INTERNATIONAL TECHNOLOGY CORPORATION

TRANSMITTAL LETTER

94 JAN 10 PM 3:04 ALCO HAZMAT

DATE 1-6-93

CLIENT ORDER NO.

PROJECT NO. 151933

TO SCOTT SEERY
Alameda County

FROM MIKE MILLER
IT CORPORATION

RE: PACIFIC BELL FACILITY : 2610 Northbridge Ave Castro Valley

ENCLOSED PLEASE FIND (1) REVISED WORK PLAN

YOUR COMMENTS PER YOUR NOV. 18, '93 LTR
ARE ADDRESSED AS FOLLOWS :

#1 - Page 3, 2nd ¶
2 - " , Last 2 ¶
3 - " "
4 - Page 4, 2nd ¶, 3rd ¶
5 - " , Table, 4th ¶
6 - Page 3, 3rd ¶
7 - Page 5, 1st ¶
8 - Page 4, 4th ¶
9 - ATTACHED

Call if any Q's.

SIGNED Michael D. Miller

Approved
1/21/94
SDS

INTERNATIONAL TECHNOLOGY CORPORATION

January 3, 1994

IT Project No. 151933

Mr. Scott Seery
Alameda County Health Agency
Division of Hazardous Materials
Department of Environmental Health
80 Swan Way, Rm. 350
Oakland, California 94621

SUBJECT: Transmittal of Revised Work Plan for Subsurface Characterization Pacific Bell Facility 2610 Norbridge Avenue Castro Valley, California

Dear Mr. Seery:

On behalf of Pacific Bell, IT Corporation is forwarding this revised work plan for additional characterization at the above-referenced Pacific Bell Facility. This workplan has been revised as you requested in your letter of November 18, 1993. As we discussed, the purpose of the subsurface investigation is to provide information to further characterize the horizontal distribution of hydrocarbon-impacted groundwater at the site. If you have any questions or comments, please contact the undersigned at (408) 894-1200.

Respectfully submitted,
IT CORPORATION

Michael D. Miller
Senior Project Geologist

cc: Ms. Irene Soto, Pacific Bell

REVISED

SUBSURFACE INVESTIGATION WORK PLAN

Pacific Bell Facility
2610 Norbridge Avenue
Castro Valley, California

Prepared For:

Pacific Bell
2600 Camino Ramon, 3E 400 I
San Ramon, California 94583

Prepared by:

IT CORPORATION
2055 Junction Avenue
San Jose, California 95131

Project Number 151933.02

August 1993

Frank Horath

Frank Horath
Senior Project Geologist

Matthew J. Hopwood
Area Manager

Cleet F. Carlton
California Registered Geologist No. 5152

REGISTERED GEOLOGIST
CLEET FRANCIS CARLTON
No. 5152
Exp. 6/30/94
STATE OF CALIFORNIA

REVISED
WORK PLAN FOR SUBSURFACE INVESTIGATION
Pacific Bell Facility
2610 Norbridge Avenue
Castro Valley, California

1.0 INTRODUCTION

This work plan has been prepared by IT Corporation (IT) to present the scope of work to characterize hydrocarbon-impacted groundwater at the Pacific Bell maintenance facility located at 2610 Norbridge Avenue in Castro Valley, California (Figure 1). The site plan and proposed monitoring well locations are presented in Figure 2.

During the recent underground storage tank (UST) removal, petroleum hydrocarbons were detected in soil within and immediately adjacent to the tank pit, and in standing water within the pit. IT proposes to install four groundwater monitoring wells to assess the groundwater quality and gradient at the site.

