

MEMORANDUM

Project No.: 020030-001-04

May 5, 2006

To: Mark Adams, Washington State Department of Ecology
cc: Alan Jacobson, A&B Jacobson LLC
From: Jeremy Porter, P.E., and Doug Hillman, LHG
Re: **April 2006 Groundwater Monitoring Results**
2801 NW Market Street, Seattle, Washington

RECEIVED
MAY 15 2006
DEPT OF ECOLOGY

This memo summarizes groundwater monitoring for chlorinated solvents conducted on April 21, 2006, at the Market Street Site and the Jacobson Terminals Site located in Seattle, Washington. The purpose of this memo is to update the summary of site conditions presented in the VCP Status Memo (Aspect 2005), which is currently being reviewed by Ecology.

Groundwater monitoring was conducted in accordance with the long-term groundwater monitoring schedules for the above-referenced sites. In addition to the normal monitoring program, two additional groundwater samples were collected using a direct-push probe in an area between former well MW-21S and the Lake Washington Ship Canal. Well MW-21S was located on the City of Seattle property before being abandoned in October 1999 during construction of the Market Street Site treatment wall. Historical monitoring at MW-21S indicated cleanup level exceedences of perchloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-DCE), and vinyl chloride (VC). Groundwater modeling performed during design of the Market Street cleanup action indicated that these levels would attenuate to below site cleanup levels the Lake Washington Ship Canal.

Soil borings SP-61 and SP-62 were advanced between the former location of MW-21S and the Ship Canal, approximately 30 feet north (upgradient of the Ship Canal). An updated site and exploration plan is provided in Figure 1. A temporary screen was installed at a depth of 9 to 12 feet, at the same approximate elevation as the former MW-21S well screen interval. Grab samples were collected using low-flow purging and sampling techniques.

VOC concentrations at SP-61 and SP-62 were generally non-detect, with one detection of VC at a concentration of 0.9 ug/L, which is below the site cleanup level. Concentrations of PCE, TCE, cis-DCE, and VC for the April 2006 monitoring event are provided on Figure 2.

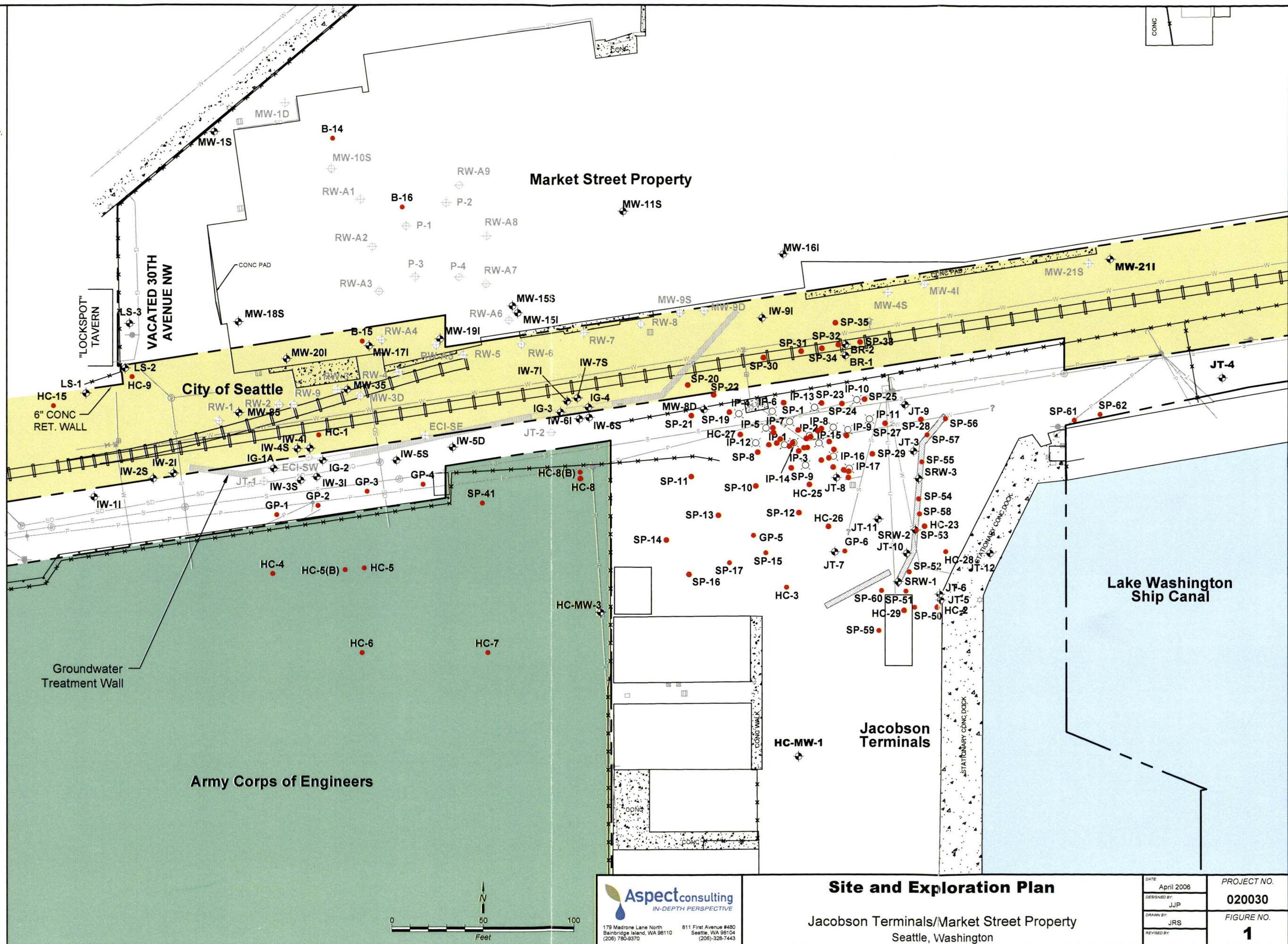
The sampling results confirm previous modeling predictions that chlorinated VOC occurrences in groundwater near former well MW-21S attenuate before reaching the Ship Canal.

