FY2015

ANNISTON ARMY DEPOT

Army Defense Environmental Restoration Program

Installation Action Plan

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Statement of Purpose

The purpose of the Installation Action Plan (IAP) is to outline the total multiyear cleanup program for an installation. The plan identifies environmental cleanup requirements at each operable unit (OU), solid waste management unit (SWMU), or area of concern (AOC) and proposes a comprehensive, installation-wide approach, along with the costs and schedules associated with conducting investigations and taking the necessary remedial actions (RA).

In an effort to coordinate planning information between the Restoration Manager, the US Army Environmental Command (USAEC), Anniston Army Depot (ANAD), the executing agencies, regulatory agencies, and the public, an IAP was completed. The IAP is used to track requirements, schedules, and budgets for all major Army installation cleanup programs.

All site-specific funding and schedule information has been prepared according to projected overall Army funding levels and is, therefore, subject to change.

Acronyms

ADEM	Alabama Department of Environmental Management
AEDB-CC	Army Environmental Database - Compliance-related Cleanup
AEDB-R	Army Environmental Database - Restoration
AL	Alabama
AM	Action Memorandum
AMC	Army Materiel Command
ANAD	Anniston Army Depot
AOC	Area of Concern
ARBCA	Alabama Risk-Based Corrective Action
ASA	Ammunition Storage Area
AST	Aboveground Storage Tank
ATSDR	Agency for Toxic Substances and Disease Registry
AWWSB	Anniston Water Works and Sewer Board
bgs	below ground surface
Bldg	Building
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene
C&D	Construction and Demolition
CAP	Corrective Action Plan
CC	Compliance-related Cleanup
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CGW	Combined Groundwater
CIP	Community Involvement Plan
CMI	Corrective Measures Implementation
CMI(C)	Corrective Measures Implementation (Construction)
CMI(O)	Corrective Measures Implementation (Operations)
CMIP	Corrective Measures Implementation Plan
CMS	Compliance Measures Study
COC	Contaminant of Concern
COPC	Contaminant of Potential Concern
CR	Compliance Restoration
CRP	Community Relations Plan
CS	Confirmation Sampling
CTC	Cost-to-Complete
CTT	Closed, Transferred, or Transferring
cy	cubic yards
DD	Decision Document
DERA	Defense Environmental Restoration Account (currently called ER,A)
DERP	Defense Environmental Restoration Program
DES	Design
DLA	Defense Logistics Agency
DoD	Department of Defense
EE/CA	Engineering Evaluation/Cost Analysis
ER,A	Environmental Restoration, Army
ERP	Emergency Response Plan
ESI	Expanded Site Inspection

Acronyms

FFA	Federal Facilities Agreement
FFS	Focused Feasibility Study
FRA	Final Remedial Action
FS	Feasibility Study
ft	feet
FY	Fiscal Year
gpd	gallons per day
GWIS	Groundwater Interceptor System
GWTP	Groundwater Treatment Plant
HHRA	Human Health Risk Assessment
HRR	Historical Records Review
HRS	Hazard Ranking System
IAP	Installation Action Plan
IM	Interim Measures
IMP(C)	Implementation (Construction)
IMP(O)	Implementation (Operations)
INV	Investigation
IR	Installation Restoration
IRA	Interim Remedial Action
IROD	Interim Record of Decision
IRP	Installation Restoration Program
ISC	Initial Site Characterization
IWTP	Industrial Wastewater Treatment Plant
JEG	Jacobs Engineering Group
K	thousand
kg	kilogram
LLC	Limited Liability Company
LTM	Long-Term Management
LUC	Land Use Control
MC	Munitions Constituent
MCL	Maximum Contaminant Level
MEC	Munitions and Explosives of Concern
mg	milligram
mg/kg	milligram per kilogram
mg/L	milligram per liter
mm	millimeter
MMRP	Military Munitions Response Program
MNA	Monitored Natural Attenuation
MR	Munitions Response
MRS	Munitions Response Site
N/A	Not Applicable
NAPL	Non-Aqueous Phase Liquid
NEW	Net Explosive Weight
NFA	No Further Action
NOV	Notice of Violation

Acronyms

NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NTRA	Non-Time-Critical Removal Action
NTU	Nephelometric Turbidity Units
O&M	Operations & Maintenance
OB/OD	Open Burning/Open Detonation
OU	Operable Unit
OWS	Oil/Water Separator
PA	Preliminary Assessment
PCE	Tetrachloroethylene
PIRP	Public Involvement and Response Plan
PMSR	Partial Mass Source Removal
POL	Petroleum, Oil and Lubricant
PP	Proposed Plan
PSV	Preliminary Screening Value
QAPP	Quality Assurance Project Plan
RA	Remedial Action
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operations)
RAB	Restoration Advisory Board
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
RIP	Remedy-in-Place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
SAIC	Science Applications International Corporation
SAR	SWMU Assessment Report
SI	Site Inspection
SIA	Southeast Industrial Area
SOP	Standard Operating Procedure
sq ft	square feet
SSTL	Site-Specific Target Level
STP	Sewage Treatment Plant
SVOC	Semi-Volatile Organic Compound
SWMU	Solid Waste Management Unit
TAPP	Technical Assistance for Public Participation
TBD	To Be Determined
TCE	Trichloroethylene
TNT	2,4,6-Trinitrotoluene
TOW®	Tube-Launched, Optically-Tracked Wireless-Guided

Acronyms

TPH	Total Petroleum Hydrocarbons
TRC	Technical Review Committee
TXC	Toxic
UFP	Uniform Federal Policy
ug/L	microgram per Liter
US	United States
USACE	US Army Corps of Engineers
USAEC	US Army Environmental Command
USAEHA	US Army Environmental Hygiene Agency (currently called USACHPPM)
USC	US Code
USEPA	US Environmental Protection Agency
UST	Underground Storage Tank
VI	Vapor Intrusion
VOC	Volatile Organic Compound
WIA	Western Industrial Area
WMM	Waste Military Munitions
WWII	World War II

Acronym Translation Table

CERCLA		RCRA
Preliminary Assessment(PA)	=	RCRA Facility Assessment(RFA)
Site Inspection(SI)	=	Confirmation Sampling(CS)
Remedial Investigation/Feasibility Study(RI/FS)	=	RCRA Facility Investigation/Corrective Measures Study(RFI/CMS)
Remedial Design(RD)	=	Design(DES)
Remedial Action (Construction)(RA(C))	=	Corrective Measures Implementation (Construction)(CMI(C))
Remedial Action (Operation)(RA(O))	=	Corrective Measures Implementation (Operation)(CMI(O))
Long Term Management(LTM)	=	Long Term Management(LTM)
Interim Remedial Action(IRA)	=	Interim Measure(IM)

CERCLA		RCRA Underground Storage Tank (UST) Site Phase Terms
Preliminary Assessment(PA)	=	Initial Site Characterization(ISC)
Remedial Investigation(RI)	=	Investigation(INV)
Feasibility Study(FS)	=	Corrective Action Plan(CAP)
Remedial Design(RD)	=	Design(DES)
Remedial Action (Construction)(RA(C))	=	Implementation (Construction)(IMP(C))
Remedial Action (Operation)(RA(O))	=	Implementation (Operations)(IMP(O))
Long Term Management(LTM)	=	Long Term Management(LTM)
Interim Remedial Action(IRA)	=	Interim Remedial Action(IRA)

Site Alias List

AEDB-R Site ID to Alias List

AEDB-R #	Alias
ANAD-001-R-01	RIFLE RNG
ANAD-002-R-01	PISTOL RNG
ANAD-003-R-01	BURNING GD
ANAD-004-R-01	OD Buffer
ANAD-01	SWMU-01
ANAD-05	SWMU-05
ANAD-07	SWMU-07
ANAD-08	SWMU-08
ANAD-09	SWMU-09
ANAD-10	SWMU-10
ANAD-11	SWMU-11
ANAD-12	SWMU-12
ANAD-13	SWMU-13
ANAD-19	SWMU-19
ANAD-20	SWMU-20
ANAD-21	SWMU-21
ANAD-22	SWMU-22
ANAD-23	SWMU-23
ANAD-24	SWMU-24
ANAD-27	SWMU-27
ANAD-28	SWMU-28
ANAD-29	SWMU-29
ANAD-30	SWMU-30
ANAD-31	SWMU-31
ANAD-35	SWMU-35
ANAD-46	SWMU-46
ANAD-48	AOC-A
CC-ANAD-02	Bldg 504
CC-ANAD-04	CC-ANAD-04
CC-ANAD-05	CC-ANAD-05
CC-ANAD-06	Bldg 432
CC-ANAD-07	Clean Fill
CC-ANAD-08	LS Spill
CC-ANAD-09	Bldg 634
CC-ANAD-10	Bldg 114
CC-ANAD-11	Bldg 136
CC-ANAD-12	Bldg 117
CC-ANAD-13	Bldg 524
CC-ANAD-14	Bldg 634

Installation Information

Installation Locale

Installation Size (Acreage): 15357
City: Anniston
County: Calhoun
State: Alabama (AL)
Other Locale Information

ANAD is located in Calhoun County in northeastern AL. It is 110 miles west of Atlanta, Georgia and 50 miles east of Birmingham, AL. The city of Anniston is located 10 miles east of the depot. The depot is surrounded by a series of small communities clustered primarily along the southern and eastern boundaries of the depot and is bordered on the north by the Pelham Range portion of the former Fort McClellan Military Reservation.

Installation Mission

ANAD is the only Army depot capable of performing maintenance and overhaul on both heavy and light-tracked combat vehicles and their components. The depot is designated as the Center for Technical Excellence for several families of combat vehicles (M-1 Abrams battle tank, M-88 tank recovery vehicle, M-113 armored personnel carrier, M-109 Paladin, Assault Breacher vehicle, M-9 ACE combat engineer vehicle, Assault Bridging vehicle, and Stryker vehicles). The depot also maintains and repairs the Department of Defense (DoD) inventory of towed howitzers and small arms.

ANAD stores, maintains and demilitarizes munitions through a tenant organization: the Anniston Defense Munitions Center. Another tenant, the Defense Logistics Agency (DLA), receives, stores, and ships military equipment and materials. The DLA is also responsible for demilitarization and disposal of excess government equipment and materials. The Anniston Chemical Activity and the Anniston Chemical Agent Disposal Facility have recently completed their missions of storing, maintaining, and demilitarizing chemical munitions and surety material and are now in the closure phase of their missions.

Lead Organization

Army Materiel Command (AMC)

Lead Executing Agencies for Installation

US Army Corps of Engineers (USACE) - Engineering and Support Center, Huntsville Ordinance and Explosive Design

US Army Corps of Engineers (USACE), Mobile District

Regulator Participation

Federal	US Environmental Protection Agency (USEPA), Region IV
State	Alabama Department of Environmental Management (ADEM)

National Priorities List (NPL) Status

A score of 52 was recorded on 01-MAR-89.

Date for RA(C) Completion: 201912

Date for NPL Deletion: TBD

Installation Restoration Advisory Board (RAB)/Technical Review Committee (TRC)/Technical Assistance for Public Participation (TAPP) Status

RAB established 199805

Installation Information

Installation Program Summaries

IRP

Primary Contaminants of Concern: Explosives, Metals, Munitions constituents (MC), Semi-volatiles (SVOC), Volatiles (VOC)

Affected Media of Concern: Groundwater, Soil

MMRP

Primary Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)

Affected Media of Concern: Groundwater, Soil

CR

Primary Contaminants of Concern: Metals, Petroleum, Oil and Lubricants (POL), Semi-volatiles (SVOC), Volatiles (VOC)

Affected Media of Concern: Groundwater, Soil

5-Year / Periodic Review Summary

5-Year / Periodic Review Summary

Status	Start Date	End Date	End FY
Complete	200904	201009	2010
Complete	200309	200412	2005
Complete	199810	199810	1999
Underway	201408	201509	2015

Last Completed 5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
Ammunition Storage Area	ANAD-05, ANAD-08, ANAD-10, ANAD-11, ANAD-14, ANAD-15, ANAD-18, ANAD-26, ANAD-27, ANAD-35, ANAD-37
Ammunition Storage Area	ANAD-05, ANAD-08, ANAD-10, ANAD-11, ANAD-14, ANAD-15, ANAD-18, ANAD-26, ANAD-27, ANAD-35, ANAD-37
GROUNDWATER OPERABLE UNIT	ANAD-01, ANAD-07, ANAD-12, ANAD-22, ANAD-25, ANAD-30, ANAD-31
GROUNDWATER OPERABLE UNIT	ANAD-01, ANAD-07, ANAD-12, ANAD-22, ANAD-25, ANAD-30, ANAD-31
SIA Soils Operable Unit	ANAD-02, ANAD-03, ANAD-04, ANAD-06, ANAD-07, ANAD-09, ANAD-12, ANAD-13, ANAD-19, ANAD-20, ANAD-21, ANAD-22, ANAD-23, ANAD-24, ANAD-28, ANAD-29, ANAD-30, ANAD-31, ANAD-38, ANAD-40, ANAD-41, ANAD-43, ANAD-44
SIA Soils Operable Unit	ANAD-02, ANAD-03, ANAD-04, ANAD-06, ANAD-07, ANAD-09, ANAD-12, ANAD-13, ANAD-19, ANAD-20, ANAD-21, ANAD-22, ANAD-23, ANAD-24, ANAD-28, ANAD-29, ANAD-30, ANAD-31, ANAD-38, ANAD-40, ANAD-41, ANAD-43, ANAD-44

Results OU-1:Interim remedy not protective.System operating w/no significant contaminate reduction.Exposure pathways monitored. Improved processes under evaluation.LUCs in-place.
OU-2:Remedy protective.LUCs in-place.
OU-3:Remedy protective.LUCs in-place.

Actions OU-1:Repaired geotex. & cap erosion.Vapor intrusion evaluation underway.GWIS pumps reprogramming underway.
OU-3:Contract award underway for semiannual monitoring.

Plans OU-1:Review GWIS data.Adjust treatment as necessary.
OU-3:Discuss addition of 1-4 dichlorobenzene & 1,1 DCE to monitoring.Discuss addition of 2,4-DNT, 2,6-DNT, 2-amino-4,6-DNT, & 4-amino-2,6-DNT to COC list.

Recommendations and Implementation Plans:

During the Tier I partnering team meeting on Sept. 9, 2011, the team discussed the recommendations in the third five-year review. ANAD indicated that four of the seven recommendations were completed or currently underway including: review of influent/effluent data for the groundwater interceptor system (GWIS); repairs of geotextile and cap erosion at affected SWMUs; the vapor intrusion investigation; and the addition of manual control ability to the GWIS pumps. For two of the remaining recommendations for OU-3, the team agreed not to change the recommended sampling frequency from annual to semiannual or add the proposed chlorinated solvent analysis at this time due to the increased cost, recent changes in the USEPA's monitored natural attenuation (MNA) protocol, and minimal data trend benefits; however, the team did agree to accept the recommendation to add the explosive breakdown products at SWMU 10, 11, and associated downgradient wells to future sampling events.

Fourth five-year review is underway and is scheduled to be completed in fiscal year (FY)15.

Land Use Control (LUC) Summary

LUC Title: OU-2 LUCs

Site(s): ANAD-07, ANAD-09, ANAD-12, ANAD-13, ANAD-19, ANAD-20, ANAD-21, ANAD-22, ANAD-23, ANAD-24, ANAD-28, ANAD-29, ANAD-30

ROD/DD Title: SIA Soils Operable Unit

Location of LUC

ANAD-7, ANAD-9/12, ANAD-13, ANAD-19, ANAD-20, ANAD-21, ANAD-22, ANAD-23 ANAD-24, ANAD-28 and ANAD-29/30

Land Use Restriction: Media specific - Prohibit activities that results in contact with contaminated sediments, Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict drinking water well installation, Media specific restriction - restrict withdrawal or use of groundwater for agricultural/irrigation purposes, Restrict land use - No residential use

Types of Engineering Controls: Signs

Types of Institutional Controls: Dig Permits, Restrictions on Groundwater Withdrawal, Restrictions on land use

Date in Place: 200604

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: 200604

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: METALS, VOC

Additional Information

N/A

LUC Title: OU-3 LUC

Site(s): ANAD-05, ANAD-08, ANAD-10, ANAD-11, ANAD-27, ANAD-35

ROD/DD Title: Ammunition Storage Area

Location of LUC

Ammunition Storage Area

Land Use Restriction: Media specific restriction - restrict drinking water well installation, Media specific restriction - restrict withdrawal or use of groundwater for agricultural/irrigation purposes, Media specific restriction - restrict withdrawal or use of groundwater w/out treatment

Types of Engineering Controls: Signs

Types of Institutional Controls: Restrictions on Groundwater Withdrawal, Restrictions on land use

Date in Place: 200604

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Installation

Record of LUC: Master Plan or Equivalent

Documentation Date: N/A

LUC Enforcement: Annual Inspections, 5 Year Reviews

Contaminants: INORGANICS, METALS

Additional Information

N/A

Cleanup Program Summary

Installation Historic Activity

The roughly square-shaped configuration of ANAD encompasses 15,357 acres. Ammunition storage bunkers within the ammunition storage area (ASA) occupy the majority of the depot. The southeast industrial area (SIA) contains the depot's industrial facilities. Additional areas, primarily along the depot's southern boundary, are allocated for warehouse storage, fuel storage, administrative services, and recreation. The ANAD is one of the major employers in the Anniston area. The ANAD workforce consists of approximately 2,900 depot employees, 450 tenant employees and 600 contract personnel. Land use around ANAD is primarily rural, residential, cropland/pasture, and mixed forest. Some industrial land use has begun on the southern boundary with Kronospan LLC and Bridgewater Interiors Limited Liability Company(LLC). Kronospan is a manufacturer of wood panel products and laminate flooring. Bridgewater is a manufacturer of automobile seats. Their presence significantly changes the environmental setting for the west area.

The US Army began operations at the depot in 1941. Since then, the depot mission has included the storage of munitions and the refurbishment, testing, and decommissioning of combat vehicles and various types of ordnance.

The initial mission for the depot was defined as munitions storage. Construction operations for the depot were formally initiated on Feb. 17, 1941 and the first ammunition storage magazines were completed on Oct. 3, 1941. During World War II (WWII), the mission of the depot was expanded to include a combat equipment storage area, where over 1,230,000 tons of equipment were handled.

Over the years, ANAD's mission was further expanded to include the following:
- overhaul and repair of ordnance vehicles;
- fire control and small arms rebuild (gained from the Augusta Arsenal which was closed in 1954);
- modification of M48A1 tanks and M67 flame throwers;
- calibration support for the southeastern states; and
- logistics support for the Lance missile, tube-launched, optically-tracked wireless-guided (TOW®) weapon systems, and the Dragon missile.

The bulk of this work was conducted in the SIA.

The present mission of ANAD includes maintaining combat vehicles such as the M-1 Abrams tank, M-60 and M-113 series, and towed and self-propelled artillery. The operation to store and demil chemical weapons and surety material is complete and closure operations are under way.

The ANAD mission has required the use of a variety of industrial processes, such as plating, painting, degreasing, sand blasting, paint stripping and steam cleaning. The various activities at ANAD since 1941 contributed to the contaminants of concern (COC). The most widespread COCs are industrial wastes, including spent solvents, heavy metals and POLs, as well as explosives contamination.

Construction of a large chemical weapons destruction facility was completed in 2003. It is located in the north-central portion of the ASA. The operation was completed in 2012. Closure of this facility is ongoing.

On March 31, 1989, the USEPA placed the ANAD SIA on the NPL because of a hazard ranking system (HRS) score of 51.91. On June 13, 1990 a federal facility agreement (FFA) between the USEPA Region IV, the ADEM, and the Department of Army was signed into effect for ANAD. The FFA identifies 44 SWMUs within ANAD: 15 in the ASA and 29 in the SIA.

Four SWMUs were added as sites in the Army Environmental Database - Restoration (AEDB-R) but these sites have not been added to the FFA. Three of these additional sites are UST sites for which ADEM issued notices of violation (NOV) under their UST regulations. The fourth site (ANAD-48) incorporates the western industrial area (WIA) groundwater. The FFA integrates the Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA)/Superfund Amendments and Reauthorization Act (SARA) requirements for the entire depot. The scope of the FFA requires the Army to conduct an RI/FS for all applicable SWMUs within ANAD, followed by the development and implementation of an RD/RA.

The ASA is not on the NPL, but is addressed in the FFA.

ANAD discharges wastewater under a National Pollutant Discharge Elimination System (NPDES) permit that was originally granted in 1986 and was last renewed in 2007. The NPDES permit includes discharges from an industrial wastewater treatment

Installation Historic Activity

plant (IWTP), a sewage treatment plant (STP), and two groundwater treatment units. In 1997, a RCRA permit was issued to ANAD.

