LMS/LEH/49672

2024 Annual Land-Use Covenant Inspection Report for DOE Areas at the Laboratory for Energy-Related Health Research/Old Campus Landfill Superfund Site University of California, Davis

January 2025

U.S. DEPARTMENT OF ENERGY | Legacy Management

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Abbreviations

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOE	U.S. Department of Energy
DSS	Domestic Septic System
DTSC	California Department of Toxic Substances Control
EDPs Area	Eastern Dog Pens Area
EH&S	Environmental Health and Safety
EPA	U.S. Environmental Protection Agency
LEHR	Laboratory for Energy-Related Health Research
PFAS	per- and polyfluoroalkyl substances
Ra/Sr Treatment Systems Area	Radium/Strontium Treatment Systems Area
ROD	Record of Decision
SMP	Soil Management Plan
SWT Area	Southwest Trenches Area
UC Davis	University of California, Davis
Weiss	Weiss Associates
WRS	Western Remediation Support

1.0 Introduction

This report documents inspections of land-use controls implemented by the U.S. Department of Energy (DOE) to control exposure to residual soil contaminants at DOE Areas of the Laboratory for Energy-Related Health Research/Old Campus Landfill Superfund site (also called the LEHR site) at the University of California, Davis (UC Davis) (Figure 1). Inspection activities documented herein apply to the reporting period from December 10, 2023, to December 9, 2024. A detailed annual inspection was conducted on October 7 and 8, 2024, with a confirmatory walkthrough on December 9, 2024. The inspection and this report fulfill the requirements of the *Covenant to Restrict Use of Property, Environmental Restriction*, hereafter referred to as the Covenant, which was recorded by Solano County on July 11, 2014 (DTSC 2014).

The requirements for land-use controls at the site's DOE Areas are documented in the *Record of Decision for DOE Areas at the Laboratory for Energy-Related Health Research, University of California, Davis,* hereafter called the Record of Decision (ROD) (DOE 2009) and in the Covenant. The implementation procedures for land-use controls are documented in the *Remedial Design/Remedial Action Work Plan for the Former Laboratory for Energy-Related Health Research Federal Facility, University of California, Davis*, hereafter called the Remedial Design/Remedial Action Work Plan (DOE 2010) and the *Soil Management Plan for the Former Laboratory for Energy-Related Health Research Federal Facility, University of California, Davis*, hereafter called the Soil Management Plan (SMP) (DOE 2022).

The DOE Areas subject to land-use controls (Figure 2) are the Radium/Strontium Treatment Systems Area (Ra/Sr Treatment Systems Area), Domestic Septic System (DSS) 3 and DSS 4 Areas, Dry Wells A–E Area, Eastern Dog Pens Area (EDPs Area), and Southwest Trenches Area (SWT Area). The DSS 2 Area is within the Ra/Sr Treatment Systems Area. The DSS 4 Area contains a portion that is subject to a prohibition on residential use.

The Western Remediation Support (WRS) Area and Eastern Remediation Support Area shown in Figure 2 do not contain residual contamination but are required to be accessible for the staging of equipment and supplies if contingent remedial actions were to be implemented at the Ra/Sr Treatment Systems Area, DSS 3 and DSS 4 Areas, Dry Wells A–E Area, EDPs Area, or SWT Area.

The Covenant states that the following conditions must be maintained until the concentrations of contaminants in the soil are at or below cleanup levels specified in the ROD:

- Residential use, use for day care for children, and cultivation of crops for human consumption are prohibited in the DSS 4 Area (Figure 2)
- Soil-disturbing activities at the Ra/Sr Treatment Systems Area, DSS 3 and DSS 4 Areas, Dry Wells A–E Area, EDPs Area, and SWT Area must be implemented in accordance with the SMP
- Interference, tampering, or destruction of the groundwater monitoring system is prohibited
- The California Department of Toxic Substances Control (DTSC) and U.S. Environmental Protection Agency (EPA) Region 9 must have reasonable right-of-entry and access to the site for periodic inspections to ensure compliance with land-use controls

- Access must be granted to DOE to conduct operation and maintenance activities
- An inspection verifying compliance with the Covenant must be conducted annually and a report of the inspection provided to DTSC and EPA by January 15

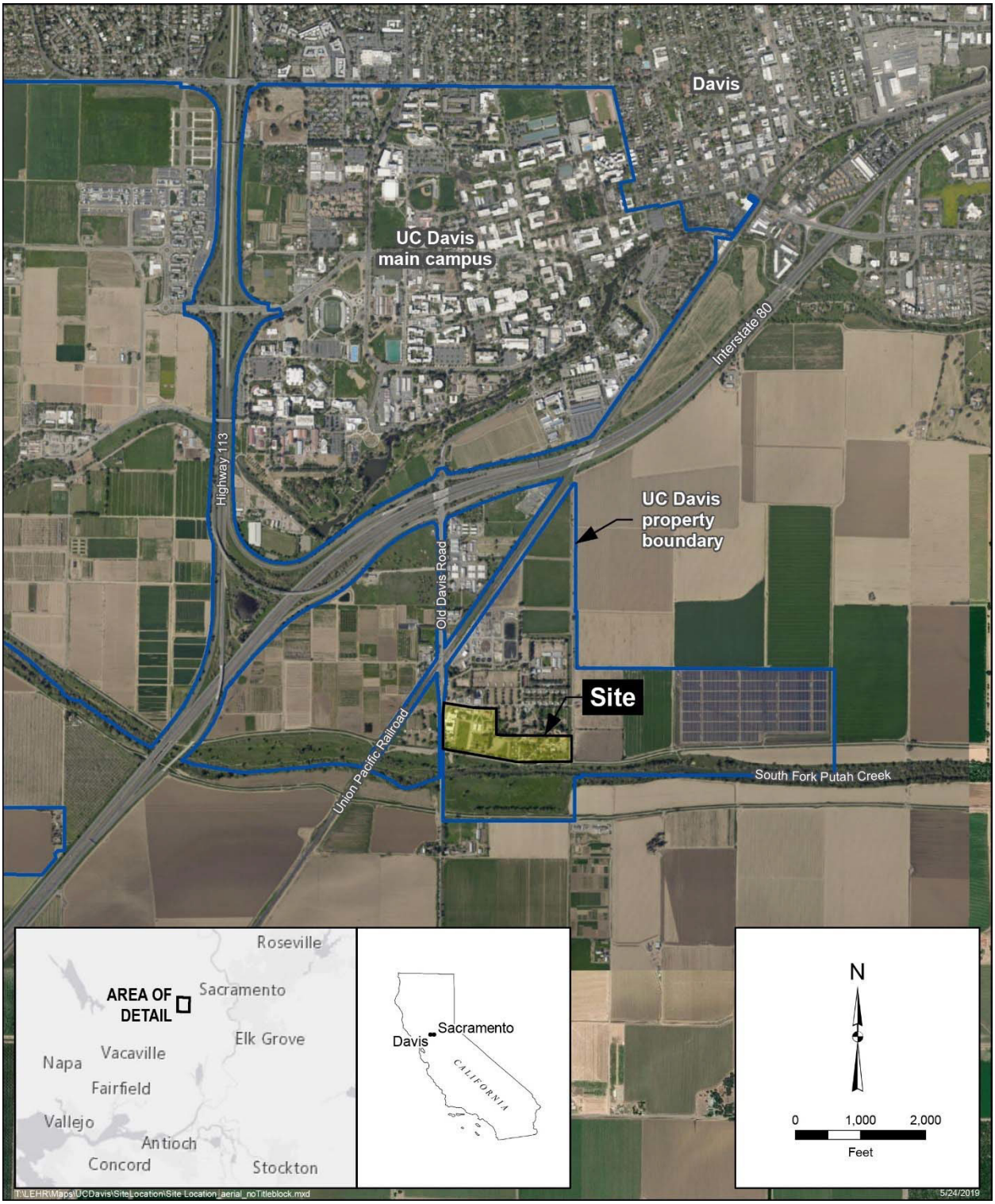

Figure 1. Location of the LEHR Superfund Site, UC Davis, Solano County, California

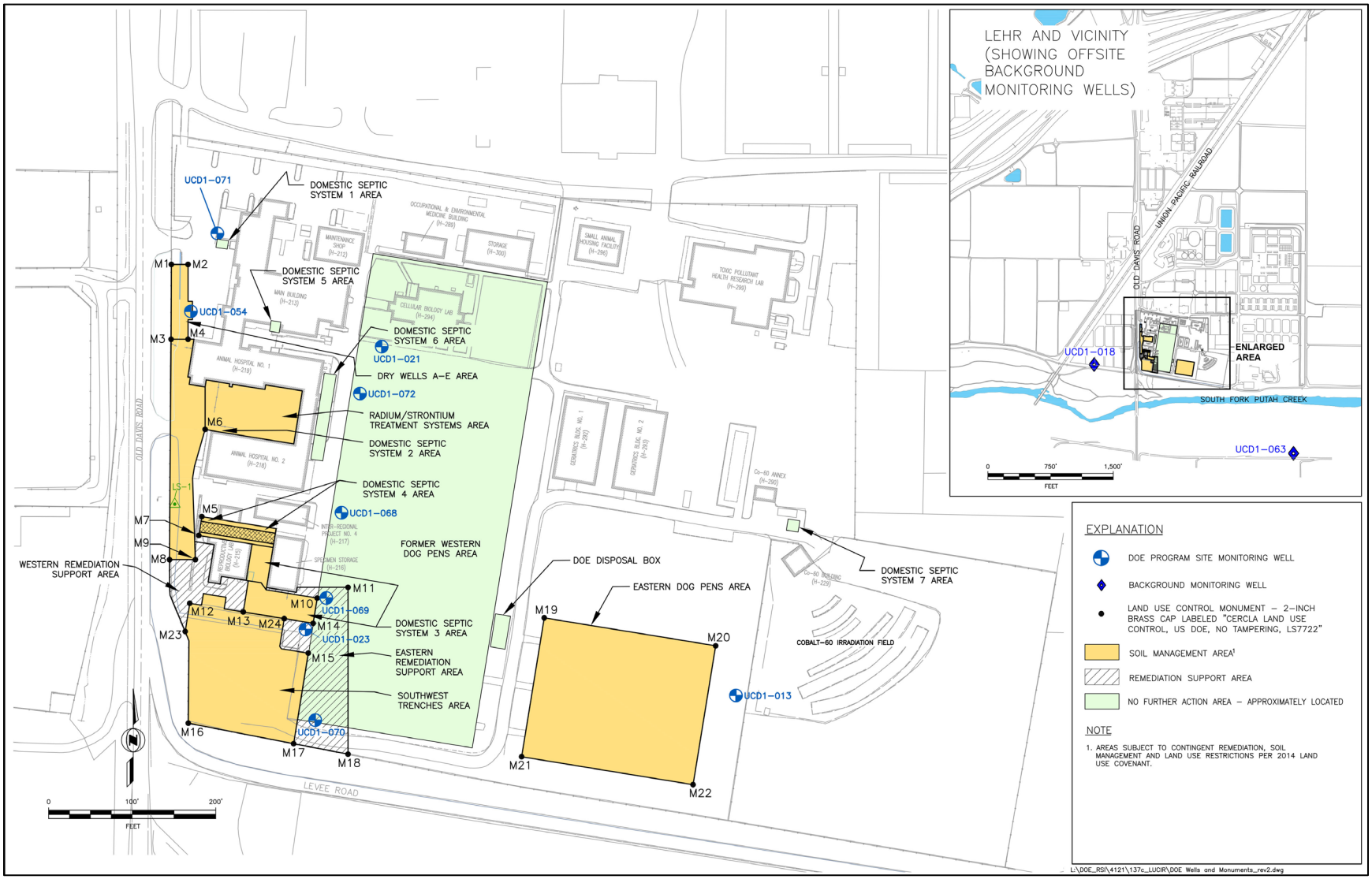

Figure 2. DOE Areas of the LEHR Federal Facility Subject to Land-Use Controls and Locations of DOE Groundwater Monitoring Wells and Survey Monuments

1.1 Inspection and Reporting Requirements

This section contains the inspection and reporting requirements specified in the Covenant, Section 4.06, which includes verification of permits obtained for soil-disturbing activities, a review of soil-disturbing activities for compliance with the SMP, a review of disposal practices for waste generated during soil-disturbing activities, and suggested changes to the SMP.

In accordance with the Covenant, Section 4.06, it is required that the inspection report contains:

- The dates and times of inspection, and the names of people who conducted the inspection and reviewed the report.
- An explanation of how the observations, which were the basis for the statements and conclusions, were performed (e.g., drive-by, flyover, walkthrough).
- The annual inspection results.
- A review of compliance with the requirements of the SMP.
- A certification of compliance with the Covenant.
- A description of any soil-disturbing activities and wastes generated.

If violations are noted, the annual inspection report must detail the steps taken to restore compliance. The inspection report is due to DTSC and EPA on or before January 15 each year.

1.2 Reporting Period

This report covers the period from December 10, 2023, to December 9, 2024.

1.3 Activities Conducted During the Reporting Period

1.3.1 Field Activities

DOE performed limited field activities during the reporting period including groundwater sample collection, water-level monitoring, monitoring well maintenance, tree tag replacement, and vegetation stockpile management. UC Davis also performed vegetation management activities in DOE Areas during the reporting period.

On April 4, 2024, DOE performed wellhead maintenance on monitoring wells UCD1-068 and UCD1-073, installed a new tag on oleander shrub 16252, and installed a new tarp over the vegetation debris stockpile in the Ra/Sr Treatment Systems Area as documented in Appendix F, Table F-1.

On May 6, 2024, DOE documented reinstallation of dedicated pumps and identification plates at monitoring wells UCD1-013 and UCD1-018 (after per- and polyfluoroalkyl substances [PFAS] sampling by UC Davis was completed), installed new identification plates on monitoring wells UCD1-021 and UCD1-054, and attached a new cable to the identification plate in monitoring well UCD1-072 as documented in Appendix F, Table F-1.

