CAFB 0004

DEPARTMENT OF THE AIR FORCE
27TH CIVIL ENGINEER SQUADRON (ACC)
CANNON AIR FORCE BASE NEW MEXICO

CAFB-04-001
RFI WP
26 SWMUs
10 JUN 2004

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Mr. James Bearzi
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New Mexico Environment Department
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Santa Fe New Mexico 87505-6063

RECEIVED
JUN 2004
NMED Hazardous
Waste Bureau

Subject: Cannon AFB - HSWA Permit

Dear Mr. Bearzi

Enclosed for your review and records is the RFI work plan pertinent to the requirement in Permit Number NM7572124454-1 paragraph 2.1.1 stating that "The Permittee shall submit RCRA Faciltiy Investigation (RFI) Work Plans within 180 days of the effective date of this permit..." for the listed Solid Waste Management Units (SWMU's) and Areas of Concern (AOC's). The work plan is being submitted within the 30-day extension period granted on May 21, 2004.

Mr. Denny Timmons and Mr. Peter P. Zamie of my staff have arraged to meet with Mr. von Gonten the week of June 14, 2004 to discuss the work plan and other documents NMED currently has under review. If you have any questions please contact Mr. Peter P. Zamie at 505-784-1092.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or person who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely

ROBERT S. PYEATT, GS-14

cc:
NMED (G. von Gonten)

SWMU 2 – Recovered Diesel Tank No. 108.

Description

An RFA (A.T. Kearney 1987) described the suspected SWMU 2 location, Hangar 108, as having a recovered diesel tank connected to an oil/water separator (OWS). This led to the UST being listed as an Appendix II site. In 1989, Hangar 108 was demolished and replaced with Hangar 125. During demolition, a 2,000-gallon heating oil tank was removed from the suspected location of SWMU 2, and the former underground storage tank (UST) location was covered with the concrete floor of the new hangar.

Proposed RFI Action

Previous documentation for the UST removal will be provided, if it is available. If previous documentation is not available, a field investigation will be completed using the following procedures. Institutional knowledge and any available record drawings will be used to locate the position of the removed heating oil UST. Typically, a 2,000-gallon UST is 5-ft.-4-in. in diameter and 12-ft. long (Highland Tank, Inc. 2004). Once the former UST location has been found using the best available information, diamond-coring equipment will be used to remove a concrete plug from the hangar floor at two sampling points. Geoprobe drilling equipment will then be used to advance soil borings to a depth of at least fifteen feet below ground surface. Soil samples will be collected every five feet beginning five feet below ground surface (bgs).

Samples will be screened in the field using headspace analysis, and at least one sample from each boring will be submitted for laboratory analysis for individual fuel oil constituents. Samples will be selected for analysis based on headspace reading and field observations (e.g., color and odor). If field screening and observations are all negative for fuel oil contamination, the two deepest samples will be submitted for analysis.

Results of the field investigation will be presented as part of an RFI report. Chemical analytical results will be compared to NMED soil screening levels. For this SWMU, no ecological risk screening will be done; however, the site conditions, i.e., under a building, will be included in the RFI report.

If documentation for a UST removal is found, and if sampling results indicate that NMED soil screening levels were exceeded, a site-specific baseline risk assessment will be completed using U.S. EPA methodology. If risk is determined to be unacceptable, a Corrective Measures Study (CMS) will be completed for the site.

SWMU 4 – Recovered Diesel Tank No. 121

Description

An RFA (A.T. Kearney 1987) described the suspected SWMU 4 location, Hangar 121, as having a recovered diesel tank connected to an OWS. This led to the UST being listed as

an Appendix II site. In 1989, Hangar 121 was demolished and replaced with Hangar 126. During demolition, a 2,000-gallon heating oil tank was removed from the suspected location of SWMU 4, and the former UST location was covered with the concrete floor of the new hangar.

Proposed RFI Action

Previous documentation for the UST removal will be provided, if it is available. If previous documentation is not available, a field investigation will be completed using the following procedures. Institutional knowledge and any available record drawings will be used to locate the position of the removed heating oil UST. A 2,000-gallon UST is typically 5-ft.-4-in. in diameter and 12-ft. long (Highland Tank, Inc. 2004). Once the former UST location has been found using the best available information, diamond-coring equipment will be used to remove a concrete plug from the hangar floor at two sampling points. Geoprobe drilling equipment will be used to advance soil borings to a depth of at least fifteen feet below ground surface. Soil samples will be collected every five feet beginning five feet bgs.

Samples will be screened in the field using headspace analysis, and at least one sample from each boring will be submitted for laboratory analysis for individual fuel oil constituents. Samples will be selected for analysis based on headspace reading and field observations (e.g., color and odor). If field screening and observations are all negative for fuel oil contamination, the two deepest samples will be submitted for analysis.

Results of the field investigation will be presented as part of an RFI report. Chemical analytical results will be compared to NMED soil screening levels. For this SWMU, no ecological risk screening will be done; however, the site conditions, i.e., under a building, will be included in the RFI report.

