

NORTH MARKET STREET ENFORCEMENT ORDER



The State of Washington Department of Ecology (Ecology) has issued Enforcement Order No. DE 00TCPER-779 under the authority of the Model Toxics Control Act (MTCA RCW 70.105D) to the Chevron Pipeline Company (Chevron), Phillips Petroleum Company (Phillips), and Tosco Refining Company (Tosco). Ecology has ordered additional groundwater and soil vapor monitoring work be performed at the North Market Street Site (Site). The Site is located in the Hillyard area of Spokane, Spokane County, Washington, and includes, but is not limited to, properties bounded by North Market Street on the west; Freya Street on the east and north; and Lincoln Road on the south (Figure 1). The City of Spokane corporate limits are located about one mile south of the Site.

Ecology believes that the additional work is necessary to continue to gather baseline information prior to remedial actions and provide for performance monitoring during cleanup at the Site. The Scope of Work includes water level measurements performed in conjunction with quarterly groundwater and vapor sampling of select monitoring points.

This Enforcement Order is submitted for public review to involve the community in the cleanup process for the North Market Street Site and provide interested parties an opportunity to comment on the requested additional investigation.

You may review and comment on the Enforcement Order March 24 through April 24, 2000.

SITE BACKGROUND

Several of the properties which comprise the North Market Street Site were developed as industrial or commercial facilities (Figure 2) that were involved in or related to the refinement, recycling, and sale of petroleum products. In the late 1930s, properties, including the current Tosco Spokane Terminal tank farm and distribution center, were developed as part of an oil refinery complex. By the late 1940s the refinery complex had an estimated daily output of approximately 314,832 gallons of refined petroleum products. Waste management practices common during that era resulted in excessive releases of liquid refinery-related petroleum wastes into the environment.

Refinery operations were discontinued in 1953. The facility continued operations as a

FACT SHEET March 2000

REPOSITORIES:

**Department of Ecology
Eastern Regional Office
4601 N. Monroe, Suite 202
Spokane, WA 99205-1295**

**Spokane Public Library
Hillyard Branch
4005 N. Cook Street
Spokane, WA 99207-5879**

For more information, and/or submission of written comments, please contact:

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Toxics Cleanup Program
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(509) 625-5190 or
1-800-826-7716**

MAILING LIST:

If you wish to be on the North Market Street mailing list please call Carol Bergin of Ecology toll free at 1-800-826-7716 or in Spokane at (509) 456-6360.

PUBLIC COMMENT PERIOD FOR THE NORTH MARKET STREET ENFORCEMENT ORDER

**March 24, 2000 through
April 24, 2000.**

petroleum tank farm after refinery

decommissioning. Today the
Tosco Spokane Terminal continues

to operate as a petroleum fuels storage and distribution center with an estimated cumulative capacity of approximately 391,500 barrels or 16,443,000 gallons, supplying the Spokane area with refined products, primarily automotive fuels. At least two bulk product spills at the Tosco Terminal since 1976 have threatened the quality of groundwater beneath the Site. Properties that comprise, or are being affected by, the Site are primarily zoned for commercial and industrial purposes. A significant portion of the Site incorporates the Tosco Spokane Terminal property, located near the intersection of North Market Street and Lincoln Road.

As early as 1978 local land owners and businesses located north of the present day Tosco tank terminal reported the presence of petroleum-laden soils on lands immediately north of the decommissioned oil refinery complex. In 1984 state officials confirmed the presence of petroleum contamination to groundwater from samples collected at three private water supply wells in the area. Use of those wells was discontinued and Ecology began supplying bottled water to users at that time. In 1991, the North Spokane Irrigation District No. 8 completed a 16-inch water line loop as far north as Magnesium Road to provide a potable water supply to users previously requiring alternate supplies.

In 1990 the US Environmental Protection Agency (EPA) listed the North Market Street Site on the federal Superfund National Priorities List (NPL) of hazardous waste sites requiring cleanup.

After the Site was listed, Ecology assumed the lead to direct cleanup under the authority of the state's hazardous waste cleanup law (MTCA).

PHASE I REMEDIAL INVESTIGATION (RI) FINDINGS

The first phase (Phase I) of the Site RI was completed in 1993. The investigative work resulted in: the installation of 10 additional groundwater monitoring wells; an assessment of groundwater and soil quality; an evaluation of hydrogeologic conditions; a preliminary evaluation of soil conditions above the water table; and, an increased understanding of the extent and sources of groundwater contamination.

