

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

Permittee Department of Public Works
City of Las Vegas
731 S 4th St
Las Vegas NV 89101

Permit No. NV0023183

Facility Groundwater collection system serving the parking garage at City Center Place
400 4th St, between Lewis Ave and Clark Ave
Las Vegas, Clark County
Latitude: 36° 10' 00" N
Longitude: 115° 08' 30" W
T20S R61E S34

General City Center Place is an office and retail building with a separate parking garage. The parking garage extends below the water table and is dewatered by a series of (9) 4 in. perforated PVC pipes spaced at regular intervals below the garage floor. The intercepted groundwater collects in a 10 ft deep sump prior to being pumped through a 4 in. pipe to a drop inlet in front of the building on 4th Street. The storm drain slopes to the north and connects to the Las Vegas Creek box culvert on Washington Street, which in turn discharges to Las Vegas Wash. The discharge is untreated based on a lack of contamination.

Receiving Water Characteristics The storm drain discharges to a tributary of Las Vegas 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, NAC445A.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 quarterly monitoring conducted under the previous permit from January 2003 through March 2007 (17 sample events) are presented in the two tables below and form the basis for the discussion that follows.

Table I.A.1 Discharge Limitations

Parameter mg/l except as noted		Discharge Limitations	Monitoring Requirements	
			Measurement Frequency	Sample Type
Flow rate, gpd ¹		m & r	continuous	meter
TPH (C6 - C36)		1	quarterly	discrete
EPA 8260 · Full Range · Report All Parameters · µg/l	Total Trihalomethanes	100	quarterly	discrete
	Trichloroethene (TCE)	5	quarterly	discrete
	Tetrachloroethene (PCE)	5	quarterly	discrete
	MTBE ²	20	quarterly	discrete
	Benzene	5	quarterly	discrete
	Toluene	100	quarterly	discrete
	Ethylbenzene	100	quarterly	discrete
	Xylenes (total)	200	quarterly	discrete
Nitrogen Species as N	Total Inorganic Nitrogen	20	quarterly	discrete
	NH ₃	m & r	quarterly	discrete
	NO ₂ + NO ₃	m & r	quarterly	discrete
Total Phosphorus		m & r	quarterly	discrete
pH, standard units		6.5 to 9	quarterly	discrete
TDS		m & r	quarterly	discrete
Metals ³		m & r	annual	discrete

Notes

m & r = monitor & report

1. Report average gpd for each month
2. Methyl tert-butyl ether
3. Analyses shall 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. Analyses shall be for total metals.

Discharge Monitoring Results - January 2003 through March 2007

mg/l except as indicated	count ¹	min	avg	max
parameter				
flow, gpd	51	0	4836	9731
NH3	2	0.19	0.24	0.29
NO2 + NO3	17	1.85	4.39	7.48
TIN	17	1.85	4.42	7.77
TDS	17	1020	1462	1730
TP	17	0.018	0.091	0.940
tetrachloroethene (PCE), ug/l	2	1.3	1.4	1.5

1. Number of flow measurements or analytical detections. Flow was reported monthly

FLOW , monitor & report: Flow data is necessary for determining impacts to the receiving water from the various constituents present. The average flow rate was 4836 gpd (3.358 gpm).

ORGANIC CONTAMINANTS: Although the discharge is untreated, limits for organic contaminants have been included as a precaution based on the two recent detections of PCE.

- TOTAL PETROLEUM HYDROCARBONS (TPH), (C6 - C36), 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.
- EPA 8260, full range, report all parameters: Similar in purpose to the TPH analysis but with much lower detection limits. The following parameters have been included because they are typically associated with solvent and fuel plumes, and are included in the 8260 analyses.
 - TOTAL TRIHALOMETHANES, 100 µg/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 (PCE), 5 µg/l: This is the Maximum Contaminant Level (MCL) for drinking water. PCE was detected two times, in November 2005 and March 2007, at 1.3 and 1.5 µg/l, respectively.

- 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 toxic 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 SPECIES AS N:

- TOTAL INORGANIC NITROGEN (TIN), 20 mg/l: This limit is taken from the control point standards, and is based on existing water quality. Total inorganic nitrogen is determined from the sum of separate analyses for nitrate, nitrite, and ammonia; the average concentration was 4.42 mg/l.
- AMMONIA, monitor & report: This is included due to the TMDL, which is 970 lb/day. Ammonia was detected twice, at 0.19 and 0.29 mg/l. At 0.29 mg/l and 4836 gpd, the contribution from this source would be 0.012 lb/day.
- NITRITE (NO₂) + NITRATE (NO₃), monitor & report: These are included since they're part of the TIN analysis. These were detected in every sample, with an average concentration of 4.39 mg/l; assumed to be mostly in the form of NO₃.

TOTAL PHOSPHORUS, monitor & report: This is included due to the TMDL, which is 434 lb/day. Phosphorus was detected in every sample, with an average concentration of 0.091 mg/l. At that concentration and 4836 gpd, the contribution from this source would be 0.0037 lb/day.

TDS, monitor & report: This is included due to salinity impacts in the Colorado River basin. The average concentration is 1462 mg/l, vs a control point standard of 1900 mg/l based on existing quality. This parameter is not limited based on natural occurrence and difficulty of treatment.

METALS, monitor & report: These are of interest based on their environmental effects in general. They're not limited based on natural occurrence and difficulty of treatment, and weren't sampled for under the previous permit.

Changes from the Previous Permit The changes are listed below with some explanation. Additional information is given in the previous section.

FLOW: The previous permit limit of 60,000 gpd has been replaced with "monitor & report" because flow rate is governed by water table elevation, hydraulic conductivity, and the capacity of the collection system; and setting a "limit" in this regard serves no environmental purpose.

TPH: The "monitor & report" of the previous permit has been replaced with a 1 mg/l limit.

EPA 8260: The monitoring requirement has been increased from annual to quarterly, based on recent detections of PCE. Limits have been added for eight parameters.

NH₃, and NO₂ + NO₃: Analytical results are to be reported.

METALS: An annual scan for priority pollutant metals has been added.

Procedures for Public Comment Notice of the Division's intent to renew discharge permit NV0023183, authorizing a discharge from the groundwater collection system serving the parking garage at the City of Las Vegas' City Center Place, 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 Monday,

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September 17, 2007, 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 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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