If documentation for a UST removal is found, and if sampling results indicate that NMED soil screening levels were exceeded, a site-specific baseline risk assessment will be completed using U.S. EPA methodology. If risk is determined to be unacceptable, a Corrective Measures Study (CMS) will be completed for the site.

SWMU 6 – POL Tank No. 129

Description

An RFA (A.T. Kearney 1987) described the suspected SWMU 6 location, Hangar 129, as having a recovered diesel tank connected to an OWS. This led to the UST being listed as an Appendix II site. A 2,000-gallon heating oil tank was removed from the suspected location of SWMU 6 following NMED UST regulations.

Proposed Action

Find copies of the UST closure report, and send the information to the NMED RCRA section. If previous documentation is not available, a field investigation will be completed using the following procedures. Institutional knowledge and any available record drawings will be used to locate the position of the removed heating oil UST. A 2,000-gallon UST is typically 5-ft.-4-in. in diameter and 12-ft. long (Highland Tank, Inc. 2004). Once the former UST location has been found using the best available information, diamond-coring equipment will be used to remove a concrete plug from the hangar floor at two sampling points. Geoprobe drilling equipment will be used to advance soil borings to a depth of at least fifteen feet below ground surface. Soil samples will be collected every five feet beginning five feet bgs.

Samples will be screened in the field using headspace analysis, and at least one sample from each boring will be submitted for laboratory analysis for individual fuel oil constituents. Samples will be selected for analysis based on headspace reading and field observations (e.g., color and odor). If field screening and observations are all negative for fuel oil contamination, the two deepest samples will be submitted for analysis.

Results of the field investigation will be presented as part of an RFI report. Chemical analytical results will be compared to NMED soil screening levels. For this SWMU, no ecological risk screening will be done; however, the site conditions, i.e., under a building, will be included in the RFI report.

If documentation for a UST removal is found, and if sampling results indicate that NMED soil screening levels were exceeded, a site-specific baseline risk assessment will be completed using U.S. EPA methodology. If risk is determined to be unacceptable, a Corrective Measures Study (CMS) will be completed for the site.

SWMU 10 – POL Tank No. 170

Description

An RFA (A.T. Kearney 1987) described the suspected SWMU 10 location, Hangar 170, as having an inactive POL tank connected to an OWS. This led to the UST being listed as an Appendix II site. A 2,000-gallon heating oil tank was removed from the suspected location of SWMU 10 following NMED UST regulations.

Proposed Action

Find copies of the UST closure report, and send the information to the NMED RCRA section. If previous documentation is not available, a field investigation will be completed using the following procedures. Institutional knowledge and any available record drawings will be used to locate the position of the removed heating oil UST. A 2,000-gallon UST is typically 5-ft.-4-in. in diameter and 12-ft. long (Highland Tank, Inc. 2004). Once the former UST location has been found using the best available information, diamond-coring equipment will be used to remove a concrete plug from the

hangar floor at two sampling points. Geoprobe drilling equipment will be used to advance soil borings to a depth of at least fifteen feet below ground surface. Soil samples will be collected every five feet beginning five feet bgs.

Samples will be screened in the field using headspace analysis, and at least one sample from each boring will be submitted for laboratory analysis for individual fuel oil constituents. Samples will be selected for analysis based on headspace reading and field observations (e.g., color and odor). If field screening and observations are all negative for fuel oil contamination, the two deepest samples will be submitted for analysis.

Results of the field investigation will be presented as part of an RFI report. Chemical analytical results will be compared to NMED soil screening levels. For this SWMU, no ecological risk screening will be done; however, the site conditions, i.e., under a building, will be included in the RFI report.

If documentation for a UST removal is found, and if sampling results indicate that NMED soil screening levels were exceeded, a site-specific baseline risk assessment will be completed using U.S. EPA methodology. If risk is determined to be unacceptable, a Corrective Measures Study (CMS) will be completed for the site.

SWMU 34 – AGE Drainage Ditch

Description

SWMU 34, the AGE Drainage Ditch, originates on the flightline side of the AGE Building, No. 186, and it runs parallel to Building Nos. 191 and 193 in a northeast direction. It terminates at a culvert inlet near Argentia Avenue. Storm water runoff from the AGE Drainage Ditch flows under Argentia Avenue via the culvert to a second drainage ditch that then routes the water to the northeast Storm Water Drainage Area (SWMU 95). A Soil Removal Investigation recommended tilling the soil and planting grass in the visually impacted portion of SWMU 34 (Radian 1987). This activity was subsequently completed in October 1988.

The Remedial Investigation (RI) of 18 Installation Restoration Program (IRP)/SWMU sites was completed in 1991 (Woodward Clyde 1992). Based on the analytical results from the investigation, the RI report recommended that no further investigation or action was required at SWMU 34.

A Baseline Risk Assessment (BRA) was included in the RI. The BRA assessed potential adverse human health and ecological effects by comparing analytical data to risk-based RFI criteria and proposed RCRA action levels, and by calculating site-specific health risks, where appropriate. The BRA concluded that potential impacts to human health and to the environment were insignificant at SWMU 34.

