FSIS # 5793

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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July 28, 2011

Mr. Craig Hultgren
PNG Environmental
1339 Commerce Avenue, Suite 313
Longview, Washington 98632-3729

Re: No Further Action at the following Site:

- **Site Name:** Newcastle Shell
- **Site Address:** 6420 Lake Washington Boulevard, SE, Newcastle, WA 98056
- **Facility/Site No.:** 26741666
- **VCP Project No.:** NW 1686

Dear Mr. Hultgren:

The Washington State Department of Ecology (Ecology or we) received your request for an opinion on your independent cleanup of the Newcastle Shell facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

NO. Ecology has determined that no further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its' implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following releases:

- Gasoline, oil, benzene, toluene, xylenes, and tetrachloroethene into the soil.
- Gasoline, benzene, toluene, and xylenes into the ground water.

Enclosure A includes a detailed description and diagram of the Site, as currently known to Ecology.

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel(s) associated with this Site are affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. Phase 2 Soils Assessment and Analysis – Hazelwood Texaco – 6420 Lake Washington Boulevard Southeast – Renton, Washington by Geotech Consultants and dated May 30, 1995.
2. Checklists for Cathodic Protection – Hazelwood Texaco – 6420 Lake Washington Boulevard – New Castle, WA 98056 by Tank Liners and dated August 10, 1995.
3. Focused Level II Environmental Site Assessment – Hazelwood Texaco Station – 6420 Lake Washington Boulevard SE – Newcastle, WA 98056 by Galloway Environmental and dated May, 1999.
4. Level I Environmental Site Assessment – Hazelwood Texaco Property – 6420 Lake Washington Boulevard SE – Renton, WA by Galloway Environmental and dated March, 2004.
5. Project Progress Reports – October 18, 2004 to August 10, 2005, by Environmental Management Services.
6. Subsurface Environmental Assessment – Hazelwood Shell – 6420 Lake Washington Boulevard – Newcastle, WA 98056 by Environmental Management Services and dated January 28, 2005.
7. First Phase Cleanup Investigation – Hazelwood Shell Station – 6420 Lake Washington Boulevard, S.E. – Newcastle, WA 98056 – by Alkai Consultants and dated May 6, 2005.
8. Decommissioning of Underground Storage Tanks, Underground Storage Tank Installation, Tightness Testing, Site Assessment, and Remedial Actions by Alkai Consultants and dated February 27, 2006.
9. Quarterly Groundwater Monitoring Event – August 3, 2006 – Newcastle Shell – 6420 Lake Washington Boulevard SE – Newcastle, WA 98056 by PNG Environmental and dated September 14, 2006.
10. Quarterly Groundwater Monitoring Event – November 7, 2006 – Newcastle Shell – 6420 Lake Washington Boulevard SE – Newcastle, WA 98056 by PNG Environmental and dated December 19, 2006.
11. Quarterly Groundwater Monitoring Event – February 5, 2007 – Newcastle Shell – 6420 Lake Washington Boulevard SE – Newcastle, WA 98056 by PNG Environmental and dated March 14, 2007.

12. Quarterly Groundwater Monitoring Event – May 7, 2007 – Newcastle Shell – 6420 Lake Washington Boulevard SE – Newcastle, WA 98056 by PNG Environmental and dated May 30, 2007.
13. Groundwater Remedial Measures and Monitoring – January 7, 2008 – Newcastle Shell – 6420 Lake Washington Boulevard SE – Newcastle, WA 98056 by PNG Environmental and dated February 7, 2008.
14. Groundwater Sampling Event - April 23, 2008 – Newcastle Shell – 6420 Lake Washington Boulevard SE – Newcastle, WA 98056 by PNG Environmental and dated June 30, 2008.
15. Groundwater Sampling Event – July 9, 2008 – Newcastle Shell – 6420 Lake Washington Boulevard SE – Newcastle, WA 98056 by PNG Environmental and dated August 11, 2008.
16. Groundwater Sampling Event - October 15, 2008 – Newcastle Shell – 6420 Lake Washington Boulevard SE – Newcastle, WA 98056 by PNG Environmental and dated January 15, 2009.
17. Groundwater Sampling Event – January 27, 2009 – Newcastle Shell – 6420 Lake Washington Boulevard SE – Newcastle, WA 98056 by PNG Environmental and dated February 18, 2009.
18. Groundwater Sampling Event - April 28, 2009 – Newcastle Shell – 6420 Lake Washington Boulevard SE – Newcastle, WA 98056 by PNG Environmental and dated May 15, 2009.
19. Groundwater Sampling Event – April 28, 2009 and July 17, 2009 – Newcastle Shell – 6420 Lake Washington Boulevard SE – Newcastle, WA 98056 by PNG Environmental and dated August 4, 2009.
20. Offsite Groundwater Investigation Report – Newcastle Shell – 6420 Lake Washington Boulevard SE – Newcastle, WA 98056 by PNG Environmental and dated May 12, 2011

