

Appendix D

Phase I Environmental Site Assessment

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT
APN #006-0266-014
CADA Parking Structure Project
805 R Street, Sacramento, CA 95811



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1.0 Summary of Assessment

HANA Resources (HANA – formerly The Sanberg Group, Inc.) was contracted by Ascent Environmental, Inc. to conduct a Phase I Environmental Site Assessment (ESA) of the State-owned warehouse building, located at 805 R Street, in the City of Sacramento, Sacramento County, California (Project site). The Project consists of demolition of a State-owned warehouse building at 805 “R” Street and the construction of a new seven-level, 800- to 850-space parking structure with approximately 265,000 gross square feet.

The Project site includes Assessor Parcel Number (APN) 006-0266-014, legal description of T8N, R4E (latitude 38° 34’ 20.18” north and longitude 121° 29’ 57.03” west). HANA performed Phase I ESA in conformance with the scope and limitations of ASTM Practice (E 1527-13) and in compliance with ASTM Standard E 2600-10. Any exceptions to, or deletions from, this practice are described below in Section 8.0 of this report.

The EDR Radius Report identified 336 locations within a mile radius of the Project site (target property in EDR report). There were several historical cleaner sites near the Project site. Information provided in the EDR report indicated that none of these sites, other than those identified (e.g.: former Downtown Sacramento Union Pacific Railyard), were found to have had a documented release or contamination to groundwater resulting from these past operations; however, none of these identified pose a REC or VEC to the Project site. Potential RECs identified at the Project site appear to be associated with materials used in the construction or maintenance of the warehouse building that contain asbestos and LBP, and universal waste. Black mold appears to be present on the north side of the building exterior. No other RECs were 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

HANA Resources (HANA – formerly The Sanberg Group, Inc.) was contracted by Ascent Environmental, Inc. to conduct a Phase I Environmental Site Assessment (ESA) of the State-owned warehouse building located at 805 R Street, in the City of Sacramento, Sacramento County, California (Project site). The Project consists of demolition of a State-owned warehouse building on a 39,204 square foot lot located at 805 “R” Street and the construction of a new seven-level, 800- to 850-space parking structure with approximately 265,000 gross square feet. It is located on Assessor Parcel Number (APN) 006-0266-014, legal description of T8N, R4E (latitude 38° 34’ 20.18” north and longitude 121° 29’ 57.03” 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.

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 Project 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, approximately 0.50 miles east of the Interstate-5 freeway/Sacramento River and 0.45 miles north of the Interstate-80 freeway as shown in Project location map ([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 southwest of Roosevelt Park. The immediate area surrounding the Project site includes multi-story buildings, and ground-level and multi-level parking areas. The California Department of Fish and Game building is located south across “R” Street and west of 9th Street, and the California Highway Patrol building is located southeast of the intersection of 9th Street and “R” Street.

3.2 Proposed Project

The proposed Project consists of the demolition of a State-owned warehouse building at 805 R Street and the construction of a new 800-space parking structure with approximately 265,000 gross square feet. The proposed Project site is located within APN 006-0266-014 between 8th Street (west) and 9th Street (east), and between Quill Alley (north) and “R” Street (south) as shown in [Figure 3-2](#). The new parking structure will likely consist of seven levels, would have a maximum height of 75 feet and proposed approximately 13,000 square foot one story ground level retail.



Figure 3-2 Project Site Location Map

3.3 Physical Setting

Topography

The topography in area surrounding the proposed Project is 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, generally southwesterly dipping (topographic gradient) alluvial plain. Ground surface elevations range from about 33 feet to 16 feet above mean sea level (33 to 16 feet msl) from north to south, and from 21 feet to 33 feet msl from east to west EDR Radius Map Report ([Appendix A](#)). The average elevation at the Project site is reported to be 20 feet msl. 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.

Symbol	Unit	Age	Description
Qb	Basin Deposits	Quaternary - Holocene	Alluvium (exposed mostly in the northwest and along the Sacramento River); deposits of clay mixed with silt and fine sand
Qha	Alluvial Deposits	Quaternary - Holocene	Alluvium Undivided (underlies most of the Project site); cobble, gravel, sand, silt, clay
Qr	Riverbank Formation	Quaternary – Pleistocene	Alluvium Undivided; clay, silt, sand, gravel, cobbles, boulders
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, gas-bearing sand unit
Jmx	Metamorphic Rocks	Jurassic (?)	Paleozoic - Mesozoic metamorphic sediments, volcanics, and granites rocks of the Sierra Nevada

Sources: Dupras, Don 1999; Wagner, et al. 1981; Hackel, Otto 1966.

Soils

Based on data provided in the EDR Radius Map Report ([Appendix A](#)) and the Web Soil Survey (USDA/NRCS, 2017), the soil at and surrounding the Project site are classified as Urban Land of variable surface texture and is classified as non-hydric.

