6/4/04 CAFB ENTERED

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)

Current Human Exposures Under Control

Facility Name: **Cannon Air Force Base**
Facility Address: **100 S. DL Ingram Blvd Suite 108**
Cannon AFB, New Mexico 88103-5214
Facility EPA ID No.: **EPA ID No. NM7572124454**

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

   Yes If yes - check here and continue with #2 below.

   _____ If no - re-evaluate existing data, or

   _____ if data are not available skip to #6 and enter "IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be **"contaminated"**[1] above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

	Yes	No	?	Rationale / Key Contaminants
Groundwater	Yes			See attached CA725 Support Table
Air (indoors)[2]		No		See attached CA725 Support Table
Surface Soil (e.g., <2 ft	Yes			See attached CA725 Support Table
Surface Water		No		See attached CA725 Support Table
Sediment		No		See attached CA725 Support Table
Subsurf. Soil (e.g., >2 ft)	Yes			See attached CA725 Support Table
Air (outdoors)		No		See attached CA725 Support Table

_____ If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

Yes If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

_____ If unknown (for any media) - skip to #6 and enter "IN" status code.

Rationale and Reference(s): **See attached CA725 Support Table**

Footnotes:

[1] "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

[2] Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

3. Are there **complete pathways** between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

Potential **Human Receptors** (Under Current Conditions)

"Contaminated" Media	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food
Groundwater	No	No	No	No			No
Soil (surface, e.g., <2 ft)	No	No	No	No	No	No	No
Soil (subsurface e.g., >2 ft)				No			No

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated") as identified in #2 above.

2. enter "yes" or "no" for potential "completeness" under each "Contaminated" Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media - Human Receptor combinations (Pathways) do not have check spaces ("___"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

No If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

____ If yes (pathways are complete for any "Contaminated" Media - Human Receptor combination) - continue after providing supporting explanation.

_____ If unknown (for any "Contaminated" Media - Human Receptor combination) - skip to #6 and enter "IN" status code

Rationale and Reference(s): **See attached CA725 Support Table**

[3] Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **"significant"**[4] (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

NO If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) - skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

_____ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway) - continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining

complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

_____ If unknown (for any complete pathway) - skip to #6 and enter "IN" status code

Rationale and Reference(s): **See attached CA725 Support Table**

[4] If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

5. Can the "significant" **exposures** (identified in #4) be shown to be within **acceptable** limits?

_____ If yes (all "significant" exposures have been shown to be within acceptable limits) - continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

_____ If no (there are current exposures that can be reasonably expected to be "unacceptable")- continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

_____ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code

Rationale and Reference(s):_____
_____

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

YE YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the Cannon AFB facility, EPA ID No. EPA ID No. NM7572124454 located at Curry County, New Mexico, EPA ID No. NM7572124454, located at Curry County, New Mexico, under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

____ NO - "Current Human Exposures" are NOT "Under Control."

____ IN - More information is needed to make a determination.

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)

Completed by: _____ Date 6/04/2004

Glenn von Gonten
Hydrologist - O
New Mexico Environment Department
Hazardous Waste Bureau

Supervisor: _____ Date 6/4/04

Steve Pullen
Hydrologist - O
New Mexico Environment Department
Hazardous Waste Bureau

Locations where References may be found:

Cannon AFB Administrative Record located at the New Mexico Environment Department, Hazardous Waste Bureau, 2905 Rodeo Park Drive East, Santa Fe, New Mexico, 87502.

Contact telephone and e-mail numbers

Glenn von Gonten
505-428-2551
glenn_vongonten@nmenv.state.nm.us

FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.

CANNON AFB CA725 SUPPORT DOCUMENT
EPA ID No. NM7572124454

CA 725 Q2: Are groundwater, soil, surface water, sediments, or air media known or reasonably suspected to be "contaminated"[1] above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

SWMU 1: OWS 119: UST (375-gallon) used to recover oily wash generated by aircraft maintenance operations.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath the SWMU.
- The top 2 feet of the OWS were removed and soil samples were collected from the resultant excavation and sent for laboratory analysis. Arsenic was the only compound that potentially exceeded the corresponding MSSL. However, the maximum possible concentration of arsenic fell below the established background levels for metals at Cannon AFB.

Refs: 25, 34, 36, 42, 51, 65, 73, 81, 95, 117

SWMU 2: Recovered Tank 108: UST (2000-gallon) used to collect recovered diesel fuel from SWMU 3.

- SWMU 2 was never investigated; therefore, no data exists to demonstrate that there was a release from SWMU 2.

Refs: 114

SWMU 3: OWS 108: UST (500 gallon) used to recover diesel fuel from washdown operations.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath the SWMU.
- One organic compound was detected at concentrations of potential concern in the soil at SWMU 3. However, risk evaluation concluded that the maximum detected concentration of this chemical was within the acceptable excess carcinogenic risk range.

Refs: 25, 34, 36, 42, 52, 69, 71, 101, 113

SWMU 4: Recovered Tank 121: UST (2000 gallon) used to collect recovered diesel fuel from SWMU 5.

- SWMU 4 was never investigated; therefore, no data exists to demonstrate that there was a release from SWMU 4.

Refs: 114

SWMU 5: OWS 121: UST (500 gallon) used to recover diesel fuel from washdown operations.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath the SWMU.
- One organic compound and three metals were detected at concentrations of potential concern in the soil. However, the Risk Assessment portion of the Phase I RFI concluded that the detected concentrations of these chemicals were all within or below the acceptable excess carcinogenic and noncarcinogenic risk ranges. A Phase II RFI did not detect any chemicals at concentrations of potential concern at SWMU 5.

Refs: 25, 34, 36, 42, 52, 69, 71, 101, 113

SWMU 6: POL Tank 129: UST (2000 gallon) used to collect recovered diesel fuel from SWMU 7.

- SWMU 6 was never investigated; therefore, no data exists to demonstrate that there was a release from SWMU 6.

Refs: 114

SWMU 7: OWS 129: UST (500 gallon) used to recover diesel fuel from washdown operations.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 7.
- Three organic compounds and four metals were detected at concentrations of potential concern in the soil. However, the Risk Assessment portion of the RFI report concluded that the detected concentrations of these chemicals were all within or below the acceptable excess carcinogenic and noncarcinogenic risk ranges.
- The Corrective Measure Completion Report documented the removal of this OWS. In addition, soil samples were collected from the resultant excavation and sent for laboratory analysis. Arsenic was the only compound that potentially exceeded the corresponding MSSL. However, the maximum possible concentration of arsenic fell below the established background levels for metals at Cannon AFB.

