PERIODIC REVIEW

Pacific Recycling
Facility/Site ID #: 326

1615 Chemical Drive
Kennewick, Washington 99336

Central Region Office

TOXICS CLEANUP PROGRAM

August 2009

1.0 INTRODUCTION

This document is the Department of Ecology's review of post-cleanup site conditions and monitoring data to assure that human health and the environment are being protected at the Pacific Recycling facility (Site). Cleanup at this Site was implemented under the Model Toxics Control Act (MTCA), Chapter 173-340 WAC.

Cleanup activities at this Site were completed under the Voluntary Cleanup Program. The cleanup actions resulted in residual concentrations of Total Petroleum Hydrocarbons (TPH) exceeding MTCA Method A cleanup levels for soil established under WAC 173-340-740(2). WAC 173-340-420 (2) requires that Ecology conduct a periodic review of a site every five years under the following conditions:

(a) Whenever the department conducts a cleanup action
(b) Whenever the department approves a cleanup action under an order, agreed order or consent decree
(c) Or, as resources permit, whenever the department issues a 'No Further Action' opinion
(d) And one of the following conditions exists:

1. Institutional controls or financial assurance are required as part of the cleanup
2. Where the cleanup level is based on a practical quantitation limit
3. Where, in the department's judgment, modifications to the default equations or assumptions using site-specific information would significantly increase the concentration of hazardous substances remaining at the site after cleanup or the uncertainty in the ecological evaluation or the reliability of the cleanup action is such that additional review is necessary to assure long-term protection of human health and the environment.

When evaluating whether human health and the environment are being protected, the factors the department shall consider include [WAC 173-340-420(4)]:

(a) The effectiveness of ongoing or completed cleanup actions, including the effectiveness of engineered controls and institutional controls in limiting exposure to hazardous substances remaining at the site;
(b) New scientific information for individual hazardous substances of mixtures present at the site;
(c) New applicable state and federal laws for hazardous substances present at the Site;
(d) Current and projected site use;
(e) Availability and practicability of higher preference technologies; and
(f) The availability of improved analytical techniques to evaluate compliance with cleanup levels.

The department shall publish a notice of all periodic reviews in the site register and provide an opportunity for public comment.

2.0 SUMMARY OF SITE CONDITIONS

2.1 Site History

The Pacific Recycling Site is located in the City of Kennewick in Benton County, Washington (Vicinity Map - Appendix 6.1). The Site is located in an industrial area. Pacific Recycling accepts various types of scrap steel and other metals that meet state guidelines.

2.2 Site Investigations

Ecology conducted an initial investigation on April 23, 1992, and determined that a release of a hazardous substance had occurred at the site. Based on visible soil contamination observed during that site visit, Ecology decided to conduct a Site Hazard Assessment (SHA) pursuant to Model Toxics Control Act regulations and suggested that Pacific pursue an independent cleanup action. Three areas were identified in the SHA: (1) the south side of the shear, (2) the diesel AST, and (3) the east side of the storage building. The site was subsequently placed on the Hazardous Sites List with a ranking of 2.

2.3 Remedial Actions

Pacific Recycling performed remedial actions at the site in February 1996. The work consisted of the excavation of approximately 400 tons of TPH-impacted soil and off-site disposal of the soil at the Roosevelt Regional Landfill. Remedial actions at the three areas of concern are described below:

2.3.1 Shear Area

Approximately 150 tons of impacted soils were excavated from the southwestern side of the shear immediately adjacent to its concrete foundation. The excavation included an area approximately 70 feet by 10 feet and a maximum of 12 feet below ground surface (bgs) at its deepest location. Deeper excavation in this location would have undermined the shear's foundation.

Soil in this excavation consisted of a one-foot-thick operational layer, consisting of soil mixed with operational debris, overlying native soil. Five confirmatory samples were collected from the walls of the shear remedial excavation. None of the confirmatory sample analyses contained TPH above MTCA Method A cleanup levels. One sample contained TPH as diesel above the method reporting limit (MRL), at a depth of 9 feet below grade from the wall of the excavation closest to the shear. The detected concentration of TPH as diesel was 69 milligrams per kilogram (mg/kg).

Field screening during excavation indicated contamination as deep as 12 feet bgs. However a representative soil sample could not be collected at 12 feet bgs due to the limitations of the

backhoe, the narrowness of the excavation, and sidewall instability. The soil sample collected at 9 feet bgs was thought to be representative of soils in the deepest portion of the excavation based on field screening and field observations. No other detections of TPH at or above the MRLs were made in any of the samples collected from the shear remedial excavation. The excavation was backfilled with clean soil. The area has since been covered with an on-grade concrete slab.

