

DRAFT  
NEVADA DIVISION OF ENVIRONMENTAL PROTECTION  
FACT SHEET  
(pursuant to NAC 445A.236)

**Permittee Name:** 7-Eleven, Inc.  
P.O. Box 711  
Dallas, TX 75221

**Permit Number:** NV0023311

**Location:** 7-Eleven Store #25586  
1705 South Las Vegas Blvd.  
Las Vegas, Clark County, NV 89104

Latitude: 36° 09' 04" N [36.1511111]; Longitude: 115° 09' 08" W [-115.1522222]  
Township 21S, Range 61E, NW¼ SW¼ Section 3

**General:** 7-Eleven Store #25586 is located at 1705 South Las Vegas Blvd., Las Vegas, Clark County, NV. The facility consists of a convenience store and self-service gasoline station. A prior leakage of gasoline from the underground storage tank system contaminated the shallow, non-potable groundwater with petroleum hydrocarbons. Petroleum hydrocarbon contaminants of concern in the shallow groundwater at this site are: benzene; ethylbenzene, xylenes (total), toluene, methyl tertiary butyl ether (MTBE), and total petroleum hydrocarbons. Untreated groundwater would exceed the Division's discharge limits for benzene, MTBE and TPH. The facility's groundwater remediation system consists of groundwater/soil vapor extraction followed by an air stripping tower and filtration for the removal of petroleum contaminants. The treated groundwater is discharged to a Clark County storm drain inlet located near the intersection of Las Vegas and Oakey Boulevards. Vapor-phase carbon adsorption will be used to treat the extracted soil gases and air stripper exhaust. The Clark County Department of Air Quality Management separately regulates the gaseous emissions from this treatment system. The Division's Bureau of Corrective Actions will regulate the soil and groundwater cleanup activities at this site.

**Flow:** The permittee specified in the permit application a pumping and treatment capacity of 10 gallons per minute (gpm), equivalent to 0.0144 million gallons per day (MGD), for this groundwater remediation system.

**Receiving Water Characteristics:** The receiving water for the treated groundwater is the Las Vegas Wash 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 aquifer at this site is 9 ft. below ground surface. Groundwater flow direction in this shallow, non-potable aquifer is east towards the Las Vegas Wash. The shallow groundwater 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 property is not within a 6,000 foot Drinking Water Protection Area (DWPA) of Public Water System (PWS) wells. Treated groundwater discharged in accordance with permit limitations to the Clark County stormdrain and Las Vegas Wash, is not expected to adversely impact PWS wells in the area.

**Corrective Action Sites:** This Bureau of Water Pollution Control (BWPC) permit facility is also an active Bureau of Corrective Action (BCA) facility site (# 8-00615). Final groundwater and soil remediation activities for the property shall be addressed in accordance with BCA requirements. There are 7 additional BCA facility sites

sites within a 1 mile radius of this BWPC permit facility. Five are associated with cleanup of petroleum hydrocarbons due to leaking underground storage tanks (USTs). 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 groundwater treatment systems at this permitted facility location.

**Discharge Characteristics:** The discharge consists of treated groundwater from the collection/interception and separation process. The following table summarizes discharge characteristics reported for the facility outfall during the time period from October 2007 to January 2009. No permit excursions were identified in review of treated discharge sample analyses submitted for the time period.

Parameter		Unit	Permit Limit	Min	Avg*	Max
Flow	Daily max.	gpd	21,600	1.14	2869	5413
Benzene		µg/l	5	ND @ 1	< 0.5	ND @ 1
Toluene		µg/l	100	ND @ 1	< 1.03	ND @ 5
Ethyl benzene		µg/l	100	ND @ 1	< 0.5	ND @ 1
Xylenes, total		µg/l	200	ND @ 2	< 1.13	ND @ 3
Methyl tert-butyl ether [MTBE]		µg/l	20	ND @ 1	< 0.5	ND @ 1
Total Petroleum Hydrocarbons [TPH]		mg/l	1.0	ND @ 0.1	< 0.20	ND @ 0.5
pH		SU	6.5 to 9.0	8.2	8.41	8.6
Total Dissolved Solids [TDS]		mg/l	M&R	2400	2637	2900
Total Phosphorous [TP]		mg/l	M&R	0.53	2.48	4.8
Total Inorganic Nitrogen as N [TIN-N]		mg/l	20	< 0.1	< 1.24	9.5

\*For calculating an overall average, non-detect samples are assigned a value of one half the reporting limit.

