

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
FACT SHEET
(Pursuant to NAC 445A.236)

Permittee The Stirling Club
2827 Paradise Rd
Las Vegas NV 89109

Permit No. NV0023256

Facility Turnberry Place Tower II
2827 Paradise Rd
(NW corner of intersection with Riviera Blvd)
38° 08' 12" N
115 09' 19" W
T21S R61E S9

General This is the first renewal for this permit, which was originally issued in 2003. The parking garage here extends below ground into the water table and is dewatered to prevent structural damage and nuisance conditions. Groundwater is collected by under floor and perimeter drains and discharged to a drop inlet on Paradise Rd. Although the discharge had previously been untreated based on a lack of contamination, recent detections of PCE have resulted in the planned installation of granular activated carbon (GAC) canisters. Limits for other constituents have been included as a precaution. The discharge reaches Las Vegas Wash via the storm drain system.

Receiving Water Characteristics The storm drain discharges to Las Wash, and the standards set at the nearest downstream control point, "Las Vegas Wash at Telephone Line Road" (NAC 445A.199), apply. In addition, the state wide standards for toxic materials, NAC 445A.144, are applicable, and Total Maximum Daily Loads (TMDLs) for Las Vegas Wash have been established for total phosphorus and ammonia.

Rationale for Permit Requirements The monitoring requirements, discharge limits, and a summary of the data submitted under the previous permit are presented in the tables below and form the basis for the discussion that follows. The 1/16/8 sample results were submitted as part of the renewal application.

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Monitoring Requirements and Discharge Limitations

| Parameter | Discharge Limitation | Monitoring Requirements | | |
|--------------------------|--------------------------|-------------------------|------------|-------------|
| | | Sample Location | Frequency | Sample Type |
| Flow Rate | 249,000 gpd ¹ | iii | continuous | meter |
| TPH (C6 - C40) | 1 mg/l | iii | quarterly | discrete |
| EPA 8260 ² | m&r | i, ii, iii | quarterly | discrete |
| Total Trihalomethanes | 100 µg/l | iii | quarterly | discrete |
| Trichloroethene (TCE) | 5 µg/l | iii | quarterly | discrete |
| Tetrachloroethene (PCE) | 5 µg/l | iii | quarterly | discrete |
| MTBE ³ | 20 µg/l | iii | quarterly | discrete |
| Benzene | 5 µg/l | iii | quarterly | discrete |
| Toluene | 100 µg/l | iii | quarterly | discrete |
| Ethylbenzene | 100 µg/l | iii | quarterly | discrete |
| Xylenes (total) | 200 µg/l | iii | quarterly | discrete |
| Total Kjeldahl Nitrogen | m&r | iii | quarterly | discrete |
| Total Ammonia as N | m&r | iii | quarterly | discrete |
| Nitrite + Nitrate as N | m&r | iii | quarterly | discrete |
| Total Inorganic Nitrogen | m&r | iii | quarterly | discrete |
| Total Nitrogen | m&r | iii | quarterly | discrete |
| Total Phosphorus | m&r | iii | quarterly | discrete |
| pH | 6.5 to 9 su | iii | quarterly | discrete |
| TDS | m&r | iii | quarterly | discrete |
| Metals ⁴ | m&r | iii | quarterly | discrete |

i = influent to carbon system, ii = influent to final carbon canister, iii = effluent from carbon system, m&r = monitor & report

1. Report average gpd per month
2. Full range, report all parameters. This will include the organics listed below this entry in the table.
3. Methyl tert-butyl ether
4. Analyses shall be for total metals and include include antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chromium, copper, fluoride, iron, lead, magnesium, manganese, mercury, molybdenum, nickel, selenium, silver, thallium, zinc, and hardness as calcium carbonate.

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Discharge Data, June 03 - Sep 08
 mg/l except as indicated
 non-detect results indicated by blank space

| Parameter | Min | Avg | Max | Criteria |
|-------------------------------|-------------|-------------|--------------|-----------|
| flow, gpd | 1,800 | 38,612 | 57,000 | |
| pH, su | 6.95 | 7.44 | 7.81 | 6.5 - 9.0 |
| TDS | 2450 | 2791 | 2980 | 1900 |
| TIN | 4.93 | 8.27 | 11.19 | 20 |
| NH3 - N | 0.084 | 0.156 | 0.240 | |
| NO2+NO3 - N | 4.93 | 8.22 | 11.00 | 10 |
| TP | 0.01 | 0.05 | 0.11 | |
| TPH | | | | |
| tetrachloroethene (PCE), ug/l | 4.1 | 16.2 | 32.0 | 5 |

Analytical Results for 1/16/8 Sample
 µg/l except as indicated
 non-detect results indicated by blank space

| Parameter | Units | Result | Criteria |
|-----------|-------|------------|-------------------|
| Sb | | | |
| As | | 2.2 | 50 |
| Ba | | 15 | 2000 |
| Be | | | |
| B | | 760 | 750 |
| Cd | | | |
| Ca | mg/l | 300 | |
| Cr | | 3.0 | 100 |
| Cu | | 4.2 | 95.7 ¹ |
| Fluoride | | 180 | 1000 |
| Fe | | | |
| Pb | | | |
| Mg | mg/l | 170 | |
| Mn | | | |
| Hg | | | |
| Mo | | 5.1 | 19 |
| Ni | | 9.6 | 543 ² |
| Se | | 12 | 5.0 |
| Ag | | | |
| Tl | | | |
| Zn | | | |
| Hardness | mg/l | 1600 | |

1. $[Cu] = 0.960 \exp\{0.8545 \ln[H] - 1.702\}$
2. $[Ni] = 0.997 \exp\{0.8460 \ln[H] + 0.0584\}$

FLOW, 249,000 gpd: Flow data is necessary for determining impacts to the receiving water from the various constituents present. Construction dewatering at the adjacent Fontainebleau site (NV0023566) has apparently lowered the water table in the area, so flow will likely increase when that's over. As this is a passive dewatering system, and permit fees are based on flow, the limit has been set at the top of the lowest applicable category.

