KFM
GEOSCIENCE

Project No. BAS 04-02E
January 29, 2008

Connie Christian, P.E.
County Sanitation Districts of Los Angeles County
1955 Workman Mill Road
Whittier, California 90601

Subject: **PHIMF Project - Limited Geotechnical Investigation - Feasibility-Level Report**
RESPONSE TO INITIAL REVIEW LETTER

Reference: "Limited Geotechnical Investigation, Feasibility-Level Report, LACSD Intermodal Facility, Access Corridor Connecting Materials Recovery Facility at 2808 Workman Mill Road with Intermodal Facility at 2500 Pellissier Place, Whittier, California" KFM GeoScience project BAS 04-02E, dated July 18, 2005.

"Initial Review of Documents re L.A.County Puente Hills Intermodal Facilities, 2808 Workman Mill road and 2500 Pellissier Place, Whittier, California" by E.D.Michael, dated January 12, 2008.

Presented herein is KFM GeoScience's (KFMg's) response to the initial review (Initial Review) by E.D. Michael, Consulting Geologist, of the above-referenced feasibility-level geotechnical document (Feasibility Report). It is noted that the Initial Review does not provide specific itemized comments; therefore the response provided herein is only intended to clarify some of the concerns apparent from the Initial Review.

SECOND PARAGRAPH

1) **"the Initial Study assigns levels of impact without authority"**: It is understood that the reviewer expects for the Draft Environmental Impact Report (DEIR) consultant to provide appropriate references to specific documents prepared by respective licensed professionals for technical statements and conclusions presented in the DEIR document.

2) **"the groundwater level fluctuation"**: Discussion and data pertaining to site groundwater conditions are quite extensively provided in Section 7 of the Feasibility Report. Additionally, the installed wells are read quarterly and a report is issued following each reading to confirm, modify, or corroborate the findings in that report. It is, however, anticipated that the actual design for the proposed Puente Hills Intermodal Facility (PHIMF) will be based on the historic high groundwater reported by the CGS (1999) for the El Monte quadrangle.

3) **At the end of the paragraph the reviewer reiterates the need to provide references for each EIR assertion**. It is our recommendation that the DEIR consultant complies with the standard of practice for presenting references in EIR documents.

THIRD PARAGRAPH

4) **"per Initial Study the project is not in a landslide area"**: It is acknowledged that the Seismic Hazard Zones map for the El Monte quadrangle indicates the slope behind the Materials Recovery Facility (MRF) is within a zone of required investigation for earthquake-induced landsliding. It should be noted that the Seismic Hazard Map was prepared prior to grading of the Lower Western Cut (LWC) which removed the bulk of the landslide debris and laid the existing slope back to a stable configuration. The Feasibility Report discusses the landslide on page 14 and indicates that the stability of the graded slope was addressed by Earth Tech (2000) and AES (2001 and 2003). In addition, a separate geotechnical report should be prepared for the design of improvements related to the development of PHIMF if any grading modifications are needed at the toe of the LWC.

5) **"lack of sophistication"**: The reviewer questions the aptitude of the definitions for "landslides", "breccia", and "abandoned active stream wash" used in the DEIR document.

While KFMg agrees that that the **landslide** definition is not the best available, it is not incorrect, rather it is awkward. There is a variety of formal definitions available, mainly due to the significant breadth of the term "landslide". Due to the good general understanding of what constitutes a landslide, we recommend to entirely omit the inclusion of the landslide definition in the DEIR. However, if a definition needs to be included, we offer to use the definition from "Dictionary of Geologic Terms" prepared by the American Geologic Institute, 3rd edition, 1984: "Landslide is a general term for a wide variety of processes and landforms involving the downslope movement, under gravity, of masses of soil and rock material. There is a broad range of landslide morphology, rates, patterns of movement, and scale. Types include rockfall, mudflow, slump, and many others."

The definition provided for **breccia** is the most general for primary deposited sedimentary rocks and does not consider the crushing mechanism of breccia formation at the base of a landslide. A more appropriate formal referenced definition for the type of "dynamic" or "crush" breccia observed at the base of the landslide comes from Rocks and Rock Minerals, by Dietrich and Skinner (1979). Thus a "dynamic" or "crush breccia" refers to "rocks made up of broken fragments, typically with haphazard arrangement, in a matrix consisting of smaller fragments and pulverized rock called gouge."