Proposed Action

The results and conclusions of the SWMU 34 RI/BRA will be reviewed and compared to current NMED soil screening levels. All of the RI analytical results with a current evaluation will be presented to the NMED RCRA section in the RFI Report.

If sampling results indicate that NMED soil screening levels were exceeded, a site-specific baseline risk assessment will be completed using U.S. EPA methodology. If risk is determined to be unacceptable, a Corrective Measures Study (CMS) will be completed for the site.

SWMU 36 – Building No. 214 Parking Lot

Description

SWMU 36 is the name assigned to an area of potential soil contamination while analytical results for soil samples were pending. During excavation activities to prepare the site for a parking lot, a contractor reported discovering an area of potentially contaminated soil.

Soil that visually appeared to be impacted was segregated from other excavated soil, and samples of the apparently impacted soil were collected and submitted for laboratory analysis of volatile organic compounds (VOCs), benzene, toluene, ethyl benzene, and xylenes (BTEX), total petroleum hydrocarbons (TPH), and a full suite of toxicity characteristic leaching procedure (TCLP) analyses. The only chemical detected above laboratory detection limits was barium in the TCLP results. The barium result, 1.7 mg/L, was below the TCLP threshold for barium of 100 mg/L. The results were provided to USEPA Region VI as an attachment to a letter from Gen. Guth, Commander Cannon AFB, dated June 29, 1994.

Proposed Action

The results of the soil sampling and analysis will be included in the RFI report.

SWMU 49 – Inactive POL Storage Tank No. 4028a

Description

An RFA (A.T. Kearney, Inc. 1987) description of this site was identical to the description given for SWMU 48A, a UST waste oil tank. This was apparently an accidental duplication. SWMU 49 was originally listed as an Appendix II site due to its misidentification as an inactive POL Storage Tank. According to Base personnel, no storage tanks of any type were ever located at the reported location of SWMU 49.

Proposed Action

Institutional knowledge and available records (e.g., Base Master Plan) will be evaluated and compared to the described location of SMWU 49. Because this site is believed to be a duplicate, no further investigation is proposed. This information will be included in the RFI report.

SWMU 50 – Inactive Storage Tank No. 4028b

Description

An RFA (A.T. Kearney, Inc. 1987) description of this site was identical to the description given for SWMU 48A, a UST waste oil tank. This was apparently an accidental duplication. SWMU 50 was originally listed as an Appendix II site due to its misidentification as an inactive POL Storage Tank. According to Base personnel, no storage tanks of any type were ever located at the reported location of SWMU 50.

Proposed Action

Institutional knowledge and available records (e.g., Base Master Plan) will be evaluated and compared to the described location of SMWU 50. Because this site is believed to be a duplicate, no further investigation is proposed. This information will be included in the RFI report.

SWMU 72 – OWS No. 390

Description

An RFA (A.T. Kearney 1987) mistakenly identified a 2,000-gallon recovered JP-4 UST as OWS 390. This led to the site being identified as SWMU 72. The UST, which is actually SWMU 71, was removed in April 1991 and replaced with a 2,000-gallon steel OWS enclosed in a concrete vault. This OWS is not SWMU 72.

Proposed Action

Closure documentation for SWMU 71 will be reviewed, and institutional knowledge and available record documents will be reviewed to document that this is a duplicate of SWMU 71. Because this SWMU is apparently a duplicate of SWMU 71, no further investigation is proposed. This information will be included in the RFI report.

SWMU 75 – Sanitary Sewage Lift Station Overflow Pit

Description

SWMU 75 served as an emergency overflow containment area for a lift station in the northwest part of the Base. The containment pit was approximately 100 feet wide by 600 feet long by 3 feet deep. It was used once in February 1983 when 100,000 to 150,000 gallons of raw domestic sewage were bypassed to the pit when the lift pumps failed. The

lift pumps were repaired about one week after the bypass event. The area of the containment pit has been rebuilt twice since the bypass event to improve drainage around the golf course and to create new water hazards for the new section of the golf course. No remnants of the pit exist.

Proposed Action

Institutional knowledge and available records (e.g., Base Master Plan) will be evaluated and compared to the described location of SMWU 75. Seven soil borings located on a grid spacing will be completed to a depth of 25 feet bgs. Soil samples will be collected every five feet beginning at the ground surface.

Samples will be screened in the field using headspace analysis, and at least one surface soil sample and one subsurface soil sample from each boring will be submitted for laboratory analysis for VOCs, SVOCs, and metals. Samples will be selected for analysis based on headspace reading and field observations (e.g., color and odor). If field screening and observations are all negative contamination, the deepest samples from each soil boring will be submitted for analysis.

Results of the field investigation will be presented as part of an RFI report. Chemical analytical results will be compared to NMED soil screening levels. For this SWMU, an ecological risk screening will be done according to NMED recommendations. The results will be included in the RFI report.

