

STATE OF NEVADA
Department of Conservation & Natural Resources
DIVISION OF ENVIRONMENTAL PROTECTION

Jim Gibbons, Governor

Allen Biaggi, Director

Leo M. Drozdoff, P.E., Administrator

September 19, 2008

Ms. Susan Crowley
Tronox, LLC
P.O. Box 55
Henderson, NV89009

**RE: Underground Injection Control Permit #UNEV94218
Tronox Henderson Facility, 8000 West Lake Mead Drive, Henderson, Nevada 89009**

Dear Ms. Crowley:

The Nevada Division of Environmental Protection, Bureau of Water Pollution Control has completed the renewal of Underground Injection Control permit # UNEV94218, **Tronox Henderson Facility, 8000 West Lake Mead Drive, Henderson, Nevada 89009**. No significant comments were received during the public notice period; therefore, the permit is active as of September 19, 2008.

Please review the permit carefully. The annual permit fee is due July 1 of each year, and the permit will expire September 19, 2013. The renewal application and fee are due 180 days before expiration of the permit. If you do not wish to renew the application, please request that the permit be cancelled and follow UIC Permit cancellation guidelines.

If you have any questions regarding the permit, please contact me at (775) 687-9428 or via email rland@ndep.nv.gov.

Sincerely,

Russ Land
Bureau of Water Pollution Control

Enclosure: UIC UNEV94218 permit

cc: Brian Rakvica, Bureau of Corrective Actions, NDEP Las Vegas
GWP Reader File
UNEV94218



STATE OF NEVADA
DIVISION OF ENVIRONMENTAL PROTECTION
AUTHORIZATION TO INJECT

In compliance with the provisions of the Nevada Revised Statutes (NRS 445A) and the Nevada Underground Injection Control Regulations (NAC 445A.810 through 445A.925), the following Permittee is authorized to inject at a facility describe below in accordance with limitations, requirements and other conditions set forth in Parts I and II hereof.

Permit Number: **UNEV94218**

Facility Name: **Tronox Henderson Facility**
Facility Address: **8000 West Lake Mead Drive, Henderson, Nevada, 89009**

Permittee: **Tronox, LLC**
Permittee Address: **P.O Box 55, Henderson, Nevada 89009**

Property Owner: **Tronox, LLC**

Legal Description: **NW ¼ of Section 12, T22S, R62E, MDB&M in Clark County, Nevada at Latitude: 36° 02' 95" N, Longitude: 115° 00' 21" W
AND
NE ¼ of Section 28, T20S, R61E, MDB&M in Clark County at Latitude: 36° 11' 17" N, Longitude: 115° 09' 38" W**

Number of Permitted Wells: **Two injection/recharge trenches**

Other Permitted Discharges: **None.**

Reporting Frequency: **Quarterly**

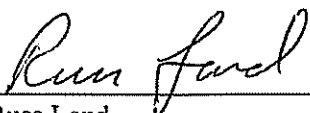
Annual Permit Fee Due: **July 1st of each year**

Permit originally issued: **1995**

This permit shall become effective **September 19, 2008.**

This permit shall expire at midnight, **September 19, 2013.**

The UIC renewal application is due 180 days prior to permit expiration.



Russ Land
Bureau of Water Pollution Control

Sept 19, 2008
Date

PART I

A. EFFLUENT LIMITATIONS, MONITORING AND OTHER REQUIREMENTS

1. During the period beginning on the effective date of this permit and lasting through the expiration date, the permittee is authorized to inject clean Lake Mead water into a maximum of two (2) injection/recharge trenches located at the Tronox facility in Henderson, Nevada.
2. **No chemical additives shall be added to the injectate prior to injection or disposal without prior written approval by the Division.** Extraction, conveyance, and injection must be accomplished in such a way so as to prevent the introduction of any foreign materials or unapproved additives to the injectate waters. Injection practices shall not cause groundwater to surface at or near the injection points.
3. The injectate shall be limited and monitored by the permittee as specified below and reported to NDEP pursuant to Part I.B. of this permit.
 - a. **At no time shall the injectate concentrations exceed Drinking Water standards or cause degradation to the affected aquifer.**
 - b. Analyses shall be performed by a laboratory certified by the State of Nevada.
 - c. Testing methods for constituents must be EPA or Division approved.
 - d. The analytical detection limits for all chemical constituents must be at least as low as primary or secondary drinking water standards when applicable.
 - e. The Division may decrease or increase the monitoring of any parameter for good cause.
4. **Sampling and monitoring requirements under this permit are listed in Table 1 of Attachment A.** The Permittee shall submit **quarterly reports along with Attachment A** on a continuous basis, **whether actively injecting or not**, which contain the required data and information listed in Attachment A.

