Appendix H

Phase I Environmental Site Assessment

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT
APN #006-0222-025
State-owned Office Building Site
1215 O Street
Sacramento, CA 95814

Prepared for:

Ascent Environmental, Inc.
455 Capital Mall, Suite 300
Sacramento, CA 95814

Prepared by:

The Sanberg Group, Inc.
14565 Valley View Ave., Suite Z
Santa Fe Springs, California 90670

Contact: Mr. Dale Schneeberger

February 28, 2017

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Appendices

1.0 Summary of Assessment

The Sanberg Group, Inc. (Sanberg) was contracted by Ascent Environmental, Inc. to conduct a Phase I Environmental Site Assessment (ESA) of the State-owned office building, located at 1215 O Street, in the City of Sacramento, Sacramento County, California (Project site). Also included is the surface parking lot immediately to the south across O Street. The Project consists of:

- Demolition of a vacant four-story office building at 1215 O Street;
- Construction of a new office building with approximately 340,000 gross square feet; and
- Repaving and installation of solar array infrastructure in the surface parking area.

The project includes Assessor Parcel Number (APN) 006-0222-025, legal description of T8N, R4E (latitude 38.5742970° north and longitude 121.4925690° west) in general conformance with the scope and limitations of ASTM Practice (E 1527-13). In addition, this ESA was performed in compliance with ASTM Standard E 2600-10.

Testing was performed on various building materials for PCB, asbestos and lead-based paint at representative locations throughout the Project site building. The results of the sampling identified each of these potentially hazards substances in the samples collected. Based on the age of the building and results of the sampling these represent recognized environmental conditions (REC). Other RECs include abandoned cleaning chemicals, the potential for mold, and the presence of universal wastes; that is, waste that is classified as hazardous but containing materials that are very common.

Based upon the information obtained during this assessment, it is our opinion that the potential for subsurface volatile organic compound (VOC) contamination at the Project site at concentrations that may require statutory cleanup is **low** with no vapor encroachment condition (VEC) identified.

Current and past activities in proximity of the Project site do not appear to have impacted the Project site.

2.0 Purpose, Scope, and Involved Parties

The Sanberg Group, Inc. (Sanberg) was contracted by Ascent Environmental, Inc. to conduct a Phase I Environmental Site Assessment (ESA) of the State-owned office building located at 1215 O Street, in the City of Sacramento, Sacramento County, California (Project site) in general conformance with the scope and limitations of ASTM Practice (E 1527). The proposed 1215 O Street Office Project (Project) consists of a vacant four-story State-owned office building. It is located on Assessor Parcel Number (APN) 006-0222-025, legal description of T8N, R4E (latitude 38.5742970°north and longitude 121.4925690° west) in general conformance with the scope and limitations of ASTM Practice (E 1527-13). In addition, this ESA was performed in compliance with ASTM Standard E 2600-10.

Also included in this Phase I ESA is the lot immediately south of the Project site across O Street. This surface lot is used for parking and is paved with asphaltic concrete (asphalt). It includes APNs 006-0222-001 – 006-0222-007. Development of this area would include removal of the existing pavement, over-excavation and re-compaction of the native soil, and installation of solar array infrastructure that would include construction of shallow support footings.

The intent of this Phase I ESA is to evaluate areas of potential environmental concern or recognized environmental conditions (RECs), including potential vapor encroachment conditions (VEC), based on available information of current and past land uses at or near the Site involving the use, storage or release of hazardous materials. For the purposes of this report, hazardous materials are defined as those substances listed as hazardous or extremely hazardous in Title 22 of the California Code of Regulations. The scope of the authorized site assessment work included site reconnaissance; review of available public data, historical records, topographic maps and aerial photographs; and the preparation of this report.

3.0 Project Site Description

3.1 Project Site Location

The Project site is located in downtown Sacramento, Sacramento County, California. It is approximately 0.85 miles east of the Interstate-5 freeway/Sacramento River and 0.75 miles north of the Interstate-80 freeway (Figure 3-1).

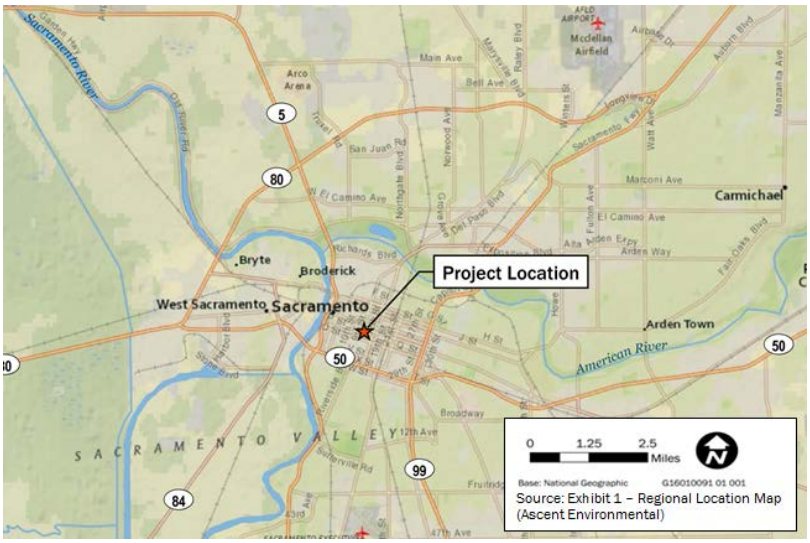

Figure 3-1 Project Location Map

The location, in which the proposed Project is planned to be implemented, is situated within an urban environment within the vicinity and southeast of the State Capitol building and the associated Capitol Park (Figure 3-2). The immediate area surrounding the Project site includes multi-story government buildings, apartments, and ground-level surface parking. The California Department of Veteran Affairs building is located immediately adjacent to the east and the California Department of Food and Agriculture building is located immediately north with a sky bridge connecting the two buildings over an alleyway.

