Appendix D-2

Soil Vapor Survey



Environmental Assessments and Solutions

4299 MacArthur Blvd., Suite 107 • Newport Beach, CA 92660 (949) 476-8922 • FAX (949) 474-3222

May 25, 2017

Mr. David Garcia SANDSTONE PROPERTIES 10877 Wilshire Boulevard, Suite 1105 Los Angeles, CA

Re: Soil Vapor Survey 1330 W. Pico Boulevard, Los Angeles Centec Project #0517030-A

Dear Mr. Garcia:

Centec Engineering, Inc. is pleased to present the following information pertaining to results of a subsurface soil vapor survey conducted at the above-referenced subject property. Pursuant to your request, the work was conducted in order to determine if significant hazardous waste conditions may be present from the former operation of a banknote printing business at the site. Centec understands that the environmental due diligence is being conducted in order to assist Sandstone Properties in its review of the environmental integrity of the property at 1330 W. Pico Blvd.

Based on our review of a January 2002 "Phase I Environmental Site Assessment" prepared for the 1330 W. Pico Boulevard property by LFR Levine-Frinke (LFR), the property is located on the space between Pico Blvd. on the north, and the 110 Freeway on the east, 16th Street on the south, and Albany Street on the west, but not including a church on the southwest corner (100'x150') of that area. LFR's research indicated the property was used for residential purposes, with "a few stores," from at least 1894 until the early 1960s, and was improved with the current 150,000 square-foot brick building in the late 1960s. A banknote production business occupied the two-story building from construction until the 1990s, and records and observations indicated "printing presses, inks, dyes and paper pressing operations were used," and the company "manufactured their own printing plates on site." Two clarifiers had been installed inside the building, a sump and floor drain system was in use, a pit for holding inks and dyes and an emergency generator were located outside the east wall of the building, and various hazardous wastes were generated at the site.



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Based in the potential concerns identified by LFR, a limited subsurface investigation was conducted at the site by LFR on Jan 28, 2002. Six soil borings were completed to collect and analyze soil samples at that time. As summarized in their Feb 7, 2002 "Limited Phase II Investigation" report, borings were completed adjacent to the clarifier in the east side of the building, adjacent to a "suspected clarifier" in the west side of the building, and by the exterior pit and generator on the east side of the building. Laboratory analytical results identified no detectable degreasing solvents (or volatile organic compounds - VOCs) or unusual pH imbalances in the 7 soil samples analyzed. Various metals were detected, including slightly elevated levels of lead, chromium, and nickel at 5-6 feet below ground surface (bgs) adjacent to the clarifier on the east side. Soils were noted to be primarily silty sands, with sand and gravel evident, and the interior borings encountered refusal at 9-10 feet bgs which prevented deeper sampling. LFR suggested the soils by the clarifier were not of significant concern but may require additional actions if disturbed. The work was completed to assist with a new use of the site by LAUSD Police training facility, which then occupied the site until recently.

Based on Centec's reviews of information and available research, it appeared prudent to conduct additional subsurface investigation utilizing soil vapor sampling. Specifically concerns were evident that only limited soil sampling was conducted at 1330 W. Pico Blvd., and it was considered possible that soil sampling may have not detected VOCs in the sandy soils and did not investigate more than two small areas within the building's interior.

In order to assist with your due diligence for the sites, Centec was retained to oversee a soil vapor survey to investigate the subsurface soils at the Pico Blvd, and 11th St. sites. The investigation was intended to determine if common cleaning or degreasing solvents, benzene or other gasoline-related compounds, or other volatile organic compounds (VOCs) may be present. The sampling was conducted on May 15, 2017.

Centec retained Optimal Technology to conduct the soil vapor testing and analyses. Optimal is a qualified vender to perform this testing service, and its mobile laboratory is certified by the State of California. Optimal collected vapor samples from 11 locations at 1330 W. Pico Blvd. Site Plans are included at the end of this report depicting the sample locations, including a Site Plan for LFR's Phase II report for Pico Blvd. The samples were collected following usual field techniques recommended by DTSC, and described in Optimal's reports included with this cover letter. All of the samples were analyzed immediately on-site in Optimal's state-certified mobile laboratory. Soil vapor testing was determined to be the most effective testing



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method since vapor sampling covers an extended area at each location (as vapors are drawn into the probe from the surrounding soils) than would be possible by discrete soil sampling.