The provided definition for the **abandoned stream definition** is fully correct in the context of the Feasibility Report text. We recommended rewording the definition used in the DEIR to "An abandoned active stream wash, in the context of this document, relates to …"

FOURTH PRAGRAPH

6) **Figures 2, 4, 5, 6, 10 and Summary of Laboratory Testing Results** from Appendix B of the Feasibility Report are attached to this letter.

7) **Provision of references**: The Feasibility Report was prepared with the intention to include all relevant background data for convenient reference. The conclusions provided in the Feasibility Report stand on their own and do not require support from the referenced documents beyond the use of the included borehole logs or measured data. In addition, the following documents are published general technical references and are available by respective agencies:

ASTM (American Society for Testing and Materials), 2001, Soil and Rock: Vol. 4.08 for ASTM test methods D-420 to D-4914; and Vol. 4.09 for ASTM test methods D-4943 to highest number.

California Department of Conservation, Division of Mines and Geology, 1997, Guidelines for Evaluation and Mitigation of Seismic Hazards in California: Special Publication 117, 74 pp.

California Department of Conservation, Division of Mines and Geology, Seismic Hazard Zones, El Monte Quadrangle, Official Map Released March 25, 1999.

California Department of Conservation, Division of Mines and Geology, 1998, Seismic Hazard Evaluation of the El Monte 7.5-Minute Quadrangle, Los Angeles Counties, California, Open File Report 98-15.

FHWA, 2001, Mechanically Stabilized Earth Walls and Reinforced Soil Slopes Design & Construction Guidelines, March 2001.

International Conference of Building Officials, 2001, California Building Code: Volume 2.

Youd, T.L. and Idriss, I.M., 1997, Proceeding of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils: National Center for Earthquake Engineering Research, Technical Report NCEER-97-0022.

The following 3 reports were referenced for completeness since the synopses of these reports were included in AES (2001) report, which was reviewed for the preparation of the Feasibility Report. KFMg does not posses the following actual reports:

LeRoy Crandall and Associates, July 24, 1984, “Report of Foundation Investigation, Proposed Industry Parcel 70, Crossroads Industrial Park, Los Angeles County, California”, a report prepared for Commerce Construction Company, Inc.

LeRoy Crandall and Associates, March 25, 1983, "Inspection and Testing of Compacted Fill and Inspection of Foundation Excavations, Proposed Improvement Project No. 89, Project Coordination Contract CR-111-089, Workman Mill Road and Peck Road, City of Industry, California", a report prepared for the Industry Urban Development Agency.

LeRoy Crandall and Associates, October 9, 1981, "Report of Geologic and Hydrogeologic Investigation, Puente Hills Landfill Site, Los Angeles County, California", a report prepared for the County Sanitation Districts of Los Angeles County.

Aside from these exceptions, it is KFMg's understanding that the requested documents will be made available for review at the Sanitation Districts' Joint Administration Office by appointment, or copies can be obtained at a charge of $0.10 per page.

CLOSURE

Thank you for the opportunity to be of service on this project. If you have any questions or if we can be of further assistance, please do not hesitate to contact the undersigned at (909) 860-5096.

Respectfully submitted,
KFM GeoScience

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Attachments: Plates 2, 4, 5, 6, and 10
Summary of Laboratory Testing Results (from Appendix B)

Distribution: (1) Addressee (1 by mail + pdf by email CChristian@lacsd.org)