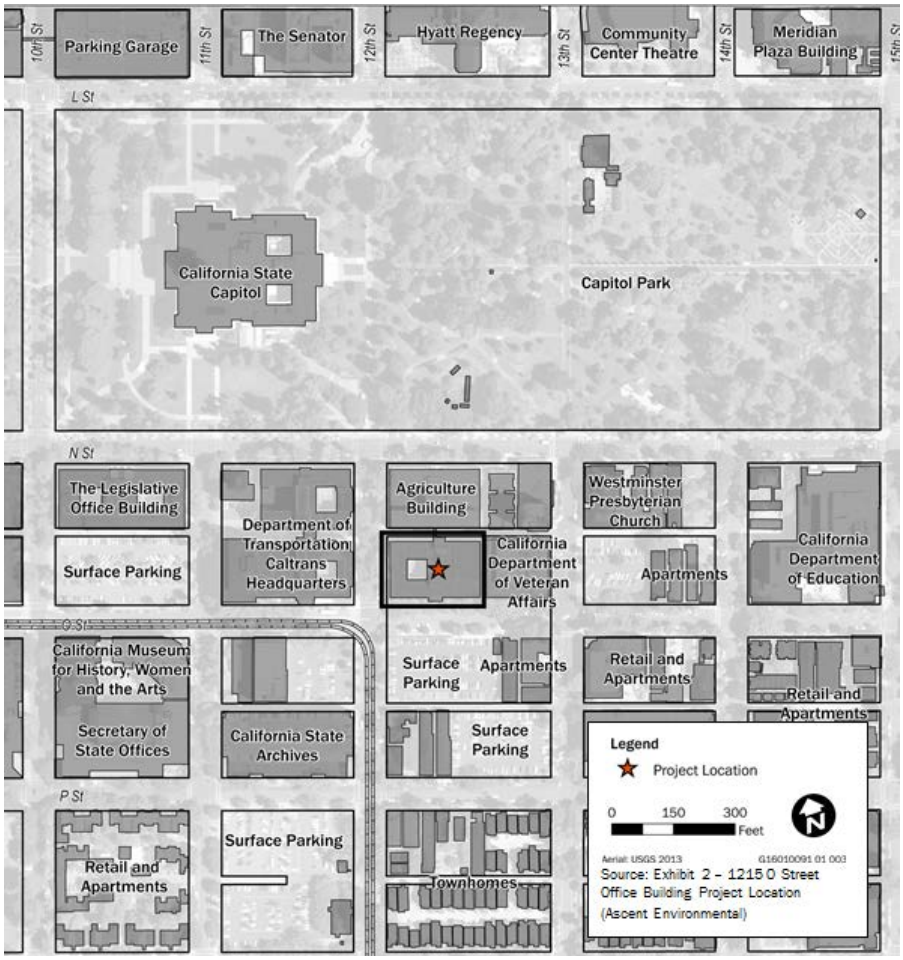

Figure 3-2 Project Site Map

3.2 Proposed Project

The proposed Project consists of the demolition of a vacant four-story State-owned office building at 1215 O Street and the construction of a new office building with approximately 340,000 gross square feet. The proposed development is located within APN 006-0222-025 (State-owned office building) and APNs 006-0222-001 – 006-0222-007 associated with the ground-level surface parking area to the south across O Street.

The new office building would have a maximum height of 150 feet and a proposed occupancy of approximately 1,000 – 1,200 staff. It would include ground-level commercial space. The new building would be connected to the State-owned

Central Plant located to the west for heating and cooling. An existing ground-level surface parking area immediately south of O Street is being considered for a solar array over the parking spaces to provide power to the building.

3.3 Physical Setting

Topography

The topography in area surrounding the proposed Project is on nearly level to very gently sloping ground. Variations in topography in the immediate region include stream channels, levees, terraces, overflow basins and small areas of floodplain, with fluvial erosion and deposition acting as the main geomorphic processes (USDA 1998). It is a relatively flat alluvial plain with ground surface elevations ranging between about 17 feet and 33 feet above mean sea level (+17 to +33 feet msl). The elevation at the Project site is reported in the Environmental Data Resources, Inc. (EDR) report to be 20 feet msl. The topographic gradient is to the south-southwest. The Project site is in an urban setting with numerous buildings and considerable surface paving including streets, sidewalks and parking areas.

Geology

The Project site is located on a relatively flat alluvial plain within the Great Valley geomorphic province. The Great Valley is an alluvial plain about 50 miles wide and 400 miles long in the central part of California, and is a trough in which sediments have been deposited almost continuously since the Jurassic Period. Its northern area is the Sacramento Valley, drained by the Sacramento River and its southern area is the San Joaquin Valley drained by the San Joaquin River.

The Project site is located at the southeastern end of the Sacramento Valley, an alluvial plain composed of a deep sequence of sediments derived from erosion of the Coast Ranges to the west and Sierra Nevada Mountains to the east, within the confines of a structural trough. The thickness of the alluvial deposits beneath the Project site is approximately 8,000 feet (Hackel 1966: Figure 1); however, a minimum of 60,000 feet of Mesozoic sediments consisting of siltstone, claystone, and sandstone of predominantly marine origin were laid down in the area west of the present margin of the Sacramento Valley (Hackel 1966: 217), and west of the Project site. The uppermost part of the alluvial plain is comprised of Holocene age Basin Deposits and Pleistocene age Riverbank Formation sediments, both alluvial in origin. These alluvial deposits are underlain by undifferentiated early Tertiary age marine deposits which overlie upper Cretaceous age deposits of the Great Valley Sequence. The sedimentary sequence rests on a basement complex composed of metamorphosed Paleozoic and Mesozoic sediments, volcanics, and granites extending west from the Sierra Nevada Mountains. Refer to Table 3-1 for summary of the geologic units.

