# FACTSHEET
## (pursuant to NAC 445A.236)

**Permittee Name:** 4-G PROPERTIES LIMITED
30240 RANCHO VIEJO RD. #B
SAN JUAN CAPISTRANO, CA - 92675

**Permit Number:** NV0023671

**Location:** FORMER CAPPY'S CLEANERS, CLARK
4235-A EAST CHARLESTON BOULEVARD, LAS VEGAS, NV - 89104
LATITUDE: 36.158889, LONGITUDE: -115.082778
TOWNSHIP: T21S, RANGE: R62E, SECTION: S5

| Outfall / Well Num | Outfall / Well Name | Location Type | Well Log Num | Outfall City | Outfall State | Outfall Zip | Outfall County | Latitude | Longitude | Receiving Water |
|---|---|---|---|---|---|---|---|---|---|---|
| 01A | INFLUENT LINE PRIOR TO TREATMENT SYSTEM #1 | Internal Outfall | | LAS VEGAS | NV | 89104 | CLARK | 36.158806 | -115.082297 | LAS VEGAS WASH VIA STORM DRAIN |
| 01B | DISCHARGE LINE AFTER FINAL GAC VESSEL OF TREATMENT SYSTEM #1 PRIOR TO DISCHARGE POINT | External Outfall | | LAS VEGAS | NV | 89104 | CLARK | 36.158806 | -115.082297 | LAS VEGAS WASH VIA STORM DRAIN |
| 02A | INFLUENT LINE PRIOR TO TREATMENT SYSTEM #2 | Internal Outfall | | LAS VEGAS | NV | 89104 | CLARK | 36.156162 | -115.078969 | LAS VEGAS WASH VIA STORM DRAIN |
| 02B | DISCHARGE LINE AFTER FINAL GAC VESSEL OF TREATMENT SYSTEM #2 PRIOR TO DISCHARGE POINT | External Outfall | | LAS VEGAS | NV | 89104 | CLARK | 36.156162 | -115.078969 | LAS VEGAS WASH VIA STORM DRAIN |
| SUM | SUM OF OUTFALLS 001 AND 002 | Sum | | LAS VEGAS | NV | 89104 | CLARK | 36.158806 | -115.082297 | LAS VEGAS WASH VIA STORM DRAIN |

**General:**

The Permittee has applied for a major modification to their National Pollutant Discharge Elimination System (NPDES) permit to continue to discharge treated groundwater from the former Cappy's Cleaners facility to the Las Vegas Wash via the storm drain system. The facility, which has since closed, was operated as a dry cleaning facility at 4235-A East Charleston Boulevard, Las Vegas, Clark County, Nevada. The groundwater under the former Cappy's Cleaners was contaminated with tetrachloroethylene (PCE) from spills/leaks during dry cleaning operations. The impacted groundwater is currently being treated with one sediment filter and two 1,000 pound granulated activated carbon (GAC) vessels before discharge to the storm drain (Treatment System #1). If influent concentrations warrant supplemental treatment, impacted groundwater can be diverted to an air stripper tower prior to the GAC vessels. An NPDES permit for this discharge was originally issued in May 2009. While the latest permit renewal occcurred in August 2013, the Permittee has requested a modification to increase the permitted daily maximum flow from 0.144 million gallons per day (MGD) to 0.432 MGD — no other changes to the permit have occurred.

PCE contaminated water has migrated to the southeast, across Lamb Boulevard from the former Cappy's Cleaners facility. The Permittee has installed additional extraction wells in this area and is requesting to add a second outfall to the discharge permit. Treatment System #2 will be installed just west of the Walmart with the treated groundwater being discharged to a nearby drop inlet on the southeast portion of the Walmart property. This treatment system will include one sediment filter and two 1,000 pound GAC vessels connected in series. Treatment System #2 was brought on-line in the fall of 2013. The new extraction wells that feed Treatment System #2 have the ability to produce more water than was anticipated which will allow the PCE plume to be remediated more rapidly.

**Discharge Characteristics:**

The treated groundwater is of good quality. Over the previous permit cycle, the discharge did not exceed any permit limits. Discharge Monitoring Reports (DMRs) indicate the treatment system is treating PCE to below detectable concentrations.

**Receiving Water:**

Treated groundwater from the remediation systems will continue to be discharged into the Las Vegas Wash via the storm drain system. Water quality standards for the nearest downstream control point, Las Vegas Wash at Telephone Line Road, are designated in NAC 445A.2142, and specified in NAC 445A.2156.

