STATE OF NEVADA
Department of Conservation & Natural Resources
DIVISION OF ENVIRONMENTAL PROTECTION
Brian Sandoval, Governor
Leo M. Drozdoff, P.E., Director
Colleen Cripps, Ph.D., Administrator

FACT SHEET

(pursuant to NAC 445A.236)

Applicant: Tropicana East Shopping Center Phase I
Ms. Tina M. Walls, Esq.
8861 W. Sahara Ave., Ste. 220
Las Vegas, NV 89117

Permit Number: NV0024198

Location: Tropicana East Shopping Center Phase I
2520 East Tropicana Ave.
Las Vegas, NV 89121
Latitude: 36° 06' 3.3" N, Longitude: 115° 06' 58.0" W
Section 24, T21S, R61E MDB&M

Discharge Outfall: **Outfall 001:** Tropicana Wash storm channel, located at:
Latitude: 36° 06' 03.00" N **Longitude: 115° 06' 59.00" W**

General: The Applicant has applied for a new National Pollutant Discharge Elimination System (NPDES) permit, NV0024198, to discharge treated groundwater to the Tropicana Wash storm water channel, tributary to the Las Vegas Wash.

The Applicant owns and operates a commercial center at 2520 E. Tropicana Ave., in Las Vegas, Clark County, Nevada. Recent sewer maintenance work approximately 5 feet under the structure revealed a strong solvent odor. It was suspected that an adjoining and upgradient dry cleaning facility within the building was the source. Further investigation and sampling indicated the presence of significantly elevated concentrations of Tetrachloroethene (PCE), a common, dry cleaning solvent, in the shallow groundwater and soil samples analyzed. A pilot test treatment system will be conducted at a flow rate of 0.025 million gallons per day (MGD). When the pilot test results are evaluated the final design of the long-term remediation system will incorporate 10-20 extraction wells that will convey flow to the treatment system. Groundwater remediation will be accomplished using an air stripper, and two aqueous phase granular activated carbon adsorption vessels in series, which will remove the PCE, and other hydrocarbons from the groundwater. The treated water will be pumped to the Tropicana Wash concrete-lined storm conveyance channel, located approximately 200 feet from the extraction wells. Sampling and analysis of the pre-treatment influent (contaminated groundwater), mid-point (between carbon canisters) location, and post-treatment effluent discharge is required for PCE and other hydrocarbons. Monitoring of the discharge will be conducted to ensure that surface waters are not degraded as a result of the discharge.

Flow: The proposed treatment system's maximum daily discharge will be 174 gallons per minute (gpm) and will be permitted at 0.250 MGD.

Discharge Characteristics: Overall, the groundwater to be discharged is anticipated to be of good quality. Data from similar treatment systems indicates that PCE, TCE, and other VOC will be removed below NDEP action levels prior to discharge.

Receiving Water Characteristics: Treated groundwater from the remediation system is discharged to the Tropicana Wash. The Tropicana Wash storm drain channel conveys the water to the Las Vegas Wash. Water quality standards for the Upper Las Vegas Wash beneficial uses designated in NAC 445A.2142, are specified in NAC 445A.2156.

Site Groundwater: Within the project area the groundwater elevation is generally quite shallow, approximately 10-20 feet below ground surface. The local groundwater flow direction is southeast.

Corrective Actions Sites: There are two other BCA remediation sites within a one-mile radius of the site. The BCA case officers do not expect the other remediation sites to be affected by the proposed pump and treat activities and discharge from this remediation site.

Well Head and Drinking Water Supply Protection: The facility is not within 6000' of a public water supply. A Wellhead Protection Area (WHPA) has not been established for this area.

Proposed Discharge Limitations and Special Conditions: The water discharged from the groundwater remediation system to the Tropicana Wash storm drain channel shall be limited, sampled, and monitored by the Permittee as specified below.

