

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(pursuant to NAC 445A.236)

Permittee: United States General Services Administration
600 Las Vegas Boulevard South, Suite 600
Las Vegas, Nevada 89101

Permit: NV0022942

Location: Lloyd D. George United States Courthouse
300 Las Vegas Boulevard South
Las Vegas, Clark County, Nevada 89101

Latitude: 36° 09' 50" N
Longitude: 115° 08' 40" W

Township 20 S, Range 61 E, Section 34 MDB&M

Permitted Flow: 50,000 gallons per day (gpd) – Daily Maximum
25,000 gpd – 30-Day Average

Receiving Water: Las Vegas Wash, via Clark County Stormdrain System

Drinking Water Protection: The facility is not within a 6000' Drinking Water Protection Areas (DWPAs) around any public or community water supply well. There is currently no established Wellhead Protection Area (WHPA) for this area.

Corrective Actions Sites: There are 16 Bureau of Corrective Actions (BCA) sites within 1 mile of the subject facility. All are associated with cleanup of petroleum hydrocarbons (due to leaking underground storage tanks) (USTs) or volatile organic solvents (due to dry cleaning discharges). No impact to corrective actions activities is expected due to dewatering at this site.

General: The Permittee has applied for a National Pollutant Discharge Elimination System (NPDES) permit, NV0022942, renewal to continue to discharge a daily maximum of 49,500 gpd of treated dewatering water to the Las Vegas Wash via the Nevada Department of Transportation (NDOT) stormdrain system and Las Vegas Creek. Construction dewatering started under temporary permit TNEV98078, issued to J.A. Jones Construction Company, and continued under NV0022942, issued February 8, 1999 to J.A. Jones. On May 24, 2000, the permit was transferred to the current Permittee.

Prior to dewatering, groundwater was located at a depth of approximately eight feet below grade at the site. The groundwater reportedly contains benzene, toluene, ethylbenzene, xylene (the BTEX compounds typical of gasoline contamination), perchloroethylene (PCE), and total petroleum hydrocarbons (TPH). The permit requires no monitoring of the groundwater prior to treatment and there is no background groundwater quality data in the 1998 or 2004 permit applications, but the

application states that these contaminants are believed to be present. The Courthouse contains sub-level parking and basement areas with floors located below the level of the groundwater. To prevent leakage into the sub-level areas, two passive sub-floor drain systems were installed, one beneath the bottom floor of the building, the other surrounding the exterior building foundation, to collect the groundwater at approximately two feet below the base of the sub-level floor.

Water collected by the passive drain systems is discharged to a concrete sump located at the south end of the site. The water is then pumped through a granulated activated carbon filtering system that is designed to remove volatile organic compounds and dissolved petroleum hydrocarbons from a maximum of 50,000 gpd. The treated water is discharged into the stormdrain located at the northeast corner of the intersection of Las Vegas Boulevard and Clark Avenue. The stormdrain system along Las Vegas Boulevard is owned and maintained by NDOT. The treatment system was constructed in a concrete vault with the base eight feet below the original grade.

Contaminated groundwater is pumped from the collection sump to a 430-gallon polyethylene influent batch tank (Tank 1). The water from the batch tank is pumped through two 100-micron silt filters set in series, then into one of two 2,000-pound carbon filter units (arranged in parallel), to the settling tank, or discharged directly to the stormdrain. The water drains from the bottom of the units and is discharged from the vault via a six-inch diameter PVC pipe that carries the water by gravity to the Las Vegas Boulevard stormdrain.

The system includes a second 430-gallon tank (Tank 2), which is used to collect treated water generated during compliance sampling and untreated water during maintenance operations, such as back flushing the carbon units. Water from the settling tank can be transferred to the influent batch tank or discharged directly to the storm sewer. Sampling of untreated discharges to the stormdrain will be required.

The permit also authorizes the discharge of stormwater from the basement parking garage. This runoff is collected and diverted through a 750-gallon oil-water separator before discharge to the stormdrain via the 6-inch PVC pipe.

Receiving Water Characteristics: The treated effluent is discharged to the Las Vegas Boulevard stormdrain, where it flows to the Las Vegas Wash via Las Vegas Creek.

The beneficial uses of the Las Vegas Wash from Telephone Line Road to confluences of discharges from Clark County and City of Las Vegas wastewater treatment plants are cited at Nevada Administrative Code (NAC) 445A.198 as irrigation, watering of livestock, recreation not involving contact with the water, maintenance of a freshwater marsh, propagation of wildlife, and propagation of aquatic life, excluding fish. This section does not preclude the establishment of a fishery. Water quality standards for this segment of the Wash are cited at NAC 445A.199.

