



a subsidiary of environmental system company

April 13, 1989

Owens-Brockway
6150 Stoneridge Mall Road
Pleasanton, CA 94566-8093

Attention: Mr. Bob Neal
Environmental Administrator, West

Subject: Proposal for a Recovery Well
Owens-Brockway Glass Container Division
Oakland, California
EES Quote No. 6494F

Dear Mr. Neal:

Ensco Environmental Services, Inc. (EES) is pleased to submit the attached proposal for the installation of the 10-inch recovery well at the Owens-Brockway facility located in Oakland, California.

To proceed with EES's proposed scope of work, please sign and return the attached Work Authorization/Agreement form so that EES can schedule the field work. EES looks forward to hearing from you. If you have any questions, or require additional information on this project, please call our office.

Sincerely,
Ensco Environmental Services, Inc.

Gary R. Mulkey, R.E.A. 311
Manager, Geotechnical Department

Lawrence D. Pavlak, C.E.G. 1187
Senior Program Geologist

GRM/LDP/da
Attachments

**PROPOSAL FOR A RECOVERY WELL
PRODUCT CONTAMINATED GROUNDWATER
AT
OWENS-BROCKWAY, GLASS CONTAINER DIVISION
OAKLAND, CALIFORNIA**

1.0 BACKGROUND

The Owens-Brockway Glass Container Division is currently cleaning up an oil spill at their Oakland, California facility. One large diameter recovery well has been installed and several hundred cubic yards of contaminated soil, as well as about 270 gallons of product have been removed from the site. An additional recovery well is planned for the area near existing groundwater monitoring well MW-2, where up to several feet floating petroleum has been measured. Since the floating product is moving, it is felt that an additional well in this location will aid in floating product recovery and site cleanup.

The proposed work would involve the installation of an additional recovery well and the attendant subsurface piping to an oil recovery tank. The oil skimming equipment and required gauging and wiring are included in the costs.

2.0 SCOPE OF WORK

Site Investigation and Report

Task 2.1 - Site Inspection and Document Review

To conduct a safe and thorough subsurface investigation it will be necessary to accurately locate underground improvements, including the large PG&E gas pipeline, in the vicinity of the proposed well and trenches and its surrounding area. This would involve checking with the plant engineer to ensure that subsurface utilities are not present or are properly located. The required well installation permit

will be secured from the Alameda County Water Conservation and Flood Control District.

Task 2.2 - Exploratory Drilling

The drilling of the recovery well boring will be conducted using a truck mounted drill rig and 12 inch outside diameter hollow-stem auger. The auger and other tools used in the hole will be steam cleaned before use. Relatively undisturbed soil samples will be collected at 5-foot intervals using a modified California split tube sampler with internal brass liners. The boring will be advanced to the desired sampling depth and the modified California sampler will be lowered to the bottom of the hole. The sampler will then be advanced ahead of the auger using a 140-pound hammer. The sampler will then be removed from the hole and broken down into its component parts. A log of the subsurface conditions will be prepared by an Ensco Environmental Services, Inc. (EES) geologist in the field during the drilling process. Should contaminated soil be encountered, it will be placed in drums (provided by the Client or available at extra cost from EES). It shall be the Client's responsibility to properly dispose of any contaminated soils. EES can assist the client in arranging for transportation and disposal on a time and material cost basis.

Task 2.3 - Recovery Wells

One groundwater recovery well will be constructed in the exploration boring. The well will be built under permit requirements of the Alameda County Water Conservation and Flood Control District. The well will be constructed of 10-inch diameter flush threaded stainless steel casing. After drilling the boring to the desired depth, the well casing will be installed through the hollow-stem auger. The lower 5 feet of casing will be solid and will act as a silt trap. A bentonite seal will be placed around the lower 4 feet of the silt trap. The auger will then be removed and the sand pack will be installed to a level approximately 1 or 2 feet above the slotted screen section, where bentonite will be used as a seal. The remaining portion of the annular space will be sealed with a neat cement and bentonite grout. The top of the well will be set in a traffic-rated vault box at grade.

Task 2.4 - Well Development

After construction, the well will be developed to improve the hydraulic conductivity between the well and the natural formation. The development will consist of manually bailing or mechanically pumping water from the well casing to remove residual silts and clays left from the drilling operations. Water and oil collected by this process will be stored in drums. Disposal of this material will be the Client's responsibility.

