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May 27, 2021

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Environmental Health Division
County of Santa Cruz Health Services Agency
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Ms. Amber Sellinger, P.G., C.Hg
Central Coast Regional Water Quality Control Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

Subject: Revised Subsurface Media Management Plan
Former Western Farm Service, Inc. Green Gro Facility
1485 Ranport Road
Watsonville, California
Global ID SL203221260

Dear Mr. Gerbrandt and Ms. Sellinger:

On behalf of Shell Oil Products US, AECOM Technical Services, Inc. revised the enclosed plan for the above-referenced site.

Should you have any questions, please do not hesitate to contact me at debra.stiffel@aecom.com or 508.833.6968.

Sincerely,

AECOM Technical Services, Inc.

Debra R.P. Stiffel, CPG
Project Manager

Thomas Pender, PG
Senior Geologist

PROFESSIONAL GEOLOGIST
THOMAS PENDER
No. 9152
Exp. 3/31/23
STATE OF CALIFORNIA

Enclosure

cc: Mr. Dave Joseph (electronic)
Mr. Richard Henry (electronic)
Ms. Toni DeMayo, Shell Oil Products US (electronic)

AECOM

REVISED SUBSURFACE MEDIA MANAGEMENT PLAN

FORMER WESTERN FARM SERVICE, INC. GREEN GRO FACILITY
1485 RANPORT ROAD
WATSONVILLE, CALIFORNIA
GLOBAL ID SL203221260

Prepared for:

Shell Oil Products US
20945 S. Wilmington Ave.
Carson, CA 90810

Prepared by:

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May 27, 2021

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A Grant Deed, Instrument 2001-0061081

B Summary of Risk Findings and Management Areas

ACRONYMS AND ABBREVIATIONS

%	percent
AECOM	AECOM Technical Services, Inc.
bgs	below ground surface
COPEC	constituent of potential ecological concern
CSCEHD	County of Santa Cruz Environmental Health Division
1,2-DCP	1,2-dichloropropane
DDT	4,4'-dichloro-diphenyl-trichloroethane
DTSC	Department of Toxic Substances Control (California)
HHERA	Human Health and Ecological Risk Assessment
HSP	Health and Safety Plan
mg/kg	milligram per kilogram
mg/L	milligram per liter
PCB	polychlorinated biphenyl
PVWMA	Pajaro Valley Water Management Agency
RWQCB	Regional Water Quality Control Board
Shell	Shell Oil Products US
Site	former WFS Green Gro facility, 1485 Ranport Road, Watsonville, California
UCL	upper confidence limit
U.S. EPA	United States Environmental Protection Agency
USGS	United States Geological Survey
WFS	Western Farm Service, Inc.

1.0 INTRODUCTION

The former Western Farm Service, Inc. (WFS) Green Gro facility is located at 1485 Ranport Road in Watsonville, California (Site) (Figure 1). Current structures at the Site include an office trailer, the former Office/Maintenance Building, an aboveground water storage tank, and various structures used for storage including the former Mixing Room, three open-walled shelters, three cargo containers, and a shed (Figure 2). This plan is based on the results of the May 2021 Revised Final Human Health and Ecological Risk Assessment (HHERA) (AECOM Technical Services, Inc. [AECOM] 2021), which includes the updated risk assessment that evaluated results from the July 2019 soil and groundwater investigation (AECOM 2020).

1.1 BACKGROUND

The Site has housed various operations since the 1960s. The Site was purchased in 1978 by WFS, a Shell Chemical subsidiary, and was used to store and distribute pesticides and fertilizers. Shell Chemical sold the Site to Herman Wilson, dba Western Farmco, Inc., in 1988. Pesticide and fertilizer storage and distribution operations were terminated in 1996. Western Farmco, Inc. merged with two other companies into WFS in 1997 and WFS sold the property to Forrest Moore in 2001. The property was conveyed from Forrest Moore to Dennis Williams in 2003 and from Dennis Williams to Richard Henry in 2019. Williams Tree Service, a commercial tree-cutting service, is currently a tenant. Dave Joseph is the beneficiary of a Deed of Trust for the property.

Historical sampling results indicate the presence of fertilizer and pesticide components in soil, groundwater, and soil vapor. Polychlorinated biphenyls (PCBs) and organochlorine pesticides in soil are present in a localized area near the former fertilizer storage tanks in the north central portion of the Site. Site remedial activities began in the early 1980s and included subsurface investigation and over-excavation of an unlined disposal pit and rinse water pond. Additional investigations and remediation have included soil sampling, monitoring well installation, in-situ denitrification and soil flushing pilot testing, installation and operation of a groundwater injection/treatment system, and soil vapor sampling. Semiannual groundwater monitoring took place from 2003 to 2008, with an additional shallow well groundwater sampling event in 2016 and a shallow and deep well groundwater sampling event in 2019 through 2021.

1.2 OBJECTIVES OF THE SUBSURFACE MEDIA MANAGEMENT PLAN

Historical PCB and pesticide impacts in soil remain under portions of the Site that pose no risk to current Site operations. This Subsurface Media Management Plan has been prepared to address possible future activities and mitigate the potential for:

- Commercial/industrial workers and construction workers to be exposed to PCBs and dieldrin in soil from below 1.5 feet and above 9.5 feet below ground surface (bgs) in the vicinity of the former fertilizer storage tank area (Table 1, Figure 3).
- The future benthic community to be exposed to PCBs and pesticides in future surface sediment (0 to 1 foot bgs) in the vicinity of the planned emergent wetland (Tables 2 and 3, Figure 3).
- Ecological risk to upland organisms related to PCBs and/or pesticides in soil in the vicinity of the former fertilizer storage tank area from below 2 feet and above 9.5 feet bgs due to the potential for construction-related redistribution of contamination to the surface (Tables 2 and 3, Figure 3).

Delineation east of exceedances at location SB-23R-E4 is achieved by the SB-12 sample at 1.5 feet bgs since the depths are comparable due to the change in topography in the swale.

This Subsurface Media Management Plan has been revised in response to comments from the County of Santa Cruz Environmental Health Division (CSCEHD) and the Central Coast Regional Water Quality Control Board (RWQCB) (CSCEHD 2020a and 2020b, RWQCB 2020). In addition, updates required

as a result of the Revised Final HHERA have been incorporated. In the event a significant change in land use not covered in the above scenarios is proposed for the Site, a revised Plan will be prepared to address hazard mitigation.

2.0 ENVIRONMENTAL SETTING

The Site has been assigned Assessor's Parcel Numbers 052-511-06 and 052-511-08 and consists of approximately 8.4 acres of land (Santa Cruz Planning Department 2018). Land usage around the facility is primarily agricultural or undeveloped. The Site is bounded to the north by California State Route 1 and to the south by Ranport Road. The Site is bounded to the west by a small residential compound and undeveloped woodland. Harkins Slough runs through the eastern portion of the Site, and its associated riparian corridor functions as the eastern boundary for ongoing Site activities. Beyond Harkins Slough to the east lies a staging area for County maintenance vehicles, additional undeveloped woodlands, and California State Route 1.

The following subsections describe the Site's environmental setting.

2.1 CLIMATE

The climate at the Site is warm and temperate with rain falling mostly in winter and relatively little rain falling in the summer. Average minimum and maximum daily temperatures in Watsonville range from 45.9 to 67.1 degrees Fahrenheit. The average annual rainfall is 22.43 inches (Western Regional Climate Center 2005).

2.2 TOPOGRAPHY

According to the United States Geological Survey (USGS) 7.5-minute Watsonville, California quadrangle, the Site's topography is divided into two regions: an Upper Terrace in the northwest region and a Lower Terrace in the southeast region, which slopes gently to the southeast from 18 to 14 feet mean sea level. The upper terrace is at an approximate elevation of 60 feet mean sea level, and the lower terrace is at an approximate elevation of 20 feet mean sea level (USGS 2015). Both regions are unpaved; however, the upper terrace has two large concrete pads of approximately 1,300 square feet that served as foundations for former aboveground storage tanks.

2.3 GEOLOGY AND HYDROGEOLOGY

The Site is located in the Pajaro Valley Groundwater basin, which is bounded to the west by Monterey Bay, to the north by geologic contact with the Purisima Formation, to the east by the San Andreas Fault, and to the south by a drainage divide in the Carneros Hills. The Pajaro Valley Basin is underlain by discontinuous low-permeability clays and sandy clays that promote perched aquifer conditions. Beneath these deposits lies the Aromas Sand Formation, which is a laterally continuous regional aquifer (California Department of Water Resources 2006).

Soil types at the Site vary between the Upper Terrace, Lower Terrace, and riparian corridor. Soils at the Site are generally classified as Clear Lake clay and Tierra-Watsonville complex (United States [U.S.] Department of Agriculture 2019). Clear Lake clay is a basin alluvium derived from igneous, metamorphic, and sedimentary rock that is poorly drained. The Tierra-Watsonville complex consists of sandy loam, clay, clay loam, and sandy clay alluvium derived from sedimentary rock that is moderately well drained.

The nearest surface water body in the downgradient direction is Harkins Slough, which passes through the Site and comprises the eastern boundary of the Site's operational area (Figure 2). Harkins Slough is a man-made riverine habitat (i.e., contained within a channel that periodically or continuously contains moving water or connects two bodies of standing water) with a low gradient and water covering the substrate throughout the year (U.S. Fish and Wildlife Service 2019). A riparian corridor associated with the slough has management practices specified to maintain riparian functions and values.

The Site is within the Pajaro River Watershed (Pajaro Valley Water Management Agency [PVWMA] 2014a). The Site's subsurface contains an Upper Saturated Unit and a Lower Saturated Unit separated by a leaky aquitard ranging from 25 to 40 feet thick. The Upper Saturated Unit is unconfined and is characterized by clay, sandy clays, and peat with water occurring at depths ranging from 4 to 20 feet bgs. The Aromas Sand Formation constitutes the laterally extensive Lower Saturated Unit and is encountered at depths ranging from 25 to 90 feet bgs and extends to approximately 400 feet bgs.

Groundwater flow direction varies seasonally and trends to the southeast towards Harkins Slough in the eastern portion of the Site. Harkins Slough is considered hydrologically disconnected from the Lower Saturated Unit and connected to the Upper Saturated Unit periodically during the wet season when shallow groundwater levels are higher and the slough receives some of its base flow from perched water in the Upper Saturated Unit (Terra Technologies 1996).

2.4 WATER SUPPLY WELLS

The Site contains one groundwater supply well in the northwestern corner of the property that is screened in the Lower Saturated Unit from 160 to 210 feet bgs and supplies water not designated for use as drinking water. The groundwater is used for the Site's fire and restroom facilities (Figure 2).

Records available in 2010 indicated 22 wells are located within 0.5 mile of the Site. The depths of these wells range from 130 feet bgs to 545 feet bgs, with most wells completed between 200 and 250 feet bgs within the Aromas Sand Formation. In addition to the on-Site well described above, four wells were identified within 1,000 feet of the Site. These wells are for domestic/private use and are cross-gradient relative to historical on-Site groundwater gradients (URS Corporation [URS] 2010).

Groundwater is the predominant source for drinking water in the Pajaro River Watershed where the Site is located. Elevated nitrate in groundwater is a regional problem within the watershed. The Pajaro River and Watsonville Creek both contain elevated concentrations of nitrate that contribute to their water quality impairment preventing their beneficial use and inclusion as a Clean Water Act Section 303(d) Listed Water Body (PVWMA 2014a and 2014b).

2.5 CURRENT AND FUTURE LAND USE

The property is zoned as Agricultural and Watsonville Utility Prohibition Combining District (Santa Cruz Planning Department 2018) and is therefore restricted to agricultural use and prohibits the provision of urban services to undeveloped/rural areas so as to discourage urban development in the farmlands, wetlands, and other environmentally sensitive areas in the coastal zone west of Watsonville.

Future land use is expected to remain non-residential and there are plans to develop facilities for lumber mill operations. The proposed facilities include an office building, saw mill building, and two storage warehouses (Spector Corbett Architects Inc. 2017). Landscaping is planned in various areas as part of the development project, including plantings along a swale at the north-central portion of the Site and plantings in the riparian buffer along the east portion of the Site (Gregory Lewis Landscape Architect 2018).

2.6 USE RESTRICTIONS

The following use restrictions are currently in place through the Grant Deed recorded as Instrument 2001-0061081 on September 28, 2001 by Official Records, County of Santa Cruz (Appendix A) (WFS and Forrest Moore 2001):

- An environmental restriction prohibits the property from being used for residential purposes.
- A use restriction prohibits use of the property as a distribution center for agricultural chemicals and fertilizer products.

A Land Use Covenant is currently in preparation that will restrict the use of shallow groundwater and will require adherence to this Subsurface Media Management Plan.

2.7 SUMMARY OF RISK FINDINGS AND MANAGEMENT AREAS

Human health and ecological risks related to the presence of potential contaminants of concern were evaluated and are briefly summarized in the following subsections (AECOM 2021). A more detailed discussion is presented in Appendix B.

2.7.1 Human Health

PCB concentrations in soil above relevant commercial/industrial worker and/or construction worker screening levels are present in multiple locations (Table 1). In addition, a single dieldrin location (SB-23 at 5 feet bgs) also exceeded the commercial/industrial worker screening levels. There are no unacceptable risks to commercial and construction workers related to these PCB and dieldrin soil concentrations under current conditions and current use of the property. If soils from between 2 and 9.5 feet bgs are brought to the surface and left accessible for 250 days per year for construction workers or for 25 years for commercial workers, potential risks associated with exposure to the soil should be mitigated. To be conservative, the areas in the planting area where no data are available were included in the management area. Figure 3 shows the area to be managed if soils below 1.5 feet are brought to the surface; subsurface activities in this area must be performed in accordance with this Subsurface Media Management Plan.

Under current use of the property, no complete exposure pathways were identified for groundwater by ingestion or direct contact because impacted groundwater at the property is not used for potable water purposes and the non-potable supply well draws from outside of the impacted groundwater area. The Land Use Covenant currently in preparation will formally document restriction of the use of shallow groundwater (Section 2.6); the Land Use Covenant will ensure any future groundwater wells will draw from outside of the impacted groundwater area.

Vapor intrusion-related risks are not a concern under current use of the property (AECOM 2021). Current land use and lumber yard operations consist primarily of outdoor operations and indoor activities are limited to two buildings: the office trailer and the former Office/Maintenance Building. The office trailer is a raised portable with free space and air flow between the bottom of the trailer and the ground surface. The former Office/Maintenance Building is reportedly currently occupied by Site workers for up to one hour per day. Based on a risk screening followed by Site-specific evaluation of vapor intrusion risk, portions of the Site exceed screening levels. In the future near areas that exceed screening levels (Figure 3), potential vapor intrusion risks should be evaluated and mitigated (e.g. soil vapor sampling, elevating structures to create free air space, vapor barrier), if warranted based on the evaluation, under scenarios such as:

- Current use of existing conventional slab-on-grade structures changes (e.g., the former Office/Maintenance Building occupied for more than one hour per day)
- Open-walled structures were to be enclosed and occupied (e.g., the former Mixing Room).
- Conventional slab-on-grade enclosed structures are proposed to be constructed.

2.7.2 Ecological

Several guidance documents were used as resources for ecological screening levels (AECOM 2021).

Terrestrial Receptors

Few screening levels were available for plants and the one plant screening level that was applied was not exceeded.

For birds, the 95 percent (%) upper confidence limits (UCLs) calculated from the Site surface soil concentrations, which are more representative of exposure for mobile species like birds, were below screening levels. These results, coupled with the low quality habitat, indicate that current use of the property poses little risk to terrestrial birds.

The majority of potential foraging areas at the Site are characterized by barren and ornamental habitats, which provide limited resource value. Continued commercial activity will not result in improvements to foraging conditions. The presence of burrowing mammal habitat will continue to be hindered by compaction, as well as frequent disturbance during commercial activities across the majority of the Site.

For burrowing mammals exposed to 0 to 6 feet bgs soils, maximum soil concentrations were above some screening levels. An evaluation of the 95% UCLs was performed. There are currently no unacceptable risks to terrestrial ecological receptors related to concentrations of PCBs and chlorinated pesticides in soil under current use of the property based on the comparison of the 95% UCL concentrations to screening levels and other lines of evidence related to Site conditions and habitat quality.

