Appendix D
Asphalt Plant No. 1 Environmental Data Evaluation W.O. E1907820
Date: April 9, 2015

To: Mahmood Karimzadeh, Principal Architect, Architecture Division

Attention: Reza Bagherzadeh, Project Manager

From: Christopher F. Johnson, P.E., G.E., Manager Geotechnical Engineering Group

Subject: ASPHALT PLANT NO. 1 ENVIRONMENTAL DATA EVALUATION W.O. E1907820 GEO FILE NO. 01-067

Submitted herein is a copy of the Environmental Data Evaluation Report dated April 9, 2015 for the Asphalt Plant No. 1 Rebuild Project.

If there are any questions in regards to this letter or report, please contact Morton Price at (213) 847-0466.
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ENVIROMENTAL DATA EVALUATION REPORT
ASPHALT PLANT NO. 1 REBUILD

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Attachments: Plates 1, 2 and 2a through 2f
1.0 INTRODUCTION

The Geotechnical Engineering Group (GEO) is providing this environmental data evaluation of existing data for the Asphalt Plant No. 1 Rebuild Project located at 2482 E. Olympic Avenue in Downtown Los Angeles as shown on Plate 1. The data evaluated for this report were collected as part of various other investigations at the site pertaining to previous leaking underground storage tanks (USTs) at the site, observations of heavy hydrocarbon seepage at the site and a geotechnical and environmental investigation for a former proposed rebuild of the site. Various investigations have been conducted from 1992 to 2008.

2.0 PROJECT SCOPE

GEO’s understanding of the project is based on information presented during a meeting held with the Project Team on March 24, 2015. It is GEO’s understanding that all or most of the buildings and equipment at the site will be demolished and replaced with new buildings, processing equipment, material storage bins, material conveyors, control equipment and other improvements. Excavation will be kept to a minimum where possible. Structures at the site will be supported by mat foundations on driven piles to limit, if not eliminate, the need for excavating and disposing of contaminated soil. Finally, some shallow excavations will be advanced for the installation of underground utilities and a possible bio-swale at the site.

3.0 SUMMARY OF PREVIOUS SUBSURFACE EXPLORATIONS

No new subsurface data was collected for this project; existing environmental data has been compiled in this report. Below is a summary of the investigations that have been performed at the site from review of GEO’s records. Plate 2 shows the locations of previous borings advanced at the site.

3.1 ASPHALT PLANT No. 1 RECONSTRUCTION (2008)

A geotechnical and limited environmental investigation was performed at the site in response to a Bureau of Street Services request in March, 2008. The proposed work at the site involved advancing four hollow stem borings at the site to depths ranging from 30 feet (ft) below ground surface (bgs) to 40 ft bgs. Geotechnical and selected environmental samples were collected from the four borings. Contamination ranging from gasoline, diesel and waste oil hydrocarbons were detected in each boring at various depths. Despite the investigation being completed, the proposed reconstruction did not move forward.

3.2 ENVIRONMENTAL INVESTIGATIONS (2006-2007)

During September of 2006 and March of 2007, to satisfy Los Angeles Fire Department (LAFD) local oversight requirements, Ninio and Moore advanced five borings ranging in depths from 125 ft bgs to 160 ft bgs. Three of these borings were converted to soil
vapor wells to potentially be used as part of a soil vapor extraction system (SVE) at the site at a later time. One of the borings encountered perched groundwater at 123 ft bgs. High levels of soil contamination ranging in depths from 5 ft bgs to approximately 140 ft bgs were detected revealing that the site had at least three different contaminant plumes at differing depths within the investigation area. Data from the investigation was submitted to the LAFD for review. The LAFD subsequently referred the site to the Los Angeles Regional Water Quality Control Board (LARWQCB) in 2009. After review of existing data, the LARWQCB later granted the site case closure.

As mentioned above, three of the borings advanced for the 2006-2007 investigation were converted to soil vapor extraction wells that consist of 4 inch diameter, schedule 40 PVC casing with traffic rated well boxes that are flush with the existing ground surface. The construction details of the three wells are shown on Table 1:

**Table 1: Well Construction Details**

<table>
<thead>
<tr>
<th>Well No.</th>
<th>Total Depth of Well</th>
<th>Screen Interval (ft)</th>
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<tr>
<td>MW-2</td>
<td>135</td>
<td>30 – 60, 115 - 135</td>
</tr>
<tr>
<td>MW-3</td>
<td>136</td>
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</tr>
<tr>
<td>MW-4</td>
<td>105</td>
<td>55 - 105</td>
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### 3.3 ENVIRONMENTAL INVESTIGATIONS (2005 AND 2002)

Pinnacle Environmental Technologies (Pinnacle) performed two investigations; one in 2005 related to observed asphaltic seeps in the south east portion of the site and the second investigation was related to the previous USTs at the site as required by LAFD.

The 2005 asphalt seep investigation consisting of Pinnacle advancing four borings near an asphaltic seep in the south east area of the site (as shown on Plate 2a); the borings ranged in depth from 10 ft bgs to 40 ft bgs. Heavy range hydrocarbons and tar were detected in the upper 10 ft of the borings.

In 2002, Pinnacle advanced three borings ranging from 30 ft bgs to 80 ft bgs near the fuel dispensing island to assess impacts from former leaking USTs at the site. Analytical results of samples from those borings detected fuel range hydrocarbons in the soil ranging in depths from 10 ft bgs to 70 ft bgs. Pinnacle recommended additional investigation near the fuel dispensing island as the extent of the contamination was not fully delineated by the three borings. The results of this investigation were submitted to the LAFD for review in 2002.
3.4 REPLACEMENT OF 12,000 GALLON DIESEL FUEL TANK

During January, 1992, the City of Los Angeles, General Services Standards Division (Standards) advanced three borings at the site. The borings were advanced to depths ranging from 21 ft bgs to 50 ft bgs. Soil contamination was detected in every boring. The goal of that investigation was to locate a suitable, non-contaminated location for a new diesel underground storage tank. The results of the investigation indicated no suitable location was found. There appears to be previous borings advanced for this project earlier, but the results of the report associated with those borings were not available for review at the time of writing this report.

4.0 NATURE OF CONTAMINATION DETECTED IN PREVIOUS INVESTIGATIONS

Soil contamination has been detected in every investigation performed at the site. The contamination appears to be related to fuel range hydrocarbons released from former USTs used at the site, release of diesel and heavy hydrocarbons during previous day to day activities at the site, previous land use as a manufactured gas plant and releases of hydrocarbons associated with those activities and migration of deeper, off-site contaminant plumes from neighboring facilities.

4.1 CONTAMINATED AREAS TO BE EXPECTED DURING CONSTRUCTION

Based on results of the previous investigations at the site, past land use, data gaps and lack of an exact scope of construction before this report was written, it should be expected that contaminated soils can be encountered anywhere an excavation is advanced at the site. Contaminated soils will consist of a combination of stained, discolored, odiferous hydrocarbon-bearing soils possibly with tar globules. It is also likely that heavy metals, particularly lead, will be encountered in shallow soils. To assist in planning for encountering contaminated soils as much as possible during construction, Plates 2a through 2f have been prepared which shows approximated areas of contamination. These plates are a guide of where contamination is likely to be encountered during construction in a range from the existing ground surface to 60 ft bgs based on previous studies at the site. It should be expected that contaminated soils can be encountered outside of the approximated areas as well.

5.0 ABANDONMENT OF SOIL VAPOR WELLS ON SITE

During the investigation in 2006 and 2007, three soil vapor wells were installed at the site in anticipation that a SVE would be implemented to remediate the soils. Before the SVE system was installed, the LARWQCB granted the site case closure and the SVE system was not implemented. GEO recommends abandoning the three existing SVE wells by methods described in the California Department of Water Resources Bulletin 74-90, California Well Standards before construction as to avoid possible cross contamination of deeper strata and interference with facility reconstruction. GEO can provide this service through one of its consultant contracts.
6.0 METHANE REQUIREMENTS

The site is within a methane zone as delineated by the Los Angeles Department of Building and Safety (DBS). If proposed structures for human entry at the site are to be greater than 100 square feet in area, have less than 30% of their wall area ventilated, and are not on a raised foundation with vents, a methane study will have to be completed. Plans for methane mitigation for the levels based on results of the study will have to be designed and approved by the DBS.