TOTAL PETROLEUM HYDROCARBONS (TPH), (C6 - C40), 1 mg/l: This is a technology based limit. The analysis is included because it covers a wide range of potential pollutants, although it's usefulness is limited by relatively high detection limits. TPH is typically split up as: gasoline range organics (GRO) C6 - C12, diesel range organics (DRO) C12 - C28, and oil range organics (ORO) C28 - C40. TPH was not detected.

EPA 8260, full range, report all parameters: Similar in purpose to the TPH analyses but with much lower detection limits. The results include the organic constituents listed below. PCE was the only parameter reported as detected under the previous permit. Influent analyses have been added to provide information on aquifer conditions.

- TOTAL TRIHALOMETHANES, 100 µ/l: This is the toxics standard for the municipal or domestic supply beneficial use.
- TRICHLOROETHENE (TCE), 5 µg/l: This is the toxics standard for the municipal or domestic supply beneficial use.
- TETRACHLOROETHENE (perchloroethene - PCE), 5 µg/l: This is the Maximum Contaminant Level (MCL) for drinking water. PCE was detected in five of the the last six samples analyzed.
- METHYL TERT-BUTYL ETHER (MTBE), 20 µg/l: This limit is taken from the Corrective Action program, and is based on taste and odor considerations.
- BENZENE, 5 µg/l: This is the toxics standard for the municipal or domestic supply beneficial use.
- TOLUENE, 100 µg/l: Toluene is methyl benzene. This technology based limit is used instead of the toxics standard (14,300 µg/l) since it's easily achievable.

- ETHYLBENZENE, 100 µg/l: This technology based limit is used instead of the toxic standard (1,400 µg/l) since it's easily achievable.
- XYLENES (TOTAL), 200 µg/l: This is a technology based limit. Total xylenes consist of the three isomers of dimethyl benzene.

NITROGEN and PHOSPHORUS: These are included based on potential inputs from leaking sewers and other sources. Limits aren't used in general because the limited occurrence wouldn't normally justify the level of treatment required. Specie specific information follows.

TOTAL KJELDAHL NITROGEN (TKN), m&r: TKN is the sum of the organic forms plus ammonia, and it's needed as part of the determination of total nitrogen.

TOTAL AMMONIA (NH₃/NH₄) as N, m&r: The TMDL for ammonia is 970 lb/day; at 38,612 gpd and 0.156 mg/l the contribution from this source would be 0.0503 lb/day. The actual contribution is likely much lower since ammonia was only detected in about a quarter of the samples.

NITRITE (NO₂) + NITRATE (NO₃): These are most often compared to the MCL for nitrate, 10 mg/l. Nitrite rapidly converts to nitrate in the environment.

TOTAL INORGANIC NITROGEN (TIN), m&r: This is included because of the control point standard, 20 mg/l, which is based on existing quality. TIN is determined from the sum of separate analyses for nitrite, nitrate, and ammonia.

TOTAL NITROGEN (TN), m&r: TN is determined from the sum of separate analyses for Kjeldahl, nitrite, and nitrate.

TOTAL PHOSPHORUS, m&r: The TMDL is 434 lb/day. At 38,612 gpd and 0.05 mg/l the contribution from this source would be 0.0161 lb/day. The actual contribution is probably lower since phosphorus was only detected in about half of the samples.

pH, 6.5 - 9.0, standard units: This is the control point standard, based on beneficial uses. Although not controlled by a treatment process, an excursion would represent some type of mishap and could be corrected fairly easily.

TDS, m&r: This is included because of existing salinity impacts in the Colorado River basin. The control point standard is 1900 mg/l, based on existing quality. The parameter is not limited based on natural occurrence, dilution, and difficulty of treatment.

METALS, monitor & report: These are of interest because of their environmental effects in general. They're not limited based on natural occurrence, dilution, and difficulty of treatment. These analyses were not conducted under the previous permit.

Changes from the Previous Permit Tower IV has been removed as it's above the water table and isn't dewatered. The flow limit has been raised to the top of the applicable fee category. Carbon treatment is specified. Nitrogen species and the complete 8260 results are to be reported. Metals analyses are to be conducted. Additional limits for typical organic parameters have been added as a precaution.

Compliance History The last five sampling episodes yielded four PCE detections above the 5 mg/l limit.

Schedule of Compliance An O & M manual is required by the six month anniversary of the effective date of the permit.

Procedures for Public Comment Notice of the Division's intent to issue discharge permit NV0023256 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 must submit written comments to the Division within (30) days of the publication date. The comment period can be extended at the discretion of the Administrator. The deadline for comments is 5:00 pm Tuesday March 3, 2009, although letters postmarked on that date will also be accepted.

A public hearing on the proposed determination can be requested by the applicant, any affected state or interstate agency, the Regional Administrator, or any interested agency, person, or group of persons. The request must be filed within the comment period and indicate the interest of the person filing the request and the reasons why a hearing is warranted. Public hearings granted by the Division are conducted in accordance with NAC 445A.238. The final determination of the Division

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may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination The Division has made the tentative determination to issue the proposed discharge permit for a five year term.

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