Potential future ecological risks associated with PCBs and pesticides in subsurface soils in the vicinity of the former fertilizer storage tank area may exist if these deeper soils are brought to the surface. If deeper soils from these are brought to the surface and left accessible for extended time periods, potential risks associated with exposure to the soil should be mitigated. Figure 3 shows the areas of potential hazards to ecological receptors if soils below 1.5 feet are brought to the surface. Subsurface activities in these areas must be performed in accordance with this Subsurface Media Management Plan.

Future Wetland Receptors

In light of the proposed land use change in the area of the swale at the north-central portion of the Site, a focused ecological risk screening was conducted on data collected within the proposed freshwater wetland footprint to assess the potential for risk to benthic and aquatic organisms that could populate this wetland in the future (AECOM 2021).

Potential future ecological risks to the benthic community should be mitigated if the proposed land use change encouraging establishment of an emergent freshwater wetland is implemented. The proposed wetland will be small and seasonal in nature (water levels are expected to be higher in approximately December to February) and the upper six inches of soil (future sediment) will comprise the bioactive zone where the majority of ecological activity occurs. Most of the benthic organisms are expected to reside at the surface and would be exposed to chemicals within the first couple of inches, with infaunal invertebrates (burrowers) potentially contacting soils down to a maximum of six inches. Therefore, prior to installing plantings to promote establishment of the wetland, the upper six inches of soil (i.e., the bioactive zone) within the vicinity of SB-3R and SB-24 in the planting area shown on Figure 3 should be removed and replaced with clean backfill. This action may also benefit terrestrial receptors, particularly burrowing mammals, which may be present in the proposed wetland area during the dry season. Most burrowing activity occurs within the top three feet of soil. The 0 to 3 ft depth interval in the proposed wetland area may provide better habitat for terrestrial receptors at the surface, and no exceedances of the burrowing mammal soil screening level for PCBs occur in this area between 0.5 and 2.5 feet bgs; exceedances occur for some OCPs at this depth interval but are expected to represent a substantial overestimate of exposure and risk by including dietary/bioaccumulation pathways that are typically limited to the bioactive zone.

As stated above, perched groundwater occurs in the proposed emergent freshwater wetland area. The soil contaminants have been in place since the 1980s and subject to leaching from downward migration of perched groundwater. After removal of impacted soil from the former pesticide disposal pit, analytical testing of extensive suites of agricultural chemicals indicated groundwater impacts were limited to 1,2-DCP and nitrate (Woodward Clyde Consultants 1990 and 1991). No changes to the hydrology will occur from removing and replacing the top six inches of soil in the area, so leaching

conditions are not expected to change; thus, the potential for an increase in chemical concentrations in groundwater is very low.

The results for subsurface soil data collected from 2 to 9.5 feet bgs within the footprint of the proposed wetland indicate concentrations of PCBs and pesticides greater than the sediment screening levels, but are beyond the bounds (i.e., too deep) of likely ecological exposures as long as they remain buried at depth. Therefore, if these deeper soils are brought to the surface, potential future ecological risks associated with exposure to the soil/wetland sediment should be mitigated. Figure 3 shows the areas of potential hazards to ecological receptors if deeper soils are brought to the surface. Subsurface activities in these areas must be performed in accordance with this Subsurface Media Management Plan.

3.0 MANAGEMENT FOR FUTURE SITE ACTIVITIES IN IMPACTED AREAS

The guidelines provided in this section outline requirements for managing soil disturbance activities below 1.5 feet and groundwater in areas where screening levels were exceeded (Figure 3). These management activities do not apply to soil disturbance shallower than 1.5 feet. These guidelines do not address requirements pertaining to right-of-entry permits, access agreements, utility clearances, or local permits that need to be obtained prior to the beginning of activities. These general requirements remain the responsibility of the party performing subsurface activities at the Site.

A qualified environmental professional with sufficient experience in environmental data collection and evaluation activities should lead and/or review the tasks described in the following subsections. These guidelines are not intended to be comprehensive or cover every possible situation. As it is not feasible to provide detailed summaries of all the available environmental data, parties and their respective environmental professionals are required to review appropriate prior reports prepared for the Site.

3.1 PRE-EXCAVATION EVALUATIONS

Parties should consult available reports to obtain relevant information on soil or groundwater in the area to be excavated.

Parties should obtain information for any existing or planned remediation equipment, groundwater monitoring wells, or engineering controls that may be affected by proposed development, construction, or property use. Potential effects on these features (e.g., destruction, impairment, reduced effectiveness) should be evaluated. To the extent reasonable, new construction should avoid the need to modify, repair, or replace groundwater wells or engineering controls. In the event modifications, repairs, or replacements are required, these should be minimized to the extent practical.

3.2 CONSULTATION WITH REGULATORY AGENCY

Parties are required to comply with applicable laws. Parties should communicate with the CSCEHD and the Central Coast RWQCB to obtain any necessary approvals for any characterization and construction work involving the management of subsurface soils that have exceeded screening levels.

3.3 HEALTH AND SAFETY

Field activities should be coordinated in a manner that will protect human health and the environment; prevent damage to property, utilities, materials, supplies, and equipment; and avoid work interruptions.

Project-specific Health and Safety Plans (HSPs) should be prepared prior to commencing field activities. The HSPs should be prepared in accordance with federal, state and local health and safety regulations.

3.4 SOIL EXCAVATION AND STOCKPILING

Free water present in the soil should be drained into the excavation prior to stockpiling and only the minimum amount of soil necessary to complete the construction project should be excavated.

Soil being excavated and loaded for transport and stockpiled soil are subject to wind (generating fugitive dust concerns) and could come into contact with storm water, thus potentially impacting the storm water that could drain into nearby surface water bodies, such as Harkins Slough. To prevent this from occurring, the following activities should be performed:

- Dust generation should be monitored during excavation, during high wind conditions, and while stockpiles are loaded into trucks to be hauled off site for disposal. Should any visible dust be observed during excavation, high wind conditions, or loading, work will be stopped until additional dust suppression measures can be enacted, such as additional wetting of work area until fugitive dust is no longer visible.
- All soil stockpiles should be placed in lined containers or on plastic sheeting with the sheeting bermed at the edges, thus preventing contact with storm water runoff.
- Excavated soil should be kept moist in order to minimize the potential for fugitive dust emissions.
- At the end of each day, or in the event of a storm, all soil stockpiles should be covered with plastic sheeting, thus preventing contact with direct precipitation.
- All soil stockpiles should be inspected each day to ensure the plastic sheeting is intact and that burrowing mammals or other fauna do not have access to the covered soil.
- Containers of soil should be covered before being transported off Site.

3.5 DEWATERING

Given the shallow nature of groundwater at the Site, dewatering may be required during excavation and construction activities depending on the depth of excavation and construction. If dewatering is required, ensure compliance with agencies rules for permitting, discharging, treating and/or disposing off Site, if necessary. A separate work plan provided by the contractor selected for the work will include information on the mechanism for dewatering, anticipated volume of water to be removed, storage of water, and a sampling and analysis plan supporting proper disposal.

3.6 SOIL OFF-SITE DISPOSAL

Excavated soils should be sampled to ensure compliance with reuse and/or disposal options.

The samples may need to be analyzed for Site contaminants, non-hazardous/hazardous waste determination analytes (CA Title 22 metals, ignitability), landfill-specific analytes, or treatment facility-specific analytes; information regarding the chemical analysis and the disposal process should be obtained from the appropriately licensed candidate landfill or treatment facility. Parties are responsible to accurately profile waste materials disposed in a landfill or treatment facility and verify any required manifests or bills of lading are completed properly and signed by the appropriate party performing the work.

The non-hazardous/hazardous waste determination for soil removed from the Site will be made during the waste profiling stage. Soil with PCBs above hazardous waste criteria (i.e., 50 mg/kg or greater) are located in the vicinity of SB-23, SB-23R-N2, and SB-23R-S2 (Figure 3). Soils with total DDT, endrin, and heptachlor epoxide potentially above the TCLP hazardous waste criteria (i.e., 0.1, 0.02, and 0.008 mg/L, respectively) are located in the vicinity of SB-23.

PCB-impacted soils should be handled in accordance with the most recent DTSC *Recommendations for Evaluating PCBs at Contaminated Sites in California* guidance. Per the Toxic Substances Control

Act regulations, all PCB waste should be transported off Site within one year of generation. All containers should be secured, marked, and labeled in accordance with U.S. Department of Transportation shipping regulations. PCB waste should be disposed in accordance with 40 Code of Federal Regulations Part 761.62.

3.7 DECONTAMINATION WATER

Reusable equipment should be decontaminated after use in impacted areas. Care should be taken to avoid contact between clean and contaminated equipment.

Decontamination water should be containerized in 55-gallon drums, totes, or similar pending sampling, waste profiling, and disposal in accordance with State, Federal, and local requirements. All waste containers should be labeled with appropriate waste labels. Decontamination water should be sampled to ensure compliance with disposal options; samples should be analyzed as described in Section 3.6.

3.8 REPORTING AND RECORD KEEPING

Upon completion of any excavation and dewatering activities, a summary report should be submitted to the CSCEHD and the Central Coast RWQCB. The report should outline the activities performed as indicated in this Subsurface Media Management Plan. The summary report should include soil excavation and disposal activities, dewatering and disposal activities (if needed), and documentation of material disposed off Site.

Field notes should be recorded and maintained for monitoring and sampling activities conducted during subsurface activities.

4.0 LIMITATIONS

The scope of services performed during this task may not be appropriate to satisfy the needs of other users, and any use or re-use of this document or of the findings, conclusions, or recommendations presented herein is at the sole risk of said user.

Background information and other data have been furnished to AECOM by Shell and/or third parties, which AECOM has used in preparing this document. AECOM has relied on this information as furnished, and is neither responsible for, nor has confirmed, the accuracy of this information.

Opinions presented herein apply to the existing and reasonably foreseeable Site conditions at the time of our assessment. They cannot apply to Site changes of which AECOM is unaware and has not had the opportunity to review. Changes in the condition of this property may occur with time due to natural processes or works of man at the Site or on adjacent properties. Changes in applicable standards may also occur as a result of legislation or the broadening of knowledge. Accordingly, the findings of this document may be invalidated, wholly or in part, by changes beyond our control.

5.0 REFERENCES

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Tables

Table 1: Summary of Soil Analytical Results and Human Health Screening Levels - Polychlorinated Biphenyls and Organochlorine Pesticides

		Analyte	PCBs (8082) [1]			Organochlorine Pesticides (8081A) [2]
			Aroclor 1254	Aroclor 1260	Total PCBs [3]	Dieldrin
U.S. EPA Soil Commercial/Industrial RSL [4]			0.97	0.99	--	0.14
SF Bay RWQCB Soil Commercial/Industrial ESL [5]			--	--	0.94	0.16
SF Bay RWQCB Soil Construction ESL [5]			--	--	5.5	1.1
DTSC HERO Note 3 Soil Commercial/Industrial SL [6]			0.59	0.60	0.58	0.093
Sample Location	Depth (ft bgs)	Sample Date				
SB-1	1.5	6/10/14	<0.0095	<0.0095	<0.019	<0.005
	7.5	6/10/14	<0.0096	0.077	0.144	0.0081 J
SB-2	1.5	6/10/14	<0.0095	<0.0095	<0.019	<0.0051
	7.5	6/10/14	<0.0095	0.057	0.124	<0.0017
SB-3	1.5	6/10/14	<0.067	0.71	1.18	<0.017
	7.5	6/10/14	<0.0095	0.025	0.092	<0.0017
SB-3R	0.5	7/23/19	<0.060	<0.060	<0.060	<0.0024
	1.5	7/23/19	<0.068	0.22	0.29	0.0099
	2.5	7/23/19	<0.061 UJ	0.32 J	0.38	0.025
	5.0	7/23/19	<0.082	0.22	0.30	0.052
	8.0	7/23/19	<0.064	<0.064	<0.064	0.014
	10.0	7/23/19	<0.06	<0.06	<0.06	<0.0024
	10.0	7/23/19	<0.048	<0.048	<0.048	<0.0049
SB-4	1.5	6/10/14	0.13	0.11	0.30	0.0039
	7.5	6/10/14	0.37	0.12	0.55	0.0049 J
SB-5	1.5	6/10/14	<0.0096	<0.0096	<0.019	<0.0017
	7.5	6/10/14	<0.0095	<0.0095	<0.019	<0.0017
SB-6	1.5	6/10/14	<0.0095	<0.0095	<0.019	<0.0017
	1.5	6/10/14	<0.0096	<0.0096	<0.019	<0.0017
	7.5	6/10/14	<0.0096	0.21	0.28	0.0082 J
SB-11	1.5	6/9/14	--	--	--	0.0042
	7.5	6/11/14	--	--	--	<0.0017
	7.5	6/11/14	<0.0097	<0.0097	<0.019	<0.0017
SB-12	1.5	6/12/14	<0.0096	0.28	0.35	0.02
	7.5	6/10/14	<0.0096	<0.0096	<0.019	0.0079 J
	7.5	6/10/14	<0.0096	<0.0096	<0.019	0.0087 J
SB-12R	0.5	7/23/19	<0.063	<0.063	<0.063	<0.0025
	1.5	7/23/19	<0.066 UJ	<0.066 UJ	<0.066	0.0045
	2.5	7/23/19	<0.055	<0.055	<0.055	<0.0022
	2.5	7/23/19	<0.12	<0.12	<0.12	<0.0046
	5.0	7/23/19	<0.062	<0.062	<0.062	<0.0025
	8.0	7/23/19	0.5	<0.064	0.56	<0.0026
	10.0	7/23/19	0.25 J	<0.06	0.31	0.011
SB-14	1.5	6/10/14	<0.0095	<0.0095	<0.019	<0.0017
	7.5	6/10/14	<0.0095	0.28	0.35	0.033 J
SB-15	1.5	6/10/14	<0.0096	0.056	0.123	0.049
	7.5	6/10/14	<0.0095	<0.0095	<0.019	<0.024 UJ
SB-16	1.5	6/12/14	--	--	--	<0.0017
	7.5	6/12/14	--	--	--	<0.0017
SB-17	1.5	6/12/14	0.14	0.14	0.34	0.0064
	7.5	6/10/14	0.41	0.29	0.76	0.036 J
SB-18	1.5	6/12/14	--	--	--	0.0049 J
	7.5	6/13/14	--	--	--	<0.0017

Table 1: Summary of Soil Analytical Results and Human Health Screening Levels - Polychlorinated Biphenyls and Organochlorine Pesticides

		Analyte	PCBs (8082) [1]			Organochlorine Pesticides (8081A) [2]
			Aroclor 1254	Aroclor 1260	Total PCBs [3]	Dieldrin
U.S. EPA Soil Commercial/Industrial RSL [4]			0.97	0.99	--	0.14
SF Bay RWQCB Soil Commercial/Industrial ESL [5]			--	--	0.94	0.16
SF Bay RWQCB Soil Construction ESL [5]			--	--	5.5	1.1
DTSC HERO Note 3 Soil Commercial/Industrial SL [6]			0.59	0.60	0.58	0.093
Sample Location	Depth (ft bgs)	Sample Date				
SB-19	1.5	6/9/14	--	--	--	<0.0017
	7.5	6/9/14	--	--	--	<0.0017
SB-20	1.5	6/11/14	--	--	--	0.016
	7.5	6/11/14	--	--	--	<0.002
SB-21	1.5	6/10/14	<0.0097	<0.0097	<0.019	<0.0018
	1.5	6/10/14	<0.0095	<0.0095	<0.019	<0.0018
	7.5	6/10/14	<0.0095	<0.0095	<0.019	<0.0019
SB-22	1.5	6/12/14	--	--	--	0.0024
	7.5	6/12/14	--	--	--	<0.0021
SB-23	1.5	6/10/14	<0.013 UJ	<0.013 UJ	<0.025	<0.084
	5	6/10/14	**26** J	**36** J	69	**0.94 J**
	5	6/10/14	**13**	**8.7**	30	**0.57 J**
SB-23R	0-0.25	3/1/16	<0.0426	<0.0426	<0.0426	--
	0.25-1.0	3/1/16	<0.0419	<0.0419	<0.0419	--
	1.5-2.0	3/1/16	<0.0454	<0.0454	<0.0454	--
	1.5-2.0	3/1/16	<0.0405	<0.0405	<0.0405	--
	4.5-5.0	5/23/16	**2.44** J	<0.406 UJ	4.88	--
	4.5-5.0	5/23/16	<0.393 UJ	**2.13** J	4.49	--
	7.5-8.0	5/27/16	<0.0382	<0.0382	<0.0382	--
	9.5-10.0	5/27/16	<0.0433	<0.0433	<0.0433	--
SB-23R-N1	0-0.25	5/24/16	<0.0369	<0.0369	<0.0369	--
	0.25-1.0	5/24/16	<0.0387	<0.0387	<0.0387	--
	1.5-2.0	5/24/16	<0.0397	<0.0397	<0.0397	--
	4.5-5.0	5/24/16	**2.54**	<0.394	4.90	--
	7.5-8.0	5/27/16	<0.0407	<0.0407	<0.0407	--
	9.5-10.0	5/27/16	<0.042	<0.042	<0.042	--
SB-23R-N2	0-0.25	5/24/16	<0.0371	<0.0371	<0.0371	--
	0.25-1.0	5/24/16	<0.0364	<0.0364	<0.0364	--
	1.5-2.0	5/24/16	<0.039	<0.039	<0.039	--
	4.5-5.0	5/24/16	*<8.01* UJ	**21.9** J	70.0	--
	7.5-8.0	5/27/16	<0.0393	<0.0393 UJ	<0.0393	--
	7.5-8.0	5/27/16	<0.226	**1.19** J	2.55	--
	9.5-10.0	5/27/16	<0.0411	<0.0411	<0.0411	--
SB-23R-N3	0-1.0	5/31/17	<0.12	<0.12 UJ	<0.12	--
	1.5-2.0	5/31/17	<0.12	<0.12	<0.12	--
	4.5-5.0	5/31/17	<0.12	<0.12	<0.12	--
	4.5-5.0	5/31/17	<0.12	<0.12	<0.12	--
	7.5-8.0	6/1/17	<0.12	<0.12	<0.12	--
	9.5-10.0	6/1/17	<0.12	<0.12	<0.12	--