In December 2023, DOE conducted continuous and manual water level monitoring in the northwest corner of the site at monitoring wells UCD1-071, UCD1-079, and UCD1-081. DOE has submitted a draft report summarizing the evaluation of groundwater flow and contaminant transport in the northwest corner of the LEHR site to the LEHR Project Team (DOE 2023b). While the report is under regulatory review, DOE has paused the collection of continuous and manual water level monitoring data at monitoring wells UCD1-071, UCD1-079, and UCD1-081.

On March 13, 2024, DOE notified UC Davis of less than one-cubic yard of roofing material and a box containing equipment found during the 2023 walkthrough inspections in the SWT Area. These items are understood to originate from recent improvement to UC Davis property. UC Davis has agreed to remove these items and their removal has been confirmed as documented in Appendix F, Table F-1.

In August and September 2024, Aleppo pine trees 16206 and 16220 (Appendix E2), located within the WRS Area and SWT Area, respectively, fell during separate wind events. On August 15, 2024, and September 18, 2024, UC Davis Facilities Management staff removed fallen trees 16206 and 16220, respectively, as emergency actions and placed them in a new stockpile in the southwest corner of the SWT Area. In addition, UC Davis trimmed limbs from tree 16219 and placed these limbs and previously fallen limbs from trees 16219 and 16220 in the new SWT Area stockpile. The stumps from trees 16206 and 16220 remain in place.

Because Aleppo pine trees and their large branches in the SWT, Ra/Sr Treatment Systems, and WRS Areas have repeatedly fallen during wind events, UC Davis and DOE have decided to remove and dispose of the remaining standing Aleppo pine trees in these areas to reduce ongoing maintenance and mitigate possible safety hazards. UC Davis has also elected to trim tree 16211 (white mulberry) located in DSS 3 for maintenance and safety reasons, but this tree was not trimmed during this reporting period. In preparation for these activities, DOE collected samples from the remaining standing Aleppo pine trees in the SWT, Ra/Sr Treatment Systems, and WRS Areas, along with the tree material stockpiles in the SWT and Ra/Sr Treatment Systems Areas, and tree 16211 in the DSS 3 Area on October 28, 2024, in accordance with the SMP.

Between January 15 and October 8, 2024, UC Davis removed trees and shrubs in the EDPs and in UC Davis Areas in coordination with DOE and the regulatory agencies in preparation for the implementation of the soil and solid waste CERCLA remedy. On October 8, 2024, DOE confirmed that all trees and shrubs of record in the EDPs had been removed. In 2024, UC Davis also removed trees 16240 through 16251, which have historically been identified in Appendix E, Table E1-1, but were not located within DOE Areas of responsibility.

1.3.2 Report and Work Plan Preparation

1.3.2.1 SMP Revision

In September 2023, DOE issued a draft update to methodology in the SMP for the evaluation of potential residual contamination in vegetation removed from DOE Areas so that any waste or reused material is properly managed (DOE 2023a). The Central Valley Regional Water Quality Control Board has approved the draft SMP for finalization (CVRWQCB 2024). However, resolution of DTSC and EPA comments on the draft SMP is ongoing.

1.3.2.2 Hydrogeologic Analysis

In January 2024, DOE issued a draft report to the regulatory agencies on groundwater flow in the northwest corner of the site (DOE 2023b). The receipt of EPA comments on this report is pending.

2.0 Inspections

On behalf of DOE, Tim Utterback, a California Professional Engineer of Weiss Associates (Weiss) performed walkthrough inspections of the DOE Areas from 7 a.m. to 1 p.m. on October 7 and 8, 2024, and from 10 a.m. to 2 p.m. on December 9, 2024, as discussed in this section. The inspection checklists are included in Appendix A, and photographs documenting the inspection are included in Appendixes B, C, and D.

2.1 Inspection of Survey Monuments

All 24 survey monuments (Figure 2) were found in good condition on October 7, 2024, as documented in the checklists and photographs in Appendixes A and B, respectively. However, monument 18, was inaccessible because it was covered up by wood chips generated by UC Davis as part of their tree removal activities. During the post-inspection walkthrough on December 9, 2024, monument 18 remained inaccessible due to the covering of wood chips. Monument 18 will be inspected in the next reporting period after UC Davis removes the stockpile.

The monument 19 location delineator was found fallen and broken at the base (photo no. 8831; Appendix B). This delineator is scheduled for replacement (Appendix F).

2.2 Inspection of DSS 4 Area for Prohibited Land Uses

No evidence of residential use, use for day care for children, cultivation of crops for human consumption, or indications of a change in land use were observed in the DSS 4 Area (Figure 2) during the inspection on October 7, 2024, as documented in the checklists and photographs in Appendixes A and C, respectively.

2.3 Inspection of DOE Areas for Evidence of Soil-Disturbing Activities and Tree or Shrub Removal

No evidence of permit-required soil-disturbing activities was observed in the DOE Areas during the site inspection on October 7 and 8, 2024. Walkthrough observations of the DOE Areas indicated no topographic changes such as excavations, areas of subsidence, soil piles, or deep vehicle tire ruts. Asphalt cuts observed in the driveway near the site entrance and Dry Wells A–E Area (photo no. 8732; Appendix C) are north and outside of this DOE area. No equipment or materials that could cause soil disturbance or obscure the ability to identify soil disturbance was identified, except where a UC Davis contactor was using equipment to downsize trees that had been removed in preparation for the pending UC Davis remedial action. Observations of this activity indicated soil was not disturbed at depths below 1-foot and, therefore, this was a

permit-excluded activity under the SMP (DOE 2022). As reported by Rachel Lauesen of the EH&S Unit at UC Davis, no permit-required soil-disturbance or tree/shrub removal activities occurred in DOE Areas during this reporting period except for the management of fallen or cut trees in the EDPs, SWTs, WRS and Ra/Sr Treatment Systems Areas.

In these areas, UC Davis EH&S conformed to substantive SMP requirements including coordination with DOE and the regulatory agencies on the sampling and management of the tree material. However, a permit was not issued in advance of tree removal activities in the EDPs. This administrative omission was corrected on November 25, 2024, with the approval of a vegetation management permit for the EDPs tree removal. Because the tree stumps were left in place and not disturbed, a soil disturbance permit was not required.

On October 8, 2024, Mr. Utterback performed a walkthrough inspection of trees and shrubs identified in the modified baseline vegetation inventory table and map included in Appendix E. Brass tags with embossed numbers are attached to each listed tree or shrub at a height of approximately 5 feet to facilitate inspections.

On October 8, 2024, one tree located in the WRS Area (tree 16206), and one tree located in the SWTs Area (tree 16220) were observed to be removed, and lower limbs from SWTs Area tree 16219 were also observed to be removed. As presented in Section 1.3.1, trees 16206 and 16220 had fallen in August 2024 and UC Davis Facilities Management staff had moved them along with the lower limbs of tree 16219 to a new stockpile in the southwest corner of the SWT Area. In addition, stanchions and rope installed in previous years that surrounded fallen limbs from SWT Area trees 16219 and 16220 were observed surrounding the new stockpile in the southwest corner of the SWT Area. UC Davis Facilities Management staff had also moved the previously fallen limbs from trees 16219 and 16220 to the new SWT Area stockpile.

The tree debris stockpile that was generated when UC Davis removed trees 16204 and 16207 during the previous reporting period remains in a posted area adjacent to the western boundary of the Ra/Sr Treatment Systems Area (photo no. 5274; Appendix F).

As discussed in Section 1.3.1, waste characterization of the tree debris stockpiles in the SWT and Ra/Sr Treatment Systems Areas is in progress, and application for a permit regarding the management and disposal of these trees is planned for the next reporting period.

The remaining 23 trees and shrubs whose status is maintained in the inventory table were found undisturbed since the 2023 inspection. The basis for this determination was that the trees and shrubs were still standing and there was no new evidence of saw cuts or torn branches or other serious physical trauma to the trees and shrubs since the 2023 inspection period. However, a tag was not found on oleander shrub 16203 in the Ra/Sr Treatment Systems Area and the tag on white mulberry tree 16211 was becoming obscured by growth. These tags are scheduled for replacement (Appendix F).

2.4 Inspections of Groundwater Monitoring Wells

On October 7 and 8, 2024, Mr. Utterback inspected monitoring wells UCD1-013, UCD1-018, UCD1-021, UCD1-023, UCD1-054, UCD1-063, and UCD1-068 through UCD1-073 (Figure 2). However, pump performance tests were postponed until December 9, 2024 due to low water

levels (depths to water were in the range of 60 feet). The tests of the monitoring well pumps conducted on December 9, 2024, indicated these pumps produced water within the target flow rate range of 0.1 to 0.5 liter per minute as specified in the Remedial Design/Remedial Action Work Plan (DOE 2010). However, the pump in well UCD1-021 produced water inconsistently and at the low end of the target flow rate range and needs to be replaced.

Monitoring wells with standpipe completions (UCD1-013, UCD1-018, UCD1-063, UCD1-070, and UCD1-073) were observed to be in good condition and secured with functioning padlocks, and there was no evidence of tampering such as pry marks or indentations on the standpipes or locks. The concrete pads at the foot of the standpipe wells were observed to be undamaged and in sturdy condition.

Monitoring wells UCD1-021, UCD1-023, UCD1-054, UCD1-069, UCD1-071, and UCD1-072 have surface completions, with lids secured by bolts or a screw-on lid (UCD1-023). The vaults, lids, and bolts on the surface completion wells were observed to be in good condition with no evidence of tampering such as pry marks or indentations, except for maintenance items identified at wells UCD1-071 and UCD1-072:

- Well UCD1-071—One vault lid bolt has stripped threads and needs to be replaced.
- Well UCD1-071—The concrete apron surrounding this wellhead is severely cracked and needs to be replaced.
- Well UCD1-072—One bolt hole used to secure the vault lid is corroded and needs to be cleaned or rethreaded.

All components inside the wells, including well casings, pump ports, suspension hardware, port plugs, and caps, were found in good condition, except the pump controller port plug was missing at well UCD1-069 and the casing cap in well UCD1-072 was blocked from sealing due to the attachment location of the identification plate cable. Identification plates were present and in acceptable condition on all wells. Appendix D includes photographs of the groundwater monitoring wells and well boxes. Activities to address the failing pump, stripped bolt, corroded bolt hole threads, cracked concrete apron, missing port plug, and blocked casing cap observed during the inspection are presented in Appendix F.

2.5 Post-Inspection Walkthrough

A post-inspection walkthrough of the DOE Areas was performed by Mr. Utterback on December 9, 2024, between 9 a.m. and 10 a.m. No evidence of soil disturbing, tree or shrub disturbing, or changed conditions were noted over those observed during the October inspection.

3.0 SMP Implementation

DOE is responsible for implementing the SMP. DOE has agreed with the Regents of the University of California that the EH&S Unit at UC Davis will implement selected requirements of the SMP. DOE retains ultimate accountability for compliance with the requirements of the ROD executed by this SMP.

3.1 Training

Personnel at the EH&S Unit at UC Davis conducted annual training to communicate soil management and tree or shrub removal requirements to applicable personnel who may perform, manage, or contract for work at and near the site. Additionally, personnel working in departments on or near the site also received annual training.

Information was provided on the following topics:

- Roles and responsibilities for soil management and tree or shrub removal in DOE Areas
- Areas and contaminants subject to soil management and tree or shrub removal requirements
- Soil management and tree or shrub removal during excavation or construction
- Permits for soil-disturbing and tree or shrub removal activities
- Plans and documentation for soil-disturbing and tree or shrub removal activities
- Soil management and tree or shrub removal during emergency work
- Waste management
- Waste characterization and disposal
- Inspections

3.2 Soil-Disturbing and Tree and Shrub Removal Activities

On the basis of site inspections and information provided by Rachel Lauesen of the EH&S Unit at UC Davis and provided to Bob Devany of Weiss on December 13, 2024 (UC Davis 2024), no soil disturbance permits were issued, no observations of soil-disturbing activities were recorded by the EH&S Unit, and one tree/shrub removal permit was issued to UC Davis for tree and shrub removal activities at the EDPs Area for conformance with management and disposal requirements in the SMP.

As discussed in Section 1.3.1, emergency conditions required expedited removal of two fallen trees in the SWT and WRS Areas (Figure 2). As specified in Section 5.0 of the SMP, campus emergency responders notified the UC Davis EH&S Unit of the work on August 15, 2024, (tree 16206) and September 18, 2024, (tree 16220), and properly staged the material at the LEHR site as directed by the UC Davis EH&S Unit. A tree/shrub removal permit addressing the management requirements for these recovered materials along with anticipated removal of other tree material from this general area is planned for the next reporting period.

3.3 Waste Disposal

On the basis of site inspections and the interview documented in this report, no soil or tree or shrub waste from DOE Areas was disposed of or recycled during the 2024 reporting period.

4.0 References

CVRWQCB (Central Valley Regional Water Quality Control Board), 2024. Central Valley Regional Water Quality Control Board letter (about Draft Soil Management Plan for the Former Laboratory for Energy-Related Health Research Federal Facility, University of California, Davis, Solano County) to Kate Whysner, site manager, U.S. Department of Energy, Office of Legacy Management, March 22.

DOE (U.S. Department of Energy), 2009. *Record of Decision for DOE Areas at the Laboratory for Energy-Related Health Research, University of California, Davis*, LMS/LEH/S05069, Office of Legacy Management, September.

DOE (U.S. Department of Energy), 2010. *Remedial Design/Remedial Action Work Plan for the Former Laboratory for Energy-Related Health Research Federal Facility, University of California, Davis*, LMS/LEH/S05822, Office of Legacy Management, November.

DOE (U.S. Department of Energy), 2022. *Soil Management Plan for the Former Laboratory for Energy-Related Health Research Federal Facility, University of California, Davis*, LMS/LEH/S35365, Office of Legacy Management, August.

DOE (U.S. Department of Energy), 2023a. *DRAFT Soil Management Plan for the Former Laboratory for Energy-Related Health Research Federal Facility, University of California, Davis*, LMS/LEH/S35365-0.1, Office of Legacy Management, September.

