SCS ENGINEERS







Phase I Environmental Site Assessment

1951 South River Road
West Sacramento, Yolo County, California
Assessor's Parcel Numbers (APNs) 067-180-004, 067-180-001, 058-260-019, 058-260-017, 058-260-018, and 058-260-016

Presented to:

City of West Sacramento
Mr. Jon Robinson
Housing and Community Investment Manager
1110 West Capitol Avenue, 2nd Floor
West Sacramento, California 95691
(916) 371-0845

Presented by:

SCS ENGINEERS
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October 21, 2014
Project Number: 01214093.00, Task 03

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Mr. Jon Robinson
Housing and Community Investment Manager
1110 West Capitol Avenue, 2nd Floor
West Sacramento, California 95691

Subject: **Phase I Environmental Site Assessment (ESA)**

Site: **Assessor's Parcel Number (APNs) 067-180-004, 067-180-001, 058-260-019, 058-260-017, 058-260-018, & 058-260-016**
1951 South River Road, West Sacramento, California 95691

Dear Mr. Robinson:

SCS Engineers (SCS) is pleased to present this Phase I Environmental Site Assessment (ESA) Report (Report) of the above-referenced Site. This Report summarizes the results of the ESA conducted to evaluate the Site's current environmental conditions. The work described in this Report was performed by SCS in general accordance with Exhibit A to the Contract for Services (Contract) between the City of West Sacramento (Client) and SCS. Exhibit A and the Contract were fully executed on March 20, 2014.

Because your full understanding of the ESA is important to us, SCS recommends that you read the Report in its entirety. However, if time does not allow you a complete reading, summaries may be found in Finding and Opinions boxes (pages 20, 34, and 40), and our Conclusions and Recommendations beginning on page 41.

We enjoyed working with you on this project. Providing economic environmental solutions to meet your needs is more than our goal—it is our mission and the measure of our success. If we may assist you in any way, now or in the future, please do not hesitate to call our office at (916) 361-1297.

Sincerely,

Paul Wisniewski, PG, QSP
Senior Project Geologist
SCS ENGINEERS

James G. Ritchie, PG, QSD
Project Director
SCS ENGINEERS

Daniel E. Johnson
Vice President
SCS ENGINEERS

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Appendices

1 BACKGROUND

SCS Engineers (SCS) has prepared this Phase I Environmental Site Assessment (ESA) Report (Report) for the property at 1951 South River Road in the City of West Sacramento (City), California, identified as Yolo County Assessor's Parcel Numbers (APNs) 067-180-004, 067-180-001, 067-180-019, 058-260-017, 058-260-018, & 058-260-016 (Site) (Appendix A, Figure 1). In addition to the address listed above, the Site is also referenced as 1875 South River Road (APNs 058-260-016), 1991 South River Road (APNs 058-260-017, 058-260-018, 067-180-001, and 067-180-019), and 1900 and 2050 South River Road (APN 067-180-004). The Site consists of approximately 37.4 acres and contains numerous buildings, internal access roads, equipment and storage buildings/yards, maintenance shop, and offices (1951 South River Road), an inactive waste water treatment plant (1991 South River Road), and an inactive shipping or navigation lock (1900 and 2050 South River Road).

The Site vicinity is an area of heavy industrial and commercial land use, including bulk fuel storage and dispensing, heavy equipment and commercial vehicle maintenance, large-scale trucking and shipping operations, metal works, and many other commercial/industrial businesses that are located along South River Road. The Site is adjacent to and the west of the Sacramento River, to the north of the Barge Canal and historic Stone Lock shipping lane that was used historically to connect the Port of Sacramento/Washington Lake/Turning Basin with the Sacramento River.

The Site is currently developed for industrial/commercial uses with buildings that house City Parks & Recreation and Public Works, including vehicle and equipment maintenance shops, storage sheds, and offices. Most of the Site buildings, however, are vacant or used only for materials storage. The Site houses an inactive City Waste Water Treatment Plant (WWTP) and the inactive W.G. Stone Navigation Lock.

This Report was requested by the City as part of evaluation of their property holdings for possible divestment and/or redevelopment as part of their Brownfields Community-Wide Assessment Grant (Grant). SCS evaluated Site records, historical land records, Site features, and other data for the possible presence and/or release of petroleum hydrocarbons and other hazardous materials in support of the Environmental Protection Agency (EPA) Grant requirements.

Available information indicates that the Site was acquired by the City in approximately 1989 and most of the existing buildings were constructed after 1964 and before 1981. City Directory listings identify Aurora Pacific Company at the Site in 1970, no listings in 1974, Dewante & Stowell and East Yolo Community Services in 1980, East Yolo County Community Services, Parks, and Utilities in 1985. The City of West Sacramento is listed at the Site in 1989 and 1994. There were no listings for the Site in 1999. Linhart Peterson Powers Associates are listed at the Site in 2003. The Site is listed as City of West Sacramento Public Works in 2008 and City of West Sacramento in 2013.

A review of an Environmental Data Resources (EDR®) Radius Report indicated numerous facilities which store or use hazardous materials in the Site search radius. Relevant facilities were investigated as part of this ESA.

This Phase I ESA was prepared to be consistent with American Society for Testing and Materials (ASTM) Standard E 1527-13, which were recently updated and more recently adopted by the EPA as being consistent with all appropriate inquiries (AAI), under federal legislation, as more fully described below.

2 STANDARDS BACKGROUND

The purpose of this ESA was to identify evidence of Recognized Environmental Conditions (RECs) that may have an adverse environmental impact on the Site or in the immediate adjoining area. The ASTM Standard E 1527-13 defines REC as:

> "*The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property*: (1) due to release to the environment; (2) under conditions indicative of a *release* to the *environment*; or (3) under conditions that pose a material *threat* of a future *release* to the *environment*. *De minimis conditions* are not *recognized environmental conditions*."

Furthermore, an Historic REC (HREC) is defined as:

> *"a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (e.g., property use restrictions, AULs* [Activity and Use Limitations], *institutional controls, or engineering controls). Before calling the past release an HREC, the EP* [Environmental Professional] *must determine whether the past release is a REC at the time the Phase I ESA is conducted (e.g., if there has been a change in the regulatory criteria). If the EP considers this past release to be a REC at the time the Phase I ESA is conducted, the condition shall be included in the Conclusions Section of the report as a REC."*

A Controlled REC (CREC) is defined as:

> "*a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (e.g., as evidenced by the issuance of a NFA* [No Further Action] *letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances*

or petroleum products allowed to remain in place subject to the implementation of required controls (e.g., property use restrictions, AULs, institutional controls, or engineering controls)…a CREC shall be listed in the Findings Section of the Phase I ESA report, and as a REC in the Conclusions Section of the….report*."

**Section 12.8 of E1527-13 requires that the Conclusions Section of the report summarize all RECs (including CRECs) connected with the property.*

This ESA is intended to constitute an appropriate inquiry into the previous ownership and uses of the Site consistent with good commercial or customary practice, required by the innocent landowner defense under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, a.k.a. Superfund), the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the Small Business Liability Relief and Brownfields Revitalization Act of 2002. This process satisfies one requirement to qualify for the innocent landowner defense, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability.

The user of this ESA should note that this ESA may satisfy one requirement to qualify for the innocent landowner defense, contiguous property owner, and bona fide prospective purchaser defense (collectively, Landowner Liability Protections). However, while this ESA may initially qualify a user for a CERCLA defense after purchase, there are "continuing obligations" that must be implemented and maintained in order to preserve the user's defense to liability through the term of property ownership. Also, while an owner of a property may qualify for one of the Landowner Liability Protections and preserve it through the term of ownership, the liability protection does not pass on to a new owner of the property.

Finally, there may be additional requirements under state laws that also apply. The Client should contact qualified legal counsel regarding matters of liability, interpretation of the acts, and potential continuing obligation.

Additionally, an ESA can be a valuable risk assessment tool that will help a purchaser, owner, lending institution, and investor identify asset management issues (business environmental risk) that may have a significant material impact on the property value, use of the asset or its future marketability. An evaluation of business environmental risk associated with a parcel of commercial real estate may necessitate investigation beyond that included herein.

DETAILED SCOPE OF STUDY

SCS performed this ESA in general accordance with the considerations set forth in the ASTM standards for environmental assessments (ASTM Standard E 1527-13) as well as any specific modifications to said standard or additional items required by the Client.

This ESA is based on:

- Field observations made during reconnaissance of the Site performed on April 22 and 28, 2014 and May 5, 2014;
- Review of available historical documents: examples include street directories, topographic maps and aerial photographs, and available environmental reports and other related documents;
- Review of federal, state, and local regulatory databases. The search distances are those specified by 40 CFR 312; and,
- Interviews with individuals knowledgeable about the Site and Site vicinity.

3 OBJECTIVE

The objective of the scope of services was to assess the likelihood that RECs are present at the Site as a result of the current or historical Site land use or from a known and reported off-site source.

4 SCOPE OF SERVICES

The scope of services designed and conducted to meet the objective was as follows:

- Site Reconnaissance, Site Research, Interviews, and User Requirements;
- Topography, Geology, Soils, Hydrogeology, and Water Quality Survey;
- Site Vicinity Reconnaissance and Off-Site Source Survey;
- Historical Site and Site Vicinity Land Use Review;
- Identification of Data Gaps; and,
- Data Evaluation, Figure Preparation, and Assessment Report Preparation.

SITE RECONNAISSANCE

On April 22 and 28, 2014 and May 2, 2014, Mr. Michael Sperber and Mr. Paul Wisniewski of SCS conducted Site reconnaissance to observe and document existing Site conditions. The Site location is shown on Figure 1 and a Site Plan showing adjoining properties is shown in Figures 2a, 2b, 2c, and 2d (Appendix A). Selected color photographs of the Site are presented in Appendix B.

The exteriors of the Site buildings were observed and the Site grounds and Site perimeters were systematically traversed on foot during the Site reconnaissance. During the reconnaissance, SCS met with Mr. Jack Murphy, Superintendent with City of West Sacramento Public Works, and Mr. Sam Cooney, Parks and Grounds Manager with City of West Sacramento Parks & Recreation. Our reconnaissance was otherwise unaccompanied.

General Information

The following table summarizes general information in connection with the Site:

APNs	067-180-004, 067-180-001, 067-180-019, 058-260-017, 058-260-018, & 058-260-016
Address	1900, 1951, 1991, and 2050 South River Road, West Sacramento, California 95605
Area	Total of 37.439 acres spanning 6 parcels
Site Land Use	APN: 067-180-004 (Navigation Lock): **vacant** (Figure 2a) APN: 067-180-001 (WWTP): **City storage** (Figure 2b) APN: 067-180-019 (WWTP): **City offices, maintenance shop, storage/yard** (Figure 2b) APN: 058-260-017 (Corp. Yard): **City equipment and materials storage yard, wash rack** (Figure 2c) APN: 067-180-018 (Corp. Yard): **City offices, maintenance shop, storage/yard** (Figure 2c) APN: 058-260-016 (Sludge Basin): **City materials storage, Clark Metal Works** (Figure 2d)
Occupant	City Parks & Recreation City Public Works Clark Metal Works
Figure Reference	Figures 1, 2a, 2b, 2c, and 2d

Site Buildings

The following table summarizes information in connection with the Site buildings:

Number of Buildings	APN: 067-180-004 (Navigation Lock): **7** (Figure 2a) APN: 067-180-001 (WWTP): **3** (Figure 2b) APN: 067-180-019 (WWTP): **14*** (Figure 2b) APN: 067-180-018 (Corp. Yard): **3** (Figure 2c) APN: 058-260-017 (Corp. Yard): **3** (Figure 2c) APN: 058-260-016 (Sludge Basin): **0** (Figure 2d) **Site Total: 30**
Interpreted Construction Date	Initial construction of WWTP in 1954 with existing buildings constructed circa 1960s and 1970s; WWTP became inactive in 2007; Stone Lock constructed between 1957 and 1964 and active until the 1980s.
Number of Stories	1 and 2 story buildings
Construction Type	Buildings are generally constructed with slab on grade concrete foundations. Walls and roofs in WWTP buildings are constructed of concrete. Walls for sheds, offices, maintenance shops, and other buildings are constructed either of sheet metal or wood and roofs for these buildings are constructed with either sheet metal or tar and gravel.
Figure Reference	Appendix B - Site Photographs

** Numerous other above and below grade structures related to the inactive WWTP are also present on this APN, including basins, digesters, ponds, clarifiers, pump shelters, and other support structures related to the WWTP.*

Site Grounds

The Site grounds consist of a navigation lock and associated buildings, an inactive WWTP, offices, maintenance shops, storage sheds, storage yards, wash rack, recyclable storage, stockpiles, construction materials, maintenance vehicles and equipment owned and operated by the City. The portion of the Site that houses the inactive WWTP includes offices, basins, digesters, ponds, clarifiers, pump shelters, a gas flare, a laboratory, a cell tower, and other above and below ground structures. In addition, the northern portion of APN 058-260-016 is occupied by Clark Metal Works, Inc., which uses this area for truck parking and equipment and materials storage on paved surfaces.

The Site is generally paved with the exception of storage yard areas on APN 067-180-018 that are covered with gravel, the eastern half of APN 067-180-004, which is covered with riparian vegetation and was inaccessible during the time of our Site reconnaissance, unpaved areas on the south and east portion of APN 067-180-019 (WWTP), APN 067-180-001, which is unpaved and partially forested, and riparian areas along Sacramento River and the navigation lock.