In April 1997, a partnering team was formed at ANAD. The team includes representatives from ANAD, the ADEM, and USEPA. USAEC, USACE, and contractors provide support for this partnership. This is not a legally binding relationship, but a commitment and agreement to work together as a team to achieve mutually beneficial goals.

In FY05, SWMUs addressed under the Installation Restoration Program (IRP) were grouped into five OUs. Previous to FY05 there were three OUs at ANAD, which did not include all of the SWMUs in the IRP. The current OU designations are: the SIA groundwater OU (OU-1), the SIA soils OU (OU-2), the ASA OU (OU-3), the Military Munitions Response Program (MMRP) OU (OU-4), and the WIA OU (OU-5). The ANAD implemented an RA which includes soil excavation, capping, and LUCs associated with the ASA and soils OUs.

In January 2008, the final SIA comprehensive RI Phase III (Science Applications International Corporation (SAIC)) was completed. A record of decision (ROD) for OU-3 had been completed and signed. The first eight years of RA(O) at OU-3 were completed. Work was completed on a focused feasibility study (FFS)and proposed plan (PP) during 2012 for OU-1. The interim record of decision (IROD) is underway and expected to be completed in 2015. An expanded site inspection (ESI) for OU-5 was completed in 2010 and an RI/FS began in 2014.

The SI for three MMRP sites (OU-4) were completed in 2005. An RI was initiated in 2010. The fourth MMRP site inspection was initiated in 2012.

Twelve Compliance Restoration (CR) sites were added in the cleanup program in the last few years and they are undergoing an RFI and a CMS.

Installation Program Cleanup Progress

IRP

Prior Year Progress: Semiannual groundwater sampling was completed for OU-1. Sole source private drinking water wells were sampled. An FFS and a PP were completed for OU-1. The LUC inspections for OU-2 and the necessary repairs were completed. The first nine years of RA(O) were completed for OU-3. The LUC inspections for OU-3 and the necessary repairs were completed. An RI for OU-5 was initiated.

Future Plan of Action: ANAD will continue with semiannual groundwater monitoring for OU-1. Sole source private drinking water wells will be sampled. ANAD plans to complete the IROD amendment at OU-1. The RD for the IROD amendment will be completed. LUC monitoring for OU-2 will continue. The RA(O) for OU-3 will continue. LUC monitoring for OU-3 will continue. An RI/FS for OU-5 will be completed. A revised CAP will be submitted for ANAD-46.

MMRP

Prior Year Progress: The draft RI report for ANAD-001-R-01, ANAD-002-R-01, and ANAD-003-R-01 sites was submitted to the regulators for approval. An SI for ANAD-004-R-01 is ongoing.

Future Plan of Action: The RI/FS, PP and ROD are scheduled to be completed for ANAD-001-R-01, ANAD-002-R-01, and ANAD-003-R-01. An SI for ANAD-004-R-01 will be completed and an RI will be initiated.

CR

Prior Year Progress: Compliance monitoring continued under the Alabama Risk-Based Corrective Action (ARBCA) Program for CC-ANAD-02. The RFIs were initiated and continued for CC-ANAD-04, CC-ANAD-05, CC-ANAD-06, CC-ANAD-07 and CC-ANAD-08.

Two new sites CC-ANAD-08 and CC-ANAD-09 were added to AEDB-R.

Future Plan of Action: Free-product removal and groundwater monitoring will continue for Site CC-ANAD-02 as recommended in the ARBCA report.

The RFIs will be completed for CC-ANAD-04, CC-ANAD-05, CC-ANAD-06, CC-ANAD-07 and CC- ANAD-08.

CC-ANAD-10, CC-ANAD-11, CC-ANAD-12, ANAD-13 and CC-ANAD-14 were added as new sites and RFIs will be initiated.

ANNISTON ARMY DEPOT

Army Defense Environmental Restoration Program
Installation Restoration Program

IRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 48/25

Installation Site Types with Future and/or Underway Phases

1 Above Ground Storage Tank
(ANAD-10)
1 Burn Area
(ANAD-29)
2 Contaminated Ground Water
(ANAD-31, ANAD-48)
1 Contaminated Sediments
(ANAD-05)
5 Disposal Pit/Dry Well
(ANAD-07, ANAD-08, ANAD-09, ANAD-13, ANAD-27)
1 Explosive Ordnance Disposal Area
(ANAD-35)
5 Landfill
(ANAD-01, ANAD-21, ANAD-23, ANAD-24, ANAD-28)
4 Surface Impoundment/Lagoon
(ANAD-11, ANAD-12, ANAD-22, ANAD-30)
1 Underground Storage Tank
(ANAD-46)
2 Waste Treatment Plant
(ANAD-19, ANAD-20)

Most Widespread Contaminants of Concern

Explosives, Metals, Munitions constituents (MC), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern

Groundwater, Soil

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
ANAD-22	A-BLOCK LAGOON (FACILITY 514)	IRA	WASTE REMOVAL - SOILS	1982
ANAD-01	SITE Z-1 TRENCHES AREA	IRA	WASTE REMOVAL - SOILS	1983
ANAD-12	FACILITY 414 (OLD LAGOONS)	IRA	WASTE REMOVAL - SOILS	1983
ANAD-25	BUILDING 130 SUMP	IRA	WASTE REMOVAL - SOILS	1983
ANAD-02	SITE Z-2 SANITARY LANDFILL	IRA	CAPPING	1994
ANAD-45	LEAKING UST AT BLDG 410	FRA	FREE PRODUCT RECOVERY	1996
ANAD-45	LEAKING UST AT BLDG 410	FRA	BIOREMEDIATION - IN SITU GROUNDWATER	1996
ANAD-45	LEAKING UST AT BLDG 410	FRA	NATURAL ATTENUATION	1996
ANAD-46	LEAKING UST AT BLDG 6	FRA	FREE PRODUCT RECOVERY	1997
ANAD-12	FACILITY 414 (OLD LAGOONS)	IRA	IN-SITU SOIL TREATMENT	2001
ANAD-12	FACILITY 414 (OLD LAGOONS)	IRA	CHEMICAL REDUCTION/OXIDATION	2001
ANAD-12	FACILITY 414 (OLD LAGOONS)	IRA	GROUND WATER TREATMENT	2003
ANAD-05	SINKHOLE (NEAR EASTERN BOUNDARY)	FRA	OTHER	2005

IRP Summary

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
ANAD-07	CHEMICAL WASTE DISPOSAL PIT	FRA	CAPPING	2005
ANAD-08	ACID DISPOSAL PIT	FRA	OTHER	2005
ANAD-09	CALCIUM HYPOCHLORITE BURIAL PIT	FRA	CAPPING	2005
ANAD-09	CALCIUM HYPOCHLORITE BURIAL PIT	FRA	REMOVAL	2005
ANAD-10	TNT WASHOUT FACILITY SEDIMENTATION TANK	FRA	NATURAL ATTENUATION	2005
ANAD-19	OLD STP (EAST AREA)	FRA	INSTITUTIONAL CONTROLS	2005
ANAD-20	NEW STP (EAST AREA)	FRA	INSTITUTIONAL CONTROLS	2005
ANAD-21	ABRASIVE DUST LANDFILL	FRA	INSTITUTIONAL CONTROLS	2005
ANAD-22	A-BLOCK LAGOON (FACILITY 514)	FRA	INSTITUTIONAL CONTROLS	2005
ANAD-23	ASBESTOS WASTE DISPOSAL TRENCH	FRA	INSTITUTIONAL CONTROLS	2005
ANAD-24	OLD SANITARY LANDFILL	FRA	INSTITUTIONAL CONTROLS	2005
ANAD-27	SOUTH TNT BURIAL PIT	FRA	OTHER	2005
ANAD-28	WASTE WOOD LANDFILL,NORTHEAST PART DEPOT	FRA	INSTITUTIONAL CONTROLS	2005
ANAD-29	OLD LUMBER DISPOSAL YARD,(NEAR BLDG 573)	FRA	CAPPING	2005
ANAD-30	NORTHEAST LAGOON AREA	FRA	CAPPING	2005
ANAD-35	DEACTIVATION FURNACE	FRA	REMOVAL	2005
ANAD-12	FACILITY 414 (OLD LAGOONS)	FRA	WASTE REMOVAL - SOILS	2006
ANAD-12	FACILITY 414 (OLD LAGOONS)	FRA	CAPPING	2006

Duration of IRP

Date of IRP Inception: 197804

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201907/204606

Date of IRP completion including Long Term Management (LTM): 204606

IRP Contamination Assessment

Contamination Assessment Overview

ANAD has a total of 48 AEDB-R sites including lagoons, storage areas, disposal pits, UST, landfills, open burning/open detonation (OB/OD) areas and waste treatment areas.

A number of studies have been conducted at ANAD to support the IRP as well as other environmental management programs. These studies, which are listed in the previous studies section, have yielded a significant amount of information on the extent of contamination on-depot and the potential for contamination off-site.

A Comprehensive Groundwater RI, Phase III (SAIC 2008d) was completed for OU-1. This RI assessed the nature and extent of groundwater contamination in the area of ANAD's southeast boundary and the extent and potential for migration of contaminants from the SIA, particularly in the deeper groundwater regime. That study filled in a number of data needs involving the nature of geologic formations, groundwater flow, and groundwater chemistry in the area upgradient of the SIA, the connectivity of the deep groundwater system in the SIA to off-post springs, the connectivity of the shallow-to-deeper groundwater system, and the degree of attenuation and degradation of contaminants. The results of this study were used to establish the objectives and extent of groundwater cleanup required which was detailed in an FS that was completed in April 2008. An FFS was completed in April 2012 for OU-1 to determine the source specific alternatives. A PP was completed in October 2012 to address the groundwater contamination in OU-1 including source areas. Due to a long cleanup time and uncertainty it was decided to complete an IROD, which is underway.

ANAD's monitoring program includes sampling wells within and downgradient of the SIA. Locations off-post of ANAD are monitored for volatile organic compounds (VOC) and bis 2-ethylhexyl phthalate groundwater contamination. Trichloroethylene (TCE) is the most frequently detected VOC and is the primary COC. The off-post locations are monitored in accordance with the requirements of ANAD's FFA with the USEPA Region IV, ADEM, and CERCLA. Anniston Water Works and Sewer Board (AWWSB) and ANAD also analyze samples from Coldwater Spring monthly, which is more frequent than the required quarterly sampling specified in the Safe Drinking Water Act and ADEM regulations.

A total of 123 wells and springs are used by residents for drinking water, agriculture, or recreation along the southern and western boundaries of ANAD. Wells and springs identified as the sole source drinking water supply have been sampled annually since 2000. The results indicate that there are no VOC contaminants above maximum contaminant levels (MCL).

Measures are in place to protect current and potential receptors (on- and off-post) from exposure to contaminants exceeding MCLs. These measures include cleanup of sites where contamination is present, operation of the interim groundwater treatment system at ANAD, and an emergency response plan (ERP), which will be implemented in the event that private or public water supplies exceed applicable drinking water standards. Due to increases in TCE concentration in some off-post monitoring wells and at Coldwater Spring, the 1996 ERP was revised. As a result, the Army funded $1.6 million for additional treatment at the AWWSB's Krebs Water Treatment Plant. Since the installation of the air strippers at the plant, TCE is at nondetectable levels in the finished drinking water.

Sites within ANAD were identified where use restrictions and controls were selected as part of the remedy to address risk and exposure to contaminants and to manage the current and future use of the property. These elements of the remedy are identified in the final ROD for the soil SIA OU (OU-2) and the final ASA OU (OU-3) ROD.

SIA (OU-1)
The investigations completed in the SIA to date have focused on both soils and groundwater, with on- and off-site groundwater receiving the primary focus since 1997. The initial investigations focused on characterizing the shallow groundwater, determining what information needed to be obtained to assess off-site groundwater contamination, and the factors controlling movement of deep groundwater. As the complexity of the site became more apparent, a phased approach to the site investigations was taken.

As additional site information was gained and a progression to the next phase was required, the SIA groundwater investigation strategy evolved. In September 1991, an IRA ROD established the on- and off-post groundwater OUs at the SIA (ANAD 1991). Per the IROD, the boundaries of the on- and off-post groundwater OUs are defined vertically and horizontally as follows:

On-post Groundwater
The on-post groundwater component was strictly defined as the on-post (just within the boundaries of ANAD), shallow groundwater encountered within the residuum and the upper several feet of bedrock. This represents the limits of the Phase I and Phase II RI Groundwater Investigations and Groundwater Remedial Activities (Jacobs 1992; SAIC 1998a).

IRP Contamination Assessment

Contamination Assessment Overview

Off-post Groundwater

The definition of off-post groundwater in the IROD is a misnomer since it not only includes the shallow and deep groundwater beyond the physical boundaries of the ANAD, but it also includes groundwater within the boundaries of the ANAD property that is beneath the vertical limits of the SIA Phase I and Phase II investigations (approximately 1992 to 1995). The off-post groundwater was the focus of the Off-Post Phase I Groundwater RI (SAIC 2001d).

Combined Groundwater (CGW):

The CGW designation was established to include both the on- and off-site groundwater of all depths. The results of the first RI with this focus are reported in the CGW RI Report (SAIC 2004d). Since the late-1970s, a number of environmental investigation activities have been conducted by ANAD at, and in the immediate vicinity of, the SIA facility. The majority of these investigations have focused on the shallow groundwater beneath the ANAD facility. The Final SIA Phase II RI (SAIC 1998a), which was completed in 1997, was the most comprehensive on-site groundwater investigation completed at ANAD. It concentrated on the soils and groundwater within the SIA. The hydrogeologic component of this investigation included groundwater and surface water elevation measurements, precipitation, stream flow and static water level monitoring, and pump testing. The Phase I off-post RI focused on hydrogeologic characterization of the Jacksonville fault zone to the south of the SIA (SAIC 2001d). The Phase I off-post RI data collection activities included remote sensing along the three transects (X-2, X-3, and X-4) using geophysical methods and drilling boreholes for lithologic and hydrogeologic data.

Following evaluation of the geophysical data and borehole results, monitoring wells were installed at recommended intervals. This RI did not include groundwater sampling. The CGW RI assessed the controls on the migration of groundwater contaminants whose source is the SIA, particularly the deeper flow of groundwater. This RI was a continuation of the Phase I Off-post RI (SAIC 2001d) and included activities to assess the movement of deep groundwater and the extent of groundwater contamination in the area of the ANAD southwestern boundary. The CGW data collection activities included geophysical surveying, borehole drilling and well installation, and groundwater sampling. These new wells were located within the SIA and off-site. During 2002, a biennial groundwater sampling program was initiated that consisted of a wet-season sampling event (e.g., March and April) and a dry-season sampling event (e.g., October and November).

Sample locations included on- and off-site monitoring wells, springs, and private wells. This sampling was supplemented by the monthly sampling of selected locations and continued through 2004. These investigations, along with previous investigations, have led to a greater understanding of the processes by which groundwater moves through the area and the development of a hydrogeologic conceptual model. The hydrogeologic conceptual model for the ANAD site, which includes the shallow and deep groundwater, is presented in the June 2004 report titled CGW RI at ANAD, Anniston, Alabama (SAIC 2004d).

As part of a Phase II FSS, the path forward includes further evaluation of specific remedial technologies applied in source-specific areas. The technologies and alternatives were evaluated with respect to the geologic limitations identified in the conceptual site model.

SIA (OU-2)

The investigations completed in the SIA to date have focused on both soils and groundwater, with on- and off-site groundwater receiving the primary focus since 1997. The initial investigations focused on characterizing the shallow groundwater, determining what information needed to be obtained to assess off-site groundwater contamination, and the factors controlling movement of deep groundwater. As the complexity of the site became more apparent, a phased approach to the site investigations was taken.

The SIA cleanup strategy includes designation of OUs, which are targeted for discrete RAs. Two OUs have been defined to date in the SIA: the soil OU-2 and on-post/off-post groundwater OU-1. The OU-2 areas within the SIA where soil, sediment, and surface water media have been impacted by historic site operations and where potential risks are present, is the subject of this ROD.

The storage, maintenance, and industrial functions of ANAD historically have resulted in the generation of hazardous wastes. Typical waste-generating processes at ANAD have included vapor degreasing, metal cleaning, sandblasting, electroplating, and painting. Generated solid and liquid wastes have included metals, cyanide, phenols, pesticides, herbicides, chlorinated hydrocarbons, petroleum hydrocarbons, solvents, acids, alkali chelating agents, asbestos, and creosote. Wastes generated at ANAD were disposed of on-post in trenches, lagoons, landfills, or other holding vessels from the 1940s through the late-1970s. The majority of the waste generated and disposed of has occurred within the SIA. Based on previous investigations, 29 locations within the SIA are known or suspected to contain wastes and have been designated as SWMUs.

IRP Contamination Assessment

Contamination Assessment Overview

Environmental studies and investigations on the ANAD SIA have been conducted since the first quantitative assessment of industrial wastewater was completed in 1966. Recent studies in the 1990s include the Phase I and II RI [Jacobs Engineering Group (JEG) 1994 and SAIC 1998a], SWMU 12 supplemental investigation, and FSs for the soil and on-post groundwater OUs (SAIC 1999 and 1998b). These studies identified the presence and the nature and extent of contaminated soil and groundwater within the SIA and identified approaches to site cleanup. As a result of these investigations and assessments, waste management practices have been changed and RAs at some of the SWMUs completed. Disposal areas at SWMU 1 (Chemical Sludge Waste Pits), SWMU 12 (Facility 414 Old Lagoons), SWMU 22 (A-Block Lagoon), and SWMU 23 (asbestos waste disposal trench) were excavated and wastes removed with contaminated soil from 1981 to 1983. Additional excavation and waste removal was performed in 2005-2006 at SWMU 9 (calcium hypochlorite pit) and SWMU 12 (Facility 414 Old Lagoons) as part of the approved PP.

The OU-2 ROD was finalized in July 2008. The RA post-construction report and operations and maintenance (O&M) plan were finalized in September 2008.

ASA INVESTIGATION (OU-3)
In 1991, JEG initiated an ESI in the ASA (15 SWMUs total). The ESI report was approved by USEPA/ADEM in December 1994. Contamination from VOCs and SVOCs was determined not to be a problem at the ASA. Heavy metals, explosives, nitrate/nitrite, total organic carbon and petroleum hydrocarbons were detected in samples of groundwater, soil and sediment from a number of sites. During the ESI, four SWMUs were identified as no further action (NFA) sites. Further investigation to confirm and evaluate the potential contamination was recommended at 11 SWMUs. High concentrations of explosives were thought to be present in subsurface soils at ANAD-11.

In September 1993, SAIC initiated preparation of RI/FS work plans for the 11 remaining ASA SWMUs. The plans were finalized by USEPA/ADEM in December 1994.

In FY97, due to unconfirmed reports that trinitrotoluene (TNT) levels in the soil at this site were in excess of 60 percent, a preliminary investigation was conducted at ANAD-11. USACE conducted this investigation to confirm the high explosives levels in order to perform the investigation in a safe manner. (Soil concentrations in excess of 10 percent are considered explosive). This investigation concluded that the concentrations were less than 10 percent.

In 1997, SAIC began the ASA RI fieldwork and completed it in 1998. A draft RI report was delivered in May 1999. An additional ecological risk assessment was determined necessary to adequately characterize nine of the sites, in accordance with USEPA, Region IV guidance. In August 2001, the final ASA RI was delivered and the final FS and PP were delivered in March 2002. The ROD was signed by each stakeholder in 2006.

UST INVESTIGATIONS
In July 1991, February 1992 and June 1993, ANAD received NOVs from ADEM for UST releases at three buildings (i.e. Buildings 385, 410, and 6). These three sites required secondary investigations due to leaking petroleum products. The tanks at these sites were removed. In FY95, the SI conducted for Building 385 determined that no further investigative or corrective actions were required. A CAP was written for Building 410 and Building 6 in FY96. These CAPs called for free-product removal and natural attenuation for soil and groundwater. In FY96, the free-product removal began for Building 410 and in FY97 for Building 6.

In 1999, alternate corrective actions were performed based on the new ADEM ARBCA guidance for USTs. This action was completed in January 2002. In 2005, the concentrations in groundwater beneath Building 410 were determined as having met the ARBCA levels and NFA was recommended for the site. Groundwater monitoring continues at Building 6. Due to increasing benzene levels in selected wells, an investigation was initiated in 2012 to determine the source.

