SCS ENGINEERS

Phase I Environmental Site Assessment and Regulatory Agency File Review and Document Compilation

Assessor's Parcel Numbers 644-042-02 and -10 Chula Vista, California

Presented to:

City of Chula Vista
c/o Ms. Carla Blackmar
Redevelopment Project Coordinator
City of Chula Vista Redevelopment Agency
246 Fourth Avenue
Chula Vista, California 91910

Presented by:

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January 23, 2012
Project Number: 11012021.07

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Ms. Carla Blackmar
Redevelopment Project Coordinator
Redevelopment Agency
City of Chula Vista
246 Fourth Avenue
Chula Vista, CA 91910

Subject: **Phase I Environmental Site Assessment (Assessment), and Regulatory Agency File Review and Document Compilation (Review)**

Site: **Assessor's Parcel Numbers (APNs) 644-042-02 and -10**
Chula Vista, CA, 91911

Dear Ms. Blackmar:

SCS Engineers (SCS) is pleased to present this report (Report) of the Assessment and Review of the above-described Site. This Report summarizes the results of the Assessment and review that were conducted in order to evaluate the Site's current environmental conditions. The work described in this Report was performed by SCS in general accordance with Exhibit 07 and the Agreement (Contract) between SCS and the City of Chula Vista (Client). Exhibit 07 and the agreement were fully executed on December 9, 2008.

Because your full understanding of the Assessment is important to us, we recommend that you read the Report in its entirety. However, if time does not allow you a complete reading, summaries may be found in text boxes at the end of each section (pages 14 through 15, 27, and 33 through 35), and our conclusions and recommendations may be found on pages 35 through 38.

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 (858) 571-5500.

Sincerely,

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1 BACKGROUND

The Site is located south of the Otay River and east of Interstate 805 in Chula Vista, California, and is approximately 20.13 acres. Based on Client-provided information, SCS understands that waste was imported from a former burn dump to a portion of the Site, and that the Client is proposing to remediate the Site by consolidating the burn ash and capping with an engineered cap.

A review of our in-house Win2Database indicated the following in connection with the Site (copies on the Win2Data reports are included in Appendix A):

APN	Address	Acre	Description	Owner
644-042-02	Not reported	11.02	Not reported	City of Chula Vista
644-042-10	Not reported	9.11	Vacant land	Shinohara Trust

A review of an Environmental FirstSearch Report indicates a number of facilities store or use hazardous materials, generate hazardous waste, or have leaking underground storage tanks (LUST) in the Site vicinity, including the Site. Please note that relevant facilities and files will be investigated as part of this Assessment.

2 STANDARDS BACKGROUND

This Assessment was conducted in general accordance with the following:

- Environmental Protection Agency (EPA), 40 Code of Federal Regulations (CFR) Part 312, Standards and Practices for All Appropriate Inquiries; Final Rule (AAI);
- American Society for Testing and Materials (ASTM) Standard Practice for Phase I Environmental Site Assessment Process E1527-05; and
- The scope, conditions, and limitations of Exhibit 07.

The Client understands that the above-referenced EPA and ASTM standards were not developed to identify all environmental risk to property. The standards were developed to allow a user (Client) to qualify for the innocent purchaser defense, bona fide prospective purchaser defense, and contiguous property owner defense to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, a.k.a Superfund) liability. This Assessment is intended to constitute an appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice, as part of the due diligence process required by CERCLA, the Superfund Amendments and Reauthorization Act of 1986 (SARA), and the Small Business Liability Relief and Brownfields Revitalization Act of 2002 (Acts).

Please note that this Assessment may initially qualify the Client for a CERCLA defense; however, after purchase, there may be “continuing obligations” that must be implemented to preserve this defense through the term of property ownership. There may be additional requirements under state law that also apply. The Client should contact qualified legal counsel regarding matters of liability, interpretation of the Acts, and potential continuing obligations. While such matters are

outside the scope of this Assessment, SCS would be pleased to work with your legal counsel to develop and implement a strategy to preserve your CERCLA liability defenses through the term of your ownership.

This Assessment focused on potential sources of hazardous substances and petroleum products that could be considered a recognized environmental condition (REC)[1,2] and 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 exposure and risk due to contaminant migration and complete exposure pathways (e.g., soil vapor inhalation or groundwater ingestion). Materials that contain substances that are not currently deemed hazardous by the United States Environmental Protection Agency (U.S. EPA) or the California EPA (Cal-EPA) were not considered as part of this Assessment.

Unless specifically included in SCS's scope of services, building materials such as asbestos, lead-based paint, lead in drinking water, urea formaldehyde, and pressure-treated lumber are not considered in this Report; nor are building issues such as fire safety, indoor air quality (with the possible exception of vapor intrusion), mold, or similar matters. SCS did not evaluate the Site for compliance with land use, zoning, wetlands, or similar laws. This Assessment also excludes regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, and high-voltage power lines. This Report is not intended to be an environmental compliance audit.

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 or asphalt) is not considered, unless obvious indications suggest that hazardous substances are likely to be present in significant concentrations or likely to migrate.

An evaluation of business environmental risk associated with a parcel of commercial real estate may necessitate investigation beyond that included herein.

3 OBJECTIVE

The objective of the scope of services was to assess the likelihood[3] 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.

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[1] *RECs*, as defined by ASTM, include the presence or likely presence of hazardous substances or petroleum products on a property that indicate an existing release, a past release, or a material threat of release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water on the property. However, the term is not intended to include *de minimis* conditions. A condition considered *de minimis* is not a REC.

[2] *De minimis conditions*, as defined by ASTM, are environmental conditions that do not generally present a material risk of harm to the public health or the environment and that generally would not be subject to an enforcement action if brought to the attention of appropriate governmental agencies.

[3] Statements of "likelihood" are made in this Report, based on the professional judgment of SCS. A description of likelihood statements, as made in this Report, is included on page 39.

4 SCOPE OF SERVICES

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

- Regulatory Agency File Review and Data Compilation (including but not limited to San Diego County Local Enforcement Agency and CalRecycle [formerly California Integrated Waste Management Board])
- Site Reconnaissance, Site Research, Interviews, and User Requirements
- Chain of Title Review and Environmental Liens and Activity Use Limitations
- 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
- Data Evaluation, Figure Preparation, and Assessment Report Preparation

SITE RECONNAISSANCE

On November 10, 2010, SCS personnel conducted a Site reconnaissance to observe and document existing Site conditions.[i] The general Site location is shown in Figure 1, and a Site and Site vicinity plan is shown in Figure 2. Selected color photographs of the Site are presented as Figures 4a through 4h.

The Site grounds and Site perimeters were systematically traversed on foot during the Site reconnaissance. Ms. Carla Blackmar (the Redevelopment Project Coordinator for the City of Chula Vista) accompanied SCS personnel, provided access to the observed features, and answered questions posed by SCS personnel. Because a large portion of the Site is occupied by the Otay River and not accessible by foot, the Site Reconnaissance focused on the Shinohara burn ash portion of the Site, known as the Shinohara II Burn Dump.

General Information

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

APNs	644-042-02 and -10
Address	None associated with the Site
Area	20.13 acres
Site Land Use	Open Space restricted from public access
Occupant	None
Figure Reference	Figures 4a-1 to 4h-2

Site Buildings

There are no buildings located on the Site.

Site Grounds

The Site grounds were observed to be vacant, undeveloped land (Figure 3a-1). The majority of the Site was observed to be part of the Otay River, comprised of vegetation and open water (Figure 3a-2). The northwestern portion of the land was observed to be vacant, undeveloped land north of the Otay River. The Shinohara II Burn Dump portion of the Site was observed to be located in the southwestern area of the Site (Figure 3a-3).

Approximately 95 percent of the Shinohara II portion of the Site was covered with natural vegetation from 0 to 2 feet high. Chain-link fencing was observed at the south, west, and east perimeters of the Shinohara II portion of the Site. Straw wattles were present at the south perimeter of the Shinohara II portion of the Site adjacent to the Otay River. Evidence of burn ash (e.g., soil containing fragments of glass, clay, and brick) was observed throughout the majority of the Shinohara II portion of the Site (Figures 3b-1 and 3b-2). Debris, including plastic bottles, fragments of foam, metal, and plastic, and an old, deteriorated mattress, was observed in the western area of the Shinohara II portion of the Site (Figures 3c-1 and 3c-2). Concrete and/or construction debris was observed in the northeastern area of the Shinohara II portion of the Site (Figure 3d-1). Plastic and metal debris was observed in the southeastern area of the Shinohara II portion of the Site (Figure 3d-2).

Hazardous Materials/Petroleum Products

No obvious indications of the storage or use of hazardous materials and/or petroleum products were observed at the Site during the Site reconnaissance.

Hazardous Wastes

No obvious indications of the generation of hazardous wastes were observed at the Site during the Site reconnaissance.

Indications of Releases of Hazardous Materials/Wastes or Petroleum Products

Evidence of burn ash containing material (e.g., soil containing fragments of glass, clay, and brick) was observed throughout the majority of the Shinohara II Burn Dump portion of the Site. Burn ash or metal-bearing fill material may contain high concentrations of contaminants of concern, notably certain metals (e.g., copper, lead, zinc, mercury, and cadmium). Therefore, the presence of burn ash represents a REC. Please refer to the CalRecycle and LEA file review sections, along with the historical land use section for further discussion of burn ash at the Site.

On-Site Utilities

Gas and Electricity	Not interpreted to be connected; however, it would reportedly be San Diego Gas and Electric
High-Power Transmission Lines	Observed adjacent to the west of the Site

Storm Drains	None observed at the Site
Source of Heating and Cooling	Not applicable
Potable Water Source	Not interpreted to be connected; however, it would reportedly be supplied by the Otay Water District
Wastewater Conveyance	

No suspect Polychlorinated biphenyl (PCB)-containing equipment (e.g., electrical transformers, elevators, etc.) were observed to be located at the Site. No obvious indications of wells, cisterns, pits, sumps, dry wells, or bulk storage tanks were observed at the Site.

SITE RESEARCH

DEH File Review

The Department of Environmental Health (DEH) Hazardous Materials Management Division (HMMD) HE-17 database, dated July 2008, lists facilities that have reportedly stored hazardous materials, generated hazardous wastes, and discharged unauthorized releases. This database has provided no information in connection with the Site. In addition, the DEH was contacted[ii] and indicated that there are no files associated with the Site. Copies of the file request forms for the Site are included in Appendix B.

CalRecycle File Review

CalRecycle (formerly California Integrated Waste Management Board) files were reviewed on November 2, 2011.[iii] The following documents were included in the CalRecycle file and reviewed as part of this Assessment (Copies of the documents are included in Appendix C):

- *Closed Disposal Site Inspection Reports*, prepared by the LEA, dated from November 6, 1998 to June 2, 2011.
- *Site Identification Forms for Shinohara II*, prepared by CIWMB, dated November 6, 1998 and August 26, 2005;
- *Site Assessment Data Forms for Shinohara II*, prepared by CIWMB, dated November 25, 1998 and August 26, 2005;
- *Solid Waste Information System Facility Data Entry Form*, prepared by CIWMB, dated February 4, 2010;
- *County of San Diego LEA Site Investigation, Shinohara I and II Properties*, prepared by the LEA, dated December 15, 1998;
- *Notice and Order*, prepared by the LEA, dated September 14, 2010; and

The table below summarizes the Closed Disposal Site Inspection Reports prepared by the San Diego County LEA. For a more detailed summary, please refer to Appendix C.

