RO 358

ExxonMobil
Refining & Supply Company
Global Remediation

25A Crescent Drive, #407
Pleasant Hill, California 95423
(925) 246-8747 Telephone
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Gene N. Ortega
Project Manager
Global Remediation – US Retail

ExxonMobil
Refining & Supply

April 26, 2004

Mr. Don Hwang
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Room 250
Alameda, California 94502-6577

RE: Former Exxon RAS #7-0235/2225 Telegraph Avenue, Oakland California.

Dear Mr. Hwang:

Attached for your review and comment is a letter report entitled ***Addendum and Response to Agency Comments and Addendum to Preferential Pathway Study and Work Plan for Off-Site Delineation,*** dated April 26, 2004, for the above-referenced site. The report was prepared by Environmental Resolutions, Inc. (ERI) of Novato, California, and details groundwater monitoring and sampling activities at the subject site.

If you have any questions or comments, please contact me at (925) 246-8747.

Sincerely,

Gene N. Ortega
Project Manager

Attachment: ERI's Groundwater Monitoring Report, First Quarter 2004, dated April 12, 2004.

cc: w/ attachment
Mr. Chuck Headlee, California Regional Water Quality Control Board, San Francisco Bay Region
Mr. Joseph A. Aldridge, Valero Energy Corporation

w/o attachment
Mr. Robert A. Saur, Environmental Resolutions, Inc.

ENVIRONMENTAL RESOLUTIONS, INC.

April 26, 2004
ERI 222914.W04

Mr. Gene N. Ortega
ExxonMobil Refining & Supply - Global Remediation
25A Crescent Drive, #407
Pleasant Hill, California 94523

Subject: Addendum to *Response to Agency Comments and Addendum to Preferential Pathway Study and Work Plan for Off-Site Delineation*, Former Exxon Service Station 7-0235, 2225 Telegraph Avenue, Oakland, California.

Mr. Ortega:

At the request of ExxonMobil Oil Corporation (ExxonMobil), Environmental Resolutions, Inc. (ERI) has prepared this Addendum to the *Response to Comments and Addendum to the Preferential Pathway Study and Work Plan for Off-Site Delineation* (Work Plan Addendum) dated December 8, 2003, in response to a letter from the Alameda County Health Care Services Agency (the County) dated March 15, 2004 (Attachment A).

BACKGROUND

The site is located on the southwestern corner of Telegraph Avenue and West Grand Avenue in Oakland, California, as shown on the Site Vicinity Map (Plate 1). The locations of existing underground storage tanks (USTs), dispenser islands, and other select site features are shown on the Generalized Site Plan (Plate 2).

RESPONSE TO AGENCY COMMENTS AND ADDENDUM TO WORK PLAN FOR OFF-SITE DELINEATION

In the March 15, 2004 letter, the County requested the following specific information. The County's requests are paraphrased in bold text, and ERI's responses follow.

Proposed Locations off-site soil borings (B5 through B7): The proposed locations for B5 and B6 are acceptable. The proposed location of B7 appears to be where GP2 was collected when 100 ug/l of total petroleum hydrocarbons as gasoline (TPHg) was detected at 12 feet. Therefore, a different location ought to be selected. We request that depth discrete grab groundwater sampling be used. Please propose additional grab groundwater sampling locations to determine optimal well locations.

The location of proposed soil boring B7 has been relocated approximately 30 feet southeast (downgradient) of the original proposed location. In addition, ERI proposes to advance an additional soil boring (B8), approximately 50 feet southeast of the new proposed location of soil boring B7. The

locations of the proposed borings are shown on Plate 2. Groundwater samples collected from the borings will be collected with a discrete groundwater sampling device.

Depth of Borings-The proposed boring depths are to just below first-encountered groundwater. The collection of groundwater samples at that depth may miss petroleum product entrapped below the water table. Please propose drilling borings to depths below the water table, which will account for entrapped petroleum product.

Based on the characteristics of liquid phase hydrocarbons (LPH), it is unlikely that LPH will be entrapped below the lowest historical groundwater elevation. Therefore, ERI proposes to advance soil borings B5 through B8 to a maximum depth of 5 feet below the lowest historical groundwater elevation, or 20 feet below ground surface (bgs). Groundwater samples will be collected at first-encountered groundwater and at approximately 20 feet bgs with a discrete groundwater sampling device.