WIA (OU-5)
Concentrations of TCE above the MCL were detected in groundwater within the WIA. The source of contaminants has not been identified. TCE was detected in groundwater while implementing other groundwater monitoring programs. An SI and ESI were implemented to identify the potential source of the TCE and to determine if an RI is warranted. The SI was completed in February 2008 and the ESI was completed in December 2010. Additional investigation will be initiated to define the nature and extent of contamination.

Cleanup Exit Strategy

Over the course of previous studies, the ANAD OU strategy has evolved, based on an increased understanding of the site and probable response actions. Most notably, the segregation of the on- and off-post groundwater OUs (as presented in the September 1991 IROD) was determined to be unnecessary and a potential impediment to the implementation of response actions. On May 20, 2004, the current OU strategy was approved by consensus of the ANAD partnering team. It was revised and incorporated in the site management plan (2005) and includes the OUs listed below. The basis for differentiating each OU is also provided.

OU-1: SIA groundwater
Response actions require longer implementation time compared to SIA soils (OU-2) and technologies are distinct and separate from soils. As a portion of the NPL site, the SIA has higher priority and is geographically separate from the ASA (OU-3).

OU-2: SIA soil
Response actions are implemented more rapidly and are dissimilar to the SIA groundwater (OU-1) response actions. As a portion of the SIA NPL site, this OU has higher priority and is geographically separate from the ASA (OU-3).

OU-3: ASA (all media)
This OU has a lower priority than SIA NPL (OU-1 and OU-2) responses and is geographically separate from the SIA NPL site.

OU-5: WIA sites
This OU has a lower priority than SIA NPL (OU-1 and OU-2) responses and currently is proceeding to the RI phase. It is geographically separate from the SIA NPL site.

In 1991, a public involvement and response plan (PIRP) was drafted by JEG. This PIRP outlined efforts to include the public in the IRP. In FY97, an update of this plan [the community relations plan (CRP) update], was initiated by QST Environmental (formerly Environmental Science & Engineering) to include environmental justice issues, as well as information concerning RABs and TAPP. In May 1998, the CRP was finalized. As an additional document to the CRP, the final ANAD community involvement plan (CIP) addendum was prepared by SAIC to reflect current community interest. The CIP was released to the public in 2004. The CIP was updated in 2012.

ANAD's cleanup strategy includes completing and implementing an IROD amendment at OU-1 and the RI/FS at OU-5. All sites in OU-2 and OU-3 are in the RA(O)/LTM phase.

IRP Previous Studies

	Title	Author	Date
1979			
	Installation Assessment of Anniston Army Depot, Report No. 119	US Army Toxic and Hazardous Materials Agency	APR-1979
1981			
	Anniston Army Depot RCRA Studies	Environmental Science and Engineering, Inc.	MAR-1981
	Geophysical and Geohydrologic Investigation of Anniston Army Depot	Technos, Inc.	SEP-1981
1982			
	Groundwater Assessment of the Southeast Industrial Area	Battelle Pacific Northwest Laboratories	OCT-1982
1984			
	Remedial Action of Hazardous Waste Sites	Roy F. Weston	JAN-1984
	Source Identification, Contaminant Transport Simulation and RA Analysis	Batelle Pacific Northwest Laboratories	JUN-1984
1985			
	SWMUs at Anniston Army Depot	Office of Commander	JAN-1985
1986			
	Off-Post Investigation at Anniston Army Depot, Summary of Preliminary Results	Environmental Science and Engineering, Inc.	DEC-1986
1987			
	RFA	NUS Corporation	FEB-1987
1988			
	FS for Anniston Army Depot, Endangerment Assessment - ATSDR Submittal	Environmental Science and Engineering, Inc.	FEB-1988
	FS for Anniston Army, Endangerment Assessment	Environmental Science and Engineering, Inc.	FEB-1988
1989			
	RI Anniston Army Depot, Volumes 1-4,	Environmental Science and Engineering, Inc.	JAN-1989
	FS for Anniston Army Depot	Environmental Science and Engineering, Inc.	JAN-1989
	Groundwater Extraction Optimization, Anniston Army Depot	E.C. Jordan	APR-1989
1990			
	Groundwater Extraction Optimization, Anniston Army Depot	E.C. Jordan	APR-1990
	FFA Between USEPA Region IV, ADEM and the US Army	Department of Army for the Anniston Army Depot	JUN-1990
1991			
	Superfund Interim Record of Decision, Anniston Army Depot, Alabama Groundwater Operable Unit	US Army Installation Restoration Program	SEP-1991
1993			
	Groundwater Extraction System Optimization Study, Final Report	Jacobs Engineering Group	MAY-1993
1994			
	Dye Tracing Study, SIA	Ewers Water Consultants	JUN-1994

IRP Previous Studies

	Title	Author	Date
1994			
	SWMU #12 Supplemental Investigation	Jacobs Engineering Group	OCT-1994
	Expanded SI Report, Ammunition Storage Area	Jacobs Engineering Group	NOV-1994
1995			
	RI Report	Jacobs Engineering Group	JAN-1995
	Revised Final Chemical Data Report No. 1 - First Quarter, Off-Post Groundwater Monitoring and ERP	Science Applications International Corp.	JUN-1995
	Final Chemical Data Report No. 2 - First Quarter, Off-Post Groundwater Monitoring and ERP	Science Applications International Corp.	JUN-1995
	Revised Final Chemical Data Report No. 3 - First Quarter, Off-Post Groundwater Monitoring and ERP	Science Applications International Corp.	SEP-1995
	Corrective Action Plan, Building 410	Ecology and Environment, Inc.	NOV-1995
	Revised Final Chemical Data Report No.4 - First Quarter, Off-Post Groundwater Monitoring and Emergency Response Plan	Science Applications International Corp.	DEC-1995
1996			
	CAP, Building 6, Site 1 and 2	Ecology and Environment, Inc.	MAR-1996
	Revised Final ERP, Off-Post Groundwater Monitoring and ERP	Science Applications International Corp.	OCT-1996
1997			
	Final Monitoring Well Inventory Well Assessment Report Vista Technologies, Inc. January 1997	Vista Technologies, Inc.	JAN-1997
	Industrial Sewer Line System Upgrade Plan	Science Applications International Corp.	FEB-1997
	Monitoring Well Rehabilitation Report	US Army Corps of Engineers, Mobile District	SEP-1997
	Expanded Site Inspection for TNT Washout Facility Leaching Beds (SWMU 11)	US Army Corps of Engineers, Mobile District	SEP-1997
1998			
	Report of Findings for the Groundwater Tracer Test SIA	Science Applications International Corp.	MAY-1998
	Final CRP Update	QST Environmental, Inc	MAY-1998
	Final SIA Phase 2 Remedial Investigation	Science Applications International Corp.	MAY-1998
	Final SIA Groundwater Operable Unit FS	Science Applications International Corp.	NOV-1998
1999			
	Geophysical Investigation, SIA Argonne National Laboratory	Argonne National Laboratory	MAY-1999
	Final SIA FS of Seven SWMUs	Science Applications International Corp.	JUL-1999
	Final Proposed Plan for the Clean-Up of Groundwater within the SIA	Science Applications International Corp.	SEP-1999
2000			
	Final Anniston AD RA On-Post Soil Operation Unit Proposed Plan	Science Applications International Corp.	JUL-2000
2002			
	Final Anniston AD ASA Proposed Plan	Science Applications International Corp.	MAR-2002

IRP Previous Studies

	Title	Author	Date
2002			
	Final Anniston AD ASA Proposed Plan	Science Applications International Corp.	MAR-2002
	Final Ammunition Storage Area Remedial Investigation Report	Science Applications International Corp.	AUG-2002
	Final Phase I of the Off-Post RI	Science Applications International Corp.	DEC-2002
2004			
	CGW RI at Anniston Army Depot, Anniston, Alabama	Science Applications International Corp.	JUN-2004
	Final ERP for Coldwater Spring Public Water Supply	Science Application International Corp.	AUG-2004
	Final ERP for Private Wells	Science Application International Corp.	AUG-2004
	Final ANAD CIP Addendum	Science Application International Corp.	AUG-2004
2005			
	Site Management Plan	Anniston Army Depot	DEC-2005
2006			
	Final ROD for ASA	Anniston Army Depot	JUL-2006
	Historical Records Review Report for WIA	Science Applications International Corp.	SEP-2006
	Draft Final ASA Natural Attenuation Monitoring Plan	STEP, Inc.	DEC-2006
2007			
	Draft Final RD Addendum/Baseline Sampling Analysis Report ASA	SpecPro Environmental Services, LLC	FEB-2007
2008			
	Final SIA Comprehensive RI Phase III	Science Applications International Corp.	JAN-2008
	Comprehensive Groundwater FS for Operable Unit 1	Science Applications International Corp.	APR-2008
	Final SI Report for the Western Industrial Area (OU-5)	Science Applications International Corp.	APR-2008
	Final ROD for SIA Soil (OU-2)	Anniston Army Depot	JUL-2008
	Final Southeast Industrial Area Remedial Action Post-Construction Report and Maintenance Plan	SpecPro Environmental Services LLC	SEP-2008
	Final ASA RA Post-Construction Report	STEP, Inc.	SEP-2008
2009			
	Final Operable Unit 3 Groundwater Monitoring Report at the Ammunition Storage Area	SpecPro Environmental Services LLC	MAR-2009
	Annual Monitored Natural Attenuation Report Year 3 for Operable Unit 3	Black & Veatch Special Projects Corp.	MAR-2009
	Final Work Plan Addendum to ASA Long-Term Groundwater Monitoring Plan	Black & Veatch Special Projects Corp.	JUN-2009
	Expanded Site Investigation Work Plan for Western Industrial Area (OU-5)	Tetra Tech, Inc.	AUG-2009
2010			
	Work Plan Addendum, ASA Long-Term Groundwater Monitoring Plan	Black & Veatch Special Projects Corp.	APR-2010

IRP Previous Studies

	Title	Author	Date
2010			
	Final Work Plan Addendum to ASA Long-Term GW Monitoring Plan	Black & Veatch Special Projects Corp.	APR-2010
	Coldwater Spring Monthly Sampling Summary Report for 2008	Science Application International Corp.	APR-2010
	Operable Unit-1 Groundwater Sampling Data Summary For calendar Year 2008	Science Application International Corp.	APR-2010
	Monitoring Well Inventory Work Plan	Science Applications International Corp.	AUG-2010
	Five-Year Review Report for OU-1, OU-2 and OU-3	U.S. Army Corps of Engineers, Mobile District	SEP-2010
	Final Expanded Site Investigation Report	Tetra Tech, Inc.	NOV-2010
	Vapor Intrusion Monitoring Work Plan	Science Application International Corp.	DEC-2010
	Vapor Intrusion Assessment UFP-QAPP	Science Application International Corp.	DEC-2010
	Final Technical Memorandum for SIA (OU-1)	Tetra Tech, Inc.	DEC-2010
2011			
	Final Annual Monitored Natural Attenuation Report Year 4 for OU-3	Black & Veatch Special Projects Corp.	JAN-2011
	Final Well Redevelopment Work Plan for OU-1	Science Applications International Corp.	MAR-2011
	Final OU-1 GW Sampling Data Summary for 2009, SIA	Science Applications International Corp.	MAY-2011
	Final Coldwater Spring and Cooper Well Monthly Sampling Summary Report for 2009	Science Application International Corp.	JUN-2011
	Final Work Plan Addendum to ASA Long-Term Groundwater Monitoring Plan	Black & Veatch Special Projects Corp.	JUN-2011
	Final Coldwater Spring and Cooper Well Monthly Sampling Summary Report for 2010	Science Applications International Corporation	OCT-2011
	Explosive Site Plan Remedial Investigation/Characterization Action MRS ANAD-001-R-01 Recoilless Rifle Range	HydroGeoLogic, Inc.	DEC-2011
	Letter Work Plan Addendum for Calendar Year 2010 Operable Unit 1 Groundwater Sampling	Science Applications International Corporation	DEC-2011
2012			
	Final Remedial Investigation/Characterization Action Work Plan Operable Unit 4	HydroGeoLogic, Inc.	FEB-2012
	Quality Control Plan Design Build: Refurbish And Provide Spill Prevention, Control and Countermeasures For Groundwater Intercept Treatment Plant	SpecPro Environmental Services LLC	FEB-2012
	Final Engineering Evaluation/Cost Analysis (EE/CA)	URS Group, Inc.	FEB-2012
	Vapor Intrusion Assessment Report	Tetra Tech, Inc.	FEB-2012
	Final Annual Monitored Natural Attenuation Report Year 5	Black & Veatch Special Projects Corp.	FEB-2012
	Operable Unit-1 Groundwater Sampling Data Summary For 2010	Science Applications International Corporation	APR-2012
	Community Involvement Plan for Anniston Army Depot	Science Applications International Corporation	APR-2012
	Final Focused Feasibility Study for Southeast Industrial Area (OU-1)	Tetra Tech, Inc.	APR-2012
	Final Work Plan Addendum to ASA Long-Term Groundwater Monitoring Plan	Black & Veatch	MAY-2012

IRP Previous Studies

	Title	Author	Date
2012			
	Addendum to the Monitoring Well Inventory Work Plan	Science Applications International Corporation	JUN-2012
	Revised Final Operable Unit-1 Groundwater Sampling Data Summary For 2010	Science Applications International Corporation	JUL-2012
	Technical Memorandum for Refinement of Chemicals of Concern of Operable Unit 1	Tetra Tech, Inc.	SEP-2012
	Final Annual Monitored Natural Attenuation Report Year 6	Black & Veatch Special Projects Corp.	SEP-2012
	Historical Data Evaluation Summary and Database For Anniston Army Depot OU-1	Science Applications International Corporation	SEP-2012
	Final Proposed Plan Southeast Industrial Area (OU-1)	Tetra Tech, Inc.	OCT-2012
2013			
	Final Coldwater Spring and Cooper Well Monthly Sampling Summary Report for 2011	Science Applications International Corporation	JAN-2013
	Operable Unit-1 Groundwater Sampling Data Summary For 2011	Science Applications International Corporation	APR-2013
	Final Annual Monitored Natural Attenuation Report Year 7	Black & Veatch Special Projects Corp.	APR-2013
2014			
	Final Coldwater Spring and Cooper Well Monthly Sampling Summary Report for 2012	Leidos, Inc.	MAY-2014
	Final Annual Monitored Natural Attenuation Report Year 8	Black & Veatch Special Projects Corp.	JUN-2014
	PLA Remedial Action Operations Work Plan, Operable Unit No. 3	EMR, Inc.	SEP-2014
2015			
	Coldwater Spring and Cooper Well Monthly Sampling Summary Report for 2013	Leidos, Inc.	JAN-2015
	OU-1 Groundwater Sampling Data Summary and Plume Refinement for 2013	Leidos, Inc.	APR-2015

ANNISTON ARMY DEPOT

Installation Restoration Program

Site Descriptions

Site ID: ANAD-01
Site Name: SITE Z-1 TRENCHES AREA
Alias: SWMU-01

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals, Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA	197804	198608
SI	198608	198704
RI/FS	198110	201506
RD	201406	201512
IRA	198211	201610
RA(C)	201505	201610
RA(O)	201607	204606

RIP Date: 201610

RC Date: 204606

SITE DESCRIPTION

This site is part of OU-1.

In 2003, a decision was made to address all groundwater actions for OU-1 under this site. The comprehensive (formerly combined) groundwater OU includes previously studied (on- and off-post) groundwater OUs. The SWMUs that are considered source areas for groundwater contamination are ANAD-01, -12, -25, -29 and -30. Investigations have shown that chlorinated solvents have migrated off-post and impacted the municipal drinking water source (Coldwater Spring) for the Anniston/Calhoun County system (approximately 60,000 people). Air strippers installed at the water treatment plant began operation in FY05.

The Z-1 Trenches Area consisted of a series of seven excavated trenches approximately 10 to 15 feet (ft) in depth, located within a two-acre area north of the vehicle test track. The waste pits were used from 1971 to 1981 for the disposal of various liquid and containerized chemical wastes. As a result of a 1979 RCRA corrective/removal action, the trenches were excavated and contaminated soils and wastes were transported off-depot for disposal. Confirmation soil sample analysis indicated a maximum concentration of 25 milligrams per kilogram (mg/kg) total organics remaining in the trenches after excavation. Based upon the soil analyses, ADEM granted approval for closure.

The Phase I RI shows that a 1983 removal action was successful in removing soil as a contaminant source. Contamination reached groundwater before the 1983 removal. In 1990, a pump-and-treat system began operation under an IROD. In the groundwater samples that were collected in 1995, solvents were detected at concentrations that indicated a high probability of non-aqueous phase liquid (NAPL).

An RA was conducted at SWMU-12 (Fenton's reagent) for TCE-contaminated soil and groundwater. The process was effective in removing VOC contaminants in the soil, but ineffective for the groundwater. The objective of the RA was to treat or reduce chemical concentrations believed to be contributing to exceeding the health-based concentration limits in the groundwater.

In FY08, the comprehensive RI was finalized with comments from ADEM. The FS was also completed in FY08. In FY12, an FFS and a PP were completed focusing on the source areas. An IROD is underway and expected to be completed in FY15.

Cost for abandonment of all wells associated with OU-1 including off-site wells is included in ANAD-01.

Installation-wide five-year reviews are included in ANAD-01. The third five-year review was completed in September 2010 and the fourth five-year review is underway and scheduled to be completed in September 2015.

CLEANUP/EXIT STRATEGY

Site ID: ANAD-01
Site Name: SITE Z-1 TRENCHES AREA
Alias: SWMU-01

The PP includes point of use treatment at Coldwater Spring, overhaul of current GWIS, long-term monitoring of the groundwater, implementation of LUCs and PMSR using aggressive bioremediation for five years in three source areas exceeding 10 mg/L TCE (trench, landfill, and northeast areas). Due to mission essential operations, access is not available in the industrial area at this time and will be completed when access is available in the future if the mission changes. It is assumed that O&M of the current groundwater system and sampling will be required for three additional years until the RD and RA(C) phases are completed. After construction is completed, RA(O) will be done for five years with PMSR and 25 years without PMSR. It is also assumed that long-term monitoring will be done for five years after completion of the RA(O).

In the interim, operation of the GWIS, groundwater monitoring, annual potable well sampling and monthly sampling of Coldwater Spring (drinking water source) will continue.

Site ID: ANAD-05
Site Name: SINKHOLE (NEAR EASTERN BOUNDARY)
Alias: SWMU-05

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals, Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA	197804	198608
SI	197804	199410
RI/FS	199310	200206
RD	200408	200508
RA(C)	200508	200509
RA(O)	200510	201810

RIP Date: 200510

RC Date: 201810

SITE DESCRIPTION

This site is part of OU-3 and is included in the ASA (OU-3). The ROD was finalized in July 2006.

The sinkhole is located in a remote area along the ASA's eastern boundary. This feature is a depression, approximately 0.6 of an acre, and contains water. The area was used periodically between 1942 and 1978 to dispose of various construction debris and miscellaneous wastes. Over the years most of the debris has been removed from the sinkhole. VOCs, SVOCs and lead have been detected in the groundwater.

The ROD required 10 years of sampling with a review at the 10th year to determine effectiveness of the remedy. It is anticipated based on current conditions that three more years of additional monitoring and LUC maintenance will be required before NFA is achieved.

This site includes all the cost associated with all OU-5 sites. Cost for abandonment of all wells associated with OU-3 is included in ANAD-05. The costs for the five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2006, the ASA (OU-3) ROD was finalized. The RA(O) outlined in the ROD is required for 10 years (one year baseline and nine years of monitoring). Baseline sampling was initiated in FY06 and an additional eight rounds of RA(O) sampling have been funded. As a part of MNA, sampling will continue for an additional three years.

LUCs prohibiting groundwater use and soil excavation are included in the final remedy. Periodic inspections will be conducted as required.

Site ID: ANAD-07
Site Name: CHEMICAL WASTE DISPOSAL PIT
Alias: SWMU-07

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200206
RD	200408	200508
RA(C)	200508	200509
LTM	200510	203510

RIP Date: N/A

RC Date: 200509

SITE DESCRIPTION

ANAD-07 soils are part of OU-2; site groundwater is included in OU-1.

The chemical waste disposal pit (SWMU-7) is located in the northeast area of the SIA, across from Building 512. A variety of chemical wastes were reportedly dumped into a small pit in this area during a six-month period in 1960. The exact location and dimensions of the pit are unknown. The area is also reported to be the site of three separate spills of paint stripper from a 1,000-gallon tank car. This site is included in the SIA soil OU. The RI identifies lead at this site posing a human health risk (industrial use) for soils. The RI states that soil contamination does not provide a significant source for the groundwater contamination.