Monitoring results and other requirements obtained during the previous reporting period, whether injection has occurred or not, shall be summarized for each month and reported no later than the 28th day of the month following the completed reporting period. Signed copies of these, and all other reports required herein, shall be submitted to the UIC Program Officer at the following address:

Division of Environmental Protection
Bureau of Water Pollution Control
UIC Compliance Coordinator
901 South Stewart, Ste 4001
Carson city, NV

5. If, during operation of this facility, the permittee or their representatives become aware of any condition which causes degradation of water in the receiving zone, injection

shall cease immediately.

6. Requests for cancellation shall contain: 1) Either certification of well abandonment OR written confirmation from regulatory agency for continued use as monitoring wells on a well by well basis, 2) final UIC monitoring report, and 3) any Affidavits not already on file in UIC permit. Any wells not needed for monitoring are required to be plugged prior to UIC permit cancellation.
7. The permittee shall operate and maintain the system per established procedures and as approved by the Division. Any modification to the system requires Division approval prior to implementation.
8. Nothing in this authorization shall be construed to eliminate the responsibility for cleanup of this area. Cleanup shall be accomplished in accordance with plans approved by the Bureau of Corrective Actions of the Division of Environmental Protection.
9. All facilities encompassed by this permit shall conform to the plans and specifications filed with the Division of Environmental Protection and shall be maintained in good working order at all times.
10. The permittee shall submit the annual review and services fee in accordance with NAC 445A.872 starting July 15th of the year immediately following permit issuance and every year thereafter until the permit is terminated.
11. The permittee shall comply with all provisions of the UIC regulations, Nevada Administrative Code 445A.810 through 445A.925, and all pertinent laws and regulations. Nothing in this permit relieves the permittee from responsibilities, liabilities or penalties established by any other state, federal or local jurisdiction.
12. Upon completion of the remediation project, all wells shall be abandoned by filling them with cement grout from total depth to land surface as required by NAC 534.420. All abandonment work will be performed by a driller licensed in the State of Nevada. All injection trench piping shall be removed or grout-filled within 90 days of project completion approval. Certification of abandonment shall be submitted to the Division prior to UIC permit cancellation.

B. MONITORING AND REPORTING

1. Samples and measurements taken as required herein shall be representative of the volume and/or nature of the subject of interest.
2. Test Procedures

Test Procedures for the analyses of required constituents shall comply with applicable

analytical methods cited and described in Tables IA - IE of 40 CFR part 136 or in appendix III of 40 CFR part 261 unless other procedures are approved by the Administrator. All analyses conducted pursuant to permit requirements must be performed by a laboratory certified by the State of Nevada.

3. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. chain-of-custody sheets with the exact place, date, and time of sampling;
- b. the dates the analyses were performed
- c. the person(s) who performed the analyses
- d. the analytical techniques or methods used
- e. the results of all required analyses
- f. the precision and accuracy of the analytical data
- g. raw laboratory data result sheets

4. Additional Monitoring by Permittee

If the permittee monitors any constituent at the location(s) designated herein more frequently than required by this permit, or monitors additional constituents other than those required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be made available to the Division upon request.

5. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records and analyses performed, calibration and maintenance of instrumentation, and recordings from continuous monitoring instrumentation, shall be retained for a minimum of three (3) years, or longer if required by the Administrator.

6. Modification of Monitoring Frequency, Location and Sample Type

After considering monitoring data, discharge flow or receiving water conditions, the Division may, for just cause, modify the monitoring frequency, location and/or sample type by issuing a Notice or an Administrative Order to the permittee.

