

Brian Sandoval, Governor Leo M. Drozdoff, P.E., Director David Emme, Administrator

FACTSHEET (pursuant to NAC 445A.236)

Permittee Name: PHILLIPS 66 COMPANY 3900 KILROY AIRPORT WAY, STE 210 LONG BEACH, CA - 90806

Permit Number: NV0023663

Location: FORMER CONOCO STATION NO. 28003, CLARK 1420 WEST BONANZA ROAD, LAS VEGAS, NV - 89106 LATITUDE: 36.1775, LONGITUDE: -115.160278 TOWNSHIP: T20S, RANGE: R61E, SECTION: S28

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Outfall City	Outfall State	Outfall Zip	Outfall County	Latitude	Longitude	Receiving Water
01A	01A - (TREATED GROUNDWATER DISCHARGE) - FLOW METER DOWNGRADIENT OF THE AIR STRIPPER	External Outfall		LAS VEGAS	NV	89106	CLARK	36.178944	-115.160611	LAS VEGAS WASH VIA THE CLARK COUNTY STORM DRAIN SYSTEM
01B	01B - (TREATED GROUNDWATER DISCHARGE) - SAMPLE PORT ON THE DISCHARGE LINE FROM THE LEADING ACTIVATED CARBON VESSEL, PRIOR TO THE SECOND ACTIVATED CARBON VESSEL	External Outfall		LAS VEGAS	NV	89106	CLARK	36.178944	-115.160611	LAS VEGAS WASH VIA THE CLARK COUNTY STORM DRAIN SYSTEM
01C	01C - (TREATED GROUNDWATER DISCHARGE) - SAMPLE PORT ON THE DISCHARGE LINE FROM THE SECOND CARBON VESSEL, PRIOR TO DISCHARGE TO THE STORM DRAIN	External Outfall		LAS VEGAS	NV	89106	CLARK	36.178944	-115.160611	LAS VEGAS WASH VIA THE CLARK COUNTY STORM DRAIN SYSTEM

General:

The Permittee has applied for renewal of National Pollutant Discharge Elimination System (NPDES) permit NV0023663, to continue to discharge treated groundwater from the former Conoco Service Station (Station) #28003 to the Las Vegas Wash via the Clark County storm drain system. The Station is located at 1420 W. Bonanza Road, on the northeast corner of the intersection of Martin Luther King Boulevard and Bonanza Road. The service station is no longer owned or operated by Conoco Phillips. All structures, pumps and tanks related to the operation of the service station have been transferred to a new station operator. The NPDES permit for this discharge was first issued in 2009.

Shallow groundwater at the site is contaminated with petroleum hydrocarbons due to a fuel leakage from underground storage tanks. The recovery/remediation system consists of 18 on-site dual phase extraction (DPE) wells, from which impacted groundwater is routed to an air/water separator, utilizing thermal oxidation of the vapor phase. Following vapor removal, the aqueous stream is treated in an aeration tank, and is then directed through a two-step activated carbon system for polishing. The activated carbon treatment system consists of two 1000-pound carbon vessels connected in series. To ensure full treatment in the event of breakthrough due to carbon loading, an intermediate monitoring point has been set at the inlet to the second carbon vessel, which will contain the most recently added fresh carbon. Ultimate disposal of the treated

groundwater will be to the Las Vegas Wash via the Clark County storm drain system. Current permitted effluent flow for the site is 0.0072 MGD, or 5 gallons per minute (gpm).

The Permittee has requested an increase in flow rate to 0.0432 MGD, which equates to 30 gpm. The Permittee indicates that the DPE system will be reconfigured by installing dedicated pneumatic submersible pumps in each of the DPE wells. By installing submersible pumps it is expected that groundwater extraction rates could increase, resulting in a further lowering of the water table beneath the site. The lowered water table, combined with the ability to increase the applied vacuum, would be expected to result in an increased vapor-phase mass recovery rate. Both the increased groundwater extraction and the vapor-phase mass recovery rates are expected to ultimately accelerate the rate of remediation and shorten the timeframe until the site conditions warrant case closure.

Discharge Characteristics:

During the previous 5-year permit cycle the Permittee exceeded the flow limits on two occasions. The first incident occurred in February 2011 and was due to start-up conditions. The second incident occurred in November 2012 and was caused by a planned system shut-down which allowed for the groundwater to recharge. Flow limits were exceeded during the re-start of the system. Within three hours the flow was found to meet the permitted requirements. No other monitored parameters have been exceeded since permit issuance and the Permittee is considered to be in substantial compliance with the permit conditions.

