# FY2015

### **CORNHUSKER ARMY AMMUNITION PLANT**

**Installation Action Plan** 

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Community Involvement.....

### **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 site or area of concern (AOC), and proposes a comprehensive, installation-wide approach, with the costs and schedules required to conduct investigations and take the necessary remedial actions (RA).

In an effort to coordinate planning information between the restoration manager, the US Army Environmental Command (USAEC), the Cornhusker Army Ammunition Plant (CHAAP), the executing agencies, regulatory agencies, and the public, an IAP was completed. The IAP is used to track requirements, schedules and tentative 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**

- AEDB-R Army Environmental Database- Restoration
  - AOC Area of Concern
    - AR Administrative Record
  - AST Above Ground Storage Tank
  - BRAC Base Realignment and Closure
- CERCLA Comprehensive Environmental Response, Compensation and Liability Act of 1980
- CHAAP Cornhusker Army Ammunition Plant
- CPNRD Central Platte Natural Resources District
  - Cr Chromium
  - **CRL** Certified Reporting Limits
  - DBG Demolition and Burning Grounds
  - **DD** Decision Document
- DDESB Department of Defense Explosive Safety Board
  - **DMM Discarded Military Munitions**
  - **DNT** Dinitrotoluene
- EE/CA Engineering Evaluation / Cost Analysis
- ER, A Environmental Restoration, Army
- ESD Explanation of Significant Differences
- ESS Explosive Safety Submission
- ESTCP Environmental Security Testing and Certification Program
  - FFA Federal Facilities Agreement
- FONSI Finding of No Significant Impact
  - FRA Final Remedial Action
  - FY Fiscal Year
  - gpm gallons per minute
  - **GW** Groundwater
- HMX Cyclotetramethylenetetranitramine
- **HQ** Headquarters
- HRS Hazard Ranking System
- IAP Installation Action Plan
- IOC Industrial Operations Command
- IRA Interim Remedial Action
- IRIP Installation Restoration Incineration Program
  - K thousand
- LAP Load, Assemble and Pack
- LTM Long-Term Management
- LTO Long-Term Operations
- MC Munitions Constituent
- MEC Munitions and Explosives of Concern
- MFR Memorandum For Record
- MMRP Military Munitions Response Program
- MNA Monitored Natural Attenuation
- MRS Munitions Response Site
- MRSPP Munitions Response Site Prioritization Protocol
  - N/A Not Applicable

### **Acronyms**

- NB Nitrobenzene
- NDAI No DoD Action Indicated
- NDEQ Nebraska Department of Environmental Quality
  - NE Nebraska
  - NFA No Further Action
  - NPL National Priorities List
- NPPD Nebraska Public Power District
  - OB Open Burn
  - **OD** Open Detonation
  - OU Operable Unit
  - PA Preliminary Assessment
  - Pb Lead
  - PP Proposed Plan
  - ppb parts per billion
- ppm parts per million
- PRG Preliminary Remediation Goals
- QAPP Quality Assurance Project Plan
  - **RA Remedial Action**
- RA(C) Remedial Action (Construction)
- RA(O) Remedial Action (Operation)
  - RC Response Complete
- RDX Cyclotrimethylenetrinitramine
  - RI Remedial Investigation
- RIP Remedy-in-Place
- **ROD** Record of Decision
  - SI Site Inspection
- SPPD Southern Public Power District
- TAPP Technical Assistance for Public Participation
- TBD To Be Determined
- TCA Trichloroethane
- TNB Trinotrobenzene
- TNT Trinitrotoluene
- TRC Technical Review Committee
- ug/g micrograms per gram
- **US United States**
- USACE US Army Corps of Engineers
- USAEC US Army Environmental Command
- USATECES US Army Technical Explosives Safety
- USATHAMA US Army Toxic and Hazardous Materials Agency (currently called USAEC)
  - USEPA US Environmental Protection Agency
    - UST Underground Storage Tank
    - VOC Volatile Organic Compound
    - WWII World War II

### **Installation Information**

#### **Installation Locale**

Installation Size (Acreage): 356.00

City: Grand Island County: Hall State: Nebraska

#### Other Locale Information

CHAAP is located approximately two miles west of Grand Island, Nebraska. It was originally 11,960 acres but presently consists of 356 acres awaiting restoration for public transfer and disposal to public buyers. The current working population at the facility is one part-time civilian. The plant was operated intermittently over a period of over 30 years from 1942 to 1974 and has remained inactive from 1974 to the present. During past production activities the working population exceeded 5,000. In 1990 the facility maintenance contract was terminated following the facility's addition to the property excess list. The area surrounding CHAAP is primarily rural; the city of Grand Island (population 50,000) is located two miles east of the installation.

#### **Installation Mission**

Current activities at CHAAP are limited to pending Military Munitions Response Program (MMRP) restoration, long-term management (LTM), remedial action - operation (RA(O)), Department of Defense Explosive Safety Board (DDESB) clearance and regulatory agency approval, and leasing of the property for agriculture.