Refs: 25, 34, 36, 42, 51, 65, 73, 81, 95, 117

SWMU 8: OWS 165: UST (600 gallon) used to recover Mirachem from aircraft cleaning operations.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 8.

- No organics or metals were detected in the surface soil samples collected from the three borings. One organic compound (xylenes) and three metals (barium, chromium, and nickel) were detected in at least one of the subsurface samples at low concentrations.
- The OWS, except the bottom, was removed, and the inlet and discharge pipes leading to and from the unit were disconnected and capped. Analytical results for soil samples were compared to the EPA Region VI Human Health MSSLs for residential soil to determine if a significant release had occurred in the area of SWMU 8. Arsenic was the only compound detected in a concentration that exceeded the corresponding MSSL. However, the maximum concentration of arsenic detected fell within the established background levels for metals at Cannon AFB.

Refs: 25, 34, 36, 42, 51, 65, 73, 81, 95, 117

SWMU 9: Aircraft Washrack Drain system: This unit is a concrete washrack used in aircraft cleaning operations.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 9.
- Four organic compounds (acetone, tetrachloroethene, toluene and xylenes) and three metals (barium, chromium, and nickel) were detected at concentrations of potential concern in the soil at SWMU 9. However, the detected concentrations of these chemicals were all within or below the acceptable excess carcinogenic and noncarcinogenic risk ranges and SWMU 9 was removed.

Refs: 25, 34, 36, 42, 51, 65, 73, 81, 95, 117

SWMU 10: POL Tank 170: UST (2000 gallon) used to collect recovered diesel fuel from SWMU 11.

- SWMU 10 was never investigated; therefore, no data exists to demonstrate that there was a release from SWMU 10.

Refs: 114

SWMU 11: OWS 170: UST (500 gallon) used to recover diesel fuel from washdown operations.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 11.
- One organic compound (methylene chloride) and two metals (mercury and nickel) of potential concern were detected in the soil at SWMU 11. However, the detected concentrations of these chemicals were all within or below the acceptable excess carcinogenic and noncarcinogenic risk ranges and SWMU 11 was removed.
- **Refs:** 25, 34, 36, 42, 51, 65, 73, 81, 95, 117

SWMU 16: OWS 680: UST (500 gallon) used to recover washdown from aircraft cleaning operations.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 16.
- Three metals were detected at concentrations of potential concern in the soil. However, the Risk Assessment portion of the Phase I RFI report concluded that the detected concentrations of these chemicals were all within or below the acceptable risk ranges and the SWMU was removed.

Refs: 25, 34, 36, 42, 52, 69, 71, 101, 113

SWMU 31: AGE Maintenance Shop Pad: This SWMU is a concrete apron (25 ft by 500 ft) which is exposed to washdown water and spilled oil and lubricants.

- Ground water was not investigated because the depth to ground water is greater than 250 feet.
- VOCs, PAHs, and metals were detected at concentrations that exceeded SSLs and/or background concentrations in the soil. SWMU 31 is a concrete apron located in an industrial part of CAFB and is scheduled for removal; therefore, there is no complete pathway for the known soil contamination to impact human health.

Refs: 17, 27, 35, 38, 40, 53, 59, 70, 102, 103

SWMU 32a: OWS 186 (#1): UST (600 gallon) used to recover washdown material.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 32a.
- One organic compound, xylenes, and three metals, barium, mercury and nickel, at concentrations of potential concern were detected in the soil at SWMU 32A. However, the chemicals were all within or below the acceptable excess carcinogenic and noncarcinogenic risk ranges and the SWMU was removed.

Refs: 25, 34, 36, 42, 51, 65, 73, 81, 95, 117

SWMU 33b: OWS 186 (#2): UST (600 gallon) used to recover washdown material.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 32b.
- Two organic compounds (acetone and toluene) and four metals (arsenic, barium, chromium, and nickel) at concentrations of potential concern were detected in the soil at SWMU 33B. However, the Risk Assessment portion of the RFI report concluded that the detected concentrations of these chemicals were all within or below the acceptable excess carcinogenic and noncarcinogenic risk ranges and the SWMU was removed.

Refs: 25, 34, 36, 42, 51, 65, 73, 81, 95, 117

SWMU 34: AGE Drainage Ditch: Unlined drainage ditch (12 ft by 1 ft by 1200 ft) which receives runoff from SWMU 31.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 33.
- Lead, zinc, PAH compounds, and TPH are of potential concern in surficial soils at this SWMU. Elevated concentrations of lead and petroleum hydrocarbons were detected in the top 0.5 feet of soil. However, no elevated concentrations of lead or petroleum hydrocarbons were detected below the 0.5-foot depth interval, indicating that the soil below this depth is largely unaffected by past disposal operations that were conducted in the area of this SWMU. The Soil Removal Investigation recommended tilling the soil and planting grass in the visually impacted portion of SWMU 34. This activity was subsequently completed in October 1988.
- The COCs identified in the soil for SWMU 34 included metals and toluene. The average exposures RME for all hazard indices for subchronic and chronic exposures to site COCs fell below the USEPA's level of concern (1.0) for noncarcinogenic effects. This indicated that no unacceptable risk of noncarcinogenic effects was expected at SWMU 34.

Refs: 10, 13, 14, 19, 21, 24, 54, 58, 63

SWMU 36: AOC 36 Auto Body Shop/Building 214 Parking Lot.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 36.
- Soil that appeared to be impacted was analyzed for VOCs, BTEX, TPH, and a full TCLP suite. Barium was chemical detected in the analyses above the laboratory detection limits in the soil, but at concentrations that do not pose a risk to human health.

Refs: 114

SWMU 38: OWS 194: UST (200 gallon) used to recover washdown material.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 38.
- Three organic compounds (acetone, 1,1,1-trichloroethane, and toluene) and two metals (nickel and chromium) at concentrations of potential concern were detected in the soil at SWMU 38. However, the Risk Assessment portion of the RFI report concluded that the detected concentrations of these chemicals were all within or below the acceptable excess carcinogenic and noncarcinogenic risk ranges and the SWMU was removed.