Those documents are kept in Ecology's Northwest Regional Office (NWRO) Central Files for review by appointment only. You can make an appointment by calling the NWRO resource contact at (425) 649-7190.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that **no further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in **Enclosure A.**

In 1990, a two-inch dry well was installed to a depth of 11 feet to obtain a soil vapor sample. The sample showed only "traces" of gasoline, leading the consultant (Environmental Control Sciences) to conclude that no gasoline had leaked from the underground tanks.

In 1995, during an upgrade of the underground tanks, 72 cubic yards of soil was removed from above the 6,000-gallon tanks. Analysis of the soil showed exceedances of gasoline and xylenes above MTCA Method A standards.

In 2005, six borings were installed on site by Environmental Management Services to a depth of 16 feet bgs. Soil samples were collected from all six borings, and groundwater samples were collected from four borings (two other borings were dry). All samples had non-detectable levels of gasoline, diesel, benzene, methylbenzene, toluene, and xylenes.

In April of 2005, a direct push boring rig was used to install two borings, one adjacent to the French drain (soil sample taken at 8 feet bgs) and one boring next to the "test well" adjacent to the diesel underground tank (soil samples taken at 4 feet and 8 feet bgs). The two shallow samples had no detections of gasoline, benzene, methylbenzene, toluene, and xylenes while the deeper (8 feet) sample had exceedances of MTCA Method A standards for soil for gasoline, benzene, and xylenes.

In 2006, four groundwater monitoring wells were installed on site. The wells were monitored quarterly from August 2006 until July 2009, with no sampling being done during the third and fourth quarters of 2007. Initial groundwater monitoring showed exceedances of MTCA Method A standards for gasoline, benzene, methylbenzene, xylenes, and naphthalene in one well. The four most recent quarterly groundwater monitoring events (October 15, 2008 and January 27, April 28, and July 17, 2009) have shown no exceedances of MTCA Method A standards for petroleum hydrocarbons in groundwater in any of the four monitoring wells.

In November 2010, at the request of Ecology, two off site temporary borings were drilled in the Lake Washington Boulevard right-of-way downgradient of the site boundary, to a depth of twenty feet. Groundwater was encountered at eighteen to eighteen and one-half feet. A temporary well was installed in each boring and a groundwater sample collected. As neither temporary well had a filter pack, both groundwater samples were turbid. The groundwater samples were analyzed for gasoline, volatile organic compounds, and total and dissolved lead. Both groundwater samples were non-detect for gasoline and volatile organic compounds. While both samples exceeded the MTCA Method A groundwater standard for total lead, in each sample, the concentration of dissolved lead was not detectable.

2. Establishment of cleanup standards.

Ecology has determined the cleanup levels and points of compliance you established for the Site meet the substantive requirements of MTCA.

Cleanup Levels:
The land use is designated for commercial use and the selected Method A standards used at this site for soil and groundwater are protective of human health and the environment:

Soil

Gasoline – 100 mg/Kg

Oil – 2,000 mg/Kg

Benzene – 0.03 mg/Kg

Toluene – 7 mg/Kg

Xylenes – 9 mg/Kg
Tetrachloroethene – 0.05 mg/Kg

Groundwater

Gasoline – 800 µg/l

Benzene – 5 µg/l

Toluene – 1,000 µg/l

Xylenes – 1,000 µg/l

A standard vertical point of compliance, from the uppermost level of the saturated zone to the lowest depth that could potentially be affected, was used for groundwater.

3. Selection of cleanup action.

Ecology has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA.

The method selected - excavation of the petroleum-contaminated soil and transportation off site meets the minimum requirements for cleanup actions by providing a permanent solution, immediate restoration time frame, provides for confirmation monitoring, and protects human health and the environment.

The method selected for the petroleum-contaminated groundwater – natural attenuation – meets the minimum requirements for cleanup actions by providing a permanent solution, a short restoration time frame, confirmation monitoring, and protects human health and the environment.

4. Cleanup.

We have determined the cleanup you performed meets the cleanup standards established for the Site.

In 1968, the service station was constructed with three underground tanks, two 6,000-gallon tanks for gasoline, and a 300-gallon tank for heating oil. The heating oil tank was removed by the property owner in 1995. Confirmatory sampling by the owner, of soil beneath the tank showed no impacts from heating oil.