SWMU 76 – Sludge Weathering Pit

Description

SWMU 76 was located near Building 326, adjacent to the northern Base boundary fence. The pit was about 200 square feet in area, and it was used to weather sludge from storage tanks for leaded gasoline. It was used during the 1960s and 1970s, and it was last used in 1980. The sludge was landfilled after it was judged to have sufficiently weathered.

In 1991, a RI/BRA was completed for the site (Woodward Clyde 1992). Four soil borings were completed at the site, and soil samples were collected at depths that ranged from 4 to 31 feet bgs. In addition, two surface soil samples were collected. All samples were analyzed for VOCs, SVOCs, and target analyte list (TAL) metals. Based on the results of the BRA, no unacceptable human health or ecological risks due to chemical releases were expected from SWMU 76.

Proposed Action

The results and conclusions of the SWMU 76 RI/BRA will be reviewed and compared to current NMED soil screening levels. All of the RI analytical results with a current evaluation will be presented to the NMED RCRA section in the RFI Report.

If sampling results indicate that NMED soil screening levels were exceeded, a site-specific baseline risk assessment will be completed using U.S. EPA methodology. If risk is determined to be unacceptable, a Corrective Measures Study (CMS) will be completed for the site.

SWMU 78 – Fire Department Training Area No. 1

Description

SWMU 78 is located in the northeast corner of the Base, south of the railroad tracks and northeast of Perimeter Road. The training area is an unlined surface approximately 100 feet in diameter. Between 1959 and 1968, the site was used twice monthly when approximately 300 gallons of waste oils, solvents, and fuels were poured on the ground surface to create fires.

In 1991, a RI/BRA was completed for the site (Woodward Clyde 1992). Two soil borings were completed at the site. Soil samples were collected at depths of 4, 10, 20, 30, 40, 50, 60, 70, 75, and 100 feet bgs. The samples were analyzed for VOCs, SVOCs, PCBs, pesticides, and TPH. In addition, all samples from one soil boring plus samples from 80 and 90 feet bgs were analyzed for total organic carbon (TOC). One additional boring was drilled and sampled because the analytical laboratory missed holding times for the VOCs and/or TPH. Six surface soil samples were also collected and analyzed for the same parameters as the subsurface samples. Based on the results of the BRA, no unacceptable human health or ecological risks due to chemical releases were expected from SWMU 78.

Proposed Action

The results and conclusions of the SWMU 78 RI/BRA will be reviewed and compared to current NMED soil screening levels. All of the RI analytical results with a current evaluation will be presented to the NMED RCRA section in the RFI Report.

If sampling results indicate that NMED soil screening levels were exceeded, a site-specific baseline risk assessment will be completed using U.S. EPA methodology. If risk is determined to be unacceptable, a Corrective Measures Study (CMS) will be completed for the site.

SWMU 81 – Solvent Disposal Site

Description

SWMU 81 was first identified in the 1983 IRP Phase I Records Search (CH2M Hill 1983) as two empty drums labeled "trichloroethylene" lying on the ground. The drums had been positioned in such a way that they would have drained into a shallow pit. The site was located approximately 300 feet east of Fire Training Area No. 1 (SWMU 78) and 100 feet south of the north Base boundary fence. The site could not be located during

preparation of the RFA in 1987 (A.T. Kearney 1987) or during the site visit performed as part of the preparation of the Appendix I, Phase I RFI Work Plan (Lee Wan and Associates 1990).

Proposed Action

The site description above will be used to locate the SWMU, and soil gas sampling will be done over a 40-foot by 60-foot area centered over the location described. Samples will be collected on a grid with 10-foot spacing. A portable gas chromatograph will be used to analyze soil vapor samples on-site. Samples will be collected at five feet bgs. If TCE is detected, the direct-push sampling rig will be used to collect soil samples for analysis at a fixed laboratory. Soil samples will be collected at five sample locations, and samples will be collected every five feet beginning at five feet bgs to a depth of 30 feet bgs.

Results of the field investigation will be presented as part of an RFI report. If soil samples are collected for fixed laboratory analysis, chemical analytical results will be compared to NMED soil screening levels. For this SWMU, an ecological risk screening will be done according to NMED recommendations. The results will be included in the RFI report.

SWMU 82 – Landfill No. 2

Description

SWMU 82 has been listed as an Appendix I site. It is an inactive, unlined, cut-and-fill landfill that occupies about 15 vacant and grass-covered acres in the northeast corner of the Base. Wastes were accepted from 1946 to 1947 and from 1952 to 1959. The period of inactivity occurred when the Base was on deactivated status. The landfill's operation apparently consisted of placing waste in trenches and burning it before burying it. The landfill reportedly received domestic solid wastes and shop wastes, which included waste oils and solvents, paint strippers and thinners, outdated paint, pesticide containers, and various empty cans and drums (Radian 1986).

A RFI and a BRA were completed for SWMU 82 (Woodward Clyde 1993). The RFI included an electromagnetic geophysical survey using a Geonics EM-31. The results of the survey were interpreted to indicate the presence of landfill cells. Based in the locations of the interpreted cells, a subsurface soil investigation was designed.