TABLE 3-1
GENERAL DESCRIPTIONS AND CHARACTERISTICS
OF THE GEOLOGIC FORMATIONS

Symbol	Unit	Age	Description
Qb	Basin Deposits	Quaternary - Holocene	Alluvium (exposed mostly in the northwest and along the Sacramento River)
Qr	Riverbank Formation	Quaternary – Pleistocene	Alluvium (exposed over most of the project area)
Tmu	Marine Deposits	Tertiary	Undifferentiated early Tertiary marine deposits beneath Sacramento Valley
Ku	Great Valley Sequence	Upper Cretaceous	Includes the Winters Sand (Formation); reservoir rock,

TABLE 3-1
GENERAL DESCRIPTIONS AND CHARACTERISTICS
OF THE GEOLOGIC FORMATIONS

Symbol	Unit	Age	Description
			gas-bearing sand unit
Jmx	Metamorphic Rocks	Jurassic (?)	Paleozoic - Mesozoic metamorphic sediments, volcanics, and granites rocks of the Sierra Nevada

Sources: Regional Geologic Map, Sacramento Quadrangle, 1981; Hackel, Otto, 1966.

Soils

Based on data provided in the November 29, 2016 EDR Radius Map Report (EDR 2016), the soil at and surrounding the Project site is classified as Urban Land of variable surface texture and as non-hydric. Soil located approximately 1/16th mile northeast of the Project site is classified as Columbia sandy loam. This soil type is characterized as hydrologic group Class A-High infiltration rates; soils are deep, well drained to excessively drained sands and gravels. Clay content increases with depth reducing the drainage class to somewhat poorly-drained. These deeper soils are considered to be partially hydric with a moderate corrosion potential.

Faulting and Seismicity

The Project site is located along the eastern margin of the circum-Pacific earthquake zone which is a result of the processes of plate tectonics, and is the most seismically active area in the United States. A major feature of the circum-Pacific earthquake zone associated with this region of California is the San Andreas Fault System which defines the boundary between the North American Plate to the east (on which the Proposed Project is located) and the Pacific Plate to the west. The San Andreas Fault System is generally expressed as a 40-mile wide elongated zone of fracturing and rock deformation that creates the general northwest-southeast trending valleys and ridges in the Coast Ranges, as well as the overall physiographic nature of the California's Central Valley. Another consequence of its proximity to the Project site is exposure to the earthquake activity that is common throughout California.

A review of available published geologic and seismic hazards maps indicates that there are no known active faults identified in or adjacent to the City of Sacramento and the Proposed Project area. In addition, there has been no documented movement on faults mapped in Sacramento County during the past 150 years. However, the region has experienced numerous instances of groundshaking originating from faults in the San Andreas Fault System.

The closest known potentially active fault mapped by the California Geological Survey is the Dunnigan Hills fault located about 20 miles northwest of Sacramento, with the closest branches of the seismically active San Andreas Fault System (Historic activity, i.e., within the last 200 years) being the Green Valley and Concord faults, 43 and 50 miles to the southwest, respectively. The main trace of the San Andreas Fault System is approximately 80 miles to the southwest. Other active faults within 100 miles of the Proposed Project area are listed on Table 3-2.

TABLE 3-2

ACTIVE FAULTS WITHIN 100 MILES OF THE PROPOSED PROJECT SITE

Fault Name	Distance from Fault to Project Site (Miles)	Age of Movement	Characteristic Earthquake (moment magnitude)
Dunnigan Hills	20	Holocene (<15,000 years)	6.6[1]
Vaca	28	Quaternary	6.1[1]
Foothills, N central section	30	Quaternary (<130,000 years)	6.0[2, 3]
Foothills, S central section	36	Quaternary	6.0[2, 3]
Greenville	43	Holocene	6.6
Green Valley	43	Recent (<150 years)	6.2
Cordelia	43	Holocene (<15,000 years)	NA
Concord	50	Recent	6.2
Healdsburg / Rogers Creek	56	Quaternary / Holocene	7.1
Hayward	61	Recent	6.9 – 7.1
Calaveras	61	Holocene	7.5
San Andreas	80	Recent	7.9

Source: Jennings and Bryant 2010

Notes: [1] Wesnousky, S.G., 1986
[2] General Plan, 2011
[3] Richter scale magnitudes

Seismic hazards resulting from earthquakes can include but are not limited to ground rupture along a fault line (surface rupture), ground shaking, and liquefaction. Surface rupture is the surface expression of movement along a fault. Structures built over an active fault can be torn apart if the ground ruptures. Surface rupture along faults is generally limited to a linear zone a few meters wide. The Project site is not located within an Alquist-Priolo active fault zone (Bryant and Hart 2007), and there is no evidence of active faulting within the project site.

The probable seismic ground shaking expected at the Project site is anticipated to produce peak ground accelerations between 10 and 20 percent of the acceleration of gravity, 0.1g and 0.2g, respectively (Probabilistic Seismic Hazard Assessment Maps 2002). Earthquake intensities generally associated with this amount of ground shaking are typically between VI and VII on the Modified Mercalli Intensity Scale (MMI). An expected characteristic earthquake on the entire San Andreas Fault System is Mw 7.9 (Moment Magnitude) and is probably the largest earthquake that would be felt in the Project site. Given the distance between the San Andreas Fault and the Project site, the felt intensity would be expected to be between MMI IV and V (light to moderate shaking). However, a felt intensity between MMI VII and VIII would be caused by a characteristic earthquake on the Dunnigan Hills fault of Mw 6.6 because it is much closer to the project area. Based on mapping conducted pursuant to the Alquist-Priolo Act, the Project site and surrounding area are not located on a site of potential liquefaction (Bryant and Hart 2007).

Standing water or other drainage features that contained flowing or standing water were not observed during the Site reconnaissance.

Rainfall is typically highest (greater than one inch) from November through April of the year with an average precipitation of approximately 18.51 inches annually (www.worldclimate.com). Annual temperatures range from an average high of 73.6 °F to an average low of 48.3 °F. Weather conditions during the Site reconnaissance were clear and cool/dry, with temperatures in the low 50's.