Part of the area has been capped with concrete for installation use (non-IRP funds). The remainder of the SWMU was capped with gravel in 2005. LTM (monitoring of LUCs) is underway.

Groundwater is addressed under ANAD-01. Cost associated with LTM for all OU-2 sites are included in ANAD-07. Five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2008, the SIA soil (OU-2) ROD was finalized. The ROD called for LUCs, which include capping and restrictions on excavation and groundwater use. LUCs were implemented as part of the final remedy. The cover and signs will be monitored under LTM and repaired as necessary.

Site ID: ANAD-08
Site Name: ACID DISPOSAL PIT
Alias: SWMU-08

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Explosives, Metals, Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA	197804	198608
SI	197804	199410
RI/FS	199310	200206
RD	200408	200508
RA(C)	200508	200509
RA(O)	200510	201810

RIP Date: 200510

RC Date: 201810

SITE DESCRIPTION

This site is part of OU-3 and is included in the ASA (OU-3). The ROD for OU-3 (ASA) was finalized in July 2006.

The acid disposal pit is located in the ASA. It is believed to have been used from 1959 to 1961 for the disposal of various chemicals, possibly in drums, before the Facility 414 Old Lagoons (ANAD-12) were constructed. The pit was concrete and has been filled in with sand that was previously used for cleaning metal parts. Elevated levels of VOCs, SVOCs, metals and explosives were detected in the groundwater.

The ROD required 10 years of sampling with a review at the 10th year to determine effectiveness of the remedy. It is anticipated based on current conditions that three more years of additional monitoring and LUC maintenance will be required before NFA is achieved.

All cost associated with this site is included in ANAD-05. Cost for abandonment of all wells associated with OU-3 is also included in ANAD-05. Costs for five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2006, the ASA (OU-3) ROD was finalized. The RA(O) outlined in the ROD is required for 10 years (one year baseline and nine years of monitoring). Baseline sampling was initiated in FY05 and an additional seven rounds of RA(O) sampling have been funded. As a part of MNA, sampling will continue for an additional three years.

LUCs prohibiting groundwater use and soil excavation are included in the final remedy. Periodic inspections will be conducted as required.

Site ID: ANAD-09
Site Name: CALCIUM HYPOCHLORITE BURIAL PIT
Alias: SWMU-09

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200206
RD	200408	200508
RA(C)	200508	200509
LTM	200510	203510

RIP Date: N/A

RC Date: 200509

SITE DESCRIPTION

The site's soils are part of OU-2.

The calcium hypochlorite pit (SWMU-9) was used in 1974 to dispose of 400 containers of calcium hypochlorite, each containing approximately 100 pounds. The pit is located approximately 500 ft southwest of the vehicle test track, between the Facility 414 Old Lagoons (ANAD-12) and the A-Block Lagoon (ANAD-22). A US Army Environmental Hygiene Agency (USAEHA) report noted several containers had ruptured during burial and had caused a fire when the hypochlorite came into contact with scrap dunnage. During trenching operations conducted in the RI, no evidence of the disposal was identified.

This site is included in the SIA soils OU. The 1998 Phase II RI identifies lead contamination in soils posing a human health (industrial use) and ecological risk.

The Final ROD for SIA Soil (OU-2) (2008) required excavation, transportation and disposal of approximately 100 cubic yards (cy) of soil and capping (about 2,500 square ft (sq ft)) of this site. All of this was completed in FY05.

Groundwater in is addressed under ANAD-01. Cost associated with LTM for all OU-2 sites are included in ANAD-07. Five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2008, the SIA soil (OU-2) ROD was finalized. The ROD called for LUCs, which include capping and restrictions on excavation and groundwater use. LUCs were implemented as part of the final remedy. The cover and signs will be monitored under LTM and repaired as necessary.

Site ID: ANAD-10
Site Name: TNT WASHOUT FACILITY SEDIMENTATION TANK
Alias: SWMU-10

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals, Munitions constituents (MC)

Media of Concern: Groundwater

Phases	Start	End
PA	197804	198608
SI	197804	199410
RI/FS	199310	200206
RD	200408	200508
RA(C)	200508	200509
RA(O)	200510	201810

RIP Date: 200510

RC Date: 201810

SITE DESCRIPTION

This site is part of OU-3 and is included in the ASA (OU-3). The ROD for OU-3 (ASA) was finalized in July 2006.

The sedimentation tank is part of the TNT washout facility located in a restricted area of the central portion of the ASA. The facility consists of a large metal building (Building 172) and a wastewater sedimentation tank. The facility was used from 1948 until the mid-1950s for washing explosives from demilitarized munitions. The slurry from washout operations discharged from the building to the sedimentation tank. The overflow from this tank then discharged through a pipe under the road and into the TNT leaching beds (ANAD-11). The unit closed in the mid-1950s except for occasional use through the late-1960s. Metals and explosives were detected in the groundwater.

The ROD required 10 years of sampling with a review at the 10th year to determine effectiveness of the remedy. It is anticipated based on current conditions that three more years of additional monitoring and LUC maintenance will be required before NFA is achieved.

All cost associated with this site is included in ANAD-05. Cost for abandonment of all wells associated with OU-3 is also included in ANAD-05. Costs for five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2006, the ASA (OU-3) ROD was finalized. The RA(O) outlined in the ROD is required for 10 years (one year baseline and nine years of monitoring). Baseline sampling was initiated in FY05 and an additional seven rounds of RA(O) sampling have been funded. As a part of MNA, sampling will continue for an additional three years.

LUCs prohibiting groundwater use and soil excavation are included in the final remedy. Periodic inspections will be conducted as required.

Site ID: ANAD-11
Site Name: TNT LEACHING BEDS
Alias: SWMU-11

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals, Munitions constituents (MC)

Media of Concern: Groundwater

Phases	Start	End
PA	197804	198608
SI	197804	199410
RI/FS	199310	200206
RD	200408	200508
RA(C)	200508	200509
RA(O)	200510	201810

RIP Date: 200510

RC Date: 201810

SITE DESCRIPTION

This site is part of OU-3 and is included in the ASA (OU-3). The ROD for OU-3 (ASA) was finalized in July 2006.

The TNT Leaching Beds (SWMU-11) are located across the road from ANAD-10. The overflow from the sedimentation tank of ANAD-10 discharged through a clay pipe into the leaching beds. The beds occupied an area of about 0.75 acre. From 1948 until the mid-1950s, the leaching beds treated explosives and washout wastewater. From the mid-1950s through the late-1960s, the beds were apparently used occasionally to dispose of wash water from pelletizing system filters. In April 1978, an unknown quantity of octal pink water was discharged to the beds. The beds have not been used since April 1978. In 1985, the area was graded and capped with 2-5 ft of native clay. Metals and explosives were detected in the groundwater.

The ROD required 10 years of sampling with a review at the 10th year to determine effectiveness of the remedy. It is anticipated based on current conditions that three more years of additional monitoring and LUC maintenance will be required before NFA is achieved.

All costs associated with this site is included in ANAD-05. Cost for abandonment of all wells associated with OU-3 is also included in ANAD-05. Costs for five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2006, the ASA (OU-3) ROD was finalized. The RA(O) outlined in the ROD is required for 10 years (one year baseline and nine years of monitoring). Baseline sampling was initiated in FY05 and an additional seven rounds of RA(O) sampling have been funded. As a part of MNA, sampling will continue for an additional three years.

LUCs prohibiting groundwater use and soil excavation are included in the final remedy. Periodic inspections will be conducted as required.

Site ID: ANAD-12
Site Name: FACILITY 414 (OLD LAGOONS)
Alias: SWMU-12

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals

Media of Concern: Groundwater, Soil

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200206
RD	200408	200508
IRA	198211	200308
RA(C)	200508	200602
LTM	200603	203510

RIP Date: N/A

RC Date: 200602

SITE DESCRIPTION

This site's soils are part of OU-2.

This facility consists of a series of three unlined industrial waste lagoons. These lagoons were used from about 1960 until 1978 to store abrasive dust waste and a variety of concentrated liquid chemical wastes generated in the shop area. In August 1978, the lagoons were emptied by pumping the liquid wastes to the A-Block Lagoon (ANAD-22). Approximately 1,100 to 1,300 cy of sludge were removed from the lagoons and stockpiled on-site. The lagoons were then backfilled with clay. As a result of a 1979 RCRA corrective/removal action, the waste sludge was removed for off-depot disposal, along with the waste from the Z-1 Trenches Area (ANAD-01). In 1990 a pump-and-treat system began operations to treat source areas.

An RA was conducted (Fenton's reagent) for TCE-contaminated soil and groundwater. The process effectively removed VOC contaminants in the soil, but it was ineffective for the groundwater. The objective of the actions was to treat or reduce chemical concentrations believed to be contributing to health-based concentration limits that are exceeded in the groundwater. The metals-contaminated soil at the site is considered an ecological risk, and some lead-contaminated soil poses a risk to industrial workers. Concentrations of solvents detected in groundwater samples in 2002 indicated a high probability of NAPL.

In FY05, in accordance with the OU-2 ROD, approximately 209 cy of soil was excavated from ANAD-09/12 and properly disposed. The area was capped with gravel. LUCs are in place and long-term monitoring and management of LUCs is underway.

Groundwater is addressed under ANAD-01. Cost associated with LTM for all OU-2 sites are included in ANAD-07. Five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2008, the SIA soil (OU-2) ROD was finalized. The ROD called for LUCs, which include capping and restrictions on excavation and groundwater use. LUCs were implemented as part of the final remedy. The cover and signs will be monitored under LTM and repaired as necessary.

Site ID: ANAD-13
Site Name: ACID CHEMICAL WASTE PIT
Alias: SWMU-13

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200206
RD	200408	200509
RA(C)	200508	200512
LTM	200512	203510

RIP Date: N/A

RC Date: 200512

SITE DESCRIPTION

This site's soils are part of OU-2.

The SIA Acid Chemical Waste Pit is located in a sandy cut in a hillside near the SIA old STP. The pit was reportedly used to dispose of tank-truck quantities of unspecified chemical wastes of unknown origin from either the late-1940s to the late-1960s or from 1957 to 1972.

The 1998 Phase II RI shows that soil contamination at this site poses an unacceptable risk to industrial workers; however, the site is not considered an ecological risk. There is no complete exposure pathway to groundwater.

The Final ROD for SIA Soil (OU-2) (2008) requires capping (2,168 sq ft) of this site. The cap was installed in 2005. LUCs are in place and LTM (monitoring and management of LUCs) is underway.

Groundwater in is addressed under ANAD-01. Cost associated with LTM for all OU-2 sites are included in ANAD-07. Five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2008, the SIA soil (OU-2) ROD was finalized. The ROD called for LUCs, which include capping and restrictions on excavation and groundwater use. LUCs were implemented as part of the final remedy. The cover and signs will be monitored under LTM and repaired as necessary.

Site ID: ANAD-19
Site Name: OLD STP (EAST AREA)
Alias: SWMU-19

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200109
RD	200506	200509
RA(C)	200509	200509
LTM	200510	203510

RIP Date: N/A

RC Date: 200510

SITE DESCRIPTION

This site's soils are part of OU-2.

This site was used from 1948 to 1982, when it was replaced by the New STP, ANAD-20. Approximately 435,000 gallons per day (gpd) of domestic sewage and pre-treated industrial wastewaters were processed at this unit. Effluent from this plant discharged to Dry Creek. The soil does not pose a risk to industrial workers and the site land use must remain industrial.

LUCs are in place and LTM (monitoring and management of LUCs) is underway. Excavation is prohibited through ANAD standard operating procedures (SOP). Excavation and off-site transport of soil must be coordinated with the Directorate of Risk Management to ensure regulatory compliance.

Groundwater is addressed under ANAD-01. Cost associated with LTM for all OU-2 sites are included in ANAD-07. Five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2008, the SIA soil (OU-2) ROD was finalized. LUCs, which include prohibiting excavation, will be implemented. Periodic inspections will be conducted as required.

Site ID: ANAD-20
Site Name: NEW STP (EAST AREA)
Alias: SWMU-20

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200109
RA(C)	200509	200509
LTM	200510	203510

RIP Date: N/A

RC Date: 200510

SITE DESCRIPTION

This new treatment system uses an activated biofilter design which uses some of the Old STP (ANAD-19) units. The capacity of the New STP is 520,000 gpd, consisting of domestic sewage wastes and pre-treated industrial wastewater. The system discharged to Coldwater Creek until December 1987, when effluent discharge was changed to Choccollocco Creek. The soil does not pose a risk to industrial workers and site land use must remain industrial.

LUCs are in place and LTM (monitoring and management of LUCs) is underway. Excavation is prohibited through ANAD SOPs. Excavation and off-site transport of soil must be coordinated with the Directorate of Risk Management to ensure regulatory compliance.

Groundwater is addressed under ANAD-01. Cost associated with LTM for all OU-2 sites are included in ANAD-07. Five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2008, the SIA soil (OU-2) ROD was finalized. LUCs, which include prohibiting excavation, are being implemented. Periodic inspections will be conducted as required.

Site ID: ANAD-21
Site Name: ABRASIVE DUST LANDFILL
Alias: SWMU-21

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200109
RA(C)	200509	200509
LTM	200510	203510

RIP Date: N/A

RC Date: 200510

SITE DESCRIPTION

From 1977 to 1981, 2.9 acres of this site were used to dispose of abrasive dust waste from sandblasting operations. The dust consists of sand, steel shot, glass, walnut hulls, paint flakes and metallic chips. The site cleanup is based on industrial worker risk; site land use must remain industrial.

LUCs are in place and LTM (monitoring and management of LUCs) is underway. Excavation is prohibited through ANAD SOPs. Excavation and off-site transport of soil must be coordinated with the Directorate of Risk Management to ensure regulatory compliance.

Groundwater is addressed under ANAD-01. Cost associated with LTM for all OU-2 sites are included in ANAD-07. Five-year reviews are included in ANAD-01.

This site's soils are included in OU-2.

CLEANUP/EXIT STRATEGY

In July 2008, the SIA soil (OU-2) ROD was finalized. LUCs, which include prohibiting excavation, are being implemented. Periodic inspections will be conducted as required.

Site ID: ANAD-22
Site Name: A-BLOCK LAGOON (FACILITY 514)
Alias: SWMU-22

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200109
IRA	198106	198112
RA(C)	200509	200509
LTM	200510	203510

RIP Date: N/A

RC Date: 200510

SITE DESCRIPTION

This site is a 1.7-acre lined surface impoundment. The lagoon was built in 1978 for the temporary storage of liquid wastes pumped from ANAD-12. The site was closed in 1982. Site cleanup is based on industrial worker risk; site land use must remain industrial.This site is included in OU-2.

LUCs are in place and LTM (monitoring and management of LUCs) is underway. Excavation is prohibited through ANAD SOPs. Excavation and off-site transport of soil must be coordinated with the Directorate of Risk Management to ensure regulatory compliance.

Groundwater is addressed under ANAD-01. Cost associated with LTM for all OU-2 sites are included in ANAD-07. Five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2008, the SIA soil (OU-2) ROD was finalized. LUCs, which include prohibiting excavation, are being implemented. Periodic inspections will be conducted as required.

Site ID: ANAD-23
Site Name: ASBESTOS WASTE DISPOSAL TRENCH
Alias: SWMU-23

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200109
RA(C)	200509	200509
LTM	200510	203510

RIP Date: N/A

RC Date: 200510

SITE DESCRIPTION

From 1980 to 1981, this shallow trench was used to dispose of insulation containing asbestos. The wastes were wrapped in double bags and disposed of in accordance with existing environmental regulations. In 1981, the trench was backfilled with area soils. The Phase II showed there is risk under the construction land-use scenario for subsurface soils. Site cleanup is based on industrial worker risk; site land use must remain industrial.

LUCs are in place and LTM (monitoring and management of LUCs) is underway. Excavation is prohibited through ANAD SOPs. Excavation and off-site transport of soil must be coordinated with the Directorate of Risk Management to ensure regulatory compliance. This site's soils are part of OU-2.

Groundwater is addressed under ANAD-01. Cost associated with LTM for all OU-2 sites are included in ANAD-07. Five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2008, the SIA soil (OU-2) ROD was finalized. LUCs, which include prohibiting excavation, are being. Periodic inspections will be conducted as required.

Site ID: ANAD-24
Site Name: OLD SANITARY LANDFILL
Alias: SWMU-24

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200109
RA(C)	200509	200509
LTM	200510	203510

RIP Date: N/A

RC Date: 200510

SITE DESCRIPTION

Remedial activities and funding for cleanup of groundwater contamination associated with this site appear under ANAD-01. This landfill operated from 1942 until 1970 when ANAD-02 was constructed. Wastes were disposed of in trenches, which were then backfilled with soil. Waste type and quantities were not documented, but reportedly consisted of typical municipal wastes such as paper, household items, garbage and, possibly, chemical wastes. This site is included in the SIA soil OU (OU-2) and the groundwater OU-1. The ROD for SIA soil OU-2 states that soil is not a risk to industrial workers; site land use must remain industrial. Site groundwater is addressed under the comprehensive groundwater OU (OU-1).

LUCs are in place and LTM (monitoring and management of LUCs) is underway. Excavation is prohibited through ANAD SOPs. Excavation and off-site transport of soil must be coordinated with the Directorate of Risk Management to ensure regulatory compliance. This site's soils are part of OU-2.

Groundwater is addressed under ANAD-01. Cost associated with LTM for all OU-2 sites are included in ANAD-07. Five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2008, the SIA soil (OU-2) ROD was finalized. LUCs, which include prohibiting excavation, are being implemented. Periodic inspections will be conducted as required.

Site ID: ANAD-27
Site Name: SOUTH TNT BURIAL PIT
Alias: SWMU-27

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Explosives

Media of Concern: Soil

Phases	Start	End
PA	197804	198608
SI	197804	199410
RI/FS	199310	200212
RD	200408	200508
RA(C)	200508	200509
RA(O)	200510	201810

RIP Date: 200510

RC Date: 201810

SITE DESCRIPTION

This site is part of OU-3 and is included in the ASA (OU-3). The ROD for OU-3 (ASA) was finalized in July 2006.

Wastes containing TNT (SWMU-27) may have been buried in a small burial pit located in the north central section of the depot near the installation boundary. The pit area is well-vegetated and shows no evidence that a site even existed, except for a few posted signs indicating a closed landfill.

Metals above risk-based screening levels were detected in the groundwater. Low concentrations of metals, VOCs and SVOCs below risk-based screening levels were detected in subsurface soils.

The ROD required 10 years of sampling with a review at the 10th year to determine effectiveness of the remedy. It is anticipated based on current conditions that three more years of additional monitoring and LUC maintenance will be required before NFA is achieved.

All cost associated with this site is included in ANAD-05. Cost for abandonment of all wells associated with OU-3 is also included in ANAD-05. Costs for five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2006, the ASA (OU-3) ROD was finalized. The RA(O) outlined in the ROD is required for 10 years (one year baseline and nine years of monitoring). Baseline sampling was initiated in FY05 and an additional seven rounds of RA(O) sampling have been funded. As a part of MNA, sampling will continue for an additional three years.

LUCs prohibiting groundwater use and soil excavation are included in the final remedy. Periodic inspections will be conducted as required.

Site ID: ANAD-28

Site Name: WASTE WOOD LANDFILL,NORTHEAST PART DEPOT

Alias: SWMU-28

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200109
RA(C)	200509	200509
LTM	200510	203510

RIP Date: N/A

RC Date: 200510

SITE DESCRIPTION

Use of this 3.7-acre closed landfill for disposal of various waste wood including railroad ties, telephone poles, and wooden pallets began in 1976. There are no records indicating that wood treated with copper, chromium, or arsenic was deposited at this site. The landfill was reported to be about 15 ft thick and was built by filling in a low-lying area. The landfill was covered and graded with 2-3 ft of clean fill. There is no soil risk to industrial workers; site land use must remain industrial.

LUCs are in place and LTM (monitoring and management of LUCs) is underway. Excavation is prohibited through ANAD SOPs. Excavation and off-site transport of soil must be coordinated with the Directorate of Risk Management to ensure regulatory compliance. This site's soils are included in OU-2.

Groundwater is addressed under ANAD-01. Cost associated with LTM for all OU-2 sites are included in ANAD-07. Five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2008, the SIA soil (OU-2) ROD was finalized. LUCs, which include prohibiting excavation, are being implemented. Periodic inspections will be conducted as required.