ND = non-detect at analysis reporting limit.

gpd = gallons per day

µg/l = micrograms/liter

mg/l = milligrams/liter

SU = Standard Units

M&R = Monitor and Report

### **Proposed Effluent Limitations and Special Conditions:**

**Table 1: Discharge Limitations (Outfall 001)**

PARAMETER	DISCHARGE LIMITATIONS	MONITORING REQUIREMENTS	
		Measurement Frequency	Sample Type
Discharge Flow, MGD	0.0144	Continuous	Flow Meter
Total Petroleum Hydrocarbons (TPH) <sup>1</sup> , mg/L	1.0	Monthly	Discrete
Benzene, µg/L	5	Monthly	Discrete
Ethylbenzene, µg/L	100	Monthly	Discrete
Toluene, µg/L	100	Monthly	Discrete
Xylenes (Total), µg/L	200	Monthly	Discrete
MTBE, µg/L	20	Monthly	Discrete
VOC <sup>2</sup> , µg/L	Monitor & Report	Annually as 4 <sup>th</sup> Qtr. DMR	Discrete
pH, S.U.	6.5 to 9.0	Quarterly	Discrete

Total Dissolved Solids, mg/L	Monitor & Report	Quarterly	Discrete
Total Phosphorus as P, lb/day	1.0	Quarterly	Discrete/Calculate
Total Inorganic Nitrogen as N, mg/L	20	Quarterly	Discrete

1. EPA Method 8015B and EPA Method 8260B, extractable and purgeable, C6-C40. Summation must meet permit limit.
2. EPA Method 8260B (report all parameters).

MGD = million gallons per day

µg/L = micrograms/liter

mg/L = milligrams/liter

DMR = Discharge Monitoring Report

SU = Standard Units

M&R = Monitor and Report

VOC = Volatile Organic Compound

MTBE = Methyl Tert-Butyl Ether

**Rationale for Permit Requirements:** Monitoring requirements for the parameters specified in Table 1 above have been established to ensure that the treatment system is discharging within the Division's allowable limits for petroleum hydrocarbon remediation sites, which discharge to surface waters of the State (Las Vegas Wash).

Flow: The rationale for the daily maximum discharge was explained in the Flow section of this fact sheet.

Total Petroleum Hydrocarbons (TPH): The shallow groundwater has been contaminated by a hydrocarbon plume on the property. The renewal permit proposes to continue to monitor TPH with a 1.0 mg/L discharge limitation.

Volatile Organic Compounds (VOC): The shallow groundwater on the property has been impacted by a hydrocarbon plume containing VOCs. The VOCs that have been detected in the treatment system influent are listed in Table 1 and will be sampled monthly and reported quarterly. The renewal permit proposes to annually monitor and report the full suite of VOCs that may be analyzed using EPA Method 8260B.

pH: NAC 445A.199 includes a single value pH water quality standard for beneficial uses within the range of 6.5 – 9.0 SU. The renewal permit proposes to continue to monitor pH without change to the discharge limitation.

Total Dissolved Solids (TDS): NAC 445A.199 includes a single value at 180°C TDS standard for beneficial uses of ≤ 3,000 mg/L. The discharge has met this standard every monitoring. 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.

This permit is for the interception and passage of groundwater and is administered under the Colorado River Basin Salinity Control Forum's policy on groundwater interception. The renewal permit proposes to continue to monitor TDS without discharge limitation.

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 Water Reclamation 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. The renewal permit proposes to continue to monitor total phosphorus with a discharge limitation of <1.0 lb/day.

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. The renewal permit proposes to continue to monitor TIN with a 20.0 mg/L discharge limitation.

**Remediation Activities and Special Conditions**: Groundwater and soil remediation activities shall be addressed in accordance with requirements of the Division's Bureau of Corrective Actions. The Division approved an Operations and Maintenance (O&M) manual for the site treatment system in November 2003. 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.

**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.

- The Permittee shall maintain and revise, as necessary, the Operations and Maintenance (O&M) manual sections for the site keeping all information current. Within 30 days of permit being issued, **Month Day, 2010**, the permittee shall:
  - i. Submit a letter to the Division indicating that the approved O&M manual has not changed since the last Division approval and that the manual is still valid for the treatment system(s) operation at the site;
  - OR**
  - ii. Submit an updated O&M manual for the site treatment system(s) for review and approval by the Division. The submitted O&M manual or sections therein shall include any change made to the treatment system since the last Division approved edition needed to comply with this permit as issued.
- At least thirty days prior to initiating any change to the approved O&M manual or approved treatment system plans, a revision request prepared by a qualified professional must be submitted to the Compliance Coordinator. The Permittee, or designated representative, shall adequately address all comments and concerns relating to the Division's review of the submitted revision. **The Permittee shall not initiate any change to an approved O&M manual or approved treatment system without Division review and approval.** Within 30 days of any requested change to the O&M manual or treatment system plans being approved by the Division, the permittee shall submit to the Division an updated O&M manual or appropriate updated section(s) thereto.
- 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 from the agency having corrective action jurisdiction of the permitted facility.

**Proposed Determination**: The Division has made the determination to issue the proposed permit for a five-year (5) period.

**Procedures for Public Comment**: The Notice of the Division's intent to issue the permit authorizing the facility to discharge to the groundwater 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 the NDEP-BWPC mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the date of the publication of the public notice. All

comments must be received by 5:00 pm local time on **August 27, 2010**. 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 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.

Prepared by: E. Samuel Stegeman, P.E.

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