

Union Pacific Railroad's Eugene Railyard

Cleanup Project Update: July 2011

DEQ has been overseeing soil and groundwater investigations and cleanups at the Union Pacific Railroad (UPRR) Eugene Railyard since the mid 1990s. Over 100-years of locomotive maintenance, roundhouse activities, railroad tie treating, and train fueling has led to contamination on the rail yard and contaminated groundwater that has spread beneath parts of the River Road and Trainsong neighborhoods. Contaminated vapors from groundwater were a recent concern in a small area of the Trainsong neighborhood.

This project is focused around a relatively small part of the yard situated west of the Chambers Street overpass between the Trainsong neighborhood to the west and part of the River Road neighborhood to the east.

Groundwater contamination

Several chemical solvents were used at the rail yard, and they ended up contaminating the groundwater below the yard. This groundwater contamination spread at low concentrations to the north beneath the River Road neighborhood, and to the west beneath the Trainsong neighborhood.

The solvent contamination consists primarily of the following compounds:

- Tetrachloroethylene (or PCE)
- Trichloroethylene (or TCE)

There are lesser amounts of several other associated chemicals and breakdown products from PCE and TCE, in some areas.

Groundwater cleanup

In 2005 and 2006 UPRR conducted an extensive cleanup of groundwater beneath the old roundhouse area, where solvent concentrations were the highest. This cleanup, using an approach called *bioremediation*, has been extremely successful in reducing solvent concentrations in groundwater beneath the rail yard. This cleanup has helped to reduce the levels of solvent contamination in the adjacent neighborhoods too. It will take many years for all traces of the solvents to be gone, but the cleanup has done a lot to reduce contaminant levels in groundwater. The bioremediation area will continue to be monitored to watch for rising

solvent concentrations, but this is not expected. If they do rise, additional bioremediation treatment may be required by DEQ.



Map showing the location of the UPRR Eugene Railyard study area (yellow) and adjacent neighborhoods.

Tap water is safe

All residents in the area affected by groundwater contamination currently use EWEB water for their household uses. EWEB water comes from the McKenzie River and is tested and safe to use. It is not affected by the groundwater contamination from the rail yard.

If you do use well water for your household use, or you are considering it, we would like to hear from you. **DEQ recommends using EWEB provided water for all household uses.**

Backyard irrigation wells

Some people in the River Road and Trainsong communities have backyard irrigation wells, and some of those wells have been affected by low levels of solvent contamination. DEQ took hundreds of water samples from irrigation wells in the late 1990s to help determine the extent of the problem. Monitoring wells were installed in 2001 to allow us to better understand the extent of contamination.

DEQ evaluated risks associated with using well water for outdoor uses, including irrigation and vegetable gardening. In all areas where there are



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currently irrigation wells in use, the levels of solvents are below DEQ standards so the water is safe for irrigation. Concentrations of solvents are declining.

Vapor intrusion

In 2006 and 2007 DEQ became concerned about solvent vapors from the contaminated groundwater and possible exposures to a small number of Trainsong neighborhood residents. At DEQ's request UPRR installed vapor barriers beneath nine homes to reduce possible exposures. Soil vapor monitoring continued, and in recent years vapor levels dropped significantly. This is likely due to the groundwater cleanup completed nearby on the rail yard. Groundwater will continue to be monitored. If solvent levels were to rise in a way that would be a vapor concern, additional vapor testing would be required. The engineered vapor barriers DEQ required are no longer required to prevent vapor exposures.

No soil contamination in neighborhoods

While historical spills have contaminated the soil on the rail yard in some areas, this soil contamination has not affected nearby residential areas. DEQ is unaware of any soil contamination off of the rail yard.

Preventing future contamination

DEQ recently approved UPRR's remedial investigation that identifies several areas of the rail yard where additional actions must be taken to prevent exposing workers and nearby residents to unsafe levels of pollution. DEQ will ensure that pollution in groundwater from the rail yard does not exceed state or federal regulatory health standards.

UPRR will prepare a feasibility study this year to evaluate different approaches to accomplish

these objectives. DEQ will then recommend a final remediation action later this year that will ensure that the site and adjacent areas are protected in the near and long term. The public will be invited to provide comments on DEQ's recommended actions.

Oregon Public Health Authority

The Environmental Health Assessment Program (EHAP), a division of the Oregon Public Health Authority, has independently reviewed the environmental sampling data from the rail yard over the years. EHAP can answer questions about health effects associated with chemical exposures and the rail yard. The EHAP contact person is Sujata Joshi. Sujata can be reached at (971) 673-1213.

DEQ project website

DEQ has a website for the Eugene Railyard project with much more information about the investigation, information for neighbors, etc. www.deq.state.or.us/lq/cu/wr/uprreugene

EHAP project website

The Environmental Health Assessment Program has a web site specific to this project. It can be found at <http://public.health.oregon.gov/healthyenvironments/environmentalexposures/hazardoussites/environmentalhealthassessment/pages/uprrsite.aspx>

For more information please contact:

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