Table 1: Summary of Soil Analytical Results and Human Health Screening Levels - Polychlorinated Biphenyls and Organochlorine Pesticides

		Analyte	PCBs (8082) [1]					Organochlorine Pesticides (8081A) [2]
			Aroclor 1254		Aroclor 1260		Total PCBs [3]	Dieldrin
U.S. EPA Soil Commercial/Industrial RSL [4]			0.97		0.99		--	0.14
SF Bay RWQCB Soil Commercial/Industrial ESL [5]			--		--		0.94	0.16
SF Bay RWQCB Soil Construction ESL [5]			--		--		5.5	1.1
DTSC HERO Note 3 Soil Commercial/Industrial SL [6]			0.59		0.60		0.58	0.093
Sample Location	Depth (ft bgs)	Sample Date						
SB-23R-E1	0-0.25	5/23/16	<0.0342		<0.0342		<0.0342	--
	0.25-1.0	5/23/16	<0.0368		<0.0368		<0.0368	--
	1.5-2.0	5/23/16	<0.0387		<0.0387		<0.0387	--
	4.5-5.0	5/23/16	**5.4**	J	*<1.98*	UJ	17.3	--
	7.5-8.0	5/27/16	*<0.856*	UJ	**3.71**	J	8.85	--
	9.5-10.0	5/27/16	<0.0391		<0.0391		<0.0391	--
SB-23R-E2	0-0.25	5/23/16	<0.0347		0.121		0.329	--
	0.25-1.0	5/23/16	<0.0405		<0.0405		<0.0405	--
	1.5-2.0	5/23/16	<0.0356		0.111		0.325	--
	4.5-5.0	5/23/16	*<1.99*	UJ	**8.25**	J	20.19	--
	7.5-8.0	5/27/16	<0.393		<0.393		<0.393	--
	9.5-10.0	5/27/16	<0.0413		<0.0413		<0.0413	--
SB-23R-E3	0-1.0	5/31/17	<0.052		<0.052		<0.052	--
	1.5-2.0	5/31/17	<0.11		<0.11		<0.11	--
	4.5-5.0	5/31/17	0.17		0.09		0.55	--
	7.5-8.0	6/1/17	**1.1**		0.93		2.6	--
	9.5-10.0	6/1/17	<0.12	UJ	<0.12	UJ	<0.12	--
SB-23R-E4	0.5	7/23/19	<0.052		<0.052		<0.052	--
	1.5	7/23/19	<0.057		<0.057		<0.057	--
	2.5	7/23/19	<0.056		<0.056		<0.056	--
	5.0	7/23/19	**2.3**		*<1.2*		3.5	--
	8.0	7/23/19	<0.054		0.19		0.24	--
	10.0	7/23/19	<0.063		0.08		0.14	--
SB-23R-S1	0-0.25	3/1/16	<0.0404		<0.0404		<0.0404	--
	0.25-1.0	3/1/16	<0.0362		<0.0362		<0.0362	--
	0.25-1.0	3/1/16	<0.0359		<0.0359		<0.0359	--
	1.5-2.0	3/1/16	<0.0428		<0.0428		<0.0428	--
	2.5-3.0	3/1/16	<0.0392		<0.0392		<0.0392	--
	4.5-5.0	5/23/16	*<2.0*	UJ	**7.83**	J	19.83	--
	7.5-8.0	5/27/16	<0.2		0.867		2.067	--
	9.5-10.0	5/27/16	<0.0388		<0.0388		<0.0388	--
SB-23R-S2	2.5-3.0	3/1/16	<0.0429		<0.0429		<0.0429	--
	4.5-5.0	5/23/16	*<7.76*		**16**		63	--
	7.5-8.0	5/27/16	<0.0404		0.0435		0.2859	--
	9.5-10.0	5/27/16	<0.0394		<0.0394		<0.0394	--
SB-23R-S3	0-1.0	5/31/17	<0.059		<0.059		<0.059	--
	1.5-2.0	5/31/17	<0.12		<0.12		<0.12	--
	4.5-5.0	5/31/17	**12**		**7.8**		23	--
	7.5-8.0	6/1/17	<0.12		0.54		1.26	--
	9.5-10.0	6/1/17	<0.16		<0.16		<0.16	--

Table 1: Summary of Soil Analytical Results and Human Health Screening Levels - Polychlorinated Biphenyls and Organochlorine Pesticides

		Analyte	PCBs (8082) [1]					Organochlorine Pesticides (8081A) [2]
			Aroclor 1254		Aroclor 1260		Total PCBs [3]	Dieldrin
U.S. EPA Soil Commercial/Industrial RSL [4]			0.97		0.99		--	0.14
SF Bay RWQCB Soil Commercial/Industrial ESL [5]			--		--		0.94	0.16
SF Bay RWQCB Soil Construction ESL [5]			--		--		5.5	1.1
DTSC HERO Note 3 Soil Commercial/Industrial SL [6]			0.59		0.60		0.58	0.093
Sample Location	Depth (ft bgs)	Sample Date						
SB-23R-S4	0-1.0	5/31/17	<0.11		<0.11		<0.11	--
	1.5-2.0	5/31/17	<0.11		<0.11		<0.11	--
	4.5-5.0	5/31/17	**5.3**		**3.0**		9.0	--
	7.5-8.0	6/1/17	**5.0**		**1.9**		7.5	--
	9.5-10.0	6/1/17	0.46	J	0.26	J	1.37	--
SB-23R-S5	1.0	7/22/19	<0.055		0.089		0.144	--
	2.0	7/22/19	<0.061		0.29		0.35	--
	5.0	7/22/19	**1.6**	J	*<1.2*	UJ	2.8	--
	8.0	7/22/19	0.48		<0.12		0.60	--
	10.0	7/22/19	0.15		<0.11		0.26	--
SB-23R-S6	1.0	7/22/19	<0.054		<0.054		<0.054	--
	2.0	7/22/19	<0.057		0.20		0.26	--
	5.0	7/22/19	<0.059		0.11		0.17	--
	5.0	7/22/19	0.73		<0.11		0.84	--
	8.0	7/22/19	<0.058		<0.058		<0.058	--
	10.0	7/22/19	<0.058		<0.058		<0.058	--
	15.0	7/22/19	<0.49		<0.49		<0.49	--
SB-23R-W1	0-0.25	5/23/16	<0.0353		0.0368		0.2486	--
	0.25-1.0	5/23/16	<0.0365		<0.0365		<0.0365	--
	1.5-2.0	5/23/16	<0.0427		<0.0427		<0.0427	--
	4.5-5.0	5/23/16	**4.03**	J	*<0.81*	UJ	8.89	--
	4.5-5.0	5/23/16	*<2.01*	UJ	**5.37**	J	17.43	--
	7.5-8.0	5/27/16	<0.039		0.249		0.483	--
	9.5-10.0	5/27/16	<0.0388		<0.0388		<0.0388	--
SB-23R-W2	0-0.25	5/23/16	<0.194		<0.194		<0.194	--
	0.25-1.0	5/23/16	<0.036		<0.036		<0.036	--
	1.5-2.0	5/23/16	<0.0363		<0.0363		<0.0363	--
	4.5-5.0	5/23/16	<0.079		0.0894		0.0894	--
	7.5-8.0	5/27/16	<0.0393		<0.0393		<0.0393	--
	9.5-10.0	5/27/16	<0.0402		<0.0402		<0.0402	--
SB-23R-W3	1.0	7/22/19	<0.053		<0.053		<0.053	--
	1.0	7/22/19	<0.05		<0.05		<0.05	--
	2.0	7/22/19	<0.053		<0.053		<0.053	--
	5.0	7/22/19	<0.062		0.1		0.2	--
	8.0	7/22/19	<0.16		<0.16		<0.16	--
	10.0	7/22/19	<0.077		<0.077		<0.077	--
SB-24	0.5	7/23/19	<0.31	UJ	0.60	J	0.91	--
	1.5	7/23/19	<0.062	UJ	0.34	J	0.40	--
	2.5	7/23/19	<0.06		0.25		0.31	--
	5.0	7/23/19	<0.062		<0.062		<0.062	--
	8.0	7/23/19	<0.081		<0.081		<0.081	--
	10.0	7/23/19	<0.059		<0.059		<0.059	--

Table 1: Summary of Soil Analytical Results and Human Health Screening Levels - Polychlorinated Biphenyls and Organochlorine Pesticides

		Analyte	PCBs (8082) [1]			Organochlorine Pesticides (8081A) [2]
			Aroclor 1254	Aroclor 1260	Total PCBs [3]	Dieldrin
U.S. EPA Soil Commercial/Industrial RSL [4]			0.97	0.99	--	0.14
SF Bay RWQCB Soil Commercial/Industrial ESL [5]			--	--	0.94	0.16
SF Bay RWQCB Soil Construction ESL [5]			--	--	5.5	1.1
DTSC HERO Note 3 Soil Commercial/Industrial SL [6]			0.59	0.60	0.58	0.093
Sample Location	**Depth (ft bgs)**	**Sample Date**				
SB-25	0.5	7/23/19	<0.09	0.25	0.34	--
	1.5	7/23/19	<0.059	0.27	0.33	--
	2.5	7/23/19	<0.059	0.18	0.24	--
	5.0	7/23/19	<0.12	0.44	0.56	--
	8.0	7/23/19	<0.063	<0.063	<0.063	--
	10.0	7/23/19	<0.062	<0.062	<0.063	--

All results are in milligrams per kilogram

-- = not applicable or not analyzed

< = constituent not detected at concentration exceeding laboratory detection limit.

Italics = non detect with detection limit above a screening criteria

Bold = detection above U.S. EPA Soil Commercial/Industrial RSL

= detection above SF Bay RWQCB Soil Commercial/Industrial ESL

blue font = detection above SF Bay RWQCB Soil Construction ESL

= detection above DTSC HERO Note 3 Soil Commercial Industrial SL

bgs - below ground surface

ESL = Environmental Screening Level

ft = feet

J = the detected concentration is estimated

[1] Individual Aroclor data was also available for 1016, 1221, 1232, 1248 for all 2017, 2016 and all 2014 samples except SB-11 (two samples), SB-16, SB-18, SB-19, SB-20 and SB-22. Because there were no detections, these four Aroclors are not included in this table and were not analyzed in 2019.

[2] Dieldrin was the only organochlorine pesticide that exceeded human health screening criteria.

[3] Total PCBs calculation:

- All Aroclors detected, Total PCBs = sum of detections
- One or more Aroclors detected, Total PCBs = sum of detection(s) and reporting limit of non detect result(s)
- No Aroclors detected, Total PCBs = highest reporting limit

[4] U.S. EPA. 2019. Regional Screening Levels, Target Hazard Quotient of 1.0, https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables. May.

[5] San Francisco Bay Regional Water Quality Control Board (SF Bay RWQCB). 2019. Direct Exposure Human Health Risk Levels (Table S-1). July, Rev 2.

[6] California Department of Toxic Substance Control (DTSC). 2019. Human and Ecological Risk Office (HERO) Note 3, DTSC-modified Screening Levels (commercial/industrial soil). April.

Table 2: Summary of Soil Analytical Results and Ecological Screening Levels - Polychlorinated Biphenyls

		Analyte	PCBs (8082)							
			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs [1]
		Soil Ecological SL - Surface [2]	--	--	--	--	--	--	--	0.371
		Soil Ecological SL - Subsurface [3]	--	--	--	--	--	--	--	4.0
		Sediment Ecological TEC (lower bound) [4]	--	--	--	--	--	--	--	0.0598
		Sediment Ecological PEC (upper bound) [4]	--	--	--	--	--	--	--	0.676
Sample Location	Depth (ft bgs)	Sample Date								
PCB delineation - Soil Ecological SLs										
SB-1	1.5	6/10/14	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.019
	7.5	6/10/14	<0.0096	<0.019	<0.0096	<0.0096	<0.0096	<0.0096	0.077	0.144
SB-2	1.5	6/10/14	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.019
	7.5	6/10/14	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	0.057	0.124
SB-3	1.5	6/10/14	<0.067	<0.13	<0.067	<0.067	<0.067	<0.067	0.71	**1.18**
	7.5	6/10/14	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	0.025	0.092
SB-4	1.5	6/10/14	<0.0096	<0.019	<0.0096	<0.0096	<0.0096	0.13	0.11	0.30
	7.5	6/10/14	<0.0096	<0.019	<0.0096	<0.0096	<0.0096	0.37	0.12	0.55
SB-5	1.5	6/10/14	<0.0096	<0.019	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.019
	7.5	6/10/14	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.019
SB-6	1.5	6/10/14	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.019
	1.5	6/10/14	<0.0096	<0.019	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.019
	7.5	6/10/14	<0.0096	<0.019	<0.0096	<0.0096	<0.0096	<0.0096	0.21	0.28
SB-11	7.5	6/10/14	<0.0097	<0.019	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.019
SB-14	1.5	6/10/14	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.019
	7.5	6/10/14	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	0.28	0.35
SB-15	1.5	6/10/14	<0.0096	<0.019	<0.0096	<0.0096	<0.0096	<0.0096	0.056	0.123
	7.5	6/10/14	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.019
SB-17	1.5	6/12/14	<0.0096	<0.019	<0.0096	<0.0096	<0.0096	0.14	0.14	0.34
	7.5	6/10/14	<0.0097	<0.019	<0.0097	<0.0097	<0.0097	0.41	0.29	0.76
SB-21	1.5	6/10/14	<0.0097	<0.019	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.019
	1.5	6/10/14	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.019
	7.5	6/10/14	<0.0095	<0.019	<0.0095	<0.0095	<0.0095	<0.0095	<0.0095	<0.019
SB-23	1.5	6/10/14	<0.013 UJ	<0.025 UJ	<0.013 UJ	<0.013 UJ	<0.013 UJ	<0.013 UJ	<0.013 UJ	<0.025
	5	6/10/14	<1.2 UJ	<2.3 UJ	<1.2 UJ	<1.2 UJ	<1.2 UJ	26 J	36 J	69
	5	6/10/14	<1.3	<2.7	<1.3	<1.3	<1.3	13	8.7	30

Table 2: Summary of Soil Analytical Results and Ecological Screening Levels - Polychlorinated Biphenyls