Discharge samples and measurements taken in compliance with the monitoring requirements specified below shall be taken prior to discharge to the storm drain channel, at the following locations:

a. The sample port on the inlet line to the first carbon canister or air stripper;

b. The sample port on the discharge line from the first activated carbon vessel, prior to discharge to the second activated carbon vessel; and

c. The sample port on the discharge line of the second carbon vessel, prior to discharge to the storm drain channel.

Table 1. Discharge Limitations, Sampling and Monitoring Requirements

Parameters	Units	Discharge Limitations		Monitoring Requirements		
		30-Day Average	Daily Maximum	Sampling Locations	Monitoring Frequency	Monitoring Type
Discharge Rate [1]	MGD	M&R	0.250	c	Continuous	Flow meter
TPH [2]	mg/l	---	M&R	a, b	Quarterly	Discrete
		---	1.0	c		
PCE [2]	µg/l	---	M&R	a, b	Quarterly	Discrete
		---	5.0	c		
TCE [2]	µg/l	---	M&R	a, b	Quarterly	Discrete
		---	5.0	c		

Chloroform	μg/l	---	M&R	a, b	Annually	Discrete
		---	M&R	c		
Carbon [3]	lbs	---	M&R	Each vessel	Event	Discrete

Table 2. Table Definitions and Footnote Explanations

Term/ Footnote	Definitions/ Explanations
MGD	Million gallons per day
M&R	Monitor and report
TPH	Total Petroleum Hydrocarbons, purgeable and extractable, full range C6-C40.
mg/l	milligrams per liter
PCE	Tetrachloroethene (perchloroethylene)
TCE	Trichloroethene
μg/l	micrograms per liter
Carbon	Spent carbon replaced; measured as mass
lbs	pounds
Footnote 1	Monitor daily and record maximum daily discharge in MGD and report quarterly. Discharge shall be monitored at the flow meter between the last carbon canister and the discharge to the ditch.
Footnote 2	Sample and analyze for TPH, PCE and TCE quarterly and report on quarterly DMR forms. Sample influent (a), midpoint between canisters (b), and effluent (c). Influent and midpoint are M&R; effluent has specific limits. Analyze using EPA Methods 8015B and 8260B.
Footnote 3	Mass of activated carbon, in lbs. Track activated carbon addition and advancement as it occurs and report date and mass on applicable DMR.

Rationale for Permit Requirements: The monitoring requirements and permit limits have been established to ensure that the receiving waters are not degraded from the discharge of the treated groundwater. The requirements are consistent with similar groundwater remediation system discharge permits.

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

TPH: 1.0 mg/l. The limit is the State standard for groundwater protection.

PCE and TCE: The 5 μg/l limit is based on drinking water standards.

Carbon Replacement: The requirement is to monitor and report.

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 discharge limitations upon issuance of the permit.
- No less than fourteen (14) days prior to first discharge under this permit, the Permittee shall submit written notice of commencement of discharge.

- Within 30 days of pilot test completion, the Permittee shall submit the analytical results and 2 copies of the full-scale remediation system as-built plans to the Division for review and approval. The as-built plans shall be wet-stamped by a Nevada Registered Professional Engineer.

- Within 6 months of permit expiration, sample the discharge from the final carbon canister (sample location "c"), and analyze for all VOC (attached). Report the analytical results with the applicable quarterly report (separately from the DMR form) and with renewal application. Report the results of all VOC individually, even non-detects. Provide a narrative summary of the results with the laboratory data.

- By **MM DD, 2012** the Permittee shall submit two copies of an Operations and Maintenance Manual to the Division for review and approval, prepared in accordance with applicable sections of WTS-2, *Minimum Information Required for an Operation and Maintenance Manual for a Wastewater Treatment Plant*.

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: The Notice of the Division's intent to issue a new NPDES permit for a five-year period, authorizing this facility to discharge to Duck Creek Wash via the Clark County stormdrain system, 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 **July 29, 2012 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: June 2012