The 11 vapor sample locations at 1320 W. Pico Blvd. were situated in areas deemed to be the most likely to have been impacted if leaks or spills from the former printing activities had occurred. Centec inspected the facility, which is now vacant and unoccupied, and located the clarifier on the east side that had been investigated by LFR, as well as the second 4-stage clarifier near the northwest corner of the building which had been indicated by research but which was not located by LFR in 2002. Centec located LFR's borings SB5 and SB6 nearby to the south by what appeared to be plumbing features, but clearly not a clarifier. Centec also noted several cuts and disturbance in the concrete floor which had appeared to have been a series of drain lines in the east side of the building's main production area and a former equipment area on the south side. The ink sump, generator and empty AST were also located outside the east wall. Although indicated to be of unknown use or contents by LFR, it was marked for storing diesel fuel, and was most evidently used to supply the nearby emergency generator.

Based on the inspection, 11 locations were chosen to representatively investigate the site. All of the samples were collected at a depth of 5 feet bgs, Sample SV1 and SV2 were collected adjacent to and slightly northeast of the northwest clarifier. Sample SV3 was collected near the south end of the clarifier and near LFR's boring Sample SV4 was collected farther to the south near former SB6 for reference. boring SB5. Sample SV5 was collected in the south side of the main production area in an area that appeared to have been cut out or disturbed by the former use of the equipment. Samples SV6 and SV7 were collected among various floor drains and drain lines (or filled trenches) in the east side of the room. Sample SV8 was collected adjacent to the eastern clarifier, and Sample SV9 was collected to the southwest of the clarifier near a former possible sump. Finally, Samples SV10 and SV11 were collected outside adjacent to the ink collection sump and between the generator and AST. These locations have been added to a Site Plan previously prepared by LFR and included at the end of this report. All of the samples were collected at representative depths of 5 feet below ground surface within dry silty sand soils.

All of the vapor samples (plus two duplicate samples) were immediately analyzed in Optimal's state-certified mobile laboratory for Total Petroleum Hydrocarbons (TPH) as gasoline and a complete scan of common industrial VOCs. As shown on Optimal's summary of "Soil Vapor Results" for each site, no detectable concentrations of any



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of the compounds of concern were identified. Both of the Optimal reports are included as an attachment to this report.

Based on the work and analytical results completed, it does not appear that significant hazardous waste conditions associated with the former use of the 1330 W. Pico Boulevard site for banknote printing or 1320 W. 11th Street site for nearby gasoline contamination are present throughout the areas investigated. Accordingly, no further actions would appear necessary at this time.

Sincerely, **CENTEC ENGINEERING, INC.**

Collas ren

Steven N. Collins, REA Principal

Attachments: Site Plan – 1330 W. Pico Blvd. Report by Optimal Technology





May 16, 2017

Mr. Steven Collins Centec Engineering 4299 MacArthur Blvd., Suite 107 Newport Beach, CA 92660

Dear Mr. Collins:

This letter presents the results of the soil vapor investigation conducted by Optimal Technology (Optimal), for Centec Engineering on May 15, 2017. The study was performed at 1330 W. Pico Blvd., Los Angeles, California.

Optimal was contracted to perform a soil vapor survey at this site to screen for possible chlorinated solvents and aromatic hydrocarbons. The primary objective of this soil vapor investigation was to determine if soil vapor contamination is present in the subsurface soil.

Gas Sampling Method

Gas sampling was performed by hydraulically pushing soil gas probes to a depth of 5.0 feet below ground surface (bgs). An electric rotary hammer drill was used to drill a 1.0-inch diameter hole through the overlying surface to allow probe placement when required. The same electric hammer drill was used to push probes in areas of resistance during placement.

At each sampling location, an electric vacuum pump set to draw 0.2 liters per minute (L/min) of soil vapor was attached to the probe and purged prior to sample collection. Vapor samples were obtained in Hamilton gas-tight syringes by puncturing tubing which connects the sampling probe and the vacuum pump. New tubing was used at each sampling point to prevent cross contamination. Samples were immediately injected into the gas chromatograph after collection.

All analyses were performed on a laboratory grade Hewlett Packard model 5890 Series II gas chromatograph equipped with a Flame Ionization Detector (FID) and an Electron Capture Detector (ECD). Restec wide bore capillary columns using hydrogen as the carrier gases were used to perform all analysis. All results were collected on a personal computer utilizing Hewlett Packard's PC based chromatographic data collection and handling system.

Quality Assurance

5-Point Calibration

The initial five-point calibration consisted of 20, 50, 100, 200 and 500 ul injections of the calibration standard. A calibration factor on each analyte was generated using a best fit line method using the HP data system. If the r^2 factor generated from this line was not greater than 0.990, an additional five-point calibration would have been performed. Method reporting limits were calculated to be 0.01-1.0 micrograms per Liter (ug/L) for the individual compounds.