Date	Violations/Areas of Concern
2/26/1999	No violations reported. Areas of concern: Site security, drainage/erosion control.
1/6/2000	None reported.
6/19/2000	No violations reported. Area of concern: intermediate cover.
8/18/2000	No violations reported. Area of concern: intermediate cover.
10/24/2000	None reported.
6/7/ 2001	None reported.
10/15/2001	None reported.
1/18/2002	None reported.
4/3/2002	None reported.
9/27/2002	None reported.
12/12/2002	No violations reported. Area of concern: evidence of glass bottle recovery excavation.
2/6/2003	No violations reported. Areas of concern: evidence of several glass bottle recovery excavations, burn ash material exposed at surface.
6/18/2003	No violations reported. Areas of concern: evidence of several glass bottle recovery excavations, burn ash material exposed at surface.
9/16/2003	No violations reported. Areas of concern: Site security, maintenance - cover exposed burn ash material with at least two feet of clean soil to limit exposure.
12/24/2003	No violations reported. Areas of concern: Site security, maintenance - cover exposed burn ash material with at least two feet of clean soil to limit exposure.
6/8/2004	No violations reported. Areas of concern: Site security, maintenance - cover exposed burn ash material with at least two feet of clean soil to limit exposure.
9/7/2004	Violations: Site security, maintenance - cover exposed burn ash material with at least two feet of clean soil to limit exposure.
12/10/2004	Violations: Site security, maintenance - cover exposed burn ash material with at least two feet of clean soil to limit exposure.
3/30/2005	Violations: Site security, maintenance - cover exposed burn ash material with at least two feet of clean soil to limit exposure.
6/27/2005	Ongoing violations: Site security, Site maintenance, final cover
9/20/2005	Violations: Site security, maintenance - cover exposed burn ash material with at least two feet of clean soil to limit exposure.

Date	Violations/Areas of Concern
3/9/2006	Violations: Site security, maintenance - cover exposed burn ash material with at least two feet of clean soil to limit exposure.
6/15/2006	Violations: Site security, maintenance - cover exposed burn ash material with at least two feet of clean soil to limit exposure.
12/20/2006	Violations: Site security, maintenance, final cover.
3/17/2007	Violations: Site security, maintenance, final cover.
6/21/2007	Violations: Site security, maintenance, final cover.
9/20/2007	Violations: Site maintenance, final cover.
12/6/2007	Violations: final cover, slope stability, drainage/erosion control, signs.
5/29/2008	Violations: final cover, drainage/erosion control (Shinohara only), signs (Shinohara only)
8/28/2008	Violations: final cover, slope stability, drainage/erosion control, signs.
12/24/2008	Violations: final cover, Site security
3/19/2009	Violation: final cover.
6/12/2009	Violations: final cover, Site security.
8/28/2009	Violation: final cover.
10/29/2009	Violation: final cover.
3/5/2010	Violation: final cover.
6/9/2010	Violation: final cover.
8/18/2010	Violation: final cover, Site security.
12/1/2010	Violation: final cover, Site security.
12/15/2010	None reported
3/17/2011	Violations: final cover, Site security.
6/2/2011	Violations: final cover, Site security.

According to the CalRecycle file review, the Site was identified as a burn ash site by the County of San Diego LEA in 1992. Initially, the Site was included in the larger Shinohara Farms property burn ash site, which included the properties to the north and south of the Otay River. In 1998, the site was divided into Shinohara I (located north of the Otay River) and Shinohara II (located south of the Otay River). Shinohara I was clean-closed by the LEA on July 19, 2001, and an auto mall was constructed.

Quarterly inspections on Shinohara II (summarized in the table above) began in 1998 and are documented through June, 2011. Burn ash is reported to be present at the surface of the Site, and Site security has been an ongoing issue. The Site is presently fenced on the western and southern sides, and access is limited by the river and dense vegetation on the north and eastern sides. An Official Notice was issued by the LEA on March 1, 2007 in which the following issues were to be addressed: (1) Site security and signage be completed by May 1, 2007; (2) Cover installation (a

minimum 2-foot cap of clean soil) be completed by July 1, 2007; and (3) Drainage and erosion control measures be completed by August 1, 2007.

The LEA's directive regarding cover installation have not yet been addressed. However, the City of Chula Vista and the Shinoharas have taken steps to address other LEA directives, including installing a security fence and signs to restrict public access, as well as installing straw waddles for erosion control. In addition, the City of Chula Vista has made repairs to the fence on a number of occasions when the fence has been damaged by trespassers; however, security continues to be an issue at the Site.

In May, 2010, the LEA was notified that Ms. Judy Shinohara, the primary controller of the trust that owns the Shinohara portion of the Site, had passed away in April 2009 and that the three daughters of Ms. Shinohara had disclaimed any interest in the property held by the trust and had declined to act as trustees for the Trust. The remaining owner of the Site, the City of Chula Vista, is currently exploring its options regarding funding for remedial activities at the Site, as well as possible legal action against the Trust.

A Notice and Order was issued by the San Diego County LEA on September 14, 2010, which requires the submittal of a workplan to complete corrective actions (i.e., installation of cover) and bi-monthly status reports, and either removal of all waste at the Site or the installation of a minimum 2-foot-thick final cover and a Site maintenance and monitoring program.

LEA File Review

LEA files were reviewed on October 21, 2011. In addition to the inspection reports discussed in the CalRecycle File Review Section of this Report, the following reports and documents were included in the LEA file and reviewed as part of this Assessment (copies of the documents are included in Appendix D):

- Report of interview between Mr. Mehdi Miremadi of Woodward-Clyde Associates and Mr. Paul Tanaka of the San Diego LEA on June 17, 1993;
- *Closed, Illegal, and Abandoned Sites Site Identification Form*, prepared by the San Diego LEA and dated August 5, 1993;
- *Revised Workplan for the Excavation and Disposal of Burn-Ash-Containing Soil, Shinohara Property, Chula Vista, California*, prepared by Woodward-Clyde and dated September, 1997.
- *Site Investigation, Shinohara I Property and Shinohara II Property*, Prepared by the County of Sean Diego LEA and dated December 11, 1998;
- June 11, 2004 letter from the San Diego LEA to the City of Chula Vista regarding Chula Vista Crossings Commercial Retail Project;
- November 1, 2004 letter from the San Diego LEA to the Otay Valley Water District regarding recycled water pipeline;

- *Erosion Mitigation Measures Completion Report*, prepared by EnviroApplications, Inc. and dated December 4, 2008;

- *Estimated Quantity and Characterization of Trash Dump Material, Proposed Palm Vista Estates, Southeast of the Intersection of Palm Avenue and Interstate 805, San Diego, California*, prepared by Leighton and Associates and dated July 21, 1986;

- *Closure Report for the South Bay Refuse Disposal Site*, prepared by Engineering Science, Inc. and dated January 28, 1994; and

- Closure letters for the South Bay Refuse Disposal Site prepared by the San Diego DEH, CIWMB, and Regional Water Quality Control Board (RWQCB), and dated February 16, 1994, February 17, 1994, and February 15, 1994, respectively.

Based on the LEA file, the Site consists of the southern portion of the Shinohara property, which went unused for a time because of its low elevation (approximately 30 feet below the elevation of the rest of the Shinohara property). Sometime after the purchase of the Site, the owner reportedly allowed for fill to be imported from various sources to create a level surface. Eventually, the surface of the Site was built up enough to be used for agricultural purposes. In 1993, the Site was identified by the San Diego LEA as a burn ash Site. While the active burning of trash reportedly did not occur at the Site, it is believed that the property owner placed excavated burn ash from the former "South Bay Burn Site" (located approximately one quarter mile south, southeast of the Site at I-805 and Palm) on the current Shinohara II Site during the construction of the I-805 freeway in the 1970's.

According to the Woodward Clyde report, fill material was accepted at the Site by the property owner to expand the acreage available for agricultural use. Although the source of the fill was not documented at the time of placement on the property, it was reported by Leighton and Associates that approximately 850,000 cubic yards of burn-ash-containing soil were exported from the South Bay Municipal Refuse Site (i.e., the South Bay Burn Site) in 1978 and used in the vicinity at various construction sites as artificial fill. The South Bay Burn Site was clean closed by the San Diego County DEH, the CIWMB, and the RWQCB in February 1994.

The Site Identification form prepared by the LEA contains notes from interviews with local residents regarding possible sources from which the fill was imported to the Site. The son of a neighboring property owner recalled that the ash came from the Southbay Burn Site during construction of the 805 "from the notch and where the McDonald's is at."

According to Woodward-Clyde, due to the timing of the filling at the Site, recollections of the hauler for the burn dump, and the close proximity of the former South Bay Municipal Refuse Site, it is likely that the burn-ash-containing materials on the property came from this refuse site.

In his interview with Mr. Paul Tanaka of the San Diego County LEA, Mr. Mehdi Miremadi of Woodward-Clyde reported that the ash deposited on the Shinohara property is believed to have been produced at a former San Diego County Burn Ash Site, which reportedly contained approximately 800,000 cubic yards of ashen material. Much of this material was reportedly used as fill for the Shinohara property and other properties in the area. Approximately 30,000 to 40,000

cubic yards of fill are believed to have been transported from the County Burn Site to the Shinohara property.

A letter from the Department of Toxic Substances Control, dated January 19, 2006, further confirms the reports that the source of the burn ash at Site was the South Bay Burn: "Burn ash generated at the South Bay Refuse Disposal Site was deposited on Shinohara I and Shinohara II."

Client-Provided Document Review

The City of Chula Vista Redevelopment and Housing Department files for Shinohara II were reviewed on October 11, 2011. The following reports were provided to SCS and reviewed as part of this Assessment (copies of the documents are included in Appendix E):

- *Revised Report: Pardee Homes – Dennery Ranch Village 2 and 3 Developments Off-Site Burn Ash Health Risk Assessment,* prepared by Environ and dated August 8, 2005;
- *Site Identification Form,* prepared by Melissa Porter, San Diego County LEA and dated August 26, 2005;
- Letter from the San Diego LEA to Ms. Shinohara regarding required actions and compliance schedule for Shinohara II, dated March 1, 2007;
- Letter from the San Diego LEA to the City of Chula Vista regarding required actions and compliance schedule for Shinohara II, dated March 1, 2007;
- Letter from the San Diego LEA to the City of Chula Vista regarding a second notice for the Shinohara II burn site, dated May 25, 2007;
- Letter from the City of Chula Vista to the San Diego LEA regarding Shinohara II compliance schedule status, dated November 4, 2008;
- Letter from EnviroApplications, Inc. to the San Diego LEA regarding erosion mitigation measures completion report, dated December 4, 2008;
- Letter from EnviroApplications, Inc. to the San Diego LEA regarding Site security measures at Shinohara II, dated August 7, 2009;
- Letter from the City of Chula Vista to the San Diego LEA regarding an update on preparation of workplan for remediation of Shinohara II, dated August 11, 2009;
- *Notice and Order (Compliance Order),* prepared by the San Diego LEA and dated September 14, 2010;
- *Notes on the Shinohara Property;* prepared by the City of Chula Vista (not dated); and
- Several Closed Disposal Site Inspection Reports prepared by the LEA from 2007 to 2009 that were also included in the CalRecycle file.

The City of Chula Vista file review confirms the information obtained from the San Diego County LEA and CalRecycle file reviews. In addition, Environ stated in its August 2005 report that no subsurface investigation had been conducted to date at the Shinohara II Burn Dump to characterize or delineate the burn ash. Based on reports that the burn ash at Shinohara I and Shinohara II came from the same source, Environ used data from the Shinohara I burn ash Site to perform a health risk analysis on Shinohara II and found that, although the mean lead concentration present at the Shinohara II Site was estimated to be 925 milligrams per kilogram (mg/kg), the burn ash present at Shinohara II Site does not pose a significant health risk to residents of Dennery Ranch. In a response letter dated January 19, 2006, the DTSC agreed with the findings in the Environ report, stating that the "Shinohara II Burn Dump does not pose a significant health threat to future residents of the proposed Dennery Ranch Village 2 and 3."

Additional Work Completed by SCS

SCS conducted field investigations of the Shinohara II property on August 5 and September 29, 2009. Depth of cover at the Site was assessed by hand digging until evidence of burn ash or refuse was observed. The following conditions were encountered during the visits:

- Cover was found to vary from 0 to 12 inches in thickness throughout the Site (Figure 4);
- The western edge of the fill may be eroded by a natural drainage course, which flows northward on the west side of the burn dump toward the river;
- Low points exist on both the Shinohara- and City-owned parcels;
- The slope along the river has no embankment protection;
- There is evidence of protruding waste along the river bank, which has cut into the fill in the past;
- The bank varies in height up to 12 feet above the river channel on an approximate slope of 2:1 (horizontal: vertical); and
- Limits of visible waste appear to be contained within known landfill limits as defined by the City and Shinohara fence on the south and by drainage courses that delineate the eastern, western, and northern boundaries.