Photographs of the Site grounds and features are included in Appendix B.

Hazardous Materials/Petroleum Products

Hazardous materials and petroleum products were observed to be used or stored at various locations throughout the Site as follows:

- An aboveground storage tank (AST) with a capacity of approximately 1,000 gallons was observed on APN 067-180-019 (WWTP). The AST appeared to be double-walled (similar to Convault®) and the placard indicated that it contained diesel fuel. No staining was observed around the AST or AST dispenser, which is located on an unpaved ground surface. No staining was observed on the ground surface around the diesel AST. Tall grasses prevented clear observation of the ground surface around the AST and its dispenser.

- Two ASTs located in the used oil shed adjacent to the maintenance shop were observed during Site reconnaissance on APN 067-180-018 (WWTP). The ASTs consisted of a 250-gallon waste oil AST constructed of double-walled steel and a 100-gallon coolant AST constructed of high density polyethylene (HDPE). No evidence of staining was observed in the area of the used oil shed, which is located on a paved surface.

- Numerous unlabeled or partially labeled 55-gallon drums and smaller quantity containers of hazardous or potentially hazardous materials were observed in various buildings throughout the Site. As indicated by labeling, many of these

drums contained petroleum products or residual quantities of petroleum products, but in all cases drums and containers were located on concrete floors under roof. SCS did not complete an inventory of these drums/containers as many containers were either not accessible (visible only through windows of locked buildings) or unlabeled. Numerous hazardous materials/petroleum product containers were observed in the following areas of the Site:

APN: 067-180-004 (Navigation Lock): Oil Shed, Machine Shop (Figure 2a)
APN: 067-180-019 (WWTP): Blower Building, Engine Room, Chlorine & Sulfur Dioxide Building, Electrical Building, Maintenance Shop (Figure 2b)
APN: 067-180-018 (WWTP): Maintenance Shop (Figure 2c)
APN: 058-260-017 (Corp. Yard): Maintenance Building (Figure 2c)

These drums and containers were observed to be located under roof on concrete surfaces with no evidence of a release of contents. However, improper storage is considered to be a compliance and housekeeping issue. Therefore, SCS recommends that the drums and containers be inventoried, tested if unlabeled to ascertain contents, for proper disposal.

Oil staining was observed on asphalt pavement along the north exterior wall of the Machine Shop located at the W.G. Stone Lock facility (APN 067-180-004). However, this staining is considered to be a *de minimis* condition because there is no evidence that that the oil forming the stain penetrated the pavement.

Photographs of hazardous materials/petroleum product containers are included in Appendix B.

Hazardous Wastes

Based upon the presence of a waste-oil AST, numerous unlabeled or partially labeled 55-gallon drums located in various buildings throughout the Site, current and historical Site uses for vehicle and equipment maintenance, and the Site listing in the database, hazardous wastes were previously and continue to be generated at the Site. According to Psomas (2008), certain Asbestos Containing Building Materials or ACBMs (e.g., asbestos cement pipe – located as indicated throughout the WWTP) may be considered hazardous waste [once removed from the facility]. However, SCS did not observe any obvious indications that wastes were being improperly disposed or accumulating (other than the above mentioned 55-gallon drums) at the Site.

Photographs of hazardous waste containers are included in Appendix B.

Indications of Releases of Hazardous Materials/Wastes or Petroleum Products

With the exception of previously noted staining, there were no obvious indications of release of hazardous materials/wastes or petroleum products at the Site.

On-Site Utilities

According to the Site owner, records reviewed, and observations during the Site reconnaissance, the on-Site electric service is provided by Pacific Gas and Electric Company (PG&E). The Site electric utilities are largely underground on Site, but electric service is provided by aboveground infrastructure (power poles) along South River Road. During our reconnaissance, SCS did not observe pole-mounted transformers, or transformers which could potential contain polychlorinated biphenyl (PCB)-containing oils located on Site, with the exception of a ground-mounted transformer located at the WWTP which is discussed in the Site Research section below.

Domestic water is supplied by the City. However, a water supply well is located on APN 067-180-004 (Navigation Lock); a photograph of the well head is included in Appendix B.

There are numerous structures related to the inactive WWTP on Site, many of which are subgrade or have piping that is subgrade, including basins, digesters, ponds, clarifiers, and other structures. Subgrade WWTP piping may contain liquids or gases related to the formerly operating WWTP, including water, waste water, sludge, chlorine, or other chemicals used as part of facility operations.

Based on yellow marking paint and posted signs, a Kinder Morgan underground liquid petroleum pipeline crosses the Site on northwestern corner of APN 067-180-004 (Navigation Lock) and parallels this parcel on the adjacent property to the north, which is occupied by Clark Trucking Services, Inc. The Kinder Morgan pipeline is located beneath South River Road to the west of the Site as shown on Figures 2a and 2b. The petroleum pipeline is considered a feature of potential concern and releases, if any, from the pipeline would be considered a REC. Further investigation (research) may be warranted to assess whether release(s) have occurred that have resulted in a REC. Environmental records reviewed for the Site did not contain information concerning the Kinder Morgan pipeline.

Septic System

The Site is connected to the City sanitary sewer system. However, an inactive WWTP that is planned for demolition is located on Site.

Non-ASTM Items Considered

During the course of this ESA, SCS considered the following non-scope items that could have an environmental impact on the current or future use of the Site. These items are primarily related to the existing buildings and structures on the Site and will be a factor for the proposed project to demolish the WWTP and other structures on the Site.

Asbestos Containing Building Materials (ACBM)

Asbestos was historically a component of certain types of building materials (e.g., vinyl flooring, ceiling textures, structural fireproofing). The manufacture of most asbestos-containing building material(s) or ACBMs especially potentially friable ACBMs, ended in the late 1970's, except for roofing tars and mastic, which were restricted in 1983. However, existing inventories of products could still be used. In addition, a few ACBMs are still being manufactured (e.g., certain roofing materials, cement-asbestos pipe etc.). In general, buildings constructed after 1985 have a reduced potential for friable ACBMs and only a low potential for non-friable forms of ACBMs such as vinyl floor tile. The construction date of the commercial/industrial buildings and structures on the Site (1954 through 1970s) suggests a high likelihood of ACBMs.

Versar conducted an ACBM survey (Versar, 2007), which identified ACBMs in a number of WWTP buildings and structures. See the report by Versar and demolition plans by Psomas for a complete listing ACBMs in the WWTP buildings.

A more in-depth discussion of the Versar ACBM survey is provided in the section below.

Lead Based Paint (LBP)

In 1973, the Consumer Product Safety Commission (CPSC) established a maximum lead content in paint of 0.5 percent by weight [or 1.0 milligram per square centimeter (mg/cm^2)] in a dry film of newly applied paint. In 1978, the CPSC lowered the allowable lead level in paint to 0.06 percent. The use of LBP was not prohibited until 1980. Buildings (structures) constructed or renovated between 1940 and 1980 have a much higher probability of containing LBP. The construction date of the commercial/industrial buildings and structures on the Site (1954 through 1970s) suggests high likelihood of LBP.

Versar conducted an LBP survey (Versar, 2007), which identified LBP in a number of WWTP buildings and structures. The Site was not tested for LBP during Site reconnaissance and such testing is outside of the scope of this Phase I ESA. See the report by Versar (2007) and demolition plans by Psomas (2008) for a complete listing of WWTP buildings and structures that contain LBP.

A more in-depth discussion of the Versar LBP survey is provided in the section below.

SITE RESEARCH

Available Documents

SCS reviewed the following documents provided by the City and prepared by Versar, Psomas, and Engeo Incorporated (Engeo) pertaining to the WWTP portion of the Site. A summary of the findings of these documents is provided below:

Versar, 2007. *West Sacramento Waste Water Treatment Plan Asbestos Containing Materials & Lead-Based Paint Pre-Demolition Survey Report*, March 23.

- Versar identified ACBMs and LBP in various building materials throughout the WWTP portion of the Site. ACBMs were identified in the Laboratory and Control Building, Electrical Building, Chlorine and SO_2 Storage Building, Primary Digester #1 Control Building, Chlorine Building/Machine Shop, Secondary Digester Control Building, Waste Excavation Disposal Area, and Sludge Dewatering Unit. LBP was identified by Versar on various building and structure surfaces throughout the WWTP.

- Versar recommended OSHA Class II work practices and other OSHA mandated work practices should be specified for the removal of identified ACBMs from the WWTP.

- Versar recommended that LBP be stabilized during demolition activities. In addition, Versar recommended that the demolition contractor take a lead waste composite sample(s) during demolition and test for Total Threshold Limit Concentration (TTLC) and Soluble Threshold Limit Concentration (STLC) to classify the waste for disposal.

Psomas, 2008. *City of West Sacramento Waste Water Treatment Plant Demolition W.O. 3209, 38 page plan set with specifications*, October 16.

- Psomas plan set sheets refer to 1977 and 1988 plan set sheets for the WWTP and the Versar report, dated March 23, 2007. ACBM and LBP are noted throughout the Psomas plan set. Psomas noted that certain ACBMs (e.g., ACP pipe – located as indicated throughout the WWTP) may be considered hazardous waste.

Engeo, 2007. *City of West Sacramento Waste Water Treatment Plant, Phase Two Environmental Site Assessment*, March 8.

Engeo, 2008a. *City of West Sacramento Waste Water Treatment Plant, Phase Two Environmental Site Assessment Addendum*, January 23.

Engeo, 2008b. *City of West Sacramento Waste Water Treatment Plant, Phase Two Environmental Site Assessment Second Addendum*, April 14.

- A Phase I ESA, prepared by Engeo and dated February 2, 2007, identified areas of concern associated with the Site history, which prompted a Phase II investigation and two follow-up Phase II investigations to address these areas of concern (Addendum and Second Addendum). The Phase I ESA report prepared by Engeo for the WWTP, dated February 2, 2007, was not available for review by SCS at the time of this Report. SCS identified environmental conditions below based on previous Phase II investigations completed by Engeo.

- Concrete Lined Pond – Engeo determined that approximately 10,000 cubic yards (cy) of debris is present beneath the Concrete Lined Pond from approximately 10 to 20 feet bgs. Approximately 10,000 cy of non-native fill underlies the debris from approximately 20 to 30 feet bgs. It is not clear from the Engeo report (April 14, 2008) whether these volume estimates are for "in-place" quantities. Based on environmental testing, Engeo determined that lead was detected above background levels but below environmental screening levels (ESLs). Low levels of total petroleum hydrocarbons as motor oil (TPHmo) and as diesel (TPHd) were present below applicable Environmental Screening Levels (ESLs) published the Regional Water Quality Control Board (RWQCB). Engeo concluded that the debris and non-native fill are non-hazardous, but pose a future geotechnical issue (for redevelopment). Engeo recommended no further assessment or remediation, but recommended that all debris and non-native fill should be removed and off-hauled during WWTP demolition work.

  Engeo identified one location where lead and chromium in shallow soil sample S-18 (0.5 – 1.0 feet bgs) were detected at 54 milligrams per kilogram (mg/kg) and 120 mg/kg, respectively. In addition, lead was detected at 74 mg/kg in shallow soil sample S-19 (0.5 – 1.0 feet below ground surface or bgs). In addition, lead was detected at 110 mg/kg in the non-native fill sample "Fill" (unknown depth). No further assessment was recommended by Engeo.

  Lead and chromium detections are below their respective Preliminary Remediation Goals (PRGs) for industrial land use listed by Engeo. However, Engeo (2007, 2008a, 2008b) concluded that these values exceed toxicity criteria for waste disposal purposes. Analytical testing should be completed if soil is to be exported for waste disposal purposes.

  Assuming the existing land use, the buried debris and non-native fill beneath the Concrete Lined Pond and low concentration lead and chromium impacts to shallow soil and non-native fill beneath the Concrete Lined Pond are considered to likely be *de minimis* conditions. *De minimis* conditions are not considered to be RECs and are not likely to result in regulatory action. However, if this soil is to be exported, it could be classified as a hazardous waste.

- Unlined Pond (former Sludge Drying Beds) – Engeo identified a nitrate plume in groundwater beneath the unlined pond that is potentially migrating to the west. Nitrate (as Nitrogen) samples ranged from 60 to 460 micrograms per liter (µg/L), which is well below the current Maximum Contaminant Level (MCL) of 10 milligrams per liter (mg/L) or 10,000 µg/L (RWQCB, 2013). Engeo determined that the plume does not

pose a threat to nearby sensitive receptors, including Sacramento River, and therefore recommended no further assessment of the unlined pond.

Nitrate impacts to groundwater beneath the unlined pond do not appear to pose a threat to sensitive receptors and nitrate is not considered to be a hazardous substance. However, nitrate concentrations are above the MCL of 10 mg/L. Therefore, this documented release of nitrate is considered to be a *REC*.

- Debris Yard – Engeo identified one location where lead and chromium in shallow soil (sample S-9 at 0.5 – 1.0 feet bgs) were detected at 120 mg/kg and 210 mg/kg, respectively. No further assessment was recommended by Engeo.

  Engeo reported that lead and chromium detections are below their respective PRGs; however, these values exceed toxicity criteria for waste disposal purposes. Should lead and chromium impacted soils exceeding the toxicity threshold of 50 mg/kg be excavated during planned WWTP demolition or future redevelopment work, analytical testing should be completed if soil is to be exported for waste disposal purposes .

