Enclosure 19

OWENS-BROCKWAY
GLASS CONTAINERS
a unit of Owens-Illinois

Toledo, Ohio

Intra-Company

April 28, 1989

CWA - 20
Ground Water Contamination

Bob Barber - GC Oakland Plt. North (all backup)

cc: Joe Batistic - GC Oakland Plt. North (cost only)
Jim Loutzenhiser - GC Pleasanton (cost only)
Roger Sandstrom - GC Oakland Plt. North (cost only)
Bob Neal - GC Pleasanton (all backup)
George Connally - 30L/GC (cost only)

Re: RECOVERY WELL INSTALLATION

Attached are the two proposals for reactivation of the existing well and installation of a new well at the Oakland Plant.

It is recommended the plant award this work to IT. This recommendation is based on slightly lower estimated costs and perhaps IT will provide some assurance that these wells will provide the required remediation.

We have to proceed with one of these proposals as soon as the "Decon Bldg" is removed.

Prior to awarding the project, you will have to determine if your basement can handle the additional water and if the water is of an acceptable quality.

If the plant can get the tank set on a pad, and assist on the electrical and plumbing, this should reduce the total costs.

Prior to proceeding with the well installation either of the proposals will have to be reviewed with the on-site hydrogeologist.

Please call me with your final decision and we can discuss the total project.

A. W. Long

Attach:

AWL:jjs

REMEDIAL ACTION PLAN
OWENS-ILLINOIS COMPANY
FRUITVALE AVENUE @ ALAMEDA CHANNEL
OAKLAND, CALIFORNIA

PRESENTED TO: Robert C. Neal
Environmental Administrator
OWENS-BROCKWAY
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Pleasanton, CA 94566-8093

PRESENTED BY: IT Environmental Services, Inc.
4575 Pacheco Blvd.
Martinez, CA 94553

March 31, 1989

Larry Hudson
Project Manager

Greg Millikan
Hydrogeologist
Martinez Environmental Services

IT Proposal #
Remedial Action Plan
Owens-Illinois Glass
Oakland, CA

1.0 INTRODUCTION

The following Remedial Action Plan (RAP) proposal has been developed to address free and dissolved-phase No. 4 fuel oil contamination detected on the referenced Owens-Illinois (OI) property. Preliminary subsurface investigation work completed by Ensco Environmental indicates that the areal extent of the contaminant plume appears to be down-gradient in the southern portion of the Owens-Illinois property.

The following work scope presented by IT provides tasks for the installation of an on-site recovery well, as well as the tasks associated with the installation/construction/operation/monitoring of the remedial system.

2.0 RAP PROPOSED METHODOLOGY

Task 1: Recovery Well Installation/Development

As currently envisioned, two 13-inch diameter boreholes will be drilled to a depth of approximately 30´ with an IT large diameter auger rig. The wells will be completed with 19´ of 6" diameter slotted PVC well screen. A two-foot solid bottom sump and approximately 10-12´ feet of solid riser will extend the wells to the surface. The screened portion of the wells will be backfilled with a graded gravel filter pack; the remaining annular space will be backfilled with clean native materials. A one-foot bentonite seal will be placed in the borehole to prevent surface water influx. The well will be equipped with a locking cover to provide security for the well until the well head is encased in a below-grade vault.

Following installation, the recovery well will be developed using a 4" steel suction bailer. All waste water generated during the development process will be collected and placed in a holding tank on-site to be later discharged into the facility water system.

Task 2: Aquifer Testing/Remediation System Sizing

Aquifer properties will be determined by an 8 hour, submersible pump test on the new recovery well. Monitoring drawdown in the pumping well and observation wells will allow time and distance-drawdown relationships to be determined to evaluate the pumping well's radial influence and yield.

Pumped groundwater will be discharged to the basement water collection system.

Following the completion of the test, all data will be reduced to indicate a specific pump size and treatment arrangement, along with drawdown/radial influence relationships for the recovery well.

Task 3: Groundwater/Product Recovery System Installation

The well head for the recovery well will be encased within a prefabricated concrete vault completed flush to grade. Explosion-Proof electrical service (1-230 volt circuit) will be brought through subgrade conduiting from the bottle plant or separate metered service to the vault.

The recovery well will be outfitted with a NEPCCO Equipment Division Hydropurge Water Table Depression Pump. The pump is sensor-controlled with intrinsically safe probes. Explosion-Proof control panels will be mounted in a shed.

Based on an estimated treatment rate of 5-8 GPM and contaminant concentrations of 790,000 maximum ppb, product removal with NEPCCO Equipment Division Petropurge Pump eliminates the need for an oil-water separation on the surface.

Task 4: Initial System Start-Up/Monitoring (1st Month)

IT will monitor/maintain the system three times per week for the first month of operation. Well monitorings and system maintenance will be provided to ensure that the system reaches equilibrium and automated operation as soon as possible.

Task 5: Monthly Monitoring/Maintenance (2nd-6th Months)

After the first month, or after the system has reached equilibrium, the system will be monitored once per week. During each visit, all wells will be monitored for water depths and product thicknesses to determine water table elevations across the site. Monthly samples of the system influent/effluent will be collected along with quarterly samples of all site wells.

Task 6: Semi-Annual Project Status/Update Report

At this time, sufficient baseline and on-going monitoring data will have been collected to present a project summary report. All water quality data, water table information, and related system information will be compiled into a comprehensive project-to-date summary. It is anticipated that the ultimate term of the project will be able to be estimated at this stage, and the appropriate orientation of future site activities and monitoring determined at that time.

3.0 PROJECT SCHEDULE

The following is a breakdown of the anticipated schedule for completing all referenced tasks following CRWQCB approval:

TASK	TIME PERIOD
Recovery Well/Installation/Development	Week 2
Aquifer Testing/Remediation System Sizing	Week 3
Groundwater Pumping/Treatment System Installation	Week 5
CRWQCB Permit	Week 16
Initial System Start-Up/Monitoring	Week 17
Monthly Monitoring/Maintenance	Weekly - commencing Week 18
6 Month Project Report	Week 46

4.0 COST ESTIMATE

Task 1:	Preliminary Investigation/Survey	$ 2,500
	- Investigate current product/water levels	
	- Prepare model chart from findings	
	- Investigate feasibility to use old revovery well	
Task 2:	Recovery Well Installation/Development	8,750
	- Well drilling/installation (2 wells)	
	- Pump test	
Task 3:	Installation of Equipment	31,500
	- Electrical	
	- Plumbing to basement	
	- Pumps (4) and controller purchase/freight	
	- System start-up/balance	
	SUBTOTAL	$42,750
Task 4:	Maintenance	
	- 1st Month	
	3 visits/week x $300 x 4 weeks =	3,600
	- 4 Months	
	1 visit/week x $500 x 16 weeks =	4,800
	TOTAL	$51,150

5.0 ALTERNATIVE INSTALLATION

The existing recovery well may be salvageable. Its location is ideal for recovery of product in the SE quadrant of the fuel oil plume. Cleanout and servicing of this well could preclude installation of an extra, new recovery well. This would save approximately $6,250.00, less the price of the well salvage ($2,250.00 +) for a net savings of $4,000.00 +.

The above-figures are an estimate based on available site data and past similar projects. All billing will be on a time and materials basis pursuant to an existing fee schedule between IT Corporation and Owens-Illinois. The figure will not be exceeded without prior justification and authorization from OI.