Ultramar

ENVIRONMENTAL PROTECTION

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July 24, 1997

STID 1497

Ms. Amy Leach
Hazardous Materials Program
Department of Environmental Health
Alameda County Health Care Services
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

SUBJECT: BEACON STATION NO. 721, 44 LEWELLING BLVD., SAN LORENZO, CALIFORNIA

Dear Ms. Leach:

Enclosed is a copy of the ***Work Plan for Soil Sample Collection*** for the above-referenced Ultramar facility. This work is proposed to obtain confirmation soil samples to evaluate the effectiveness of the remediation system and to acquire data to be used in the preparation of a Risk Based Corrective Action (RBCA). The RBCA will be used to evaluate whether site closure is warranted.

Please call if you have any questions regarding this project.

Sincerely,

ULTRAMAR INC.

Terrence A. Fox

Terrence A. Fox
Senior Project Manager
Marketing Environmental Department

Enclosures

cc w/encl: Mr. Steve Morse, San Francisco Bay Region, RWQCB

Delta
Environmental
Consultants, Inc.

3164 Gold Camp Drive
Suite 200
Rancho Cordova, CA 95670
916/638-2085
FAX: 916/638-8385

July 22, 1997

Mr. Terrence A. Fox
Ultramar, Inc.
525 West Third Street
Hanford, California 93230

Subject: *Work Plan for Soil Sample Collection*
Beacon Station No. 721
44 Lewelling Boulevard
San Lorenzo, California
Delta Project No. D093-936

Dear Mr. Fox:

Delta Environmental Consultants, Inc. (Delta), has been authorized by Ultramar, Inc. (Ultramar), to assess current soil conditions at Beacon Station No. 721 located at 44 Lewelling Boulevard, San Lorenzo, California (Figure 1).

Purpose

Collect soil samples in the vicinity of the former underground storage tanks to assess current soil conditions for risk based corrective action analysis.

Proposed Scope of Work

The proposed work includes collecting soil samples at three locations shown on Figure 2. The soil samples will be collected using a direct push technology. Ground water is expected to be encountered at approximately 15 feet below surface grade (bsg) therefore soil samples from 10 feet bsg and in the capillary fringe will be preserved for analysis. The preserved soil samples will be submitted for laboratory analysis of benzene, toluene, ethylbenzene, and total xylenes using EPA Method 8020, and total petroleum hydrocarbons as gasoline using EPA Method 8015 Modified. The remaining soils recovered will be retained by Delta for future soil property analysis. The locations are base on the historical data presented in Table 1.

The sampling points will be backfilled with neat cement consisting of one sack of Portland cement to five gallons of clean water. The surfaces will be finished with concrete colored to match the surrounding paving. A results report will be generated including boring logs of the borings. The proposed work will be conducted according to the Delta's standard field methods described in Enclosure A.

Permit

A drilling permit application will be submitted to the Alameda County Public Works Agency after approval of this work plan. After receiving the permit, work will proceed.

Remarks/Signatures

The interpretations contained in this document represent our professional opinions, and are based in part, on information supplied by the client. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeological and engineering practices at this time and location. Other than this, no warranty is implied or intended.

Delta recommends that a copy of this document be forwarded to:

Mr. Steven Ritchie
California Regional Water Quality Control Board,
San Francisco Bay Region
2101 Webster Street
Oakland, California 94612

Ms. Amy Leech
Alameda County Environmental Health Dept.
470 27th Street, Room 322
Oakland, California 94612

If you have any questions regarding this document, please contact Keoni Almeida at (916) 638-2085.

