Site Investigation Report of Findings

SIERRAPINE ROCKLIN FACILITY

WKA No. 10467.05

October 21, 2016

Prepared For:

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Site Investigation Report of Findings
SIERRAPINE ROCKLIN FACILITY
Rocklin, California
WKA No. 10467.05
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Wallace-Kuhl & Associates has prepared this *Site Investigation Report of Findings* for the SierraPine Rocklin Facility Site located at 4300 Dominguez Road, Placer County, California. This Report of Findings was prepared on behalf of SierraPine in a manner consistent with the level of care and skill ordinarily exercised by professional geologists and environmental scientists. This report was prepared under the supervision of a California Professional Geologist.

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Site Investigation Report of Findings
SIERRAPINE ROCKLIN FACILITY
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1.0 INTRODUCTION

Wallace-Kuhl & Associates (WKA) has prepared this *Site Investigation Report of Findings* for the SierraPine Rocklin Facility, located at 4300 Dominguez Road, Placer County, California (herein referred to as Site) (Figure 1, 2 and 3). Industrial operations at the Site have been terminated and the facility has been demolished. The Site will be undergoing a change in land use from industrial to single-family detached residential subdivision and all environmental screening levels will be referenced herein will reflect a residential exposure scenario.

This report describes activities to evaluate Recognized Environmental Conditions (RECs) identified in WKAs *Phase I Environmental Site Assessment,* dated March 11, 2015. WKA submitted the Site Investigation Workplan dated September 5, 2015, to the Placer County Environmental Health Department (PCEHD) in September 2015. The purpose of this Site Investigation Report of Findings is to demonstrate that the Site is suitable for the change in land use from industrial/ commercial use to residential occupancy

2.0 BACKGROUND

This section describes the regional setting, the historical onsite operations at the Site including chemical use, materials handling, and the manufacturing processes used at the Site. Offsite environmental concerns from nearby properties, which may have contributed to environmental impacts at the Site, are also discussed in this section.

2.1 Regional Setting

The Site is located on the eastern edge of the Great Valley geomorphic province of California, a 500 mile, northwest-trending structural trough, generally constrained to the west by the Coast Ranges and to the east by the foothills of the Sierra Nevada Range (Norris and Webb, 1990). The Great Valley consists of two valleys lying end-to-end, with the Sacramento Valley to the north and the San Joaquin Valley to the south.

The Sacramento and San Joaquin Valleys have been filled to their present elevations with thick sequences of sediment derived from both marine and terrestrial sources. The sedimentary deposits range in thickness from relatively thin deposits along the eastern valley edge to more than 25,000 feet in the south-central portion of the Great Valley (Norris and Webb, 1990). The sedimentary geologic formations of the Great Valley province vary in age from Jurassic to Quaternary, with the older deposits being primarily marine in origin. Younger sediments are continentally derived and were typically deposited in lacustrine, fluvial, and alluvial environments with their primary source being the Sierra Nevada Range.

Geographically, the Site is located in the Loomis Basin, located near the periphery of the western foothills of the Sierra Nevada. The Sierra Nevada is a large westward dipping fault block composed of granitic and metamorphic rocks, which dips beneath alluvial sediments of the Great Valley.

The Site is mapped (Olmsted, 1971) as being underlain entirely by quartz-diorite of the light-colored phase of the Penryn Pluton (KJpl, Figure 4). Occurrences of the Penryn Pluton at the Site ranged from less than one-foot bgs to greater than 10 feet bgs. No rock outcrops were observed on Site. The Penryn Pluton was observed to be buff to light orange to gray, medium to coarse-grained porphyritic rock composed of quartz, feldspar, hornblende, and biotite. Weathering of the quartz-diorite varies across the Site exhibiting changes in color, hardness and mineralogy as weathering becomes more intense. Less weathered exposures vary in hardness from competent buried blocks to easily friable and typically retain the granular contact arrangement of the parent rock. Highly weathered quartz-diorite occurs as buff to gray course sand and clayey sand, which exhibits relict granitic texture. Weathering varies by location where occurrences in closer proximity to Sucker Ravine being more highly weathered. Weathering decreases with an increase in depth. Two near vertical joint sets striking N15E to N35E and N80E are common in the area with joint spacing between ½ foot and 5 feet (Livingston, 1974). Numerous horizontal to slightly dipping joints also occur in the area (Livingston, 1974).

In the undeveloped portion of the Site, located adjacent to Sucker Ravine, fluvial/alluvial terrace deposits up to 10 feet thick overlay the weathered plutonic rock. The terrace deposits are a brown silty sand with gravel. The U.S. Department of Agriculture (USDA) Web Soil Survey identifies this unit as a xerofluvent terrace deposit consisting of stratified loamy sand to fine sandy loam with increasing amounts of clay with depth; this is consistent with WKA observations (Figure 5). At several locations across the Site, reworked soil (fill) consisting of various soil types was observed to overlay the terrace deposits at thicknesses ranging from 2 feet to 10 fee

The Site lies on the southwestern side of Dominguez Road, southeast of Pacific Street (Figure 2). The Site is located in an area of light industrial and commercial buildings; however, residential housing developments are being constructed to the southeast. To the southwest, Taiga Forest Products operates a lumber storage yard. The northwestern boundary of the property is shared with commercial and light industrial properties and a Cardlock fuel station. Pacific MDF located on the opposite side of Dominguez Road, operates a manufacturing facility, which makes moulding products out of MDF; similar to the board previously made at SierraPine. A railroad sidetrack extends from the main line on the north side of Pacific Street across the northern portion of the Site eventually crossing Dominguez Road to service Pacific MDF.

2.2 Historical Onsite Operations (1975 - 2012)

The Site was formerly operated as a Medium Density Fiberboard (MDF) manufacturing facility (facility) from 1975 until the cessation of production operations in 2012. The facility was composed of an office building, manufacturing facilities, and open land. Figure 6 shows the Site operational features referenced below, as they existed in 2011, prior to demolition.

Review of historical aerial photography indicated that prior to development as an MDF manufacturing facility the Site was mostly open land with a small portion of the Site used for agricultural cultivation. Historical grading and construction activities have modified the Site such that no surface soil remains undisturbed. Engineered fill was likely placed during grading and construction of the facility over the years.

The manufacturing of MDF involved the breakdown of raw and reclaimed wood sources to obtain lignocellulosic fibers (fibers). The fibers are ideal for the production of MDF, due to their resistance to degradation and their hydrolytic stability.

Raw Materials Storage and Processing

The facility receivedwood chips or shavings in the form of raw and reclaimed wood sources generated from offsite operations. Raw materials were received into the raw materials storage and processing building via an end dump lift or belly dump platform. Raw wood materials were, reportedly, not stockpiled outside of the raw materials storage and processing building. The first stage of the manufacturing process was the breakdown of wood material to cellulose fibers. The breakdown was accomplished using mechanical maceration and heat from steam, generated onsite. No chemicals were used in the breakdown process.

Boilers

The large quantity of steam used to in the wood refining and board processing operations was generated by a dust-fired boiler, which was replaced by a natural gas boiler in 2011. After the installation of the natural gas boiler, the dust-fired boiler was no longer used and the facility no longer produced ash.

Resin Usage and Storage

To produce the MDF product, cellulose fibers were mixed with a binding agent (resin). Urea-Formaldehyde (UF), an amino thermosetting resin, was used to bind wood fibers to produce the MDF product. UF resins are formed from the reaction of urea and formaldehyde. Prior to application of the UF resin to the fibers, an acidic cure catalyst was blended with the UF, lowering the pH to less than 5.0. In addition to UF, SierraPine used wax resins and a formaldehyde scavenger additive in the UF resin mixture used in the MDF products.

The UF, ammonium sulfate catalyst, and the resin additives were stored in above ground resin storage tanks on the southeast side of the raw materials storage and processing building. The resin was mixed at the resin mixing area, inside the raw materials storage and processing building, adjacent to the resin storage tanks. The resin mixture was then blended with wood fibers, dried and conveyed to a dry storage bin, prior to transportation to the forming line. SierraPine operated two separate forming lines at the peak of production. The MDF forming line was located on the southeast end of the thick board press building. Finishing for the thin MDF board was located in the eastern portion of the thin board press building. Steam was the principal transport mechanism for the transportation of resinated fiber.

Once at the forming line, the UF resin and fiber mixture was formed into an intermediate product called MDF mat. The MDF mat was then conveyed to a multi-opening hydraulically powered press, where heat and pressure formed and cured the MDF mat. After the boards were off-loaded from the press, they were cooled in a multi-wicket board cooler and then sent to the finishing line.

Hydraulic Control Room

The hydraulically powered thick board press was located in the thick board press pit, which measures 35 feet wide, 75 feet long, and 40 feet deep. Steam, generated from the boilers, was used to achieve the reaction temperatures required to set the resin. Hydraulic oil reservoirs for the thick board press were located adjacent to the press pit in the hydraulic control room. A subgrade vault connecting the hydraulic control room and the press pit was used as a channel

for hydraulic oil and electrical lines. The thick board press utilized an above ground oil-water separator located on the exterior of the building on the north side of the hydraulic control room.

Hot Oil Storage Room

The thin board press was a continous above grade hydraulic press that utilized a heated oil product as the source of the heat required to set the resin. The hot oil storage room, located in an outbuilding on the south side of the thin board press building, used electrical heating elements to heat oil, which was circulated through the thin board press, via an overhead closed loop system. The hot oil storage room housed the heating elements and the oil storage reservoirs.

Finishing

The finishing line processed MDF from the press and shaped the product using hydraulically operated saws and sanders to finish the MDF, per customer specifications. The thin board production line was equipped with an in-line flying cut-off saw. The board produces in this process did not require sanding.

SierraPine reported that they recycled waste from the finishing line as a contribution to the raw materials. The sander dust that was generated fueled the dust-fired boiler. MDF, which was compromised by contact with chemicals that precluded its reuse as a raw material or fuel, was disposed of at an offsite facility.

Oil Shed/Ash Storage Shed

SierraPine used the oil shed/ ash storage shed, located near the firewater storage ponds, as a storage area for drums of ash from the dust-fired boiler and waste oil from onsite operations. All ash produced by the dust-fired boiler collected for regularly scheduled off-site disposal under hazardous waste manifest. Waste oil was recycled off-site. The Site was permitted as a large quantity generator under the Resource Conservation and Recovery Act.

ASTs

Chemicals used in the manufacturing process were stored in Aboveground Storage Tanks (ASTs). A 2012 Phase I Environmental Site Assessment, performed by URS, reported the following 12 ASTs at the Site:

- Four 15,000 gallon Urea-Formaldehyde tanks;
- One 4,800-gallon ammonium sulfate tank;
- One 8,000 gallon wax (Cascowax EW-403W) tank;
- One 10,000 gallon Formaldehyde scavenger (GP 3399) tank;
- Five 50 gallon hydraulic oil reservoirs, and;
- One 1,000-gallon diesel tank.

All ASTs noted above were removed in 2012 during the activities to dismantle and remove manufacturing equipment from the Site.

Electrical Substation and Transformers

The operation of the facility required a large amount of electricity. Electricity was provided by a privately owned and operated electrical sub-station, which was located on the southern boundary of the Site, which included overhead and buried transmission lines and several large transformer units. Electricity was routed through switchgear located near the substation, which diverted power to two banks of electrical transformers. The main transformer room was located in the northeastern corner of the raw materials storage and processing building and housed three transformers that were cooled by polychlorinated biphenyl (PCBs). An auxiliary transformer was located in the thick board building and was cooled by PCBs.

Equipment Repair/ Machine Shop

SierraPine performed maintenance of equipment and conducted repairs of equipment out of an equipment repair/ machine shop, located on the southwestern flank of the thick board press building, adjacent to the forming line. Activities in this space were reportedly vehicle and equipment maintenance, welding, and machining for facility tooling.

Water Storage Features

POTW Basin

The Publicly Owned Treatment Works (POTW) Basin consisted of a partitioned concrete lined basin located on the western side of the facility. The basins received discharges of wastewater, generated from boiler blowdown, cooling tower bleed, and air pollution control equipment including wet electrostatic precipitator bleed and wet scrubbers. The POTW Basin was governed under the POTW discharge permit.

WDR Basin

SierraPine diverted wastewater from manufacturing plant wash water and collected storm water runoff into the WDR Basin. The WDR Basin was configured to allow wood fiber transported with the wastewater to settle. Periodically, the basins were drained and the wood fiber was stockpiled at the north end of the basin and allowed to dry. Sediment removed from the WDR basin was hauled offsite for use as soil amendment or fuel. To the extent possible, wastewater in the WDR Basin was recycled and used as plant process water. If the WDR Basin capacity was exceeded, overflow from the basin was conveyed into a clay-lined storage pond, located immediately adjacent to the WDR Basin.

Clay Lined Pond

Wastewater that accumulated in the Clay Lined Pond was used to supplement irrigation water that was applied to the area along the southern portion of the Site, using sprinkler application methods. SierraPine identified the system comprised of the WDR Basin, the Clay Lined Pond, and the WDR Spray Field as the WDR system.

A summary of the WDR system demolition, soil sample collection, and laboratory analyses is included in the WDR Closure Report for this Site, which was submitted to the CVRWQCB under separate cover, on September 29, 2016.

Firewater Storage

Two firewater storage ponds were located on the east side of the Site, which served as an onsite source for water for an onsite fire suppression system. The ponds were usually filled with water obtained from the municipal water supply system. Prior to the construction of the POTW Basin, the fire ponds occasionally received non-contact cooling water (water that did not encounter wood materials) from cooling towers associated with the steam generating boilers. SierraPine discharged no storm water or facility wash water into the fire ponds and no wood material was allowed to enter the fire ponds. Diesel-powered pumps fed a network of fire suppression hydrant stations, located throughout the Site and conveyed water from the two fire ponds. Fuel for the diesel powered pump was located in a 500 gallon above ground storage tank (AST).

Underground Storage Tanks (USTs)

The facility operated two 1,000 gallon USTs to provide fuel for use onsite. These tanks (one diesel and one gasoline) were removed in August 1986. Soil samples taken during the excavation

showed concentrations of total petroleum hydrocarbons as diesel (TPHd) and total petroleum hydrocarbons as gasoline (TPHg) to be 5,300 milligrams per kilogram (mg/kg) and 1,100 mg/kg, respectively. The tank pit was over excavated in December 1986 and soil samples that were collected from the base of the excavation contained up to 3,700 mg/kg of TPHd.

Three soil borings were advanced outside the perimeter of the tank excavation. Soil samples collected from borings located just outside the excavation contained 130 mg/kg TPHd. The borings were subsequently converted into three shallow groundwater monitoring wells. These wells were included in the MRP and by November 1992, no detections were seen in groundwater samples collected from the monitoring wells. Water samples from these wells were analyzed in May 2000 for TPHd, TPHg, BTEX, fuel oxygenates, and fuel additives. Laboratory analyses completed for each sample found no detectable concentrations of the constituents of concern. In September 2001, CVRWQCB issued a No Further Action (NFA) letter to SierraPine, regarding the removal of the two 1,000-gallon USTs from the Site. The three monitoring wells were abandoned in October 2010, following receipt of the NFA letter from the CVRWQCB.

2.3 Offsite Considerations

A Leaking Underground Storage Tank (LUST) affected local groundwater at the Card Lock fueling facility, operated by the Dawson Oil Company, abutting the Site to the north (Figure 3). Soil investigations surrounding the discovery of the leak indicated impacts from MTBE, toluene, benzene, ethylbenzene, TPHg and TPHd in soils beneath the LUST. Quarterly monitoring was conducted until 2009. Remediation was accomplished and the Site obtained case closure from the Central Valley Water Quality Control Board in 2010. A low concentration of MTBE was reported at the SierraPine Site but was reported to be of no risk to human health and no offsite migration of the Card Lock MTBE plume had occurred. A review of monitoring data indicated the flow of groundwater at the LUST site varied from northwest to southwest for the duration of the groundwater monitoring activities.

2.4 Demolition

In 2012, Manufacturing operations at the Site were terminated. Manufacturing equipment was sold and relocated. Dismantling operations were conducted and the majority of utility infrastructure was removed for recycling.

In late 2014, major demolition of the Site was started, beginning with the raw materials storage and processing building and the materials processing building. Following the demolition of the structures and off haul of debris, the concrete foundation underlying the structure was

destroyed. Material from the concrete foundation was crushed on site and sold for offsite use as recycled material.

Following the destruction of the raw materials storage and processing building in January 2015, work began on the demolition of the thick board press building. Demolition started in the southeastern portion of the thick board press building formerly occupied by the thick board forming line. Demolition continued to the northwest followed by demolition of the concrete foundation. Following the dismantling and removal of the press, the vault was steam cleaned and granular soil and aggregate material were used to fill the vault, which was then capped using concrete. The decommissioning of the press pit was completed under the regulatory supervision of the PCEHD. No modifications or perforations were made to the press pit prior to backfilling and capping. As with the raw materials storage and processing building, the concrete foundation of the thick board press building and the concrete cap covering the press pit were demolished following the razing of the structure.

SierraPine began to demolish the thick board press building in July 2015. Demolition started in the southeastern portion of the building in an area formerly occupied by the thick board forming line. Demolition continued to the northwest followed by demolition of the concrete foundation. As part of the demolition activities in preparation for future Site use, SierraPine demolished the upper 15 feet of the vertical walls of the thick board press pit walls. Final demolition depth of the press pit walls was confirmed by GPSr records and backfilled with material previously excavated from the press pit.

During the demolition of the thick board press pit walls, SierraPine discovered an area of stained soil that emitted a strong hydrocarbon odor. This area corresponds to the location of the hydraulic control room for the thick board press. SierraPine immediately conducted a remedial excavation, concurrent with the demolition of the thick board press pit walls, to remove impacted soil in the area. A description of the remedial activities concerning the hydraulic control room is included below in section 4.2.

Demolition of the surface water impoundments was completed in June 2016. This included the removal of the firewater storage ponds, clay lined pond, and both concrete lined settling basins. SierraPine is currently undertaking grading activities to flatten the Site and allow for surface drainage toward Sucker Ravine.

Figure 7 shows satellite imagery of the Site from July 2016, which shows all features related to the historic operation of the facilities have been removed.

In August 2016, the thin board press building was sold and the land occupying the northwestern corner of the property was partitioned off onto a separate parcel. As a result of the sale, the scope of WKA's investigation was limited to areas outside the footprint of the building. The current parcel map is included as Figure 8.

3.0 SOIL INVESTIGATION AND LABORATORY ANALYSIS

This section describes field activities, soil sampling, and laboratory analysis completed between February 2015 and October 2016, in accordance with the WKA Site Investigation Workplan, dated August 5, 2015.

3.1 General Methodology

WKA marked the Site with white paint and notified Underground Service Alert (USA) to have their members locate and identify any underground utility conduits. WKA notified USA and received a Dig Ticket number at least 48 hours prior to beginning sample collection activities. An active dig ticket was maintained for the duration of the activities performed onsite.

Each soil sample was collected into a laboratory provided eight-ounce jars or that are sealed using a Teflon™-lined cap or new stainless steel stubs sealed with Teflon™ liners at each end. WKA labeled each container to indicate a unique sample number, sample location, time and date collected and sampler's identification. Samples were preserved in a chilled cooler for transportation to California Laboratory Services (CLS), in Rancho Cordova, California, a State Water Resources Control Board certified laboratory, with completed chain-of-custody forms. WKA requested soil samples be analyzed for the following chemical constituents by the methods identified below.

Analyte	**Method**
Polychlorinated biphenyl (PCBs)	EPA Method 8080A
Total petroleum hydrocarbons as hydraulic oil (TPHho)	EPA Method 8015
Total petroleum hydrocarbons as diesel (TPHd)	EPA Method 8015
Total petroleum hydrocarbons as motor oil (TPHmo)	EPA Method 8015
Total petroleum hydrocarbons as gasoline (TPHg)	EPA Method 8260
Ammonia as Nitrogen	Standard Method 4500-NH3C
Nitrate/ Nitrite as Nitrogen	EPA Method 300
Sulfate as SO_4	EPA Method 300
Formaldehyde	EPA Method 8315A
California Assessment Manual 17 (CAM 17) metals	EPA Method 6010/ 6020/ 7010
Chromium VI	EPA Method 7199

Analyte	Method
Volatile Organic Compounds (VOCs) [1]	EPA Method 8260B
Asbestos	CARB 435
Organochlorine pesticides	EPA Method 8081A
Polynuclear aromatic hydrocarbons (PAH)	EPA Method 8310

[1] VOCs included MTBE, ETBE, DIPE, TAME, TBA, 1,2 DCA, EDB

All field location data including building features, sample locations, and subsequent excavation limits, were recorded using a High accuracy Global Positioning System receiver (GPSr). The GPSr can record locations with 0.5-inch horizontal accuracy and 2.5-inch vertical accuracy. All locations were imported into a geographic information system (GIS) database and were used to determine and record limits for remedial excavations and to aid in collection of confirmation samples. The GIS database was also used to produce the figures included in this report. GPSr data was instrumental in tracking the temporal evolution of the Site, as demolition activities removed visual points of reference.

3.2 Study Area Investigations

Dust-Fired Boiler

On November 19, 2015, WKA collected soil samples from the area formerly occupied by the dust-fired boiler, which burned wood dust to produce steam used at the facility (Figure 9). Using GPSr data, collected prior to demolition of the raw materials storage and processing building, WKA placed three soil sample locations in the area. The first sample was collected from the surface interval representing the area directly beneath the concrete slab (SI-WB-S01a through SI-WB-S03a). The second sample was collected in the interval from two to two and a half feet below the surface (SI-WB-S01b through SI-WB-S03b). Soil collected in the surface interval was observed as brown silty sand with gravel. Brown silty sand with gravel consisting with engineered fill was also observed in deeper intervals. Due to poor site conditions at the time of sampling, soil sample SI-WB-S03b could not be recovered.

The five soil samples collected from the dust-fired boiler area were analyzed for CAM 17 metals, chromium VI, and PAHs (Table 1). Laboratory results for the three samples collected in the interval from zero to six inches bgs detected Chromium VI in surface soil samples at concentrations ranging from 0.017 mg/kg to 0.038 mg/kg. CAM 17 metals, in soil samples collected from the dust-fired boiler area, were not detected at concentrations exceeding their respective CHHSLs. No PAHs were detected in soil samples collected from the dust-fired boiler area at concentrations exceeding their respecting laboratory reporting limits. Based on these results, no further study was necessary.

Resin Storage Tank Area

On November 18, 2015, WKA collected soil samples from five locations within the area formerly occupied by the resin storage tank area (Figure 9). Prior to sampling, SierraPine's demolition contractor destroyed and removed the concrete slab in the area of the resin storage tanks (above ground). Using GPSr data, collected prior to demolition of the facility, WKA located the boundaries of the resin storage tank area and collected soil samples from five locations within the area. The first sample was collected from the surface interval representing the area directly beneath the concrete slab (SI-TF-S01a through SI-TF-S05a). The second sample was collected in the interval from two to two and a half feet below the bottom of the concrete slab (SI-TF-S01b through SI-TF-S05b). Soil collected directly beneath the concrete slab was observed as brown silty sand with gravel. Grey course sand with gravel consisting with engineered fill was observed in the deeper intervals. Due to poor site conditions at the time of sampling, soil sample SI-TF-S05b could not be recovered.

The nine soil samples collected beneath the resin tank area were analyzed for formaldehyde, sulfate, and nitrogen compounds. Laboratory results for the nine soil samples collected from the resin storage tank area can be found in Table 2. Ammonia in soil within the resin storage tank area was detected at concentrations of less than the laboratory reporting limit of 20 mg/kg to 1,800 mg/kg. Formaldehyde was detected at concentrations from less than the laboratory reporting limit of 1 mg/kg to 28 mg/kg. Nitrate/ Nitrite as N was detected at concentrations ranging from the laboratory reporting limit of 5 mg/kg to 600 mg/kg. Concentrations of Sulfate were detected at concentrations ranging from 11 mg/kg to 2,100 mg/kg. Based on these results, remedial excavation was necessary. These excavation activities are discussed in section 4.1.