SCS is currently in the process of submitting a workplan for waste characterization at the Shinohara II Burn Dump. The workplan includes the following tasks:

- Exploration for waste limits in which the horizontal extent and thickness of the waste will be assessed by trenching;
- Topographical survey for the purposes of grading design; and
- Waste characterization.

Subsequent to the implementation of the workplan, the results of the waste characterization will be used for closure design (including a surface runoff hydrogeology study, river flow analysis, specified soil performance characteristics, preparation of a Construction Quality Control manual, and preparation of engineering drawings and technical specifications for the waste consolidation and capping) and preparation of a Closure/Post-Closure Monitoring and Maintenance Plan.

This Phase I Report, along with the workplan and the scope of work listed above, will be funded with Chula Vista's EPA Brownfields Assessment Grant. Chula Vista will seek additional grant funding from CalRecylce or other sources for the eventual remediation and capping of the Shinohara II Burn Dump.

RWQCB Records Review

The RWQCB was contacted regarding files for Shinohara, and an RWQCB representative indicated that the RWCB has files for Shinohara I and Shinohara II.[iv] Upon review, SCS discovered that the files only contained information for Shinohara I, and no information regarding Shinohara II.

Fire Department Records Review

The City of Chula Vista Fire Department (CVFD) was contacted regarding hazardous materials/waste or underground storage tank (UST) records for the Site.[v]

Mr. Justin Gipson of the CVFD reported in an email dated November 17, 2011, that the CVFD has no records for the Site. A copy of the CVFD email is included in Appendix F.

Building Department Records Review

Chula Vista Building Department (CVBD) records were reviewed for the historic Site address and are summarized in the table below.[vi] Copies of the CVBD records for the Site are included in Appendix G. Please note that the permit is likely from the portion of the Shinohara property located north of the Otay River and not associated with the Site.

Permit Number	Date Approved	Description	Reported Applicant/Owner
Not reported	9/25/1992	Demolition/house move	Matt Johnson

In addition, SCS searched the county of San Diego online permit and land information system, as the Site was annexed to the City of Chula Vista in 1990, before which it was county land. The County of San Diego had no records associated with the Site.

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 indicating RECs in connection with the Site. As part of this Assessment, the following contacts were either interviewed, or attempts were made to conduct interviews.

Contact	Affiliation to Site	Description
Mr. Joseph T. Holland	Legal counsel for current Site owner of APN 644-042-10	SCS made several attempts to contact Mr. Holland by telephone; however, Mr. Holland had not responded to SCS as of the publication of this Report.
Ms. Marilyn Ponseggi	Former Environmental Review Coordinator for the City of Chula Vista	Discussed below

Ms. Ponseggi, former environmental review coordinator for the City of Chula Vista, confirmed SCS's understanding of the Site history and current Site status (i.e., burn ash-impacted fill was reportedly imported to the Site to expand agricultural acreage and that now public access to the Site is prohibited due to health risk concerns). Ms. Ponseggi stated that she had no knowledge regarding hazardous materials and petroleum products used or stored at the Site, hazardous waste generated at the Site, or releases of hazardous materials, petroleum products, and/or hazardous waste at the Site.

As stated in the table above, SCS made several attempts to call Mr. Holland, legal counsel for the Shinoharas. SCS called and left messages for Mr. Holland on November 9, 14, and 17, 2011; however, Mr. Holland had not responded to SCS as of the publication of this Report. Therefore, SCS was unable to interview an owner or representative for the Shinohara portion of the Site.

USER REQUIREMENTS

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 Client's responses (A copy of the User Questionnaire is included in Appendix H).

Question	Response
Have environmental cleanup liens been filed or recorded against the Site?	No
Are activity or land use limitations in place at the Site, or have they been filed or recorded in the registry?	No
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 [1]
Is the Client aware of commonly known or reasonably ascertainable information about the Site, which would indicate releases or threatened releases?	Yes [2,3]
Are there obvious indications that point to the presence of contamination at the Site?	Yes [4]

N/A: Not applicable
[1]The Redevelopment Agency paid fair market value for parcel 644-042-02 when it was acquired in 1991
[2] Past use of the property may have been a gravel mining operation
[3] The Client believes the Site may be contaminated with burn ash, and that this burn ash was used as fill to elevate the land for agriculture
[4] The Site has areas of glass fragments/debris that may indicate the presence of burn ash contamination.

In addition, SCS contracted with an outside vendor (Nationwide Environment Title Research [NETR]) to conduct a lien and activity/land use limitation search for the Site. NETR reported that there are no liens and/or activity or land use limitations for the Site. NETR also provided chain of title reports that were used for historical research on the Site. The NETR reports are included in Appendix I.

DATA GAPS IN CONNECTION WITH CURRENT SITE LAND USE

With the possible exception of the interview limitations discussed below, there are no obvious indications of data gaps in connection with the current Site land use based on SCS's observations and research.

- SCS made several attempts to contact Mr. Holland by telephone; however, Mr. Holland had not responded to SCS as of the publication of this Report. Therefore, SCS was unable to interview an owner or representative for the Shinohara portion of the Site (APN 644-042-10).

- The City of Chula Vista was unable to provide contact information for previous owners of the Chula Vista portion of the Site (APN 644-042-02); therefore, SCS was not able to interview previous owners for this portion of the Site.

- A large portion of the Site is occupied by the Otay River and not accessible by foot. Therefore, the Site Reconnaissance focused on the Shinohara burn ash portion of the Site, known as the Shinohara II Burn Dump.

Findings and Opinions—Current Site Land Use
With the possible exception listed below, there is a low likelihood that a REC exists at the Site as a result of the current Site land use based on SCS's observations and research. The presence of burn ash constitutes a REC at the Site. Based on regulatory file reviews, burn ash material was reportedly imported to the Site from the South Bay Burn Dump Site in the late 1970's. In addition, evidence of burn ash-containing material (i.e., soil containing fragments of glass, clay, and brick) was observed throughout the majority of the Site. The San Diego County LEA has presented the Site owners with a Notice and Order to remediate the burn ash at the Site. The LEA's directive regarding cover installation have not yet been addressed. However, the City of Chula Vista and the Shinoharas have taken steps to address other LEA directives, including installing a security fence and signs to restrict public access, as well as installing straw waddles for erosion control. In addition, the Client has embarked on the process of properly characterizing the burn ash at the Site, and the Site will eventually be capped with clean soil in an effort to close the burn ash case. SCS is currently in the process of preparing a workplan for waste characterization at the Shinohara II Burn Dump. The workplan includes the following tasks:

Findings and Opinions—Current Site Land Use
• Exploration for waste limits in which the horizontal extent and thickness of the waste will be assessed by trenching; • Topographical survey for the purposes of grading design; and • Waste characterization. Subsequent to the implementation of the workplan, the results of the waste characterization will be used for closure design (including a surface runoff hydrogeology study, river flow analysis, specified soil performance characteristics, preparation of a Construction Quality Control manual, and preparation of engineering drawings and technical specifications for the waste consolidation and capping) and preparation of a Closure//Post-Closure Monitoring and Maintenance Plan. This Phase I Report, along with the workplan and the scope of work listed above, will be funded with Chula Vista's EPA Brownfields Assessment Grant. Chula Vista will seek additional grant funding from CalRecylce for the eventual remediation and capping of the Shinohara II Burn Dump.

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 100 feet above mean sea level
Reported Slope Direction	Slopes down to the west
Source	United States Geological Survey 7.5 Minute Topographic Map, Imperial Beach Quadrangle, California - San Diego County, 1967, photo-revised 1975

Based on a Google Earth map, topography at the Site ranges from approximately 88 to 95 feet above mean sea level (msl) along the Otay River floodplain, to approximately 100 to 105 feet msl in the southern Shinohara II Burn Dump portion of the Site, to approximately 115 to 120 feet msl in the northern-most portion of the Site.

Soil Survey

Reported Soil Type	Otay River bed and riverwash (rm) deposits
Reported Description	Occur in intermittent stream channels. Typically sandy, gravely, or cobbly, and in many places, it is used as a source of sand and gravel. It is excessively drained and rapidly permeable. Many areas are barren. Scattered sycamores and coast live oaks grow along the banks. Sparse shrubs and forbs occur in patches. The designation "gravel pit" occurs to the east and west of the Site, which refers to areas where gravel was mined from the riverbed. It is possible that the Site may have been a gravel pit at one time.

Source	Imperial Beach Quadrangle, Soil Survey, San Diego County, California, compiled by the United States Department of Agriculture, issued December 1973

Geology

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

Reported Formation	Alluvium and Slopewash (underlies the majority of the Site) and Stream Terrace Deposits (under the northern portion of the Site)
Reported Description	Alluvium and slopewash consists mostly of poorly consolidated stream deposits of silt, sand, and cobble-sized particles derived from bedrock sources. The deposits intertounge with Holocene slopewash that commonly mantles the lower valley slopes throughout much of coastal San Diego county. The slopewash deposits are poorly consolidated surficial materials derived chiefly from nearby sources of soil and decomposed bedrock. The slopewash is deposited along the banks of the lower valley slopes by the interaction of gravity and water. Steam terrace deposits occur locally as thin veneer along the larger drainage courses. The deposits include unconsolidated sand and gravel derived locally from the sedimentary, igneous, and metamorphic rocks of the area.
Source	Geologic Map of Landslide Hazards in the El Cajon Quadrangle, San Diego County, California by Siang S. Tan, 1992, Landslide Hazard Identification Map Number 28, Plate 28B, California Division of Mines and Geology

The online Geologic Map of the San Diego 30' x 60' Quadrangle, California, compiled by Michael P. Kennedy and Siang S. Tan, 2005, digital preparation by Kelly R. Bovard, Anne G. Garcia, and Diane Burns, U.S. Geological Survey, Department of Earth Sciences, University of California, Riverside, was also referenced and includes a similar designation of the formation beneath the Site. Young alluvial flood-plain deposits (Holocene and late Pleistocene) underlie the majority of the Site and are defined as poorly consolidated, poorly sorted, permeable flood- plain deposits of sandy, silty or clay-bearing alluvium. The northern portion of the Site is underlain by old alluvial flood-plain deposits, undivided (late to middle Pleistocene), defined as fluvial sediments deposited on canyon floors and consisting of moderately well consolidated, poorly sorted, permeable, commonly slightly dissected gravel, sand, silt, and clay-bearing alluvium.

Hydrogeology

Surface water is present in the central portion of the Site within the Otay River floodplain. The elevation of the surface water likely coincides with the approximate elevation of groundwater in the immediate vicinity of the Site. The topographic elevation of the surface water ranges from approximately 88 to 91 feet, according to review of Google Earth as previously discussed. Therefore, depth to groundwater would be expected to range from approximately zero feet (areas of surface water) up to approximately 32 feet (northern-most area of the Site).

Data regarding groundwater flow direction for the Site were not readily available. However, in SCS's experience, groundwater flow may generally follow stream flow. Therefore, the

groundwater flow direction at the Site may generally be to the west with the Otay River flow direction, with a localized component toward the Otay River floodplain (i.e., northwesterly flow along the south side of the river floodplain and southwesterly flow along the north side of the river floodplain).

During this assessment, SCS reviewed files on the RWQCB Geotracker database for the Shell Branded Service Station located approximately 0.25 mile west-northwest of the Site. The following table summarizes the results of this review:

Property Location	0.25 mile west-northwest of the Site
Reported Depth	46.9 to 49.0 feet below grade
Reported Flow Direction	West
Source	*Groundwater Monitoring Report, Third Quarter 2011, Shell Branded Service Station*, prepared by Conestoga-Rovers & Associates and dated September 21, 2011

Based on review of Google Earth, the Shell Station is located at an elevation of approximately 130 feet msl. As shown in the above table, the reported groundwater elevation at this facility ranged from approximately 47 to 49 feet below grade (81 to 83 feet msl). As this facility is located west-northwest of the Site, the groundwater elevation may be expected to be lower than that at the Site. In addition, the groundwater flow direction at this facility is reported to be to the west. Therefore, the groundwater data obtained from the Shell facility is generally consistent with SCS's interpretation of the likely groundwater depth and flow direction at the Site.

