Appendix J

Letters designating Shell Oil Products US (Shell) as a Potentially Liable Party (PLP)

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47775 • Olympia, Washington 98504-7775 • (360) 407-6300

November 18, 2010

Ms. Beth A. Flowers
Environmental Claims Manager
Shell Oil Products U.S.
One Shell Plaza #666
910 Louisiana
Houston, TX 77002

Re: Notice of Potential Liability under the Model Toxics Control Act for the Release of Hazardous Substances at the following Hazardous Waste Site:

- Name: Fuel Processors Facility
- Address: 701 Bozarth Ave., Woodland, WA 98674
- County Assessor's Parcel Number(s) 50144 50145
- Facility/Site No. 810

Dear Ms. Flowers:

Under the Model Toxics Control Act (MTCA), chapter 70.105D RCW, which governs the cleanup of hazardous waste sites in Washington State, the Department of Ecology (Ecology) may identify persons that it finds are liable for the release of hazardous substances at a site. Before making such a finding, Ecology must provide persons with notice and an opportunity to comment on the proposed finding. Any person whom Ecology finds, based on credible evidence, to be liable is known as a "potentially liable person" or "PLP."

Proposed Finding of Liability

Based on credible evidence, Ecology is proposing to find Shell Oil Products US liable under RCW 70.105D.040 for the release of hazardous substances at the Fuel Processors Inc. (FPI) Facility (Site). This proposed finding is based on the following site history and chemical evidence:

1. Historical records indicate that the site was purchased in 1928 by Washington Refining Company from a lumber mill. Shell Oil Products US operated at the site from 1931 to 1953 as an "Oil and Lubricants Dealer". In 1953, Shell Oil purchased the site from Washington Refining Co. and maintained ownership of the property until 1969, when it sold the property to Marcus and Irene Deans. Between 1972, when the Deans sold the property and 1985 when it was purchased by Mr. Bill Briggs the property was bought and sold numerous times, however, based on Ecology's understanding of the site history, the property was not used for oil and gas storage

operations. Mr. Briggs, as ORRCO, operated a used oil recycling and transfer facility at the property until 2005 when operations at the property ceased. Additional details regarding property history are described in Enclosure 1, Detailed History of the Fuel Processors Property, Woodland Washington.

2. Chemical evidence of releases to the environment is based on the results of pre-2008 environmental assessments, investigations, and soil sampling, as described in detail in Agreed Order No. DE 5054. Investigations and soil/ground water sampling conducted at the facility from September 2008 to the present as required by the agreed order were compiled from the Phase I RI Summary Report, laboratory reports and forensic analysis summaries. A detailed summary of the history of environmental investigation at the Site follows:

   In April, 1985, EPA conducted soil sampling within the uncovered portion of the tank farm. Laboratory analytical results indicated that soil at the site was impacted by chlorinated solvents, with tetrachloroethylene (PCE) and trichloroethylene (TCE) above regulatory criteria. Polychlorinated biphenyls (PCBs) were also detected but at concentrations below the MTCA Method A soil cleanup level of 1 mg/kg.

   In 1976 when the Resource Conservation and Recovery Act (RCRA) came into effect, the EPA was given the authority to control the generation, transportation, treatment, storage, and disposal of hazardous waste. Hazardous waste treatment, storage and disposal (TSD) facilities in existence when RCRA came into effect were considered to have interim status permits and were treated as if they had been issued a permit. Under the assumption that the facility held federal interim status, on April 2, 1986 EPA began a RCRA Facility Assessment (RFA) at the Facility to identify those areas where release(s) of hazardous substances, as defined in RCW 70.105D.020(10), may have occurred or may be occurring. The RFA focused primarily on the waste pile located in a surface impoundment north of the facility boundary. Additional soil samples were collected from seven locations (three within and four outside of the tank farm). Because the intent of the RFA was to determine if releases to the environment occurred at the Site, the actively used storage tanks were not investigated. The RFA indicated that the soil beneath the Site was contaminated with chlorinated solvents.

   In 1996, EPA conducted a second RFA that consisted of a review of records and sampling results from the Ecology sampling of the waste pile north of the facility boundary on July 8, 1982. In 1996, EPA also reviewed the 1986 RFA sampling and subsequent correspondence, submittals and inspections conducted by Ecology and EPA.

   Pursuant to the RFA Reports and other information, Ecology identified a number of solid waste management units (SWMUs) and AOCs at the Dangerous Waste Management Facility. Based on credible evidence, Ecology in a letter dated October 30, 2006, issued a preliminary PLP status letter to Mr. Bill Briggs owner of Fuel Processors Inc. and Oil Re-Refining Co. (ORCCO), pursuant to RCW 70.105D.040, -

.020(21), and WAC 173-340-500. By letter dated November 11, 2006, Mr. Briggs voluntarily waived his rights to notice and comment and accepted Ecology's preliminary determination that Mr. Briggs is a PLP under RCW 70.105D.040.

On December 28, 2007 Ecology notified Mr. Briggs of its determination that he was a PLP for a release or releases at the Fuel Processors Inc. (FPI) Facility. Ecology, however, stated that FPI and ORRCO would be named in the order. On August 18, 2008 Ecology issued Agree Order No. DE 5054 which requires Fuel Processors Inc. and ORRCO to determine the nature and extent of contamination at the site, select appropriate remedies and to implement those remedies. Specifically the order requires Fuel Processors to conduct a Remedial Investigation and Feasibility Study (RI/FS) to define investigate releases to the environment and develop remedies that would be implemented under a cleanup action plan (CAP).

The Phase I RI investigation consisting of soil sampling, the installation of ground water monitoring wells and sampling of ground water was conducted on September 29-30, 2008. Results of laboratory analyses indicated that fifteen soil samples from eight locations contained hydrocarbon contamination in the form of gasoline, diesel or oil above MTCA Method A cleanup levels. In addition, PAHs were detected in eight soil samples. Significant concentrations of PCBs were detected in one sample.

Additional soil sampling at the property was conducted in February and August, 2010 to determine the relative age of the hydrocarbons. Petroleum product fingerprinting analysis of soil samples was performed by two independent laboratories:

- Manchester Environmental Laboratory, Port Orchard, Washington
- Freidman & Bruya, Environmental Chemist, Seattle, Washington

The result of the TPH-Gx GC/FID (gasoline range) analysis (see enclosure) indicated high concentrations of gasoline, diesel, and high boiling material such as lube oil. The loss of normal alkanes hydrocarbon and the low level of alkyl benzene in the gasoline trace also indicated the presence of extremely weathered (old) gasoline.

Review of the TPH-Dx (diesel) analysis result showed that the diesel range hydrocarbons were extensively degraded resulting in the presence of primarily only the isoprenoid compounds: norpristane, pristine and phytane. The abundance of the isoprenoids in conjunction with the total loss of normal alkanes showed that the diesel present in the sample was an old spill. The analysis of soil samples for metals and organo metals indicated the presence of trace metals such as Lead, Mercury, Manganese and Nickel. Tetraethyl lead (TEL), an organic lead gasoline additive was present in the soil samples. Methylclopentadienyl Manganese Tricarbonyl (MMT) an organic lead supplement was also found in the soil samples.