#### **Lead Organization**

Base Realignment and Closure Division

#### **Lead Executing Agencies for Installation**

US Army Corps of Engineers (USACE)

#### **Regulator Participation**

Federal US Environmental Protection Agency (USEPA), Region VII

#### **National Priorities List (NPL) Status**

A score of 51 was recorded on 01-JUL-87.

Final RA(C) Completion Date: 200403

Date for NPL Deletion: TBD

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

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

**Installation Program Summaries** 

#### **IRP**

Primary Contaminants of Concern: Asbestos, Explosives, Munitions and explosives of concern (MEC)

Affected Media of Concern: Groundwater, Soil

#### **MMRP**

Primary Contaminants of Concern: Explosives, Metals, Munitions and explosives of concern (MEC), Munitions

constituents (MC)

Affected Media of Concern: Groundwater, Soil

### **Cleanup Program Summary**

#### **Installation Historic Activity**

CHAAP was constructed for the production of artillery, bombs, boosters and supplementary charges for World War II (WWII). The plant was operated intermittently over a period of 30 years. From 1942 to 1945 it was activated for munitions production for WWII, from 1950 to 1957 during the Korean Conflict, and from 1965 to 1973 during the Vietnam Conflict. Between 1945 and 1948, the ammonium nitrate area formerly used for nitrates production was used for the production of fertilizer. The most recent operations terminated in 1974 and land disposal began in 1999.

Current activities at the facility reflect a declining industrial and agricultural lease base. The local community formed a reuse committee to guide the transfer and disposal of the property to the public, in accordance with the 1994 public law requiring the Hall County reuse committee to direct prioritization to the Army to excess the facility in accordance with the "Comprehensive Reuse Plan for the Cornhusker Army Ammunition Plant," dated Dec. 30, 1997. Approximately 2.5 percent of CHAAP remains for sale to designees.

On July 22, 1987, due to the waste disposal procedures to the load-line cesspools and leach pits and from the disposal of waste, the installation was listed on the NPL with a hazard ranking system (HRS) score of 51.13. A federal facility agreement (FFA) was signed by the USEPA, Region VII, the NDEQ and the Army, effective Sept. 4, 1990.

### **Installation Program Cleanup Progress**

IRP

Prior Year Progress: Groundwater restoration of operable unit (OU) 1 on-site was accelerated with the concurrence of the

regulatory agencies.

Future Plan of Action: RA(O), which includes the monitoring and application of groundwater amendments (on-site) to

accelerate the removal of explosive contaminants, will continue to be performed. After RA(O) has been completed, LTM will continue until the USEPA maximum contaminant level requirements are

met.

**MMRP** 

Prior Year Progress: The MMRP cleanup work is in progress under an EE/CA. Currently, the site is being remediated to

remove an immediate explosive hazard. When this work is complete, environmental sampling will

commence and the remedial investigation (RI) will commence.

Future Plan of Action: The interim removal action (IRA) will be completed in fiscal year (FY) 15. The IRA consists of remote

excavation and sifting to a depth of undisturbed soil. No additional groundwater work is proposed for

the site. An RI/feasibility study (RI/FS) and record of decision (ROD) will be required after the

completion of the IRA. A no further action (NFA) ROD is anticipated for the site.

### **5-Year / Periodic Review Summary**

#### 5-Year / Periodic Review Summary

Status	Begin Date	End Date	End FY
Complete	200209	200210	2003
Complete	200903	200909	2009
Underway	201410	201509	2015

#### Last Completed 5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
GROUNDWATER TREATMENT/OU1	CAAP-001A, CAAP-001AA, CAAP-001AB, CAAP-
	001AD, CAAP-001AE, CAAP-001AG, CAAP-001AH,
	CAAP-001AI, CAAP-001AJ, CAAP-001AK, CAAP-
	001AL, CAAP-001AM, CAAP-001AN, CAAP-001AO,
	CAAP-001AP, CAAP-001AQ, CAAP-001AR, CAAP-
	001AS, CAAP-001AT, CAAP-001AU, CAAP-001AV,
	CAAP-001B, CAAP-001C, CAAP-001F, CAAP-001G,
	CAAP-001H, CAAP-001I, CAAP-001J, CAAP-001K,
	CAAP-001L, CAAP-001M, CAAP-001N, CAAP-001O,
	CAAP-001P, CAAP-001Q, CAAP-001R, CAAP-001S,
	CAAP-001T, CAAP-001U, CAAP-001V, CAAP-001W,
	CAAP-001X, CAAP-001Y, CAAP-001Z, CAAP-002B,
	CAAP-002C, CAAP-002D, CAAP-002E, CAAP-002F,
	CAAP-002G, CAAP-002I, CAAP-002J, CAAP-004,
	CAAP-010

**Results**The remedies at OU1, OU2, OU3, OU4 and OU5 are protective of human health and the environment (or will be upon completion).

Actions Evaluate operational data for the explosives plume in OU1 to verify the extraction well can operate at pumping rates assumed in capture zone modeling. Provide updated plume maps annually to stakeholders. USEPA comments have been responded to.

