



Weiss Associates

5500 Shellmound Street, Emeryville, CA 94608-2411

Environmental and Geologic Services

Fax: 510-547-5043 Phone: 510-450-6000

ENVIRONMENTAL
PROTECTION
96 JUN 14 AM 8:26

May 14, 1996

Amy Leech
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

RE: Corrective Action Work Plan Addendum
Former Chevron Service Station #9-5607
5269 Crow Canyon Road
Castro Valley, California
WA Job #4-1129-70

Dear Ms. Leech:

This letter addends Weiss Associates' April 1, 1996 *Proposed Corrective Action Work Plan* by including additional vapor and soil sample collection and analysis at the site referenced above. As we discussed during our May 10, 1996 telephone conversation, the following additional data will be collected to support the RBCA potential human health risk analysis at this site.

- Soil vapor depth profile samples will be collected from three boreholes in the area of greatest concern, just up gradient of the condominium complex. Vapor samples will be collected at approximately 3 and 8 feet below the ground surface and 3 feet above ground water to provide a benzene gradient profile for calculating the benzene vapor flux towards the surface.
- Additional soil samples will be collected and analyzed for fraction of organic carbon (FOC) using the Watley Black Method to establish the site soil FOC range. The proposed samples will be collected at between 1 to 3 feet below the surface from the same boreholes as the soil vapor depth profile samples described above.

Upon receipt of your approval we will proceed with implementing the work described above and the previously submitted corrective action plan.

Amy Leech
May 14, 1996

2

Weiss Associates 

We appreciate the attention and interest you have shown this case. Please feel free to call Brett Hunter of Chevron at 842-8695 or me at 450-6150 if you have questions.