Task 2.5 - Groundwater Sampling

Groundwater samples will not be collected since existing groundwater monitoring wells currently provide the needed data. Thickness of product will be measured periodically after completion of the well.

Task 2.6 - Well Installation Letter Report Preparation

EES shall prepare a Well Installation Report summarizing the field and laboratory methods used, the data obtained, conclusions, and recommendations based on our findings. The report will contain the boring log for the exploration boring drilled and construction details of the recovery well installed.

3.0 RECOVERY SYSTEM INSTALLATION

Task 3.1 - Trench Excavation

EES will review the work area with the Owens-Brockway Plant Engineer to determine underground utility locations prior to commencing work. Where required, concrete or asphalt will be saw cut and removed. A 2-foot wide by 2-foot deep trench will be excavated for subsurface burial of piping and electrical lines. The trench will be extended approximately 160 feet from the proposed recovery well to the northwest corner of the existing bottle plant. From there, the pipes and conduit will run along building or basement walls to their respective destinations.

Task 3.2 - Pump Installation

A groundwater depression pump and an oil skimming pump will be installed in the proposed recovery well. The oil skimming pump will be powered by a 3/4-inch compressed air line which will be connected to existing building utilities. Approximately 150 feet of 1/2 inch diameter PVC product discharge pipe from the proposed recovery well will be placed in the trench leading to the oil storage tank location. At this time, the 1,000 gallon oil recovery tank is not installed. EES personnel will reinstall this tank. Our bid assumes that this tank will be located in approximately the same location at is was prior to its removal. A control box equipped with 110V interface will be installed within a subsurface Forni box and connected to the skimmer pump.

EES will install a groundwater extraction pump into the extraction well. The 115V, 3/4 HP groundwater extraction pump will be equipped with a control box and will operate on single phase electricity. Approximately 600 feet of 1-1/2 inch diameter PVC line for contaminated groundwater discharge from this pump will be placed in the trench and will be extended along the bottle plant basement ceiling and discharged into the existing cooling water system.

Approximately 160 feet of galvanized conduit with appropriate elbows and couplings will be placed in the trench to route the electrical lines to existing building facilities. Electrical lines to be installed will consist of 12 gauge wires, an appropriate 20A receptacle, and terminal box with cover. All electrical lines will terminate on the northwest corner of the building and a power connection will have to be supplied by Owens-Brockway.

The skimmer pump from recovery well R-1 will be reinstalled at this time. Since the pump has required constant cleaning in the past, the Client may want to install a dual pump system similar to that proposed for the second recovery well. This system will be covered by a separate bid which will be submitted at the Client's request.

Task 3.3 - Site Restoration

A traffic bearing, locking Forni box will be placed over the recovery well, pumps, and electrical panel to provide secured access to the installation. The Forni box located over the existing recovery will be repaired or replaced at this time. After the associated piping and electrical lines have been placed in the excavated trench, it will be backfilled with clean material. Asphalt or concrete will be replaced to match the existing surface.

4.0 PRICE

The total fixed price for the pumping system installation described above, less the recovery well installation described in Section 3.0, subject to the the Terms and Conditions listed in Section 5.0, is \$36,428.75. This price does not include any disposal of contaminated material.

The estimated costs for the recovery well installation are presented below. The actual costs will be billed on a time and materials basis according to the attached General Price List. Technical performance is contingent upon the General Conditions provided in Section 5.1.

Task	Description	Cost
Task 2.1	Site Inspection and Permits	\$ 220.00
Task 2.2	Exploratory Drilling/Logging	≈\$ 2,725.00
Task 2.3	Recovery Well Construction	≈\$ 6,250.00
Task 2.4	Recovery Well Development	\$ 500.00
Task 2.5	Groundwater Sampling (measure thickness)	\$ 200.00
Task 2.6	Well Installation Report Preparation	\$ 700.00
Project Management		\$255.00

The individual tasks will be billed upon completion. EES payment terms are net 30 days, due and payable upon receipt of our invoice. Interest of 1.5% per month will be assessed on any overdue balance.

5.0 PROJECT TERMS AND CONDITIONS

5.1 General Conditions

The aforementioned scope of work and project price are fully contingent upon General Terms and Conditions provided as Attachment A.