7.0 CONTAMINATED SOIL HANDLING

It is recommended to perform as little excavation as possible for the project as to keep workers on the site and adjacent sites exposure to contaminants to a minimum. It is expected that trenches for new utilities will have to be excavated as part of the facility reconstruction. In the likely event that contaminated soils will be encountered during construction it is highly recommended that these soils be placed directly in covered, haul-away bins designed for transporting contaminated soils rather than stockpiling the contaminated soil at the site. Clean soils may be stockpiled at the site and covered with a plastic tarp. In the event that contaminated soil must be stockpiled at the site, soil that appears contaminated should be segregated from clean soil. The contaminated soil may be placed on a plastic tarp and covered with a plastic tarp such that weather elements will not allow the soil or odors to migrate from the stock pile. Storm water runoff should be diverted away from all stock piles. Regardless of placing soil in a haul away bin or stockpiling, the soil should be characterized for disposal and sent to an appropriate waste disposal facility. GEO can provide contact information for such facilities. For budgeting purposes, it should be assumed that 70% of the contaminated soil will require disposal at a Class II disposal facility, and that 30% of the contaminated soil will require disposal at a Class I disposal facility.

GEO recommends that during any excavation operations, an industrial hygienist should be on site to monitor the air quality, health and safety conditions and direct the workers to don appropriate dress out as necessary. It is also recommended that workers performing any work within the proximity of contaminated soils or other hazardous substances at the site have 40 Hour OSHA HAZWOPER training with up to date refreshers. Additionally, an appropriate site specific health and safety plan should be developed and implemented at the work site and should apply to all workers as well visitors entering the site work area. For budgeting, it should be assumed that appropriate dress out for workers will range from Level D (typical work uniform attire with hard hat, gloves, eye protection, steel toe boots, etc.) for 40% of the time, Level C (addition of air purifying respirator) for 40% of the time and Level B (air purifying respirator and addition of attire such as a tyvek suit) for 20% of the time.
8.0 CLOSURE

If there are any questions regarding this report, please contact Morton Price at (213) 847-0466.

Morton Price, CEG 2481
Engineering Geologist I
9.0 REFERENCES


Ninyo and Moore, "Data Report, Asphalt Plant No. 1", April 2, 2007

Ninyo and Moore, "Data Report, Asphalt Plant No. 1", November 17, 2006

Pinnacle Environmental, "Soil Investigation Report, Asphalt Plant No. 1", January 29, 2005

Pinnacle Environmental, "Phase II Site Assessment Reprot, Asphalt Plant No. 1", April 25, 2002

City of Los Angeles Construction Division, Geotechnical Services, "8/25-1 Asphalt Plant No. 1 Replacement of 12,000 Gallon Diesel UST", August 26, 1992
Asphalt Plant No. 1
Rebuild
LOS ANGELES, CALIFORNIA

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GEO FILE No.: 01-067
DATE: April, 2015

PLATE No. 1

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<td>Leighton</td>
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</tr>
<tr>
<td>B-1</td>
<td>Ninyo and Mooree</td>
<td>2006-2007</td>
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<tr>
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<td>Pinnacle Environmental</td>
<td>2002 and 2005</td>
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<td>1992</td>
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**ASPHALT PLANT NO. 1 REBUILD**

**LOS ANGELES, CALIFORNIA**

**BUREAU OF ENGINEERING**

**GEOENGINEERING GROUP (GEO)**

**GEO FILE No.: 01-067**

**DATE: April, 2015**

**PLATE No. 2**
ASPHALT PLANT NO. 1 REBUILD
LOS ANGELES, CALIFORNIA

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DATE: April, 2015

PLATE No. 2b
ASPHALT PLANT NO. 1 REBUILD
LOS ANGELES, CALIFORNIA

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GEO FILE No.: 01-067
DATE: April, 2015

PLATE No. 2d

Approximate extent of observed contamination 30 ft to 40 ft bgs.
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ASPHALT PLANT NO. 1 REBUILD
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PLATE No. 2e
Approximate extent of observed contamination 50 ft to 60 ft bgs