Tetraethyl lead was first manufactured in 1923 and until 1960 TEL was the only additive blended to gasoline. Methylclopentadienyl Manganese Tricarbonyl was blended to leaded gasoline at an allowable concentration of 0.125 grams of manganese per gallon of gasoline from 1960 until the mid 1970's. The concentration of organic lead and in the soil samples is consistent with leaded gasoline produced

prior to 1986. The concentration of MMT found in the soil sample is consistent with the amount of MMT used as leaded gasoline supplement prior to its prohibition in 1977. The forensic evaluation indicates that gasoline and diesel releases at the Site occurred before 1985, possibly as early as 1940's.

Shell Oil's status as a PLP is based on the following converging lines of evidence:

1. Gasoline, diesel and oil detected in the soil was highly weathered indicating that it was released long before 1985
2. Laboratory analyses of soil samples detected concentrations of tetra ethyl lead (TEL) consistent with the permissible amounts of lead in gasoline manufactured before 1986.
3. The amount of Methylclopentadienyl Manganese Tricarbonyl (MMT) detected in soil samples is consistent with concentrations permitted to be blended with gasoline prior to its prohibition in 1977
4. MMT was blended with leaded gasoline only between 1960 and 1977
5. Shell Oil operated at the site from at least 1923 to 1969
6. After 1972 the site was not used to store or distribute gasoline or lube oil

3. A release of a hazardous substance(s) to the environment has occurred on the Site. This release(s) has been documented in 1986 and1996 (RFAs), the 2008 Phase I RI, and sampling conducted in February and August 2010. Laboratory analyses of soil samples indicate that high concentrations of weathered gasoline, weathered diesel fuel and metal additives such as lead and manganese were present. Laboratory analyses of ground water samples indicated the presence of gasoline, diesel or oil and VOCs at concentrations that exceed their respective MTCA Method A criteria. In addition, the RFAs indicate the release of halogenated hydrocarbons and PCBs to soil and possibly the ground water at the Site. These releases potentially pose a threat to human health and the environment.

Opportunity to Respond to Proposed Finding of Liability

In response to Ecology's proposed finding of liability, you may either:

1. Accept your status as a PLP without admitting liability and expedite the process through a voluntary waiver of your right to comment. This may be accomplished by signing and returning the enclosed form or by sending a letter containing similar information to Ecology;

2. Challenge your status as a PLP by submitting written comments to Ecology within thirty (30) calendar days of the date you receive this letter; or

3. Choose not to comment on your status as a PLP.

Please submit your waiver or written comments to the following address:

Stan Leja
Department of Ecology
Hazardous Waste and Toxics Reduction Program - SWRO
PO Box 47775
Olympia, WA 98504-7775

After reviewing any comments submitted or after 30 days if no response has been received, Ecology will make a final determination regarding your status as a PLP and provide you with written notice of that determination.

Identification of Other Potentially Liable Persons

Ecology has notified the following additional persons that they are potentially liable for the release of hazardous substances at the Site:

1. Fuel Processors, Inc., c/o Wilmer L. Briggs, President.
2. Oil Re-Refining Co., c/o Wilmer L. Briggs, President
3. Wilmer L. Briggs, in his individual capacity.

If you are aware of any other persons who may be liable for the release of hazardous substances at the Site, Ecology encourages you to provide us with their identities and the reason you believe they are liable. Ecology also suggests you contact these other persons to discuss how you can jointly work together to most efficiently clean up the Site.

Responsibility and Scope of Potential Liability

Please note that Ecology may either conduct or require PLPs to conduct remedial actions to investigate and clean up the release of hazardous substances at a site. PLPs are encouraged to initiate discussions and negotiations with Ecology and the Office of the Attorney General that may lead to an agreement on the remedial action to be conducted.

Please also note that each liable person is strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release of hazardous substances at a site. If Ecology incurs remedial action costs in connection with the investigation or cleanup of real property and those costs are not reimbursed, then Ecology has the authority under RCW 70.105D.055 to file a lien against that real property to recover those costs.

Next Steps in Cleanup Process

In response to the release of hazardous substances at the Site, Ecology is requiring FPI and ORRCO to perform the following actions under MTCA:

1. Continue the Remedial Investigation/Feasibility Study (RI/FS) under Agreed Order No. 5054. FPI and ORRCO have conducted an initial RI with supplemental soil and

ground water sampling for forensic analyses. Additional characterization of the site will be performed to define the nature and extent of contamination in the vadose zone and ground water. Potential remedial alternatives will be evaluated under the FS;

2. Develop and implement a cleanup action plan (CAP).

For a description of the process for cleaning up a hazardous waste site under MTCA, please refer to the enclosed fact sheet.

Ecology's policy is to work cooperatively with PLPs to accomplish the prompt and effective cleanup of hazardous waste sites. Please note that your cooperation in planning or conducting remedial actions at the Site is not an admission of guilt or liability. Should Shell Oil Co. be named a PLP Ecology expects they will be included in the existing agreed order.

Contact Information

If you have any questions regarding this letter or if you would like additional information regarding the cleanup of hazardous waste sites, please call me at (360) 407-6345. Thank you for your cooperation.

Sincerely,

Stan Leja

Stan Leja
Hazardous Waste and Toxics Reduction Program - SWRO

Lt:SL
Enclosures:
(1) FOCUS: MODEL TOXICS CONTROL ACT CLEANUP REGULATION: PROCESS FOR CLEANUP OF HAZARDOUS WASTE SITES (Pub. No. #94-129)
(2) VOLUNTARY WAIVER OF RIGHT TO COMMENT FORM
(3) AGREED ORDER No. DE 5054
(4) PRODUCT FINGERPRINTING ANALYSIS RESULTS OF SOIL SAMPLES FROM FUEL PROCESSOR WOODLAND WASHINGTON
(5) MANCHESTER ENVIRONMENTAL LABORATORY RESULTS OF SOIL SAMPLES
(6) FRIEDMAN & BRUYA ORGANOMETALS ANALYSIS RESULTS
(7) FRIEDMAN & BRUYA GC/FID HYDROCARBON ANALYSIS RESULTS

cc: Bill Briggs, ORRCO billb@orrco.biz
Dave Coles, Coles Environmental dcolescec@comcast.net
Kate Moore, Dunn Carney Allen Higgins & Tongue LLP kmoore@dunncarney.com
Sonia Wolfmann, AGO SoniaW@ATG.WA.GOV
Samuel Iwenofu, Ecology
Ava Edmonson, Ecology

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JAN 18 2011
WA State Department
of Ecology (SWRO)

Shell Oil Products US
Environmental Claims
One Shell Plaza, Rm 666
910 Louisiana
Houston, Texas 77002
Tel (713) 241-0548
Fax (713) 241-6926
Email beth.flowers@shell.com
Internet http://www.shell.com

Mr. Stan Leja
Hazardous Waste and Toxics Reduction Program - SWRO
State of Washington
Department of Ecology
P.O. Box 47775
Olympia, Washington 98504-7775

Via E-Mail (SLEJ461@ECY.WA.GOV) and U.S. Mail

January 12, 2011

Re: 701 Bozarth Avenue, Woodland, Washington

Dear Mr. Leja:

This letter is provided in response to your letter of November 18, 2010 which was received in this office on November 29, 2010. An extension for response to that letter until January 15, 2011 was granted in writing by you. Per your letter, the Department of Ecology is proposing that Shell Oil Products US ("Shell") be named as a potentially liable party ("PLP"). You have given Shell the opportunity to comment on this matter prior to naming Shell as a PLP.