2.3.2 Storage Building Area

The storage building area is located southeast of the main warehouse and office building. Approximately 10 tons of hydrocarbon-impacted soils were excavated from this area to a depth of 1 foot below grade, over an area of approximately 7 feet by 15 feet. One confirmational sample was collected from the excavation floor at a depth of one foot. The detected concentrations of TPH in this sample were below Method A cleanup levels. No sidewall samples were collected from this area because of the shallow depth of the excavation. Based on visual observations and field screening it was evident that all impacted material had been removed.

2.3.3 Diesel AST Area

Initial excavation of the diesel AST was conducted at the Pacific facility in February 1996. The excavation was dug to a depth of approximately 12 feet bgs, which was the limit of the tractor backhoe used. Approximately 150 tons of hydrocarbon impacted soils were excavated for disposal. Excavated soils consisted of sandy gravel with cobbles. Five initial confirmatory samples were collected from the limits of the excavation. The four sidewall samples contained no TPH as diesel or TPH as other at concentrations at or above the MRLs. However, the sample collected from the floor at a depth of 12 feet bgs contained TPH as diesel at 809 mg/kg.

Because of the remaining soil above Method A cleanup levels, the AST remedial excavation was extended to a depth of approximately 21 feet bgs. Groundwater was encountered at approximately 19 feet bgs. Approximately 100 additional tons of sandy gravel with cobbles was excavated for disposal, for a total of approximately 250 tons from the diesel AST remedial excavation.

Confirmatory samples collected from the diesel AST excavation indicated diesel above Method A cleanup levels in soil and groundwater. The soil sample collected from the excavation immediately above the water table (at an elevation where product smearing due to groundwater level fluctuations is likely to occur), at a depth of 18.5 feet bgs contained 13,000 mg/Kg TPH as diesel.

The groundwater sample collected from the excavation contained 33 mg/L TPH as diesel.

An attempt was made to enlarge the lateral extent of the excavation and remove additional impacted soil that was present at the water table; however, due to the proximity of the excavation to Pacific's site operations, the vicinity of the nearby highway embankment, and excavation wall

instability, this attempt was terminated. The AST excavation was subsequently been backfilled with clean sand and gravel.

2.4 Cleanup Levels

Due to the proximity to residential properties and the Columbia River, MTCA Method A cleanup levels are used at the Site.

2.5 Groundwater Sampling

Following remedial activities, Pacific Recycling proposed the installation and sampling of groundwater monitoring wells at the Site. To date this has not occurred. Due to the presence of TPH-impacted soils at the depth of the soil to groundwater interface, and the presence of TPH-impacted groundwater in the excavation during remedial activities, groundwater should be evaluated at the Site.

2.6 Institutional Controls

Additional remedial actions, including groundwater characterization are required at the Site. Should residual contamination remain after additional remedial actions, institutional controls in the form of a Restrictive Covenant will be required at the Site for a no further action determination to be issued by Ecology.

3.0 PERIODIC REVIEW

3.1 Effectiveness of completed cleanup actions

The structures, surface cover and site use continue to prevent human exposure to contaminated soils from ingestion and direct contact. Based upon the site visit conducted on July 8, 2009, no repair, maintenance, or contingency actions have been required. A photo log is available as Appendix 6.3.

Soils and ground water with TPH concentrations higher than MTCA Method A cleanup levels are still present at the Site. Site structures, surface covers and site use prevent human exposure to this contamination by ingestion and direct contact with soils. However, no institutional controls are in place to prevent future exposure of these contaminated soils. A Restrictive Covenant for the property is required for Ecology to issue a no further action determination.

Groundwater with TPH concentrations exceeding MTCA Method A cleanup levels may remain at the Site. A groundwater investigation should be conducted to determine the scope and severity of groundwater contamination.

3.2 New scientific information for individual hazardous substances for mixtures present at the Site

There is no new relevant scientific information for the contaminants of concern at the Site.

3.3 New applicable state and federal laws for hazardous substances present at the Site

Cleanup levels have changed for TPH since remedial actions were conducted at the Site. However, soil and groundwater contamination remains at the Site above past and current MTCA Method A cleanup levels.

3.4 Current and projected Site use

The Site is currently used for industrial purposes. There have been no changes in current or projected future Site or resource uses.

3.5 Availability and practicability of higher preference technologies

The remedy implemented included removal/recycling of hazardous substances by remedial excavation, as well as containment, and it continues to prevent human exposure to contaminants by direct contact. Additional remedial activities may be required for the Site, but simple remedial excavation or additional containment would likely be sufficient and other technologies are not likely necessary.

3.6 Availability of improved analytical techniques to evaluate compliance with cleanup levels

The analytical methods used at the time of the remedial action were capable of detection well below site specific cleanup levels. The presence of improved analytical techniques would not effect decisions or recommendations made for the Site.