Site ID: ANAD-29
Site Name: OLD LUMBER DISPOSAL YARD,(NEAR BLDG 573)
Alias: SWMU-29

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200308
RD	200408	200505
RA(C)	200506	200509
LTM	200510	203510

RIP Date: N/A

RC Date: 200509

SITE DESCRIPTION

The Old Lumber Disposal Yard (SWMU-29) was located immediately south of the Eulaton gate of the SIA, just north of what is now Building 513. It was used for disposal of wood by burning with waste oil and as a stockpile of wood available for the public. The area covered less than one acre and was in use from the mid-1940s through the mid-1970s. In 1997, the site was excavated (non-IRP) in order to construct a warehouse. Waste wood removed in the excavation was disposed of off-site. Most of the area is now covered with concrete and a metal structure.

In accordance with the OU-2 ROD, areas posing a human health risk (lead in soil) were capped in late FY05. LUCs were implemented as part of the final remedy.

Excavation is prohibited through ANAD SOPs. Excavation and off-site transport of soil must be coordinated with the Directorate of Risk Management to ensure regulatory compliance. LUCs are in place and LTM (monitoring/management of LUCs) is underway. This site's soils are included in OU-2.

Groundwater is addressed under ANAD-01. Cost associated with LTM for all OU-2 sites are included in ANAD-07. Five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2008, the SIA soil (OU-2) ROD was finalized. The ROD called for LUCs, which include capping and restrictions on excavation and groundwater use. LUCs were implemented as part of the final remedy. The cover and signs will be monitored under LTM and repaired as necessary.

Site ID: ANAD-30
Site Name: NORTHEAST LAGOON AREA
Alias: SWMU-30

STATUS

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Metals, Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200308
RD	200408	200508
RA(C)	200506	200509
LTM	200510	203510

RIP Date: N/A

RC Date: 200509

SITE DESCRIPTION

Until the early-1960s the various surface impoundments and liquid disposal pits at the northeast Lagoon Area (SWMU-30) were used for waste disposal. It is approximately one acre and is located adjacent to Building 513 in the northeastern section of the SIA. The northeast lagoon area is believed to have been used as a primary disposal area for chlorinated solvents from the early-1950s to the early-1960s. The area has since been filled in and is now used as a gravel parking lot.

The Phase II RI states that human health risks are associated with lead in the soils and that the subsurface soil is not presently contributing to groundwater contamination. VOC contamination reached groundwater in the past and has persisted. Groundwater samples collected in 2002 contained solvents at levels that indicated a high probability of NAPL. A pump-and-treat system began operations in 1990. Groundwater contamination is being addressed under ANAD-01 (OU-1).

In late FY05, in accordance with the OU-2 ROD, areas posing a human health risk were capped. LUCs were implemented as part of the final remedy.

Excavation is prohibited through ANAD SOPs. Excavation and off-site transport of soil must be coordinated with the Directorate of Risk Management to ensure regulatory compliance. LTM (monitoring/management of LUCs) is underway. This site's soils are included in OU-2.

Groundwater is addressed under ANAD-01. Cost associated with LTM for all OU-2 sites are included in ANAD-07. Five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2008, the SIA soil (OU-2) ROD was finalized. The ROD called for LUCs, which include capping and restrictions on excavation and groundwater use. LUCs were implemented as part of the final remedy. The cover and signs will be monitored under LTM and repaired as necessary.

Site ID: ANAD-31
Site Name: METAL PLATING SHOP (BUILDING 114)
Alias: SWMU-31

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals, Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
PA	197804	198608
SI	197804	198608
RI/FS	198110	200203
RD	201110	201209
IRA	198304	201510
RA(C)	201209	201610
RA(O)	201207	201610

RIP Date: 201610

RC Date: 201610

SITE DESCRIPTION

ANAD-31 groundwater is part of OU-1 and the site's soils are part of OU-2. Operations in Building 114 (SWMU-31) include cleaning, treating, and metal plating. A French drain system surrounds the building and drains into an adjacent collection sump. The water (350,000 gpd) is collected and pumped to a treatment site. As a result of past activities, there is extensive chromium and VOC contamination in soil and groundwater in the vicinity of Building 114. Consequently, it is necessary to treat the sump water using an air stripping system (VOC removal) and granulated activated carbon to remove hexavalent chromium. The air stripper was installed in 1990 as part of an IROD. This treatment system is incorporated in to the overall strategy for OU-1. Cost for this system is accounted for in ANAD-01 cost estimate. The surface soil is not a human health or ecological risk because the site is covered with pavement. The subsurface soil is not a significant source of groundwater contamination.

Five-year review cost is included in ANAD-01.

CLEANUP/EXIT STRATEGY

The IROD for OU-1 addresses groundwater contamination at this site.

The cleanup strategy is to continue operation of the groundwater sump and air strippers with associated carbon vessels to treat groundwater from beneath the building. The system will be integrated into ANAD-01 when IROD amendment is implemented.

Site ID: ANAD-35
Site Name: DEACTIVATION FURNACE
Alias: SWMU-35

STATUS

Regulatory Driver: CERCLA

RRSE: MEDIUM

Contaminants of Concern: Metals

Media of Concern: Groundwater

Phases	Start	End
PA	197804	198608
SI	197804	199410
RI/FS	199310	200206
RD	200408	200508
RA(C)	200508	200509
RA(O)	200509	201810

RIP Date: 200509

RC Date: 201810

SITE DESCRIPTION

This site is part of OU-3 and is included in the ASA (OU-3). The ROD for OU-3 (ASA) was finalized in July 2006.

The Deactivation Furnace (SMWU-35) was located in the northwest corner of the ASA. The furnace was used to deactivate small munitions. Particulate emissions from the furnace were collected in a bag house where the dust was drummed and stored as a hazardous waste. A leaking, 1,000-gallon underground diesel fuel tank located adjacent to the furnace building was removed and the surrounding contaminated soils remediated. An air emission permit application was submitted to ADEM and then withdrawn. The site was never granted a RCRA permit or operated as a RCRA unit.

In 1999, the equipment was removed and the building received RCRA closure. In 2000, the building was removed. The groundwater, surface and subsurface soils are being investigated as a CERLCA site. Lead in the surface soil posed a human health risk for industrial workers. Metals above risk-based screening levels were detected in the groundwater.

In FY05, soils posing a risk were excavated to residential standards and disposed of properly.

The ROD required 10 years of sampling with a review at the 10th year to determine effectiveness of the remedy. It is anticipated based on current conditions that three more years of additional monitoring and LUC maintenance will be required before no further action is achieved.

All cost associated with this site is included in ANAD-05. Cost for abandonment of all wells associated with OU-3 is also included in ANAD-05. Costs for five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

In July 2006, the ASA (OU-3) ROD was finalized. The RA(O) outlined in the ROD is required for 10 years (one year baseline and nine years of monitoring). Baseline sampling was initiated in FY05 and an additional seven rounds of RA(O) sampling have been funded. As a part of MNA, sampling will continue for an additional two years.

LUCs prohibiting groundwater use and soil excavation are included in the final remedy. Periodic inspections will be conducted as required.

Site ID: ANAD-46
Site Name: LEAKING UST AT BLDG 6
Alias: SWMU-46

STATUS

Regulatory Driver: RCRA

RRSE: HIGH

Contaminants of Concern: Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater

Phases	Start	End
ISC	199201	199301
INV	199301	199501
CAP	199501	199702
IMP(C)	199702	201907
IMP(O)	199702	201907

RIP Date: 201907

RC Date: 201907

SITE DESCRIPTION

Building 6 is located in the WIA of ANAD and encompasses approximately 1.5 acres. The facility operates as a service station for Base vehicles.

In 1989, two gasoline USTs were suspected of leaking, which initiated the investigation process at the site. These investigations indicated that petroleum contaminants had been released to the subsurface. In 1994, the tanks were removed. Subsequently, three new USTs were installed and are currently in use at the site. A preliminary investigation conducted in 1990 discovered the presence of free-phase gasoline and dissolved contaminants in the groundwater. A CAP presented the results of further secondary investigation activities. The CAP identified benzene as the primary COC in the shallow and intermediate groundwater zones only. The CAP recommended remediation of the soil and groundwater through the installation of absorbent socks placed in select monitoring wells and installation of a pump-and-treat system to remove contaminants from the groundwater. No free-product has been observed since 1997.

Following implementation of the groundwater remedial activities, a 10-year monitoring program began in 1998 and was scheduled to conclude in 2008. Based on monitoring data, groundwater is analyzed for VOCs only. At the request of ADEM, an ARBCA assessment was completed in 2005 to establish site-specific target levels (SSTL). Results of the ARBCA indicated that groundwater concentrations at the source were not protective of groundwater at a point of exposure. Natural attenuation with groundwater compliance monitoring results being compared to SSTLs was recommended and approved as the form of remediation for the site, with the condition that the site remains designated as commercial use only.

Results from groundwater sampling events have demonstrated that the benzene plume has remained stable throughout the years. Currently, two monitoring wells have benzene concentrations exceeding their respective SSTLs. Historical trends at one of the monitoring wells have shown increasing benzene concentrations. In addition, benzene concentrations have increased at another monitoring well but concentrations remain below the SSTL. The observed increases in benzene concentrations prompted a site-wide groundwater investigation in 2014. The results of the groundwater investigations identified two small benzene hotspot areas, one to the north and another to the west of Building 6. The groundwater investigation report recommended that the CAP for Building 6 be updated.

ANAD awarded a contract which included IMP(O) including updating CAP and continuing IMP(O) in accordance with the updated CAP.

Cost for the abandonment of all wells associated with OU-5 is included in ANAD-48. Costs for five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

MNA for groundwater is being implemented and will continue until cleanup standards have been met. Based on current conditions,

it is anticipated that two more years of monitoring will be required.

Depending on the outcome of the ongoing investigations due to increasing benzene concentration in selected wells, additional investigations and remediation may be required in the future.

Site ID: ANAD-48
Site Name: WESTERN INDUSTRIAL AREA GROUNDWATER
Alias: AOC-A

STATUS

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Metals, Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater, Sediment, Soil, Surface Water

Phases	Start	End
PA	200402	200502
SI	200502	201009
RI/FS	201009	201810

RIP Date: N/A

RC Date: 201810

SITE DESCRIPTION

The WIA is located in western part of the installation. This site is part of OU-5.

The WIA contains the depot's support facilities for the industrial operation including equipment maintenance, rail service and automotive facilities. Additional areas are allocated for warehouse storage, fuel storage, administrative services, housing, and recreation. During the investigation of leaking USTs (ANAD-46), TCE was detected in concentrations above the MCLs. Originally, ANAD-48 was intended to address groundwater beneath the WIA; however, based on the nature of that contaminant and the historical use of the industrial area, ANAD-48 now includes groundwater for all of OU-5.

In April 2008, ANAD completed an SI to determine the source of the TCE. In 2010, ANAD completed an ESI. An RI was funded and initiated in 2013 and is anticipated to be completed by FY16. FS, PP and ROD will be required. Since cleanup requirements will not be determined until the RI/FS is completed, the phase schedule and cost-to-complete (CTC) for this site is limited to the RI/FS at this time.

Cost for abandonment of all wells associated with OU-5, including ANAD-46, is included in ANAD-48. Costs for five-year reviews are included in ANAD-01.

CLEANUP/EXIT STRATEGY

It is anticipated that NFA will be required upon completion of the RI/FS and wells will be abandoned.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
ANAD-02	SITE Z-2 SANITARY LANDFILL	200602	Not IRP eligible, permitted landfill addressed under installation environmental budget
ANAD-03	OLD IWTP (BUILDING 505)	200206	NFA, OU-2 ROD July 2008
ANAD-04	NEW IWTP (BUILDING 505)	200206	NFA, OU-2 ROD OU-2 ROD July 2008
ANAD-06	NA FILLED VALVE DISPOSAL PIT	200109	NFA, OU-2 ROD OU-2 ROD July 2008
ANAD-14	LAUNDRY WASTE LEACHING FACILITY	200205	NFA, OU-3 ROD June 2006
ANAD-15	PROPELLENT DISPOSAL FACILITY	200212	NFA, OU-3 ROD June 2006
ANAD-16	BURNING GROUND (NW SIDE OF DEPOT)	199410	Not IRP eligible, Active site with RCRA Permit
ANAD-17	DEMOLITION PIT (NORTHWEST SIDE OF DEPOT)	199410	Not IRP eligible, Active site with RCRA Permit
ANAD-18	OLD STP (WEST AREA)	200206	NFA recommended in the ASA RI, site included in OU-5 (SI phase), a letter approving RI was received from ADEM and USEPA
ANAD-25	BUILDING 130 SUMP	200308	NFA, OU-2 ROD OU-2 ROD July 2008
ANAD-26	NORTH TNT BURIAL PIT	200212	NFA, OU-3 ROD June 2006
ANAD-32	HAZARDOUS WASTE STORAGE BLDG (BLDG 512)	199709	NFA, OU-2 ROD OU-2 ROD July 2008
ANAD-33	OLD HAZARDOUS WASTE STORAGE BLDG (512)	199709	NFA, OU-2 ROD OU-2 ROD July 2008
ANAD-34	CHEMICAL STORAGE IGLOOS(TOTAL 41)	199410	Not IRP eligible, active site with RCRA permit
ANAD-36	DRILL&TRANSFER SYS SITE(TXC DEMIL SITE)	199410	NFA, OU-3 ROD June 2006
ANAD-37	VEHICLE WASH RACK (BLDG 45)	200206	NFA recommended in the ASA RI, site included in OU-5 (SI phase), a letter approving RI was received from ADEM and USEPA
ANAD-38	ABRASIVE DUST COLLECTORS	200109	NFA, OU-2 ROD OU-2 ROD July 2008
ANAD-39	DYNAMOMETER WASTEWATER TRT SYS(BLDG 410)	200109	NFA, OU-2 ROD OU-2 ROD July 2008
ANAD-40	OIL-WATER SEPARATOR (BLDG 501)	200109	NFA, OU-2 ROD OU-2 ROD July 2008
ANAD-41	STM CLNG BLDGS(BLDG 129,130,409,421,503)	200109	NFA, OU-2 ROD OU-2 ROD July 2008
ANAD-42	PAINT BOOTHS(BLDG 129,130,143,409,433)	200109	NFA, OU-2 ROD OU-2 ROD July 2008
ANAD-43	CYANIDE PRETREATMENT SYS (BLDG 506)	200109	NFA, OU-2 ROD OU-2 ROD July 2008
ANAD-44	DRY CREEK	200206	Not IRP eligible, active site with NPDES permit
ANAD-45	LEAKING UST AT BLDG 410	200506	NFA Letter from ADEM, July 2006 (ARBCA)
ANAD-47	LEAKING UST AT BLDG 385	199603	UST Closure, Site Assessment, Building 385

IRP Schedule

Date of IRP Inception: 197804

Past Phase Completion Milestones

1982	
IRA	(ANAD-22 - A-BLOCK LAGOON (FACILITY 514))
1983	
IRA	(ANAD-25 - BUILDING 130 SUMP)
1986	
RFA	(ANAD-16 - BURNING GROUND (NW SIDE OF DEPOT), ANAD-17 - DEMOLITION PIT (NORTHWEST SIDE OF DEPOT))
SI	(ANAD-02 - SITE Z-2 SANITARY LANDFILL, ANAD-03 - OLD IWTP (BUILDING 505), ANAD-04 - NEW IWTP (BUILDING 505), ANAD-06 - NA FILLED VALVE DISPOSAL PIT, ANAD-07 - CHEMICAL WASTE DISPOSAL PIT, ANAD-09 - CALCIUM HYPOCHLORITE BURIAL PIT, ANAD-12 - FACILITY 414 (OLD LAGOONS), ANAD-13 - ACID CHEMICAL WASTE PIT, ANAD-14 - LAUNDRY WASTE LEACHING FACILITY, ANAD-15 - PROPELLENT DISPOSAL FACILITY, ANAD-19 - OLD STP (EAST AREA), ANAD-20 - NEW STP (EAST AREA), ANAD-21 - ABRASIVE DUST LANDFILL, ANAD-22 - A-BLOCK LAGOON (FACILITY 514), ANAD-23 - ASBESTOS WASTE DISPOSAL TRENCH, ANAD-24 - OLD SANITARY LANDFILL, ANAD-25 - BUILDING 130 SUMP, ANAD-28 - WASTE WOOD LANDFILL,NORTHEAST PART DEPOT, ANAD-29 - OLD LUMBER DISPOSAL YARD,(NEAR BLDG 573), ANAD-30 - NORTHEAST LAGOON AREA, ANAD-31 - METAL PLATING SHOP (BUILDING 114), ANAD-32 - HAZARDOUS WASTE STORAGE BLDG (BLDG 512), ANAD-33 - OLD HAZARDOUS WASTE STORAGE BLDG (512), ANAD-38 - ABRASIVE DUST COLLECTORS, ANAD-39 - DYNAMOMETER WASTEWATER TRT SYS(BLDG 410), ANAD-40 - OIL-WATER SEPARATOR (BLDG 501), ANAD-41 - STM CLNG BLDGS(BLDG 129,130,409,421,503), ANAD-42 - PAINT BOOTHS(BLDG 129,130,143,409,433), ANAD-43 - CYANIDE PRETREATMENT SYS (BLDG 506), ANAD-44 - DRY CREEK)
PA	(ANAD-01 - SITE Z-1 TRENCHES AREA, ANAD-02 - SITE Z-2 SANITARY LANDFILL, ANAD-03 - OLD IWTP (BUILDING 505), ANAD-04 - NEW IWTP (BUILDING 505), ANAD-05 - SINKHOLE (NEAR EASTERN BOUNDARY), ANAD-06 - NA FILLED VALVE DISPOSAL PIT, ANAD-07 - CHEMICAL WASTE DISPOSAL PIT, ANAD-08 - ACID DISPOSAL PIT, ANAD-09 - CALCIUM HYPOCHLORITE BURIAL PIT, ANAD-10 - TNT WASHOUT FACILITY SEDIMENTATION TANK, ANAD-11 - TNT LEACHING BEDS, ANAD-12 - FACILITY 414 (OLD LAGOONS), ANAD-13 - ACID CHEMICAL WASTE PIT, ANAD-14 - LAUNDRY WASTE LEACHING FACILITY, ANAD-15 - PROPELLENT DISPOSAL FACILITY, ANAD-18 - OLD STP (WEST AREA), ANAD-19 - OLD STP (EAST AREA), ANAD-20 - NEW STP (EAST AREA), ANAD-21 - ABRASIVE DUST LANDFILL, ANAD-22 - A-BLOCK LAGOON (FACILITY 514), ANAD-23 - ASBESTOS WASTE DISPOSAL TRENCH, ANAD-24 - OLD SANITARY LANDFILL, ANAD-25 - BUILDING 130 SUMP, ANAD-26 - NORTH TNT BURIAL PIT, ANAD-27 - SOUTH TNT BURIAL PIT, ANAD-28 - WASTE WOOD LANDFILL,NORTHEAST PART DEPOT, ANAD-29 - OLD LUMBER DISPOSAL YARD,(NEAR BLDG 573), ANAD-30 - NORTHEAST LAGOON AREA, ANAD-31 - METAL PLATING SHOP (BUILDING 114), ANAD-32 - HAZARDOUS WASTE STORAGE BLDG (BLDG 512), ANAD-33 - OLD HAZARDOUS WASTE STORAGE BLDG (512), ANAD-34 - CHEMICAL STORAGE IGLOOS(TOTAL 41), ANAD-35 - DEACTIVATION FURNACE, ANAD-36 - DRILL&TRANSFER SYS SITE(TXC DEMIL SITE), ANAD-37 - VEHICLE WASH RACK (BLDG 45), ANAD-38 - ABRASIVE DUST COLLECTORS, ANAD-39 - DYNAMOMETER WASTEWATER TRT SYS(BLDG 410), ANAD-40 - OIL-WATER SEPARATOR (BLDG 501), ANAD-41 - STM CLNG BLDGS(BLDG 129,130,409,421,503), ANAD-42 - PAINT BOOTHS(BLDG 129,130,143,409,433), ANAD-43 - CYANIDE PRETREATMENT SYS (BLDG 506), ANAD-44 - DRY CREEK)
1987	
SI	(ANAD-01 - SITE Z-1 TRENCHES AREA)
1993	
ISC	(ANAD-46 - LEAKING UST AT BLDG 6)
1994	
IRA	(ANAD-02 - SITE Z-2 SANITARY LANDFILL)
ISC	(ANAD-45 - LEAKING UST AT BLDG 410, ANAD-47 - LEAKING UST AT BLDG 385)
1995	
SI	(ANAD-05 - SINKHOLE (NEAR EASTERN BOUNDARY), ANAD-08 - ACID DISPOSAL PIT, ANAD-10 - TNT WASHOUT FACILITY SEDIMENTATION TANK, ANAD-11 - TNT LEACHING BEDS, ANAD-18 - OLD STP