  Low level lead and chromium impacts to soil beneath the Debris Yard are considered likely to be a *de minimis* condition.

- Oil/Water Separator – No VOCs or other contaminants were detected by Engeo above applicable regulatory standards and therefore no further assessment was recommended.

- Maintenance Building Waste Oil Tank – No contaminants were detected by Engeo above applicable regulatory standards and therefore no further assessment was recommended.

- Emergency Diesel Generator – No contaminants were detected by Engeo above applicable regulatory standards and therefore no further assessment was recommended.

- Wastewater Treatment Plant Equipment – Due to access restrictions of the formerly operating WWTP, Engeo was unable to test soil in the area of the WWTP Equipment. Further assessment was recommended by Engeo to determine extent of soil impacts, if any, for underground features of the WWTP and major process units once demolition work is underway.

  SCS identifies the Wastewater Treatment Plant Equipment area as a potential area of concern as this area was identified by Engeo to be a potential source of VOCs and CVOCs. SCS concurs with Engeo's recommendation that the WWTP Equipment should be further assessed.

The WWTP Equipment area is considered a *REC* until assessment can be completed. The WWTP Equipment area is considered to be a data gap.

- Underground Storage Tanks (USTs) – Engeo reported that five USTs were removed from the WWTP in the early 1990s, three from the maintenance shop, one diesel UST associated with the clarifier, and one diesel UST associated with the emergency generator. Soil and groundwater testing revealed little or no impacts by petroleum hydrocarbons or volatile organic compounds (VOCs) associated with any of the UST areas. Therefore, Engeo recommended no further assessment of the USTs.

- Transformer – Engeo identified a corroded transformer that due to its age may have contained PCBs. The PCB aroclor-1230 was detected in sample S-13 (0 – 0.5 feet bgs) at 22 micrograms per kilogram (µg/kg), which is well below the commercial/industrial ESL for PCBs in shallow soil of 0.25 mg/kg or 250 µg/kg (RWQCB, 2013). Engeo concluded that the transformer contains PCBs, but recommended no further assessment for the transformer area.

  PCBs detected in soil near the transformer is considered to be a *HREC* and the suspected presence of PCBs in the transformer is considered to be a *REC*.

- Groundwater –

  - Concentrations of nitrates, manganese, and nickel beneath the northern portion of the WWTP near the concrete lined and unlined ponds and appear to be elevated and are above typical water quality objectives. Nitrate was detected up to 190 mg/L, manganese was detected up to 15,000 µg/L, and nickel was detected up to 110 µg/L in groundwater beneath the WWTP. The MCL for nitrate (as nitrogen) is 10 mg/L, the Secondary MCL for manganese is 0.05 mg/L, and the ESL for commercial/industrial land use where groundwater is a potential source of drinking water for nickel is 8.2 ug/L. Engeo recommended no further assessment of groundwater beneath the WWTP since there are no plans to use groundwater as a drinking water supply in this area.

    Nitrates, manganese, and nickel concentrations detected in groundwater well above the applicable MCL, Secondary MCL, and ESL, respectively are considered to be *RECs*.

  - Maintenance Shop USTs were suspected by Engeo to be the source of VOCs and chlorinated VOCs (CVOCs) identified in groundwater, including cis-1,2 DCE up to 3.7 µg/L, which is below the current MCL of 70 µg/L, and tetrachloroethylene (PCE)

up to 1.3 µg/L, which is below the MCL of 5 µg/L, and Methyl Tertiary Butyl Ether (MTBE) at 0.88 µg/L, which is below the ESL of 5.0 µg/L (for commercial/industrial land use where groundwater is a potential source of drinking water). Further testing revealed that these USTs are not the source of VOCs or CVOCs; no other potential source was identified by Engeo, other than leaks in the former WWTP operations.

VOCs and CVOCs detected in groundwater in the area of the Maintenance Shop USTs area are below applicable MCLs and ESLs and are unlikely to cause a VI risk; therefore, VOCs and CVOCs are considered to be a *de minimis* condition.

- Corporation Yard – The lateral and vertical extent has been defined for oily soil containing elevated levels of metals, motor oil, VOCs, CVOCs, and organochlorine pesticides (OCPs) identified in the eastern portion of the Corporation Yard. Engeo estimated that approximately 1,250 cy of soil impacted with Total Petroleum Hydrocarbons in the motor oil range (TPHmo) were present beneath the Corporation Yard within an area approximately 170 feet by 80 feet to a depth of 2.5 feet bgs. TPH-mo impacted soil, with concentrations up to 3,400 mg/kg, was determined to be above the ESL of 500 mg/kg, which is the ESL for shallow soils (less than 3 meters bgs) for Commercial/Industrial land use (RWQCB, 2013). Engeo recommended confirmation soil sampling during excavation of impacted soil that has been planned as part of WWTP demolition work.

  Engeo identified one location where lead and chromium in shallow soil (sample S-9E at 3.0 – 3.5 feet bgs) were detected at 130 mg/kg and 66 mg/kg, respectively. No further assessment was recommended by Engeo.

  Lead and chromium detections are below their respective PRGs listed by Engeo; however, values exceed regulatory waste thresholds. Analytical testing should be conducted on any exported soil generated as part of demolition or redevelopment work..

  Low level lead and chromium impacts to soil beneath the Corporation Yard are considered likely to be a *de minimis* condition.

Environmental Health Department Records Review

The County of Yolo Environmental Health Services (EHS) was contacted on May 15 and 22, 2014 regarding any available records for the Site for the Site. EHS records included a 2009 Mitigated Negative Declaration (MND) for *City of West Sacramento Wastewater Treatment Plant Decommissioning Project*, prepared by the City for 1991 South River Road. The MND indicated that as of October 31, 2007, wastewater flow was diverted from the WWTP to the Sacramento Regional County Sanitation District's Elk Grove

Treatment Facility. The project includes demolition and removal of the WWTP including all above and below ground structures, to a depth of approximately 20 feet. The MND summarizes Phase I and Phase II ESA documents produced by Engeo that are discussed in the section above.

EHS records from 2006 indicated that the WWTP had 24,000 pounds of chlorine and 30,000 pounds of sulphur dioxide, both of which are regulated by California Accidental Release Prevention Program (CalARP) at 100 and 300 pounds, respectively. A number of environmental compliance documents, including Consolidated Contingency Plans, Spill Prevention Control and Countermeasure (SPCC) plans, annual re-certifications, Business Activities Declarations, and hazardous materials inventory inspection reports, dated from 2000 until 2012 were found on file with EHS on the Yolo County's SIRE WebCenter website. The following information was obtained for 1951 and 1991 South River Road from our review of available EHS files.

- In 2000, the Site WWTP was assessed a hazardous materials inventory fee for 1991 South River Road for a combination of 352,519 cubic feet, gallons, and pounds of hazardous materials. 1951 South River Road was assessed a fee for 3,199 cubic feet, gallons, and pounds of hazardous materials.

- In 2005 and 2006, the Site WWTP was listed as a Small Quantity Generator of hazardous waste, generating less than 5 tons per year of hazardous waste.

- In 2002, the Site WWTP was listed as storing 12 one-ton cylinders of chlorine, 15 one-ton cylinders of sulfur dioxide, 3,500 gallons of sodium hydroxide, 1,000-gallon AST with diesel, and 55-gallon drums containing petroleum based motor oils, waste oil.

- In 2007, well and boring permit applications were submitted to EHS by Engeo for four Geoprobe borings to groundwater (to approximately 34 feet bgs) and six exploratory auger borings.

A copy of available records obtained from EHS, including the MND, are contained in Appendix E.

Fire Department Records Review

The City of West Sacramento Fire Department (WSFD) was contacted regarding hazardous materials/waste or any applicable records for the Site on May 15 and 22, 2014. The WSFD Fire Safety Inspection Reports for 1951 River Road list several violations for City Public Works or Corporate Yard during the period 1987 through 2013. Violations included those relating to the availability of or signage for fire extinguishers, flammable liquids not being stored in original containers or closed metal cans, unlabeled or unsecured compressed gas cylinders (August 16, 2001), misuse of flammable and combustible liquids (undated report), hazardous materials barrel outside of designated storage area (August 24,1992; November 15, 1991). A Dewante and Stowell Consulting

Engineers Site Plan dated November 1977 was obtained from WSFD records. The Site Plan indicated that the shop area located immediately to the north of a wastewater treatment plant (administration and maintenance building) was used for the storage of hazardous materials, including oxygen, acetylene, and traffic paint. The City Parks & Recreation Department "Shop Building" was used (circa 1977) for the storage of chemicals, including Roundup®, Trimec®, Surflan®, Diquat®, Triflan®, Princep®, Alcosimazine®, Wilco Gopher Bait®, Assault®, Malathion, aluminum phosphide, and sulphur dioxide.

The "Vehicle Maintenance Garage" was used to store hydraulic oil and other oils, antifreeze, solvents, and propane. Based on Phase II investigation reports prepared by Engeo (2007a, 2007b, 2007c), it does not appear that pesticide testing was conducted in this pesticide storage area. This constitutes a data gap and therefore SCS recommends testing soil and groundwater in the area of the "Shop Building" ("Parks Dept. Maintenance Shop" on Figure 2b) for potential impacts from the use and storage of pesticides. VOC testing conducted by Engeo indicated that there were low level impacts from solvents or TPH used and stored in this area.

WSFD records available for 2050 South River Road (APN 067-180-004) include an aerial view map of W.G. Stone Lock, circa 1997. The map shows four machinery pits containing miscellaneous oil, grease, lubricant, a Harbor Tower (off-Site), containing diesel fuel and oil, River Tower containing electrical controls, Crane Room containing grease, lube oil, and electrical components, Lube Storage Area containing miscellaneous drums of lube oils and grease.

A copy of available records obtained from WSFD are contained in Appendix E.

Community Development Records Review

The City of West Sacramento Community Development Department (WSCD) (Building Division) was contacted regarding hazardous materials/waste or any applicable records for the Site on May 15 and 22, 2014. WSCD records were reviewed; results of a review of building permit records are summarized in the table below.

Permit Number	Date Approved	Description	APN	Reported Applicant/Owner
12-09-085	2012	1400 square foot shade structure	058-260-019	Owner/City of West Sacramento
12-06-008	2012	Replace 6 antennas with 6 new antennas on existing communications facility (windmill)	058-260-019	Owner/City of West Sacramento
11-06-106	2011	Install 4-roll up doors in existing building	058-260-019	Owner/City of West Sacramento
11-10-007	2011	Add electric motor to roll-up door	058-260-019	Owner/City of West Sacramento
07-11-014	2007	Install 6 panel antennas on existing windmill tower & related ground equipment (Metro PCS)	058-260-019	Owner/City of West Sacramento

A copy of available records obtained from WSCD are contained in Appendix E.

Air Quality Management District Records Review

On May 15 and 22, 2014, the Yolo/Solano County Air Quality Management District (AQMD) was contacted regarding any pertinent records for the Site. SCS reviewed Internal Combustion (IC) Engine Inspection Reports dating from 1996 until 2008. These inspection reports were issued by AQMD for two Caterpillar Model No. G-379, 4-cycle, natural gas and digester gas fueled IC engines located in the blower building at the WWTP located at 1991 South River Road (Figure 2b). No violations were issued based on any of the inspection reports reviewed.

A copy of available records obtained from AQMD are contained in Appendix E.

Central Valley Regional Water Quality Control Board Records Review

On May 15 and 22, 2014, the RWQCB was contacted regarding any pertinent records for the Site. No records were available from the RWQCB for the Site.

SCS reviewed the State Water Resource Control Board (SWRCB) GeoTracker website to locate and review available records. A Leaking Underground Storage Tank (LUST) case was identified at 1951 South River Road at the Corporation Yard. The clean-up status for the LUST case is reported by GeoTracker as "Completed – Case Closed" and a "No Further Action" letter dated May 24, 1990 was reviewed by SCS. The NFA letter indicated that gasoline LUSTs had been discovered on May 8, 1990 and later removed from the Site. Impacted soil was reportedly excavated to a depth of 30 feet and aerated on Site following removal of the LUSTs. No other documents were available for this case on the GeoTracker website. The former LUSTs are considered to be a *CREC*. Engeo conducted soil and groundwater investigations in the area of the LUSTs (and USTs at other locations at the WWTP) at the Site and found little or no evidence of impacts from TPH or VOCs. A copy of the NFA letter for the Corporate Yard LUST case is included in Appendix E.

Mr. David Stavarek, caseworker for RWQCB, was contacted by SCS to obtain further information regarding these LUST cases. Mr. Stavarek indicated that due to the age of the case files, the paper file would have been archived and possibly available on the website of the lead agency for the case, the EHS. The archived paper records for these case files were not available and therefore not reviewed at the time of this Report.

INTERVIEWS

The above-referenced EPA and ASTM standards require that attempts be made to conduct interviews with past and present owners and occupants of the Site to obtain information regarding recognized environmental conditions in connection with the Site. As part of this ESA, SCS contacted the following City personnel.