Current Uses

The Project site and immediate surrounding areas include other State office buildings, and retail, apartments, religious, and parking uses. Capitol Park, including the California State Capitol building, is located to the north.

3.4 Site Inspection and Interviews

Upon arrival to the Project site on February 24, 2017 Sanberg staff met with Mr. Fuad, the building manager. Mr. Fuad allowed access to the vacant State-owned building. No other information regarding the building was available at the time of the site inspection. Photographs of the Project site included both the exterior and interior of the vacant building and surrounding environs (Appendix A). Selected photographs that focus on the Project site interior are also provided in Appendix A.

Identified Potentially Hazardous Materials

Inspection of the building began with the roof, which is composed of tar and gravel, and sloped for drainage (Photo 1). A small shed housing tanks with possible oil staining on floor in small room adjacent to greenhouse was observed (Photo 2). Also on the roof, lubricating oil was observed on the floor of another small room that housed the elevator lift motors (Photo 3). On the third floor, chemicals used for degreasing were identified on the floor of a small closet along with some used fluorescent lamps (Photo 4). Four lead-acid storage batteries, presumably used as backup power for a telecom or computer network server, were observed on the floor of a closet on the second floor (Photo 5). On the first floor, water puddles on the floor (leaking from upper floors) inside an air handler (fan) room may have possible mold associated (Photo 6).

Examples of other potentially hazardous materials include office wall material and ceiling tiles (Photo 7), pipe insulation (Photo 8), peeling and cracked paint on window frame (Photo 9) and walk-in refrigerator (Photo 10).

Fluorescent lighting in ceiling fixtures on all floors was observed (Photo 11). The fluorescent lamps are classified as universal waste (see below) as they contain small amounts of the heavy metal mercury. Care should be taken to avoid breakage. There is concern that mercury vapor could be retained in carpets when broken; however, the amount of mercury vapor released from used or non-functioning lamps is significantly less than from new ones, as much of the mercury is bound to the glass rather than released as vapor. During the site inspection of the inside of the building, broken lamps were not observed.

Underground Storage Tanks (USTs)

No USTs were reported or observed at the Project site and no visible signs of USTs were observed.

Asbestos

According to the California Department of Parks and Recreation (DPR) Historic Resources Inventory Form 523, the Project site building was constructed in 1955. As such, it can be expected that asbestos containing materials (ACM) would have been used in the construction as was typical until the late 1970s. In response, the building's interior was sampled for ACM to confirm the presence of these materials and to identify the locations where they occur prior to demolition. Sampling was performed by Terracon Consultants, Inc. (Terracon 2016) on various building materials inside of the building. These materials included plaster walls and ceilings, acoustical ceiling tile, carpet and resilient sheet and/or tile flooring, pipe and fitting insulation, and roofing materials.

Terracon collected 153 samples of suspected asbestos materials. In addition, five suspected asbestos materials were sampled at the connection of the skybridge to the California Department of Food and Agriculture building to the north. The results of the sampling indicated 45 materials were reported with asbestos content (25 materials were pending

analysis at the time of the draft report) in the vacant 1215 O Street building. All the materials tested in the California Department of Food and Agriculture building were reported negative for asbestos content. Refer to the draft sampling report for a complete description of the sampling locations and results (Appendix B).

Lead Based Paint

Building material prior to 1978 should be suspected of containing lead based paint. Sampling was performed by Terracon at 12 painted surfaces and nine bulk materials (ceramic tile, resilient flooring, and caulks) were sampled for potential lead content in the Project site building. Four painted surfaces and one bulk material were sampled for potential lead content in the California Department of Food and Agriculture building to the north. Nine of the painted surfaces in the Project site building and three (3) painted surfaces sampled in the California Department of Food and Agriculture building were found to have lead content above the laboratory detection limit; three paint samples were pending analysis at the time of the draft report. Seven bulk materials were reported with lead content including ceramic wall tile, resilient flooring and various sealants. The ceramic wall tile (restrooms), resilient sheet flooring, and window sealants were reported with lead content exceeding 1,000 parts per million (ppm), the threshold for designation of a hazardous lead waste in California. Three (3) of the paint samples were found to contain lead in concentrations exceeding 5,000 ppm, the threshold for designation of lead-based paint.

The presence of delaminating, chipping and peeling paint was observed during the interior inspection of the Project site building; an example is provided in Photo 9 that shows peeling paint on the window pane in an office along the south side of the building. Refer to the draft sampling report for a complete description of the sampling locations and results (Appendix B).

Radon

Radon is a radioactive gas that occurs naturally in the environment and cannot be seen, smelled or tasted. A human health effect associated with exposure to elevated levels of radon is an increased risk of developing lung cancer. The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. The Federal EPA Radon zone for Sacramento County for the Project site and surrounding area is Zone 3, average indoor level < 2 pCi/L. This determination is based on 52 sites. The data indicate that 100% of all first floor and second floor living areas are <4 pCi/L; for basement areas 50% are <4 pCi/L and 50% are between 4 and 20 pCi/L. Based on these data, radon does not pose a risk to human health within areas of buildings occupied at or above ground level. However, there may be a potential risk in poorly ventilated basement areas.

PCBs

Polychlorinated Biphenyls (PCBs) were used in the past as insulating oils in electrical transformers or as hydraulic oils in elevator equipment prior to the 1980s. Between 1950 and 1979 PCB-containing building materials were used in buildings and fluorescent light ballasts. The Project site building's elevator system utilizes steel cables in place of hydraulics and therefore no hydraulic oils would be present. However, testing for PCB by Terracon identified and sampled three building sealants in the Project site building and analyzed for potential PCB content. PCB content was reported in one of the three materials tested, but reported less than the 50 ppm regulatory threshold established by the Toxic Substances Control Act (TSCA) regulations, 40 CFR 761, for disposal and cleanup requirements. If the PCB material (e.g.: caulk, paint, mastic or sealant) remains attached to the building materials during demolition, it would be classified as PCB bulk product waste. However, if the PCB material is removed prior to demolition, the (potentially) contaminated building material would be classified as PCB remediation waste. In any event, the PCB waste material will require special handling and disposal.

