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: American Entertainment Properties Corp.
142 West 57th Street, 5th Floor
New York, NY 10019

Permit Number: NV0023566

Facility Location: Fontainebleau Casino and Resort
2755 Las Vegas Boulevard
Las Vegas, Clark County, NV 89109

Latitude: 36° 08' 13" N, Longitude: 115° 09' 35" W
Section 9, Township 21S, Range 61E

General: The Permittee, American Entertainment Properties Corp. owns the Fontainebleau Casino and Resort located at 2755 Las Vegas Boulevard in Las Vegas, Clark County. The 4000 room hotel/casino complex covers approximately 25 acres, on the site of the former Algiers hotel. To date the hotel, podium, and parking garage structures are complete, but the casino construction has not yet commenced.

During construction of the hotel tower, parking garage, and podium, a temporary system of approximately 100 pumping wells facilitated dewatering of the site. Shortly after the temporary dewatering system began operation in December 2006, an off-site tetrachloroethene (PCE) plume was pulled into the dewatering system. Once PCE was detected, the facility was required to treat the groundwater prior to discharge to the storm drain system. The treatment system, installed in October 2008, is composed of four parallel-operated granular activated carbon (GAC) canisters. Since the treatment system began operation, four exceedances of the PCE limit have occurred. The exceedances were due to carbon breakthrough events, demonstrating the need for more frequent carbon replacement and more active treatment system maintenance. The carbon media is replaced approximately every 12 months.

The temporary dewatering system was removed in February 2012 and the permanent dewatering system for the constructed structures began operation in March 2012. The permanent dewatering system is a passive sub-slab drainage system. Groundwater is collected by four-inch perforated PVC piping systems within drain rock gravel. The water flows by gravity to 7 collection sumps within the podium and 2 collection sumps within the parking garage, from which it flows to a common surge tank, then to the treatment system comprised of the 4 GAC units, and back to a common header before discharging to one City of Las Vegas storm drain inlet located in Las Vegas Blvd at the northwest corner of the site.

Flow: Prior to submittal of the renewal application the permitted flow rate was 1.92 million gallons per day (MGD), reflective of a site-wide active pumping dewatering system. Since the majority of the site no longer requires dewatering, discharge rates have been greatly reduced. The applicant has requested a decrease in the daily maximum discharge flow rate to 0.99 MGD.

Receiving Water Characteristics: The receiving water for the discharge is the Las Vegas Wash. The water quality standards for the beneficial uses designated in NAC445A.2142 for the Las Vegas Wash at Telephone Line Road (NAC 445A.2156) will be applied at the point of discharge (Outfall 001).

Site Groundwater: Depth to groundwater is approximately 14-20 feet below ground surface. Groundwater flow direction is northeast, towards the Las Vegas Wash.

Corrective Actions Sites: There are four Bureau of Corrective Actions (BCA) remediation sites within one mile of the Fontainebleau dewatering and discharge system. The BCA case officers have stated that the construction dewatering system for the Fontainebleau drew in PCE from two nearby remediation sites. Since the temporary dewatering system was discontinued and the permanent passive structure dewatering was implemented, the discharge rate is approximately one-half the historic average flow rate. Future impacts to the remediation sites are not expected from the passive dewatering and discharge activities.

Discharge Flow and Characteristics: During the period from July 2007-July 2012, the following characteristics were reported in the quarterly Discharge Monitoring Reports.

Table 1. Water Quality Data from July 2007 through July 2012

Parameter		*Permit Limit*	Average	Maximum	Minimum	# of Exceedances
Flow < 03/12	Daily Max (MGD)	***1.92***	.360	1.655	.14	0
Flow > 03/12	Daily Max (MGD)	***0.99***	.140	.287	.10	0
pH	Quarterly (mg/l)	***6.5-9.0***	7.3	7.86	6.2	0
PCE influent (> 10/24/08)	Quarterly (μg/l)	***M&R***	21.1	32	ND *	N/A
PCE effluent (< 10/24/08)	Quarterly (μg/l)	***5.0***	9.6 *	17.0	ND *	15
PCE effluent (> 10/24/08)	Quarterly (μg/l)	***5.0***	4.05 *	9.2	ND *	4
TCE	Quarterly (μg/l)	***5.0***	1.35	9.0	ND *	1
TPH (8015B)	Quarterly (mg/l)	***1.0***	35.9	703 **	ND *	2 **
MTBE	Quarterly (μg/l)	***20***	7.64 *	147	ND *	1
TIN	Quarterly (mg/l)	***20***	6.68	9.46	4.94	0
Nitrate	Quarterly (mg/l)	***M&R***	6.56	9.46	4.94	N/A
TDS	Quarterly (mg/l)	***M&R***	2513	2900	284	N/A
TP	Quarterly (mg/l)	***M&R***	.085	.27	ND *	N/A

