

**FACT SHEET STATEMENT OF BASIS
CANYONLANDS BY NIGHT
RENEWAL DISCHARGE PERMIT
UPDES PERMIT NUMBER: UT0025828
MINOR INDUSTRIAL**

FACILITY CONTACTS

Person Name: Bert Paxman
Position: Owner

Facility Name: Canyonlands by Night

Mailing Address: 1871 North Hwy 191
Moab, UT 84532

Telephone: (435) 259-2628

Facility Address: 1861 North Hwy 191
Moab, UT 84532

DESCRIPTION OF FACILITY

Canyonlands by Night (CBN) is a tourism business that currently is constructing a hotel and accompanying shops. This facility is currently upgrading the water treatment system and installing a new wastewater treatment system.

The discharge from the water treatment plant will consist of river water that overflows from the inlet raw water tank back to the discharge. The water treatment process consists of a super settler, plate settler and a membrane treatment system. A neutralization tank also collects water from acid and caustic cleaning processes of the membranes. The backwash from the membranes will also be discharged.

The wastewater treatment process consists of two 25,000 gallon settling tanks, a 25,000 gallons recirculation tank, six Advantex textile filter pods, a 25,000 gallon effluent storage tank and a U/V disinfection system. The influent settling tanks will be pumped of solids as needed. The average daily flow from the combined discharge will be 80,000 gallons per day. The final discharge will be to the Colorado River and to a large underground wastewater onsite disposal system.

CHANGES FROM PREVIOUS PERMIT

As previously mentioned, CBN is upgrading the water treatment system, and is installing a new wastewater treatment system. The final discharge will be a combination of treated wastewater and the water treatment system effluents. The capacity of the entire treatment system will be increased from 5,000 to 80,000 gallons per day. Limits for E. Coli and Oil and Grease will be added to the permit. All other limits will be the same as the previous permit. The UPDES permit will include operating requirements for the large underground wastewater treatment and disposal system.

DISCHARGE

DESCRIPTION OF DISCHARGE

<u>Outfall</u>	<u>Description of Discharge Point</u>
001	Internal discharge point from the wastewater treatment process. Located after the wastewater treatment unit and before being combined with other waste streams.
002	Located at latitude 38° 36' 16" N and longitude 109° 34' 57" W. The discharge is to The Colorado River through an 8 inch pipe.

RECEIVING WATERS AND STREAM CLASSIFICATION

The final discharge is to the Colorado River, which is classified as 1C, 2A, 3B, and 4 according to *Utah Administrative Code (UAC) R317-2-6 and R317-2-13.4*:

Class 1C	-Protected for domestic purposes with prior treatment by treatment processes as required by the Utah Division of Drinking Water.
Class 2A	- Protected for frequent primary contact recreation where there is a high likelihood of ingestion of water or a high degree of bodily contact with the water. Examples include, but are not limited to, swimming, rafting, kayaking, diving, and water skiing.
Class 3B	-Protected for warm water species of game fish and other warm water aquatic life, including the necessary aquatic organisms in their food chain.
Class 4	-Protected for agricultural uses including irrigation of crops and stock watering.

BASIS FOR EFFLUENT LIMITATIONS

Limitations on total suspended solids (TSS) and BOD₅ are based on current Utah Secondary Treatment Standards, *UAC R317-1-3.2*. The Oil and Grease (O&G) limit is based on best professional judgment and is the same as in the previous permit. No flow limits were placed in Outfall 001 because all of the parameters are based on secondary treatment standards. Flow will be monitored to ensure that the WLA flow basis is not exceeded. The discharge flow from CBN has a dilution factor of approximately 10,000:1 with the Colorado River. With such a high dilution factor there is no reasonable potential of causing a violation of water quality standards. Limitations for Total Dissolved Solids (TDS) are based on the Colorado River Basin Salinity

Control Forum Policy, entitled *2008 Review, Water Quality Standards For Salinity, Colorado River System*, as authorized in *UAC R317-2-4*. The concentration limit for TDS will remain the same as the previous permit. The permit limitations are:

Parameter	Effluent Limitations			
	30 - Day Average	Maximum 7 - Day Average	Daily Minimum	Daily Maximum
Outfall 001				
Flow, gpd	30,000	NA	NA	NA
BODs, mg/L	25	35	NA	NA
TSS, mg/L	25	35	NA	NA
pH, Standard Units	NA	NA	6.5	9.0
E. Coli, No/100mL	126	157	NA	NA
Outfall 002				
Flow, gpd	80,000	NA	NA	NA
TDS, mg/L	NA	NA	NA	5000
TDS, tons/day	NA	NA	NA	1.0
Oil & Grease, mg/L	NA	NA	NA	10
pH, Standard Units	NA	NA	6.5	9.0

NA – Not Applicable.