Each of the points referring to Shell's status as a potential PLP as outlined on page 4 of your letter are addressed below.

1. **Gasoline, diesel and oil detected in the soil were highly weathered indicating that it was released long before 1985.**
   There is no data provided in the forensic report that would "date" the hydrocarbons detected in soil as "released long before 1985". Weathering depends on many environmental factors and age assignment is not possible unless the presence or absence or certain components can be correlated with regulations. In this case, the detection of lead reported for one of the samples (HA-01(2') was used to speculate that this was a release of leaded gasoline which was in use prior to 1985. The sample is described in the Friedman and Bruya report as *"indicative of a mixture of a low boiling material such as gasoline; a middle distillate such as a diesel fuel; and a high boiling material such as lube oil or similar materials"*. This description is consistent with used oil which contains residual gasoline (if from a gasoline engine) and diesel range material (if from a diesel engine). The site was used by an oil recycler after Shell left the site in 1969. Leaded gasoline was in use until 1996. Any used oil from a gasoline engine that ran on leaded gasoline would have residual gasoline in the waste oil from engine blowby. The chromatogram provided for sample HA-01(2') is typical of used oil.

2. **Laboratory analyses of soil samples detected concentrations of tetra ethyl lead ("TEL") consistent with the permissible amounts of lead in gasoline manufactured before 1986.**
   With regard to the TEL, it is unlikely that TEL is present as TEL in soil as TEL is not stable in soil. Furthermore, TEL was reported as 0.2 mg/kg just above the reporting limit of 0.1 mg/kg with a concentration of organic lead of 0.1 mg/kg with a TPH value of

approximately 2100 mg/kg. The actual concentration of lead in the sample is uncertain. It should be mentioned that because of exchange and lead credits, lead was not reduced effectively until 1988 and was in use at some level until 1996. Shell left the site in 1969.

3. **The amount of Methylclopentadienyl Manganese Tricarbonyl ("MMT") detected in soil samples is consistent with concentrations permitted to be blended with gasoline prior to its prohibition in 1977.**
   The presence of MMT was not confirmed in sampling conducted. It was at the reporting limit as MMT (0.1 mg/kg) and not detected as organic manganese at <0.05 mg/kg. The presence and amount of manganese in this sample is questionable.

4. **MMT was blended with leaded gasoline only between 1960 and 1977.**
   As indicated in item 3, the presence of MMT or manganese was not confirmed in the sampling conducted. MMT was also used without lead after 1974. It should be mentioned that the use of MMT was banned in 1977 in the US by the Clean Air Act until the Ethyl Corporation could prove that the additive would not lead to failure of new car emissions-control systems. As a result of this ruling, the Ethyl Corporation began a legal battle with the EPA, presenting evidence that MMT was harmless to automobile emissions-control systems. In 1995, the U.S. Court of Appeals ruled that the EPA had exceeded its authority and, as a result, MMT became a legal fuel additive in the US. However, it is believed that there was limited use of MMT in the US after the ban was lifted.

5. **Shell Oil operated at the site from at least 1923 to 1969.**
   Deed information provided by Fuel Processors, Inc. ("FPI") clearly shows that Shell's first ownership interest at the Property was in late 1953. Prior to 1953, the property appears to have been owned by Washington Refining Company. Shell last operated at the site as a petroleum products terminal in 1969.

6. **After 1972 the site was not used to store or distribute gasoline or lube oil.**
   FPI operated a used oil recycling facility at the site between 1984 and 2005. As part of those operations, used oil which typically contains metals and various gasoline, diesel, and lube oil constituents would have been stored and treated at the facility.

Shell does not disagree that it operated a bulk terminal at the property. However, FPI and Oil Re-Refining Co. ("ORRCO") also conducted used oil recycling activities at the site and entered into an Agreed Order with the Department of Ecology. Further, analytical data provided by FPI does not support the conclusion that petroleum constituents identified at the property are solely attributable to Shell's former operations. Therefore, Shell respectfully requests that if it is named as a PLP to the Agreed Order that FPI and ORRCO remain parties to the order as well.

Sincerely,
Shell Oil Products US

Beth A. Flowers

Beth A. Flowers
Environmental Claims Manager

Cc: David P. Rossmiller – Dunn Carney Allen Higgins & Tongue LLP, Suite 1500, 851 S.W. Sixth Avenue, Portland, Oregon 97204-1357 (via e-mail – drossmiller@dunncarney.com)

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

March 31, 2011

Ms. Beth A. Flowers
Environmental Claims Manager
Shell Oil Products US
One Shell Plaza, #666
910 Louisiana
Houston, TX 77002

Dear Ms. Flowers:

RE: Determination of Potentially Liable Person Status

On November 18, 2010 the Department of Ecology (Ecology) sent you written notice regarding your proposed status as a potentially liable person (PLP) for a release of hazardous substances at the following site:

- Name: Fuel Processors Facility
- Address: 701 Bozarth Ave., Woodland, WA 98674
- County Assessor's Parcel Number(s) 50144 50145
- Facility/Site No.: 810

The 30-day comment period on this preliminary notice was extended by Ecology and expired on January 15, 2011.

We have received and evaluated your comments in your January 12, 2011 letter, received by Ecology on January 18, 2011. Based on the information available to date, the Department finds that credible evidence exists which supports your status as potentially liable for the release or releases at the Fuel Processors, Inc. (FPI) facility. On the basis of this finding, Ecology has determined that you are a Potentially Liable Party (PLP) with regard to the FPI site.

Ecology intends to provide you the option of not signing on to the existing agreed order, or amending the existing order to include Shell Oil Company as a party to the Agreed Order as requested in your letter dated January 12, 2011.

Your rights and responsibilities as a PLP are outlined in Chapter 70.105D RCW, and WAC 173-340. Ecology's site manager for the facility, Stan Leja, will contact you with information about how Ecology intends to proceed with the cleanup at this site.

If you have any questions regarding this notice, please contact Stan at (360)-407-6345.

