

**INSTALLATION ACTION PLAN
for
McALESTER ARMY AMUNITION
PLANT**



Fiscal Year 2001



**MCALESTER
ARMY
AMMUNITION
PLANT**



2001 INSTALLATION ACTION PLAN

INSTALLATION ACTION PLAN 2001

**McALESTER ARMY
AMMUNITION PLANT**

STATEMENT OF PURPOSE

The purpose of the Installation Action Plan is to outline the total multi-year restoration program for an installation. The plan will define Installation Restoration Program requirements and propose a comprehensive approach and associated costs to conduct future investigations and remedial actions at each Installation Restoration Program site at the installation.

In an effort to coordinate planning information among the Installation Restoration Program Manager, major army commands, installations, executing agencies, regulatory agencies, and the public, an Installation Action Plan has been completed for McAlester Army Ammunition Plant. The Installation Action Plan is used to track requirements, schedules, and budgets for all major Army installation restoration programs.

All site specific funding and schedule information has been prepared according to projected overall Army funding levels and is therefore subject to change. Under current project funding, McAlester Army Ammunition Plant is under the Army's current strategy of accelerated cleanup.

CONTRIBUTORS TO THE INSTALLATION ACTION PLAN

INFORMATION SHARING

The Installation Action Plan is an integral component to the scoping, scheduling, and budgeting of the accelerated path to cleanup. A workshop was held on August 30 - September 1, 2000, in San Antonio, Texas. The following individuals attended the workshop and were essential to the success of the FY 01 Installation Action Plan.

NAME:

ORGANIZATION:

Kevin Tiemeier	United States Army Munitions Armaments Command (PROV)
Sernanda Anderson	Environmental - McAlester Army Ammunition Plant
Darrell Elliott	Environmental - McAlester Army Ammunition Plant
Bob Sturdivant	United States Environmental Protection Agency, Region 6
David Lawson	Oklahoma Department of Environmental Quality
Carolyn Russell	United States Army Corps of Engineers, Tulsa
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Tim White	The IT Group

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MCALESTER ARMY AMMUNITION PLANT

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ACRONYMS & ABBREVIATIONS

AMC	United States Army Materiel Command
AEC	United States Army Environmental Center
AOC	Area of Concern
APCS	Air Pollution Control System
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CESWT	United States Army Corps of Engineers Southwest Division, Tulsa District
CMI	Corrective Measures Implementation
CMIP	Corrective Measures Implementation Plan
CMS	Corrective Measures Study
CTC	Cost to Complete
cy	Cubic Yards
DAC	Defense Ammunition Center
DERA	Defense Environmental Restoration Act
DRMO	Defense Reutilization and Marketing Office
DSERTS	Defense Sites Environmental Restoration Tracking System
EPA	Environmental Protection Agency
ER,A	Environmental Restoration, Account
FS	Feasibility Study
FY	Fiscal Year
HW	Hazardous Waste
IAP	Installation Action Plan
IRA	Interim Remedial Action
IRP	Installation Restoration Program
LTM	Long Term Monitoring
MAC	Munitions Armaments Command (PROV)
MCAAP	McAlester Army Ammunition Plant
NE	Not Evaluated
NFA	No Further Action
NFRAP	No Further Remedial Action Planned
NPDES	National Pollution Discharge Elimination System
ODEQ	Oklahoma Department of Environmental Quality
OSC	Operations Support Command
POL	Petroleum, Oil and Lubricants
PROV	Provisional
PA	Preliminary Assessment
PCB	Polychlorinated Biphenyls
PCP	Pentachlorophenol
ppb	Parts Per Billion
ppm	Parts Per Million
RA	Remedial Action

ACRONYMS & ABBREVIATIONS

RA(C)	Remedial Action - Construction
RA(O)	Remedial Action - Operation
RAB	Restoration Advisory Board
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
REM	Removal
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RRSE	Relative Risk Site Evaluation
SI	Site Inspection
SWMU	Solid Waste Management Unit
TCE	Trichloroethylene
TPH	Total Petroleum Hydrocarbons
TSCA	Toxic Substances Control Act
USACE	United States Army Corps of Engineers
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine
USAEHA	United States Army Environmental Hygiene Agency

SUMMARY

REGULATORY AUTHORITY

RCRA Corrective Action as required by Part B Permit issued on 2 September 1992 and modified on 15 December 1998

NUMBER OF DSERTS SITES:

46 DSERTS sites
 7 Active ER,A Eligible Sites
 18 Response Complete ER,A Eligible Sites
 21 Response Complete Non-ER,A Eligible Sites

POTENTIAL DSERTS SITES:

One site under review by ODEQ

DIFFERENT SITE TYPES:

2	Burn Areas	3	Contaminated Buildings
1	Contaminated Fill	2	Surface Disposal Areas
1	Disposal Pit/Dry Well	11	Landfills
1	Oil Water Separator	3	Storage Areas
12	Surface Impoundments/Lagoons	3	Spill Site Areas
3	Waste Treatment Plants	3	Explosive Ordnance Disposal Areas
1	Other		

CONTAMINANTS OF CONCERN:

TPH, Metals, PCBs, Dioxins, Explosives

MEDIA OF CONCERN:

Soil, Sediment, Surface Water, and Groundwater

COMPLETED REM/IRA/RA:

None

CURRENT IRP PHASES:

REM - Removal of PCB contaminated soils and Building 644 (MCAAP-43)
 RA - Removal of lead contaminated soils at Deactivation Furnace Lagoon (MCAAP -18)
 RI/FS Pallet Dipping Building 209 (MCAAP - 32) and Building 471 (MCAAP - 33) and Bailer Site (MCAAP - 46)
 RA - Removal of lead contaminated soils at Burn Area 2 (MCAAP - 26)
 LTM -(MCAAP - 02)

PROJECTED IRP PHASES:

PA/SI (1 site)
 RI/FS (3 sites)
 RD (4 sites)
 RA (6 sites)
 LTM (1 site)

IDENTIFIED POSSIBLE REM/IRA/RA:

~ Removal of contaminated soil at MCAAP-046

FUNDING (K):

PRIOR YEAR THROUGH (1976 -00):	\$8,265.312
FY01:	\$1,416
FUTURE REQUIREMENTS:	\$4,974
TOTAL:	\$14,655.312

DURATION:

YEAR OF IRP INCEPTION: 1991
 YEAR OF IRP COMPLETION EXCLUDING LTM:2002
 YEAR OF IRP COMPLETION INCLUDING LTM: 2030

INSTALLATION INFORMATION

LOCALE

McAlester Army Ammunition Plant (MCAAP) is located in a sparsely populated area of southeast Oklahoma, 9 miles southwest of the City of McAlester (population 16,370), Pittsburg County, (population 40,581). The closest major cities are more than hundred miles away (Tulsa, 113 miles north; Oklahoma City, 120 miles northwest; Dallas 180 miles southwest). The area has been used for strip mining coal, but is currently used for agricultural purposes. MCAAP occupies 44,965 acres (70 square miles) and is the major employer in the area.

COMMAND ORGANIZATION

MAJOR COMMAND: United States Army Materiel Command (AMC)

SUB COMMAND: United States Army Operations Support Command (OSC)

INSTALLATION: McAlester Army Ammunition Plant (MCAAP); Environmental Management Office

INSTALLATION RESTORATION PROGRAM EXECUTING AGENCY

- United States Army Environmental Center (AEC)
- United States Army Corps of Engineers (USACE), Tulsa District

REGULATORY PARTICIPATION

FEDERAL: United States Environmental Protection Agency (EPA), Region VI

STATE REGULATORY AGENCY: Oklahoma Department of Environmental Quality (ODEQ)

REGULATORY STATUS

- None of MCAAP sites are on the National Priorities List.
- MCAAP is performing corrective actions as required by their Resource Conservation and Recovery Act (RCRA) Part B Permit issued by EPA (1992), and modified December 15, 1998, and is under the primacy of the ODEQ (1994).

MAJOR CHANGES TO ACTION PLAN FROM PREVIOUS YEAR (FY 00)

- RD and RA phases deleted at two sites MCAAP - 32 and MCAAP - 33
- Remediation completed at one site MCAAP-26
- Identified 13 additional sites requiring investigation and possibly remediation
- Completed Preliminary Assessment/Site Inspection (PA/SI) at Former Dud Area and Bailer Site.
- Groundwater Assessment Closure Report approved for MCAAP - 02

INSTALLATION DESCRIPTION

LOCATION

MCAAP is located in southeastern Oklahoma approximately 9 miles southwest of the city of McAlester, the county seat of Pittsburg County. The city of McAlester is located about equidistant from Oklahoma's two largest cities; Tulsa is approximately 113 miles north and Oklahoma City is approximately 120 miles northwest. The roads leading to MCAAP include State Route 31, which trends east to west, and State Highway 69, which trends north to south. The main entrance to MCAAP is along Highway 69. MCAAP occupies approximately 44,965 acres or 70 square miles.



HISTORY

McAlester Naval Ammunition Depot began with a War Department announcement on June 10, 1942, that a \$35 million plant would be built to provide additional production facilities during World War II. Work began on the construction of the McAlester Naval Ammunition Depot at McAlester, Oklahoma, in August 1942. Construction of the depot was a concerted effort, and at the height of activity, 15,000 workmen were employed. Construction proceeded rapidly, and, on September 24, 1943, the first munitions were produced. During World War II, the facility produced 325,000 tons of various types of munitions including 16-inch gun ammunition, mines, rockets, and depth charges.

On October 1, 1977, the Deputy Secretary of Defense transferred operation of the installation under the provisions of the Department of Defense Directive 5160.65 and established the MCAAP as the single manager for the manufacture of conventional ammunition. MCAAP was assigned to the United States Army Armament Materiel Readiness Command. The primary mission of MCAAP did not change after transfer of operations to the Army. MCAAP is an active OSC facility, which is Government owned and Government operated.

EPA Region VI in conjunction with ODEQ issued a RCRA part B permit in September 1992. The permit that was modified December 15, 1998 requires the corrective action program at MCAAP. EPA Region VI was the lead regulatory agency for RCRA remediation until ODEQ obtained corrective action authority in December 1994.

MCAAP has surveyed the surrounding community on several occasions and has determined that there is currently no community interest in forming a Restoration Advisory Board (RAB).

MISSION

The current mission of MCAAP is to produce and renovate conventional ammunition and ammunition-related components as a Specified Mission Facility. MCAAP receives, stores, ships, and/or demilitarizes and disposes of conventional ammunition and related items. Additionally, MCAAP is the group General Technology Center for bomb loading, assembling, packing, manufacturing, engineering, product assurance and production support.

MCAAP is also the home for the United States Army Defense Ammunition Center (DAC) which was relocated from the Savanna Army Depot Activity, Savanna, Illinois in 1998.

CONTAMINATION ASSESSMENT

OVERVIEW

In 1987, the EPA performed a RCRA Facility Assessment (RFA) and identified eight Solid Waste Management Units (SWMUs). In 1992, the United States Army Environmental Hygiene Agency (USAEHA) performed an additional assessment and identified 42 potential SWMUs at MCAAP. Negotiations between the EPA and the Army resulted in the designation of nine SWMUs requiring further investigation. MCAAP requested that AEC conduct the RCRA Facility Investigation (RFI) for the nine SWMUs identified in 1992. In January 1993, MCAAP notified the EPA of an additional SWMU bringing the total number of SWMUs to ten. MCAAP investigated another site to determine if it required designation as a SWMU. The site did not meet the requirements to be designated as a SWMU but is being remediated for Total Petroleum Hydrocarbons (TPH).

MCAAP has a total of 46 sites in the Defense Sites Environmental Restoration Tracking System (DSERTS). The 46 SWMU locations are shown on the enclosed map.

By modification of the Part B Permit on December 15, 1998, ODEQ accepted no further action for SWMUs 1,2,5,12, and 19.

Two SWMUs previously identified for corrective measures study, MCAAP-32 and MCAAP-33, were investigated and were determined not to require cleanup under current regulatory risk level criteria.