Refs: 25, 34, 36, 42, 51, 65, 73, 81, 95, 117

SWMU 39: OWS 195: UST (200 gallon) used to recover washdown material.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 39.
- Two organic compounds, acetone and toluene, and four metals, barium, chromium, lead, and nickel, at concentrations of potential concern in the soil at SWMU 39. However, the Risk Assessment portion of the RFI report concluded that the detected concentrations of these chemicals were all within or below the acceptable excess carcinogenic and noncarcinogenic risk ranges and the SWMU was removed.

Refs: 25, 34, 36, 42, 51, 65, 73, 81, 95, 117

SWMU 46: OWS 196: UST (200 gallon) used to recover washdown material.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 46.
- Two metals (barium and antimony) at concentrations exceeding the corresponding RBCs were detected in the soil at SWMU 46. However, the report concluded that these detected metals were naturally occurring and were not SWMU-related. SWMU 46 was partially removed.

Refs: 17, 27, 35, 38, 40, 51, 65, 73, 81, 95, 117

SWMU 47: OWS 494: UST (unknown capacity).

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 47.
- Organic compounds and metals were detected at concentrations that were less than the corresponding RBCs in the soil at SWMU 47 and SWMU 47 was removed.

Refs: 17, 27, 35, 38, 40, 51, 65, 73, 81, 95, 117

SWMU 48a: Underground Waste Oil Tank: UST (20,000 gallon) which was used from 1941 to 1985 to store waste oils, spent solvents, paint thinners, recovered fuels, engine oil, PD-680 (Type II), hydraulic fluid, and Turco cold stripper was removed in 1988 and covered with asphalt.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 48a.
- Elevated levels of organic compounds and metals were detected in the soil at SWMU 48A. The results of the human health and ecological risk evaluations conducted during the CMS at SWMU 48A indicated that there is no unacceptable risk to human health and the environment.

Refs: 25, 34, 36, 42, 52, 69, 71, 101, 113

SWMU 48b: Above Ground Overflow Capacity Tank: AST (2000 gallon) which provided overflow capacity for the adjacent UST (SWMU 48a). This SWMU was active from 1941 to 1985 and was removed in 1992. Site is covered with asphalt.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 48b.
- Elevated levels of six organic compounds and five metals were detected in the soil at SWMU 48b. However, according to CAFB, none of the concentrations of the chemicals detected at SWMU 48B pose an unacceptable human health risk.

Refs: 25, 34, 36, 42, 52, 69, 71, 101, 113

SWMU 49: Inactive POL Storage Tank 4028a: UST (20,000 gallon) which held used oil. Inactive since 1985.

- SWMU 49 does not exist and is apparently a duplicate of SWMU 48a.

Refs: 114

SWMU 50: Inactive POL Storage Tank 4028b UST: (20,000 gallon) which held used oil.

- SWMU 50 does not exist and is apparently a duplicate of SWMU 48a.

Refs: 114

SWMU 51: OWS 375: Tank of unknown capacity and history.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 51.
- Four organic compounds, TPH, and one metal at concentrations of potential concern were detected at concentrations exceeding the corresponding RBCs in the soil at SWMU 51 . A risk assessment found that no unacceptable human health or ecological risks due to chemical releases from this SWMU were expected and the SWMU was removed.

Refs: 17, 27, 35, 38, 40, 51, 65, 73, 81, 95, 117

SWMU 55: Lead Acid Battery Accumulation Point: Storage area for batteries. Site is covered with asphalt.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 55.
- Three metals (aluminum, barium and zinc) were detected at concentrations slightly exceeding the established background levels in the soil at SWMU 55. However, none of these metals exceeded the corresponding RBCs. Five organic compounds, all PAHs, were detected at concentrations exceeding the corresponding RBCs or other risk screening criteria. The results of the risk screening found that the maximum detected concentrations of organics that exceeded the corresponding RBCs were all within the EPA target risk range of 1 x 10-6 to 1 x 10-4.

Refs: 17, 27, 35, 38, 40, 53, 59, 70, 102, 103

SWMU 57: OWS 379: UST (5000 gallon) which is used to recover oil from washdown operations.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 57.
- No metals and no organic compounds at concentrations exceeding the corresponding RBCs were detected in the soil at SWMU 57 and the SWMU was removed.

Refs: 17, 27, 35, 38, 40, 51, 65, 73, 81, 95, 117

SWMU 61: OWS 5077a UST: (760 gallon) which is used to recover washdown material.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 61.
- No contaminants at concentrations that exceeded the corresponding RBCs and/or the corresponding background levels were detected in the soil at SWMU 61.

Refs: 17, 27, 35, 38, 40, 51, 65, 73, 81, 95, 117

SWMU 62: OWS 5077b UST: (760 gallon) which is used to recover washdown material.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 62.
- No contaminants at concentrations that exceeded the corresponding RBCs and/or the corresponding background levels were detected in the soil at SWMU 62.

Refs: 17, 27, 35, 38, 40, 51, 65, 73, 81, 95, 117

SWMU 63: OWS 5077c UST: (1,675 gallon) used to recover washdown materials.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 63.
- One metal and four organic compounds were detected in the soil at concentrations exceeding the screening criteria, including RBCs and background levels at SWMU 63. A risk assessment determined that there is no unacceptable human health or ecological risks due to chemical releases at SWMU 63.

Refs: 17, 27, 35, 38, 40, 51, 65, 73, 81, 95, 117

SWMU 70: OWS and Leach Field 326: UST (20,000 gallon) which is used to recover oily material prior to discharge to a leaching field.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 70.
- A bioventing system is in place for residual soil contamination source reduction.

Refs: 17, 27, 35, 37, 38, 40, 51, 65, 73, 81, 95, 117

SWMU 71: Recovered JP-4 Fuel Tank 390: UST (2000 gallon) which is used to collect recovered JP-4 from SWMU 72.

- SWMU 71 was removed in April 1991 and replaced with a 2,000-gallon steel OWS enclosed in a concrete vault. Soil samples were analyzed for BTEX and TPH, but were not detected. Therefore, there is no data that demonstrates that there was a release from SWMU 71.

Refs: 114

SWMU 72: OWS 390: UST (2000 gallon) which is used to recover waste JP-4.