Receiving Water:

The treated groundwater is discharged to the Las Vegas Wash via the Clark County storm drain system. NAC 445A.2156 sets the standards of water quality for the body of water known as Las Vegas Wash from the confluence of the discharges from the City of Las Vegas and Clark County wastewater treatment plants to Telephone Line Road.

Summary of Changes From Previous Permit:

Discharge flow rates have been increased from 0.0072 million gallons per day (MGD) to 0.0432 MGD for the daily maximum permit limit.

Annual selenium monitoring has been added to the permit due to the 303(d) listing of this parameter as a pollutant of concern in the Las Vegas Wash.

The requirement to report the amount of activated carbon and advanced carbon added to the canisters has been removed.

Proposed Effluent Limitations:

The water discharged from the groundwater remediation system to the Clark County storm drain system shall be limited, sampled and monitored by the Permittee as specified below.

	Monitoring Requirements						
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	Daily Maximum	<= 0.0432 Million Gallons per Day (Mgal/d)		Internal Monitoring Point ^[1]	01A	Continuous	METER
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		Internal Monitoring Point ^[1]	01A	Continuous	METER

Discharge Limitations Table for Sample Location 01A (Flow Meter) To Be Reported Monthly

Notes (Discharge Limitations Table):

1. Flow meter down gradient of the air stripper.

Discharge Limitations Table for Sample Location 01B (Sample Port On Discharge Line From Leading Vessel) To Be Reported Monthly

	[Discharge Lim	Monitoring Requirements				
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Methyl tert-butyl ether	Daily Maximum		M&R Micrograms per Liter (ug/L)	Internal Monitoring Point ^[2]	01B	Monthly	DISCRT
Total Petroleum Hydrocarbons - Gasoline ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point ^[2]	01B	Monthly	DISCRT
Total Petroleum Hydrocarbons - Diesel ^[1]	Daily Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point ^[2]	01B	Monthly	DISCRT
Toluene	Daily Maximum		M&R Micrograms per Liter (ug/L)	Internal Monitoring Point ^[2]	01B	Monthly	DISCRT
Ethylbenzene	Daily Maximum		M&R Micrograms per Liter (ug/L)	Internal Monitoring Point ^[2]	01B	Monthly	DISCRT
1,2-Dichloroethane	Daily Maximum		M&R Micrograms per Liter (ug/L)	Internal Monitoring Point ^[2]	01B	Monthly	DISCRT
Benzene	Daily Maximum		M&R Micrograms per Liter (ug/L)	Internal Monitoring Point ^[2]	01B	Monthly	DISCRT
Xylene	Daily Maximum		M&R Micrograms per Liter (ug/L)	Internal Monitoring Point ^[2]	01B	Monthly	DISCRT

Notes (Discharge Limitations Table):

1. Refer to part A.3.2 of the permit for Test Procedures

2. Sample port on discharge line from first carbon vessel, prior to second carbon vessel

Discharge Limitations Table for Sample Location 01C (Sample Port After Second Vessel Prior To Discharge) To Be Reported Monthly

	0	Discharge Lim	Monitoring Requirements				
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Methyl tert-butyl ether	Daily Maximum		<= 20 Micrograms per Liter (ug/L)	Effluent Gross ^[2]	01C	Monthly	DISCRT
Total Petroleum Hydrocarbons - Gasoline ^[1]	Daily Maximum		<= 1.0 Milligrams per Liter (mg/L)	Effluent Gross ^[2]	01C	Monthly	DISCRT
Total Petroleum Hydrocarbons - Diesel ^[1]	Daily Maximum		<= 1.0 Milligrams per Liter (mg/L)	Effluent Gross ^[2]	01C	Monthly	DISCRT
Toluene	Daily Maximum		<= 100 Micrograms per Liter (ug/L)	Effluent Gross ^[2]	01C	Monthly	DISCRT
Ethylbenzene	Daily Maximum		<= 100 Micrograms per Liter (ug/L)	Effluent Gross ^[2]	01C	Monthly	DISCRT
1,2-Dichloroethane	Daily Maximum		<= 5 Micrograms per Liter (ug/L)	Effluent Gross ^[2]	01C	Monthly	DISCRT
Benzene	Daily Maximum		<= 5 Micrograms per Liter (ug/L)	Effluent Gross ^[2]	01C	Monthly	DISCRT
Xylene	Daily Maximum		<= 200 Micrograms per Liter (ug/L)	Effluent Gross ^[2]	01C	Monthly	DISCRT

Notes (Discharge Limitations Table):

