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Alameda County
Environmental Health



March 21, 2008

Mr. Jerry Wickham
Alameda County Health Care Services
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Work Plan for the Excavation of Petroleum Hydrocarbon-Affected Soil at the Former Hot Mix Asphalt Plant Area (AOC #1) of the Hanson Aggregates Radum Facility, 3000 Busch Road, Pleasanton, California, SLIC Case #RO0002941 and GeoTracker ID SLT19719376

Dear Mr. Wickham:

The enclosed "Work Plan for the Excavation of Petroleum Hydrocarbon-Affected Soil at the Former Hot Mix Asphalt Plant Area (AOC #1) of the Hanson Aggregates Radum Facility, 3000 Busch Road, Pleasanton, California" ("the Work Plan") was prepared by LFR Inc. (LFR) on behalf of Hanson Aggregates Northern California for the former hot mix asphalt plant area (area of concern [AOC] #1) of the Hanson Aggregates Radum Facility, located at 3000 Busch Road, Pleasanton, California ("the Site"). This Work Plan presents a scope of work for excavating shallow soil affected by petroleum hydrocarbons in localized areas at the Site and conducting confirmation sampling in the excavations. This Work Plan was prepared at the request of Alameda County Environmental Health in its technical comment letter dated January 11, 2008.

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

If you have any questions or comments concerning this Work Plan, please call me at (925) 426-4170 or Katrin Schliewen of LFR at (510) 652-4500.

Sincerely,

Lee W. Cover
Environmental Manager
Hanson Aggregates Northern California

Attachment



March 21, 2008

001-09567-04

Mr. Jerry Wickham
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Work Plan for the Excavation of Petroleum Hydrocarbon-Affected Soil at the Former Hot Mix Asphalt Plant Area (AOC #1) of the Hanson Aggregates Radum Facility, 3000 Busch Road, Pleasanton, California, SLIC Case #RO0002941 and GeoTracker ID SLT19719376

Dear Mr. Wickham:

LFR Inc. (LFR) is pleased to present this work plan in response to the Alameda County Environmental Health (ACEH) letter dated January 11, 2007 (“the ACEH Letter”), regarding the environmental conditions in the former hot mix asphalt plant area of the Hanson Aggregates Northern California (“Hanson”) Radum Facility located at 3000 Busch Road in Pleasanton, California (“the Site”; Figures 1 and 2). In the ACEH Letter, ACEH presented technical comments regarding LFR’s summary report entitled “Additional Site Investigation Report for the Former Hot Mix Asphalt Plant Area (AOC #1), ACEH Case #RO0002941 and Geotracker Global ID #SLT19719376, Hanson Aggregates Radum Facility, 3000 Busch Road, Pleasanton, Alameda County, California,” dated December 21, 2007 (“the LFR Report”).

Background

In preparation for a property transfer between Hanson and Legacy Partners (“Legacy”), Legacy retained ENV America (ENV) to assist with due diligence related to the environmental conditions of the Site. During 2006 and 2007, ENV conducted several Phase I and Phase II environmental assessment investigations throughout the Hanson Radum property including at the Site. In late 2006, Hanson retained LFR to further characterize areas of potential environmental concern at the Site and subsequently in other areas of the property. At the request of ACEH, LFR prepared a site-wide characterization work plan that included summaries of site history and environmental conditions throughout the property. To better focus the investigation, LFR defined nine areas of concern (AOCs; Figure 2); AOC #1 is considered to be the Site in this work plan.

The Site consists primarily of the former hot mix asphalt plant area where historical activities included the use of paving oil, lubricants, and diesel fuel. Most of the structures associated with the former hot mix asphalt plant have been demolished. Currently visible at the Site are the concrete base of the truck scale, the base of the paving oil containment structure, several concrete pads, and



miscellaneous debris. Standing water and petroleum product have been observed in the paving oil containment structure and former truck scale foundation.