PS/ps
Filename: PHIMF - response to E.D.Michael letter LET.doc

	Referenced Geotechnical Reports	Author	Date	REF#
1	Final Rough Grade Soils Engineering and Geology Report for the Lower Western Cut Project at the Puente Hills Landfill, Whittier, California	Advanced Earth Science, Inc.	January 13, 2003	954099
2	Report of Geotechnical Investigation for the Proposed Puente Hills Materials Recovery Facility	Advanced Earth Science, Inc.	October 24, 2001	954146
3	Soil and Rock: Vol. 4.08 for ASTM test methods D-420 to D-4914; and Vol. 4.09 for ASTM test methods D-4943 to highest number	ASTM	2001	Published Document
4	Phase I Environmental Site Assessment of Industrial Property, 2500 & 2520 Pellissier Place, City of Industry, California	ATC Associates Inc.	November 9, 2000	
5	Guidelines for Evaluation and Mitigation of Seismic Hazards in California: Special Publication 117, 74 pp.	California Department of Conservation, Division of Mines and Geology	1997	Published Document
6	Seismic Hazard Zones, El Monte Quadrangle, Official Map	California Department of Conservation, Division of Mines and Geology	March 25, 1999	Published Document
7	Evaluation of the El Monte 7.5-Minute Quadrangle, Los Angeles Counties, California, Open File Report 98-15	California Department of Conservation, Division of Mines and Geology	1998	Published Document
8	Geotechnical Investigation and Design Report for the Lower Western Cut of the Puente Hills Landfill	Earth Tech, Inc.	February 2000	954112
9	Mechanically Stabilized Earth Walls and Reinforced Soil Slopes Design & Construction Guidelines	FHWA	March 2001	Published Document
10	Liquefaction Potential Evaluation for 2500 Pellissier Place, City of Industry, California	GEOBASE, INC.	March 10, 2000	954197
11	Regional Hydrogeologic Evaluation, 2500 Pellissier Place, City of Industry, California	Geosystem Consultants, Inc.	March 9, 2000	954198
12	California Building Code: Volume 2	International Conference of Building Officials	2001	Published Document
13	Detection and Evaluation Monitoring Program for the Main Canyon at the Puente Hills Landfill	International Technology Corporation	March 1998	810468
14	Report of Foundation Investigation, Proposed Industry Parcel 70, Crossroads Industrial Park, Los Angeles County, California	LeRoy Crandall and Associates	July 24, 1984	Ref. of References
15	Inspection and Testing of Compacted Fill and Inspection of Foundation Excavations, Proposed Improvement Project No. 89, Project Coordination Contract CR-111-089, Workman Mill Road and Peck Road, City of Industry, California	LeRoy Crandall and Associates	March 25, 1983	Ref. of References

16	Report of Geologic and Hydrogeologic Investigation, Puente Hills Landfill Site, Los Angeles County, California	LeRoy Crandall and Associates	October 9, 1981	805941
17	Report of Soils Investigation Proposed Industry Private Drain No. 161, San Jose Creek West of Workman Mill Road, Crossroads industrial Park, Industry	LeRoy Crandall and Associates	November 21, 1978	954205
18	http://dpw2.co.la.ca.us/website/wells/viewer.asp (Los Angeles County Department of Public Works, 2005, Webpage)	LADPW	2005	Published Document
19	Probabilistic Seismic Hazard Assessment for the State of California	California Department of Conservation, Division of Mines and Geology	1996	Published Document
20	Procedure to Evaluate Earthquake-Induced Settlements in Dry Sandy Soils	Journal of Geotechnical and Geoenvironmental Engineering	April 1998	Published Document
21	Erratum to Procedure to Evaluate Earthquake-Induced Settlements in Dry Sandy Soils	Journal of Geotechnical and Geoenvironmental Engineering	October 1998	Published Document
22	Soil Liquefaction and its Evaluation Based on SPT and CPT", Liquefaction Workshop	Robertson, P.K., and Fear, C.E.	January 1996	954213
23	Recommended Procedures for Implementation of DMG Special Publication 117 Guidelines for Analyzing and Mitigating Liquefaction in California	Southern California Earthquake Center	March 1999	Published Document
24	Recommended Procedures for Implementation of DMG Special Publication 117 Guidelines for Analyzing and Mitigating Landslide Hazards in California	Southern California Earthquake Center	March 2002	Published Document
25	Evaluation of Settlements in Sands due to Earthquake Shaking	Journal of Geotechnical Engineering Division, ASCE, Vol. 113, No. 8	1987	Published Document
26	Preliminary Soils and Geologic Investigation, Proposed Refuse-to-Energy Facilities, Puente Hills Landfill, Whittier, California	Triad Foundation Engineering, Inc.	May, 10, 1984	398540
27	Phase I Environmental Site Assessment, Iffuce/Warehouse Property, 2055 and 2520 Pellissier Place, City of Industry, California	Versar, Inc.	September 17, 1999	
28	Proceeding of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils, Technical Report NCEER-97-0022	National Center for Earthquake Engineering Research	1997	Published Document
29	Liquefaction Resistance of Soils: Summary report of NCEER 1996 and 1998 NCEER/SF Workshops on Evaluation of Liquefaction Resistance of Soils	Journal of Geotechnical and Geoenvironmental Engineering	April 2001	Published Document
30	Geotechnical Investigation Regarding Stability of Slope Adjacent to an Approximately 17-Acre Land Parcel Easterly Side, Workman Mill Road, City of Industry, County of Los Angeles, California	Zeiser Kling Consultants, Inc.	February 21, 1994	780296