1. Refer to part A.3.2 of the permit for Test Procedures

2. Sample port on discharge line from second carbon vessel, prior to discharge.

Discharge Limitations Table for Sample Location 01C (Sample Port After Second Vessel Prior To Discharge) To Be Reported Quarterly

	g Requirements						
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
pH, maximum	Daily Maximum		<= 9.0 Standard Units (SU)	Effluent Gross ^[1]	01C	Quarterly	DISCRT
pH, minimum	Daily Minimum		>= 6.5 Standard Units (SU)	Effluent Gross ^[1]	01C	Quarterly	DISCRT
Nitrogen, ammonia total (as N)	Daily Maximum	M&R Pounds per Day (lb/d)		Effluent Gross ^[1]	01C	Quarterly	CALCTD
Phosphorus, total (as P)	Daily Maximum	M&R Pounds per Day (lb/d)		Effluent Gross ^[1]	01C	Quarterly	CALCTD
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross ^[1]	01C	Quarterly	DISCRT
Nitrogen, inorganic total	Daily Maximum		<= 20 Milligrams per Liter (mg/L)	Effluent Gross ^[1]	01C	Quarterly	DISCRT

Notes (Discharge Limitations Table):

1. Sample port on discharge line from second carbon vessel, prior to discharge.

Discharge Limitations Table for Sample Location 01C (Sample Port After Second Vessel Prior To Discharge) To Be Reported Annually^{[2][1]}

Discharge Limitations Monitoring Requirements							
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Selenium, total (as Se)	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
Methylene chloride	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
Dibromochloromethane	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
cis-1,3- Dichloropropene	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
Methyl chloride (Chloromethane)	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
Chloroform	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
Chloroethane	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
Chlorobenzene	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
Carbon tetrachloride	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
Methyl bromide (Bromomethane)	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
Bromoform	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
			M&R				

Discharge Limitations Table for Sample Location 01C (Sample Port After Second Vessel Prior To Discharge) To Be Reported Annually^{[2][1]}

Discharge Limitations Monitoring Requirements							
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Dichlorobromomethane	Daily Maximum		Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
2-Chloroethyl vinyl ether, (mixed)	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
1,4-Dichlorobenzene	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
1,3-Dichlorobenzene	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
1,2-Dichloropropane	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
1,2-Dichlorobenzene	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
1,1-Dichloroethylene	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
1,1-Dichloroethane	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
1,1,2-Trichloroethane	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
1,1,2,2- Tetrachloroethane	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
1,1,1-Trichloroethane	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
			M&R				

Discharge Limitations Table for Sample Location 01C (Sample Port After Second Vessel Prior To Discharge) To Be Reported Annually^{[2][1]}

	Disc	harge Limita	Monitoring Requirements				
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Vinyl chloride	Daily Maximum		Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
Trichlorofluoromethane	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
Trichloroethylene	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
trans-1,3- Dichloropropene	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
trans-1,2- Dichloroethylene	Daily Maximum		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT
Tetrachloroethylene Daily Maximum p		M&R Micrograms per Liter (ug/L)	Effluent Gross ^[3]	01C	Annual	DISCRT	

Notes (Discharge Limitations Table):

1. Refer to part A.3.2. of the permit for Test Procedures

2. Conduct sampling and analysis as part of the 4th Quarter DMR/Annual Report Submission

3. Sample port on discharge line from second carbon vessel, prior to discharge.

Rationale for Permit Requirements:

Monitoring is required to assess the quality of the discharge water and to ensure that the treated groundwater will not impact the beneficial uses of the Las Vegas Wash.

<u>Total Petroleum Hydrocarbons (TPHs):</u> Monthly analysis for TPH has been retained from the previous permit. The Division's technology- based remediation standard of 1.0 mg/L has also been retained. Continued monitoring is required to verify TPH removal by the treatment system.

<u>Volatile Organic Compounds (VOCs):</u> Monthly analysis for BTEX (benzene, toluene, ethylbenzene, and xylene) and MTBE (methyl tert-butyl ether) has been retained from the previous permit. The Division's technology-based remediation standards for BTEX and MTBE are 5 µg/L, 100 µg/L, 200 µg/L and 20 µg/L, respectively. Annual monitoring of all other VOCs has been retained and is required to verify VOC removal by the treatment system.

<u>Total Dissolved Solids (TDS):</u> NAC 445A.2156 includes a TDS requirement of 95% of the single value samples being less than or equal to 1900 mg/L. Naturally occurring elevated TDS levels would flow to the Las Vegas Wash if it were not intercepted by the dewatering system, therefore, the TDS standard is not applied to remediation discharges in this area. 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. The requirement to monitor and report quarterly has been retained from the previous permit.