PART II

A. MANAGEMENT REQUIREMENTS

1. Change in Effluents or Discharge

All effluents or discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any constituent identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, or treatment modifications which will result in new, different, or increased effluents or discharges must be reported by submission of a new application or, if such changes will not violate the limitations specified in this permit, by notice to the permit issuing authority of such changes. Following such notice, the permit may be modified to specify and limit any constituents not previously limited.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with or will be unable to comply with the conditions, requirements and limitations specified in this permit, the permittee shall provide the Administrator with the following information, in writing, within five (5) days of becoming aware of such conditions:

- a. A description of the noncompliance or violation.
- b. The period of noncompliance, including exact dates and times, or if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncompliance.
- c. Notification shall be provided verbally as soon as possible but not later than the end of the first working day after learning of the violation, and in writing within five days of becoming aware of such conditions.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible, all treatment or control facilities, devices or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

4. Adverse Impact

The permittee shall take all reasonable steps, including such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying effluent or discharge, to minimize any adverse impact to waters of the State resulting from noncompliance with any limitations specified in this permit.

5. Bypassing

Any diversion from or bypass of facilities necessary to maintain compliance with the terms and conditions of this permit is prohibited except where unavoidable to prevent loss of life or severe property damage. The Division will have the final authority in the determination of whether a discharge is deemed unavoidable. The permittee shall promptly notify the Director in writing, of each such diversion or bypass, in accordance with the procedure specified in Part II.A.2 above.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Administrator and/or his authorized representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises where a source is located or in which any records are required to be kept under the terms and conditions of this permit.
- b. To have access to, and to copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to perform any necessary sampling to determine compliance with this permit or to sample any effluent or discharge.

2. Transfer of Ownership or Control

In the event of any change in control or ownership, the permittee shall notify the succeeding owner or controller in writing of the existence of this permit. A copy of said notice shall be forwarded to the Director within 10 days of such change. All transfer of permits shall be approved by the Administrator of the Division of Environmental Protection

3. Availability of Reports

Except for data determined to be confidential under NRS 445A.665, all reports prepared in accordance with the terms of this permit shall be available for public inspection. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in NRS 445A.710.

4. Permit Modification, Suspension or Revocation

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any terms or conditions of this permit
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the effluent or discharge.

5. Civil and Criminal Liability

- a. Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.
- b. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation.
- c. The issuance of this permit does not convey any property rights, in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, State or local laws or regulations.

ATTACHMENT A**UNEV 94218: Monitoring Report Requirements**

The Permittee shall submit **quarterly reports** on a continuous basis, **whether actively injecting or not**, which contain the following data (please check all information included in the attached report):

___ The UIC permit number and Attachment A.

___ The results of the chemical analyses as required by Table 1.

Table 1

PARAMETER	FREQUENCY	LOCATION	LIMITATIONS
VOCs, Total Perchlorate, and Profile I Analysis	Quarterly	Lake Mead Water at Discharge Pipe Prior to Injection	State and Federal Drinking Water Standards. Injectate must not degrade the Groundwater Quality
Total and Hexavalent Chromium	Quarterly	M-11, M-12A, M-36, M-37, M-44, M-84, M- 95, and M-100	Monitor and Report
Total Perchlorate, Including NaClO ₄ and NH ₄ ClO ₄	Quarterly	M-11, M-12A, M-36, M-37, M-44, M-84, M- 95, and M-100	Monitor and Report
TDS	Quarterly	M-11, M-12A, M-36, M-37, M-44, M-84, M- 95, and M-100	Monitor and Report
Injection Rate into Injection trenches and Total Volume injected	Continuously	Discharge Pipe Prior to Injection	100 gpm monthly average. Must be equivalent or less than total extraction rate and volume
Extraction Rate and Total Volume extracted	Continuously	Extraction Wells located Upgradient of Injection Trenches	Cumulative extraction rate must be equivalent or greater than injection rate and volume
Groundwater Elevation and Depth	Quarterly	M-25, M-38, M-80, M-82, M-86, M-95, M-96, M-98, M-99, M-100, and M-102	Monitor and Report

___ For each month in the reporting period document injection rate (gpm), volume, date, and time injected of Lake Mead water into two injection trenches.

___ Water level, contour map illustrating groundwater gradient and flow direction.

___ Summary narrative report of monitoring activities for that reporting period. The report shall include, but not be limited to, any problems encountered with the injection system, the results of any tests performed during that period, and any changes noted to the groundwater. If no injection has occurred, report the non-injection status and the reason the system is not in operation.