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

Water Quality Survey

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

Reported Hydrologic Area	Otay Valley Hydrologic Area (910.20)
Reported Hydrologic Unit	Otay Hydrologic Unit (910.00)
Reported Beneficial Use	Beneficial uses for groundwater include agricultural supply; and beneficial uses for surface water include non-contact water recreation, warm freshwater habitat, wildlife habitat, and rare, threatened or endangered species. Potential beneficial uses for groundwater include industrial service supply; and beneficial uses for surface water include contact water recreation.
Source	RWQCB's "Comprehensive Water Quality Plan" (Plan) originally adopted in 1974, Amendments to the Plan, adopted in May 1998 by the RWQCB

SITE VICINITY RECONNAISSANCE AND OFF-SITE SOURCE SURVEY

Current Site Vicinity Conditions

The following table summarizes land use for and SCS's observations of the immediate Site vicinity.[vii] For the purpose of this Report, the immediate Site vicinity includes those properties judged to be adjacent[4] to the Site.

Direction	Land Use	Comments
North	Fuller Ford (560 Auto Park Drive) and Fuller Honda (580 Auto Park Drive) (Figures 3e-1 and 3e-2)	No obvious indications of the use, storage, or generation of hazardous materials/wastes or petroleum products were observed; however, hazardous materials/wastes are judged likely to be present as discussed in the Historical Site Vicinity Land Use section.
Northeast	Toyota Chula Vista (650 Main Street) (Figure 3f-1)	
East	Vacant, Undeveloped Land (APNs 644-040-65, -84, and -88) (Figure 3f-2)	No obvious indications of the use, storage, or generation of hazardous materials/wastes or petroleum products were observed.
South	Vacant, Undeveloped Land (APNs 645-400-03 and -04) (Figures 3a-3 and 3g-1)	No obvious indications of the use, storage, or generation of hazardous materials/wastes or petroleum products were observed.
Southwest	Vacant, Undeveloped Land (APN 624-071-01) (Figure 3g-2)	
West	Vacant, Undeveloped Land (APN 624-060-74) (Figure 3g-2)	
West	Kohl's (1870 Main Court) (Figure 3h-1)	
Northwest	AT&T facility and storage yard (APN 624-060-45) (Figure 3h-2)	

[4] Adjacent is defined by ASTM E1527-05 as any real property, the border of which is contiguous or partially contiguous with that of the Site or would be contiguous or partially contiguous with that of the Site but for a street, road, or other public thoroughfare separating them.

Environmental FirstSearch™ Site Assessment Report

A Site Assessment Report[viii] was prepared by the FirstSearch Technologies Corporation (FirstSearch) for the Site. Local, state, and federal regulatory databases were reviewed for the Site and for those facilities within up to one mile of the Site. The FirstSearch report was described to have been prepared in general accordance with the ASTM standard for the regulatory database review for Phase I Environmental Site Assessments. The locations of the referenced facilities relative to the Site are shown on FirstSearch's "Map of Sites within One Mile," which is included in its report. A description of the various databases, as well as the date each database was most recently updated, is included in the FirstSearch report, which is included in Appendix J.

Based on a review of the FirstSearch report, the following table summarizes the facilities within the selected search circumferences, as well as whether the Site or a facility that was interpreted to be adjacent to the Site was listed in each database.

Federal or State Government Database	Search Radius	Number of Reported Facilities	On Site	Adjacent to the Site
National Priorities List (NPL)	1.00 mile	0	No	No
NPL Delisted	0.50 mile	0	No	No
Comprehensive Environmental Response Compensation and Liability System (CERCLIS)	0.50 mile	0	No	No
No Further Remedial Action Planned (NFRAP)	0.50 mile	4	No	Yes
Resource Conservation and Recovery Act-Corrective Action (RCRA COR ACT)	1.00 mile	0	No	No
RCRA Treatment and Disposal Facilities (RCRA TSD)	0.50 mile	0	No	No
RCRA Generators (RCRA GEN)	0.25 mile	2	No	Yes
RCRA No Longer Listed facilities (RCRA NLR)	0.125 mile	0	No	No
Federal Engineering and Institutional Controls (IC/EC)	0.25 mile	0	No	No
Federal Brownfields	0.25 mile	0	No	No
Emergency Response Notification System (ERNS)	0.125 mile	0	No	No
Tribal Lands	1.00 mile	0	No	No
State/Tribal Sites	1.00 mile	4	No	No
Spills-1990	0.125 mile	0	No	No
State/Tribal Solid Waste List (SWL)	0.50 mile	1	No	No
State/Tribal Leaking underground Storage Tanks (LUST)	0.50 mile	9	No	Yes
State/Tribal Underground/Aboveground Storage Tanks (USTs/ASTs)	0.2 mile	0	No	Yes
State/Tribal Deed-Restriction Site Listing (EC/IC)	0.25 mile	0	No	No

Federal or State Government Database	Search Radius	Number of Reported Facilities	On Site	Adjacent to the Site
State/Tribal Voluntary Cleanup Program (VCP)	0.50 mile	0	No	No
State/Tribal Brownfields	0.50 mile	0	No	No
State Permits	0.125 mile	0	No	No
State Other	0.25 mile	0	No	No
HW Manifest	0.125 mile	0	No	No

The following sections discuss facilities identified on the regulatory database within the required search radii. The tables in the following sections summarize the following information: facility name, address, distance and direction from the Site; the regulatory status; the likelihood that the facility has resulted in a REC at the Site; and the rationale for this judgment. The following table provides definitions for abbreviations found in the Rationale column in the tables below:

Abbreviation	Definition
S	Regulatory status (e.g., case closed)
CT	Case type (e.g., soil only)
D	Distance from Site
GWD	Reported depth to groundwater in the Site vicinity
GWF	Reported groundwater flow direction

Known, Reported, or Suspected Releases within the Site Vicinity

No Further Remedial Action Planned (NFRAP)

Four facilities within 0.5 mile of the Site were identified on the NFRAP database. These facilities are summarized in the following table:

Facility (Distance and Direction from Site)	Status	REC likelihood[1]	Rationale[2]
Parcel 8 4705 Otay Valley Road (Site)	No further remediation action planned	Discussed in the Additional SCS Research section.	
Apache Services LDFL 4551 Otay Valley Road (0.29 mile northwest)	No further remediation action planned	Low	S, D
Vincent Davies Property 4501 Otay Valley Road (0.38 mile northwest)	No further remediation action planned	Low	S, D
Omar Rendering 4826 Otay Valley Road (0.47 mile northeast)	No further remediation action planned	Low	S, D

Notes:

[1]: REC refers to a recognized environmental condition. This column explains the likelihood that the facility has resulted in a REC at the Site.

[2]: Rationale abbreviation definitions are provided in the table at the beginning of this section above.

State Site

Four facilities within one mile of the Site were identified on the State Sites database. These facilities are summarized in the following table

Facility (Distance and Direction from Site)	Status	REC likelihood[1]	Rationale[2]
Apache Services 4551 Otay Valley Road (0.29 mile northeast)	Referred to another agency (RWQCB). Potential contaminants described as laboratory waste chemicals, less than 30 gallons. RWQCB states that there is a low probability that toxins will be released and is implementing a plan to ensure that no toxins will be released.	Low	CT, D
Vincent Davies Property 4501 Otay Valley Road (0.38 mile northwest)	Referred to another agency (agency not specified)	Low	D
Dennery Ranch Otay Valley Road and I-5 (0.43 mile northwest)	Voluntary cleanup agreement terminated. Area of concern is 0.5 acre burn ash located in northwest corner of 260 acre property.	Low	D, CT
Omar Rendering Disposal Site 4826 Otay Valley Road (0.47 mile northeast)	Inactive, needs evaluation	Low	D

Notes:

[1]: REC refers to a recognized environmental condition. This column explains the likelihood that the facility has resulted in a REC at the Site.

[2]: Rationale abbreviation definitions are provided in the table at the beginning of this section above.

Solid Waste Landfill (SWL)

One facility within 0.5 mile of the Site was identified on the SWL database. This facility is summarized in the following table:

Facility (Distance and Direction from Site)	Status	REC likelihood[1]	Rationale[2]
Brandywine Distribution Center 1670 and 1680 Brandywine Avenue (0.41 mile north)	Active, site discharges hazardous process waste	Low	D

Notes:

[1]: REC refers to a recognized environmental condition. This column explains the likelihood that the facility has resulted in a REC at the Site.

[2]: Rationale abbreviation definitions are provided in the table at the beginning of this section above.

LUST and HE-17

These databases list facilities where a release, usually from a UST, is known to have occurred. The following table summarizes the unauthorized release cases listed in the FirstSearch report. Please note that some of the facilities may be listed more than once because different databases sometimes use different names and/or addresses for the responsible party. Also, please note that a single facility can have multiple releases that result in separate cases. For the purposes of this Assessment, multiple cases for a single property are considered to be a single release location with the worst case (e.g., an open groundwater case with free product) taking precedence. In addition, for some facilities, information provided by the different databases is contradictory. In such instances, the information reported for the HE-17 LUST database will be used as the current status of the case. This judgment is based on the fact that the DEH is the lead agency for the vast majority of LUST cases in San Diego County and that the HE-17 database is generally the more current of the two databases reviewed by FirstSearch.

Based on the project performance by the Lawrence Livermore National Laboratory (LLNL) for distribution and remediation of methyl tertiary butyl ether (MTBE) in groundwater,[ix] on the average, approximately 94 percent of the MTBE plumes studied in detail (as measured by MTBE in a concentration of 20 micrograms per liter [µg/L]) did not extend more than approximately 400 feet from the source, while approximately 89 percent of the benzene plumes (as measured by benzene in a concentration of 1 µg/L) extended less than 400 feet.[x] Therefore, the detailed review radius for open groundwater cases has been conservatively established by SCS at 0.20 mile (approximately 1,000 feet).

The following table summarizes the LUST cases identified on the regulatory database:

Number of Reported Facilities	9
Number of Reported Facilities Within 0.20 Mile	2
Actual Number of Facilities Within 0.20 Mile	1
Number of Facilities Within 0.20 Mile With Open LUST Cases	1

Described in the following table is the one facility with an open groundwater LUST case within 0.20 mile of the Site:

Facility and Address	Distance/Direction from Site	Direction from Site With Respect to Groundwater Flow Direction		
		Downgradient	Crossgradient	Upgradient
Shinohara Farms	0.18 mile northwest		x	

Please refer to the Additional SCS Research section for further discussion on the above LUST case.

The remaining LUST cases do not meet the criteria for additional analysis (i.e. no open groundwater-impacted LUST cases within 0.20 mile of the Site); therefore, no further evaluation of these LUST cases was conducted.

Permitted Hazardous Materials/Waste Facilities within the Site Vicinity

While there are facilities within the Site vicinity that are reported to be on the UST/AST and RCRA GEN databases (which list hazardous materials users, hazardous waste generators, and violations), inclusion in these databases is only an indication of the use or storage of hazardous materials or of the generation of hazardous waste and related violations. Only those facilities judged to be immediately adjacent to the Site are discussed in this Report. Information regarding the other facilities can be found in the FirstSearch report in Appendix J.

USTs and ASTs

One facility (Shinohara Farms at 4705 Otay Valley Road) within 0.25 mile of the Site was reported to have or to historically have had USTs or ASTs. This facility was interpreted to be located adjacent to the north of the Site. The regulatory files for this facility were reviewed and are discuss in the Additional SCS Research section.

Waste Generators (RCRA GEN)

The RCRA GEN database lists facilities that generate, store, and/or transport hazardous waste. A RCRA GEN facility is a facility that generates at least 100 kilograms (kg) per month of nonacutely hazardous waste.