Soil located approximately 1/8th mile south and southeast of the Project site is classified as silt loam. This soil type is characterized as hydrologic group Class D-Very slow infiltration rates; soils that are clayey have a high water table, or are shallow to an impervious layer, which are somewhat poorly drained. Soil located approximately 1/8th mile southwest of the Project site is also classified as silt loam. This soil type is characterized as hydrologic group Class C-Slow infiltration rates; soils with layers impeding downward movement of water, or soils with moderately fine or fine textures; which are somewhat poorly drained.

The soils at the Project site and nearby surrounding areas are urban land (USDA/NRCS, 2017). Information regarding this soil type is provided in [Table 3.2](#). These urban land-type soils are characterized by large areas covered by impervious surfaces or structures such as roads, driveways, sidewalks, buildings, and parking lots. In most places 90% or more of the area is covered by impervious surfaces. The soil material under the impervious surfaces is likely to have been altered during construction of urban features through excavation/removal, mixing of soils, and importation of fill.

Table 3.2 Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Soil Erosion (K Factor – Whole Soil)	Linear Extensibility (Shrink-Swell)
	Upper	Lower		AASHTO Group	Unified Soil		
H1	0 inches	6 inches	Variable	Not Reported	Not Reported	Not Rated	Not Rated

Groundwater

Depth to the uppermost groundwater has been reported to be at a depth of approximately 17 feet below ground surface from geotechnical borings advanced beneath the Project site as part of a modified Phase I ESA by Allwest Geoscience, 2005 ([Appendix B](#)). They also note that deeper occurrences of groundwater based on regional data are at depths greater than 228 feet below ground surface. Local depressions in the water table are noted and are the result of groundwater pumping; shallow groundwater levels have declined significantly in some areas. More recently, depth to groundwater has been reported from a geotechnical investigation performed 0.2-mile north of the Project site to be at depths ranging approximately from 12 to 15 feet (Arup 2017).

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 ground shaking 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 in [Table 3.3](#).

Table 3.3 Active Faults Within 100 Miles of the Proposed Project Area

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 of 0.320g at 2% within 50 years and 0.199g at 10% within 50 years (CDC 2008). Earthquake intensities generally associated with this amount of ground shaking are typically between VI and VII on the Modified Mercalli Intensity Scale (MMI) as shown in [Table 3.4](#). 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).

Table 3.4 Abbreviated Modified Mercalli Intensity Scale

Intensity	Description
I	Not felt except by a very few under especially favorable conditions.
II	Felt only by a few persons at rest, especially on upper floors of buildings.
III	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.
XI	Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly.
XII	Damage total. Lines of sight and level are distorted. Objects thrown into the air.

Other Observations

Standing water or other drainage features containing flowing or standing water were not observed during the Project 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 Project site reconnaissance were clear and very warm, with temperatures in the low to mid-90's.

Current Uses

The Project site is currently being used as a warehouse to store various materials used for facility cleaning and infrastructure maintenance, public hygiene, information technology (IT), and construction. The immediate surrounding areas include other State office/warehouse buildings, retail/commercial, churches, apartments and parking uses. Roosevelt Park is located two blocks to the northeast and the California Health and Human Services building is located to the northeast of the Project site and immediately northwest of Roosevelt Park. The California Department of Social Services building is located approximately three blocks to the north.

3.4 Site Inspection and Interviews

A pedestrian site inspection of the Project site was performed on July 28, 2017 by HANA staff. Photographs of the Project site included both the warehouse interior, exterior and surrounding environs ([Appendix C](#)). Upon arrival, Mr. Jonathan Prock, California Department of General Services (DGS) met with the HANA staff person conducting the site inspection to allow access to the interior of the warehouse. He indicated that the warehouse was used by different agencies within the State DGS system for temporary storage of routinely used supplies as well as longer-term to indefinite storage of other items. Some items such as universal waste are accumulated pending disposal/recycling. In addition, various chemicals and equipment used for cleaning and maintenance at State-owned properties, related construction materials, and IT and office equipment are stored pending use, reuse or recycling/disposal. No other information (interviews) regarding the building was available at the time of the site inspection.

The interior of the warehouse is divided into a series of areas generally enclosed by chain-link fencing secured with some manner of locking mechanism. The areas are identified from a floorplan map supplied by the DGS for use in this Phase I ESA. Based on this floorplan map and the site reconnaissance, a summary map was prepared that shows the interior of the warehouse and the various secured storage areas. For ease of review, the photographic log is keyed to the summary map showing the location and direction of the photo, and the representative materials contained within. The various photos are grouped and described as follows:

PHOTO GROUP A – This group includes photographs P-1 through P-7

This area contains various office items, desks, workstations, partitions, miscellaneous office supplies, binders, computer software, white boards, file cabinets and chairs (Photo P-2 and Photo P-3). Miscellaneous construction materials are stored outside the storage area as indicated in Photo P-4 and Photo P-5. A pallet with universal waste is identified in Photo 6. Access corridors are shown in Photo P-1 and Photo P-7.