	(WEST AREA), ANAD-26 - NORTH TNT BURIAL PIT, ANAD-27 - SOUTH TNT BURIAL PIT, ANAD-34 - CHEMICAL STORAGE IGLOOS(TOTAL 41), ANAD-35 - DEACTIVATION FURNACE, ANAD-36 - DRILL&TRANSFER SYS SITE(TXC DEMIL SITE), ANAD-37 - VEHICLE WASH RACK (BLDG 45))
INV	(ANAD-45 - LEAKING UST AT BLDG 410, ANAD-46 - LEAKING UST AT BLDG 6)
CS	(ANAD-16 - BURNING GROUND (NW SIDE OF DEPOT), ANAD-17 - DEMOLITION PIT (NORTHWEST SIDE OF DEPOT))
1996	
IMP(C)	(ANAD-45 - LEAKING UST AT BLDG 410)
CAP	(ANAD-45 - LEAKING UST AT BLDG 410)
INV	(ANAD-47 - LEAKING UST AT BLDG 385)
1997	
CAP	(ANAD-46 - LEAKING UST AT BLDG 6)
RI/FS	(ANAD-32 - HAZARDOUS WASTE STORAGE BLDG (BLDG 512), ANAD-33 - OLD HAZARDOUS WASTE STORAGE BLDG (512))
2001	
RI/FS	(ANAD-06 - NA FILLED VALVE DISPOSAL PIT, ANAD-19 - OLD STP (EAST AREA), ANAD-20 - NEW STP (EAST AREA), ANAD-21 - ABRASIVE DUST LANDFILL, ANAD-22 - A-BLOCK LAGOON (FACILITY 514), ANAD-23 - ASBESTOS WASTE DISPOSAL TRENCH, ANAD-24 - OLD SANITARY LANDFILL, ANAD-28 - WASTE WOOD LANDFILL,NORTHEAST PART DEPOT, ANAD-38 - ABRASIVE DUST COLLECTORS, ANAD-39 - DYNAMOMETER WASTEWATER TRT SYS(BLDG 410), ANAD-40 - OIL-WATER SEPARATOR (BLDG 501), ANAD-41 - STM CLNG BLDGS(BLDG 129,130,409,421,503), ANAD-42 - PAINT BOOTHS(BLDG 129,130,143,409,433), ANAD-43 - CYANIDE PRETREATMENT SYS (BLDG 506))
2002	
RI/FS	(ANAD-02 - SITE Z-2 SANITARY LANDFILL, ANAD-03 - OLD IWTP (BUILDING 505), ANAD-04 - NEW IWTP (BUILDING 505), ANAD-05 - SINKHOLE (NEAR EASTERN BOUNDARY), ANAD-07 - CHEMICAL WASTE DISPOSAL PIT, ANAD-08 - ACID DISPOSAL PIT, ANAD-09 - CALCIUM HYPOCHLORITE BURIAL PIT, ANAD-10 - TNT WASHOUT FACILITY SEDIMENTATION TANK, ANAD-11 - TNT LEACHING BEDS, ANAD-12 - FACILITY 414 (OLD LAGOONS), ANAD-13 - ACID CHEMICAL WASTE PIT, ANAD-14 - LAUNDRY WASTE LEACHING FACILITY, ANAD-18 - OLD STP (WEST AREA), ANAD-31 - METAL PLATING SHOP (BUILDING 114), ANAD-35 - DEACTIVATION FURNACE, ANAD-37 - VEHICLE WASH RACK (BLDG 45), ANAD-44 - DRY CREEK)
2003	
RI/FS	(ANAD-15 - PROPELLENT DISPOSAL FACILITY, ANAD-25 - BUILDING 130 SUMP, ANAD-26 - NORTH TNT BURIAL PIT, ANAD-27 - SOUTH TNT BURIAL PIT, ANAD-29 - OLD LUMBER DISPOSAL YARD,(NEAR BLDG 573), ANAD-30 - NORTHEAST LAGOON AREA)
IRA	(ANAD-12 - FACILITY 414 (OLD LAGOONS))
2005	
RA(C)	(ANAD-05 - SINKHOLE (NEAR EASTERN BOUNDARY), ANAD-07 - CHEMICAL WASTE DISPOSAL PIT, ANAD-08 - ACID DISPOSAL PIT, ANAD-09 - CALCIUM HYPOCHLORITE BURIAL PIT, ANAD-10 - TNT WASHOUT FACILITY SEDIMENTATION TANK, ANAD-11 - TNT LEACHING BEDS, ANAD-19 - OLD STP (EAST AREA), ANAD-20 - NEW STP (EAST AREA), ANAD-21 - ABRASIVE DUST LANDFILL, ANAD-22 - A-BLOCK LAGOON (FACILITY 514), ANAD-23 - ASBESTOS WASTE DISPOSAL TRENCH, ANAD-24 - OLD SANITARY LANDFILL, ANAD-27 - SOUTH TNT BURIAL PIT, ANAD-28 - WASTE WOOD LANDFILL,NORTHEAST PART DEPOT, ANAD-29 - OLD LUMBER DISPOSAL YARD,(NEAR BLDG 573), ANAD-30 - NORTHEAST LAGOON AREA, ANAD-35 - DEACTIVATION FURNACE)
IMP(O)	(ANAD-45 - LEAKING UST AT BLDG 410)
PA	(ANAD-48 - WESTERN INDUSTRIAL AREA GROUNDWATER)
RD	(ANAD-05 - SINKHOLE (NEAR EASTERN BOUNDARY), ANAD-07 - CHEMICAL WASTE DISPOSAL PIT, ANAD-08 - ACID DISPOSAL PIT, ANAD-09 - CALCIUM HYPOCHLORITE BURIAL PIT, ANAD-10 - TNT WASHOUT FACILITY SEDIMENTATION TANK, ANAD-11 - TNT LEACHING BEDS, ANAD-12 - FACILITY 414

	(OLD LAGOONS), ANAD-13 - ACID CHEMICAL WASTE PIT, ANAD-19 - OLD STP (EAST AREA), ANAD-27 - SOUTH TNT BURIAL PIT, ANAD-29 - OLD LUMBER DISPOSAL YARD,(NEAR BLDG 573), ANAD-30 - NORTHEAST LAGOON AREA, ANAD-35 - DEACTIVATION FURNACE)
2006	
LTM	(ANAD-02 - SITE Z-2 SANITARY LANDFILL)
RA(C)	(ANAD-12 - FACILITY 414 (OLD LAGOONS), ANAD-13 - ACID CHEMICAL WASTE PIT)
2010	
SI	(ANAD-48 - WESTERN INDUSTRIAL AREA GROUNDWATER)
2012	
RD	(ANAD-31 - METAL PLATING SHOP (BUILDING 114))

Additional Past Phase Completion Milestones

2007 FS for OU-1 completed.
2008 SI for OU-5 completed.

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

Site ID	Site Name	ROD/DD Title	ROD/DD Date

Final RA(C) Completion Date: 201907

Schedule for Next Five-Year Review: 2015

Estimated Completion Date of IRP at Installation (including LTM phase): 204606

ANNISTON ARMY DEPOT IRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
ANAD-01	SITE Z-1 TRENCHES AREA	RD						
		IRA						
		RA(C)						
		RA(O)						
ANAD-05	SINKHOLE (NEAR EASTERN BOUNDARY)	RA(O)						
ANAD-07	CHEMICAL WASTE DISPOSAL PIT	LTM						
ANAD-08	ACID DISPOSAL PIT	RA(O)						
ANAD-09	CALCIUM HYPOCHLORITE BURIAL PIT	LTM						
ANAD-10	TNT WASHOUT FACILITY SEDIMENTATION TANK	RA(O)						
ANAD-11	TNT LEACHING BEDS	RA(O)						
ANAD-12	FACILITY 414 (OLD LAGOONS)	LTM						
ANAD-13	ACID CHEMICAL WASTE PIT	LTM						
ANAD-19	OLD STP (EAST AREA)	LTM						
ANAD-20	NEW STP (EAST AREA)	LTM						
ANAD-21	ABRASIVE DUST LANDFILL	LTM						
ANAD-22	A-BLOCK LAGOON (FACILITY 514)	LTM						
ANAD-23	ASBESTOS WASTE DISPOSAL TRENCH	LTM						
ANAD-24	OLD SANITARY LANDFILL	LTM						
ANAD-27	SOUTH TNT BURIAL PIT	RA(O)						
ANAD-28	WASTE WOOD LANDFILL,NORTHEAST PART DEPOT	LTM						
ANAD-29	OLD LUMBER DISPOSAL YARD,(NEAR BLDG 573)	LTM						
ANAD-30	NORTHEAST LAGOON AREA	LTM						

ANNISTON ARMY DEPOT IRP Schedule

SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
ANAD-31	METAL PLATING SHOP (BUILDING 114)	IRA						
		RA(C)						
		RA(O)						
SITE ID	**SITE NAME**	**PHASE**	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**	**FY21+**
ANAD-35	DEACTIVATION FURNACE	RA(O)						
SITE ID	**SITE NAME**	**PHASE**	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**	**FY21+**
ANAD-46	LEAKING UST AT BLDG 6	IMP(C)						
		IMP(O)						
SITE ID	**SITE NAME**	**PHASE**	**FY16**	**FY17**	**FY18**	**FY19**	**FY20**	**FY21+**
ANAD-48	WESTERN INDUSTRIAL AREA GROUNDWATER	RI/FS						

ANNISTON ARMY DEPOT

Army Defense Environmental Restoration Program
Military Munitions Response Program

MMRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 4/0

Installation Site Types with Future and/or Underway Phases

1 Firing Range
(ANAD-001-R-01)
1 Open Burn
(ANAD-003-R-01)
1 Open Burning/Open Detonation (OB/OD)
(ANAD-004-R-01)
1 Pistol Range
(ANAD-002-R-01)

Most Widespread Contaminants of Concern

Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern

Groundwater, Soil

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
N/A				

Duration of MMRP

Date of MMRP Inception 200203

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201810/201810

Date of MMRP completion including Long Term Management (LTM): 201810

MMRP Contamination Assessment

Contamination Assessment Overview

The DoD's environmental cleanup activities began in 1975 under IRP before any formal federal requirements or program was established. The DoD instituted its IRP to address past practices that often did not take long-term environmental effects into account. The environmental law driving the present Defense Environmental Restoration Program (DERP) is CERCLA, commonly known as the Superfund. The DERP was formally established by Section 211 of the SARA and is codified in Sections 2710-2710 of Title 10 of the US Code (USC) Superfund Amendments and Reauthorization Act before SARA. SARA set requirements for the DERP and its funding mechanisms, the DERA. DERA funding was available in 1984 before the formal establishment of the DERP.

The SI for three Anniston MMRP sites is complete. MEC and MC are suspected of occurring at each site. An RI was initiated in FY10 and continues through FY15. Based on the RI field results it is determined that a FS will be required. A FS is anticipated to be initiated in FY15.

The OD Buffer Zone (ANAD-004-R-01) was qualified as new MMRP site in FY12. An SI is ongoing since FY13.

Cleanup Exit Strategy

Currently, four sites are listed under the ANAD MMRP program. The RI/FS for three sites was initiated in FY10 and continued through FY13. Based on the RI field results it is determined that a FS will be required. An FS was initiated in FY13.

The OD Buffer Area site (ANAD-004-R-01) was qualified as a new MMRP site in FY12. An SI was initiated in FY13.

No off-post contamination associated with the sites in the MMRP has been reported, and no responses have been issued. No complicating factors or uncertainties have been identified.

A draft NTRA is scheduled in FY15 and a LUC plan is being proposed for these sites as a protective IM. This action has been significantly vetted and should be ready to be proposed.

MMRP Previous Studies

	Title	Author	Date
2002			
	Closed, Transferred, or Transferring (CTT) Range Inventory	Malcolm Pirnie, Inc.	JAN-2002
2004			
	Final Historical Records Review	Malcolm Pirnie, Inc.	NOV-2004
2005			
	Final Site Inspection Report	Malcolm Pirnie, Inc.	JUL-2005
2011			
	Explosives Site Plan Remedial Investigation/Characterization Action MRS ANAD-001-R-01, Recoilless Rifle Range	HydroGeoLogic, Inc.	DEC-2011
2012			
	Final Remedial Investigation/Characterization Action Work Plan	HydroGeoLogic, Inc.	FEB-2012
	Final Engineering Evaluation/Cost Analysis (EE/CA) Land Use Controls	URS Group, Inc.	FEB-2012
	Final Action Memorandum Land Use Controls	URS Group, Inc.	SEP-2012
2013			
	Final Non-Time Critical Removal Action Land Use Control Plan	URS Group, Inc.	JAN-2013
2014			
	Final Addendum To Final Engineering Evaluation/Cost Analysis (EE/CA) Land Use Controls (February 2012)	URS Group, Inc	JUN-2014
	Final Historical Records Review Former Open Detonation	HydroGeoLogic, Inc.	JUL-2014
	Final Remedial Investigation/Characerization Action Work Plan OU-4	HydroGeoLogic, Inc.	JUL-2014
	Final Addendum To Final Non-Time-Critical Removal Action	URS Group, Inc	AUG-2014
	Final Addendum To Final Action Memorandum Land Use	URS Group, Inc	SEP-2014
	Interim Land UseControl Work Plan For Four Munitions Response Sites	Leidos, Inc.	DEC-2014

ANNISTON ARMY DEPOT

Military Munitions Response Program

Site Descriptions

Site ID: ANAD-001-R-01
Site Name: RECOILLESS RIFLE RANGE
Alias: RIFLE RNG

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 04

Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA	200203	200305
SI	200309	200507
RI/FS	201007	201810

RIP Date: N/A

RC Date: 201810

SITE DESCRIPTION

The Recoilless Rifle Range is located in the northwest corner of the installation and was used in the 1960s to test the recoil of the recoilless rifle. The site was closed in 1975 for reasons that are unknown. The Recoilless Rifle Range currently covers 28 acres. The site has a 1,200-meter firing fan that extends to the west, acting as a safety zone for materials fired from the rifle range. Although inert ordnance was used at the site during the recoilless rifle testing, there is a potential for live munitions because the site is located east of the current operational range which is used for target practice with 57millimeter (mm) and 106mm projectiles (the operational range was also used for small arms from 1981 to 1983). Once inside the installation's boundaries, access to the site is not limited; however, its current location is at least two miles from any occupied buildings and no bulk propellants or explosives are used at the site.

The SI gathered information to support that live ordnance may have been used here. Results of the July 2005 SI report indicate that future investigation for MC and MEC should be conducted.

The RI for the site began in FY10. A FS, PP, and DD were already funded in 2012 and were initiated in FY13 and will continue into FY17. An NTRA is being completed in 2015 in accordance with the action memorandum (AM) completed in 2013. Interim LUCs installed in accordance with the AM will be maintained until final ROD is completed. Interim LUC cost associated with all MMRP sites (OU-4) is included in this site. Since cleanup requirements will not be determined until the RI/FS is completed, the phase schedule and CTC for this site is limited to the RI/FS at this time. Interim LUCs were installed in 2015. Annual interim LUCs inspections and maintenance will be required until final ROD is signed and the final remedy is in place.

Five-year reviews will be included in ANAD-01.

CLEANUP/EXIT STRATEGY

An RI/FS was initiated in FY10 and is expected to continue through FY15. Cleanup requirements will not be determined until RI/FS is completed.

Site ID: ANAD-002-R-01
Site Name: PISTOL RANGE
Alias: PISTOL RNG

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 05

Contaminants of Concern: Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA	200203	200305
SI	200309	200507
RI/FS	201002	201610

RIP Date: N/A

RC Date: 201610

SITE DESCRIPTION

The Pistol Range was originally reported in the Phase III Army CTT Range Inventory (2002). According to the July 2005 SI report, review of the historical records indicated that this was an unofficial small arms range used for a brief time period in the early-1980s. The current site area is 1.2 acres. MEC has not been detected and is not suspected at the site. The potential presence of MC at the site suggests further confirmatory actions.

The RI for the site began in FY10. A FS, PP, and DD were already funded in 2012 and were initiated in FY13 and will continue into FY17. An NTRA is being completed in 2015 in accordance with the AM completed in 2013. Interim LUCs installed in accordance with the AM will be maintained until final ROD is completed. Cost associated with this site is included in ANAD-001-R-01. Since cleanup requirements will not be determined until the RI/FS is completed, the phase schedule and CTC for this site is limited to the RI/FS at this time.

Five-year reviews will be included in ANAD-01.

CLEANUP/EXIT STRATEGY

An RI/FS was initiated in FY10 and will continue through FY15. Cleanup requirements will not be determined until RI/FS is completed.

Site ID: ANAD-003-R-01
Site Name: Burning Ground Buffer Area
Alias: BURNING GD

STATUS

Regulatory Driver: CERCLA

MRSPP Score: 05

Contaminants of Concern: Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Groundwater, Soil

Phases	Start	End
PA	200203	200305
SI	200309	200507
RI/FS	201002	201610

RIP Date: N/A

RC Date: 201610

SITE DESCRIPTION

In the final historical records review (HRR) (2004), the burning ground buffer area was identified as a 351-acre site located in the northwestern section of the installation. The MMRP site encircles the operational burning ground from the current buffer area of 1,250 ft to the extent of the historic buffer zone of 2,400 ft. Due to land designated as RCRA permitted on the northern end of the site, the munitions response site (MRS) is horse-shoe shaped, with the open-end on the north, rather than a complete circle. The July 2005 SI did not identify MEC or munitions debris. In soil samples, explosives were not detected above the quantitation limit, and metals did not exceed the preliminary remediation goals. The SI recommended an RI/FS for the site in order to further investigate MEC and MC.

The RI for the site began in FY10. A FS, PP, and DD were already funded in 2012 and were initiated in FY13 and will continue into FY17. An NTRA is being completed in 2015 in accordance with the AM completed in 2013. Interim LUCs installed in accordance with the AM will be maintained until final ROD is completed. Cost associated with this site is included in ANAD-001-R-01. Since cleanup requirements will not be determined until the RI/FS is completed, the phase schedule and CTC for this site is limited to the RI/FS at this time.

Five-year reviews will be included in ANAD-01.

CLEANUP/EXIT STRATEGY

An RI/FS was initiated in FY10 and is expected to continue through FY15. Cleanup requirements will not be determined until RI/FS is completed.

Site ID: ANAD-004-R-01
Site Name: OD Historical Buffer Zone
Alias: OD Buffer

STATUS

Regulatory Driver: CERCLA

MRSPP Score: Evaluation pending

Contaminants of Concern: Explosives, Munitions and explosives of concern (MEC), Munitions constituents (MC)

Media of Concern: Soil

Phases	Start	End
PA	201105	201208
SI	201301	201510
RI/FS	201301	201710

RIP Date: N/A

RC Date: 201710

SITE DESCRIPTION

The OD unit (ANAD-004-R-01) is located adjacent to the northeast boundary of the ANAD and occupies approximately 52 acres in the northwestern corner of the Ammunition Limited Area of the Depot. OD unit is dedicated to the detonation of Hazard Class 1 explosives including waste military munitions (WMM) and explosive-contaminated wastes. The OD unit may be used to treat wastes that are generated on-site by the facility or off-site by other DoD installations.

Operation of the OD unit began in the early-1940s. Waste conventional military munitions are treated at the OD typically by buried detonation, but surface detonations can occur. The site is currently used for buried detonations up to 1,000 lbs net explosive weight (NEW) of conventional munitions/energetic waste at each detonation station at depths of up to 14 ft. The site can also be used for surface detonations of up to 15 lbs NEW at each detonation station. Historical information dates back 20 years with current employee knowledge. Based on available knowledge and information, it is surmised that this range has been used only for OD.

Former buffer zone around the OD range has been inactive for 20 years and will not be necessary for mission and was reclassified as closed.

ANAD received a letter dated May 6, 2011 from ADEM requiring ANAD to perform corrective action at the site buffer area. Since this buffer area is now a closed range, it qualifies as a MMRP site.

A contract to complete a HRR, SI, and RI/FS was awarded in FY13 and will be completed by FY18. An NTRA is being completed in 2015 in accordance with the AM completed in 2013. Interim LUCs installed in accordance with the AM will be maintained until final ROD is completed. Interim LUC cost associated with this site is included in ANAD-001-R-01. Since cleanup requirements will not be determined until the RI/FS is completed, the phase schedule and CTC for this site is limited to the RI/FS at this time.