SELF-MONITORING AND REPORTING REQUIREMENTS

The following self-monitoring requirements are the same as in the previous. The reporting requirements will be submitted on Discharge Monitoring Report Form (EPA No. 3320-1) or by NetDMR, post-marked or entered into NetDMR no later than the 28th day of the month following the completed reporting period.

Self-Monitoring and Reporting Requirements			
Parameter	Frequency	Sample Type	Units
Outfall 001			
Total Flow	Continuous	Recorder	gpd
BOD ₅	Monthly	Composite	mg/L
Total Suspended Solids	Monthly	Composite	mg/L
E. Coli	Monthly	Grab	No./100mL
pH	Monthly	Grab	SU
Outfall 002			
Total Flow	Continuous	Recorder	gpd
Total Dissolved Solids	Monthly	Grab	mg/L, tons/day
Oil & Grease	Monthly (If seen is observed)	Grab	mg/L
pH	Monthly	Grab	SU

BIOSOLIDS**DESCRIPTION OF DISPOSAL**

The solids from CBN will be regularly pumped from the primary settling tank and then hauled to Moab City's wastewater treatment plant.

WASTE LOAD ANALYSIS AND ANTIDegradation REVIEW

Effluent limitations are also derived using a waste load analysis (WLA), which is appended to this statement of basis as ADDENDUM. The WLA incorporates Secondary Treatment Standards, Water Quality Standards, Antidegradation Reviews (ADR), as appropriate and designated uses into a water quality model that projects the effects of discharge concentrations on receiving water quality. Effluent limitations are those that the model demonstrates are sufficient to meet State water quality standards in the receiving waters.

During the UPDES permit development, a WLA and ADR were performed. An ADR Level I review was performed and the conclusion was that an ADR level II review was required, because

the receiving water or downstream water is a 1C drinking water source. CBN prepared a Level II ADR review report addressing all of the points required in R317-2, which was dated June 3, 2014. A copy of the ADR Level II is appended to this document.

STORM WATER

The *Utah Administrative Code (UAC) R-317-8-3* requires storm water permit provisions to include the development of a storm water pollution prevention plan for waste water treatment facilities if the facility meets one or both of the following criteria:

1. waste water treatment facilities with a design flow of 1.0 MGD or greater, and/or,
2. waste water treatment facilities with an approved pretreatment program as described in *40CFR Part 403*,

CBN does not meet the above criteria; therefore this permit does not include storm water provisions. However, the permit does include a storm water re-opener provision.

PRETREATMENT REQUIREMENTS

The permittee has not been designated for pretreatment program development because it does not meet conditions which necessitate a full program. The flow through the plant is less than five (5) MGD, there are no categorical industries discharging to the treatment facility, industrial discharges comprise less than 1 percent of the flow through the treatment facility, and there is no indication of pass through or interference with the operation of the treatment facility such as upsets or violations of the POTW's UPDES permit limits.

BIOMONITORING REQUIREMENTS

A nationwide effort to control toxic discharges where effluent toxicity is an existing or potential concern is regulated in accordance with the *State of Utah Permitting and Enforcement Guidance Document for Whole Effluent Toxicity Control (biomonitoring)*. Authority to require effluent biomonitoring is provided in *Permit Conditions, UAC R317-8-4.2, Permit Provisions, UAC R317-8-5.3* and *Water Quality Standards, UAC R317-2-5* and *R317-2-7.2*.

The permittee is classified as a minor industrial facility that will discharge a relatively small volume of effluent when compared to flows of the receiving stream. The receiving stream water quality monitoring data indicate no impairment of the stream. Based on these considerations, there is no reasonable potential for toxicity in the proposed discharge (per *State of Utah Permitting and Enforcement Guidance Document for WET Control*). As such, there will be no numerical WET limitations or WET monitoring requirements in this permit. However, the permit will contain a toxicity limitation re-opener provision that allows for modification of the permit should additional information indicate the presence of toxicity in the discharge.