Universal Wastes

Universal wastes are defined as those that are classified as hazardous but containing materials that are very common. Mercury-containing fluorescent lamps and high intensity discharge bulbs were present throughout the interior and exterior of the Project site building. Mercury-containing thermostats and switches were observed within the building. Exits signs observed were lit by fluorescent lamps with backup batteries. Representative lighting ballasts inspected in the building were labeled as containing "No PCBs." Equipment with refrigerants in the building included drinking fountains, room-sized air conditioner units, and a small room-sized walk-in refrigerator.

Trash

Based on the observations made during the Project site reconnaissance, evidence of illegal dumping did not appear to be a concern. Very minimal trash or other debris was observed. Remnants of previous building occupation included some old office furniture, file and storage cabinets, and miscellaneous paper files.

Utilities

Electricity is supplied and made available to the Project site from underground utilities. Natural gas service equipment was not observed during the site reconnaissance. Heating and cooling is supplied from the Central Plant, located within Block 261, which is bounded by P, Q, 6th, and 7th streets, southwest of the Project site.

Septic Tanks and Cesspools

Septic tanks and cesspools are often associated with the disposal of wastewater from structures that are not served by public sewer systems. Septic tanks and cesspools may be associated with hazardous materials if such materials have been inappropriately disposed of in the past via sinks. No septic tanks or evidence of a cesspool was observed at the Project site.

Pits, Ponds, and Lagoons

Pits, ponds, and lagoons are often associated with the disposal of solid and liquid wastes, which may include hazardous materials. Information obtained from the site inspection, historical records review, and interviews indicated that no pits, ponds, or lagoons exist or have existed on the Project site that would be used for disposal of solid or liquid wastes. No evidence of solid or liquid wastes was observed during the site reconnaissance.

3.5 Past Uses of Project Site and Adjoining Properties

Information obtained from the review of Sanborn maps, historic topographic maps, and aerial photography indicates that the Project site has been developed as far back as1895 (Sanborn maps), potentially 1891 (topographic maps) and 1937 (aerial photographs). The following is a summary of the review of each data source.

Sanborn Maps

The Project site appears to have individual structures as indicated on the 1895 and 1915 Sanborn maps. Similar development is indicated for the surrounding properties; apartments are located to the northeast. In the 1950 Sanborn map, the Project site still appears occupied with individual structures but a Department of Motor Vehicles building is located immediately adjacent and north. In addition, a Department of Public Works building is indicated to the northwest. Individual structures are still indicated to the south and east, including the apartments; some buildings appear to have been removed to the west. In 1952, the development appears similar to 1950 with the exception of a new Department of Public Works building to the west across 12th Street; a note on the map indicates construction in 1951. On the 1957 Sanborn map, the Department of Motor Vehicles building immediately north of the Project site is now

identified as a Department of Agriculture building, and the Project site is now developed with a State Office Building – Division of Agriculture (actual construction was 1955; DPR form). The parcel to the east is now developed as a State Office Building – Department of Veterans Affairs. By 1960 (and also 1964, 1965, 1966, 1968, 1970) the parcel immediately south of the Project site appears to have been cleared of the previous structures and replaced by ground level parking. The apartments are still located immediately north of the State Office Building – Department of Veterans Affairs. The copies of the Sanborn maps are provided in Appendix C.

Historic Topographic Maps

Topographic maps are provided in Appendix D with the dates or revised dates of 1891, 1892, 1893, 1902/1907, 1911/1916, 1949, 1954, 1967, 1975, 1980, 1992 and 2012. Specific development of the Project site cannot be ascertained from the scale of the maps from years 1891 through 1893. Beginning in 1902/1907 the topographic map appears to indicate some development but the type cannot be determined. This is similar for the 1911/1916 map. By 1949 the historic topographic map indicates a structure immediately adjacent and north of the Project site, probably the Department of Motor Vehicles building; a structure to the northwest is also indicated and is likely the Department of Public Works building. In the 1954 topographic map a structure is indicated on the Project site and is the State Office Building – Division of Agriculture. Further development is indicated on the 1967, 1975 and 1980 maps. In the 1992 and 2012 maps, individual buildings are no longer indicated.

Historic Aerial Photographs

Historical aerial photographs were reviewed for evidence of past development or land use on the Project site and surrounding areas, and are provided in Appendix E. Features described on the images are interpretive and are valid only for the date of flight, index number, and frame number. The following features relative to the land-use history are summarized in Table 3-3.

TABLE 3-3

SUMMARY OF AERIAL PHOTOGRAPHS

1937	The Project site is developed, likely mixed-use residential and commercial, with development to the north, south, east and west (Scale 1"=500')
1947	The Project site is developed similar to 1937 (Scale 1"=500')
1953	The Project site is developed similar to 1947, with new development to the west (Scale 1"=500')
1957	The Project site building is present in the aerial photo, along with new development to the east. Other development to the north, south, east and west. Property to the immediate east has been redeveloped and features a new office building (Scale 1"=500')
1964	Project site office building is present in aerial photo; parking lot constructed immediately south of the Project site building (Scale 1"=500')
1966	Project site and surrounding area is similar to the 1964 aerial photograph; more surface parking appears to be developed in surrounding areas (Scale 1"=500')
1972	Project site and surrounding area is similar to the 1966 aerial photograph (Scale 1"=500')
1984	Project site and surrounding area is similar to the 1972 aerial photograph (Scale 1"=500')
1993	Project site and surrounding area is similar to the 1984 aerial photograph (Scale 1"=500')

1998	Project site and surrounding area is similar to the 1993 aerial photograph (Scale 1"=500')
2005	Project site and surrounding area is similar to the 1998 aerial photograph (Scale 1"=500')
2006	Project site and surrounding area is similar to the 2005 aerial photograph (Scale 1"=500')
2009	Project site and surrounding area is similar to the 2006 aerial photograph (Scale 1"=500')
2010	Project site and surrounding area is similar to the 2009 aerial photograph (Scale 1"=500')
2012	Project site and surrounding area is similar to the 2010 aerial photograph (Scale 1"=500')

The review of the historic aerial photographs indicated no readily apparent RECs.

