June 27, 2000

Ms. Georgia Baxter
J.H. Baxter & Company
1700 South El Camino Real
San Mateo, California 94402-0902

Re: Proposed Scope of Work for Remedial Design
Subsurface Investigation NAPL Extent and Storm Water Pilot Test
7026-02

Dear Georgia:

This letter presents our proposed scope of work to collect data for selecting and designing a cleanup action at the J.H. Baxter wood treating facility located in Arlington, Washington. We believe these activities are needed prior to implementing the remedial alternatives described in the Feasibility Study (FS) (Hart Crowser, 2000). The proposed work includes:

- A subsurface investigation in the area of the NAPL occurrences observed during the Remedial Investigation (RI), beneath the former butt tank and near boring SB-6; and
- Pilot testing a surface-modified zeolite filter for treating site storm water.

The specific scope is outlined in the following task summary.

SCOPE OF WORK

Task 1—Reconnoiter the Site

We will visit the site and meet with site employees to discuss remedial alternatives presented in the FS, mark soil boring and monitoring well locations, and determine where to install the storm water filter pilot unit. A schedule for the work will be discussed. Potential locations of the equipment and activities for remedial alternatives will also be evaluated.

Task 2—Determine NAPL Extent In Subsurface

We observed NAPL at two locations on site during the RI. These were beneath the former butt-treating tank and near boring SB-6. For this task, we will drill to sample subsurface soils

in the vicinity of these occurrences to determine the area and depth of NAPL-impacted soil. At this time we are planning approximately twelve soil borings at the approximate locations shown on Figure 1. The borings will be located at 20-foot intervals outward from the locations where NAPL was identified. If NAPL continues to be observed in any of the outer borings, we would propose that additional borings be completed until the full extent is identified. We will keep in close contact with you during the drilling to let you know our findings and to seek approval if it appears additional borings may be needed.

Borings BT-1 through BT-6 are planned for the vicinity of the former butt-treating tank, and SB-9 through SB-14 are planned for the boring SB-6 area. Borings will be advanced with a direct-push drill rig and completed to a depth of 5 feet below the seasonal low water table. Samples will be collected at 5-foot-depth intervals. Up to 24 samples will be analyzed for PCP (EPA Method 8151 Modified) and NWTPH-Dx. Up to two samples will be analyzed for dioxin (EPA Method 8290) and PAHs (EPA Method 8270) if NAPL is observed.

Task 3—Install Monitoring Wells for Groundwater Sampling

In addition to the borings, four wells will be installed for groundwater monitoring and NAPL thickness determination purposes. Wells will be drilled with a hollow-stem auger and completed to 5 feet below the seasonal low water level. Samples will be collected at 5-foot-depth intervals. One soil sample collected at the top of the water table in each boring will be analyzed for PCP and NWTPH-Dx. Three of the wells (HCMW-9, HCMW-10, and HCMW-11) will be located downgradient of the identified NAPL areas, to verify the PCP plume location and conceptual model. These well locations are designed to help us better understand groundwater flow and contaminant transport from the former butt tank and SB-6 area, to wells MW-3 and BSX-3. In addition, these wells will be suitable later for monitoring should an *in situ* remediation alternative be implemented.

Well HCMW-8 will be installed adjacent the former butt tank to determine NAPL thickness and will be constructed as a possible recovery well should NAPL recovery be feasible and appropriate. Proposed locations for the wells are shown on Figure 1, but may be adjusted based on field observations during drilling of the borings.

The new monitoring wells will be completed to a depth of 35 to 40 feet with 15 feet of well screen placed across the water table. Well HCMW-8, located next to the butt tank, will be constructed with 2-inch-diameter stainless steel and 15 feet of wire-wrapped screen to facilitate NAPL recovery. Wells HCMW-9 through HCMW-11 will be constructed with 2-inch-diameter PVC and slotted PVC screen unless NAPL is observed. We will develop the

wells using surge and bail techniques and survey the wells relative to monitoring wells currently existing on site.

Groundwater samples will be collected from each well and field analyzed for pH, temperature, specific conductivity, and dissolved oxygen. One sample from each well will be analyzed for PCP (EPA Method 8151 Modified), NWTPH-Dx, and total suspended solids (TSS).

Task 4—Conduct a Pilot Test of a Zeolite Storm Water Filter

A pilot test of a surface-modified zeolite storm water filter will be conducted during the wet season when adequate storm water is available. The following equipment will be installed for the zeolite filtration pilot test (efforts would be coordinated with any interim drainage design currently being negotiated with Ecology):

- A pump in the drainage ditch near the Main Treatment Area;
- Perlite and Zeolite Filter Cartridges connected in series; and
- Piping between the pump and the filter cartridges.