A trench approximately 28 feet long, 8 feet wide, and 7 feet deep was dug into one of the interpreted landfill cells. After the cell cap was removed, landfilled materials were excavated and a field screening was done using an organic vapor analyzer (OVA). No OVA readings above background levels were detected (Woodward Clyde 1997). The landfilled materials and the clay cap were replaced.

In addition, 27 soil borings were drilled and subsurface soil samples from 15 of the borings were collected and submitted for chemical analyses. The borings were advanced to depths of 76 feet bgs. A total of 120 samples were analyzed for VOCs, SVOCs, pesticides/PCBs, and TAL metals. In addition some samples were also analyzed for TPH and TOC. Five surface soil samples were collected from 0 to 0.5 feet bgs, and these were also analyzed for VOCs, SVOCs, pesticides/PCBs, and TAL metals. Geotechnical gradation analysis was completed on 44 subsurface and one surface soil samples.

A BRA was completed for SWMU 82 based on the results of the RFI. Only benzo(a)pyrene was found to exceed a RCRA action level, and this compound exceeded the action level very slightly and in a limited area. The ecological risk screening for the site indicated that chemicals at the site do not pose an unacceptable risk to the environment.

Proposed Action

The results and conclusions of the SWMU 82 RFI/BRA will be reviewed and compared to current NMED soil screening levels. All of the RFI analytical results with a current evaluation will be presented to the NMED RCRA section in the RFI Report.

If sampling results indicate that NMED soil screening levels were exceeded, a site-specific baseline risk assessment will be completed using U.S. EPA methodology. If risk is determined to be unacceptable, a Corrective Measures Study (CMS) will be completed for the site.

SWMU 85 – Stormwater Collection Point

Description

SWMU 85 has been listed as an Appendix I site. It is a naturally occurring nine-acre playa lake located in the southwestern part of the Base. Since 1943, stormwater runoff from the flight line has collected in this lake. Stormwater runoff flows toward the center of the site where it either evaporates or percolates into the soil.

The Final IRP RI for SWMU 85 included drilling and sampling 8 soil borings (Walk Haydel 1990). Soil samples were collected from depths of 5 to 70 feet bgs. Near surface and subsurface samples were analyzed for VOCs, base/neutral extractable compounds, and for total and extraction procedure (EP) toxicity metals. Barium, mercury, and selenium were detected in several samples in concentrations slightly above area background levels (Woodward Clyde 1997).

A human health screening was completed for SWMU 85. The conclusion of the risk screening was that metals concentrations at SWMU 85 are indicative of background metals concentrations (Woodward Clyde 1997). Ecological screening at SWMU 85 concluded that selenium was present in concentrations considered toxic to wildlife, but

these concentrations are within the range of background concentrations (Woodward Clyde 1997).

Proposed Action

The results and conclusions of the SWMU 85 RI and risk screening will be reviewed and compared to current NMED soil screening levels. All of the RI analytical results with a current evaluation will be presented to the NMED RCRA section in the RFI Report.

If sampling results indicate that NMED soil screening levels were exceeded, a site-specific baseline risk assessment will be completed using U.S. EPA methodology. If risk is determined to be unacceptable, a Corrective Measures Study (CMS) will be completed for the site.

SWMU 91 – Recovered Fuel Tank No. 5114

Description

An RFA (A.T. Kearney 1987) misidentified the suspected SWMU 91 location as having an aboveground storage tank (AST) for fuel recovered from OWS 5114 (SWMU 86). The tank was actually a 5,000-gallon aboveground JP-4 bulk storage tank for Test Stand No. 5114. The tank was removed in 1988 when the test stand was demolished.

Proposed Action

Two soil borings will be drilled to a depth of 25 feet bgs at the location of the former AST using hollow-stem augers. Soil samples will be collected every five feet beginning at the ground surface.

Samples will be screened in the field using headspace analysis, and at least one sample from each boring will be submitted for laboratory analysis for individual JP-4 constituents. Samples will be selected for analysis based on headspace reading and field observations (e.g., color and odor). If field screening and observations are all negative for fuel oil contamination, the two deepest samples will be submitted for analysis.

Results of the field investigation will be presented as part of an RFI report. Chemical analytical results will be compared to NMED soil screening levels. For this SWMU, an ecological risk screening will be done according to NMED recommendations. The results will be included in the RFI report.

SWMU 95 – Northeast Stormwater Drainage Area

SWMU 95 is a shallow, open ditch that begins near the end of the northeastern runway, Runway 4/22, and extends to the southeast under an access road before emptying into an open field. The northwest end of the ditch is marked by a concrete culvert and is

surrounded by heavy vegetation. The drainage ditch is approximately 40 feet wide and runs for approximately 550 feet until it reaches the field.