Sincerely,

Ava Edmonson, Section Manager
Hazardous Waste and Toxic Reduction Program
Southwest Regional Office

By Certified Mail
7010 0780 0002 3400 2677

SL/lt: Shell Oil Co. final PLP Notice

cc: Bill Briggs, ORRCO billb@orrco.biz
Dave Coles, Coles Environmental dcolescec@comcast.net
Kate Moore, Dunn Carney Allen Higgins & Tongue LLP
kmoore(wdunncarney.com
Stan Leja, Ecology
Samuel Iwenofu
Kerry, Graber, Ecology
Sonia Wolfman, AAG
Central Files

CONESTOGA-ROVERS
& ASSOCIATES

20818 44th Avenue West, Suite 190, Lynnwood, Washington 98036
Telephone: 425-563-6500 Facsimile: 425-563-6599
www.CRAworld.com

copy in file

August 10, 2011

Reference No. 060866

Mr. Stan Leja
Hazardous Waste and Toxics Reduction Program - SWRO
Washington State Department of Ecology
PO Box 47775
Olympia, Washington 98504-7775

RECEIVED
AUG 15 2011
WA State Department
of Ecology (SWRO)

Re: Response to Determination of Potentially Liable Person Status
701 Bozarth Avenue
Woodland, Washington

Dear Mr. Leja:

Conestoga-Rovers & Associates (CRA), on behalf of Shell Oil Products US (Shell), is submitting this response to Washington State Department of Ecology's (Ecology) letter dated March 31, 2011 indicating that there is credible evidence that Shell is potentially liable for the release or releases at the facility located at 701 Bozarth Avenue, Washington (site; Figure 1), and should be named as a Potential Liable Person (PLP) to the Agreed Order at the site.

The site is currently a non-operational Fuel Oil Processors, Inc. (FPI) facility. The former oil recycling facility configuration is presented in Figure 2. CRA agrees that a release, as identified in Agreed Order No. 5054, has occurred at the site, however, the information summarized in this letter indicates that the former Shell terminal operation is not the source of this release. Furthermore, Solid Waste Management Units (SWMUs) 1, 3, 4, 5, 6, 8, 9, and 10 and Area of Concern (AOC) 2, referenced in Agreed Order No. 5054 (Agreed Order), clearly operated after Shell ceased operations at the referenced site. The locations of the SWMUs and AOCs referenced in the Agreed Order are presented in Attachment A.

Ecology's claim is based on the results of soil sampling conducted in 2008 and 2010 that indicated that weathered gasoline (pre-1985) is present at the site, citing the presence of banned gasoline additives including tetra ethyl lead (TEL) and manganese tricarbonyl (MMT). Ecology also indicated as part of their determination that Shell operated at the site from at least 1923 to 1969, and that the facility was not used to store or distribute gasoline after 1972.

SITE CONFIGURATION DURING SHELL TERMINAL OPERATION:

Based on review of aerial photographs and a 1943 Sanborn map, a fuel terminal operated from at least 1939 through at least 1966 and was located in the northwestern portion of the property with piping running south to an apparent drum platform and fueling area. Washington

Refining Company, the owner of the terminal facility prior to December 29, 1953, added an additional aboveground storage tank (AST) to the existing three AST fuel farm sometime between 1939 and 1948. The remainder of the property appeared undeveloped and not used for fuel storage.

As noted in a January 12, 2011, letter to Ecology, Shell purchased the terminal facility on December 29, 1953. The condition of assets received at the time of sale of the facility from Washington Refining Company to Shell are unknown. According to the Bill of Sale dated August 19, 1969, the property was sold by Shell to Marcus and Irene Deans and included the following personal property:

(1) 30' x 30' combination building and pump house; (2) meters; (5) transfer pumps; (1) barrel platform; (1) fillstand; (1) 200' fencing and gates; (1) water and sewer system; (1) railroad siding; (1) 2,000 gallon underground storage tank (UST); (3) 12,000 gallon USTs; and (1) 25,000 gallon UST.

Based on the aerial photographs, the Bill of Sale appears to be incorrect in identifying the 12,000-gallon USTs and the 25,000-gallon UST as underground tanks and are actually ASTs. The location of the 2,000-gallon UST could not be identified from the aerial photograph review. Based on the Bill of Sale and the review of the aerial photographs, Figure 3 identifies the configuration of the historical structures on the property at the time of the Shell terminal operation.

SITE ACTIVITY CHRONOLOGY

Information gathered during review of Ecology and United States Environmental Protection Agency (EPA) files for the site is summarized below.

1985 –FPI excavated approximately 1 to 2 feet of contaminated soil across the tank farm area totaling a reported 900 cubic yards of excavated soil. The area was subsequently filled and a concrete containment berm was constructed. The actual documented extent of the excavation was not available in the Ecology or EPA files; however based on descriptions within file correspondence, the approximate extent is presented in Figures 4a and 4b.

1985/1986 – Soil sampling was conducted at the property in association with a RCRA Facility Assessment (RFA). Results of the soil sampling indicated that elevated levels of organic solvents and PCBs were present in near surface samples. Benzene was detected in one near surface sample (0 to 0.5 feet below ground surface [bgs]) in the vicinity of the G-1 spec fuel tank (see Attachment A) but was not detected in the sample collected at 5 feet bgs. No other soil samples contained benzene concentrations above regulatory limits. The sample containing

benzene also contained chlorinated hydrocarbons including tetrachloroethene (PCE) at concentrations 80 times higher than the benzene concentration.

August/September 1991 – Ecology conducted a series of inspections of the FPI facility. The Ecology inspector observed the storage of approximately 85 55-gallon drums labeled "non-regulated waste" located in the north central portion of the facility west of the resident house (see Figure 2). Two of these drums were observed to be leaking. Six 85-gallon overpack drums located at the western edge of the drum area closest to the tank farm were labeled "waste gasoline". At least one of these "waste gasoline" drums was observed leaking. The owner was informed of these leaking drums, however, the drums were still present and leaking during subsequent inspections conducted over the next 12 days. Additionally, the concrete containment structure was noted to be excessively cracked at this time. In a subsequent letter to FPI dated October 8, 1992, the exact number of "waste gasoline" drums was not given, however, both 55-gallon and 85-gallon drums of waste gasoline were documented in the letter.

December 1996 – Ecology conducted an inspection of the FPI facility. A description of this inspection was not found in the file, however, the laboratory report for liquid and solid samples collected during the inspection, presumably from facility infrastructure, were included in the file. The exact locations of these samples was not able to be determined, however, a number of the samples contained elevated constituents found in gasoline including benzene, toluene, ethylbenzene, and xylenes (BTEX). Water samples were labeled "YARDSUMP FP1", "TANKSUMP FP2", "RUSTY FP3 E1", and "TANK FP4 E2". A sediment/soil sample was labeled "HEATER RMFP5". Results of the water sample collected from "RUSTY FP3 E1" included elevated benzene concentrations (3,860 micrograms per liter [µg/l]), as well as toluene, ethylbenzene, xylenes, 1,2,4- and 1,3,5-trimethylbenzene, 2-butanone, acetone, and various chlorinated hydrocarbons. Results of the water sample collected from "TANK FP4 E2" contained the same constituents as "RUSTY FP3 E1" but at higher concentrations, including benzene (9,980 µg/l) and toluene (41,100 µg/L). The soil sample "HEATER RMFP5" contained similar elevated constituents detected in the water samples described above including BTEX constituents and various chlorinated hydrocarbons.