Discharge Characteristics: The discharge consists of treated groundwater from the foundation dewatering system and treated stormwater from the basement parking garage. The groundwater reportedly contains trace amounts benzene, toluene, ethylbenzene, xylene, PCE, and TPH. Because the stormwater is collected in the parking garage, the stormwater must be treated in an oil-water separator prior to discharge. The stormwater discharge volume and quality are not monitored.

During the period from April 2004 through February 2009, the following discharge characteristics

were reported:

PARAMETER	PERMIT LIMIT	AVERAGE	MAXIMUM	MINIMUM
Flow (gpd)				
30-Day Average	25,000	27.82	55.2	4.9
Daily Maximum	49,500	45.61	100.5	7.2
pH (Standard Units)				
Average	6.5 to 9.0	7.55	7.92	7.24
Maximum		7.71	8.35	7.41
Total Inorganic Nitrogen (mg/l)	20	<2	<5	
Total Dissolved Solids (mg/l)	M & R	2624	4810	2040
Ammonia as N (mg/l)	M & R	<0.3	0.56	<0.3
Total Phosphorus (mg/l)	M & R	0.05	0.3	<0.025
Benzene (µg/l)	5	<2	<5	<1
Ethylbenzene (µg/l)	100	<2	<5	<1
Total Xylenes (µg/l)	200	<5	<10	<1
Toluene (µg/l)	200	<5	<5	<1
MTBE (µg/l)	20	<5	<5	<5
Total Petroleum Hydrocarbons (mg/l)	1	<1	5.9	<0.54

Proposed Effluent Limitations: During the period beginning on the effective date of this permit and lasting until the permit expires, the Permittee is authorized to discharge from Outfall 001, the six-inch diameter PVC pipe that flows to the Las Vegas Boulevard stormdrain. The discharge shall consist of treated groundwater from the foundation dewatering system and treated stormwater from the basement parking garage only.

- a. Effluent samples taken in compliance with the monitoring requirements specified below shall be taken at:
 - i. Totalizing flow meter between the collection vault (wet well) and Tank 1;
 - ii. Influent from collection vault to Tank 1;
 - iii. The treated water sample port at Tank 2; and
 - iv. The discharge of any water that has not flowed through the carbon vessels, including but not limited to discharge from the vault sump, the settling tank, or the influent batch tank.
- b. The discharge shall be limited and monitored by the Permittee as specified below:

PARAMETERS	EFFLUENT DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	30-Day Average	Daily Maximum	Sample Locations	Measurement Frequency	Sample Type
Flow (MGD)	0.025	0.050	i.	Continuous	Flow Meter
				Quarterly	Photograph ²
	Monitor and Report (gallons)		iv.	Each Occurrence	Estimate
Benzene (µg/L)	---	5	iii.	Quarterly ¹	Discrete
			iv	Each Occurrence	Discrete
Ethylbenzene (µg/L)	---	100	iii.	Quarterly ¹	Discrete
			iv	Each Occurrence	Discrete
Toluene (µg/L)	---	100	iii.	Quarterly ¹	Discrete
			iv	Each Occurrence	Discrete
Xylenes, Total (µg/L)	---	200	iii.	Quarterly ¹	Discrete
			iv	Each Occurrence	Discrete
Methyl tert-butyl ether (µg/L)	---	20	iii.	Quarterly ¹	Discrete
			iv	Each Occurrence	Discrete
Perchloroethylene (µg/L)	---	5	iii.	Quarterly ¹	Discrete
			iv	Each Occurrence	Discrete
Volatile Organic Compounds EPA Method 624 - report all parameters (µg/L)	Monitor and Report ¹		ii.	Annually	Discrete
Total Petroleum Hydrocarbons, Extractable, EPA Method SW8015M (mg/L)	Monitor and Report ¹		ii.	Annually	Discrete
	---	1.0	iii.	Quarterly ¹	Discrete
			iv	Each Occurrence	Discrete
Total Inorganic Nitrogen -N (mg/L)	---	20.0	iii.	Quarterly	Discrete
Total Dissolved Solids (mg/L)	Monitor and Report		iii.	Quarterly	Discrete
Total Ammonia -N (mg/L)	Monitor and Report		iii.	Quarterly	Discrete
Total Phosphorus -P (mg/L)	Monitor and Report		iii.	Quarterly	Discrete
pH (standard units)	6.5 ≤ pH ≤ 9.0		iii.	Quarterly	Discrete

Notes:

- 1: Any VOC or TPH detection shall require carbon replacement within three weeks of obtaining the data from the laboratory. If the carbon cannot be replaced within three weeks of data receipt, the Permittee shall initiate every other day sampling and analysis of the discharge water from the second carbon column. Exceedance of the 1.0 mg/L TPH standard or any of the listed permit VOC standards in the discharge from the second carbon column shall be a permit violation.
- 2: The Permittee shall submit a readable, date stamped photograph of the face of the totalizing flowmeter, indicating the quarterly meter reading.