PHOTO GROUP B – This group includes photograph P-8

This area contains computers, monitors, printers, toner cartridges, network racks, and miscellaneous computer hardware. Free-standing safes are also included.

PHOTO GROUP C – This group includes photographs P-9 and P-10

This area contains storage boxes and miscellaneous office furniture.

PHOTO GROUP D – This group includes photographs P-14, P-15, P-17, P-18 and P-19A, B, C, D

This area contains a variety of items including cleaning equipment (Photo P-14), carpeting and miscellaneous office furniture (Photo P-15), miscellaneous office-related materials and construction materials (Photo P-17 and Photo P-18), and various chemicals used for cleaning and maintenance Photo P-19A, B, C, D). Old doors from the Capital Building are also stored (Photo P-14).

PHOTO GROUP E – This group includes photographs P-11 through P-13, and P-20 through P-24

This area contains miscellaneous storage of computer equipment, office furniture, free-standing scale (Photo P-11); universal waste and miscellaneous construction materials (Photo P-12 and Photo P-13A, B, C);

miscellaneous construction materials and office furniture and equipment (Photo P-20 and Photo P-21); storage boxes (Photo P-22); typical electrical and security panels (Photo P-23); and interior of office (Photo P-24).

PHOTO GROUP F – This group includes photographs P-16A, B

This area contains miscellaneous storage of specialized furniture (e.g.: map files cabinets), storage boxes, and a historic printing press and other undisclosed furniture.

PHOTO GROUP G – This group includes photographs P-25 through P-30, P-32, P-33 and P-36

This area contains typical electrical boxes on west outside of office (Photo P-25); various cleaning and maintenance chemicals (Photo P-26 and Photo P-27); main electrical panel (Photo P-28); propane bottle storage used with fork lifts (Photo P-29); birds-eye view of storage showing chemicals, furniture, fluorescent lamps, construction materials, and truck-mounted utility box (Photo P-30); examples of typical cleaning chemicals (Photo P-32 and Photo P-33); and leaking cleaning chemicals (Photo P-36).

PHOTO GROUP H – This group includes photographs P-34

This area contains various construction and construction support and safety materials.

PHOTO GROUP I – This group includes photographs P-35

This area contains miscellaneous office hygiene supplies.

PHOTO GROUP J – This group includes photographs P-31 and P-37 through P-39

Birds-eye view of area that contains storage showing chemicals, furniture, construction materials, and truck-mounted utility box (Photo P-31); leaking containers of degreaser on pallet (Photo P-37); leaked unknown material on floor (Photo P-38); and containers of floor stripper (Photo P-38).

Other typical representative chemicals stored in the Group G area of the warehouse include metal cleaner and polisher (Photo P-40A), concrete repair polymer (Photo P-40B), group release (Photo P-40C), and glass cleaner concentrate (Photo P-40D). Other examples of chemicals stored in the Group G and J areas are provided in the following photo page.

Photographs of the Project site property boundary and surrounding areas are provided in photos P-41 through P-47:

- Southern boundary at “R” Street and 8th Street (Photo P-41)
- Western boundary at corner of “R” Street and 8th Street looking north (Photo P-42)
- Southern boundary at “R” Street looking east toward 9th Street (Photo P-43)
- Northern boundary at Quill Alley and 9th Street looking west toward 8th Street (Photo P-44)
- Northern boundary at Quill Alley showing black mold on wall of building (Photo P-45)
- Eastern boundary at Quill Alley and 9th Street looking south toward “R” Street (Photo P-46)
- Southern boundary at “R” Street and 9th Street looking toward northwest (Photo P-47)

Identified Potentially Hazardous Materials

A majority of the chemical products stored within the warehouse area appear to be non-toxic; however, some potentially hazardous (toxic) materials (various cleaning products and adhesives) were identified inside the warehouse during the site reconnaissance. A modified Phase I ESA ([Appendix B](#)) was prepared for the Project site that included limited sampling/testing for metals, total recoverable petroleum hydrocarbons (TRPH), asbestos containing materials, lead based paint and Polychlorinated Biphenyls (PCBs). The results of the previous modified Phase I ESA are incorporated into the discussion below; sampling was not a part of this Phase I ESA scope of work.

Other potentially hazardous materials were not observed outside of the structure or in the adjoining areas on the Project site.

Underground Storage Tanks (USTs)

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

Asbestos

Asbestos containing materials (ACM) used in construction was typical until the late 1970s. The results of previous sampling for ACM in the warehouse building indicated the following:

- friable asbestos (Chrysotile – 2%) containing material was detected in window putty;
- non-friable asbestos (Chrysotile – 3% to 5%) containing material was detected in vinyl floor tile and floor mastic in the office area;
- non-friable asbestos (Chrysotile – 30%) containing material was detected in 8-inch transit pipe at an HVAC vent in the main warehouse; and
- trace asbestos (<1%) was detected in composite wall board (Chrysotile – 1% in joint compound).