4.0 CONCLUSIONS

The following conclusions are made as a result of this periodic review:

- The cleanup actions completed at the Site are not protective of human health and the environment;

- Soils and ground water cleanup levels have not been met at the Site and no institutional controls have been implemented to prevent future exposure to contaminants still present at the Site.

- Groundwater at the Site should be sampled and evaluated for petroleum hydrocarbon contamination.

Based on this five-year review, the Department of Ecology has determined that additional cleanup actions are required by the property owner. Institutional controls are also likely to be necessary for the Site to be eligible for a no further action determination.

4.1 Next Review

The next review for the site will be scheduled five years from the date of this periodic review. In the event that additional cleanup actions or institutional controls are required, the next periodic review will be scheduled five years from the completion of those activities.

5.0 REFERENCES

Science Applications International Corporation. *Sampling Methodology and Analytical Results for Pacific Recycling Site Hazard Assessment.* May 16, 1995.

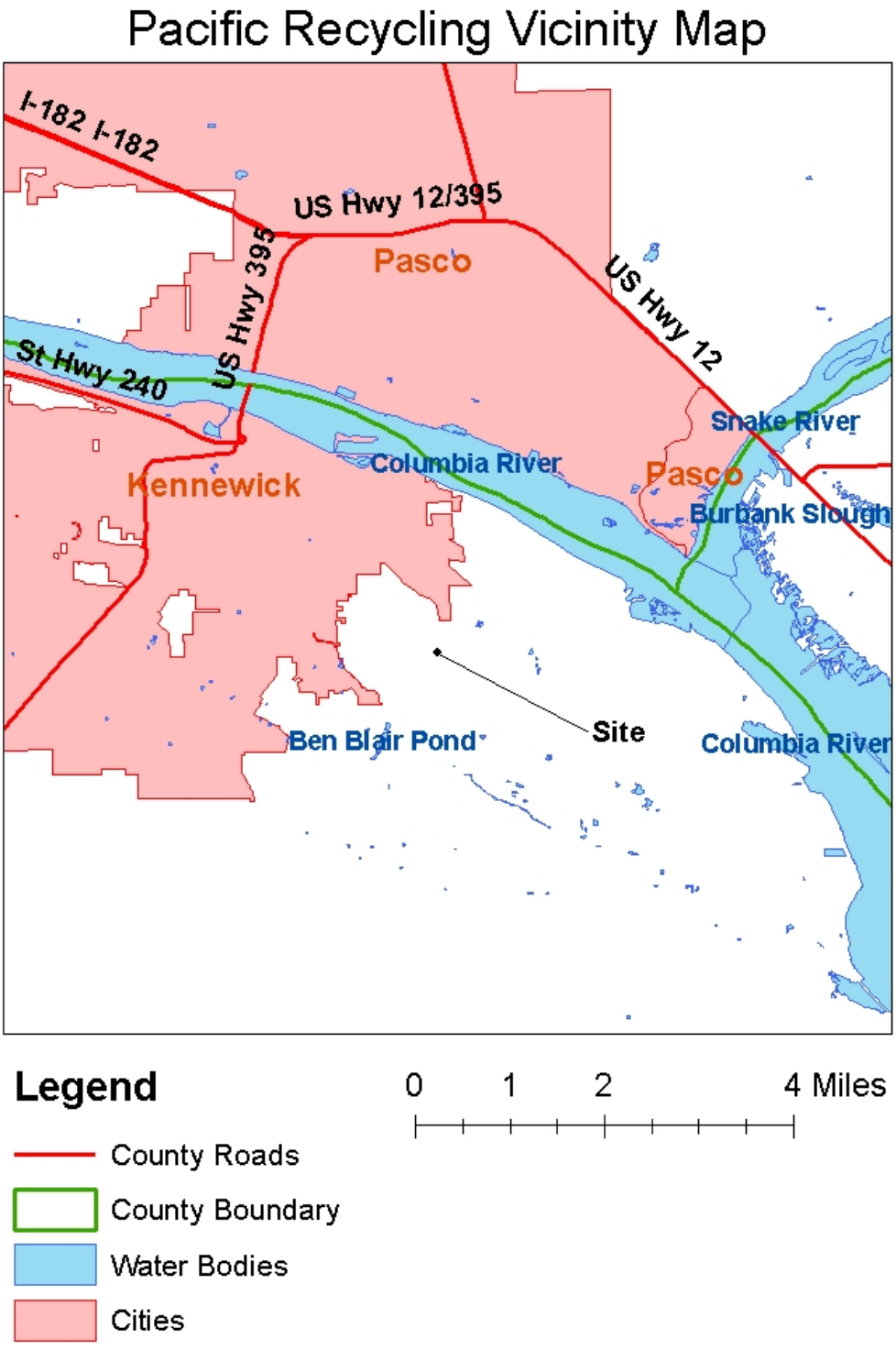
Ecology. *Site Hazard Assessment.* 1995.