- SWMU 72 does not exist and is apparently a duplicate of SWMU 71.

Refs: 114

SWMU 74: Landfill 1: Inactive 4 acre landfill which when in operation, received domestic solid wastes and shop wastes including oils and solvents, paint strippers and thinners, paint, pesticide containers, cans, and drums. Operations ceased at this Landfill in 1946.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 74.
- One metal and five organic compounds were detected in the soil at SWMU 74. The results of the human health risk evaluation conducted during the Phase I RFI at SWMU 74 indicated that this SWMU poses no unacceptable risk to human health. None of the chemicals detected above background levels exceeded the established RBCs.

Refs: 23, 63, 67, 74, 83, 97

SWMU 75: Sanitary Sewage Lift Station Overflow Pit: Unlined surface impoundment (100 ft by 600 ft by 3 ft) and when in use, served to contain sewage overflow.

- SWMU 75 was never investigated; therefore, no data exists to demonstrate that there was a release from SWMU 75.

Refs: 114

SWMU 76: Sludge Weathering Pit: Unlined, shallow surface impoundment (25 ft by 25 ft) used to weather fuel tank sludges. Inactive since 1980.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 76.

- The COCs in the soil for SWMU 76 included lead, ethylbenzene, and xylenes. However, since a USEPA-verified toxicity value for lead had not been established, the quantitative evaluation of human health impacts at this site were limited to ethylbenzene and xylenes. None of these COCs are classified as carcinogenic chemicals. All hazard indices and hazard quotients for subchronic and chronic exposures to site COCs fell well below the USEPA's level of concern (1.0) for noncarcinogenic effects.
- Based on site conditions at SWMU 76, all exposure pathways were determined to be either incomplete, insignificant, or not applicable, with the exception of the air pathway. Within the air pathway, the fate and transport of the metals detected in the soils of this area showed no evidence of health risks. Based on air quality modeling of soil gas releases, VOCs detected at SWMU 76 do not present a health risk.

Refs: 10, 13, 14, 19, 21, 24, 54, 58, 63

SWMU 77: Civil Engineering Container Storage Area: Container storage area (100 ft by 200 ft) which was used to store 55-gallon drums; waste materials stored in drums are unknown. Presently Implementing Corrective Measures.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 77.
- Elevated levels of metals and organic compounds were detected in the soil at SWMU 77. However, the concentrations of metals or organics did not exceed the USEPA target risk range.

Refs: 17, 27, 35, 38, 40, 53, 59, 70, 102, 103

SWMU 78: Fire Department Training Area 1: Unlined open burning area (100 ft in diameter) used during fire fighting training exercises; inactive since 1968.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 78.
- TPH, phthalates, pesticides, lead, and zinc were detected in the soil at SWMU 78 at concentrations that exceeded background or SSLs. The average exposures and reasonable maximum exposures (RME) for all hazard indices for subchronic and chronic exposures to site COCs were less than EPA's hazard quotient of 1.0 for noncarcinogenic effects. This indicated that no unacceptable risk of noncarcinogenic effects was expected at SWMU 78. The total carcinogenic risk for average exposures and RME of workers at SWMU 78 were less than EPA's target risk range.

Refs: 10, 13, 14, 19, 21, 24, 54, 58, 63

SWMU 79: UST (2000 gallon) used to collect and store recovered JP-4.

- SWMU 79 cannot be located or does not exist.

Refs: 114

SWMU 81: Solvent Disposal Site: Inactive surface impoundment believed to have been used to dispose of TCE.

- SWMU 81 cannot be located or does not exist.

Refs: 10, 13, 14, 19, 21, 24, 54, 58, 63

SWMU 82: Landfill 2: Unlined, inactive Landfill (4 acres) which received domestic and industrial solid waste, including waste oils and solvents, paints, paint strippers, paint thinners, pesticide containers, cans, and drums.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 82.
- Seven metals and 13 organic compounds, including one VOC and one PCB, were detected in the soil at SWMU 82 at concentrations that exceeded background. Maximum concentrations of the detected chemicals were compared to applicable RCRA Action Levels. RCRA Action Levels are highly conservative screening values used to assess whether a formal, site-specific risk assessment is warranted; therefore, the results overestimate the actual hazard/risk and the site. Based on the results of the screening, only one of the COCs, benzo(a)pyrene, slightly exceeded the corresponding RCRA Action Level for soil. However, based on this compound's small exceedence of the action level, the limited areal extent of its detection, and the low likelihood of chronic exposure, benzo(a)pyrene was not considered to be a significant concern at SWMU 82.

Refs: 20, 23, 63

SWMU 83: Concrete sump (7 feet by 8 inches by 5 inches).

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 83.
- A total of 14 organic compounds, nine of which were PAHs, and one metal were detected in the soil at SWMU 83. However, none of the concentrations of the chemicals detected at SWMU 83 posed an unacceptable human health risk.

Refs: 25, 34, 36, 42, 52, 69, 71, 101, 113

SWMU 85: Stormwater Collection Point: Playa used as surface impoundment (9 acres) used to receive stormwater runoff and fuel spills.

- Ground water was not investigated because the depth to groundwater is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 85.
- Metals, including barium, chromium, lead, mercury, selenium, and zinc were detected in three near-surface soil samples collected from SWMU 85. Barium, mercury, and selenium were detected in the soil at slightly elevated concentrations exceeding the area

background levels. However, these elevated concentrations were all within the ranges typical of soils.

Refs: 9, 63, 114

SWMU 86: Engine Test Cell: Enclosed tank (50 ft by 10 ft by 20 ft tall) used to collect washdown material. Part of SD-11, which includes SWMUs 86-90.

- Ground water was not investigated because the depth to groundwater is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 85.
- VOCs and metals were detected in the soil at SWMUs 85-90 (SD-11). The average exposures and RME for all hazard indices for subchronic and chronic exposures were less than EPA's hazard quotient of 1.0 for noncarcinogenic effects. This indicated that no unacceptable risk of noncarcinogenic effects was expected at SD□11. The total carcinogenic risk for average and RME exposures was less than EPA's target risk range. This indicated that no unacceptable risk of carcinogenic effects was expected at SD-11. The maximum concentration of lead detected was less than the applicable EPA interim guidance for soil lead cleanup levels at Superfund sites (USEPA 1991a). In addition, the estimated ambient air concentrations of lead at SD-11 fell below the EPA background concentration of 0.200 µg/mg3 . Therefore, no unacceptable risk was expected due to the presence of lead at SD-11. The OWS system and the petroleum-contaminated soil surrounding this system were removed in 1994.