*Detection limits based on specific lab detection limit, or assigned ½ the reporting limit.
**TPH exceedances were likely due to sample cross contamination or on-site fuel release.

Proposed Discharge Limitations and Special Conditions: The water discharged from the passive dewatering and activated carbon treatment system to the City of Las Vegas storm drain system 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 drop inlet, at the following locations:

ISP: The influent sample port on the inlet line to the treatment system;

Outfall 001: The sample port on the discharge line from the treatment system, prior to discharge to the storm drain system drop inlet in Las Vegas Blvd.

Latitude: 36° 08' 18.78" N **Longitude**: 115° 09' 37.72" W

Proposed Discharge Limits: Sampling and monitoring requirements are provided in Table 2.

Table 2. Discharge Limitations, Sampling and Monitoring Requirements

Parameters	Units	Discharge Limitations		Monitoring Requirements		
		30-Day Average	Daily Maximum	Sampling Locations	Monitoring Frequency	Monitoring Type
Discharge [1]	MGD	M&R	0.99	001	Daily	Flow meter
TPH [2]	mg/l	---	1.0	001	Annually	Discrete
PCE -influent [3]	µg/l	---	M&R	ISP	Monthly	Discrete
PCE -effluent [3]		---	5.0	001	Quarterly	
TCE [2]	µg/l	---	5.0	001	Annually	Discrete
MTBE [2]	µg/l	---	20	001	Annually	Discrete
pH min [4]	S.U.	---	6.5	001	Quarterly	Meter/ Discrete
pH max [4]	S.U.	---	9.0	001	Quarterly	
TDS [4]	mg/l	---	M&R	001	Quarterly	Discrete
TIN [4]	mg/l	---	20	001	Quarterly	Discrete
TP [4]	mg/l	---	M&R	001	Quarterly	Discrete

Table Definitions and Footnote Explanations are provided in Table 3.

Table 3. 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. Analyze using EPA Method 8015B.
mg/l	milligrams per liter
µg/l	micrograms per liter
PCE	Tetrachloroethene
TCE	Trichloroethene
MTBE	Methyl tertiary butyl ether
TDS	Total dissolved solids

TIN	Total inorganic nitrogen
TP	Total phosphorus
Footnote 1	Monitor daily and record maximum daily discharge in MGD, and report quarterly. Discharge shall be monitored at the outlet from the treatment system prior to discharge to the storm drain system drop inlet at Outfall 001.
Footnote 2	Sample and analyze annually and report on 4th quarter DMR.
Footnote 3	Sample and analyze influent monthly and effluent quarterly and report on quarterly DMR forms. Sample influent at the influent sample port (ISP), and effluent prior to discharge to drop inlet (001). Influent has no numeric limit (M&R); effluent has a numeric limit. Influent sampling requirement may be removed after 12 consecutive monthly non-detects.
Footnote 4	Monitor or sample and analyze; report results for each parameter individually on DMR forms. Sample and analyze quarterly and report on DMR quarterly.

Rationale for Permit Requirements: The Division has established the monitoring requirements in Table 1 to ensure that water quality is not degraded as a result of project activities.

Flow: 0.99 MGD. Flow data is necessary for determining the potential of the dewatering system to draw in the off-site PCE plumes. Previous permit limit was 1.92 MGD. The renewal permit limit has been requested to be lowered to reflect the reduced dewatering rates, a consequence of changing the dewatering system from a temporary, site-wide, active pumping system, to a permanent, structure-based, passive dewatering system. Average flow rates are currently ½ of the average historic dewatering rates of 0.36 MGD.