Contact	Affiliation to Site	Contact Information	Description
Ms. Katie Yancey	Current Site Owner Representative	(916) 617-4555	Discussed below

Ms. Yancey is a representative of the City of West Sacramento, the current Site owner. SCS inquired with Ms. Yancey regarding the Site and received a written response summarized below:

No AUL search was conducted for the Site, however, according to Ms. Yancey, "prior to dissolution the (Redevelopment) agency recorded IODs and covenants on the Site to protect planned right-of-way and floor protection improvements." Ms. Yancey indicated that she did not have specialized knowledge of the Site or information concerning its

market value. However, Ms. Yancey was aware that APNs 058-026-016 and -018 were "large vacant parcels with limited outdoor storage occurring. Parcel -018 houses a facilities/maintenance building currently in use." Ms. Yancey indicated that APN 058-026-019 is the location of the former WWTF. Ms. Yancey indicated that "two of the Site APNs are former Redevelopment Agency properties that were under option at the time of dissolution. Should the optionee fail to perform the City may purchase the property from the Successor Agency. This is subject to a DOF approved LRPMP."

USER REQUIREMENTS

In order to qualify for one of the landowner liability protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (discussed in the Background section above), 40 CFR Part 312 requires that the user (Client) provide the following information to the environmental professional. The following table summarizes the responses by the Client –the AAI Questionnaire was not completed by the Client but their responses are contained in Appendix F.

Question	Response
Have environmental cleanup liens been filed or recorded against the Site?	No Search Conducted
Are activity or land use limitations in place at the Site or have they been filed or recorded in the registry?	No Search Conducted
Does the user have specialized knowledge or experience in connection with the Site?	No
Does the purchase price being paid for the Site reasonably reflect the fair market value of the Site?	N/A
Is the Client aware of commonly known or reasonably ascertainable information about the Site, which would indicate releases or threatened releases?	No*
Are there obvious indications that point to the presence of contamination at the Site?	No

* Client is generally aware of past use(s) and present, or once present, chemicals, but is not aware of chemical spills, releases, or cleanups.

DATA GAPS IN CONNECTION WITH CURRENT SITE LAND USE

Based on observations and research, with the possible exception that the Control Room and Oil Shed on APN 067-180-004 were inaccessible in addition to riparian areas along the Barge Canal and Sacramento River, there are no obvious indications of data gaps in connection with the current Site land use, with the exception of the archived paper files for the Beneto Tank Lines case file which were not available for review at the time of this report. A Phase II investigation would be required to address this data gap. The groundwater impacts beneath are considered to be a data gap. Based on corroborating

information and other data sources, these data gaps are not judged significant with respect to SCS ability to assess the Site.

Findings and Opinions—Current Site Land Use
Based on observations and research, there is low likelihood that a REC exists at the Site as a result of the current Site land use, with the following possible exceptions: nitrate impacts to groundwater beneath the Unlined Pond (former Sludge Drying Beds); suspected presence of PCBs in the transformer; nitrates, manganese, and nickel impacts to groundwater beneath the northern portion of the WWTP near the concrete lined and unlined ponds are considered to be RECs. Historical releases from USTs identified at 1951 South River Road at the Corporation Yard are considered to be CRECs. Other impacts, such as lead and chromium contained within buried debris and non-native fill beneath the Concrete Lined Pond and within soil beneath the Debris Yard, low concentrations of VOCs and CVOCs detected in groundwater in the area of the Maintenance Shop USTs area, and soil impacts of various COCs beneath the Corporate Yard were identified in connection with historical Site use. If the Site use changes or the Site is redeveloped, certain current *de minimis* conditions such as these may require further investigation. SCS recommends that the Client consider improved "housekeeping" at the Site including proper disposal of unused hazardous materials and hazardous wastes. PCBs detected in soil near the transformer at the WWTP are considered to be a HREC and the suspected presence of PCBs in the transformer is considered to be a REC. SCS recommends proper disposal of the PCBs contained within the transformer as part of any Site redevelopment. In addition, it does not appear that pesticide testing was conducted in this pesticide storage area of the "Shop Building" at the WWTP. This constitutes a data gap and therefore SCS recommends testing soil and groundwater for potential impacts from the use and storage of pesticides.

TOPOGRAPHY, SOIL, GEOLOGY, HYDROGEOLOGY AND WATER QUALITY SURVEY

Topography

A topographic map for the Site vicinity was reviewed and is summarized in the following table:

Reported Elevation	Approximately 36 feet above mean sea level (msl)
Reported Slope Direction	Generally flat; General topographic gradient to the east, southeasterly
Source	United States Geological Survey (USGS) 7.5 Minute Digital Elevation Model (DEM), acquired in 2002, updated in 2006 and Scanned Digital USGS 7.5' Topographic Map (DRG)

Soil Survey

A soil survey for the Site vicinity was reviewed and is summarized in the following table:

Reported Soil Type	Lang sandy loam
Reported Description	Physical improvements, which include commercial and industrial buildings and structures, a shipping canal (Barge Canal), and paved surfaces, alter the landscape of the Site. Lang soils, which underlie the Site, consist of sandy loam with slow infiltration rates, layers that impede downward movement of water or moderately fine or fine textures, and somewhat poorly drained. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.
Source	EDR® Radius Report with GeoCheck

Geology

A geologic map for the Site vicinity was reviewed and is summarized in the following table:

Reported Formation	Stratified Sequence
Reported Description	Not reported in EDR® Radius Report with GeoCheck. Stratified Sequence often refers to alluvial or colluvial material consisting of uncemented or poorly cemented clasts with relatively high permeability. In general, high permeability geologic formations allow contaminant plumes to move more quickly.
Source	USGS, Geology Map of Conterminous U.S., 1:2,500,000 Scale, 1974; USGS Digital Data Series (DDS) - 11, 1994.

The Site is located at an approximate elevation of 36 feet msl, as listed by EDR from the 1980 USGS topographic map for the City of West Sacramento. According to the Geologic Map of California by Charles W. Jennings (1977), published by California Department of Conservation, Division of Mines and Geology (CDMG, now the California Geological Society), the materials underlying the Site consist of Quaternary, Pleistocene-Holocene (Q) alluvium, lake, playa and terrace deposits, unconsolidated and semi-consolidated, mostly non-marine sediments.

The Site is located in the Great Valley Geomorphic province of California – a large, elongate northwest-trending structural trough. The Coast Ranges border the western side of the province and the Sierra Nevada foothills border the province to the east (Norris and Webb, 1990). The Great Valley province includes the Sacramento Valley (north) and San Joaquin Valley (south) which lie end to end and which are filled with thick sequences of sediments derived from marine and non-marine sources. Up to 25,000 feet of sediment is present in the south central portion of the Great Valley (Norris and Webb, 1990). The geologic formations with comprise the Great Valley sequence vary from Quaternary to Jurassic aged deposits, with the older deposits derived primarily from marine sources and the younger deposits derived primarily from continental sources.

According to the CDMG (Wagner, et al, 1981), the Site is underlain by approximately 11,000 feet of Holocene alluvial deposits, consisting of mixtures of sand, silt, and clay with gravel horizons. The deposits form natural levees and broad alluvial fans of low relief along the main course of the Sacramento River.

Hydrogeology

Data regarding groundwater depth and flow direction for the Site were not provided by EDR. In the absence of Site-specific data, groundwater depth and flow direction information was reviewed for properties in the Site vicinity using the SWRCB GeoTracker database and the Department of Toxic Substances Control (DTSC) EnviroStor database. Previous investigations by Engeo (Engeo, 2007, 2008a, 2008b) on the Site indicate that first groundwater beneath the Site is at approximately 34 to 35 feet bgs.

The prevailing groundwater flow direction in West Sacramento is generally northeast, though flow directions may vary both locally and seasonally. Groundwater flow direction is apparently controlled by the Sacramento River as well as by local pumping of wells. Flow reportedly switches 180 degrees toward and away from the river. This would suggest an alternating east-west flow direction in the area of the Site.

The Department of Water Resources (DWR) Bulletin 118-80 (1980) identifies four separate groundwater basins within Yolo County. The Site is located within the Yolo Basin. The East Yolo Basin consists of low, poorly drained land between the alluvial fans of the Sacramento River. It extends from the Knights Landing Ridge to the southern County line. Deposits in the Basin are mainly clay and clay-adobe soils at the surface with some water bearing materials present, but the proportion of sand and gravel is generally less than that found in the adjoining river lands and low plains.

Please note that many variables influence groundwater depth and flow direction, and the actual depth and flow direction at the Site may be different than presented in this section.

EDR provided detail maps of the Site indicating that wetlands are located in the north-central portion and southeast corner of the Site, adjacent to Sacramento River. A portion of the Site is mapped as water associated with Sacramento River.

Groundwater Quality Survey

The following table summarizes the reported groundwater quality in the Site vicinity:

Reported Hydrologic Subarea	Yolo Subbasin
Reported Hydrologic Area	Sacramento Valley
Reported Hydrologic Unit	Alluvium Deposits
Reported Beneficial Use	Municipal/Domestic, Agricultural, and Industrial
Source	(Regional Water Quality Control Board or RWQCB, 2011.)

The Site is interpreted to be located in the Sacramento River Basin. According to the RWQCB, "…unless otherwise designated by the RWQCB, all ground water in the Region are considered as suitable or potentially suitable, at a minimum, for municipal and domestic water supply (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (PRO)."

SITE VICINITY RECONNAISSANCE AND OFF-SITE SOURCE SURVEY

Current Site Vicinity Conditions

The following table summarizes land use and observations in the immediate Site vicinity. For the purpose of this Report, the immediate Site vicinity includes those properties judged to be adjoining properties to the Site.

Direction	Land Use	Comments
North	Commercial/Industrial	No obvious indication of the use, storage, or generation of hazardous materials/wastes or petroleum products were observed, with the exception of the Buckeye Terminal bulk fuels facility and the Ramos Oil facility.
East	Sacramento River, Miller Park, Miller Park Marina, Sacramento	No obvious indication of the use, storage, or generation of hazardous materials/wastes or petroleum products were observed.
West	Commercial/Industrial and Residential farther to the West	No obvious indication of the use, storage, or generation of hazardous materials/wastes or petroleum products were observed, with the exception of North State Tire, Greyhound Maintenance Center, and Clark Pacific.
South	Barge Canal, Vacant Land	No obvious indication of the use, storage, or generation of hazardous materials/wastes or petroleum products were observed.

Environmental EDR® Site Assessment Report

A Site Assessment Report was prepared by EDR for the Site. Local, state, and federal regulatory databases were reviewed for the Site and for those facilities within up to 1 mile of the Site. The EDR Report was reported to have been prepared in general accordance with the ASTM standard for the regulatory database review for Phase I ESAs. The locations of the referenced facilities relative to the Site are shown on EDR's "Radius Map ™ Report with GeoCheck". A description of the various databases, as well as the date each database was most recently updated, is included in the EDR Report. The EDR Report is contained in Appendix C of this Report.

Based on a review of the EDR Report, the following table summarizes the facilities within the selected search radii, and whether the Site or a facility that was interpreted to be adjacent to the Site was listed on each database.

Federal or State Government Database	Search Radius (mile)	Number of Reported Facilities	On Site	Adjacent to the Site
National Priorities List (NPL)	1.00	0	No	No
California Response – State and Tribal Equivalent NPL.	1.0	4	No	No
California Leaking Underground Storage Tanks (LUST)	0.50	20	Yes	Yes
Resource Conservation and Recovery Act-Corrective Action (CORR ACTS)	1.0	0	No	No
CORTESE database and CORTESE HIST Sites	0.50	15	Yes	Yes
RCRA Generators (RCRA GEN)	0.25	6	No	Yes
California Facility Inventory Database (CA FID UST)	0.25	1	No	Yes
California Registered Underground Storage Tanks (UST)	0.25	13	No	Yes
California State Spills List (SLIC)	0.50	14	No	No
CA Drycleaners	0.125	0	No	No
US Hist Cleaners	0.25	2	No	No
ENVIROSTOR State and Tribal Equivalent CERCLIS	1.00	19	No	Yes
SWRCB Proposition 65 Database	1.00	0	No	No

The Site appeared on the following databases:

- LUST: Wastewater Treatment Plant (1991 South River Road)
  Status – Completed: Case Closed
- LUST: West Sacramento CS (1951 South River Road)
  Status – Completed: Case Closed
- UST: W Sac Public Works Corp Yard (1951 South River Road)
- HIST UST: Public Utilities Corporation Yard (1951 South River Road)
- HIST CORTESE: Wastewater Treatment Plant (1991 South River Road) and West Sacramento CS (1951 South River Road)

Site listings in the LUST, UST, HIST UST, HIST CORTESE databases are discussed at length in the Site Research section above and under the listings below.

The Site was not listed in any of the other EDR databases reviewed by SCS.