Emcon. *Status Report, Independent Remedial Action, Pacific Steel and Recycling.* May 13, 1996.

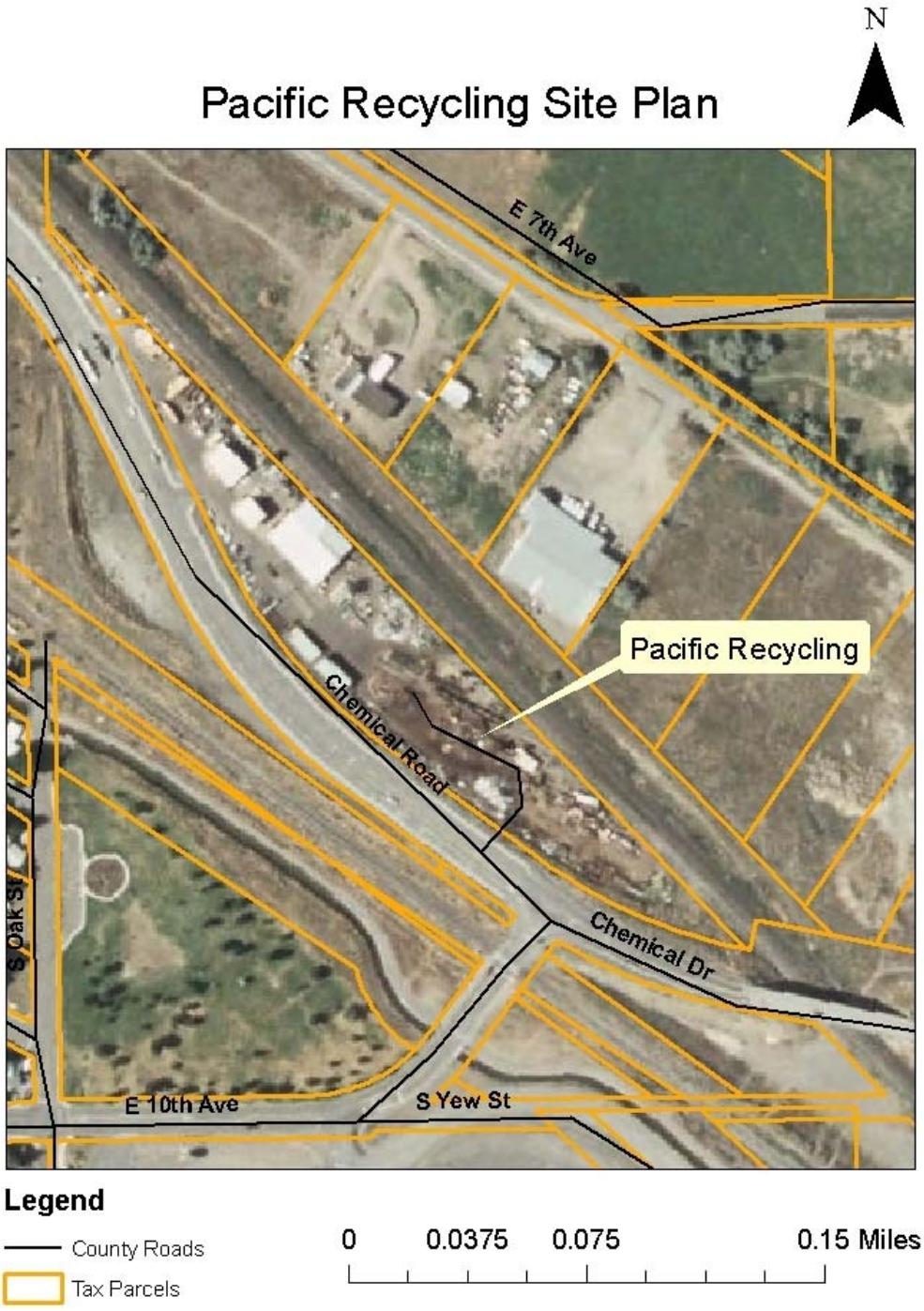
Ecology, 2008, Site Visit

6.0 APPENDICES

6.1 Vicinity Map



6.2 Site Plan


Pacific Recycling Site Plan
N
E 7th Ave
Pacific Recycling
Chemical Road
Chemical Dr
S Oak St
E 10th Ave
S Yew St
Legend
County Roads
Tax Parcels
0
0.0375
0.075
0.15 Miles

6.3 Photo log

Photo 1: Scale Near Main Office - from the northwest

Photo 2: Former Shear Area - from the south

Photo 3: Former Shear Area - from the west

Photo 4: Site From Chemical Drive - from south