2.0 INVESTIGATION BACKGROUND

On May 4, 1993, a 10,000-gallon fiberglass unleaded gasoline underground storage tank (UST) was removed by Balch Petroleum of Milpitas, California, under the supervision of IT Corporation (IT). Following excavation, and prior to removal, the UST was emptied of product using a vacuum truck. The tank was visually inspected and no holes or areas of high corrosion were observed. On May 5, 1993, standing water in the tank pit bottom was pumped from the open excavation via vacuum truck by Petroleum Recycling Corporation (PRC). Following pumping, a new double wall steel tank was installed, and the excavation was backfilled with clean pea gravel fill.

A groundwater grab sample GRABWATER-1 was collected from standing water 8 to 9 feet below ground surface (bgs) within the excavation following the tank removal. This sample contained 7,900 parts per billion (ppb) total petroleum hydrocarbons as gasoline (TPH-G) and constituents benzene, toluene, ethylbenzene, and total xylenes (BTEX) concentrations up to 110 ppb ethylbenzene and total xylenes.

IT collected and analyzed three soil samples (SOIL-1 through SOIL-3, Figure 2) from the original excavation sidewalls, approximately 6 feet below ground surface (bgs). TPH-G and BTEX were not detected within the northern (SOIL-1) and northeastern (SOIL-2) excavation corners. The southern sidewall sample (SOIL-3) contained 12 parts per million (ppm) TPH-G.

Due to the presence of detectable hydrocarbons in soil sample SOIL-3, IT over-excavated and extended the excavation approximately 10 feet in the southern direction. IT then collected three

soil samples (SOIL-4 through SOIL-6) from the excavation sidewalls. SOIL-4 within the southwest corner of the excavation contained 430 ppm TPH-G at 6 feet bgs. TPH-G and BTEX were not detected in SOIL-5 and SOIL-6.

IT extended an exploratory trench, approximately 12 feet southwest of the southwestern corner of the excavation, to define the non-detect boundary of the soil plume. Soil sample SOIL-7 was collected from 6 feet bgs and did not contain detectable TPH-G and BTEX. The absence of detectable hydrocarbons at location SOIL-7 defined the southwest boundary of hydrocarbon impacted soil.

A second round of over-excavation was initiated to remove hydrocarbon impacted soil adjacent to the southwest corner of the excavation. This over-excavated area is shown in the attached Figure 2. Three verification samples (SOIL-8, SOIL-9, and SOIL-10) were collected from this over-excavated area. Detectable TPH-G or BTEX were not found in soil sample SOIL-10. Soil sample SOIL-8, collected just above the groundwater interface (7.5 feet bgs), contained 31 ppm TPH-G. BTEX concentrations up to 0.35 ppm ethyl benzene (SOIL-8) were found in soil samples SOIL-8 and SOIL-9.

3.0 OBJECTIVES AND WORK SCOPE

IT will drill four soil borings and install groundwater monitoring wells in each boring during this investigation. The objective is to characterize the horizontal distribution of hydrocarbon-impacted groundwater at the site. The scope of work has been divided into three tasks each with several work items as follows:

Task 1. Permitting, Work Plan, Health and Safety Plan;
Task 2. Monitoring Well Installation;
Task 3. Monitoring Well Installation Report.

Task 1: Permitting and Work Plan

The following sub-tasks will be undertaken prior to initiation of field activities:

1. Obtain groundwater monitoring well permits from the Zone 7 Water Agency;
2. Complete the investigation work plan and submit it to the Alameda County Health Department for review;
3. Complete the site Health And Safety Plan (HASP).

Task 2: Monitoring Well Installation

IT will locate subsurface utilities by notifying Underground Service Alert (USA) at least five days prior to drilling and retaining a private utility locator to locate underground utilities and potential interferences before drilling.

Four soil borings will be drilled at the site and groundwater monitoring wells will be installed (Figure 2). One well will be located upgradient and two in the anticipated downgradient groundwater direction relative to the tank pit. The fourth well will be drilled in the over-excavated area immediately downgradient of the tank pit for groundwater monitoring and extraction, if necessary. The borings will be drilled using a truck-mounted drill rig equipped with eight-inch and ten-inch diameter hollow-stem augers. The borings will be advanced to approximately 18 feet below ground surface. Groundwater was previously encountered at the site at approximately 8 feet BGS.

