DRAFT

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(pursuant to NAC 445A.236)

Permittee Name: ConocoPhillips Company
1230 West Washington Street, Suite 212
Tempe, AZ 85281

Permit Number: NV0022837

Location: Circle K Store #0695
428 S. Valley View Blvd., Las Vegas, Clark County, NV 89107-4373

Store located at NW corner of Valley View Blvd. & Alta Dr.
Section 31, Township 20 South, Range 61 East, MDBM
Latitude: 36° 09' 59.4" N……...[36.1664930°]
Longitude: 115° 11' 34.8" W….[-115.1930310°]

Permitted Flow: 30 gpm (0.0432 MGD) – Daily Maximum
30 gpm (0.0432 MGD) – 30-day Average

Receiving Water: Las Vegas Wash via Clark County Stormdrain System

General: The Permittee operates a groundwater remediation system located at Circle K Store #0695, 428 S. Valley View Blvd., Las Vegas. This store is a mini-mart and self-serve gasoline dispensing station. Previous leakage from an underground fuel storage tank has contaminated the shallow, non-potable groundwater system with petroleum hydrocarbons (gasoline). The leaking tank has been excavated and replaced. In 1997, the Division issued National Pollutant Discharge Elimination System (NPDES) Permit # NV0022837 to Circle K Stores, Inc. (now permitted as ConocoPhillips Co.). The NPDES permit authorizes disposal of the treated groundwater to the Clark County storm drain for eventual discharge into the Las Vegas Wash System. The proposed permit is a renewal.

A total of 10 dual-phase vapor/water extraction wells have been installed at the site for extraction of soil gases and contaminated groundwater. The groundwater treatment process consists of air stripping and final polishing via two liquid-phase activated carbon canisters, which are arranged in series treatment. The treated groundwater is then discharged into a storm drain inlet located near the intersection of Valley View Blvd. and Alta Dr. The extracted soil gases and exhaust from the air stripper are treated via two vapor-phase activated carbon canisters prior to discharge to the atmosphere. The Clark County Department of Air Quality Management regulates the gaseous emissions from this treatment system.

Upon startup in 1997, the petroleum hydrocarbon and VOC contaminants of concern in the shallow groundwater at this site included benzene, toluene, ethylbenzene and xylenes (BTEX); methyl tertiary butyl ether (MTBE); and tetrachloroethylene [PCE, a degreasing (dry cleaning) solvent]. The Division's Bureau of Corrective Actions requires this site to operate the remediation system until final site soil and groundwater cleanup criteria have been achieved.

Receiving Water Characteristics: The receiving water for the treated groundwater is the Las Vegas

Wash System via the Clark County storm drain system. Water quality standards for the Upper Las Vegas Wash are specified in NAC 445A.199.

Depth to groundwater occurrence in the shallow, non-potable groundwater system at this site is approximately eight feet below ground surface. Groundwater flow direction in this shallow, non-potable groundwater system flows east-southeast towards the Las Vegas Wash. The water table in the shallow groundwater system within the Las Vegas Valley typically varies from surface to 50 ft. below ground surface. The shallow groundwater system results predominantly from lawn irrigation (i.e. over-irrigation) and stormwater runoff events.

Drinking Water Protection: Wellhead Protection Areas (WPA) have not been established for this Las Vegas metropolitan area. The permitted facility or a portion of it lies within the Drinking Water Protection Area (DWPA) buffer zone established for 19 Public Water System (PWS) wells as listed below. Groundwater collected and treated by the facility's approved remediation treatment system then discharged, in accordance with permit limitations, to the Clark County Stormdrain and entering the Las Vegas Wash is not expected to adversely impact PWS wells in the area. Most of the wells belong to the Las Vegas Valley Water District system and are ranked moderately vulnerable to VOC and SOC.

Well Radius Buffer	0 < R ≤ 150'	150' < R ≤ 1,000'	1,000' < R ≤ 3,000'	3,000' < R ≤ 6,000'
No. wells within DWPA buffer	0	1	4	14

Corrective Action Sites: This Bureau of Water Pollution Control (BWPC) permit facility is also an active Bureau of Corrective Action (BCA) facility site # 8-000129. There are 6 additional BCA facility sites within a 1 mile radius of this BWPC permit facility. All are associated with cleanup of petroleum hydrocarbons due to leaking underground storage tanks (USTs) or of volatile organic solvents due to dry cleaning operations discharge. Case officers for these potentially affected BCA facility sites were contacted during permit renewal development. No adverse impact is expected to any of the BCA activities due to the permittee operating a groundwater remediation treatment system at this permitted facility location.