In 1974, two more tanks were added – a 2,000-gallon tank for diesel and a 300-gallon tank for waste oil.

In 1995, during an upgrade of the tanks, 72 cubic yards of soil were excavated from the top of the tanks and stockpiled. Subsequent testing of the stockpiled soil had exceedances of gasoline (330 and 770 mg/Kg) and xylenes (23.9 mg/Kg). In 1999, retesting of the stockpiled soil for gasoline and diesel showed no exceedances of MTCA standards. Disposal of the soil is unknown.

In October of 2004, 200–250 gallons of gasoline were spilled due to a faulty valve. Eighty-five gallons were recovered during the initial response, and 234 gallons were recovered by pumping contaminated water from a catch basin and sumps on site. Thirty cubic yards of petroleum-contaminated soil were removed from the area of the French drain. Disposal of the contaminated soil is unknown. A sump with pump was placed at the end of the former French drain following removal of the French drain.

In 2005, remediation of the 2004 spill was undertaken. The waste oil tank (300 gallons) and the diesel tank (2,000 gallons) were removed by excavation and taken off site for recycling. Petroleum-contaminated soil (729 tons) was taken off site to a permitted landfill. Confirmatory soil samples from the bottom and sidewalls of the final excavation showed no exceedances of MTCA Method A standards for gasoline, diesel, and oil. Two unknown previous releases (one gasoline and one waste oil) that occurred prior to 1995, were identified during the soil excavation. As these two releases affected the same area of soil as the 2004 release, remediation of the latter resulted in remediation of the previous releases as well. The French drain recovery pit installed in 2004 was removed. A new 2,000-gallon underground tank was installed.

Groundwater contaminated with gasoline, benzene, methylbenzene, and xylenes above MTCA Method A standards was found in the diesel tank excavation. Contaminated groundwater and stormwater (2,500 gallons) were taken off site for treatment.

In 2006, four groundwater monitoring wells were installed on site and monitored quarterly from August 2006 until July 2009, with no sampling being done during the third and fourth quarters of 2007. Initial groundwater monitoring showed exceedances of MTCA Method A standards for gasoline, benzene, methylbenzene, xylenes, and naphthalene in one well. The four most recent quarterly groundwater sampling events (October 15, 2008 and January 27, April 28, and July 17, 2009) have shown no exceedances of MTCA Method A standards for petroleum hydrocarbons in any of the four monitoring wells. No active remediation of groundwater was done.

Listing of the Site

Based on this opinion, Ecology will remove the Site from our Confirmed and Suspected Contaminated Sites List.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

Termination of Agreement

Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (NW 1686).

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion, or the termination of the Agreement, please contact me by phone at 360-407-7223 or e-mail at cmau461@ecy.wa.gov.