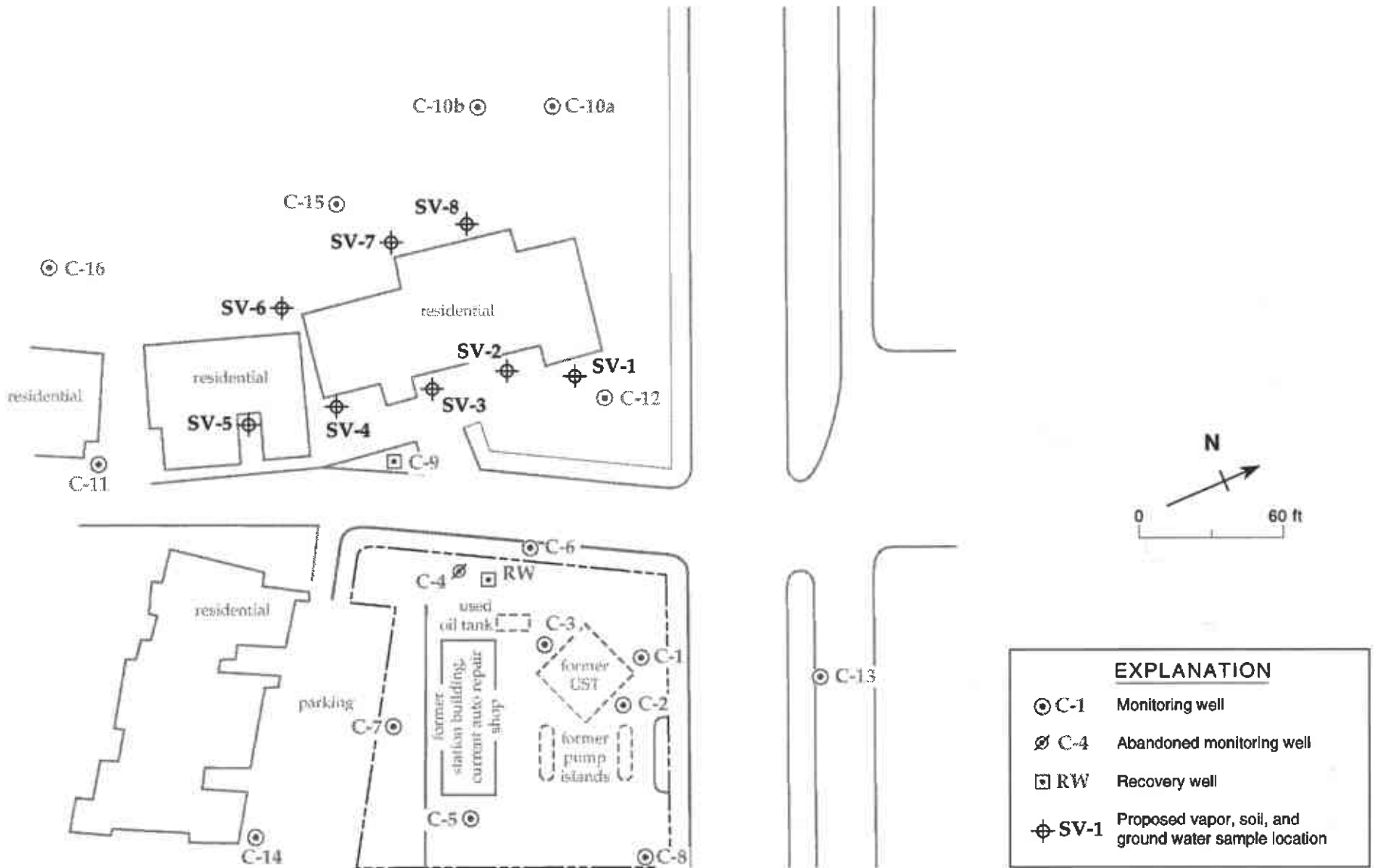
Sincerely,
Weiss Associates



Mike Cooke
Project Geologist

cc: Brett Hunter, Chevron USA Products Company, P.O. Box 5004, San Ramon, CA 94583-0804
Kevin Graves, Regional Water Quality Control Board - San Francisco Bay,
2101 Webster Street, Suite 500, Oakland, California 94612

MC:all
j:\chevron\11129\corresp\96\addend.doc



| Sample Location | VAPOR SAMPLES | | WATER SAMPLES | SOIL SAMPLES | | | |
|-----------------|---|---|---|--|----------------------------------|--|---|
| | Sample Depths | Analysis Methods | Hydrocarbon Analysis | Hydrocarbon Sample Depth | Hydrocarbon Analysis Method | Modeling Parameter Sample Depth | Modeling Parameter Analysis Method |
| SV-1 | 3, 8 feet bgs, | benzene by EPA Method TO-14 and O ₂ , CO ₂ , CH ₄ by ASTM Method D3416 | BTEX and MTBE by EPA method 8020 (1 sample) | 5, 10 feet bgs and within capillary fringe | BTEX and MTBE by EPA Method 8020 | 8 feet bgs | Density and Porosity by ASTM Methods D2850 and D4612 respectively |
| SV-2 | 3, 8 feet bgs, 3 feet above water table | benzene by EPA Method TO-14 and O ₂ , CO ₂ , CH ₄ by ASTM Method D3416 | BTEX and MTBE by EPA method 8020 (1 sample) | 5, 10 feet bgs and within capillary fringe | BTEX and MTBE by EPA Method 8020 | 3 feet bgs and within 10 feet of water table | Fraction of Organic Carbon by Watley Black Method |
| SV-3 | 3, 8 feet bgs, 3 feet above water table | benzene by EPA Method TO-14 and O ₂ , CO ₂ , CH ₄ by ASTM Method D3416 | BTEX and MTBE by EPA method 8020 (1 sample) | 5, 10 feet bgs and within capillary fringe | BTEX and MTBE by EPA Method 8020 | 3 feet bgs and within 10 feet of water table | Fraction of Organic Carbon by Watley Black Method |
| SV-4 | 3, 8 feet bgs, 3 feet above water table | benzene by EPA Method TO-14 and O ₂ , CO ₂ , CH ₄ by ASTM Method D3416 | BTEX and MTBE by EPA method 8020 (1 sample) | 5, 10 feet bgs and within capillary fringe | BTEX and MTBE by EPA Method 8020 | 3 feet bgs and within 10 feet of water table | Fraction of Organic Carbon by Watley Black Method |
| SV-5 | 3 feet bgs | benzene by EPA Method TO-14 and O ₂ , CO ₂ , CH ₄ by ASTM Method D3416 | BTEX and MTBE by EPA method 8020 (1 sample) | 5, 10 feet bgs and within capillary fringe | BTEX and MTBE by EPA Method 8020 | None | None |
| SV-6 | 3 feet bgs | benzene by EPA Method TO-14 and O ₂ , CO ₂ , CH ₄ by ASTM Method D3416 | BTEX and MTBE by EPA method 8020 (1 sample) | 5, 10 feet bgs and within capillary fringe | BTEX and MTBE by EPA Method 8020 | None | None |
| SV-7 | 3 feet bgs | benzene by EPA Method TO-14 and O ₂ , CO ₂ , CH ₄ by ASTM Method D3416 | BTEX and MTBE by EPA method 8020 (1 sample) | 5, 10 feet bgs and within capillary fringe | BTEX and MTBE by EPA Method 8020 | None | None |
| SV-8 | 3 feet bgs | benzene by EPA Method TO-14 and O ₂ , CO ₂ , CH ₄ by ASTM Method D3416 | BTEX and MTBE by EPA method 8020 (1 sample) | 5, 10 feet bgs and within capillary fringe | BTEX and MTBE by EPA Method 8020 | None | None |

Notes:

bgs = Below ground surface
 BTEX = Benzene, toluene, ethylbenzene and xylenes.
 O₂ = Oxygen
 CO₂ = Carbon dioxide
 CH₄ = Methane

Figure 1. Vapor, Soil, Ground Water Sample Locations and Analytical Methods - Chevron Station 9-5607, 5269 Crow Canyon Road, Castro Valley, California