The site was investigated during a Final IRP RI (Walk Haydel 1990). The investigation included drilling and sampling of 11 soil borings. Soil samples were collected to maximum depths that ranged from 5 to 61.5 feet. Samples were analyzed for total metals, EP toxicity characteristics, VOCs, and base/neutral extractable compounds. Long chain organics were detected at shallow depth in one soil boring near the northwest end of the drainage ditch. Selenium and barium were detected in concentrations above area background concentrations, but within the range of concentrations typical of area soils.

An RI (Woodward Clyde 1992) was completed at SWMU 95. Two soil borings were drilled and sampled to maximum depths of 10 feet bgs. The soil borings were located upstream of SWMU 95 to evaluate possible contributions of contaminants from upstream of the already sampled reach of the ditch. Samples were analyzed for VOCs, SVOCs, TAL metals and TPH. A BRA was completed based on data collected during the RI (Woodward Clyde 1992). Lead and zinc were identified as the only chemicals of concern (COCs) for human health risk evaluation. Calculated risk to human health for non-carcinogenic and carcinogenic risks indicated no unacceptable risk. No unacceptable ecological risks were identified.

Proposed Action

The results and conclusions of the SWMU 95 RI/BRA will be reviewed and compared to current NMED soil screening levels. All of the RI analytical results with a current evaluation will be presented to the NMED RCRA section in the RFI Report.

If sampling results indicate that NMED soil screening levels were exceeded, a site-specific baseline risk assessment will be completed using U.S. EPA methodology. If risk is determined to be unacceptable, a Corrective Measures Study (CMS) will be completed for the site.

SWMU 96 – Old Entomology Rinse Area

Description

SWMU 96 was located behind Building 2160, pesticide storage building, which was abandoned in October 1983 and demolished in September 1984. During the site's use, pesticide and herbicide application equipment was cleaned in a sink located inside Building 2160. The sink drained into a 3-foot-square and 2-foot-deep pit at the rear of the building. The bottom of the pit was reported to be unlined and open to the soil (Woodward Clyde 1992).

The IRP Phase II investigation for SWMU 96 detected potentially significant concentrations of pesticides and herbicides in samples collected from two soil borings (Radian 1986). An IRP Phase IV-A investigation of SWMU 96 (Walk Haydel 1990) was

completed to confirm and delineate the potential contamination detected during the IRP Phase II investigation. During this investigation, 8 soil borings were drilled and sampled. Four soil borings were drilled to 50 feet bgs, and 4 were drilled to 100 feet bgs. The Phase IV-A investigation did not detect herbicides and only detected pesticides at concentrations of potential concern in samples collected near the ground surface.

An RI (Woodward Clyde 1992) included collection and analysis of one surface soil sample and one groundwater sample. The results of the RI were used to complete a BRA. The pesticides 4,4-DDE, 4,4-DDT, alpha- and gamma-chlordane, and heptachlor epoxide were identified as COCs. No unacceptable non-carcinogenic or carcinogenic human health risks were identified for the site. No chemical concentrations in groundwater exceeded a maximum contaminant level (MCL). The COCs at SWMU 96 were determined not to exceed background concentrations for the ecological risk screening; therefore, no unacceptable ecological risk was identified.

A supplemental RFI was completed for SWMU 96 (Woodward Clyde 1994). One soil boring was drilled to a depth of 102 feet bgs, and samples were collected at 10-foot intervals. Ten subsurface samples were collected and analyzed for VOCs, SVOCs, TAL metals, pesticides/PCBs, chlorinated herbicides, TRPH, gasoline-range organics (GRO), and total chromatographical organics (TCO). Two pesticides, 4-4-DDE and 4,4-DDT were detected at estimated concentrations below the laboratory reporting limits in the sample from 10 feet bgs. Detected metals were within background concentrations.

Proposed Action

The results and conclusions of the SWMU 96 RI/RFI/BRA will be reviewed and compared to current NMED soil screening levels. All of the RI and RFI analytical results with a current evaluation will be presented to the NMED RCRA section in the RFI Report.

If sampling results indicate that NMED soil screening levels were exceeded, a site-specific baseline risk assessment will be completed using U.S. EPA methodology. If risk is determined to be unacceptable, a Corrective Measures Study (CMS) will be completed for the site.

SWMU 98 – Sanitary Sewer Line

Description

The sanitary sewer lines at the Base are located underground and are used to transport sanitary wastewater to the wastewater treatment plant. The sewer lines are constructed of PVC in the housing area and of clay in the main Base area. The pipe diameters range from 8 inches for PVC to 15 inches for clay tile. The system has been in operation since 1943, and the approximate daily flow is 0.4 million gallons per day (MGD). No indication of significant line losses has been observed.

The sanitary sewer system's main trunk line flows northeast along Torch Boulevard in the aircraft maintenance area. A smaller branch flows south along Torch Boulevard near the main entrance to the Base. A secondary line flows southeast and enters the main trunk at Argentia Avenue, and a transmission line flows east across the runways to the wastewater lagoon. Only the main trunk, the south flowing branch, and the east flowing transmission line potentially received hazardous waste. All other lines, including the secondary branch lines, receive only domestic sewage.