Refs: 10, 13, 14, 19, 21, 24, 54, 58, 63, 66, 74, 77, 100, 109, 112, 116

SWMU 87: Former Overflow Pit: Unlined surface impoundment (6-8 ft in diameter) which collected wash water. Part of SD-11, which includes SWMUs 86-90.

- Ground water was not investigated because the depth to groundwater is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 85.
- VOCs and metals were detected in the soil at SWMUs 85-90 (SD-11). The average exposures and RME for all hazard indices for subchronic and chronic exposures were less than EPA's hazard quotient of 1.0 for noncarcinogenic effects. This indicated that no unacceptable risk of noncarcinogenic effects was expected at SD□11. The total carcinogenic risk for average and RME exposures was less than EPA's target risk range. This indicated that no unacceptable risk of carcinogenic effects was expected at SD-11. The maximum concentration of lead detected was less than the applicable EPA interim guidance for soil lead cleanup levels at Superfund sites (USEPA 1991a). In addition, the estimated ambient air concentrations of lead at SD-11 fell below the EPA background concentration of 0.200 µg/mg3 . Therefore, no unacceptable risk was expected due to the presence of lead at SD-11. The OWS system and the petroleum-contaminated soil surrounding this system were removed in 1994.

Refs: 10, 13, 14, 19, 21, 24, 54, 58, 63, 66, 74, 77, 100, 109, 112, 116

SWMU 88: Former Leaching Field: Leaching field (10,000 SF) that received washdown wastewaters from SWMU 86. Part of SD-11, which includes SWMUs 86-90.

- Ground water was not investigated because the depth to groundwater is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 85.
- VOCs and metals were detected in the soil at SWMUs 85-90 (SD-11). The average exposures and RME for all hazard indices for subchronic and chronic exposures were less than EPA's hazard quotient of 1.0 for noncarcinogenic effects. This indicated that no unacceptable risk of noncarcinogenic effects was expected at SD□11. The total carcinogenic risk for average and RME exposures was less than EPA's target risk range. This indicated that no unacceptable risk of carcinogenic effects was expected at SD-11. The maximum concentration of lead detected was less than the applicable EPA interim guidance for soil lead cleanup levels at Superfund sites (USEPA 1991a). In addition, the estimated ambient air concentrations of lead at SD-11 fell below the EPA background concentration of 0.200 µg/mg3 . Therefore, no unacceptable risk was expected due to the presence of lead at SD-11. The OWS system and the petroleum-contaminated soil surrounding this system were removed in 1994.

Refs: 10, 13, 14, 19, 21, 24, 54, 58, 63, 66, 74, 77, 100, 109, 112, 116

SWMU 89: Evaporation Pond: Concrete impoundment (60 ft by 60 ft) used to evaporate washwater. Part of SD-11, which includes SWMUs 86-90.

- Ground water was not investigated because the depth to groundwater is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 85.
- VOCs and metals were detected in the soil at SWMUs 85-90 (SD-11). The average exposures and RME for all hazard indices for subchronic and chronic exposures were less than EPA's hazard quotient of 1.0 for noncarcinogenic effects. This indicated that no unacceptable risk of noncarcinogenic effects was expected at SD□11. The total carcinogenic risk for average and RME exposures was less than EPA's target risk range. This indicated that no unacceptable risk of carcinogenic effects was expected at SD-11. The maximum concentration of lead detected was less than the applicable EPA interim guidance for soil lead cleanup levels at Superfund sites (USEPA 1991a). In addition, the estimated ambient air concentrations of lead at SD-11 fell below the EPA background concentration of 0.200 µg/mg3 . Therefore, no unacceptable risk was expected due to the presence of lead at SD-11. The OWS system and the petroleum-contaminated soil surrounding this system were removed in 1994.

Refs: 10, 13, 14, 19, 21, 24, 54, 58, 63, 66, 74, 77, 100, 109, 112, 116

SWMU 90: OWS 5114: UST (100 gallon) used to recover JP-4 fuel. Part of SD-11, which includes SWMUs 86-90.

- Ground water was not investigated because the depth to groundwater is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 85.
- VOCs and metals were detected in the soil at SWMUs 85-90 (SD-11). The average exposures and RME for all hazard indices for subchronic and chronic exposures were less than EPA's hazard quotient of 1.0 for noncarcinogenic effects. This indicated that no

unacceptable risk of noncarcinogenic effects was expected at SD□11. The total carcinogenic risk for average and RME exposures was less than EPA's target risk range. This indicated that no unacceptable risk of carcinogenic effects was expected at SD-11. The maximum concentration of lead detected was less than the applicable EPA interim guidance for soil lead cleanup levels at Superfund sites (USEPA 1991a). In addition, the estimated ambient air concentrations of lead at SD-11 fell below the EPA background concentration of 0.200 µg/mg3 . Therefore, no unacceptable risk was expected due to the presence of lead at SD-11. The OWS system and the petroleum-contaminated soil surrounding this system were removed in 1994.
Refs: 10, 13, 14, 19, 21, 24, 54, 58, 63, 66, 74, 77, 100, 109, 112, 116

SWMU 91: Recovered Fuel Tank 5114: AST (5000 gallon) used to collect recovered JP-4 from SWMU 90.

- SWMU 91 was never investigated; therefore, no data exists to demonstrate that there was a release from SWMU 91.

Refs: 114

SWMU 92: OWS 5120: UST (100 gallon) used to recover washdown material.

- Ground water was not investigated because the depth to groundwater is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 92.
- Organic compounds, including PAHs, and one metal were detected in the soil at SWMU 92. A risk assessment determined that no unacceptable human health or ecological risks due to chemical releases were expected at SWMU 92 and the SWMU was removed.

Refs: 17, 27, 35, 38, 40, 51, 65, 73, 81, 95, 117

SWMU 93: OWS 5121: UST (100 gallon) used to recover washdown materials.

- Ground water was not investigated because the depth to groundwater is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 93.
- Organic compounds and metals were detected in the soil at SWMU 93. None of the concentrations of metals or organics exceeded the USEPA Region III RBCs for residential soil.