Soil Samples from Borings-Instead of collecting soil boring samples at 5 feet intervals as proposed, soil samples shall be collected at a minimum of every 5 feet, including at changes in lithology, at the soil/groundwater interface, and at areas of obvious contamination.

During the advancement of proposed borings B5 through B8, soil samples will be collected continuously to evaluate sediment composition.

Preferential Pathway Study-Geologic cross sections including underground utilities were provided. Based on the depths of the underground utilities versus historic highest and lowest groundwater levels, it was determined that groundwater does not intersect the utility trenches. Were the width of the utility lines and trench backfill taken into consideration?

The Preferential Pathway Study and geologic cross sections did take into account the width of the utility lines, when the information was available. Based on information obtained from the City of Oakland (the City), the sewer line is approximately 20-inch diameter and the storm drain lines on the west and east sides of Telegraph Avenue are approximately 24-inch diameter and 16-inch diameter, respectively. Based on information obtained from the East Bay Water, the water line has approximately a 12-inch diameter. Based on information obtained from Pacific Gas and Electric (PG&E), the width of the gas and electric lines were not available. In addition, the City, East Bay Water, and PG&E indicated that they do not have information on the trench backfill material of the underground utility lines. Because the utility trenches have not been submerged during the history of groundwater monitoring at the site, the utility trenches do not influence groundwater flow in the saturated zone, regardless of width. LPH has not been identified at the site therefore the trenches do not provide a preferential pathway for LPH, regardless of width.

DPE Interim Remediation-Please state why you want to evaluate other remedial alternatives after conducting a Dual-Phase Extraction (DPE) Pilot Test, which determined that DPE was effective at this site.

ERI concluded that DPE will be an effective remedial alternative at the subject site; however, DPE may not be the most cost-effective remedial alternative. Therefore, after assessment activities are complete, and the residual and dissolved hydrocarbons are delineated, ERI will prepare a Corrective Action

Plan (CAP). The CAP will compare and evaluate the effectiveness and cost effectiveness of DPE, air sparge/soil vapor extraction, vacuum-enhanced groundwater extraction (AS/SVE), and natural attenuation; and propose a corrective action that is both efficient and cost-effective. Natural attenuation may be the most efficient and cost-effective remedial alternative.

Historical Hydraulic Gradients-Please remember to include a rose diagram with magnitude and direction; include cumulative groundwater gradients in all future reports submitted for this site.

A rose diagram showing cumulative hydraulic gradients and flow directions is provided on Plate 3.

DOCUMENT DISTRIBUTION

ERI recommends this Work Plan Addendum be forwarded to the following:

Mr. Don Hwang
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Mr. Chuck Headlee
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

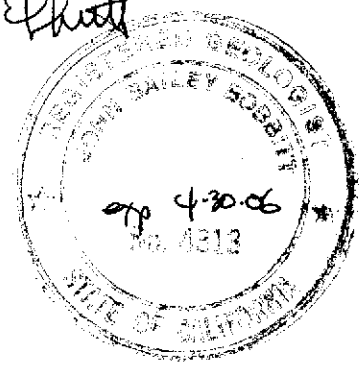
Mr. Joseph A. Aldridge
Valero Energy Corporation
685 West Third Street
Hanford, California 93230

Please contact Mr. Robert A Saur, ERI's project manager for this site, at (415) 382-9105 with any questions regarding this Addendum.

Sincerely,
Environmental Resolutions, Inc.