The following sections discuss off-Site facilities identified on the regulatory database within the required search radii. When evaluating the EDR databases for sites or cases which could potentially impact the Site, SCS used the following criteria to refine the list of sites or cases for further review:

1) **UST open release cases within 1,000 feet and hydraulically upgradient, or open/adjacent UST release cases.** Based on "Technical Justification for Groundwater Media-Specific Criteria," (Groundwater Study) (March 2012) developed to support the State of California "Low Threat Closure Policy" (adopted May 2012), "plume length studies recognize that petroleum plumes stabilize in length due to natural attenuation." The Groundwater Study goes on to cite Shih et. al., (2004) that a peer-reviewed study of plume lengths at 500 petroleum UST sites in the Los Angeles area is widely accepted as representative of plume lengths at California UST sites. Shih et. al. reports MTBE with 90th percentile maximum plume lengths of 540 feet. Therefore, the detailed review radius for open groundwater cases has been conservatively established by SCS at 0.20 miles (approximately 1,000 feet). For non-release cases (e.g., permitted facilities), only those facilities that were judged to be immediately adjacent to the Site were interpreted to have the potential to represent a REC;

2) **Open VOC release cases within 1/3 mile (1,600 feet) and hydraulically upgradient, or open/adjacent VOC release cases.** Empirical studies show that natural attenuation is much more prevalent at fuel-impacted sites compared to solvent-impacted sites. In the mid-1990s, Lawrence Livermore National Laboratory (LLNL) conducted a study of fuel-impacted sites in California, finding evidence of natural attenuation that limited plume length at more than 90% of 271 sites examined in detail. The study led to an October 1995 LLNL report to the State Water Board. A 1999 study of approximately 250 solvent plumes nation-wide found much less evidence of natural attenuation ("Historical Case Analysis of Chlorinated Volatile Organic Compound Plumes") by a group that included the U.S. Department of Energy and LLNL. This study concluded that the median solvent plume length was about 1,600 feet (as compared to 130 feet for fuel plumes) and that, in general, chlorinated solvent plume length is more sensitive to source strength (i.e., concentration and flow rate) than to natural attenuation. Therefore, the detailed review radius for open groundwater cases has been established by SCS at 0.30 miles (approximately 1,600 feet). For non-release cases (e.g., permitted facilities), only those facilities that were judged to be immediately adjacent to the Site were interpreted to have the potential to represent a REC; and,

3) **Open/adjacent release cases for all other (low mobility) chemicals such as metals, SVOCs, and PCBs**. Due to the limited mobility of chemicals such as metals, PCBs, and SVOCs, SCS reviewed only those facilities with open cases which were adjacent to the Site.

Given the variable groundwater flow direction reported in the Site vicinity, SCS did not attempt to distinguish hydraulically "upgradient" or "downgradient" sites or cases and instead included all cases or sites within the noted search radii for further evaluation. The following sections summarize reviewed cases including facility name, address, distance and direction from the Site, status, the likelihood that the facility has resulted in a REC at the Site, and the rationale for this judgment.

Known, Reported, or Suspected Releases within the Site Vicinity

Off-Site facilities listed in the EDR® Report were evaluated as to their potential to impact the Site. The databases included in the EDR® Report can be grouped into two general categories: databases reporting unauthorized releases of hazardous substances or petroleum products (e.g., LUST, RCRA Corrective Action facilities, Drycleaners) and databases reporting permitted hazardous materials users and hazardous waste generators, which have not necessarily experienced a release. SCS evaluated each of the off-Site facilities listed in the EDR® Report as to their potential to impact the Site.

State and Tribal EnviroStor - CERCLIS Equivalent

The California DTSC Site Mitigation and Brownfield s Reuse Programs EnviroStor database is considered equivalent to the Federal Facility Site Information Listing (CERCLIS). The EDR Report identified nineteen such facilities within a 1.0 mile radius of the Site; however, only the following two sites are within 1,600 feet of the Site.

Clark's Trucking, 2000 South River Road, West Sacramento, approximately 20 feet west-northwest. This facility is listed on the EnviroStor website as being referred to RWQCB on January 29, 1987. The GeoTracker website lists the case as completed, case closed as of November 25, 1991. Diesel was listed as the potential COC and the media affected as soil only. Therefore, there is a low likelihood that the historical release from this facility has impacted the Site.

Lucky Drayage, 1520 River, West Sacramento, approximately 1,330 feet north. This facility is not listed on the EnviroStor website. Due to the distance from the Site and discussion for the Tesoro Petroleum facility, there is low likelihood that COCs from this facility have impacted the Site.

California LUSTs

These databases list facilities where a release, usually from a UST (i.e., leaking underground storage tank or LUST), is known to have occurred.

The following table summarizes the LUST cases identified on the regulatory database within a 0.2 mile radius from the Site:

Number of Reported Facilities	20
Number of Reported Facilities Within 0.20 Mile	12
Actual Number of Facilities Within 0.20 Mile	9
Number of Facilities Within 0.20 Mile With Open LUST Cases	1
Number of Facilities Within 0.20 Mile With Open Groundwater LUST Cases	1

There were 9 listings identified within 0.20 miles of the Site, three of which were repeat listings, and only 1 of which has an open case file, which is discussed below. In addition, there are two instances of USTs located on or adjacent the Site, which are described below

7-Eleven, 1552 Jefferson Boulevard, approximately 519 feet north-northwest of the Site. Remediation activities are reportedly being conducted at this facility (Stantec Consulting Service, Inc. [Stantec], *Groundwater Monitoring Report, 1540-1552 Jefferson Boulevard, West Sacramento, California*, dated August 2014). TPHg and benzene concentrations in groundwater samples collected from a monitoring well nearest to the Site (MW-3) were reported to be 34,000 and 6,300 µg/L, respectively. Based on the interpreted distance from the Site (approximately 500 feet) and location with respect to the reported groundwater flow direction (downgradient), there is a potential that petroleum hydrocarbons from this release may have migrated beneath the Site.

SITE, William G. Stone Lock, 1900 South River Road, approximately 17 feet north-northwest of the Site. The EHS UST database lists a permanent UST closure permit to the Army Corps of Engineers (USACE), dated October 31, 1993, for one double-walled 500-gallon diesel UST, located either on the Site or likely adjacent to the Site for 1900 South River Road. Due to the age of this database instance, lack of information concerning the UST closure, and the age of the closure permit, this UST would be considered a *REC*.

ADJACENT TO SITE, William G. Stone Lock, 2025 Jefferson Blvd, approximately 41 feet west-southwest of the Site. The HIST UST database lists one single-walled diesel UST as being installed in 1962 by ACE at William G. Stone Lock located at 2025 Jefferson Blvd, which is adjacent and to the west of the Site. Due to the age of this database instance and lack of information concerning the UST, this UST would be considered a *REC*.

Rollins Leasing, 1781 South River Road, West Sacramento, approximately 272 feet north of the Site. The EDR Report lists this facility as LUST site. According to GeoTracker, the site formerly was operated by Rollns Leasing, and contained two 12,000-gallon capacity diesel USTs and one 4,000 gallon capacity waste oil UST. The

USTs were removed under EHS oversight, followed by soils removal and confirmation sampling. A total of 540 cubic yards of diesel affected soil were disposed off-site, and excavation base confirmation soil sampling and analysis did not yield detectable petroleum hydrocarbons. The EHS subsequently issued a soil only case closure letter on April 12, 1994. Based on these data, the facility represents an HREC, but does not appear to pose a threat to degrade the Site subsurface.

Federal RCRA Gen Facilities List

The EDR Report identified seven facilities within a one mile radius from the Site with RCRA generator facilities.

Penske Truck Leasing, 1781 South River Road, West Sacramento, approximately 272 feet north of the Site. The database listing indicates that this facility historically generated hazardous wastes including lead, benzene, PCE, and TCE. However, the facility no longer generates hazardous wastes and there were no violations associated with this historical waste generation. The facility was also listed as having USTs, but no documented releases have occurred that appear in the EDR databases or on GeoTracker. Therefore, information concerning this facility would not be considered a REC.

SFPP, L.P. West Sacramento, 1570 South River Road, West Sacramento, approximately 1,018 feet north of the Site. This facility is listed as a Large Quantity Generator of hazardous wastes including benzene; however, no violations or releases are noted in the EDR report. Therefore, there is a low likelihood that a REC exists at the Site due to this facility.

Ramos Oil Recyclers, 1515 South River Road, West Sacramento, approximately 1,077 feet north of the Site. Based on a review of the regulatory records for this facility, the case status is reported to be inactive. Based on case status (inactive), there is a low likelihood that a REC exists at the Site as a result of the release case at this adjacent facility.

BP Sacramento Fleet, 1700 South River Road, West Sacramento, approximately 391 feet north of the Site. This facility is listed historically as both a small and large quantity hazardous waste generator operated by Buckeye Terminals LLC and Tesoro Refining, Marketing & Supply Co., facilities of which are described listed below. Historically, the facility had USTs, but no releases are attributed to BP Sacramento Fleet in the EDR database report or on GeoTracker.

Buckeye Terminals LLC Sacramento Terminal, 1700 and 1701 South River Road, West Sacramento, approximately 389 feet north. Remediation activities are reportedly being conducted at this facility (Stantec Consulting Service [Stantec], *Groundwater Monitoring and Remediation, 1701 South River Road, West Sacramento, California,* dated March 2013). According to the EDR Report, Tesoro owned and operated a bulk

fuels facility at 1701 South River Road until 1996 when it sold to BP ARCO, which subsequently sold the facility to Buckeye Terminals LLC in June 2011.

VOCs were reportedly present in groundwater samples collected from monitoring wells located at the Site (MW-15, -16, -17, -18, -19, and -20) as follows:

TPHd: 25 to 70 µg/L
TPHg: 66 to 110 µg/L

Stantec concluded:

- "The plume is stable to decreasing in size and mass and is adequately characterized by the monitoring well network. Overall hydrocarbon concentration trends in groundwater are relatively stable to decreasing."

SCS concludes:

- VOCs are interpreted to be present in the groundwater beneath the Site. However, in SCS's experience, there is a low likelihood that soil and groundwater impacts at the Site, caused by an off-Site source, would lead to an enforced remediation to the Site owner, assuming that the Site did not cause, contribute to, or exacerbate impacts to groundwater. So long as the Site did not cause, contribute to, or exacerbate impacts to groundwater, it has been SCS's experience that the Site would not be named a "responsible party" or be required to assume responsibility for the remediation of the source of this release.

- Even though the Site owner may not assume responsibility for the assessment and remediation of soil and groundwater impacts, there is a potential for human health risk issues in connection with vapor intrusion (i.e., vapors migrating as a result VOCs in groundwater through the soil column into the Site building), which could result in a REC.

- If the Site is ever developed with occupied structures, based on the known and reported concentrations of VOCs in the groundwater beneath the Site, SCS recommends the collection and analysis of soil vapor samples for VOCs. If VOCs are present in the shallow soil vapor, a health risk assessment should be performed to assess possible health risks for current and future building occupants.

B and T Enterprise, 1550 South River Road, West Sacramento, approximately 1,114 feet north of the Site. This facility is listed as a Small Quantity Generator of hazardous wastes including benzene, PCE, and TCE; however, no violations or releases are noted in the EDR Report. Therefore, it is unlikely that a REC exists at the Site due to this facility.

Estes West-South River Road, 1872 South River Road, West Sacramento, approximately 10 feet north-northwest of the Site. This facility is listed as a Small Quantity Generator of hazardous wastes on September 1, 1996 and A&S Truck Painting, Inc. as a Large Quantity Generator on March 26, 1981; however, no violations or releases are noted in the EDR Report. The A&S Truck Painting, Inc. facility is also listed in the HIST UST database as having one waste oil tank installed in 1971. The A&S facility is not listed on GeoTracker. Due to the lack of information concerning this UST and its close proximity to the Site, it is considered to be a data gap. However, due to the lack of a reported release, then it is unlikely that a REC would exist at the Site due to this facility.

CORTESE database and HIST CORTESE Sites

The EDR Report identified 15 facilities on the CORTESE database and/or the CORTESE HIST sites list within 0.5 miles of the Site as designated by the State Water Resources Control Board (SWRCB) LUST, the Integrated Waste Board (SWF/LS) and the California Department of Toxic Substances Control (DTSC) (CALSITES). The listing is no longer updated by the noted state agencies.

Clark's Trucking, 2000 South River Road, West Sacramento, approximately 21 feet west-northwest. This facility is listed on the EnviroStor website as being referred to RWQCB on January 29, 1987. The GeoTracker website lists the case as completed, case closed as of November 25, 1991. Diesel was listed as the potential COC and the media affected as soil only. Therefore, there is a low likelihood that the historical release from this facility has resulted in a REC at the Site.

Tesoro Petroleum, 1700 River, West Sacramento, approximately 391 feet north. Remediation activities are reportedly being conducted at this facility (Stantec Consulting Service [Stantec], *Groundwater Monitoring and Remediation, 1700 South River Road, West Sacramento, California*, dated May 2014). COCs from this facility include benzene, diesel, gasoline, MTBE, tertiary butyl alcohol (TBA), and other fuel oxygenates. Three downgradient monitoring wells (MW-21A, MW-24A, and MW-24B) associated with the Tesoro Petroleum case are located on the Site on the north half of APN 058-260-016. These wells have been tested periodically for TPHg, TPHd, and BTEX from approximately 2003 until 2014. Low detections of TPH and BTEX compounds have been detected historically in these wells, but recent results are below regulatory thresholds.

While this TPH and VOC impact to groundwater beneath the northern portion of the Site is considered to be a *REC*, concentrations of COCs are below regulatory thresholds. Due to the low concentrations of VOCs, there is low likelihood that VI risk exists as a result of the documented impact to groundwater beneath the Site. If the Site is ever developed with occupied structures, based on the known and reported concentrations of VOCs in the groundwater beneath the Site, SCS recommends the collection and analysis of soil vapor samples for VOCs. If VOCs are present in the shallow soil vapor, a health risk

assessment should be performed to assess possible health risk for current and future building occupants. The Buckeye Terminal facility is located at a closely similar address as the Tesoro Petroleum facility and is discussed above.