Refs: 17, 27, 35, 38, 40, 53, 59, 70, 102, 103

SWMU 94: OWS 5144: UST (100 gallon) used to recover washdown materials.

- Ground water was not investigated because the depth to groundwater is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 94.
- Five organic compounds and three metals were detected in the soil at SWMU 94 at concentrations that exceeded the corresponding RBCs. A risk assessment determined that no

unacceptable human health or ecological risks due to chemical releases from this SWMU were expected and the SWMU was removed.
Refs: 17, 27, 35, 38, 40, 51, 65, 73, 81, 95, 117

SWMU 95: NE Stormwater Drainage Area. Open field which receives water from SWMUs 38, 39, & 46 and runoff water from the runways and storm water drains.

- Ground water was not investigated because the depth to groundwater is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 95.
- VOCs (heptanes to heptadecanes) and two metals (lead and zinc) were detected in the soil at SWMU 95. The average exposures and RME for all hazard indices for subchronic and chronic exposures to site COCs was less than EPA's hazard quotient of 1.0 for noncarcinogenic effects. This indicated that no unacceptable risk of noncarcinogenic effects was expected at SWMU 95. The total carcinogenic risk for average exposures and RME at SWMU 95 was less than EPA's target risk range.

Refs: 10, 13, 14, 19, 21, 24, 54, 58, 63

SWMU 96: Old Entomology Rinse Area. Open pit (3 ft by 3 ft by 2 ft deep) which received decon rinse waters from pesticide sprayers and containers.

- Analysis of ground water for pesticides and PCBs indicated no impact. Barium, chromium, copper, lead, vanadium, and zinc were detected at concentrations less than the corresponding MCLs.
- Pesticides were detected in the soil at SWMU 96. The average exposures and RME for all hazard indices for subchronic and chronic exposures to site COCs fell below the EPA's hazard quotient of 1.0 for noncarcinogenic effects. This indicated that no unacceptable risk of noncarcinogenic effects was expected at SWMU 96. The total carcinogenic risk for average and RME exposures at SWMU 96 was less than EPA's target risk range.

Refs: 10, 13, 14, 19, 21, 24, 54, 58, 63

SWMU 97: Landfill 25: Concrete rubble pile.

- Chromium and nickel exceed the MCLs at SWMU 97 in 1997 only. The source of the problem was a stainless steel screen in the well which is being attacked by ground water leading to the release of dissolved metals in this well. The problematic well was plugged and abandoned in 2001 and replaced with a new well. A long term ground water monitoring program indicates that there has been no release to ground water from SWMU 97.
- SWMU 97 was sampled for asbestos, PCBs, extractable organics, VOCs, herbicides, pesticides, and metals. None of the above parameters were detected in the soil.

Refs: 26, 33, 48, 53, 59, 70, 102, 103, 122, 127

SWMU 98: Sanitary Sewage Line: Sewer used to collect sanitary and industrial wastewater.

- Ground water was not investigated because the depth to groundwater is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 98.
- Acetone was the only TAL VOC detected at concentrations exceeding the CRQL in the soil. In all borings except one, the presence of acetone was dismissed as laboratory contamination. TPH was detected in one boring at a concentration above 100 mg/kg. Lead and cadmium were detected above background levels in two samples. The COCs identified for SWMU 98 included barium, acetone, and toluene. Acetone does not have an inhalation toxicity value, so it was not evaluated for noncarcinogenic effects from inhalation exposure. The average exposures and RME for all hazard indices for subchronic and chronic exposures to site COCs were less than EPA's hazard quotient of 1.0 for noncarcinogenic effects. This indicated that no unacceptable risk of noncarcinogenic effects was expected at SWMU 98. Carcinogenic risks were absent (or zero) due to the absence of carcinogenic chemicals identified as COCs at SWMU 98.

Refs: 10, 13, 14, 19, 21, 24, 54, 58, 63

SWMU 101: Wastewater Treatment System - Lagoons: Two unlined wastewater treatment unit (WWTU) surface impoundments (32 acres). Presently Implementing Corrective Measures.

- A long term ground water monitoring program indicates that there has been no release to ground water from SWMU 101. The concentration of nitrate has historically exceeded the Maximum Contaminant Levels (MCLs) until SWMU 101 was closed in 1998. Nitrate concentrations dropped below the MCLs in 1999.
- Arsenic, dieldrin, PCB-1260, and endrin aldehyde were detected in the soil at SWMU 101. All noncancer risks from contaminants in the soil were less than the target hazard index of 1.0. The total excess lifetime cancer risk was below the NMED target risk. SWMU 101 is undergoing closure and all contaminated soils will be removed.

Refs: 10, 13, 14, 19, 21, 24, 54, 58, 63, 119, 126, 129

SWMU 102: Wastewater Treatment Effluent Discharge Pipe: Discharge pipe from wastewater treatment unit. SWMU 102 is contiguous with SWMU 101 and has been investigated and remediated with SMWU 101.

- A long term ground water monitoring program indicates that there has been no release to ground water from SWMU 102.
- Arsenic, dieldrin, PCB-1260, and endrin aldehyde were detected in the soil at SWMU 101. All noncancer risks from contaminants in the soil were less than the target hazard index of 1.0. The total excess lifetime cancer risk was below the NMED target risk. SWMU 101 is undergoing closure and all contaminated soils will be removed.

Refs: 10, 13, 14, 19, 21, 24, 54, 58, 63

SWMU 103: Wastewater Playa Lake: Natural land depression (13 acres) which receives stormwater discharge and waste solvents from SWMU 9.

- The ground water beneath SWMU 103 was never investigated; therefore, no data exists to demonstrate that there was a release from SWMU 103.
- VOCs, SVOCs, and pesticides were detected in the playa sediments. VOCs, SVOCs, pesticides, Arochlor 1248, and metals were detected in the soil surrounding the playa. Manganese concentrations in the playa sediment exceeded the hazard quotient of 1.0; however, there is no complete pathway for human receptors.

Refs: 17, 27, 35, 38, 40, 53, 59, 70, 102, 103

SWMU 104: Landfill 4: Inactive, unlined Landfill (7 acres) which received domestic and industrial sold waste, including waste oils and solvents, paints, paint strippers, paint thinners, pesticides, cans, and drums.

