

MEMORANDUM

Department of Environmental Quality
Water Division
Office of Spill Response and Remediation

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SUBJECT: OSRR PROGRAM GUIDANCE MEMORANDUM NUMBER 94-009
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On-Site Disposal of Ground Water at Petroleum Contaminated Sites

TO: Water Regional Directors

FROM:  David K. Paylor/ Larry G. Lawson

DATE: July 29, 1994

COPIES: Andy Hagelin, Robert Baird, Water Resource Managers, Regional Ground Water Managers, Martin G. Ferguson, Fred K. Cunningham, David T. Ormes, David P. Chance

This memorandum provides guidance on the need for obtaining approvals (including permits) from DEQ for the on-site disposal of ground water purged from monitoring wells used for the purpose of sampling and water generated from aquifer pump tests. It will be the **sole responsibility of the Responsible Party (RP)** to either provide adequate treatment of the purged/pumped ground water or certify that the purged/pumped ground water is not contaminated prior to disposal on-site. This guidance does not apply to effluent generated by a remediation or hydraulic containment system which requires a Corrective Action Plan and a CAP Permit.

GROUND WATER PURGED FROM MONITORING WELLS FOR SAMPLING

The RP should not be required to obtain approval (including permits) for the on-site land application of ground water purged from a monitoring well used for the purpose of sampling if all of the following conditions are met:

1. The purged ground water should not be allowed to discharge to any storm sewer or surface waters.
2. The purged ground water should be applied in such a way that it will infiltrate over the delineated contaminant plume and within the property boundaries of the site, or within approximately a 5 foot radius of the well from which it was purged.
3. There should be no presence of liquid phase hydrocarbons, to include sheen or emulsion in the purged ground water.
4. The purged ground water should not be land applied during saturated or frozen ground conditions.
5. All actions taken as a result of this guidance are included in the respective report for which the sampling occurred.

AQUIFER PUMP TESTS, DEWATERING OF UST PITS, ETC. (With RO Discretion)

The RP should not be required to obtain approval (including permits) for the on-site land application of ground water generated as a result of an aquifer pump test, UST pit dewatering, or other site process generating water, if the following conditions are met:

1. The pumped ground water should not be allowed to discharge to any storm sewer or surface waters.
2. The pumped ground water should be applied in such a way that it will infiltrate only within the property boundaries of the site from which it was pumped.
3. The quality of the pumped ground water allowed to be land applied should not exceed the CAP General permit requirements for freshwater (Attachment 1).
4. Sampling of pump test water should be done at a rate of no less than once per every 8 hours of pumping.
5. Sample analysis should measure the appropriate parameters as identified in Attachment 1. Samples should be analyzed using EPA approved methods, DEQ approved methods, or on-site immunoassay tests.¹
6. Pump test water should not be land applied during saturated or frozen ground or surface water conditions.
7. All records of the disposal and testing should be maintained by the RP until the site is closed.
8. All actions taken as a result of this guidance should be included in the respective report for which the pumping occurred.

Because of the significant quantities of ground water generated from many aquifer tests, UST pit dewatering events, etc., ground water suspected to be contaminated should be properly treated and monitored to meet the above conditions prior to being allowed to re-infiltrate on-site.

¹ - Immunoassay based tests for TPH, BTEX, PAHs, etc. in water are not EPA approved but are acceptable for the purposes of this guidance if the QA/QC guidelines from the respective manufacturer(s) are adhered to. The unapproved tests are for screening only and are not acceptable for compliance monitoring.

Water Quality Allowed to be Land Applied

Discharges contaminated with gasoline:

Benzene	50 µg/l max
Toluene	175 µg/l max
Ethylbenzene	320 µg/l max
Total Xylenes	74 µg/l max
Total Recoverable Lead*	$e^{(1.273(\ln \text{ hardness}^{**})) - 4.705}$

Discharges contaminated with kerosene, jet fuel, or diesel

Naphthalene	62 µg/l max
Total Petroleum Hydrocarbons	No limit, monitoring required

* Monitoring for this parameter is required only when contamination is from leaded fuel

** Hardness of the effluent