CLEANUP/EXIT STRATEGY

An SI is underway. An exit strategy will be determined after the SI is completed.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation

There are no NFA sites

MMRP Schedule

Date of MMRP Inception 200203

Past Phase Completion Milestones

2003

PA	(ANAD-001-R-01 - RECOILLESS RIFLE RANGE, ANAD-002-R-01 - PISTOL RANGE, ANAD-003-R-01 - Burning Ground Buffer Area)

2005

SI	(ANAD-001-R-01 - RECOILLESS RIFLE RANGE, ANAD-002-R-01 - PISTOL RANGE, ANAD-003-R-01 - Burning Ground Buffer Area)

2012

PA	(ANAD-004-R-01 - OD Historical Buffer Zone)

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

To Be Determined

Final RA(C) Completion Date:

Schedule for Next Five-Year Review: 2015

Estimated Completion Date of MMRP at Installation (including LTM phase): 201810

ANNISTON ARMY DEPOT MMRP Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
ANAD-001-R-01	RECOILLESS RIFLE RANGE	RI/FS						
ANAD-002-R-01	PISTOL RANGE	RI/FS						
ANAD-003-R-01	Burning Ground Buffer Area	RI/FS						
ANAD-004-R-01	OD Historical Buffer Zone	SI						
		RI/FS						

ANNISTON ARMY DEPOT

Army Defense Environmental Restoration Program
Compliance Restoration

CR Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 12/0

Installation Site Types with Future and/or Underway Phases

1 Contaminated Ground Water
(CC-ANAD-02)

6 Industrial Discharge
(CC-ANAD-05, CC-ANAD-10, CC-ANAD-11, CC-ANAD-12, CC-ANAD-13, CC-ANAD-14)

1 Landfill
(CC-ANAD-07)

2 Spill Site Area
(CC-ANAD-06, CC-ANAD-08)

1 Storage Area
(CC-ANAD-04)

1 Washrack
(CC-ANAD-09)

Most Widespread Contaminants of Concern

Metals, Petroleum, Oil and Lubricants (POL), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern

Groundwater, Soil

Completed Remedial Actions (Interim Remedial Actions/ Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY
CC-ANAD-02	Building 504	FRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	2008

Duration of CR

Date of CR Inception: 199011

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201912/201912

Date of CR completion including Long Term Management (LTM): 201912

CR Contamination Assessment

Contamination Assessment Overview

Environmental restoration activities include the IRP and MMRP. On Dec. 29, 2008, the Office of the Deputy Under Secretary of Defense for Installations and Environment issued an interim policy for DERP eligibility that rescinded the 1986 eligibility date for the IRP and the 2002 eligibility date for the MMRP. This made many sites previously addressed in the Army's Compliance-related Cleanup (CC) program eligible for the DERP. Sites that are now eligible for the Munitions Response (MR) program have been migrated from Army Environmental Database-Compliance-related Cleanup (AEDB-CC) and given the naming convention of other MR sites. The newly eligible non-MR type sites are considered to be Installation Restoration (IR) sites; however, the newly eligible sites are being coded as CR in AEDB-R to distinguish them from the original IR sites and IR metrics.

ANAD has three CR sites. CC-ANAD-02 (Building 504) lies within ANAD's southeast industrial complex. It is where tracked vehicles are refurbished for the Army. Fluids are drained from the vehicles into containment buckets. Overspills from the buckets are fed to floor drains that are routed to a storage tank. The floor of the building is concrete and over a period of time the floor has cracked because of the activities associated with refurbishing large tracked vehicles. Occasional overspills from the containment that seeped through the cracked concrete are believed to be the source of contaminants to the subsurface. The shallow zone consists primarily of clay, silt, and minor amounts of sand, with numerous rock and chert fragments.

The occurrence of rock and chert fragments apparently increases with depth until a more resistant rock fragment/rubble zone is encountered at approximately 20 ft to 30 ft below ground surface (bgs). The depths to groundwater across the site range from 14 ft to 16 ft bgs. The floor of the building has been repaired and plant operations continue. The current tenant has replaced the USTs with aboveground storage tanks (ASTs) and underground lines with aboveground lines. Underground lines have been grouted. The current tenant also has completed several free-product removals.

An ARBCA report was completed for this site to compute site-specific cleanup levels. Free- product removal and monitoring were initiated under the ARBCA program since FY09 and monitoring is expected to continue through FY16.

CC-ANAD-04 (the Defense National Stockpile Sites) are located in the northeastern portion of the ASA. They were used to store strategic materials for National Defense. The materials include bauxite and manganese ore which are predominantly mined for the metals aluminum and manganese. The stockpile areas basically consisted of piles of these materials stored in the open, on the ground. These materials were initially stored at ANAD beginning in WWII. Each unit ranges in size from one acre to several acres. In 1995, Congress ordered the sale of the stockpiles, and the materials were sold and transported off-site from 1995 to 2001. A thin layer of ore remains on the surface at each of the stockpile areas.

A Phase I RFI was conducted from February through May 2008 to assess the presence or absence of contamination at six of the Defense National Stockpile areas (Black & Veatch, 2009). As a result of the Phase I effort, further investigation (Phase II) was required by the ADEM to determine the extent of metals contamination at four of the sites. These four sites include: Bauxite Stockpile AOC J-CLA, Bauxite Stockpile AOC J-2, Bauxite Stockpile AOC J-3/AOC J-4, Manganese Dioxide Stockpile AOC J-1B and an additional site, Manganese Dioxide Stockpile AOC J-1A. Phase II field activities were conducted in July 2010. In addition to the collection and analysis of soil samples, both a human health risk assessment and a screening-level ecological risk assessment were conducted during the Phase II effort.

CC-ANAD-05 (Building 409) is located within the east area of ANAD in the Nichols Industrial Complex and covers an area of approximately 1.5 acres. It is an industrial building designated for abrasive and chemical cleaning operations for parts, painting, container repair, and testing. In February 2009, wastewater was observed seeping to the ground surface near one of the industrial sewer outlets, which was later discovered to be related to ruptured underground sewer piping, which is located approximately 3 ft bgs. A field investigation was conducted and an RFI report was submitted to ADEM in June 2009. In February 2010, ANAD personnel discovered a second release at Building 409 while upgrading sumps adjacent to Building 409. In April 2010, a cavity was discovered below one of the concrete vats inside Building 409 that allowed discharges of wastewaters to the environment. Engineering measures were incorporated to repair the sources of all three releases shortly after they were discovered. The contaminants of potential concern (COPCs) from all three releases are similar and related to current operations within Building 409. ADEM also requested that ANAD conduct leak tests, flow tests, mass balance evaluations, etc., as necessary to determine which vats, pits, sumps, and pipes were/are leaking and the amount of wastewaters and constituents that have been released. This was to be done in addition to the RFI effort for the area around Building 409 affected by the earlier releases of wastewater. In summary, there were some metals and VOC exceedances in the soil and groundwater samples. Metals that were detected in the unfiltered groundwater samples were typically below the screening criteria in samples that were collected through a 0.45 micron filter. Turbidity readings from the unfiltered groundwater samples ranged from 18.3 nephelometric turbidity units (NTU) to greater than 1000 NTUs. The lower concentration and/or lack of detection of metals in the filtered groundwater samples are an indication that turbidity may be a source of metals concentrations. TCE was the primary

Contamination Assessment Overview

VOC detected in the groundwater. The concentrations were above screening levels, but they were not at levels that were indicative of a major release to the environment or a continuing source present in the subsurface media.

CC-ANAD-06 The Building 432 is located adjacent to the installation boundary. Building 432 was used to blast hulls and turrets using stainless steel pellets as part of the refurbishing process for combat vehicles. The steel pellets have been found on the concrete and in a nearby storm water drain during an ADEM RCRA compliance inspection. The concrete around Building 432 is approximately 10 inches thick and has cracks and expansion joints that are, and have been, routinely filled in. Before filling these cracks, ANAD did not verify if the expansion joints were open or the cracks extended to the soil. A Phase I RFI was completed in 2010 and submitted for ADEM approval. In a January 2011 letter to ANAD, a Phase II RFI was requested to complete the horizontal and vertical delineation of the four COPC metals (cadmium, chromium, lead, and zinc). A Phase II RFI was completed in 2012 and 2013 but did not achieve delineation to unrestricted use screening levels and thus, was not submitted to ADEM for review. A review of the Phase II RFI shows that delineation to unrestricted screening levels was not achieved to the southwest of Outfall #36, along the stream bank southwest of the outfall, and to the northeast of Building 432 along Roosevelt Avenue. Sediment was delineated to below unrestricted use screening criteria in both the upgradient and downgradient directions along Dry Creek from Outfall #36.

CC-ANAD-07 Clean Fill Construction and Demolition (C&D) Site is located on a hilltop in the WIA of ANAD and compromises an approximate area of 9.19 acres. The site is estimated to contain approximately 230,000 cubic meters of concrete, dirt, wood, asphalt, and rock with approximate composition of 60 percent concrete, 35 percent soil, with the remaining materials made of wood, asphalt, and rock. An SI as a result of an executive order resulted in the discovery of concrete with exposed rebar, scrap metal, and wood that appeared to be from railroad ties at the site and ADEM was subsequently notified. The burial site is no longer active. In 2009, ANAD performed a PA to determine the presence or absence of site related COPC, total metals. Soil samples were collected as part of the PA below the landfill surface. Several metals (arsenic, beryllium, barium, cadmium, chromium, nickel, and zinc) exceeded the background values. A Phase I RFI was completed in October 2013. Additional soil samples were collected from the surface and from native soils at the bottom of an excavated trench through the landfill waste materials. Five COPCS (antimony, iron, manganese, vanadium, and benzo(a)pyrene) were retained for further analysis due to detected concentrations exceeding background values and ADEM preliminary screening values. A fate and transport model was run to evaluate if metals in surface or subsurface soil have the potential to leach to groundwater. The RFI concluded that leaching to groundwater was not a complete exposure pathway. Lastly, a human health risk assessment (HHRA) was performed utilizing ADEM's required format and guidance. The HHRA concluded that no COCs were present at the site due to the total carcinogenic risk and non-carcinogenic hazard indexes (HI) were below ADEM's target cancer risk and HI. ADEM has considered the RFI to be incomplete and requested a Phase II RFI in May 2014.

CC-ANAD-08 The Groundwater Lift Station is located just to the northwest of the ANAD IWTP. The Groundwater Lift Station is used to store and convey contaminated groundwater from 26 various groundwater extraction wells to the groundwater treatment plant (GWTP). In 2010 and 2011, the lift station pumps malfunctioned and releases of untreated groundwater occurred. Approximately 1,000 gallons were released in 2010 as compared to 25,000 gallons in 2011. The untreated groundwater drained to outfall DSN001 and was transported across the ground for approximately 10 to 20 ft before entering storm water piping. The lift station serves as a contaminated groundwater conveyance for OU-1 (ANAD-01), which includes the following COCs: aluminum, arsenic, beryllium, chromium, iron, lead, manganese, carbon tetrachloride, chloroform, methylene chloride, TCE, bis (2-ethylhexyl)phthalate and tetrachloroethylene (PCE). In June 2011, a SWMU assessment report (SAR) was prepared and submitted by ANAD to ADEM. ADEM requested a RFI after review of the SAR. In 2013, a RFI was initiated and a draft RFI was prepared. Ten soil sample locations were sampled at the surface and 3 to 4 ft bgs. Soil data were screened against background values and ADEM screening levels with the resulting COPCs: aluminum, arsenic, chromium, manganese, and TCE. Sediment samples were all below the applicable screening levels. Five additional soil borings were advanced to complete the delineation in March 2014. Chromium and TCE were not delineated to unrestricted use screening levels in the southwest portion of the site and will require additional soil borings to complete the delineation.

CC-ANAD-09 Building 414 Wash Rack is in the SIA of ANAD. An in-line oil/water separator (OWS) and lift station move wastewater from the washrack at Building 414 to the IWTP. The washrack utilizes the OWS and lift station as a wastewater conveyance for wastewater containing oil and grease from the washing of the exterior and engine components of combat vehicles. In February 2013, an oily sheen was noted in a tributary to Dry Creek. The lift station pump malfunctioned and untreated water was released to the immediate area. The OWS, installed in 2011, was exposed by excavation and found to not be completely sealed, and potentially leaking, since installation in 2011. A SAR was performed and submitted to ADEM by ANAD

Contamination Assessment Overview

in 2013. ANAD collected four samples from under the concrete covering the tank prior to concrete removal. The OWS was exposed and soils removed to allow inspection of the OWS. The OWS was replaced and the tank basin was over excavated to remove visually impacted soils. Soil samples of the post-excavation soils were collected. The post-excavation soil samples yielded several COPCs: PCE, 1,2,4- trimethylbenzene, 1,3,5-trimethylbenzene, 2- methylnaphthalene, naphthalene, methylene chloride, cadmium, and zinc. In December 2013, ADEM issued a letter to ANAD identifying Building 414 Wash Rack as a SWMU and requesting a RFI.

CC-ANAD-10 On September 12, 2014, ANAD Directorate of Risk Management was notified that the previous night water was seen surfacing through the cracks in the concrete located near the northeast corner of Building 114.

Upon investigation, it was found that the underground pipe coming from the sump, located in the northeast corner of Building 114 going to the lift station, was cracked and released general waste to the environment. The air pump associated with the system had been turned off the night before, when the water was first noticed, and the vacuum truck was brought in to vacuum then approximately 20 gallons of water had been released. The waste was released to the nearby general waste sump. Soil removed during the investigation was placed in a roll-off and moved to the hazardous waste storage and disposed as hazardous waste. In situ surface soils were taken and results were submitted in a SAR to ADEM in accordance with the ANAD RCRA permit.

In a letter dated Jan. 26, 2015, ADEM required ANAD to perform an RFI to investigate the release. Based on experience with similar sites. It is anticipated that a CMS will also be required.

Cleanup Exit Strategy

Based on the current site conditions, monitoring and remediation are expected to continue through FY15.

CR Previous Studies

	Title	Author	Date
2011			
	Groundwater Compliance Monitoring Report for Building 504	Black & Veatch Special Projects Corp.	APR-2011

ANNISTON ARMY DEPOT

Compliance Restoration

Site Descriptions

Site ID: CC-ANAD-02
Site Name: Building 504
Alias: Bldg 504

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Petroleum, Oil and Lubricants (POL), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
ISC	199011	199012
INV	199012	199502
CAP	200801	200806
IMP(C)	200801	200806
IMP(O)	200907	201907

RIP Date: 200907

RC Date: 201907

SITE DESCRIPTION

Building 504 lies within ANAD's southeast industrial complex. It is where tracked vehicles are refurbished for the Army. Fluids are drained from the vehicles into containment buckets. Overspills from the buckets are fed to floor drains that are routed to a storage tank. The floor of the building is concrete and over a period of time the floor has cracked because of the activities associated with refurbishing large tracked vehicles. Occasional overspills from the containment that seeped through the cracked concrete are believed to be the source of contaminants to the subsurface. The shallow zone consists primarily of clay, silt, and minor amounts of sand, with numerous rock and chert fragments.

When employees of ANAD noticed a petroleum-like substance emerging from the base of the easternmost wall of Building 504, an investigation was launched to determine where the petroleum product was emanating from and the extent of the contamination. Initially, all drainage lines from Building 504 were pressure tested. The pipeline study indicated these drainage lines failed pressure tests conducted in 1996. International Technology Corporation performed a subsurface investigation of the building by installing soil borings which were advanced to a depth of 15 ft bgs in and around the building to determine the extent of contamination. Visual observations indicated that the concrete flooring was cracked at various locations. In addition, the floor (which consists of two layers of concrete) appears not to have been bonded at several boring locations. These locations coincide with the highest observed levels of contamination. Furthermore, diesel stains were found in between two concrete layers at two boring locations. Free-product was also observed from 12 to 13 ft bgs. The media of concern is groundwater. The contaminants of concern include acetone, benzene, toluene, ethylbenzene, and xylenes. Total petroleum hydrocarbons (TPH) ranged from nondetect to 9,500 mg/kg. The vertical and horizontal extents of contamination are unknown at this point. Data available so far indicates that the petroleum may have leaked from drainage pipes or spills on the floor and entered the flooring through cracks, spread between the two concrete layers, and continued to migrate to the subsurface through the cracks in the lower concrete slab.

The occurrence of rock and chert fragments apparently increases with depth until a more resistant rock fragment/rubble zone is encountered at approximately 20 to 30 ft bgs. The depths to groundwater across the site range from 14 to 16 ft bgs. The floor of the building has been repaired and plant operations continue. The current tenant has replaced the USTs with ASTs and underground lines with aboveground lines. Underground lines have been grouted. The current tenant also has completed several free-product removals.

An ARBCA was completed for this site in 2010. Free-product removal and monitoring were initiated under the ARBCA program in FY09 and monitoring was expected to continue through FY13. However, due to the continued presence of contaminant at the site, monitoring is expected to continue. Additionally, ADEM has requested corrective measures implementation (CMI) to be performed at this site. In January 2013, a draft CMI plan was submitted to ADEM for review. Per ADEM, ANAD will continue groundwater sampling and passive free-product removal in accordance with the draft CMI plan to assess the effectiveness of MNA until the final CMI plan is approved. ANAD awarded in December 2014 which included IMP(O) until completion of CMI plan and completion of corrective measures in accordance with the approved CMI plan.

Site ID: CC-ANAD-02
Site Name: Building 504
Alias: Bldg 504

CLEANUP/EXIT STRATEGY

Based on the current site conditions, monitoring and remediation are expected to continue through FY15.

Site ID: CC-ANAD-04
Site Name: Defense National Stockpile Sites
Alias: CC-ANAD-04

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals

Media of Concern: Soil

Phases	Start	End
RFA	200701	200701
RFI/CMS	200910	201512
CMI(C)	201612	201912

RIP Date: N/A

RC Date: 201912

SITE DESCRIPTION

Defense National Stockpile areas are located in the northeastern portion of the ASA. They were used to store strategic materials for National Defense. The materials include bauxite and manganese ore which are predominantly mined for the metals aluminum and manganese. The stockpile areas consisted of piles of bauxite and manganese ore stored in the open, on the ground. The piles were sold off and removed sometime in 2001. A thin layer of ore remains on the surface at each of the stockpile areas. Three phases of a RFI have been completed at the site from 2008 to 2013 without achieving delineation to residential standards in accordance with ADEM's regulations. A Phase I RFI was conducted February through May 2008 to assess the presence or absence of contamination at six of the Defense National Stockpile areas, AOC J-CLA, AOC J-1A, AOC J1-B, AOC J-2, AOC J-3, and AOC J-4 (Black & Veatch, 2009). As a result of the Phase I effort, a Phase II RFI was required by the ADEM to determine the extent of metals contamination at four of the sites: Bauxite Stockpiles AOC J-CLA, AOC J-2, and AOC J-3/AOC J-4, and Manganese Dioxide Stockpiles AOC J- 1B and AOC J-1A. Phase II field activities were conducted in July 2010. In addition to the collection and analysis of soil samples, both a HHRA and a screening-level ecological risk assessment were conducted during the Phase II effort. A Phase III RFI was initiated in 2012 and was completed in 2013. ADEM's review of the Phase III RFI is documented in their April 3, 2014 letter requiring delineation of the site to unrestricted use screening criteria. ANAD awarded a contract in December 2014 which included completion of an RFI, completion of a CMI in accordance with the approved CMI plan.

It is estimated by the contractor that approximately 22 hot spots or 700 cy (980 tons) of arsenic and/or manganese impacted soil will require removal and off-site disposal. The expected soil removal depth is proposed at two ft bgs. The soil volume estimate is based on the extrapolation of the 2013 Phase III RFI incorporating the Phase I and Phase II RFI data completed for the National Defense Stockpile sites.

CLEANUP/EXIT STRATEGY

NFA is expected after completion of the Phase III RFI.

Site ID: CC-ANAD-05
Site Name: Building 409
Alias: CC-ANAD-05

STATUS

Regulatory Driver: RCRA

Contaminants of Concern: Metals, Volatiles (VOC)

Media of Concern: Groundwater, Soil

Phases	Start	End
RFA	200701	200701
CS	200904	200906
RFI/CMS	201011	201612
CMI(C)	201612	201812

RIP Date: N/A

RC Date: 201907

SITE DESCRIPTION

Building 409 is located within the east area of ANAD in the Nichols Industrial Complex and covers an area of approximately 1.5 acres. It is an industrial building designated for abrasive and chemical cleaning operations for parts, painting, container repair, and testing.