DOE (U.S. Department of Energy), 2023b. *DRAFT Hydrogeologic Analysis to Evaluate the Potential for Westward Offsite Groundwater and Contaminant Migration in the Northwest Corner of the DOE LEHR Site*, LMS/LEH/46129, Office of Legacy Management, December. Issued January 11, 2024.

DOE (U.S. Department of Energy), 2024. *2023 Annual Land-Use Covenant Inspection Report for DOE Areas at the Laboratory for Energy-Related Health Research/Old Campus Landfill Superfund Site University of California, Davis*, LMS/LEH/46427, Office of Legacy Management, January.

DTSC (California Department of Toxic Substances Control), 2014. *Covenant to Restrict Use of Property, Environmental Restriction, (Re: Portions of County of Solano Assessor's Parcel No. 110-05-04 UC Davis Laboratory for Energy-Related Health Research/Old Campus Landfill [LEHR/OCL] Superfund Site, Site Code 100424)*, Solano County Recorder's Office Document No. 201400051822, July 11.

UC Davis (University of California, Davis), 2024. Rachel Lauesen, UC Davis Environmental Health and Safety Unit, email communication to Bob Devany, Weiss Associates, December 13.

5.0 Certification

DOE hereby certifies to the best of its knowledge that the information contained in this inspection report is true and accurate and no exceptions to the Covenant terms and conditions occurred during this reporting period.

KATHLEEN WHYSNER
Digitally signed by KATHLEEN WHYSNER
Date: 2024.12.30 08:57:13 -07'00'

Kathleen Whysner, DOE Site Manager
U.S. Department of Energy
Office of Legacy Management
2597 Legacy Way
Grand Junction, CO 81503

Date

The University of California hereby certifies to the best of its knowledge that the information contained in this inspection report is true and accurate and no exceptions to the Covenant terms and conditions occurred during this reporting period.

[redacted]
Chris Wright
cn=Chris Wright, o=University of California - Davis, ou=Environmental Health and Safety, email=cvwright@ucdavis.edu, c=US
2025.01.08 13:45:59 -08'00'

Christopher Wright, Director
UC Davis Environmental Health and Safety
One Shields Avenue
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Date

Appendix A

Inspection Checklists

LAND-USE CONTROL INSPECTION CHECKLIST

Inspector: Tim Utterback Inspection Date: October 7, 2024

Area Inspected: Monuments Reporting Period: December 10, 2023–December 9, 2024

Monument No.	Close-up Photo[1]	Setting Photo[2]	Damaged or missing? (Yes/No) If Yes, explain	Comments
1	8738	8739	No	
2	8740	8742	No	
3	8744	8745	No	
4	8746	8747	No	
5	8759	8760	No	
6	8761	8762	No	
7	8763	8764	No	
8	8765	8766	No	
9	8767	8768	No	
10	8791	8792	No	
11	8794	8795	No	
12	8783	8784	No	
13	8785	8786	No	
14	8789	8790	No	
15	8796	8797	No	
16	8801	8802	No	
17	8803	8804	No	
18	none	8805	Yes	On October 7 and December 9, 2024, monument 18 was buried under a wood chip stockpile.
19	8829	8831	No	The delineator adjacent to monument 19 is broken at its base and fallen.
20	8839	8840	No	
21	8824	8827	No	
22	8842	8843	No	
23	8798	8799	No	
24	8787	8788	No	

Notes:

[1] Take zoom photograph of monument. Record photograph number.

[2] Place orange ring marker around monument and step back to take photo of monument location with recognizable site features (buildings, fence, road, etc.) in view. Record photograph number.

Certification:

I certify that the inspection information presented above is true and accurate. By: [redacted]

Date: November 19, 2024

LAND-USE CONTROL INSPECTION CHECKLIST

Inspector: Tim Utterback

Inspection Date: October 7, 2024

Area Inspected: Southwest Trenches

Reporting Period: December 10, 2023–December 9, 2024

Inspection Item	Yes	No	Not Applicable	Comments
Were any indications of soil disturbance or tree/shrub removal observed during walkthrough inspection? If yes, explain.[1]	■	□	□	Tree 16220 is removed down to the stump and tree 16219 lower limbs are removed. The vegetation waste is stored in the southwest corner of the Southwest Trenches Area.
Were there any emergency responses in this DOE Area that resulted in soil or tree disturbance since December 10, 2023?[2]	■	□	□	Campus arborists trained to SMP responded to downed tree 16220 in August 2024 (See Section 1.3.1). SMP procedures properly followed.
Were any soil disturbance or tree/shrub removal permit requests filed with UC Davis Environmental Health and Safety (EH&S) Unit for this DOE Area since December 10, 2023?[2]	□	■	□	
Were any soil disturbance or tree/shrub removal permits issued by the EH&S Unit for this DOE Area since December 10, 2023?[2]	□	■	□	
Were permitted soil disturbing or tree/shrub removal activities conducted in this DOE Area since December 10, 2023?[2]	□	■	□	
If permitted soil disturbing or tree/shrub removal activities were conducted in this DOE Area since December 10, 2023, were the activities in compliance with the Soil Management Plan? If no, explain.	□	□	■	
If waste was generated due to soil disturbing or tree/shrub removal activities since December 10, 2023, was the soil managed and/or disposed in compliance with the Soil Management Plan? If no, explain.	■	□	□	
Are there any suggested changes to the Soil Management Plan at this time? If yes, explain.	□	■	□	

Notes:

[1] Soil-disturbing activities include, but are not limited to, excavation, grading, trenching, utility installation or repair, and any other human activities that could potentially bring contaminated soil to the surface. Tree/shrub removal also includes any partial removal resulting from pruning or fallen branches. This does not apply to landscaping, fire protection, or maintenance work that is conducted at depths less than 1 foot below ground surface and less than 5 cubic yards of soil waste that is significantly displaced (e.g., stockpiled, placed in containers), and all soil is returned to the disturbed area. Such work may proceed without restriction.

[2] Interview information provided by email from Rachel Lauesen, UC Davis EH&S Unit, to Robert Devany, Weiss Associates, dated December 13, 2024.

Certification:

I certify that the inspection information presented above is true and accurate. By: [redacted] Date: December 10, 2024

I certify that the interview information presented above is true and accurate. By: [redacted] Date: December 13, 2024

LAND-USE CONTROL INSPECTION CHECKLIST

Inspector: Tim Utterback

Inspection Date: October 7, 2024

Area Inspected: Southwest Trenches

Reporting Period: December 10, 2023–December 9, 2024

Photograph Description	Photo No.	Comments
View southeast of Southwest Trenches Area: North Levee of the South Fork of Putah Creek in background.	8806	
View south of Southwest Trenches Area: North Levee of the South Fork of Putah Creek in background.	8807	
View southeast of Southwest Trenches Area: Former washdown pad in left.	8808	
View west of Southwest Trenches Area: Shoulder of Old Davis Road in background.	8809	
View northwest of Southwest Trenches Area.	8810	UC Davis tree work in center of photo.
View north of Southwest Trenches Area: Buildings H-215 and H-216 in background.	8811	
View north from center of Southwest Trenches Area: Buildings H-215 and H-216 in background.	8812	
View west from center of Southwest Trenches Area.	8813	Stanchions and rope surrounding stockpile containing fallen tree 16220 and limbs cut from tree 16219 in upper left of photo.
View south from center of Southwest Trenches Area.	8814	Stanchions and rope surrounding stockpile containing fallen tree 16220 and limbs cut from tree 16219 in upper right of photo.
View east from center of Southwest Trenches Area: Western Dog Pens Area and UC Davis Southern Trenches Area in background.	8815	
View north of northwest corner of Southwest Trenches Area.	8816	Tree 16219 previously fallen limb moved to new stockpile. Previously installed stanchions, posting, and rope removed.
View east of Southwest Trenches Area: Western Dog Pens Area and UC Davis Southern Trenches Area in background.	8817	Shallow tire ruts less than a 1 foot deep from UC Davis tree work in bottom center of photo.

Certification:

I certify that the inspection information presented above is true and accurate. By: [redacted] Date: December 10, 2024

LAND-USE CONTROL INSPECTION CHECKLIST

Inspector: Tim Utterback

Inspection Date: October 7, 2024

Area Inspected: Domestic Septic System 3

Reporting Period: December 10, 2023–December 9, 2024

Inspection Item	Yes	No	Not Applicable	Comments
Were any indications of soil disturbance or tree/shrub removal observed during walkthrough inspection? If yes, explain.[1]	□	■	□	
Were there any emergency responses in this DOE Area that resulted in soil or tree disturbance since December 10, 2023?[2]		■		
Were any soil disturbance or tree/shrub removal permit requests filed with UC Davis Environmental Health and Safety (EH&S) Unit for this DOE Area since December 10, 2023?[2]	□	■	□	
Were any soil disturbance or tree/shrub removal permits issued by the EH&S Unit for this DOE Area since December 10, 2023?[2]	□	■	□	
Were permitted soil disturbing or tree/shrub removal activities conducted in this DOE Area since December 10, 2023?[2]	□	■	□	
If permitted soil disturbing or tree/shrub removal activities were conducted in this DOE Area since December 10, 2023, were the activities in compliance with the Soil Management Plan? If no, explain.	□	□	■	
If waste was generated due to soil disturbing or tree/shrub removal activities since December 10, 2023, was the soil managed and/or disposed in compliance with the Soil Management Plan? If no, explain.	□	□	■	
Are there any suggested changes to the Soil Management Plan at this time? If yes, explain.	□	■	□	

Notes:

[1] Soil-disturbing activities include, but are not limited to, excavation, grading, trenching, utility installation or repair, and any other human activities that could potentially bring contaminated soil to the surface. Tree/shrub removal also includes any partial removal resulting from pruning or fallen branches. This does not apply to landscaping, fire protection, or maintenance work that is conducted at depths less than 1 foot below ground surface and less than 5 cubic yards of soil waste that is significantly displaced (e.g., stockpiled, placed in containers), and all soil is returned to the disturbed area. Such work may proceed without restriction.

[2] Interview information provided by email from Rachel Lauesen, UC Davis EH&S Unit, to Robert Devany, Weiss Associates, dated December 13, 2024.

Certification:

I certify that the inspection information presented above is true and accurate. By: [redacted] Date: December 10, 2024

I certify that the interview information presented above is true and accurate. By: [redacted] Date: December 13, 2024

LAND-USE CONTROL INSPECTION CHECKLIST

Inspector: Tim Utterback

Inspection Date: October 7, 2024

Area Inspected: Domestic Septic System 3

Reporting Period: December 10, 2023–December 9, 2024

Photograph Description	Photo No.	Comments
View east over former leach field part of Domestic Septic System 3 Area: Building H-216 in upper left; Former washdown pad in upper right; Western Dog Pens Area in background.	8771	
View east of eastern half of Domestic Septic System 3 Area.	8772	
View west of former leach field part of Domestic Septic System 3: Buildings H-215 and H-216 to right; Old Davis Road obscured by trees in background.	8773	
View south of septic tank part of Domestic Septic System 3 Area: Building H-216 to left; Building H-215 to right.	8774	
View north of portions of Domestic Septic System 3 and 4 Areas: Building H-215 to left; Building H-216 to right; Domestic Septic System 4 Area in background.	8775	
View south of east end of Domestic Septic System 3 Area leach field: Building H-215 to right; Former washdown pad in background/center.	8778	
View east of Domestic Septic System 3 Area: Building H-216 in background, standing north/left of tree.	8776	
View east of Domestic Septic System 3 Area: Building H-216 in background, standing south/right of tree.	8777	

Certification:

I certify that the inspection information presented above is true and accurate. By: [redacted] Date: December 10, 2024

LAND-USE CONTROL INSPECTION CHECKLIST

Inspector: Tim Utterback

Inspection Date: October 7, 2024

Area Inspected: Domestic Septic System 4

Reporting December 10, 2023–December 9, 2024

Inspection Item	Yes	No	Not Applicable	Comments
Were any indications of soil disturbance observed during walkthrough inspection? If yes, explain.[1]	□	■	□	
Were any indications of a residence, growing plants for human consumption, or a day care center for children observed during walkthrough inspection? If yes, explain.	□	■	□	
Did UC Davis Environmental Health and Safety (EH&S) Unit observe or receive report of any indications of a residence, growing plants for human consumption, or a day care center for children in this DOE Area since December 10, 2023.[2]	□	■	□	
Were any indications of a change in land use observed during walkthrough inspection? If yes, explain.[1]	□	■	□	
Were there any emergency responses in this DOE Area that resulted in soil or tree disturbance since December 10, 2023?[2]	□	■	□	
Were any soil disturbance permit requests filed with UC Davis Environmental EH&S Unit for this DOE Area since December 10, 2023?[2]	□	■	□	
Were any soil disturbance permits issued by the EH&S Unit for this DOE Area since December 10, 2023?[2]	□	■	□	

Notes:

[1] Soil-disturbing activities include, but are not limited to, excavation, grading, trenching, utility installation or repair, and any other human activities that could potentially bring contaminated soil to the surface. The DSS 4 area does not contain trees or shrubs. This does not apply to landscaping, fire protection, or maintenance work that is conducted at depths less than 1 foot below ground surface and less than 5 cubic yards of soil waste that is significantly displaced (e.g., stockpiled, placed in containers), and all soil is returned to the disturbed area. Such work may proceed without restriction.

[2] Interview information provided by email from Rachel Lauesen, UC Davis EH&S Unit, to Robert Devany, Weiss Associates, dated December 13, 2024.