The two facilities (Fuller Ford Honda at 560 Auto Park Drive and People's Chevrolet at 580 Auto park Drive) identified on the RCRA GEN database were interpreted to be located adjacent to the Site. However, the DEH reported that both facilities were located at 580 Auto Park Drive. People's Chevrolet operated at the location until approximately 2009 and Fuller Honda operated at the location from 2009 to present. The regulatory files for this facility were reviewed and are discussed in the Additional SCS Research section below.

Non-Geocoded Sites

FirstSearch listed six facilities as being non-geocoded. Non-geocoded sites are facilities for which FirstSearch 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 two of the facilities are within requisite search radii for their reported database listings. However, these facilities (Shinohara I and Shinohara II) were identified as the Site and adjacent to the Site and are addressed in other portions of this Report.

Additional SCS Research

DEH File Review

H135062, People's Chevrolet, 580 Auto Park Drive

Based on its listing on the RCRA GEN database and its proximity to the Site, the DEH file for this adjacent facility was reviewed (copies of the file are included in Appendix K). The DEH file for this facility includes Compliance Inspection Reports (CIRs) for 2003 through 2009. The following table summarizes CIR dates, hazardous materials, and petroleum products reported to

be used and stored at this facility, hazardous wastes reported to be generated at the this facility, and reported violations of the hazardous waste control law.

Date	Hazardous Materials, Petroleum Products, Hazardous Waste	Violations
9/12/2003	Waste antifreeze, waste oil, waste gasoline, helium (quantities not reported)	Waste container for used solvent not properly labeled, plastic containers not empties completely before being disposed of, waste manifest receipts not on site for 3 years.
1/19/2007	Waste antifreeze, waste oil, waste gasoline, waste brake fluid, sludge from degreaser, sodium hydroxide (quantities not reported)	Waste containers not properly labeled, plastic containers not empties completely before being disposed of, used rags not properly stored, records of battery disposal not maintained on site.
9/11/2008	Not reported	Waste containers not properly labeled, sufficient aisle space around waste storage not maintained, used rags not properly stored, records of battery disposal not maintained on site.
7/30/2009	Petroleum (2800-gallon AST), new lubricating oil (2500 gallons), used oil (300 gallons), used coolant (55 gallons), used absorbent (55 gallons), used aqueous parts cleaning solution, used oil filters, used batteries, used brake cleaning solution (quantities not reported)	Used rags not properly stored

There is a low likelihood that a REC exists at the Site in connection with the listing of this facility on the RCRA GEN database based the absence of disposal violations and the lack of known and reported releases.

H211063, Fuller Honda, 580 Auto Park Drive

Based on its listing on the RCRA GEN database and its proximity to the Site, the DEH file for this adjacent facility was reviewed (copies of the file are included in Appendix K). The DEH file for this facility includes Compliance Inspection Reports (CIRs) for 2009. The following table summarizes hazardous materials and petroleum products reported to be used and stored at this facility, hazardous wastes reported to be generated at the this facility, and reported violations of the hazardous waste control law.

Date	Hazardous Materials, Petroleum Products, Hazardous Waste	Violations
7/30/2009	Petroleum (2800-gallon AST), new lubricating oil (2500 gallons), used oil (300 gallons), used coolant (55 gallons), used absorbent (55 gallons), used aqueous parts cleaning solution, used oil filters, used batteries, used brake cleaning solution (quantities not reported)	Used rags not properly stored

There is a low likelihood that a REC exists at the Site in connection with the listing of this facility on the RCRA GEN database based the absence of disposal violations and the lack of known and reported releases.

H20138, Shinohara Farms (a.k.a. Parcel 8), 4705 Otay Valley Road

The DEH file for this facility was reviewed based on its listing on the LUST, UST, and NFRAP database and its proximity to the Site (adjacent to the north) (copies of the file are included in Appendix K). Please note that the address for this facility historically included the Shinohara II property (Site) but that the regulatory activities described below include only the portion of the property north of the Otay River (currently the auto park); therefore, this facility is considered adjacent to the Site. The following reports were included in the DEH file and reviewed as part of this Assessment:

- *Tank Removal Report, Shinohara Farms* prepared by Groundwater Technology, Inc., dated September 16, 1991; and
- *Underground Tank Removal/Closure Report* prepared by the DEH, dated August 22, 1991.

Based on the review of the DEH file, one 550-gallon gasoline tank and one 550-gallon diesel tank were removed from the facility. The tanks were located adjacent to one another, so the excavation resulted in only one tank pit. Groundwater was not encountered during the tank excavation, and no hydrocarbon staining was observed on the tank pit floor. A total of 12 soil samples were collected from the excavation: 4 from beneath the tanks, 4 from the tank pit sidewalls, and 4 from the stockpile composed of approximately 30 cubic yards of tank pit over burden soil. All samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) and total petroleum hydrocarbons as gas (TPHg) and diesel (TPHd). The soil samples with the highest TPH concentrations were also analyzed for total organic lead. BTEX, TPHg, and total organic lead were not detected above the laboratory reporting limits in any of the samples. Three soil samples from the tank pit contained TPHg in concentrations ranging from 17 to 38 milligrams per kilogram (mg/kg). Three soil samples from the stockpile contained TPHg in concentrations ranging from 33 to 87 mg/kg.

Upon review of the analytical results, the DEH approved backfilling of the tankpit overburden stockpile, and the tank pit was backfilled on September 11, 1991. The DEH issued a “No Further Action Required” letter on September 17, 1991.

Based on the status of this LUST case (case closed as of September 17, 1991) and the location of the tanks relative to the Site (0.18 mile north, on the other side of the Otay River), there is a low likelihood that a REC exists at the Site in connection with the listing of this facility on the LUST database.

Client-Provided Document Review

Because Shinohara I and Shinohara II are so closely related, the City of Chula Vista Redevelopment Department's file for Shinohara I was reviewed. The following documents were included in the Shinohara I file and reviewed as part of this Assessment (copies of the documents are included in Appendix L):

- *Subsurface Site Assessment, Shinohara Property, 4705 Otay Valley Road, Chula Vista, California,* prepared by Ninyo & Moore and dated March 13, 1990;
- *Request for Non-Hazardous Waste Classification, Burn-Ash-Containing Soil, Shinohara Property, Chula Vista, California,* prepared by Woodward-Clyde and dated December, 1995;
- *Letter Regarding the Request for Non-Hazardous Waste Classification, Burn-Ash-Containing Soil, Shinohara Property, Chula Vista, California,* prepared by the California EPA and dated December 10, 1996; and
- *"No Further Action" Letter,* prepared by the San Diego County LEA and dated July 19, 2001.

Based on a review of the City of Chula Vista Redevelopment Agency Shinohara I file, burn ash-containing fill was imported to the Shinohara I property during the late 1960's and 1970's to expand acreage available for agricultural use. The likely source of the burn ash-containing soil was the South Bay Municipal Refuse Site (similarly to Shinohara II). In 1990, a geotechnical investigation, in which burn ash materials were discovered, was conducted at Shinohara I in relation to plans to redevelop the property into an auto dealership.

Torstan conducted a limited subsurface investigation that confirmed that burn ash materials were present at Shinohara I but that groundwater at the property was not impacted by burn ash. In April, 1994, portions of the site were excavated to allow for development of the auto dealership, and burn ash impacted soil was stockpiled on site. Woodward Clyde assessed the stockpiles and concluded in its December, 1995 report that: "burn ash containing soil at the Shinohara property has mitigating physical/chemical characteristics which render it insignificant as a hazard to human health and safety, livestock, and wildlife, and, therefore, requested a nonhazardous waste classification for the stockpiles." In 1996, the CalEPA approved the removal of 34,000 cubic yards of burn-ash-containing soil from the Shinohara I property for use as daily cover at the Otay Valley Landfill. In July 1996, the San Diego County LEA provided a "no further action" letter for the Shinohara I property, and the burn ash case was closed.

California Division of Oil and Gas

SCS personnel reviewed the California Division of Oil and Gas (DOG) Map regarding oil and gas well locations within one mile of the Site.[xi] There were no wells interpreted to be located within a one-mile radius of the Site.

DATA GAPS IN CONNECTION WITH OFF-SITE SOURCES

Based on the Site vicinity reconnaissance and off-Site source survey, there are no obvious indications of data gaps in connection with off-Site sources.

Findings and Opinions—Off-Site Source Survey
Based on the off-Site source survey, several facilities in the Site vicinity were reported to have had releases of hazardous materials/waste or petroleum products. However, there is a low likelihood that a REC exists at the Site as a result of known and reported releases of hazardous materials/wastes 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, reported depth to groundwater, direction from the Site with respect to reported groundwater flow direction, and information obtained through a review of County of San Diego Department of Environmental Health files.

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 Assessment:

Resource	Location	Years Available
Aerial Photographs	San Diego County Department of Cartographic Services, NETR Online (http://www.historicalaerials.com), and Environmental FirstSearch (Aerials plotted with the approximate Site boundaries are included in Appendix M)	1928, 1953, 1964, 1966, 1968, 1970, 1971, 1973, 1974, 1978, 1980, 1981, 1989, 1990, 2002, 2003, 2005, 2008
City Directories	San Diego Central Library	2010, 2005, 2000, 1995, 1990, 1985, 1980, 1975, 1970
Sanborn Fire Insurance Maps	Not Applicable	No coverage
Topographic Maps	In-House Collection	1967, 1975
Building Department Records	CVBD	1992

Resource	Location	Years Available
Historical Chain of Title Reports	Provided by NETR and dated October 11, 2011	1937 to 1993
Interviews	Not applicable	Not Applicable

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	Reported Site Owners	Interpreted Site Tenants	Interpreted Site Use
APN 644-042-10			
1928 to 1938	Kimiko Kuratomi	None	Vacant undeveloped land (note: a large portion of the property appears to be part of the Otay River)
1938 to 1953	Jimmie H. and Charles T. Shinohara	None	
1953 to 1965	Jimmie H. and Judi Shinohara	None	
1965-1973	Jimmie H. and Judi Shinohara, trustees under Trust dated October 21, 1987	None	
1978	Jimmie H. and Judi Shinohara, trustees under Trust dated October 21, 1987	None	Appears that fresh fill had recently been imported in aerial photograph from this year
1981 to 1989	Jimmie H. and Judi Shinohara, trustees under Trust dated October 21, 1987	None	Agricultural
2003 to present	Jimmie H. and Judi Shinohara, trustees under Trust dated October 21, 1987	None	Vacant land
APN 644-042-02			
1928 to 1937	John Mosto	None	Vacant undeveloped land
1937 to 1954	Merril L. Nelson and Paul R. Sloan	None	Vacant undeveloped land
1954 to 1963	Elma Nelson	None	Vacant undeveloped land
1964 to 1966	Nelson and Sloan, a co-partnership	None	Mining activities

Years	Reported Site Owners	Interpreted Site Tenants	Interpreted Site Use
1970 to 1991	Nelson and Sloan, a co-partnership	None	Vacant land
1967 to 1970	N&S Materials, Inc.	None	Vacant land
1973 to 1983	N&S Materials, Inc.	Unknown	Site use unknown. Structures/buildings are evident in the southeastern portion of the parcel in the 1973, 1974, 1978, 1980, and 1983 aerials, possible out-buildings in support of agricultural activities to the south.
1991 to present	Chula Vista Redevelopment Agency	None	Vacant land

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.

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

- A review of the aerial photographs revealed that mining activities took place on APN 644-042-10 in 1964 and 1966. Nelson and Sloan owned the parcel until 1991, so it is possible that mining operations continued past 1966. Based on the type of material mined (i.e., gravel), there is a low likelihood that historic mining activities have resulted in a REC at the Site. However, mining reclamation took place on the parcel after the mining operation ceased. The origin or composition of this reclamation material is not known, therefore, SCS is unable to assess the potential that the reclamation material contains CoCs and/or has resulted in a REC at the Site. To assess the potential, subsurface assessment activities should be conducted at this portion of the Site.

- A review of aerial photographs revealed that undocumented fill was imported to the Site between 1974 and 1978. Based on regulatory file reviews, burn ash material was reportedly imported to the Site from the South Bay Burn Dump Site in the late 1970's. The 1973 historic aerial from the San Diego County Department of Cartographic Services shows construction of Interstate 805 to the west of the Site, as well as stockpiles (interpreted to be related to the 805 construction) located on the Shinohara-owned portion of the Site.

