Navdeep Singh Grewal
349 Brianne Court
Pleasanton, CA 94566

August 23, 2013

Mr. Mark Detterman
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: CHEVRON #9-1851
451 Hegenberger Road
Oakland, California
ACEH Case No. 464

Dear Mr. Detterman:

I, Mr. Navdeep Singh Grewal, have retained Pangea Environmental Services, Inc. (Pangea) for environmental consulting services for the project referenced above. On my behalf, Pangea is submitting the attached *Response Letter*.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached report is true and correct to the best of my knowledge.

Sincerely,

Navdeep Singh Grewal

August 23, 2013

VIA ALAMEDA COUNTY FTP SITE

Mr. Mark Detterman
Alameda County Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Re: **Response Letter**
451 Hegenberger, Oakland, California
ACEH Case #464

Dear Mr. Dettermen:

Based on our discussion today, Pangea Environmental Services, Inc. (Pangea) prepared this letter responding to your email dated August 22, 2013. This letter describes information supporting our conclusion that there was no new release of significant contamination from the recently removed diesel underground storage tank (UST).

SITE BACKGROUND

The site is an active gasoline station located at the intersection of Hegenberger Road and Edgewater Road in Oakland, California. The operating station consists of one station building, two fuel dispenser islands, and three 10,000-gallon underground storage tanks (USTs), and prior to recent removal, one 10,000-gallon diesel UST.

On September 18, 2012, Balch Petroleum Contractors and Builders Inc., (Balch) of Milpitas, California removed a 10,000-gallon diesel UST, a dispenser island, and associated piping from the site. Soil was excavated from the ground surface to the bottom of the UST (approximately 15 ft below grade surface [bgs]). The UST removal was observed by Hazardous Materials Inspector Keith Matthews of the Oakland Fire Department (OFD). Inspector Matthews of the OFD observed compliance sampling performed by Pangea. Soil and groundwater compliance sampling results were documented in the *Underground Storage Tank (UST) Removal Compliance Sampling Report* dated October 26, 2012.

An existing LUST case was opened on February 23, 1996 for the subject site after hydrocarbon contaminants were discovered during a baseline environmental investigation. Chevron Environmental Management Company (Chevron) is the responsible party for the release. Significant site assessment has been performed to delineation the lateral and vertical extent of petroleum hydrocarbons. Years of groundwater monitoring of site wells documented plume stability. In October and November 2012, Chevron coordinated the excavation of approximately 900 tons of soil to target residual petroleum hydrocarbon impact near the former waste oil UST located west of the site station building. The excavation area was approximately 26 ft wide by 60 ft long by 9 ft deep. The excavation targeted TPHmo-range contaminants previously identified in site soil borings, which also included TPHd-range reported concentrations. Following excavation activities in November 2012, the Chevron consultant recommended case closure. ACEH is reviewing the case for closure and in May 2013 requested a mailing list for all record fee title owners.

The property owner is redeveloping the site to replace the existing building with a larger building west (behind) the existing building. No remodeling of the fueling facilities is planned. A Soil and Groundwater Management Plan (SMP) was prepared to safeguard human health and safety with respect to potential residual petroleum hydrocarbons during site redevelopment. Site data indicates that the primary residual impact of concern is gasoline-range hydrocarbons (TPHg and benzene) identified near the eastern dispenser at approximately 2 ft bgs. Very limited residual petroleum hydrocarbon impact (primarily TPHd and TPHmo) near the former waste oil UST was present in the capillary fringe/saturated zone present about 4 to 8 ft bgs. Data regarding residual soil and groundwater impact is presented in Conestoga-Rovers & Associates' (CRA) *Remedial Excavation Report and Case Closure Request* dated April 5, 2013.

RESPONSE TO AGENCY EMAIL

From your August 22, 2013 email, Pangea understands that the OFD, a California Unified Program Agency (CUPA), referred this case to your agency under suspicion of a potential new release from the recently removed diesel UST. Your email references a reported TPHd increase detected in well MW-3 during the September 13, 2012 groundwater monitoring event, just before the UST was removed on September 18, 2012. The subsequent destruction of this well, which is located immediately downgradient of the removed diesel UST, prevented the ability to resample this well for further evaluation of groundwater quality at this location. The following information supporting our conclusion that there was no new release of significant contamination from the recently removed diesel UST.