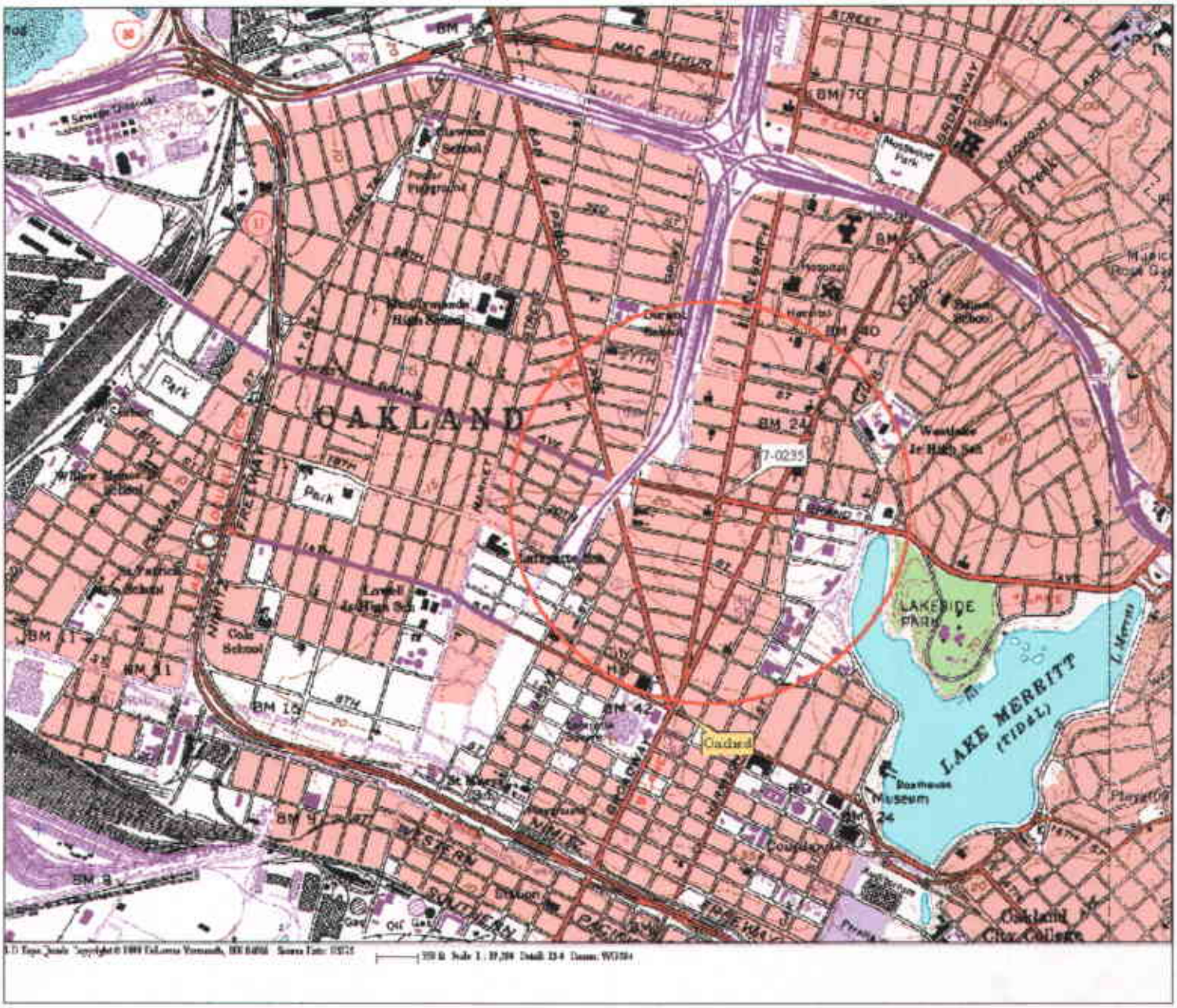
Robert A. Saur
Project Manager

John B. Bobbitt
R.G. 4313



Attachments:
Plate 1: Site Vicinity Map
Plate 2: Generalized Site Plan
Plate 3: Groundwater Flow Direction Rose Diagram

Attachment A: Regulatory Correspondence



FN 2229Topo

EXPLANATION

1/2-mile radius circle

N

APPROXIMATE SCALE

0 0.5 1 mile

SOURCE:
Modified from a map
provided by
DeLorme 3-D TopoQuads

ERI ENVIRONMENTAL RESOLUTIONS, INC.

SITE VICINITY MAP

FORMER EXXON SERVICE STATION 7-0235
2225 Telegraph Avenue
Oakland, California

PROJECT NO. 2229

PLATE 1

N

APPROXIMATE SCALE

0 40 80 Feet

FN 2229004a

ENVIRONMENTAL RESOLUTIONS, INC.