2008 – 2010 Site Investigation Activities: Coles Environmental Consulting (CEC), on behalf of FPI, conducted site investigation activities at the site including collection of soil samples and installation of three monitoring wells. The locations of soil and groundwater sampling conducted at the site by the EPA and CEC are presented in Figures 4a, 4b, and 5. Soil sampling within the oil recycling tank farm indicated the presence of elevated concentrations of total petroleum hydrocarbons (TPH) in the gasoline range (TPHg), diesel range (TPHd) and oil range (TPHo). The highest concentration of TPHg collected from soil during this investigation was encountered at probe location HP-1 at a depth of 5-5.5 feet bgs. The location of HP-1 is approximately 40 feet east of the easternmost boundary of the former Shell terminal footprint

(Figure 4a). The highest TPHg concentrations from grab groundwater samples collected during this investigation were collected from hydroprobe location HP-5 located approximately 55 feet east and upgradient of the easternmost boundary of the former Shell terminal footprint adjacent to the H-1 sump (Figure 5). Monitoring wells MW-1 through MW-3 were sampled in January 2009. The highest TPHg concentration was observed in monitoring well MW-2 directly downgradient of hydroprobe location HP-5. Monitoring well MW-3 is located south of the warehouse building and upgradient of the former Shell operation footprint and contained low concentrations of TPHg and TPHd in soil relative to samples collected in other areas of the tank farm; however, the TPHg concentration in groundwater was similar to monitoring well MW-2. Based on the gauging of monitoring wells MW-1 through MW-3 in January 2009, CEC reported a groundwater flow direction of west-northwest.

Additional soil sampling was conducted in February and August 2010. The results of the February 2010 sampling event were not found in the Ecology file, however, the location of an additional boring, HA-01, was estimated based on email correspondence between CEC and Ecology dated July 21, 2010. Boring HA-01 was advanced adjacent to the former hydroprobe location HP-1. The purpose of HA-01 appeared to be to determine the relative age of the hydrocarbons detected in this area. Soil samples were collected from HA-01 at 1-foot intervals from 1 foot bgs to 5 feet bgs. The highest TPHg concentration was detected in the samples collected at 1 foot and 2 feet bgs. The sample from 2 feet bgs was additionally analyzed for TEL and MMT along with additional analyses used to fingerprint hydrocarbons. TEL was detected at a concentration of 0.2 milligrams per kilogram (mg/kg) which is just above the reporting limit of 0.1 mg/kg. MMT was detected at the reporting limit of 0.1 mg/kg. As stated above, the location of boring HA-01 and hydroprobe location HP-1 is approximately 40 feet east of the easternmost boundary of the former Shell terminal footprint. The greatest concentrations of TPHg in soil sampled (at 1 foot and 2 feet bgs) were from an area which was excavated and re-filled by Fuel Processors, Inc. in 1985 to a depth of approximately 2 feet bgs.

SUMMARY AND CONCLUSIONS

Ecology has named Shell as a PLP at the site due to "credible evidence" based on the results of soil and groundwater sampling conducted by FPI since 2008. FPI and Ecology are claiming that concentrations of TPHg and TPHd present in site soil and groundwater is actually highly weathered gasoline. Furthermore, Ecology claims that the presence of TEL and MMT in one soil sample collected from 2 feet bgs within the tank farm area substantiates that the gasoline release is pre-1985 due to the suspension of use of these additives in the 1970s and 1980s.

Based on aerial photograph review, the footprint of the former Shell terminal is clearly limited to the westernmost portion of the property (Figure 3). The highest concentrations of TPHg

detected in soil and groundwater were identified in site investigation activity completed east of the former Shell operation footprint within the expanded tank farm constructed in the 1970s. Aerial photographs clearly indicate that the area east of the former Shell terminal remained vacant until Shell sold the site in 1969. USEPA sampled soil in April 1986 as part of the RFA including soil sampling within the former Shell terminal footprint. Results of these soil samples were not analyzed for TPHg, however, the samples were analyzed for BTEX. None of the samples contained BTEX concentrations above the laboratory reporting limit, with the exception of estimated values of toluene which was well below regulatory limits.

Results of soil sampling conducted by CEC in 2008 and 2010 included the detection of weathered TPHg, however, only soil samples from hydroprobe locations HP-7 and HP-8 contained TPHg concentrations within the footprint of the former Shell operation (Figure 4). The percentage of TPHg from the cumulative TPH mixture for the soil sample collected from HP-8 was approximately 1 percent. The percentage of TPHg from the cumulative TPH mixtures for the soil samples collected from HP-7 ranged from approximately 0.1 percent in unsaturated soil to 0.2 to 4 percent in saturated soil.

A soil sample collected in 2008 at a depth of 1 to 1.5 feet bgs from boring HP-2 located near the eastern edge of the former Shell terminal footprint contained a TPHg concentration of 5,050 milligrams per kilogram. Soil sampling conducted in August 2010 at one foot intervals from 1 foot to 5 feet bgs in the area of the highest suspected TPHg impact had the highest TPHg concentrations at depths of 1 foot bgs and 2 feet bgs. According to FPI, in 1985 the uppermost 1 to 2 feet of soil within the tank farm was excavated, and backfilled with presumably clean fill prior to construction of the concrete containment structure. If the soil sampling conducted in this area in 2008 and 2010 encountered impacted material at depths of 1 to 2 feet bgs, then it is reasonable to conclude that the impact to shallow soil likely occurred subsequent to the 1985 excavation of the fuel farm.

The highest concentrations of TPHg have been detected in groundwater in the northeastern corner of the oil recycling tank farm near the H-1 sump. There is a storm drain located immediately adjacent to the H-1 sump just outside the concrete berm and is connected to the H-1 sump and an additional surface drain located approximately 25 feet further to the east. These surface drains are located in close proximity to the area identified during the 1991 Ecology inspection used to store leaking "waste gasoline" drums. The 1991 inspection identified the concrete in the vicinity of these leaking drums to be heavily stained, and that extensive cracks were evident in the concrete containment structure as well as the curb between the concrete containment structure and the northern gate in the vicinity of the stored drums. It should be noted that in 1991, TEL in gasoline was still present in Washington state, and furthermore, the origin of the waste gasoline is unknown and may have contained both TEL and MMT.

Ecology has indicated in the letter to Shell, that the facility never stored gasoline. Based on the information revealed during the file review, this does not appear to be the case; sampling results of both liquid and shallow soil during the 1996 Ecology inspection appear to contain gasoline constituents at concentrations that indicate the possible use of gasoline in the oil recycling process, which is substantiated by the interview conducted by Ecology with Mr. Dave Clark in 1999, a former partner of Bill Briggs of FPI, indicating that used gasoline was blended into the used oil.