SITE West Sacramento CS, 1951 South River Road, West Sacramento, approximately 16 feet north-northwest. The facility listed is a Waste Water Treatment Facility with several closed UST case files and violations, including a number of waste water compliance violations under NPDES requirements. Violations included effluent limitation violations from January 1, 2007 until December 31, 2007, one of which was a serious violation. A Cease and Desist Order was issued June 6, 2003 for effluent limitations on ammonia, trihalomethanes (THMs), chloromethane, manganese, dalapon, organochlorine pesticides (OCPs), aluminum, nitrate+nitrite, iron, 1,4-dichlorobenzene, chloroform, and MTBE.

A notice of violation was also issued on July 14, 2001 for discharging SSO to storm drain, the cause of which was immediately corrected. A raw sewage spill occurred on April 26, 2000. An effluent pipeline failure occurred on March 29, 2000. A 900-gallon discharge of raw wastewater to an open ditch occurred on January 17, 2000. Cease and Desist Orders were issued on May 20, 1994, September 6, 1991, and September 11, 1998 under NPDES permits. Due to a discharge of wastewater to an open ditch and lack of information concerning cleanup efforts, this is considered to be a potential REC and a data gap. Additional research would be needed to assess if this release is a REC.

Beneto Inc., 1875 South River Road, West Sacramento, approximately 16 feet north-northwest. A LUST case for Beneto Tank Lines was closed in 1996 for an "underground tank farm" located at 1875 South River Road. The location of the LUSTs for this case appear to be on or adjacent to the Site. A NFA letter, dated December 9, 1996 was reviewed by SCS. Based on the NFA letter, the LUST case consisted of 13 USTs that were removed in January 1994. The USTs included: two 10,000-gallon gasoline USTs, three 12,000-gallon motor oil USTs, one 1,500-gallon motor oil UST, one 25,000-gallon transmission fluid UST, two 20,000-gallon ethanol UST, two 25,000-gallon diesel UST, one 20,000-gallon diesel UST, and one 500-gallon waste oil UST. Over-excavations were completed for three of the USTs up to 31 feet bgs.

Groundwater impacts were documented in four monitoring wells for benzene and TPH. Based on the NFA letter, it is unclear if adequate vertical and lateral groundwater characterization was completed or soil vapor testing was completed for this case. This lack of data concerning the UST releases is considered to be a data gap. Due to the era in which this LUST case was closed and the close proximity of the USTs to the Site, releases from the USTs may have impacted the Site and are considered to be a *REC*. A Phase II investigation would be required to address this data gap. A copy of the NFA letter for this case is included in Appendix E.

Redwood Oil Bulk Plant, 1800 South River Road, West Sacramento, approximately 22 feet north-north-west. The UST case file for this database instance was closed May

5, 2010. Based on downgradient monitoring wells, MW-1 and MW-3, groundwater was impacted with TPHd, TPHd, and BTEX compounds as recently as 2005; however, 2010 groundwater data indicated that COCs were below their respective reporting limits. Therefore, it is unlikely that the UST release from the Redwood Oil Bulk Plant has resulted in RECs at the Site.

California State Spills, Leaks, Investigations and Cleanup (SLIC) List

SLIC is a SWRCB and RWQCB program designed to protect and restore water quality from spills, leaks, and similar discharges. Fourteen facilities are listed in the SLIC database as located within 0.5 miles of the Site.

Tesoro Petroleum, 1700 River, West Sacramento, approximately 427 feet north. This facility is discussed above under the Buckeye Terminals LLC.

Tesoro Petroleum, 1701 River Road South, West Sacramento, approximately 801 feet north. This facility is discussed above under the Buckeye Terminals LLC.

Tarp Facility c/o Secor Intern, 1701 South River Road, West Sacramento, approximately 740 feet north. The case file for this facility is listed as Open – Remediation. TARP stands for Tesoro ARCO Remediation Program and is discussed above under Buckeye Terminals LLC.

Sacramento Station, 1570 South River Road, West Sacramento, approximately 1,018 feet north. This facility is discussed above under the West Sacramento Station.

Ramos Oil Recyclers, Inc. D.B., 1515 River Road South, West Sacramento, approximately 1,077 feet north. Based on a review of the regulatory records for this facility, the case status is reported to be inactive. Based on case status (inactive), there is a low likelihood that a REC exists at the Site as a result of the release case at this adjacent facility.

Kinder Morgan Energy Partners, 1570 River Road South, West Sacramento, approximately 1,093 feet north. Remediation activities are reportedly being conducted at this facility (Arcadis, *Groundwater Monitoring and Remediation, 1570 South River Road, West Sacramento, California*, dated April 2014). COCs were reportedly not present in groundwater samples collected from a monitoring well (MW 22) nearest (approximately 1,093 feet north of the Site).

Based on the distance of the nearest monitoring well to the Site (1,093 feet) and the absence of COCs in the collected groundwater samples, there is a low likelihood that a recognized environmental condition exists at the Site as a result of the release case at this adjacent facility.

US Hist Auto Stat

EDR listed 2 facilities within 0.25 miles of the Site which may potentially have been gas stations/filling stations/service station sites based upon business directory listings.

Regal Stations Inc., 1700 South River Road, West Sacramento, approximately 389 feet north. This listing duplicates the Tesoro Petroleum instance that is listed and discussed under the CORTESE and CORTESE HIST database sections below.

US Hist Cleaners

EDR listed 2 facilities within 0.25 feet of the Site which may have been dry cleaners, based upon business directory listings.

Other EDR Site Listings

EDR listed Hazardous Waste/Contaminated Sites (CA HIST), Local Lists of Registered Storage Tanks (CA FID UST), Historical Registered USTs (CA HIST UST), Statewide Environmental Evaluation and Planning System (SWEEPS), Formerly Used Defense Sites (FUDS), Legal Settlement of NPL sites (CONSENT), Record of Decision on NPL sites (ROD), and California Bond Expenditure Plan (CA BOND EXP PLAN) sites as being within the 0.5 to one mile of the Site. The facilities have each been discussed in prior summaries presented earlier, and none of the facilities appear to represent a threat to degrade groundwater quality at the Site. Impacts to the Site from the listed facilities are unlikely.

Non-Geocoded Site

EDR listed 20 facilities as being non-geocoded. Non-geocoded sites are facilities for which EDR does not have sufficient information to accurately locate them on a map. Based on a review of the non-geocoded facilities, it is interpreted that none of the facilities are within requisite search radii for their reported database listings.

Water Supply Wells

SCS personnel reviewed the EDR Physical Setting Source Map regarding water well and public water supply well locations within 1 mile of the Site and found eight listings, one of which is immediately to the north of the Site.

California Division of Oil and Gas

SCS personnel reviewed the EDR Physical Setting Source Map regarding oil and gas well locations within 1 mile of the Site and found three listings, all of which are located on the east side of Sacramento River.

Additional SCS Research

No additional SCS research was conducted for the Site or adjoining properties.

DATA GAPS IN CONNECTION WITH OFF-SITE SOURCES

Based on observations and research the primary data gaps in connection with the off-Site sources or potential off-site sources, release sites with little or no data reported impacts, if any, to soil or groundwater. Focused research, a geophysical survey, or Phase II investigation would be required to further assess any potential data gaps.

Findings and Opinions—Off-Site Source Survey

Based on the off-Site source survey, and with the possible exceptions below, there is a low likelihood that a REC exists at the Site as a result of known and reported releases of hazardous materials or petroleum products from an off-Site source. This judgment is based on one or more of the following: reported regulatory status (e.g., case closed), media affected (e.g., soil contamination only), distance from the Site, direction from the Site with respect to the reported groundwater flow direction, and information obtained through a review of regulatory files.

VOCs from off-Site releases (Buckeye Terminals, Tesoro Petroleum,) are interpreted to be present in the groundwater beneath the Site. However, in SCS's experience, there is a low likelihood that soil and groundwater impacts at the Site, caused by an off-Site source, would lead to an enforced remediation to the Site owner, assuming that the Site did not cause, contribute to, or exacerbate impacts to groundwater. So long as the Site did not cause, contribute to, or exacerbate impacts to groundwater, it has been SCS's experience that the Site would not be named a "responsible party" or be required to assume responsibility for the remediation of the source of this release.

Even though the Site owner may not be required to assume responsibility for the assessment and remediation of soil and groundwater impacts from off-Site sources, there is a potential for human health risk issues in connection with vapor intrusion (i.e., vapors migrating off groundwater through the soil column into the Site building), which could result in a REC.

If the Site is developed with occupied structures, based on the known and reported concentrations of VOCs in the groundwater beneath the Site, SCS recommends the collection and analysis of soil vapor samples for VOCs. If VOCs are present in the shallow soil vapor, a health risk assessment should be performed to assess possible health risks for current and future building occupants.

One double-walled 500-gallon diesel UST was located either on the Site or likely adjacent to the Site was located at 1900 South River Road and one single-walled diesel UST was located at 2025 Jefferson Blvd. Due to the age of these UST database instances, lack of information concerning the UST closure these USTs would be considered a data gap. SCS recommends a Phase II investigation to assess if historical releases from the USTs have impacted the Site.

Due to a discharge of wastewater to an open ditch at the WWTP and lack of information

Findings and Opinions—Off-Site Source Survey
concerning cleanup efforts, this is considered to be a data gap. Additional research would be needed to assess if this release is a REC. Lack of data concerning the UST releases at 1875 South River Road is considered to be a data gap. Due to the era in which this LUST case was closed and the close proximity of the USTs to the Site, releases from the USTs may have impacted the Site and are considered to be a potential REC and a data gap. A Phase II investigation would be required to address this data gap.

HISTORICAL LAND USE REVIEW

In accordance with the ASTM Standard and AAI rule, numerous reasonably ascertainable standard historical information sources were reviewed, and an attempt was made to interpret the historical Site and Site vicinity land use back to the obvious first developed use of the Site. The following table summarizes the historical resources reviewed as part of this ESA:

Resource	Location	Years Available
Aerial Photographs	EDR Report	1937, 1947, 1957, 1964, 1971, 1981, 1993, 1998, 2005, 2006, 2009, 2010
City Directories	EDR Report	1970, 1974, 1980, 1985, 1989, 1994, 1999, 2003, 2008, 2013
Sanborn Fire Insurance Maps	EDR Report	None Found
Topographic Maps	EDR Report	1907, 1916, 1949, 1954, 1967, 1975, 1980, 1992
Community Development, Building Department Records	City of West Sacramento Building Department	2008, 2012, 2013
Environmental Health Services	Yolo County	1991, 2005, 2006, 2007, 2011, 2012
AAI User Questionnaire	Not applicable	Not completed, answers provided 2014
Interviews	Not applicable	2014

The Client did not perform an Environmental Lien search nor was a Chain of Title provided to SCS.

Historical Site Land Use

The following table provides a chronology of the apparent historical Site land uses as interpreted from a review of information from the sources referenced:

Years	Interpreted Site Tenants	Interpreted Site Use
1937-1957	Not Applicable	Undeveloped vacant land and agricultural land
1957-1964	East Yolo Community Services, Parks, and Utilities	Waste Water Treatment Plant
1964 - 2007	Aurora Pacific Company, Dewante & Stowell, East Yolo Community Services, Parks, and Utilities, Linhart Peterson Powers Associates City of West Sacramento Public Works, City of West Sacramento	Waste Water Treatment Plant, Vehicle and Equipment Maintenance, Offices, Materials and Equipment Storage, Navigation Lock/Barge Canal
2007 - Present	City of West Sacramento Parks & Recreation, City of West Sacramento Public Works Department, Clark Metal Works	Vehicle and Equipment Maintenance, Offices, Materials and Equipment Storage, Navigation Lock/Barge Canal

City Directory listings identify a Aurora Pacific Company at the Site in 1970, no listings in 1974, Dewante & Stowell and East Yolo Community Services in 1980, East Yolo County Community Services, Parks, and Utilities in 1985. The City of West Sacramento is listed at the Site in 1989 and 1994. There were no listings for the Site in 1999. Linhart Peterson Powers Associates are listed at the Site in 2003. The Site is listed as City of West Sacramento Public Works in 2008 and City of West Sacramento in 2013. A copy of the EDR City Directory report is contained in Appendix D.

Because many of the dates listed above are based on a limited selection of historical resources, they are considered to be approximations only; the actual beginning/ending dates for many of the Site uses listed above may have been earlier or later than indicated.

Based on a review of available documents, it is unlikely that RECs exist as a result of historical Site land use prior to 1957. However, based on review of Phase II documents prepared by others and discussed by SCS above, RECs likely exist due to the Site land use as a WWTP as discussed in the Site Research section of this Report.

A review of aerial photographs revealed that some type of agricultural activity took place on Site APN 067-180-004. There is low likelihood that organochlorine pesticides (OCPs) are present at the Site since the portion of the Site APN where agriculture formerly occurred was removed during development of the W.C. Stone Navigation Lock and Barge Canal, which was constructed sometime between 1957 and 1964.