3.6 Current and Past Uses of Adjoining Properties

The land use prior to development of the Project site appears to have been mostly a mix of commercial and residential development. Over time, the Project site and surrounding areas become more developed with larger office buildings, many owned by the State of California. Currently the area is mostly developed with a mix of State office buildings, commercial, multi-family residential (apartments) and parking (both surface and multi-level structures) uses.

4.0 Records Review

4.1 Standard Environmental Records

Sanberg environmental staff reviewed available databases from federal and state regulatory agencies to identify use, generation, storage, and treatment and/or disposal of hazardous materials and chemicals or release incidents of such materials, which may have impacted the Site. The regulatory databases were provided to Sanberg from EDR Radius Map Report with GeoCheck (Appendix F). The radius search was performed using the addresses and latitude and longitude coordinates to locate the Site. The environmental and regulatory databases that were included in this review follow the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) guidelines.

The radius report contains records of registered sites in the vicinity of the Site for the classifications and distances listed in Table 4-1. The target property was not listed in any of the database lists provided by EDR as potential environmental concerns. Report dates for each database searched are listed in Appendix F.

TABLE 4-1
SUMMARY OF REGULATORY DATABASE SEARCH

Database	Distance Searched (miles)	Map Finding Summary
CERCLIS NFRAP	0.5	1
RCRA Corrective Actions	1	1
RCRA Large Quantity Generators (LQG)	0.25	1
RCRA Small Quantity Generators (SQG)	0.25	14
RCRA Non-Generators	0.25	1

Database	Distance Searched (miles)	Map Finding Summary
CA RESPONSE	1	11
Leaking Underground Storage Tank (LUST)	0.5	50
Spills, Leaks, Investigation & Cleanup Recovery Listing (SLIC)	0.5	12
CA Sacramento County CS	0.5	50
Underground Storage Tanks (UST)	0.25	4
Aboveground Storage Tanks (AST)	0.25	4
VA Voluntary Cleanup (VCP)	0.5	2
CA Brownfields	0.5	1
US Brownfields	0.5	18
CA HIST Cal-Sites	1	12
Historical Underground Storage Tanks (HIST UST)	0.25	2
Statewide Environmental Evaluation and Planning System (SWEEPS UST)	0.25	8
ENVIROSTOR Cleanup Sites (ENVIROSTOR)	1.0	33
CA FID UST	0.25	8
CA DEED	0.5	1
CA BOND EXP PLAN	1	5
CA Cortese	0.5	1
Historic Cortese List (HIST CORTESE)	0.5	31
CA-HAZNET	0.125	1
CA HWP	1	2
CA Sacramento Co. ML	0.25	41
Notify 65	1.0	6
CA WIP	0.25	1
EDR Manufactured Gas Plants (EDR MGP)	1	3
EDR Historical Auto Stations	0.125	5
EDR Historical Cleaners	0.125	9

FEDERAL RECORDS

Federal CERCLIS NFRAP List

Tracks sites that have no further interest under the Federal Superfund Program based on available information; now SEMS-ARCHIVE.

The Project site is not listed in the search of this database, while one site is listed within 0.5 miles of the site.

Federal RCRA CORRACTS Facilities List

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

The Project site is not listed in the search of this database, while one site is listed within 1.0 miles of the site.

RCRA Large Quantity Generators (RCRA-LQG)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

The Project site is not listed in the search of this database while one site is listed within 0.25 mile of the site.

RCRA Small Quantity Generators (RCRA-SQG)

Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

The Project site is not listed in the search of this database, while 14 sites are listed within 0.25 miles of the site.

RCRA Non Generator (RCRA-NONGEN)

Non-Generators that do not presently generate hazardous waste but have in the past.

The Project site is not listed in the search of this database, while one site is listed within 0.125 miles of the Site.

STATE AND LOCAL RECORDS

CA Response (RESPONSE)

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

The Project site is not listed in the search of this database, while 11 sites are located within 1.0 miles of the site.

Envirostor Cleanup Sites (ENVIROSTOR)

The Department of Toxic Substances Control (DTSC) has developed the EnviroStor database system to evaluate and track sites with confirmed or potential contamination and sites where further investigation may be necessary. This EnviroStor database of cleanup sites contains the following: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. Sites where DTSC has made a "No Action Required" determination are not included in this database, as these sites had assessments that revealed no evidence of recognized environmental conditions in connection with the property.

The Project site is not listed in the search of this database, while 33 sites are located within 1.0 miles of the site.

Leaking Underground Storage Tanks (LUST)

This data is maintained by the State Water Resources Control Board. LUST records contain an inventory of reported leaking underground storage tank incidents.

The Project site is not listed in the search of this database, while eight sites are located within 0.5 miles of the Site.

Spills, Leaks, Investigation & Cleanup Recovery Listing (SLIC)

These records are maintained by the California Regional Water Quality Control Board (RWQCB). This list includes contaminated sites that impact groundwater or have the potential to impact groundwater. Refer to CLEANUPSITES database as source of current data.

The Project site is not listed in the search of this database, while 50 sites are located within 0.5 miles of the site.

Statewide SLIC Cases (SLIC)

Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

The Project site is not listed in the search of this database, with 12 sites located within 0.5 miles of the site.

CA Sacramento Co. CS

State of California and tribal leaking storage tank lists.

The Project site is not listed in the search of this database, with 50 sites located within 0.5 miles of the site.

Underground Storage Tanks (UST)

Active UST facilities gathered from the local regulatory agencies.

The Project site is not listed in the search of this database, with four sites located within 0.25 miles of the site.