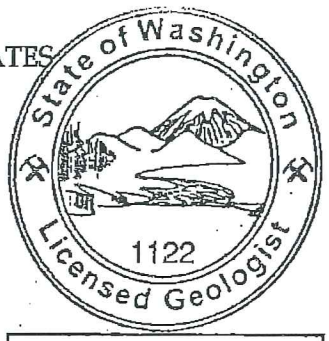
The impacted soil and groundwater at the facility is well outside and upgradient of the former Shell terminal footprint. There does not appear to be adequate evidence linking the gasoline impact detected at the site with the operation of the former Shell fuel terminal.

If you have any questions regarding the contents of this document, please contact Brian Peters at (425) 563-6506.

Respectfully,

CONESTOGA-ROVERS & ASSOCIATES

Brian Peters
BP/cd/1
Encl.



BRIAN C. PETERS

Figure 1	Vicinity Map
Figure 2	Oil Recycling Facility
Figure 3	Former Shell Terminal Footprint
Figure 4a	TPHg Concentrations in Soil
Figure 4b	Benzene Concentrations in Soil
Figure 5	Groundwater Sampling Locations
Attachment A	SWMU Location Map

cc: Ms. Carol Campagna, Shell Oil Products US
Ms. Beth Flowers, Shell Oil Products US
Ms. Carita Walker, Shell Oil Products US

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

August 10, 2012

Brian Peters
Conestoga-Rovers & Associates.
20818 44th Avenue West, Suite 190
Lynnwood, Washington 98036

Re: 701 Bozarth Avenue, Woodland Washington
Determination of Potentially Liable Person status

Dear Mr. Peters:

Washington State Department of Ecology (Ecology) received your letter dated August 10, 2011 on behalf of Shell Oil Products US (Shell). Your letter is written in response to Ecology's letter dated March 31, 2011, which indicated that there is credible evidence that Shell is potentially liable for the release of petroleum products at the facility located at 701 Bozarth Avenue, Woodland Washington.

Shell does not dispute that a release has occurred at the site; however Shell contends that the former Shell terminal operation was not the source of the petroleum product releases. Shell asserts that the Solid Waste Management units (SWMUs) and the Area of Concern (AOC) referenced in Agreed Order No. 5054 (AO) operated only after Shell ceased operation at the site.

For reasons described below, the letter from Conestoga-Rovers & Associates (CRA) does not change Ecology's position that there is credible evidence that Shell is potentially liable for the release or releases at the site, and should be named as a Potentially Liable Person (PLP) with regard to Fuel Processor Inc., at 701 Bozarth Avenue, Woodland Washington State.

Ecology's responses to each of the points outlined in CRA's letter are as follows:

Site configuration during Shell Terminal Operation

CRA Comment 1.

Based on review of the aerial photographs and a 1943 Sanborn map, a fuel terminal operated from at least 1939 through at least 1966 and was located in the northwestern portion of the property with piping running south to an apparent drum platform and fueling area. Washington Refining Company, the owner of the terminal prior to December 29, 1953, added an additional aboveground storage tank (AST) to the existing three AST fuel farm sometime between 1939 and 1948. The remainder of the property appeared underdeveloped and not used for fuel storage.

Ecology Response:

CRA appears to assert that Shell's operations did not commence at the site until 1953, when in fact the evidence shows that Shell was operating at the site much earlier. Historical records indicate that between 1928 and 1953 bulk petroleum facility operations were conducted on the property. Shell was listed in the City Directories as an Oil and Lubricant Dealer" at the property from at least 1936 until 1951. In addition, a review of the 1943 Sanborn Fire Insurance Maps indicates that Shell occupied the property, as well as the following structures:

- One 25,000-gallon capacity gasoline tank and structure with oil pumps and were located at the northwestern portion of the property.
- One "Oil Drum" structure
- One "filling" structure, and
- One Grease Warehouse" structure with an adjacent shade containing numerous containers of chemicals was located on the southwest portion of the property.

Historical aerial photographs from 1939 showed that Shell had acquired two additional storage tanks located adjacent to and west of the 25,000-gallon capacity gasoline tank and by 1948 there was a new tank constructed at the property located adjacent and south of the 25,000-gallon tank. The Woodland City directory indicated that between 1951 and 1969 both Shell and M.H. Deans Distribution were located at the property. Title records indicate that Shell purchased the property from Washington Refining in 1953 and owned the property until 1969.

CRA Comment 2.

Based on the aerial photographs, the Bill of Sale appears to be incorrect in identifying the 12,000-gallon USTs and the 25,000-gallon UST as underground storage tanks and actually ASTs. The location of the 12,000-gallon UST could not be identified from the aerial photograph review. Based on the Bill of Sale and the review of the aerial photographs, Figure 3- identifies the configuration of the historical structure on the property at the time of Shell terminal operation.

Ecology Response:

CRA appears to assert that the footprint was limited to only portions of the site when in fact the evidence shows that the company operated throughout the site. A historical 1948 aerial photograph indicates that an AST was constructed on the property south of the 25,000-gallon capacity gasoline AST located at the northwest portion of the property. The structure and developed areas of the property matched those noted in the 1943 the Sanborn Fire Insurance Maps. These maps indicate that Shell occupied the property, as well as the structures identified in the Sanborn Fire Insurance Maps. Structure (s) or materials were located on the northeast corner of the property.

Based on a comparison of a 1957 historical photograph, the property does not appear to have changed much from the 1948 historical photograph. A historical photograph from 1963 shows that the oil drum structure and the structures on the northeast of the property were removed some time

prior. An above ground storage tank was added to the nest of ASTs at the northwest portion of the property. Marcus and Irene Dean were listed as distributor for Shell Oil, and Shell Oil/Marcus Dean Distributor were listed in the City directory from 1953-1954. There appear to be no significant changes to the property from 1963 to 1973 based on the review of historic aerial photographs. Shell ceased operation at the property in 1969, when the property was sold to Marcus and Irene Dean.

The Deans sold the property in 1972. By 1980, a structure was added at the central portion of the property, and additional tanks were added to the eastern portion of the property in 1981. Used oil was not stored at the property until 1985 when Warren W. Bingham sold the property to Fuel Processor, Inc (FPI). FPI operated a used oil recycling operation at the property from 1985 to 2003. A review of historical documentation and correspondence indicates that gasoline was not stored on the property during FPI's operations.

Site Activity Chronology

CRA Comment 3.

CRA gathered site activity information during review of Ecology and United States Environmental Protection Agency (EPA) files. The CRA summary of the reviewed file contained inaccurate assumptions and conclusion.

In 1985, FPI excavated approximately 1to 2 feet of contaminated soil across the tank farm area totaling a reported 900 cubic yards of excavated soil. The area was subsequently filled and a concrete berm was constructed. The actual documented extent of excavation was not available in Ecology or EPA files; however based on descriptions within file correspondence, the approximate extent is presented in Figure 4a and 4b (not included).