**Summary of Changes From Previous Permit:**

Annual Profile I analysis has replaced the quarterly "Metals" requirement that was in the previous permit. Profile I includes all of the metals previously required and will be consistent with other similar remediation permits.

The groundwater in this area has a high concentration of naturally occurring total dissolved solids (TDS), approximately 6000 mg/L. To demonstrate that no additional source of TDS is being added during treatment, quarterly monitoring of the influent for TDS has been added to the permit.

Monitoring and reporting of nitrate plus nitrite and total Kjeldahl nitrogen has been removed from the permit because they are only used to calculate the total nitrogen value.

In 2013, the Permittee requested to add a second outfall to the permit. As a result, the permitted flow rate will be increased from 0.049 million gallons per day (MGD) to 0.144 MGD.

In 2014, the permit underwent a major modification to increase the flow from 0.144 MGD to 0.432 MGD.

**Proposed Effluent Limitations:**

The water discharged from the groundwater remediation systems to the Las Vegas Wash shall be limited, and sampled and monitored by the Permittee as specified below.

## Discharge Limitations Table for Sample Location 01A (Internal Outfall) To Be Reported Quarterly

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Methyl tert-butyl ether | Value | | M&R Micrograms per Liter (ug/L) | Internal Monitoring Point | 01A | Quarterly | DISCRT |
| Hydrocarbons, total petroleum[2] | Value | | M&R Milligrams per Liter (mg/L) | Internal Monitoring Point | 01A | Quarterly | DISCRT |
| Trichloroethylene | Value | | M&R Micrograms per Liter (ug/L) | Internal Monitoring Point | 01A | Quarterly | DISCRT |
| Tetrachloroethylene | Value | | M&R Micrograms per Liter (ug/L) | Internal Monitoring Point | 01A | Quarterly | DISCRT |
| Trihalomethane, tot. | Value | | M&R Micrograms per Liter (ug/L) | Internal Monitoring Point | 01A | Quarterly | DISCRT |
| Benzene | Value | | M&R Micrograms per Liter (ug/L) | Internal Monitoring Point | 01A | Quarterly | DISCRT |
| Ethylbenzene | Value | | M&R Micrograms per Liter (ug/L) | Internal Monitoring Point | 01A | Quarterly | DISCRT |
| Toluene | Value | | M&R Micrograms per Liter (ug/L) | Internal Monitoring Point | 01A | Quarterly | DISCRT |
| Xylene | Value[1] | | M&R Micrograms per Liter (ug/L) | Internal Monitoring Point | 01A | Quarterly | DISCRT |
| Solids, total dissolved | Value | | M&R Milligrams per Liter (mg/L) | Internal Monitoring Point | 01A | Quarterly | DISCRT |

Notes (Discharge Limitations Table):

1. Total Xylenes

2. EPA Method 8015B, full range, purgeable and extractable

## Discharge Limitations Table for Sample Location 01B (External Outfall) To Be Reported Monthly

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Flow rate[1] | 30 Day Average | M&R Million Gallons per Day (Mgal/d) | | Effluent Gross | 01B | Continuous | METER |
| Flow rate[1] | Daily Maximum | M&R Million Gallons per Day (Mgal/d) | | Effluent Gross | 01B | Continuous | METER |

Notes (Discharge Limitations Table):

1. Flow shall also be reported as the sum of outfall 001 and 002 in the "Discharge Limitations Table for Sample Location Sum" table.

**Discharge Limitations Table for Sample Location 01B (External Outfall) To Be Reported Quarterly**

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Trichloroethylene | Value | | <= 5 Micrograms per Liter (ug/L) | Effluent Gross | 01B | Quarterly | DISCRT |
| Tetrachloroethylene | Value | | <= 5 Micrograms per Liter (ug/L) | Effluent Gross | 01B | Quarterly | DISCRT |
| Trihalomethane, tot. | Value | | <= 100 Micrograms per Liter (ug/L) | Effluent Gross | 01B | Quarterly | DISCRT |
| Benzene | Value | | <= 5 Micrograms per Liter (ug/L) | Effluent Gross | 01B | Quarterly | DISCRT |
| Ethylbenzene | Value | | <= 100 Micrograms per Liter (ug/L) | Effluent Gross | 01B | Quarterly | DISCRT |
| Toluene | Value | | <= 100 Micrograms per Liter (ug/L) | Effluent Gross | 01B | Quarterly | DISCRT |
| Xylene[1] | Value | | <= 200 Micrograms per Liter (ug/L) | Effluent Gross | 01B | Quarterly | DISCRT |
| Methyl tert-butyl ether | Value | | <= 20 Micrograms per Liter (ug/L) | Effluent Gross | 01B | Quarterly | DISCRT |
| Hydrocarbons, total petroleum[2] | Value | | <= 1 Milligrams per Liter (mg/L) | Effluent Gross | 01B | Quarterly | DISCRT |
| Solids, total dissolved | Value | | M&R Milligrams per Liter (mg/L) | Effluent Gross | 01B | Quarterly | DISCRT |
| Nitrogen, inorganic total | Value | | M&R Milligrams per Liter (mg/L) | Effluent Gross | 01B | Quarterly | DISCRT |

## Discharge Limitations Table for Sample Location 01B (External Outfall) To Be Reported Quarterly

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Nitrogen, ammonia total (as N) | Value | | M&R Milligrams per Liter (mg/L) | Effluent Gross | 01B | Quarterly | DISCRT |
| Phosphorus, total (as P) | Value | | M&R Milligrams per Liter (mg/L) | Effluent Gross | 01B | Quarterly | DISCRT |
| pH, maximum | Maximum | | <= 9.0 Standard Units (SU) | Effluent Gross | 01B | Quarterly | DISCRT |
| pH, minimum | Minimum | | >= 6.5 Standard Units (SU) | Effluent Gross | 01B | Quarterly | DISCRT |

Notes (Discharge Limitations Table):

1. Total Xylenes
2. EPA Method 8015B, full range, purgeable and extractable

**Discharge Limitations Table for Sample Location 01B (External Outfall) To Be Reported Annually**

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Alkalinity, bicarbonate (as CaCO3) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Alkalinity, total (as CaCO3) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Aluminum, total (as Al) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Antimony, total (as Sb) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Arsenic, total (as As) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Barium, total (as Ba) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Beryllium, total (as Be) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Cadmium, total (as Cd) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Calcium, total (as Ca) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Chloride (as Cl) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Chromium, total (as Cr) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |

**Discharge Limitations Table for Sample Location 01B (External Outfall) To Be Reported Annually**

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Copper, total (as Cu) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Fluoride, total (as F) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Iron, total (as Fe) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Lead, total (as Pb) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Magnesium, total (as Mg) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Manganese, total (as Mn) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Mercury, total (as Hg) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Nickel, total (as Ni) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Nitrogen, total | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Potassium, total (as K) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Selenium, total (as Se) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |

## Discharge Limitations Table for Sample Location 01B (External Outfall) To Be Reported Annually

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| Parameter | Base | Quantity | Concentration | Monitoring Loc | Sample Loc | Measurement Frequency | Sample Type |
| Silver, total (as Ag) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Sodium, total (as Na) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Sulfate, total (as SO4) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Thallium, total (as Tl) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Zinc, total (as Zn) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| 1,1,1-Trichloroethane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| 1,1,2,2-Tetrachloroethane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| 1,1,2-Trichloroethane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| 1,1-Dichloroethane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| 1,1-Dichloroethylene | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| 1,2-Dichlorobenzene | Value | | M&R Micrograms per Liter | Effluent Gross | 01B | Annual | DISCRT |

## Discharge Limitations Table for Sample Location 01B (External Outfall) To Be Reported Annually

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| Parameter | Base | Quantity | Concentration | Monitoring Loc | Sample Loc | Measurement Frequency | Sample Type |
| | | | (ug/L) | | | | |
| 1,2-Dichloroethane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| 1,2-Dichloropropane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| 1,3-Dichlorobenzene | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| 1,4-Dichlorobenzene | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| 2-Chloroethyl vinyl ether, (mixed) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Dichlorobromomethane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Bromoform | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Methyl bromide (Bromomethane) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Carbon tetrachloride | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Chlorobenzene | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| | | | M&R | | | | |

## Discharge Limitations Table for Sample Location 01B (External Outfall) To Be Reported Annually

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Chloroethane | Value | | Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Chloroform | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Methyl chloride (Chloromethane) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| cis-1,3-Dichloropropene | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Dibromochloromethane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Methylene chloride | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| trans-1,2-Dichloroethylene | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| trans-1,3-Dichloropropene | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Trichlorofluoromethane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |
| Vinyl chloride | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 01B | Annual | DISCRT |

