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Project No. 2015-29
June 26, 2017

Mr. Tyler Wood
Lennar Multifamily Communities, Inc.
492 9th Street Suite 300
Oakland, California 94607

Subject: **LONG-TERM SOIL MANAGEMENT PLAN**
Proposed Multifamily Development
1750 Webster Street, 1810 Webster Street and 301 19th Street
APNs 008-625-017; 008-625-018; and 008-625-002-1
Oakland, California
VRAP Case No. RO0003229
SCP No. RO0002672

Dear Mr. Wood:

At your request, *GeoSolve, Inc.* has prepared this Long-Term Soil Management Plan (LTSMP) for the above-referenced site. The subject site consists of three properties located at 1750 Webster Street, 1810 Webster Street and 301 19th Street in Oakland, California with Alameda County Assessor Parcel Numbers (APNs) 008-625-017; 008-625-018; and 008-625-002-1.

A summary of the previous environmental activities conducted on the subject site are summarized in the Summary of Environmental Activities Report (*GeoSolve, Inc.*, June 19, 2017).

The purpose of this LTSMP is to provide Lennar Multifamily Communities (LMC) and future residents and contractors with detailed instructions regarding excavating soil and handling activities and worker protection, emergency numbers, as well as contingencies for encountering known lead-impacted soil areas. This LTSMP was requested by the Alameda County Health Care Services Agency (ACHCSA) to accommodate site closure activities of all three properties and for long-term management of excavated soil during future utility installation and/or repairs. The subject site has historic ACHCSA Voluntary Remediation Action Program (VRAP) Case Number RO0003229 and Former Site Cleanup Program (SCP) Number RO0002672.



LONG-TERM SOIL MANAGEMENT PLAN

This LTSMP has been prepared for LMC, future residents and contractors who plan to excavate soil for utility installation and repair activities. These sections below detail site-specific steps necessary to address lead-impacted soil areas during future site work. Contingencies for handling lead-impacted soil are summarized in this LTSMP.

LTSMP Emergency Contact List

Tyler Wood, LMC	(609) 273-6848
Dan Emerson, LMC	(510) 306-0263
Karel Detterman, P.G., ACHCSA.....	(510) 567-6708
Rob Weston, ACHCSA.....	(510) 567-6781
Rob Campbell, P.G., C.E.G, <i>GeoSolve, Inc.</i>	(925) 963-1198

Lead-Impacted Soil

Lead was detected in three soil samples analyzed from the surface fill at subject site (see attached Figure 1); at 170 mg/Kg in boring B-1 at five feet bgs (*GeoSolve, Inc.*, November 2015) and at 130 mg/Kg in boring B-2 at one foot bgs (*GeoSolve, Inc.*, February 2016); and at 5 feet bgs in soil sample SPB3-A at 760 mg/Kg (*GeoSolve, Inc.*, April 3, 2017). Lead-impacted soil maybe encountered during future site work, the contractor's health and safety plan for the site will discuss requirements for workers coming in contact with lead-impacted soil.

Procedures for Soil Excavation

If maintenance or utility work at the site exposes soil below the currently-existing site, the protocols summarized below will be followed by all onsite personnel:

1. If removal of the cap is required during future site activities, ACHCSA will be notified prior to initiation of work. Upon removal of the cap, representative samples of soil to be excavated will be collected and analyzed to evaluate lead concentrations in the soil. The soil sample will be analyzed for total lead using Environmental Protection Agency (EPA) Methods SW846/SW6020. If lead concentrations exceed 50 milligrams per kilogram (mg/Kg), the soil sample will also be re-analyzed for leachable lead using soluble threshold limit concentration (STLC) lead using California Title 22 extraction.



2. All excavated soil will be properly disposed at a Class II landfill if lead STLC concentrations are less than 5 milligrams per liter (mg/L). If STLC lead concentrations exceed 5 mg/L, then the excavated soil will be properly disposed at a Class I landfill under owner-signed manifests. ACHCSA will be contacted to discuss removal actions.

General Excavation Activities

All fieldwork must be conducted in accordance with the contractor's health and safety plan. The contractor health and safety plan will have minimum requirements in accordance with 40-hour hazardous waste operating procedures (HAZWOPER) as per 29 Code of Federal Regulations (CFR) 1910.120 and 8 Code California Regulations (CCR) General Industry Safety Orders (GISO) 5192.

If potentially adverse environmental conditions are encountered during excavation activities at the subject property, then the following contingencies must be followed, depending on the item(s) and/or situation(s) encountered and discussed below.

Management of Unknown USTs and/or Structures Uncovered During Excavation Activities

In the event an unknown underground container or structure (e.g., underground storage tank, sump, drum or pipe) that could have potentially hazardous materials is discovered during future excavation activities, all work in the vicinity of the underground container or structure will cease and ACHCSA will be notified. Such containers and structures, if any, and all associated piping or other appurtenances will be removed in accordance with applicable laws and regulations, the requirements in this LTSMP, and the management protocols described below:

- If the structure is a former petroleum-containing UST, ACHCSA and the Oakland Fire Department (OFD) will be notified within 24 hours. The UST will be removed in accordance with OFD requirements. The OFD may require a work plan prior to tank removal, investigation, and closure.
- Residual liquid or sludge, if present in the encountered below-grade structure or pipeline, will be removed, placed in sealed storage containers, characterized as required by laws and regulations and as otherwise required by the permitted disposal facility, and appropriately disposed.



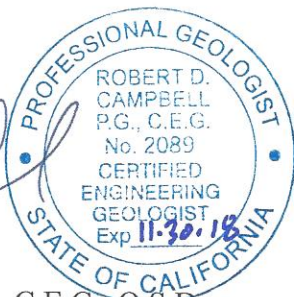
- The below-grade structure will be removed. Any visibly contaminated or odorous soil surrounding the below-grade structure or pipe will be managed according to the protocols described below:
 - If the structure is a pipe, it may not be necessary to remove the entire pipe, especially if the pipe extends beyond construction, if the pipe does not contain contaminated, hazardous, flammable, or explosive liquid, sludge, or gas. Under these conditions, the pipe may be cut, removed, and the ends capped. The removed pipe will be disposed in accordance with applicable laws and regulations. If the pipe material contains asbestos, then the material will be handled in accordance with applicable air quality and hazardous waste management laws and regulations and appropriate protocols for handling asbestos materials. As indicated above, if the pipe contains potentially hazardous materials, the materials will be removed, contained, and appropriately disposed of. The pipe will be removed and underlying soil inspected for visible contamination or odors.
 - A PID with an 11.2-volt bulb (for VOCs) must be used to evaluate any pipe and/or structures for petroleum and/or VOC vapors. If vapors are detected, ghost-wipe samples must be collected from the structure(s) and analyzed for VOCs and petroleum-hydrocarbons using Environmental Protection Agency (EPA) Methods SW846/SW8260B, SW8015m with silica-gel cleanup, and SW8021. Based on the results of the ghost wipe samples, handling of the material as a hazardous waste/substance or construction debris will be determined in the field.



Please contact us at your convenience if you have any questions regarding this Long-Term Soil Management Plan or if you require additional information.

Sincerely,

GeoSolve, Inc.



Robert D. Campbell, M.S., P.G., C.E.G., Q.S.D.
Principal Engineering Geologist

Attachment:

Figure 1, Lead-Impacted Areas



REFERENCES

GeoSolve, Inc., November 7, 2015. *Phase II Environmental Site Assessment at 1750 Webster Street and 301 19th Street in Oakland, California.* **GeoSolve, Inc.** Project No. 2015-29.

GeoSolve, Inc., February 11, 2016. *Phase II Environmental Site Assessment at 1810 Webster Street in Oakland, California.* **GeoSolve, Inc.** Project No. 2016-03.

GeoSolve, Inc., April 3, 2017. *Soil Management Plan for Excavation at 1750 Webster Street, 1810 Webster Street and 301 19th Street in Oakland, California.* **GeoSolve, Inc.** Project No. 2015-29.

GeoSolve, Inc., June 19, 2017. *Summary of Environmental Activities at 1750 Webster Street, 1810 Webster Street and 301 19th Street in Oakland, California.* **GeoSolve, Inc.** Project No. 2015-29.





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PROPOSED DEVELOPMENT FOOTPRINT LENNAR MULTIFAMILY COMMUNITIES LONG-TERM SOIL MANAGEMENT PLAN 1750 and 1810 WEBSTER STREET and 301 19th STREET OAKLAND, CALIFORNIA		Project No.	Drawn by:	1
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Figure No.