Aboveground Storage Tanks (AST)

A listing of aboveground storage tank petroleum storage tank locations.

The Project site is not listed in the search of this database, with four sites located within 0.125 miles of the site.

Voluntary Cleanup Program Properties (CA VCP)

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have requested that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

The Project site is not listed in the search of this database, with two sites located within 0.5 miles of the site.

CA Brownfields

State of California and tribal Brownfields sites. Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment.

The Project site is not listed in the search of this database, with one site located within 0.5 miles of the site.

US Brownfields

Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups

in My Community. Cleanups in My Community provide information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

The Project site is not listed in the search of this database, with 18 sites located within 0.5 miles of the site.

CA HIST Cal-Sites

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

The Project site is not listed in the search of this database, with 12 sites located within 1.0 miles of the site.

Statewide Environmental Evaluation and Planning System (CA SWEEPS UST)

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contracted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

The Project site is not listed in the search of this database, while eight other sites are listed within 0.25 miles of the site.

Historical Underground Storage Tanks (CA HIST UST)

The Hazardous Substance Storage Container Database is a historical list of Underground Storage Tank sites, compiled from tank survey and registration information collected at one time between 1984 and 1987. The hazardous substances stored within these tanks includes, but not restricted to, petroleum products, industrial solvents, and other materials.

The Project site is not listed in the search of this database, while two other sites are listed within 0.25 miles of the site.

CA DEED

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

The Project site is not listed in the search of this database, with one site located within 0.5 miles of the site.

CA BOND EXP PLAN

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

The Project site is not listed in the search of this database, with five sites located within 1.0 miles of the site.

"Cortese" Hazardous Waste & Substances Sites List (CORTESE)

The sites for the CORTESE list are designated by the State Water Resources Control Board (through the LUST program, the Integrated Waste Management Board (through the SWF/LS program), and the Department of Toxic Substances Control (through the Cal-Sites program).

The Project site is not listed in the search of this database, while one site is listed within 0.5 miles of the site.

Facility and Manifest Data (HAZNET)

The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

The Project site is listed in the search of this database, with PCBs and material containing PCBs being identified. No information regarding removal is provided. No other sites located within 0.125 miles of the site.

Hazardous Waste & Substances Site List (HIST CORTESE)

The sites for the list are designated by the State Water Resource Control Board (through the LUST program), the Integrated Waste Board (through the SWF/LS program), and the Department of Toxic Substances Control (through the Cal-Sites program). This listing is no longer updated by the state agency.

The Project site is not listed in the search of this database, while 31 sites are listed within 0.5 miles of the site.

EnviroStor Permitted Facilities Listing (CA HWP)

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

The Project site is not listed in the search of this database, while two sites are listed within 1.0 miles of the site.

CA Sacramento Co. ML

Sacramento County Master List. The list identifies any business that has hazardous materials on site, hazardous materials storage sites, underground storage tanks, and/or waste generators.

The Project site is listed in the search of this database but is identified as inactive and no longer updated. The list also identifies 40 sites listed within 0.25 miles of the site.

Proposition 65 Records (Notify 65)

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

The Project site is not listed in the search of this database, while six other sites are listed within 1.0 miles of the site.

Well Investigation Program Case List (WIP)

The Well Investigation Program (WIP) was developed to locate, assess and remediate sources of solvent contamination impacting drinking water wells. WIP is no longer in use. Existing WIP cases that are still being assessed or remediated are now overseen under the Spills, Leaks, Investigations & Cleanup (SLIC) program.

The Project site is not listed in the search of this database, while one site is listed within 0.125 miles of the site.

Manufactured Gas Plants (EDR MGP)

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to

produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

The Project site is not listed in the search of this database, with three other listings within 1.0 miles of the site.

EDR Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

The Project site is not listed in the search of this database, with five other listings within 0.125 miles of the site.

EDR Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

The Project site is not listed in the search of this database, with nine other listings within 0.125 miles of the site.

4.2 Additional Record Sources

4.2.1 Building Records and Permits

A search of building department records was conducted EDR for the Project site and surrounding properties. Information was collected from both the City of Sacramento Community Development and from the County of Sacramento Planning and Community Development. Records were returned for the City of Sacramento Community Development for the years 2011 - 2016; and for the County of Sacramento Planning and Community Development for the years 2013 - 2016. The building department records were identified for adjoining properties only. No permits were identified for the Project site in the EDR report. The results indicated no past activities that would be associated with a potential REC.

A search for Environmental Liens and Activity Use Limitations (AUL) did not reveal evidence of environmental liens or other activity and use limitations associated with RECs at the Project site. The City of Sacramento gifted the property to the State of California on July 7, 1969. Refer to Appendix G for additional information.

4.2.2 Chain-of Title

A 50-Year Chain-of-Title report was not provided for review and incorporation into this report.

4.2.3 Oil and Gas Well Maps

Two Oil/Gas wells are identified in the EDR database as being operated by the Sacramento Natural Gas Company. The wells, CAOG11000235424 and CAOG11000235425 were abandoned on July 12, 2001. They were located approximately 0.70 miles west of the Project site. Refer to EDR Report for details in the Appendix F.

4.2.4 Wetlands

Information obtained from the site inspection, aerial photographs, and topographic maps indicated that the proposed Project site does not appear to impact any identified wetlands. However, wetlands are present within one mile of the Project site. Refer to EDR Report for details in the Appendix F.

4.2.5 Groundwater Wells

The EDR report indicates there are three potential water wells located within one mile of the Project site. The closest is slightly more than 0.25 miles to the northeast (CADW60000003129). A second well is located approximately 0.75 miles to the southwest (CADW600000029660). A third well is located approximately 0.90 miles to the west (CADW600000029664). Refer to EDR Report for details in the Appendix F.

4.2.6 City Directories

Business directories including city, cross reference and telephone directories were reviewed at approximately five year intervals for the years spanning 1920 through 2013. One site identified as Holland Cleaners was listed in 1937 at 1427 11th Street. Additional information is available in the EDR report in Appendix G.

5.0 Vapor Encroachment Condition

5.1 ASTM Standards

ASTM E1527-13 specifically requires assessing the potential for hazardous vapors to migrate onto or within the target property. It does so by defining "migrate/migration" as "the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface," and then requiring an analysis of surrounding property uses and data-base records for migration potential.

ASTM Standard E2600-10 is a Standard Guide for Vapor Encroachment Screening for volatile organic compounds (VOC) on Property Involved in Real Estate Transactions (Guide 2600). A footnote to the definition of "migrate/migration" in ASTM E1527-13 states "vapor migration in the subsurface is described in Guide 2600," thereby placing some reliance on Guide 2600. Further, the goal of Guide 2600 is to identify a Vapor Encroachment Condition, or VEC, which is "the presence or likely presence of [chemicals of concern] vapors in the subsurface of the target property (TP) caused by the release of vapors from contaminated soil or groundwater either on or near the TP as identified by Tier 1 … or Tier 2 … procedures." Similarly, the goal of ASTM E1527-13 is to identify a Recognized Environmental Condition, or REC, which is "the presence or likely presence of any substances or petroleum products in, on, or at a property… due to release to the environment… ."

Guide 2600 specifies use of "Phase I ESA-type information to determine if a VEC exists" as part of a "Tier 1" screen. This includes an analysis of historical records, historical uses, federal, state, local and tribal governmental records, physical setting information and user-specialized knowledge. The Tier 1 screen even uses minimum search distances, focusing its analysis on potential petroleum releases within 1/10 of a mile from the target property, and up to 1/3 of a mile for hazardous material releases that migrate more easily than petroleum. Unless a Tier 1 screen can rule out a VEC, Guide 2600 calls for regulatory file reviews and/or soil, soil gas or groundwater sampling under a Tier 2 screen process, similar to what occurs if a REC is identified under ASTM E1527-13.

5.2 Vapor Encroachment Screening Listings and Data

A Vapor Encroachment Screen model (Appendix H) was performed to identify the potential for any VEC that may be present within the Project site. The model identified up-gradient sites that could represent potential sources for vapor intrusion at the proposed Project site. After review of these sites, there were no identified threats resulting from past activities that would be classified as a potential VEC affecting the proposed Project site.

6.0 Previous Environmental Assessments

Sampling for asbestos, lead-based paint, and PCB was performed (refer to Section 3.4). No other environmental assessments, other than those discussed in previous sections of this report are known for the Project site. If these exist, none were provided at the time of the preparation of this Phase I ESA report.

7.0 Findings and Conclusions

Sanberg performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice (E) 1527-13 of the Site located at 1215 O Street, Sacramento, California. Any exceptions to, or deletions from, this practice are described below in Section 8.0 of this report.

The EDR Radius Report identified 219 locations within a mile radius of the Project site (target property in EDR report). Of these, two were identified at the Project site; one was from the Facility and Manifest Data (HAZNET) database which extracts data from the copies of hazardous waste manifests received each year by the DTSC, and the other is from the CA Sacramento Co. ML database that addresses any business that has hazardous materials on site. Waste material containing PCB was identified along with waste oil. Both of these appear to be associated with past operations at the site with no record of releases or violations identified.

Testing by Terracon found PCB content in one of the three materials tested, but reported less than 50 ppm. Given the history of the Project site, PCB constitutes a REC.

Asbestos containing materials and lead-based paint were identified by Terracon in various building materials inside of the Project site, and constitutes a REC.

One instance of chemicals used for cleaning (degreasers) and storage batteries were observed during the site reconnaissance. Other occurrences of these materials may be discovered during demolition of the building. The numerous fluorescent lighting fixtures on each floor of the building will need to be handled as universal waste and cannot be disposed with the other construction debris. These too are considered RECs.

Standing water was observed in at least one area of the building and mold may be present in areas where building materials have been subjected to excess moisture over a period of time. The potential for mold inside the building represents a REC.

Based upon the information obtained during this assessment, it is our opinion that the potential for subsurface VOC contamination at the Project site at concentrations that may require statutory cleanup is **low** with no VEC identified.

Current and past activities in proximity of the Project site do not appear to have impacted the Project site.

8.0 Exceptions

No exceptions to, or deletions from ASTM Practice (E) 1527 occurred during this assessment.

9.0 Limitations

This report has been prepared for the exclusive use of Ascent Environmental, Inc. as it pertains to the Project site located at 1215 O Street, City of Sacramento, Sacramento County, California. The conclusions and recommendations rendered herein are opinions based upon information obtained within the scope of work authorized by the client. This report should not be regarded as a guarantee that no further contamination, beyond that which may have been detected within the scope of this study, is present on or beneath the Project site. If additional information regarding the possible present or past use of hazardous materials at the Project site becomes available, then the need for further field investigation should be re-evaluated. Similarly, if suspected contamination is encountered during earthwork or construction activities, a qualified engineer or geologist should be on-site to monitor the soils and collect samples for laboratory analysis. Unless otherwise indicated in this Report, no attempt was made to check on the compliance of present or past owners of the Site with federal, state or local laws and regulations. Sanberg shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld or not fully disclosed at the time the assessment were performed. All work has been performed in accordance with the generally accepted practices in environmental consulting, environmental geology, and hydrogeology. No other warranty, either expressed or implied, is made.

Sincerely,
The Sanberg Group, Inc.

Dale Schneeberger, M.S., P.G.
Vice President Environmental Service
February 28, 2017

Ray Rothwell
Staff Environmental Scientist
February 28, 2017

10.0 References

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APPENDIX A – Selected Photographs

APPENDIX B – Draft Sampling Report by Terracon

APPENDIX C – Sanborn Maps

APPENDIX D – Historic Topographic Maps

APPENDIX E- Aerial Photographs

APPENDIX F – EDR Radius Report

APPENDIX G – Other EDR Report Data

APPENDIX H – VEC Screening Report