A daily calibration check and end of run calibration check was performed using a pre-mixed standard supplied by Scotty Analyzed Gases. The standard contained common halogenated solvents and aromatic hydrocarbons (see Table 1). The individual compound concentrations in the standards ranged between 0.025 nanograms per microliter (ng/ul) and 0.25 ng/ul.

	TABLE 1	
Dichlorodifluoromethane	Carbon Tetrachloride	Chloroethane
Trichlorofluoromethane	1,2-Dichloroethane	Benzene
1,1-Dichloroethene	Trichloroethene	Toluene
Methylene Chloride	1,1,2-Trichloroethane	Ethylbenzene
trans-1,2-Dichloroethene	Tetrachloroethene	m-/p-Xylene
1,1-Dichloroethane	Chloroform	o-Xylene
cis-1,2-Dichloroethene	1,1,1,2-Tetrachloroethane	Vinyl Chloride
1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	Freon 113
4-Methyl-2-Pentanone	Cyclohexane	Acetone
Chlorobenzene	2-Butanone	Isobutane

Sample Replicates

A replicate analysis (duplicate) was run to evaluate the reproducibility of the sampling system and instrument. The difference between samples did not vary more than 20%.

Equipment Blanks

Blanks were run at the beginning of each workday and after calibrations. The blanks were collected using an ambient air sample. These blanks checked the septum, syringe, GC column, GC detector and the ambient air. Contamination was not found in any of the blanks analyzed during this investigation. Blank results are given along with the sample results.

Tracer Gas Leak Test

A tracer gas was applied to the soil gas probes at each point of connection in which ambient air could enter the sampling system. These points include the top of the sampling probe where the tubing meets the probe connection and the surface bentonite seals. Isobutane was used as the tracer gas. No Isobutane was found in any of the samples collected.

Purge Volume

The standard purge volume of three volumes was purged in accordance with the July 2015 DTSC/RWQCB Advisory for Active Soil Gas Investigations.

Shut-in Test

A shut-in test was conducted prior to purging or sampling each location to check for leaks in the above-ground sampling system. The system was evaluated to a minimum measured vacuum of 100 inches of water. The vacuum gauge was calibrated and sensitive enough to indicate a water pressure change of at least 0.5 inches.

Scope of Work

To achieve the objective of this investigation a total of 12 vapor samples were collected from 11 locations at the site. Sampling depths, vacuum readings, purge volume and sampling volumes are given on the analytical results page. All the collected vapor samples were analyzed on-site using Optimal's mobile laboratory.

Subsurface Conditions

Subsurface soil conditions at this site offered sampling flows at 0" water vacuum. Depth to groundwater was unknown at the time of the investigation.

Results

During this vapor investigation, eleven samples contained levels of Tetrachloroethene (PCE) ranging from 0.15 ug/L to 1.43 ug/L. One sample contained 0.95 ug/L of Trichloroethene (TCE). None of the other compounds listed in Table 1 above were detected above the listed reporting limits. A complete table of analytical results is included with this report.

Disclaimer

All conclusions presented in this letter are based solely on the information collected by the soil vapor survey conducted by Optimal Technology. Soil vapor testing is only a subsurface screening tool and does not represent actual contaminant concentrations in either the soil and/or groundwater. We enjoyed working with you on this project and look forward to future projects. If you have any questions, please contact me at (877) 764-5427.

Sincerely,

Allia Son

Attila Baly Project Manager



SOIL VAPOR RESULTS

Site Name: 1330 W. Pico Blvd., Los Angeles, CA Analyst: A. Baly Collector: A. Baly Method: Modified EPA 8021B Lab Name: Optimal Technology Inst. ID: HP-5890 Series II

Detectors: FID and ECD

Date: 5/15/17

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SAMPLE ID	BLANK-1	SV-1	SV-2	SV-3	SV-4	SV-5	SV-6	SV-7
Sampling Depth (Ft.)	N/A	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Purge Volume (ml)	N/A	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Vacuum (in. of Water)	N/A	0	0	0	0	0	0	0
Injection Volume (ul)	500/2500	500/2500	500/2500	500/2500	500/2500	500/2500	500/2500	500/2500
Dilution Factor (ECD/FID)	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