GENERALIZED SITE PLAN

FORMER
EXXON SERVICE STATION 7-0235
2225 Telegraph Avenue
Oakland, California

EXPLANATION

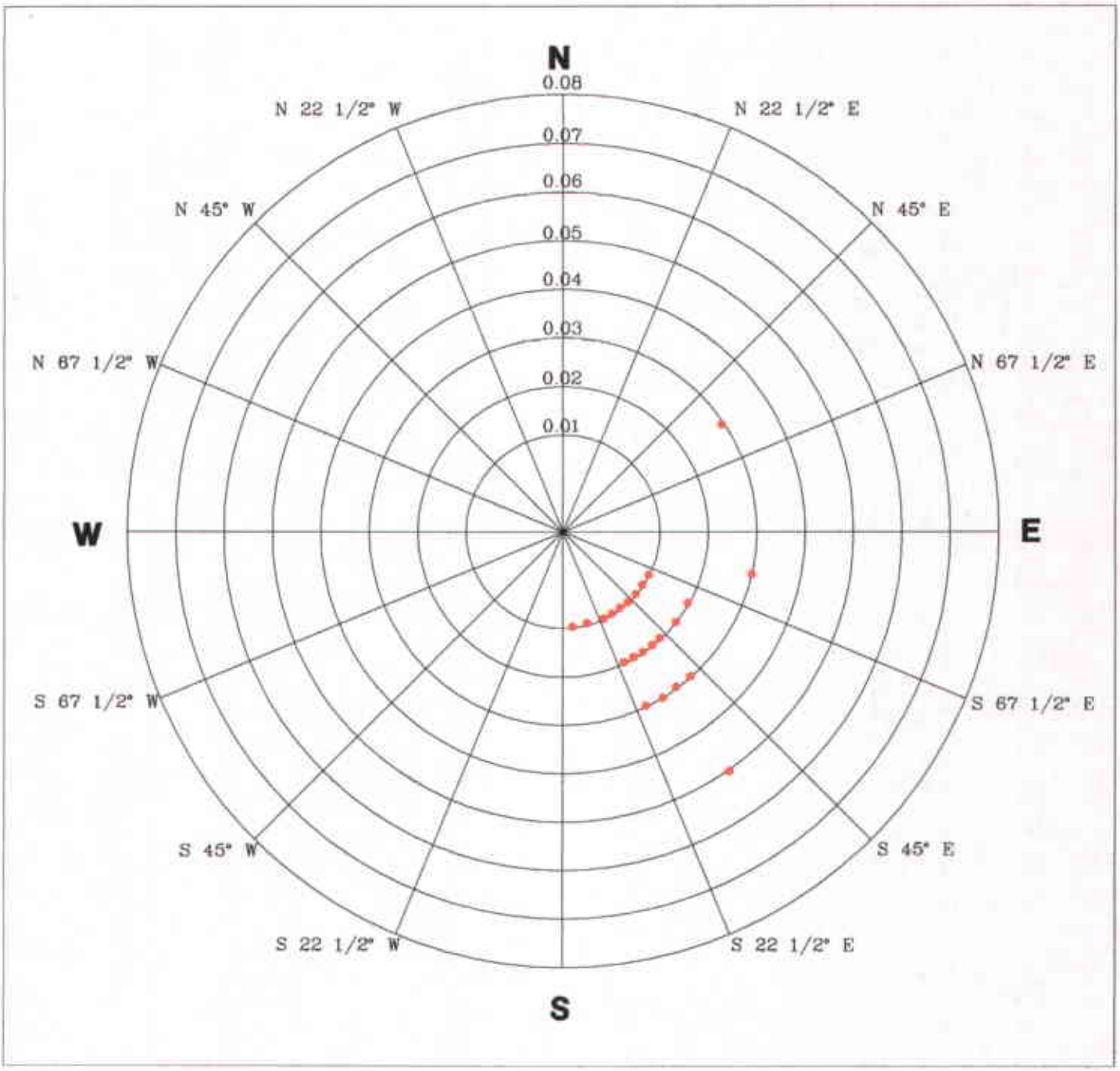
MW6J — Groundwater Monitoring Well

B8 — Proposed Soil Boring

RW3A — Recovery Groundwater Monitoring Well

PROJECT NO. 2229

PLATE 2



2559 ROSE3

EXPLANATION

N Compass Direction

23 Data Points Shown

Rose diagram developed by evaluating the groundwater gradient direction from the quarterly monitoring data. Each circle on the rose diagram represents the number of monitoring events that the gradient plotted in that 22 1/2 degree sector.