LARGE UNDERGROUND WASTEWATER OPERATING PERMIT REQUIREMENTS

Until such time as this permit expires or is modified or revoked, the permittee is authorized to operate a large underground wastewater disposal system in conformance with all the requirements, limitations, and conditions set forth in *Utah Administrative Code R317-5*, with the attached schedules as follows:

SCHEDULE A

Waste Disposal Limitations

1. The permittee is authorized to operate and maintain a large underground wastewater disposal system that has been constructed in accordance with plans and specifications approved by the Division of Water Quality and with the following conditions:
 - a. System type: Conventional Gravity; Conventional with Pump-to-Gravity; Pressure Distribution; Alternative (describe) _____
 - b. Maximum Daily Design Flow of 30,000 (gpd) Treatment - 10,000 (gpd) onsite disposal
 - c. Components of wastewater disposal system (check): Septic Tanks; Enhanced Treatment Unit; Grease Trap; Pump Tank with Floats; Control Panel; Distribution Box; Pressure Distribution; Drip Irrigation; Trenches; Deep Trench; Bed; Mound Other (describe) _____
 - d. Drainfield media: Gravel; Gravelless Chambers
 - e. Effluent parameters will meet R317-4 for domestic wastewater or additional treatment may be required.
2. Discharge of untreated or partially treated sewage or septic tank effluent directly or indirectly onto the ground surface or into the surface waters of the state constitutes a public health hazard and is prohibited. This permit does not relieve the permittee from responsibility for compliance with any other applicable federal, state, or local law(s), rule(s) or standard(s).
3. No cooling water, air conditioner water, ground water, oil, hazardous materials, roof drainage, storm water runoff, or other aqueous or non-aqueous substance which is, in the judgment of the Division, detrimental to the performance of the system or to groundwater, shall be discharged into the wastewater treatment system.
4. No activities shall be conducted that could cause an adverse impact on existing or potential beneficial uses of groundwater.

SCHEDULE B

Required Servicing and Inspections

1. Annually; Semi-Annually (Every 6 months); Other (specify) _____

2. All servicing and inspections must be conducted by a certified maintenance person per R317-11. Level 2 is required for conventional systems and Level 3 for all other LUWDS.

Name of person performing maintenance on this system: _____

Level 2; Level 3

3. **If Sample results exceed Operating Parameters (other than Flow of wastewater) in table titled "Minimum Monitoring and Reporting Requirements", report to the Division within 5 days and follow rules in R317-5-9.2.(D).**

Inspection Components

TYPE OF SYSTEM	Measure and record depth of sludge/ scum levels, pump when necessary: <ul style="list-style-type: none"> • Septic Tank • Pump Tank • Grease Trap 	Inspect and clean when necessary, with date performed: <ul style="list-style-type: none"> • Pump/Floats • Control Panel • Pump Filter 	Flush/ clean pressure laterals, measurement of height; inspect for ponding or surfacing in dispersal area; reset squirt height for equal pressure- and date inspected.	Manufacturers Recommendations: <ul style="list-style-type: none"> • Recirc Tank • Pre-Treatment Unit • Misc. and date inspected
Conventional Gravity or Pump-to-Gravity				
Pressure System	X	X	X	X
Mound, At-Grade				
Packed Bed		X		X

Minimum Frequency of Periodic Inspections

TYPE OF SYSTEM	Every 12 months	Every 6 months
Conventional System (Gravity or Pump-to-Gravity): 5,000 - 15,000 gal/day 15,000 + gal/day		X
At-Grade Alternative System (first 5 years only)		
Mound (pressure)		
Packed Bed		
Treatment System (to lower waste strength levels)		X

* Or more per manufacturer requirements

Minimum Monitoring and Reporting Requirements

Item or Parameter	Minimum Frequency	Type of Sample	Operating Parameters
Approved Drainfield Design Flow (gpd)	Monthly	Measurement based on meter readings	Approved design flow (gpd)
Turbidity or BOD/ COD and TSS	Semiannual	Grab	Concentration (mg/L)
Total Inorganic Nitrogen (TIN)	Semiannual	Grab	Concentration (mg/L)
E. coli	Semiannual	Grab	No./100 mL

Reporting

Monitoring, maintenance practices, solids handling and results shall be reported on Division approved forms. Reports must be submitted by **August 1, following the “reporting year” period of July 1 to June 30.**

Mail Reports to (permitting agency): Division of Water Quality, c/o Engineering Section, P O Box 144870, Salt Lake City, UT 84114-4870.

Office: 801-536-4300 Fax: 801-536-4301

SCHEDULE C

Special & General Conditions

1. All septage/sludge shall be managed by a licensed liquid waste operator as defined in R317-550. The solids from CBN will be regularly pumped from the primary settling tank and then hauled to Moab City's wastewater treatment plant.
2. Any observations of excessive kitchen wastes, surfacing sewage, etc., must be reported to the Division within 5 working days.
3. The permittee must maintain all treatment and control facilities in good working order and in conformance with permit requirements.

PERMIT DURATION

It is recommended that this permit be effective for a duration of five (5) years.

Drafted by
Matthew Garn, P.E.
Utah Division of Water Quality
August 27, 2014

PUBLIC NOTICE

Began:
Ended:
Public Noticed in the

DWQ-2014-008543