COMPOUND	REP. LIMIT	CONC (ug/L)							
Dichlorodifluoromethane	1.00	ND							
Chloroethane	1.00	ND							
Trichlorofluoromethane	1.00	ND							
Freon 113	1.00	ND							
Methylene Chloride	1.00	ND							
1,1-Dichloroethane	1.00	ND							
Chloroform	1.00	ND							
1,1,1-Trichloroethane	1.00	ND							
Carbon Tetrachloride	0.02	ND							
1,2-Dichloroethane	0.04	ND							
Trichloroethene (TCE)	0.10	ND	0.95						
1,1,2-Trichloroethane	1.00	ND							
Tetrachloroethene (PCE)	0.10	ND	0.50	0.23	0.15	0.78	0.26	0.19	0.41
1,1,1,2-Tetrachloroethane	1.00	ND							
1,1,2,2-Tetrachloroethane	1.00	ND							
Vinyl Chloride	0.01	ND							
Acetone	1.00	ND							
1,1-Dichloroethene	1.00	ND							
trans-1,2-Dichloroethene	1.00	ND							
2-Butanone (MEK)	1.00	ND							
cis-1,2-Dichloroethene	1.00	ND							
Cyclohexane	1.00	ND							
Benzene	0.03	ND							
4-Methyl-2-Pentanone	1.00	ND							
Toluene	1.00	ND							
Chlorobenzene	1.00	ND							
Ethylbenzene	0.40	ND							
m/p-Xylene	1.00	ND							
o-Xylene	1.00	ND							
TPH-g	5.00	ND							
Isobutane (Tracer Gas)	1.00	ND							

Note: ND = Below Listed Reporting Limit

1667 Cross Bridge Place, Thousand Oaks, CA 91362 • Toll Free (877) SOIL GAS (764-5427) • (818) 734-6230 • Fax (818) 734-6235



SOIL VAPOR RESULTS

Site Name: 1330 W. Pico Blvd., Los Angeles, CA Analyst: A. Baly Collector: A. Baly Method: Modified EPA 8021B Lab Name: Optimal Technology Inst. ID: HP-5890 Series II

Detectors: FID and ECD

Date: 5/15/17

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SAMPLE ID	S
Sampling Depth (Ft.)	
Purge Volume (ml)	1
Vacuum (in. of Water)	
Injection Volume (ul)	500
Dilution Factor (ECD/FID)	

SV-8	SV-9	SV-10	SV-11	SV-11 Dup		
5.0	5.0	5.0	5.0	5.0		
1,500	1,500	1,500	1,500	1,500		
0	0	0	0	0		
500/2500	500/2500	500/2500	500/2500	500/2500		
1/1	1/1	1/1	1/1	1/1		

COMPOUND	REP. LIMIT	CONC (ug/L)						
Dichlorodifluoromethane	1.00	ND	ND	ND	ND	ND		
Chloroethane	1.00	ND	ND	ND	ND	ND		
Trichlorofluoromethane	1.00	ND	ND	ND	ND	ND		
Freon 113	1.00	ND	ND	ND	ND	ND		
Methylene Chloride	1.00	ND	ND	ND	ND	ND		
1,1-Dichloroethane	1.00	ND	ND	ND	ND	ND		
Chloroform	1.00	ND	ND	ND	ND	ND		
1,1,1-Trichloroethane	1.00	ND	ND	ND	ND	ND		
Carbon Tetrachloride	0.02	ND	ND	ND	ND	ND		
1,2-Dichloroethane	0.04	ND	ND	ND	ND	ND		
Trichloroethene (TCE)	0.10	ND	ND	ND	ND	ND		
1,1,2-Trichloroethane	1.00	ND	ND	ND	ND	ND		
Tetrachloroethene (PCE)	0.10	1.43	1.00	ND	0.23	0.22		
1,1,1,2-Tetrachloroethane	1.00	ND	ND	ND	ND	ND		
1,1,2,2-Tetrachloroethane	1.00	ND	ND	ND	ND	ND		
Vinyl Chloride	0.01	ND	ND	ND	ND	ND		
Acetone	1.00	ND	ND	ND	ND	ND		
1,1-Dichloroethene	1.00	ND	ND	ND	ND	ND		
trans-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND		
2-Butanone (MEK)	1.00	ND	ND	ND	ND	ND		
cis-1,2-Dichloroethene	1.00	ND	ND	ND	ND	ND		
Cyclohexane	1.00	ND	ND	ND	ND	ND		
Benzene	0.03	ND	ND	ND	ND	ND		
4-Methyl-2-Pentanone	1.00	ND	ND	ND	ND	ND		
Toluene	1.00	ND	ND	ND	ND	ND		
Chlorobenzene	1.00	ND	ND	ND	ND	ND		
Ethylbenzene	0.40	ND	ND	ND	ND	ND		
m/p-Xylene	1.00	ND	ND	ND	ND	ND		
o-Xylene	1.00	ND	ND	ND	ND	ND		
TPH-g	5.00	ND	ND	ND	ND	ND		
Isobutane (Tracer Gas)	1.00	ND	ND	ND	ND	ND		

Note: ND = Below Listed Reporting Limit