Discharge Characteristics: The discharge consists of treated groundwater from the remediation extraction and separation process. During the period from January 2007 through June 2009, the following discharge characteristics were reported:

Parameter		Unit	Permit Limit	Min	Avg	Max
flow 001	30-day	gpm	--	0.023	0.532	1.3
	Daily Max	gpm	30.0	0.050	0.643	1.32
pH		su	6.5 - 9.0	6.7	7.6	8.1
Total Dissolved Solids [TDS]		mg/l	M&R	1800	1897	2070
Total Phosphorus [TP]		mg/l	M&R	0.014	<0.05	0.1
Total Inorganic Nitrogen as N [TIN-N]		mg/l	20	0.77	2.8	5.1
benzene		ug/l	5	<1.0	<1.0	<5
toluene		ug/l	100	<1.0	<1.0	<5
ethyl benzene		ug/l	100	<1.0	<1.0	<5
xylenes, total		ug/l	200	<2.0	<2.0	<10

Parameter	Unit	Permit Limit	Min	Avg	Max
MTBE	ug/l	20	<5	<5.0	<5
Tetracholorethylene [PCE]	ug/l	5	<1.0	<1.0	<5
Total Petroleum Hydrocarbons [TPH]	mg/l	1.0	<0.025	<0.025	<0.1

Flow: The design treatment capacity of this groundwater remediation system is specified as 30 gallons per minute (gpm), which is equivalent to 0.0432 million gallons per day (MGD). Over the last several quarters, the discharge into the storm drain has averaged less than 3 gpm. This remediation system has been in operation since 1997.

Proposed Effluent Limitations:

Table 1: Discharge Limitations (Outfall 001)
Clark County storm drain system

PARAMETER	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day Average	Daily Maximum	Measurement Frequency	Sample Type
Discharge Flow	30 gpm (0.0432 MGD)		Continuous	Flow Meter
Benzene	5 µg/L		Monthly	Discrete
Ethylbenzene	100 µg/L		Monthly	Discrete
Toluene	100 µg/L		Monthly	Discrete
Xylenes (Total)	200 µg/L		Monthly	Discrete
Total Petroleum Hydrocarbons (TPH) [1]	1.0 mg/L		Monthly	Discrete
MTBE	20 µg/L		Monthly	Discrete
Tetrachloroethylene (PCE)	5 µg/L		Monthly	Discrete
Total Dissolved Solids	Monitor & Report (mg/L)		Quarterly	Discrete
Total Inorganic Nitrogen as N	20 mg/L		Quarterly	Discrete
Total Phosphorus as P	Monitor & Report (mg/L)		Quarterly	Discrete
pH	Within 6.5 – 9.0 SU		Quarterly	Discrete
Full VOC Scan (Method 8260)	Monitor & Report (Report all Parameters)		Annually (4th Quarter)	Discrete
Photos	See permit I.A.18		Annually (4th Quarter)	Discrete

1. TPH purgable and extractable. Method 8015B and Method 8260B

Remediation Activities and Special Conditions:

a. Groundwater and soil remediation activities shall be addressed in accordance with requirements of the Division's Bureau of Corrective Actions. The Permittee shall notify the Division's Bureau of Water Pollution Control in writing when the Permittee is granted approval from the Bureau of Corrective Actions to cease operation of the groundwater extraction and treatment system.

b. Spent carbon shall be replaced 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 fresh 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 have been established to ensure that the receiving water (Las Vegas Wash) is not degraded as a result of discharge from the remediation system.

Schedule of Compliance: There is no compliance requirement scheduled for submission to the Division at this time. The Division approved this facility's updated Operation and Maintenance (O&M) Manual in 2006. According to the application materials and the owner's engineering consultant, there has been no appreciable change in the design and operation of the remediation system since the 2006 update, except for routine repairs and replacement of spent carbon canisters. The permittee shall notify the Division in writing within 14 days of the permittee being granted approval to cease operation of the groundwater extraction and remediation treatment system.

Procedures for Public Comment: The Notice of the Division's intent to issue (renew) an NPDES permit authorizing the facility to discharge treated groundwater to the Las Vegas Wash, 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 **June 18, 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.

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

Prepared by: E. Samuel Stegeman, P.E.
Bureau of Water Pollution Control

NPA Draft: May 2010

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