- A long term ground water monitoring program indicates that there has been no release to ground water from SWMU 104.

Refs: 16, 29, 31, 44, 47, 60, 63, 68, 104, 115

SWMU 105: Landfill 3: Inactive, unlined Landfill (7 acres) which received domestic and industrial sold waste, including waste oils and solvents, paints, paint strippers, paint thinners, pesticides, cans, and drums.

- Long term ground water monitoring program indicates that there has been no release to ground water from SWMU 97.

Refs: 16, 22, 29, 32, 39, 45, 47, 60, 63, 68, 115

SWMU 106: Fire Department Training Area 2: Inactive, unlined fire training area (100 ft in diameter) used during fire training exercises.

- Ground water was not investigated because the depth to groundwater is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 106.
- Lead, chromium, benzene, and toluene were detected in the soil at SWMU 106. All hazard indices for subchronic and chronic exposures to site COCs were less than EPA's level of concern (1.0) for noncarcinogenic effects. In addition, the total carcinogenic risk for workers at SWMU 106 fell below the USEPA's target risk range, indicating that that no unacceptable risk of noncarcinogenic or carcinogenic effects was expected at SWMU 106.

Refs: 10, 13, 14, 19, 21, 24, 54, 58, 63

SWMU 107: Fire Department Training Area 3: Inactive, unlined fire training area (100 ft in diameter) used during fire training exercises.

- Ground water was not investigated because the depth to groundwater is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 107.
- Lead, chromium, benzene, and toluene were detected in soil at SWMU 107.as COCs. All hazard indices for subchronic and chronic exposures to site COCs were less than

EPA's level of concern (1.0) for noncarcinogenic effects. In addition, the total carcinogenic risk for workers at SWMU 106 fell below the USEPA's target risk range, indicating that that no unacceptable risk of noncarcinogenic or carcinogenic effects was expected at SWMU 107.
Refs: 10, 13, 14, 19, 21, 24, 54, 58, 63

SWMU 108: Active Explosive Ordinance Disposal Activities Area: Area (1800 ft in diameter) used for ammunition disposal training operations.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath the SWMU.
- Toluene, 2-butanone, and barium were detected in the soil at SWMU 108. The hazard indices for subchronic and chronic exposures to toluene and 2-butanone were less than EPA's level of concern (1.0) for noncarcinogenic effects. Barium was detected at concentrations that marginally exceeded site background. The calculated HQ for barium was 1.08. The risk assessment determined that there is no risk to human health for barium.

Refs: 25, 34, 36, 42, 52, 69, 71, 101, 113

SWMU 109: Inactive, unlined fire training area (400 ft in diameter) used during fire training exercises at the Fire Training Area 4 (SWMUs 109, 110, 111, 112). Previously used as a fuel truck cleaning area. CMS/CMI Phase.

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath the SWMU.
- A total of 13 VOCs, 2 SVOCs, and TPH were detected in the soil at FTA-4. A total of 11 metals were detected at concentrations that exceed background and 4 metals were detected at concentrations that exceed both the background and MSSLs. However, the Risk Assessment concluded that the detected concentrations of these chemicals were all within or below the acceptable excess carcinogenic and noncarcinogenic risk ranges.

Refs: 10, 13, 14, 19, 21, 24, 54, 58, 63, 80, 84, 87, 89, 91, 94, 108, 128

SWMU 110: Underground Waste Oil Tank 2336: UST (2000 gallon) used to store recovered JP-4 fuel for fire training exercises. Part of FTA-4. CMS/CMI Phase.

- See notes for SWMU 109 above.

Refs: 80, 84, 87, 89, 91, 94, 108, 128

SWMU 111: Unlined Pit: Unlined pit used to collect runoff from SWMU 109. Part of FTA-4. CMI Phase

- See notes for SWMU 109 above.

Refs: 80, 84, 87, 89, 91, 94, 108, 128

SWMU 112: OWS 2336: UST used to recover JP-4 fuel from runoff derived during fire training exercises. Part of FTA-4. CMS/CMI Phase.

- See notes for SWMU 109 above.

Refs: 80, 84, 87, 89, 91, 94, 108, 128

SWMU 113: Landfill 5: Landfill (30 acres) which receives general construction debris, domestic and industrial solid waste, including waste oils and solvents, paints, paint removers, paint thinners, pesticides, cans, and drums.

- Chromium concentrations in the ground water exceeded the MCL at SWMU 113 in 1995; however there have been no further exceedences.
- Barium and lead were detected at concentrations in the ground water less than the corresponding MCL.
- Vanadium was detected at concentrations in the soil at concentrations less than the corresponding USEPA Region VI MSSL.

Refs: 10, 14, 19, 21, 24, 54, 55, 63, 72, 78, 107

SWMU 124: UST 1: UST used to store diesel oil. Reported to have been filled with sand.

- SWMU 124 was never investigated; therefore, no data exists to demonstrate that there was a release from SWMU 124.

Refs: 114

SWMU 125: UST 2: UST used to store diesel oil.

- SWMU 125 cannot be located; therefore, it probably never existed.

Refs: 114

SWMU 126: UST 3: UST used to store diesel oil. SWMU 126 was removed when Building 163 was demolished in accordance NMED UST regulations.

- SWMU 126 was never investigated; therefore, no data exists to demonstrate that there was a release from SWMU 126.
- SWMU 124 was removed following NMED UST regulations

Refs: 114

SWMU 127: OWS Near Tank 4095 (#1) & Leach field: UST used to recover washdown materials.

- Ground water was not investigated because the depth to groundwater is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath SWMU 127.
- A total of 16 organic compounds, 8 metals, BTEX, and TPH were detected in the soil at SWMU 127. One compound (dibenzo(a,h)anthracene) exceeded the residential soil RBCs.

- The risk posed by the maximum detected concentration of this compound was estimated at 3 x 10^{-6}, a level within the acceptable USEPA target risk range.

Refs: 17, 27, 35, 38, 40, 53, 59, 70, 102, 103

SWMU 128: OWS Near Tank 4095 #2 & Leach Field: UST used to recover washdown materials.

- SWMU 128 does not exist.

