

Appendix F

Phase I Environmental Site Assessment Maps



APPENDIX F PHASE II SUMMARY and CONCLUSIONS

(Copied from Phase II ESA by Earthsystems Southwest, November 22, 2006)

4.0 SUMMARY OF FINDINGS

The findings of this investigation are summarized below by topic of concern. Figures depicting the sample locations are presented in Appendix A. Tables of the laboratory results are presented in Appendix B. Methods are presented in Appendix C. The laboratory reports are presented in Appendix D.

4.1 Pesticide Residues in Agricultural Field Areas

Five OCP residues were detected in the composite surface soil samples collected in the former agricultural areas, including DDT, DDD, DDE, Endosulfan Sulfate, and Toxaphene. DDD and DDE are breakdown by-products of DDT. All eight composite samples and the ten individual samples analyzed contained residues of DDE and DDD. No single composite sample contained all five detected OCPs. Other OCPs were not detected above laboratory reporting limits. Most detected OCPs in the field areas were at concentrations less than their respective TTLC, PRG-r, and PRG-i values, and were consistent with residues from farming application.

Eight of ten surface samples collected in the field area at the northwestern part of the site [NW Field Area] contained concentrations of TDE (the combination of the values of DDT, DDD, and DDE) that slightly exceeded the TTLC value of 1.0 mg/kg (maximum value of 2.34 mg/kg in SS-111). A boring to 5 feet below ground surface [bgs] was completed at the location of SS-111 and samples were collected at 1 foot, 3 feet, and 5 feet bgs. DDE and DDT residues were detected at 1 foot bgs at 0.018 and 0.003 mg/kg, respectively. Other OCPs were not detected above laboratory reporting limits at 1 foot. OCPs were not detected above laboratory reporting limits for samples collected at 3 and 5 feet bgs. The uniform concentration of these residues in the NW Field Area is consistent with farming application.

One composite sample from the southeastern field area (SS-105-106) contained Toxaphene at a concentration of 0.44 mg/kg, equivalent to the PRG-r for Toxaphene. Toxaphene was not detected in excess of the PRG-r in other samples from the field portions of the site, including areas with elevated TDE values. Therefore, this single marginally elevated Toxaphene value is not considered to be representative of site conditions. Considering that the highest Toxaphene value is only equal to the PRG-r value, Toxaphene is not considered to be a contaminant of concern for the field portions of the site.

4.2 Pesticide Residues in the Existing and Former Building and Storage Areas

Eight OCP residues were detected in the composite and individual surface soil samples collected in the existing and former building and storage areas, including DDT, DDD, DDE, Dieldrin, Endosulfan Sulfate, Heptachlor Epoxide, Technical Chlordane, and Toxaphene. No single composite sample contained all eight detected OCPs. Other OCPs were not detected. Most detected concentrations of OCPs in the building areas were less than their respective TTLC, PRG-r, and PRG-i values.

Three of four surface samples collected in the western half of the NW Storage area contained detected concentrations of TDE (the combination of the values of DDT, DDD, and DDE) that slightly exceeded the TTLC value of 1.0 mg/kg (maximum concentration of 1.69 mg/kg TDE in SS-213). The concentration did not exceed the respective PRG-r and PRG-i values. A boring to 5 feet bgs was completed at the location of SS-213 and samples were collected at 1 foot, 3 feet, and 5 feet bgs. OCPs were not detected above laboratory reporting limits in the subsurface samples.

One of six surface samples collected the southern part of the Address Location contained detected concentrations of TDE (the combination of the values of DDT, DDD, and DDE) that slightly exceeded the TTLC value of 1.0 mg/kg (maximum concentration of 1.1 mg/kg TDE in SS-220). The concentrations did not exceed the respective PRG-r and PRG-i values. Sample SS-220 also contained residues of Toxaphene at 1.1 mg/kg and Dieldrin at 0.050 mg/kg, which exceeded the PRG-r values of 0.44 mg/kg and 0.03 mg/kg (respectively) but do not exceed the PRG-i values of 1.6 and 0.11 mg/kg (respectively). This sample did not exceed the TTLC values for either Toxaphene or Dieldrin. A boring to 5 feet bgs was completed at the location of SS-220 and samples were collected at 1 foot, 3 feet, and 5 feet bgs. Toxaphene was detected at 1 and 3 feet bgs at concentrations of 0.047 and 0.021 mg/kg, respectively. Other OCPs were not detected above laboratory reporting limits in the subsurface samples at 1 and 3 feet bgs. OCPs were not detected above laboratory reporting limits in the sample collected at 5 feet bgs. The presence of OCP residues in the existing and former building and storage areas is likely the result of spillage from mixing and storage.