Sincerely,

Christopher Maurer

Christopher Maurer, P.E.
HQ - Toxics Cleanup Program

Enclosure (1): A – Description and Diagrams of the Site

cc: Michael Johnson, Property Owner
Dolores Mitchell, Ecology

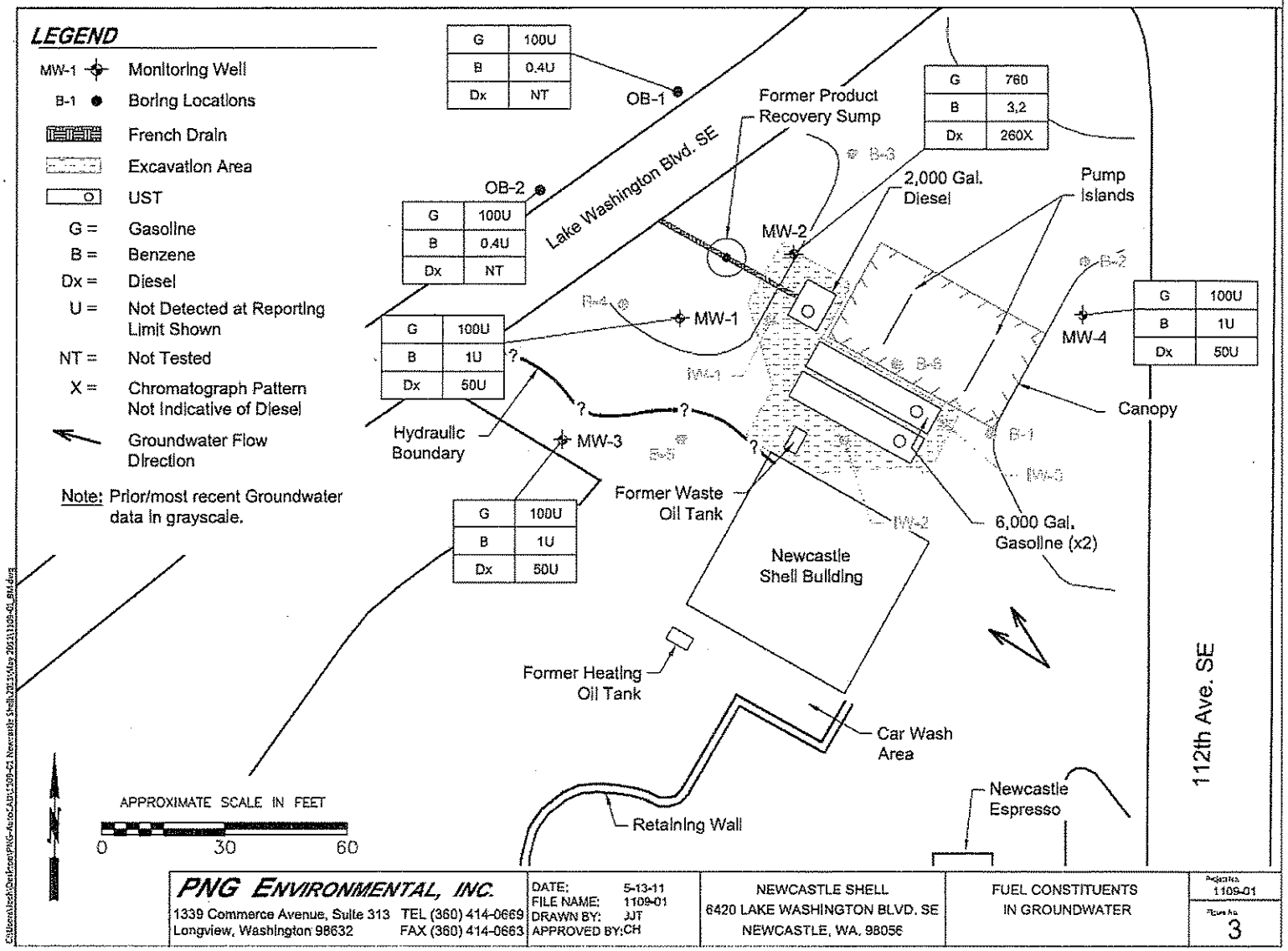
Enclosure A

Description and Diagrams of the Site

3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 850 ft Scale: 1 : 20,800 Detail: 13-5 Datum: WGS84

N

PNG ENVIRONMENTAL INC. 1339 Commerce Avenue, Suite 313 TEL (360) 414-0669 Longview, Washington 98632 FAX (360) 414-0883	DATE: 1-4-01 FILENAME: F101.DWG DRAWN BY: KM APPROVED BY: CH	Newcastle Shell 6420 Lake Washington Way Newcastle, Washington	Site Location Map	Project No. 1109-01 Figure No. 1


LEGEND
MW-1 Monitoring Well
B-1 Boring Locations
French Drain
Excavation Area
UST
G = Gasoline
B = Benzene
Dx = Diesel
U = Not Detected at Reporting Limit Shown
NT = Not Tested
X = Chromatograph Pattern Not Indicative of Diesel
Groundwater Flow Direction
Note: Prior/most recent Groundwater data in grayscale.
G 100U
B 0.4U
Dx NT
OB-1
OB-2
G 100U
B 0.4U
Dx NT
G 100U
B 1U
Dx 50U
G 100U
B 1U
Dx 50U
G 760
B 3,2
Dx 260X
G 100U
B 1U
Dx 50U
Lake Washington Blvd. SE
Former Product Recovery Sump
2,000 Gal. Diesel
Pump Islands
MW-1
MW-2
MW-3
MW-4
B-1
B-2
B-3
B-4
B-5
B-6
Hydraulic Boundary
Canopy
Former Waste Oil Tank
6,000 Gal. Gasoline (x2)
Newcastle Shell Building
Former Heating Oil Tank
Car Wash Area
Retaining Wall
Newcastle Espresso
112th Ave. SE
APPROXIMATE SCALE IN FEET
0 30 60
PNG ENVIRONMENTAL, INC.
1339 Commerce Avenue, Suite 313 TEL (360) 414-0669
Longview, Washington 98632 FAX (360) 414-0663
DATE: 5-13-11
FILE NAME: 1109-01
DRAWN BY: JJT
APPROVED BY: CH
NEWCASTLE SHELL
6420 LAKE WASHINGTON BLVD. SE
NEWCASTLE, WA. 98056
FUEL CONSTITUENTS IN GROUNDWATER
Project No. 1109-01
Figure No. 3