Storm water will be pumped from the drainage ditch through the filter cartridges and will be discharged away from the ditch used as a storm water source. The perlite filter is designed to remove the majority of the suspended solids and the zeolite filter is designed to remove solids and PCP. We will collect influent and effluent samples for a range of flow rates between 5 and 15 gallons per minute. Approximately ten samples will be analyzed for PCP (EPA Method 8151 Modified) and TSS to determine treatment effectiveness and calculate design parameters. We propose to analyze two samples for dioxin/furans. The maximum flow rate yielding suitable performance will determine the number of filter cartridges required in a full-scale system.

After testing the treatment effectiveness at different flow rates, we will continue to filter storm water at 15 gallons per minute and collect samples after 1, 3, 7, and 14 days of continuous flow through the filter cartridges. We will analyze these samples for PCP and TSS to test for breakthrough of the constituents. This will allow us to estimate the frequency of filter replacement in a full-scale system. After the test is completed, a sample of the filter medium will be extracted using TCLP techniques, and the extract will be analyzed for PCP. This will help determine whether the filter media will require disposal as a hazardous waste.

Task 5—Re-evaluate Remedial Alternatives and Prepare Engineering Reports

We will analyze the data collected during the field investigation and pilot test and prepare two engineering reports. The first report will summarize data collected during the field investigation, provide revised mass and volume estimates for the areas of NAPL-impacted soil, and recommend a remedial alternative for NAPL-impacted soil. The second engineering report will summarize data collected during the storm water treatment pilot test, evaluate the effectiveness of the zeolite filtration system, and recommend a full-scale remedial alternative for site storm water. Both engineering reports will include preliminary (30%) Design Drawings.

Sincerely,

HART CROWSER, INC.