Resin Mixing Area

On November 18, 2015, WKA collected soil samples from five locations within the area formerly occupied by the resin mixing area (Figure 9). Prior to sampling, SierraPine's demolition contractor destroyed and removed the concrete slab in the area of the resin mixing area. Using GPSr data, collected prior to demolition of the facility, WKA located the boundaries of the resin mixing area and collected soil samples from five locations. The first sample was collected from the surface interval representing the area directly beneath the concrete slab (SI-MA-S01a through SI-MA-S05a). The second sample was collected in the interval from two to two and a half feet below the bottom of the concrete slab (SI-MA-S01b through SI-MA-S05b). Soil collected directly beneath the concrete slab was observed as brown silty sand with gravel. Grey course sand with gravel consistent with engineered fill was observed in deeper intervals.

The 10 soil samples collected beneath the resin mixing area were analyzed for formaldehyde, sulfate, and nitrogen compounds. Laboratory results for the 10 soil samples collected from the resin storage tank area can be found in Table 3. Ammonia in soil within the resin storage tank area was detected at concentrations of less than the laboratory reporting limit of 20 mg/kg to 860 mg/kg. Formaldehyde was detected at concentrations from less than the laboratory reporting limit of 1 mg/kg to 7.3 mg/kg. Nitrate/ Nitrite as N was detected at concentrations ranging from less than the laboratory reporting limit of 5 mg/kg to 360 mg/kg. Concentrations of sulfate were detected ranging from less than the laboratory reporting limit of 5 mg/kg to 250 mg/kg. Based on these results, remedial excavation was necessary. These excavation activities are discussed in section 4.1.

Oil/ Water Separator

On November 19, 2015, WKA collected soil samples from the shallow soil beneath the recently demolished concrete slab, above which SierraPine operated an above grade oil/ water separator used to separate water and hydraulic oil used in the thick board press (Figure 10). With the assistance of Mr. Guil Rivas and facility photographs, WKA was able to identify the previous location of the oil/ water separator. WKA placed two soil sample locations beneath the location of the oil-water separator. The first sample was collected from the surface interval representing the area directly beneath the concrete slab (SI-OW-S01a through SI-OW-S02a). The second sample was collected in the interval from two to two and a half feet below the bottom of the concrete slab (SI-OW-S01b through SI-OW-S02b). Soil collected in the surface interval was observed as dark brown silty sand with gravel. Grey course sand with gravel consisting with engineered fill was observed in the deeper intervals, apparently undisturbed by demolition activities.

The four soil samples collected beneath the oil/ water separator were analyzed for TPHho, TPHd, TPHmo, VOCs, and PAHs (Table 4). Laboratory results for soil collected beneath oil water separator showed no detectable concentrations of TPHd or TPHmo above the laboratory reporting limits. Concentrations of TPHho in the two surface soil samples (SI-OW-S01a through SI-OW-S02a) and two subsurface soil samples (SI-OW-S01b through SI-OW-S02b) ranged from 12 to 13 mg/kg and from 10 to 12 mg/kg, respectively. Based on these results, no further study was necessary.

Hot Oil Storage Room

On December 1, 2015, WKA collected soil samples from two locations beneath the concrete slab, in the former hot oil storage room (Figure 11). The hot oil was used at the thin board MDF line to heat the continuous press and was stored/heated in the hot oil storage room. Hot oil was

conveyed from the hot oil storage room to the thin board press via overhead conduits. Following the demolition of the building, SierraPine's demolition contractor perforated the concrete slab at three locations within the footprint of the former building. Using hand-auger sample methodologies, WKA advanced soil borings and collected soil samples from three locations. The first sample in each boring was collected from the interval directly beneath the concrete slab (SI-HO-S01a and SI-HO-S03a). The second sample was collected in the interval from two to 2½ feet below the bottom of the concrete slab (SI-HO-S01b and SI-HO-S03b).

Soil collected from directly beneath the concrete slab in each boring was observed as brown, well-sorted fine sand with gravel. Brown, well-sorted, fine sand with gravel was encountered in the deeper intervals. WKA observed a hydrocarbon odor during sampling at location SI-HO-S03. The six soil samples, collected beneath the former hot oil room, were analyzed for TPHd, TPHho, TPHmo, TPHg, and BTEX.

Results of laboratory analysis of soil samples are included in Table 5. Laboratory analysis of soil samples collected at the former hot oil storage room did not detect concentrations of BTEX, TPH as gasoline, or TPH as motor oil above laboratory reporting limits. TPH as diesel was detected at 330 milligrams per kilogram (mg/kg) in sample SI-HO-S03a. TPH as hydraulic oil was detected at concentrations ranging from 2.1 mg/kg in SI-HO-S01b to 42,000 mg/kg in SI-HO-S03a. Based on these results, remedial excavation was necessary. These excavation activities are discussed in section 4.1.

Oil Shed/ Ash Storage Shed

On December 29, 2015, WKA collected soil samples from three locations beneath the concrete foundation of the former oil shed/ ash storage shed (Figure 12). Two samples were collected from each location using hand-sampling methodologies. One sample was collected from soil representing the interval directly underneath the concrete foundation (SI-OS-S01a through SI-OS-S03a). The second sample was collected in the interval from two to two and a half feet below the concrete liner (SI-OS-S01b through SI-OS-S03b). WKA observed soil directly beneath the concrete liner to be a brown silty sand including various amounts of angular gravel intermixed with construction/ demolition debris, which included broken asphalt, concrete, and metal. In the deeper interval, the soil was observed to be gray fine to coarse sand with gravel consistent with highly weathered granodiorite. The six soil samples collected beneath the former hot oil room were analyzed for TPHd, TPHho, TPHg, CAM 17, chromium VI, TPHmo, VOCs, and PAHs.

Results of laboratory analysis of soil samples are included in Table 6. Laboratory analysis of soil samples collected at the oil shed/ ash storage shed did not detect concentrations of BTEX,

TPHg, TPHmo, chromium VI, VOCs, or PAHs above laboratory reporting limits. TPH as diesel was detected at 1.5 milligrams per kilogram (mg/kg) in sample SI-OS-S01a. TPH as motor oil was detected at concentrations ranging from 14 mg/kg in SI-HO-S01a to 350 mg/kg in SI-HO-S03b. There were no hydrocarbon detections in soil samples collected in the interval from 24 to 30 inches below the bottom of the concrete slab. Detections of CAM 17 metals were not detected at concentrations above California Human Health Screening Levels for occupancy under a residential scenario. Based on these results, no further study was necessary.

Above Ground Storage Tank

On December 1, 2015, WKA collected soil samples from two locations beneath the concrete containment basin, which formerly held 500-gallons of diesel in an AST used to supply fuel to a diesel powered pump for the fire suppression system (Figure 12). Following the removal of the AST and vertical containment walls, SierraPine's demolition contractor perforated the concrete slab at each end of the AST. Using hand sample methodologies, WKA collected soil samples from each perforation. The first sample was collected from the interval directly beneath the concrete slab (SI-DT-S01a and SI-DT-S02a). The second sample was collected in the interval from two to two and a half feet below the bottom of the concrete slab (SI-DT-S01b and SI-DT-S02b). Soil collected directly beneath the concrete slab was observed as brown silty sand with gravel, with brown to buff highly weathered granodiorite in the deeper intervals.

The four soil samples collected beneath the AST were analyzed for TPHd, BTEX, Naphthalene, and MTBE (Table 7). Laboratory results reported no concentrations of TPHd, BTEX, Naphthalene, or MTBE above laboratory reporting limits. Based on these results, no further study was necessary.

Electrical Substation

On June 14, 2016, WKA observed the de-energized electrical substation and the in place components. Using the GPSr, WKA recorded the location of the major components and concrete secondary containment basins. Components of the electrical substation were moved off site for reuse or recycled. Each secondary containment basin included a drain in the floor with an exterior valve. Observations during the demolition of the substation containment features indicated that the drains were plumbed to the POTW basin.

On June 14, 2016, WKA collected soil samples from five locations within the electrical substation boundary (Figure 13). After the demolition of the concrete secondary containment structures, one soil sample was collected directly beneath each of the four floor drain features in the interval from 0 to 6 inches bgs and one sample was collected from 18 to 24 inches bgs (SI-

SS-S01 through SI-SS-S04). WKA placed an additional soil sample location beneath an area of heavy oil staining observed in one of the secondary containment basins prior to demolition (SI-SS-SO5).

The soil in the surface interval was observed to be brown silty sand with angular gravel. At depth, the soil was brown slightly moist silty sand absent of gravel. WKA did not observe any staining or chemical odors in soil samples collected within the substation. The 10 soil samples were analyzed for PCBs. Laboratory analysis of soil samples did not detect PCBs at concentrations above the laboratory-reporting limit of 20 µg/kg (Table 8). Based on these results, no further study was necessary.

Main Transformer Room

On November 19, 2015, WKA collected soil samples from the main transformer room for the raw materials storage and processing building, which housed the main switch room and a bank of three transformers (Figure 9). Using GPSr data collected prior to demolition of the raw materials storage and processing building, WKA placed three soil sample locations in the area. The first sample was collected from the surface interval, representing the area directly beneath the concrete slab (SI-MT-S01a through SI-MT-S03a). The second sample was collected in the interval from two to two and a half feet below the surface interval (SI-MT-S01b through SI-MT-S03b). Soil collected in the surface interval was observed as brown silty sand with gravel. Grey course sand with gravel consisting with engineered fill was observed in deeper intervals.

The six soil samples collected beneath the main transformer bank were analyzed for PCBs (Table 9). Laboratory results for the three samples, collected in the interval from zero to six inches bgs, detected PCBs at concentrations ranging from less than the laboratory reporting limit of 0.02 mg/kg to 3.5 mg/kg (Aroclor 1254). PCBs were not detected above laboratory reporting limits in samples collected in the interval from 24 to 30 inches bgs. Based on these results, remedial excavation was necessary. These excavation activities are discussed in section 4.1.

Auxiliary Transformer Room

On November 20, 2015, WKA collected soil samples from the area formerly occupied by an auxiliary transformer, labeled as containing PCBs (Figure 9). WKA sampled shallow soil at two locations, beneath the transformer location, using GPSr data collected prior to demolition of the facility to locate the sample locations. The first sample was collected from the surface interval representing the area directly beneath the concrete slab (SI-AT-S01a through SI-AT-S02a). The second sample was collected in the interval from two to two and a half feet below the

surface interval (SI-AT-S01b through SI-AT-S02b). Soil collected in the surface interval was observed as brown silty sand with gravel and demolition debris resultant from onsite demolition operations. Brown silty sand with gravel was observed in the deeper intervals.

The four soil samples collected beneath the auxiliary transformer were analyzed for PCBs. Laboratory results can be found in Table 10. PCBs were detected in soil samples SI-AT-S02a and SI-AT-S02b at concentrations of 0.039 mg/kg (Aroclor 1260) in both soil samples. Based on these results, no further study was necessary.

Equipment Repair/ Machine Shop

On November 20, 2015, WKA sampled the area formerly occupied by the equipment repair/ machine shop (machine shop) at the Site (Figure 9). WKA samples shallow soil at three locations within the footprint of the machine shop. Using GPSr data collected prior to demolition of the facility, WKA located the boundaries of the machine shop and collected soil samples from three locations within the area. The first sample was collected from the surface interval representing the area directly beneath the concrete slab (SI-MS-S01a through SI-MS-S03a). The second sample was collected in the interval from two to two and a half feet below the bottom of the concrete slab (SI-MS-S01b through SI-MS-S03b). Soil collected in the surface interval was observed as brown silty sand with gravel and demolition debris resultant from onsite demolition operations. Grey course sand with gravel consisting with engineered fill was observed in the deeper intervals, apparently undisturbed by demolition activities.

The six soil samples collected beneath the machine shop were analyzed for TPHd, TPHho, TPHg, THPho, TPHmo, VOCs, and PAHs. Laboratory results for the equipment repair/ machine shop can be found in Table 11. TPHg, TPHd, and TPHmo were not detected above laboratory reporting limits in samples collected from the interval from zero to six inches bgs or the interval 24 to 30 inches bgs. TPHho was found in samples collected from the interval from zero to six inches bgs at concentrations ranging from 110 mg/kg to 360 mg/kg. TPHho was detected in sample SI-MS-S01b at a concentration of 190 mg/kg. Based on these results, no further study was necessary.

POTW Basin

On January 4, 2016, WKA collected soil samples from four locations beneath the two concrete-lined POTW basins (Figure 14). Two samples were collected from each location with assistance from an excavator operated by SierraPine's demolition contractor. One sample was collected from soil representing the interval directly beneath the concrete liner (SI-PO-S01a through SI-PO-S04a). The second sample was collected in the interval from two to two and a

half feet below the concrete liner (SI-PO-S01b through SI-PO-S04b). WKA observed soil directly beneath the concrete liner to be a brown silty sand including various amounts of angular gravel consistent with the aggregate base used for the construction of the concrete impoundments. In the deeper interval, the soil beneath the eastern basin was observed to be gray fine to coarse sand consistent with weathered granodiorite, common to the Site. Brown silty sand with various concentrations of artificially digested wood fiber fill was observed beneath the western basin.

The eight soil samples collected within the POTW basin were analyzed for TPHd, TPHmo, TPHg, TPHho, chromium VI and VOCs. Laboratory results for samples collected beneath the POTW basin are shown in Table 12. Results indicated concentrations of TPHho and TPHmo ranging from less than laboratory reporting limits to 1,100 mg/kg and 2.1 mg/kg respectively. TPHg was not detected in soil samples collected from beneath the POTW basin, with the exception of sample SI-PO-S03a (0.32 mg/kg). P-isopropyl toluene was detected in sample SI-PO-S03a at a concentration of 32 µg/kg. Other VOCs were not detected in any soil samples collected from the POTW Basin at concentrations exceeding their respective laboratory reporting limits.

All soil represented by samples collected at the POTW basin has been removed by excavation activities advanced to remove wood fiber fill. A discussion of the wood fiber fill excavation is discussed in section 4.2. Based on these results and the subsequent excavation of the representative soil, no further study was necessary.

Firewater Storage Ponds

On January 4, 2016, WKA collected soil samples from eight locations within the limits of the two firewater storage ponds (Figure 12). Four sample locations were selected within each basin. WKA observed that each pond was constructed of earthen berms and lined with a clay liner. At each sample location one sample of the clay liner was collected (SI-FP-S01a through SI-FP-S08a) and one soil sample was collected from beneath the clay liner (SI-FP-S01b through SI-FP-S08b). The clay liner was observed to be a buff to gray plastic clay approximately four inches thick. Under the liner, the soil was observed to be brown silty sand with gravel, consistent with soil used to construct the containment berm. In each basin, a layer of dried sediment was observed at thicknesses from three to 10 inches thick and was composed of brown low-density organic material.

The 16 soil samples collected from the firewater storage ponds were analyzed for TPHd, TPHmo, TPHg, TPHho, BTEX, naphthalene, VOCs, and hexavalent chromium (Table 13). TPHmo was detected in two of the 16 samples collected from the fire ponds at concentrations of

2.1 and 1.9 mg/kg. Both TPHmo detections were found in samples collected from the clay liner. TPHd, TPHho, TPHg, and VOCs were not detected in soil samples collected from the firewater storage ponds. CAM 17 metals were not detected at concentrations exceeding the CHHSLs for occupancy under a residential scenario. Based on these results, no further study was necessary.

Former UST Area

On December 17 and 18, 2015, WKA collected soil samples from the area formerly occupied by two USTs. With assistance from a drill rig using hollow stem augers, soil samples were collected from five locations using a California modified split spoon sampler (Figure 9). Soil samples were collected in new stainless steel tubes from depths of four feet, eight feet, 12 feet, and 14 feet below ground surface. WKA observed brown silty course sand consistent with fill material from the ground surface to approximately 8 feet bgs. Brown to buff highly weathered granite was observed from 8 feet to 14 feet bgs where the borings were terminated. Hydrocarbon odors were observed in cuttings from in borings SI-UT-S01, SI-UT-S04, and SI-UT-S05.

The 20 soil samples collected in the UST area were analyzed for TPHd, TPHmo, TPHg, TPHho, BTEX, naphthalene, PAHs, nitrogen compounds, sulfate, formaldehyde, and VOCs (Table 14). Laboratory analysis of soil samples collected in the former UST area found no detectable concentrations of TPHho, BTEX, naphthalene PAHs, or VOCs above laboratory reporting limits. TPHd was detected at sample location SI-UT-S01 in samples collected from the intervals from 4 to 4 ½ feet bgs (SI-UT-S01a) and from 8 to 8 ½ feet bgs (SI-UT-S01b) at 4.3 mg/kg and 3.3 mg/kg respectively. TPHmo was detected at 59 mg/kg in sample SI-UT-S01a. TPHg was found in sample SI-UT-S01a, SI-UT-S01b, and SI-UT-S05a at concentrations of 0.23, 0.26, and 0.21 mg/kg, respectively. Ammonia as nitrogen was detected in soil samples collected at the former UST location at concentrations ranging from less than the laboratory reporting limit of 5.0 to 880 mg/kg. Formaldehyde was found in soil collected at 4 and 8 feet bgs in all 5 borings in the UST area. Concentrations of formaldehyde were detected at concentrations ranging from 1.2 to 7.3 mg/kg. Formaldehyde was not detected above the laboratory reporting limit in in samples collected at 12 and 14 feet bgs. Based on these results, no further study was necessary.

Historically Agricultural Area

On December 29, 2015, WKA collected soil samples in the undeveloped area on the southeastern portion of the Site (Figure 15). Historic aerial photography indicated that the Site was used for agriculture purposes. WKA collected soil samples from four locations within the undeveloped portion of the Site. Surface soil across the undeveloped portion of the Site (SI-

AG-S01a through SI-AG-S04a) was brown silty sand with <10% gravel. In the westernmost sample location of the undeveloped area (SI-AG-S01b), buff to gray coarse clayey sand consistent with highly weathered granite was encountered at 2 feet bgs. In sample locations SI-AG-S02b and SI-AG-S03b, samples were collected from brown coarse to fine sand with silt at 4 feet bgs. WKA observed brown silty sand with gravel at the sample collection interval of two feet bgs from location SI-AG-S04b.

The eight soil samples collected in the undeveloped portion of the Site were analyzed discreetly for Lead Arsenic and OCPs. Laboratory results can be found in Table 15. OCPs were not detected at concentrations above their respective reporting limits is any of the samples collected in the undeveloped portion of the Site. Total lead was found at concentrations ranging from less than the laboratory reporting limit of 2.5 mg/kg to 7.7 mg/kg. Arsenic was found at concentrations ranging from less than the laboratory reporting limit of 1 mg/kg to 4.2 mg/kg. Based on these results, no further study was necessary.

Soil represented by samples collected at locations SI-AG-S01 through SI-AG-S03 has been removed by excavation activities advanced to remove wood fiber fill. A discussion of the wood fiber fill excavation is discussed in section 4.2.

Engineered Fill

On December 7, 8, and 9, 2015, WKA advanced 32 borings to investigate the engineered fill placed over the years during various stages of construction at the Site (Figure 15). Soil samples were collected from each boring in the intervals from two to 2 ½ feet bgs and five to 5 ½ feet bgs. The soil in the 2-foot interval was predominantly brown silty sand with variable amounts of course sand and gravel. Due to the inconsistent nature of shallow granitic bedrock, soil collected from this interval ranged from gray silty course sand with gravel and brown silty course sand to brown to buff to gray highly weathered granite.

Soil samples collected from the engineered fill or natural weathered granite were composited at a ratio of four to one (4:1) by depth and analyzed for CAM 17 metals and asbestos (Table 16). CAM 17 metals were not detected at concentrations above California Human Health Screening Levels for occupancy under a residential scenario. Soil samples were examined for asbestos, using polarized light microscopy with a ball mill preparation, and no asbestos fibers were found in excess of 0.25% in any of the composited soil samples. Based on these results, no further study was necessary.

Shallow Aquifer Sampling

To identify any potential impacts to shallow groundwater, WKA collected grab groundwater samples from the shallow unconfined aquifer at the Site. Sample locations were distributed across the Site using Geographic Information System (GIS) software prior to field activities. At the request of PCEHD, two aquifer sample locations were located near the location of the former thick board press pit and two were located near the location of the former UST. WKA advanced 16 borings to collect 16 samples from the shallow aquifer at the Site with assistance from a drill rig (Figure 16). Groundwater samples were collected from unlined borings using a disposable bailer. Each sample was collected into new laboratory supplied sample containers and placed into a chilled cooler for transportation with chain-of-custody documents to California Laboratory Services in Rancho Cordova, California. Groundwater was observed in 11 of the 16 borings at depths between 1.75 and 11.35 feet bgs.

Water collected from the shallow unconfined aquifer was analyzed for TPHd, TPHmo, TPHg, TPHho, BTEX, naphthalene, VOCs, Formaldehyde, Nitrogen Compounds, and PCBs. Laboratory results are summarized in Table 17.

Samples SI-AQ-S01 and SI-AQ-S02 were collected at the location of the former UST. Groundwater was not present in SI-AQ-S02. Formaldehyde was found in the groundwater sample at a concentration of 26 µg/L. Ammonia and sulfate were found at concentrations of 1,300 and 11,000 µg/L, respectively. TPHG was detected at a concentration of 58 µg/L. MTBE and naphthalene were found at concentrations of 0.82 and 1.9 µg/L, respectively.

Samples SI-AQ-S12 and SI-AQ-S13 were collected near the former thick board press pit. Groundwater was not present in SI-AQ-S12. In the groundwater sample collected from SI-AQ-S13, ammonia was found at a concentration of 1,000 µg/L. MTBE was detected at a concentration of 0.67 µg/L.

Samples SI-AQ-S10 and SI-AQ-S11 were collected on the northern corner of the property adjacent to the Card Lock facility. In the groundwater samples collected at these locations, Nitrate/ Nitrite as Nitrogen was found at concentrations ranging from 4,100 to 8,300 µg/L. MTBE was detected at a concentration of 0.67 µg/L. Ammonia was found in SI-AQ-S10 at a concentration of 100 µg/L.

Groundwater was recovered from seven of the remaining borings. Laboratory results show detections of formaldehyde at concentrations ranging from less the laboratory reporting limits of 20 µg/L to 56 µg/L. Ammonia as N was found at concentrations ranging from less than 100 µg/L to 490 µg/L. TPHmo was found at SI-AQ-S14 at a concentration of 170 µg/L. MTBE was

reported at concentrations ranging from less than the laboratory reporting limit of 0.50 µg/L to 6.2 µg/L.

Based on the results gathered from the grab groundwater sampling at the Site, no further study was necessary as part of this Site Investigation.

4.0 REMEDIAL ACTIVITIES

This section describes remedial activities to remove soil containing chemical hazards and deleterious material from the Site in support of a change in land use. This section also describes the off-haul of impacted material and analysis of fill imported to the Site.

4.1 Study Area Remediation

During the course of WKA's investigation, soil sampling and analysis identified four areas that required remedial excavation. The four areas identified were the hydraulic control room associated with the thick board press pit, the main transformer room, the resin storage tank and mixing areas, and the hot oil storage room associated with the thin board press.

Details of these activities are discussed below.

Hydraulic Control Room Excavation

The soil beneath the hydraulic control room was exposed during the demolition of the vertical walls of the thick board press pit. The hydraulic control room excavation is located immediately east of the exposed portion of the thick board press pit vault. WKA observed multiple stages of the excavation effort and collected confirmation samples at the limits of each stage. Confirmation soil samples were analyzed for TPHho. Excavation limits and confirmation sample locations are shown in Figures 17A through 17G. Laboratory Analytical results can be found in Table 18.

In February 2016, SierraPine completed the remedial excavation. (Figure 17H). The excavation activities removed approximately 1,600 cubic yards of hydraulic oil impacted soil from the area around the hydraulic control room. Records indicate 978.6 tons of impacted soil was disposed of under manifest at Recology Ostrom Road, Vacaville, California. Confirmation samples representing soil remaining at the Site are presented in Table 19. Concentrations of TPHho in the soil remaining in the excavation in the 17 confirmation samples ranged from less

than laboratory reporting limits of 1.0 mg/kg to 31 mg/kg with a mean concentration of 3.8 mg/kg.

Hot Oil Storage Room Excavation

On May 18, 2016, SierraPine excavated approximately 75 cubic yards of soil from two excavations within the footprint of the hot oil storage room. Using the GPSr data collected during the initial sampling conducted on December 1, 2015, WKA confirmed the removal of soil represented by samples SI-HO-S02 and SI-HO-S03.

Eleven confirmation soil samples were collected to confirm the successful removal of hydraulic oil impacted soil. Figure 11b shows the soil sample locations and limits of the two excavations advanced within the footprint of the hot oil storage room. Five soil samples were collected from sidewalls in the western excavation and one sample was collected from the floor, co-located with SI-HO-SO3. Four soil samples were collected from the sidewalls and one soil sample was collected from the floor of the eastern excavation. Laboratory results indicate that TPHho and TPHd were not present in soil samples collected in the remedial excavations at the hot oil storage room at concentrations exceeding the laboratory reporting limits of 1.0 mg/kg (Table 20).

Main Transformer Room Excavation

Concentrations of PCBs in the soil beneath the main transformer room exceeded the CHHSL for residential occupancy and remedial excavation was necessary. Due the time elapsed between the date of original soil sampling and the excavation activities, WKA collected additional soil samples in the locations identified previously to contain PCBs (SI-TR-S02 and SI-TR-S03) (Figure 12). Soil samples were collected at the intervals from 0 to ½ feet, 1 to 1 ½ feet bgs, and 2 to 2 ½ feet bgs. Laboratory analysis confirmed the need to conduct remedial excavation, with detections of PCBs ranging from less than the laboratory reporting limit of 0.020 µg/kg to 0.640 µg/kg (Table 21)

On July 22, 2016, WKA used the GPSr to outline an area representative of the portion of the footprint of the main transformer room requiring remedial excavation. SierraPine's demolition contractor advanced an excavation for that area to a depth of two feet. On August 1, 2016, WKA collected confirmation soil samples (SI-TR-CS01 through SI-TR-CS10) from the floor and sidewalls of the excavation (Figure 18).

Confirmation soil samples collected from the excavation were analyzed for PCBs (Table 22). Laboratory results for confirmation samples indicated PCB detections exceeding the CHHSLs

the in southeast, southwest, and northwest sidewalls of the excavation. Based on the laboratory results, the excavation was expanded to remove an additional two feet of soil laterally, where required. Additional confirmation soil samples (SI-TR-CS11 through SI-TR-CS15) were collected from the expanded excavation and analyzed for PCBs (Table 22). Approximately 175 cubic yards of soil was removed from the excavation. Impacted soil was stockpiled onsite, profiled and is awaiting off-haul to Recology's Ostrom Road Facility for disposal. Laboratory results for the final limits of the excavation show that PCBs ranged from less than the laboratory reporting limit of 0.020 µg/kg to 0.035 µg/kg and do not exceed the CHHSL for occupancy under a residential scenario.

Resin Area Excavation

Concentrations of ammonia in the soil beneath the former resin mixing area and the former resin storage tank area were found to be elevated. Due to the location of the former resin mixing area and the former resin storage tank area, relative to one another, the effort to excavate soil impacted by the operational history of these areas was combined into one excavation.

Due the time elapsed between the date of original soil sampling and the excavation activities, WKA collected additional soil samples in the locations identified previously to contain high concentrations of ammonia (SI-MA-S02 through SI-MA-S03 and SI-TF-S02 through SI-TF-S03) (Figure 12). Soil samples were collected at the intervals from 0 to ½ feet, 1 to 1 ½ feet bgs, and 2 to 2 ½ feet bgs. Laboratory analysis confirmed the need to conduct remedial excavations with detections of ammonia ranging from less than the laboratory reporting limit of 0.020 µg/kg to 0.640 µg/kg (Table 23)

On July 22, 2016, WKA used the GPSr to outline an area representative of the portion of t he footprint of the combined former resin mixing area and resin storage tank area (resin area) requiring remedial excavation. SierraPine's demolition contractor advanced an excavation for that area to a depth of approximately 5 feet bgs. On August 1, 2016, WKA collected confirmation soil samples (SI-RA-CS01 through SI-RA-CS12) from the floor and sidewalls of the excavation (Figure 18).

Confirmation soil samples collected from the excavation were analyzed for ammonia, nitrate/nitrite, sulfate, and formaldehyde (Table 24). Laboratory results for confirmation samples showed ammonia and sulfate impacts in the southeastern corner of the excavation ranging from 61 mg/kg to 3,200 mg/kg for ammonia and 81 mg/kg to 520 mg/kg for sulfate. Based on the laboratory results, the excavation was expanded to remove an additional five feet of soil laterally, where required. The excavation was expanded to excavate and demolish a buried

utility conduit oriented roughly north-south. Observation of the additional excavation to remove the utility conduit indicated that no soil impacts were suspected in the utility alignment.

Additional confirmation soil samples (SI-RA-CS13 through SI-RA-CS15) were collected from the sidewalls of the expanded excavation and analyzed for ammonia, nitrate/nitrite, sulfate, and formaldehyde (Table 24). Approximately 1,500 cubic yards of soil was removed from the final excavation. Impacted soil is stockpiled onsite and for future reuse or offsite disposal. Laboratory results for the final limits of the excavation show that ammonia, nitrate/nitrite, sulfate, and formaldehyde remaining in soil do not pose a threat to human health under a residential scenario.

4.2 Additional Discoveries and Remediation

During the demolition of the facility, WKA discovered two areas where previously unknown impacts to the soil at the Site required additional excavation and sampling. The first discovery was located in an area formerly occupied by a hydraulically operated ripsaw in the finishing line portion of the thick board press building. The second discovery was a large area where processed wood fiber and wood waste had been buried. The following section describes the discovery and remedial actions undertaken at this location.

Rip Saw Discovery Excavation and Confirmation Sampling

During the demolition of the concrete foundation of the finishing line portion in thick board press building, SierraPine staff discovered an area of stained soil emitting a hydrocarbon odor. SierraPine excavated the stained soil and surrounding soil to a total depth of 4 feet bgs (Figure 19). WKA observed the extents of the excavation and found the excavation floor and sidewalls to be free of staining or odors.

On October 9, 2015, WKA collected confirmation soil samples from the floor and sidewalls of the excavation. WKA used a high precision Global Positioning System receiver (GPSr) to record the limits of the excavation. WKA collected four confirmation soil samples from the floor of the excavation and eight soil samples from the walls of the excavation (Figure 19A). Soil samples collected from the ripsaw excavation were analyzed for PCBs and TPHho (Table 25). Concentrations of TPHho ranged from less than the laboratory reporting limit of 1.0 mg/kg to 460 mg/kg. WKA identified two areas where representative samples indicated the need for further excavation. An excavation was advanced by SierraPine to remove additional soil (Figure 19B).

An additional confirmation soil sample (SI-RS-CS13) was collected from the sidewall of expanded excavation and analyzed for TPHho (Table 24). Approximately 210 cubic yards of soil was removed from the final excavation. Impacted soil was stockpiled on site and off-hauled to Recology's Ostrom Road Facility for disposal. Laboratory results for the confirmation soil samples collected from final limits of the excavation indicated that THPho concentrations ranged from less than laboratory reporting limits (1.0 mg/kg) to 70 mg/kg. No PCBs were detected in the ripsaw excavation. The area was backfilled using soil reclaimed from on Site.

Wood Fiber Fill Excavation

Excavation of wood fiber laden material commenced in the area of the initial discovery in spring of 2016. Excavation within the area of the WDR system revealed a widespread presence of wood fiber fill buried in the subsurface. As of September 27, 2016, the expanded wood fiber fill excavation covers an area of approximately 185,000 square feet (ft²) (Figure 20).

SierraPine estimates that the excavation activities to date have removed approximately 25,000 cubic yards of wood fiber impacted soil across the entire site. Complete results of the wood fiber fill excavation activities, confirmation soil sampling, and analytical testing results will be included in the Report of Findings, requested by CVRWQCB, in a letter dated September 23, 2016. Upon completion of the Report of Findings for the excavation of wood fiber fill impacted soil, a copy will be sent to PCEHD.

4.3 Soil Disposal

All soil generated during remedial activities at the Site was disposed of at an off-Site disposal facility authorized to accept the waste. SierraPine personnel conducted all export soil sampling and disposal activities. Manifests for soil disposal are provided in Appendix A. A summary of soil disposal is provided below.

Excavation	Volume	Constituent	Destination
Hydraulic Control Room	1,600 yds³	TPHho	Recology Ostrom Road
Hot Oil Room	75 yds³	TPHho	Recology Ostrom Road
Rip Saw Area	210 yds³	TPHho	Recology Ostrom Road

Soil excavated from the main transformer room has been profiled and accepted by Recology' Ostrom Road facility and is awaiting off haul. Stockpiled soil from the resin area excavation is currently undergoing laboratory analysis to determine the most appropriate handling method. The remainder of the soil disposal information will be submitted under separate cover to PCEHD, upon completion of the soil disposal activities.

4.4 Import Fill

To date, SierraPine has imported an estimated 21,300 cubic yards (Yds³) of soil to backfill remedial excavations at the Site. WKA understands that SierraPine is expecting to receive additional import fill to complete the backfilling and grading activities at the Site. A supplemental report will be prepared to provide additional details upon completion of the remaining soil disposal, soil import, and grading activities. WKA sampled each volume of imported fill according to the California Department of Toxic Substances Control *Information Advisory Clean Imported Fill Material* guidance (2001). A table summarizing the soil imported to date is provided below.

Source	Approximate Volume	Date Sampled	Analysis
Excavation for Utility Extension, Granite Drive, Rocklin, CA	1,300 Yds³	5/12/2016 & 6/2/2016	PCBs, TPHd, TPHho, TPHmo, TPHg, CAM 17 Metals, VOCs, and SVOCs
Stockpiled soil, NorCal Crushing, Lincoln, CA	10,000 Yds³	6/2/2016 & 6/20/2016	TPHd, TPHmo, Total Lead, Total Arsenic, and OCPs.
Excess Soil from grading, Granite Drive And Dominguez, Rocklin, CA	2,000 Yds³	8/22/2016	PCBs, TPHd, TPHmo, TPHg, CAM17 metals, BTEX, and OCPs
Elliott Homes Stockpiled Soil, Roseville, CA	4,000 Yds³	9/20/2016	CAM 17 Metals, and OCPs
Fiddyment Ranch Stockpiled Soil, Lincoln, CA	4,000 Yds³	9/20/2016	CAM 17 metals, OCPs, Ammonia as N, and Nitrate/ Nritrite

SierraPine is actively searching for additional sources of fill material to replace soil excavated during remedial activities. The remainder of the soil import information will be submitted under separate cover to PCEHD, upon completion of the import and placement activities.

5.0 DISCUSSION AND CONCLUSIONS

Based on the observations and data collected during this site investigation and subsequent remedial excavation activity, WKA concludes the following:

- SierraPine has terminated MDF production and is no longer manufacturing MDF at the Site.
- SierraPine has demolished the MDF facility, including the above ground and underground facilities.
- Laboratory analysis of soil samples collected beneath the areas identified by WKAs *Phase I Environmental Site Assessment,* dated March 11, 2015, as having the potential for accidental release of feature specific chemical constituents, indicated that these areas were free of impacts that would threaten human health under a residential occupancy scenario, with the exception of the hydraulic control room, the resin mixing area, the resin storage tank area and the main transformer room.
- Following remedial excavation activities, analysis of confirmation samples collected within the hydraulic control room, the resin mixing area, the resin storage tank area, the main transformer room, and the ripsaw area indicated that feature specific chemical constituents are not present at concentrations that would pose a threat to human health under a residential occupancy scenario.
- Wood fiber fill material, historically buried within the Site by previous property owners, has been or will be excavated and transported to an offsite facility for disposal and/or reuse.
- Soil imported for placement as fill within the Site has been or will be analyzed to verify that it is acceptable for use as backfill within the proposed future residential development at the Site.
- Upon completion of the backfill activities (expected to be completed by the end of October 2016), the Site will not pose a threat to human health under a residential scenario.

6.0 FUTURE ACTIVITIES

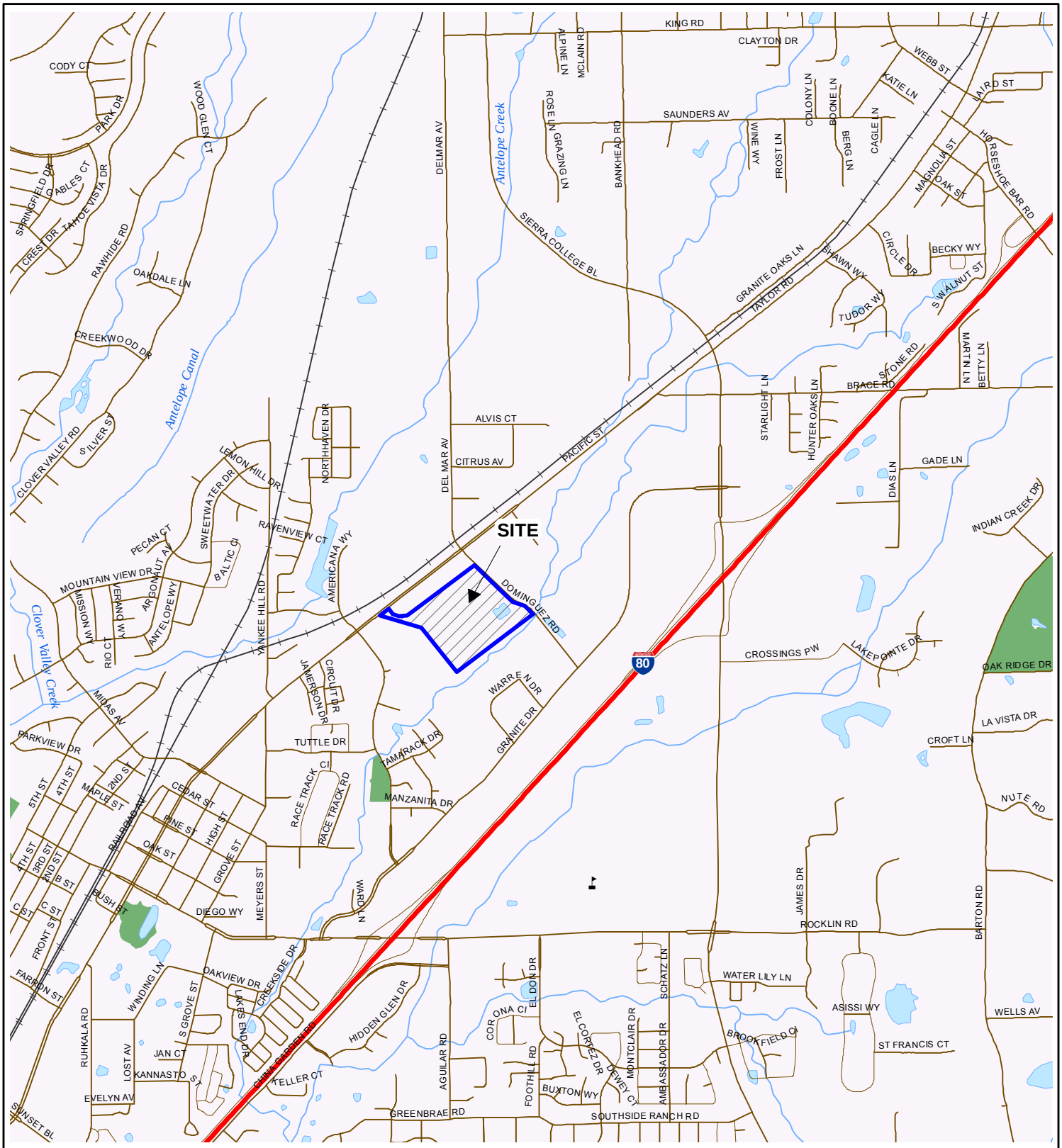
There are two additional WKA workplans related to this Site, including the WDR Sampling Workplan dated September 15, 2016, and the Revised Groundwater Feasibility Workplan, dated July 26, 2016 (both are overseen by CVRWQCB). Work related to the implementation of these workplans will be submitted under separate cover.

The WDR Closure Report, dated September 30, 2016, has been submitted to CVRWQCB. SierraPine will also continue to submit reports for ongoing shallow groundwater monitoring activities. Groundwater monitoring and reporting, associated with the implementation of the

WKA Revised Groundwater Feasibility Workplan, dated July 26, 2016, is anticipated to be completed the fourth quarter of 2017.

7.0 LIMITATIONS

The statements and results presented in this report are based upon the scope of work described above and on observations made on the dates of WKA's applicable fieldwork. The summary report was prepared in a manner consistent with the level of care and skill ordinarily exercised by Professional Geologists. Work was performed using a degree of skill consistent with that of competent environmental consulting firms performing similar work in the area. No recommendation is made as to the suitability of the property for any purpose. The result of the investigation does not preclude the possibility that materials currently, or in the future, defined as hazardous are present on the site. This report is applicable only to the investigated site and should not be used for any other site. No warranty is expressed or implied.



Street data courtesy of Placer County.
Hydrography courtesy of the U.S. Geological Survey acquired from the GIS Data Depot, December, 2007.
Projection: NAD 83, California State Plane, Zone II

N

0 1,000 2,000
Feet

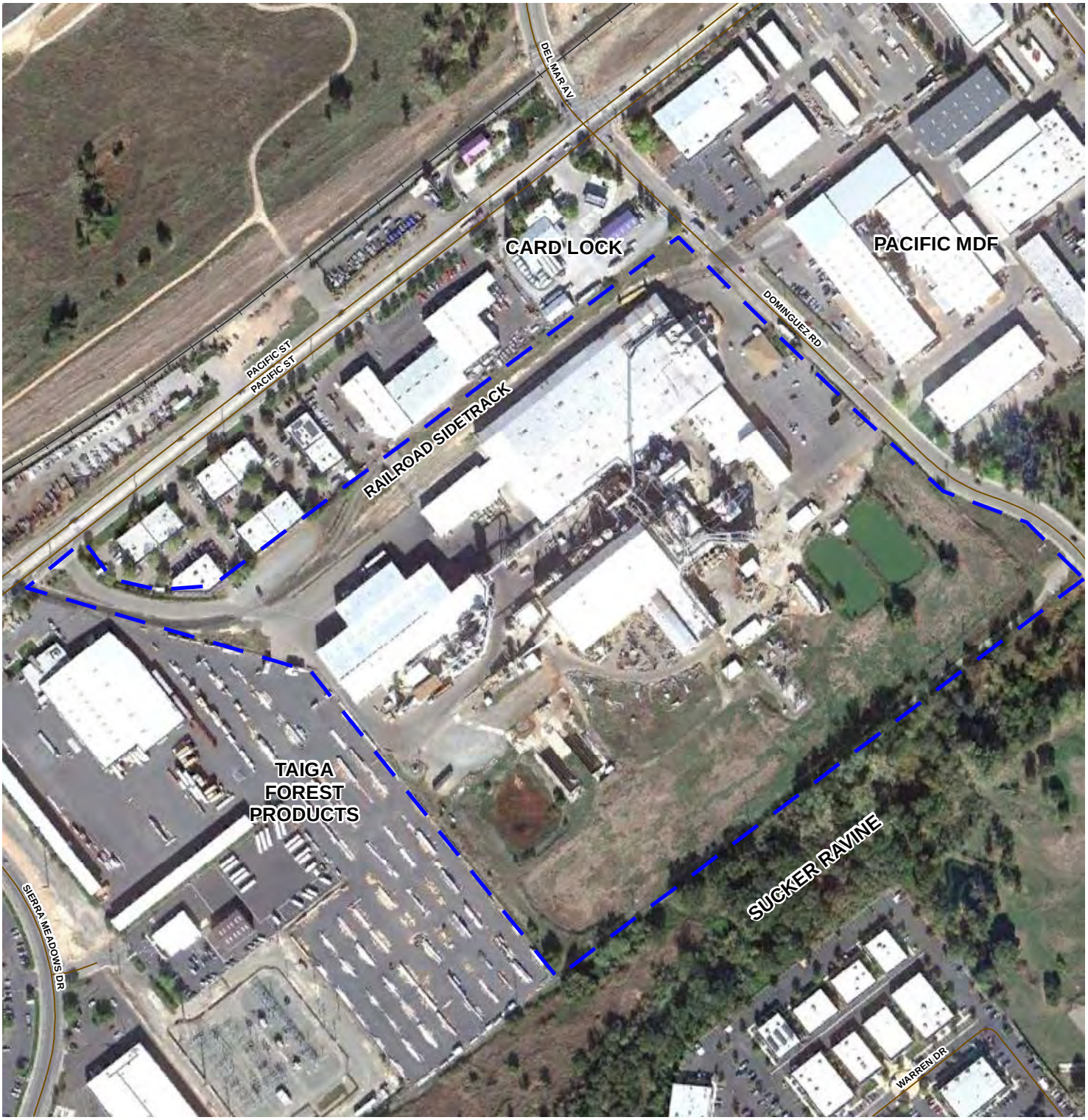
WallaceKuhl & ASSOCIATES

VICINITY MAP

SIERRAPINE

Rocklin, California

FIGURE	1
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	



Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

Site Boundary

N

0 150 300

Feet

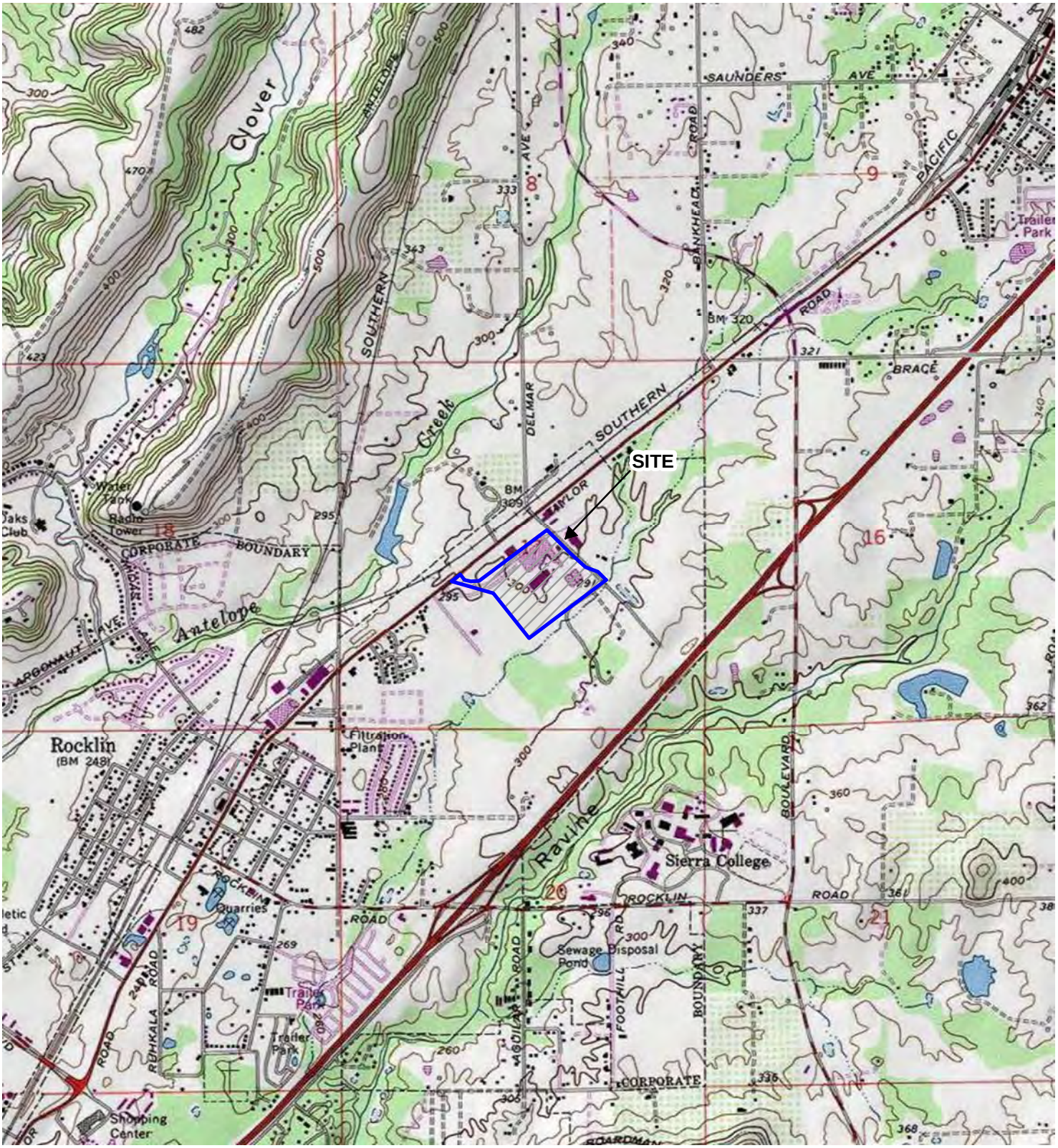
WallaceKuhl & ASSOCIATES

AERIAL SITE MAP

SIERRAPINE

Rocklin, California

FIGURE	2
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	



Adapted from U.S. Geological Survey 7.5 minute
topographic map of the Rocklin quadrangle,
Projection: NAD 83, California State Plane, Zone II

N

0 1,000 2,000

Feet

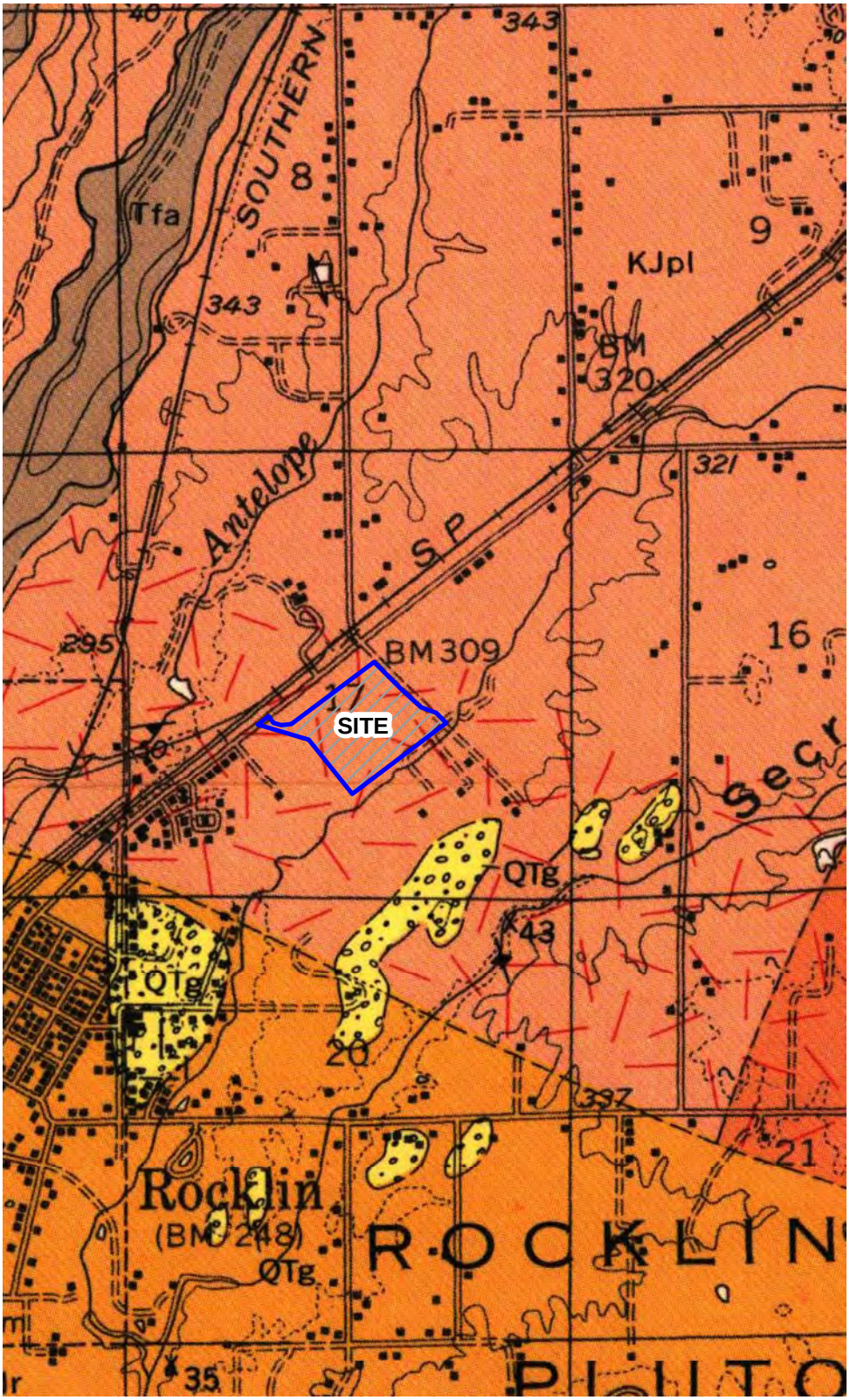
WallaceKuhl & ASSOCIATES

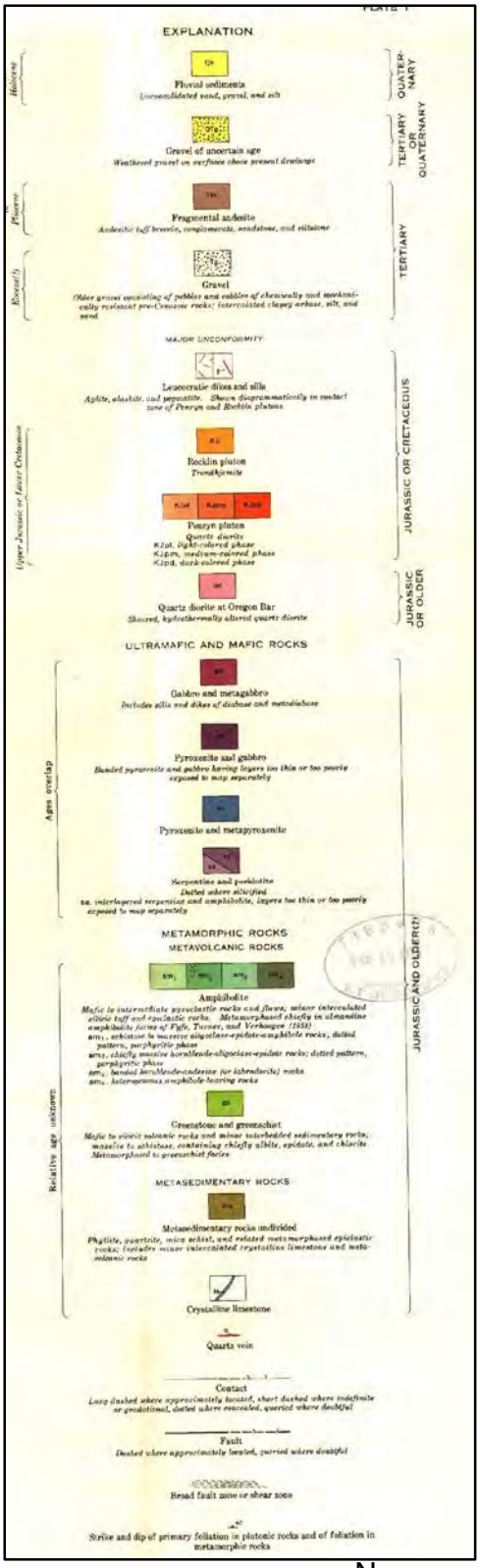
TOPOGRAPHIC MAP

SIERRAPINE

Rocklin, California

FIGURE	3
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	





Adapted from the Pre-Cenozoic Geology of the South Half of the Auburn 15-Minute quadrangle, California. 1975
Projection: NAD 83, California State Plane, Zone II

N

0 1,000 2,000

Feet

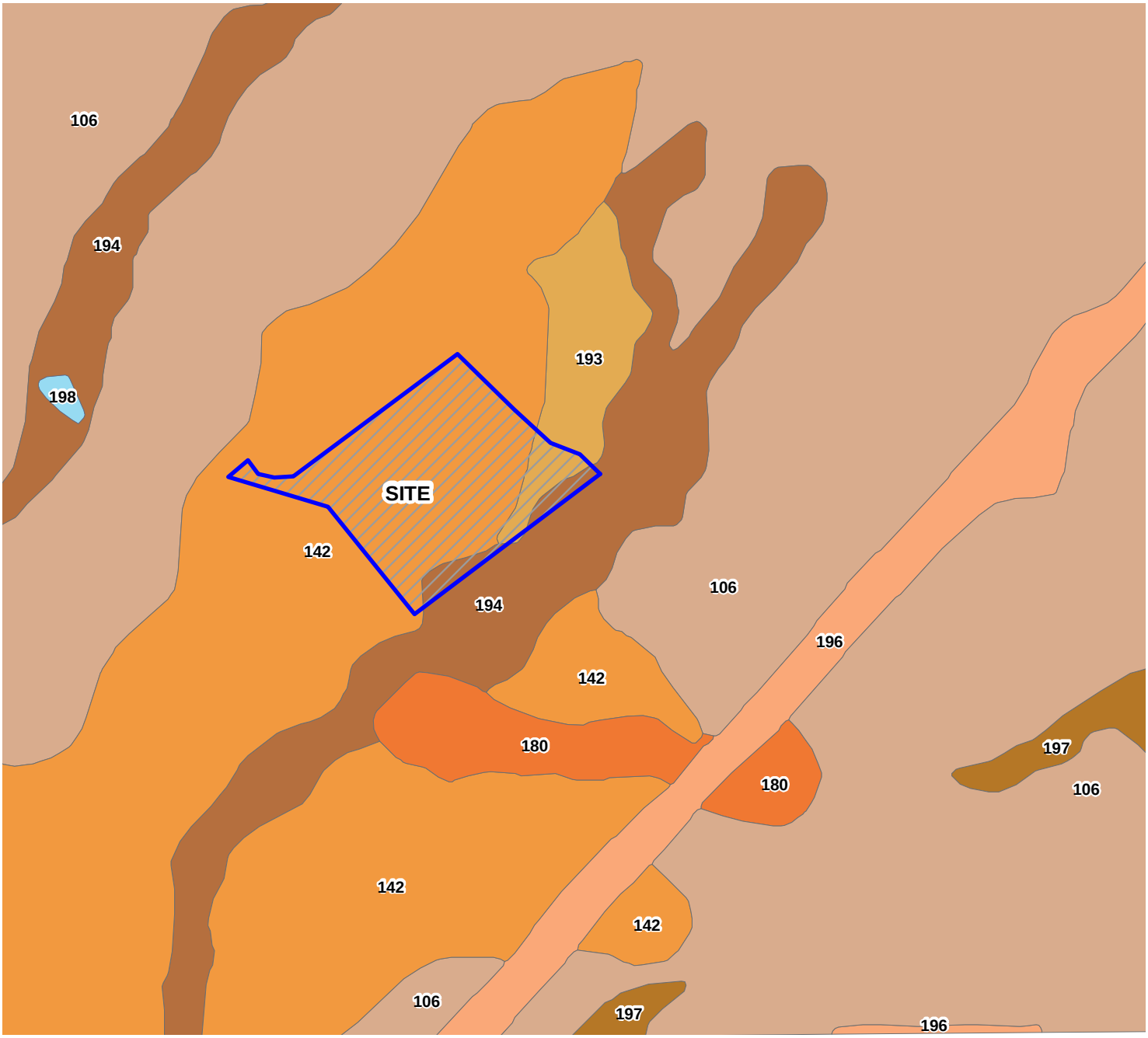
WallaceKuhl & ASSOCIATES

GEOLOGIC MAP

SIERRAPINE

Rocklin, California

FIGURE	4
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	



Legend

Site Boundary

Adapted from U.S.D.A. Web Soils Survey, version 7
dated September 7, 2014.
Projection: NAD 83, California State Plane, Zone II

MUSYM		
	106	Andregg coarse sandy loam, 2 to 9 percent slopes
	140	Cometa sandy loam, 1 to 5 percent slopes
	142	Cometa-Ramona sandy loams, 1 to 5 percent slopes
	145	Exchequer-Rock outcrop complex, 2 to 30 percent slopes
	152	Inks cobbly loam, 2 to 30 percent slopes
	153	Inks cobbly loam, 30 to 50 percent slopes
	180	Rubble land
	193	Xerofluvents, occasionally flooded
	194	Xerofluvents, frequently flooded
	196	Xerorthents, cut and fill areas
	197	Xerorthents, placer areas
	198	Water

N

0 450 900

Feet

WallaceKuhl & ASSOCIATES

SOILS MAP

SIERRAPINE

Rocklin, California

FIGURE	5
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	

SITE FEATURE

- A Office Building
- B Raw Materials Storage and Processing Building
- C End Dump Lift
- D Belly Dump Platform
- E Dust-Fired Boiler
- F Natural Gass Boiler
- G Resin Storage Tanks
- H Resin Mixing Area
- I Thick Board Press Building
- J Thin Board Press Building
- K Thick Board Press Pit
- L Hydraulic Control Room
- M Oil / Water Seperator
- N Hot Oil Storage Room
- O Oil Shed / Ash Storage Shed
- P Elictrical Sub Station
- Q Main Transformer Room
- R Auxiliary Transformer
- S Equipment Repair / Machine Shop
- T POTW Basin
- U WDR Basin
- V Clay Lined Pond
- W WDR Spray Field
- X Firewater Storage Ponds
- Y AST
- Z USTs

Adapted from a Google Earth aerial photograph,
dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

Site Boundary

N

0 100 200
Feet

Wallace Kuhl & Associates

SITE FEATURE MAP

SierraPine

Rocklin, California

FIGURE	6
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16

WKA NO. 10467.10

Adapted from a Google Earth aerial photograph, dated July 10, 2016.
Projection: NAD 83, California State Plane, Zone II
Groundwater Contour information collected 11/3/15.

Legend

Site Boundary

N

0 150 300

Feet

WallaceKuhl & ASSOCIATES

AERIAL SITE MAP - POST DEMOLITION

SIERRAPINE

Rocklin, California

FIGURE	7
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	

Adapted from a Google Earth aerial photograph,
dateJuly 10, 2016.
Projection: NAD 83, California State Plane, Zone II

Legend

Site Boundary

N

0 150 300

Feet

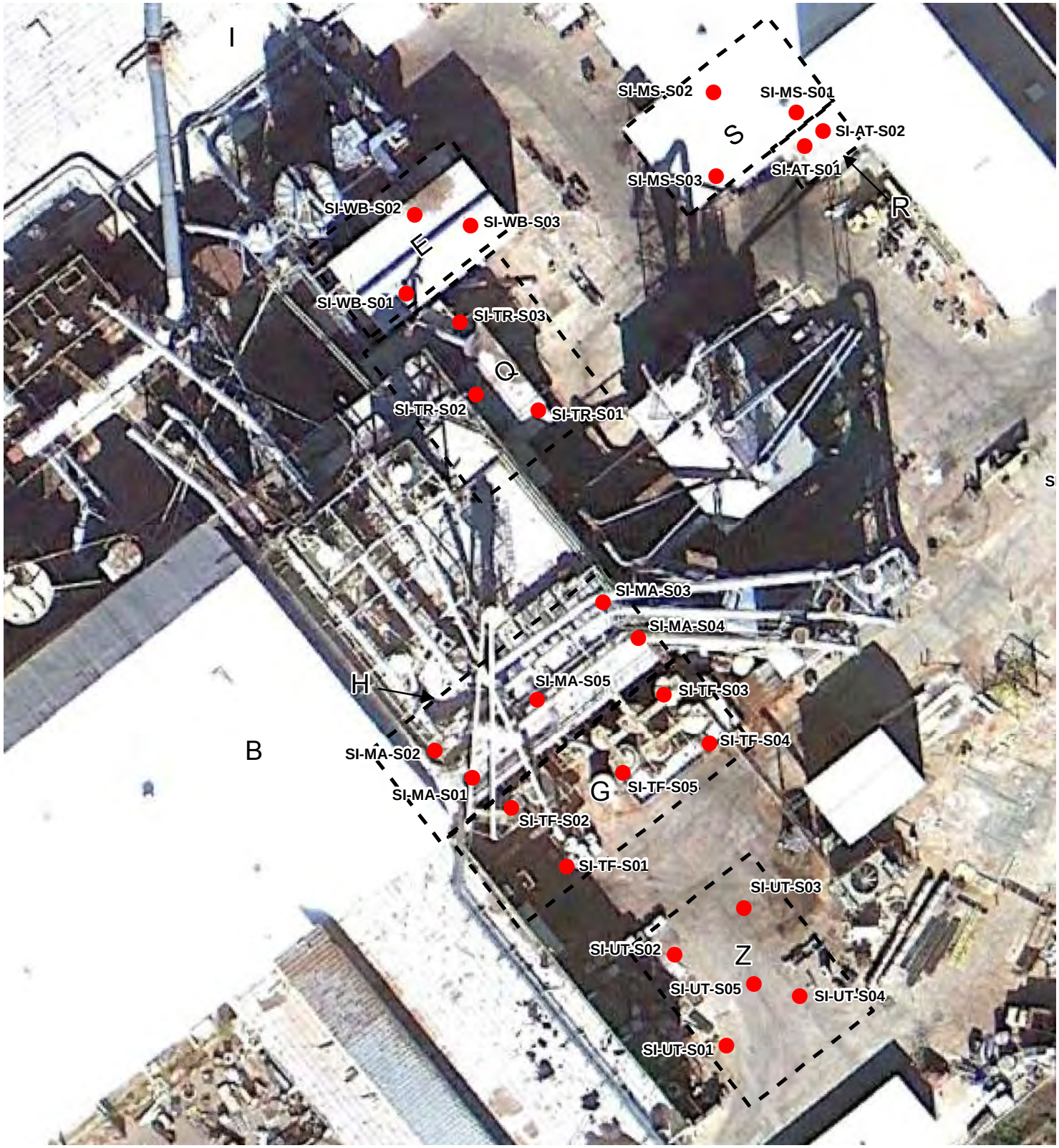
WallaceKuhl & ASSOCIATES

MODIFIED PARCEL MAP (APRIL 11, 2016)

SIERRAPINE

Rocklin, California

FIGURE	8
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	



Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

● Soil Sample Location

N

0 25 50

Feet

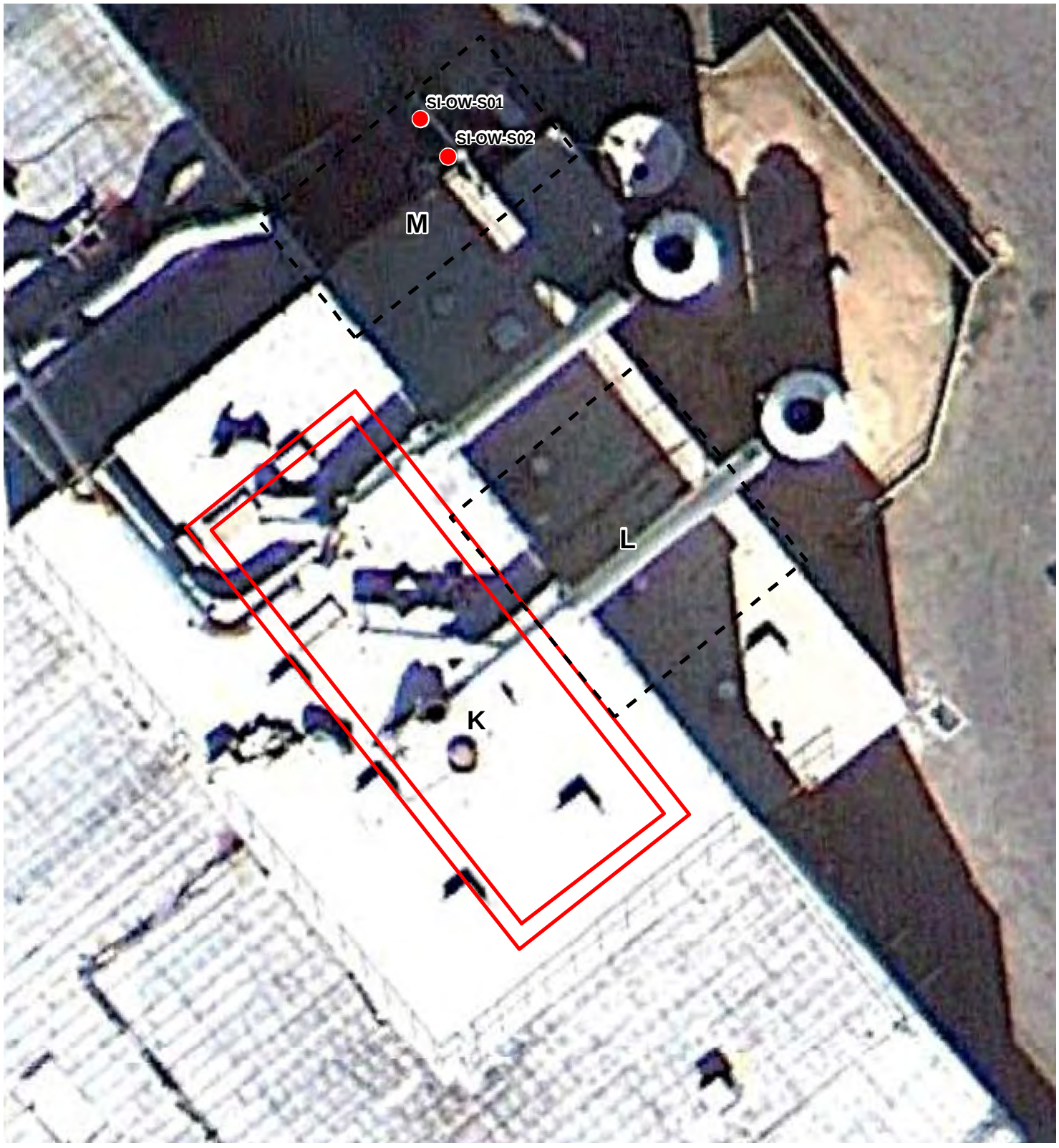
WallaceKuhl & ASSOCIATES

CENTRAL FACILITY SAMPLE LOCATION MAP

SIERRAPINE

Rocklin, California

FIGURE	9
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	



Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

- Press pit
- Soil Sample Location

N

0 10 20
Feet

WallaceKuhl & ASSOCIATES

OIL / WATER SEPERATOR SAMPLE LOCATION MAP

SIERRAPINE

Rocklin, California

FIGURE	10
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	

Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

● Soil Sample Location

N

0 25 50

Feet

WallaceKuhl & ASSOCIATES

HOT OIL STORAGE ROOM
SAMPLE LOCATION MAP

SIERRAPINE

Rocklin, California

FIGURE	11A
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	

Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

- Hot Oil Room Excavation
- Hot Oil Room Confirmation Sample

N

0 20 40

Feet

WallaceKuhl & ASSOCIATES

HOT OIL STORAGE ROOM EXCAVATION
SAMPLE LOCATION MAP

SIERRAPINE

Rocklin, California

FIGURE	11B
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	

Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

- Soil Sample Location

N

0 25 50

Feet

WallaceKuhl & ASSOCIATES

FIRE WATER STORAGE PONDS, AST AND OIL SHED / ASH STORAGE SHED SAMPLE LOCATION MAP

SIERRAPINE

Rocklin, California

FIGURE	12
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	

Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

- Sample Location Under Drain Inlet
- Sub-Station Sample

N

0 15 30

Feet

WallaceKuhl & ASSOCIATES

ELECTRICAL SUB-STATION SAMPLE LOCATION MAP

SIERRAPINE

Rocklin, California

FIGURE	13
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	

Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

- Site Boundary
- Soil Sample Location

N

0 25 50
Feet

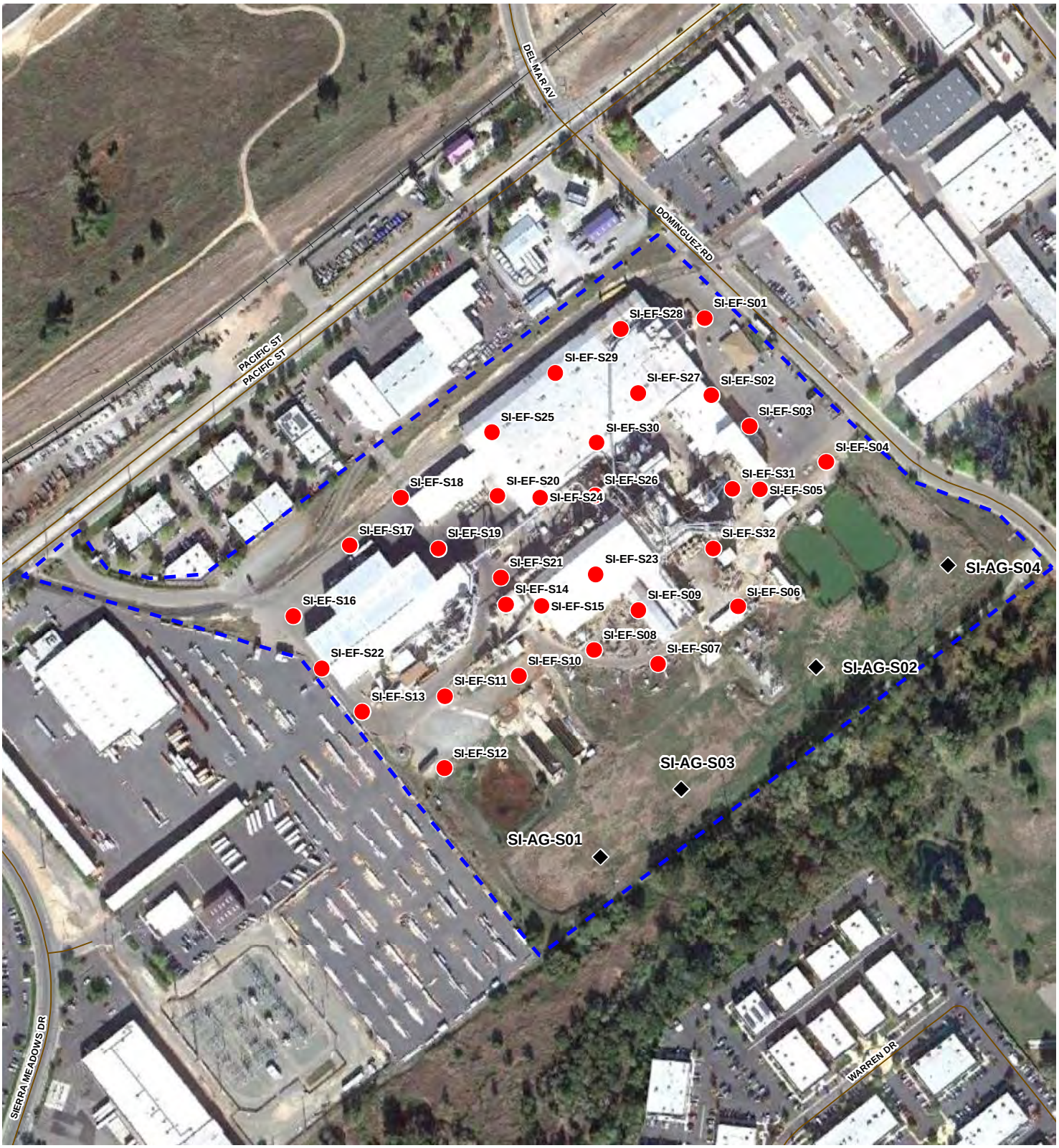
WallaceKuhl & ASSOCIATES

POTW BASIN SAMPLE LOCATION MAP

SIERRAPINE

Rocklin, California

FIGURE	14
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	



Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

- Site Boundary
- Engineered Fill Sample
- AG Sample Location

N

0 150 300
Feet

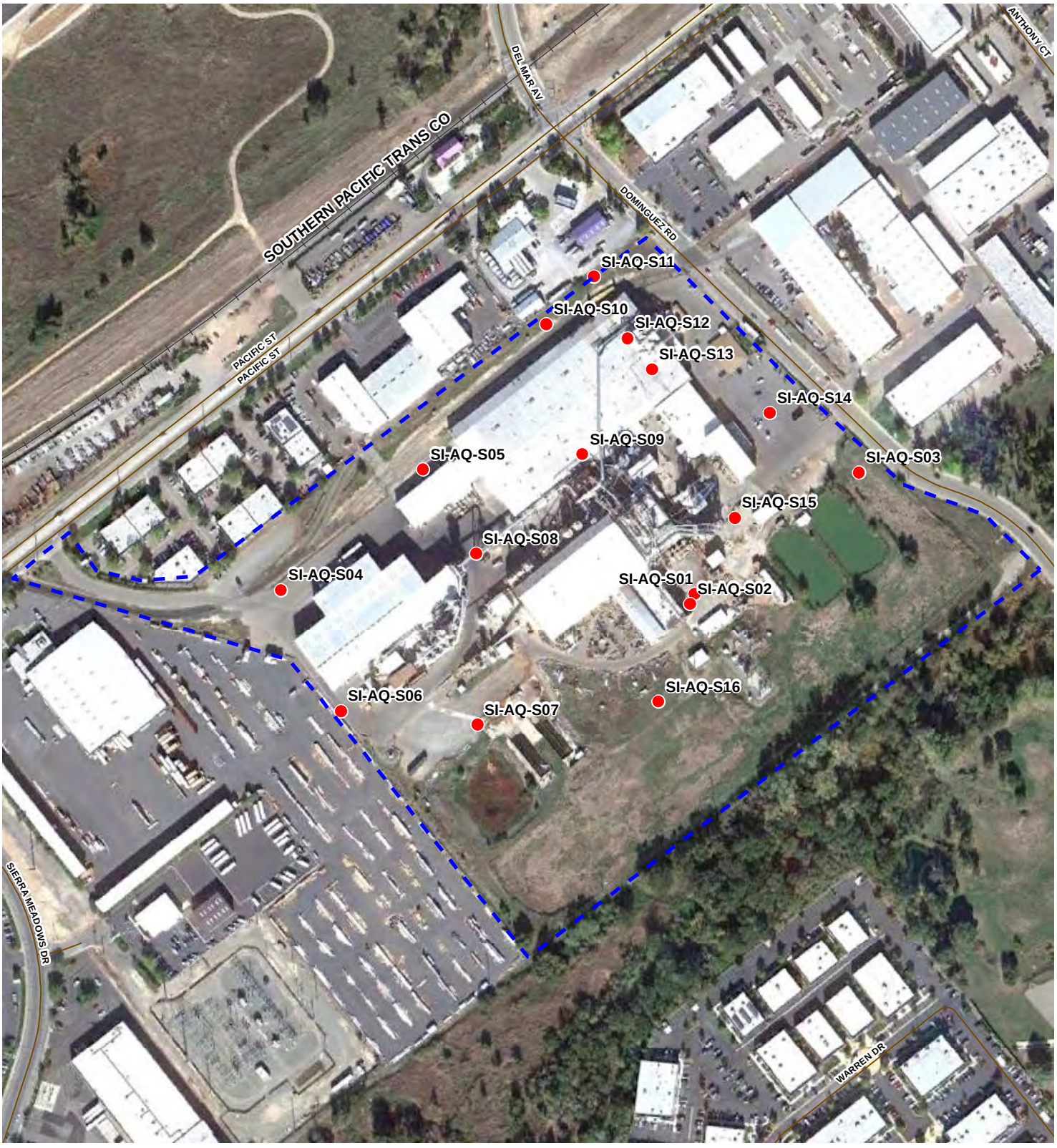
WallaceKuhl & ASSOCIATES

ENGINEERED FILL & HISTORICAL AGRICULTURAL AREA SAMPLE LOCATION MAP

SIERRAPINE

Rocklin, California

FIGURE	15
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	



Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

- Site Boundary
- Aquifer Sample Location

N

0 150 300

Feet

WallaceKuhl & ASSOCIATES

SHALLOW AQUIFER SAMPLE LOCATION MAP

SIERRAPINE

Rocklin, California

FIGURE	16
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	

Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

10/12/2015 - Confirmation Sample Location

- 1 - 2 feet bgs
- 2 - 3 feet bgs
- 3 - 4 feet bgs
- 5 - 6 feet bgs
- 6 - 7 feet bgs
- 10/12/2015 Foot Excavation Limits
- Press Pit Walls

N

0 10 20

Feet

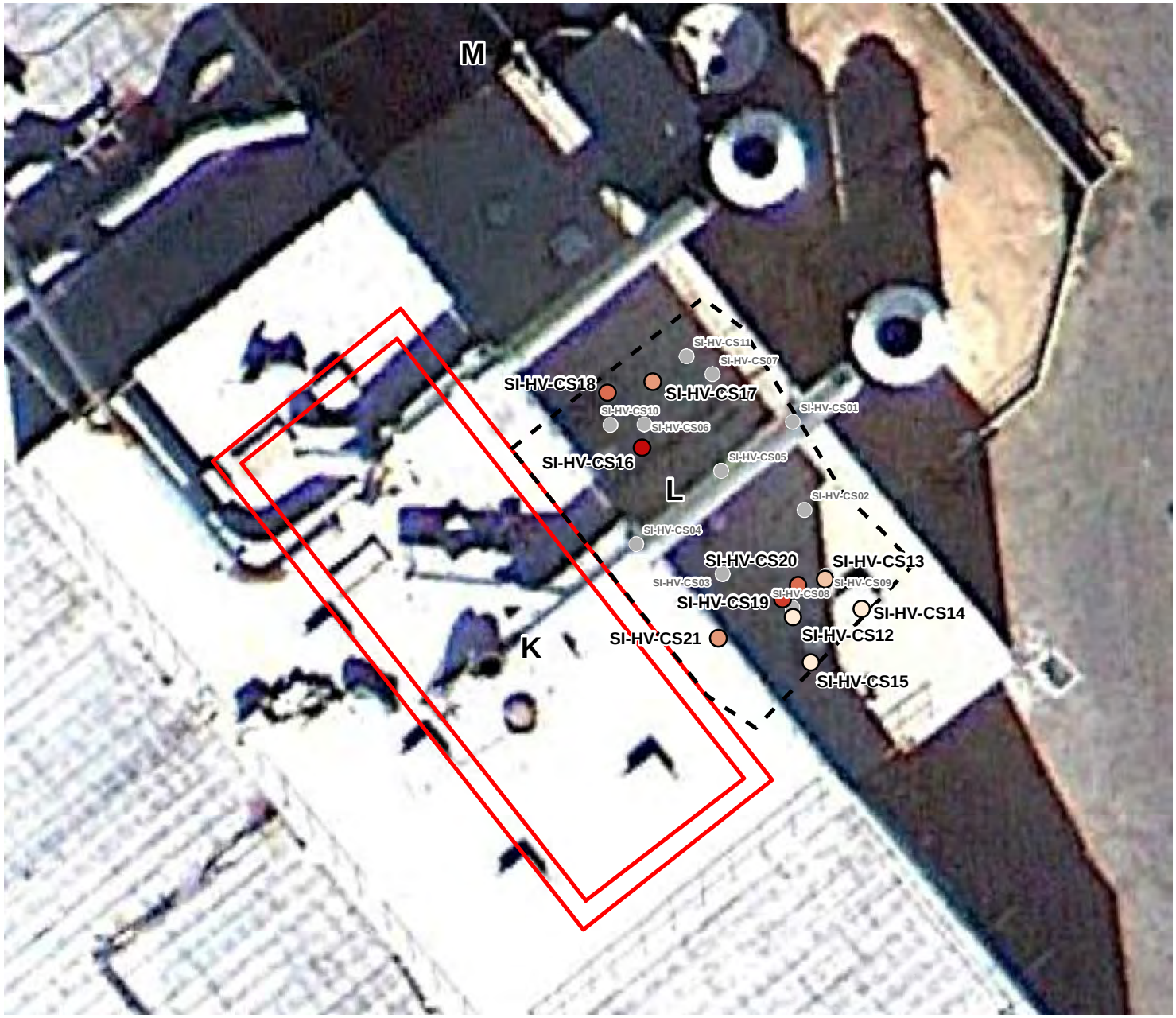
WallaceKuhl & ASSOCIATES

HYDRAULIC CONTROL ROOM EXCAVATION MAP

SIERRAPINE

Rocklin, California

FIGURE	17A
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	



Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

11/14/2015 Confirmation Sample Location

- 3-4 feet bgs
- 4-5 feet bgs
- 5-6 feet bgs
- 6-7 feet bgs
- 8-9 feet bgs
- 9-10 feet bgs
- Previous Confirmation Sample Location
- 11/4/15 Excavation Limits
- Press Pit Walls

N

0 10 20

Feet

WallaceKuhl & ASSOCIATES

HYDRAULIC CONTROL ROOM EXCAVATION MAP

SIERRAPINE

Rocklin, California

FIGURE	17B
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	

Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

- Previous Confirmation Sample Location

11/18/2015 Confirmation Sample Location

- 5-6 feet bgs
- 6-7 feet bgs
- 7-8 feet bgs
- 8-9 feet bgs
- 11-18-2015 Excavation Limits
- Press Pit Walls

N

0 10 20

Feet

WallaceKuhl & ASSOCIATES

HYDRAULIC CONTROL ROOM EXCAVATION MAP

SIERRAPINE

Rocklin, California

FIGURE	17C
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	

Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

- Previous Confirmation Sample Location

01/04/2016 Confirmation Sample Location

- 6-7 feet bgs
- 7-8 feet bgs
- 8-9 feet bgs
- 9-10 feet bgs
- 01/04/2016 Excavation Limits
- Press Pit Walls

N

0 10 20
Feet

WallaceKuhl & ASSOCIATES

HYDRAULIC CONTROL ROOM EXCAVATION MAP

SIERRAPINE

Rocklin, California

FIGURE	17D
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	

Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

- Previous Confirmation Sample Location
- 01/28/2016 Confirmation Sample Location
  - 8-9 feet bgs
  - 9-10 feet bgs
- 01/28/2016 Excavation Limits
- Press Pit Walls

N

0 10 20
Feet

WallaceKuhl & ASSOCIATES

HYDRAULIC CONTROL ROOM EXCAVATION MAP

SIERRAPINE

Rocklin, California

FIGURE	17E
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	

Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

- Previous Confirmation Sample Location
- 02/09/2016 Confirmation Sample Location
  - 6-7 feet bgs
  - 9-10 feet bgs
- 02/09/2016 Excavation Limits
- Press Pit Walls

N

0 10 20
Feet

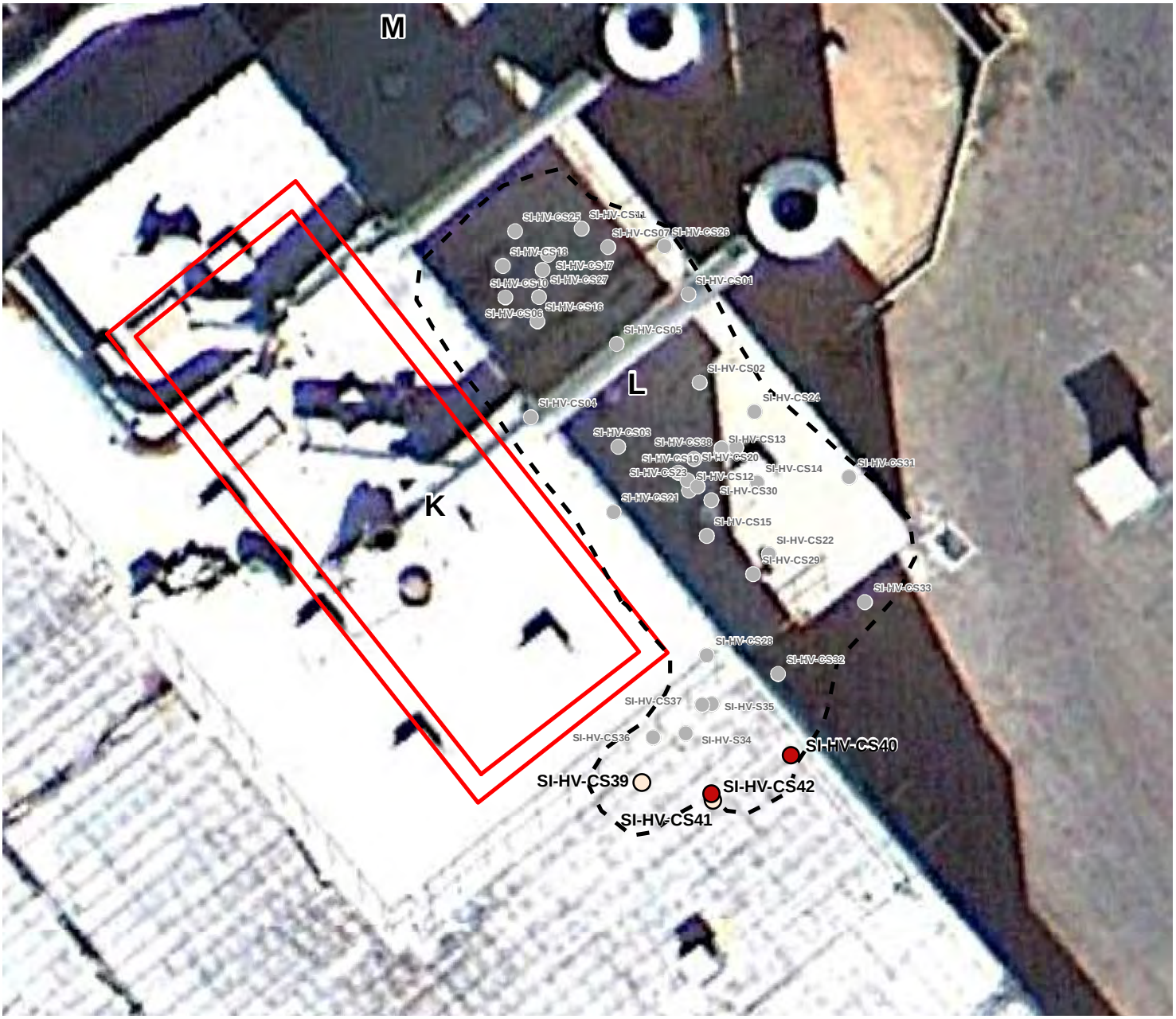
WallaceKuhl & ASSOCIATES

HYDRAULIC CONTROL ROOM EXCAVATION MAP

SIERRAPINE

Rocklin, California

FIGURE	17F
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	



Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

- Previous Confirmation Sample Location
- 02/19/2016 Confirmation Sample Location
- 5 - 6 feet bgs
- 6 - 7 feet bgs
- 02/19/2016 Excavation Limits
- Press Pit Walls

N

0 10 20
Feet

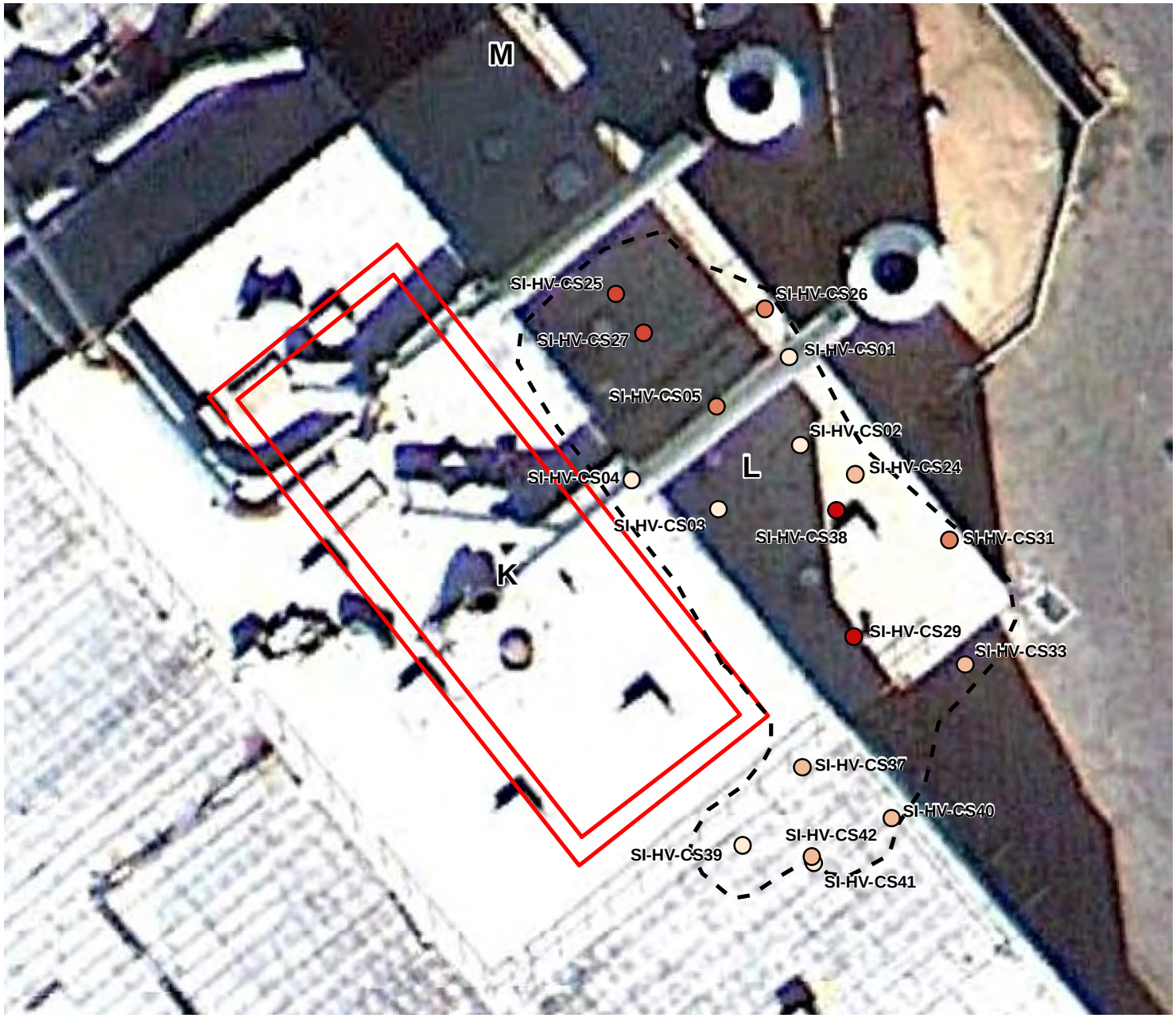
WallaceKuhl & ASSOCIATES

HYDRAULIC CONTROL ROOM EXCAVATION MAP

SIERRAPINE

Rocklin, California

FIGURE	17G
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	



Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

Remaining Confirmation Sample Locations

- 5 - 6 feet bgs
- 6 - 7 feet bgs
- 7 - 8 feet bgs
- 8 - 9 feet bgs
- 9 - 10 feet bgs

Final Excavation Limits

Press Pit Walls

N

0 10 20

Feet

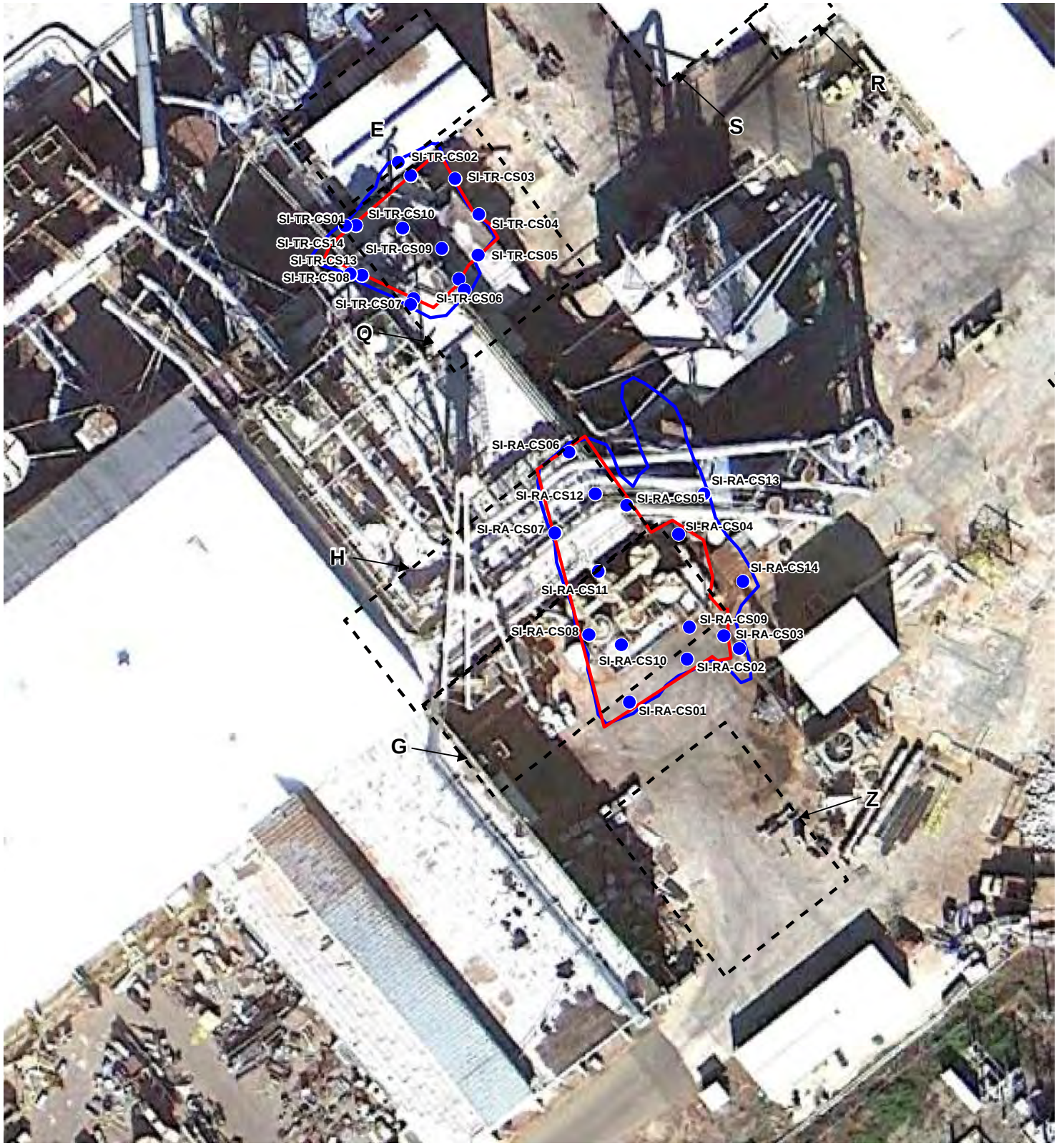
WallaceKuhl & ASSOCIATES

HYDRAULIC CONTROL ROOM CONFIRMATION SAMPLE MAP

SIERRAPINE

Rocklin, California

FIGURE	17H
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	



Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

- Excavation Limits (8/1/2016)
- Excavation Limits (8/22/2016)
- Confirmation Sample Location

N

0 25 50

Feet

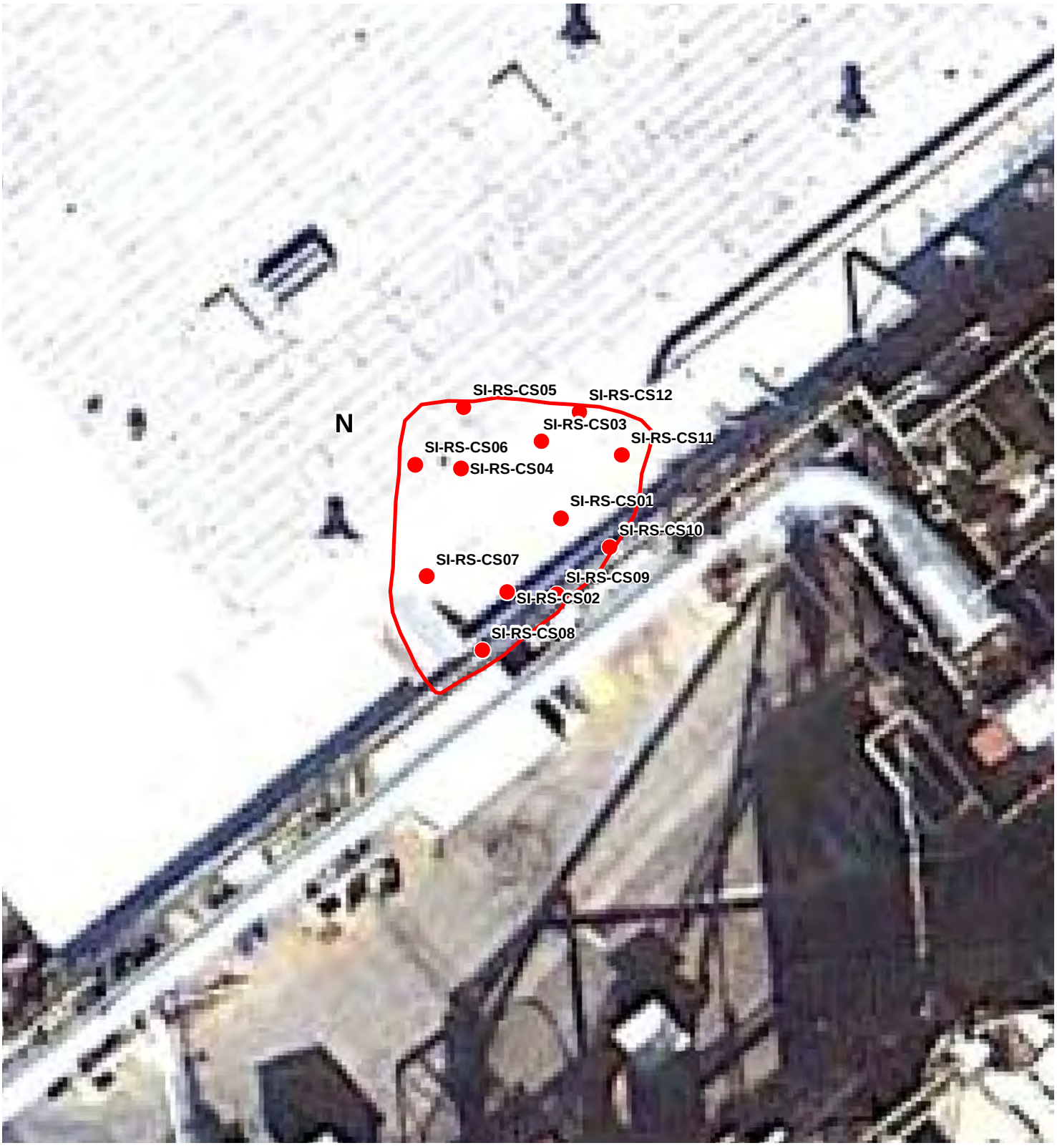
WallaceKuhl & ASSOCIATES

RESIN AREA AND MAIN TRANSFORMER EXCAVATION MAP

SIERRAPINE

Rocklin, California

FIGURE	18
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	



Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

- Site Boundary
- Ripsaw Excavation Limits
- Soil Sample Location

N

0 10 20

Feet

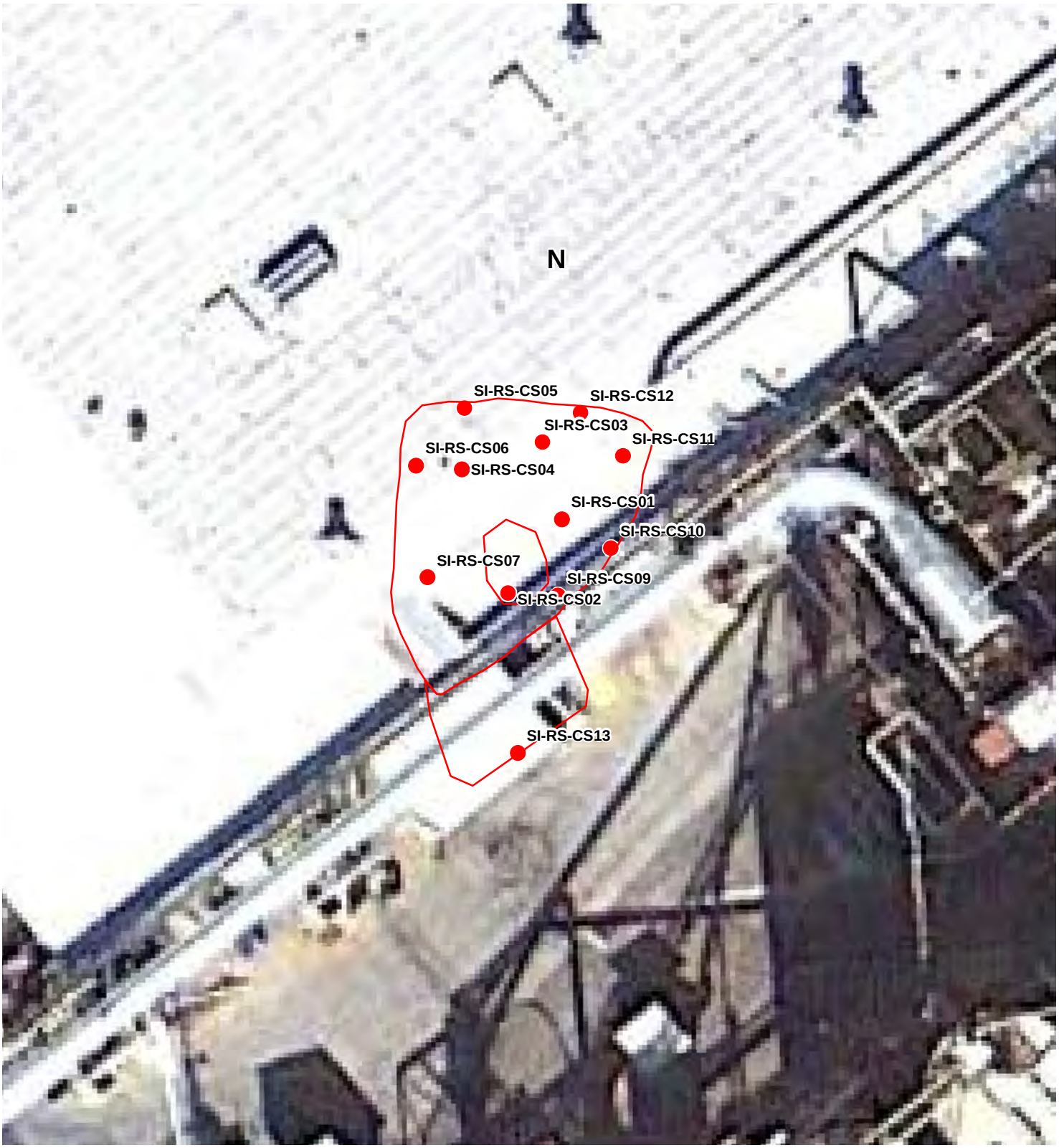
WallaceKuhl & ASSOCIATES

RIPSAW EXCAVATION MAP

SIERRAPINE

Rocklin, California

FIGURE	19A
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	



Adapted from a Google Earth aerial photograph, dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

- Site Boundary
- Ripsaw Excavation Limits
- Sample Locations

N

0 10 20

Feet

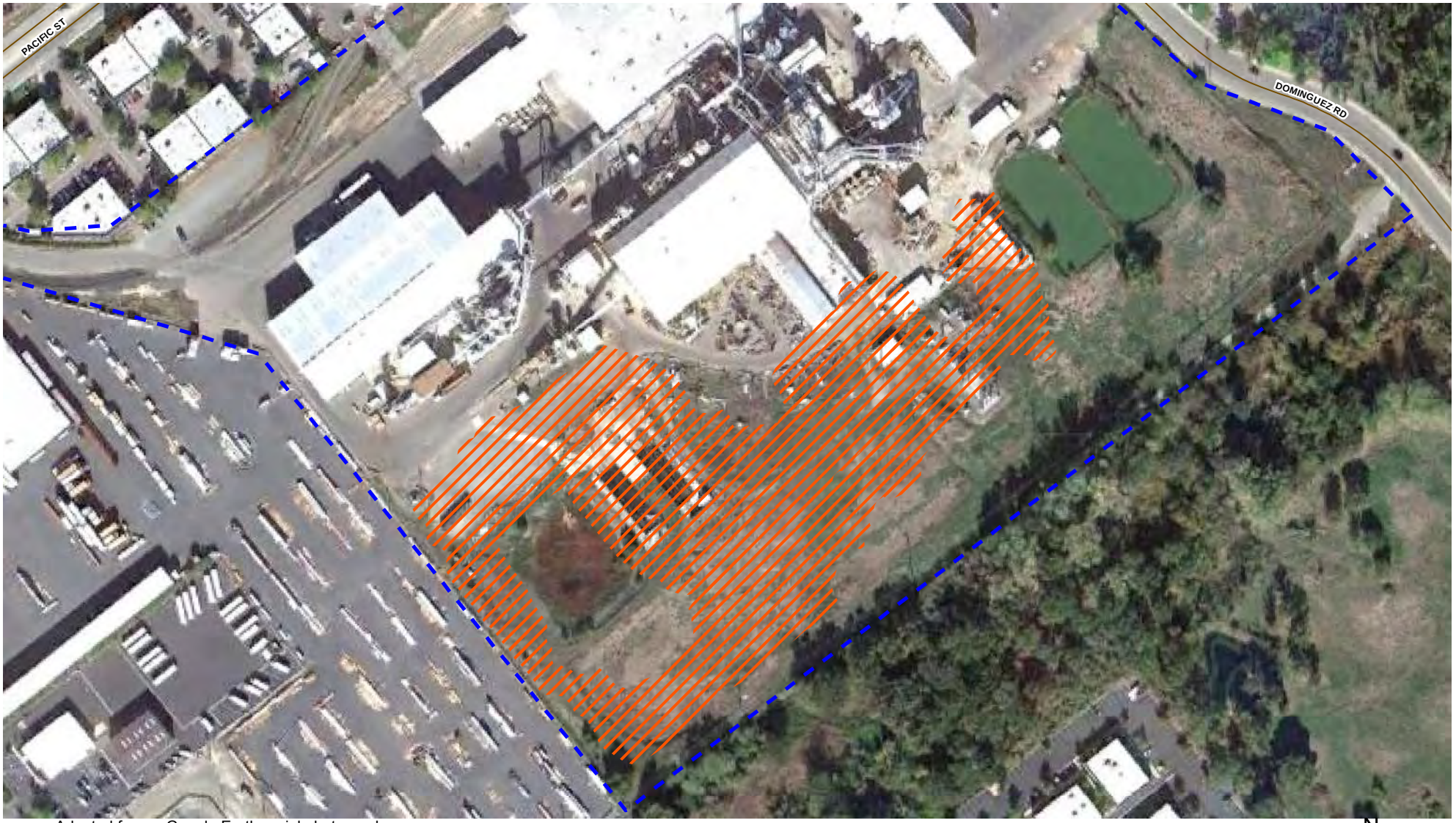
WallaceKuhl & ASSOCIATES

FINAL RIPSAW EXCAVATION MAP

SIERRAPINE

Rocklin, California

FIGURE	19B
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO. 10467.10	



Adapted from a Google Earth aerial photograph,
dated October 30, 2011.
Projection: NAD 83, California State Plane, Zone II

Legend

Site Boundary

Excavated Areas as of 10/13/2016

N

0 100 200

Feet

WallaceKuhl & ASSOCIATES

EXCAVATION LIMITS BURIED WOOD FIBER FILL

SIERRAPINE

Rocklin, California

FIGURE	20
DRAWN BY	RWO
CHECKED BY	JWR
PROJECT MGR	BCY
DATE	10/16
WKA NO.	10467.10

Table 1
Summary of Soil Analytical Results - Dust Fired Boiler
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sample Depth (feet)	CAM 17 Metals by EPA 6010/ 7010									
				Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury
Concentrations reported in milligrams per kilogram (mg/kg)													
SI-WB-S01a	Discrete	11/19/2015	0 - 0.5	<2.5	0.41	94	<1.0	<1.0	16	4.5	13	<2.5	<0.10
SI-WB-S01b	Discrete	11/19/2015	2 - 2.5	<2.5	2.1	100	<1.0	<1.0	18	6.7	16	<2.5	<0.10
SI-WB-S02a	Discrete	11/19/2015	0 - 0.5	<2.5	2.8	110	<1.0	<1.0	21	5.4	16	3.5	0.13
SI-WB-S02b	Discrete	11/19/2015	2 - 2.5	<2.5	1.3	70	<1.0	<1.0	18	6.3	14	<2.5	<0.10
SI-WB-S03a	Discrete	11/19/2015	0 - 0.5	<2.5	3.3	98	<1.0	<1.0	28	5.8	18	<2.5	0.1
SI-WB-S03b	Discrete	11/19/2015	2 - 2.5	Not Analyzed - No Sample Recovery									

Sample ID	Sample Type	Sample Date	Sample Depth (feet)	CAM 17 Metals by EPA 6010/ 7010							EPA 7199	EPA 8310
				Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Chromium VI	PAHs
Concentrations reported in milligrams per kilogram (mg/kg)												
SI-WB-S01a	Discrete	11/19/2015	0 - 0.5	<1.0	9.6	<2.5	<1.0	<1.0	25	24	0.038	ND [1]
SI-WB-S01b	Discrete	11/19/2015	2 - 2.5	<1.0	13	<2.5	<1.0	<1.0	33	28	<0.010	ND [1]
SI-WB-S02a	Discrete	11/19/2015	0 - 0.5	<1.0	13	<2.5	<1.0	<1.0	30	35	0.034	ND [1]
SI-WB-S02b	Discrete	11/19/2015	2 - 2.5	<1.0	12	<2.5	<1.0	<1.0	33	25	<0.010	ND [1]
SI-WB-S03a	Discrete	11/19/2015	0 - 0.5	<1.0	14	<2.5	<1.0	<1.0	29	34	0.017	ND [1]
SI-WB-S03b	Discrete	11/19/2015	2 - 2.5	Not Analyzed - No Sample Recovery								

Note:

<1.0 - Less than laboratory reporting limit

CAM 17 - California Assessment Manual 17 listed metals

ND [1] - The laboratory analysis of the samples listed above did not detect PAHs at concentrations above laboratory reporting limits

Table 2
Summary of Soil Analytical Results - Resin Storage Tank Area
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sample Depth (feet)	SM4500-NH3C	EPA 300.0		EPA 8315A
				Ammonia as N	Nitrate/ Nitrite as N	Sulfate as SO4	Formaldehyde
Concentrations reported in milligrams per kilogram (mg/kg)							
SI-TF-S01a	Discrete	11/18/2015	0 - 0.5	26	<5.0	180	<1.0
SI-TF-S01b	Discrete	11/18/2015	2 - 2.5	31	<5.0	110	2.9
SI-TF-S02a	Discrete	11/18/2015	0 - 0.5	<20	<5.0	83	<1.0
SI-TF-S02b	Discrete	11/18/2015	2 - 2.5	<20	<5.0	11	<1.0
SI-TF-S03a	Discrete	11/18/2015	0 - 0.5	1300	9.6	170	5.2
SI-TF-S03b	Discrete	11/18/2015	2 - 2.5	<20	<5.0	92	2.6
SI-TF-S04a	Discrete	11/18/2015	0 - 0.5	1800	350	1300	28
SI-TF-S04b	Discrete	11/18/2015	2 - 2.5	1200	5.4	160	9.6
SI-TF-S05a	Discrete	11/18/2015	0 - 0.5	1200	600	2100	48
SI-TF-S05b	-	11/18/2015	-	Not Analyzed - No Sample Recovery			

Notes:
<1.0 - Less than laboratory reporting limit
N - Nitrogen
SO4 - Sulfate

Table 3
Summary of Soil Analytical Results - Resin Mixing Area
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sample Depth (feet)	SM4500-NH3C	EPA 300.0		EPA 8315A
				Ammonia as N	Nitrate/ Nitrite as N	Sulfate as SO4	Formaldehyde
Concentrations reported in milligrams per kilogram (mg/kg)							
SI-MA-S01a	Discrete	11/18/2015	0 - 0.5	<20	6.6	170	<1.0
SI-MA-S01b	Discrete	11/18/2015	2 - 2.5	<20	<5.0	120	<1.0
SI-MA-S02a	Discrete	11/18/2015	0 - 0.5	42	38	140	<1.0
SI-MA-S02b	Discrete	11/18/2015	2 - 2.5	<20	<5.0	9.2	<1.0
SI-MA-S03a	Discrete	11/18/2015	0 - 0.5	860	360	120	7.3
SI-MA-S03b	Discrete	11/18/2015	2 - 2.5	26	<5.0	<5.0	<1.0
SI-MA-S04a	Discrete	11/18/2015	0 - 0.5	540	82	160	5.5
SI-MA-S04b	Discrete	11/18/2015	2 - 2.5	120	5.7	39	1.1
SI-MA-S05a	Discrete	11/18/2015	0 - 0.5	200	59	250	3.8
SI-MA-S05b	Discrete	11/18/2015	2 - 2.5	220	49	140	2.5

Notes:
<1.0 - Less than laboratory reporting limit
N - Nitrogen
SO4 - Sulfate

Table 4
Summary of Soil Analytical Results - Oil/ Water Seperator
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sample Depth (feet)	EPA 8015			EPA 8260M	EPA 8260	EPA 8310
				TPH as Diesel	TPH as Hydraulic Oil	TPH as Motor Oil	TPH as Gasoliine	VOCs	PAHs
Concentrations reported in milligrams per kilogram (mg/kg)									
SI-OW-S01a	Discrete	11/19/2015	0 - 0.5	<1.0	13	<1.0	<0.20	ND [1]	ND [2]
SI-OW-S01b	Discrete	11/19/2015	2 - 2.5	<1.0	12	<1.0	<0.20	ND [1]	ND [2]
SI-OW-S02a	Discrete	11/19/2015	0 - 0.5	<1.0	12	<1.0	<0.20	ND [1]	ND [2]
SI-OW-S02b	Discrete	11/19/2015	2 - 2.5	<1.0	10	<1.0	<0.20	ND [1]	ND [2]

Notes:
<1.0 - Less than laboratory reporting limit
TPH - Total Petroleum Hydrocarbons
VOC - Volatile Organic Compounds
PAH - Polynuclear aromatic hydrocarbons
ND [1] - The laboratory analysis of the samples listed above did not detect VOCs at concentrations above laboratory reporting limits
ND [2] - The laboratory analysis of the samples listed above did not detect PAHs at concentrations above laboratory reporting limits

Table 5
Summary of Soil Analytical Results - Hot Oil Storage Room
SierraPine
WKA No. 10467.10

Sample ID	Sample type	Sample Date	Sample Depth (feet)	EPA 8015			EPA 8260M	EPA 8260B [1]			
				TPH as Diesel	TPH as Hydraulic Oil	TPH as Motor Oil	TPH as Gasoline	Benzene	Ethylbenzene	Toluene	Xylenes
Concentrations reported in:				milligrams per kilogram (mg/kg)				micrograms per kilogram (ug/kg)			
SI-HO-S01a	Discrete	12/1/2015	0 - 0.5	<1.0	6.3	<1.0	<0.20	<5.0	<5.0	<5.0	<10
SI-HO-S01b	Discrete	12/1/2015	2 - 2.5	<1.0	2.1	<1.0	<0.20	<5.0	<5.0	<5.0	<10
SI-HO-S02a	Discrete	12/1/2015	0 - 0.5	<1.0	4500	<1.0	<0.20	<5.0	<5.0	<5.0	<10
SI-HO-S02b	Discrete	12/1/2015	2 - 2.5	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	<5.0	<10
SI-HO-S03a	Discrete	12/1/2015	0 - 0.5	330	42000	<1.0	<0.20	<5.0	<5.0	<5.0	<10
SI-HO-S03b	Discrete	12/1/2015	2 - 2.5	<1.0	1700	<1.0	<0.20	<5.0	<5.0	<5.0	<10

Notes:
<1.0 - Less than laboratory reporting limit
TPH - Total Petroleum Hydrocarbons
VOC - Volatile Organic Compounds
[1] - Samples analyzed for BTEX only

Table 6
Summary of Soil Analytical Results - Oil Shed/ Ash Storage Shed
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sample Depth (feet)	EPA 8015			EPA 8260	EPA 7199	EPA 8260	EPA 8310
				TPH as Diesel	TPH as Hydraulic Oil	TPH as Motor Oil	TPH as Gasoline	Chromium VI	VOCs	PAHs
Concentrations reported in milligrams per kilogram (mg/kg)										
SI-OS-S01a	Discrete	12/29/2015	0 - 0.5	1.5	<5.0	14	<0.20	<10	ND [1]	ND [2]
SI-OS-S01b	Discrete	12/29/2015	2 - 2.5	<5.0	<5.0	<5.0	<0.20	<10	ND [1]	ND [2]
SI-OS-S02a	Discrete	12/29/2015	0 - 0.5	<5.0	<5.0	61	<0.20	<10	ND [1]	ND [2]
SI-OS-S02b	Discrete	12/29/2015	2 - 2.5	<5.0	<5.0	<5.0	<0.20	<10	ND [1]	ND [2]
SI-OS-S03a	Discrete	12/29/2015	0 - 0.5	<5.0	<5.0	350	<0.20	<10	ND [1]	ND [2]
SI-OS-S03b	Discrete	12/29/2015	2 - 2.5	<5.0	<5.0	<5.0	<0.20	<10	ND [1]	ND [2]

Sample ID	CAM 17 metals by EPA 6010/ 7010															
	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Concentrations reported in milligrams per kilogram (mg/kg)																	
SI-OS-S01a	<2.5	1.6	53	<1.0	<1.0	23	7.6	36	7.3	<0.10	1.1	14	<2.5	<1.0	<1.0	33	160
SI-OS-S01b	<2.5	1.2	100	<1.0	<1.0	20	7.3	22	2.9	<0.10	<1.0	7.5	<2.5	<1.0	<1.0	33	23
SI-OS-S02a	<2.5	1.2	120	<1.0	<1.0	23	9	29	3.1	<0.10	<1.0	8.6	<2.5	<1.0	<1.0	40	42
SI-OS-S02b	<2.5	2.4	100	<1.0	<1.0	32	11	27	<2.5	<0.10	<1.0	12	<2.5	<1.0	<1.0	28	29
SI-OS-S03a	7.9	3.1	97	<1.0	<1.0	2500	23	54	9.5	<0.10	22	1200	<2.5	<1.0	<1.0	38	110
SI-OS-S03b	<2.5	1.3	110	<1.0	<1.0	29	7.7	27	2.7	<0.10	<1.0	11	<2.5	<1.0	<1.0	37	26

Notes:

<1.0 - Less than laboratory reporting limit

TPH - Total Petroleum Hydrocarbons

CAM 17 - California Assessment Manual 17 listed metals

VOC - Volitile Organic Compounds

ND [1] The laboratory analysis of the samples listed above did not detect VOCs not listed above at concentrations above laboratory reporting limits

ND [2] The laboratory analysis of the samples listed above did not detect PAHs not listed above at concentrations above laboratory reporting limits

Table 7
Summary of Soil Analytical Results - Above Ground Diesel Storage Tank
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sample Depth (feet)	EPA 8015	VOCs by EPA 8260B					
				TPH as Diesel	Benzene	Ethlybenzene	MTBE	Toluene	Napthelene	Xylenes
Concentrations reported in:				milligrams per kilogram (mg/kg)	micrograms per kilogram (ug/kg)					
SI-DT-S01a	Discrete	12/1/2015	0 - 0.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-DT-S01b	Discrete	12/1/2015	2 - 2.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-DT-S02a	Discrete	12/1/2015	0 - 0.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-DT-S02b	Discrete	12/1/2015	2 - 2.5	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10

Notes:
<1.0 - Less than laboratory reporting limit
TPH - Total Petroleum Hydrocarbons
VOC - Volitile Organic Compounds

Table 8
Summary of Soil Analytical Results - Electrical Substation
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sample Depth (feet)	EPA 8080A PCBs
Concentrations reported in micrograms per kilogram (µg/kg)				
SI-SS-S01a	Discrete	6/14/2016	0 - 0.5	<20
SI-SS-S01b	Discrete	6/14/2016	2 - 2.5	<20
SI-SS-S02a	Discrete	6/14/2016	0 - 0.5	<20
SI-SS-S02b	Discrete	6/14/2016	2 - 2.5	<20
SI-SS-S03a	Discrete	6/14/2016	0 - 0.5	<20
SI-SS-S03b	Discrete	6/14/2016	2 - 2.5	<20
SI-SS-S04a	Discrete	6/14/2016	0 - 0.5	<20
SI-SS-S04b	Discrete	6/14/2016	2 - 2.5	<20
SI-SS-S05a	Discrete	6/14/2016	0 - 0.5	<20
SI-SS-S05b	Discrete	6/14/2016	2 - 2.5	<20

Notes:
<20 - Less than laboratory reporting limit
PCB - polychlorinated biphenyl

Table 9
Summary of Soil Analytical Results - Main Transformer Room
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sample Depth (feet)	EPA 8080A PCBs
Concentrations reported in miligrams per kilogram (mg/kg)				
SI-TR-S01a	Discrete	11/19/2015	0 - 0.5	<0.020
SI-TR-S01b	Discrete	11/19/2015	2 - 2.5	<0.020
SI-TR-S02a	Discrete	11/19/2015	0 - 0.5	3.5*
SI-TR-S02b	Discrete	11/19/2015	2 - 2.5	<0.020
SI-TR-S03a	Discrete	11/19/2015	0 - 0.5	0.18*
SI-TR-S03b	Discrete	11/19/2015	2 - 2.5	<0.020

Notes:
<1.0 - Less than laboratory reporting limit
PCB - polychlorinated biphenyl
* PCBs as Aroclor 1254

Table 10
Summary of Soil Analytical Results - Auxiliary Transformer Room
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sample Depth (feet)	EPA 8080A PCBs
Concentrations reported in miligrams per kilogram (mg/kg)				
SI-AT-S01a	Discrete	11/20/2015	0 - 0.5	<20
SI-AT-S01b	Discrete	11/20/2015	2 - 2.5	<20
SI-AT-S02a	Discrete	11/20/2015	0 - 0.5	0.039*
SI-AT-S02b	Discrete	11/20/2015	2 - 2.5	0.039*

Notes:
<1.0 - Less than laboratory reporting limit
PCB - polychlorinated biphenyl
* PCBs as Aroclor 1260

Table 11
Summary of Soil Analytical Results - Equipment Repair/ Machine Shop
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sample Depth (feet)	EPA 8015			EPA 8260M	EPA 8260	EPA 8310
				TPH as Hydraulic Oil	TPH as Diesel	TPH as Motor oil	TPH as Gasoliine	VOCs	PAHs
Concentrations reported in:				milligrams per kilogram (mg/kg)					
SI-MS-S01a	Discrete	11/20/2015	0 - 0.5	360	<1.0	<1.0	<0.20	ND [1]	ND [2]
SI-MS-S01b	Discrete	11/20/2015	2 - 2.5	190	<1.0	<1.0	<0.20	ND [1]	ND [2]
SI-MS-S02a	Discrete	11/20/2015	0 - 0.5	210	<1.0	<1.0	<0.20	ND [1]	ND [2]
SI-MS-S02b	Discrete	11/20/2015	2 - 2.5	<1.0	<1.0	<1.0	<0.20	ND [1]	ND [2]
SI-MS-S03a	Discrete	11/20/2015	0 - 0.5	110	<1.0	<1.0	<0.20	ND [1]	ND [2]
SI-MS-S03b	Discrete	11/20/2015	2 - 2.5	<1.0	<1.0	<1.0	<0.20	ND [1]	ND [2]

Notes:
<1.0 - Less than laboratory reporting limit
TPH - Total Petroleum Hydrocarbons
VOC - Volatile Organic Compounds
ND [1] - The laboratory analysis of the samples listed above did not detect VOCs at concentrations above laboratory reporting limits
ND [2] The laboratory analysis of the samples listed above did not detect PAHs not listed above at concentrations above laboratory reporting

Table 12
Summary of Soil Analytical Results - POTW Basin
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sample Depth	EPA 8015M			EPA 8260M
				TPH as Hydraulic Oil	TPH as Diesel	TPH as Motor Oil	TPH as Gasoline
Concentrations reported in milligrams per kilogram (mg/kg)							
SI-PO-S01a	Discrete	1/4/2016	0 - 0.5	370	<1.0	<1.0	<0.20
SI-PO-S01b	Discrete	1/4/2016	2 - 2.5	<1.0	<1.0	<1.0	<0.20
SI-PO-S02a	Discrete	1/4/2016	0 - 0.5	<1.0	<1.0	2.0	<0.20
SI-PO-S02b	Discrete	1/4/2016	2 - 2.5	<1.0	<1.0	<1.0	<0.20
SI-PO-S03a	Discrete	1/4/2016	0 - 0.5	76	<1.0	<1.0	0.32
SI-PO-S03b	Discrete	1/4/2016	2 - 2.5	53	<1.0	<1.0	<0.20
SI-PO-S04a	Discrete	1/4/2016	0 - 0.5	190	<1.0	<1.0	<0.20
SI-PO-S04b	Discrete	1/4/2016	2 - 2.5	1100	<1.0	<1.0	<0.20

Sample ID	Sample Type	Sample Date	Sample Depth	EPA 8260B [1]							EPA 7199
				Benzene	Ethylbenzene	MTBE	Toluene	Xylenes	Naphthalene	opropyltolu	Chromium VI
micrograms per kilogram (ug/kg)											
SI-PO-S01a	Discrete	1/4/2016	0 - 0.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-PO-S01b	Discrete	1/4/2016	2 - 2.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-PO-S02a	Discrete	1/4/2016	0 - 0.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-PO-S02b	Discrete	1/4/2016	2 - 2.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-PO-S03a	Discrete	1/4/2016	0 - 0.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	28	<10
SI-PO-S03b	Discrete	1/4/2016	2 - 2.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-PO-S04a	Discrete	1/4/2016	0 - 0.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-PO-S04b	Discrete	1/4/2016	2 - 2.5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10

Notes:
<1.0 - Less than laboratory reporting limit
TPH - Total Petroleum Hydrocarbons
VOC - Volatile Organic Compounds
[1] The laboratory analysis of the samples listed above did not detect VOCs not listed above at concentrations above laboratory reporting limits
CAM 17 - California Assessment Manual 17 listed metals

Table 13
Summary of Soil Analytical Results - Fire Water Storage Ponds
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sample Depth	EPA 8015M			EPA 8260M	EPA 8260B [1]						EPA 7199
				TPH as Hydraulic Oil	TPH as Diesel	TPH as Motor Oil	TPH as Gasoline	Benzene	Ethylbenzene	MTBE	Toluene	Xylenes	Naphthalene	Chromium VI
				Concentrations reported in milligrams per kilogram (mg/kg)				micrograms per kilogram (ug/kg)						
SI-FP-S01a	Discrete	1/4/2016	Liner	<1.0	<1.0	2.1	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-FP-S01b	Discrete	1/4/2016	Under Liner	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-FP-S02a	Discrete	1/4/2016	Liner	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-FP-S02b	Discrete	1/4/2016	Under Liner	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-FP-S03a	Discrete	1/4/2016	Liner	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-FP-S03b	Discrete	1/4/2016	Under Liner	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-FP-S04a	Discrete	1/4/2016	Liner	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-FP-S04b	Discrete	1/4/2016	Under Liner	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-FP-S05a	Discrete	1/4/2016	Liner	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-FP-S05b	Discrete	1/4/2016	Under Liner	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-FP-S06a	Discrete	1/4/2016	Liner	<1.0	<1.0	1.9	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-FP-S06b	Discrete	1/4/2016	Under Liner	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-FP-S07a	Discrete	1/4/2016	Liner	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-FP-S07b	Discrete	1/4/2016	Under Liner	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-FP-S08a	Discrete	1/4/2016	Liner	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10
SI-FP-S08b	Discrete	1/4/2016	Under Liner	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10

Sample ID	CAM 17 Metals by EPA 6010/ 7010																
	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenu	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
	Concentrations reported in milligrams per kilogram (mg/kg)																
SI-FP-S01a	<2.5	1.7	66	<1.0	<1.0	18	4.4	21	4.3	0.16	1.3	9.7	<2.5	<1.0	<1.0	34	82
SI-FP-S01b	<2.5	2.3	78	<1.0	<1.0	16	5.4	9.3	2.9	0.37	<1.0	8.7	<2.5	<1.0	<1.0	38	17
SI-FP-S02a	<2.5	<1.0	13	<1.0	<1.0	6	1.4	9.5	<2.5	0.2	<1.0	3.2	<2.5	<1.0	<1.0	23	16
SI-FP-S02b	<2.5	2.8	87	<1.0	<1.0	19	6.6	12	2.8	0.41	<1.0	10	<2.5	<1.0	<1.0	40	20
SI-FP-S03a	<2.5	1.7	40	<1.0	<1.0	12	2.4	19	3.9	0.23	<1.0	5.6	<2.5	<1.0	<1.0	41	17
SI-FP-S03b	<2.5	3	68	<1.0	<1.0	13	5.9	8.5	<2.5	0.26	<1.0	6.8	<2.5	<1.0	<1.0	29	13
SI-FP-S04a	<2.5	2.5	34	<1.0	<1.0	17	3.6	28	5.6	0.36	<1.0	8.8	<2.5	<1.0	<1.0	55	38
SI-FP-S04b	<2.5	1.9	70	<1.0	<1.0	13	5.6	8.3	2.9	0.42	<1.0	6.8	<2.5	<1.0	<1.0	27	14
SI-FP-S05a	<2.5	2.3	38	<1.0	<1.0	13	2.7	24	4.5	0.29	<1.0	6.8	<2.5	<1.0	<1.0	43	23
SI-FP-S05b	<2.5	2.2	65	<1.0	<1.0	16	5.9	8.9	<2.5	0.39	<1.0	8.1	<2.5	<1.0	<1.0	34	16
SI-FP-S06a	<2.5	1.8	27	<1.0	<1.0	15	3.5	37	6.6	<0.10	<1.0	8.9	<2.5	<1.0	<1.0	59	48
SI-FP-S06b	<2.5	1.2	81	<1.0	<1.0	15	6.5	9.7	<2.5	<0.10	<1.0	8	<2.5	<1.0	<1.0	36	17
SI-FP-S07a	<2.5	2.3	25	<1.0	<1.0	13	2.6	29	5.8	0.19	<1.0	7.3	<2.5	<1.0	<1.0	63	35
SI-FP-S07b	<2.5	1.3	58	<1.0	<1.0	11	3.5	7.3	3.9	<0.10	<1.0	5.5	<2.5	<1.0	<1.0	26	13
SI-FP-S08a	<2.5	1.6	27	<1.0	<1.0	16	2.4	34	6.1	0.45	<1.0	7.4	<2.5	<1.0	<1.0	51	29
SI-FP-S08b	<2.5	2.4	51	<1.0	<1.0	11	4.6	6.8	<2.5	<0.10	<1.0	5.8	<2.5	<1.0	<1.0	27	11

Notes:
<1.0 - Less than laboratory reporting limit
TPH - Total Petroleum Hydrocarbons
VOC - Volatile Organic Compounds
[1] The laboratory analysis of the samples listed above did not detect VOCs not listed above at concentrations above laboratory reporting limits
CAM 17 - California Assessment Manual 17 listed metals

Table 14
Summary of Soil Analytical Results - Former UST Area
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sample Depth (feet)	EPA 8015			EPA 8260M	SM4500-NH3C / EPA 300.0			EPA 8315A	EPA 8260	EPA 8310
				TPH as Diesel	TPH as Hydraulic Oil	TPH as Motor Oil	TPH as Gasoline	Ammonia as N	Nitrate/ Nitrite as N	Sulfate as SO4	Formaldehyde	VOCs	PAHs
Concentrations reported in milligrams per kilogram (mg/kg)													
SI-UT-SO1a	Discrete	12/18/2015	4	4.3	<1.0	89	0.23	880	<5.0	81	3	ND [1]	ND [2]
SI-UT-SO1b	Discrete	12/18/2015	8	3.3	<1.0	<1.0	0.26	60	<5.0	8.7	1.3	ND [1]	ND [2]
SI-UT-SO1c	Discrete	12/18/2015	12	<1.0	<1.0	<1.0	<0.20	33	<5.0	5.8	<1.0	ND [1]	ND [2]
SI-UT-SO1d	Discrete	12/18/2015	14	<1.0	<1.0	<1.0	<0.20	24	<5.0	7.2	<1.0	ND [1]	ND [2]
SI-UT-SO2a	Discrete	12/17/2015	4	<1.0	<1.0	<1.0	<0.20	350	<5.0	na	2.2	ND [1]	ND [2]
SI-UT-SO2b	Discrete	12/17/2015	8	<1.0	<1.0	<1.0	<0.20	24	<5.0	na	1.2	ND [1]	ND [2]
SI-UT-SO2c	Discrete	12/17/2015	12	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	na	<1.0	ND [1]	ND [2]
SI-UT-SO2d	Discrete	12/17/2015	14	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	na	<1.0	ND [1]	ND [2]
SI-UT-SO3a	Discrete	12/17/2015	4	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	na	3.3	ND [1]	ND [2]
SI-UT-SO3b	Discrete	12/17/2015	8	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	na	1.9	ND [1]	ND [2]
SI-UT-SO3c	Discrete	12/17/2015	12	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	na	<1.0	ND [1]	ND [2]
SI-UT-SO3d	Discrete	12/17/2015	14	<1.0	<1.0	<1.0	<0.20	22	<5.0	na	<1.0	ND [1]	ND [2]
SI-UT-SO4a	Discrete	12/17/2015	4	<1.0	<1.0	<1.0	<0.20	37	<5.0	na	4.4	ND [1]	ND [2]
SI-UT-SO4b	Discrete	12/17/2015	8	<1.0	<1.0	<1.0	<0.20	28	<5.0	na	7.2	ND [1]	ND [2]
SI-UT-SO4c	Discrete	12/17/2015	12	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	na	<1.0	ND [1]	ND [2]
SI-UT-SO4d	Discrete	12/17/2015	14	<1.0	<1.0	<1.0	<0.20	<5.0	<5.0	na	<1.0	ND [1]	ND [2]
SI-UT-SO5a	Discrete	12/17/2015	4	<1.0	<1.0	<1.0	0.21	66	<5.0	na	3.4	ND [1]	ND [2]
SI-UT-SO5b	Discrete	12/17/2015	8	<1.0	<1.0	<1.0	<0.20	35	<5.0	na	7.3	ND [1]	ND [2]
SI-UT-SO5c	Discrete	12/17/2015	12	<1.0	<1.0	<1.0	<0.20	26	<5.0	na	<1.0	ND [1]	ND [2]
SI-UT-SO5d	Discrete	12/17/2015	14	<1.0	<1.0	<1.0	<0.20	46	<5.0	na	<1.0	ND [1]	ND [2]

Notes:
<1.0 - Less than laboratory reporting limit
TPH - Total Petroleum Hydrocarbons
VOC - Volatile Organic Compounds
N - Nitrogen
SO4 - Sulfate
ND [1] - The laboratory analysis of the samples listed above did not detect VOCs at concentrations above laboratory reporting limits
ND [2] - The laboratory analysis of the samples listed above did not detect PAHs at concentrations above laboratory reporting limits

Table 15
Summary of Soil Analytical Results - Historical Agrucultural Area
SierraPine
WKA No. 10467.05

Sample ID	Sample Type	Sample Date	Sample Depth (feet)	EPA 6010 / 6020		EPA 8081
				Arsenic	Lead	OCPs
Concentrations reported in milligrams per kilogram (mg/kg)						
SI-AG-S01a	Discrete	12/29/2015	0 - 0.5	<1	3.9	ND [1]
SI-AG-S01b	Discrete	12/29/2015	2 - 2.5	<1	4.3	ND [1]
SI-AG-S02a	Discrete	12/29/2015	0 - 0.5	1.2	3.6	ND [1]
SI-AG-S02b	Discrete	12/29/2015	2 - 2.5	<1	2.7	ND [1]
SI-AG-S03a	Discrete	12/29/2015	0 - 0.5	1.6	5.1	ND [1]
SI-AG-S03b	Discrete	12/29/2015	2 - 2.5	2.1	<2.5	ND [1]
SI-AG-S04a	Discrete	12/29/2015	0 - 0.5	4.2	7.7	ND [1]
SI-AG-S04b	Discrete	12/29/2015	2 - 2.5	3.8	2.9	ND [1]

Notes:
<1.0 - Less than laboratory reporting limit
OCPs - Organochlorine Pesticides
ND [1] - The laboratory analysis of the samples listed above did not detect OCPs at concentrations above laboratory reporting limits

Table 16
Summary of Soil Analytical Results - Engineered Fill
SierraPine
WKA No. 10467.05

Sample ID	Sample Type	Sample Date	Sample Depth (feet)	CAM 17 Metals by EPA 6010/ 7010								
				Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead
Concentrations reported in				milligrams per kilogram (mg/kg)								
SI-EF-S01a through S04a	Composite	12/7/2015	2 - 2.5	<2.5	<1.0	140	<1.0	<1.0	19	12	28	<2.5
SI-EF-S05a through S08a	Composite	12/7/2015	2 - 2.5	<2.5	1.2	77	<1.0	<1.0	15	4.4	14	<2.5
SI-EF-S09a through S12a	Composite	12/8/2015	2 - 2.5	<2.5	1.6	68	<1.0	<1.0	19	5.4	17	6.4
SI-EF-S13a through S16a	Composite	12/8/2015	2 - 2.5	<2.5	1.7	100	<1.0	<1.0	25	7.7	17	<2.5
SI-EF-S17a through S20a	Composite	12/8/2015	2 - 2.5	<2.5	2	160	<1.0	<1.0	22	7.4	16	<2.5
SI-EF-S21a through S24a	Composite	12/9/2015	2 - 2.5	<2.5	1.5	67	<1.0	<1.0	25	6.6	15	2.6
SI-EF-S25a through S28a	Composite	12/9/2015	2 - 2.5	<2.5	1.1	100	<1.0	<1.0	23	8.8	16	<2.5
SI-EF-S29a through S32a	Composite	12/9/2015	2 - 2.5	<2.5	<1.0	120	<1.0	<1.0	28	10	22	<2.5
SI-EF-S01b through S04b	Composite	12/7/2015	5 - 5.5	<2.5	<1.0	170	<1.0	<1.0	18	7.9	13	<2.5
SI-EF-S05b through S08b	Composite	12/7/2015	5 - 5.5	<2.5	<1.0	140	<1.0	<1.0	23	8	13	<2.5
SI-EF-S09b through S12b	Composite	12/8/2015	5 - 5.5	<2.5	1.3	85	<1.0	<1.0	15	4.5	10	7.5
SI-EF-S13b through S16b	Composite	12/8/2015	5 - 5.5	<2.5	3.4	150	<1.0	<1.0	36	14	29	<2.5
SI-EF-S17b through S20b	Composite	12/8/2015	5 - 5.5	<2.5	<1.0	270	<1.0	<1.0	37	11	53	<2.5
SI-EF-S21b through S24b	Composite	12/9/2015	5 - 5.5	<2.5	2.6	120	<1.0	<1.0	33	11	31	<2.5
SI-EF-S25b through S28b	Composite	12/9/2015	5 - 5.5	<2.5	1.3	140	<1.0	<1.0	29	8.4	22	<2.5
SI-EF-S29b through S32b	Composite	12/9/2015	5 - 5.5	<2.5	1.1	150	<1.0	<1.0	24	8.6	17	<2.5

Sample ID	Sample Type	Sample Date	Sample Depth (feet)	CAM 17 Metals by EPA 6010/ 7010								CARB 435
				Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Asbestos
Concentrations reported in				milligrams per kilogram (mg/kg)								% Fibers
SI-EF-S01a through S04a	Composite	12/7/2015	2 - 2.5	<0.10	<1.0	9.3	<2.5	<1.0	<1.0	29	43	>0.25%
SI-EF-S05a through S08a	Composite	12/7/2015	2 - 2.5	0.31	<1.0	9.6	<2.5	<1.0	<1.0	29	24	>0.25%
SI-EF-S09a through S12a	Composite	12/8/2015	2 - 2.5	<0.10	<1.0	11	<2.5	<1.0	<1.0	31	27	>0.25%
SI-EF-S13a through S16a	Composite	12/8/2015	2 - 2.5	<0.10	<1.0	11	<2.5	<1.0	<1.0	38	30	>0.25%
SI-EF-S17a through S20a	Composite	12/8/2015	2 - 2.5	<0.10	<1.0	9.6	<2.5	<1.0	<1.0	39	27	>0.25%
SI-EF-S21a through S24a	Composite	12/9/2015	2 - 2.5	<0.10	<1.0	10	<2.5	<1.0	<1.0	34	24	>0.25%
SI-EF-S25a through S28a	Composite	12/9/2015	2 - 2.5	<0.10	<1.0	8.7	<2.5	<1.0	<1.0	40	26	>0.25%
SI-EF-S29a through S32a	Composite	12/9/2015	2 - 2.5	<0.10	<1.0	11	<2.5	<1.0	<1.0	46	38	>0.25%
SI-EF-S01b through S04b	Composite	12/7/2015	5 - 5.5	<0.10	<1.0	8.6	<2.5	<1.0	<1.0	27	28	>0.25%
SI-EF-S05b through S08b	Composite	12/7/2015	5 - 5.5	<0.10	<1.0	13	<2.5	<1.0	<1.0	39	29	>0.25%
SI-EF-S09b through S12b	Composite	12/8/2015	5 - 5.5	0.6	<1.0	8.5	<2.5	<1.0	<1.0	28	27	>0.25%
SI-EF-S13b through S16b	Composite	12/8/2015	5 - 5.5	<0.10	<1.0	17	<2.5	<1.0	<1.0	48	48	>0.25%
SI-EF-S17b through S20b	Composite	12/8/2015	5 - 5.5	<0.10	<1.0	16	<2.5	<1.0	<1.0	47	42	>0.25%
SI-EF-S21b through S24b	Composite	12/9/2015	5 - 5.5	<0.10	<1.0	15	<2.5	<1.0	<1.0	54	39	>0.25%
SI-EF-S25b through S28b	Composite	12/9/2015	5 - 5.5	<0.10	<1.0	12	<2.5	<1.0	<1.0	47	34	>0.25%
SI-EF-S29b through S32b	Composite	12/9/2015	5 - 5.5	<0.10	<1.0	9.6	<2.5	<1.0	<1.0	42	30	>0.25%

Notes
<1.0 - Less than laboratory reporting limit
>0.25% - No asbestos fibers detected
CAM 17 - California Assesment Manual 17 listed metals

Table 17
Summary of Analytical Results - Shallow Aquifer Sampling
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Total Depth of Boring (feet)	Depth To Water (feet)	EPA 8315A	SM4500-NH3C / EPA Method 300.0		
					Formaldehyde	Ammonia as N	Nirtate/ Nitrite as N	Sulfate as SO4
Concentrations Reported in micrograms per liter (µg/L)								
SI-AQ-S01	Grab	12/17/2015	15	13.52	26	1,300	<400	11,000
SI-AQ-S02	Grab	12/17/2015	15	dry	-	-	-	-
SI-AQ-S03	Grab	12/18/2015	15	8.6	28	210	0.012	44,000
SI-AQ-S04	Grab	12/18/2015	15	10	23	390	0.0012	37,000
SI-AQ-S05	Grab	12/18/2015	15	6.1	56	110	0.0063	39,000
SI-AQ-S06	Grab	12/28/2015	15	dry	-	-	-	-
SI-AQ-S07	Grab	12/28/2015	15	8.1	<20	490	<400	na
SI-AQ-S08	Grab	12/28/2015	15	11.35	<20	<100	3,100	na
SI-AQ-S09	Grab	12/28/2015	15	10.2	<20	240	<400	na
SI-AQ-S10	Grab	12/28/2015	5	1.75	<20	100	8,300	na
SI-AQ-S11	Grab	12/28/2015	9	2.34	<20	<100	4,100	na
SI-AQ-S12	Grab	12/28/2015	13	dry	-	-	-	-
SI-AQ-S13	Grab	12/28/2015	15	6.18	<20	1000	<400	na
SI-AQ-S14	Grab	12/28/2015	15	6.05	<20	260	<400	na
SI-AQ-S15	Grab	12/28/2015	15	dry	-	-	-	-
SI-AQ-S16	Grab	12/28/2015	15	dry	-	-	-	-

Table 17
Summary of Analytical Results - Shallow Aquifer Sampling
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Total Depth of Boring (feet)	Depth To Water (feet)	EPA 8015			EPA 8260M
					TPH as Diesel	Hydraulic Oil	TPH as Motor Oil	TPH as Gasoline
Concentrations Reported in micrograms per liter (µg/L)								
SI-AQ-S01	Grab	12/17/2015	15	13.52	160	<50	<50	58
SI-AQ-S02	Grab	12/17/2015	15	dry	-	-	-	-
SI-AQ-S03	Grab	12/18/2015	15	8.6	<50	<50	<50	<50
SI-AQ-S04	Grab	12/18/2015	15	10	<50	<50	<50	<50
SI-AQ-S05	Grab	12/18/2015	15	6.1	<50	<50	<50	<50
SI-AQ-S06	Grab	12/28/2015	15	dry	-	-	-	-
SI-AQ-S07	Grab	12/28/2015	15	8.1	<50	<50	<50	<50
SI-AQ-S08	Grab	12/28/2015	15	11.35	<50	<50	<50	<50
SI-AQ-S09	Grab	12/28/2015	15	10.2	<50	<50	<50	<50
SI-AQ-S10	Grab	12/28/2015	5	1.75	<50	<50	<50	<50
SI-AQ-S11	Grab	12/28/2015	9	2.34	<50	<50	<50	<50
SI-AQ-S12	Grab	12/28/2015	13	dry	-	-	-	-
SI-AQ-S13	Grab	12/28/2015	15	6.18	<50	<50	<50	<50
SI-AQ-S14	Grab	12/28/2015	15	6.05	<50	<50	170	<50
SI-AQ-S15	Grab	12/28/2015	15	dry	-	-	-	-
SI-AQ-S16	Grab	12/28/2015	15	dry	-	-	-	-

Table 17
Summary of Analytical Results - Shallow Aquifer Sampling
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Total Depth of Boring (feet)	Depth To Water (feet)	VOCs by EPA 8260A[1]				
					MTBE	Ethlybenzene	sopropylbenzen	Napthalene	n-Propylbenzene
Concentrations Reported in micrograms per liter (µg/L)									
SI-AQ-S01	Grab	12/17/2015	15	13.52	0.82	0.87	1.5	1.9	6.7
SI-AQ-S02	Grab	12/17/2015	15	dry	-	-	-	-	-
SI-AQ-S03	Grab	12/18/2015	15	8.6	<0.50	<0.50	<0.50	<0.50	<0.50
SI-AQ-S04	Grab	12/18/2015	15	10	<0.50	<0.50	<0.50	<0.50	<0.50
SI-AQ-S05	Grab	12/18/2015	15	6.1	<0.50	<0.50	<0.50	<0.50	<0.50
SI-AQ-S06	Grab	12/28/2015	15	dry	-	-	-	-	-
SI-AQ-S07	Grab	12/28/2015	15	8.1	0.78	<0.50	<0.50	<0.50	<0.50
SI-AQ-S08	Grab	12/28/2015	15	11.35	<0.50	<0.50	<0.50	<0.50	<0.50
SI-AQ-S09	Grab	12/28/2015	15	10.2	4.7	<0.50	<0.50	<0.50	<0.50
SI-AQ-S10	Grab	12/28/2015	5	1.75	<0.50	<0.50	<0.50	<0.50	<0.50
SI-AQ-S11	Grab	12/28/2015	9	2.34	<0.50	<0.50	<0.50	<0.50	<0.50
SI-AQ-S12	Grab	12/28/2015	13	dry	-	-	-	-	-
SI-AQ-S13	Grab	12/28/2015	15	6.18	0.67	<0.50	<0.50	<0.50	<0.50
SI-AQ-S14	Grab	12/28/2015	15	6.05	6.2	<0.50	<0.50	<0.50	<0.50
SI-AQ-S15	Grab	12/28/2015	15	dry	-	-	-	-	-
SI-AQ-S16	Grab	12/28/2015	15	dry	-	-	-	-	-

Notes:
<1.0 - Less than laboratory reporting limit
[1] The laboratory analysis of the samples listed above did not detect VOCs not listed above at concentrations above laboratory reporting limits
- Not Sampled
SO4 - Sulfate
N - Nitrogen
na - Not Analyzed
TPH - total petroleum hydrocarbons

Table 18
Summary of Soil Analytical Results - Hydraulic Control Room Excavation
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sample Depth (Feet)	Sampe Location	EPA 8080A PCBs	EPA 8015 TPH as Hydraulic Oil
Concentrations reported in milligrams per kilogram (mg/kg)						
SI-HV-CS01	Descrete	10/12/2015	5.2	Sidewall	<0.02	<1.0
SI-HV-CS02	Descrete	10/12/2015	5.6	Sidewall	<0.02	<1.0
SI-HV-CS03	Descrete	10/12/2015	5.3	Sidewall	<0.02	<1.0
SI-HV-CS04	Descrete	10/12/2015	5.0	Sidewall	FILL; NOT ANALYSED	
SI-HV-CS05	Descrete	10/12/2015	7.5	Floor	FILL; NOT ANALYSED	
SI-HV-CS06	Descrete	10/12/2015	6.4	Sidewall	<0.02	890
SI-HV-CS07	Descrete	10/12/2015	6.0	Sidewall	<0.02	<1.0
SI-HV-CS08	Descrete	10/12/2015	1.2	Sidewall	<0.02	1100
SI-HV-CS09	Descrete	10/12/2015	0.4	Sidewall	<0.02	8600
SI-HV-CS10	Descrete	10/12/2015	2.2	Sidewall	<0.02	80
SI-HV-CS11	Descrete	10/12/2015	2.6	Sidewall	<0.02	<1.0
SI-HV-CS12	Descrete	11/4/2015	3.7	Floor	EXCAVATED; NOT ANALYSED	
SI-HV-CS13	Descrete	11/4/2015	4.1	Floor	-	2300
SI-HV-CS14	Descrete	11/4/2015	3.2	Sidewall	-	120
SI-HV-CS15	Descrete	11/4/2015	3.9	Sidewall	-	4600
SI-HV-CS16	Descrete	11/4/2015	9.2	Floor	-	<1.0
SI-HV-CS17	Descrete	11/4/2015	5.7	Sidewall	-	630
SI-HV-CS18	Descrete	11/4/2015	6.9	Sidewall	-	1200
SI-HV-CS19	Descrete	11/4/2015	8.0	Floor	-	960
SI-HV-CS20	Descrete	11/4/2015	6.4	Sidewall	-	240
SI-HV-CS21	Descrete	11/4/2015	5.3	Sidewall	-	100
SI-HV-CS22	Descrete	11/19/2015	5.3	Sidewall	-	16000
SI-HV-CS23	Descrete	11/19/2015	8.6	Floor	-	410
SI-HV-CS24	Descrete	11/19/2015	6.8	Sidewall	-	<1.0
SI-HV-CS25	Descrete	11/19/2015	8.0	Sidewall	-	<1.0
SI-HV-CS26	Descrete	11/19/2015	7.6	Sidewall	-	31
SI-HV-CS27	Descrete	11/19/2015	8.6	Floor	-	26
SI-HV-CS28	Descrete	1/4/2016	8.6	Sidewall	-	12000
SI-HV-CS29	Descrete	1/4/2016	9.4	Sidewall	-	<1.0
SI-HV-CS30	Descrete	1/4/2016	10.0	Sidewall	-	170
SI-HV-CS31	Descrete	1/4/2016	7.2	Sidewall	-	<1.0
SI-HV-CS32	Descrete	1/4/2016	6.6	Sidewall	-	210
SI-HV-CS33	Descrete	1/4/2016	6.0	Sidewall	-	<1.0
SI-HV-CS34	Descrete	1/28/2016	8.1	Sidewall	-	5900
SI-HV-CS35	Descrete	1/28/2016	9.6	Sidewall	-	<1.0

Table 18
Summary of Soil Analytical Results - Hydraulic Control Room Excavation
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sample Depth (Feet)	Sampe Location	EPA 8080A PCBs	EPA 8015 TPH as Hydraulic Oil
Concentrations reported in milligrams per kilogram (mg/kg)						
SI-HV-CS36	Descrete	2/9/2016	9.1	Sidewall	-	110
SI-HV-CS37	Descrete	2/9/2016	6.3	Sidewall	-	<1.0
SI-HV-CS38	Descrete	2/9/2016	9.7	Floor	-	<1.0
SI-HV-CS39	Descrete	2/19/2016	5.5	Sidewall	-	<1.0
SI-HV-CS40	Descrete	2/19/2016	6.1	Sidewall	-	<1.0
SI-HV-CS41	Descrete	2/19/2016	5.4	Sidewall	-	<1.0
SI-HV-CS42	Descrete	2/19/2016	6.7	Sidewall	-	<1.0

Notes:
RED - Soil represented by sample removed
<1.0 - Less than laboratory reporting limit
PCB - polychlorinated biphenyl
TPH - Total Petroleum Hydrocarbons
- Not Analysed
FILL - Soil used for backfilling during the demolition of the Press Pit

Table 19
Summary of Soil Analytical Results - Hydraulic Control Room Excavation
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sample Depth (Feet)	Sampe Location	EPA 8080A PCBs	EPA 8015 TPH as Hydraulic Oil
Concentrations reported in milligrams per kilogram (mg/kg)						
SI-HV-CS01	Descrete	10/12/2015	5.2	Sidewall	<0.02	<1.0
SI-HV-CS02	Descrete	10/12/2015	5.6	Sidewall	<0.02	<1.0
SI-HV-CS03	Descrete	10/12/2015	5.3	Sidewall	<0.02	<1.0
SI-HV-CS04	Descrete	10/12/2015	5.0	Sidewall	FILL; NOT ANALYSED	
SI-HV-CS05	Descrete	10/12/2015	7.5	Floor	FILL; NOT ANALYSED	
SI-HV-CS24	Descrete	11/19/2015	6.8	Sidewall	-	<1.0
SI-HV-CS25	Descrete	11/19/2015	8.0	Sidewall	-	<1.0
SI-HV-CS26	Descrete	11/19/2015	7.6	Sidewall	-	31
SI-HV-CS27	Descrete	11/19/2015	8.6	Floor	-	26
SI-HV-CS29	Descrete	1/4/2016	9.4	Sidewall	-	<1.0
SI-HV-CS31	Descrete	1/4/2016	7.2	Sidewall	-	<1.0
SI-HV-CS33	Descrete	1/4/2016	6.0	Sidewall	-	<1.0
SI-HV-CS38	Descrete	2/9/2016	9.7	Floor	-	<1.0
SI-HV-CS39	Descrete	2/19/2016	5.5	Sidewall	-	<1.0
SI-HV-CS40	Descrete	2/19/2016	6.1	Sidewall	-	<1.0
SI-HV-CS41	Descrete	2/19/2016	5.4	Sidewall	-	<1.0
SI-HV-CS42	Descrete	2/19/2016	6.7	Sidewall	-	<1.0

Notes:
<1.0 - Less than laboratory reporting limit
PCB - polychlorinated biphenyl
TPH - Total Petroleum Hydrocarbons
- Not Analysed
FILL - Soil used for backfilling during the demolition of the Press Pit

Table 20
Summary of Soil Analytical Results - Hot Oil Room Excavation
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sampe Location	EPA 8015
				TPH as Hydraulic Oil
Concentrations reported in milligrams per kilogram (mg/kg)				
SI-HO-CS01	Descrete	10/12/2015	Sidewall	<1.0
SI-HO-CS02	Descrete	10/12/2015	Sidewall	<1.0
SI-HO-CS03	Descrete	10/12/2015	Sidewall	<1.0
SI-HO-CS04	Descrete	10/12/2015	Sidewall	<1.0
SI-HO-CS05	Descrete	10/12/2015	Sidewall	<1.0
SI-HO-CS06	Descrete	11/19/2015	Floor	<1.0
SI-HO-CS07	Descrete	11/19/2015	Floor	<1.0
SI-HO-CS08	Descrete	11/19/2015	Sidewall	<1.0
SI-HO-CS09	Descrete	11/19/2015	Sidewall	<1.0
SI-HO-CS10	Descrete	1/4/2016	Sidewall	<1.0
SI-HO-CS11	Descrete	1/4/2016	Sidewall	<1.0

Notes:
<1.0 - Less than laboratory reporting limit
TPH - Total Petroleum Hydrocarbons
- Not Analysed

Table 21
Summary of Soil Analytical Results - Resin Area Resampling
SierraPine
WKA No. 10467.05

Sample ID	Sample Type	Sample Date	SM4500-NH3C	EPA 300.0		EPA 8315A
			Ammonia as N	Nitrate/ Nitrite as N	Sulafte as SO4	Formaldehyde
Concentrations reported in milligrams per kilogram (mg/kg)						
SI-TF-CS03a	Discrete	6/30/2016	580	590	350	<1.0
SI-TF-CS03b	Discrete	6/30/2016	1700	8	290	2.2
SI-TF-CS03c	Discrete	6/30/2016	<20	<5.0	8.4	2.2
SI-TF-CS04a	Discrete	6/30/2016	28	360	140	<1.0
SI-TF-CS04b	Discrete	6/30/2016	320	320	220	3.4
SI-TF-CS04c	Discrete	6/30/2016	74	74	190	<1.0
SI-TF-CS05a	Discrete	6/30/2016	25	25	100	<1.0
SI-TF-CS05b	Discrete	6/30/2016	150	150	510	<1.0
SI-TF-CS05c	Discrete	6/30/2016	480	480	180	2.4
SI-MA-CS03a	Discrete	6/30/2016	130	830	140	1.2
SI-MA-CS03b	Discrete	6/30/2016	1000	110	21	1.6
SI-MA-CS03c	Discrete	6/30/2016	1100	9.4	8.7	2.2
SI-MA-CS04a	Discrete	6/30/2016	190	370	210	<1.0
SI-MA-CS04b	Discrete	6/30/2016	2300	140	170	<1.0
SI-MA-CS04c	Discrete	6/30/2016	1100	23	50	2.1

Notes:
<1.0 - Less than laboratory reporting limit
RED - soil represented by sample removed by excavation
N - Nitrogen
SO4 - Sulfate

Table 22
Summary of Soil Analytical Results - Resin Area Excavation
SierraPine
WKA No. 10467.05

Sample ID	Sample Type	Sample Date	SM4500-NH3C	EPA 300.0		EPA 8315A
			Ammonia as N	Nitrate/ Nitrite as N	Sulafte as SO4	Formaldehyde
Concentrations reported in milligrams per kilogram (mg/kg)						
SI-RA-CS01	Sidewall	8/1/2016	22	<5.0	94	2.3
SI-RA-CS02	Sidewall	8/1/2016	16	<5.0	99	1.5
SI-RA-CS03	Sidewall	8/1/2016	3200	110	520	25
SI-RA-CS04	Sidewall	8/1/2016	1800	<5.0	480	62
SI-RA-CS05	Sidewall	8/1/2016	61	12	81	1.1
SI-RA-CS06	Sidewall	8/1/2016	21	<5.0	71	1.2
SI-RA-CS07	Sidewall	8/1/2016	43	<5.0	95	1.2
SI-RA-CS08	Sidewall	8/1/2016	28	<5.0	110	<1.0
SI-RA-CS09	Floor	8/1/2016	16	<5.0	110	2.6
SI-RA-CS10	Floor	8/1/2016	18	<5.0	57	12
SI-RA-CS11	Floor	8/1/2016	56	<5.0	57	9.8
SI-RA-CS12	Floor	8/1/2016	50	<5.0	59	4.8
SI-RA-CS13	Sidewall	8/22/2016	360	<5.0	120	1.5
SI-RA-CS14	Sidewall	8/22/2016	120	<5.0	97	6.0
SI-RA-CS15	Sidewall	8/22/2016	33	<5.0	69	6.9

Notes:
<1.0 - Less than laboratory reporting limit
RED - soil represented by sample removed by excavation
N - Nitrogen
SO4 - Sulfate

Table 23
Summary of Soil Analytical Results - Main Transformer Room Excavation
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	EPA 8080A
			PCBs
Concentrations reported in miligrams per kilogram (mg/kg)			
SI-TR-CS02a	Sidewall	8/1/2016	0.34 [1]
SI-TR-CS02b	Sidewall	8/1/2016	<0.020
SI-TR-CS02c	Sidewall	8/1/2016	<0.020
SI-TR-CS03a	Sidewall	8/1/2016	0.64 [1]
SI-TR-CS03b	Sidewall	8/1/2016	<0.020
SI-TR-CS03c	Sidewall	8/1/2016	0.033 [1]

Notes:
<1.0 - Less than laboratory reporting limit
RED - soil represented by sample removed by excavation
PCB - polychlorinated biphenyl
[1] PCBs as Aroclor 1254

Table 24
Summary of Soil Analytical Results - Main Transformer Room Excavation
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	EPA 8080A
			PCBs
Concentrations reported in miligrams per kilogram (mg/kg)			
SI-TR-CS01	Sidewall	8/1/2016	<0.020
SI-TR-CS02	Sidewall	8/1/2016	0.130 [1]
SI-TR-CS03	Sidewall	8/1/2016	<0.020
SI-TR-CS04	Sidewall	8/1/2016	0.035 [1]
SI-TR-CS05	Sidewall	8/1/2016	<0.020
SI-TR-CS06	Sidewall	8/1/2016	0.073 [1]
SI-TR-CS07	Sidewall	8/1/2016	0.077 [2]
SI-TR-CS08	Sidewall	8/1/2016	0.100 [1]
SI-TR-CS09	Floor	8/1/2016	<0.020
SI-TR-CS10	Floor	8/1/2016	<0.020
SI-TR-CS11	Sidewall	8/22/2016	<0.020
SI-TR-CS12	Sidewall	8/22/2016	<0.020
SI-TR-CS13	Sidewall	8/22/2016	<0.020
SI-TR-CS14	Sidewall	8/22/2016	<0.020
SI-TR-CS15	Sidewall	8/22/2016	<0.020

Notes:
<1.0 - Less than laboratory reporting limit
RED - soil represented by sample removed by excavation
PCB - polychlorinated biphenyl
[1] PCBs as Aroclor 1254
[2] PCBs as Aroclor 1260

Table 25
Summary of Soil Analytical Results - Rip Saw Area
SierraPine
WKA No. 10467.10

Sample ID	Sample Type	Sample Date	Sample Depth (Feet)	Sampe Location	EPA 8080A	EPA 8015
					PCBs	TPH as Hydraulic Oil
Concentrations reported in milligrams per kilogram (mg/kg)						
SI-RS-01	Descrete	10/9/2015	5.3	Floor	<0.02	12
SI-RS-02	Descrete	10/9/2015	5.4	Floor	<0.02	220
SI-RS-03	Descrete	10/9/2015	4.9	Floor	<0.02	<1.0
SI-RS-04	Descrete	10/9/2015	4.5	Floor	<0.02	<1.0
SI-RS-05	Descrete	10/9/2015	1.6	Sidewall	<0.02	47
SI-RS-06	Descrete	10/9/2015	1.6	Sidewall	<0.02	19
SI-RS-07	Descrete	10/9/2015	1.2	Sidewall	<0.02	49
SI-RS-08	Descrete	10/9/2015	2.2	Sidewall	<0.02	460
SI-RS-09	Descrete	10/9/2015	2.5	Sidewall	<0.02	17
SI-RS-10	Descrete	10/9/2015	2.2	Sidewall	<0.02	63
SI-RS-11	Descrete	10/9/2015	1.6	Sidewall	<0.02	29
SI-RS-12	Descrete	10/9/2015	1.7	Sidewall	<0.02	70
SI-RS-13	Descrete	11/3/2015	2.5	Sidewall	-	<1.0

Notes:
RED - Soil represented by sample removed
<1.0 - Less than laboratory reporting limit
TPH - Total Petroleum Hydrocarbons
- Not Analysed