## Discharge Limitations Table for Sample Location 02A (Internal Outfall) To Be Reported Quarterly

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Toluene | Value | | M&R Micrograms per Liter (ug/L) | Internal Monitoring Point | 02A | Quarterly | DISCRT |
| Xylene[1] | Value | | M&R Micrograms per Liter (ug/L) | Internal Monitoring Point | 02A | Quarterly | DISCRT |
| Methyl tert-butyl ether | Value | | M&R Micrograms per Liter (ug/L) | Internal Monitoring Point | 02A | Quarterly | DISCRT |
| Hydrocarbons, total petroleum[2] | Value | | M&R Milligrams per Liter (mg/L) | Internal Monitoring Point | 02A | Quarterly | DISCRT |
| Trichloroethylene | Value | | M&R Micrograms per Liter (ug/L) | Internal Monitoring Point | 02A | Quarterly | DISCRT |
| Tetrachloroethylene | Value | | M&R Micrograms per Liter (ug/L) | Internal Monitoring Point | 02A | Quarterly | DISCRT |
| Trihalomethane, tot. | Value | | M&R Micrograms per Liter (ug/L) | Internal Monitoring Point | 02A | Quarterly | DISCRT |
| Benzene | Value | | M&R Micrograms per Liter (ug/L) | Internal Monitoring Point | 02A | Quarterly | DISCRT |
| Ethylbenzene | Value | | M&R Micrograms per Liter (ug/L) | Internal Monitoring Point | 02A | Quarterly | DISCRT |
| Solids, total dissolved | Value | | M&R Milligrams per Liter (mg/L) | Internal Monitoring Point | 02A | Quarterly | DISCRT |

Notes (Discharge Limitations Table):

1. Total Xylenes

2. EPA Method 8015B, full range, purgeable and extractable

## Discharge Limitations Table for Sample Location 02B (External Outfall) To Be Reported Monthly

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Flow rate[1] | 30 Day Average | M&R Million Gallons per Day (Mgal/d) | | Effluent Gross | 02B | Continuous | DISCRT |
| Flow rate[1] | Daily Maximum | M&R Million Gallons per Day (Mgal/d) | | Effluent Gross | 02B | Continuous | DISCRT |

Notes (Discharge Limitations Table):

1. Flow shall also be reported as the sum of outfall 001 and 002 in the "Discharge Limitations Table for Sample Location Sum" table.

**Discharge Limitations Table for Sample Location 02B (External Outfall) To Be Reported Quarterly**

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Trichloroethylene | Value | | <= 5 Micrograms per Liter (ug/L) | Effluent Gross | 02B | Quarterly | DISCRT |
| Tetrachloroethylene | Value | | <= 5 Micrograms per Liter (ug/L) | Effluent Gross | 02B | Quarterly | DISCRT |
| Trihalomethane, tot. | Value | | <= 100 Micrograms per Liter (ug/L) | Effluent Gross | 02B | Quarterly | DISCRT |
| Benzene | Value | | <= 5 Micrograms per Liter (ug/L) | Effluent Gross | 02B | Quarterly | DISCRT |
| Ethylbenzene | Value | | <= 100 Micrograms per Liter (ug/L) | Effluent Gross | 02B | Quarterly | DISCRT |
| Toluene | Value | | <= 100 Micrograms per Liter (ug/L) | Effluent Gross | 02B | Quarterly | DISCRT |
| Xylene[1] | Value | | <= 200 Micrograms per Liter (ug/L) | Effluent Gross | 02B | Quarterly | DISCRT |
| Methyl tert-butyl ether | Value | | <= 20 Micrograms per Liter (ug/L) | Effluent Gross | 02B | Quarterly | DISCRT |
| Hydrocarbons, total petroleum[2] | Value | | <= 1 Milligrams per Liter (mg/L) | Effluent Gross | 02B | Quarterly | DISCRT |
| Solids, total dissolved | Value | | M&R Milligrams per Liter (mg/L) | Effluent Gross | 02B | Quarterly | DISCRT |
| Nitrogen, inorganic total | Value | | M&R Milligrams per Liter (mg/L) | Effluent Gross | 02B | Quarterly | DISCRT |

## Discharge Limitations Table for Sample Location 02B (External Outfall) To Be Reported Quarterly

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Nitrogen, ammonia total (as N) | Value | | M&R Milligrams per Liter (mg/L) | Effluent Gross | 02B | Quarterly | DISCRT |
| Phosphorus, total (as P) | Value | | M&R Milligrams per Liter (mg/L) | Effluent Gross | 02B | Quarterly | DISCRT |
| pH, maximum | Maximum | | <= 9.0 Standard Units (SU) | Effluent Gross | 02B | Quarterly | DISCRT |
| pH, minimum | Minimum | | >= 6.5 Standard Units (SU) | Effluent Gross | 02B | Quarterly | DISCRT |