Certification:

I certify that the inspection information presented above is true and accurate. By: [redacted] Date: December 10, 2024

I certify that the interview information presented above is true and accurate. By: [redacted] Date: December 13, 2024

LAND-USE CONTROL INSPECTION CHECKLIST

Inspector: Tim Utterback

Inspection Date: October 7, 2024

Area Inspected: Domestic Septic System 4

Reporting Period: December 10, 2023–December 9, 2024

Inspection Item	Yes	No	Not Applicable	Comments
Were permitted soil disturbing activities conducted in this DOE Area since December 10, 2023?	□	■	□	
If permitted soil disturbing activities were conducted in this DOE Area since December 10, 2023, were the activities in compliance with the Soil Management Plan? If no, explain.	□	□	■	
If waste was generated due to soil disturbing activities since December 10, 2023, was the soil managed and/or disposed in compliance with the Soil Management Plan? If no, explain.	□	□	■	
Are there any suggested changes to the Soil Management Plan at this time? If yes, explain.	□	■	□	

Photograph Description	Photo No.	Comments
View north of Domestic Septic System 4 Area septic tank location and east end of leach field: Building H-215 to left; Building H-216 to right; Building H-217 in background.	8779	
View west of east end of Domestic Septic System 4 Area leach field; Building H-215 in background.	8780	
View east of Domestic Septic System 4 Area septic tank location: Building H-216 in background.	8781	
View east of western portion of Domestic Septic System 4 Area: Building H-215 in background/center.	8782	

Certification:

I certify that the inspection information presented above is true and accurate. By: [redacted] Date: December 10, 2024

I certify that the interview information presented above is true and accurate. By: [redacted] Date: December 13, 2024

LAND-USE CONTROL INSPECTION CHECKLIST

Inspector: Tim Utterback

Inspection Date: October 10, 2024

Area Inspected: Radium/Strontium Treatment Systems Area Inclusive of Domestic Septic System 2

Reporting Period: December 10, 2023–December 9, 2024

Inspection Item	Yes	No	Not Applicable	Comments
Were any indications of soil disturbance or tree/shrub removal observed during walkthrough inspection? If yes, explain.[1]	■	□	□	Vegetation waste from prior year's tree removal stored in Ra/Sr Treatment Systems Area adjacent to west perimeter fence.
Were there any emergency responses in this DOE Area that resulted in soil or tree disturbance since December 10, 2023?[2]	□	■	□	
Were any soil disturbance or tree/shrub removal permit requests filed with UC Davis Environmental Health and Safety (EH&S) Unit for this DOE Area since December 10, 2023?[2]	□	■	□	
Were any soil disturbance or tree/shrub removal permits issued by the EH&S Unit for this DOE Area since December 10, 2023?[2]	□	■	□	
Were permitted soil disturbing or tree/shrub removal activities conducted in this DOE Area since December 10, 2023?[2]	□	■	□	
If permitted soil disturbing or tree/shrub removal activities were conducted in this DOE Area since December 10, 2023, were the activities in compliance with the Soil Management Plan? If no, explain.[2]	□	□	■	
If waste was generated due to soil disturbing or tree/shrub removal activities since December 10, 2023, was the soil managed and/or disposed in compliance with the Soil Management Plan? If no, explain.	■	□	□	Tree waste from prior year is being properly managed and will be disposed of after sampling and characterization is complete.
Are there any suggested changes to the Soil Management Plan at this time? If yes, explain.	□	■	□	

Notes:

[1] Soil-disturbing activities include, but are not limited to excavation, grading, trenching, utility installation or repair, and any other human activities that could potentially bring contaminated soil to the surface. Tree/shrub removal also includes any partial removal resulting from pruning or fallen branches. This does not apply to landscaping, fire protection, or maintenance work that is conducted at depths less than 1 foot below ground surface and less than 5 cubic yards of soil waste is significantly displaced (e.g., stockpiled, placed in containers) and all soil is returned to the disturbed area. Such work may proceed without restriction.

[2] Interview information provided by email from Rachel Lauesen, UC Davis EH&S Unit, to Robert Devany, Weiss Associates, dated December 13, 2024.

Certification:

I certify that the inspection information presented above is true and accurate. By: [redacted] Date: December 10, 2024

I certify that the interview information presented above is true and accurate. By: [redacted] Date: December 13, 2024

LAND-USE CONTROL INSPECTION CHECKLIST

Inspector: Tim Utterback

Inspection Date: October 10, 2024

Area Inspected: Radium/Strontium Treatment Systems Area Inclusive of Domestic Septic System 2

Reporting Period: December 10, 2023–December 9, 2024

Photograph Description	Photo No.	Comments
View north over southern portion of Radium/Strontium Treatment Systems Area (Ra/Sr Area). Building H-215 to right; Buildings H-218 and H-219 in background.	8748	
View north of middle portion of Radium/Strontium Treatment Systems Area: building cooling unit and Building H-218 northwest corner in upper right portion of photo; Building H-219 in background.	8749	
View south over southern portion of Ra/Sr Area. Building H-215 to left.	8750	Stanchions surrounding vegetation waste stockpile from fallen limbs and removal of trees 16204 and 16207 visible in center right of photo. Direct view of stockpile provided in Appendix F.
View north over northern portion of Ra/Sr Area. Building H-219 in upper right portion of photo.	8751	
View south over middle-south portion of Ra/Sr Area. Building H-218 to left; west perimeter gate and fence to right.	8752	
View east over central portion of Ra/Sr Area. Building H-218 to right; Building H-219 to left.	8753	
View west over Domestic Septic System 2 area within middle-west portion of Ra/Sr Area.	8755	
Roof-level view west over middle portion of Ra/Sr Area. Building H-219 to right; Building H-218 to left.	8756	
Roof-level view southwest over central portion of Ra/Sr Area; Building H-218 in background/left.	8757	
Roof-level view northwest over central portion of Radium/ Strontium Treatment Systems Area; Building H-219 in background.	8758	
View south over northern portion of Ra/Sr Area: Building H-219 to left; west perimeter fence and Old Davis Road to right.	8770	

Certification:

I certify that the inspection information presented above is true and accurate. By: [redacted] Date: December 10, 2024

LAND-USE CONTROL INSPECTION CHECKLIST

Inspector: Tim Utterback

Inspection Date: October 7, 2024

Area Inspected: Dry Wells A–E Area

Reporting Period: December 10, 2023–December 9, 2024

Inspection Item	Yes	No	Not Applicable	Comments
Were any indications of soil disturbance or tree/shrub removal observed during walkthrough inspection? If yes, explain.[1]	□	■	□	
Were there any emergency responses in this DOE Area that resulted in soil or tree disturbance since December 10, 2023?[2]	□	■	□	
Were any soil disturbance or tree/shrub removal permit requests filed with UC Davis Environmental Health and Safety (EH&S) Unit for this DOE Area since December 10, 2023?[2]	□	■	□	
Were any soil disturbance or tree/shrub removal permits issued by the EH&S Unit for this DOE Area since December 10, 2023?[2]	□	■	□	
Were permitted soil disturbing or tree/shrub removal activities conducted in this DOE Area since December 10, 2023?[2]	□	■	□	
If permitted soil disturbing or tree/shrub removal activities were conducted in this DOE Area since December 10, 2023, were the activities in compliance with the Soil Management Plan? If no, explain.	□	□	■	
If waste was generated due to soil disturbing or tree/shrub removal activities since December 10, 2023, was the soil or vegetation managed and/or disposed in compliance with the Soil Management Plan? If no, explain.	□	□	■	
Are there any suggested changes to the Soil Management Plan at this time? If yes, explain.	□	■	□	

Notes:

[1] Soil-disturbing activities include, but are not limited to excavation, grading, trenching, utility installation or repair, and any other human activities that could potentially bring contaminated soil to the surface. Tree/shrub removal also includes any partial removal resulting from pruning or fallen branches. This does not apply to landscaping, fire protection, or maintenance work that is conducted at depths less than 1 foot below ground surface and less than 5 cubic yards of soil waste is significantly displaced (e.g., stockpiled, placed in containers) and all soil is returned to the disturbed area. Such work may proceed without restriction.

[2] Interview information provided by email from Rachel Lauesen, UC Davis EH&S Unit, to Robert Devany, Weiss Associates, dated December 13, 2024.

Certification:

I certify that the inspection information presented above is true and accurate. By: [redacted] Date: December 10, 2024

I certify that the interview information presented above is true and accurate. By: [redacted] Date: December 13, 2024

LAND-USE CONTROL INSPECTION CHECKLIST

Inspector: Tim Utterback

Inspection Date: October 10, 2024

Area Inspected: Dry Wells A–E Area

Reporting Period: December 10, 2023–December 9, 2024

Photograph Description	Photo No.	Comments
View north of Dry Wells A–E Area: Old Davis Road to left monuments M3 and M4 in left and right foreground, respectively.	8735	
View south of Dry Wells A–E Area: Building H-219 in Background/left.	8732	Asphalt cut visible in bottom center of photo is north of Monuments 1 and 2, which define the northern boundary of the Dry Wells A–E Area (See Appendix B, photo no. 8742).
View west of Dry Wells A–E Area and main gate; Old Davis Road in background.	8733	
View southwest of Dry Wells A–E Area.	8734	

Certification:

I certify that the inspection information presented above is true and accurate. By: [redacted] Date: December 10, 2024

LAND-USE CONTROL INSPECTION CHECKLIST

Inspector: Tim Utterback

Inspection Date: October 7 and 8, 2024

Area Inspected: Eastern Dog Pens Area

Reporting Period: December 10, 2023–December 9, 2024

Inspection Item	Yes	No	Not Applicable	Comments
Were any indications of soil disturbance or tree/shrub removal observed during walkthrough inspection? If yes, explain.[1]	■	□	□	All cataloged trees and shrubs were removed by UC Davis as of October 8, 2024.
Were there any emergency responses in this DOE Area that resulted in soil or tree disturbance since December 10, 2023?[2]	□	■	□	
Were any soil disturbance or tree/shrub removal permit requests filed with UC Davis Environmental Health and Safety (EH&S) Unit for this DOE Area since December 10, 2023?[2]	■	□	□	
Were any soil disturbance or tree/shrub removal permits issued by the EH&S Unit for this DOE Area since December 10, 2023?[2]	■	□	□	
Were permitted soil disturbing or tree/shrub removal activities conducted in this DOE Area since December 10, 2023?[2]	■	□	□	
If permitted soil disturbing or tree/shrub removal activities were conducted in this DOE Area since December 10, 2023, were the activities in compliance with the Soil Management Plan? If no, explain.	■	□	□	
If waste was generated due to soil disturbing or tree/shrub removal activities since December 10, 2023, was the soil managed and/or disposed in compliance with the Soil Management Plan? If no, explain.	■	□	□	The removed trees and shrubs were chipped and are stored onsite in stockpiles awaiting disposal.
Are there any suggested changes to the Soil Management Plan at this time? If yes, explain.	□	■	□	

Notes:

[1] Soil-disturbing activities include, but are not limited to, excavation, grading, trenching, utility installation or repair, and any other human activities that could potentially bring contaminated soil to the surface. Tree/shrub removal also includes any partial removal resulting from pruning or fallen branches. This does not apply to landscaping, fire protection, or maintenance work that is conducted at depths less than 1 foot below ground surface and less than 5 cubic yards of soil waste that is significantly displaced (e.g., stockpiled, placed in containers), and all soil is returned to the disturbed area. Such work may proceed without restriction.

[2] Interview information provided by email from Rachel Lauesen, UC Davis EH&S Unit, to Robert Devany, Weiss Associates, dated December 13, 2024.

Certification:

I certify that the inspection information presented above is true and accurate. By: [redacted] Date: December 10, 2024

I certify that the interview information presented above is true and accurate. By: [redacted] Date: December 13, 2024

LAND-USE CONTROL INSPECTION CHECKLIST

Inspector: Tim Utterback

Inspection Date: October 7 and 8, 2024

Area Inspected: Eastern Dog Pens Area

Reporting Period: December 10, 2023–December 9, 2024

Photograph Description	Photo No.	Comments
View northeast over Eastern Dog Pens Area from North Levee of the South Fork of Putah Creek showing southwest corner monument location in center.	8821, 5344	Photos on October 7 and 8, 2024, respectively, showing trees removed between inspection days.
View east over central Eastern Dog Pens Area.	8828	
View southeast over Eastern Dog Pens Area from northwest corner showing northwest corner monument location.	8834	Delineator laying on ground next to monument.
View south over central Eastern Dog Pens Area.	8835	
View southwest over Eastern Dog Pens Area from northeast corner showing location of northeast corner monument.	8837	
View west over central Eastern Dog Pens Area.	8841	
View northwest into Eastern Dog Pens Area from North Levee of the South Fork of Putah Creek showing location of southeast corner monument.	8823, 5346	Photos on October 7 and 8, 2024, respectively, showing trees removed between inspection days.
View north over Eastern Dog Pens Area from North Levee of the South Fork of Putah Creek.	8822, 5345	Photos on October 7 and 8, 2024, respectively, showing trees removed between inspection days.
View north of Eastern Dog Pens Area showing unidentified shrub.	5347	Shrub remaining in Eastern Dog Pens Area on October 8, 2024.

Certification:

I certify that the inspection information presented above is true and accurate. By: [redacted] Date: December 10, 2024

LAND-USE CONTROL INSPECTION CHECKLIST

Inspector: Tim Utterback Inspection Dates: October 8, 2024

Area Inspected: Trees and Shrubs Reporting Period: December 10, 2023–December 9, 2024

Tree ID	Tag Number	Tag Photo[1]	Damaged or missing tag? If Yes, explain	Tree/shrub changed since last inspection? If Yes, explain	Comments
16196	096	5313	No	No	
16197	097	5315	No	No	
16198	098	5316	No	No	
16199	099	5317	No	No	
16200	100	5321	No	No	
16201	001	5322	No	No	
16202	002	5323	No	No	
16203	003	NA	Yes	Yes	Oleander tree tag inaccessible (not found) due to new growth. Photo 5324.
16204	004	NA	Yes	No	Tree removed during previous reporting period; waste stored in Ra/Sr Treatment Systems Area adjacent to west perimeter fence.
16205	005	5325	No	No	
16206	006	NA	Yes	Yes	Tree removed; waste stored in southwest corner of SWT Area.
16207	007	NA	Yes	Yes	Tree removed during previous reporting period; waste stored in Ra/Sr Treatment Systems Area adjacent to west perimeter fence.
16208	008	5328	No	No	
16209	009	5332	No	No	
16210	010	5333	No	No	
16211	011	5331	Yes	No	White mulberry tree tag obscured by growth.
16212	012	5330	No	No	
16213	013	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16214	014	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16215	015	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16216	016	5339	No	No	
16217	017	5340	No	No	
16218	018	5341	No	No	
16219	019	5334	No	Yes	Lower limbs removed. Photo 5335.
16220	020	5336	No	Yes	Tree removed; waste stored in southwest corner of SWT Area. Tag remains attached to stump.
16221	021	5338	No	No	
16223	023	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16224	024	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16225	025	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16226	026	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.

LAND-USE CONTROL INSPECTION CHECKLIST (continued)

Inspector: Tim Utterback
Area Inspected: Trees and Shrubs **(continued)**

Inspection Dates: October 8, 2024
Reporting Period: December 10, 2023–December 9, 2024

Tree ID	Tag Number	Tag Photo[1]	Damaged or missing tag? If Yes, explain	Tree/shrub changed since last inspection? If Yes, explain	Comments
16227	027	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16228	028	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16229	029	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16230	030	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16231	031	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16232	032	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16233	033	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16234	034	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16235	035	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16236	036	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16237	037	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16238	038	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16239	039	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16240	040	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16241	041	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16242	042	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16243	043	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16244	044	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16245	045	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16246	046	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16247	047	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16248	048	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16249	049	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16250	050	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16251	051	NA	Yes	Yes	Tree removed by UC Davis in advance of planned CERCLA remedy.
16252	052	5329	No	Yes	Significant growth since previous reporting period.

Inspector: Tim Utterback
Area Inspected: Trees and Shrubs **(continued)**

Inspection Dates: October 8, 2024
Reporting Period: December 10, 2023–December 9, 2024

Tree ID	Tag Number	Tag Photo[1]	Damaged or missing tag? If Yes, explain	Tree/shrub changed since last inspection? If Yes, explain	Comments
16253	053	5320	No	No	
16254	054	5319	No	No	
16255	055	5318	No	No	
NA	056	5342	No	No	Upper trunk section remains collapsed but attached.

Note:
[1] Take zoom photograph of tag. Record photograph number.

Abbreviation:
NA= not applicable

Certification:

I certify that the inspection information presented above is true and accurate. By: [redacted]
Date: November 19, 2024

LAND-USE CONTROL INSPECTION CHECKLIST

Inspector: Tim Utterback
Area Inspected: Monitoring Wells

Inspection Date: October 7 and 8, 2024, and December 9, 2024
Reporting Period: December 10, 2023–December 9, 2024

Well ID and Completion Type	Photographs		Evidence of Tampering? (Yes/No) If Yes, explain	Locks/Bolts Secure?[3] (Yes/No) If No, explain	ID Plates OK?[4] (Yes/No) If No, explain	Vault and Seal Sound?[5] (Yes/No) If No, explain	Pump OK?[6] (Yes/No) If No, explain	Maintenance Needed? (Yes/No) If Yes, explain	Comments
	Wellhead/ Tag[1]	Vault/ Tag[2]							
UCD1-013 standpipe	5307 5308	5309 5310	No	Yes	Yes	Yes	Yes [7]	No	
UCD1-018 standpipe	5299 5300	5301 5302	No	Yes	Yes	Yes	Yes [7]	No	
UCD1-021 flush	8903 8904	8905 8906	No	Yes	Yes	Yes	No[7]	Yes	Dedicated pump produced approximately 200 milliliters of water per minute but discharge was slow and inconsistent.
UCD1-023 flush	8884 8886	8887 8889	No	Yes	Yes	Yes	Yes [7]	No	
UCD1-054 flush	8907 8908	5293 5294	No	Yes	Yes	Yes	Yes [7]	No	
UCD1-063 standpipe	5295 5296	5297 5298	No	Yes	Yes	Yes	Yes [7]	No	
UCD1-068 flush	8894 8895	8896 8897	No	Yes	Yes	Yes	Yes [7]	No	
UCD1-069 flush	8890 8891	8892 8893	No	Yes	Yes	Yes	Yes [7]	Yes	Pump controller port needs cap.
UCD1-070 standpipe	8844 8845	8846 8847	No	Yes	Yes	Yes	Yes [7]	No	
UCD1-071 flush	8848 8849	8850 8851	No	No	Yes	Yes	Yes [7]	Yes	Vault lid needs new bolt and washer. Concrete apron needs replacement.
UCD1-072 flush	8898 8899	8900 8901	No	No	Yes	Yes	Yes [7]	Yes	See note 8 regarding maintenance.
UCD1-073 standpipe	5303 5304	5305 5306	No	Yes	Yes	Yes	Yes [7]	No	

Notes:

[1] Take photograph inclusive of wellhead features including concrete pad. Take zoom photograph of wellhead identification plaque (tag). Record photograph numbers. Photo date stamp shows specific date and time of inspection.

[2] Open well vault and take photograph inclusive of vault inner features. Take zoom photograph of identification plaque (tag) stored in vault. Record photograph numbers.

[3] Verify that standpipe well locks are present, in good condition, and secured with the lock at the time of inspection. Verify that flush mount well bolts are present, in good condition, and properly secured at the time of inspection. Document any issues.

[4] Verify that well identification plates are fixed to the outside of the well and stored inside the well are legible and in good condition (two plates per well). Document any issues.

[5] Verify that concrete pads are structurally sound. Document any issues.

[6] Connect pump to controller and discharge approximately 300 milliliters of water to bucket. Document any issues.

[7] Pump flow test postponed to December 9, 2024, due to low water levels in wells.

[8] Vault bolt hole threads need cleaning or rethreading. Interior ID plate cable needs to be repositioned for proper seal of casing cap.

Certification:

I certify that the inspection information presented above is true and accurate. By: [redacted] Date: December 10, 2024

Appendix B

Photographs of Survey Monuments at Permanent Reference Points for Areas Subject to Land-Use Controls

Survey Monument 1: Northwest Corner of Dry Wells A–E Area (Photo No. 8738)

View Northwest: Survey Monument 1 Within Orange Ring (outside diameter, 14 inches); West Perimeter Fence and Center for Health and the Environment Entrance Sign in Background (Photo No. 8739)

Survey Monument 2: Northeast Corner of Dry Wells A–E Area (Photo No. 8740)

View West: Survey Monument 2 Within Orange Ring; South Edge of Asphalt Cut Located North (Center Right) of Monument; Hedge and West Perimeter Fence in Background (Photo No. 8742)

Survey Monument 3: Southwest Corner of Dry Wells A–E Area (Photo No. 8744)

View Southwest: Survey Monument 3 Within Orange Ring; West Perimeter Fence Behind Survey Monument; Old Davis Road in Background (Photo No. 8745)

Survey Monument 4: Southeast Corner of Dry Wells A–E Area (Photo No. 8746)

View East: Survey Monument 4 Within Orange Ring; Building H-219 in Background (Photo No. 8747)

Survey Monument 5: Northwest Corner of DSS 4 Area (Photo No. 8759)

View East: Survey Monument 5 Within Orange Ring; Building H-215 in Background (Photo No. 8760)

Survey Monument 6: Adjacent to Northwest Corner of Building H-218; Ra/Sr Treatment Systems Area (Photo No. 8761)

View East: Survey Monument 6 Within Orange Ring; Corner of Building H-218 in Background (Photo No. 8762)

Survey Monument 7: Southwest Corner of DSS 4 Area (Photo No. 8763)

View East: Survey Monument 7 Within Orange Ring; Building H-215 in Background (Photo No. 8764)

Survey Monument 8: Southwest Corner of Radium-226 Leach Trench; Ra/Sr Treatment Systems Area (Photo No. 8765)

View Southwest: Survey Monument 8 Within Orange Ring; West Perimeter Fence Behind Survey Monument; Shoulder of Old Davis Road in Background (Photo No. 8766)

Survey Monument 9: Southeast Corner of Radium-226 Leach Trench; Ra/Sr Treatment Systems Area (Photo No. 8767)

View Northeast: Survey Monument 9 Within Orange Ring; Building H-215 in Background (Photo No. 8768)

Survey Monument 10: Northeast Corner of Former Leach Field in DSS 3 Area (Photo No. 8791)

View Southeast: Survey Monument 10 Within Orange Ring; Delineator Behind Survey Monument; EDPs Area and North Levee in Background (Photo No. 8792)

Survey Monument 11: Northeast Corner of Eastern Remediation Support Area (Photo No. 8794)

View Northeast: Survey Monument 11 Within Orange Ring; Delineator Right of Survey Monument; Building H-216 in Background Left (Photo No. 8795)

Survey Monument 12: Northwest Corner of SWT Area (Photo No. 8783)

View Southwest: Survey Monument 12 Within Orange Ring in Center; Water Hydrant in Background (Photo No. 8784)

Survey Monument 13: Southwest Corner of DSS 3 Area (Photo No. 8785)

View South: Survey Monument 13 Within Orange Ring at Edge of Concrete Swale; Southwest Trenches Area in Background (Photo No. 8786)

Survey Monument 14: Southeast Corner of DSS 3 Area (Photo No. 8789)

View Southeast: Survey Monument 14 Within Orange Ring; Delineator Behind Survey Monument; Western Dog Pens and Southern Trenches Areas in Background (Photo No. 8790)

Survey Monument 15: Eastern Corner of SWT Area (Photo No. 8796)

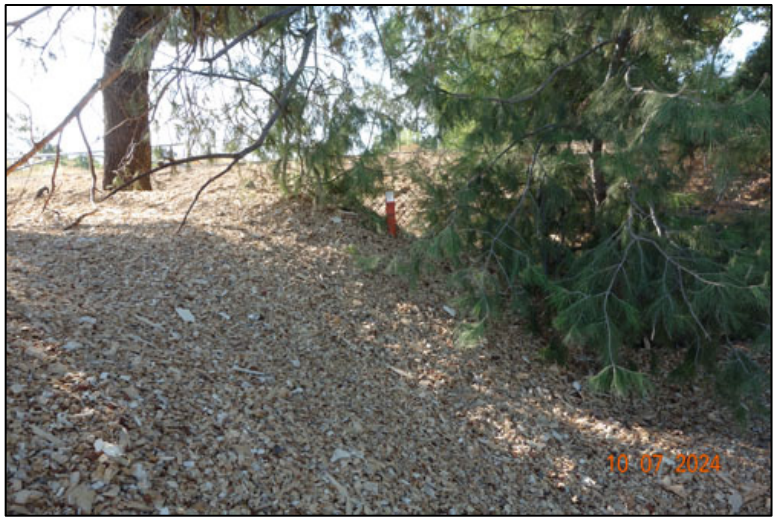
View South: Survey Monument 15 Within Orange Ring; Delineator Left of Survey Monument (Photo No. 8797)

Survey Monument 16: Southwest Corner of SWT Area (Photo No. 8801)

View West: Survey Monument 16 Within Orange Ring; Delineator Right of Survey Monument; Southwest Corner of Perimeter Fence Behind Survey Monument (Photo No. 8802)

Survey Monument 17: Southeast Corner of SWT Area (Photo No. 8803)

View Southwest: Survey Monument 17 Within Orange Ring; Delineator Right of Survey Monument; South Perimeter Fence Behind Survey Monument; North Levee in Background (Photo No. 8804)



View South: Top of Survey Monument 18 Delineator in Center; Monument Buried, North Levee in Background (Photo No. 8805)

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Survey Monument 19: Northwest Corner of EDPs Area (Photo No. 8829)

View North: Survey Monument 19 Within Orange Ring; Fallen Delineator Left of Survey Monument; Geriatrics Buildings in Upper Right (Photo No. 8831)

Survey Monument 20: Northeast Corner of EDPs Area (Photo No. 8839)

View Northwest: Survey Monument 20 Within Orange Ring; Delineator Right of Survey Monument; Geriatrics Building 1 in Upper Right (Photo No. 8840)

Survey Monument 21: Southwest Corner of EDPs Area
(Photo No. 8824)

View Southeast: Survey Monument 21 Within Orange Ring; Delineator Right of Survey Monument; North Levee in Upper Right
(Photo No. 8827)

Survey Monument 22: Southeast Corner of EDPs Area
(Photo No. 8842)

View Southwest: Survey Monument 22 Within Orange Ring; Delineator Left of Survey Monument, North Levee in Background
(Photo No. 8843)

Survey Monument 23: Western Perimeter Point of SWT Area (Photo No. 8798)

View Northwest: Survey Monument 23 Within Orange Ring; Delineator Right of Survey Monument; West Perimeter Fence Behind Survey Monument (Photo No. 8799)

Survey Monument 24: Northeast Corner of SWT Area at Southern Perimeter of DSS 3 Area (Photo No. 8787)

View South: Survey Monument 24 Within Orange Ring on Edge of Concrete Swale; Former Washdown Pad in Upper Left (Photo No. 8788)

Appendix C

Photographs of DOE Areas Subject to Land-Use Controls

View Southeast of SWT Area: North Levee of South Fork of Putah Creek in Background (Photo No. 8806)

View South of SWT Area: North Levee of South Fork of Putah Creek in Background (Photo No. 8807)

View Southeast of SWT Area: Former Washdown Pad at Left (Photo No. 8808)

View West of SWT Area: Shoulder of Old Davis Road in Background; UC Davis Tree Debris in Center Left of Photo (Photo No. 8809)

View Northwest of SWT Area: UC Davis Tree Debris in Center of Photo (Photo No. 8810)

View North of SWT Area: Buildings H-215 and H-216 in Background (Photo No. 8811)

View North from Center of SWT Area: Buildings H-215 and H-216 in Background (Photo No. 8812)

View West from Center of SWT Area: Fallen Tree 16220 and Stanchions and Rope Surrounding New Tree Debris Stockpile in Upper Left of Photo (Photo No. 8813)

View South from Center of SWT Area: Stanchions and Rope Surrounding New Tree Debris Stockpile in Upper Right of Photo (Photo No. 8814)

View East from Center of SWT Area: UC Davis Tree Debris in Center Right of Photo; Western Dog Pens Area in Background (Photo No. 8815)

View North of Northwest Corner of SWT Area (Photo No. 8816)

View East of SWT Area: Shallow Ruts from UC Davis Tree Work in Bottom Center of Photo; Western Dog Pens Area and UC Davis Southern Trenches Area in Background (Photo No. 8817)

View East over Former Leach Field Part of DSS 3 Area: Building H-216 in Upper Left; Former Washdown Pad in Upper Right; Western Dog Pens Area in Background (Photo No. 8771)

View East of Eastern Half of DSS 3 Area (Photo No. 8772)

View West of Former Leach Field Part of DSS 3: Buildings H-215 and H-216, Right; Old Davis Road in Background (Photo No. 8773)

View South of Septic Tank Part of DSS 3 Area: Building H-216, Left; Building H-215, Right (Photo No. 8774)

View North of Portions of DSS 3 and 4 Areas:
Building H-215, Left; Building H-216, Right; DSS 4 Area in Background
(Photo No. 8775)

View South of East End of DSS 3 Area Leach Field:
Building H-215, Right; Former Washdown Pad in Background
(Photo No. 8778)

View East of DSS 3 Area: Out-of-Service Filter Canisters
in Center; Building H-216 in Background, Standing North and
Left of Tree (Photo No. 8776)

View East of DSS 3 Area: Building H-216 in Background,
Standing South and Right of Tree (Photo No. 8777)

View North of DSS 4 Area Septic Tank Location and East End of Leach Field: Building H-215, Left; Building H-216, Right; Building H-217 in Background (Photo No. 8779)

View West of East End of DSS 4 Area Leach Field: Building H-215 in Background (Photo No. 8780)

View East of DSS 4 Area Septic Tank Location: Building H-216 in Background (Photo No. 8781)

View East of Western Portion of DSS 4 Area: Building H-215 in Background, Center (Photo No. 8782)

View North of Southern Portion of Ra/Sr Treatment Systems Area: Building H-215, Right; Buildings H-218 and H-219 in Background (Photo No. 8748)

View North of Middle Portion of Ra/Sr Treatment Systems Area: Building Cooling Unit and Building H-218 Roof Line, Top Right; Building H-219 in Background (Photo No. 8749)

View South of Southern Portion of Ra/Sr Treatment Systems Area: Building H-215, Left (Photo No. 8750)

View North of Northern Portion of Ra/Sr Treatment Systems Area: Building H-219, Right (Photo No. 8751)

View South of Middle-South Portion of Ra/Sr Treatment Systems Area: Building H-218, Left; West Perimeter Gate and Fence, Right (Photo No. 8752)

View East of Central Portion of Ra/Sr Treatment Systems Area: Building H-218, Right; Building H-219, Left (Photo No. 8753)

View West of DSS 2 Area Within Middle-West Portion of Ra/Sr Treatment Systems Area: Building H-219, Top Right (Photo No. 8755)

Roof-Level View West of Central Portion of Ra/Sr Treatment Systems Area: Building H-219, Right; Building H-218, Left (Photo No. 8756)

Roof-Level View Southwest of Central Portion of Ra/Sr Treatment Systems Area: Building H-218 in Background, Left (Photo No. 8757)

Roof-Level View Northwest of Central Portion of Ra/Sr Treatment Systems Area: Building H-219 in Background, Right (Photo No. 8758)

View South over Northern Portion of Ra/Sr Treatment Systems Area: Building H-219, Left; West Perimeter Fence and Old Davis Road, Right (Photo No. 8770)

View West over Vegetation Debris Stockpile in Ra/Sr Treatment Systems Area (Photo No. 5274)

View North of Dry Wells A–E Area: Old Davis Road, Left (Photo No. 8735)

View South of Dry Wells A–E Area: Building H-219 in Background, Left; Asphalt Cuts in Bottom Center of Photo Are North of Drywells A–E Area (Photo No. 8732)

View West of Dry Wells A–E Area and Main Gate: Old Davis Road in Background (Photo No. 8733)

View Southwest of Dry Wells A–E Area (Photo No. 8734)

October 7, 2024, View Northeast of EDPs Area from North Levee of South Fork of Putah Creek; Some Trees Remaining (Photo No. 8821)

October 8, 2024, View Northeast of EDPs Area from North Levee of South Fork of Putah Creek with Orange Delineator Showing Southwest Corner Monument Location in Center; All Trees Removed (Photo No. 5344)

View East of EDPs Area (Photo No. 8828)

View Southeast of EDPs Area from Northwest Corner; Fallen Orange Delineator Showing Northwest Corner Monument Location in Center Left (Photo No. 8834)

View South of EDPs Area (Photo No. 8835)

View Southwest of EDPs Area from Northeast Corner Showing Location of Northeast Corner Monument (Photo No. 8837)

View West of EDPs Area (Photo No. 8841)

October 7, 2024, View Northwest into EDPs Area from North Levee of South Fork of Putah Creek Showing Location of Southeast Corner Monument; Some Trees Remaining (Photo No. 8823)

October 7, 2024, View North over EDPs Area from North Levee of South Fork of Putah Creek; Some Trees Remaining (Photo No. 8822)

October 8, 2024, View North over EDPs Area from North Levee of South Fork of Putah Creek; All Trees Removed (Photo No. 5345)

October 8, 2024, View Northwest into EDPs Area from North Levee of South Fork of Putah Creek Showing Location of Southeast Corner Monument; All Trees Removed (Photo No. 5346)

October 8, 2024, View North of One Remaining Shrub in EDPs Area (Photo No. 5347)

Appendix D

Photographs of Groundwater Monitoring Wells

UCD1-013 Wellhead (Photo No. 5307)

UCD1-013 Wellhead ID Plate (Photo No. 5308)

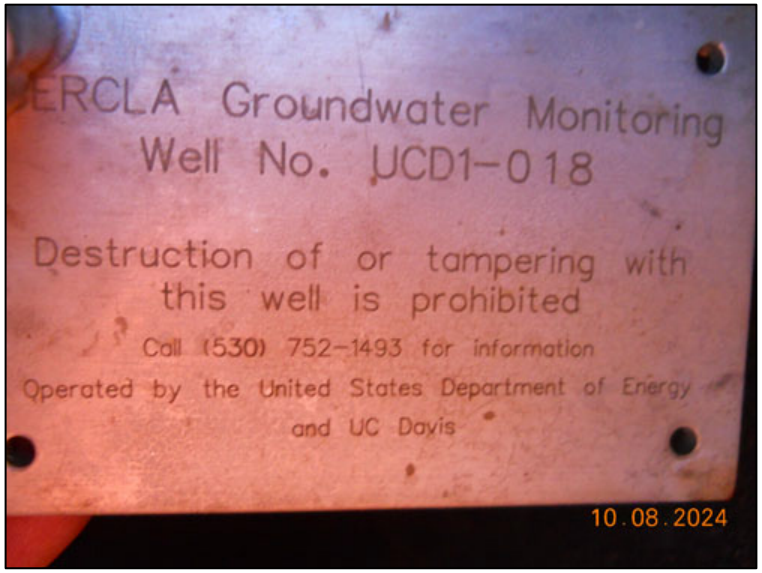
UCD1-013 Interior (Photo No. 5309)

UCD1-013 Interior ID Plate (Photo No. 5310)

UCD1-018 Wellhead (Photo No. 5299)

UCD1-018 Wellhead ID Plate (Photo No. 5300)

UCD1-018 Interior (Photo No. 5301)



UCD1-018 Interior ID Plate (Photo No. 5302)

UCD1-021 Wellhead (Photo No. 8903)

UCD1-021 Wellhead ID Plate (Photo No. 8904)

UCD1-021 Interior (Photo No. 8905)

UCD1-021 Interior ID Plate (Photo No. 8906)

UCD1-023 Wellhead (Photo No. 8884)

UCD1-023 Wellhead ID Plate (Photo No. 8886)

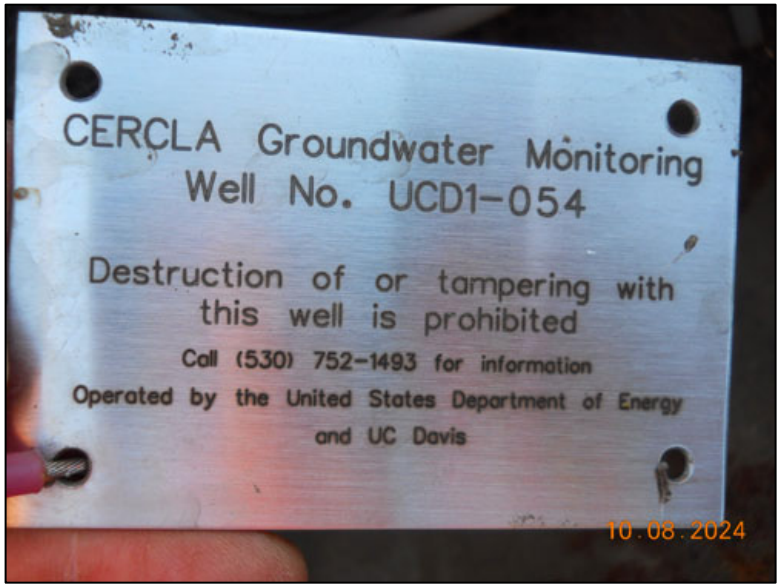
UCD1-023 Interior (Photo No. 8887)

UCD1-023 Interior ID Plate (Photo No. 5364)

UCD1-054 Wellhead (Photo No. 8907)

UCD1-054 Wellhead ID Plate (Photo No. 8908)

UCD1-054 Interior (Photo No. 5293)



UCD1-054 Interior ID Plate (Photo No. 5294)

UCD1-063 Wellhead (Photo No. 5295)

UCD1-063 Wellhead ID Plate (Photo No. 5296)

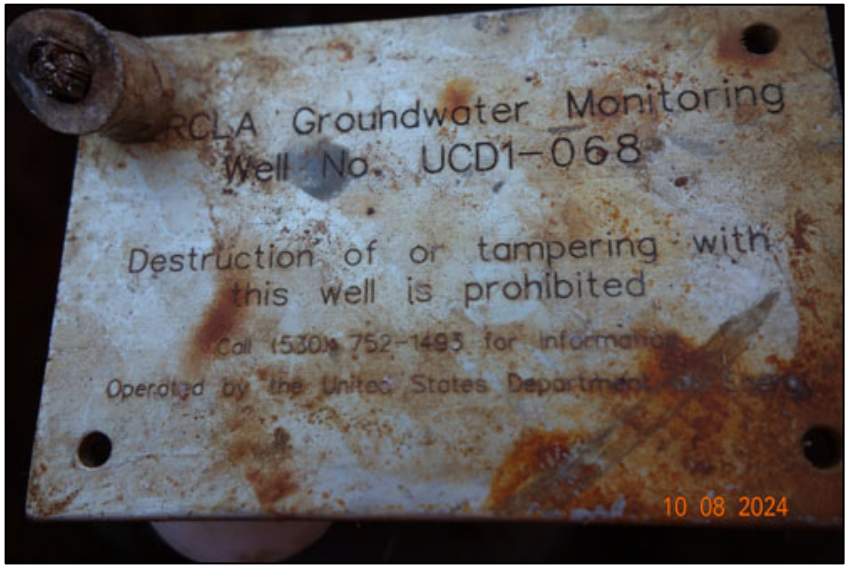
UCD1-063 Interior (Photo No. 5297)

UCD1-063 Interior ID Plate (Photo No. 5298)

UCD1-068 Wellhead (Photo No. 8894)

UCD1-068 Wellhead ID Plate (Photo No. 8895)

UCD1-068 Interior (Photo No. 8896)



UCD1-068 Interior ID Plate (Photo No. 8897)

UCD1-069 Wellhead (Photo No. 8890)

UCD1-069 Wellhead ID Plate (Photo No. 8891)

UCD1-069 Interior (Photo No. 8892)

UCD1-069 Interior ID Plate (Photo No. 8893)

UCD1-070 Wellhead (Photo No. 8844)

UCD1-070 Wellhead ID Plate (Photo No. 8845)

UCD1-070 Interior (Photo No. 8846)

UCD1-070 Interior ID Plate (Photo No. 8847)

UCD1-071 Wellhead with Cracks in Concrete Apron (Photo No. 8848)

UCD1-071 Wellhead ID Plate (Photo No. 8849)

UCD1-071 Interior (Photo No. 8850)

UCD1-071 Interior ID Plate (Photo No. 5361)

UCD1-072 Wellhead (Photo No. 8898)

UCD1-072 Wellhead ID Plate (Photo No. 8899)

UCD1-072 Interior (Photo No. 8900)

UCD1-072 Interior ID Plate (Photo No. 8901)

UCD1-073 Wellhead (Photo No. 5303)

UCD1-073 Wellhead ID Plate (Photo No. 5304)

UCD1-073 Interior (Photo No. 5305)

UCD1-073 Interior ID Plate (Photo No. 5306)

Appendix E

Vegetation Management Documentation

Appendix E1

Table Showing DOE Areas Trees and Shrubs
December 2024

Table E1-1. Catalog of Trees and Shrubs In or Near DOE Areas of Laboratory for Energy-Related Health Research/Old Campus Landfill Superfund Site

Tag No.	Tree ID	Assessment Date	Genus	Species	Common Name	DBH (cm)	Height (m)	No. of Stems	SMP Controlled[a] (Y/N)	Area	Condition (Notes)
NA	~~16192~~	~~11/4/2016~~[b]	~~*Juglans*~~	~~*bindsil*~~	~~California Black Walnut~~	~~67~~	~~5–10~~	~~1~~	N	~~Drywells~~	~~Poor (dead tree).~~ Removed in 2017
NA	~~16193~~	~~11/4/2016~~[b]	~~*Juglans*~~	~~*bindsil*~~	~~California Black Walnut~~	~~64~~	~~5–10~~	~~1~~	N	~~Drywells~~	~~Poor (tree canopy is 95% dead with severe mistletoe).~~ Removed in 2017
NA	~~16194~~	~~11/4/2016~~[b]	~~*Juglans*~~	~~*ninosii*~~	~~California Black Walnut~~	~~57~~	~~5–10~~	~~1~~	N	~~Ra/Sr~~	~~Poor (dead tree).~~ Removed in 2017
NA	~~16195~~	~~11/4/2016~~[b]	~~*Morus*~~	~~*alba*~~	~~White Mulberry~~	~~126~~	~~16–20~~	~~1~~	N	~~NA~~	~~Fair (vigorous growth; history of branch failure; moderate branch decay; excessive canopy weight).~~ Not adjacent to DOE Area
096	16196	11/4/2016	*Olea*	*europaea*	Olive	13	5–10	2	Y	Ra/Sr	Good (minor dead branches; structurally sound, but needs corrective pruning to improve branching structure)
097	16197	11/4/2016	*Olea*	*europaea*	Olive	13	5–10	2	Y	Ra/Sr	Good (structurally sound, but needs corrective pruning to improve branching structure)
098	16198	11/4/2016	*Celtis*	*sinensis*	Chinese Hackberry	22	11–15	1	Y	Ra/Sr	Good (vigorous growth; structurally sound; infested with Hackberry Woolly Aphid)
099	16199	11/4/2016	*Olea*	*europaea*	Olive	9	<5	4	Y	Ra/Sr	Good (structurally sound, but needs corrective pruning to improve branching structure)
100	16200	11/4/2016	*Celtis*	*sinensis*	Chinese Hackberry	30	11–15	1	Y	Ra/Sr	Good (vigorous growth; 5-degree lean toward street; infested with Hackberry Woolly Aphid)
001	16201	11/4/2016	*Celtis*	*sinensis*	Chinese Hackberry	24	11–15	2	Y	Ra/Sr	Fair (vigorous growth; multitrunked with included bark; minor dead branches; infested with Hackberry Woolly Aphid)
002	16202	11/4/2016	*Nerium*	*oleander*	Oleander	4	<5	11	Y	Ra/Sr	Good (vigorous growth)
003	16203	11/4/2016	*Nerium*	*oleander*	Oleander	2	<5	11	Y	Ra/Sr	Good (vigorous growth)
~~004~~	~~16204~~	~~11/4/2016~~	~~*Pinus*~~	~~*halepensis*~~	~~Aleppo Pine~~	~~70~~	~~16–20~~	~~1~~	Y	~~Ra/Sr~~	~~Fair (vigorous growth; 15-degree lean toward building; history of large branch failure)~~ Removed in 2023
005	16205	11/4/2016	*Pinus*	*halepensis*	Aleppo Pine	79	16–20	1	Y	Ra/Sr	Fair (vigorous growth; 15-degree lean toward street; excessive canopy weight)
~~006~~	~~16206~~	~~11/4/2016~~	~~*Pinus*~~	~~*halepensis*~~	~~Aleppo Pine~~	~~48~~	~~11–15~~	~~1~~	N	~~WRS~~	~~Fair (vigorous growth; 30-degree lean toward street; minor decay at root crown)~~ Removed in 2024
~~007~~	~~16207~~	~~11/4/2016~~	~~*Pinus*~~	~~*halepensis*~~	~~Aleppo Pine~~	~~66~~	~~16–20~~	~~1~~	N	~~WRS~~	~~Fair (vigorous growth; 10-degree lean southward; excessive canopy weight)~~ Removed in 2023
008	16208	11/4/2016	*Pinus*	*halepensis*	Aleppo Pine	68	16–20	1	N	WRS	Fair (vigorous growth; 10-degree lean toward street; excessive canopy weight; conflict with fence and light post)
009	16209	11/4/2016	*Nerium*	*oleander*	Oleander	2	<5	11	N	WRS	Good (vigorous growth)
010	16210	11/4/2016	*Pinus*	*halepensis*	Aleppo Pine	7	<5	1	Y	SWT	Good (vigorous growth)
011	16211	11/4/2016	*Morus*	*alba*	White Mulberry	107	16–20	1	Y	DSS 3	Fair (vigorous growth; risk of branch failure due to excessive canopy weight)
012	16212	11/4/2016	*Nerium*	*oleander*	Oleander	2	<5	11	Y	SWT	Good (vigorous growth)
~~013~~	~~16213~~	~~11/4/2016~~	~~*Prunus*~~	~~*dulcis*~~	~~Almond~~	~~30~~	~~5–10~~	~~1~~	Y	~~EDP~~	~~Fair (minor dead branches; poor branching structure)~~ Removed in 2024
~~014~~	~~16214~~	~~11/4/2016~~	~~*Sambucus*~~	~~*nigra*~~	~~Elderberry~~	~~20~~	~~<5~~	~~11~~	Y	~~EDP~~	~~Poor (tree 75% dead; severe trunk decay; major dead branches)~~ Removed in 2024
~~015~~	~~16215~~	~~11/4/2016~~	~~*Sambucus*~~	~~*nigra*~~	~~Elderberry~~	~~22~~	~~<5~~	~~11~~	Y	~~EDP~~	~~Poor (tree 60% dead; major branch failure)~~ Removed in 2024
016	16216	11/5/2016	*Pinus*	*halepensis*	Aleppo Pine	55	5–10	1	Y	SWT	Fair (vigorous growth; 45-degree lean east; excessive canopy weight)
017	16217	11/5/2016	*Pinus*	*halepensis*	Aleppo Pine	96	16–20	1	Y	SWT	Good (vigorous growth; excessive canopy weight)
018	16218	11/5/2016	*Pinus*	*halepensis*	Aleppo Pine	92	16–20	1	N	ERS	Good (vigorous growth)
019	16219	11/5/2016	*Pinus*	*halepensis*	Aleppo Pine	68	16–20	1	Y	SWT	Good (vigorous growth) Lower limbs removed in 2024
~~020~~	~~16220~~	~~11/5/2016~~	~~*Pinus*~~	~~*halepensis*~~	~~Aleppo Pine~~	~~61~~	~~16–20~~	~~1~~	Y	~~SWT~~	~~Fair (vigorous growth; 10-degree lean; history of branch failure; excessive canopy weight)~~ Removed in 2024
021	16221	11/5/2016	*Pinus*	*halepensis*	Aleppo Pine	89	16–20	1	Y	SWT	Fair (vigorous growth; codominant trunks with included bark; excessive branch weight)
NA	~~16222~~	~~11/5/2016~~ [c]	~~*Sambucus*~~	~~*nigra*~~	~~Elderberry~~	~~3~~	~~<5~~	~~11~~	Y	~~EDP~~	~~Poor (dead tree).~~ Tree dead and fallen as of November 2019
~~023~~	~~16223~~	~~11/5/2016~~	~~*Fraxinus*~~	~~*sp.*~~	~~Ash species~~	~~7~~	~~<5~~	~~3~~	Y	~~EDP~~	~~Good (vigorous growth)~~ Removed in 2024
~~024~~	~~16224~~	~~11/5/2016~~	~~*Pinus*~~	~~*halepensis*~~	~~Aleppo Pine~~	~~60~~	~~11–15~~	~~1~~	Y	~~EDP~~	~~Good (vigorous growth; codominant leaders; excessive branch weight)~~ Removed in 2024
~~025~~	~~16225~~	~~11/5/2016~~	~~*Pinus*~~	~~*halepensis*~~	~~Aleppo Pine~~	~~47~~	~~11–15~~	~~2~~	Y	~~EDP~~	~~Fair (vigorous growth; 5-degree lean; excessive branch weight; 2 trunks girdling each other; fluxing on trunk)~~ Removed in 2024
~~026~~	~~16226~~	~~11/5/2016~~	~~*Pinus*~~	~~*canariensis*~~	~~Canary Island Pine~~	~~28~~	~~11–15~~	~~1~~	Y	~~EDP~~	~~Good (vigorous growth; codominant leaders)~~ Removed in 2024
~~027~~	~~16227~~	~~11/5/2016~~	~~*Pinus*~~	~~*halepensis*~~	~~Aleppo Pine~~	~~21~~	~~5–10~~	~~1~~	Y	~~EDP~~	~~Fair (vigorous growth; poor branching structure; excessive branch weight)~~ Removed in 2024
~~028~~	~~16228~~	~~11/4/2016~~	~~*Prunus*~~	~~*dulcis*~~	~~Almond~~	~~25~~	~~<5~~	~~11~~	Y	~~EDP~~	~~Poor (tree has toppled due to severe trunk rot; mix of dead branches and new growth)~~ Removed in 2024
~~029~~	~~16229~~	~~11/5/2016~~	~~*Pinus*~~	~~*halepensis*~~	~~Aleppo Pine~~	~~28~~	~~<5~~	~~1~~	Y	~~EDP~~	~~Fair (vigorous growth; 30-degree; excessive branch weight; fluxing from trunk)~~ Removed in 2024
~~030~~	~~16230~~	~~11/5/2016~~	~~*Pinus*~~	~~*canariensis*~~	~~Canary Island Pine~~	~~20~~	~~5–10~~	~~1~~	Y	~~EDP~~	~~Good (vigorous growth)~~ Removed in 2024
~~031~~	~~16231~~	~~11/5/2016~~	~~*Celtis*~~	~~*sinensis*~~	~~Chinese Hackberry~~	~~44~~	~~5–10~~	~~2~~	Y	~~EDP~~	~~Fair (vigorous growth; codominant trunks with included bark; minor dead branches)~~ Removed in 2024
~~032~~	~~16232~~	~~11/4/2016~~	~~*Prunus*~~	~~*dulcis*~~	~~Almond~~	~~9~~	~~<5~~	~~2~~	Y	~~EDP~~	~~Fair (codominant trunks with included bark)~~ Removed in 2024
~~033~~	~~16233~~	~~11/5/2016~~	~~*Sambucus*~~	~~*nigra*~~	~~Elderberry~~	~~10~~	~~<5~~	~~11~~	Y	~~EDP~~	~~Poor (severe trunk decay; major dead branches)~~ Removed in 2024
~~034~~	~~16234~~	~~11/5/2016~~	~~*Pinus*~~	~~*halepensis*~~	~~Aleppo Pine~~	~~2~~	~~<5~~	~~1~~	Y	~~EDP~~	~~Good (vigorous growth; codominant leaders); uppermost section of trunk toppled and dead but not detached as of 2023~~ Removed in 2024

Table E1-1. Catalogue of Trees and Shrubs In or Near DOE Areas of Laboratory for Energy-Related Health Research/Old Campus Landfill Superfund Site (continued)

Tag No.	Tree ID	Assessment Date	Genus	Species	Common Name	DBH (cm)	Height (m)	No. of Stems	SMP Controlled[a] (Y/N)	Area	Condition (Notes)
~~035~~	~~16235~~	~~11/5/2016~~	~~*Pinus*~~	~~*halepensis*~~	~~Aleppo Pine~~	~~53~~	~~11–15~~	~~1~~	Y	~~EDP~~	~~Good (vigorous growth; 5-degree lean)~~ Removed in 2024
~~036~~	~~16236~~	~~11/5/2016~~	~~*Pinus*~~	~~*halepensis*~~	~~Aleppo Pine~~	~~52~~	~~11–15~~	~~1~~	Y	~~EDP~~	~~Fair (vigorous growth; codominant trunks)~~ Removed in 2024
~~037~~	~~16237~~	~~11/5/2016~~	~~*Sambucus*~~	~~*nigra*~~	~~Elderberry~~	~~4~~	~~<5~~	~~5~~	Y	~~EDP~~	~~Good (growing vigorously; minor dead branches)~~ Removed in 2024
~~038~~	~~16238~~	~~11/5/2016~~	~~*Sambucus*~~	~~*nigra*~~	~~Elderberry~~	~~10~~	~~<5~~	~~11~~	Y	~~EDP~~	~~Fair (vigorous growth; 15-degree lean; minor dead branches)~~ Removed in 2024
~~039~~	~~16239~~	~~11/5/2016~~	~~*Sambucus*~~	~~*nigra*~~	~~Elderberry~~	~~20~~	~~<5~~	~~11~~	Y	~~EDP~~	~~Fair (severe trunk decay; major dead branches; new growth at branch tips)~~ Removed in 2024
~~040~~	~~16240~~	~~11/5/2016~~	~~*Pinus*~~	~~*canariensis*~~	~~Canary Island Pine~~	~~51~~	~~16–20~~	~~1~~	N	~~ET~~	~~Good (vigorous growth; 5-degree lean)~~ Removed in 2024
~~041~~	~~16241~~	~~11/5/2016~~	~~*Pinus*~~	~~*canariensis*~~	~~Canary Island Pine~~	~~64~~	~~16–20~~	~~1~~	N	~~ET~~	~~Fair (vigorous growth; codominant trunks with included bark)~~ Removed in 2024
~~042~~	~~16242~~	~~11/5/2016~~	~~*Pinus*~~	~~*canariensis*~~	~~Canary Island Pine~~	~~14~~	~~5–10~~	~~1~~	N	~~ET~~	~~Good (vigorous growth)~~ Removed in 2024
~~043~~	~~16243~~	~~11/5/2016~~	~~*Pinus*~~	~~*canariensis*~~	~~Canary Island Pine~~	~~51~~	~~16–20~~	~~1~~	N	~~ET~~	~~Good (vigorous growth; excessive branch weight)~~ Removed in 2024
~~044~~	~~16244~~	~~11/5/2016~~	~~*Pinus*~~	~~*canariensis*~~	~~Canary Island Pine~~	~~57~~	~~16–20~~	~~1~~	N	~~ET~~	~~Good (vigorous growth; excessive branch weight)~~ Removed in 2024
~~045~~	~~16245~~	~~11/5/2016~~	~~*Prunus*~~	~~*dulcis*~~	~~Almond~~	~~10~~	~~<5~~	~~2~~	N	~~ET~~	~~Fair (codominant trunks; 10-degree lean; minor dead branches)~~ Removed in 2024
~~046~~	~~16246~~	~~11/5/2016~~	~~*Pinus*~~	~~*canariensis*~~	~~Canary Island Pine~~	~~19~~	~~5–10~~	~~1~~	N	~~ET~~	~~Good (vigorous growth; scaffold branch with included bark)~~ Removed in 2024
~~047~~	~~16247~~	~~11/5/2016~~	~~*Pinus*~~	~~*canariensis*~~	~~Canary Island Pine~~	~~35~~	~~11–15~~	~~1~~	N	~~ET~~	~~Good (vigorous growth)~~ Removed in 2024
~~048~~	~~16248~~	~~11/5/2016~~	~~*Pinus*~~	~~*canariensis*~~	~~Canary Island Pine~~	~~46~~	~~16–20~~	~~1~~	N	~~ET~~	~~Good (vigorous growth; codominant leaders)~~ Removed in 2024
~~049~~	~~16249~~	~~11/5/2016~~	~~*Pinus*~~	~~*canariensis*~~	~~Canary Island Pine~~	~~18~~	~~<5~~	~~1~~	N	~~ET~~	~~Fair (vigorous growth; leader has 90-degree bend)~~ Removed in 2024
~~050~~	~~16250~~	~~11/5/2016~~	~~*Pinus*~~	~~*canariensis*~~	~~Canary Island Pine~~	~~42~~	~~11–15~~	~~1~~	N	~~ET~~	~~Good (vigorous growth)~~ Removed in 2024
~~051~~	~~16251~~	~~11/5/2016~~	~~*Pinus*~~	~~*canariensis*~~	~~Canary Island Pine~~	~~53~~	~~16–20~~	~~1~~	N	~~ET~~	~~Good (vigorous growth; 5-degree lean)~~ Removed in 2024
052	16252	11/5/2016	*Nerium*	*oleander*	Oleander	2	<5	11	N	WRS	Good (vigorous growth)
053	16253	11/4/2016	*Celtis*	*sinensis*	Chinese Hackberry	12	5–10	1	Y	Ra/Sr	Fair (codominant trunks with included bark; minor dead branches; infested with Hackberry Woolly Aphid)
054	16254	11/4/2016	*Celtis*	*sinensis*	Chinese Hackberry	45	11–15	1	Y	Ra/Sr	Good (vigorous growth; minor dead branches; infested with Hackberry Woolly Aphid)
055	16255	11/4/2016	*Nerium*	*oleander*	Oleander	3	<5	11	Y	Ra/Sr	Good (vigorous growth)
056	NA[d]	5/6/2021	*Pinus*	*halepensis*	Aleppo pine	20	<5	1	Y	SWT	Good (vigorous growth). Uppermost one-third of the trunk toppled and dead but not detached as of 2024

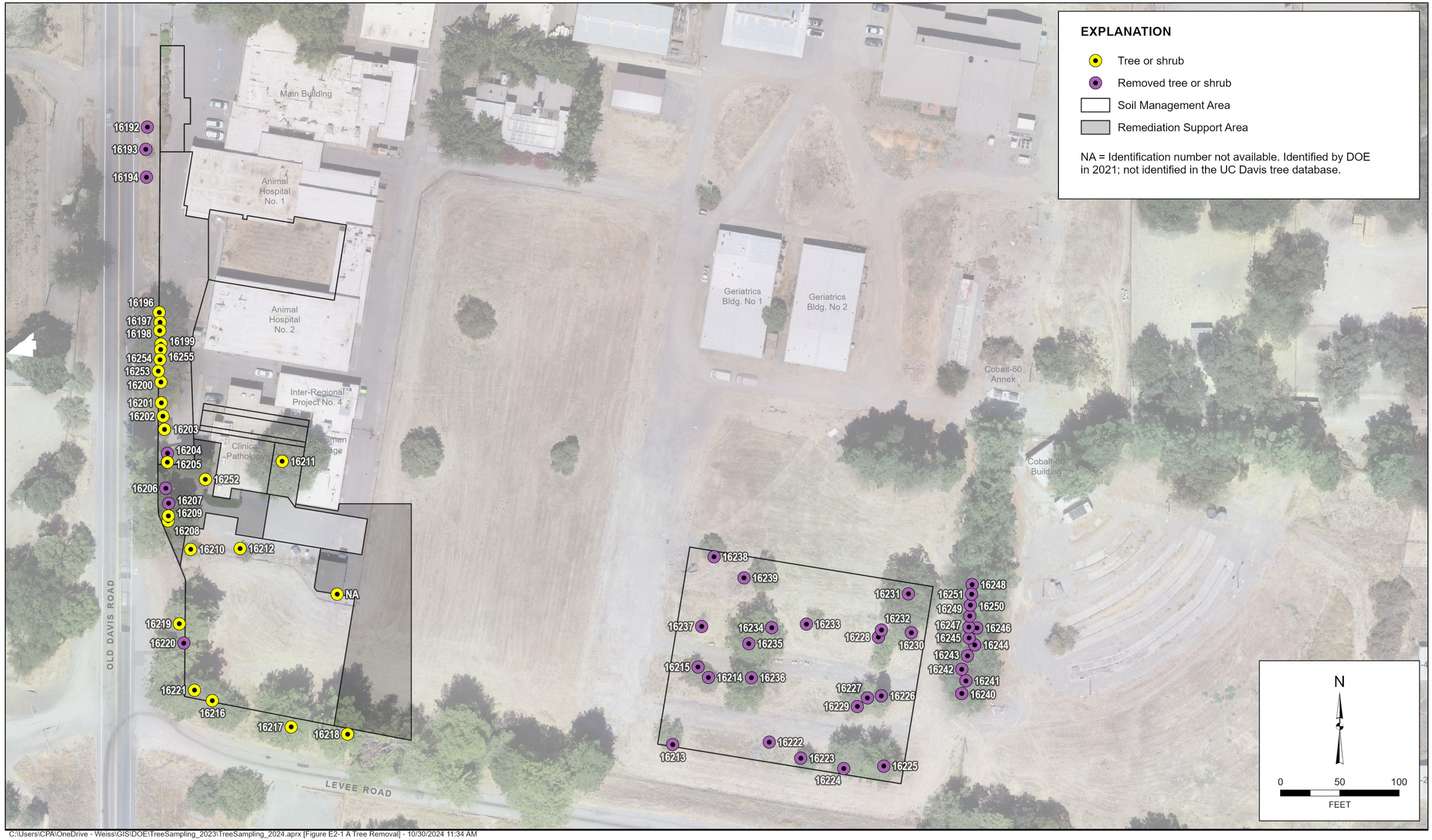
Sources:
DOE (U.S. Department of Energy), 2020. *2019 Annual Land-Use Covenant Inspection Report for DOE Areas at the Laboratory for Energy-Related Health Research/Old Campus Landfill Superfund Site, University of California, Davis*, LMS/LEH/S28507, Office of Legacy Management, January
DOE (U.S. Department of Energy), 2022. *Soil Management Plan for the Former Laboratory for Energy-Related Health Research Federal Facility, University of California, Davis*, LMS/LEH/S35365, Office of Legacy Management, August
UC Davis (University of California, Davis), 2016. *Survey of Trees and Shrubs with Canopies within DOE Areas at LEHR, Facilities Management, Buildings and Grounds, University of California, Davis*, November 7

Notes:
Strikethrough text represents changes from the UC Davis baseline survey of trees and shrubs (UC Davis 2016).
[a] Trees and shrubs having canopy in DOE Areas subject to soil management (Appendix E2). Trees and shrubs having canopy entirely within remediation support areas are not controlled.
[b] Trees documented as removed (DOE 2022).
[c] Tree documented as dead and fallen (DOE 2020).
[d] Not identified in UC Davis Campus Tree Database (see https://www.arcgis.com/apps/webappviewer/index.html?id=4bbcb1fb3b7f43fd830d3d2894612eca); tagged by DOE in 2021.

Abbreviations:
cm = centimeters
DBH = diameter of the trunk at breast height
DSS = Domestic Septic System Area
EDP = Eastern Dog Pens Area
ET = UC Davis Eastern Trenches Area
m = meters
N = no
NA = not applicable
Ra/Sr = Radium/Strontium Treatment Systems Area
SMP = Soil Management Plan (DOE 2022)
SWT = Southwest Trenches Area
Y = yes

Appendix E2

Map Showing DOE Areas Trees and Shrubs
December 2024



C:\Users\CPA\OneDrive - Weiss\GIS\DOE\TreeSampling_2023\TreeSampling_2024.aprx [Figure E2-1 A Tree Removal] - 10/30/2024 11:34 AM

Figure E2-1. Trees and Shrubs with Canopies Within DOE Areas
(Modified from Version Provided by UC Davis Facilities Management to Focus on DOE Areas and to Show the Current Trees and Shrubs)

Appendix F

Maintenance Issue Documentation

Land-Use Covenant (Covenant) maintenance items identified in 2023 and 2024 are documented in Table F-1, followed by photographs of repairs completed during the 2024 reporting period. The outstanding maintenance items are planned for completion by early 2025, before the annual water monitoring event, except for vegetation waste disposal, which is planned for completion prior to the end of the next reporting period. Covenant maintenance items identified before 2023 were completed before this reporting period.

Table F-1. Maintenance Log (2023–2024)

Maintenance Item	Date Identified	Description of Completed or Planned Repair	Date Completed	Completion Photo No.
Disposal of vegetation debris stockpiles in Ra/Sr Treatment Systems and SWT Areas	1/19/2023, 10/8/2024	Repair completed: Stockpile samples collected on 10/28/2024; Laboratory results pending Repair planned: Characterize and dispose of waste according to SMP procedures	TBD	NA
Wells UCD1-013 and UCD1-018: Dedicated pumps and identification plates removed	10/11/2023	Repair completed: Reinstalled dedicated pumps and identification plates upon completion of PFAS sample collection program	5/6/2024	0485, 0490
Wells UCD1-021 and UCD1-054: Identification plates becoming illegible	10/11/2023	Repair completed: Replaced identification plates	5/6/2024	0496, 0495, 0494, 0492
Well UCD1-072: identification plate within vault does not have attachment cable	10/11/2023	Repair completed: Installed stainless steel attachment cable to identification plate within vault	5/6/2024	0488
Wells UCD1-068 and UCD1-073: Pump controller port plug missing	10/11/2023	Repair completed: Installed new pump controller port plugs	4/4/2024	5288, 5270
Almond tree 16232: Missing tag	10/11/2023	Repair completed: UC Davis removed tree 16232 as planned	10/8/2024[a]	5345
Almond tree 16245: Tag becoming illegible	10/11/2023	Repair completed: UC Davis removed tree 16245 as planned	10/8/2024[a]	5345
Oleander shrub 16252: Missing tag	10/10/2023	Repair completed: Installed new tag	4/4/2024	5280
Roofing material and box deposited in SWT Area near former washdown pad	10/10/2023, 10/11/2023, 10/7/2024	Repair completed: UC Davis disposed of the roofing material and box	12/9/2024	005, 008
Vegetation debris stockpile in Ra/Sr Treatment Systems Area needs new tarp	10/10/2023	Repair completed: Installed and secured new tarp material over stockpile	4/4/2024	5274
Monument 19: Delineator broken at base and fallen	10/7/2024	Repair planned: Repair or replace delineator	TBD	NA
Oleander shrub 16203: Missing tag	10/8/2024	Repair planned: Install new tree tag	TBD	NA
White mulberry tree 16211: Tag becoming obscured by tree growth	10/8/2024	Repair planned: Install new tree tag	TBD	NA
Well UCD1-021: Poor performance of dedicated pump	12/9/2024	Repair planned: Install new dedicated pump if required	TBD	NA
Well UCD1-069: Pump controller port plug missing	10/8/2024	Repair planned: Install new pump controller port plug	TBD	NA

Table F1. Maintenance Log (2023–2024) (continued)

Maintenance Item	Date Identified	Description of Completed or Planned Repair	Date Completed	Completion Photo No.
Well UCD1-071: vault lid bolt has stripped threads	10/7/2024	Repair planned: Install new bolt	TBD	NA
Well UCD1-071: concrete apron surrounding wellhead is cracked	10/7/2024	Repair planned: Install new concrete apron	TBD	NA
Well UCD1-072: bolt hole below vault lid has thread corrosion	10/8/2024	Repair planned: Clean or rethread bolt hole	TBD	NA
Well UCD1-072: ID Plate cable attachment is blocking casing cap seal	10/8/2024	Repair planned: Move attachment location of ID plate cable	TBD	NA

Note:
[a] Trees 16232 and 16245 were observed as having been removed during the walkthrough inspection on October 8, 2024.

Abbreviations:
NA = not applicable
TBD = repair completion date to be determined

Photo F-1. Well UCD1-013: Dedicated Pump and Identification Plate Reinstalled (0485)

Photo F-2. Well UCD1-018: Dedicated Pump and Identification Plate Reinstalled (0490)

Photo F-3. Well UCD1-021: New Identification Plate Attached to Vault Lid (0496)

Photo F-4. Well UCD1-021: New Identification Plate Installed Within Well Vault (0495)

Photo F-5. Well UCD1-054: New Identification Plate Attached to Vault Lid (0494)

Photo F-6. Well UCD1-054: New Identification Plate Within Vault (0492)

Photo F-7. Well UCD1-072: New Stainless Steel Cable Attached to Identification Plate Within Well Vault (0488)

Photo F-8. Well UCD1-068: New Plug Installed on Pump Controller Port (5288)

Photo F-9. Well UCD1-073: New Plug Installed on Pump Controller Port (5270)

Photo F-10. View North over the Eastern Dog Pens Area and Former Location of Almond Trees 16232 and 16245: From North Levee of South Fork of Putah Creek (5345)

Photo F-11. Oleander Shrub 16252: New Tag Installed (5280)

Photo F-12. View Northeast from Northeast Corner of SWT Area: Locations of Removed and Disposed Former Washdown Pad Roofing Material in Center of Photo (005)

Photo F-13. View Northeast from Northeast Corner of SWT Area: Location of Removed and Disposed Box Previously Found in Southwest Trenches Area, Center (008)

Photo F-14. Vegetation Debris Stockpile in Ra/Sr Treatment Systems Area Covered with New Tarp and Surrounded by Access Controls (5274)