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

Charles Keoni Almeida
Project Manager

Owen M. Kittredge, R.G.
California Registered Geologist No. 5853

OMK (LRP009.936)
Enclosures

TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS

Beacon Station No 721
44 Lewelling Boulevard
San Lorenzo, California

Sample ID	Date	Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	TPH as gasoline (mg/kg)
S-1	04/28/87	14	12	2	14	63	329
S-2	04/28/87	14	22	136	26	179	663
S-4	04/28/87	14	16	8	19	116	1,136
S-5	04/28/87	14	<0.05	<0.05	<0.05	<0.05	510
S-6	04/28/87	14	0.41	0.08	0.21	0.31	1.64
S-17-NW	04/30/87	17	1.37	1.06	0.4	1.18	6.98
MW-1	05/28/87	20	NA	NA	NA	NA	904
MW-2	05/28/87	20	NA	NA	NA	NA	0.62
MW-3	05/28/87	15	NA	NA	NA	NA	101.39
MW-3	05/28/87	20	NA	NA	NA	NA	9.4
MW-4	12/01/88	11.5	<0.09	<0.2	<0.2	<0.7	<0.5
MW-5	12/01/88	11.5	<0.09	<0.1	<0.2	<0.7	<0.5
MW-6	12/01/88	11.5	<0.09	<0.1	<0.2	<0.7	<0.5
MW-7	12/01/88	11.5	<0.09	<0.1	<0.2	<0.7	<0.5
B-1	12/02/88	11.5	<0.09	<0.1	<0.2	<0.7	<0.5
B-1	12/02/88	16	<2.0	<3.0	7.8	39	250
MW-8C	09/05/89	15	<0.01	<0.02	<0.02	<0.06	<0.5
MW-9C	09/05/89	15	<0.01	<0.04	<0.02	<0.06	<0.5
RW-10	10/17/91	10	0.009	0.025	0.018	0.11	1.5
RW-15	10/17/91	15	7.9	29	28	160	1,900
MW-10	10/17/91	6	<0.005	<0.005	<0.005	<0.005	<1.0
MW-10	10/17/91	11	<0.005	<0.005	<0.005	<0.005	<1.0
MW-10	10/17/91	16	<0.005	<0.005	<0.005	<0.005	<1.0
MW-11	10/17/91	6	<0.005	<0.005	<0.005	<0.005	<1.0
MW-11	10/17/91	11	<0.005	<0.005	<0.005	<0.005	<1.0
MW-11	10/17/91	16	<0.005	<0.005	<0.005	<0.005	<1.0
AS-1-10	10/10/95	10	<0.005	<0.005	<0.005	<0.005	<1.0
AS-1-15	10/10/95	10	<0.005	<0.005	<0.005	<0.005	<1.0
AS-1-20	10/10/95	10	<0.005	<0.005	<0.005	<0.005	<1.0
AS-2-10	10/10/95	10	<0.005	<0.005	<0.005	<0.005	<1.0
AS-2-15	10/10/95	15	1.2	12	14	81	<1.0
AS-2-20	10/10/95	10	2.6	3.5	0.4	2.6	21
AS-3-10	10/10/95	10	<0.005	<0.005	<0.005	<0.005	<1.0
AS-3-15	10/10/95	15	<0.005	<0.005	<0.005	0.023	<1.0
AS-3-20	10/10/95	10	0.47	0.38	0.74	4.5	26

TPH = Total petroluem hydrocarbons.
mg/kg = Milligrams per kilograms.
NA = Not analyzed.

R.2 W.

GENERAL NOTES:

BASE MAP FROM U.S.G.S.
HAYWARD, CA.
7.5 MINUTE TOPOGRAPHIC
PHOTOREVISED 1980

North

QUADRANGLE LOCATION

0 2000 FT

SCALE 1 : 24,000

FIGURE 1
SITE LOCATION MAP
BEACON STATION NO. 721
44 LEWELLING BOULEVARD
SAN LORENZO, CA.

PROJECT NO. 40-93-936	DRAWN BY LH. 11/2/92
FILE NO. ——	PREPARED BY TMG
REVISION NO. 1	REVIEWED BY [signature] 11/19/92

Delta Environmental Consultants, Inc.