During drilling, soil samples will be collected using a modified California split-spoon sampler lined with 6x2-inch stainless steel sample tubes for observation of the soil lithology, field measurement of volatile organic compounds with a field screening meter, and laboratory analysis. Soil samples will be collected from each boring at 2.5-foot intervals or greater based on field conditions. In general, soil samples collected from the vadose zone (5 feet BGS) and saturated/unsaturated zone (7.5 feet BGS) will be submitted to the laboratory for analysis. Laboratory analysis will be performed by a State-certified laboratory and will include TPH-G and BTEX by EPA Methods 8015 (modified) and 8020.

Legible, water-proof labels will be affixed to each sample container. Soil sample labels will include: sample identification number; boring number; collection depth; project number; date and time of collection; and sampler's name. The samples will be recorded on a properly completed IT chain-of-custody form. A copy of this form will remain with the samples while at the laboratory. The laboratory attendant receiving the sample delivery will sign the chain of custody form, documenting receipt of the samples as of a certain date and time. The laboratory will keep a separate log that tracks the samples. These procedures will be applied to both soil and water samples. Drill cuttings generated from the investigation will be stored on a roll-out bin and covered by plastic, pending laboratory analysis to determine disposal options. Procedures for drilling, logging, and soil sampling will be in accordance with regulatory guidelines and IT technical procedures.

Three of the monitoring wells will be constructed of two-inch diameter, schedule 40 poly vinyl chloride (PVC) casing. The well placed in the over-excavated area immediately downgradient of the tank pit will be constructed of four-inch diameter schedule 40 PVC casing. The upper portion of the wells will consist of solid, blank casing and the lower portion of the wells will be screened across the stabilized water level. The top of the screened interval will be placed several feet above this level to allow for seasonal water level variations. The annular space around the screened interval will be backfilled with a sand filter pack.

Excavation of soil during the tank removal provided identification of the depth of the water table and a definition of the stratigraphy so that the well screen may be placed at the appropriate interval (approximately 6 to 16 feet BGS) and constructed properly (.020-inch slot and #3 Lonestar sand). The sand filter pack will be capped with a six-inch layer of hydrated granular bentonite. Neat portland cement grout will be placed in the annulus above the bentonite seal to

about 0.5 feet BGS. A locking cap will be placed atop the well, and a secured surface enclosure will be set in concrete flush with the site ground surface.

The wells will be developed approximately 72 hours after completion. The wells will be developed by surge and bail methods designed to remove fine-grained materials from the monitoring wells and to increase the hydraulic communication between the formation and the well. It is estimated that the well will be sufficiently developed by removing between five and ten well volumes of water. The removed water will be stored on-site in 55-gallon (DOT-17E) drums until analyses are completed. The water will be properly disposed as determined by the analytical results.

The wells will be purged and sampled approximately 72 hours after development. The wells will be considered purged only after measurements of temperature, conductivity and pH of the evacuated water stabilize, and when the water is relatively free of suspended material. These field parameters will be recorded on a data sheet and included in the report appendices. The maximum differentials, which will be taken as an indication of stabilization of the water being purged between 3 consecutive readings, are as follows:

PARAMETER	**MAXIMUM VARIATION FOR STABILIZATION**
Electrical Conductivity, EC	10% of the instrument scale unit.
Temperature °F	1°
Ph	0.1 unit
Water clarity	Water is clear or color stable

Water level measurements will be made using a Solinst brand water level indicator. Each well will be checked for the presence of free product utilizing an interface probe or a clear acrylic bailer designed for free product measurements. The thickness of any free product layer will be recorded. Water level data will be recorded on field logs.