JEREMY PORTER
Senior Staff Engineer

LORI HERMAN
Principal Hydrogeologist

BARRY KELLEMS
Senior Associate Environmental Engineer

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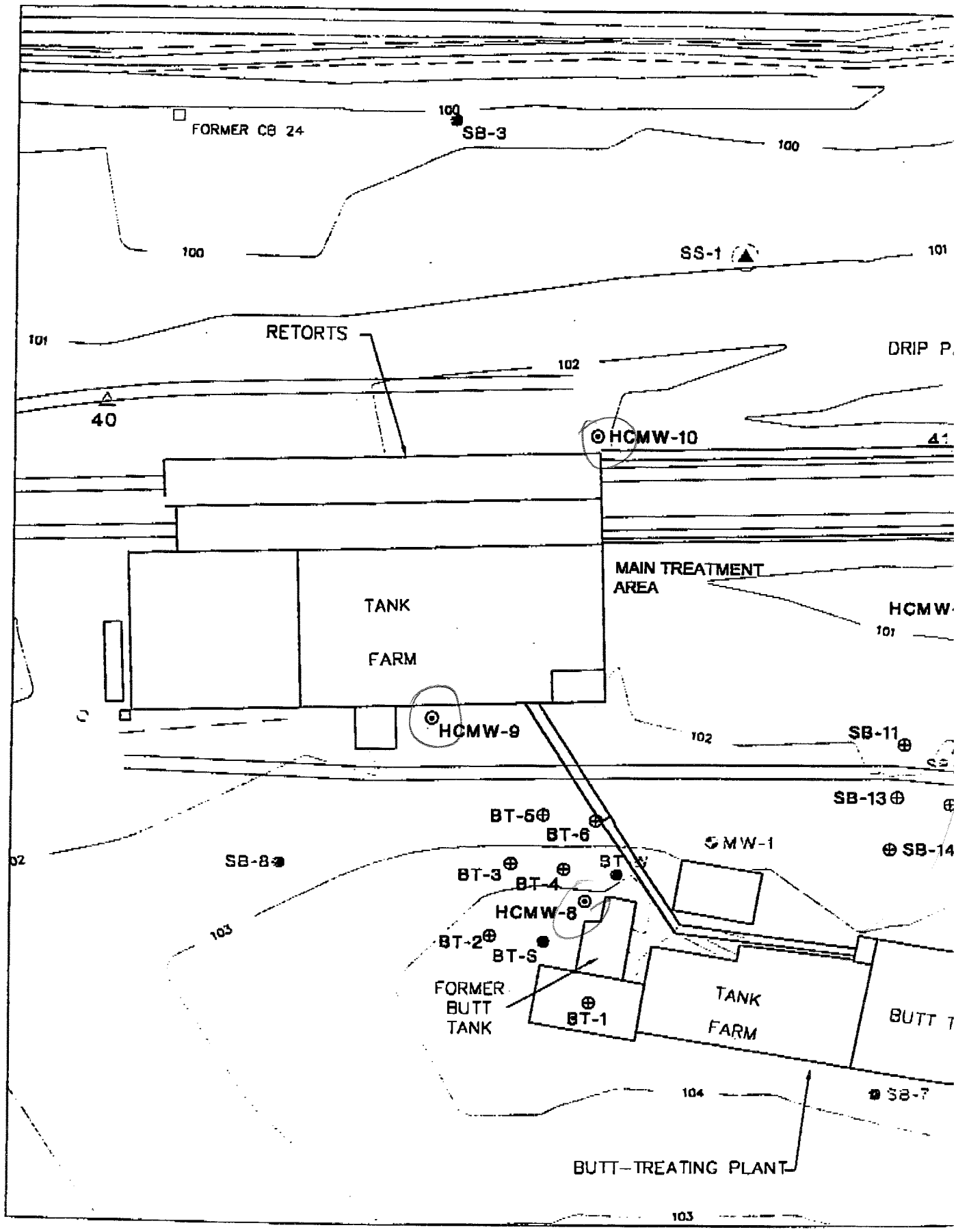
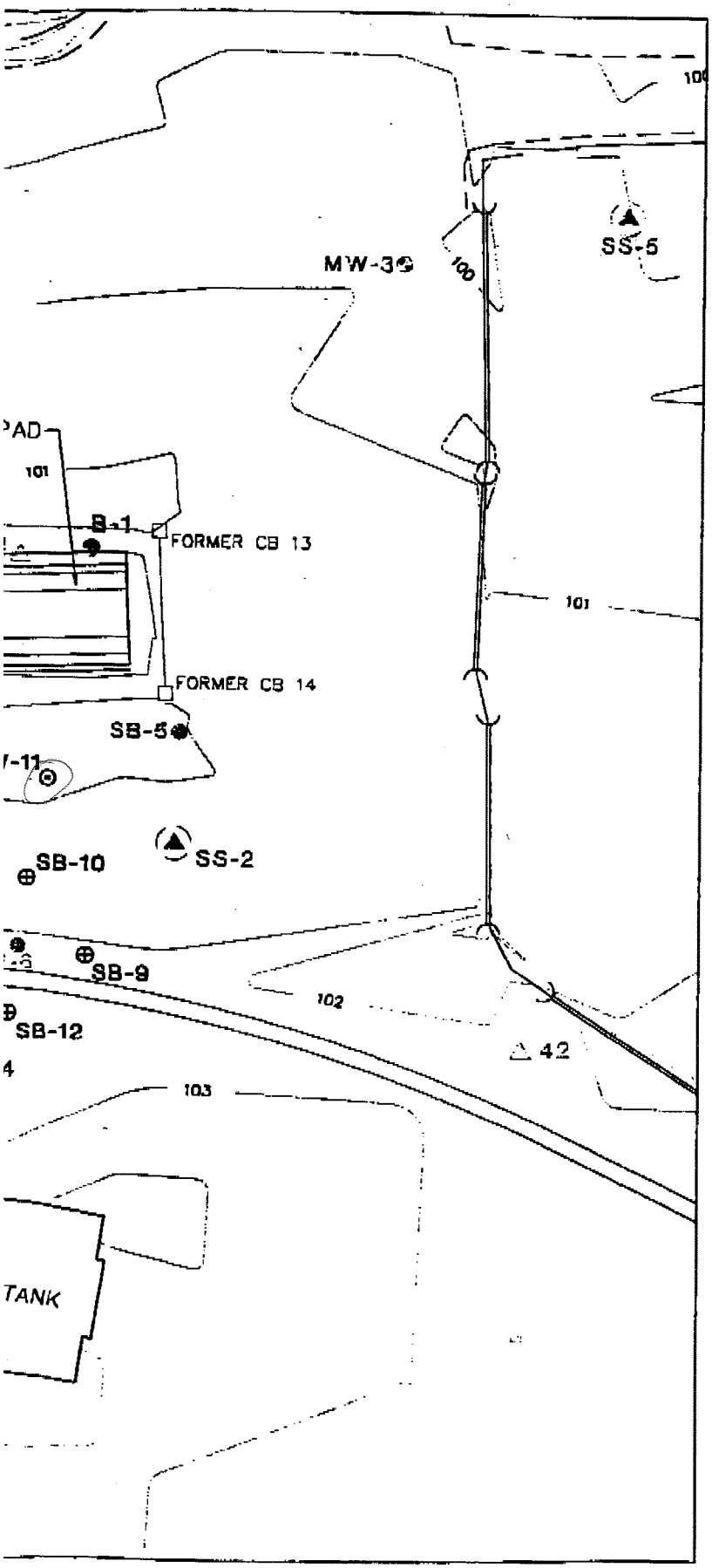
Attachments:
Figure 1 - Proposed Exploration Plan for NAPL Extent Assessment

Proposed Exploration Plan for NAPL Extent Assess





Proposed Exploration Location and Numb

BT-1 ⊕ Boring

HCMW-9 ⊙ Monitoring Well

Existing Exploration Location and Numbe

MW-4 ⊙ Monitoring Well

B-1 ● Soil Boring

42 △ Surface Soil Sample (Ecology, 1992)

SS-1 ▲ Composite Surface Soil Sample (Hart Crowser, 1999)

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Scale in Feet

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Figure 1