MGD: Million gallons per day. -N: As nitrogen.
 µg/L: Micrograms per liter. -P: As phosphorus.
 mg/L: Milligrams per liter. gpd: Gallons per day.

Schedule of Compliance: The Permittee shall implement and comply with the provisions of the schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications which the Administrator may make in approving the schedule of compliance.

- a. The Permittee shall achieve compliance with the effluent limitations upon issuance of the permit.
- b. **By MMM DD, 2010**, (Within ninety (90) days of the permit effective date), the Permittee shall submit a revised Operations and Maintenance Manual to the Division for review and approval. The document shall be submitted to the Division at the following address:

Mr. Nadir Sous
Division of Environmental Protection
Bureau of Water Pollution Control - Las Vegas
2030 E. Flamingo Rd, Suite 230
Las Vegas, NV 89119-0837

A final copy of the approved Manual shall be submitted to

Department of Conservation and Natural Resources
Division of Environmental Protection
Bureau of Water Pollution Control
ATTN: Compliance Coordinator
901 S. Stewart Street, Suite 4001
Carson City, Nevada 89701

Rationale for Permit Requirements: Monitoring requirements for the parameters specified in the Proposed Effluent Limitations table have been established in the draft permit to ensure that the receiving water, the Las Vegas Wash, is not degraded as a result of the Permittee's dewatering discharge.

This permit is for the interception, treatment, and passage of groundwater and thus is exempted from Total Dissolved Solids limits under the Colorado River Basin Salinity Control Forum's policy on groundwater interception.

Flow: The daily maximum flow is limited by the design capacity of the treatment system and the fee categories of NAC 445A.232. A time stamped digital photograph of the face of the totalizing flowmeter is required quarterly to ensure accurate flow monitoring.

Volatile Organic Compounds (VOC): Quarterly analysis of the EPA Method 624 VOCs is required to verify removal prior to discharge of any VOC that may have been drawn to the site by the Permittee's dewatering activities.

Total Petroleum Hydrocarbons (TPH): The shallow groundwater in the vicinity of the facility has reportedly been contaminated by a hydrocarbon release. Monitoring is required to verify proper treatment prior to discharge.

Total Inorganic Nitrogen as Nitrogen (TIN): NAC 445A.199 includes a requirement to maintain existing higher quality TIN standard of 95% of the samples \leq 20.0 mg/L.

Total Dissolved Solids (TDS): NAC 445A.199 includes a single value at 180°C TDS standard for beneficial uses of \leq 3,000 mg/L. The TDS concentration of the groundwater at the time of permit renewal application was 2,190 mg/L. The shallow groundwater with naturally occurring elevated TDS levels would flow to the Wash, if it was not intercepted by the dewatering system, therefore, the TDS standard is not applied to dewatering and shallow groundwater remediation discharges in this area.

Again, this permit is for the interception, treatment, and passage of groundwater and thus is exempted from TDS limits under the Colorado River Basin Salinity Control Forum's policy on groundwater interception.

Total Ammonia as Nitrogen: A total ammonia TMDL of 970 lb/day has been established for the Las Vegas Bay/Wash. Based on the low concentrations of total ammonia in groundwater and the State's de minimis policy of exempting discharges of less than 1.0 lb/day total ammonia from the TMDL analysis, the total ammonia load is not expected to be an issue and has not been included in the draft permit.

Total Phosphorus as Phosphorus (TP): In 1987, a TP total maximum daily load (TMDL) of 434 lb/day was established for the Las Vegas Bay/Wash. The waste load allocations (WLAs) set are applicable for only April through September and were based on a target concentration of 0.64 mg/L. WLAs have been assigned only to the Cities of Las Vegas and Henderson and the Clark County Sanitation District.

Based on the State's de minimis policy of exempting discharges of less than 1 lb/day TP from the TMDL analysis, a WLA has not been assigned to this Permittee. At the permitted maximum 30-day flow of 0.025 MGD, the TP concentration in the discharge must exceed 4.80 mg/L to violate the 1 lb/day de minimus loading threshold. Therefore, TP concentrations and loads have not been included in the permit.

pH: NAC 445A.199 includes a single value pH water quality standard for beneficial uses within the range of 6.5 – 9.0 SU.

Proposed Determination: The Division has made the tentative determination to issue the proposed permit. The proposed permit will be for a term of five (5) years.

Procedures for Public Comment: The Notice of the Division's intent to issue a permit authorizing the facility to continue to discharge to the Las Vegas Wash via the Las Vegas Boulevard stormdrain system and Las Vegas Creek 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. November 18, 2009**, 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. Public hearings granted by the Division shall be conducted in accordance with NAC 445A.238.

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

Prepared by: Janine O. Hartley, P.E.
Draft: October 2009

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