Ecology Response:

CRA speculates as to the extent of the excavated area, and Ecology does not necessarily agree with figures 4a and 4b. In addition, Shell appears to imply that the spill was a gasoline spill when in fact it was a used oil spill. FPI excavated between 1 to 2 feet of soil as a result of the used oil spill that occurred in the spring of 1985 when FPI was preparing the site for their use. The oil was immediately pumped out and about a foot of impacted soil was removed, and the concrete floor to the containment area was then constructed. There was little or no chance for percolation of oil through the soil.

CRA Comment 4.

Around 1985 and1986 soil sampling was conducted at the property in association with RCRA Facility Assessment (RFA). Results of the soil sampling indicated that elevated levels of organic solvents and PCBs were present in near surface samples. Benzene was detected in one near surface sample (0 to 0.5 feet below ground surface (bgs)) in the vicinity of the G-1 spec fuel tank (see Attachment A) but was not detected in the sample collected at 5 feet bgs. No other soil samples contained benzene concentration above regulatory limits. The samples containing benzene also

contained chlorinated hydrocarbons including tetrachloroethane (PCE) at concentration 80 times higher than benzene concentration.

Ecology Response:

In asserting that Shell is not a PLP, CRA ignores other findings in the RFA report. In 1985, subsurface soil samples were collected from the uncovered portion of the tank farm area at the property. In April 1986, soil samples were also collected within and outside the tank farm from subsurface to 5 feet bgs through the concrete. A review of the 1985 sampling data indicates the presence of solvents and metals commonly associated with used –oil recycling operation and the 1986 sampling results show that the analyzed soil samples contained elevated levels of Benzene, Toluene, Ethyl-benzene and Xylenes (BTEX) hydrocarbons and Polycyclic Aromatic Hydrocarbons (PAHs). Aromatic compounds are a major ingredient in gasoline. They can be present in used oil, but at much lower level. BTEX compounds represent 6.43 to 36.87 percent of gasoline by weight and account for less than 0.1 percent total of diesel fuel (Louden, 1993). The results also indicate weathered BTEX hydrocarbon constituents (Morrison, 2000), and the level of xylene in the soil further indicates weathered gasoline (Kaplan et al., 1997). Xylenes are preferentially retained in soil relative to benzene, and they are more resistant to degradation. Degradation of the more soluble BTEX indicates an older gasoline spill (Raymond et al.1976).

Shell used the facility as a new product distribution facility and used it to store gasoline, diesel, and oil product. The source of the aromatic compounds at the site can be attributed to Shell operation at the site since gasoline was never stored at the site after Shell ceased operation. After Shell ceased operation, the property was a used – oil recycling facility.

CRA Comment 5.

2008 – 2010 Site investigation Activities: CRA stated in its report that "The location of HP-1 is approximately 40 feet easternmost boundary of the former Shell terminal footprint. The greatest concentration of TPHg in soil sampled was from an area which was excavated and re-filled by Fuel Processor Inc, in 1985 to a depth of approximately 2 feet bgs."

Ecology Response:

As explained above, the former Shell operations were not limited to a portion of the site as CRA would suggest. As stated above, historical aerial photographs and Sanborn Fire Insurance Maps indicate that Shell occupied the entire property, as well as the structures in the property. The bill of sale dated 1969 between Shell and the Deans include a list of buildings and ASTs referred to as USTs in the bill of Sale. The ASTs are in the northern half (tank farm area) of the property. Based on a comparison of historical photographs from 1968 and 1972, the structures on the property do not appear to have changed. Probe HP-1 was placed in the central portion of the former tank farm to the east. This probe was advanced to a total depth of 15 feet bgs. Petroleum odor consistent with weathered gasoline odor was noted at a deeper core of 10-15 feet bgs.

In February and August 2010, Ecology re-sampled the tank farm area with probes EC-02 placed near probe HP-1 location. The boring log for EC-02 showed that the recovered core (4-10 feet

bgs) had a strong gasoline odor and sheen. Soil samples were obtained in August from the most contaminated area of the tank farm. Boring HA-1 (see attached) was a deeper sample collected at 5 feet bgs, and which showed very strong evidence of weathered gasoline spill. Boring HA-1 was located between EC-02 and HP-01.

This indicates that the weathered gasoline in the sampled soil at the above sampled locations is not from the oil spill that occurred in the spring of 1985 as claimed by CRA.

The 1985 used- oil spill occurred in the eastern-most tank and the released oil immediately was pumped from the soil surface, thus limiting any opportunity for soil infiltration. Some spreading occurred to the west, but the oil mostly was contained in the eastern third of the tank farm. FPI removed 12-18 inches of soil that showed visual impact and backfilled it with gravel so that the concrete pad could be constructed. As gasoline is a minor component of used oil, this spill essentially had no contribution to the gasoline contamination found at the site.

Two key sources are believed to account for the major concentration of gasoline detected in the soil and groundwater at the site. One is general spills from the former Shell bulk plant tanks/plumbing. The other is the up-gradient loading rack. This rack was where gasoline was transferred to/from the storage tanks and trucks. The rack area was unpaved and graveled for its service life. ORRCO or FPI never used this rack. Any similar rack used in the pre-80s likely experienced numerous gasoline spills because of a general lower level of care that was common at that time. The groundwater flow essentially is from the rack to the tank farm. Finally, the argument that gasoline contamination found in the fill immediately under the concrete (clean fill that was placed after the 1985 cleanup of used oil) is due to recent releases ignores the shallow groundwater at the site, particularly in the wet season. Groundwater reaches the near surface in low areas such as the tank farm. High concentrations of gasoline were found in the soil to a depth of over five feet. This represents old gasoline in a smear zone reaching to the base of the concrete. With such shallow groundwater, gasoline migration in the shallow soils, to the base of the concrete, is probable and unrelated to the 1985 release. The clean fill placed after the cleanup was most likely contaminated later by gasoline in the deeper smear zone migrating upward during the wet season. Gasoline also will migrate horizontally under the conditions observed at this site. Assumptions of spill location verses the present distribution of contamination ignores the vertical and horizontal migration of gasoline at this site given that the contamination has probably been present for 50 to 60 years. There has been more than sufficient time for the contamination to migrate in the immediate area of the rack, tank farm, and possibly off-site.

CRA Comment 6.

Results of soil sampling conducted by Coles Environmental Consulting in 2008 and 2010 included the detection of weathered TPHg. However, only soil samples from hydro probe locations HP-7 and HP-8 contained TPHg concentrations within the footprint of the former Shell operation. The percentage of TPHg from the cumulative mixture for sample collected from HP-8 was approximately 1 percent. The percentage TPHg from the cumulative TPH mixture for soil sample collected from HP-7 ranged from approximately 0.1 percent in unsaturated soil to 0.2 to 4 percent in saturated soil.