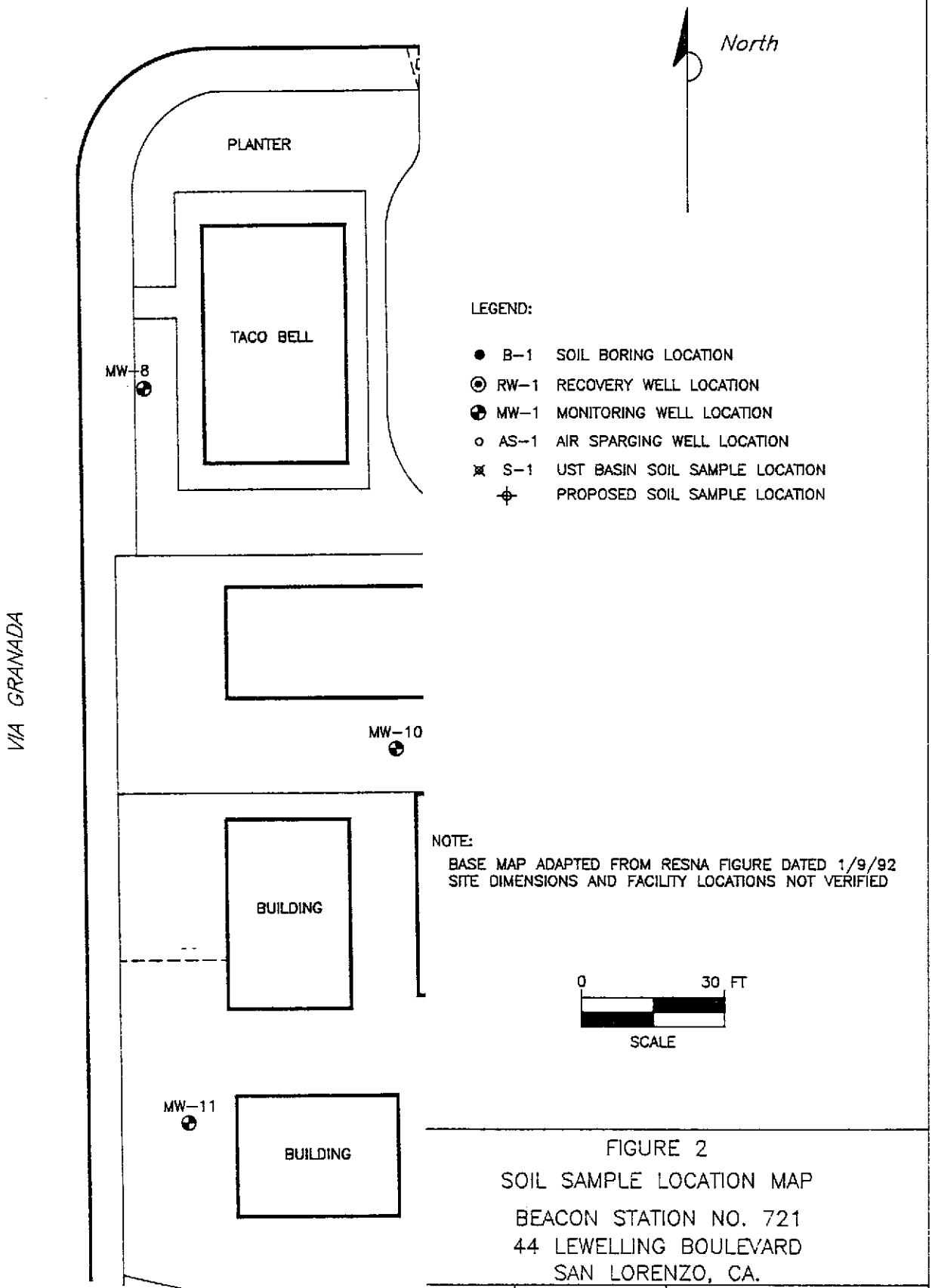

FIGURE 2
SOIL SAMPLE LOCATION MAP
BEACON STATION NO. 721
44 LEWELLING BOULEVARD
SAN LORENZO, CA.

JECT NO. 193-936	DRAWN BY M.L. 7/9/97
NO. 5-936-1	PREPARED BY OMK
SION NO. 2	REVIEWED BY CLA

Delta Environmental Consultants, Inc.

PRE-FIELD WORK ACTIVITIES

Health and Safety Plan

Field work performed by Delta and Delta's subcontractors at the site is conducted according to guidelines established in a Site Health and Safety Plan (SHSP). The SHSP is a document which describes the hazards that may be encountered in the field and specifies protective equipment, work procedures, and emergency information. A copy of the SHSP is at the site and available for reference by appropriate parties during work at the site.

Locating Underground Utilities

Prior to commencement of any work that is to be below surface grade, the location of the excavation, boring, etc., is marked with white paint as required by law. An underground locating service such as Underground Service Alert (USA) is contacted. The locating company contacts the owners of the various utilities in the vicinity of the site to mark the locations of their underground utilities. Any invasive work is preceded by hand augering to a minimum depth of five feet below surface grade to avoid contact with underground utilities.

FIELD METHODS AND PROCEDURES

Direct Push Technology, Water Sampling

A well known example of direct push technology for water sampling is the Hydropunch®. For the purpose of this field method the term hydropunch will be used instead of direct push technology for water sampling.

The hydropunch is typically used with a drill rig. A boring is drilled with a hollow stem-augers to just above the sampling zone. In some soil conditions the drill rig can push directly from the surface to the sampling interval. The hydropunch is conveyed to the bottom of the boring using drill rods. Once on bottom the hydropunch is driven a maximum of five feet. The tool is then opened by lifting up the drill rod no more than four feet. Once the tool is opened, water enters and a sample can be collected with a bailer or tubing utilizing a peristaltic pump. Soil particles larger than silt are prevented from entering the tool by a screen within the tool. The water sample is collected, labeled, and handled according to the Quality Assurance Plan.