In February 2009, wastewater was observed seeping to the ground surface near one of the industrial sewer outlets, which was later discovered to be related to ruptured underground sewer piping, which is located approximately three ft bgs. A field investigation was conducted and an RFI report was submitted to ADEM in June 2009. In February 2010, ANAD personnel discovered a second release at Building 409 while upgrading sumps adjacent to Building 409. In April 2010 a cavity was discovered below the one of the concrete vats inside Building 409 that allowed discharges of wastewater to the environment. In October 2012, a leaking general waste line was discovered, repaired and reported to ADEM for inclusion in future RFI work.

Engineering measures were incorporated to repair the sources of all three releases shortly after they were discovered. The COPCs from all three releases are similar and related to current operations within Building 409.

ADEM also requested that ANAD conduct leak tests, flow tests, mass balance evaluations, etc., as necessary to determine which vats, pits, sumps, and pipes were/are leaking and the amount of wastewaters and constituents that have been released. This was to be done in addition to the RFI effort for the area around Building 409 affected by the earlier releases of wastewater.

In summary, there were some metals and VOC exceedances in the soil and groundwater samples. Metals that were detected in the unfiltered groundwater samples were typically below the screening criteria in samples that were collected through a 0.45 micron filter. Turbidity readings from the unfiltered groundwater samples ranged from 18.3 NTUs to greater than 1,000 NTUs. The lower concentration and/or lack of detection of metals in the filtered groundwater samples are an indication that turbidity may be a source of metals concentrations. TCE was the primary VOC detected in the groundwater. The concentrations were above screening levels, but they were not at levels that were indicative of a major release to the environment or a continuing source present in the subsurface media. A Phase II RFI completely delineating contamination to residential screening levels has been ordered by ADEM in a letter dated Dec. 12, 2012. Due to the potential levels of contaminant and this site being within the footprint of OU-1, the site is assumed to need a CMI plan and CMI. ANAD awarded a contract in December 2014 which included completion of an RFI, completion of a CMI in accordance with the approved CMI plan.

It is estimated by the contractor that semiannual groundwater sampling of five wells, including the existing, will constitute the corrective measures.

CLEANUP/EXIT STRATEGY

It is anticipated that NFA will be required after completion of the Phase II RFI.

Site ID: CC-ANAD-06
Site Name: RCRA regulated 90 day site
Alias: Bldg 432

STATUS

Regulatory Driver: RCRA

Phases	Start	End
RFA	200805	200912
RFI/CMS	201001	201612
CMI(C)	201612	201812

RIP Date: N/A

RC Date: 201812

SITE DESCRIPTION

Building 432 is used to blast hulls and turrets using stainless steel pellets as part of the refurbishing process for combat vehicles. The steel pellets were found during an ADEM RCRA compliance inspection on the concrete and on the ground near a storm water outfall (ANAD Outfall DSN # 36). As a result of this finding, ADEM ordered ANAD to perform an RFI. During the source characterization phase of the investigation (conducted in May and June 2008), elevated levels of cadmium, chromium, lead and zinc were encountered in surface and subsurface soil samples collected from underneath expansion joints in the concrete near Building 432 and near Outfall # 36. Also, elevated metals were encountered in sediment samples collected from Dry Creek near Outfall # 36. Further sampling was conducted in the Building 432 Area in December 2009. Cadmium, chromium, and zinc were the most frequently detected metals in surface soil in exceedance of their respective industrial preliminary screening levels and background values. The majority of these surface soil exceedances were in sample locations south-southeast, potential surface runoff downgradient area of the Building 432 area; however, most of the elevated metals were located under an approximately one-ft thick concrete slab that extends across the entire site, thus preventing the horizontal mobility of these exceedances.

The site was sufficiently delineated in the horizontal and vertical directions via soil, sediment and groundwater sampling to industrial standards. Exceedances of industrial exposure standards were noted nearest the source area: however, ANAD originally investigated/delineated the site to industrial levels. During the course of this investigation ADEM promulgated their Universal Environmental Covenant Act which requires all sites with contamination above unrestricted use (no residential exposure concerns) to enact an Environmental Covenant. This requires the site to be delineated to unrestricted use/residential standards. ADEM ordered ANAD to further delineate the site to these standards, by completing a Phase II RFI, via letter documenting their comments on the ANAD RFI Report on Jan. 5, 2011. As a result of the noted release, the blasting operations in Building 432 were modified. Previously hulls/turrets had to travel outside of the building to get to the vacuum bay of the building. This process was enclosed to alleviate the need for the hulls/turrets to traverse outdoors. Also, it was discovered that the blast hangar and the building itself were releasing media to the environment. The building was sealed preventing media from being released to the environment.

A Phase II RFI was completed in 2013 but did not achieve delineation to unrestricted use screening levels and thus, was not submitted to ADEM for review. A review of the Phase II RFI shows that delineation to unrestricted screening levels was not achieved to the southwest of Outfall # 36, along the stream bank southwest of the outfall, and to the northeast of Building 432 along Roosevelt Avenue. Sediment was delineated to below unrestricted use screening criteria in both the upgradient and downgradient directions along Dry Creek from Outfall # 36. ANAD awarded a contract in December 2014 which included completion of an RFI, completion of a CMI in accordance with the approved CMI plan.

It is estimated by the contractor that approximately 100 cy (150 tons) of chromium impacted soil will require removal and off-site disposal. The expected soil removal depth is proposed at 2 ft bgs.

CLEANUP/EXIT STRATEGY

NFA is expected for this site after completion of the Phase II RFI.

Site ID: CC-ANAD-07
Site Name: Western Area Clean Fill Site
Alias: Clean Fill

STATUS

Regulatory Driver: RCRA

Phases	Start	End
RFA	200910	201001
RFI/CMS	201206	201612
CMI(C)	201612	201812

RIP Date: N/A

RC Date: 201812

SITE DESCRIPTION

ANAD's Clean Fill C&D Site is located on a hilltop in the WIA of ANAD and compromises an approximate area of 9.19 acres. The site is estimated to contain approximately 230,000 cubic meters of concrete, dirt, wood, asphalt, and rock with approximate composition of 60 percent concrete, 35 percent soil, with the remaining materials made of wood, asphalt, and rock. An SI as a result of an executive order resulted in the discovery of concrete with exposed rebar, scrap metal, and wood that appeared to be from railroad ties at the site and ADEM was subsequently notified. The burial site is no longer active. In 2009, ANAD performed a PA to determine the presence or absence of site-related COPC, total metals. Soil samples were collected as part of the PA below the landfill surface. Several metals (arsenic, beryllium, barium, cadmium, chromium, nickel, and zinc) exceeded the background values. A Phase I RFI was completed in October 2013. Additional soil samples were collected from the surface and from native soils at the bottom of an excavated trench through the landfill waste materials. Five COPCs (antimony, iron, manganese, vanadium, and benzo(a)pyrene) were retained for further analysis due to detected concentrations exceeding background values and ADEM preliminary screening values. A fate and transport model was run to evaluate if metals in surface or subsurface soil have the potential to leach to groundwater. The RFI concluded that leaching to groundwater was not a complete exposure pathway. Lastly, a HHRA was performed utilizing ADEM's required format and guidance. The HHRA concluded that no COCs were present at the site due to the total carcinogenic risk and non-carcinogenic HI were below ADEM's target cancer risk and HI. ADEM has considered the RFI to be incomplete and requested a Phase II RFI in May 2014.

ANAD awarded a contract in December 2014 which included completion of an RFI, completion of a CMI in accordance with the approved CMI plan.

It is anticipated that ADEM will approve a NFA with LUCs to prevent residential land use at the site. NFA request would be considered a risk-based closure as waste was left in place and risk-based target levels.

CLEANUP/EXIT STRATEGY

Based on the preliminary results, it is anticipated that NFA will be required.

Site ID: CC-ANAD-08
Site Name: Groundwater Lift Station Spill Site
Alias: LS Spill

STATUS

Regulatory Driver: RCRA

Phases	Start	End
RFA	200610	200709
CS	201011	201102
RFI/CMS	201303	201512
CMI(C)	201612	201812

RIP Date: N/A

RC Date: 201812

SITE DESCRIPTION

The Groundwater Lift Station is located just to the northwest of the ANAD IWTP. The Groundwater Lift Station is used to store and convey contaminated groundwater from 26 various groundwater extraction wells to the GWTP. In 2010 and 2011, the lift station pumps malfunctioned and releases of untreated groundwater occurred. Approximately 1,000 gallons were released in 2010 as compared to 25,000 gallons in 2011. The untreated groundwater drained to outfall DSN001 and was transported across the ground for approximately 10-20 ft before entering storm water piping. The lift station serves as a contaminated groundwater conveyance for OU-1, which includes the following COCs: aluminum, arsenic, beryllium, chromium, iron, lead, manganese, carbon tetrachloride, chloroform, methylene chloride, TCE, bis (2 ethylhexyl)phthalate and tetrachloroethylene. In June 2011, a SAR was prepared and submitted by ANAD. ADEM requested a RFI after review of the SAR. In 2013, a RFI was initiated and a draft RFI was prepared. Ten soil sample locations were sampled at the surface and three to four ft bgs. Soil data were screened against background values and ADEM screening levels with the resulting COPCs: aluminum, arsenic, chromium, manganese, and TCE. Sediment samples were all below the applicable screening levels. Five additional soil borings were advanced to complete the delineation in March 2014. Chromium and TCE were not delineated to unrestricted use screening levels in the southwest portion of the site and will require additional soil borings to complete the delineation.

ANAD a contract in December 2014 which included completion of an RFI, completion of a CMI in accordance with the approved CMI plan.

CLEANUP/EXIT STRATEGY

It is anticipated that ADEM will approve an NFA with LUCs to prevent residential land use at the site.

Site ID: CC-ANAD-09
Site Name: Building 414 Washrack Release
Alias: Bldg 634

STATUS

Regulatory Driver: RCRA

Phases	Start	End
RFA	201302	201312
RFI/CMS	201410	201612
CMI(C)	201612	201812

RIP Date: N/A

RC Date: 201812

SITE DESCRIPTION

On Feb. 26, 2013, ANAD Directorate of Risk Management personnel were notified of a release of oily sheen to an Unnamed Tributary of Dry Creek. Upon investigation, it appeared that the lift station/OWS that conveyed steam cleaning wastewater from the Building 414 washrack to ANAD's IWTP had blown a fuse and was not effectively pumping causing a release to the immediate area. At that time, the visible release was remediated and the washrack was shut down pending further investigation of the extent of the release. ANAD took soil samples for oil and grease from beneath the concrete on April 3, 2013. ANAD then excavated concrete around the lift station on April 11, 2013 and took further soil samples. Visual examination upon excavation noted that the OWS installed approximately two years ago was not a completely sealed vessel. Further receipt of the analyses on April 12 and April 17, 2013, respectively, confirmed that this was an AOC.

As noted in SAR, there were exceedances of several semi-volatiles above the preliminary screening values (PSV) and exceedances of several metals above PSVs and background values. ANAD then submitted a SAR to ADEM. ADEM reviewed the final SAR and has instructed ANAD to perform an RFI via letter dated Dec. 23, 2013. A contract was awarded September 2014 to complete the RFI.

CLEANUP/EXIT STRATEGY

After completion of the RFI, it is anticipated that completion of the corrective measures implementation plan (CMIP) and CMI in accordance with the CMIP will be requested. It is anticipated that a NFA with LUCs will be approved after completion of corrective measures for two years.

Site ID: CC-ANAD-10
Site Name: General Waste Leak
Alias: Bldg 114

STATUS

Regulatory Driver: RCRA

Phases	Start	End
RFA	201409	201412
RFI/CMS	201506	201706

RIP Date: N/A

RC Date: 201706

SITE DESCRIPTION

On Sept. 12, 2014, ANAD Directorate of Risk Management was notified that the previous night, water was seen surfacing through the cracks in the concrete located near the northeast corner of Building 114.

Upon investigation, it was found that the underground pipe coming from the sump, located in the northeast corner of building going to the lift station, was cracked and released general waste to the environment. The air pump associated with the system had been turned off the night before, when the water was first noticed. A vacuum truck was brought in to vacuum approximately 20 gallons of water that had been released. The waste was released to the nearby general waste sump. Soil removed during the investigation was placed in a roll-off and moved to the hazardous waste storage and disposed as hazardous waste. In situ surface soils were taken and results were submitted in a SAR to the ADEM in accordance with the RCRA Permit.

In a letter dated Jan. 26, 2015 ADEM required ANAD to perform an RFI to investigate the release.

CLEANUP/EXIT STRATEGY

Based on experience with similar sites, it is anticipated that a CMS will also be required.

Site ID: CC-ANAD-11
Site Name: Chrome Line Leak
Alias: Bldg 136

STATUS

Regulatory Driver: RCRA

Phases	Start	End
RFA	201402	201406
RFI/CMS	201506	201706

RIP Date: N/A

RC Date: 201706

SITE DESCRIPTION

On Feb. 28, 2014, the ANAD Directorate of Risk Management was notified of a release of chrome wastewater from the force main that carries the wastewater from the location of the old ANAD IWTP to the new ANAD IWTP.

Upon discovery, Directorate of Public Works personnel used a vacuum truck to contain free liquids at the site of the leak. The liquids removed by the vacuum truck were transported to the ANAD IWTP for treatment. Soil was excavated to locate the leak. Once located, the leak was repaired and the line placed back into service. Excavated soils were placed in a hazardous waste roll-off box and sent off-site for treatment due to chromium contamination. The actual amount of the release is unknown. Post-excavation samples were also taken and included in SAR.

After the original release/notification, ANAD performed a SAR per the ANAD RCRA Permit. Based on this submittal, in a letter dated Jan. 26, 2015 ADEM ordered ANAD to perform an RFI to investigate the release.

CLEANUP/EXIT STRATEGY

Based on experience with similar sites, it is anticipated that a CMS will also be required.

Site ID: CC-ANAD-12
Site Name: General Waste Release Building 117
Alias: Bldg 117

STATUS

Regulatory Driver: RCRA

Phases	Start	End
RFA	201402	201405
RFI/CMS	201506	201706

RIP Date: N/A

RC Date: 201706

SITE DESCRIPTION

On Feb. 6, 2014, the ANAD Directorate of Risk Management was notified of water seeping up through concrete. Once on-site, the pumps that service this portion of wastewater sewer were shut down. Concrete and soil were excavated and it was observed that a portion of force main had a tee installed with rubber couplings and had failed. The rubber couplings were replaced with stainless steel band clamps. One section of underground force main developed a leak at a tee fitting and the wastewater came aboveground through cracks in the concrete pavement, flowing approximately 30 ft across the pavement and into a storm water system drop inlet. Excavated soils and concrete were placed into a hazardous waste roll-off and managed as D006 waste due to cadmium. Source soil samples were collected and results were reported and the results were submitted to ADEM in a SAR in accordance with the RCRA Permit.

In a letter dated Jan. 26, 2015 ADEM required ANAD to perform an RFI to investigate the release.

CLEANUP/EXIT STRATEGY

Based on experience with similar sites, it is anticipated that a CMS will also be required.

Site ID: CC-ANAD-13
Site Name: Building 414 Washrack
Alias: Bldg 524

STATUS

Regulatory Driver: RCRA

Phases	Start	End
RFA	201406	201409
RFI/CMS	201506	201706

RIP Date: N/A

RC Date: 201706

SITE DESCRIPTION

On June 26, 2014, ANAD Directorate of Risk Management personnel were notified of a potential underground water leak that was seen coming to the surface on the west side of Building 524.

Upon investigation, it was found that the pipe coming from the OWS located at the Building 414 washrack had ruptured and was releasing oily water to the environment. The system was shut down and the pipeline was repaired.

Excavated soils were placed into a roll-off and relocated to the hazardous waste storage facility. Subsequent testing of the excavated dirt resulted in a nonhazardous determination and the dirt was sent to a nonhazardous landfill. Source solid samples were collected. Analytical results were tabulated in the SAR.

After the original release/notification, ANAD performed a SAR in accordance with the ANAD RCRA Permit. In a letter dated Jan. 26, 2015 ADEM required ANAD to perform an RFI to investigate the release.

CLEANUP/EXIT STRATEGY

Based on experience with similar sites, it is anticipated that a CMS will also be required.

Site ID: CC-ANAD-14
Site Name: Compressor Blow Down Building 634
Alias: Bldg 634

STATUS

Regulatory Driver: RCRA

Phases	Start	End
RFA	201406	201409
RFI/CMS	201506	201706

RIP Date: N/A

RC Date: 201706

SITE DESCRIPTION

On June 4, 2014, ANAD Directorate of Risk Management was notified of a release from Building 634.

Upon investigation it was noted that oily compressor blowdown had been released from piping and a septic tank that serviced the building. Contaminated soils were removed to the extent practical and containerized for off-site disposal. At the time of discovery, repairs were made to the piping to stop the release. In situ surface soil samples were taken and the results are tabulated in the SAR.

After the original release/notification, ANAD performed a SAR per the ANAD RCRA Permit. Based on this submittal, in a letter dated Jan. 26, 2015 ADEM required ANAD to perform an RFI to investigate the release.

CLEANUP/EXIT STRATEGY

Based on experience with similar sites, it is anticipated that a CMS will also be required.

Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation

There are no NFA sites

CR Schedule

Date of CR Inception: 199011

Past Phase Completion Milestones

1991	
ISC	(CC-ANAD-02 - Building 504)
1995	
INV	(CC-ANAD-02 - Building 504)
2007	
RFA	(CC-ANAD-04 - Defense National Stockpile Sites, CC-ANAD-05 - Building 409 , CC-ANAD-08 - Groundwater Lift Station Spill Site)
2008	
CAP	(CC-ANAD-02 - Building 504)
IMP(C)	(CC-ANAD-02 - Building 504)
2009	
CS	(CC-ANAD-05 - Building 409)
2010	
RFA	(CC-ANAD-06 - RCRA regulated 90 day site, CC-ANAD-07 - Western Area Clean Fill Site)
2011	
CS	(CC-ANAD-08 - Groundwater Lift Station Spill Site)
2014	
RFA	(CC-ANAD-09 - Building 414 Washrack Release, CC-ANAD-11 - Chrome Line Leak, CC-ANAD-12 - General Waste Release Building 117, CC-ANAD-13 - Building 414 Washrack, CC-ANAD-14 - Compressor Blow Down Building 634)

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

To Be Determined

Final RA(C) Completion Date: 201912

Schedule for Next Five-Year Review: 2015

Estimated Completion Date of CR at Installation (including LTM phase): 201912

ANNISTON ARMY DEPOT CR Schedule

= phase underway

SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
CC-ANAD-02	Building 504	IMP(O)						
CC-ANAD-04	Defense National Stockpile Sites	RFI/CMS						
		CMI(C)						
CC-ANAD-05	Building 409	RFI/CMS						
		CMI(C)						
CC-ANAD-06	RCRA regulated 90 day site	RFI/CMS						
		CMI(C)						
CC-ANAD-07	Western Area Clean Fill Site	RFI/CMS						
		CMI(C)						
CC-ANAD-08	Groundwater Lift Station Spill Site	RFI/CMS						
		CMI(C)						
CC-ANAD-09	Building 414 Washrack Release	RFI/CMS						
		CMI(C)						
CC-ANAD-10	General Waste Leak	RFI/CMS						
CC-ANAD-11	Chrome Line Leak	RFI/CMS						
CC-ANAD-12	General Waste Release Building 117	RFI/CMS						
CC-ANAD-13	Building 414 Washrack	RFI/CMS						
CC-ANAD-14	Compressor Blow Down Building 634	RFI/CMS						

Community Involvement

Technical Review Committee (TRC): 199310

Community Involvement Plan (Date Published): 201204

Restoration Advisory Board (RAB): RAB established 199805

RAB Adjournment Date: N/A
RAB Adjournment Reason: None

Additional Community Involvement Information

In May 1998, the TRC was converted into a RAB. The RAB is made up of local officials, members of environmental groups and members of the local community. The RAB meets quarterly and discusses ongoing work in the IRP. The RAB also has played an active role in public meetings for the CGW RI, including the private well and spring inventory.

RAB members have expressed interest in reducing meeting frequency to less than quarterly, until there is greater Environmental Restoration, Army (ER,A) program activity. Members have also requested, and been given, information on how to apply for a TAPP grant. The CIP was updated in 2012.

Administrative Record is located at

Anniston Army Depot
Directorate of Risk Management, Bldg 199
7 Frankford Avenue
Anniston, AL 36201
(256) 235-4854

Information Repository is located at

Jacksonville State University
Houston Cole Library
Jacksonville, AL 36265
(256) 782-5255

Anniston Calhoun County Public Library
108 East 10th Street
Anniston, AL 36202
(256) 237-8501

Current Technical Assistance for Public Participation (TAPP): N/A

TAPP Title: N/A

Potential TAPP: The RAB has decided not to take advantage to TAPP opportunity at this time.