Results from the Phase I RI indicated that petroleum-derived contaminants were present above established safe limits for groundwater in the Spokane Valley Aquifer beneath the Site. Estimates of dissolved gasoline, diesel, and heavy oil hydrocarbons found in groundwater have been estimated at total (summed) concentrations up to 63 parts per million (ppm). The Washington State cleanup level requirement for total petroleum hydrocarbons (TPH) in groundwater is 1 ppm.

PHASE II REMEDIAL INVESTIGATION (RI) FINDINGS

Agreed Order amendments signed by the Potentially Liable Person(s) (PLPs) Chevron, Phillips, and Tosco provided for performance and completion of the North Market Street Site Phase II RI and Feasibility Study (FS). The Phase II RI field work has been completed. The Phase II program

was developed to further characterize and define the soil and groundwater information. The Phase II program was conducted in 1995 and was comprised of: installation and sampling of nine additional monitoring wells and two borings to bedrock; installation and sampling of thirteen vapor probes; excavation and soil sampling of 89 test pits; and treatability testing of select soil samples.

The treatability testing was conducted on individual soil samples collected from four different test pits. The purpose of the testing was to assess the biodegradation potential of petroleum hydrocarbons in soil, amount of weathering, and the treatability of the petroleum hydrocarbons in the soils. The biodegradation potential testing results indicated that over 50 percent of the petroleum hydrocarbons could be removed after treatment in three of the four samples.

The Phase II RI showed that petroleum hydrocarbon contamination is present in Site near-surface soil (less than 15 feet); in deep soil to depths of 60 feet; and in soil at the water table (smear zone) about 150 to 170 feet below ground surface. Petroleum hydrocarbon concentrations are also present in soil vapor at depths of 50, 100 feet and below, and continue to be present in groundwater. Petroleum chemicals in groundwater are detectable extending for about one mile within the Spokane Regional Aquifer. The groundwater flow direction beneath the Site is north-northwest.

Gasoline and diesel range hydrocarbons were detected as high as 8 ppm and 13 ppm in groundwater samples collected in 1995. Heavy oil range hydrocarbons were detected at 0.99 ppm in water samples. Free product was observed in five wells between 1995 and 1996. Free product has been detected intermittently since 1996, typically at times of lower groundwater elevations. The Washington State cleanup level requirement for total petroleum hydrocarbons (TPH) in groundwater is 1 ppm.

The Phase II work is documented in a report titled: Final-Draft Phase II Remedial Investigation Report - North Market Street Site Spokane, Washington, June 1996. The Phase II RI Report presents a summation of previous investigations conducted at the Site and the findings of the Phase II RI program.

In July 1996, supplemental RI work was conducted after finalization of the Phase II report. The additional investigation included the installation of five monitoring wells and the two quarterly groundwater and soil vapor sampling rounds. The work was undertaken to provide additional information on the size and characteristics of the groundwater contamination plume.

Following finalization of the Phase II Remedial Investigation, a Feasibility Study (FS) was completed and submitted to Ecology in June 1998. The FS was finalized in July 1998 after a 30-day public comment period. In the FS,

cleanup alternatives were selected for the Site soil and groundwater.

In June 1998, Ecology issued Enforcement Order No. DE 98TC-E103 to the PLPs to complete additional groundwater and soil gas monitoring of monitoring points and treatability testing of smear zone soil samples.

Ecology completed the Draft Cleanup Action Plan (DCAP) in November 1999. Following the 30-day public comment period and completion of the Responsiveness Summary, the DCAP was finalized in January 2000.

WHAT HAPPENS NEXT?

Ecology and the PLPs will begin negotiations to implement the final Cleanup Action Plan (CAP).

OPPORTUNITY TO COMMENT

The public comment period represents an opportunity to have your ideas and comments heard by Ecology. **You may review and comment on the Enforcement Order March 24 through April 24, 2000.**

- ◆ Copies of the Enforcement Order are available for public review at the repositories listed in the shaded box on page one of this fact sheet.
- ◆ To review more detailed Site documents than those in the information repositories, contact Johnnie Harris of Ecology at (509) 456-2751 to schedule an appointment.
- ◆ Files may be reviewed at Ecology's Spokane office Monday through Thursday, 8-5 p.m. by appointment only.

- ◆ **Please submit written comments by April 24, 2000** to Mr. William J. Fees, P.E., Site Manager, at the Ecology address listed in the shaded box on page one.