Each well will be purged of at least three well volumes of groundwater utilizing a decontaminated bailer or pump (depending on volume of water to be removed). In addition the parameters of temperature, conductivity, pH, and water clarity will be measured and recorded on a field sheet. The well will be sampled only after these parameters have stabilized to within the same limits as for well development (see above). The water sample will be collected after the water returns to 80 percent of its initial level. Wells in which free product has been identified will not be purged or sampled for dissolved hydrocarbons.

Groundwater will be sampled using a new Voss Technologies disposable bailer. The water samples will be placed into appropriate containers supplied by the laboratory (40-ml VOA vials with preservatives). No headspace will be allowed present in sample bottles which will be

analyzed for volatile organic compounds. After sample collection, the bottles will be placed in "ziploc" bags. The samples will be stored in a chilled ice chest until delivery to the laboratory. The chain of custody form will be completed as the wells are sampled and will accompany the samples. In addition to these samples, a quality assurance duplicate sample will be collected from one of the wells and submitted "blind" to the laboratory for analysis to evaluate the repeatability of the steps in the sampling and analysis program.

All water samples will be analyzed by a California state certified analytical laboratory for TPH-G/BTEX. The samples will be analyzed utilizing the containers, methods, and detection limits shown below:

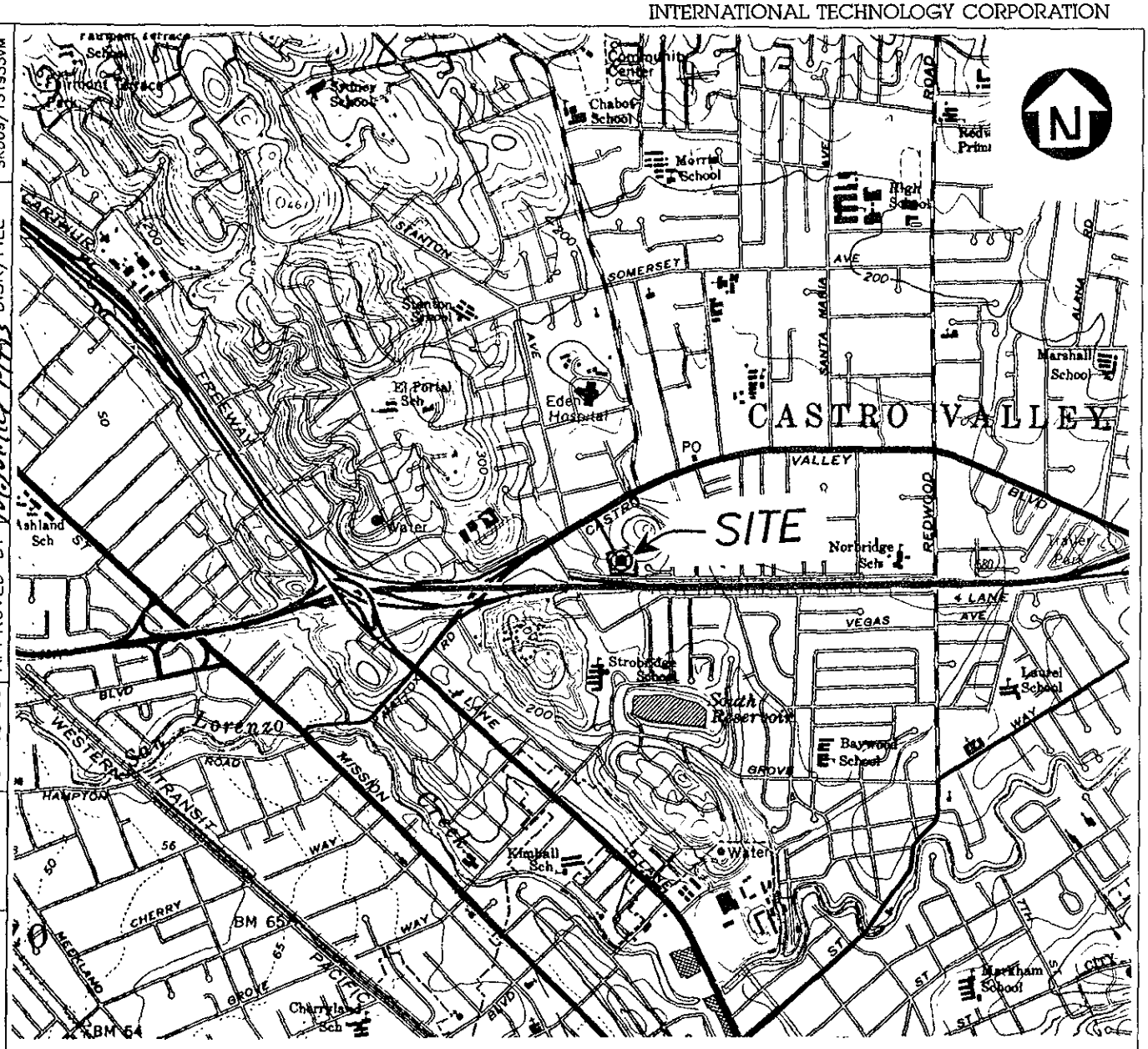
ANALYSIS NAME	SAMPLE CONTAINER	METHOD	DETECTION LIMIT (ppb)
TPH-G/BTEX	Three 40ml volatile organic vials with HCl	Modified EPA Method 8015 (Gasoline)/8020 in Series	50.0 (Gasoline) 0.5 (BTEX)