PlansSchedule for implementing a procedure for operational evaluations and annual updating of plume maps is to be determined. Responses to USEPA comments on the 5-Year Review have been submitted for USEPA review.

### Recommendations and Implementation Plans:

The five-year review document was submitted to the USEPA on Sept. 17, 2009 for their review and comments. The USEPA requested a more detailed review of technical data in the five-year review in order to provide support for the protectiveness statement. Per the USEPA, responses did not need to be submitted until the USACE received all USEPA comments. The USEPA toxicologist comments were received in March 2010. Comment responses were provided to the USEPA in May 2010. OU1: Support for protectiveness rested, in part, on the results of a capture zone analysis for the OU1 explosives plume. The report stated that the ability for the extraction system to sustain pumping rates assumed in the July 2009 analysis has not been demonstrated by operations data. Four-month performance data (November 2009) for the subsurface injection program was evaluated and indicated that capture of the explosives plume and the required rate of pumping is being maintained. March 2010 system data was reevaluated and injections will continue in the groundwater plume.

### **Summary of Parcel Prioritization and Transfer Strategy**

Parcel Name: LL 1 & Tract 37C/37D

Parcel Size: 228.00 **Associated Sites:** Transfer Date: 200710 **Current Land Use:** Agricultural Future Land Use: Industrial

**Encumbrances:** No residence or development for drinking water wells.

Leases/Permits/Licenses: N/A Transfer Strategy: Public Sale **Recipient Organization: SPPD** Other Issues Affecting Transfer: N/A

Parcel Name: LL 2 & T-24/35/36

Parcel Size: 733.83 **Associated Sites:** Transfer Date: 200710 **Current Land Use:** Agricultural Future Land Use: Industrial

Encumbrances: No residence or development for drinking water wells.

Leases/Permits/Licenses: N/A Transfer Strategy: Public Sale **Recipient Organization: NPPD** Other Issues Affecting Transfer: N/A

Parcel Name: LL 3 & T-33 & 34

Parcel Size: 640.00 **Associated Sites:** Transfer Date: 200710 **Current Land Use:** Agricultural Future Land Use: Industrial

**Encumbrances:** No residence or development for drinking water wells.

Leases/Permits/Licenses: N/A Transfer Strategy: Public Sale Recipient Organization: NPPD Other Issues Affecting Transfer: N/A

Parcel Name: LL 4 & T-32

Parcel Size: 363.15 **Associated Sites:** Transfer Date: 200909 **Current Land Use:** Agricultural Future Land Use: Industrial

Encumbrances: No residence or development for drinking water wells.

Leases/Permits/Licenses: N/A Transfer Strategy: Public Sale **Recipient Organization: NPPD** Other Issues Affecting Transfer: N/A

Parcel Name: Pistol Range - Tract 21A (Clean)

Parcel Size: 331.51 **Associated Sites:** Transfer Date: 200710 **Current Land Use: Agricultural** 

Future Land Use: Other (Storage-excavated soil from storm detention cells)

Encumbrances: N/A

Leases/Permits/Licenses: N/A Transfer Strategy: Public Sale **Recipient Organization: CPNRD** Other Issues Affecting Transfer: N/A

Parcel Name: Pistol Range - Tract 21B

Parcel Size: 32.67 **Associated Sites:** Transfer Date: 201209

Current Land Use: Other (no current land use)

Future Land Use: Other (Storage-excavated soil from storm detention cells)

Other (CHAAP-005 Site)

Encumbrances: No excavating or drinking water wells.

Leases/Permits/Licenses: N/A Transfer Strategy: Public Sale

Recipient Organization: Central Platte Natural Resources District

Other Issues Affecting Transfer: Soils have to be place elsewhere (other than a landfill). If so, they are going on the pistol

range. No transferring any property until RI/FS is complete and excavated soils that are

currently stockpiled have been characterized.

**Parcel Name: Pump Station** 

Parcel Size: 16.16
Associated Sites:
Transfer Date: 203512

Current Land Use: Other (groundwater treatment plant)

Future Land Use: Industrial Encumbrances: N/A

**Leases/Permits/Licenses:** N/A **Transfer Strategy:** Public Sale

Recipient Organization: Designee to be determined by Hall County

Other Issues Affecting Transfer: N/A

Parcel Name: Tract 19B
Parcel Size: 20.53
Associated Sites:
Transfer Date: 202009
Current Land Use: Agricultural

Ourient Lana OSC: Agricultural

Future Land Use: Other (storm water detention cells)

Encumbrances: N/A

Leases/Permits/Licenses: N/A
Transfer Strategy: Public Sale
Recipient Organization: CPNRD
Other Issues Affecting Transfer:N/A

Parcel Name: Tract 19C - OB/OD

Parcel Size: 33.13
Associated Sites:
Transfer Date: 202009

Current Land Use: Other (none-due to micro gravel mines)
Future Land Use: Other (storm water detention cells)

Encumbrances: N/A

**Leases/Permits/Licenses:** N/A **Transfer Strategy:** Public Sale

Recipient Organization: Central Platte Natural Resources District

Other Issues Affecting Transfer:5X certification/restoration or Army owns/maintains the property.