A RI/BRA was completed for SWMU 98 (Woodward Clyde 1992). Forty-two soil borings were drilled near the sewer lines, and they were sampled for chemical and geotechnical analyses. Subsurface soil samples were collected to maximum depths of 8 to 29 feet bgs. Termination depths for soil borings were generally about 5 feet below the estimated bottom of the sewer line near the sample location. Forty-two subsurface soil samples were analyzed for VOCs, TAL metals, and TPH.

The BRA for SWMU 98 was completed using the data collected during the RI (Woodward Clyde 1992). Based on the results of the BRA, no unacceptable human health or ecological risks were identified for chemicals associated with this SWMU.

Proposed Action

The results and conclusions of the SWMU 98 RI/BRA will be reviewed and compared to current NMED soil screening levels. All of the RI analytical results with a current evaluation will be presented to the NMED RCRA section in the RFI Report.

If sampling results indicate that NMED soil screening levels were exceeded, a site-specific baseline risk assessment will be completed using U.S. EPA methodology. If risk is determined to be unacceptable, a Corrective Measures Study (CMS) will be completed for the site.

SWMU 102 – Wastewater Treatment Effluent Discharge

Description

The Effluent Discharge (SWMU 102) was an integral part of the lagoon wastewater treatment system. It consisted of a discharge pipe and inlet chamber equipped with two slide gates. The discharge was directed to SWMU 103, a self-contained playa lake located near the eastern boundary of the Base.

Proposed Action

The location of SWMU 102 will be inspected and the condition of remaining components of the SWMU will be reported in the RFI report. In addition, any reports generated during construction of the new wastewater treatment facilities that may include descriptions of alterations of decommissioning of SWMU 102 will be reviewed, and a summary will be included in the RFI report.

SWMU 106 – Fire Department Training Area No. 2

Description

SWMU 106 is located in the southeast corner of the Base near abandoned north-south taxiway T-5. The site consists of two small round depressions in the land surface, each sparsely vegetated and about 100 feet in diameter. From 1968 to 1974, SWMU 106 was used concurrently with SWMU 107, Fire Department Training Area No 3. During training exercises, the ground was saturated with water, and JP-4 jet fuel was introduced and ignited for training purposes. Approximately 300 gallons of fuel were burned during each training exercise. The exercises occurred about 8 times per year.

A RI/BRA was completed for SWMU 106. During the RI, 4 soil borings, two in each depression, were drilled to depths of between 31 and 32 feet bgs. Four subsurface samples were collected and analyzed from each soil boring. Samples were analyzed for VOCs, TPH, and lead/chromium. In addition four surfaces soil samples were collected, one each from the soil boring locations. The surface soil samples were analyzed for BTEX, TPH, and lead/chromium.

The BRA indicated no unacceptable risk of non-carcinogenic or carcinogenic effects was expected at SWMU 106. The ecological risk evaluation concluded that none of the chemicals at the site posed a significant risk to small mammalian populations or other biota.

Proposed Action

The results and conclusions of the SWMU 106 RI/BRA will be reviewed and compared to current NMED soil screening levels. All of the RI analytical results with a current evaluation will be presented to the NMED RCRA section in the RFI Report.

If sampling results indicate that NMED soil screening levels were exceeded, a site-specific baseline risk assessment will be completed using U.S. EPA methodology. If risk is determined to be unacceptable, a Corrective Measures Study (CMS) will be completed for the site.

SWMU 107 – Fire Department Training Area No. 3

Description

SWMU 107 is located in the southeast corner of the Base adjacent to and east of abandoned north-south taxiway T-5. The training area consists of an unlined surface area in a half-moon shape that is approximately 100 feet in length. The site has little surface vegetation, but was littered with numerous empty storage containers of various sizes at the time of the RI sampling event (Woodward Clyde 1992). From 1968 to 1974, the SWMU was used concurrently with SWMU 106, Fire Department Training Area No. 2.

During training exercises, the ground was saturated with water, and JP-4 jet fuel was introduced and ignited for training purposes. Approximately 300 gallons of fuel were burned during each training exercise. The exercises occurred about 8 times per year. According to the 1995 RFI (Woodward Clyde 1995), the area of SWMU 107 has been used for activities associated with the adjacent ordnance training site.

An RI/BRA (Woodward Clyde 1992) was completed at the site. Four soil borings were drilled and sampled to depths of 31 feet bgs in 3 borings and to 67 feet bgs in the fourth. Samples were collected at 5, 10, 20, and 29.5 feet bgs in the first 3 soil borings and at 4, 10, 20, 30, 45, 50 and 60 feet bgs in the fourth. The samples were analyzed for VOCs, TPH, and lead/chromium. Four surface soil samples collected from the soil borings were analyzed for BTEX, TPH and lead/chromium.

The BRA concluded that no unacceptable risk of non-carcinogenic or carcinogenic effects was expected at SWMU 107. The ecological risk evaluation concluded that none of the chemicals at the site posed a significant risk to small mammalian populations or other biota.