Ecology Response:

CRA claims that the footprint of Shell's former operations is limited to the southern portion of the property, and the area of hydro-probe locations HP-7 and HP-8 that contained TPHg. However, Ecology and Coles and Associates (formerly Coles Environmental Consulting) investigations found that gasoline contamination is present over the entire property, and dominates mostly the northern half of the property while oil contamination is present over the entire site, and tends to dominate the southern half of the property. The oil consists of a mixture of used oil from the mid-1980s while the gasoline (TPHg) is highly weathered. Site history suggests that gasoline releases occurred during the period of Shell's use of the site as a bulk petroleum distribution facility.

CRA Comment 7.

The highest concentrations of TPHg have been detected in groundwater in the northeastern corner of the oil recycling tank farm near the H-1 sump. There is a storm drain located immediately adjacent to H-1 sump just outside the concrete berm and is connected to the H-1 sump and an additional surface drain located approximately 25 feet further to the east. These are surface drains located in close proximity to the area identified during the 1991 Ecology Inspection used to store leaking "waste gasoline" drums. The 1991 inspection identified the concrete in the vicinity of these leaking drums to be heavily stained, and that extensive cracks were evident in the concrete containment structure as well as the curb between the concrete containment structure and the northern gate in the vicinity of the stored drums. It should be noted that in 1991, TEL in gasoline was still present in Washington State, and furthermore the origin of the waste gasoline is unknown and may have contained both TEL and MMT.

Ecology Response:

CRA asserts that gasoline contamination at the site was the result of the leaking "waste gasoline" drums. However, FPI provided clarification regarding the "waste gasoline" drums in response to the August and September 1991 Ecology's Inspection Report. Mr. Briggs was present when EPA and Ecology inspected the facility on September 5, 1991. Mr. Briggs noted that the drums near the northern fence line including the "waste gasoline" drums contained oil sludge and tanks bottoms from UST removal at Fort Lewis. They had loose bungs (plugs were not tightened down) and some rainwater that created sheen on the top of the drums. Any gasoline that might have drained down the side of the drums was minor and could not account for all the gasoline found in the soil and groundwater. The drums were only present at the site for a short period (days) and they were set on concrete. Gasoline does not stain concrete to the extent observed in the area of the drum, which was more consistent with used oil staining. TEL and MMT found at the site were consistent with chemical additives found in pre-1986 gasoline. The "waste gasoline" drums are not a source for extensive gasoline contamination found in the soil and groundwater at the site.

CRA Comment 8.

Ecology has indicated in the letter to Shell that the facility never stored gasoline. Based on the information revealed during the file review, this does not appear to be the case. Sampling results of both liquid and shallow soil during the 1996 Ecology inspection appear to contain gasoline

constituents at concentrations that indicate the possible use of gasoline in oil recycling process. This is substantiated by the interview conducted by Ecology with Mr. Dave Clark in 1999, a former partner of Bill Briggs of FPI, in which Mr. Clark indicated that used gasoline was blended into used oil.

Ecology Response:

In the interview conducted by an Ecology Inspector with Mr. David Clark, Mr. Clark told Ecology Inspector that blending of gasoline was conducted at an ORRCO facility. Mr. Clark did not indicate the exact ORRCO location where the blending occurred. According to the Ecology's Inspector memo, the fuel blending activities occurred at the Portland Oregon ORRCO facility and not at their Woodland, Washington facility.

The chemical evidence supports a finding that the used oil operations at the site did not utilize gasoline. Used oil and heavy fuel oil are known to contain aromatic hydrocarbons. Liquid samples were collected from the process water tanks at the south western end of the tank farm and a soil/sludge sample was collected at the cooker/heater area inside the building located south of the tank farm. The soil sample is from sludge that was removed from raw used oil and not from shallow soil. The results of the water and sludge samples included gasoline and chlorinated hydrocarbon constituents typical of a used oil processing operation. It does not indicate any use of pure gasoline in the used oil recycling operation. Mr. Briggs and Coles and Associates provided the following account of FPI used oil processing operation:

"Used oil collected from various generators was brought to the Woodland facility for limited processing. Typically, used oil contains water, soil, sludges, and other debris and very small concentrations of gasoline, diesel, and chlorinated compounds. The oil was offloaded into storage tanks. Upon processing, the raw used oil was directed via piping to a "shaker" which is essentially a fine, vibrating screen. Sludge, soil, and other debris were removed with this processing step. The filtered oil was then directed to a dehydrator tank (aka "cooker") located in the southwest part of the plant where the temperature was raised to distill off the water. The water, along with a small amounts of light ends (volatile compounds such as BTEX compounds, chlorinated compounds, and smaller alkyl compounds), was condensed and captured in a tank. The light ends were then skimmed off the water and blended back into the oil to improve the final fuel product's BTU content. The water that remained contained dissolved BTEX and other light ends, at concentrations based on individual compound solubilities. This water was shipped to ORRCo's Portland facility where it was either evaporated or processed and then batch discharged to the POTW. A "heater", used to provide heat to the dehydrator tank, was located in a former garage west of the dehydrator room. A heat-transfer oil was heated with a burner and the transfer oil pumped through coils in the dehydrator tank. The heater was fueled with diesel from the F-2 fuel oil tank located north of the heater system. No raw gasoline was used at the facility".

In summary, Ecology's position is that Shell is potentially liable for the release of petroleum products at the facility based on available evidence. Historical records indicate that Shell conducted bulk petroleum operations at the property going back to at least 1936. Sanborn Fire Insurance Maps show that Shell occupied the property, as well as the structures within the

property, as far back as 1943. Sampling conducted in 1986 as part of an RFA for the facility confirm the presence of weathered gasoline constituents and this is corroborated by the results of the 2008 and 2010 forensic analysis that found extensively weathered gasoline and diesel in the soil at the property. There is credible evidence linking the gasoline impact detected at the site with the operation of the former Shell fuel terminal.

Next steps:

Shell's rights and responsibilities as a PLP are outlined in Chapter 70.105D RCW, and WAC 173-340. Ecology proposes to amend the existing AO to include Shell as a signatory to the AO for participation in the cleanup. If Shell chooses not to sign the AO, Shell is still deemed to be a PLP by Ecology. Ecology reserves the right to issue an enforcement order to any PLP that has not signed the AO, should that become necessary.

Ecology's site manager for the facility is Stan Leja. Mr. Leja, will contact Shell with information about how Ecology intends to proceed with the cleanup at this site. If you have any questions, please contact Mr. Leja at (360) 407-6345.

Sincerely,

Ava Edmonson, Section Manager
Hazardous Waste and Toxics Reduction
Southwest Regional Office.

By Certified Mail: (7011 1150 0000 7970 2719)

Enclosure(s): 1943 Sandborn Fire Insurance Maps
Historical Aerial photos
Fuel Processors, Inc. Woodland Facility Site Diagram, Subsurface Sampling Locations

cc: Ms. Beth Flowers, Shell Oil Products US (beth.flowers@shell.com)
Sonia Wolfman, Assistant Attorney General, AGO Ecology Division (soniaw@atg.wa.gov)
Samuel Iwenofu (Ecology)
Stan Leja (Ecology)
Central File (Ecology)

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