Parcel Name: Tract 20B
Parcel Size: 71.60
Associated Sites:
Transfer Date: 202009
Current Land Use: Agricultural

Future Land Use: Other (storm water detention cells)

Encumbrances: N/A

Leases/Permits/Licenses: N/A
Transfer Strategy: Public Sale
Recipient Organization: CPNRD
Other Issues Affecting Transfer:N/A

### **CORNHUSKER ARMY AMMUNITION PLANT**

**Non-BRAC Excess Installation Restoration Program** 

### Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 66/64

### Installation Site Types with Future and/or Underway Phases

Contaminated Ground Water

(CAAP-010)

1 Landfill

(CAAP-003)

### **Most Widespread Contaminants of Concern**

Asbestos, Explosives, Munitions and explosives of concern (MEC)

### **Media of Concern**

Groundwater, Soil

Completed Remedial Actions (Interim Remedial Actions / Final Remedial Actions (IRA/FRA))						
Site ID	Site Name	Action	Remedy	FY	Cost	
CAAP-001A	PINK WATER DISP DP-01	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
	(LP)		SUPPLY TREATMENT			
CAAP-	PINK WATER DISP DP-27	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AA	(CP)		SUPPLY TREATMENT			
CAAP-	PINK WATER DISP DP-28	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AB	(CP)		SUPPLY TREATMENT			
CAAP-	L LINE 3 PINK WATER DISP	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AC	DP-29 (CP)(OU4)	15.4	SUPPLY TREATMENT	1000	<b>TDD</b>	
CAAP-	PINK WATER DISP DP-30	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AD	(CP)	ID A	SUPPLY TREATMENT	4000	TDD	
CAAP-	PINK WATER DISP DP-31	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AE	(CP) L LINE 2 PINK WATER DISP	ID A	SUPPLY TREATMENT	1006	TBD	
CAAP- 001AF	DP-32 (CP)(OU4)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	עסו	
CAAP-	PINK WATER DISP DP-33	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AG	(CP)	INA	SUPPLY TREATMENT	1900	ישוו	
CAAP-	PINK WATER DISP DP-34	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AH	(CP)	шлл	SUPPLY TREATMENT	1300	100	
CAAP-001AI	PINK WATER DISP DP-35	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
0, 11 11 00 17 11	(CP)		SUPPLY TREATMENT	1000	155	
CAAP-	PINK WATER DISP DP-36	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AJ	(CP)		SUPPLY TREATMENT			
CAAP-	PINK WATER DISP DP-37	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AK	(CP)		SUPPLY TREATMENT			
CAAP-	PINK WATER DISP DP-38	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AL	(CP)		SUPPLY TREATMENT			
CAAP-	PINK WATER DISP DP-39	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AM	(CP)		SUPPLY TREATMENT			
CAAP-	PINK WATER DISP DP-40	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AN	(CP)		SUPPLY TREATMENT			
CAAP-	PINK WATER DISP DP-41	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AO	(CP)		SUPPLY TREATMENT			
CAAP-	PINK WATER DISP DP-42	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AP	(CP)	ID A	SUPPLY TREATMENT	4000	TDD	
CAAP-	PINK WATER DISP DP-43	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AQ CAAP-	(CP) PINK WATER DISP DP-44	IRA	SUPPLY TREATMENT ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AR	(CP)	IKA	SUPPLY TREATMENT	1900	עסו	
CAAP-	PINK WATER DISP DP-45	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AS	(CP)	IIV	SUPPLY TREATMENT	1900	טטו	
CAAP-	PINK WATER DISP DP-46	IRA	ALTERNATE WATER SUPPLY/WATER	1986	TBD	
001AT	(CP)	11.7.1	SUPPLY TREATMENT	1000	100	
331711	(0. )		OS E. IKE/KIMERI			

Completed R Site ID	emedial Actions (Interim Reme Site Name	edial Action Action	ns / Final Remedial Actions (IRA/FRA)) Remedy	FY	Cost
CAAP- 001AU	PINK WATER DISP DP-47 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP- 001AV	PINK WATER DISP DP-48 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001B	PINK WATER DISP DP-02 (LP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001C	PINK WATER DISP DP-03 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001D	L LINE 4 PINK WATER DISP DP-04 (LP)(OU4)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001E	L LINE 5 PINK WATER DSIP DP-05 (LP)(OU4)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001F	PINK WATER DISP DP-06 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001G	PINK WATER DISP DP-07 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001H	PINK WATER DISP DP-08 (LP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001I	PINK WATER DISP DP-09 (LP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001J	PINK WATER DISP DP-10 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001K	PINK WATER DISP DP-11 (LP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001L	PINK WATER DISP DP-12 (LP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001M	PINK WATER DISP DP-13 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001N	PINK WATER DISP DP-14 (LP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001O	PINK WATER DISP DP-15 (LP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001P	PINK WATER DISP DP-16 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001Q	PINK WATER DISP DP-17 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001R	PINK WATER DISP DP-18 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001S	PINK WATER DISP DP-19 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001T	PINK WATER DISP DP-20 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001U	PINK WATER DISP DP-21 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001V	PINK WATER DISP DP-22 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001W	PINK WATER DISP DP-23 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001X	PINK WATER DISP DP-24 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001Y	PINK WATER DISP DP-25 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001Z	PINK WATER DISP DP-26 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD

Completed R Site ID	emedial Actions (Interim Reme Site Name	dial Action	ns / Final Remedial Actions (IRA/FRA)) Remedy	FY	Cost
CAAP-002A	L LINE 1 PINK WATER DISP DP-49 (CP)(OU4)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-002B	PINK WATER DISP DP-50 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-002C	PINK WATER DISP DP-51 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-002D	PINK WATER DISP DP-52 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-002E	PINK WATER DISP DP-53 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-002F	PINK WATER DISP DP-54 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-002G	PINK WATER DISP DP-55 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-002H	LAUNDRY FAC PINK WATER DISP DP-56(OU4)		ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-002I	PINK WATER DISP DP-57 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-002J	PINK WATER DISP DP-58 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-010	OU1 GROUNDWATER	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1986	TBD
CAAP-001A	PINK WATER DISP DP-01 (LP)	IRA	INCINERATION	1988	TBD
CAAP- 001AA	PINK WATER DISP DP-27 (CP)	IRA	INCINERATION	1988	TBD
CAAP- 001AB	PINK WATER DISP DP-28 (CP)	IRA	INCINERATION	1988	TBD
CAAP- 001AC	L LINE 3 PINK WATER DISP DP-29 (CP)(OU4)	IRA	INCINERATION	1988	TBD
CAAP- 001AD	PINK WATER DISP DP-30 (CP)	IRA	INCINERATION	1988	TBD
CAAP- 001AE CAAP-	PINK WATER DISP DP-31 (CP) L LINE 2 PINK WATER DISP	IRA IRA	INCINERATION INCINERATION	1988 1988	TBD TBD
001AF CAAP-	DP-32 (CP)(OU4) PINK WATER DISP DP-33	IRA	INCINERATION	1988	TBD
001AG CAAP-	(CP) PINK WATER DISP DP-34	IRA	INCINERATION	1988	TBD
001AH CAAP-001AI	(CP) PINK WATER DISP DP-35	IRA	INCINERATION	1988	TBD
CAAP-	(CP) PINK WATER DISP DP-36	IRA	INCINERATION	1988	TBD
001AJ CAAP-	(CP) PINK WATER DISP DP-37	IRA	INCINERATION	1988	TBD
001AK CAAP-	(CP) PINK WATER DISP DP-38	IRA	INCINERATION	1988	TBD
001AL CAAP-	(CP) PINK WATER DISP DP-39	IRA	INCINERATION	1988	TBD
001AM CAAP-	(CP) PINK WATER DISP DP-40	IRA	INCINERATION	1988	TBD
001AN CAAP-	(CP) PINK WATER DISP DP-41	IRA	INCINERATION	1988	TBD
001AO	(CP)				

