

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(pursuant to NAC 445A.236)

Applicant: V.K. Leavitt
The Waterhole
PO Box 367
Overton, NV 89040-0367

Permit Number: NEV2010513

Location: The Waterhole
475 N. Moapa Valley Blvd.
Overton, Clark County, Nevada 89040
Latitude: 36° 33' 01" N, Longitude: 114° 27' 18" W
NW ¼ NW ¼ Section 13, T16S, R67E MDB&M

Discharge Outfall: Groundwaters of the State via percolation from off-site dust control applications.

General: The Permittee has applied for a 5-Year Groundwater Discharge Permit, NEV2010513, to discharge treated groundwater from a former fuel dispensing station, located at 475 N. Moapa Valley Blvd., in Overton, in Clark County, Nevada. Former leaking underground storage tanks resulted in hydrocarbon contamination to the near-surface groundwater aquifer. The groundwater remediation project is administered by the Division's Bureau of Corrective Actions. Beginning in April 2009, groundwater extraction utilizing one well, and treatment with granular activated carbon began. From June 2009 through July 2010 pre-treatment concentrations averaged: Benzene 2035 µg/l, Toluene 8261 µg/l, Ethylbenzene 6339 µg/l, Total xylenes 11,704 µg/l, and methyl-tertiary butyl ether (MTBE) 4110 µg/l. Two groundwater extraction wells are now used to pump the impacted groundwater to the surface for treatment, one on-site and one off-site. The separate discharges enter a common 2000-gallon oil/water separator, and the discharge is then transferred to a 4-stage air diffuser. Vapor is extracted to two 1000-lb vapor phase carbon vessels, and the liquid phase is pumped, after sampling, into a 500-gallon transfer tank, and then to two in-series 2000-lb carbon absorption vessels. A sampling port is installed in the influent line of the first carbon canister; samples here are designated as **influent**. A midpoint sampling port is installed between the lead and lag carbon absorption vessels to inform the site managers when the first vessel's carbon is spent; samples at the midpoint are identified as **midpoint**. And a discharge sampling port is installed after the lag vessel; these samples may be identified as **discharge**. The **discharge** sampling point, noted in the permit as **Outfall 001**, is the compliance point for discharge water quality limits. Following treatment, the water is pumped into an on-site 10,000-gallon tank and is periodically removed by water trucks. The treated discharge is used for off-site dust control at a nearby sand and gravel pit. The permit is for the discharge of treated groundwater, with appropriate restrictions and conditions.

Flow: The facility's daily maximum flow through the two 2000-lb carbon units is requested and permitted at 30 gallons per minute (gpm) or 0.0432 MGD. In May, 2010, the previous 800-lb carbon vessels were replaced with 2000-lb carbon vessels, and a second groundwater extraction well was added. Average daily discharge flow from June 2009 through July 2010 was approximately 2000 gallons per day.

Receiving Water Characteristics: Groundwater in the area of the discharge is generally high in TDS, but free of petroleum hydrocarbons. The data in the tables below is data collected from the lag vessel sampling port from June 2009 through July 2010.

TABLE 1. REMEDIATION SYSTEM DISCHARGE WATER QUALITY DATA

Nominal Averages, Minimums & Maximums from monthly samples collected June 2009 through July 2010

Parameter	Units	Average ¹	Maximum	Minimum ²
Benzene	µg/L	2.4	7.2	2
Toluene	µg/L	9.7	88	2.5
Ethylbenzene	µg/L	3.2	17	2.5
Xylenes, total	µg/L	13.1	140	2.5
MTBE	µg/L	5.7	26	2.5

1. Average values include non-detects (calculated as one-half of the detection limits).

2. The minimum values are reported as one-half of the detection limits.

Site Groundwater: The water table varies in depth from 9-11 feet below ground surface. Groundwater flow direction is to the southeast.

Corrective Actions Sites: This facility is undergoing remediation under the oversight of the Division's Bureau of Corrective Actions (BCA), and there are no other BCA sites within a one-mile radius of the permitted facility.

Well Head and Drinking Water Supply Protection: The facility is not within 6000' of a public water supply. The facility is not within an established Wellhead Protection Area (WPA) or capture zone.

Proposed Discharge Limitations, Sampling and Monitoring Requirements: During the period beginning on the effective date of this permit and lasting until the permit expires, the Permittee is authorized to discharge groundwater recovered at the facility for remediation of leaking underground gasoline storage tank(s). The groundwater shall be treated in a petroleum hydrocarbon treatment system prior to discharge to groundwaters of the State via off-site dust control applications.