Historical Site Vicinity Land Use

The following table provides a chronology of the apparent historical Site vicinity land uses as interpreted from a review of information from the sources referenced:

Years	Interpreted Site Vicinity Tenants	Interpreted Site Vicinity Use
North		
1937-1947	Not Applicable	Vacant land
1947-1971	Vacant lank (adjacent); bulk fuel facility	Above ground bulk fuel tanks
1971-present	Commercial warehousing, equipment/materials storage; bulk fuel facility	Warehouse; above ground bulk fuel tanks
East		
1937-present	Single owner	Sacramento River
South		
1937- 1957	Not Applicable	Vacant land, orchards
1957-present	USACE/City; Not Applicable	Barge Canal; vacant land farther south with multiple access roads.
West		
1937-1947	Not Applicable	Vacant land, railroad corridor, multiple access roads
1947-1957	Not applicable	Structures present to northwest, access roads, railroad corridor, Jefferson Blvd.
1957-1964	Cark Pacific; Clark Trucking	Structures present, industrial buildings, access roads, railroad corridor, Jefferson Blvd.
1964-present	Multiple industrial owners – Clark Pacific; Clark Trucking	Numerous industrial buildings, access roads, materials storage areas, railroad corridor, Jefferson Blvd.

Because many of the dates listed above are based on a limited selection of historical resources, they are considered to be approximations only; the actual beginning/ending dates for many of the Site uses/development described above may have been earlier or later than indicated. In addition, some of the addresses listed in the EDR Report appear to slightly change as occupants of a property change. These slight changes likely only reflect change in ownership of a particular property and not different properties.

With the possible exceptions described below, no obvious historical facilities, features of concern, or land uses indicative of the use, storage, or generation of hazardous materials/wastes or petroleum products were found in the historical resources reviewed for the Site vicinity.

Historical Agricultural Activities

Agricultural activity beginning in the late 1930s may have included use of organochlorine pesticides (OCPs) such as dichlorodiphenyltrichloroethane (DDT), chlordane, and metal-based pesticides, such as copper, lead, and arsenic. These classes of pesticides are typically resistant to breakdown and may remain in detectable concentrations in shallow soils for extended periods of time. Trace concentrations of OCPs and metals are likely to be present, even in areas of "routine, legal and permitted" use and application of pesticides after mass grading and earth movement; however, it has generally been our experience that unless a pesticide mixing, storage, or disposal area was present, concentrations of OCPs in the subsurface in general agricultural areas tend to be low. No such areas were reported or are known to have existed at the Site and Site vicinity.

The presence of residual pesticides in soil may result in the soil being classified as a hazardous waste, but the soil would first need to be classified as a "waste" (e.g., to be excavated and transported off-site). Testing of Site soil would be required to evaluate the potential presence of pesticides in soil, and is recommended should earthwork or Site redevelopment occur. Assuming the legal and permitted application of these pesticides, and assuming existing Site use remains the same, this common occurrence is, in our experience, unlikely to lead to an enforcement action and to a human health risk and is therefore likely to be considered *de minimis*, as defined by ASTM. Therefore, assuming the Site land use does not change, there is a low likelihood that the possible presence of pesticides in shallow soil beneath the Site represents a current REC.

Lead-Impacted Soil

In older urban areas, such as West Sacramento, there is the potential for elevated concentrations of metals, particularly lead, to exist in the shallow soil (e.g., imported fill, aerially deposited lead, paint from historical structures, etc.). Based on our experience, if elevated concentrations of metals are present in soil, they are unlikely to lead to an enforcement action and to a human health risk, and would likely be considered *de minimis*, as defined by ASTM. Assuming the Site land use does not change, there is a low likelihood that the possible presence of metals in the shallow soil beneath the Site represents a current REC, as long as the soil remains undisturbed and covered by hardscape or landscape (i.e., there are no complete exposure pathways). Testing of Site soil would be required to evaluate the potential presence of lead, and is recommended should earthwork or Site redevelopment occur.

Commercial/Industrial Facilities

There are and have been commercial and industrial facilities on the Site and on adjoining properties to the north and west. Properties to the north have been used for bulk fuel storage, vehicle and equipment maintenance, and other operations. Properties to the west have been used for vehicle and equipment maintenance, shipping, transportation, and other uses. These land uses have resulted in releases to soil and groundwater and the potential impacts to the Site have been addressed in the “Off Site Sources” section of this Report.

Railroad Right-of-Way

Our review of historical records and field reconnaissance identified a railroad right-of-way adjacent to or near the Site. Tracks of the Union Pacific Railroad are located to the west of APN067-180-004. Due to the limited geographic exposure of the Site to this railroad right-of-way and the limited nature of historical and current rail activity along the Site (i.e., no rail yards or spurs), it is unlikely that uses of the railroad right-of-way have impacted the Site.

DATA GAPS IN CONNECTION WITH THE HISTORICAL SITE LAND USE

With the possible exception of interviews not being conducted with prior owner/operators of the Site and inadequate information concerning the USTs reported at the W.G. Stone Lock facility, there are no obvious data gaps in association with the historical Site land use. Based on corroborating information and other data sources, this data gap is not judged significant with respect to SCS ability to assess the Site.

Findings and Opinions—Historical Site and Site Vicinity Land Use

Based on the available data regarding the historical and current use of the Site, there is a low likelihood of a REC at the Site as a result of the historical (pre-1957) Site land use. There are known and reported release(s) from historical Site vicinity land uses, which have been investigated and are addressed in the Off Site Source section of the Report. Based on a review of historical resources and with the possible exceptions discussed in the Additional SCS Research section above, there is a low likelihood that a REC exists at the Site as a result of a release of hazardous materials/wastes or petroleum products from a known or interpreted historical Site or Site vicinity land use.

Historical Agricultural Activities

A review of aerial photographs revealed that some type of agricultural activity took place within the Site vicinity from prior to 1907, and possibly into the 1930s. The agricultural activity is interpreted to have possibly taken place at the time that OCPs such as DDT, chlordane, and metal-based pesticides, such as lead, copper and arsenic, were in wide general use for pest control.

Based on SCS's experience, there is a moderate likelihood that residual concentrations of organochlorine- and metal-based pesticides are present in the shallow surface soil beneath the adjacent properties. Assuming the legal and permitted application of these pesticides, and assuming existing land use remains the same, this common occurrence is, in SCS's experience, unlikely to lead to an enforcement action and is therefore likely to be considered *de minimis,* as defined by ASTM.

Based on the fact that Site was not interpreted to have been used for agricultural purposes, the distance of the historical agricultural activities to the Site (over 150 feet), and the lack of known or reported releases, there is a low likelihood that a REC exists at the Site as a result of the historical agricultural land use at adjacent properties.

Lead- Impacted Soil

Based on our experience with older urban areas California, including West Sacramento, there is the potential that elevated concentrations of metals, such as lead may exist in shallow soil (e.g., imported fill, aerially deposited lead, paint from historical structures, etc.). In such a case, the likelihood of an enforced remediation is low as long as the soil remains undisturbed and covered by hardscape or landscape (i.e., there are no complete exposure pathways). However, if the Site is to be redeveloped, including shallow soil disturbance, excavation, or export in connection with Site development, sampling of the shallow subsurface soil at the Site should be conducted to assess proper soil handling and disposal as well as the possible human health risk, if any.

VAPOR INTRUSION

The USEPA defines vapor intrusion (VI) as the migration of volatile chemicals from the subsurface into overlying buildings. Volatile organic chemicals in contaminated soils or groundwater can emit vapors, which may migrate through subsurface soils and may enter the indoor air of overlying buildings. Building depressurization may cause these vapors to enter the home through cracks in the foundation. Depressurization can be caused by a combination of wind effects and stack effects, which are the result of heating within the building and/or mechanical ventilation. In extreme cases, the vapors may accumulate in dwellings to levels that

may pose near-term safety hazards, such as explosion. Typically, however, vapor concentrations are present at low levels, to which long-term exposure may pose increased risk for chronic health effects.

The historic use of the Site and presence of USTs and a LUST case files and the presence of VOCs in groundwater from off Site sources suggests the potential for VI. However, based on the results of previous Phase II investigations conducted by Engeo (Engeo 2007; 2008a, 2008b) in which VOC concentrations in soil and groundwater were found to be low, VI potential is likely to be low within the areas tested. However, Engeo did not test soil or groundwater at the far north end of APN 067-180-016 where Clark Metal Works is leasing a portion of the Site and possibly on which a "tank farm" was formerly operated by Beneto Tank Lines (1875 South River Road). A Phase II investigation, possibly including a soil vapor survey, would be required to address a data gap associated with the Beneto Tank Lines LUST case.

In addition, VOCs from off-Site releases (Buckeye Terminals, Tesoro Petroleum,) are interpreted to be present in the groundwater beneath the Site resulting in a potential for human health risk issues in connection with vapor intrusion (i.e., vapors migrating off groundwater through the soil column into the Site building), which could result in a REC. If the Site is developed with occupied structures, based on the known and reported concentrations of VOCs in the groundwater beneath the Site, SCS recommends the collection and analysis of soil vapor samples for VOCs. If VOCs are present in the shallow soil vapor, a health risk assessment should be performed to assess possible health risks for current and future building occupants.

5 CONCLUSIONS AND RECOMMENDATIONS

This ESA has been conducted by an environmental professional whose qualifications were made known to the Client. The conclusions and recommendations presented below are based on the review of readily available data obtained as part of this ESA, current regulatory guidelines, the Site and Site vicinity reconnaissance, and our experience.

SCS has performed a Phase I ESA of 1951 South River Road (including 1991 and 2050 South River Road), West Sacramento, California, in general conformance with the ASTM Standard Practice for Phase I Environmental Site Assessment Process E 1527-13 and the EPA, 40 CFR Part 312, Standards and Practices for All Appropriate Inquiries; Final Rule (AAI). Any exceptions to, or deletions from, the ASTM and AAI Scope of Work were previously described in this Report where applicable.

With the possible exceptions below, there is a low likelihood that a REC is present at the Site as a result of the current or historical Site land use or a known and reported off Site source:

- The Site is located at 1951 South River Road in the City of West Sacramento, California and is identified as Yolo County Assessor's Parcel Numbers (APN) 067-180-004, 067-180-001, 067-180-019, 058-260-017, 058-260-018, & 058-260-016 (Site) (Appendix A, Figure 1). In addition to the address listed above, the Site is also referenced as 1875 South River Road (APNs 058-260-016), 1991 South River Road (APNs 058-260-017, 058-260-018, 067-180-001, and 067-180-019), and 1900 and 2050 South River Road

(APN 067-180-004). The Site consists of approximately 37.4 acres and contains numerous buildings, internal access roads, equipment and storage buildings/yards, maintenance shop, and offices (1951 South River Road), an inactive waste water treatment plant (WWTP) (1991 South River Road), and an inactive shipping or navigation lock (1900 and 2050 South River Road). Available information indicates that the Site was acquired by the City in approximately 1989. The Site currently houses offices, maintenance facilities, and equipment and materials storage yards of the City of West Sacramento Public Works Department and City of West Sacramento Parks and Recreation Department. The Site is located adjacent and to the west of the Sacramento River, to the north of the Barge Canal and historic W.G. Stone Lock navigation canal that was used historically to connect the Port of Sacramento/Washington Lake/Turning Basin with the Sacramento River.

- A total of 30 buildings are located on the Site with approximately 17 of these buildings constituting the WWTP. Numerous other above and below grade structures related to the inactive WWTP are also present, including basins, digesters, ponds, clarifiers, pump shelters, and other support structures related to the WWTP. Initial construction of WWTP occurred in 1954 with existing buildings constructed circa 1960s and 1970s. Most of the existing buildings were constructed after 1964 and before 1981. The WWTP became inactive in 2007. The W.G. Stone Lock was constructed between 1957 and 1964 and was active until the 1980s. The buildings associated with W.G. Stone Lock are currently used to store chemicals and other materials, but are otherwise vacant. Buildings associated with the WWTP are also vacant, with the exception of those used for storage or offices.

- The Site vicinity is an area of heavy industrial and commercial land use, including bulk fuel storage and dispensing, heavy equipment and commercial vehicle maintenance, large scale trucking and shipping operations, metal works, and many other commercial and industrial businesses that are located along South River Road. Buckeye Terminal bulk fuels facility and the Ramos Oil facility are located to the north of the Site. North State Tire, Greyhound Maintenance Center, and Clark Pacific are located to the west of the Site.

- Numerous unlabeled or partially labeled 55-gallon drums and smaller quantity containers of hazardous or potentially hazardous materials were observed in various buildings throughout the Site. As indicated by labeling, many of these drums contained petroleum products or residual quantities of petroleum products, but in all cases drums and containers were located on concrete floors under roof. Improper storage is considered to be a compliance and housekeeping issue. SCS recommends that client consider improved “housekeeping” at the Site including proper disposal of unused hazardous materials and hazardous wastes.

- A Phase I ESA and several Phase II investigations were completed by Engeo in 2007 and 2008 for the WWTP portion of the Site. SCS’s conclusions and recommendations based on the third party data are as follows. Nitrate impacts to groundwater beneath the Unlined Pond (former Sludge Drying Beds); suspected presence of PCBs in the transformer;

nitrates, manganese, and nickel impacts to groundwater beneath the northern portion of the WWTP near the concrete lined and unlined ponds are considered to be RECs. Historical releases from USTs identified at 1951 South River Road at the Corporation Yard are considered to be CRECs. Other impacts, such as lead and chromium contained within buried debris and non-native fill beneath the Concrete Lined Pond and within soil beneath the Debris Yard, low concentrations of VOCs and CVOCs detected in groundwater in the area of the Maintenance Shop USTs area, and soil impacts of various COCs beneath the Corporate Yard were identified in connection with historical Site use. If the Site use changes or the Site is redeveloped, certain current *de minimis* conditions such as these may require further investigation.