Monitoring wells will be surveyed with respect to an established benchmark to mean sea level for groundwater gradient determination. Elevations will be measured to the nearest 0.01 foot.

Task 3: Monitoring Well Installation Report

Upon completion of Task 2, a report presenting the results of the well installation will be submitted to the applicable regulatory agencies. The report will present: site plan, groundwater elevation contours, TPH-G and BTEX concentrations in groundwater, laboratory results, boring logs, and well construction data.

DRAWN BY	J.M.	QA/QC BY	APPROVED BY	DISK/FILE	DRAWING NO.
	07-08-93	J. Hrach 7-19-93	M. Miller 7-19-93	SK009/151933VM	151933-VM



SCALE 1:24000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
DOTTED LINES REPRESENT 5-FOOT CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

QUADRANGLE LOCATION

Figure 1

VICINITY MAP

IT PROJECT No. 151933

PACIFIC BELL FACILITY
2610 NORBRIDGE AVENUE
CASTRO VALLEY, CALIFORNIA

PREPARED FOR

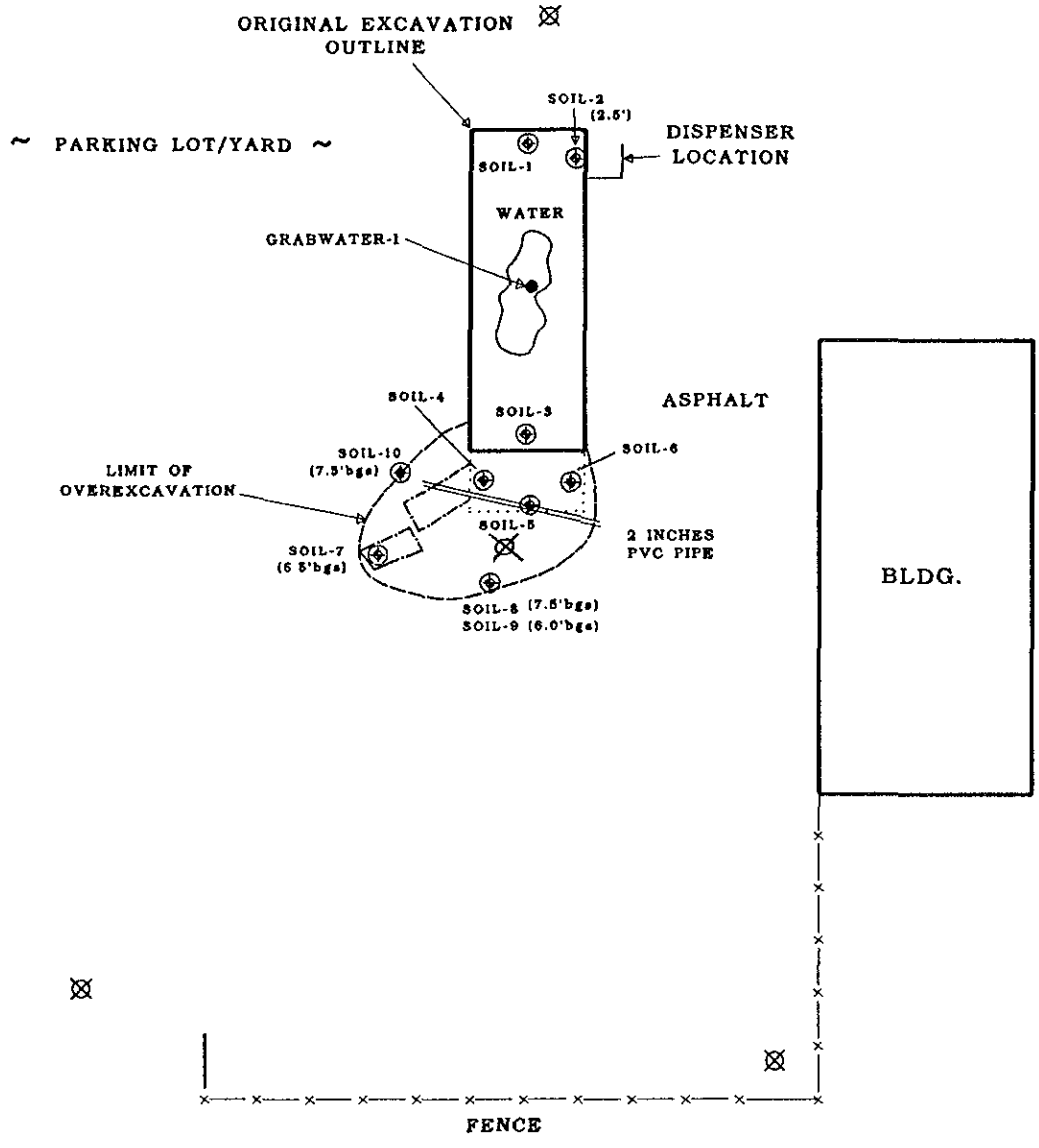
PACIFIC BELL
SAN JOSE, CALIFORNIA

REFERENCE

UNITED STATES DEPT. OF THE INTERIOR, GEOLOGICAL SURVEY
STATE OF CALIFORNIA, HAYWARD QUADRANGLE,
7 5 MINUTE SERIES (TOPOGRAPHIC).

INTERNATIONAL TECHNOLOGY CORPORATION

DRAWN BY	JM	QA/QC BY		DRAWING NO	151933-SP
	06-30-93	APPROVED BY		FILE/DISK	51933/GCD04



NORBRIDGE AVENUE

APPROX SCALE

0 20 40 FEET

LEGEND

- PROPOSED WELL LOCATIONS
- SOIL-1 SOIL SAMPLE (6' bgs, EXCEPT WHERE NOTED)
- ..... FIRST OVEREXCAVATION
- —·—·— EXPLORATORY TRENCH
- ——— SECOND OVEREXCAVATION

Figure 2

SITE PLAN

IT PROJECT NO. 151933

PACIFIC BELL FACILITY
2610 NORBRIDGE AVENUE
CASTRO VALLEY, CALIFORNIA

PREPARED FOR

PACIFIC BELL
SAN JOSE, CALIFORNIA

INTERNATIONAL TECHNOLOGY CORPORATION