Notes (Discharge Limitations Table):

1. Total Xylenes
2. EPA Method 8015B, full range, purgeable and extractable

**Discharge Limitations Table for Sample Location 02B (External Outfall) To Be Reported Annually**

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Alkalinity, bicarbonate (as CaCO3) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Alkalinity, total (as CaCO3) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Aluminum, total (as Al) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Antimony, total (as Sb) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Arsenic, total (as As) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Barium, total (as Ba) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Beryllium, total (as Be) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Cadmium, total (as Cd) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Calcium, total (as Ca) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Chloride (as Cl) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Chromium, total (as Cr) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |

**Discharge Limitations Table for Sample Location 02B (External Outfall) To Be Reported Annually**

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Copper, total (as Cu) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Fluoride, total (as F) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Iron, total (as Fe) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Lead, total (as Pb) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Magnesium, total (as Mg) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Manganese, total (as Mn) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Mercury, total (as Hg) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Nickel, total (as Ni) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Nitrogen, total | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Potassium, total (as K) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Selenium, total (as Se) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |

## Discharge Limitations Table for Sample Location 02B (External Outfall) To Be Reported Annually

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| Parameter | Base | Quantity | Concentration | Monitoring Loc | Sample Loc | Measurement Frequency | Sample Type |
| Silver, total (as Ag) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Sodium, total (as Na) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Sulfate, total (as SO4) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Thallium, total (as Tl) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Zinc, total (as Zn) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| 1,1,1-Trichloroethane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| 1,1,2,2-Tetrachloroethane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| 1,1,2-Trichloroethane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| 1,1-Dichloroethane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| 1,1-Dichloroethylene | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| 1,2-Dichlorobenzene | Value | | M&R Micrograms per Liter | Effluent Gross | 02B | Annual | DISCRT |

## Discharge Limitations Table for Sample Location 02B (External Outfall) To Be Reported Annually

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| Parameter | Base | Quantity | Concentration | Monitoring Loc | Sample Loc | Measurement Frequency | Sample Type |
| | | | (ug/L) | | | | |
| 1,2-Dichloroethane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| 1,2-Dichloropropane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| 1,3-Dichlorobenzene | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| 1,4-Dichlorobenzene | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| 2-Chloroethyl vinyl ether, (mixed) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Dichlorobromomethane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Bromoform | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Methyl bromide (Bromomethane) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Carbon tetrachloride | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Chlorobenzene | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| | | | M&R | | | | |

## Discharge Limitations Table for Sample Location 02B (External Outfall) To Be Reported Annually

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Chloroethane | Value | | Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Chloroform | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Methyl chloride (Chloromethane) | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| cis-1,3-Dichloropropene | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Dibromochloromethane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Methylene chloride | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| trans-1,2-Dichloroethylene | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| trans-1,3-Dichloropropene | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Trichlorofluoromethane | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |
| Vinyl chloride | Value | | M&R Micrograms per Liter (ug/L) | Effluent Gross | 02B | Annual | DISCRT |

**Discharge Limitations Table for Sample Location Sum (Sum) To Be Reported Monthly**

| | Discharge Limitations | | | Monitoring Requirements | | | |
|---|---|---|---|---|---|---|---|
| **Parameter** | **Base** | **Quantity** | **Concentration** | **Monitoring Loc** | **Sample Loc** | **Measurement Frequency** | **Sample Type** |
| Flow rate | 30 Day Average | M&R Million Gallons per Day (Mgal/d) | | Effluent Gross | SUM | Continuous | METER |
| Flow rate | Daily Maximum | <= 0.432 Million Gallons per Day (Mgal/d) | | Effluent Gross | SUM | Continuous | METER |

**Rationale for Permit Requirements:**

The monitoring requirements and permit limits have been established to ensure that the receiving waters are not degraded from the discharge of the treated groundwater. The requirements are consistent with similar groundwater remediation system discharge permits.

Volatile Organic Compounds (VOCs): Quarterly analysis for PCE, trichloroethylene (TCE), trihalomethane, benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tert-butyl ether (MTBE) has been retained from the previous permit. The Division's technology based remediation standards for VOCs are as follows: PCE 5 µg/L; TCE 5 µg/L; trihalomethane 100 µg/L; BTEX 5 µg/L, 100 µg/L, 100 µg/L, and 200 µg/L, respectively; and MTBE 20 µg/L. Annual monitoring of all other VOCs has been retained and is required to verify VOC removal by the treatment system.