ERI ENVIRONMENTAL RESOLUTIONS, INC.

CUMMULATIVE GROUNDWATER FLOW DIRECTION ROSE DIAGRAM

FORMER EXXON SERVICE STATION 7-0235
2225 Telegraph Avenue
Oakland, California

PROJECT NO. 2229

PLATE 3

ATTACHMENT A

REGULATORY CORRESPONDENCE

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

222903X

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

March 15, 2004

Gene Ortega, Territory Manager Global Remediation – US Retail
ExxonMobil
Refining & Supply Co.
Global Remediation
2300 Clayton Rd., Suite 1250
Concord, CA 94520

Dear Mr. Ortega:

Subject: Fuel Leak Case No. RO0000358, Exxon #7-0235,
2225 Telegraph Ave., Oakland, CA

Alameda County Environmental Health staff reviewed "Response to Agency Comments and Addendum to Preferential Pathway Study and Work Plan" dated December 8, 2003, and Quarterly Groundwater Monitoring Report, 4th Quarter 2003" dated January 20, 2004, both prepared by Environmental Resolutions, Inc. We request that you address the following technical comments and send us the technical reports requested below.

TECHNICAL COMMENTS

1) Proposed Locations Off-site Soil Borings (B5 through B7): The proposed locations for B5 and B6 are acceptable. The proposed location of B7 appears to be where GP2 was collected when 100 ug/l Total Purgeable Petroleum Hydrocarbons as gasoline (TPPHg) was detected at 12 feet. Therefore, a different location ought to be selected. We request that depth discrete grab groundwater sampling be used. Please propose additional grab groundwater sampling locations to determine optimal well locations. Include your proposal in the Work Plan Addendum requested below.
2) Depth of Borings - The proposed borings depths are to just below first-encountered groundwater. The collection of groundwater samples at that depth may miss petroleum product entrapped below the water table. Please propose drilling borings to depths below the water table, which will account for entrapped petroleum product. Include in the Work Plan Addendum.
3) Soil Samples from Borings - Instead of collecting soil boring samples at 5 ft. intervals as proposed, soil samples shall be collected at a minimum of every 5 ft., including at changes of lithology, at the soil/groundwater interface, and at areas of obvious contamination. Please include in the Work Plan Addendum.

4) Preferential Pathway Study – Geologic cross sections including underground utilities were provided. Based on the depths of the underground utilities versus the historic highest and lowest groundwater levels, it was determined that groundwater does not intersect the utility trenches. Were the width of the utility lines and trench backfill taken into consideration?
5) DPE Interim Remediation - Please state why you want to evaluate other remedial alternatives after conducting a Dual-Phase Extraction (DPE) Pilot Test, which determined that DPE was effective at this site.
6) Historical Hydraulic Gradients – Please remember to include a rose diagram with magnitude and direction; include cumulative groundwater gradients in all future reports submitted for this site.

TECHNICAL REPORT REQUEST

Please submit the following technical reports to the Alameda County Environmental Health (Attention: Don Hwang), according to the following schedule:

April 30, 2004 - Work Plan Addendum
April 30, 2004 - Quarterly Groundwater Monitoring Report, 1st Quarter 2004
July 31, 2004 - Quarterly Groundwater Monitoring Report, 2nd Quarter 2004
October 31, 2004 - Quarterly Groundwater Monitoring Report, 3rd Quarter 2004
January 31, 2005 - Quarterly Groundwater Monitoring Report, 4th Quarter 2004

If you have any questions, you may call me at 510/567-6746.

Sincerely,

Don Hwang

Don Hwang
Hazardous Materials Specialist
Local Oversight Program

c: Robert Saur, Environmental Resolutions, Inc., 73 Digital Dr., Suite 100, Novato, CA 94949-5791
Donna Drogos
File