Recent Investigation at the Site and the LFR Report

During October 2007, LFR conducted an additional subsurface characterization investigation at the Site (AOC #1) and presented conclusions and recommendations in the LFR Report. The objectives of LFR's October 2007 investigations were:

- (1) To further characterize the lateral and/or vertical extent of petroleum hydrocarbons (primarily total petroleum hydrocarbons [TPH] as diesel [TPHd] and TPH as motor oil [TPHmo]) to the south, southwest, and northwest of the former asphalt plant;
- (2) To investigate the nature of the deep soil contamination identified in the northern half of the Site at approximately 30 to 40 feet below ground surface (bgs); and
- (3) To install five (subsequently increased to seven per ACEH request) new groundwater monitoring wells to monitor groundwater flow and quality over time.

These objectives were met by advancing 11 temporary soil borings to collect depth-discrete soil samples and five grab groundwater samples for laboratory analyses, collecting samples from the free product and from the deep soil contamination for specialized leaching and fingerprinting analyses, and installing seven new groundwater monitoring wells approximately around and in the vicinity of the former hot mix asphalt plant. The new wells were appropriately developed, and initial groundwater samples were collected for laboratory analyses. Based on the results of the October 2007 investigations and well installations, LFR concluded the following:

- The lateral and/or vertical extent of petroleum hydrocarbons in soil was sufficiently characterized at the Site.
- The deep soil contamination is relatively old, of limited extent, and immobile; was probably buried in place during historical mining operations; and is unlikely to further affect soil or significantly affect groundwater beneath the Site.
- The local groundwater flow direction in October 2007 was approximately to the west-northwest.
- Groundwater beneath the Site does not appear to have been significantly affected by TPH detected in soil beneath the Site.

LFR recommended initiation of a periodic groundwater monitoring and reporting program at the Site, comprised of sampling groundwater monitoring wells on a quarterly basis for approximately one year. If, after one year of quarterly monitoring, no significant concentrations of compounds are detected in samples collected from the groundwater monitoring wells, groundwater monitoring should cease and the wells should be abandoned.



In addition, LFR recommended that remaining debris and water and petroleum product in the paving oil containment structure be removed and properly disposed of, and that shallow soils affected by petroleum hydrocarbons be removed and confirmation sampling be conducted. The subject of this work plan is the excavation of shallow soil affected with petroleum hydrocarbons.

The ACEH Letter Technical Comments

ACEH generally concurred with the conclusions and recommendations in the LFR Report. In particular, ACEH requested that a work plan for soil excavation, removal, and confirmation sampling be prepared and submitted by March 21, 2008. This work plan provides the scope of work to excavate TPH-affected soil in localized areas in AOC #1.

Scope of Work

The scope of work for this work plan is as follows:

- Excavate areas of TPH-affected soil in AOC #1.
- Collect confirmation soil samples from the areas of excavation for laboratory analyses.
- Dispose of the excavated soil at an appropriate off-site landfill.
- Backfill excavated areas with clean fill.
- Prepare a summary report documenting the soil excavation activities.

It is LFR's understanding that Hanson plans to remove remaining surface structures and their contents for proper disposal. This work likely will be conducted in conjunction with the soil excavation activities proposed in this work plan. After surface structures are removed, LFR will inspect and screen the soil beneath the structures for indications of potentially affected shallow soil, for example, visible staining and odor. Confirmation soil samples from approximately 0.5 foot bgs will be collected in areas where the soil appears to have been affected by the former structures or their contents. If necessary, additional soil excavation and confirmation sampling may be conducted beneath former structures. Because the condition of the soil beneath the former structure currently is unknown, a scope of work specific to these activities is not presented herein.

Task 1: Pre-Field Activities

Prior to excavating TPH-affected soil at AOC #1, LFR will contact Underground Service Alert to notify them of the work, and will subcontract a private underground utility clearance contractor to clear the proposed excavation locations and nearby areas.

The site-specific Health and Safety Plan prepared by LFR for previous subsurface investigations at the Site will be updated to address health and safety concerns specific to the planned field



activities. Daily health and safety tailgate meetings will be conducted by the LFR field geologist prior to beginning any fieldwork, and fieldwork will be monitored to ensure that appropriate health and safety procedures are followed during the fieldwork. In accordance with Hanson’s standard facility operations, LFR staff and LFR’s subcontractors will attend on-site health and safety training conducted by a Hanson representative.