Attachments: Figure 1 – Site and Exploration Plan
Figure 2 – Performance Monitoring Results April 2006

V:\020030 Jacobson Terminals\MW-21S memo.doc

Legend

- MW-18S Existing Monitoring Well
RW-2 Former Monitoring Well, Recovery Well, or Piezometer (Abandoned)
IP-5 Injection Well
SP-41 Soil Boring
Note: Labels removed from several borings in "IP" area for clarity. Refer to "Interim Cleanup Action Summary", Hart Crowder, July 18, 2002.
- Property Boundary
Concrete Surface
Cement-Bentonite Groundwater Treatment Wall
Permeable Iron/Sand Gate
Overhead Power
Sanitary Sewer Line
Water Line
Utility Line
City of Seattle Property
Iron/GAC Groundwater Treatment Wall



Aspect consulting
IN-DEPTH PERSPECTIVE

179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 785-9370

811 First Avenue #480
Seattle, WA 98104
(206) 328-7443

Site and Exploration Plan

Jacobson Terminals/Market Street Property
Seattle, Washington

DATE	April 2006	PROJECT NO.	020030
DESIGNED BY	JJP	FIGURE NO.	1
DRAWN BY	JRS		
REVIEWED BY			

MW-18S

Existing Monitoring Well
(Bold indicates part of
long-term monitoring
program for Terminal
and/or Market Street
sites)

Property Boundary

Concrete Surface

Cement-Bentonite Groundwater Treatment Wall

Permeable Iron/Sand Gate

Overhead Power

Sanitary Sewer Line

Water Line

Utility Line

City of Seattle Property

Iron/GAC Groundwater
Treatment Wall

Perchloroethene
Concentration in $\mu\text{g/L}$

Trichloroethene
Concentration in $\mu\text{g/L}$

— cis-1,2-Dichloroethene
Concentration in $\mu\text{g/L}$

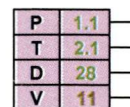
— Vinyl Chloride
Concentration in $\mu\text{g/L}$

Not Detected

Exceeds Wall Performance Criteria

Exceeds Cleanup Level

Below Cleanup Level



ND

3,500

58

1.1

Army Corps of Engineers

Market Street Property

MW-11S

CKSPOT™
CAVERN

City of Seattle

Groundwater Treatment Wall

Jacobson Terminals

Lake Washington Ship Canal

Performance Monitoring Results April 2006

Jacobson Terminals/Market Street Property
Seattle, Washington

DATE:	April 2006
DESIGNED BY:	JJP
DRAWN BY:	JRS
REVISED BY:	

PROJECT NO.
020030

FIGURE NO.
2



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179 Madrone Lane North
Bainbridge Island, WA 98110
(206) 780-9370

811 First Avenue #480
Seattle, WA 98104
(206)-328-7443

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