- a. Discharge samples and measurements taken in compliance with the monitoring requirements specified below shall be taken at the following locations:
 - i. the flow meter on the discharge line of the second carbon canister;
 - ii. the sample port (identified as **influent**) in the influent line of the first carbon vessel
 - iii. the sample port on the discharge line between the lead and lag carbon vessels (identified as **midpoint**); and
 - iv. The sample port on the discharge line of the second carbon vessel (identified as **discharge**), prior to discharge to the 10,000-gallon water tower tank.

Table II. Discharge Limitations, Sampling and Monitoring Requirements

PARAMETERS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	30-Day Average	Daily Maximum	Sample Location	Measurement Frequency	Sample Type
Flow, MGD	.0432	0.0432	i.	Continuous	Flow meter
VOC EPA Method 8260B, µg/l	Monitor & Report (report all parameters)		iv.	Annually ¹	Discrete
Benzene, µg/l	---	M&R	ii, iii.	Quarterly	Discrete
	---	5	iv.		
Ethylbenzene, µg/l	---	M&R	ii, iii.	Quarterly	Discrete
	---	100	iv.		
Toluene, µg/l	---	M&R	ii, iii.	Quarterly	Discrete
	---	100	iv.		
Xylenes, Total, µg/l	---	M&R	ii, iii.	Quarterly	Discrete
	---	200	iv.		
Total Petroleum Hydrocarbons ² , mg/l	---	M&R	ii, iii.	Quarterly	Discrete
	---	1.0	iv.		
Methyl-tertiary-butyl ether, µg/l	---	M&R	ii, iii.	Quarterly	Discrete
	---	20	iv.		
Activated Carbon Addition and Advancement, Date and Pounds	---	M&R	Carbon Canisters	Each Event	Discrete

Notes:

- 1: To be analyzed in the fourth quarter and submitted to the Division with the Annual Report.
- 2: EPA Method 8015B and EPA Method 8260B, full range, purgeable and extractable.

mg/L: Milligram per liter. µg/L: Micrograms per liter. MGD: Million gallons/day
 M&R: Monitor and Report VOC: Volatile organic compounds

Rationale for Permit Requirements: The Division has established the monitoring requirements in Table 1 above to ensure that groundwaters of the State are not degraded as a result of project activities.

Flow: The rationale for the 30-day average daily discharge was explained in the Flow section of this fact sheet.

Organics (full range of petroleum hydrocarbons and VOCs, including MTBE, BTEX) -EPA Methods 8015B and 8260B: Various limits (see Table II.). TPH and volatile organics (VOC) are being treated by a filtration system including a 4-stage air diffuser, and two in-series 2000-lb granular activated carbon absorption canisters. Samples are collected prior to entering the activated carbon treatment system (**influent**), at the midpoint between the two canisters (**midpoint**), and at the discharge

of the last carbon canister (**discharge**).

Activated Carbon Addition and Advancement: M&R. Each time a carbon vessel has the carbon replaced, or when the lead and lag vessels are exchanged, the mass of carbon is recorded and/or date of replacement/exchange is noted. This ensures that the discharge meets the permit limits.

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:

- The Permittee shall achieve compliance with the effluent limitations upon issuance of the permit.
- Within 90 days of the permit effective date (**MM DD, 2010**), the Permittee shall submit to the Division, for review and approval, an Operations & Maintenance (O&M) Manual prepared in accordance with the Division's WTS-2 guidance: *Minimum Information Required for an Operations and Maintenance Manual* 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

All schedule of compliance submittals and evidence of compliance documents shall be submitted to the Bureau of Water Pollution Control Compliance Coordinator at the address listed below:

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

Before implementing changes to an approved O&M Manual, the Permittee shall submit proposed changes to the Division for review and approval.

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

Procedures for Public Comment: The Notice of the Division's intent to issue a new groundwater discharge permit authorizing this facility to discharge to groundwaters of the State for a five-year period, 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 for a period of thirty (30) days following the date of publication of the public notice in the newspaper. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all comments are to be submitted (via postmarked mail or time-stamped faxes, e-mails, or hand-delivered items) to the Division is **November 8, 2010 by 5:00**

P.M.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator 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 determines to be appropriate. All public hearings must 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: Jeryl R. Gardner, P.E.
Date: October, 2010