Direct Push Technology, Soil Sampling

A well known example of direct push technology for soil sampling is the Geoprobe®. For the purpose of this field method, the term geoprobe will be used instead of direct push technology for water sampling. The geoprobe is typically used without a drill rig. The geoprobe typically consists of a sample barrel and drive casing. When a soil sample is to be collected for laboratory analysis cleaned brass or stainless steel tubes of varying diameters and lengths (typically one by six inches) are used as the sample barrel. The sample barrel and drive casing are simultaneously pushed, pounded or vibrated three to five feet into the soil. The sample barrel containing the soil is removed and new or cleaned sample barrel is then lowered to the bottom of the boring. The process is repeated until the desired depth is reached. The soil samples are labeled and handled according to the Quality Assurance Plan. If ground water is encountered, a water sample can be collected with a bailer or tubing utilizing a peristaltic pump. The soil sample is collected, labeled, and handled according to the Quality Assurance Plan. A geologist from Delta Environmental Consultants, Inc. continuously logs (if required) each borehole using the Soil Classification method section during advancement and constantly checks soil samples for indications of first recognizable occurrence of ground water. A portion of the sample may be screened in the field, when required according to the Soil Sample Screening method section.

Soil Classification

As the samples are obtained in the field, they are classified by the field geologist in accordance with the Unified Soil Classification System. Representative portions of the samples are then retained for further examination and for verification of the field classification. Logs of the borings indicating the depth and identification of the various strata, the N value, and pertinent information regarding the method of maintaining and advancing the borehole are prepared.

Soil Sample Screening

After the soil samples in Ziploc® type bags have been brought to ambient temperature, the headspace vapors in the bag are screened with a photoionization detector equipped with a 10.2 eV lamp. The corner of the bag is opened and the detector probe immediately placed within the headspace. The highest observed reading is recorded.

Soil Cuttings From Drilling Operations

Soil generated during drilling operations will be stockpiled on-site. The stockpile is typically set on asphalt and covered by plastic sheeting in a manner to prevent rain water from coming in contact with the soil. If no asphalt is available the soil is placed on plastic sheeting and covered in the above method. The soil will remain on-site until the proper method for disposal is assessed.

QUALITY ASSURANCE PLAN

General Sample Collection and Handling Procedures

Proper collection and handling are essential to ensure the quality of a sample. Each sample is collected in a suitable container, preserved correctly for the intended analysis, and stored prior to analysis for no longer than the maximum allowable holding time. Details on the procedures for collection and handling of samples used on this project can be found in this section.

Soil and Water Sample Labeling and Preservation

Label information includes a unique sample identification number, job identification number, date, and time. After labeling all soil and water samples are placed in a Ziploc® type bag and placed in an ice chest cooled to approximately 4° Celsius. Upon arriving at Delta's office the samples are transferred to a locked refrigerator cooled to approximately 4° Celsius. Chemical preservation is controlled by the required analysis and is noted on the chain-of-custody form.

Upon recovery, the sample container is sealed to minimize the potential of volatilization and cross-contamination prior to chemical analysis. Soil sampling tubes are typically closed at each end with Teflon® sheeting and plastic caps. The sample is then placed in a Ziploc® type bag and sealed. The sample is labeled and refrigerated at approximately 4° Celsius for delivery, under strict chain-of-custody, to the analytical laboratory.

Sample Identification and Chain-of-Custody Procedures

Sample identification and chain-of-custody procedures document sample possession from the time of collection to ultimate disposal. Each sample container submitted for analysis has a label affixed to identify the job number, sampler, date and time of sample collection, and a sample number unique to that sample. This information, in addition to a description of the sample, field measurements made,

sampling methodology, names of on-site personnel, and any other pertinent field observations, is recorded on the borehole log or in the field records. The samples are analyzed by a California-certified laboratory.

A chain-of-custody form is used to record possession of the sample from time of collection to its arrival at the laboratory. When the samples are shipped, the person in custody of them relinquishes the samples by signing the chain-of-custody form and noting the time. The sample-control officer at the laboratory verifies sample integrity and confirms that the samples are collected in the proper containers, preserved correctly, and contain adequate volumes for analysis.

If these conditions are met, each sample is assigned a unique log number for identification throughout analysis and reporting. The log number is recorded on the chain-of-custody form and in the legally-required log book maintained by the laboratory in the laboratory. The sample description, date received, client's name, and other relevant information is also recorded.