Remediation of MCAAP-26 has been completed and is awaiting regulatory approval. Remediation of MCAAP-18 has received regulatory approval and the contract is being closed out. Remediation of MCAAP-43 has been completed and is awaiting regulatory approval.

PREVIOUS STUDIES

PREVIOUS STUDIES AT McALESTER ARMY AMMUNITION PLANT

1. Horacek, Smith, Painter and Spitz, Inc., November 1979, McAlester Army Ammunition Plant Water Quality Management Study, U.S. Army Corps Of Engineers, Ft. Worth, TX.
2. U.S. Army Armament Materiel Readiness Command, March 1979, Installation Environmental Impact Assessment, McAlester, OK.
3. Enviromed Laboratories, Inc., April 1987, Environmental Studies and Disposal Recommendations (Final), McAlester, OK.
4. Environmental Protection Agency, August 1987, RCRA Facility Assessment Report, McAlester Army Ammunition Plant, McAlester, OK.
5. Environmental Science and Engineering, Inc., June 1988, Update of the Initial Installation Assessment of McAlester Army Ammunition Plant, OK, U.S. Army Toxic and Hazardous Materials Agency, Aberdeen, MD.
6. U.S. Army Corps of Engineers, Tulsa District, January 1990, Ground Water Assessment, McAlester OK.
7. U.S. Army Environmental Hygiene Agency, December 1990, Ground Water Quality Consultation No. 38-26-0374-91, McAlester Army Ammunition Plant, McAlester, OK.
8. U.S. Army Environmental Hygiene Agency, March 1992, Ground-Water Quality Consultation No. 38-26-K135-92, Evaluation of Solid Waste Management Units, McAlester, OK.
9. U.S. Army Environmental Hygiene Agency, February 1992, Wastewater Management Study No. 32-24-H094-92, Preliminary Toxicity Testing and Evaluation, McAlester Army Ammunition Plant, U.S. Army Materiel Command, Alexandria, VA.
10. Metcalf and Eddy, Inc., 1994, RCRA Facility Investigation (RFI) Report for Various Solid Waste Management Units, McAlester Army Ammunition Plant, Pittsburg County, Oklahoma, U.S. Army Corps of Engineers, Baltimore District.
11. Metcalf and Eddy, Inc., December 1994, RCRA Facility Investigation and Risk Assessment (Final), U.S. Army Environmental Center, Aberdeen, MD.
12. AWD Technologies, 30 Dec 1994, Final Work Plan, Removal and Disposal of PCB Contaminated Material and Soil, Minol Building, McAlester Army Ammunition Plant, McAlester, Oklahoma
13. Dow Environmental (formerly AWD), 11 Jul 1995, Final Summary Report, Removal and Disposal of PCB Contaminated Material and Soil, Minol Building, McAlester Army Ammunition Plant, McAlester, Oklahoma
14. Dow Environmental, 8 Sep 1995, Summary Report, Soil Sampling South of Building 177, McAlester Army Ammunition Plant, McAlester, Oklahoma. (Draft, accepted as Final)

PREVIOUS STUDIES

15. Dow Environmental, 6 Feb 1996, Final Work Plan, Removal and Disposal of PCB Contaminated Material and Soil, Minol Building, McAlester Army Ammunition Plant, McAlester, Oklahoma
16. Dow Environmental, Apr 1996, Submittal of Summary Report, Removal and Disposal of the PCB Contaminated Soil, South of Building 177, McAlester Army Ammunition Plant, McAlester, Oklahoma
17. Radian International (formerly Dow Environmental), 14 Jul 1999, Final Corrective Measures Completion Report, Minol Building and Drainage Ditch South of Building 177, McAlester Army Ammunition Plant, McAlester, Oklahoma
18. Woodward-Clyde, October 1996, Technical Report Site Investigation of Roundhouse Area, U.S. Army Corps of Engineers, Tulsa District.
19. R.F. Weston, June 1997, Corrective Measures Study for SWMU #26, Burn Area 2, U.S. Army Corps of Engineers, Tulsa District.
20. R.F. Weston, June 1997, Corrective Measures Study for SWMU #18, Deactivation Furnace Lagoon and Surrounding Soils, U.S. Army Corps of Engineers, Tulsa District.
21. IT Corporation/OHM Remediation Services Corp. (IT/OHM), October 1998, Project Work Plan, SWMU #18 Soil Remediation and Lagoon Closure for McAlester Army Ammunition Plant, Pittsburg County, Oklahoma, U.S. Army Corps of Engineers, Tulsa District.
22. R.F. Weston, March 1998, Corrective Measures Implementation Plan for SWMU #18, Soil Remediation and Lagoon Closure, U.S. Army Corps of Engineers, Tulsa District.
23. Hazardous and Medical Waste Study No. 37-EF-4333-00 Relative Risk Site Evaluation McAlester Army Ammunition Plant, Oklahoma, 13-14 December 1999.
24. R.F. Weston, January 1999, Corrective Measures Implementation Plan for SWMU #26 Soil Remediation, McAlester Army Ammunition Plant, Pittsburg County, Oklahoma, U.S. Army Corps of Engineers, Tulsa District.
25. IT/OHM, July 1999, Final Corrective Action Closure Report, SWMU #18 Soil Remediation and Lagoon Closure for McAlester Army Ammunition Plant, Pittsburg County, Oklahoma, U.S. Army Corps of Engineers, Tulsa District.
26. IT/OHM, October 1999, Project Work Plan, SWMU #26 Soil Remediation for Burn Area 2, McAlester Army Ammunition Plant, Pittsburg County, Oklahoma, U.S. Army Corps of Engineers, Tulsa District.
27. Woodward-Clyde, September 1999, Report for Removal and Disposal of Total Petroleum Hydrocarbons Contaminated Materials and Soil, Roundhouse Area, McAlester Army Ammunition Plant, McAlester, Oklahoma, U.S. Army Corps of Engineers, Tulsa District.

PREVIOUS STUDIES

28. IT/OHM, February 2000, Corrective Measures Completion (CMC) Report for SWMU #18 Soil Remediation and Lagoon Closure, McAlester Army Ammunition Plant, Pittsburg County, Oklahoma, U.S. Army Corps of Engineers, Tulsa District.
29. IT/OHM, May 2000, Final Corrective Action Closure Report, SWMU #26 Burn Area 2 Soil Remediation for McAlester Army Ammunition Plant, Pittsburg County, Oklahoma, U.S. Army Corps of Engineers, Tulsa District.

**ER,A ELIGIBLE
ACTIVE DSERTS SITES**

MCAAP - 2

LANDFILL SOUTHWEST OF BROWN LAKE

SITE DESCRIPTION

This site is located 1,000 feet south of the western end of Brown Lake in the central section of the installation. The site was a general refuse landfill approximately 50 acres in size and operated from 1967 until August 1990. Monitoring wells have been installed at the site and sampling results from those wells indicate metals and trichloroethylene (TCE) contamination above the National Primary Drinking Water Requirement standards.

The results of the Metcalf & Eddy RCRA December 1994 Facility Investigation & Risk Assessment showed that no complete exposure scenarios existed for groundwater, surface water, or sediment for an occupational receptor.

In accordance with EPA letter dated September 15, 1994, long term groundwater monitoring was continued in accordance with ODEQ directives.

In March 2000 ODEQ approved the Groundwater Assessment which included ceasing the long term monitoring and abandoning the wells.

PROPOSED PLAN

Documentation of well abandonment will be submitted to ODEQ in FY01 to complete closure requirements.



IRP STATUS

RRSE RATING: 3A

(Low, with regulator agreement)

CONTAMINANTS OF CONCERN:

TCE, Metals

MEDIA OF CONCERN:

Groundwater

COMPLETED IRP PHASE:

(PA/SI) RFI, RA

CURRENT IRP PHASE:

LTM

FUTURE IRP PHASE:

RC

CONSTRAINED COST TO COMPLETE

PHASE	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08+	CTC
RI/FS									
RD									
RA(C)									
RA(O)									
IRA									
LTM	67	69	71	74	77	79	82	1230	1749

PROJECTED TOTAL: \$1,749,000

MCAAP - 18 DEACTIVATION FURNACE LAGOON

SITE DESCRIPTION

The lagoon (approximately 35' x 75') was located about 150 feet north of the deactivation furnace near the center of the installation. Lead was found in the lagoon sediment and in drainage paths around the lagoon. The human health risk assessment indicated unacceptable soil lead levels. Following the RFI recommendation and the EPA directive, a Corrective Measures Study (CMS) was performed during Fiscal Year (FY) 96 and FY 97. The CMS was submitted for regulatory review in FY 97 with the preferred alternative of removal with stabilization and off-site disposal. In FY 99 the contaminants were removed, the lagoon drained, and the area sloped to drain.

The ODEQ issued a Part B Permit modification on December 15, 1998 accepting the Interim Remedial Action (IRA) as the approved RA.

ODEQ approved all final documentation in March 2000.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING:

1A (High with regulator agreement)

CONTAMINANTS OF CONCERN:

Lead

MEDIA OF CONCERN:

Soil, Surface water

COMPLETED IRP PHASE:

CMS (FS), CMI, RD

CURRENT IRP PHASE:

RA

FUTURE IRP PHASE:

Remedy Complete

CONSTRAINED COST TO COMPLETE

PHASE	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08+	CTC
RI/FS									
RD									
RA(C)	8	1							9
RA(O)									
IRA									
LTM					5			5	10

PROJECTED TOTAL: \$19,000

MCAAP - 26 BURN AREA 2

SITE DESCRIPTION

This site is located south of C-Tree road, west of the entrance to the Medium Caliber Area in the eastern portion of the installation. The site is a former Burn Area, approximately 23 acres in size, that contained several burn cages with blast walls around the burn cages to contain any debris from the burn operations. The site was operated from the mid 1940s to the mid 1960s. The site borders the western edge of Brown Lake (MCAAP-44). The results of the RFI found lead levels associated with unacceptable predicted blood lead levels for occupational scenarios. The RFI recommended a CMS to determine the most viable method of eliminating the lead hazard. The EPA agreed with the recommendation and directed a CMS be performed. The field work for the CMS was completed in FY 96. The CMS was submitted for regulatory review in FY 97 with the preferred alternative of removal with stabilization and off-site disposal. The ODEQ issued a Part B Permit modification on December 15, 1998 accepting the CMS Proposed Plan as the approved RA.

Field work was completed in February 2000. ODEQ approved the closure report in August 2000.

PROPOSED PLAN

Corrective Measure Completion Report will be submitted in FY01.



IRP STATUS

RRSE RATING:

1A (High with regulator agreement)

CONTAMINANTS OF CONCERN:

Lead, dioxins

MEDIA OF CONCERN:

Soil, Sediment

COMPLETED IRP PHASE:

CMS (FS)

CURRENT IRP PHASE:

CMI(RD/RA)

FUTURE IRP PHASE:

Remedy Complete

CONSTRAINED COST TO COMPLETE

PHASE	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08+	CTC
RI/FS									
RD	4								4
RA(C)	16	6	3						25
RA(O)									
IRA									
LTM					5			5	10

PROJECTED TOTAL: \$39,000

MCAAP - 32

BUILDING 209 PALLET DIPPING OPERATION

SITE DESCRIPTION

The site is located near the southwest corner of the Bomb Mine Area along Road 5 in the center section of the installation. The site is an open sided steel girder structure set on a concrete block foundation. It is approximately 30' x 150' and was operational in the 1970s and 1980s. Wooden pallets were immersed into dipping vats, containing a pentachlorophenol (PCP) solution. Pallets were then allowed to drip dry. In the 1980s, PCP was replaced with copper-8-hydroxyquinolate. Soil samples during the RFI revealed no PCP, but copper was detected above background and dioxins were detected in composite samples. The RFI recommended no further action based upon the low occupational exposure and the EPA concurred.