Refs: 114

SWMU 129: Waste Oil Storage Facility 244: Formerly known as AOC I

- Ground water was not investigated because the depth to ground water is greater than 250 feet and the soil sampling results demonstrate that contaminants are not being transported significantly in a vertical direction beneath the SWMU.
- Samples taken from the soil at SWMU 129 showed no signs of contamination.

Refs: 90, 123

AOC A: MOGAS Spill Site: Site of two automobile gasoline spills.

- Ground water was not investigated because the depth to groundwater is greater than 250 feet.
- Barium was detected in the soil at AOC A at concentrations less than NMED's SSLs.

Refs: 114

AOC B: JP-4 Fuel Spill Site: Site of JP-4 fuel spill.

- AOC B was never investigated; therefore, no data exists to demonstrate that there was a release from SWMU 124.

Refs: 114

AOC C: Blown Capacitor Site. Site of PCB spill.

- Approximately 6 gallons of oil, believed to contain PCBs, were released and spilled onto the ground. The contaminated soil was excavated, placed in 55-gallon drums, and sent for off-site disposal.
- SWMU AOC C was never investigated; therefore, no data exists to demonstrate that there was a release from SWMU 124.

Refs: 114

DP-33: Drum Disposal Pit (DP-33, not listed on Table A-1) was discovered in 1991 during earthwork operations. During the earthwork operations, a buried drum was excavated and its contents spilled onto surrounding soils. Cannon performed a Rapid Response Corrective Action at the site. The corrective action included the

removal and offsite disposal of approximately 25 buried drums and approximately 610 cubic yards of impacted soils

- Xylene, three pesticides, and 17 metals were detected in the soil at DP-33.
- Approximately 25 buried drums and approximately 610 cubic yards of impacted soils were removed and disposed of offsite. Therefore, the source and associated contaminated soil was removed and there is no pathway to impact human health.

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Comprehensive Corrective Action Report

Report run on: June 4, 2004 - 12:05 PM

CANNON AIR FORCE BASE NEW MEXICO — NM7572124454

CANNON AFB, CURRY COUNTY — NEW MEXICO — Region 06

Universes

Generator: LQG
Transporter:

Full Enforcement:	L--S-	Subj CA:	X	Perm Prgrs:	L--S-	Op Pmt GPRA:	X+
Operating TSDF:	--S-	Subj CA TSD 3004:	X	Perm Wrkld:	--S-	PClos GPRA:	X+
BOYSNC:		Subj CA TSD Discr:		Clos Wrkld:	L---	CA GPRA:	X-
SNC:		Subj CA Non-TSD:		Pclos Wrkld:	L---	CA HE EI:	X-
Annual BOY Enf:	X	CA Wrkld:	X			CA GW EI:	X+

CA Authority	Suborg.	Staff	Attny	Resp. Agy	Loc.	Issue Date	Effective Date
Voluntary CA		R6	NM	EPA	NM	05/24/1993	05/24/1993
*Other, specified by Legal Authority Citation							

Area Name	Seq.	Releases: GW:	SW:	Soil:Y	Air:	Facilitywide: Y
ENTIRE FACILITY	14					

Event Code	Seq.	Resp. Agcy	Act.Loc.	Actual Date	Sched. Orig.	Sched. New
CA750YE	1	State	NM	06/17/2003		
RELEASE TO GW CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE						

(1) →

Area Name	Seq.	Releases: GW:	SW:	Soil:Y	Air:	Facilitywide: N
ASBESTOS LANDFILL/AOC-D	8					

Event Code	Seq.	Resp. Agcy	Act.Loc.	Actual Date	Sched. Orig.	Sched. New
CA155	1	State	NM	08/22/1997		
RFI SUPPLEMENTAL INFO REQ BY AGENCY						
CA189	1	State	NM	07/25/1997		
RFI REPORTS REVIEWED						
CA113	1	State	NM	02/15/1996		
VOLUNTARY CA MEASURE (VCM) WORKPLAN RECI						
Notes: AOC-D						
CA650	1	EPA	NM	05/24/1993		
STABILIZATION CONSTRUCTION COMPLETED						
Notes: SOIL COVER CONSTRUCTED TO PREVENT WIND DISPERSAL OF ASBESTOS FIBERS						

CA Authority	Suborg.	Staff	Attny	Resp. Agy	Loc.	Issue Date	Effective Date
Operating Permit		NMHUR	R6	EPA	NM	11/14/1989	12/17/1989
*RCRA 3004(u) or equivalent							

Area Name	Seq.	Releases: GW:	SW:	Soil:Y	Air:	Facilitywide: Y
ENTIRE FACILITY	14					

Event Code	Seq.	Resp. Agcy	Act.Loc.	Actual Date	Sched. Orig.	Sched. New
CA750YE	1	State	NM	06/17/2003		
RELEASE TO GW CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE						
CA725IN CA725YE		State	NM	~~03/08/2000~~ 06/04/2004		
~~HUMAN~~ EXPOSURES CONTROLLED ~~DETERMINATION-MORE INFORMATION NEEDED~~ YES APPLICABLE AS						
CHANGE						
CA750IN	1	State	NM	03/08/2000 OF THIS DATE		
RELEASE TO GW CONTROLLED DETERMINATION-MORE INFORMATION NEEDED						
CA725YE	1	EPA	NM	08/26/1996		
HUMAN EXPOSURES CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE						
CA750YE	1	EPA	NM	08/26/1996		
RELEASE TO GW CONTROLLED DETERMINATION-YES, APPLICABLE AS OF THIS DATE						
CA225IN	1	EPA	NM	05/09/1995		
STABILIZATION MEASURES EVALUATION-FURTHER INVESTIGATION NECESSARY						
CA075HI	2	EPA	NM	10/05/1992		
CA PRIORITIZATION-HIGH CA PRIORITY						
CA075ME	1	EPA	NM	02/24/1992		
CA PRIORITIZATION-MEDIUM CA PRIORITY						
CA050	1	EPA	NM	07/30/1987	09/30/1987	
RFA COMPLETED						
CA070YE	1	EPA	NM	07/30/1987		
DETERMINATION OF NEED FOR A RFI-RFI IS NECESSARY						

ADD (1) CA 725 YE 1 STATE NM 06/04/2004
HUMAN EXPOSURES CONTROLLED - YES APPLICABLE AS OF THIS DATE

SUBMITTED: GwG 6/04/2004
APPROVED: SDP 6/04/04
ENTERED: