

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(pursuant to NAC 445A.236)

Permittee: Atlantic Richfield Company (ARCO)
P. O. Box 1257
San Ramon, CA 94583

Permit: NV0023787

Location: ARCO Station #5326
333 East Charleston Blvd.
Las Vegas, Clark County, Nevada. 89104
Township 20 S, Range 61 E, Section 34
Latitude: 36° 09' 32.90" N
Longitude: 115° 08' 52.96" W

Flow: Daily Maximum: 0.0202 million gallons per day (MGD),
(14 gallons per minute)

Corrective Actions Sites:

There are seven (7) Bureau of Corrective Actions (BCA) remediation sites located within a one-mile radius of the subject remediation site. The proposed discharge is to surface water, and the low pumping rate is not expected to adversely impact the remediation activities. Discharge from this remediation activity will have an overall beneficial effect.

Project ID #	Site Number	Facility Name	Media	Contaminant
576	H-000038	Union Pacific Railroad Company	Soil & Groundwater	Unlisted
1433	8-000278	Las Vegas Laundry and Dry Cleaning	Groundwater	Solvents
2411	8-000615	7-Eleven 25586	Soil & Groundwater	Gasoline
2514	8-000675	Texaco Station 0151	Soil & Groundwater	Other
3679	H-001337	Former Dry Cleaner (Abandoned)	Soil & Groundwater	Solvents
3547	H-001275	Cantrell Cleaners	Soil & Groundwater	Solvents
5599	H-000625	Gaming Partners International USA, Inc.	Soil	TPH

TPH = Total Petroleum Hydrocarbons

Well Head and Drinking Water Supply Protection:

The ARCO Station No. 5326 site is not within the 6000' Drinking Water Protection Areas (DWPAs) around any public water supply well. A Well Head Protection Zone has not been established for this location.

General:

The Permittee has applied for a National Pollutant Discharge Elimination System (NPDES) permit, to discharge treated groundwater to the Las Vegas Wash via the Clark County storm drain system.

The ARCO Station remediation site is located at 333 E. Charleston Boulevard, on the northwest corner of the intersection of Charleston Boulevard and Fourth Street. Groundwater remediation is being conducted under the direction of Nevada Division of Environmental Protection (NDEP) Bureau of Corrective Actions (BCA), Facility ID # 8-001049.

Groundwater below the site is contaminated with petroleum hydrocarbons due to a fuel leakage from underground storage tanks. The recovery/remediation system consists of 6 on-site dual phase extraction (DPE) wells, from which impacted groundwater is routed to four activated carbon treatment vessels. Each vessel contains 1000 pounds of granular activated carbon, and the four vessels are connected in series. To ensure full treatment in the event of breakthrough due to carbon loading, an intermediate monitoring point will be set at the inlet to the fourth carbon vessel, which will contain the most recently replaced fresh carbon. Ultimate disposal of the treated groundwater will be to the Las Vegas Wash via the Clark County storm drain system. Effluent flow will be 0.0202 MGD, or 14 gallons per minute, the design treatment capacity of the facility. The Bureau of Corrective Actions, Nevada Division of Environmental Protection will continue to regulate the soil and groundwater remediation activities at this site.

Receiving Water Characteristics:

The receiving water for the treated groundwater is the Las Vegas Wash via the Clark County storm drain system. The beneficial uses of the Las Vegas Wash as cited at NAC 445A.198 include 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. The establishment of a fishery is not precluded. Water quality standards for the receiving reach of Las Vegas Wash are specified at NAC 445A.199.

Proposed Effluent Limitations and Requirements:

The discharge from Outfall 001 shall be limited and monitored by the Permittee at the locations listed below, according to the following Table:

- i. the flow meter on the discharge line of the fourth carbon vessel;
- ii. the sample port on the discharge line from the third activated carbon vessel, prior to the fourth activated carbon vessel; and
- iii. the sample port on the discharge line of the fourth carbon vessel, prior to discharge to the storm drain.

Table 1: Discharge Limitations

PARAMETERS	EFFLUENT DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	30-Day Average	Daily Maximum	Sample Location	Measurement Frequency	Sample Type
Flow, MGD	M&R	0.0202	i.	Continuous	Flow meter
VOC EPA Method 8260, µg/L	Monitor & Report (report all parameters)		iii.	Annually ¹	Discrete
Benzene, µg/L	---	M&R	ii.	Quarterly	Discrete
	---	5	iii.		
Ethylbenzene, µg/L	---	M&R	ii.	Quarterly	Discrete
	---	100	iii.		
Toluene, µg/L	---	M&R	ii.	Quarterly	Discrete
	---	100	iii.		
Xylenes, Total, µg/L	---	M&R	ii.	Quarterly	Discrete
	---	200	iii.		
Total Petroleum Hydrocarbons ² , mg/L	---	M&R	ii.	Quarterly	Discrete
	---	1.0	iii.		
Methyl tertiary butyl ether, µg/L	---	M&R	ii.	Quarterly	Discrete
	---	20	iii.		
Activated Carbon Addition and Advancement, Date and Pounds	---	M&R	Carbon Canisters	Each Event	Discrete
Total Inorganic Nitrogen as N, mg/L	---	20	iii.	Quarterly	Discrete
Total Dissolved Solids, mg/L	Monitor and Report		iii.	Quarterly	Discrete
Total Phosphorus as P, lb/day	< 1.0		iii.	Quarterly	Discrete
Total Ammonia as N, lb/day	< 1.0		iii.	Quarterly	Discrete
pH, SU	6.5 ≤ pH ≤ 9.0		iii.	Quarterly	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.

mg/L: Milligram per liter. µg/L: Micrograms per liter. MGD: Million gallons per day.
 P: Phosphorus. N: Nitrogen. VOC: Volatile organic compound.
 SU: Standard units M&R: Monitor and Report

Spent carbon shall be replaced immediately 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 virgin carbon shall be available at all times to replace the activated carbon in both vessels at the same time.

Rationale for Permit Requirements:

Monitoring requirements for the parameters specified in Table 1 above have been established to ensure

that the receiving water, the Las Vegas Wash, is not degraded as a result of the Permittee's discharge of treated groundwater. Monitoring is required to assess the level of treatment being provided and to assure that the treated groundwater will not impact the beneficial uses of Las Vegas Wash.

Flow: The Daily Maximum flow effluent discharge limitation is based on the values requested by the Permittee, and is reflective of the design treatment capacity.

Total Petroleum Hydrocarbons: The shallow groundwater in the vicinity of the recovery system was contaminated by a gasoline leak from an underground storage tank. The 1.0 mg/L TPH limit is the State standard for remediation projects.

Volatile Organic Compounds (VOC): The shallow groundwater in the immediate area of the former service station is impacted by petroleum hydrocarbons containing VOCs. Annual analysis of the full suite of EPA Method 8260 influent VOCs is required to verify that no VOCs have been drawn to the site by the Permittee's recovery of hydrocarbon contaminated groundwater.

Discharge Limitations. The specific VOC daily maximum discharge limits have been set at the following State standards for remediation projects: Benzene 5 µg/L, Ethylbenzene 100 µg/L, Toluene 100 µg/L, and Total Xylenes 200 µg/L. The 20 µg/L action level for MTBE in groundwater for sites in close proximity to receptors and/or sensitive environments applies.

Total Dissolved Solids (TDS): 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 discharges in this area. The permit requirement is to Monitor and Report.

This permit is for the 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 as Nitrogen (TIN): NAC 445A.199 includes a requirement to maintain existing higher quality TIN standard of 95% of the samples ≤ 20.0 mg/L.

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

Total Phosphorus as Phosphorus and Total Ammonia as N: Total Maximum Daily Loads (TMDLs) of 434 lb/day Total Phosphorus and 970 lb/day Total Ammonia have been established for the Las Vegas Bay/Wash. The waste load allocations (WLAs) have been assigned only to the Cities of Las Vegas and Henderson and the Clark County Water Reclamation District.

Based on the State's de minimis policy of exempting discharges of less than 1 lb/day Total Phosphorus or Total Ammonia from the TMDL analysis, a WLA has not been assigned to this Permittee. At the maximum permitted flow of 0.00202 MGD, the groundwater Total Phosphorus and Total Ammonia concentrations would each have to exceed 5.93 mg/L to violate the 1 lb/day of the de minimis policy.

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 that 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. **No less than fourteen (14) days prior to first discharge under this permit**, the Permittee shall submit written notice of commencement of discharge.
- c. **By MMM DD, 2010**, the Permittee shall submit an Operations and Maintenance Manual, prepared in accordance with applicable sections of WTS-2 *Minimum Information Required for an Operation and Maintenance Manual for a Wastewater Treatment Plant*, to the Division for review and approval 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**

Copies of the approved manual shall be submitted to both the address above and Compliance Coordinator at the following address:

**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**

Proposed Determination:

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

Procedures for Public Comment:

Notice of the Division's intent to issue a permit authorizing the facility to continue 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 also 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. **MMM DD, 2010**, 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 will 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 to accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.238

Prepared by: Janine O. Hartley, P.E.
Draft: May 2010

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