  Evidence of burn ash-containing material (i.e., soil containing fragments of glass, clay, and brick) was observed throughout the majority of the Site. The San Diego County LEA has presented the Site owners with a Notice and Order to remediate the burn ash at the Site. The LEA's directives regarding cover installation have not yet been addressed.

However, the City of Chula Vista and the Shinoharas have taken steps to address other LEA directives, including installing a security fence and signs to restrict public access, as well as installing straw waddles for erosion control. In addition, the Client has embarked on the process of properly characterizing the burn ash at the Site, and it is our understanding that the Site will eventually be capped with clean soil in an effort to close the burn ash case.

- A review of aerial photographs revealed that some type of agricultural activity took place at the Site, possibly prior to 1981 and continued to circa 1989. This agricultural activity took place on an area of the parcel that was covered with artificial fill. It is likely that top soil was imported (possibly from Shinohara I, which is interpreted to have had agricultural activity dating back to 1928) and placed over the fill, as artificial fill is typically not suitable for agriculture. The agricultural activity is not interpreted to have taken place at the time when organochlorine pesticides such as dichlorodiphenyltrichloroethane (DDT), chlordane, and metal-based pesticides, such as lead, copper, and arsenic, were widely used for pest control; however, it is possible that the top soil may contain such pesticides.

  These classes of pesticides are known to have the potential to remain detectable in the subsurface soil for extended periods of time. Based on the interpreted land use, SCS's experience with agricultural properties, and a review of the available literature, it is our judgment that it is likely that trace concentrations of organochlorine or metal-based pesticides are present in the soil at the Site and Site vicinity as a result of the interpreted agricultural land use. These trace concentrations are likely to be present even 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 organochlorine pesticides 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.

  While there are currently no regulations that stipulate cleanup levels for pesticides in soil, there is a level at which soil could be classified as a hazardous waste based on, for example, a DDT concentration. However, it has been SCS's experience that in order for pesticide-impacted soil to be classified as a hazardous waste, the soil would first need to be classified as a "waste" (e.g., to be excavated and transported off Site). In addition, it would need to have concentrations of pesticides and/or metals, in excess of regulatory values, such as the total threshold limit concentration (TTLC) or soluble threshold limit concentration (STLC) values.

  Based on our experience, there is a moderate likelihood that residual concentrations of organochlorine and metal-based pesticides are present in the shallow surface soil beneath the Site. 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 a health risk or an enforcement action and is, therefore, likely to be considered de minimis as defined by ASTM.

  For the Shinohara II portion of the Site, soil in this part of the Site will be disturbed during remediation and capping activities conducted to mitigate burn ash; however, because the material to be reconsolidated and capped will require special handling (i.e., dust control

during excavation and reconsolidation, use of 40-hour HAZWOPPER-trained contractors, etc.) and precautions due to the presence of CoCs (particularly metals), the presence of pesticides would not require additional efforts and will be assessed during waste characterization.

For the remainder of the Site, because this area is designated to remain undeveloped open space and no excavation or soil export is planned for this area, the potential presence of pesticides at this portion of the Site is considered de minimis.

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
560 and 580 Auto Park Drive and APN 644-042-07 (North)		
1928 to 1990	Shinohara family	Agricultural
1995 to present	Fuller Ford/Honda/Kia, Authorized KOA Mobile Home Repair, People's Chevrolet, South Bay Chevy/Geo	Auto sales and service, motor home repair
650 Main Street (Northeast)		
1928 to 1989	None	Agricultural
1990 to 2005	None	Vacant land
2008 to present	Toyota Chula Vista	Auto sales and service
APNs 644-040-65, -84, and -88 (East)		
1928 to present	None	Vacant, undeveloped land
APNs 645-400-03, and -04 (South)		
1928	None	Vacant, undeveloped land
1953 to 1990	None	Agricultural
1989 to present	None	Vacant land
APN 624-071-01 (Southwest)		
1928 to 1978	None	Vacant, undeveloped land
1981 to 1990	Unknown	Appears to be industrial activity, graded and unpaved, possible storage yard
2003	Unknown	Trailer storage
2005 to present	None	Vacant Land
1928 to 1978	Unknown	Vacant, undeveloped land

Years	Interpreted Site Vicinity Tenants	Interpreted Site Vicinity Use
1870 Main Court (West)		
1980 to 1981	Unknown	Graded but undeveloped, some trailer storage on west side of property
1983 to 2003	Unknown	Trailer storage
2005 to present	Kohl's	Retail shopping
APN 624-060-74 (West)		
1928 to present	Unknown	Vacant undeveloped land, appears to be part of the Otay River
APN 624-060-45 (Northwest)		
1928 to 1971	None	Agricultural
1973 to 1995	Unknown, possible Pacific Bell	Light industrial, possible storage yard
1995 to present	Pacific Bell/AT&T	Pacific Bell facility and storage yard

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.

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

- A review of aerial photographs revealed that some type of agricultural activity took place at the Site vicinity, possibly prior to 1928 to circa 1990. The agricultural activity is interpreted to have possibly taken place at the time when organochlorine pesticides such as dichlorodiphenyltrichloroethane (DDT), chlordane, and metal-based pesticides, such as lead, copper, and arsenic, were widely used for pest control. Please see the Historical Site Land Use section for further discussion regarding historical agricultural activity.

- Portions of the Site vicinity (1870 Main Court and APNs 624-071-01 and 624-060-74) have a history of industrial uses that span approximately 20 years and pre-date the period in which detailed records were maintained and regulations were enforced regarding USTs, the use or storage of hazardous materials, and the generation of hazardous waste. Therefore, there is the potential that undocumented features of concern (FOCs) and/or releases exist at three portions of the Site vicinity and may impact the Site.

- Auto dealerships located to the north of the Site (560 and 580 Autopark Drive and 650 Main Street) have been in operation from 1995 to the present. Auto dealerships generally contain auto repair and washing facilities that may include FOCs such as inground

hydraulic lifts, solvent parts-cleaning units, and inground wastewater clarifiers. However, based on the lack of reported disposal violations and on the modern infrastructure at the Site; activities at the auto dealerships are unlikely to result in a REC at the Site.

- The parcel located northwest adjacent to the Site (APN 624-060-45) is interpreted to have had light industrial activity dating back to 1973. This parcel is located adjacent to the burn ash portion of the Site, which, as mentioned above, is to be remediated by the Client. Therefore, any potentially hazardous materials at the Site associated with industrial land use at the northwest adjacent parcel (APN 624-060-45) will be managed together with the burn ash material when the Site is remediated.

DATA GAPS IN CONNECTION WITH THE HISTORICAL SITE LAND USE

Based on a review of historical sources, there are no obvious indications of data gaps in connection with the historical Site and Site vicinity land use.

Findings and Opinions—Historical Site and Site Vicinity Land Use
With the possible exceptions below, 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 based on a review of historical resources. • A review of aerial photographs revealed that undocumented fill was imported to the Site in the 1970's. Based on regulatory file reviews, burn ash material was reportedly imported to the Site from the South Bay Burn Dump Site in the late 1970's. The 1973 historic aerial from the San Diego County Department of Cartographic Services shows construction of Interstate 805 to the west of the Site, as well as stockpiles (interpreted to be related to the 805 construction) located on the Shinohara-owned portion of the Site. Evidence of burn ash-containing material (i.e., soil containing fragments of glass, clay, and brick) was observed throughout the majority of the Site. The San Diego County LEA has presented the Site owners with a Notice and Order to remediate the burn ash at the Site. The LEA's directives regarding cover installation have not yet been addressed. However, the City of Chula Vista and the Shinoharas have taken steps to address other LEA directives, including installing a security fence and signs to restrict public access, as well as installing straw waddles for erosion control. In addition, the Client has embarked on the process of properly characterizing the burn ash at the Site, and it is our understanding that the Site will eventually be capped with clean soil in an effort to close the burn ash case. • A review of the aerial photographs revealed that mining activities took place on APN 644-042-10 in 1964 and 1966. Nelson and Sloan owned the parcel until 1991, so it is possible that mining operations continued past 1966. Based on the type of material mined (i.e., gravel), there is a low likelihood that historic mining activities have resulted in a REC at the Site. However, mining reclamation took place on the parcel after the mining operation ceased. The origin or composition of this reclamation material is not known,

Findings and Opinions—Historical Site and Site Vicinity Land Use

therefore, SCS is unable to assess the potential that the reclamation material contains CoCs and/or has resulted in a REC at the Site. To assess the potential, subsurface assessment activities could be conducted at this portion of the Site.

- A review of aerial photographs revealed that some type of agricultural activity took place at the Site from1981 to 1989, and in the Site vicinity, possibly prior to 1928 and continuing to circa 1989. The agricultural activity at the Site took place on an area of the parcel that was covered with artificial fill. It is likely that top soil was imported (possibly from Shinohara I, which is interpreted to have had agricultural activity dating back to 1928) and placed over the fill, as artificial fill is typically not suitable for agriculture. The agricultural activity at the Site is not interpreted to have taken place at the time when organochlorine pesticides such as dichlorodiphenyltrichloroethane (DDT), chlordane, and metal-based pesticides, such as lead, copper, and arsenic, were widely used for pest control; however, it is possible that the top soil at the Site, and likely that the soil in the Site vicinity contains such pesticides.

  These classes of pesticides are known to have the potential to remain detectable in the subsurface soil for extended periods of time. Based on the interpreted land use, SCS's experience with agricultural properties, and a review of the available literature, it is our judgment that it is likely that trace concentrations of organochlorine or metal-based pesticides are present in the soil at the Site and Site vicinity as a result of the interpreted agricultural land use. These trace concentrations are likely to be present even 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 organochlorine pesticides 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.

  While there are currently no regulations that stipulate cleanup levels for pesticides in soil, there is a level at which soil could be classified as a hazardous waste based on, for example, a DDT concentration. However, it has been SCS's experience that in order for pesticide-impacted soil to be classified as a hazardous waste, the soil would first need to be classified as a "waste" (e.g., to be excavated and transported off Site). In addition, it would need to have concentrations of pesticides and/or metals, in excess of regulatory values, such as the total threshold limit concentration (TTLC) or soluble threshold limit concentration (STLC) values.

  Based on our experience, there is a moderate likelihood that residual concentrations of organochlorine and metal-based pesticides are present in the shallow surface soil beneath the Site. 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 a health risk or an enforcement action and is, therefore, likely to be considered de minimis as defined by ASTM.

  For the Shinohara II portion of the Site, soil in this part of the Site will be disturbed during remediation and capping activities conducted to mitigate burn ash; however,

Findings and Opinions—Historical Site and Site Vicinity Land Use
because the material to be reconsolidated and capped will require special handling (i.e., dust control during excavation and reconsolidation, use of 40-hour HAZWOPPER-trained contractors, etc.) and precautions due to the presence of CoCs (particularly metals), the presence of pesticides would not require additional efforts and will be assessed during waste characterization. For the remainder of the Site, because this area is designated to remain undeveloped open space and no excavation or soil export is planned for this area, the potential presence of pesticides at this portion of the Site is considered de minimis. • Portions of the Site vicinity (1870 Main Court and APNs 624-071-01 and 624-060-74) have a history of industrial uses that span approximately 20 years and pre-date the period in which detailed records were maintained and regulations were enforced regarding USTs, the use or storage of hazardous materials, and the generation of hazardous waste. Therefore, there is the potential that undocumented features of concern (FOCs) and/or releases exist at three portions of the Site vicinity and may impact the Site. Auto dealerships located to the north of the Site (560 and 580 Autopark Drive and 650 Main Street) have been in operation from 1995 to the present. Auto dealerships generally contain auto repair and washing facilities that may include FOCs such as inground hydraulic lifts, solvent parts-cleaning units, and inground wastewater clarifiers. However, 1870 Main Court, APN 624-071-01, and the auto dealerships are located across the Otay River from the Site; therefore, they are unlikely to result in a REC at the Site. The west adjacent parcel (APN 624-060-45) is located adjacent to the burn ash portion of the Site, which, as mentioned above, we understand will be mitigated as part of a Site closure planning process. Therefore, any potentially hazardous materials at the Site associated with industrial land use at the west adjacent parcel (APN 624-060-45) will be managed together with the burn ash material when the Site is remediated.