Total Petroleum Hydrocarbons (TPH): Quarterly analysis for TPH has been retained from the previous permit. The Division's technology based remediation standard is 1.0 mg/L. Continued monitoring is required to verify TPH removal by the treatment system.

Total Dissolved Solids (TDS): Quarterly analysis for TDS has been retained from the previous permit. The shallow groundwater with naturally occurring elevated TDS levels would flow to the Las Vegas Wash, if it was not intercepted by the remediation system. Therefore, the TDS standard in NAC 445A.2156 is not applied to remediation discharges in this area. The permit is essentially for interception and passage of groundwater and thus is exempted under the Colorado River Basin Salinity Control Forum's policy on groundwater interception.

Total Inorganic Nitrogen (TIN) and pH: Quarterly analysis for TIN and pH has been retained from the previous permit due to the inclusion in NAC 445A.2156.

Total Phosphorus and Total Ammonia as Nitrogen: Quarterly monitoring of total phosphorus and ammonia has been retained from the previous permit due to the Wash total maximum daily loads (TMDLs) for these parameters.

Profile I: Annual monitoring and reporting of Profile I parameters are included because of possible natural

occurrences and these constituents are not targeted or significantly attenuated by the treatment process.

**Special Conditions:**

SA – Special Approvals / Conditions Table

| Item # | Description |
|---|---|
| 1 | Spent carbon shall be replaced when breakthrough has been detected, with the fresh carbon being placed in the final canister and the other canisters rotated so that the oldest carbon is placed in the first position, and subsequent positions are occupied by decreasingly spent carbon. A sufficient amount of fresh carbon shall be available to replace the activated carbon in all vessels at the same time. If permit limits are exceeded due to breakthrough, a subsequent sample shall be taken once the carbon has been replaced and the system has been restarted. |
| 2 | The O&M Manual shall include a carbon replacement schedule for the vessels used in the treatment system. |

**Reasonable Potential Analysis and Antidegradation Review:**

The treated groundwater shall meet the applicable standards listed in NAC 445A.1236 and NAC 445A.2156, therefore no degradation of existing water in the Wash is expected.

**Flow:**

The Permittee has requested to increase the permitted flow to a daily maximum rate of 0.432 MGD.

**Corrective Action Sites:**

There are three (3) other Bureau of Corrective Actions (BCA) remediation sites located within one mile of this facility. The BCA case officers don't expect the off-site remediation to be impacted by the increase in discharge from this site.

**Wellhead Protection Program:**

This facility is not located within an established Drinking Water Protection Area or Wellhead Protection Area.

**Schedule of Compliance:**

SOC – Schedule of Compliance Table

| Item # | Description | Due Date |
|---|---|---|
| 1 | The Permittee shall submit for review and approval two (2) copies of an updated Operations and Maintenance (O&M) Manual, compiled in accordance with the appropriate sections of Nevada Division of Environmental Protection (NDEP) guidance document WTS-2, "Minimum Information Required for an Operation and Maintenance Manual for a Wastewater Treatment Plant." The O&M Manual shall be prepared by a Nevada Registered Professional Engineer or Division-approved qualified person. If prepared by a Nevada Registered Professional Engineer, the O&M Manual shall be wet stamped. | 11/1/2013 |

**Deliverable Schedule:**

DLV– Deliverable Schedule for Reports, Plans, and Other Submittals

| Item # | Description | Interval | First Scheduled Due Date |
|---|---|---|---|
| 1 | Quarterly DMRs | Quarterly | 10/28/2013 |
| 2 | Annual Report | Annually | 1/28/2014 |

**Procedures for Public Comment:**

The Notice of the Division's intent to issue a permit authorizing the facility to discharge to surface waters of the State of Nevada subject to the conditions contained within the permit, is being sent to the **Las Vegas Review Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing until 5:00 P.M. **8/26/2014** , a period of 30 days following the date of the public notice. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator of EPA Region IX or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted. Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determined to be appropriate. All public hearings must be conducted to accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

**Proposed Determination:**

The Division has made the tentative determination to issue / re-issue the proposed 5-year permit.

Prepared by: **Jason Ferrin**
Date: **6/18/2013**
Title: **E.I., Staff II Associate**