ENSCO ENVIRONMENTAL SERVICES, INC.
41674 Christy Street
Fremont, California 94538
(415) 659-0404

WORK AUTHORIZATION/AGREEMENT

DATE: April 13, 1989
QUOTE NO: 6494F
CLIENT: Owens-Brockway Glass Container, Inc.
6150 Stoneridge Mall Road
Pleasanton, California 94566-8093

Owens-Brockway agrees to the following scope of work:

EES to perform recovery well installation on a time and material basis as described in EES Quote No. 6494F..... Estimated Cost: \$ 10,850.00

Total fixed price for the pumping system installation as described in EES Quote No. 6494F.....Cost: \$ 36,428.75

I agree to authorize this work according to the terms and conditions set forth by Ensco Environmental Services, Inc.

Authorization to perform the above services:

OWENS-BROCKWAY GLASS CONTAINER, INC.

Name: _____
Signature: _____
Date: _____
P.O. No.: _____

ENSCO ENVIRONMENTAL SERVICES, INC.

Name: _____
Signature: _____
Date: _____

ATTACHMENT A

GENERAL CONDITIONS

- A. Customer shall indicate to Ensco Environmental Services, Inc. (EES) the property lines and is responsible for accuracy of markers.
- B. Customer shall grant free access to the site for all necessary equipment and personnel. The Customer shall notify any and all possessors of the project site, whether they be lawfully or unlawfully in possession, that customer has granted free access to the project site.
- C. Customer shall take steps to see that the property is protected inside and out, including all landscaping, shrubs and flowers, and EES will not be responsible for damage to lawns, shrubs, landscapes, walks, sprinkler systems or underground utilities and installations caused by movement of earth or equipment.
- D. Customer shall be responsible for informing EES of any hazardous materials or conditions which exist in or around the proposed work area.
- E. Customer shall locate for EES and shall assume responsibility for the accuracy of his representatives as to the locations of all underground utilities and installations. EES will not be responsible for damage to any such utilities or installations not so located, and any such damage may, at option, be repaired by and billed, at cost plus 20 percent to Customer. Such costs are in addition to the fees defined by the proposal of which this is a part.
- F. All samples of soil, rock or water will be discarded thirty days after submission of our report unless specific arrangements are previously made by Customer.
- G. In field changes to the basic monitoring well design made at the direction of the designated water district field inspector shall be considered the final authority on the well installations. Possible changes include, but are not limited to, the depth of the well, the extent of the screened interval, the type of annular backfill or the determination or the requirement for a vadose well.
- H. In the event that the Customer requests termination of the work prior to completion of a report, we reserve the right to complete such analyses and records as are necessary to protect our professional reputation, and to complete a report on the work performed to date. A termination charge to cover the cost thereof in an amount not to exceed 30 percent of all charges incurred up to date of the stoppage of the work may be made at the discretion of EES.
- I. For any damages on account of error, omission or other professional negligence, our liability will be limited to a sum of \$5,000.00, or our fee, whichever is greater.
- J. In the event the Customer makes a claim against EES, at law or otherwise, for any alleged error, omission or other acts arising out of the performance of our professional services, and the Customer fails to prove such claim, then the Customer shall pay all costs incurred by EES in defending itself against the claim.

- K. Reports, boring logs, field data, field notes, laboratory test data, calculations, estimates and other documents prepared by EES, as instruments or service, shall remain the property of EES. Customer agrees that reports and other work furnished to the Customer or his agents, which is not paid for will be returned upon demand and will not be used by the Customer for any purpose. EES will retain pertinent records relating to the services performed for a period of two years following submission of the report during which period the records will be made available to the Customer at reasonable times.
- L. Equipment damaged or lost on a job while attempting to accomplish a request by the Customer will be billed to the job (i.e., sampling equipment damaged or rendered unusable by contamination or by well construction, samplers damaged by overdriving, bits destroyed by cutting hard rock or concrete, or vandalism to vehicles or theft of equipment while on the job, etc.).
- M. EES reserves the right to refuse projects deemed risky or dangerous due to site conditions or weather or where access or mobility is questionable. We will attempt questionable access only at the request and responsibility of the Customer.
- N. The pricing in this proposal is contingent upon the methods currently allowed by regulations and must meet with the approval of EES's Geotechnical Department.
- O. In the event that additional services are requested by either the Customer or Regulators which are above and beyond the original scope of work, these services will be billed to the Customer on a time and materials basis pending the Customer's prior approval.