5 CONCLUSIONS AND RECOMMENDATIONS

This Assessment has been conducted by an environmental professional whose qualifications[5] 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 Assessment, current regulatory guidelines, the Site and Site vicinity reconnaissance, and SCS's experience.

SCS has performed a Phase I Environmental Site Assessment of the Shinohara Burn in Chula Vista, California, in general conformance with the American Society for Testing and Materials (ASTM) Standard Practice for Phase I Environmental Site Assessment Process E 1527-05 and the

[5] SCS declares that, to the best of our professional knowledge and belief, the reviewer meets the definition of Environmental Professional as defined in §312.10 of 40 CFR 312 and that SCS professionals have the specific qualifications (based on education, training, and experience) to assess a property of the nature, history, and setting of the subject property. SCS has developed and performed the All Appropriate Inquiries in conformance with the standards and practices set forth in 40 CFR Part 312. The qualifications of the Report preparers are included in the Appendix.

Environmental Protection Agency (EPA), 40 Code of Federal Regulations (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 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:

- A review of aerial photographs revealed that undocumented fill was imported to the Site in the 1970's. Based on regulatory file reviews, burn ash material was reportedly imported to the Site from the South Bay Burn Dump Site in the late 1970's. The 1973 historic aerial from the San Diego County Department of Cartographic Services shows construction of Interstate 805 to the west of the Site, as well as stockpiles (interpreted to be related to the 805 construction) located on the Shinohara-owned portion of the Site.

  Evidence of burn ash-containing material (i.e., soil containing fragments of glass, clay, and brick) was observed throughout the majority of the Site. The San Diego County LEA has presented the Site owners with a Notice and Order to remediate the burn ash at the Site. The LEA's directives regarding cover installation have not yet been addressed. However, the City of Chula Vista and the Shinoharas have taken steps to address other LEA directives, including installing a security fence and signs to restrict public access, as well as installing straw waddles for erosion control. In addition, the Client has embarked on the process of properly characterizing the burn ash at the Site, and it is our understanding that the Site will eventually be capped with clean soil in an effort to close the burn ash case.

  SCS is currently in the process of preparing a workplan for waste characterization at the Shinohara II Burn Dump. The workplan includes the following tasks:

    - Exploration for waste limits in which the horizontal extent and thickness of the waste will be assessed by trenching;
    - Topographical survey for the purposes of grading design; and
    - Waste characterization.

  Subsequent to the implementation of the workplan, the results of the waste characterization will be used for closure design (including a surface runoff hydrogeology study, river flow analysis, specified soil performance characteristics, preparation of a Construction Quality Control manual, and preparation of engineering drawings and technical specifications for the waste consolidation and capping) and preparation of a Closure//Post-Closure Monitoring and Maintenance Plan.

  This Phase I Report, along with the workplan and the scope of work listed above, will be funded with Chula Vista's EPA Brownfields Assessment Grant. SCS understands that Chula Vista will seek additional grant funding from CalRecylce for the eventual remediation and capping of the Shinohara II Burn Dump.

- A review of the aerial photographs revealed that mining activities took place on APN 644-042-10 in 1964 and 1966. Nelson and Sloan owned the parcel until 1991, so it is possible that mining operations continued past 1966. Based on the type of material mined (i.e., gravel), there is a low likelihood that historic mining activities have resulted in a REC at the Site. However, mining reclamation took place on the parcel after the mining operation ceased. The origin or composition of this reclamation material is not known, therefore, SCS is unable to assess the potential that the reclamation material contains CoCs and/or has resulted in a REC at the Site. To assess the potential, subsurface assessment activities could be conducted at this portion of the Site.

- A review of aerial photographs revealed that some type of agricultural activity took place at the Site from1981 to 1989, and in the Site vicinity, possibly prior to 1928 and continuing to circa 1989. The agricultural activity at the Site took place on an area of the parcel that was covered with artificial fill. It is likely that top soil was imported (possibly from Shinohara I, which is interpreted to have had agricultural activity dating back to 1928) and placed over the fill, as artificial fill is typically not suitable for agriculture. The agricultural activity at the Site is not interpreted to have taken place at the time when organochlorine pesticides such as dichlorodiphenyltrichloroethane (DDT), chlordane, and metal-based pesticides, such as lead, copper, and arsenic, were widely used for pest control; however, it is possible that the top soil at the Site, and likely that the soil in the Site vicinity contains such pesticides.

  These classes of pesticides are known to have the potential to remain detectable in the subsurface soil for extended periods of time. Based on the interpreted land use, SCS's experience with agricultural properties, and a review of the available literature, it is our judgment that it is likely that trace concentrations of organochlorine or metal-based pesticides are present in the soil at the Site and Site vicinity as a result of the interpreted agricultural land use. These trace concentrations are likely to be present even 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 organochlorine pesticides 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.

  While there are currently no regulations that stipulate cleanup levels for pesticides in soil, there is a level at which soil could be classified as a hazardous waste based on, for example, a DDT concentration. However, it has been SCS's experience that in order for pesticide-impacted soil to be classified as a hazardous waste, the soil would first need to be classified as a "waste" (e.g., to be excavated and transported off Site). In addition, it would need to have concentrations of pesticides and/or metals, in excess of regulatory values, such as the total threshold limit concentration (TTLC) or soluble threshold limit concentration (STLC) values.

  Based on our experience, there is a moderate likelihood that residual concentrations of organochlorine and metal-based pesticides are present in the shallow surface soil beneath the Site. 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 a health risk or an enforcement action and is, therefore, likely to be considered de minimis as defined by ASTM.

For the Shinohara II portion of the Site, soil in this part of the Site will be disturbed during remediation and capping activities conducted to mitigate burn ash; however, because the material to be reconsolidated and capped will require special handling (i.e., dust control during excavation and reconsolidation, use of 40-hour HAZWOPPER-trained contractors, etc.) and precautions due to the presence of CoCs (particularly metals), the presence of pesticides would not require additional efforts and will be assessed during waste characterization.

For the remainder of the Site, because this area is designated to remain undeveloped open space and no excavation or soil export is planned for this area, the potential presence of pesticides at this portion of the Site is considered de minimis.

- Portions of the Site vicinity (1870 Main Court and APNs 624-071-01 and 624-060-74) have a history of industrial uses that span approximately 20 years and pre-date the period in which detailed records were maintained and regulations were enforced regarding USTs, the use or storage of hazardous materials, and the generation of hazardous waste. Therefore, there is the potential that undocumented features of concern (FOCs) and/or releases exist at three portions of the Site vicinity and may impact the Site.

- Auto dealerships located to the north of the Site (560 and 580 Autopark Drive and 650 Main Street) have been in operation from 1995 to the present. Auto dealerships generally contain auto repair and washing facilities that may include FOCs such as inground hydraulic lifts, solvent parts-cleaning units, and inground wastewater clarifiers. However, 1870 Main Court, APN 624-071-01, and the auto dealerships are located across the Otay River from the Site; therefore, they are unlikely to result in a REC at the Site. The west adjacent parcel (APN 624-060-45) is located adjacent to the burn ash portion of the Site, which, as mentioned above, we understand will be mitigated as part of a Site closure planning process. Therefore, any potentially hazardous materials at the Site associated with industrial land use at the west adjacent parcel (APN 624-060-45) will be managed together with the burn ash material when the Site is remediated.

- SCS recommends continuation of the characterization and closure planning process of the Shinohara II Burn Dump, as outlined above.

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 Assessment 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.

Assessments are qualitative, not comprehensive, in nature and may not identify all environmental problems or eliminate all risk. For every property, especially for properties in older downtown or urban areas, it is possible for there to be unknown, unreported RECs, underground storage tanks, 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 Environmental Site Assessments in San Diego County 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 Assessment 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 Assessment; 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 Assessment and the environmental professional, SCS.

9 ENDNOTES

[i] Site reconnaissance conducted by Alissa Barrow (SCS) on November 10, 2011.

[ii] Records request - County of San Diego Department of Environmental Health by Alissa Barrow (SCS) on September 27, 2011.

[iii] Records request – CalRecycle (formerly California Integrated Waste Management Board) by Alissa Barrow (SCS) on September 18, 2011.

[iv] Records request – Regional Water Quality Control Board (RWQCB) by Alissa Barrow (SCS) on September 27, 2011.

[v] Records request - City of Chula Vista Fire Department by Alissa Barrow (SCS) on November 9, 2011.

[vi] Records request - City of Chula Vista Building Department by Alissa Barrow (SCS) on October 11, 2011.

[vii] Site vicinity reconnaissance conducted by Alissa Barrow (SCS) on November 10, 2011.

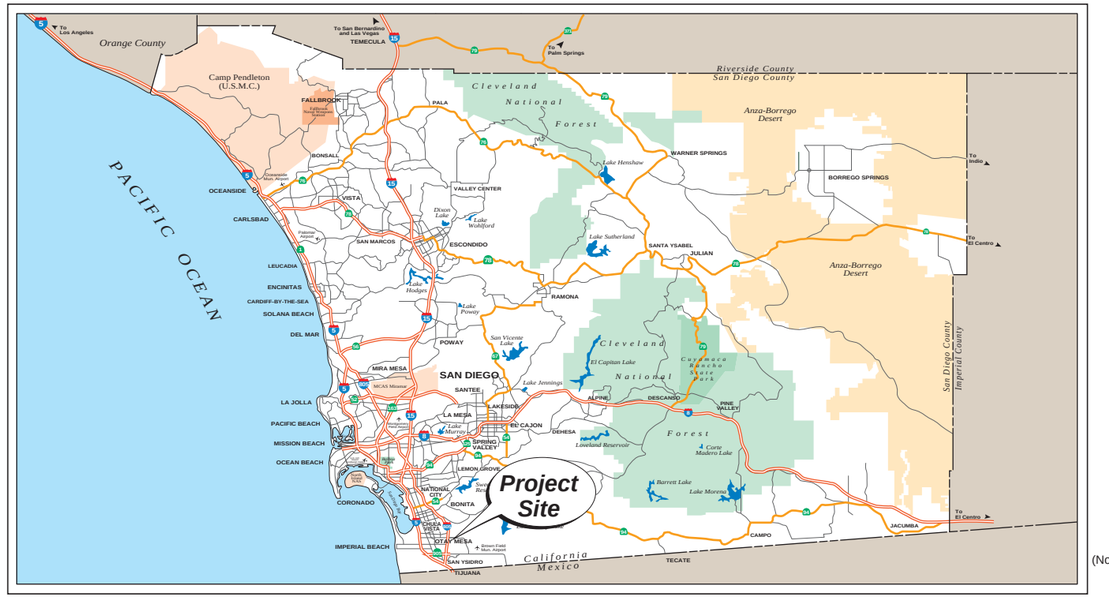
[viii] FirstSearch Technologies Corporation, 2007, Site Assessment Report: Unpublished report prepared for Shinohara Burn Dump, dated September 26, 2011.

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

[x] Lawrence Livermore National Laboratory Report, Recommendations to Improve the Cleanup Process for California's Leaking Underground Fuel Tanks (LUFTs), dated October 16, 1995.