- PCBs detected in soil near the transformer at the WWTP are considered to be a HREC and the suspected presence of PCBs in the transformer is considered to be a REC. SCS recommends proper disposal of the PCBs contained within the transformer as part of any Site redevelopment.

- A Dewante and Stowell Consulting Engineers Site plan, dated November 1977, indicated that City Parks & Recreation Department "Shop Building" was used (circa 1977) for the storage of pesticides. Based on Phase II investigation reports prepared by Engeo (2007a, 2007b, 2007c), it does not appear that pesticide testing was conducted in this pesticide storage area. This constitutes a data gap and therefore SCS recommends testing soil and groundwater in the area of the "Shop Building" ("Parks Dept. Maintenance Shop" on Figure 2b) for potential impacts from the use and storage of pesticides.

- Due to the age of W.G. Stone Lock facility (constructed between 1957 and 1964 and active until the 1980s) and WSFD records indicating the presence of COCs, the current improper storage of hazardous materials, the machinery pits, Crane Room, Oil Shed, and Machine Shop are considered to be areas of potential concern. SCS recommends conducting a Phase II investigation to determine if COC release(s) occurred related to the historical operation of the W.G. Stone Lock facility.

- One double-walled 500-gallon diesel UST was located either on the Site or likely adjacent to the Site located at 1900 South River Road and one single-walled diesel UST was located at 2025 Jefferson Blvd. Due to the age of these UST database instances, lack of information concerning the UST closure these USTs would be considered a data gap. SCS recommends a Phase II investigation to assess if historical releases from the USTs have impacted the Site.

- Due to a discharge of wastewater to an open ditch at the WWTP and lack of information concerning cleanup efforts, this is considered to be a data gap. Additional research would be needed to assess if this release is a REC.

- Lack of data concerning the UST releases at 1875 South River Road is considered to be a data gap. Due to the era in which this LUST case was closed and the close proximity of

the USTs to the Site, releases from the USTs may have impacted the Site and are considered to be a potential REC. A Phase II investigation would be required to address this data gap.

- Remediation activities are reportedly being conducted at the Buckeye Terminals LLC Sacramento Terminal (formerly Tesoro Petroleum facility), 1700 and 1701 South River Road facility (Stantec, *Groundwater Monitoring and Remediation, 1701 South River Road, West Sacramento, California*, dated March 2013; *Groundwater Monitoring and Remediation, 1700 South River Road, West Sacramento, California*, dated May 2014). Based on data contained within the Stantec reports, SCS concludes that VOCs are present in the groundwater beneath the Site, which constitutes a *REC*. There is a potential for human health risk issues in connection with vapor intrusion (i.e., vapors migrating off groundwater through the soil column into the Site building), which could result in a REC. If the Site is ever developed with occupied structures, based on the known and reported concentrations of VOCs in the groundwater beneath the Site, SCS recommends the collection and analysis of soil vapor samples for VOCs. If VOCs are present in the shallow soil vapor, a health risk assessment should be performed to assess possible health risk for current and future building occupants.

- A 900-gallon discharge of raw wastewater occurred to an open ditch at the WWTP on January 17, 2000. Due to a discharge of wastewater to an open ditch at the WWTP and lack of information concerning cleanup efforts, this is considered to be a data gap. Additional research would be needed to assess if this release is a REC.

- Lack of data concerning the UST releases for the Beneto Tank Lines LUST case at 1875 South River Road is considered to be a data gap. Due to the era in which this LUST case was closed and the close proximity of the USTs to the Site, releases from the USTs may have impacted the Site and are considered to be a potential REC and a data gap. A Phase II investigation would be required to address this data gap.

SIGNIFICANT ASSUMPTIONS

Based on the documents reviewed, interviews with knowledgeable people, and the Site reconnaissance, the following significant assumptions have been made regarding the Site.

- Unless obviously inaccurate or if information exists to the contrary, SCS assumes that information collected during this ESA is accurate and correct. The information collected and reviewed for this ESA has not been independently validated.

LIMITATIONS AND EXCEPTIONS

This ESA focused on potential sources of hazardous substances and petroleum products that could be considered a REC and a liability due to their presence in significant concentrations (e.g., above acceptable limits set by the federal, state or local government) or due to the potential for contamination migration through exposure pathways (e.g., groundwater). Materials that

contain substances that are not currently deemed hazardous by the USEPA or the DTSC were not considered as part of this study.

Consideration of building materials such as asbestos, lead-based paint, water supply plumbing, urea formaldehyde, and pressure-treated lumber are not considered in this Report, nor are building issues such as fire safety, indoor air quality, mold, or similar matters. We did not evaluate the Site for compliance with land use, zoning, wetlands, or similar laws. This Report is not intended to be an environmental compliance audit.

The findings and conclusions of this ESA are based on visual observations, interviews, and record reviews.

Hazardous substances occurring naturally in plants, soils, and rocks (e.g., heavy metals, naturally occurring asbestos, or radon) are not typically considered in these investigations. Similarly, construction debris (e.g., discarded concrete, asphalt) is not considered unless the observation suggests that hazardous substances are likely to be present in significant concentrations or likely to migrate.

The term "scattered solid waste debris," or rubbish, is used to describe wastes such as paper, plastic, food packaging, cans, bottles, rubber tires, and other similar materials. These materials do not normally represent a REC unless specifically stated as such within this Report.

This Report was prepared for the City of West Sacramento and describes the results of a Phase I ESA for the Site located at 1951 South River Road, West Sacramento, Yolo County, California (APNs: 058-260-016, 058-260-017, 058-260-018, 058-260-019, 067-180-001 & 067-180-004). This Report has been prepared in accordance with the care and skill generally exercised by reputable professionals, under similar circumstances, in this or similar localities. No other warranty, either expressed or implied, is made as to the professional advice presented herein. No other party, known or unknown to SCS is intended as a beneficiary of this work product, its content or information embedded herein. Third parties use this Report at their own risk. SCS assumes no responsibility for the accuracy of information obtained from, compiled, or provided by third-party sources, such as regulatory agency listings.

Certain other limitations could affect the accuracy and completeness of this Report, as follows:

- Site Access Limitations – Vegetative cover and high fencing around riparian corridors along Sacramento River and in certain restricted areas defined by signage as being "environmentally sensitive" prevented or limited observation in these areas and were not observed.

- Physical Obstructions to Observations – At the time of our Site reconnaissance, the Control Room and Oil Shed were locked and not accessible on APN 067-180-004 (Navigation Lock). However, some observations were possible of the interior of the Oil Shed through the building windows. The Modular Office located on APN 067-180-001 (WWTP) was also locked and not accessible.

- Outstanding Information Requests – The Client provided answers to the AAI questionnaire, but did not complete and return the questionnaire. The Client did not perform an Environmental Lien search nor was a Chain of Title provided to SCS. The Engeo Phase I ESA Report, dated February 2, 2007, was not provided.

- Historical Data Sources Failure – Previous Site owners were not available for interview at the time of this Report. The Engeo Phase I ESA Report, dated February 2, 2007, was not provided. Records concerning details of USTs on or near the W.G. Stone Lock facility were not available at the time of this Report.

The findings and conclusions of this ESA are based on visual observations, record reviews, and interviews with persons knowledgeable of the Site. Soil, groundwater, air, and building materials were not sampled during the ESA. A potential always remains for the presence of unknown, unidentified, or unforeseen surface or subsurface contamination.

Special Terms and Conditions

This ESA Report does not purport to address safety concerns, if any, associated with the use of the Site or exposure to safety concerns from adjoining facilities. It is the responsibility of the owner and/or the user of this ESA Report to establish appropriate safety and health practices and determine the applicability of regulatory limitations. SCS is not required to identify safety concerns unless otherwise required in the scope of work. However, even though not required, SCS will normally advise their client of obvious and apparent concerns that may warrant immediate attention.

This ESA is not a compliance audit for regulatory compliance with federal, state, and local statutes, laws, rules or regulations unless otherwise required by the agreed upon scope of work. It is, however, SCS's normal procedure to advise their clients of major obvious and apparent non-compliance issues that are noted in the course of conducting the ESA.

6 REPORT USAGE AND FUTURE SITE CONDITIONS

This Report is intended for the sole usage of the Client and other parties designated by SCS. The methodology used during this ESA was in general conformance with the requirements of the Client and the specifications and limitations presented in the Agreement between the Client and SCS. This Report contains information from a variety of public and other sources, and SCS makes no representation or warranty about the accuracy, reliability, suitability, or completeness of the information. Any use of this Report, whether by the Client or by a third party, shall be subject to the provisions of the Agreement between the Client and SCS. Any misuse of or reliance upon the Report shall be without risk or liability to SCS.

Phase I ESAs are qualitative, not comprehensive, in nature and may not identify all environmental problems or eliminate all risk. For every property, but especially for properties in older downtown or urban areas, it is possible for there to be unknown, unreported RECs, USTs, or other features of concern that might become apparent through demolition, construction, or

excavation activities, etc. In addition, the scope of services for this project was limited to those items specifically named in the scope of services for this Report. Environmental issues not specifically addressed in the scope of services for this project are not included in this Report.

Land use, condition of the properties within the Site, and other factors may change over time. The information and conclusions of this Report are judged to be relevant at the time the work described in this Report was conducted. This Report should not be relied upon to represent future Site conditions unless a qualified consultant familiar with the practice of Phase I ESAs in the City of West Sacramento is consulted to assess the necessity of updating this Report.

The property owners at the Site are solely responsible for notifying all governmental agencies and the public of the existence, release, or disposal of any hazardous materials/wastes or petroleum products at the Site, whether before, during, or after the performance of SCS services. SCS assumes no responsibility or liability for any claim, loss of property value, damage, or injury that results from hazardous materials/wastes or petroleum products being present or encountered within the Site.

Although this ESA has attempted to assess the likelihood that the Site has been impacted by a hazardous material/waste release, potential sources of impact may have escaped detection for reasons that include, but are not limited to: 1) our reliance on inadequate or inaccurate information rightfully provided to us by third parties, such as public agencies and other outside sources; 2) the limited scope of this ESA; and 3) the presence of undetected, unknown, or unreported environmental releases.

7 LIKELIHOOD STATEMENTS

Statements of "likelihood" have been made in this report. Likelihood statements are based on professional judgments of SCS. The term "likelihood," as used herein, pertains to the probability of a match between the prediction for an event and its actual occurrence. The likelihood statement assigns a measure for a "degree of belief" for the match between the prediction for the event and the actual occurrence of the event.

The likelihood statements in this Report are made qualitatively (expressed in words). The qualitative terms can be approximately related to quantitative percentages. The term "low likelihood" is used by SCS to approximate a percentage range of 10 to 20 percent; the term "moderate likelihood" refers to an approximate percentage range of 40 to 60 percent; and the term "high likelihood" refers to an approximate percentage range of 80 to 90 percent.

8 SPECIAL CONTRACTUAL CONDITIONS BETWEEN USER AND ENVIRONMENTAL PROFESSIONAL

There were no special contractual conditions between the user of this ESA and the environmental professional, SCS. Statements regarding qualifications of the environmental professionals that prepared this Phase I ESA Report are contained in Appendix H.

9 REFERENCES

ASTM, 2010, *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions,* Designation E-2600-10.

ASTM, 2013, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process,* Designation E-1527-13.

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CDMG, 1981, *Geologic Map of Sacramento, California Quadrangle,* Wagner, et. al.

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Lawrence Livermore National Laboratory (LLNL) Report, Methyl Tertiary Butyl Ether (MTBE) Impacts to California Groundwater, dated March 25, 1999.

LLNL Report, Recommendations to Improve the Cleanup Process for California's Leaking Underground Fuel Tanks (LUFTs), dated October 16, 1995.

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RWQCB Groundwater Committee, a staff committee of the RWQCB San Francisco Bay Region, *Assessment Tool for Closure of Low-Threat Chlorinated Solvent Sites, Draft Final,* dated July 31, 2009.

SCS Engineers (SCS): Records request - by Michael Sperber (SCS) on May 15 and 22, 2014. Site and vicinity reconnaissance conducted by Paul Wisniewski (SCS) on April 22, April 28, and May 2, 2014. Interview with Ms. Katie Yancey of the City of West Sacramento conducted by James Ritchie (SCS) on July 31 and August 13, 2014.

Versar, 2007. *West Sacramento Waste Water Treatment Plan Asbestos Containing Materials & Lead-Based Paint Pre-Demolition Survey Report*, dated March 23.

http://www.epa.gov/AthensR/learn2model/part-two/onsite/jne_background_forward.html

GeoTracker and EnviroStor Links

Clarks Trucking -2000 South River Road- Clarks Trucking

http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611300136

Corporation Yard -1951 South River Road

http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611300082

Beneto Tank Lines-1875 South River Road

http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611300182

Rollins Leasing-1781 South River Road

http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611300183

Tesoro Arco Remediation Program-1701 South River Road

http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL0611357876

Tesoro Petroleum-1700 South River Road

http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611300132

Kinder Morgan Facility-1570 S. River Road

http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL375133637

Ramos Oil Recycler-1515 South River Road

http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SLT5S2363275