The CMS for this site is currently under way. ODEQ has accepted a risk and cleanup level of 5 ppb (dioxins) which is greater than observed concentrations.

PROPOSED PLAN

The CMS report will be submitted to ODEQ for approval of no further action in FY01.



IRP STATUS

RRSE RATING: 2A

CONTAMINANTS OF CONCERN:

Dioxins

MEDIA OF CONCERN:

Soil

COMPLETED IRP PHASE:

RFI (RI)

CURRENT IRP PHASE:

CMS (FS), LTM

FUTURE IRP PHASE:

RC

CONSTRAINED COST TO COMPLETE

PHASE	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08+	CTC
RI/FS	2								2
RD	21	12							33
RA(C)	828	1593	95	48					2564
RA(O)									
IRA									
LTM						6			6

PROJECTED TOTAL: \$2,605,000

MCAAP - 33

BUILDING 471 PALLET DIPPING OPERATION

SITE DESCRIPTION

The site is located due north of the medium caliber area in the northeast section of the installation. The site is a covered crane-way area approximately 15' x 30' and was used from 1972 to 1974. Wooden pallets were dipped into a PCP solution and allowed to drip dry on the surrounding concrete. Soil samples during the RFI revealed no PCP or copper levels above background. However the supplemental RFI detected dioxins in composite samples. The RFI recommended no further action based upon the low occupational exposure and the EPA concurred. Recent usage of the area around the site by DAC has increased the exposure potential beyond that used in the risk analysis estimated during the RFI. The new Relative Risk Site Evaluation (RRSE) processed as a high factor.

The CMS for this site is currently under way. ODEQ has accepted a risk and cleanup level of 5 ppb (dioxins) which is greater than observed concentrations.

PROPOSED PLAN

The CMS report will be submitted to ODEQ for approval of no further action in FY01.



IRP STATUS

RRSE RATING: 1A
CONTAMINANTS OF CONCERN:
 Dioxins
MEDIA OF CONCERN:
 Soil
COMPLETED IRP PHASE:
 RFI (RI)
CURRENT IRP PHASE:
 CMS (FS), LTM
FUTURE IRP PHASE:
 RC

CONSTRAINED COST TO COMPLETE

PHASE	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08+	CTC
RI/FS	18								18
RD	18	12							30
RA(C)	434	932	90	33	10				1499
RA(O)									
IRA									
LTM						6			6

PROJECTED TOTAL: \$1,553,000

MCAAP - 43

MINOL BUILDING (BUILDING 644)

SITE DESCRIPTION

The site is located in the Bomb Mine Area in the center of the installation. The site was an abandoned one story, flat-topped cement block building approximately 15' x 25'. In 1988, installation personnel sampled and discovered polychlorinated biphenyl (PCB) contamination of the structure (less than 15ppm) and the soil (as high as 1600 mg/kg). On 25 January 1993, the installation notified EPA Region 6 that this was a new SWMU. The RFI detected PCB 1242, PCB 1260, and TPH above acceptable EPA human health risk standards in the soils around the Minol building and PCB 1242/1260 in the structure at levels that exceed applicable health-based Appropriate Relative Applicable Requirements for an occupational scenario. The EPA approved remediation of this site and issued temporary authorization to proceed with the removal of PCB contaminated soils and structures to a level not to exceed 25 ppm. Final cleanup reports have been received and show the cleanup has achieved well below the 25 ppm specified.

PROPOSED PLAN

The Corrective Measure Completion Report has been submitted to the EPA for final closeout. As the remedial action was a “clean closure”, no LTM will be required.

Class 1 permit modification pending.



IRP STATUS

RRSE RATING: 1A

(High with regulator agreement)

CONTAMINANTS OF CONCERN:

PCBs

MEDIA OF CONCERN:

Soil and sediment

COMPLETED IRP PHASE:

RFI (RI)

CURRENT IRP PHASE:

CMI (RA)

FUTURE IRP PHASE:

Remedy Complete

CONSTRAINED COST TO COMPLETE

PHASE	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08+	CTC
RI/FS									
RD									
RA(C)									
RA(O)									
IRA									
LTM					5			5	10

PROJECTED TOTAL: \$10,000

MCAAP - 46 BAILER SITE

SITE DESCRIPTION

The bailer site is located in the DRMO yard. At this site, a Resource Recovery Recycling Program bailer was used to compact metal cans and other metal objects. The cans crushed here are suspected of having contained paints, oils, solvents and other liquids in varying amounts. Over the years of operation, especially in the 1950s and 1960s, it is believed that some of the waste materials leached into the soil. During rainy periods, an oily layer has been noted floating on puddles in the vicinity of the bailer. Sampling occurred in December 1999.

PROPOSED PLAN

USACHPPM report was submitted in the fourth quarter FY00 to the regulators for concurrence that it is a low priority site. Investigations will be completed in FY01 with removal action, if required, awarded in FY02.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

PCBs, Dioxins, Solvents, Metals, POL

MEDIA OF CONCERN:

Groundwater, Soil, Surface Water

COMPLETED IRP PHASE:

PA

CURRENT IRP PHASE:

SI

FUTURE IRP PHASE:

CMI-RD/RA

CONSTRAINED COST TO COMPLETE

PHASE	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08+	CTC
RI/FS		100							100
RD		60	10						70
RA(C)		200	20	4					224
RA(O)									
IRA									
LTM								21	21

PROJECTED TOTAL: \$415,000

**ER,A ELIGIBLE
RESPONSE COMPLETE
DSERTS SITES**

MCAAP - 1 LANDFILL

SITE DESCRIPTION

This site is located about 3,000 feet south of the east end of Brown Lake (MCAAP-44). The site is between four and five acres in size and is currently covered with vegetation. A small pond is present on the northwest side of the landfill. The site was operated as a trench and sanitary landfill between the late 1950s and the late 1960s. The RFI results indicated that there was no human health or ecological risk.

The EPA approved no further action in its acceptance of the RFI Report, December 1994. The state of Oklahoma issued a Part B permit on December 15, 1998 approving the no further action alternative.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

TCE, Metals

MEDIA OF CONCERN:

Groundwater

COMPLETED IRP PHASE:

RFI (PA/SI)

CURRENT IRP PHASE:

EPA and ODEQ approved NFA;

FUTURE IRP PHASE:

Response Complete

MCAAP - 4

SUSPECTED ABANDONED LANDFILL

SITE DESCRIPTION

This site could not be located during the SWMU investigation, but is reportedly located northwest of Building 52SH405 near the northern boundary of the installation's property and covers approximately 5 acres. This site was described in 1986 as being identified only through finding traces of exposed scrap metal, crushed drums, and containers with the majority of the contents apparently scrap metal.

There is no documented evidence of release from this site. The exposure potential is low to medium, since the site is located within 1/4 mile of the installation boundary.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

None

MEDIA OF CONCERN:

Soil, Groundwater

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 5

SCRAP METAL DISPOSAL AREA

SITE DESCRIPTION

MCAAP-5 is located 1.1 miles due north of the Major Caliber area in the northeast section of the installation. The site is a scrap metal disposal area with two small lagoons and is 10 acres in size. Materials observed at the site include an assortment of scrap metal refuse including cans, buckets, drums, rocket bodies, incinerator refuse and electrical refuse.

The RFI recommended no further action due to the absence of a human health risk and low ecological impact. The EPA agreed with no further action for this site and sanctioned application for a class 3 permit modification. The ODEQ issued a Part B permit on December 15, 1998 approving the no further action alternative.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

Metals

MEDIA OF CONCERN:

Groundwater, Surface Water

COMPLETED IRP PHASE:

RFI (PA/SI)

CURRENT IRP PHASE:

EPA & ODEQ approved NFA

FUTURE IRP PHASE:

Response complete

MCAAP - 6

SUSPECTED ABANDONED LANDFILL

SITE DESCRIPTION

This landfill is located about 500 feet northwest of the intersection of Road G and Road 3 and covers 2 to 3 acres.

The operating practices of this site may have been a dumping site for demolition debris and possibly sludge from the concrete bomb lagoons. The period of operation is from the mid 1950s through late 1970s.

The exposure potential has been determined to be low because the material disposed here is relatively inert and there are no migration pathways or visual evidence of releases observed.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

None

MEDIA OF CONCERN:

None

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 7

SUSPECTED DISPOSAL AREA

SITE DESCRIPTION

This site presently consists of a quarried-out area filled with water located along the east side of Road G, approximately 2,000 feet north of Defense Reutilization and Marketing Office (DRMO). This area is approximately 2.5 acres and reportedly was a disposal area. This site is identified from a map entitled "Locations of Approved Borrow Pits and Areas for Scrap and Refuse Disposal" dated May 10, 1977. The site is shown as "disposal and dumping location for rock, broken concrete, and soil".

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

None

MEDIA OF CONCERN:

None

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 9 LANDFILL

SITE DESCRIPTION

This landfill is located along both sides of Road 4, about 1,000 feet east of the intersection with Road F. The total combined area of this landfill is about 2-3 acres and was mostly demolition debris.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

None

MEDIA OF CONCERN:

Surface Water

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 10 ABANDONED LANDFILL

SITE DESCRIPTION

This landfill is located south of the Group 71-BT area, southwest of the 90° bend in Road F. This landfill is approximately 3 acres and was reportedly active between the 1950s and 1970s. The type of waste placed in the site is unknown, although rocket bodies, metal boxes, wire and concrete rubble have been observed on the site.

The USAEHA report for the “Evaluation of Solid Waste Management Units MCAAP”, March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

None

MEDIA OF CONCERN:

Soil, Groundwater, Surface Water

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 11

ABANDONED LANDFILL

SITE DESCRIPTION

This landfill is located 100 yards east of the intersection of Road 4 and Road F, 100 yards south of Road 4. This landfill is approximately 1.5 acres and was reportedly active between 1962 and 1967. The site was apparently a borrow pit that was backfilled with demolition type waste. There is no observed or documented evidence of release from the site.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

None

MEDIA OF CONCERN:

Surface Water

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 12

GROUP 41 LC LAGOON & LANDFILL AREA

SITE DESCRIPTION

The site is located south of the 41 LC Bunker Area in the north central part of the installation and consists of an 8-10 acre dump area between two lagoons. The lagoons are about 5 acres each. The site was operated from the late 1940s through the 1950s.

During the RFI, the lagoon waters, sediment, and soil were sampled. Water samples were analyzed for volatile and semivolatile organics, metals, explosives, pesticides, and nonmetals including cyanide, total nitrogen, and sulfates. Sediment and soil samples were analyzed for metals and explosives. The RFI recommended no further action due to the absence of a human health risk and low ecological impact. The EPA agreed with no further action for this site and sanctioned application for a class 3 permit modification. The ODEQ issued a Part B permit on December 15, 1998 approving the no further action alternative.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

Metals, Organics

MEDIA OF CONCERN:

Surface water, Sediment

COMPLETED IRP PHASE:

RFI (PA/SI)

CURRENT IRP PHASE:

EPA & ODEQ approved NFA

FUTURE IRP PHASE:

Response Complete

MCAAP - 17 PONDS AND LAGOON

SITE DESCRIPTION

There is a lagoon and three earthen ponds located on either side of Road E, north of Building 186. These ponds received pinkwater wastes from an ammunition steam-out operation in Building 186. Between 1971 and 1974, wastes were piped into what is now termed Pond 4. In 1974, Ponds 2 and 3 were constructed; from 1974 to 1980, wastewater flowed consecutively into Ponds 2, 3, and 4. In 1980, Pond 1 (the lagoon) was constructed adjacent to Building 186 to hold wastewater prior to its discharge to the stream which flows into Pond 2.

In 1987, the EPA agreed that the pinkwater lagoons were non-RCRA regulated on the basis of Bureau of Mines reactivity testing. ODEQ granted and approved the closure of Pond 1. The remaining earthen Ponds 2,3, and 4 are being used for stormwater outfall.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

Explosives

MEDIA OF CONCERN:

Sediments

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 19 ROCKET LAKE

SITE DESCRIPTION

Rocket Lake is located east of Road F and west of the Motor Loading Plant in the center of the installation. This site is a 10-acre lake that received explosives-contaminated wastewater until 1990 from the Bomb Mine Areas and the Motor Loading Plant. The outfall from Rocket Lake is a tributary to Brown Lake (MCAAP-44). During the RFI, the lake water and sediments were sampled to determine the presence of explosives and metals.

Results from the RFI indicated the presence of low levels of metals. The concentrations were below acceptable levels of noncancer hazard or carcinogenic risk levels. The ecological risk assessment found no associated risks. The RFI recommended no further action for this site and the EPA approved it. ODEQ issued a Part B Permit on December 15, 1998 approving the no further action alternative.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

Metals

MEDIA OF CONCERN:

Sediment, Surface water

COMPLETED IRP PHASE:

RFI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 21

B PLANT EAST LAGOON

SITE DESCRIPTION

Three earthen, unlined lagoons are located south of Road 5 in the Bomb and Mine Plant east-end facility, and operated between 1980 and 1990.

During their active usage, these lagoons received about 600,000 gallons of pinkwater wastes per year. In 1987, the EPA agreed that the pinkwater lagoons were non-RCRA regulated on the basis of Bureau Mines reactivity testing. In 1989 ODEQ agreed with the EPA's determination.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

Explosives

MEDIA OF CONCERN:

Surface Water

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 23 SPECIAL WEAPONS LAGOON

SITE DESCRIPTION

This lagoon is located south of Rocket Lake (MCAAP-19) and northeast of Building 567. This is an unlined 60' x 120' earthen impoundment.

The period of operation was from the 1970s until November 1991. During its early operation, small quantities of wastes from electroplating operations, anodizing, and a chemical treatment solution were placed in this area. The earthen impoundment was also used to contain domestic sewage. There is no observed or documented evidence of release from this site.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

Metals

MEDIA OF CONCERN:

Surface Water

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 24 C-TREE LAGOON

SITE DESCRIPTION

This site is a triangular-shaped earthen lagoon located southeast of the intersection of C-Tree Road and Road G. The lagoon is located next to a pad originally used to wash trucks, and catch the runoff and rinse water from the truck wash. Wastes were not disposed of at this site; however, chlordane and lead were found in the sediment. The lagoon is presently intact and contains water.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

POL, Pesticides

MEDIA OF CONCERN:

Surface Water

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 35

SUSPECT ACID NEUTRALIZATION PIT

SITE DESCRIPTION

This site is located 200 feet west of Building 452 and consists of a pit excavated out of the hill. The pit is about 30 x 125 feet in size and 3-4 feet deep.

The period of operation and the operating practices are unknown. This pit was “discovered” during the original EPA RCRA Facility site visit and no other documentation has been found concerning the pit. The location of the pit, with no visible vehicle access, makes it an especially unlikely area for any waste treatment. The EPA reported “evidence of discoloration in and around the pit area”. This evidence was not observed during the USAEHA investigation.

The USAEHA report for the “Evaluation of Solid Waste Management Units MCAAP”, March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

Unknown

MEDIA OF CONCERN:

Surface Water

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 36 BURIAL SITE

SITE DESCRIPTION

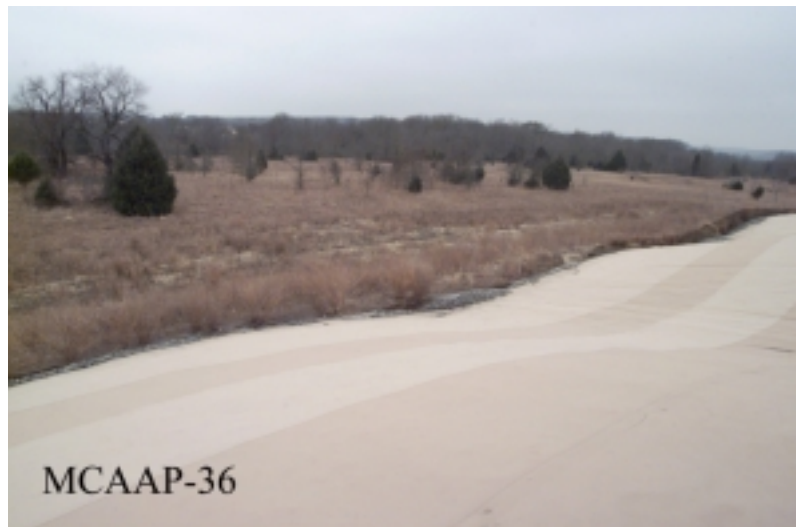
This site is located in the 45 DC area behind Magazine 107.

Reportedly, a one-time burial occurred in January 1965. Approximately 200 pounds of sodium cyanide were converted to ferrocyanide by reaction with sodium carbonate and ferrous sulfate in aqueous solution. This solution was drained into ten holes approximately 18 inches in diameter and 7 feet deep and was allowed to seep into the ground. Loose dirt was replaced in the holes. No visible evidence of an actual burial site could be found during the USAEHA investigation. The exposure potential is low.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

Ferrocyanide

MEDIA OF CONCERN:

Groundwater

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 37

FORMER WASTE OIL STORAGE TANK - BUILDING 10

SITE DESCRIPTION

This site is located near the Railroad Engine Roundhouse (Buildings 10, 10a, and 10b). A 1,000 gallon underground storage tank was used to collect waste oil from 10B via an underground fill line. This tank was removed by MCAAP employees on September 18, 1989 and was reportedly in good condition. All soil samples collected were below 50 ppm TPH.

PROPOSED PLAN

None required.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

TPH

MEDIA OF CONCERN:

Soil, Groundwater

COMPLETED IRP PHASE:

Removal

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 45 ROUNDHOUSE COMPLEX

SITE DESCRIPTION

The Roundhouse Complex (Buildings 10, 10-A, and 10-B) is located in the administrative area, within approximately 300 yards of a backwater lagoon of Brown Lake (MCAAP-44). It is a train maintenance and staging area in use since 1945. In February 1994 a reportable spill of petroleum was detected spilling into the backwater and appeared to be coming from an old drainage pipe that had been capped in 1986. The SI found excessive levels of TPH, but no volatile organic compounds or significant metals content. The SI was submitted to ODEQ with a recommendation to not designate this site as a SWMU and to clean up TPH to the Oklahoma Corporation Commission levels. By letter dated 30 September 1999, ODEQ accepted the RA. Removal of the TPH contaminated soils was completed in the first quarter of FY 99.

PROPOSED PLAN

Response complete.



IRP STATUS

RRSE RATING: 1A

(Due to spill release to drinking water supply)

CONTAMINANTS OF CONCERN:

TPH

MEDIA OF CONCERN:

Soil

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

RA approved by ODEQ

FUTURE IRP PHASE:

Remedy Complete

**NON-ER,A ELIGIBLE
RESPONSE COMPLETE
DSERTS SITES**

MCAAP - 3 ACTIVE LANDFILL

SITE DESCRIPTION

This is an active landfill located northwest of the corner of the intersection of Ashland Road and Road B. This landfill covers 49 acres. The trenches are 30 feet wide and 10 feet deep. The operation dates of this landfill is August 1, 1990 until present.

MCAAP has a permit for this landfill to operate and maintain as a Type V Nonhazardous Waste facility.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998. Closure will be conducted in accordance with existing National Pollution Discharge Elimination System (NPDES) permit requirements.

This site is listed as a landfill Permit Number 3561014 with the Solid Waste Division ODEQ. Closure will be conducted in accordance with existing RCRA permit requirements.

PROPOSED PLAN

None required.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:

None

MEDIA OF CONCERN:

Groundwater

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 8 WOOD SCRAP YARD

SITE DESCRIPTION

This is an active wood scrap yard. It is located northeast of the intersection of Road 4 and F. It is approximately 5 acres.

Scrap wood and lumber from the installation are stored for future reuse at this site. An old burning area, reportedly used to burn waste munitions, is apparently located somewhere under the scrap wood. According to a June 1977 Trip and Visit Report, TNT, ammonia picrate, and smokeless powder were burned at the burning area. The exposure potential is low. The runoff from the scrap wood area enters a tributary to Brown Lake. There is no documented evidence of release.

This site is currently covered with scrap wood and lumber.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:

Explosives

MEDIA OF CONCERN:

Soil, Surface Water

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 13

CONCRETE BOMB SETTLING PONDS

SITE DESCRIPTION

These are industrial waste lagoons located between Buildings 453 and 454 in the Medium Caliber Area. There are four earthen lagoons of various sizes.

The period of operation dates from 1986 until present. These lagoons treat cement contaminated waste and wash water from the manufacture of concrete practice bombs. The wastewater enters Lagoon 1 for heavy settling. Final settling occurs in Lagoon 2. A carbon dioxide - sulfamic acid mixture is added and mixed into the water in Lagoon 3. Lagoon 4 is a holding lagoon for final discharge to the Wastewater Treatment Plant.

This site is listed as a surface impoundment in NPDES Permit Number OK0000523. Closure will be conducted in accordance with existing NPDES permit requirements.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:

None

MEDIA OF CONCERN:
Surface Water

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:
Response Complete

FUTURE IRP PHASE:
Response Complete

MCAAP - 14

CONCRETE BOMB SETTLING PONDS

SITE DESCRIPTION

These are industrial waste lagoons located east of Building 455 in the Medium Caliber Area. There are two earthen lagoons about 12 x 40 feet each.

The period of operation dates from 1986 until present. These lagoons are used to hold cement contaminated waste and wash water from the manufacture of concrete practice bombs. Wastewater from Building 455 is held here prior to being pumped to the Building 454 lagoons for treatment and discharge. The lagoons are still being used.

This site is listed as a surface impoundment in NPDES Permit Number OK0000523. Closure will be conducted in accordance with existing NPDES permit requirements.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:

None

MEDIA OF CONCERN:
Surface water

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:
Response Complete

FUTURE IRP PHASE:
Response Complete

MCAAP - 15 ROUNDHOUSE LAGOONS

SITE DESCRIPTION

The Roundhouse lagoons are located approximately 100 feet northwest of Building 8. The two earthen lagoons are approximately 50 feet in diameter, and about 3-4 feet deep.

The period of operation is unknown. The lagoons received wastewater runoff from the steamoff and washdown of locomotive engines in the Roundhouse. Washdown was piped from a sump in the Roundhouse to the eastern lagoon. Reportedly, oil waste and possibly solvents from the maintenance shops were discharged here. This discharge was NPDES discharge point until the fall of 1991 when it was connected to the Wastewater Treatment Plant.

This site is listed as a surface impoundment in NPDES Permit Number OK0000523. Closure will be conducted in accordance with existing NPDES permit requirements.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:
 TPH, Solvents
MEDIA OF CONCERN:
 Soil, Groundwater, Surface Water
COMPLETED IRP PHASE:
 PA/SI
CURRENT IRP PHASE:
 Response Complete
FUTURE IRP PHASE:
 Response Complete

MCAAP - 16 SEWAGE RETENTION LAGOON

SITE DESCRIPTION

This sewage retention lagoon is located at the northwest corner of C-Tree Road and the entrance to Medium Caliber area. It is approximately 1.7 acres.

The period of operation is 1988 until present. This lagoon is used to store excess sewage from industrial areas. Sewage is piped from the lagoon to the Sewage Treatment Plant.

This site is listed as a surface impoundment in NPDES Permit Number OK0000523. Closure will be conducted in accordance with existing NPDES permit requirements.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:
 None
MEDIA OF CONCERN:
 Soil, Groundwater, Surface Water
COMPLETED IRP PHASE:
 PA/SI
CURRENT IRP PHASE:
 Response Complete
FUTURE IRP PHASE:
 Response Complete

MCAAP - 20 B PLANT WEST LAGOON

SITE DESCRIPTION

This is an earthen lagoon located about 1/4 mile northwest of the intersection of Road 5 and Road E, with about 1 acre surface area and a capacity of about 1 million gallons.

Explosives contaminated wastewater and domestic type sewage wastes were placed in this lagoon; the period of operation was 1968 until the early 1990s. Lagoon water, sediment, and groundwater samples from the lagoon area were collected as part of the development of a ground water quality assessment plan completed in 1982.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

This site is listed as a surface impoundment in NPDES Permit Number OK0000523. Closure will be conducted in accordance with existing NPDES permit requirements.

PROPOSED PLAN

None required.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:
 Explosives
MEDIA OF CONCERN:
 Surface Water
COMPLETED IRP PHASE:
 PA/SI
CURRENT IRP PHASE:
 Response Complete
FUTURE IRP PHASE:
 Response Complete

MCAAP - 22 MEDIUM CALIBER LAGOONS

SITE DESCRIPTION

This site is located west of the Medium Caliber Area. There are two earthen lagoons, with a combined area of 3.5 acres and a maximum depth of 6 feet.

The period of operation is 1974 until present. Past wastes have included domestic sewage, explosives-contaminated laundry wastewater, organic detergents, and pinkwater from the medium caliber area. Presently only laundry wastewater is discharged here. The NPDES discharge point from the lagoons was #005. Groundwater samples from the lagoon area were collected as part of the development of a groundwater quality assessment plan completed in 1982.

This site is listed as a surface impoundment in NPDES Permit Number OK0000523. Closure will be conducted in accordance with existing NPDES permit requirements.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:
 None
MEDIA OF CONCERN:
 Soil, Groundwater
COMPLETED IRP PHASE:
 PA/SI
CURRENT IRP PHASE:
 Response Complete
FUTURE IRP PHASE:
 Response Complete

MCAAP - 25

ACTIVE OPEN BURNING GROUND

SITE DESCRIPTION

This approximately 10 acre site is located along the north side of Road 6, east of its intersection with Road F. The site consists of five burning pads, two flashing trenches, and three rocket static firing pads.

The waste treated at the site includes: propellants and explosive materials.

Trenches are used to flash-burn explosive contaminated materials.

The USAEHA investigated this site in August 1981. Four monitoring wells were installed and 66 soil samples were collected. The sample results indicate that no release to ground water has occurred. The exposure potential is low.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

This site is listed as a permitted Open Burn Unit in RCRA Part B Permit Number #6213822798 as modified August 6, 1999. Closure will be conducted in accordance with existing RCRA permit requirements.

PROPOSED PLAN

None required.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:

Explosives

MEDIA OF CONCERN:
Soil, Groundwater

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:
Response Complete

FUTURE IRP PHASE:
Response Complete

MCAAP - 27

"OLD" DEMOLITION AREA

SITE DESCRIPTION

This is an active site located near the southeast corner of the installation, about 2 miles south of Brown Lake (MCAAP-44). The total site area covers about 40 acres. The site consists of 26 pits. Each pit is about 15 x 30 feet surrounded by a horseshoe shaped berm about 15 feet high.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

This site is listed as a permitted Open Detonation Unit in RCRA Part B Permit Number #6213822798 as modified August 6, 1999. Closure will be conducted in accordance with existing RCRA permit requirements.

PROPOSED PLAN

None required.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:

Explosives, Metals

MEDIA OF CONCERN:
Surface Water

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:
Response Complete

FUTURE IRP PHASE:
Response Complete

MCAAP - 28 “NEW” DEMOLITION AREA

SITE DESCRIPTION

This site is located along the south side of Road 6, east of the Road F intersection. The total site area covers about 5 acres. The site consists of twenty-six 15 x 30 foot pits, surrounded by horseshoe shaped berms about 15 feet high. Ordnance is detonated in the pits. Ordnance to be detonated is set inside the bermed area and buried with about 8-9 cubic yards of soil before detonation.

The USAEHA report for the “Evaluation of Solid Waste Management Units MCAAP”, March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

This site is listed as an open Detonation Unit in RCRA Part B Permit Number #6213822798 as modified August 6, 1999. Closure will be conducted in accordance with existing RCRA permit requirements.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:
 Explosives
MEDIA OF CONCERN:
 Groundwater, Surface Water
COMPLETED IRP PHASE:
 PA/SI
CURRENT IRP PHASE:
 Response Complete
FUTURE IRP PHASE:
 Response Complete

PROPOSED PLAN

None required.

MCAAP - 29 SEDIMENTATION RETENTION BASIN

SITE DESCRIPTION

This site is located southeast of the new open detonation area. The basin is 150 x 200 feet, a capacity of 3 million gallons and is composed of 8 foot high berms and a 2 foot thick clay liner. This basin captures runoff from the New Open Detonation Area. The USACE performed a groundwater assessment of the sedimentation retention basin downgradient of this site in 1988. Contamination was not indicated in the water samples from the sedimentation retention basin.

The USAEHA report for the “Evaluation of Solid Waste Management Units MCAAP”, March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

This site is listed as a sedimentation lagoon in NPDES Permit Number OK0000523. Closure will be conducted in accordance with existing NPDES permit requirements.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:
 Explosives
MEDIA OF CONCERN:
 Soil, Groundwater, Surface Water
COMPLETED IRP PHASE:
 PA/SI
CURRENT IRP PHASE:
 Response Complete
FUTURE IRP PHASE:
 Response Complete

PROPOSED PLAN

None required.

MCAAP - 30

PINK WATER TREATMENT SYSTEM

SITE DESCRIPTION

This is an industrial waste treatment unit located in Building 192A, in the “A” Plant of the Bomb Mine Area.

The period of operation is 1990 until present. This is an active unit, providing treatment for MCAAP’s explosives contaminated wastewater.

The USAEHA report for the “Evaluation of Solid Waste Management Units MCAAP”, March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

This site is listed as a pinkwater treatment system in NPDES Permit Number OK0000523. Closure will be conducted in accordance with existing NPDES permit requirements.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:
 Explosives
MEDIA OF CONCERN:
 None
COMPLETED IRP PHASE:
 PA/SI
CURRENT IRP PHASE:
 Response Complete
FUTURE IRP PHASE:
 Response Complete

PROPOSED PLAN

None required.

MCAAP - 31

PINK WATER COLLECTION SYSTEM

SITE DESCRIPTION

This site is located in the Bomb Mine Area. This is an industrial waste storage unit. There are a total of 15 concrete sumps and three 15,000 gallon above-ground steel tanks interconnected by concrete trenches.

The sumps and tanks have been in active use since 1990. The explosives contaminated wastewater is accumulated in the sumps until it is pumped to holding tanks. From the holding tanks it is trucked to the pink water treatment plant at building 192A.

The USAEHA report for the “Evaluation of Solid Waste Management Units MCAAP”, March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

This site is listed as a pinkwater treatment plant outfall No. 2 in NPDES Permit Number OK0000523. Closure will be conducted in accordance with existing NPDES permit requirements.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:
 Explosives
MEDIA OF CONCERN:
 Surface Water
COMPLETED IRP PHASE:
 PA/SI
CURRENT IRP PHASE:
 Response Complete
FUTURE IRP PHASE:
 Response Complete

PROPOSED PLAN

None required.

MCAAP - 34 DEACTIVATION FURNACE

SITE DESCRIPTION

The furnace has a series of conveyors that transport the waste (munitions) into the feed chute at the low temperature end of the rotary kiln incinerator. The kiln ignites the munitions and burns out the reactive components from within the metal shells. High order detonations are contained within the retort walls which are 2.5 inches thick at the ends and 3.25 inches at the center. Scrap metal passes from the retort to the discharge conveyor into a chute and is collected in an approved hazardous waste container positioned at the discharge end of the chute. Gases, ashes, and other residues escaping from the retort are routed through the Air Pollution Control System (APCS). The APCS is comprised of an afterburner, two gas coolers, cyclone separator, baghouse, compressor, induced draft fan, and associated ducting.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

This site is listed as a thermal treatment unit in RCRA Part B Permit Number #6213822798 as modified September 1997. Closure will be conducted in accordance with existing RCRA permit requirements.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:

None

MEDIA OF CONCERN:

None

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

PROPOSED PLAN

None required.

MCAAP - 38 DRMO YARD

SITE DESCRIPTION

This site is located on the east side of Road G, approximately 3.5 miles east of installation entrance. This site is approximately 10 acres.

The period of operation is June 1973 until present. Materials stored include various metal items, such as cans that have been compressed into bails, demilled bomb bodies, munitions casings, steel bandings and wooden pallets. Scrap material is either piled or stacked at various locations across the site.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:

None

MEDIA OF CONCERN:

Soil, Surface Water

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

PROPOSED PLAN

None required.

MCAAP - 39

HAZARDOUS WASTE STORAGE AREA, BUILDING 669

SITE DESCRIPTION

This hazardous waste storage site is a concrete block structure, located inside the DRMO yard near the northern fence. It is a 2,400 square feet storage area and a 900 square feet load/unload pad. The storage area contains three storage modules approximately 20 feet x 20 feet each.

Materials stored here include paints, solvents, demilitarization ash and production wastes stored in drums. A RCRA Part B Permit was issued for this site effective September 2, 1992. The first waste was placed into this site in November 1992.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

This site is listed as a permitted hazardous waste storage unit in RCRA Part B Permit Number #6213822798 issued September 2, 1992. Closure will be conducted in accordance with existing RCRA permit requirements.

PROPOSED PLAN

None required.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:

None

MEDIA OF CONCERN:
Soil, Groundwater, Surface Water

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 40

HW STORAGE BUNKERS BUILDING 41 LC 103 A, B, C

SITE DESCRIPTION

This site is located east of Brown Lake (MCAAP-44) and about 1/2 mile west of the entrance gate, south of C-Tree Road.

The period of operation is 1941 until November 1992.

This site was used as a hazardous waste storage facility while under interim status of RCRA regulations. This site was closed out in accordance with state approved RCRA closure plans in 1993. This facility is now used as a hazardous waste storage facility.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:

None

MEDIA OF CONCERN:
None

COMPLETED IRP PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

MCAAP - 41

SEWAGE TREATMENT PLANT

SITE DESCRIPTION

This site is located east of Brown Lake (MCAAP-44) and about 1/2 mile west of the entrance gate, south of C-Tree Road.

The period of operation is 1941 until present.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

This site is listed as a surface impoundment in NPDES Permit Number OK0000523. Closure will be conducted in accordance with existing NPDES permit requirements.

IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

None

MEDIA OF CONCERN:

Surface Water

COMPLETED IRP

PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

PROPOSED PLAN

None required.

MCAAP - 42

WATER TREATMENT PLANT

SITE DESCRIPTION

This site is located east of Brown Lake (MCAAP-44).

The period of operation is 1941 until present.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

This site is listed as a surface impoundment in NPDES Permit Number OK0000523. Closure will be conducted in accordance with existing NPDES permit requirements.

IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

None

MEDIA OF CONCERN:

None

COMPLETED IRP

PHASE:

PA/SI

CURRENT IRP PHASE:

Response Complete

FUTURE IRP PHASE:

Response Complete

PROPOSED PLAN

None required

MCAAP - 44 BROWN LAKE

SITE DESCRIPTION

Brown Lake is a 560 acre lake that is the source of drinking water for the installation as well as for two small towns located adjacent to the installation. Besides being the drinking water source, Brown Lake is also the major recreational site for installation personnel and their families. During the RFI, the lake sediments and waters were sampled a minimum of four times, waiting a minimum of one month between sampling events. The samples were analyzed for explosives, volatiles, semivolatiles, and metals. No contamination was found.

The USAEHA report for the "Evaluation of Solid Waste Management Units MCAAP", March 1992, recommended no further investigation/response complete. This response complete recommendation was accepted in Section IV of the RCRA Part B Permit issued September 1992 and modified in December 1998.

PROPOSED PLAN

None required.

IRP STATUS

RRSE RATING: NE
CONTAMINANTS OF CONCERN:

Explosives

MEDIA OF CONCERN:

Surface water, sediment

COMPLETED IRP PHASE:

RFI (RI)

CURRENT IRP PHASE:

NFA

FUTURE IRP PHASE:

NFA

**NON ER, A ELIGIBLE
“PROPOSED”
DSERTS SITES**

FORMER DUD AREA

SITE DESCRIPTION

The former Dud area is an area on the south side of Brown Lake (MCAAP-44) which was used during Marine fire power shows. The range received mortars of various sizes and machine gun and tracer rounds that were fired across Brown Lake into this area. The firings occurred from a peninsula on the north side of Brown Lake. Earliest witness accounts date back to 1962 and shows the firings continued until the Marines ceased providing security at the McAlester Naval Ammunition Depot (now MCAAP) in 1977. Sampling occurred in December 1999.

PROPOSED PLAN

USACHPPM report which recommended no further action will be submitted to the regulators for concurrence that the site is not a SWMU. Possible reevaluation may be required under the Range Rule.



IRP STATUS

RRSE RATING: NE

CONTAMINANTS OF CONCERN:

Explosives, Metals

MEDIA OF CONCERN:

Groundwater, Soil, Surface Water

COMPLETED IRP PHASE:

—

CURRENT IRP PHASE:

—

FUTURE IRP PHASE:

—

SCHEDULE

PAST MILESTONES

1988

Installation Assessment Completed

1992

USAEHA completed evaluation of Solid Waste Management Units

1994

Awarded contract for IRA at MCAAP-043

PA for MCAAP-045 completed

SI for MCAAP-045 awarded

1995

Completed Workplan for CMS at MCAAP-018 and MCAAP-026 (March)

Awarded CMS for MCAAP-018 and MCAAP-026 (June)

1996

Received final report for MCAAP-045

1997

Awarded CMIP for MCAAP-018 (November)

1998

Awarded CMIP for MCAAP-026 (March)

Awarded contract for IRA at MCAAP-018 (December)

Completed workplan CMS for MCAAP-32 and MCAAP-33 (November)

1999

Awarded Contract for RA for MCAAP-26 (May)

Award contract for CMS for MCAAP-32 and MCAAP-33 (March)

Submitted Groundwater Assessment Closure Report to ODEQ for MCAAP-2 (March)

Received Final Report for MCAAP-18 (July)

Received Final Report for MCAAP-45 (September)

2000

CMC Accepted by ODEQ for SWMU 18 (March)

Corrective Action Report Accepted by ODEQ for SWMU 26 (September)

Completed Preliminary Assessment for Former DUD Area and Bailer Sites (MCAAP - 46) (August)

EPA approved Corrective Measures Completion Report for SWMU 43 (October)

NO FURTHER ACTION SITES

The following sites currently require no further action:

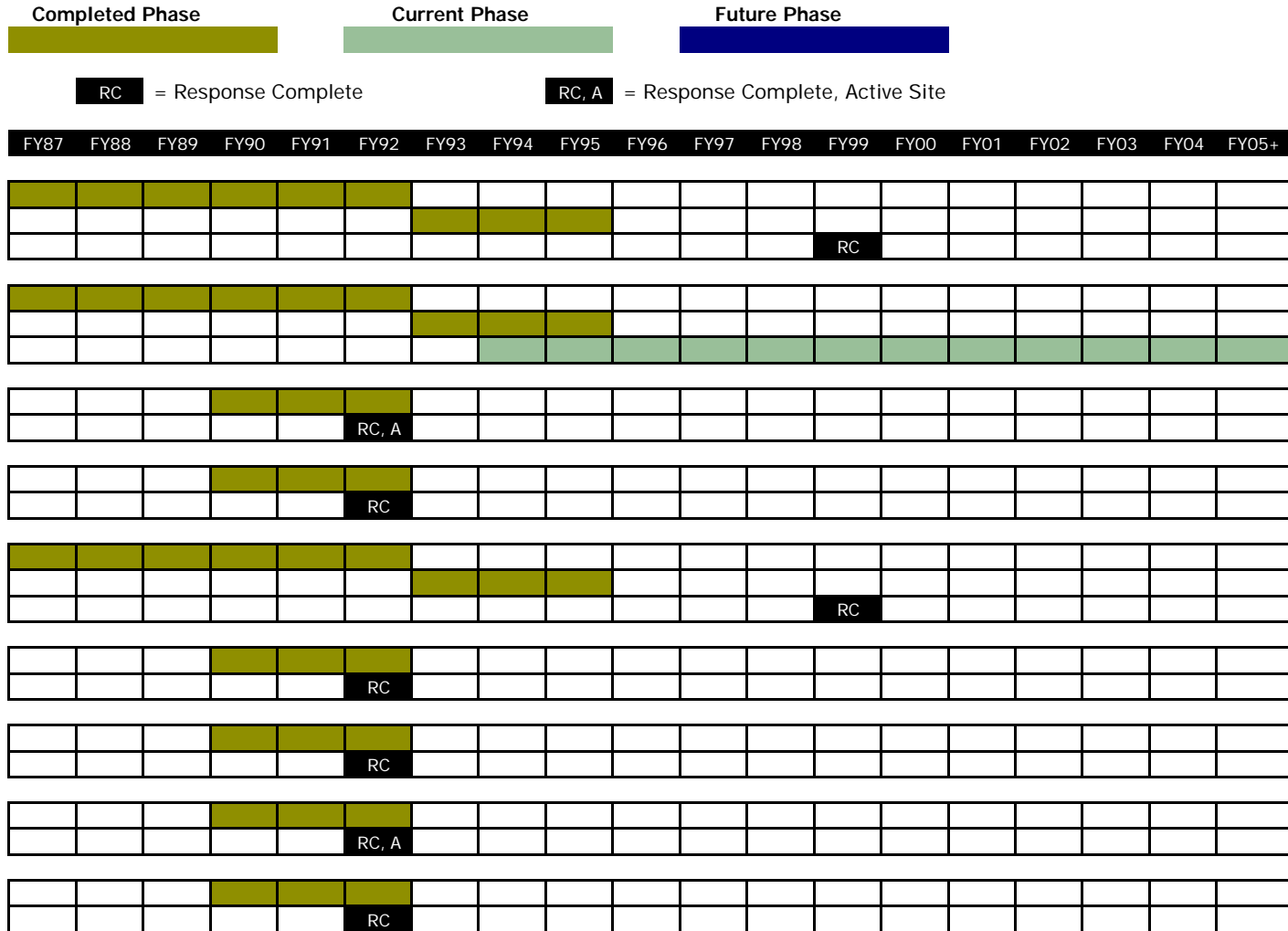
MCAAP - 1	Landfill
MCAAP - 4	Suspected Abandoned Landfill
MCAAP - 5	Scrap Metal Disposal Area
MCAAP - 6	Suspected Abandoned Landfill
MCAAP - 7	Suspected Disposal Area
MCAAP - 9	Landfill
MCAAP - 10	Abandoned Landfill
MCAAP - 11	Abandoned Landfill
MCAAP - 12	Group 41 LC Lagoon & Landfill Area
MCAAP - 17	Ponds And Lagoon
MCAAP - 19	Rocket Lake
MCAAP - 21	B Plant East Lagoon
MCAAP - 23	Special Weapons Lagoon
MCAAP - 24	C-Tree Lagoon
MCAAP - 35	Suspect Acid Neutralization Pit
MCAAP - 36	Burial Site
MCAAP - 37	Former Waste Oil Storage Tank - Building 10
MCAAP - 45	Roundhouse Complex

The following sites are not ER,A eligible and require no further action at this time.

MCAAP-3	Active Landfill
MCAAP - 8	Wood scrap yard
MCAAP - 13	Concrete Bomb Settling Ponds
MCAAP - 14	Concrete Bomb Settling Ponds
MCAAP - 15	Roundhouse Lagoons
MCAAP - 16	Sewage Retention Lagoon
MCAAP - 20	B Plant West Lagoon
MCAAP - 22	Medium Caliber Lagoons
MCAAP - 25	Active Open Burning Ground
MCAAP - 27	“Old” Demolition Area
MCAAP - 28	“New” Demolition Area
MCAAP - 29	Sedimentation Retention Basin
MCAAP - 30	Pink Water Treatment System
MCAAP - 31	Pink Water Collection System
MCAAP - 34	Deactivation Furnace
MCAAP - 38	DRMO Yard
MCAAP - 39	Hazardous Waste Storage Area, Building 669
MCAAP - 40	HW Storage Bunkers Building 41 LC 103 A, B, C
MCAAP - 41	Sewage Treatment Plant
MCAAP - 42	Water Treatment Plant
MCAAP - 44	Brown Lake

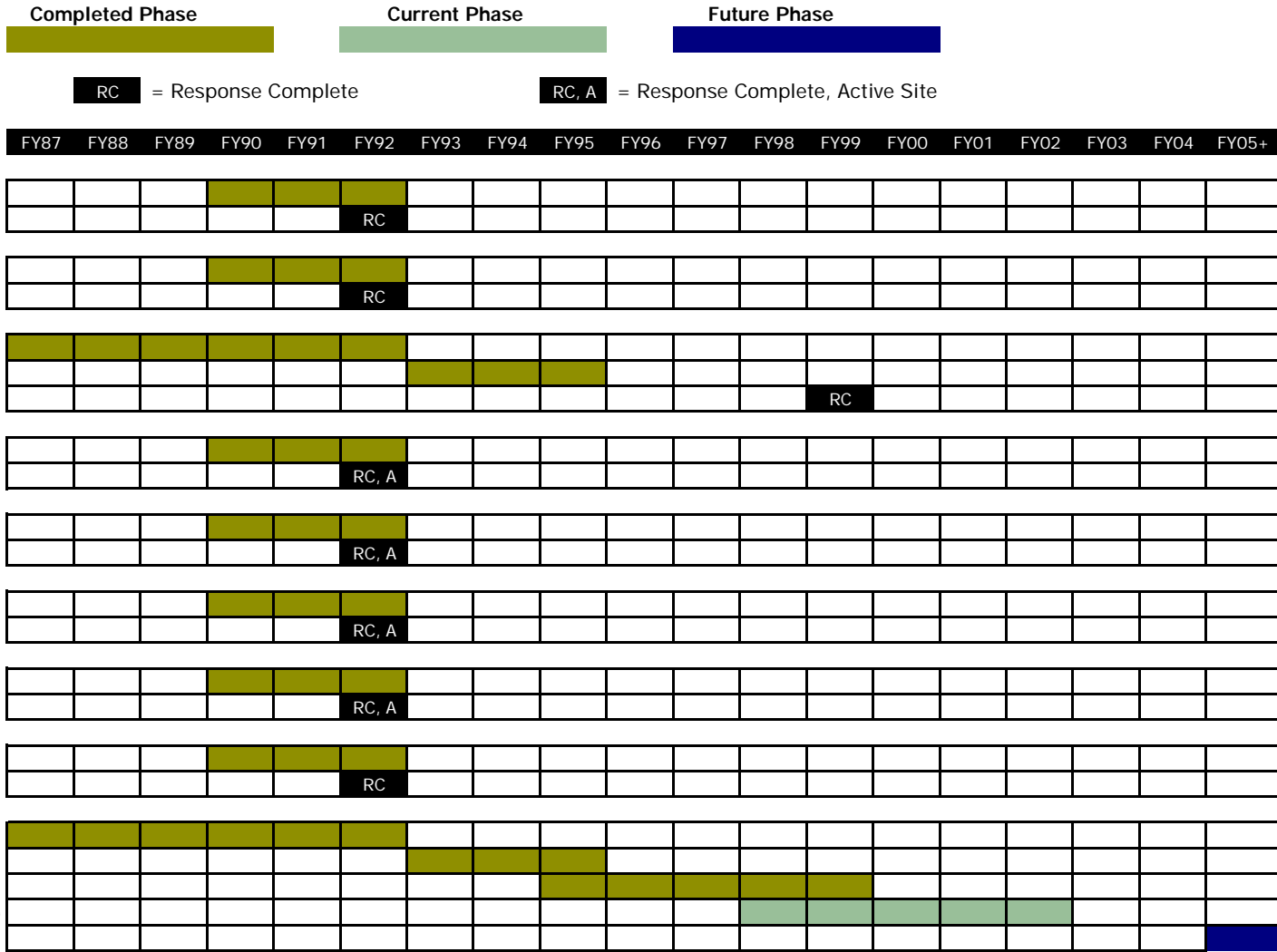
McAlester Army Ammunition Plant IRP Schedule

(Based on current funding constraints and Buy-out plans)



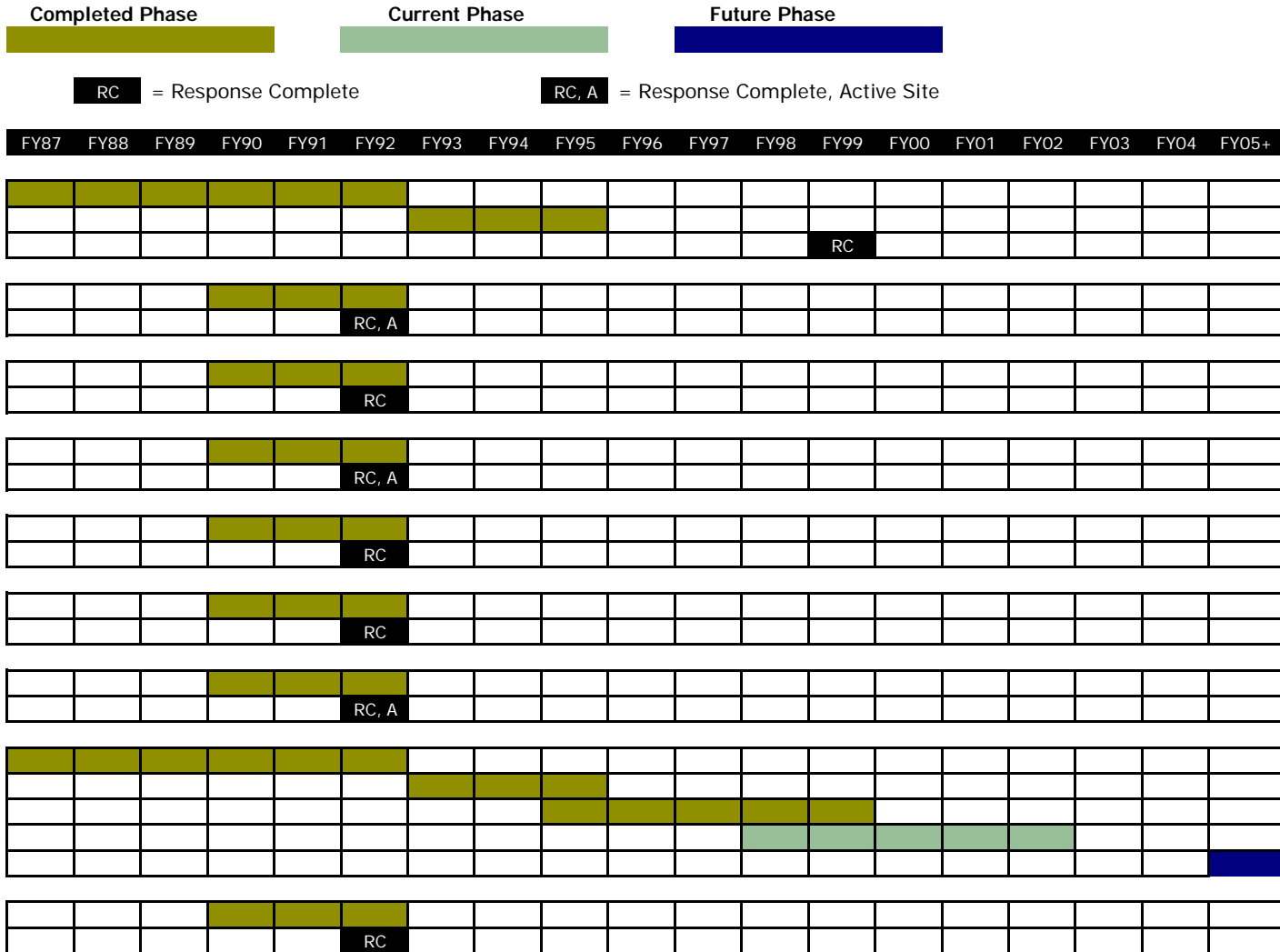
McAlester Army Ammunition Plant IRP Schedule

(Based on current funding constraints and Buy-out plans)



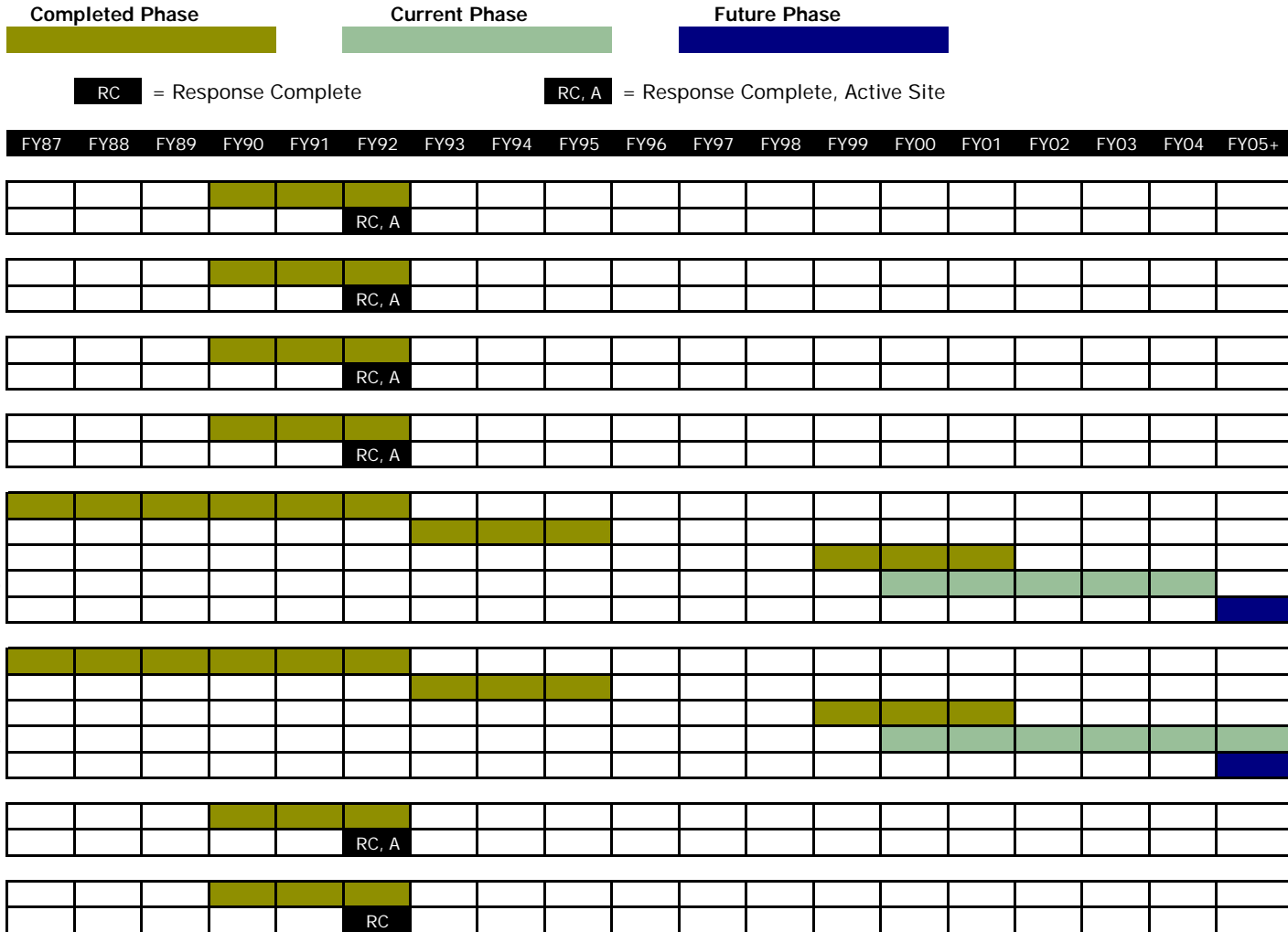
McAlester Army Ammunition Plant IRP Schedule

(Based on current funding constraints and Buy-out plans)



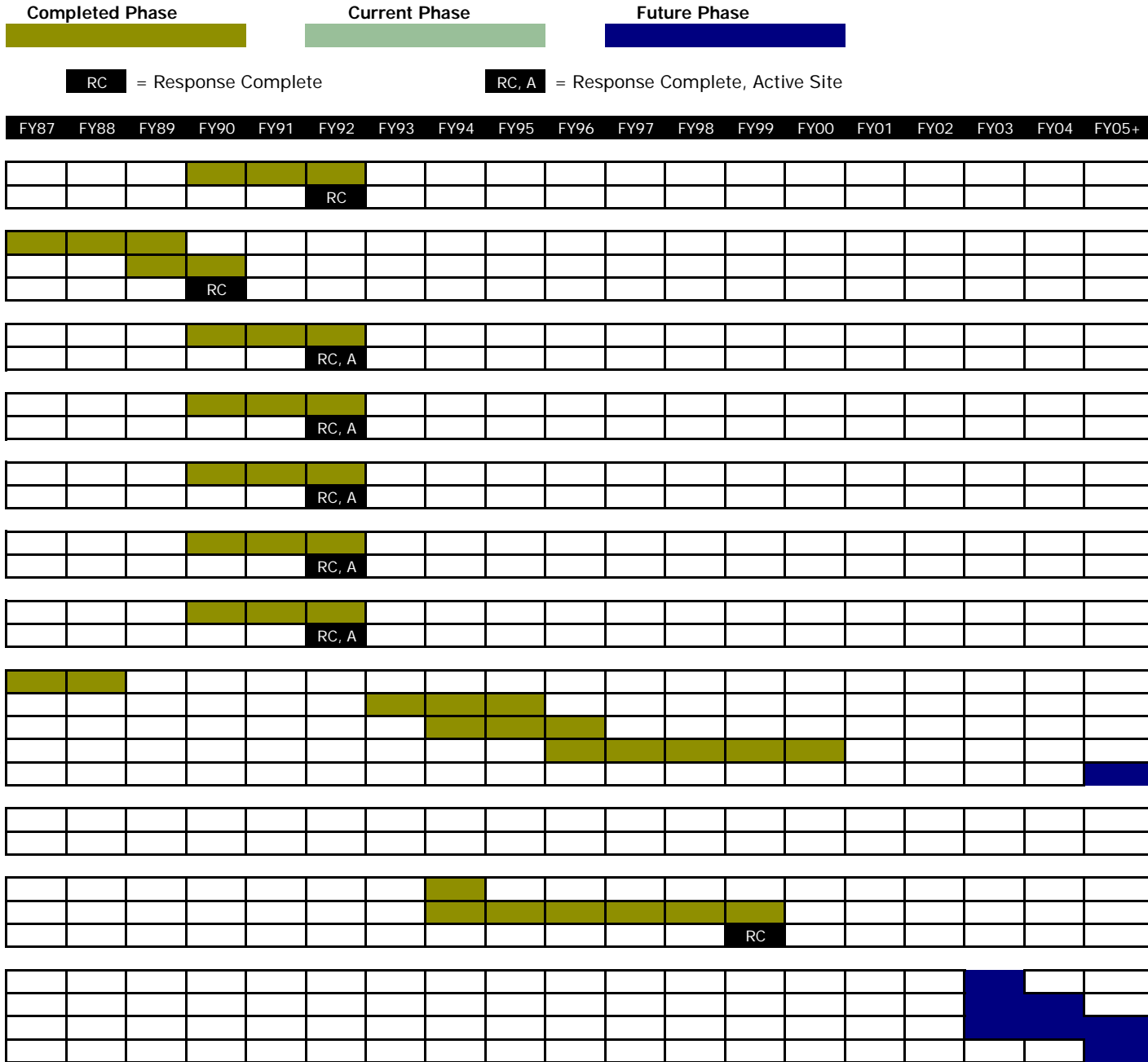
McAlester Army Ammunition Plant IRP Schedule