Lead Based Paint

Building material prior to 1978 should be suspected of containing lead based paint (LBP). The warehouse building was constructed around 1952. Previous sampling for LBP indicated that lead was detected in seven of the eight interior and exterior paint chip samples and exceeded the action level for Cal/OSHA of greater than 600 ppm and the EPA/DHS action level of greater than 5,000 ppm. The areas sampled included the interior office green wall, interior office brown door jamb, interior office wood window frame, interior warehouse floor yellow stripe, a vertical drain pipe on the exterior south wall, and metal on the exterior south side loading dock edge.

Metals

The results of the previous sampling/testing for metals (As, Ba, Cr, Co, Cu, Pb, Ni, Vn, Zn) other than those associated with lead based paint indicated that they were are levels typical for normal background.

Petroleum Hydrocarbons

The results of the previous sampling/testing for total recoverable petroleum hydrocarbons (TRPH) indicated that the three samples analyzed contained concentrations at levels of 43 mg/kg to 47 mg/kg from depths of two to eight feet below ground surface. However, these concentrations of TRPH are below Regional Water Quality Control Board (RQWCB) Environmental Screening Levels (ESLs) for the samples tested. The source of the TRPH in the soil has not been identified but past usage of the Project site may have contributed to the minor impact identified.

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, 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 (average 0.665 pCi/L and 0.200 pCi/L, respectively); for basement areas, 50% are <4 pCi/L and 50% are between 4 and 20 pCi/L (average 8.350 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. Testing for Radon gas is recommended for future development that may include below ground structures (e.g.: subterranean parking, etc.).

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. Testing for PCB in building materials was not performed during the previous modified Phase I ESA. However, sampling/testing for PCB in soil during the previous modified Phase I ESA indicated that no detectable concentrations of PCB's were found.

Universal Wastes

Universal wastes are defined as those that are classified as hazardous but containing materials that are very common. Common universal wastes include mercury-containing fluorescent lamps and high intensity discharge bulbs, and mercury-containing thermostats and switches. Lighting ballasts may contain PCBs. Universal waste, mainly fluorescent lamps, were observed during the site reconnaissance being typically contained in recycling boxes on pallets and wrapped for stability pending disposal. Occasional individual boxes were noted as well. Ballasts and/or fluorescent light fixtures were also observed along with occasional small electrical transformers of unknown use.

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 inside the warehouse building but was generally properly contained in trash receptacles.

Utilities

Natural gas, water and sewer appear to be supplied and made available to the Project site from belowground utilities. Electricity is supplied to the warehouse via a drop at the south (middle) side of the building from an aboveground distribution line utility poles generally running along the south side of "R" Street but jogging to the north where a single utility pole is positioned at the drop point. Telephone service is supplied via aboveground utility poles and appears to enter the building underground at the same location as the power drop.

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. In the latter part of the nineteenth century, with the exception of civic sanitation in the form of redwood sewers in the commercial district designed primarily for storm water drainage and not sanitation, the vast majority of privies in Sacramento were mere holes dug in the ground. In the case of the better homes and best hotels, cesspools were still common even in the 1880s. Following the floods of 1861 and 1862, which raised concerns of miasmatic diseases and set into motion the first sanitation reforms, the city proposed that connections be made from each back yard to sewer pipes laid below ground surface in the center of the street alleys. These in turn would be connected with larger street sewers at the intersections. Implementation proceeded slowly over the next 15 years with a hodgepodge system of brick and redwood conduits, ceramic pipe, and open ditch sewers (Hamilton et al., 2005).

Water closets were seen in wealthier residences and civic buildings by the 1870s, but the large-scale move to indoor plumbing took a slow course in Sacramento. The city passed several ordinances that decade, including the first "mandatory use of cesspools as intermediary settling tanks before hookups to alley sewers could be made" in 1878. By 1890 the city had paved many streets with asphalt, built cement sidewalks downtown, and constructed a new water system, but the sanitation problem still loomed large for many years after. City

health officials were constantly attending to complaints of odors and poor plumbing. A 1902 Sacramento Bee article estimated that 5,500 privies remained in the city, suggesting they were still a prime means of waste disposal. It would still be another decade before city legislation and modern plumbing codes finally ended the unsanitary conditions (Hamilton et al., 2005).

The Project site is served by a domestic water supply and municipal sewer. There is no documented evidence of a private sewage disposal system using a septic tank, seepage pits, or leach lines having been used on the Project site. Any environmental biological hazard associated with the use of outdoor privies and cesspools is not expected as the organic material would be thoroughly degraded after over a century of exposure to the natural processes of biological decomposition.

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 and historical records review 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 aerial photography, historic topographic maps, and Sanborn maps indicates that the Project site has been developed as far back as 1953 (aerial photographs) and continued to develop into a building of the State of California in 1957 (Sanborn maps). The topographic map as early as 1902/1907 appears to indicate some development but the type cannot be determined. The following is a summary of the review of each data source.

Historical Aerial Photographs

Historical aerial photographs were reviewed for evidence of past development or land use in the Project Corridor and surrounding areas, and are provided in Appendix D. 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 3.5.

Table 3.5 Summary of Historical Aerial Photographs

Year	Summary
1937	Project Site is not yet developed; primary use in surrounding area is state buildings, residential, and commercial use. Capitol Park can be seen in Northeast direction of map and Southside Park is seen on the Southwest portion of the aerial map. Area is about 75% developed (Scale 1"=500)
1947	Project Site and surrounding area is similar to the 1937 aerial photo (Scale 1"=500)
1953	Project Site building is now developed with unknown use; primary use in surrounding area is state buildings, residential, and commercial use. Area is about 80% developed. (Scale 1"=500)
1957	Project Site and surrounding area is developed similarly to 1953 aerial photo. Area is about 90% developed (Scale 1"=500)
1964	Project Site and surrounding area is similar to the 1957 aerial photo (Scale 1"=500)
1966	Project Site and surrounding area is similar to the 1964 aerial photo (Scale 1"=500)

Table 3.5 Summary of Historical Aerial Photographs

Year	Summary
1972	Project Site and surrounding area is similar to the 1966 aerial photo (Scale 1"=500)
1984	Project Site and surrounding area is developed similarly to the 1972 aerial photo. Area is 100% developed (Scale 1"=500)
1993	Project Site and surrounding area is similar to the 1984 aerial photo (Scale 1"=500)
1998	Project Site and surrounding area is similar to the 1993 aerial photo (Scale 1"=500)
2005	Project Site and surrounding area is similar to the 1998 aerial photo (Scale 1"=500)
2006	Project Site and surrounding area is similar to the 2005 aerial photo (Scale 1"=500)
2009	Project Site and surrounding area is similar to the 2006 aerial photo (Scale 1"=500)
2010	Project Site and surrounding area is similar to the 2009 aerial photo (Scale 1"=500)
2012	Project Site and surrounding area is similar to the 2010 aerial photo (Scale 1"=500)

Historical Topographic Maps

Topographic maps are provided in [Appendix E](#) with dates or revised dates of 1891, 1892, 1893, 1902/1907, 1911/1916, 1948, 1949, 1954, 1967, 1697, 1975, 1980, 1992, and, 2012. Specific development along 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. A cemetery (which develops into the present day Historic Sacramento City Cemetery) can be seen on the south side of the map and the Sacramento River runs along the west side. This is similar for the 1911/1916 and 1948 maps. By 1949 some other key markers such as the Southside Park, Roosevelt Park, and the State Capitol can be identified. The 1954 map is similar to that of the 1949, yet the west half of this map is missing from the database so visual confirmation is limited. By 1967 all major landmarks are still present and visible with much more surrounding development; including major highways such as the I-5, SR-99, and I-80. The maps 1975 through 1992 are similar to that of the 1967 map, with the addition of the US Highway 50 labeled in the 1992 map. The 2012 map reflects the 1992 map developmentally, with less labels and descriptions of the area.

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

Sanborn Maps

Sanborn maps are provided in [Appendix F](#) with dates or revised date of 1895, 1915, 1950, 1952, 1957, 1960, 1964, 1965, 1966, 1968, and 1970. In the 1895 Sanborn maps, the Project site appears to have at least five individual dwellings (residences) with similar development in the surrounding areas with no major identifiable landmarks other than streets and alleys. In the 1915 map, six residences are indicated along with a shed within the Project site. Freight tracks of the Western Pacific Railroad are located in an unnamed alley way directly to the north and those of the Southern Pacific are located along "R" Street directly to the south of the Project site. Other businesses to the southwest are indicated on the 1915 Sanborn map and include the Great Western Power Company powerhouse, the Sacramento Pipe Works pipe shop, and a warehouse and bottling works. The surrounding areas include mostly dwellings and some apartments.

In the 1950 Sanborn map, the Project site appears blank with no structures indicated. In addition, a Government Storage facility is labeled directly south of the Project site, located between Cambell

Construction Company and National Biscuit Company. An electrical supplies warehouse and Montgomery Ward & Company is located west across 8th Street. To the southwest of the Project site is the Sacramento Municipal Utilities District (SMUD) substation (formerly Great Western Power Company powerhouse) and Shasta Water Company (formerly identified as warehouse and bottling works); the Sacramento Pipe Works pipe shop appears to have been removed. East of the Project site an auto repair shop is indicated. To the southeast of the Project site a roller skating rink, a newspaper supplies warehouse and a magazine and warehouse is identified. The greater area is still mostly developed with residences and apartments. The 1952 Sanborn map of the Project site and surrounding areas is similar to that of the 1950 map except that the Montgomery Ward & Company appears to have been replaced by a wholesale (?) drug store; a tire warehouse is now indicated in a formerly vacant lot adjacent to the auto repair shop. Similar surrounding development is present in the 1957 Sanborn map. The Project site is now identified as the State of California furniture warehouse. To the west across 8th Street, the wholesale (?) drug store is no longer indicated. Farther to the southwest, the Shasta Water Company has been replaced by a liquor warehouse; a chain (?) warehouse is located on the western portion of the former Sacramento Pipe Works pipe shop footprint. To the southeast of the Project site the roller skating rink appears to have been replaced by a warehouse; the newspaper supplies warehouse and magazine and warehouse are still identified.

The 1960 Sanborn map reflects similar Project site and surrounding area development with that of the 1957 map, with minor business name changes surrounding the site. The chain warehouse to the southwest of the Project site has been replaced by a furniture warehouse. The roller skating rink is once again indicated to the southeast of the Project site. The National Biscuit Company has been replaced by a tobacco warehouse southeast of the Project site across “R” Street at 9th Street. The 1964 through 1970 Sanborn maps all reflect similar Project site and surrounding area development; the 1960 map identifies designated parking areas immediately adjacent to and greater surrounding area with more being identified in the later maps. In the 1964 map the tobacco warehouse southeast of the Project site across “R” Street at 9th Street is replaced by a laundry and dry cleaning supplies warehouse. To the southwest, the furniture warehouse has been replaced by a transfer warehouse. Development of the area is similar through 1970.

3.6 Current and Past Uses of Adjoining Properties

Following the discovery of gold near Sacramento in December 1848, many thousands of people came to the area in search of the precious metal. As a result, the area grew very rapidly, almost overnight. A summary of the historic account of the Sacramento area, including the Project site, is provided by Anderson (2002) as follows.

In 1855 the Sacramento Valley Railroad began construction and included “R” Street. In 1856, Sacramento Valley Railroad was purchased by the Central Pacific Railroad which would become the Southern Pacific Railroad. At this time there was very little development in the area of the Project site and by 1870 the land uses along “R” Street remained a mix of small gardens with scattered homes.

In 1895, the first published Sanborn map for the Project site was produced. In that same year the City of Sacramento became electrified with the construction of the powerhouse at Folsom (Anderson 2002). Transportation was dominantly by horse drawn conveyances. There were only 27 registered automobiles in 1905 but by 1915 there were thousands of automobiles and trucks (Anderson 2002). In 1910, the Western Pacific railroad, whose tracks are shown in the alley way north of the Project site in the 1915 Sanborn map, became the first major competitor of the Central Pacific (later Southern Pacific) railroad. South of the Project site along “R” Street is a spur rail service of the main Southern Pacific freight line.

In 1908, the Great Western Power Company powerhouse was constructed at the southwest corner of 8th Street and “R” Street (Anderson 2002) and was a major supplier of electricity to the downtown area, being operated until the mid-1980s by its successor PG&E and later SMUD. The 1908 structure was demolished sometime

after 1980. This information was prepared as part of a 1980 Historical Resources Inventory for the State of California. During the 1915 to 1929 construction boom in the downtown area, similar activities occurred along “R” Street as well. Buildings were remodeled and many new sturdy brick warehouses and manufacturing plants were built (Anderson 2002). From 1920 to 1960, the following occurred along “R” Street between 8th Street and 9th Street:

- In the 1940s, the whole block north of “R” Street was owned by the Henry Cowell Lime and Cement Company at the location of the current State-owned warehouse;
- Around 1952, the construction of the current concrete block State-owned warehouse (Project site) at 805 “R” Street on block 266;
- In the mid-1920s a brick building was constructed southwest of the Project site across “R” Street and was operated by the Campbell Construction Company until around 1965; and
- From the late 1930s to around 1960 the National Biscuit Company occupied the area southeast of the Project site across “R” Street and was later occupied by the Allied Cleaning Company in the 1960s.

In summary, 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. Currently the area is mostly developed with a mix of state-owned buildings, commercial, multi-family residential (apartments) and parking (both surface and multi-level structures) uses.

4.0 Records Review

4.1 Standard Environmental Records

HANA environmental staff reviewed available databases from federal and state regulatory agencies to identify use, generation, storage, treatment and/or disposal of hazardous materials and chemicals or release incidents of such materials, which may have impacted the Project Site and surrounding areas. The regulatory databases were provided to HANA from EDR Radius Map Report with GeoCheck ([Appendix A](#)). 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 listed in two of the database lists provided by EDR as potential environmental concerns; Leaking Underground Storage Tank (LUST), and CA Sacramento County CS. Report dates for each database searched are listed in [Appendix A](#).

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
Federal RCRA non-CORRACTS TSD facilities list	0.5	1
RCRA Small Quantity Generators (SQG)	0.25	10
ENVIROSTOR Cleanup Sites (ENVIROSTOR)	1.0	38

Table 4.1 Summary of Regulatory Database Search

Database	Distance Searched (miles)	Map Finding Summary
CA RESPONSE	1	11
Leaking Underground Storage Tank (LUST)	0.5	36
Spills, Leaks, Investigation & Cleanup Recovery Listing (SLIC)	0.5	7
CA Sacramento County CS	0.5	37
Underground Storage Tanks (UST)	0.25	6
Aboveground Storage Tanks (AST)	0.25	6
VA Voluntary Cleanup (VCP)	0.5	1
CA Brownfields	0.5	1
US Brownfields	0.5	4
CA HIST Cal-Sites	1	12
Statewide Environmental Evaluation and Planning System (SWEEPS UST)	0.25	19
Historical Underground Storage Tanks (HIST UST)	0.25	24
CA FID UST	0.25	19
FUDS Formerly Used Defense Sites Properties	1	1
CA BOND EXP PLAN	1	5
Historic Cortese List (HIST CORTESE)	0.5	25
CA HWP	1	2
CA Sacramento Co. ML	0.25	50
Notify 65	1.0	5
EDR Manufactured Gas Plants (EDR MGP)	1	3
EDR Historical Auto Stations	0.125	10
EDR Historical Cleaners	0.125	1

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 1 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 1 site is listed within 1.0 mile of the site.

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: 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). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

The Project site is not listed in the search of this database, while 1 site is listed within 0.5 miles of the site.

RCRA Small Quantity Generators (RCRA-SQG)

Federal RCRA generators list

RCRA-SQG: 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). 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 10 sites are listed within 0.25 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 38 sites are located within 1.0 miles of the site.

Leaking Underground Storage Tanks (LUST)

LUST: Leaking Underground Storage Tank (LUST) 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, while 36 other 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 7 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 not listed in the search of this database, with 37 other 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 6 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 6 sites located within 0.25 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 1 site 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 1 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 4 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 19 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 24 other sites are listed within 0.25 miles of the site.

CA FID UST:

The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

The Project site is not listed in the search of this database, while 19 other sites are listed within 0.25 miles of the site.

FUDS

The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

The Project site is not listed in the search of this database, while 1 other site are listed within 1 mile 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 5 sites located within 1.0 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 25 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 2 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 50 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 5 other sites are listed within 1.0 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 3 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 10 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 1 other listing 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 by EDR for the Project site and surrounding properties. No permits were identified for the Project site in the EDR report.

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

Three Oil/Gas wells are identified in the EDR database. Two wells, CAOG11000235424 and CAOG11000235425, were operated by the Sacramento Natural Gas Company and were abandoned on July 12, 2001. They were located approximately 0.30 mile northwest of the Project site. The third well, CAOG11000234914, was operated by the Pacific Gas & Electric Company and was located approximately 0.75 mile west from the Project site, yet was abandoned November 30, 2003. Refer to EDR Report for details in the [Appendix A](#).

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 quarter of a mile of the Project site. Refer to EDR Report for details in the [Appendix A](#).

4.2.5 Groundwater Wells

The EDR report indicates there are four potential water wells located within one mile of the Project site. The closest is slightly more than 0.50 miles to the west (CADW600000029664). A second well is located

approximately 0.75 miles to the northeast (CADW60000003129). A third well is located approximately 0.50 miles to the south (CADW600000029660). The fourth is located slightly more than 0.75 miles to the west (USGS40000189207). Refer to EDR Report for details in the [Appendix A](#).

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 2014. One site identified as A-B-C Cleaners was listed in 1961 at 1120 7th Street. Another site was identified as Moncade John (EDR Historical Cleaner) was listed in 1920 and 1923 at 1706 7th Street. Additional information is available in the EDR-City Directory Abstract 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 database records for migration potential.

ASTM Standard E2600-10 is a Standard Guide for Vapor Encroachment Screening 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 (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 (VES) 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.

The following site listings were identified on multiple databases. Some information is provided and more can be located in the EDR Vapor Encroachment Screening Report provided in [Appendix H](#). The number of the site below corresponds to the numbered listing in the VES Report.

51) Mobil #8 – 714 P Street, Sacramento, CA: This site is listed under the LUST, HIST CORTESE, SACRAMENTO CO. CS and SACRAMENTO CO. ML databases. A leak was discovered in December 1986. Cleanup was conducted and case was listed as closed in January 1990. There have been no reports of leaks or violations since that time.

57) State Office Building #819, 714 P Street, Sacramento, CA: This site is listed on the LUST and Notify 65 databases. There have been no reports of leaks or violations.

69) State of California Bonderson Building, 901 P Street, Sacramento, CA: This site is listed under the LUST, HIST CORTESE, and SACRAMENTO CO. CS databases. There have been no reports of leaks or violations.

77) Energy Commission Building 008, 1516 9th Street, Sacramento, CA: This site is listed on FINDS, LUST, HIST UST, RCRA-SQG, HAZNET, UST, SWEEPS UST, CA FID UST, Notify 65, SACRAMENTO CO. ML, and ECHO databases. This site was listed as a producer of Hazardous Waste. No reports of violation were noted.

112) State Garage, 1416 10th Street, Sacramento, CA: This site is listed under the LUST, HIST UST, HIST CORTESE and SACRAMENTO CO. ML databases. A gasoline leak was discovered in July 1989. Cleanup was conducted and case was listed as closed in January 1991. There have been no reports of leaks or violations since that time.

114) State Archives Building, 1020 O Street, Sacramento, CA: This site is listed on the LUST, SWEEPS UST, HIST CORTESE, SACRAMENTO CO. CS and SACRAMENTO CO. ML databases. A diesel leak was discovered in November 1992. Cleanup was conducted and case was listed as closed in July 1996. There have been no reports of leaks or violations since that time.

69) Consumer Affairs Building, 1020 N Street, Sacramento, CA: This site is listed under the LUST, HIST CORTESE, and SACRAMENTO CO. CS databases. A gasoline leak was discovered in March 1988. Cleanup was conducted and case was listed as closed in July 2003. There have been no reports of leaks or violations since that time.

130) CADA Properties Site 222, Sacramento, CA: This site is listed on FINDS and US BROWNFIELDS databases. No reports of violation were noted.

The following listings were found on the Historical Auto Stations Database. There were no reports of violations found:

- 5) PDQ Shell Service, 1700 9th Street, Sacramento, CA
- 9) Tom's Automotive Service, 730 Q Street, Sacramento, CA
- 12) Wang's Auto Service, 708 Q Street, Sacramento, CA

The following listings were found on the LUST Database. There were no reports of violations found:

- 65) State of California Bonderson Building, 901 P Street, Sacramento, CA

The following listings were found on the SACRAMENTO CO. CS Database. There were no reports of violations found:

- 78) State Energy Commission, 1516 9th Street, Sacramento, CA

The following listings were found on the ENVIROSTOR Database. There were no reports of violations found:

- 104) Mather Mil AF (J09CA0012), Sacramento, CA
- 105) Mather Storage Annex (J09CA0081), Sacramento, CA

6.0 Previous Environmental Assessments

As discussed beforehand in Section 3.4, limited sampling/testing for metals, total recoverable petroleum hydrocarbons (TRPH), asbestos containing materials, lead based paint and PCBs was performed as part of a previously prepared modified Phase I ESA ([Appendix B](#)). 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

HANA performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice (E 1527-13) of the State-owned property located at 805 R Street, in the City of Sacramento, Sacramento County, California. Any exceptions to, or deletions from, this practice are described below in Section 8.0 of this report. The EDR Radius Report identified 336 locations within a mile radius of the Project site (target property in EDR report). There were several historical cleaner sites near the Project site. Information provided in the EDR report indicated that there were no violations reported. The nature of the chemicals and activities associated with these types of businesses could pose risks of contamination soil and groundwater; however, as none of these sites were found to have had a documented release or contamination to groundwater resulting from these past operations, they do not constitute a REC.

The former Downtown Sacramento Union Pacific Railyard (Southern Pacific Transportation Company) site is located approximately 0.8 miles north of the Project site. According to the database, past activities have impacted both soil and groundwater media at this location with impact extending southward as a groundwater plume. The southernmost extent of the plume appears to be immediately north of the Project site based on data from monitoring and extraction wells that have been installed as far south as “P” Street as part of a voluntary cleanup program regulated by the DTSC. Monitoring along “P” Street indicates groundwater impacted by metals (copper, manganese and zinc) and volatile organic compounds TCE, PCE, and 1,4-dioxane. With the exception of one sample for 1,4-Dioxane and the metal manganese, all other analytes were either below detection limits or below maximum concentration limits for water. None of the reported metals or VOCs in the groundwater poses a REC or VEC to the Project site.

The potential for RECs at the Project site appear to be associated with building materials that contain asbestos and LBP, universal waste, and potentially black mold. Asbestos is identified in window putty, in vinyl floor tile and floor mastic in the office area, in 8-inch transit pipe at an HVAC vent in the main warehouse, and in composite wall board joint compound. LBP is identified in the interior office green wall, interior office brown door jamb, interior office wood window frame, interior warehouse floor yellow stripe, a vertical drain pipe on the exterior south wall, and metal on the exterior south side loading dock edge. Universal waste (other than that being temporarily stored pending disposal) will require proper handling and disposal during demolition activities. Black mold appears to be present on the north-facing exterior wall of the building; no sampling was performed. The presence of black mold may be an indication of other mold inside the building. As such, this represents a REC for demolition purposes. No other RECs associated with building materials and paint was identified.

Based upon the information obtained during this assessment, it is our opinion that:

- potentially hazardous materials both inside and outside the warehouse building are present and represent RECs;
- these RECs will require special attention during demolition activities; and
- the potential for subsurface contamination at the Project site at concentrations that may require statutory cleanup is **low** with no historic or current RECs (or VEC) noted.

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 1527-13) 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 of the State-owned property located at 805 R Street, in the 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 Project site with federal, state, or local laws and regulations. HANA Resources shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time the assessments 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,
HANA Resources



Dale Schneeberger, MS, PG, QSD
Consulting Manager
October 9, 2017



Ray Rothwell
GIS Manager/ Staff Environmental Scientist
October 9, 2017



10.0 References

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