TPH: 1.0 mg/l. Technology-based limit included as a check on the operation of the groundwater treatment system. TPH was detected twice: in March 2010 the concentration was 703 mg/l; and in April 2007 the concentration was 75 mg/l. The two detections were likely due to sample cross-contamination or an on-site fuel release. Confirmation samples at each event were non-detect. The previous monitoring frequency was quarterly. The frequency is being decreased to annually due to the lack of detectable TPH in the effluent. If TPH is not detected in the effluent during this permit cycle the Permittee may request removal of the requirement at the next permit renewal.

PCE: Influent –M&R. Influent is monitored to assess the effectiveness of the remediation system and to inform regarding the off-site plume migration. Effluent -5.0 μg/l, a technology-based limit. PCE concentrations in the discharge exceeded the limit 15 times in 2007 and 2008, and were a result of temporary site-wide construction dewatering rates drawing in an off-site PCE plume. The NDEP required that a treatment system be installed to prevent further exceedances. The treatment system was installed late in 2008. Since the treatment system was installed four exceedances have occurred, all of which were due to carbon breakthrough in the GAC units. Since March 2012 there have been no detectable concentrations in either the influent or effluent. After 12 consecutive months, beginning with March 2012, of monthly influent monitoring data showing non-detects for PCE, the Permittee may request to disconnect the treatment system, and discontinue influent monitoring. If the Division decides to approve that request the influent monitoring requirement may be removed with a Minor Modification to the Permit. Quarterly effluent monitoring remains as a precautionary measure to ensure that the permit limits are not exceeded. If the effluent monitoring data at the time of the next permit renewal demonstrates no further exceedances, the Permittee may request a reduction in the frequency of effluent monitoring.

TCE: 5.0 μg/l, a technology-based limit. TCE was detected once in the discharge, in April 2007; the concentration was 9.0 μg/l. TCE effluent monitoring will continue to be required but the frequency will be reduced to annually, due to the lack of detectable concentrations in the past 5 years.

MTBE: 20 μg/l, a risk-based limit. MTBE had one detectable concentration in January 2007 -147 μg/l; all samples since have been non-detect. Monitoring will continue to gather additional data and ensure the treatment system is functioning properly, but the frequency is being reduced to annually.

TDS: M&R. NAC 445A.2156 contains a single value standard of 1900 mg/l and a 95% of all single value average of 3000 mg/l. The discharge data set revealed an average of 2513 mg/l and a single value maximum of 2900 mg/l. A limit is not set because TDS is naturally occurring and difficult to treat. TDS is routinely monitored for all discharges to Las Vegas Wash, based on salinity issues in the Colorado River basin. The quarterly monitoring requirement is retained.

TIN: 20 mg/l. The limit is the water quality standard given by NAC 445A.2156, based on existing quality. TIN is determined from the sum of separate analyses for nitrate, nitrite, and ammonia. Although not attenuated by passage through carbon, site concentrations have resided well below the standard, with the overall average being 6.68 mg/l.

TP: M&R. TP was detected at high concentrations during the first year of the dewatering, and has remained near zero since 2008. The quarterly monitoring requirement is retained.

Carbon: M&R. Track mass of carbon replaced in GAC units. This requirement helps ensure that carbon in the GAC units is replaced regularly, and prior to carbon breakthrough resulting in potential discharge of organic compounds in excess of the standards.

Changes from Previous Permit:

NITRATE as N: This parameter is removed from the renewal permit. Data collected over the past 5 years indicates that Nitrate is the primary source of TIN, and the 10 mg/l MCL has never been exceeded. The nitrate requirement is redundant, and is therefore removed.

Monitoring Frequency Reductions: The monitoring frequency requirements for TPH, TCE, and MTBE are reduced from quarterly to annually. The data collected over the past 5 years demonstrates that there is little potential for these compounds to show up in the effluent.

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.

- By **January 25, 2013** the Permittee shall submit two copies of an updated 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 NPDES permit authorizing the Permittee to discharge to the Las Vegas Wash via the City of Las Vegas storm drain system, for a five-year period, 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 **October 21, 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: September 2012

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