4.3 Geophysical Investigation for USTs

Geophysical surveys involving TCM and GPR were conducted at seven separate localities on-site, and four objects were detected (OB-1 through OB-4). OB-1, located near the gate of the enclosed area in the NW Storage area, had a geophysical signature that suggested a flat conductive (likely metallic) object about 3 feet by 2 feet in size. OB-2 and OB-3 were located in the south storage area of the Address Location, where the ESA indicated a UST was suspected to have historically existed. OB-2 was about 5 feet by 3 feet in size and OB-3 was about 10 feet by 3 feet in size. Both anomalies had a geophysical signature suggestive of a buried drum or UST. OB-4, located at the SE building location, was about 2 feet by 4 feet in size and is about 1 foot below the

surface. The geophysical survey did not detect conductivity anomalies in the other existing and former building and storage locations on-site.

4.4 Borings at AST and Suspected UST Locations

Soils were observed to consist of silty clay and clayey sand (Unified Soil Classification System symbols CL and SC) in the upper 10 feet and clayey sand and silty sand (SC and SM) below 10 feet. Groundwater was not encountered in the borings. PID readings above background were not encountered. Evidence of petroleum staining and odors were encountered in each of the borings drilled at observed surface staining adjacent to ASTs (B-1@1, B-2@1, B-3@1, B-4@1, and B-4@5). Evidence of petroleum staining and odors were not observed in the borings completed at suspected UST locations (B-5 through B-8). Trace amounts of TPH-diesel was detected in soil samples B-1@1 (670 mg/kg), B-2@1 (56 mg/kg), and B-4@1 (34 mg/kg). TPH-extractable hydrocarbons were not detected in the samples above laboratory reporting limits. The detected concentrations of TPH-fs are less than typical clean-up levels.

4.5 Excavation Activities

A back hoe was used to excavate the four geophysical anomalies OB-1 through OB-4. OB-1, OB-2, and OB-4 were found to be non-hazardous metallic debris. OB-3 was found to be a UST that was approximately 12 feet long and 4 feet in diameter (Photo 5). The UST was buried about 2.5 feet below the surface and the long axis on the UST was oriented in a north-south direction. Four subsurface samples were collected near the base of the UST at approximately 4.5 feet bgs at the north, south, west, and east sides of the UST (OB-3@4.5N through OB-3@4.5E, respectively). The four samples were analyzed for TPH-fs, and OB-3@4.5N and OB-3@4.5S were additionally analyzed for VOCs. TPM-fs was not detected above laboratory reporting limits for all four samples. Trace concentrations of Toluene were detected in OB-3@4.5N (0.005 mg/kg) and OB-3@4.5S (0.007 mg/kg). The detected concentrations of Toluene are less than typical clean-up levels.

4.6 Other Observations

Brown Barranca is a steep-sided gully that cuts through the northeast corner of the site. It is estimated to be between 25 to 50 feet deep and is extensively overgrown with brush, reeds, small trees, and poison oak. It was observed that the Barranca is currently and has historically been used as a local disposal site for agricultural and domestic debris. Debris as large as a refrigerator was observed dumped in the Barranca (Photo 7). While drums or hazardous material were not observed, due to the extensive overgrowth in the Barranca it was not possible to observe large portions of the banks and bottom during this investigation.

A piece of asbestos-cement [AC] approximate 5 feet long and 6 inches in diameter was observed in a pile of agricultural debris at the west end of the row of small sheds in the southern field area (Photo 8). A precursory inspection of other debris piles in the existing and former building and storage sites did not reveal other pieces of AC pipe. It is possible that the AC pipe was part of a vent pipe. Vent pipes are typically used in gravity (non-pressurized) systems, while AC pipe is normally used underground only in irrigation systems that are moderately pressurized. The topography of the site slopes to the southeast, with surface elevations ranging from about 260 feet above mean sea level in the northwestern corner to about 190 feet above mean sea level in the southeastern corner, for a topographic change of about 65 feet. AC pipe was historically installed in irrigation systems expected to have moderate water pressures, which would exceed the strength of concrete pipe (about 20 feet of hydrostatic head) but be less than the design strength of AC pipe (about 120 feet of hydrostatic head). The topography of the subject site falls within that range, so it is possible that AC pipe was used in the on-site irrigation system, particularly in the southern portion of the site. The site is currently irrigated by an aboveground sprinkler system and not by a subsurface irrigation system. This piece of AC piping, and any other AC piping discovered during construction, should be removed and disposed of properly by a licensed asbestos contractor.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the activities and findings summarized above, the following conclusions and recommendations are presented:

1. Soil samples collected in the agricultural field portion of the site were found to contain low concentrations of DDT, DDD, DDE, Endosulfan Sulfate, and Toxaphene. Other OCPs were not detected.

- Toxaphene was detected at a concentration equal to the PRG-r in one sample from the field areas, but was not detected in most of the other samples from the field areas. The average concentration of Toxaphene was well below the PRG-r value. Therefore, the detection of Toxaphene at a concentration equivalent to the PRG-r value is not considered significant.
- DDT and the breakdown byproducts DDE and DDD (collectively referred to as TDE) were detected in eight of ten surface soil samples from the northwest portion of the site at concentrations that exceeded the TTLC value of 1.0 mg/kg. The concentrations were relatively consistent across this portion of the site, suggesting the material is a residue from historical agricultural activities. A boring completed at the sample with the highest detected concentration (SS-111 at 2.34 mg/kg) found that the concentrations decreased rapidly with depth, such that at 1 foot bgs the concentration of TDE was 0.021 mg/kg. The DDT, DDE, and DDD concentrations do not exceed the PRG-r values individually,

but the combined risk from all three would exceed the PRG-r goal in some of the samples. The combined risk from all three would be well below the PRG-i. **Consequently, it appears that the upper % foot of soil in the NW Field area is marginally above preferred values for use in a residential setting, and would be classified as a hazardous waste if the material were to be disposed of off-site. Therefore, we recommend that the uppermost soil be sequestered on-site to avoid exposure to these soils by future residents, such as placing the soil as fill in the Barranca area or under the proposed commercial portion of the site. The quantity of soil in question is approximately 11,200 cubic yards. It is recommended that the on-site mitigation options be coordinated with the Ventura County Environmental Health Division [VCEHD].**

- Pesticide residues were not found at elevated concentrations in other portions of the field areas. Further investigations in these areas regarding this issue do not appear warranted.

2. Soil samples collected in the existing and former building and storage locations of the site were found to contain trace amounts of DDT, DDD, DDE, Endosulfan Sulfate, and Toxaphene. Other OCPs were not detected. With the exception of samples collected in the west part of the NW Storage Location and the storage area directly south of the Address Location, the concentrations of OCPs were less than Residential PRG and TTLC values. Further investigations regarding this issue do not appear warranted in the building areas except as follows:

- In the west part of the NW Storage Location, three of the four soil samples contained TDE residues that were slightly over the TTLC limit of 1.0 mg/kg. A boring completed at the sample with the highest detected concentration (SS-213 at 1.69 mg/kg) found that the residues of pesticides decreased rapidly with depth, and that TDE was not detected above laboratory reporting limits at a depth of 1 foot bgs. The volume of affected soil totals about 270 cubic yards. **These soils should be handled in the same manner as the surface soil in the northwestern portion of the site, with the concurrence of the VCEHD.**
- In the storage area directly south of the Address Location, Sample SS-220 contained TDE residues that were slightly over the TTLC limit of 1.0 mg/kg, as well as residues of Dieldrin and Toxaphene that were over the PRG-r's. A boring completed at SS-220 found that pesticide concentrations decreased rapidly to less than the PRG-r's by a depth of 1 foot bgs. The volume of affected soil in this location is very small (about 2 cubic yards). **We recommend soils within a 10-foot radius of SS-220 to a depth of 0.5 feet be handled in the same manner as the surface soil in the northwestern portion of the site, with the concurrence of the VCEHD.**

3. Soil samples collected from the borings completed at the suspected AST locations contain low concentrations of TPH-diesel at depths of about 1 to 2 feet bgs. Evidence

of subsurface contamination by leakage of petroleum products from ASTs deeper than 5 feet bgs was not observed. The amount of observed hydrocarbon contamination of the soils is considered to be minor and should be disposed of properly during any construction activities. Further investigations of the stained soils associated with the ASTs do not appear warranted.

4. Geophysical anomalies OB-1 through OB-4 were investigated with borings and excavations. OB-1, OB-2, and OB-4 were found to be non-hazardous metallic junk. Residues of TFH-fs were not detected in subsurface samples from these areas. A 12-foot long and 4-foot diameter UST was found at the OB-3 location. Residues of TPH-fs were not detected near the base of the UST and only trace amounts of Toluene were detected. **We recommend that the UST be properly excavated and disposed of according to the guidelines of the Ventura County Fire Department and the VCEHD.**

5. Brown Barranca apparently has been used as a local disposal site for agricultural and domestic debris for a considerable period of time. Debris as large as a refrigerator can be seen in the Barranca. Brown Barranca is extensively overgrown and very steep-sided, so observations of the banks and bottom of the Barranca are severely limited. It is recommended that during construction activities involving clearing of the banks and bottom of Brown Barranca, care be taken to look for potentially hazardous material such as drums, tanks, stained soils, pesticide and other poison containers, and similar materials. If these materials are found, they should be segregated from the other material and disposed of properly. Further investigation may be warranted if significant potentially-hazardous materials are encountered during clearing activities.

6. A piece of asbestos-cement [AC] approximate 5 feet long and 6 inches in diameter was observed in the southern field area in a pile of agricultural debris. Historically, AC pipe was typically installed in irrigation systems expected to have moderate water pressures, which would exceed the strength of concrete pipe (about 20 feet of hydrostatic head) but be less than the design strength of AC pipe (about 120 feet of hydrostatic head). The topography of the subject site falls within that range, so it is possible that AC pipe was used in the on-site irrigation system, particularly in the southern portion of the site. This piece of AC piping, and any other AC piping discovered during construction, should be removed and disposed of properly by a licensed asbestos contractor. We understand that AC pipe removal and disposal can cost between \$1,000 and \$2,000 per hundred lineal feet of pipe to be removed, and that hundreds to thousands of feet of irrigation pipe can be installed on some farms (depending on the layout of the fields). Since this cost can be significant, you may want to conduct further evaluations regarding the potential presence of AC pipe in the former irrigation system.



Reference: Google Earth

LEGEND

- Site Boundary
- Limits Geophysical Survey
- B-1 Boring Location
- OB-1 Geophysical Object
- SS-1 Surface Sample Location
- Exceeds TTLC Guideline for TDE (DDT+DDD+DDE)
- Exceeds Residential PRG Guideline for Toxaphene



Figure 2
Sample and Boring Locations

TT 5632 Parklands, SWC Telegraph Rd & Wells Rd.
Ventura, California



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Reference: Google Earth

LEGEND

- - - Limits Geophysical Survey
 - OB-1 Geophysical Object
 - ⊕ B-1 Boring ○ SS-1 Surface Sample
 - Exceeds TTLC Guideline for TDE
- Approximate Scale: 1" = 60'
- 0 60' 120'



Figure 3
Address Location and Vicinity

TT5632 Parklands, SWC Telegraph Rd and Wells Rd
 Ventura, California



Earth Systems
Southwest

11/22/06

10832-01



Reference: Google Earth

LEGEND

-  Limits Geophysical Survey
 -  OB-1 Geophysical Object
 -  B-1 Boring
 -  SS-1 Surface Sample Location
- Approximate Scale: 1" = 35'
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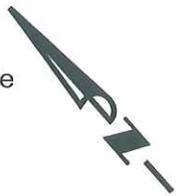


Figure 4
East Building Location

TT5632 Parklands, SWC Telegraph Rd and Wells Rd
Ventura, California



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