Analytical Results from Compliance Sampling for Diesel UST and Well Sampling

Pangea's compliance sampling report documents that a grab groundwater collected beneath the removed diesel UST on September 18, 2012 contained a TPHd concentration of 960 micrograms per liter (µg/L). As we discussed on August 22, 2013, the laboratory analytical report included the following comment for the analyzed grab groundwater sample: "aged diesel is significant."

Your email references an increased TPHd concentration (2,000 µg/L) detected in nearby well MW-3 on September 13, 2012. This represents an increase from the two prior sampling events on well MW-3: 89 µg/L on March 16, 2012 (about 6 months prior), and <50 µg/L on September 30, 2011 (about 12 months prior). However, the laboratory comment that the compliance sample represented impact from "aged diesel" suggests that the TPHd impact reported in well MW-3 is *not* from a new release from the removed diesel UST.

In addition, the September 2012 sampling of well MW-3 reported 4,400 ug/L TPHmo in conjunction with the 2,000 µg/L TPHd. The presence of higher TPHmo-range concentrations than TPHd-range concentrations in this sample could suggest that the TPHd-range hydrocarbons reported as 'aged diesel' are actually the lighter range of the TPHmo impact associated with Chevron's release from the nearby used motor oil UST. TPHmo and TPHd have been regularly reported for other site wells, including a maximum of 8,500 ug/L TPHd in nearby well MW-2. TPHmo impact (and TPHd impact) was the target of remedial excavation performed in November 2012 that included the removal of well MW-2 and surrounding soil.

Also, soil analytical results from the diesel UST removal sampling indicates that very low concentrations of TPHd was found in compliance soil samples and the stockpile sample. The maximum TPHd concentration detected in soil was 5.5 mg/kg. The limited TPHd in soil further suggests that the source of

TPHd in groundwater is likely from another source (e.g, former used oil UST near MW-2). The presence of MTBE and TBA suggests that the diesel tank area has been impacted by a release(s) from elsewhere.

Pangea notes that no naphthalene was detected in soil or groundwater compliance samples, further supporting that this is not a new diesel release and that the residual impact does not represent a significant risk. The lack of BTEX compounds in these wells of concern also indicates limited risk associated with this TPH impact.

Finally, the diesel UST was first exposed approximately two weeks before the September 18, 2013 removal and compliance sampling date. The subsurface work preparing the UST for removal may have disturbed the subsurface to contribute to the reported TPHd and TPHmo concentrations in nearby well MW-3 on September 13, 2013, about five days before the actual removal. Although the laboratory note suggests an "aged diesel", it is possible a "de minimus" release occurred during tank uncovering, pipe cutting, or related UST removal efforts.

CLOSING

In closing, the residual impact near former well MW-3 and the former diesel UST is limited in extent, does not pose a risk to human health or the environment, and does not merit additional investigation. We respectfully request that your agency soon issue documentation that allows the property owner to proceed with the planned development well before the upcoming rainy season. If your agency does require additional investigation or corrective action in the future, the former diesel UST location is not slated for redevelopment and will remain accessible for any future required work.

Pangea appreciates your agencies prompt attention to this matter over the past months. If additional information is required, please contact me at briddell@pangeaenv.com or (510) 435-8664.

Sincerely,
Pangea Environmental Services, Inc.

Bob Clark-Riddell, P.E.
Principal Engineer

ATTACHMENTS

Appendix A – Laboratory Results for Grab Groundwater Beneath Diesel UST

APPENDIX A

Laboratory Results for Grab Groundwater Beneath Diesel UST

McCampbell Analytical, Inc.
"When Quality Counts"
1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc.	Client Project ID: #1465.001; Grewel-451 Hegenberger	Date Sampled: 09/18/12
		Date Received: 09/18/12
1710 Franklin Street, Ste. 200	Client Contact: Tina De La Fuente	Date Extracted 09/18/12
Oakland, CA 94612	Client P.O.:	Date Analyzed 09/19/12

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3510C/3630C Analytical methods: SW8015B Work Order: 1209438

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS	Comments
1209438-001B	TB	W	960	1	92	e3

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract/matrix interference.

%SS = Percent Recovery of Surrogate Standard. DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:
e3) aged diesel is significant

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager