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RECORD OF TECHNICAL CHANGE

Technical Change No. 1

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Project/Job No. 776711 32010100

Date 2/25/99

Project/Job Name Industrial Sites / CAU 261

The following technical changes (including justification) are requested by:

Dustin Wilson
(Name)

Industrial Sites Task Manager
(Title)

The deletions, changes, and additions specified in this Record of Technical Change apply to Sections 1.0, 2.2, 3.2, 4.1, 4.2.3:4, and 7.0, and Figures 1-2, 4-1, and 4-2, of the Corrective Action Investigation Plan for Corrective Action Unit 261: Test Cell A Leachfield System, Nevada Test Site, Nevada, Rev. 0, DOE/NV--519. U.S. Department of Energy, Nevada Operations Office, September, 1998.

These deletions, changes, and additions are required because of additional site-specific historical information not discussed in the Data Quality Objective (DQO) process or addressed in the Corrective Action Investigation Plan (CAIP). The leachfield and collection system addressed by Corrective Action Unit (CAU) 261 is one of the two leachfield systems that received effluent from Building 3124 at Test Cell A in Area 25 of the Nevada Test Site. The following summary is an update of the building's operational history based on the additional information.

Building 3124 was constructed in 1962 to support the Test Cell A reactor test facility at the Nuclear Rocket Development Station (NRDS). The building was named the Equipment Testing Laboratory (ETL). During NRDS operations, the ETL contained equipment for water flow testing, gas flow testing, static pressure testing, equipment maintenance and cleaning, and limited analytical work. Building 3124 was used for various laboratories, including a high-level radioactive sample handling facility, sometime after Test Cell A was deactivated in 1966. This facility was primarily used to support Nevada Applied Ecology Group (NAEG) sampling to examine the biological effects of plutonium and other transuranics. Activities included sample preparation and possibly some analytical work. The building was refurbished in 1991 and renamed as the Treatability Test Facility (TTF). Preparation for TTF operations included grouting the floor drains in Building 3124. The TTF was used to study radioactively contaminated soil remediation techniques for about 2.5 years. After 1995, "Waste Management" used the TTF for bench scale lead separation soil treatability tests for a short time. Building 3124 is currently unoccupied.

This summary is based on information provided in Revision 1 of the CAU 266 CAIP. No information regarding the effluent generated by activities conducted in Building 3124 after the deactivation of Test Cell A has been located. Effluent produced by laboratory operations and treatability experiments may have reached both the sanitary (CAU 266) and radioactive (CAU 261) leachfields. The historical information and list of required analytes provided in the CAU 261 must be changed based on this possibility.

The following information represents deletions, changes, and additions to the Corrective Action Investigation Plan:

Section 1.0 paragraph 3 sentences 3 and 4

Change sentences to "Operations within Building 3124 resulted in the release of potentially contaminated effluent to the leachfield and AWLP (DOE, 1988a). The surface and subsurface soils in the vicinity of the collection system, AWLP, and leachfield have potentially been impacted by radioactive and other contaminants of potential concern (COPCs) associated with Test Cell A equipment decontamination, laboratory operations, or contaminated soil treatability experiments.



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Figures 1-2, 4-1, and 4-2

Change 100 on foot scale to read 75.

Section 2.2 paragraph 1 sentence 3

Delete sentence 3.

Section 2.2 paragraph 2

Change paragraph to "Activities conducted in Building 3124 following the deactivation of Test Cell A in 1966 are described in Section 2.2 of the CAU 266 CAIP (DOE/NV, 1999). The building was remodeled to house various laboratories including a high-level radioactive sample handling facility and later remodeled and renamed the Treatability Test Facility (TTF) to provide facilities for contaminated soil treatment experiments. It is unknown if effluent associated with these operations was introduced into the CAU 261 leachfield. The building is presently unoccupied. Brief descriptions of the two CASs addressed by CAU 261 are provided in Section 2.2.1 and Section 2.2.2, and the entire site is discussed in Section 2.2.3."

Section 3.2

Add sentence to end of paragraph 1 "Additional contaminants associated with operation of radiological laboratories may be present."

Add the following bullets to the first bullet list:

- Total petroleum hydrocarbons (TPH)
- Polychlorinated biphenyls (PCBs)

Add the following bullets to the second bullet list:

- TPH (oil/diesel-range organics)
- PCBs
- Isotopic Uranium (minimum 25 percent of samples)
- Isotopic Plutonium (minimum 25 percent of samples)
- Isotopic Americium (minimum 25 percent of samples)
- Strontium-90 (minimum 25 percent of samples)

Add sentences to end of paragraph 4: "Isotopic americium will be measured using analytical methods equivalent or superior to SOP 780/714 (Paragon, 1997). Minimum reporting limits for gamma-emitting radionuclides are 0.2 picocuries per gram (pCi/g) for soil and 20 picocuries per liter (pCi/L) for water (DOE/NV, 1996). Minimum reporting limits for isotopic americium are 0.05 pCi/g for soil and 0.10 pCi/L for water (Paragon, 1997). The relative percent differences and percent recoveries for isotopic americium are the same as those listed for isotopic plutonium in Table 3-1 of the Leachfield Work Plan."

Section 4.1

Replace bullet eight with the following two bullets:

- "Analyze soil samples for total VOCs, total SVOCs, total RCRA metals, TPH (oil/diesel-range organics), PCBs, and gamma-emitting radionuclides.
- Analyze soil samples for isotopic uranium, isotopic plutonium, isotopic americium, and strontium-90 if radiological field screening levels are exceeded. If this percentage of samples does not meet the 25 percent minimum, then additional samples will be selected for these analyses at Site Supervisor's discretion."

Section 4.2.3.4

Change sentence to "Soil adjacent to obvious breaches located during the collection system video survey will be sampled using direct push methods."

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Section 7.0

Add references:

"U.S. Department of Energy, Nevada Operations Office. 1999. *Corrective Action Investigation Plan for Corrective Action Unit 266: Area 25 Building 3124 Leachfield, Nevada Test Site, Nevada*, Rev. 1, DOE/NV--529. Las Vegas, NV."

"Paragon Analytics, Inc. 1997. *Laboratory Quality Assurance Plan*, Revision 3. Fort Collins, Colorado."

The project time will be (Increased)(Decreased)(Unchanged) by approximately -0- days

Applicable Project-Specific Document(s):

Corrective Action Investigation Plan for Corrective Action Unit 266: Area 25 Building 3124 Leachfield, Nevada Test Site, Nevada, Rev. 1, DOE/NV--529-REV 1. U.S. Department of Energy, Nevada Operations Office, January, 1999.

CC:

Approved By:

Janet Appenzeller-Wing
Janet Appenzeller-Wing, Project Manager
Industrial Sites Project

Date 2/26/99

Robert C. Wycoff
Robert C. Wycoff, Division Director
Environmental Restoration Division

Date 2/26/99

Client Notified Yes ☐ No ☐ Date

Contract Change Order Required Yes ☐ No ☐

Contract Change Order No.

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