



RESPONSIVENESS SUMMARY

NuStar Energy (ST Services)

April 11 – May 10, 2011 Public Comment Period

*Agreed Order Amendment for an Interim Action, Interim Action Work Plan and
State Environmental Policy Act Determination*

**Prepared by
Washington State Department of Ecology
Southwest Regional Office
Toxics Cleanup Program
Lacey, Washington**

May 2011

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Site Information

Location: Port of Vancouver Terminal #2, 2565 NW Harborside Drive, Vancouver, Washington

Site Manager: Rod Schmall

Public Involvement Coordinator: Diana Smith

The Washington State Department of Ecology (Ecology) is amending a legal agreement (Agreed Order) for the cleanup of the NuStar Energy L.P. (NuStar) site. NuStar is planning an interim action (partial cleanup) to expand the cleanup efforts that began in 2008. The new interim action will:

- Expand the existing soil vapor extraction system that removes volatile organic compounds from soil.
- Expand the existing enhanced bioremediation system to treat contaminated groundwater.

Three documents were available for public comment from April 11 - May 10, 2011:

- Draft Interim Action Work Plan—Described the system design and operation for the proposed interim action.
- Agreed Order Amendment—Updated the original legal agreement between Ecology and NuStar.
- State Environmental Policy Act Determination and Checklist—Described the potential negative impacts of the cleanup work and how they will be lessened.

Site Background

ST Services (now NuStar Terminals Services, Inc, a subsidiary of NuStar Energy L.P.) has operated the site as a shipping terminal since 1998. The terminal receives, stores, and transfers bulk chemicals, jet fuel and methanol. The Port of Vancouver owns the property and leases it to NuStar.

Prior to 1998, the terminal was owned and operated by GATX. During GATX ownership, contamination of soil and groundwater was discovered on site.

Initial investigations to determine the type and extent of contamination found several contaminants above state cleanup levels including the chlorinated solvents perchloroethylene (PCE) and trichloroethylene (TCE). Chlorinated solvents have not been handled on the site since at least 1994.

In 1998, ST Services (after purchasing GATX) entered into an Agreed Order with Ecology to complete a remedial investigation, interim actions and a feasibility study.

Before these activities could be completed, Valero L.P. purchased ST Services. Valero L.P. then assumed responsibility for cleanup of this site. In 2007, Valero L.P. changed its name to NuStar Energy L.P. NuStar then entered into an Agreed Order with Ecology to complete a remedial investigation and feasibility study for the site.

Site Location





Commissioners

Nancy E. Barnes
Carol J. Curtis
Byron H. Hanke

*Chief Executive Officer/
General Manager*

Wayne W. Nelson

May 9, 2011

Rod Schmall, Site Manager
WA Department of Ecology
Vancouver Field Office
2108 Grand Blvd.
Vancouver, WA 98661

Subject: Comment on NuStar Energy's Draft Interim Action Plan, Facility Site ID #: 1026

Dear Mr. Schmall:

Clark Public Utilities appreciates the opportunity to provide comment on NuStar's draft Interim Action Plan, expanding their clean-up efforts at their 2565 Harborside Drive facility. The aquifers that underlie the Vancouver Lake lowlands are critical supply sources for meeting the drinking water needs of Clark County for the next 50+ years. The utility currently operates a public water supply well field at 5806 Fruit Valley Road drawing from the deep Sand and Gravel aquifer. The shallow Pleistocene Alluvial Aquifer, present from approximately 55 feet to 180 feet below ground surface, is the aquifer needed for meeting the long term public water needs. Efforts to expedite remediation of contaminated soil and ground water in the Vancouver Lake lowland area are essential in protecting this critical supply aquifer.

Attached are comments from our consultant Pacific Groundwater Group on the proposed plan for expansion of the interim action. The utility is hopeful these comments will assist you and NuStar in adopting a remediation plan that will expedite clean-up while providing long term protection of the aquifers present beneath the Vancouver Lake lowlands.

Thank you for your consideration of these comments.

Sincerely,

A handwritten signature in blue ink that reads "Steven S. Prather".

Steven S. Prather
Water Quality/Production Manager

May 9, 2011

Clark Public Utilities
PO Box 8900
Vancouver, WA 98668

Attn: Steve Prather

Re: Comments on the Interim Cleanup Plan for the NuStar Energy L.P. Site

Dear Steve:

The purpose of this letter is to provide comments from Clark Public Utilities (CLARK) on the Interim Cleanup Plan for the NuStar Energy L.P. Site (NuStar). As reflected in other comments, CLARK is focused on the valuable groundwater drinking water resource that underlies the Vancouver Lake lowlands and on minimizing the extent of contamination that impacts this resource. CLARK has a keen interest in a timely cleanup of the NuStar, Cadet, and Swan environmental sites since the contaminant plumes associated with these sites are currently limiting the public's access to an important regional water supply source.

General Comments on the Interim Cleanup Plan

CLARK is supportive of source control at NuStar. NuStar's Interim Action is focused on vadose zone soil vapor extraction and shallow zone enhanced bioremediation. It appears that the existing interim action has been effective in decreasing concentrations in soil and groundwater in the shallow zone.