(Based on current funding constraints and Buy-out plans)



McAlester Army Ammunition Plant IRP Schedule

(Based on current funding constraints and Buy-out plans)



DEFENSE SITE ENVIRONMENTAL RESTORATION TRACKING SYSTEM

Site 4. Installation Phase Summary Report 12/31/00

Installation: MCALESTER AAP
 Programs: BRAC I, BRAC II, BRAC III, BRAC IV, IRP

Subprograms: Compliance, Restoration, UXO
 Installation count for Programs: 1

NPL Options: Delisted, No, Proposed, Yes

Installations count for Programs and NPL: 1
 Site count for Programs and NPL: 46

Phase / Status / Sites

PA				SI			
C	U	F	RC	C	U	F	RC
46	0	0	0	45	0	0	33
	RI / FS					RD	
C	U	F	RC	C	U	F	
10	2	1	5	4	1	3	
	RA(C)					RA(O)	
C	U	F	RC	C	U	F	RC
2	3	3	2	0	0	0	0
			LTM				
			C	U	F	N	
			0	1	0	43	

Remedy / Status / Sites (Actions)

IRA

C	U	F
2 (2)	0 (0)	0 (0)

FRA

C	U	F
3 (3)	3 (3)	3 (5)

RIP Total: 0
 RC Total: 40

Reporting Period End Date: 09/30/2000

DSERTS RISK IAP REPORT MCAAP

DEFENSE SITE ENVIRONMENTAL RESTORATION TRACKING SYSTEM												
Site, 9. RISK INSTALLATION ACTION PLAN REPORT												12/31/2000
Installation:	MCALESTER AAP											
Major Command:	AMC											
SubCommand:	OSC											
Program Options:	IRP, BRAC I, BRAC II, BRAC III, BRAC IV											
Subprogram Options:	Compliance, Restoration, UXO											
Site	RRSE	Media Evaluated	Phase (s) Completed	Phase (s) Underway	Phase (s) Future	#IRA Completed	#IRA Underway	#IRA Future	LTM Status	RIP Date	RC Date	
MCAAP-001	NE		PA RI SI						N		199409	
MCAAP-002	1A	GW SEF WEF	PA RI SI						U		199409	
MCAAP-003	NE		PA SI						N		199206	
MCAAP-004	NE		PA SI						N		199206	
MCAAP-005	NE		PA RI SI						N		199409	
MCAAP-006	NE		PA SI						N		199206	
MCAAP-007	NE		PA SI						N		199206	
MCAAP-008	NE		PA SI						N		199206	
MCAAP-009	NE		PA SI						N		199206	
MCAAP-010	NE		PA SI						N		199206	
MCAAP-011	NE		PA SI						N		199206	
MCAAP-012	NE		PA RI SI						N		199409	
MCAAP-013	NE		PA SI						N		199206	
MCAAP-014	NE		PA SI						N		199206	
MCAAP-015	NE		PA SI						N		199206	
MCAAP-016	NE		PA SI						N		199206	
MCAAP-017	NE		PA SI						N		199206	

DSERTS RISK IAP REPORT MCAAP

Site	RRSE	Media Evaluated	Phase (s) Completed	Phase (s) Underway	Phase (s) Future	#IRA Completed	#IRA Underway	#IRA Future	LTM Status	RIP Date	RC Date
MCAAP-018	1A	SEM SL	PA RD	RAC		1			N		200209
			RI								
MCAAP-019	NE		PA						N		199409
			RI								
MCAAP-020	NE		PA						N		199206
			SI								
MCAAP-021	NE		PA						N		199206
			SI								
MCAAP-022	NE		PA						N		199206
			SI								
MCAAP-023	NE		PA						N		199206
			SI								
MCAAP-024	NE		PA						N		199206
			SI								
MCAAP-025	NE		PA						N		199206
			SI								
MCAAP-026	1A	SEM SL	PA RI	RAC RD					N		200308
			SI								
MCAAP-027	NE		PA						N		199206
			SI								
MCAAP-028	NE		PA						N		199206
			SI								
MCAAP-029	NE		PA						N		199206
			SI								
MCAAP-030	NE		PA						N		199206
			SI								
MCAAP-031	NE		PA						N		199206
			SI								
MCAAP-032	2A	SL	PA	RI	RAC				N		200409
			SI		RD						
MCAAP-033	1A	SL	PA	RI	RAC				N		200410
			SI		RD						
MCAAP-034	NE		PA						N		199206
			SI								
MCAAP-035	NE		PA						N		199206
			SI								
MCAAP-036	NE		PA						N		199206
			SI								
MCAAP-037	NE		PA						N		199001
			RAC								
			RD								
			RI								
			SI								
MCAAP-038	NE		PA						N		199206
			SI								
MCAAP-039	NE		PA						N		199206
			SI								

DSERTS RISK IAP REPORT MCAAP

Site	RRSE	Media Evaluated	Phase (s) Completed	Phase (s) Underway	Phase (s) Future	#IRA Completed	#IRA Underway	#IRA Future	LTM Status	RIP Date	RC Date
MCAAP-040	NE		PA SI						N		199206
MCAAP-041	NE		PA SI						N		199206
MCAAP-042	NE		PA SI						N		199206
MCAAP-043	1A	SL	PA RD RI SI	RAC		1			N		200102
MCAAP-044	NE		PA SI						N		199206
MCAAP-045	1A	GW SL	PA RAC RD RI SI								199909
MCAAP-046	3A	GW SL	PA		RAC RD RI						200503
RRSE - Relative Risk Site Evaluation; Risk Category - 1=High, 2=Medium, 3=Low; Legal Agreement - A = with agreement, B = without agreement; C = Complete, U = Underway, F = Future, N = Not Applicable											
										Reporting Period End Date: 09/30/2000	

REM/IRA/RA ASSESSMENT

PAST REM/IRA/RA

IRA at MCAAP-43

In June 1994, a contract was awarded to remove Building 644, its associated piping, and the surrounding soil, all of which were contaminated with PCBs. The field work began in December 1994 and was completed in March 1995. It was determined that the contamination had spread downstream into a drainage swale. That area was remediated in February 1996.

RA at MCAAP-18

The RA consists of excavation, stabilization, and disposal of lead contaminated soil. Field work occurred in November-December 1998. Construction Completion Report approved October 1999.

RA at MCAAP-45

The RA of the petroleum contaminated soil was performed in conjunction with O&M work at no cost to the ER,A account. Field work was performed in November-December 1998. Final Report approved September 1999.

RA at MCAAP-26

The RA consists of excavation, stabilization, and disposal of lead contaminated soil. Field work was performed during November 1999 through February 2000. Construction Completion Report approved August 1999.

CURRENT REM/IRA/RA

None

FUTURE REM/IRA/RA

RA at MCAAP-46

The RA will consist of a method to protect human health and the environment from the PCB and lead contaminated soil. Anticipated RA award is FY 02

IRA at MCAAP-47

The IRA will consist of a method to protect human health and the environment from the PCB contaminated soil. Anticipated RA award is FY 01

COST ESTIMATES

PRIOR YEAR FUNDS

FY 76-90

Environmental Assessment \$50.0K
(Non-DERA funds)

FY 91-92

No Activity

FY 93

RFI/RI - RFI Workplan, RFI \$1,139.0K
SUPPORT \$5.0K
SUBTOTAL: \$ 1,144.0K

FY 94

PA/SI - Roundhouse \$261.0K
RFI/RI \$212.0K
REM - Minol \$712.0K
CMS/FS \$105.0K
SUPPORT \$5.0K
SUB TOTAL \$1,295.0K

FY 95

REM/IRA \$77.0K
PA/SI \$44.0K
CMS/FS \$293.0K
LTM \$63.0K
SUPPORT \$5.0K
SUB TOTAL \$482.0K

FY 96

SI \$26.0K
REM/IRA \$53.0K
CMS/FS \$90.0K
LTM \$38.0K
SUPPORT (Change in Policy; Funds Moved to Individual Project.) \$0.0K
SUB TOTAL \$207.0K

FY 97

CMI/RA \$0.0K
LTM \$54.0K
CMS/FS \$30.0K
REM/IRA \$65.0K
SI \$8.0K
RAB \$10.0K
SUB TOTAL \$167.0K

FY 98

CMI/RA \$480.4K
CMI/RD \$87.0K
LTM \$76.0K
CMS/FS \$13.0K
REM/IRA \$ 0.0K
SI \$4.0K
Support \$4.0k
RAB \$10.0K
SUB TOTAL \$694.4K

FY 99

CMI/RA \$1,275.0K
CMI/RD \$73.0K
LTM \$45.0K
CMS/FS \$439.0K
Support \$7.0k
SUB TOTAL \$1,839K

FY 00

RI/FS \$54.0K
RA \$103.0K
RD \$86.068K
LTM \$43.444K
SUB TOTAL \$286.512K

**TOTAL PRIOR YEAR
FUNDS:
\$8,265,312**

**McAlester Army Ammunition Plant
CTC FY 01-08+**

DSERTS #	Phase	FY01	FY 02	FY03	FY04	FY05	FY06	FY07	FY08+	Phase CTC	Site Totals
MCAAP-2	LTM	67	69	71	74	77	79	82	1230	1749	
											\$1,749,000.00
MCAAP-18	RA-C	8	1							9	
	LTM					5			5	10	\$19,000.00
MCAAP-26	RI/FS	0									
	RD	4								4	
	RA-C	16	6	3	0					25	
	LTM					5			5	10	\$39,000.00
MCAAP-32	RI/FS	2								2	
	RD	21	12							33	
	RA-C	828	1593	95	48	0	0			2564	
	LTM						6			6	\$2,605,000.00
MCAAP-33	RI/FS	18								18	
	RD	18	12							30	
	RA-C	434	932	90	33	10	0			1499	
	LTM						6			6	\$1,553,000.00
MCAAP-43	RA-C	0								0	
	LTM					5			5	10	\$10,000.00
MCAAP-46	RI/FS		100							100	
	RD		60	10						70	
	RA-C		200	20	4	0				224	
	LTM								21	21	\$415,000.00
TOTALS BY YEAR		\$1,416	\$2,985	\$289	\$159	\$102	\$91	\$82	\$1,266	\$6,390	\$6,390,000
MCALESTER AAP POM		\$1,416	\$233	\$99	\$81	\$77	\$79	\$82	\$4,679		\$6,746,000

COMMUNITY INVOLVEMENT

MCAAP does not have a RAB or a Technical Review Committee. The plant has surveyed the surrounding community on several occasions and has determined there is currently no community interest in forming a RAB.

The latest public canvassing was accomplished through a mailing to potentially interested community residents which included a September 16, 1997 Fact Sheet and invited them to a public meeting which was held February 26, 1998 in McAlester. Several community members attended the meeting, but there was not sufficient interest to develop the RAB. A similar canvassing will be conducted in FY 01 to reevaluate community interest.

PUBLIC ANNOUNCEMENTS

DEFENSE SITE ENVIRONMENTAL RESTORATION TRACKING SYSTEM

Installation, 7. RAB REPORT

12/31/2000

Command: AMC

SubCommand: OSC

Installation: MCALESTER AAP

RAB Established Date:

Reason RAB Not Establish:

RAB Adjourned Date:

The community has expressed no sufficient, sustained interest in a RAB.

Reason RAB Adjourned:

TRC Date:

RAB Community Members:

Total RAB Community Members:

RAB Government Members:

Total RAB Government Members:

RAB Activities:

RAB Advice

TAPP Application Approval Date:

TAPP Project Title:

09/30/2000

TAPP Project Description:

Award Number

Purchase Order

Award Date

Completion Date