<u>Selenium</u>: Annual monitoring for selenium has been added to the permit due to the 303(d) listing of this parameter as a pollutant of concern for the Las Vegas Wash. The shallow groundwater with this naturally occurring constituent would flow to Las Vegas Wash were it not intercepted by the dewatering system. This parameter will be monitored and reported annually to allow NDEP the opportunity to review and ensure concentrations remain consistent with background levels and degradation of waters does not occur.

<u>Total Ammonia as Nitrogen and Total Phosphorus (TP</u>): The 1989 TMDL for the receiving water included the following discussion of point source contributions to the Las Vegas Wash: "Point source discharges into the Las Vegas Wash include City of Las Vegas, Clark County Sanitation District, TIMET, Kerr-McGee and Stauffer. Kerr-McGee discharges non-contact cooling water and stormwater and Stauffer discharges stormwater. The discharges from both these facilities are intermittent, and have been relatively uncommon in the past. TIMET discharges approximately 4 MGD and both the total ammonia and total phosphorus concentration found in this discharges are approximately 0.01 mg/L or less. Therefore, only the discharge from the City of Las Vegas and Clark County treatment plants were used to estimate the total monthly average point source load discharged to Las Vegas Wash.

In consideration of the permit application, NDEP has determined that the permitted discharge limits are consistent with the assumptions for the relevant Waste Load Allocations (WLAs) and does not warrant a more restrictive limit to implement the applicable WLAs. Except for one occasion in 2014, reported groundwater concentrations for Total Ammonia has been reported at less than 0.1 mg/L. Based on reported groundwater concentrations TP has been reported at less than 0.1 mg/L. In conjunction with the newly proposed flow of 30 gpm, NDEP has determined the load to be an insignificant or negligible contributor of TP and Total Ammonia, consistent with the assumptions and requirements of the WLAs in the TMDL. However, the parameter will be monitored quarterly to allow NDEP the opportunity to review and ensure concentrations remain consistent with background levels and degradation of waters does not occur.

Special Conditions:

SA – Special Approvals / Conditions Table

ltem #	Description
1	Laboratory results of the samples shall be received and reviewed by the Permittee within five (5) calendar days of sample collection to evaluate whether a breakthrough of any monitored parameter has occurred from the leading carbon vessel. If breakthrough from the first vessel occurs, additional sampling shall proceed on a daily basis at the discharge of the second carbon canister. Laboratory results of these samples shall be received and reviewed by the Permittee within 24 hours of sample collection to evaluate whether a breakthrough has occurred from the lag vessel. Daily collection and analysis of the samples shall continue until the spent carbon has been replaced and laboratory results demonstrate no breakthrough is occurring from the leading carbon vessel.
2	Spent Carbon shall be replaced when breakthrough has been detected. Fresh Carbon shall be 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 availabe at all times to replace the activiated carbon in both vessels at the same time.

Flow:

The Permittee has requested to increase the flow rate from 0.0072 MGD (5 gpm) to 0.0432 MGD (30 gpm) in response to an upgraded design treatment capacity.

Corrective Action Sites:

There are seven remediation sites managed by NDEP-Bureau of Corrective Actions (BCA) that are located within a 1-mile radius of this facility: H- 000778, 8-001512, 8-001105, H-000557, 8-000708, H-000243, and 8-000272. The BCA does not expect the permitted discharge associated with this permit to have adverse effects on these remediation sites.

Wellhead Protection Program:

The facility is located outside of the 6000' Drinking Water Protection Areas (DWPAs) and any established Wellhead Protection Zone.

Schedule of Compliance:

	SOC -	Schedule	of	Com	oliance	Table
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ltem #	Description	Due Date
1	Within 60 days of permit issuance, the Permittee shall submit a revised Operations and Maintenance (O&M) manual. The O&M manual shall be prepared in accordance with the Division's WTS-2 Guidance: Minimum Information Required for an Operations and Maintenance Manual. If no revisions to the original O&M manual have been made, the Permittee shall submit a letter by the specified due date indicating such.	12/4/2015

Deliverable Schedule:

Item #	Description	Interval	First Scheduled Due Date							
1	Quarterly DMRs	Quarterly	1/28/2016							
2	Annual Report	Annually	1/28/2016							

DLV- Deliverable Schedule for Reports, Plans, and Other Submittals

Procedures for Public Comment:

The Notice of the Division's intent to issue a permit authorizing the facility 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 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. 8/18/2015, 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 must be conducted in the geographical area of the proposed discharge or any other area the Administrator determined 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.605.

Proposed Determination:

The Division has made the tentative determination to issue / re-issue the proposed 5-year permit.

Prepared by:Michele ReidDate:7/13/2015Title:Staff II Associate Engineer