		Analyte	PCBs (8082)							
			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs [1]
		Soil Ecological SL - Surface [2]	--	--	--	--	--	--	--	0.371
		Soil Ecological SL - Subsurface [3]	--	--	--	--	--	--	--	4.0
		Sediment Ecological TEC (lower bound) [4]	--	--	--	--	--	--	--	0.0598
		Sediment Ecological PEC (upper bound) [4]	--	--	--	--	--	--	--	0.676
Sample Location	Depth (ft bgs)	Sample Date								
SB-23R	0-0.25	3/1/16	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426
	0.25-1.0	3/1/16	<0.0419	<0.0419	<0.0419	<0.0419	<0.0419	<0.0419	<0.0419	<0.0419
	1.5-2.0	3/1/16	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454
	1.5-2.0	3/1/16	<0.0405	<0.0405	<0.0405	<0.0405	<0.0405	<0.0405	<0.0405	<0.0405
	4.5-5.0	5/23/16	<0.406	<0.406	<0.406	<0.406	<0.406	2.44 J	<0.406 UJ	4.88
	4.5-5.0	5/23/16	<0.393	<0.393	<0.393	<0.393	<0.393	<0.393 UJ	2.13 J	4.49
	7.5-8.0	5/27/16	<0.0382	<0.0382	<0.0382	<0.0382	<0.0382	<0.0382	<0.0382	<0.0382
	9.5-10.0	5/27/16	<0.0433	<0.0433	<0.0433	<0.0433	<0.0433	<0.0433	<0.0433	<0.0433
SB-23R-N1	0-0.25	5/24/16	<0.0369	<0.0369	<0.0369	<0.0369	<0.0369	<0.0369	<0.0369	<0.0369
	0.25-1.0	5/24/16	<0.0387	<0.0387	<0.0387	<0.0387	<0.0387	<0.0387	<0.0387	<0.0387
	1.5-2.0	5/24/16	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397	<0.0397
	4.5-5.0	5/24/16	<0.394	<0.394	<0.394	<0.394	<0.394	2.54	<0.394	4.90
	7.5-8.0	5/27/16	<0.0407	<0.0407	<0.0407	<0.0407	<0.0407	<0.0407	<0.0407	<0.0407
	9.5-10.0	5/27/16	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
SB-23R-N2	0-0.25	5/24/16	<0.0371	<0.0371	<0.0371	<0.0371	<0.0371	<0.0371	<0.0371	<0.0371
	0.25-1.0	5/24/16	<0.0364	<0.0364	<0.0364	<0.0364	<0.0364	<0.0364	<0.0364	<0.0364
	1.5-2.0	5/24/16	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039
	4.5-5.0	5/24/16	<8.01 UJ	<8.01 UJ	<8.01 UJ	<8.01 UJ	<8.01 UJ	<8.01 UJ	21.9 J	70.0
	7.5-8.0	5/27/16	<0.226	<0.226	<0.226	<0.226	<0.226	<0.226	1.19 J	2.55
	9.5-10.0	5/27/16	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411
SB-23R-N3	0-1.0	5/31/17	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12 UJ	<0.12
	1.5-2.0	5/31/17	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
	4.5-5.0	5/31/17	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
	4.5-5.0	5/31/17	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
	7.5-8.0	6/1/17	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
	9.5-10.0	6/1/17	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
SB-23R-E1	0-0.25	5/23/16	<0.0342	<0.0342	<0.0342	<0.0342	<0.0342	<0.0342	<0.0342	<0.0342
	0.25-1.0	5/23/16	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368
	1.5-2.0	5/23/16	<0.0387	<0.0387	<0.0387	<0.0387	<0.0387	<0.0387	<0.0387	<0.0387
	4.5-5.0	5/23/16	<1.98 UJ	<1.98 UJ	<1.98 UJ	<1.98 UJ	<1.98 UJ	5.4 J	<1.98 UJ	17.3
	7.5-8.0	5/27/16	<0.856 UJ	*<0.856* UJ	*<0.856* UJ	*<0.856* UJ	*<0.856* UJ	*<0.856* UJ	3.71 J	8.85
	9.5-10.0	5/27/16	<0.0391	<0.0391	<0.0391	<0.0391	<0.0391	<0.0391	<0.0391	<0.0391

Table 2: Summary of Soil Analytical Results and Ecological Screening Levels - Polychlorinated Biphenyls

		Analyte	PCBs (8082)							
			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs [1]
Soil Ecological SL - Surface [2]			--	--	--	--	--	--	--	0.371
Soil Ecological SL - Subsurface [3]			--	--	--	--	--	--	--	4.0
Sediment Ecological TEC (lower bound) [4]			--	--	--	--	--	--	--	0.0598
Sediment Ecological PEC (upper bound) [4]			--	--	--	--	--	--	--	0.676
Sample Location	Depth (ft bgs)	Sample Date								
SB-23R-E2	0-0.25	5/23/16	<0.0347	<0.0347	<0.0347	<0.0347	<0.0347	<0.0347	0.121	0.329
	0.25-1.0	5/23/16	<0.0405	<0.0405	<0.0405	<0.0405	<0.0405	<0.0405	<0.0405	<0.0405
	1.5-2.0	5/23/16	<0.0356	<0.0356	<0.0356	<0.0356	<0.0356	<0.0356	0.111	0.325
	4.5-5.0	5/23/16	<1.99 UJ	<1.99 UJ	<1.99 UJ	<1.99 UJ	<1.99 UJ	<1.99 UJ	8.25 J	20.19
	7.5-8.0	5/27/16	<0.393	<0.393	<0.393	<0.393	<0.393	<0.393	<0.393	<0.393
	9.5-10.0	5/27/16	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413
SB-23R-S1	0-0.25	3/1/16	<0.0404	<0.0404	<0.0404	<0.0404	<0.0404	<0.0404	<0.0404	<0.0404
	0.25-1.0	3/1/16	<0.0362	<0.0362	<0.0362	<0.0362	<0.0362	<0.0362	<0.0362	<0.0362
	0.25-1.0	3/1/16	<0.0359	<0.0359	<0.0359	<0.0359	<0.0359	<0.0359	<0.0359	<0.0359
	1.5-2.0	3/1/16	<0.0428	<0.0428	<0.0428	<0.0428	<0.0428	<0.0428	<0.0428	<0.0428
	2.5-3.0	3/1/16	<0.0392	<0.0392	<0.0392	<0.0392	<0.0392	<0.0392	<0.0392	<0.0392
	4.5-5.0	5/23/16	<2.0 UJ	<2.0 UJ	<2.0 UJ	<2.0 UJ	<2.0 UJ	<2.0 UJ	7.83 J	19.83
	7.5-8.0	5/27/16	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.867	2.067
	9.5-10.0	5/27/16	<0.0388	<0.0388	<0.0388	<0.0388	<0.0388	<0.0388	<0.0388	<0.0388
SB-23R-S2	2.5-3.0	3/1/16	<0.0429	<0.0429	<0.0429	<0.0429	<0.0429	<0.0429	<0.0429	<0.0429
	4.5-5.0	5/23/16	<7.76	<7.76	<7.76	<7.76	<7.76	<7.76	16	63
	7.5-8.0	5/27/16	<0.0404	<0.0404	<0.0404	<0.0404	<0.0404	<0.0404	0.0435	0.2859
	9.5-10.0	5/27/16	<0.0394	<0.0394	<0.0394	<0.0394	<0.0394	<0.0394	<0.0394	<0.0394
SB-23R-S4	0-1.0	5/31/17	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
	1.5-2.0	5/31/17	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
	4.5-5.0	5/31/17	<0.13	<0.13	<0.13	<0.13	<0.13	5.3	3.0	9.0
	7.5-8.0	6/1/17	<0.12	<0.12	<0.12	<0.12	<0.12	5	1.9	7.5
	9.5-10.0	6/1/17	<0.13 UJ	<0.13 UJ	<0.13 UJ	<0.13 UJ	<0.13 UJ	0.46 J	0.26 J	1.37
SB-23R-S5	1.0	7/22/19	--	--	--	--	--	<0.055	0.089	0.144
	2.0	7/22/19	--	--	--	--	--	<0.061	0.29	0.35
	5.0	7/22/19	--	--	--	--	--	1.6 J	<1.2 UJ	2.8
	8.0	7/22/19	--	--	--	--	--	0.48	<0.12	0.60
SB-23R-S6	1.0	7/22/19	--	--	--	--	--	<0.054	<0.054	<0.054
	2.0	7/22/19	--	--	--	--	--	<0.057	0.20	0.26
	5.0	7/22/19	--	--	--	--	--	<0.059	0.11	0.17
	5.0	7/22/19	--	--	--	--	--	0.73	<0.11	0.84
	8.0	7/22/19	--	--	--	--	--	<0.058	<0.058	<0.058

Table 2: Summary of Soil Analytical Results and Ecological Screening Levels - Polychlorinated Biphenyls

		Analyte	PCBs (8082)							
			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs [1]
		Soil Ecological SL - Surface [2]	--	--	--	--	--	--	--	0.371
		Soil Ecological SL - Subsurface [3]	--	--	--	--	--	--	--	4.0
		Sediment Ecological TEC (lower bound) [4]	--	--	--	--	--	--	--	0.0598
		Sediment Ecological PEC (upper bound) [4]	--	--	--	--	--	--	--	0.676
Sample Location	Depth (ft bgs)	Sample Date								
SB-23R-W1	0-0.25	5/23/16	<0.0353	<0.0353	<0.0353	<0.0353	<0.0353	<0.0353	0.0368	0.2486
	0.25-1.0	5/23/16	<0.0365	<0.0365	<0.0365	<0.0365	<0.0365	<0.0365	<0.0365	<0.0365
	1.5-2.0	5/23/16	<0.0427	<0.0427	<0.0427	<0.0427	<0.0427	<0.0427	<0.0427	<0.0427
	4.5-5.0	5/23/16	<0.81	<0.81	<0.81	<0.81	<0.81	4.03 J	<0.81 UJ	8.89
	4.5-5.0	5/23/16	<2.01 UJ	<2.01 UJ	<2.01 UJ	<2.01 UJ	<2.01 UJ	<2.01 UJ	5.37 J	17.43
	7.5-8.0	5/27/16	<0.039	<0.039	<0.039	<0.039	<0.039	<0.039	0.249	0.483
	9.5-10.0	5/27/16	<0.0388	<0.0388	<0.0388	<0.0388	<0.0388	<0.0388	<0.0388	<0.0388
SB-23R-W2	0-0.25	5/23/16	<0.194	<0.194	<0.194	<0.194	<0.194	<0.194	<0.194	<0.194
	0.25-1.0	5/23/16	<0.036	<0.036	<0.036	<0.036	<0.036	<0.036	<0.036	<0.036
	1.5-2.0	5/23/16	<0.0363	<0.0363	<0.0363	<0.0363	<0.0363	<0.0363	<0.0363	<0.0363
	4.5-5.0	5/23/16	<0.079	<0.079	<0.079	<0.079	<0.079	<0.079	0.0894	0.0894
	7.5-8.0	5/27/16	<0.0393	<0.0393	<0.0393	<0.0393	<0.0393	<0.0393	<0.0393	<0.0393
	9.5-10.0	5/27/16	<0.0402	<0.0402	<0.0402	<0.0402	<0.0402	<0.0402	<0.0402	<0.0402
SB-23R-W3	1.0	7/22/19	--	--	--	--	--	<0.053	<0.053	<0.053
	1.0	7/22/19	--	--	--	--	--	<0.05	<0.05	<0.05
	2.0	7/22/19	--	--	--	--	--	<0.053	<0.053	<0.053
	5.0	7/22/19	--	--	--	--	--	<0.062	0.1	0.2
	8.0	7/22/19	--	--	--	--	--	<0.16	<0.16	<0.16
PCB delineation - Soil Ecological SLs and Sediment Ecological TEC/PEC										
SB-3R	0.5	7/23/19	--	--	--	--	--	<0.060	<0.060	*<0.060*
	1.5	7/23/19	--	--	--	--	--	<0.068	0.22	0.29
	2.5	7/23/19	--	--	--	--	--	<0.061 UJ	0.32 J	0.38
	5.0	7/23/19	--	--	--	--	--	<0.082	0.22	0.30
	8.0	7/23/19	--	--	--	--	--	<0.064	<0.064	<0.064
SB-12	1.5	6/12/14	<0.0096	<0.019	<0.0096	<0.0096	<0.0096	<0.0096	0.28	0.35
	7.5	6/10/14	<0.0096	<0.019	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.019
	7.5	6/10/14	<0.0096	<0.019	<0.0096	<0.0096	<0.0096	<0.0096	<0.0096	<0.019

Table 2: Summary of Soil Analytical Results and Ecological Screening Levels - Polychlorinated Biphenyls

		Analyte	PCBs (8082)							
			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs [1]
Soil Ecological SL - Surface [2]			--	--	--	--	--	--	--	0.371
Soil Ecological SL - Subsurface [3]			--	--	--	--	--	--	--	4.0
Sediment Ecological TEC (lower bound) [4]			--	--	--	--	--	--	--	0.0598
Sediment Ecological PEC (upper bound) [4]			--	--	--	--	--	--	--	0.676
Sample Location	Depth (ft bgs)	Sample Date								
SB-12R	0.5	7/23/19	--	--	--	--	--	<0.063	<0.063	*<0.063*
	1.5	7/23/19	--	--	--	--	--	<0.066 UJ	<0.066 UJ	*<0.066*
	2.5	7/23/19	--	--	--	--	--	<0.055	<0.055	<0.055
	2.5	7/23/19	--	--	--	--	--	<0.12	<0.12	*<0.12*
	5.0	7/23/19	--	--	--	--	--	<0.062	<0.062	<0.062
	8.0	7/23/19	--	--	--	--	--	0.5	<0.064	0.56
SB-23R-E3	0-1.0	5/31/17	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052
	1.5-2.0	5/31/17	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	*<0.11*
	4.5-5.0	5/31/17	<0.058	<0.058	<0.058	<0.058	<0.058	0.17	0.09	0.55
	7.5-8.0	6/1/17	<0.12	<0.12	<0.12	<0.12	<0.12	1.1	0.93	2.6
	9.5-10.0	6/1/17	<0.12 UJ	<0.12 UJ	<0.12 UJ	<0.12 UJ	<0.12 UJ	<0.12 UJ	<0.12 UJ	<0.12
SB-23R-E4	0.5	7/23/19	--	--	--	--	--	<0.052	<0.052	<0.052
	1.5	7/23/19	--	--	--	--	--	<0.057	<0.057	<0.057
	2.5	7/23/19	--	--	--	--	--	<0.056	<0.056	<0.056
	5.0	7/23/19	--	--	--	--	--	2.3	<1.2	3.5
	8.0	7/23/19	--	--	--	--	--	<0.054	0.19	0.24
SB-23R-S3	0-1.0	5/31/17	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059
	1.5-2.0	5/31/17	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	*<0.12*
	4.5-5.0	5/31/17	<0.12	<0.12	<0.12	<0.12	<2.4	12	7.8	23
	7.5-8.0	6/1/17	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	0.54	1.26
	9.5-10.0	6/1/17	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
SB-24	0.5	7/23/19	--	--	--	--	--	<0.31 UJ	0.60 J	**0.91**
	1.5	7/23/19	--	--	--	--	--	<0.062 UJ	0.34 J	**0.40**
	2.5	7/23/19	--	--	--	--	--	<0.06	0.25	0.31
	5.0	7/23/19	--	--	--	--	--	<0.062	<0.062	<0.062
	8.0	7/23/19	--	--	--	--	--	<0.081	<0.081	<0.081

Table 2: Summary of Soil Analytical Results and Ecological Screening Levels - Polychlorinated Biphenyls

		Analyte	PCBs (8082)							
			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs [1]
		Soil Ecological SL - Surface [2]	--	--	--	--	--	--	--	0.371
		Soil Ecological SL - Subsurface [3]	--	--	--	--	--	--	--	4.0
		Sediment Ecological TEC (lower bound) [4]	--	--	--	--	--	--	--	0.0598
		Sediment Ecological PEC (upper bound) [4]	--	--	--	--	--	--	--	0.676
Sample Location	**Depth (ft bgs)**	**Sample Date**								
SB-25	0.5	7/23/19	--	--	--	--	--	<0.09	0.25	0.34
	1.5	7/23/19	--	--	--	--	--	<0.059	0.27	0.33
	2.5	7/23/19	--	--	--	--	--	<0.059	0.18	0.24
	5.0	7/23/19	--	--	--	--	--	<0.12	0.44	0.56
	8.0	7/23/19	--	--	--	--	--	<0.063	<0.063	<0.063

All results are in milligrams per kilogram
-- = not applicable or not analyzed
< = constituent not detected at concentration exceeding laboratory detection limit.
Italics = non detect with detection limit above a screening criteria
Bold = detection above Soil Ecological SL - Surface (samples between 0 to 2 feet bgs)
= detection above Soil Ecological SL - Subsurface (samples between 2 to 6 feet bgs)
blue font = detection above Sediment Ecological TEC (samples from 0 to 2.5 feet bgs)
= detection above Sediment Ecological PEC (samples from 0 to 2.5 feet bgs)
= Soil Ecological SL - Surface exceedance if subsurface soil below 2 feet bgs and above 9.5 feet bgs brought to surface

bgs - below ground surface
J = the detected concentration is estimated
PEC = probable effects concentration (upper bound)
SL = Screening Level
TEC = threshold effects concentration (lower bound)
UJ = the detection limit is estimated

[1] Total PCBs calculation:
- All Aroclors detected, Total PCBs = sum of detections
- One or more Aroclors detected, Total PCBs = sum of detection(s) and reporting limit of non detect result(s)
- No Aroclors detected, Total PCBs = highest reporting limit

[2] Efroymson et al. 1997. Oak Ridge National Laboratory, Preliminary Remediation Goals for Ecological Endpoints.
[3] Oregon Department of Environmental Quality. 2001. Level II Ecological Screening Level Values.
[4] Sediment screening levels protective of a freshwater benthic community, with the consensus-based TECs and PECs as the primary source (MacDonald et al. 2000), supplemented by screening levels presented in the National Oceanic and Atmospheric Administration Screening Quick Reference Tables (Buchman 2008).

Table 3: Summary of Soil Analytical Results and Ecological Screening Levels - Organochlorine Pesticides

		Analyte	Organochlorine Pesticides (8081A)																		
			DDD	DDE	DDT	Total DDTs [1]	Aldrin	alpha-BHC	beta-BHC	delta-BHC	Gamma-BHC (Lindane)	Chlordane	cis-Chlordane	trans-Chlordane	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin Ketone
Soil Ecological SL - Surface [2]			0.021	0.021	0.021	0.021	0.0049	1,000	1,000	8	8	9	9	9	0.0049	20	20	20	0.04	0.04	0.04
Soil Ecological SL - Subsurface [3]			0.021	0.021	0.021	0.021	0.0049	1,000	1,000	1,000	1,000	250	250	250	0.0049	20	20	20	5	5	5
Sediment Ecological TEC (lower bound) [4]			0.00488	0.00316	0.00416	0.00528	0.002	0.006	0.005	0.00324	0.00237	0.00324	0.00324	0.00324	0.0019	--	--	--	0.00222	0.00222	--
Sediment Ecological PEC (upper bound) [4]			0.028	0.0313	0.0629	0.572	0.08	0.1	0.21	0.0176	0.00499	0.0176	0.0176	0.0176	0.0618	--	--	--	0.207	0.207	--
Sample Location	Depth (ft bgs)	Sample Date																			
Organochlorine pesticides delineation - Soil Ecological SLs																					
SB-1	1.5	6/10/14	<0.0098	<0.0098	<0.0098	<0.0098	*<0.005*	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005	<0.005	<0.005	<0.0098	<0.0098	<0.0098	<0.0098	--
	7.5	6/10/14	0.023	0.05	<0.0033	0.08	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	0.0081 J	<0.0017	<0.0033	<0.0033	0.0033	<0.0033	--
SB-2	1.5	6/10/14	<0.0098	<0.0098	<0.0098	<0.0098	*<0.0051*	<0.0051	<0.0051	<0.0051	<0.0051	--	<0.0051	<0.0051	<0.0051	<0.0051	<0.0098	<0.0098	0.0098	<0.0098	--
	7.5	6/10/14	0.025	0.0083	<0.0033	0.037	0.0027 J	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	<0.0017	<0.0017	<0.0033	<0.0033	0.0033	<0.0033	--
SB-3	1.5	6/10/14	<0.033	<0.033	0.11	0.18	*<0.017*	<0.017	<0.017	<0.017	<0.017	--	<0.017	<0.017	<0.017	<0.017	<0.033	0.077 J	<0.033	<0.033	--
	7.5	6/10/14	<0.0033	<0.0033	<0.0033	<0.0033	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	<0.0017	<0.0017	<0.0033	<0.0033	0.0033	<0.0033	--
SB-4	1.5	6/10/14	0.0084	0.0046	<0.0033	0.0163	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	0.0026	0.0027	0.0039	<0.0017	0.0098 J	<0.0033	<0.0033	0.0033	--
	7.5	6/10/14	0.03 J	0.0074	0.0034 J	0.04	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	0.0021	<0.0017	0.0049 J	<0.0017	<0.0033	<0.0033	0.0074 J	<0.0033	--
SB-5	1.5	6/10/14	<0.0033	<0.0033	<0.0033	<0.0033	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	0.0022 J	<0.0017	<0.0017	<0.0017	<0.0033	<0.0033	<0.0033	<0.0033	--
	7.5	6/10/14	<0.0033	<0.0033	<0.0033	<0.0033	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	<0.0017	<0.0017	<0.0033	<0.0033	<0.0033	<0.0033	--
SB-6	1.5	6/10/14	<0.0033	0.005	<0.0033	0.012	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	<0.0017	<0.0017	<0.0033	<0.0033	<0.0033	<0.0033	--
	1.5	6/10/14	<0.0033	0.005	<0.0033	0.012	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	<0.0017	<0.0017	<0.0033	<0.0033	<0.0033	<0.0033	--
	7.5	6/10/14	0.022 J	0.054	0.039 J	0.115	<0.0017	<0.0017	<0.0017	0.02 J	<0.0017	--	0.0054 J	<0.0017	0.0082 J	0.018	0.059 J	<0.0033	0.021 J	<0.0033	--
SB-10	1.5	6/9/14	<0.0033	<0.0033	<0.0033	<0.0033	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	<0.0017	<0.0017	<0.0033	<0.0033	0.0033	<0.0033	--
	7.5	6/9/14	<0.0033	<0.0033	<0.0033	<0.0033	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	<0.0017	<0.0017	<0.0033	<0.0033	0.0033	<0.0033	--
SB-11	1.5	6/9/14	<0.0033	<0.0033	0.0056	0.0122	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	0.0042	<0.0017	<0.0033	<0.0033	<0.0033	<0.0033	--
	7.5	6/11/14	<0.0033	<0.0033	<0.0033	<0.0033	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	<0.0017	<0.0017	<0.0033	<0.0033	<0.0033	<0.0033	--
	7.5	6/11/14	<0.0033	<0.0033	<0.0033	<0.0033	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	<0.0017	<0.0017	<0.0033	<0.0033	<0.0033	<0.0033	--
SB-14	1.5	6/11/14	<0.0033	<0.0033	<0.0033	<0.0033	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	<0.0017	<0.0017	<0.0033	<0.0033	<0.0033	<0.0033	--
	7.5	6/11/14	0.035	0.045	0.0048 J	0.085	0.0045	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	0.0021	0.033 J	<0.0017	<0.0033	0.0034 J	0.016 J	<0.0033	--
SB-15	1.5	6/12/14	**0.066 J**	**0.03 J**	0.0058 J	**0.10**	<0.0017	<0.0017	<0.0017	0.0063	<0.0017	--	0.029 J	0.032	0.049	0.015	0.044 J	0.017 J	0.0061 J	0.01	--
	7.5	6/12/14	1.4 J	0.25 J	0.28 J	1.9	<0.024 UJ	<0.024 UJ	<0.024 UJ	<0.024 UJ	<0.024 UJ	--	<0.024 UJ	0.052 J	<0.024 UJ	0.14 J	0.097 J	<0.046 UJ	<0.046 UJ	<0.046 UJ	--
SB-16	1.5	6/12/14	<0.0033	<0.0033	<0.0033	<0.0033	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	<0.0017	<0.0017	<0.0033	<0.0033	0.0033	<0.0033	--
	7.5	6/12/14	<0.0033	<0.0033	<0.0033	<0.0033	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	<0.0017	<0.0017	<0.0033	<0.0033	0.0033	<0.0033	--
SB-17	1.5	6/9/14	0.016	0.013	**0.039**	**0.068**	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	--	0.0049 J	<0.0022	0.0064	0.0038	<0.0043	0.02 J	0.009 J	<0.0043	--
	7.5	6/9/14	0.05 J	0.041 J	0.025 J	0.12	0.005	<0.0023	<0.0023	<0.0023	<0.0023	--	<0.0023	0.034	0.036 J	<0.0023	<0.0045	<0.0045	0.041 J	0.011 J	--
SB-18	1.5	6/12/14	<0.0033	0.0036 J	0.0079	0.0148	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	0.0049 J	<0.0017	<0.0033	<0.0033	0.0042 J	<0.0033	--
	7.5	6/13/14	<0.0033	<0.0033	<0.0033	<0.0033	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	<0.0017	<0.0017	<0.0033	<0.0033	0.0033	<0.0033	--
SB-19	1.5	6/9/14	<0.0033	<0.0033	0.0042	0.0108	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	0.0042 J	<0.0017	<0.0017	<0.0017	<0.0033	<0.0033	<0.0033	<0.0033	--
	7.5	6/9/14	<0.0033	<0.0033	<0.0033	<0.0033	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	<0.0017	<0.0017	<0.0033	<0.0033	<0.0033	<0.0033	--
SB-20	1.5	6/11/14	<0.0038	<0.0038	0.016	**0.0236**	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	0.016	<0.002	<0.0038	<0.0038	<0.0038	<0.0038	--
	7.5	6/11/14	<0.0038	<0.0038	<0.0038	<0.0038	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.002	<0.0038	<0.0038	<0.0038	<0.0038	--
SB-21	1.5	6/12/14	<0.0035	<0.0035	<0.0035	<0.0035	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	--	<0.0018	<0.0018	<0.0018	<0.0018	<0.0035	<0.0035	<0.0035	<0.0035	--
	1.5	6/12/14	<0.0034	<0.0034	<0.0034	<0.0034	<0.0018	<0.0018	<0.0018	<0.0018	<0.0018	--	<0.0018	<0.0018	<0.0018	<0.0018	<0.0034	<0.0034	<0.0034	<0.0034	--
	7.5	6/12/14	<0.0038	<0.0038	<0.0038	<0.0038	<0.0019	<0.0019	<0.0019	<0.0019	<0.0019	--	<0.0019	<0.0019	<0.0019	<0.0019	<0.0038	<0.0038	<0.0038	<0.0038	--
SB-22	1.5	6/12/14	0.012 J	0.016	**0.067**	**0.095**	<0.0021	<0.0021	<0.0021	<0.0021	0.014	--	<0.0021	<0.0021	0.0024	<0.0021	<0.004	0.0073 J	0.0058 J	0.004	--
	7.5	6/12/14	<0.0041	<0.0041	<0.0041	<0.0041	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	--	<0.0021	<0.0021	<0.0021	<0.0021	<0.0041	<0.0041	<0.0041	<0.0041	--
SB-23	1.5	6/12/14	<0.16	<0.16	<0.16	<0.16	*<0.084*	<0.084	<0.084	<0.084	<0.084	--	<0.084	<0.084	<0.084	<0.084	<0.16	<0.16	*<0.16*	*<0.16*	--
	5.0	6/13/14	1.7 J	1.4 J	3.4 J	6.5	*<0.43 UJ*	<0.43 UJ	<0.43 UJ	<0.43 UJ	<0.43 UJ	--	<0.43 UJ	<0.43 UJ	0.94 J	<0.43 UJ	<0.83 UJ	0.99 J	*<1.2 UJ*	*<1.2 UJ*	--
	5.0	6/13/14	1.4 J	0.64 J	2.1 J	4.1	*<0.041 UJ*	<0.041 UJ	<0.041 UJ	<0.041 UJ	<0.041 UJ	--	<0.041 UJ	<0.041 UJ	0.57 J	<0.041 UJ	0.31 J	<0.08 UJ	**0.78 J**	**0.15 J**	--

Table 3: Summary of Soil Analytical Results and Ecological Screening Levels - Organochlorine Pesticides

		Analyte	Organochlorine Pesticides (8081A)			
			Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
Soil Ecological SL - Surface [2]			15	15	500	1,000
Soil Ecological SL - Subsurface [3]			15	15	500	1,000
Sediment Ecological TEC (lower bound) [4]			0.00247	0.00247	--	0.0001
Sediment Ecological PEC (upper bound) [4]			0.016	0.016	--	0.001
Sample Location	Depth (ft bgs)	Sample Date				
Organochlorine pesticides delineation - Soil Ecological SLs						
SB-1	1.5	6/10/14	<0.005	<0.005	<0.05	<0.18
	7.5	6/10/14	0.0026 J	0.0023 J	<0.017	<0.06
SB-2	1.5	6/10/14	<0.0051	<0.0051	<0.051	<0.18
	7.5	6/10/14	<0.0017	<0.0017	<0.017	<0.06
SB-3	1.5	6/10/14	<0.017	0.019 J	<0.17	<0.6
	7.5	6/10/14	<0.0017	<0.0017	<0.017	<0.06
SB-4	1.5	6/10/14	<0.0017	0.0026	<0.017	<0.06
	7.5	6/10/14	<0.0017	<0.0017	<0.017	<0.06
SB-5	1.5	6/10/14	<0.0017	<0.0017	<0.017	<0.06
	7.5	6/10/14	<0.0017	<0.0017	<0.017	<0.06
SB-6	1.5	6/10/14	<0.0017	<0.0017	<0.017	<0.059
	1.5	6/10/14	<0.0017	<0.0017	<0.017	<0.06
	7.5	6/10/14	<0.0017	0.01 J	<0.017	<0.06
SB-10	1.5	6/9/14	<0.0017	<0.0017	<0.017	<0.059
	7.5	6/9/14	<0.0017	<0.0017	<0.017	<0.06
SB-11	1.5	6/9/14	<0.0017	<0.0017	<0.017	<0.06
	7.5	6/11/14	<0.0017	<0.0017	<0.017	<0.059
	7.5	6/11/14	<0.0017	<0.0017	<0.017	<0.061
SB-14	1.5	6/11/14	<0.0017	<0.0017	<0.017	<0.059
	7.5	6/11/14	<0.0017	<0.0017	<0.017	<0.06
SB-15	1.5	6/12/14	0.0081	0.02 J	<0.017	<0.06
	7.5	6/12/14	<0.024 UJ	0.071 J	<0.24 UJ	<0.84 UJ
SB-16	1.5	6/12/14	<0.0017	<0.0017	<0.017	<0.059
	7.5	6/12/14	<0.0017	<0.0017	<0.017	<0.06
SB-17	1.5	6/9/14	<0.0022	<0.0022	<0.022	<0.078
	7.5	6/9/14	<0.0023	0.016 J	<0.023	<0.082
SB-18	1.5	6/12/14	0.0017	<0.0017	<0.017	<0.06
	7.5	6/13/14	<0.0017	<0.0017	<0.017	<0.06
SB-19	1.5	6/9/14	<0.0017	<0.0017	0.047	<0.06
	7.5	6/9/14	<0.0017	<0.0017	<0.017	<0.059
SB-20	1.5	6/11/14	<0.002	<0.002	<0.02	<0.069
	7.5	6/11/14	<0.002	<0.002	<0.02	<0.07
SB-21	1.5	6/12/14	<0.0018	<0.0018	<0.018	<0.064
	1.5	6/12/14	<0.0018	<0.0018	<0.018	<0.062
	7.5	6/12/14	<0.0019	<0.0019	<0.019	<0.068
SB-22	1.5	6/12/14	<0.0021	<0.0021	<0.021	<0.073
	7.5	6/12/14	<0.0021	<0.0021	<0.021	<0.074
SB-23	1.5	6/12/14	<0.084	<0.084	<0.84	<3.0
	5.0	6/13/14	<0.43 UJ	0.49 J	<4.3 UJ	<15 UJ
	5.0	6/13/14	<0.041 UJ	<0.041 UJ	<0.41 UJ	<1.5 UJ

Table 3: Summary of Soil Analytical Results and Ecological Screening Levels - Organochlorine Pesticides

		Analyte	Organochlorine Pesticides (8081A)																		
			DDD	DDE	DDT	Total DDTs [1]	Aldrin	alpha-BHC	beta-BHC	delta-BHC	Gamma-BHC (Lindane)	Chlordane	cis-Chlordane	trans-Chlordane	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin Ketone
Soil Ecological SL - Surface [2]			0.021	0.021	0.021	0.021	0.0049	1,000	1,000	8	8	9	9	9	0.0049	20	20	20	0.04	0.04	0.04
Soil Ecological SL - Subsurface [3]			0.021	0.021	0.021	0.021	0.0049	1,000	1,000	1,000	1,000	250	250	250	0.0049	20	20	20	5	5	5
Sediment Ecological TEC (lower bound) [4]			0.00488	0.00316	0.00416	0.00528	0.002	0.006	0.005	0.00324	0.00237	0.00324	0.00324	0.00324	0.0019	--	--	--	0.00222	0.00222	--
Sediment Ecological PEC (upper bound) [4]			0.028	0.0313	0.0629	0.572	0.08	0.1	0.21	0.0176	0.00499	0.0176	0.0176	0.0176	0.0618	--	--	--	0.207	0.207	--
Sample Location	Depth (ft bgs)	Sample Date																			
Organochlorine pesticides delineation - Soil Ecological SLs and Sediment Ecological TEC/PEC																					
SB-3R	0.5	7/23/19	<0.0024	<0.0024	0.0025	0.0073	*<0.0024*	<0.0024	<0.0024	<0.0024	*<0.0024*	0.053	0.0042 J	0.0041	*<0.0024*	<0.0024	<0.0024	<0.0024	*<0.0024*	*<0.0024*	<0.0024
	1.5	7/23/19	0.013	0.017	0.014 J	**0.044**	*<0.0027*	<0.0027	<0.0027	<0.0027	*<0.0027*	*<0.055*	<0.0027	<0.0027	**0.0099**	<0.0027	0.0068	0.012	*<0.0027*	*<0.0027*	<0.0027
	2.5	7/23/19	0.0088 J	0.024	0.17	0.203	*<0.0025*	<0.0025	<0.0025	<0.0025	*<0.0025*	*<0.049*	<0.0025	<0.0025	0.025	<0.0025	0.049	0.20	*<0.0025*	*<0.0025*	<0.0025
	5.0	7/23/19	0.045	0.041	0.54	0.626	0.0049	<0.0033	<0.0033	<0.0033	<0.0033	<0.066	<0.0033	<0.0033	0.052	<0.0033	0.024	0.0093 J	<0.0033	<0.0033	<0.0033
	8.0	7/23/19	0.051	0.012	0.01 J	0.0730	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.052	<0.0026	<0.0026	0.014	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026
SB-12	1.5	6/12/14	**0.046**	0.019	**0.025 J**	**0.090**	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	0.0022	0.0019	**0.02**	<0.0017	0.018 J	0.037	0.018 J	0.004 J	--
	7.5	6/12/14	0.037	0.0092	0.057 J	0.103	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	0.0019	0.0019	0.0079 J	0.016 J	0.025 J	0.0084 J	<0.0033	<0.0033	--
	7.5	6/12/14	0.041 J	0.008	0.036 J	0.085	<0.0017	<0.0017	<0.0017	<0.0017	<0.0017	--	<0.0017	<0.0017	0.0087 J	0.012 J	0.014 J	0.0063 J	<0.0033	<0.0033	--
SB-12R	0.5	7/23/19	<0.0025	<0.0025	<0.0025	<0.0025	*<0.0025*	--	--	--	--	--	--	--	*<0.0025*	--	--	--	*<0.0025*	*<0.0025*	--
	1.5	7/23/19	0.003	<0.0027	0.0028 J	0.009	*<0.0027*	--	--	--	--	--	--	--	0.0045	--	--	--	*<0.0027*	*<0.0027*	--
	2.5	7/23/19	<0.0022	<0.0022	<0.0022	<0.0022	*<0.0022*	--	--	--	--	--	--	--	*<0.0022*	--	--	--	<0.0022	<0.0022	--
	2.5	7/23/19	<0.0046	*<0.0046*	*<0.0046*	<0.0046	*<0.0046*	--	--	--	--	--	--	--	*<0.0046*	--	--	--	*<0.0046*	*<0.0046*	--
	5.0	7/23/19	0.056	0.018 J	0.033	0.107	<0.0025	--	--	--	--	--	--	--	<0.0025	--	--	--	<0.0025	<0.0025	--
	8.0	7/23/19	0.032 J	0.013 J	<0.0026	0.048	<0.0026	--	--	--	--	--	--	--	<0.0026	--	--	--	<0.0026	<0.0026	--

Table 3: Summary of Soil Analytical Results and Ecological Screening Levels - Organochlorine Pesticides

			Organochlorine Pesticides (8081A)			
		Analyte	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
		Soil Ecological SL - Surface [2]	15	15	500	1,000
		Soil Ecological SL - Subsurface [3]	15	15	500	1,000
		Sediment Ecological TEC (lower bound) [4]	0.00247	0.00247	--	0.0001
		Sediment Ecological PEC (upper bound) [4]	0.016	0.016	--	0.001
Sample Location	**Depth (ft bgs)**	**Sample Date**				
Organochlorine pesticides delineation - Soil Ecological SLs and Sediment Ecological TEC/PEC						
SB-3R	0.5	7/23/19	<0.0024	<0.0024	<0.0024	*<0.048*
	1.5	7/23/19	*<0.0027*	*<0.0027*	<0.0027	*<0.055*
	2.5	7/23/19	*<0.0025*	0.0029	<0.0025	0.66
	5.0	7/23/19	<0.0033	<0.0033	<0.0033	<0.066
	8.0	7/23/19	<0.0026	<0.0026	<0.0026	<0.052
SB-12	1.5	6/12/14	<0.0017	0.0019	<0.017	*<0.06*
	7.5	6/12/14	<0.0017	<0.0017	<0.017	<0.06
	7.5	6/12/14	<0.0017	<0.0017	<0.017	<0.06
SB-12R	0.5	7/23/19	--	--	--	--
	1.5	7/23/19	--	--	--	--
	2.5	7/23/19	--	--	--	--
	2.5	7/23/19	--	--	--	--
	5.0	7/23/19	--	--	--	--
	8.0	7/23/19	--	--	--	--

All results are in milligrams per kilogram
-- = not applicable or not analyzed
< = constituent not detected at concentration exceeding laboratory detection limit.
Italics = non detect with detection limit above a screening criteria
Bold = detection above Soil Ecological SL - Surface (samples between 0 to 2 feet bgs)
= detection above Soil Ecological SL - Subsurface (samples between 2 to 6 feet bgs)
blue font = detection above Sediment Ecological TEC (samples from 0 to 2.5 feet bgs)
= detection above Sediment Ecological PEC (samples from 0 to 2.5 feet bgs)
= Soil Ecological SL - Surface exceedance if subsurface soil below 2 feet bgs and above 9.5 feet bgs brought to surface

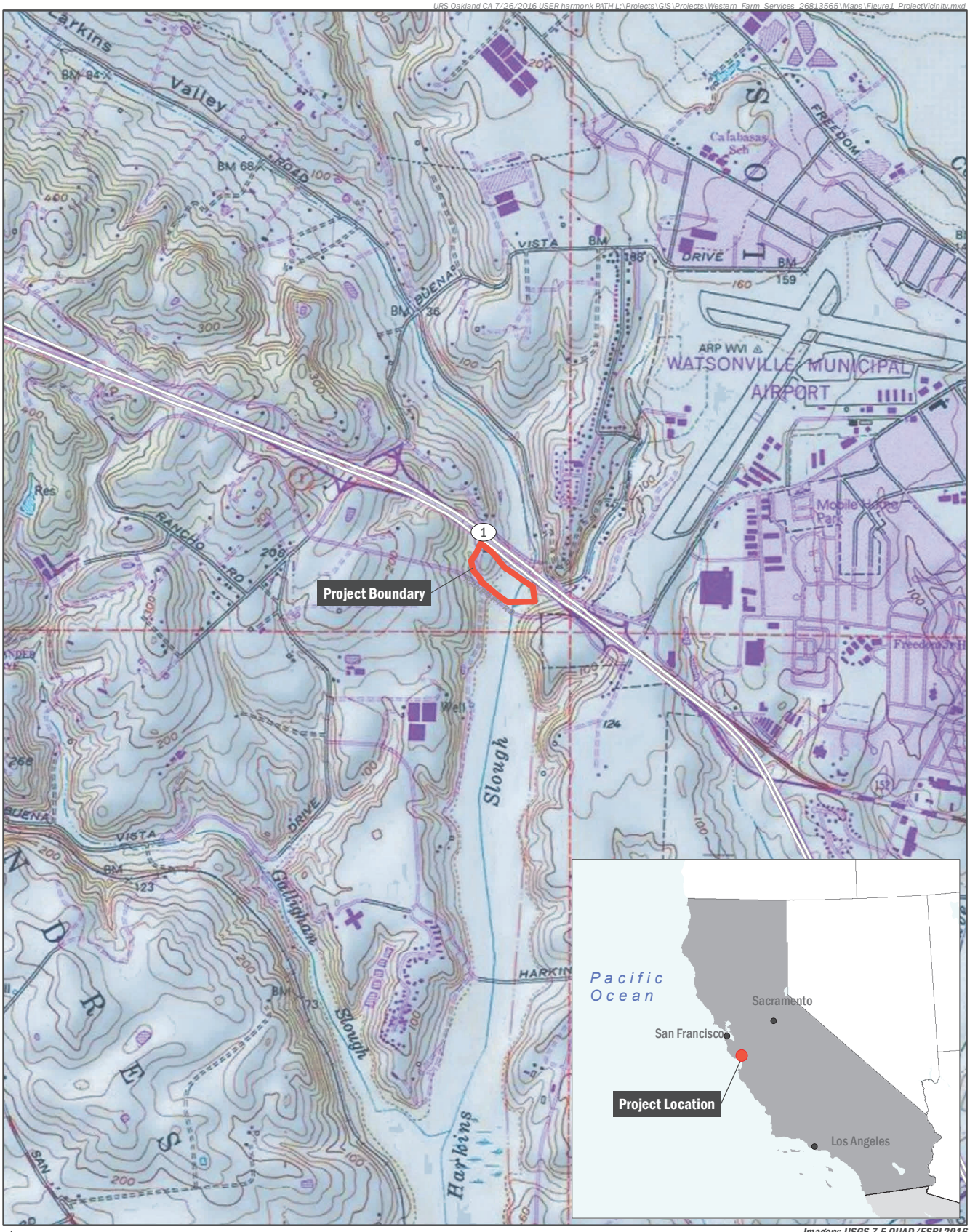
bgs - below ground surface
BHC = benzene hexachloride
DDD = 4,4'-dichloro-diphenyl-dichloroethane
DDE = 4,4'-dichloro-diphenyl-dichloroethylene
DDT = 4,4'-dichloro-diphenyl-trichloroethane
ft = feet
J = the detected concentration is estimated
PEC = probable effects concentration (upper bound)
SL = Screening Level
TEC = threshold effects concentration (lower bound)

[1] Total DDTs calculation:
- All three isomers (DDD, DDE, DDT) detected, Total DDTs = sum of detections
- One or two isomers detected, Total DDTs = sum of detection(s) and reporting limit of non detect result(s)
- All three isomers non detect, Total DDTs = highest reporting limit

[2] Efroymson et al. 1997. Oak Ridge National Laboratory, Preliminary Remediation Goals for Ecological Endpoints.
[3] Oregon Department of Environmental Quality. 2001. Level II Ecological Screening Level Values.
[4] Sediment screening levels protective of a freshwater benthic community, with the consensus-based TECs and PECs as the primary source (MacDonald et al. 2000), supplemented by screening levels presented in the National Oceanic and Atmospheric Administration Screening Quick Reference Tables (Buchman 2008).

Figures

URS Oakland CA 7/26/2016 USER harmonk PATH L:\Projects\GIS\Projects\Western_Farm_Services_26813565\Maps\Figure1_ProjectVicinity.mxd



Imagery: USGS 7.5 QUAD/ESRI 2016

N 0 0.5 Miles

AECOM

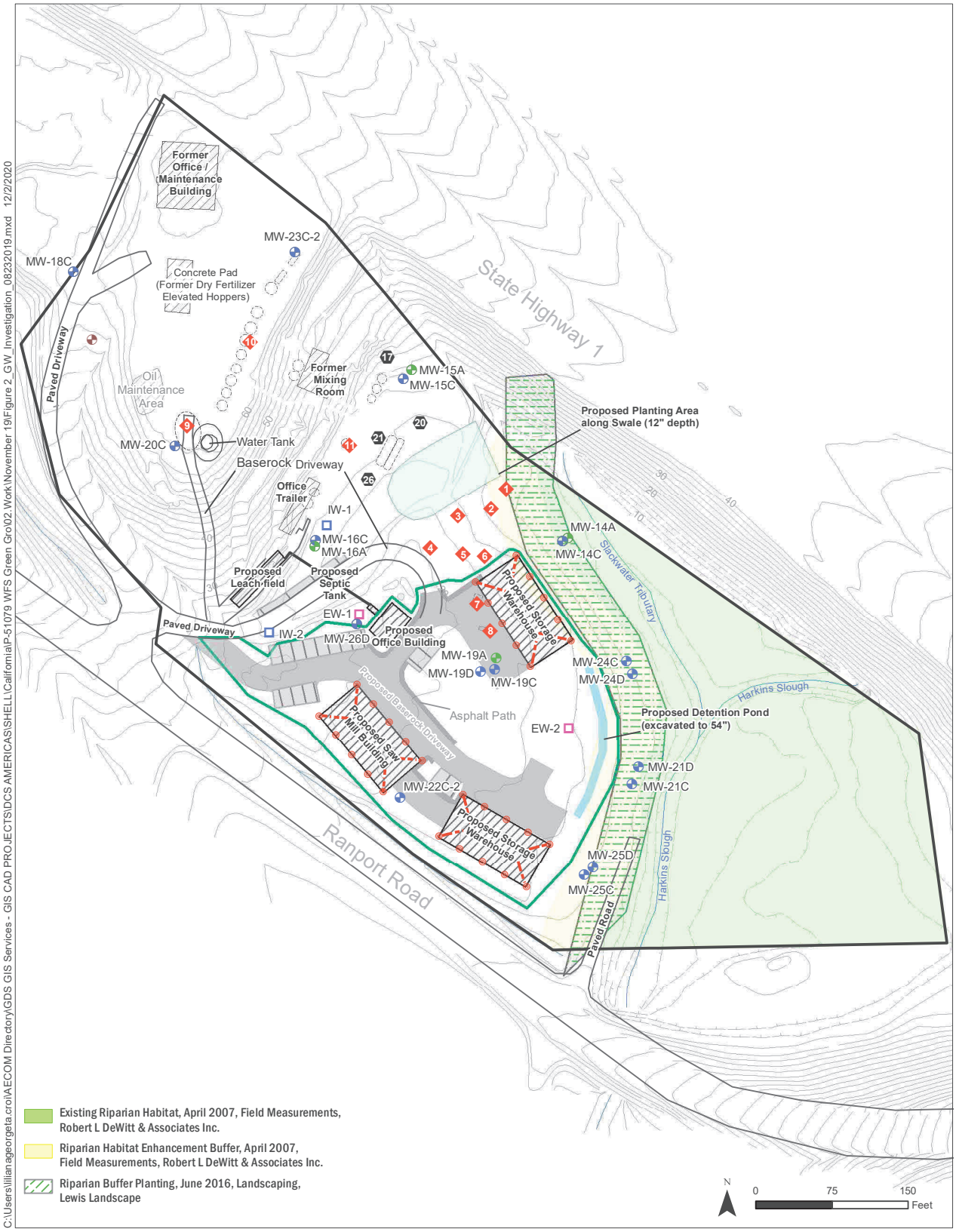
Western Farm Services, Inc.

Former Green Gro Facility

PROJECT NUMBER 60593206

FIGURE 1

Project Vicinity



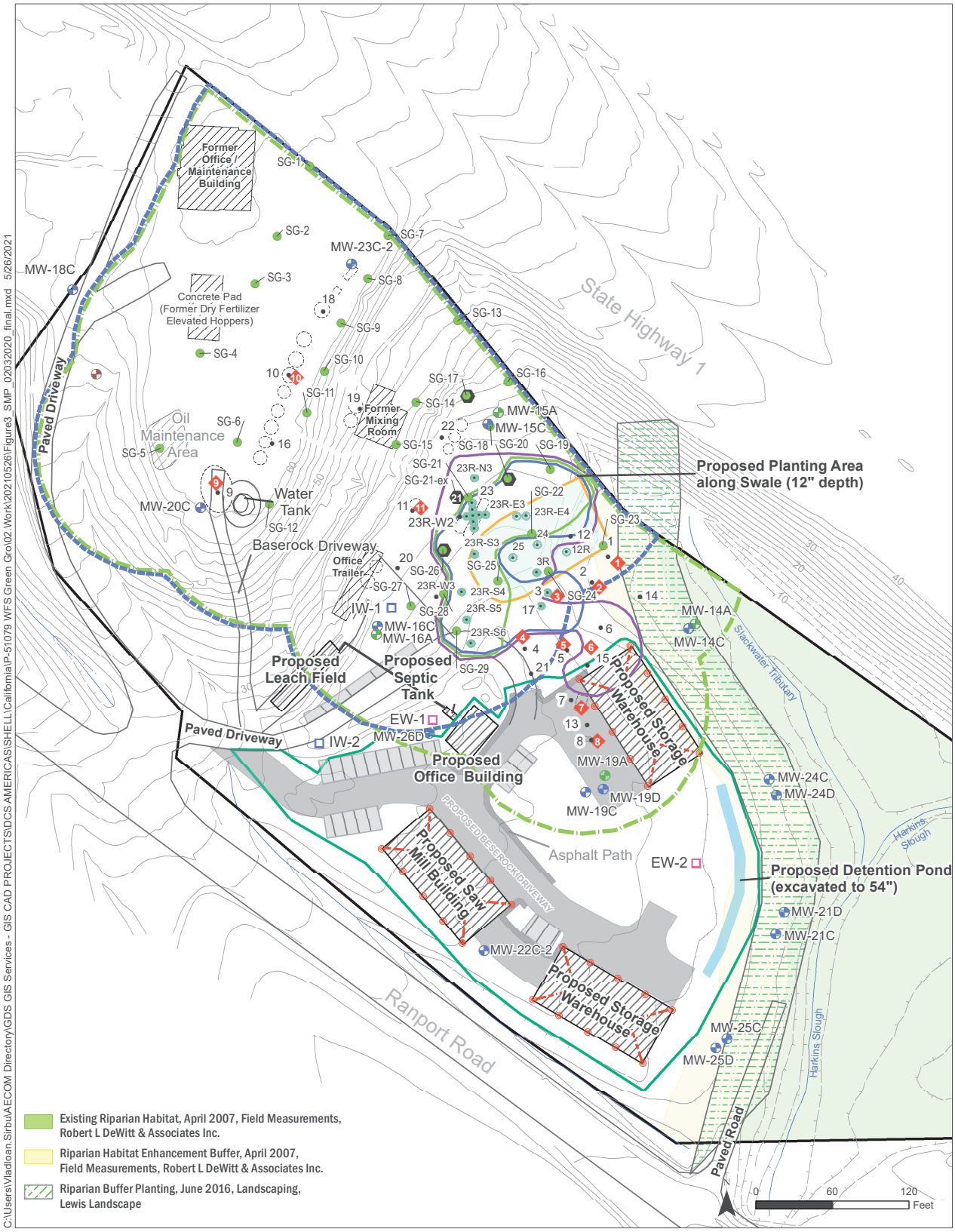
C:\Users\liliangeorgeta.crol\AECOM Directory\GDS GIS Services - GIS CAD PROJECTS\DCS AMERICAS\SHELL\California\P-51079 WFS Green Gro\02.Work\November 19\Figure 2_GW_Investigation_08232019.mxd 12/2/2020

Topographic Contours: Mid Coast Engineers 01/23/1996

- Site Boundary
- Limit of proposed grading
- Former Agricultural Chemical or Petroleum Storage Tank
- Topographic Contours (feet above mean sea level)
- Roads and driveways
- Proposed Helical piers (29' depth)
- Monitoring Well, shallow well
- Monitoring Well, deep well
- Approximate Location of Non-Potable Water Supply Well
- Extraction Well (inactive)
- Injection Well (inactive)
- Soil Vapor Well Location (SVW-#) (Wells SVW-1, SVW-2, SVW-9, SVW-10 and SVW-11 are nested soil vapor wells)
- Soil Vapor Well Location (SVW-SG-#) (Repeat sample locations from 2009)

Western Farm Service, Inc.
Former Green Gro Facility
PROJECT NUMBER: 60593206

FIGURE 2
Site Plan



Topographic Contours: Mid Coast Engineers 01/23/1996

- Site Boundary
- Limit of proposed grading
- Former Agricultural Chemical or Petroleum Storage Tank
- Topographic Contours (feet above mean sea level)
- Roads and driveways
- Proposed Helical piers (29' depth)
- 2009 Soil Vapor Sample Location
- Soil Boring Location (SB-#)
- Soil result > human health and/or ecological criteria
- Soil Vapor Well Location (SVW-#). (Wells SVW-1, SVW-2, SVW-9, SVW-10 and SVW-11 are nested soil vapor wells)
- Soil Vapor Well Location (SVW-SG-#). (Repeat sample locations from 2009)
- Monitoring Well, shallow well
- Monitoring Well, deep well
- Approximate Location of Non-Potable Water Supply Well
- Extraction Well (inactive)
- Injection Well (inactive)
- Approximate area to be managed if plants are installed to promote an emergent freshwater wetland; PCBs and pesticides exceed ecological screening levels. The upper 6 inches of soil should be removed and replaced with clean backfill.
- Approximate area to be managed if subsurface soils from below 1.5 feet are brought to the surface; PCBs exceed ecological screening levels.
- Approximate area to be managed if subsurface soils from below 1.5 feet are brought to the surface; pesticides exceed ecological screening levels
- Approximate area of soil to be managed for soil disturbance below 1.5 feet; PCBs exceed commercial and construction worker screening levels
- Approximate area with soil vapor exceedances (attenuation factor 0.005) to be evaluated and managed prior to slab-on-grade building occupancy
- Approximate area with soil vapor exceedances (attenuation factor 0.03) to be evaluated and managed prior to slab-on-grade building occupancy

Western Farm Service, Inc.
Former Green Gro Facility
PROJECT NUMBER: 60593206

FIGURE 3

Screening Level Exceedance Management Areas

Appendix A
Grant Deed, Instrument 2001-0061081

RECORDING REQUESTED BY

CHICAGO TITLE COMPANY

AND WHEN RECORDED MAIL THIS DEED AND, UNLESS OTHERWISE SHOWN BELOW, MAIL TAX STATEMENT TO:

Name Forrest P. Moore

Street Address P.O. Box 1480

City & State Zip Freedom, Ca. 95019

Title Order No. 5586329-SCF Escrow No. 9472478 Jrtm

Santa Cruz Title CO.

2001-0061081

Recorded Official Records County Of SANTA CRUZ RICHARD W. BEDAL Recorder

08:00AM 28-Sep-2001

REC FEE	25.00
TAX	181.50
SURVEY	10.00

BLS

SPACE ABOVE THIS LINE FOR RECORDER'S USE

T 355 Legal (2-94)

Grant Deed

THE UNDERSIGNED GRANTOR(s) DECLARE(s)

DOCUMENTARY TRANSFER TAX IS $ 181.50

☒ _____ unincorporated area ☐ City of _____

Parcel No. 052-511-06 & 08 & 052-011-61

☒ computed on full value of interest or property conveyed, or

☐ computed on full value less value of liens or encumbrances remaining at time of sale, and

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, WESTERN FARM SERVICE, INC., a Delaware Corporation

hereby GRANT(S) to FORREST P. MOORE, a single man

the following described real property in the county of Santa Cruz, state of California:

SEE EXHIBIT "A" ATTACHED HERETO AND BY THIS REFERENCE MADE PART HEREOF

SUBJECT TO THE ENVIRONMENTAL RESTRICTION AND USE RESTRICTION AS SET FORTH IN EXHIBIT "C" ATTACHED HERETO AND BY THIS REFERENCE MADE PART HEREOF.

Dated September 17, 2001

WESTERN FARM SERVICE, INC., a Delaware Corporation

BY Gordon Miller

Gordon Miller

ITS Vice President

Vice President

STATE OF CALIFORNIA

COUNTY OF Fresno } S.S.

On September 24, 2001 before me, Denell Cline a Notary Public in and for said County and State, personally appeared Gordon Miller

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature Denell Cline

DENELL CLINE
Commission # 1249292
Notary Public - California
Fresno County
My Comm. Expires Feb 9, 2004

(This area for official notarial seal)

MAIL TAX STATEMENTS TO PARTY SHOWN ON FOLLOWING LINE; IF NO PARTY SHOWN, MAIL AS DIRECTED ABOVE

Name | Street Address | City & State

NOTARY SEAL CLARIFICATION PAGE

I certify under penalty of perjury that the "Notary Seal" on the document to which this statement is attached reads as follows:

Name of Notary: Denell Cline

Commission #: 1249292

Date commission expires: FEb. 9, 2004

Place of execution: Fresno, Ca.

Date: 9/26/01 Chicago Title Company

SIGNATURE (FIRM NAME IF ANY)

(Govt. Code, Sec. 27361.7)

EXHIBIT "A"

PARCEL ONE:

Being a portion of Lot 10, as the same is shown upon that certain map entitled, "Map No. 2 of Harkins Ranch, as partitioned by the referees W.R. Radcliff, John Kennaugh and James B. Holohan, and surveyed by C.B. Lewis, 1907, situated in Santa Cruz County, California", filed for record in the office of the County Recorder of Santa Cruz County in Volume 16 of Maps, Page 8, Santa Cruz County Records, and more particularly described as follows:

Beginning at a driven iron pipe at the Southeast corner of the abovementioned Lot No. 10; thence from said point of beginning along the South boundary of said Lot No. 10 South 88° 28'30" West shown on said map as South 87° 43' West 831.12 feet to a driven iron pipe at the Southwest corner of lands conveyed to Leslie S. Fauskee et ux, by Deed recorded in Volume 831, page 51 of Official Records of said County; thence along the East boundary of said lands of Fauskee, now or formerly and of lands conveyed to Silvio Sciutto, et ux by Deed recorded in Volume 931 Page 613, Official Records of said county, North 8° 43' East 350.00 feet to a point; thence North 42° 30' West 150.00 feet to a point; thence North 14° 44' 40" West 153.00 feet to a point; thence North 35° 37' East 115.00 feet to a point; thence North 25° 03' East 169.23 feet to a 1/2" X 30" iron pipe marked "1.s.4134" on the Southwest side of California State Highway 1, from which a 1" iron pipe with plastic tag "C.H.C." bears N 52° 10' 41" W 21.86 feet distant, thence along said side of said highway South 52° 10' 41" East 203.03 feet; thence South 40° 47' 50" East 92.39 feet; thence South 39° 44' 44" East 194.64 feet; thence South 50° 11' 33" East 539.07 feet to a point on the East line of aforementioned Lot No. 10; thence leaving aforementioned lands of the State and along the East Boundary of aforementioned Lot No. 10, South 8° 09' 20" West, called on said map 141.43 feet to the point of beginning.

Excepting therefrom Parcel 2 of the lands conveyd to the State of California by W.C. Deny et al by Deed recorded June 3, 1971 in Vol. 2100, page 222, Official Records of Said County called "Rampart Road".

PARCEL TWO:

An easement, appurtenant to Parcel One, for driveway purposes over and across that certain property described as follows:

Being a portion of that parcel of land described in the State of California director's Deed to Silvio Sciutto, et al, recorded June 4, 1973, in Volume 2317, Page 453, Official Records of Santa Cruz County, said portion being more particularly described as follows:

Commencing at the Southeasterly terminus of a course described as "S. 44° 41' 31" E., 206.79 feet" in said parcel (2317 or 453); thence along said course North 44° 41' 31" West, 17.99 feet; thence from a tangent that bears North 28° 35' 26" East, along a curve to the left with a radius of 25.00 feet, through an angle of 68° 49' 12", an arc length of 30.03 feet; thence North 40° 13' 46" West 49.67 feet; thence along a tangent curve to the right with a radius of 208.00 feet, through an angle of 13° 29' 43", an arc length of 48.99 feet to the line common to the land, now or formerly, of Silvio Sciutto, et al., and W.C. Denny, et al,;

thence along said common property line, South 42° 07′ 56" East, 139.81 feet and South 09° 05′ 04" West, 28.13 feet to the Southwesterly line of said parcel (2317 or 453); thence along last said line North 51° 14′ 15" West, 18.96 feet to the point of commencement, as granted in the Deed from Christina Solari, et al., to Walter W. Love, et al., recorded March 21, 1979, in Volume 3034, Page 490, Official Records of Santa Cruz County.

BENIFITTED PROPERTY AS SET OUT IN EXHIBIT "C"

EXHIBIT "B"

SITUATE in the City of Watsonville, County of Santa Cruz, State of California.

PARCEL ONE:

BEING a part of the lands conveyed by Earl G. Callender, et al., to Monterey Bay Investments, Inc., by Deed dated March 28, 1958, recorded April 2, 1958 in Volume 1178, Page 476, Official Records of Santa Cruz County, and being more particularly described as follows:

BEGINNING on the Southerly side of Wall Street, sometimes called 3rd Street, at the Northeast corner of lands conveyed by Loma Prieta Lumber Company to Walter J. Foster, by Deed recorded April 13, 1928 in Volume 128, Page 286, Official Records of Santa Cruz County, which point is South 64° 28' West 288.67 feet from the intersection of the Southerly side of Wall Street with the Westerly side of Pine Street; thence from said place of beginning along the Southerly side of Wall Street, North 64° 28' East 100 feet to a point which is 188.67 feet from said intersection; thence parallel with the East line of said lands of Foster, (now Stolich, et al.), South 23° 20' East to the North line of Watson Street; thence along the North line of Watson Street, South 48° 5' West to the Southwest corner of said lands conveyed to Monterey Bay Investments, Inc.; thence leaving the North side of Watson Street and along the West line of said lands of Monterey Bay Investments, Inc., North 23° 34' West 196.92 feet, more or less, to a stake at the Southwest corner of said lands of Foster; and thence along the line of said lands, North 64° 28' East parallel with 3rd Street, 66.50 feet to a stake at the Southeast corner of said lands; thence North 23° 20' West 200.00 feet to the place of beginning.

PARCEL TWO:

BEGINNING at a 3/4-inch pipe on the Northwesterly boundary of Watson Street at the South corner of land of Edward A. Bakich, et ux., from which a 3/4-inch pipe at the intersection of the Southwesterly side of Pine Street with the said Northwesterly side of Watson Street is North 48° 04' East 292.19 feet distant and a 2-inch pipe bears South 48° 04' West 47.61 feet distant; thence along the Southwest boundary line of said lands of Bakich North 23° 30' West at 114.70 feet a 3/4-inch iron pipe, 148.70 feet to the West corner of lands conveyed by Monterey Bay Investments, Inc., to Edward A. Bakich, et ux., by Deed dated April 26, 1963, recorded May 13, 1963 in Volume 1540, Page 554, Official Records of Santa Cruz County; thence along the Northerly boundary of said lands, Northeasterly 60 feet; thence leaving said boundary, South 23° 30' East 132 feet, more or less, to the North side of Watson Street and thence along the North side of Watson Street, South 48° 04' West 63 feet, more or less, to the place of beginning.

EXHIBIT "C"

Environmental Restriction: For the purpose of protecting human health and safety from possible hazardous materials, the Grantee of the property described on Exhibit "A" attached to this Grant Deed (the "Real Property"), hereby covenants that the Real Property shall never be permitted to be used for residential purposes. The Parties to this Grant Deed hereby specifically agree that this covenant shall be binding on all successors and assigns of the Grantee.

Use Restriction: The Grantee of the Real Property hereby covenants for the benefit of the real property described on Exhibit "B" attached to this Grant Deed (the "Benefitted Property"), that the Real Property shall never be permitted to be used as a distribution center for any agricultural chemicals and fertilizer products. The parties to this Grant Deed hereby specifically agree that this restrictive use covenant shall be binding upon the successors and assigns of the Grantee and all successive owners of the Real Property, and enforceable by the successors and assigns of the Grantor and all successive owners of the Benefitted Property.

The foregoing restrictions are hereby read and approved by the undersigned grantee and grantee hereby accepts this deed containing foregoing restrictions.

Forrest P. Moore

Forrest P. Moore

STATE OF CALIFORNIA,

COUNTY OF SANTA CRUZ

On SEPTEMBER 25, 2001, before me, THE UNDERSIGNED, a Notary Public in and for said County and State, personally appeared FORREST P. MOORE

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature Joyce E Avila

FOR NOTARY SEAL OR STAMP

JOYCE E. AVILA
COMM. # 1202585
NOTARY PUBLIC-CALIFORNIA
SANTA CRUZ COUNTY
COMM. EXP. NOV. 21, 2002

I CERTIFY UNDER PENALTY OF PERJURY THAT THE "NOTARY SEAL" ON THE DOCUMENT TO WHICH THIS STATEMENT IS ATTACHED READS AS FOLLOWS:

COMMISSION #_____

NAME OF NOTARY_____

DATE COMMISSION EXPIRES_____

PLACE OF EXECUTION_____ DATE_____

Govt. Code, Sec. 27261.7) _____
Signature (Firm Name If Any)

Appendix B
Summary of Risk Findings and Management Areas

B-1.0 SUMMARY OF RISK FINDINGS AND MANAGEMENT AREAS

Human health and ecological risks related to the presence of potential contaminants of concern were evaluated and are summarized in the following subsections (AECOM 2020 and 2021). This Subsurface Media Management Plan has been prepared to mitigate the potential:

- For commercial/industrial workers and construction workers to be exposed to PCBs in soil from below 1.5 feet and above 9.5 feet below ground surface (bgs) in the vicinity of sample locations SB-3, SB-17, SB-23, SB-23R, SB-23R-N1, SB-23R-N2, SB-23R-E1, SB-23R-E2, SB-23R-E3, SB-23R-E4, SB-23R-S1, SB-23R-S2, SB-23R-S3, SB-23R-S4, SB-23R-S5, SB-23R-S6, and SB-23R-W1 near the former fertilizer storage tank area (Table 1, Figure 3).
- For commercial/industrial workers and construction workers to be exposed to dieldrin in soil at 5 feet bgs at sample location SB-23 (Table 1, Figure 3).
- For the future benthic community to be exposed to future surface sediment (0 to 1 foot bgs) impacted with PCBs in the vicinity of sample location SB-24 and pesticides in the vicinity of sample location SB-3R (Tables 2 and 3, Figure 3).
- For ecological risk to upland organisms related to PCBs and/or pesticides in soil in the vicinity of sample locations SB-3R, SB-6, SB-12, SB-15, SB-17, SB-23, SB-23R, SB-23R-N1, SB-23R-N2, SB-23R-E1, SB-23R-E2, SB-23R-E3, SB-23R-E4, SB-23R-S1, SB-23R-S2, SB-23R-S3, SB-23R-S4, SB-23R-S5, SB-23R-S6, and SB-23R-W1 from below 2 feet and above 9.5 feet bgs due to the potential for construction-related redistribution of contamination to the surface (Tables 2 and 3, Figure 3).

Delineation east of exceedances at location SB-23R-E4 is achieved by the SB-12 sample at 1.5 feet bgs since the depths are comparable due to the change in topography in the swale.

B-1.1 Human Health

In the 2017 HHERA using Site-averaged concentrations, excess cancer risks and noncancer hazards related to direct contact with soil are at acceptable levels for the current commercial workers both for 0 to 3 feet bgs depth intervals and for 0 to 10 feet bgs depth intervals, although there are some exceedances of screening levels at some individual locations. Risks and hazards are also acceptable on a Site-wide basis for future construction workers on the basis of available data[1]. These risks were estimated from soil data collected throughout the site, including sampling locations in the vicinity of the proposed office building and the northern proposed storage warehouse. There is no known use or history of potential sources or releases in in the area of the proposed saw mill building and proposed storage warehouse in the southern portion of the Site; therefore, soil management planning would be unnecessary in those areas. An updated HHERA method was used in the final HHERA (AECOM 2021) such that exposure depths for commercial and constructions workers were defined as 0 to 10 feet bgs and all depths (0 to 15 feet bgs), respectively.

Exceedances of commercial worker and construction worker screening levels[2], noted at some individual subsurface soil locations, are defined in this SMMP. PCB concentrations in soil above relevant commercial/industrial worker screening criteria are present below 2 feet bgs at locations SB-17, SB-23, SB-23R, SB-23R-N1, SB-23R-N2, SB-23R-E1, SB-23R-E2, SB-23R-E3, SB-23R-E4, SB-23R-S1, SB-23R-S2, SB-23R-S3, SB-23R-S4, SB-23R-S5, SB-23R-S6, and SB-23R-W1 (Table 1). PCB concentrations in soil above the construction worker screening criteria are present below 2 feet bgs at locations SB-23, SB-23R-N2, SB-23R-E1, SB-23R-E2, SB-23R-S1, SB-23R-S2, SB-23R-S3,

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[1] The excess cancer risks were either less than or only marginally above a level of 1 x 10^{-6}, and the noncancer hazards were well below a value of 1.0.

[2] Corresponding to a cancer risk level of 1 x 10^{-6} and noncancer hazard of 1.0.

SB-23R-S4, and SB-23R-W1. In addition, a single dieldrin location (SB-23 at 5 feet bgs) also exceeded the commercial/industrial worker screening levels (Table 1). There are no unacceptable risks to commercial and construction workers related to these PCB and single dieldrin soil concentrations under current conditions and current use of the property. If soils from between 2 and 9.5 feet bgs are brought to the surface and left accessible for extended time periods, potential risks associated with exposure to the soil should be mitigated. To be conservative, the areas in the planting area where no data are available were included in the management area. Figure 3 shows the area of commercial and construction workers screening criteria exceedances to be managed if deeper soils are brought to the surface; subsurface activities in this area must be performed in accordance with this Subsurface Media Management Plan.

Under current use of the property, no complete exposure pathways were identified for groundwater by ingestion or direct contact because impacted groundwater at the property is not used for potable water purposes and the non-potable supply well draws from outside of the impacted groundwater area. The Land Use Covenant currently in preparation will formally document restriction of the use of shallow groundwater (Section 2.6); the Land Use Covenant will ensure any future groundwater wells will draw from outside of the impacted groundwater area.

Vapor intrusion-related risks are not a concern under current use of the property (AECOM 2021). Current land use and lumber yard operations consist primarily of outdoor operations and indoor activities are limited to two buildings: the office trailer and the former Office/Maintenance Building. The office trailer is a raised portable with free space and air flow between the bottom of the trailer and the ground surface. The former Office/Maintenance Building is reportedly currently occupied by Site workers for up to one hour per day. Figure 3 shows the approximate areas requiring soil vapor risk management under the assumption of an AF of 0.03 and the California-specific commercial AF of 0.005 and considering all depths of soil vapor data. In the future near areas that exceed screening levels (Figure 3), potential vapor intrusion risks should be evaluated and mitigated (e.g. soil vapor sampling, elevating structures to create free air space, vapor barrier), if warranted based on the evaluation, under scenarios such as:

- Current use of existing conventional slab-on-grade structures changes (e.g., the former Office/Maintenance Building occupied for more than one hour per day)
- Open-walled structures were to be enclosed and occupied (e.g., the former Mixing Room).
- Conventional slab-on-grade enclosed structures are proposed to be constructed.

B-1.2 Ecological

Several guidance documents were used as resources for ecological screening levels (AECOM 2021).

B-1.2.1 Terrestrial Receptors

Few screening levels were available for plants and the one plant screening level that was applied (for total PCBs) was not exceeded.

For birds, the maximum soil concentrations of total 4,4’-dichloro-diphenyl-trichloroethane (DDT), total PCBs, and dieldrin within 0 to 2 feet bgs exceeded the screening levels. However, the 95 percent (%) upper confidence limits (UCLs), which are more representative of exposure for mobile species like birds, were below the screening levels. These results, coupled with the low quality habitat, indicate that current use of the property poses little risk to terrestrial birds.

The majority of potential foraging areas at the Site are characterized by barren and ornamental habitats, which provide limited resource value. Continued commercial activity will not result in improvements to foraging conditions. The presence of burrowing mammal habitat will continue to be hindered by compaction, as well as frequent disturbance during commercial activities across the majority of the Site.

For burrowing mammals exposed to 0 to 6 feet bgs soils, maximum soil concentrations of total DDT, total PCBs, and dieldrin were above the screening levels. For soils within 0 to 2 feet bgs, the 95% UCLs for total DDT and dieldrin were higher than the screening levels and the 95% UCL for total PCBs was less than the screening level. Because the maximum concentrations of PCBs and these chlorinated pesticides were detected at SB-23 at 4.5 to 5 feet bgs, and these detections were markedly higher than other detections of these constituents of potential ecological concern (COPECs), the 95% UCLs for 0 to 6 feet bgs soils were calculated without the data from SB-23. The 95% UCLs for 0 to 6 feet bgs soils for total DDT, total PCBs, and dieldrin were higher than the screening levels when these deep SB-23 data were excluded.

The risk posed by these exceedances is overestimated because the highest concentrations of these COPECs occur in soil between 4.5 to 5 feet bgs, which is deeper than most burrowing rodent activity would be expected to occur. Most burrowing rodents remain within the first 2 to 3 feet of soil (California Department of Toxic Substances Control [DTSC] 1998). In addition, food consumption is typically the primary pathway of exposure for mammals (U.S. EPA 2005), and prey such as insects and other invertebrates would not be expected to contact COPECs in soils deeper than the first few feet (e.g., bioactive zone). The Site generally lacks a soil invertebrate community (especially earthworms) in the barren areas where contamination is present at the surface and subsurface, and animals at the Site are likely to be exposed to lower doses of chemicals than predicted in this conservative screening assessment. There are currently no unacceptable risks to terrestrial ecological receptors related to concentrations of PCBs and chlorinated pesticides in soil under current use of the property.

Potential future ecological risks associated with PCBs in subsurface soils in the vicinity of location SB-23, including locations SB-23R, SB-23R-N1, SB-23R-N2, SB-23R-E1, SB-23R-E2, SB-23R-S1, SB-23R-S2, SB-23R-S3, SB-23R-S4, and SB-23R-W1 may exist if these deeper soils are brought to the surface. At these locations, PCB detections exceed the ecological screening level for subsurface soils of 4 mg/kg in addition to the lower screening level for surface soil of 0.371 mg/kg (Table 2, Figure 3). Other locations in the vicinity of SB-23 have subsurface PCB detections that exceed the surface soil screening level, but not the subsurface screening level (SB-23R-E3, SB-23R-E4, SB-23R-S5, SB-23R-S6). Total PCB concentrations in subsurface soils from the remaining locations, which are not affiliated with SB-23, i.e., SB-4-7.5', SB-17-7.5', SB-3R-2.5', SB-12R-8.0', and SB-25-5.0', are only slightly higher than the surface soil screening level (≤ 2 times higher); therefore, measures to address potential future subsurface soil exposures by ecological receptors is not warranted.

In addition, pesticides in subsurface soil in the vicinity of sample locations SB-3R, SB-6, SB-15, SB-17, and SB-23 may pose a concern due to exceedances of the surface soil screening levels (Table 3, Figure 3). Subsurface soil concentrations of pesticides in exceedance of the surface soil screening levels at the remaining locations (SB-1-7.5', SB-2-7.5', SB-4-7.5', SB-14-7.5', SB-3R-8.0', SB-12-7.5', SB-12R-5.0', and SB-12R-8.0') are considered low (≤ 5 times higher) in recognition of the conservative nature of the surface soil screening levels and are not expected to pose an ecological risk if brought to the surface.

If deeper soils from these areas discussed above are brought to the surface and left accessible for extended time periods, potential risks associated with exposure to the soil should be mitigated. Figure 3 shows the areas of potential hazards to ecological receptors if deeper soils are brought to the surface. Subsurface activities in these areas must be performed in accordance with this Subsurface Media Management Plan.

As stated above, no further assessment of PCBs and pesticides in surface soil under current use of the property is warranted because the 95% UCL is below the lowest ecological screening level for PCBs, and the 95% UCLs for total DDTs and dieldrin are only slightly higher than the soil SLs.

B-1.2.2 Future Wetland Receptors

In light of the proposed land use change in the area of the swale at the north-central portion of the Site, a focused ecological risk screening was conducted on data collected within the proposed

freshwater wetland footprint to assess the potential for risk to benthic and aquatic organisms that could populate this wetland in the future (AECOM 2021).

The near surface soil depths (0 to 1.0 foot bgs) at seven locations were selected because they most closely correspond to the likely depth of the bioactive zone of a future wetland use in the vicinity (bottom of Tables 2 and 3). PCBs were detected in surface soil from SB-24 above both lower and upper-bound screening levels, while at SB-25 only the lower-bound sediment screening level was exceeded (Table 2). Total DDTs, chlordane, and cis- and trans-chlordane were detected in surface soil from SB-3R at concentrations greater than the lower-bound sediment screening level, and the chlordane detection was also above the upper-bound sediment screening level (Table 3).

Potential future ecological risks to the benthic community should be mitigated if the proposed land use change encouraging establishment of an emergent freshwater wetland is implemented. The proposed wetland will be small and seasonal in nature (water levels are expected to be higher in approximately December to February) and the upper six inches of soil (future sediment) will comprise the bioactive zone where the majority of ecological activity occurs. Most of the benthic organisms are expected to reside at the surface and would be exposed to chemicals within the first couple of inches, with infaunal invertebrates (burrowers) potentially contacting soils down to a maximum of six inches. Therefore, prior to installing plantings to promote establishment of the wetland, the upper six inches of soil (i.e., the bioactive zone) within the vicinity of SB-3R and SB-24 in the planting area shown on Figure 3 should be removed and replaced with clean backfill. The locations of the proposed mitigation were identified by evaluating surface soil exceedances of the upper-bound (probable effects concentration) screening values shown on Tables 2 and 3 (i.e., chlordane at SB-3R and PCBs at SB-24). Locations with multiple lower-bound (threshold effects concentration) screening value exceedances in surface soil (more than one COPEC) were also considered for the proposed mitigation (i.e., Total DDTs and chlordane at SB-3R). Although there are multiple sampling points within the proposed planting area, chlordane data are available at only location SB-3R; therefore, the entire area of the proposed wetland area is conservatively included in the mitigation plan. This action may also benefit terrestrial receptors, particularly burrowing mammals, which may be present in the proposed wetland area during the dry season. Most burrowing activity occurs within the top three feet of soil. The 0 to 3 ft depth interval in the proposed wetland area may provide better habitat for terrestrial receptors at the surface, and no exceedances of the burrowing mammal soil screening level for PCBs occur in this area between 0.5 and 2.5 feet bgs; exceedances occur for some OCPs at this depth interval but are expected to represent a substantial overestimate of exposure and risk by including dietary/bioaccumulation pathways that are typically limited to the bioactive zone.

Perched groundwater occurs in the proposed emergent freshwater wetland area. The soil contaminants have been in place since the 1980s and subject to leaching from downward migration of perched groundwater. After removal of impacted soil from the former pesticide disposal pit, analytical testing of extensive suites of agricultural chemicals indicated groundwater impacts were limited to 1,2-DCP and nitrate (Woodward Clyde Consultants 1990 and 1991). No changes to the hydrology will occur from removing and replacing the top six inches of soil in the area, so leaching conditions are not expected to change; thus, the potential for an increase in chemical concentrations in groundwater is very low.

The results for subsurface soil data collected from 2 to 9.5 feet bgs within the footprint of the proposed wetland indicate concentrations of PCBs and pesticides greater than the sediment screening levels, but are beyond the bounds (too deep) of likely ecological exposures as long as they remain buried at depth. SB-23R-E3 (7.5-8 feet bgs), SB-23R-E4 (5 feet bgs), and SB-23R-S3 (4.5-5 feet bgs and 7.5-8 feet bgs) are the locations within the wetland footprint with PCB concentrations in subsurface soils at levels of potential concern to benthic or aquatic organisms (>10 times higher than lower-bound sediment screening level). In addition, concentrations of dieldrin and total DDTs (>10 times higher than lower-bound sediment screening levels) and toxaphene (> upper-bound sediment screening level) at SB-3R-2.5', and dieldrin and total DDTs at SB-12-1.5' (>10 times higher than lower-bound sediment screening level) are present in subsurface soils at levels of potential concern to benthic or aquatic organisms. Therefore, if these deeper soils are brought to the surface, potential future ecological risks

associated with exposure to the soil/wetland sediment should be mitigated. Figure 3 shows the areas of potential hazards to ecological receptors if deeper soils are brought to the surface. Subsurface activities in these areas must be performed in accordance with this Subsurface Media Management Plan.

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