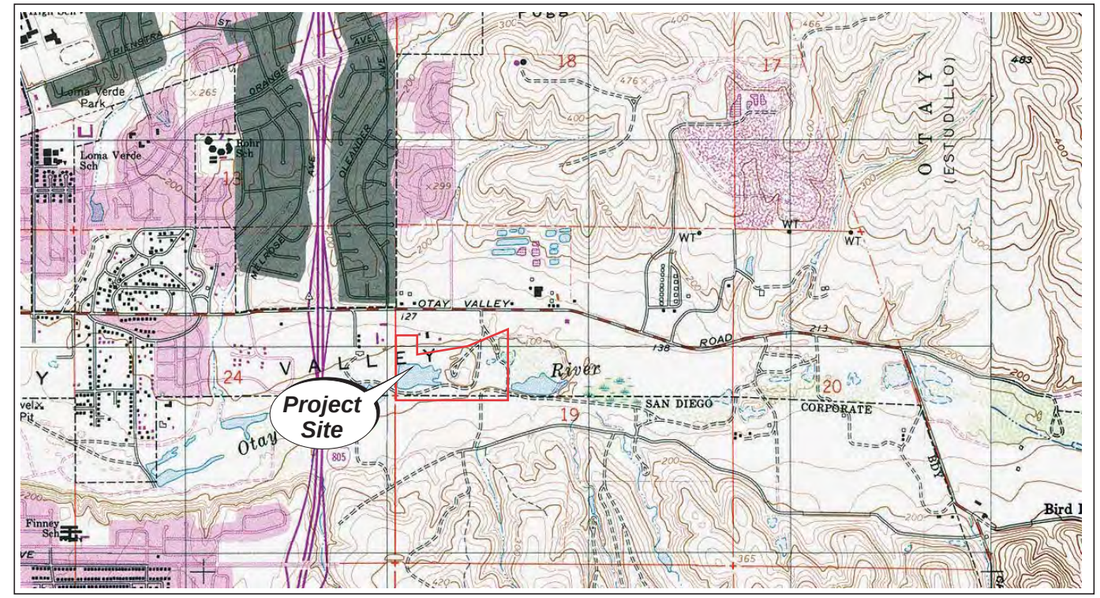
[xi] California Division of Oil and Gas (DOG) Regional Wildcat Map W1-7, September 19, 1998.

FIGURES



North
(Not to scale)

REGIONAL SITE LOCATION



North

Reference:
U.S.G.S. 7.5 Minute Quadrangle map
Imperial Beach, California - 1977. Photo revised 1982.

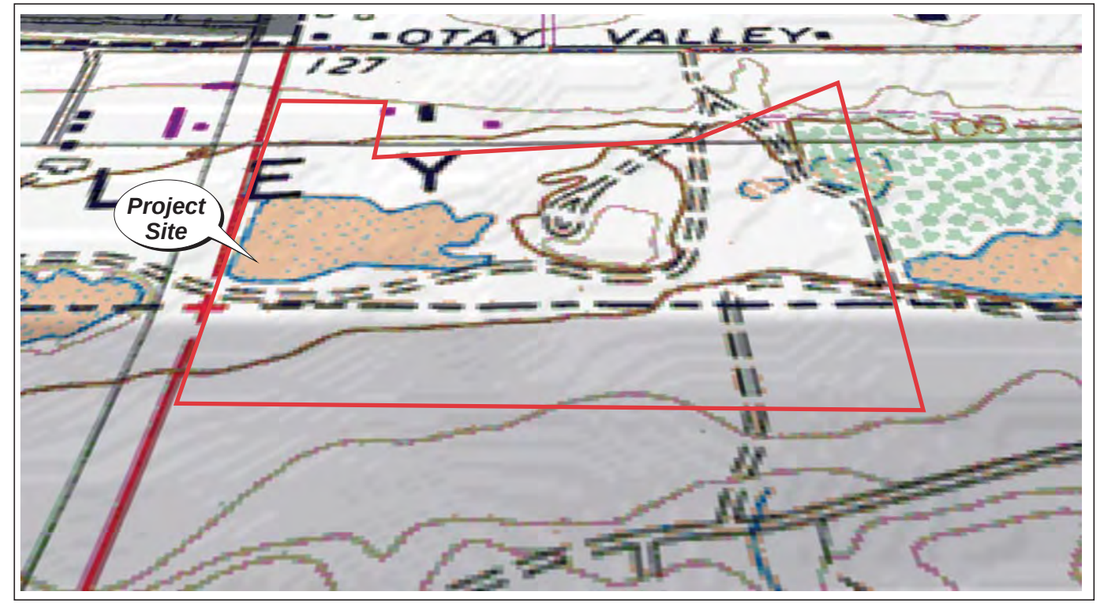
2-DIMENSIONAL SITE LOCATION

0 1,000 2,000 3,000
Approximate Graphic Scale in Feet

North
(Not to scale)

Reference:
Google Earth Aerial Photograph
Chula Vista, California - December 2008

SITE AERIAL PHOTOGRAPH



North
(Not to scale)

Reference:
U.S.G.S. 7.5 Minute Quadrangle map
Imperial Beach, California - 1977. Photo revised 1982.

3-DIMENSIONAL SITE LOCATION

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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4-WAY SITE LOCATION MAP
City of Chula Vista
Shinohara II Burn Ash Site
Chula Vista, California

Project No.: 11012021.07

Figure 1

Date Drafted: 11/16/11

EXPLANATION

Approximate Site boundary

Location and direction of Site photograph

Approximate Otay River boundary

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

North
Not to Scale

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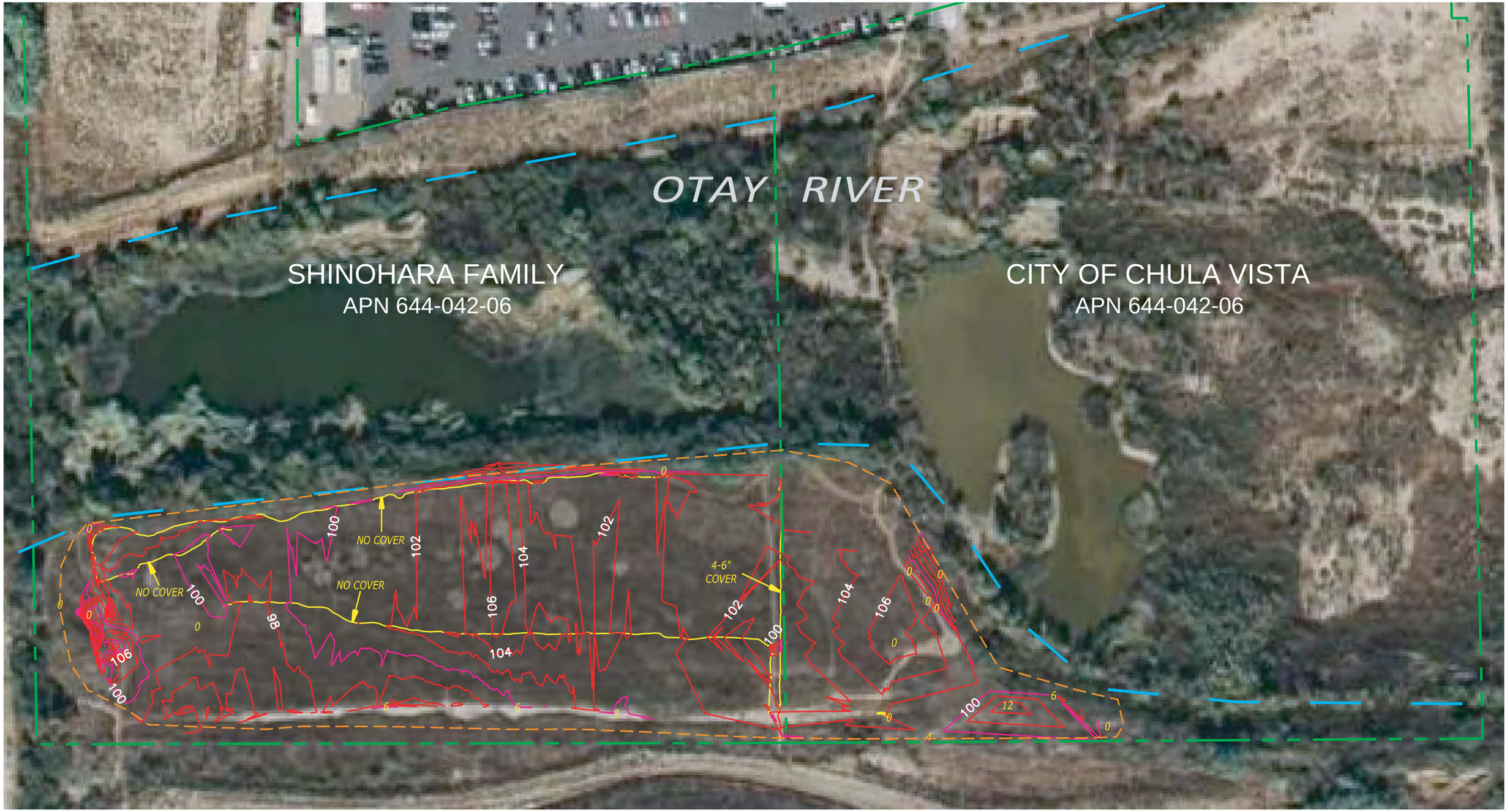
SITE AND SITE VICINITY PLAN
City of Chula Vista
Shinohara II Burn Ash Site
Chula Vista, California

Project No.: 11012021.07

Figure 2

Date Drafted: 11/30/11



BOUNDARIES

- Property Line
- Approximate River Limit
- Estimated Edge Of Refuse

SURVEY

- Pothole Location (Cover Thickness In Inches)
- Topography Contours

0 50 100 150
Approximate Graphic Scale in Feet

North

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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SITE TOPOGRAPHY, ESTIMATED BURN ASH EXTENT, AND ESTIMATED COVER EXTENT
City of Chula Vista
Shinohara II Burn Ash Site
Chula Vista, California

Project No.: 11012021.07

Figure 3

Date Drafted: 11/30/11

1) View of the Site from the southwest, facing northeast.

2) View of the Otay River.

3) Panoramic view of the Shinohara II Burn Dump portion of the Site.

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PHOTOGRAPHIC PLATE
City of Chula Vista
Shinohara II Burn Ash Site
Chula Vista, California

Project No.: 11012021.07

Figure 4a

Date Drafted: 11/30/11

1) View of burn ash observed at the Site.

2) View of burn ash observed at the Site.

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PHOTOGRAPHIC PLATE
City of Chula Vista
Shinohara II Burn Ash Site
Chula Vista, California

Project No.: 11012021.07

Figure 4b

Date Drafted: 11/30/11

1) View of debris in the western area of the Shinohara II portion of the Site.

2) View of debris in the western area of the Shinohara II portion of the Site.

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PHOTOGRAPHIC PLATE
City of Chula Vista
Shinohara II Burn Ash Site
Chula Vista, California

Project No.: 11012021.07

Figure 4c

Date Drafted: 11/30/11

1) View of concrete and/or construction debris at the Shinohara II portion of the Site.

2) View of plastic sheeting and metal debris in the southeastern area of the Shinohara II portion of the Site.

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PHOTOGRAPHIC PLATE
City of Chula Vista
Shinohara II Burn Ash Site
Chula Vista, California

Project No.: 11012021.07

Figure 4d

Date Drafted: 11/30/11

1) View of the north-adjacent property at 560 Auto Park Drive.

2) View of the north-adjacent property at 580 Auto Park Drive.

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PHOTOGRAPHIC PLATE
City of Chula Vista
Shinohara II Burn Ash Site
Chula Vista, California

Project No.: 11012021.07

Figure 4e

Date Drafted: 11/30/11

1) View of the northeast-adjacent property at 650 Main Street.

2) View of the Chula Vista portion of the Site (APN 644-042-02) and east-adjacent property (APNs 644-040-84, -65, and -88).

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PHOTOGRAPHIC PLATE
City of Chula Vista
Shinohara II Burn Ash Site
Chula Vista, California

Project No.: 11012021.07

Figure 4f

Date Drafted: 11/30/11

1) View of the southeast-adjacent property (APNs 645-400-03 and -04).

2) View of the southwest- and west-adjacent properties (APNs 624-071-01 and 624-060-74).

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PHOTOGRAPHIC PLATE
City of Chula Vista
Shinohara II Burn Ash Site
Chula Vista, California

Project No.: 11012021.07

Figure 4g

Date Drafted: 11/30/11

1) View of the west-adjacent property at 1870 Main Court.

2) View of the northwest-adjacent property (APN 624-060-45).

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PHOTOGRAPHIC PLATE
City of Chula Vista
Shinohara II Burn Ash Site
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Project No.: 11012021.07

Figure 4h

Date Drafted: 11/30/11