Proposed Action

The results and conclusions of the SWMU 107 RI/BRA will be reviewed and compared to current NMED soil screening levels. All of the RI analytical results with a current evaluation will be presented to the NMED RCRA section in the RFI Report.

If sampling results indicate that NMED soil screening levels were exceeded, a site-specific baseline risk assessment will be completed using U.S. EPA methodology. If risk is determined to be unacceptable, a Corrective Measures Study (CMS) will be completed for the site.

SWMU 125 – Inactive Underground Storage Tank No. 2

Description

An RFA (A.T. Kearney 1987) described the suspected SWMU 124 location as a UST of unknown dimensions, capacity, and construction adjacent to Building 357. However, site inspections and record searches failed to reveal the existence of this unit. Interviews with the paint shop personnel indicated that a UST had been removed prior to the effective date of the NMED UST regulations. However, real property records indicate that the tank had been abandoned in place.

Proposed Action

Two soil borings will be drilled to a depth of 25 feet bgs at the location of the former UST using hollow-stem augers. Soil samples will be collected every five feet beginning at the ground surface.

Samples will be screened in the field using headspace analysis, and at least one sample from each boring will be submitted for laboratory analysis for individual fuel constituents. Samples will be selected for analysis based on headspace reading and field observations (e.g., color and odor). If field screening and observations are all negative for fuel oil contamination, the two deepest samples will be submitted for analysis.

Results of the field investigation will be presented as part of an RFI report. Chemical analytical results will be compared to NMED soil screening levels. For this SWMU, an ecological risk screening will be done according to NMED recommendations. The results will be included in the RFI report.

AOC A – MOGAS Spill Site

Description

AOC A is the name assigned to an area along Argentia Avenue across from the refueling area of Facility No.379. On two occasions in the early 1960s (Radian 1986), fuel trucks overturned into a ditch in this area and quantities of MOGAS estimated at 2,000 to 3000 gallons each were spilled.

Visually impacted soils were segregated, and samples of impacted soil were analyzed for VOCs, BTEX, TPH, and a full TCLP suite. Barium in the TCLP analysis was the only chemical detected, and the detected concentration, 1.7 mg/L was below the TCLP threshold for hazardous waste.

Proposed Action

Four soil borings will be drilled to a depth of 25 feet bgs at the location of the former spill site using hollow-stem augers. Soil samples will be collected every five feet beginning at the ground surface.

Samples will be screened in the field using headspace analysis, and at least one sample from each boring will be submitted for laboratory analysis for individual fuel constituents and lead. Samples will be selected for analysis based on headspace reading and field observations (e.g., color and odor). If field screening and observations are all negative for fuel oil contamination, the two deepest samples will be submitted for analysis.

Results of the field investigation will be presented as part of an RFI report. Chemical analytical results will be compared to NMED soil screening levels. For this SWMU, an ecological risk screening will be done according to NMED recommendations. The results will be included in the RFI report.

AOC B – JP-4 Fuel Spill Site

Description

AOC B is the name assigned to an area located in the west-central part of the Base that was the site of an accidental fuel spill in 1980. An estimated 400 gallons of JP-4 spilled from an aircraft fuel tank onto a concrete parking apron during the accident as a result of a broken fuel line coupling (CH2M Hill 1983).

Proposed Action

Impact to human health and the environment would come only by release of JP-4 to an environmental media, most likely soil at the edge of the concrete parking apron. Two soil borings will be drilled to a depth of 25 feet bgs off the edge of the apron near the spill site using hollow-stem augers. Soil samples will be collected every five feet beginning at the ground surface.

Samples will be screened in the field using headspace analysis, and at least one sample from each boring will be submitted for laboratory analysis for individual JP-4 constituents. Samples will be selected for analysis based on headspace reading and field observations (e.g., color and odor). If field screening and observations are all negative for fuel oil contamination, the two deepest samples will be submitted for analysis.

Results of the field investigation will be presented as part of an RFI report. Chemical analytical results will be compared to NMED soil screening levels. For this SWMU, an ecological risk screening will be done according to NMED recommendations. The results will be included in the RFI report.

AOC C – Blown Capacitor Site

Description

AOC C is the location of a power pole that houses 6 capacitors. Lightning struck the pole in 1978 and ruptured 3 of the capacitors. Approximately 6 gallons of dielectric oil, believed to contain PCBs, were spilled onto the ground. The contaminated soil was excavated, placed in 55-gallon drums, and sent off-site for disposal by the Defense Property Disposal Office (DPDO).

Proposed Action

Three soil borings will be drilled to a depth of 15 feet bgs at the location of the power pole using hollow-stem augers. Soil samples will be collected every five feet beginning at the ground surface.

All soil samples will be submitted for laboratory analysis for PCBs. Results of the field investigation will be presented as part of an RFI report. Chemical analytical results will be compared to NMED soil screening levels. For this SWMU, an ecological risk screening will be done according to NMED recommendations. The results will be included in the RFI report.

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