Task 2: Excavation Activities

The proposed areas of excavation are shown on Figures 3 and 4, and a summary of the estimated volume of soil proposed to be excavated is provided in Table 1. Initially, each area of excavation will be advanced to the proposed depths presented on Figure 4 and Table 1. These proposed excavation depths are based on analytical results of soil samples collected from soil borings previously advanced at the Site. When the proposed depth of the excavation is reached, confirmation soil samples will be collected. If visual observation and/or the analytical results from confirmation soil samples indicate that additional excavation is necessary, then the excavation will be extended laterally and/or vertically beyond the area proposed in this work plan. The maximum depth of each area of excavation will be 8 feet bgs. Although no regulatory-defined depth for soil excavation exists, excavating TPH-affected soil to a depth of 8 to 10 feet bgs is typically considered protective of human health for residential land use areas by the Department of Toxic Substances Control (DTSC). The proposed maximum excavation depth of 8 feet bgs would be a conservative total depth, considering that this Site is proposed for potential future industrial/commercial land use, not residential land use. In addition, 8 feet bgs generally will be deeper than future potential excavations, for example, for underground utilities or landscaping purposes.

Soil Cleanup Levels

LFR proposed applying the San Francisco Regional Water Quality Control Board (RWQCB) Environmental Screening Level (ESL) guidance for TPHd and TPHmo in soil at commercial sites where groundwater is a current or potential source of drinking water as the cleanup goals for the soil excavation (RWQCB November 2007).

Proposed Soil Cleanup Goals

Chemicals of Potential Concern	RWQCB ESL (mg/kg)
TPH as motor oil	2,500
TPH as diesel	83

Note: mg/kg = milligrams per kilogram



Excavation Procedures and Field Documentation

LFR will retain a California-licensed General Engineering Contractor to provide equipment and experienced personnel to conduct the excavation work. The personnel will have the appropriate Occupational Safety and Health Administration (OSHA) training for sites with affected soil and groundwater (HAZWOPER). Excavation activities will be directed by an LFR representative working under the direct supervision of a California Professional Geologist or Professional Engineer.

Excavated soil will be visually inspected and screened in the field using a photoionization detector (PID), a flame ionization detector (FID), or a similar instrument, to evaluate the presence of hydrocarbons. Field observations, including approximate excavation dimensions, locations and depths of confirmation soil samples, and field screening results, will be recorded on field reports.

Visual inspections of each excavation's sidewalls and bottom will be conducted during the excavation activities. Soil samples will be collected from the sidewalls of the excavation to document concentrations (if any) that may remain in place. Soil samples from the sidewalls will be field-screened with a PID, FID, or similar instrument, for the presence of petroleum hydrocarbons. In addition to the visual inspections and field screening, confirmation soil samples will be collected for laboratory analyses from the sidewalls and bottom of each excavation, as described below. If the visual inspection, the field screening, and/or the analytical results from the soil sampling warrant additional excavation, the excavation may be vertically deepened and/or expanded laterally if deemed feasible, safe, and appropriate. Excavations will not be advanced deeper than approximately 8 feet bgs.

Excavated TPH-affected soil will be profiled for disposal at an appropriate landfill. Based on the analytical results of the soil samples collected at the Site to date, excavated soils are expected to be disposed of at a Class III non-hazardous solid waste disposal facility, in accordance with the facility's waste soil disposal criteria.

Excavation Entry

Workers will not enter excavations greater than 4 feet in depth without appropriate protective systems such as benching or sloping or a soil wall-retaining structure. Access to the excavations by on-site personnel will be limited and strictly monitored. No confined space entry is anticipated for this project.

Vehicle and equipment entry to the excavations will be by a ramp or ramps advanced as each excavation progresses, as deemed appropriate by the selected excavation contractor.



Excavation Design, Process, and Equipment

Excavation of affected soil will continue until the proposed excavation dimensions are reached and/or the analytical results of the confirmation soil samples are below the proposed cleanup levels. Soil removal will be accomplished by use of earthmoving equipment (backhoes, articulated loaders, or other equipment as appropriate).

Temporary Storage Operations/Stock Pile Management

Excavated soil will either be temporarily stockpiled on-site for additional handling, including sampling for waste classification, or loaded directly into trucks and hauled off-site for disposal. If the soil is profiled for disposal using the existing data for soil samples collected at AOC #1, the soil could be loaded directly into trucks for transportation off-site.

If the soil is stockpiled, the stockpiled soil will be placed on plastic sheeting for temporary storage in a suitable location at the Site. Soil stockpiles will be spaced to allow continued site access as needed. Temporary berms will be constructed around the stockpile area to control runoff from draining from the wet soil and/or caused by precipitation. The soil stockpiles will be covered with plastic sheeting at the end of each workday and/or during events of significant precipitation. The plastic sheeting will be secured with sandbags or other suitable method. If necessary, the stockpiled soil will be sampled for waste disposal characterization as described below.

Dust Control

Dust control measures will be implemented during excavation activities. Dust suppressant measures may include spraying the area, haul and access roads, and stockpiles with water, and/or covering stockpiled soil with plastic or other appropriate material. If, during excavation activities, dust is observed in the area being excavated, appropriate dust suppression measures will be undertaken (e.g., spraying soil with water).

Confirmation Soil Sample Collection and Analyses

Soil samples will be collected from inside the excavation after the proposed dimensions of the excavation are reached and prior to backfilling. Sidewall samples are proposed to be collected at approximately 20 linear-foot intervals from each excavation. One soil sample is also proposed to be collected from the base of each excavation at approximately one sample for every 400 square feet of excavation area. For example, if an excavation is 20 feet long by 20 feet wide, four sidewall samples and one bottom sample would be collected and submitted for laboratory analyses.

The soil samples will be collected in clean, laboratory-supplied containers from soil collected from the backhoe bucket. The sample containers will be labeled with the sample identification, the time



and date of collection, the analysis requested, and the initials of the sampler. The samples will be stored in ice-chilled coolers and submitted to the laboratory under strict chain-of-custody protocols.

LFR will submit the soil samples to a state-certified laboratory approximately daily after sample collection. Each soil sample will be submitted for the analysis of TPHd and TPHmo using EPA test Method 8015, modified, after silica-gel cleanup. If appropriate, soil samples will be analyzed on a rapid turnaround schedule so that analytical results can be reviewed and the need for additional soil excavation can be evaluated and conducted while the excavation contractor is at the Site.

Backfill

After each excavation has been advanced at least to the depth and extent proposed in this scope of work (Table 1 and Figure 4), and results from the confirmation soil samples indicate that the excavation has been advanced sufficiently to remove TPH-affected soil, the excavation will be backfilled with clean fill material. If considered appropriate, LFR proposes to backfill the excavation with fill material that is already stockpiled on-site, presumably from previous mining activities. Representative composite soil samples will be collected from the stockpiled material at a sample rate of approximately one four-point composite soil sample per 250 cubic yards. This sampling frequency is consistent with the DTSC's October 2001 "Information Advisory: Clean Imported Fill Material" guidance document. This document is a non-regulatory fact sheet specific to sensitive land use properties (e.g., hospitals and schools) and, as such, is used only as a guidance for sample frequency. The stockpile soil samples will be analyzed for TPHd, TPHmo, TPH as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds), and LUFT metals concentrations. If concentrations are below the RWQCB ESLs, and/or are otherwise considered acceptable, the soil will be deemed appropriate for backfilling the excavations. If necessary, additional clean fill material may be imported from off-site soil sources. Any imported clean fill material will similarly be sampled and analyzed for TPHd, TPHmo, TPHg, BTEX, and metals, and also for methyl tertiary-butyl ether (MTBE) concentrations.

Task 3: Reporting

LFR will prepare and submit to ACEH a report summarizing the excavation activities described above. The report will include a summary of the field observations made at the time of excavation, the volume of soil removed from the Site, a summary of the analytical results of the confirmation soil samples, field forms, chain-of-custody forms, and certified laboratory analytical reports.

Schedule

After receiving approval from ACEH for this work plan, LFR will oversee the proposed excavation activities and collect the appropriate confirmation samples as described above. Subsequently, LFR will submit the summary report to ACEH within 45 days after excavation work is complete.



In accordance with ACEH, all reports will be uploaded to the ACEH file transfer protocol site and to the RWQCB Geotracker database.

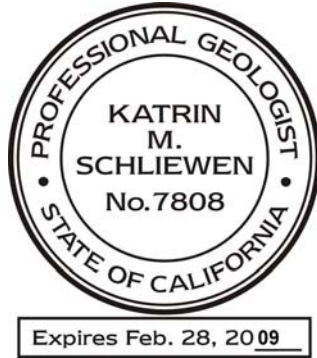
Closure

Please contact either of the undersigned at (510) 652-4500 or Lee Cover of Hanson at (925) 426-4170 if you have questions regarding the scope of work presented in this work plan.

Sincerely,

Katrin Schliewen, P.G. (7808)
Senior Hydrogeologist

Ron Goloubow
Senior Associate Geologist



Attachments:

- Table 1: Proposed Soil Excavation Areas
- Figure 1: Location Map
- Figure 2: Property Area Showing Areas of Concern
- Figure 3: AOC #1, TPH Concentrations in Soil and Grab Groundwater Samples
- Figure 4: AOC #1, Proposed Soil Excavation Areas

cc: Lee Cover, Hanson Aggregates Northern California

Table 1
Proposed Soil Excavation Areas and Volumes
Former Hot Mix Asphalt Plant Area
Hanson Radum Facility, 3000 Busch Road, Pleasanton, California

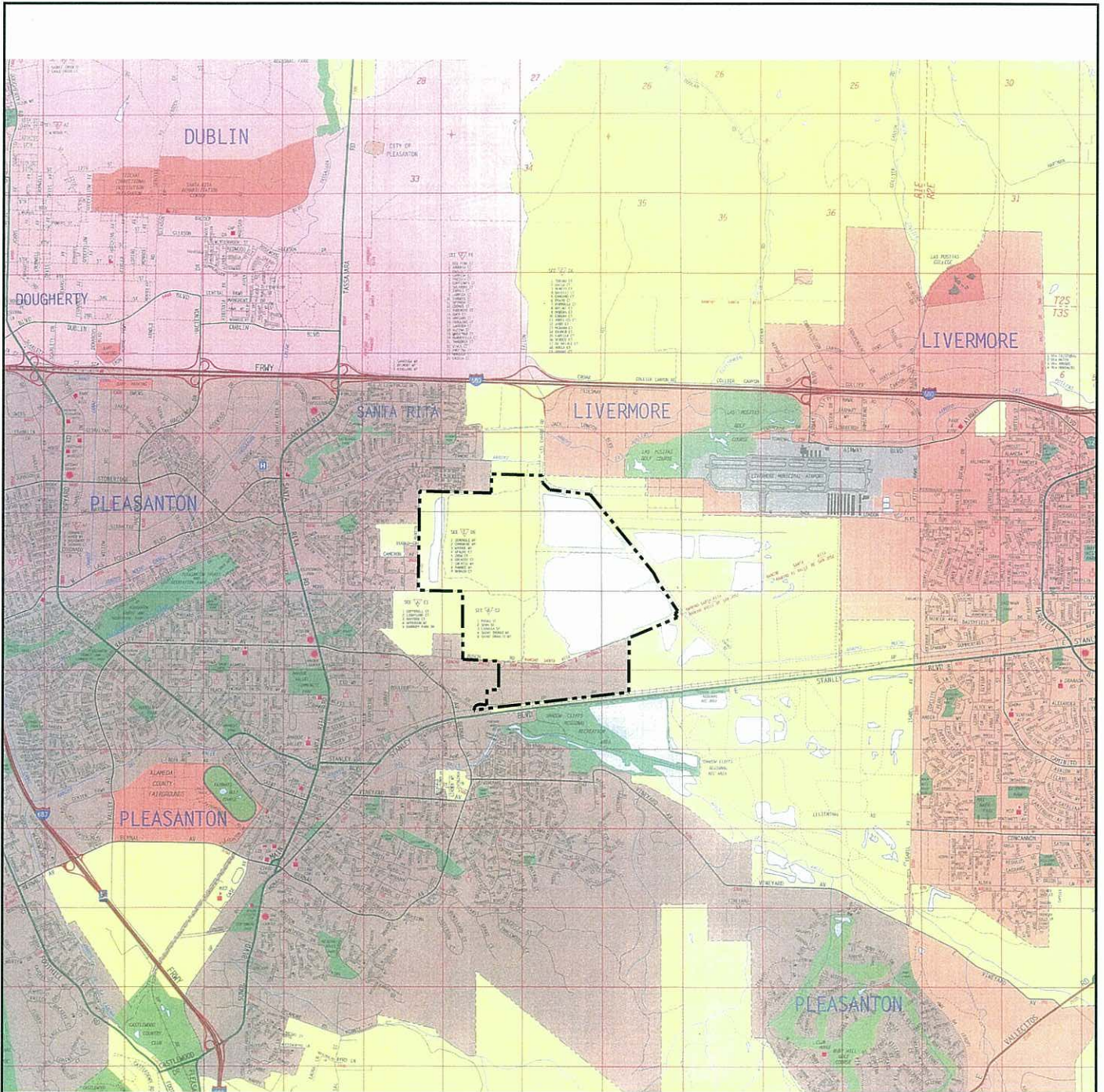
Area	Proposed Excavation Size			Volume (cubic feet)	Volume (cubic yards) ¹	Weight (tons) ²
	Width (feet)	Length (feet)	Depth (feet bgs)			
<i>Southwest and West of Former Hot Mix Asphalt Plant</i>						
CS1 Area	20	20	4	1,600	59	101
B6/B32 Area	20	40	6	4,800	178	302
<i>Former Hot Mix Asphalt Plant</i>						
PO1 Area	20	20	8	3,200	119	201
<i>Northwest and North of Former Hot Mix Asphalt Plant</i>						
EB30 Area	20	20	6	2,400	89	151
B35 Area	20	20	6	2,400	89	151
SR3 Area	20	20	8	3,200	119	201
SR2/B-3 Area	20	50	6	6,000	222	378
B16 Area	20	20	5	2,000	74	126
Total of All Areas				25,600	948	1,612

Notes:

feet bgs = feet below ground surface

¹ Based on 1 cubic yard = 27 cubic feet

² Assume 1 cubic yard of soil weighs 1.7 tons



Source: Thomas Guide

EXPLANATION

----- Approximate Property Boundary



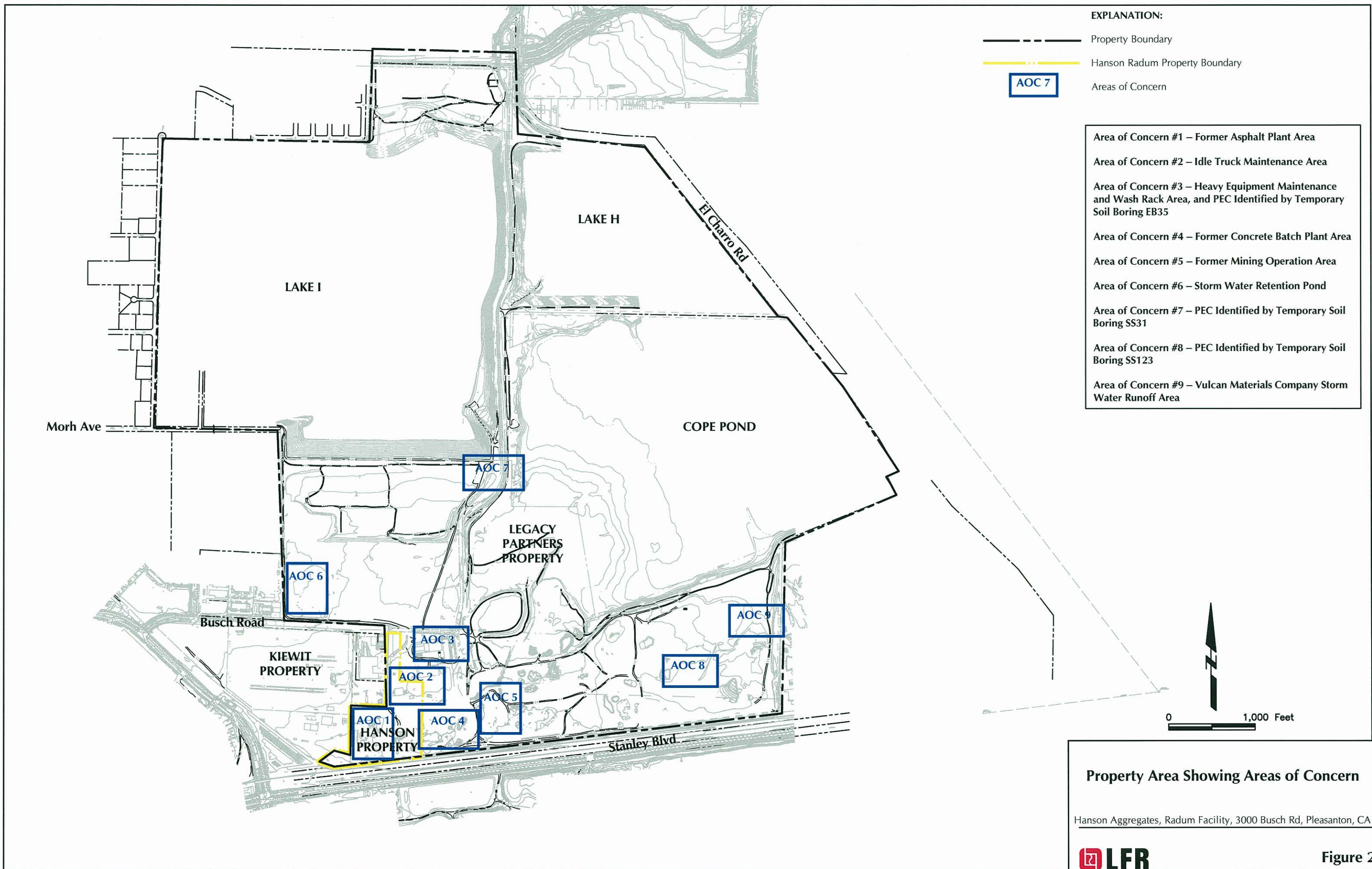
0 5,000 Feet
APPROXIMATE SCALE

Location Map


Hanson Aggregates, Radum Facility, 3000 Busch Rd, Pleasanton, CA



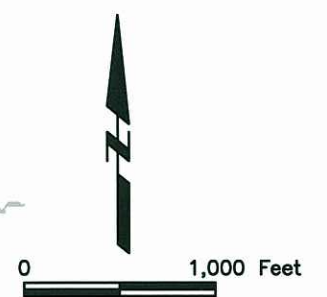
Figure 1



EXPLANATION:

-  Property Boundary
-  Hanson Radum Property Boundary
-  Areas of Concern

- Area of Concern #1 – Former Asphalt Plant Area
- Area of Concern #2 – Idle Truck Maintenance Area
- Area of Concern #3 – Heavy Equipment Maintenance and Wash Rack Area, and PEC Identified by Temporary Soil Boring EB35
- Area of Concern #4 – Former Concrete Batch Plant Area
- Area of Concern #5 – Former Mining Operation Area
- Area of Concern #6 – Storm Water Retention Pond
- Area of Concern #7 – PEC Identified by Temporary Soil Boring SS31
- Area of Concern #8 – PEC Identified by Temporary Soil Boring SS123
- Area of Concern #9 – Vulcan Materials Company Storm Water Runoff Area



Property Area Showing Areas of Concern

Hanson Aggregates, Radum Facility, 3000 Busch Rd, Pleasanton, CA



Figure 2

