PM
-------------------	--------	--------	--	------	---	----------------------

PHOSPHOROUS, TOTAL AS P

SM4500-PE-2011 Analyst: **AB**

Phosphorus, Total (As P)	0.194	0.0100		mg/L	1	7/15/2022 12:08:34 PM
--------------------------	-------	--------	--	------	---	-----------------------

Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit

H	Holding times for preparation or analysis exceeded
PL	Permit Limit

Original
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CLIENT:	Gun Lake Casino	Collection Date:	7/5/2022 10:00:00 AM
Project:	WTTP	Received Date:	7/6/2022 1:10:00 PM
Lab ID:	2207262-02	Matrix:	WASTEWATER
Client Sample ID:	Effluent	Sampled By:	AK

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
BOD, 5 DAY CARBONACEOUS						
				SM5210B-2011	A5210B	Analyst: SJ
Carbonaceous BOD-5	2.46	2.00		mg/L	1	7/11/2022 8:00:00 AM
<u>Prep Start</u>	<u>Prep End</u>	<u>Prep Initials</u>				
7/6/2022 2:10:00 PM	7/11/2022 8:00:00 AM	SJ				
AMMONIA AS N						
				SM4500NH3D-2011		Analyst: TE
Nitrogen, Ammonia	0.0794	0.0300		mg/L	1	7/12/2022 8:36:49 AM
PHOSPHOROUS, TOTAL AS P						
				SM4500-PE-2011		Analyst: AB
Phosphorus, Total (As P)	0.250	0.0100		mg/L	1	7/11/2022 12:27:56 PM

Qualifiers:

<	Not Detected at the Reporting Limit
MCL	Maximum Contaminant Level
RL	Reporting Limit

H	Holding times for preparation or analysis exceeded
PL	Permit Limit
S	Spike Recovery outside accepted recovery limits

Original
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