

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

Permittee Kinder Morgan Energy Partners LP
370 Van Gordon St
Lakewood CO 80228-8304

Permit No. NV0023230

Facility Kinder Morgan Las Vegas Terminal
5049 N Sloan Lane
Clark County, 89115
northeast of the intersection of E Craig Rd and N Nellis
Blvd, between N Las Vegas Blvd and I15
Clark County
Latitude: 36° 15' 15" N
Longitude: 115° 2' 45" W
T21S R61E S20

General This is the first permit renewal for a groundwater treatment system discharge at this fuel storage site. There was very little activity under the previous permit for a variety of reasons. The principal contaminants are MTBE, toluene, benzene, ethylbenzene, and xylenes. The cleanup is being conducted pursuant to the requirements of the Division's Bureau of Corrective Actions, and soil vapor extraction, groundwater treatment, and reinjection processes are in place. Groundwater treatment consists of oil water separation, carbon adsorption, manganese precipitation, and arsenic adsorption. Free product is recovered by the oil water separator. The carbon canisters are configured in two parallel three unit trains operated alternately. The manganese precipitation process also removes iron and occurs by catalyst in a fixed bed arrangement, with periodic backwashing and solids collection. The arsenic adsorption step, similar to VOC removal by GAC, is achieved by media filtration via two fixed bed canisters in series, with capacity dependent on flow and concentration. The metals removal processes were developed in the drinking water industry. Discharge is to a box culvert on Sloan Channel, which is earthen along this reach.

Receiving Water Characteristics Sloan Channel is tributary to Las Vegas Wash, below Flamingo Wash, and the standards set at the nearest downstream control point, "Las Vegas Wash at Telephone Line Road" (NAC 445A.199), apply. In addition, the state wide standards

for toxic materials, NAC445A.144, are applicable, and Total Maximum Daily Loads (TMDLs) for Las Vegas Wash have been established for total phosphorus and ammonia.

Rational for Permit Requirements The monitoring requirements, and limits are given in Table I.A.1 of the permit, which is presented below.

Table I.A.1 Discharge Limitations

Parameter	Discharge Limitations	Monitoring Requirements	
		Measurement Frequency	Sample Type
flow rate ¹	172,800 gpd	continuous	meter
benzene	5 µg/l	monthly	discrete
ethylbenzene	100 µg/l	monthly	discrete
toluene	100 µg/l	monthly	discrete
total xylenes	200 µg/l	monthly	discrete
TPH	1.0 mg/l	monthly	discrete
MTBE ²	20 µg/l	monthly	discrete
As	50 µg/l	monthly	discrete
Mn	100 µg/l	monthly	discrete
TDS	m&r mg/l	monthly	discrete
TIN	20 mg/l	monthly	discrete
TP	m&r mg/l	monthly	discrete
pH	6.5 - 9.0 su	monthly	discrete

Notes

1. Report average gpd for each month
2. Methyl tert-butyl ether

The discharge limits are repeated from the previous permit.

FLOW RATE, 172,800 gpd: This is the design capacity of the treatment system

BENZENE 5 µg/l: This is the toxics criteria for the municipal or domestic supply beneficial use.

ETHYLBENZENE 100 µg/l: This technology based limit is used instead of the toxics criteria (1,400 µg/l) since it's easily achievable.

TOLUENE 100 µg/l: Toluene is methyl benzene. This technology based limit is used instead of the toxics criteria (14,300 µg/l) since it's easily achievable.

TOTAL XYLENES 200 µg/l: This is a technology based limit. Xylenes consist of the three isomers of dimethylbenzene.

TOTAL PETROLEUM HYDROCARBONS (TPH), 1 mg/l: This analysis covers a wide range of carbon chains and should include most constituents of the fuel plume. The limit is technology based.

METHYL TERT-BUTYL ETHER (MTBE), 20 µg/l: This criteria was developed under the Corrective Actions program, based on taste and odor considerations.

ARSENIC, 50 µg/l: This is the toxics criteria for the municipal or domestic supply beneficial use.

MANGANESE, 100 µg/l: The previous fact sheet states that this was a Nevada drinking water standard; for comparison, the toxics criteria is 200 µg/l for the irrigation beneficial use.

TOTAL DISSOLVED SOLIDS, monitor & report: This is included because of existing salinity impacts in the Colorado River Basin. The discharge concentration is approximately 500 mg/l. The control point standard is 1900 mg/l, based on existing quality.

TOTAL INORGANIC NITROGEN (TIN), 20 mg/l: This limit is taken from the control point standards, and is based on existing water quality. Total inorganic nitrogen is determined from the sum of separate analyses for nitrite, nitrate, and ammonia.

TOTAL PHOSPHORUS, monitor & report: This is included due to the TMDL, which is 434 lb/day.

pH, 6.5 - 9.0, standard units: This is the control point standard.

Changes from the Previous Permit Language specifying the carbon changeout procedure has been added to maintain treatment capability throughout the carbon use cycle.

Schedule of Compliance: An updated O & M manual is due on the six month anniversary of the effective date of the permit.

Compliance History Problems with the air pollution control equipment prevented operations for most of the previous permit term. A slight excursion of As and Mn concentrations above the permit limits caused a system shutdown at the end of 2006. The precipitation and adsorption processes mentioned previously were installed, and the system subsequently restarted in June of 2007.

Procedures for Public Comment Notice of the Division's intent to issue discharge permit NV0023230, authorizing a groundwater remediation discharge to Sloan Channel, 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 must submit written comments to the Division within (30) days of the publication date. The comment period can be extended at the discretion of the Administrator. The deadline for comments is 5:00 pm Tuesday March 4, 2008, although letters postmarked on that date will also be accepted. A public hearing on the proposed determination can be requested by the applicant, any affected state or interstate agency, the Regional Administrator, or any interested agency, person, or group of persons. The request must be filed within the comment period and indicate the interest of the person filing the request and the reasons why a hearing is warranted. Public hearings granted by the Division are conducted in accordance with NAC 445A.238. The final determination of the Division may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination The Division has made the tentative determination to renew the discharge permit as proposed for a five year term.

Prepared by: Robert J. Saunders
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January 23, 2008