Previous environmental evaluations of this area by the Port of Vancouver (POV) indicate that some contamination from the NuStar site has been migrating to northeast as a result of historical industrial pumping at the Great Western Malting facility. More recently, the POV has initiated operation of a pump and treat system near the Cadat/Swan environmental sites in order to reduce contaminant levels in that area. The POV pump and treat system may also be acting to increase offsite migration of contaminants from the NuStar site.

While source control is very important, CLARK encourages timely hydraulic control of the plume in all zones as it continues to migrate to the northeast. It is most effective to hydraulically control the plume now and protect the value of the groundwater resource, rather than allowing migration for years while the interim action is undertaken. CLARK

strongly encourages NuStar to expand the interim action to include hydraulic controls in the northeastern part of the plume.

Specific Comments on the Interim Cleanup Plan

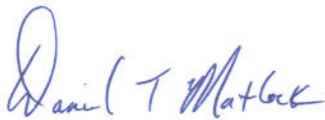
Section 2.3.2 Hydrogeology characterizes the site using Figure 3 to show that a silt layer effectively isolates the shallow zone contamination on the NuStar property. While interpretation of geology is key element of any environmental evaluation, the existing chemical data shows that the plumes in the shallow and intermediate zones extend to the northeast past the NuStar property line (PMX, 2010)¹.

In this vein, it appears that not all existing data were used to characterize groundwater chemistry. Specifically, Figure 5 shows the extent of COPCs in shallow zone groundwater as roughly bounded by the NuStar property line within 600 feet of the Columbia River; however Figure 11 from the PMX memorandum shows the shallow zone TCE plume extending 1500 feet to the northeast (MW-E at 90 ug/L and MW-21i-40 at 91 ug/L). Figure 12 from the PMX memorandum also shows that there is also offsite migration within the intermediate zone (MW-32i at 55 ug/L, MW-31i at 15 ug/L, MW-33i at 13 ug/L, MW-22i at 14 ug/L, MW-20i at 6.4 ug/L). The known data can be added to the Plan's figures to more accurately depict the extent of contamination.

We appreciate the opportunity to offer these comments. Please call if you should have any questions.

Sincerely,

Pacific Groundwater Group



Dan Matlock
Principal Hydrogeologist

comment letter v1.doc

¹ Parametrix, 2010. Preliminary Performance Evaluation of Groundwater Pump and Treatment Interim Action, technical memorandum dated July 20, 2010.



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

MS: 70 ▪ 2108 Grand Boulevard ▪ Vancouver, Washington 98661-4624 ▪ (360) 690-7171

May 26, 2011

Mr. Steven Prather
Clark Public Utilities
P.O. Box 8900
Vancouver, WA 98668

Re: Response to the CPU/Pacific Groundwater Group
Comments on NuStar Energy's Draft 2011 Interim Action
NuStar Energy LP Site / Vancouver, Washington
NuStar Terminals Services, Inc. – FSID: #1026

Dear Mr. Prather:

The Washington State Department of Ecology (Ecology) thanks Clark Public Utilities (CPU) for its active interest in the ongoing and future remediation activities within the Vancouver Lake lowlands. We share your belief that the underlying aquifer is extremely important and we're appreciative of your heedfulness regarding its protection from contamination.

CPU's comments on NuStar's 2011 Interim Action are parallel to concerns we have for the *aggregate* of contaminant release/source areas in and around Port of Vancouver (Port) property. Ecology is continuously examining approaches—including those suggested by CPU—in our quest to develop a final cleanup action plan (CAP) that will best address the area *as a whole*, not necessarily for either NuStar or the Port alone.

The subject Interim Action (IA), required by Ecology, was designed by NuStar to reduce contaminant mass at the most contaminated area within the NuStar leasehold. Notwithstanding the recognized value of hydraulic control for contaminant containment, the benefits of the IA—a *single* component of the overall NuStar-Port remediation effort—would be obtained with *or without* a NuStar-specific hydraulic containment system. Large-volume groundwater extractions near the source area could possibly increase undesirable contaminant migration outward from the source.

Because the value of the proposed IA is not diminished by the migration of already present aquifer contaminants or the absence of NuStar-specific containment, Ecology believes approval of NuStar's 2011 Interim Action is in the best interest of the environment—including the Vancouver Lake lowlands aquifer.

Although CPU's comments will not change Ecology's approval decision regarding the subject IA project, they are very appropriate for the agency's development of compatible components for area-wide remediation. Ecology staff persons are presently in consultation with NuStar, the Port, and their consultants to make science- and data-based judgments regarding area-wide contamination characterization and future remediation efforts. This effort will help ensure our formulation of the best approach for a final cleanup action plan, which is scheduled for finalization in 2012 with implementation in 2013 or sooner.

Please contact me if you have questions or comments.

Respectfully,

A handwritten signature in black ink that reads "Rod Schmall". The signature is written in a cursive style with a large, looping "R" and "S".

Rod Schmall, Site Manager
Washington Department of Ecology

Enclosure: May 9, 2011 CPU letter to Ecology with Pacific Groundwater Group memo attached

cc: Dan Matlock / Pacific Groundwater Group
Joe Aldridge, Renee Robinson / NuStar Energy
Amanda Spencer, Stephanie Bosze / Ash Creek Associates
Patty Boyden / Port of Vancouver USA
Diana Smith, James DeMay, Craig Rankine / Ecology

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