Completed R	emedial Actions (Interim Reme Site Name	edial Action Action	ns / Final Remedial Actions (IRA/FRA)) Remedy	FY	Cost
CAAP-	PINK WATER DISP DP-42	IRA	INCINERATION	1988	TBD
001AP	(CP)				
CAAP-	PINK WATER DISP DP-43	IRA	INCINERATION	1988	TBD
001AQ	(CP)	ID A	INCINEDATION	1000	TDD
CAAP- 001AR	PINK WATER DISP DP-44 (CP)	IRA	INCINERATION	1988	TBD
CAAP-	PINK WATER DISP DP-45	IRA	INCINERATION	1988	TBD
001AS	(CP)	IIVA	INDINERATION	1300	וטטו
CAAP-	PINK WATER DISP DP-46	IRA	INCINERATION	1988	TBD
001AT	(CP)				
CAAP-	PINK WATER DISP DP-47	IRA	INCINERATION	1988	TBD
001AU	(CP)				
CAAP-	PINK WATER DISP DP-48	IRA	INCINERATION	1988	TBD
001AV	(CP)	ID A	INIOINEDATION	4000	TDD
CAAP-001B	PINK WATER DISP DP-02	IRA	INCINERATION	1988	TBD
CAAP-001C	(LP) PINK WATER DISP DP-03	IRA	INCINERATION	1988	TBD
OAAI -0010	(CP)	шлл	INDINERATION	1300	100
CAAP-001D	L LINE 4 PINK WATER DISP	IRA	INCINERATION	1988	TBD
	DP-04 (LP)(OU4)				
CAAP-001E	L LINE 5 PINK WATER DSIP	IRA	INCINERATION	1988	TBD
	DP-05 (LP)(OU4)				
CAAP-001F	PINK WATER DISP DP-06	IRA	INCINERATION	1988	TBD
CAAD 004C	(CP)	ID A	INCINEDATION	4000	TDD
CAAP-001G	PINK WATER DISP DP-07 (CP)	IRA	INCINERATION	1988	TBD
CAAP-001H	PINK WATER DISP DP-08	IRA	INCINERATION	1988	TBD
0/4/11 00111	(LP)	1101	INCINETO (TION	1000	100
CAAP-001I	PINK WATER DISP DP-09	IRA	INCINERATION	1988	TBD
	(LP)				
CAAP-001J	PINK WATER DISP DP-10	IRA	INCINERATION	1988	TBD
	(CP)				
CAAP-001K	PINK WATER DISP DP-11	IRA	INCINERATION	1988	TBD
CAAP-001L	(LP) PINK WATER DISP DP-12	IRA	INCINERATION	1988	TBD
CAAF-001L	(LP)	INA	INCINERATION	1900	100
CAAP-001M	PINK WATER DISP DP-13	IRA	INCINERATION	1988	TBD
	(CP)				
CAAP-001N	PINK WATER DISP DP-14	IRA	INCINERATION	1988	TBD
	(LP)				
CAAP-001O	PINK WATER DISP DP-15	IRA	INCINERATION	1988	TBD
CAAD 001D	(LP)	ID A	INCINEDATION	1000	TDD
CAAP-001P	PINK WATER DISP DP-16 (CP)	IRA	INCINERATION	1988	TBD
CAAP-001Q	PINK WATER DISP DP-17	IRA	INCINERATION	1988	TBD
0/1/11 001Q	(CP)	1101	INCINETO (TION	1000	100
CAAP-001R	PINK WATER DISP DP-18	IRA	INCINERATION	1988	TBD
	(CP)				
CAAP-001S	PINK WATER DISP DP-19	IRA	INCINERATION	1988	TBD
0445	(CP)	15.4	MONEDATION	4000	
CAAP-001T	PINK WATER DISP DP-20	IRA	INCINERATION	1988	TBD
CAAP-001U	(CP) PINK WATER DISP DP-21	IRA	INCINERATION	1988	TBD
UAAF-0010	(CP)	INA	INCINERATION	1 300	וסט
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Completed R Site ID	emedial Actions (Interim Reme Site Name	dial Action Action	ns / Final Remedial Actions (IRA/FRA)) Remedy	FY	Cost
CAAP-001V	PINK WATER DISP DP-22 (CP)	IRA	INCINERATION	1988	TBD
CAAP-001W	PINK WATER DISP DP-23 (CP)	IRA	INCINERATION	1988	TBD
CAAP-001X	PINK WATER DISP DP-24 (CP)	IRA	INCINERATION	1988	TBD
CAAP-001Y	PINK WATER DISP DP-25 (CP)	IRA	INCINERATION	1988	TBD
CAAP-001Z	PINK WATER DISP DP-26 (CP)	IRA	INCINERATION	1988	TBD
CAAP-002A	L LINE 1 PINK WATER DISP DP-49 (CP)(OU4)	IRA	INCINERATION	1988	TBD
CAAP-002B	PINK WATER DISP DP-50 (CP)	IRA	INCINERATION	1988	TBD
CAAP-002C	PINK WATER DISP DP-51 (CP)	IRA	INCINERATION	1988	TBD
CAAP-002D	PINK WATER DISP DP-52 (CP)	IRA	INCINERATION	1988	TBD
CAAP-002E	PINK WATER DISP DP-53 (CP)	IRA	INCINERATION	1988	TBD
CAAP-002F	PINK WATER DISP DP-54 (CP)	IRA	INCINERATION	1988	TBD
CAAP-002G	PINK WATER DISP DP-55 (CP)	IRA	INCINERATION	1988	TBD
CAAP-002H	LAUNDRY FAC PINK WATER DISP DP-56(OU4)	IRA	INCINERATION	1988	TBD
CAAP-002I	PINK WATER DISP DP-57 (CP)	IRA	INCINERATION	1988	TBD
CAAP-002J	PINK WATER DISP DP-58 (CP)	IRA	INCINERATION	1988	TBD
CAAP-005	DEMO AND BURNG GD(OU5)	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1988	TBD
CAAP-005	DEMO AND BURNG GD(OU5)	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1994	TBD
CAAP-009	UNDERGROUND STORAGE TANKS(INSTALL. WIDE)	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1994	TBD
CAAP-001A	PINK WATER DISP DP-01 (LP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AA	PINK WATER DISP DP-27 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AB	PINK WATER DISP DP-28 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AC	L LINE 3 PINK WATER DISP DP-29 (CP)(OU4)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP- 001AC	L LINE 3 PINK WATER DISP DP-29 (CP)(OU4)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AD	PINK WATER DISP DP-30 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AD	PINK WATER DISP DP-30 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP- 001AE	PINK WATER DISP DP-31 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP- 001AE	PINK WATER DISP DP-31 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
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Completed Ro	emedial Actions (Interim Reme Site Name	edial Action Action	ns / Final Remedial Actions (IRA/FRA)) Remedy	FY	Cost
CAAP- 001AF	L LINE 2 PINK WATER DISP DP-32 (CP)(OU4)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AF	L LINE 2 PINK WATER DISP DP-32 (CP)(OU4)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP- 001AG	PINK WATER DISP DP-33 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP- 001AG	PINK WATER DISP DP-33 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AH	PINK WATER DISP DP-34 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP- 001AH	PINK WATER DISP DP-34 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001AI	PINK WATER DISP DP-35 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001AI	PINK WATER DISP DP-35 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AJ	PINK WATER DISP DP-36 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP- 001AJ	PINK WATER DISP DP-36 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AK	PINK WATER DISP DP-37 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP- 001AK	PINK WATER DISP DP-37 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AL	PINK WATER DISP DP-38 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AL	PINK WATER DISP DP-38 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP- 001AM	PINK WATER DISP DP-39 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP- 001AM	PINK WATER DISP DP-39 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AN	PINK WATER DISP DP-40 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP- 001AN	PINK WATER DISP DP-40 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AO	PINK WATER DISP DP-41 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP- 001AO	PINK WATER DISP DP-41 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AP	PINK WATER DISP DP-42 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP- 001AP	PINK WATER DISP DP-42 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AQ	PINK WATER DISP DP-43 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AR	PINK WATER DISP DP-44 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP- 001AR	PINK WATER DISP DP-44 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AS	PINK WATER DISP DP-45 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP- 001AS	PINK WATER DISP DP-45 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD

Completed Ro	emedial Actions (Interim Reme Site Name	edial Action Action	ns / Final Remedial Actions (IRA/FRA)) Remedy	FY	Cost
CAAP- 001AT	PINK WATER DISP DP-46 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP- 001AT	PINK WATER DISP DP-46 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP- 001AU	PINK WATER DISP DP-47	IRA	REMOVAL	1995	TBD
CAAP- 001AU	(CP) PINK WATER DISP DP-47 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-	PINK WATER DISP DP-48	IRA	WASTE REMOVAL - SOILS	1995	TBD
001AV CAAP-	(CP) PINK WATER DISP DP-48	IRA	ALTERNATE WATER SUPPLY/WATER	1995	TBD
001AV CAAP-001B	(CP) PINK WATER DISP DP-02	IRA	SUPPLY TREATMENT ALTERNATE WATER SUPPLY/WATER	1995	TBD
CAAP-001B	(LP) PINK WATER DISP DP-02	IRA	SUPPLY TREATMENT WASTE REMOVAL - SOILS	1995	TBD
CAAP-001C	(LP) PINK WATER DISP DP-03	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001C	(CP) PINK WATER DISP DP-03	IRA	ALTERNATE WATER SUPPLY/WATER	1995	TBD
CAAP-001D	(CP) L LINE 4 PINK WATER DISP DP-04 (LP)(OU4)	IRA	SUPPLY TREATMENT WASTE REMOVAL - SOILS	1995	TBD
CAAP-001D	L LINE 4 PINK WATER DISP DP-04 (LP)(OU4)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001E	L LINE 5 PINK WATER DSIP DP-05 (LP)(OU4)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001E	L LINE 5 PINK WATER DSIP DP-05 (LP)(OU4)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001F	PINK WATER DISP DP-06 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001F	PINK WATER DISP DP-06 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001G	PINK WATER DISP DP-07 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001G	PINK WATER DISP DP-07 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001H	PINK WATER DISP DP-08 (LP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001H	PINK WATER DISP DP-08 (LP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001I	PINK WATER DISP DP-09 (LP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001I	PINK WATER DISP DP-09 (LP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001J	PINK WATER DISP DP-10 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001J	PINK WATER DISP DP-10 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001K	PINK WATER DISP DP-11 (LP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001K	PINK WATER DISP DP-11	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001L	(LP) PINK WATER DISP DP-12 (LP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD

Completed R Site ID	emedial Actions (Interim Remo	edial Action Action	ns / Final Remedial Actions (IRA/FRA)) Remedy	FY	Cost
CAAP-001L	PINK WATER DISP DP-12 (LP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001M	PINK WATER DISP DP-13 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001M	PINK WATER DISP DP-13 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001N	PINK WATER DISP DP-14 (LP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001N	PINK WATER DISP DP-14 (LP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001O	PINK WATER DISP DP-15 (LP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001O	PINK WATER DISP DP-15 (LP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001P	PINK WATER DISP DP-16 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001P	PINK WATER DISP DP-16 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001Q	PINK WATER DISP DP-17 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001Q	PINK WATER DISP DP-17 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001R	PINK WATER DISP DP-18 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001R	PINK WATER DISP DP-18 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001S	PINK WATER DISP DP-19 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001S	PINK WATER DISP DP-19 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001T	PINK WATER DISP DP-20 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001T	PINK WATER DISP DP-20 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001U	PINK WATER DISP DP-21 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001U	PINK WATER DISP DP-21 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001V	PINK WATER DISP DP-22 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001V	PINK WATER DISP DP-22 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001W	PINK WATER DISP DP-23 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001W	PINK WATER DISP DP-23 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001X	PINK WATER DISP DP-24 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001X	PINK WATER DISP DP-24 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001Y	PINK WATER DISP DP-25 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001Y	PINK WATER DISP DP-25 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD

Completed R Site ID	emedial Actions (Interim Reme Site Name	edial Action Action	ns / Final Remedial Actions (IRA/FRA)) Remedy	FY	Cost
CAAP-001Z	PINK WATER DISP DP-26 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-001Z	PINK WATER DISP DP-26 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-002A	L LINE 1 PINK WATER DISP DP-49 (CP)(OU4)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-002A	L LINE 1 PINK WATER DISP DP-49 (CP)(OU4)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-002B	PINK WATER DISP DP-50 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-002B	PINK WATER DISP DP-50 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-002C	PINK WATER DISP DP-51 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-002C	PINK WATER DISP DP-51 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-002D	PINK WATER DISP DP-52 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-002D	PINK WATER DISP DP-52 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-002E	PINK WATER DISP DP-53 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-002E	PINK WATER DISP DP-53 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-002F	PINK WATER DISP DP-54 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-002F	PINK WATER DISP DP-54 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-002G	PINK WATER DISP DP-55 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-002G	PINK WATER DISP DP-55 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-002H	LAUNDRY FAC PINK WATER DISP DP-56(OU4)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-002H	LAUNDRY FAC PINK WATER DISP DP-56(OU4)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-002I	PINK WATER DISP DP-57 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-002I	PINK WATER DISP DP-57 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-002J	PINK WATER DISP DP-58 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-002J	PINK WATER DISP DP-58 (CP)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-004	CLAY PIT DISPOSAL AREA(OU3-4)	IRA	WASTE REMOVAL - SOILS	1995	TBD
CAAP-010	OU1 GROUNDWATER	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1995	TBD
CAAP-001A	PINK WATER DISP DP-01 (LP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1996	TBD
CAAP- 001AA	PINK WATER DISP DP-27 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1996	TBD
CAAP- 001AB	PINK WATER DISP DP-28 (CP)	IRA	ALTERNATE WATER SUPPLY/WATER SUPPLY TREATMENT	1996	TBD

Completed R Site ID	emedial Actions (Interim Reme Site Name	dial Action Action	ns / Final Remedial Actions (IRA/FRA)) Remedy	FY	Cost
CAAP-010	OU1 GROUNDWATER	FRA	GROUND WATER TREATMENT	1999	TBD
CAAP-005	DEMO AND BURNG GD(OU5)	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	2000	TBD
CAAP-008	MOTOR POOL(OU3)	IRA	WASTE REMOVAL - SOILS	2000	TBD
CAAP-003	NON ACTIVE DEMOLITION DEBRIS LF(OU3)	FRA	WASTE REMOVAL - SOILS	2001	TBD
CAAP-003	NON ACTIVE DEMOLITION DEBRIS LF(OU3)	FRA	GROUND WATER TREATMENT	2001	TBD
CAAP-003	NON ACTIVE DEMOLITION DEBRIS LF(OU3)	FRA	NATURAL ATTENUATION	2001	TBD
CAAP-004	CLAY PIT DISPÓSAL AREA(OU3-4)	FRA	WASTE REMOVAL - SOILS	2001	TBD
CAAP-009	UNDERGROUND STORAGE TANKS(INSTALL. WIDE)	FRA	WASTE REMOVAL - SOILS	2004	TBD

### **Duration of IRP**

Year of IRP Inception: 197901

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 200408/204509

Date of IRP completion including Long Term Management (LTM): 204509

### **IRP Contamination Assessment**

#### **Contamination Assessment Overview**

In March 1980, an installation assessment of CHAAP was completed by the US Army Toxic and Hazardous Materials Agency (USATHAMA). Based on the findings of that report, subsequent investigations confirmed the presence of munitions contamination and the migration of contaminants. Subsequent investigations confirmed the presence of munitions contamination in soils and groundwater. A residential well survey was conducted to assure that all potential residential wells exposed to cyclotrimethylenetrinitramine (RDX) were sampled. A portion of the alluvial aquifer, extending northeast of Load Line 1 from the boundary of CHAAP into the northwest portion of Grand Island (Capital Heights area), is contaminated with explosive compounds. Recent and historical sampling results indicate that RDX has migrated the greatest distance within the aquifer. The presence of RDX in the alluvial aquifer approximately four miles east of the CHAAP boundary has been verified. Sampling for cyclotetramethylenetetranitramine (HMX) indicates that small concentrations of this analyte also occur in the Capital Heights area.

As a result of this groundwater contamination, the United States (US) Army paid for the installation of a permanent water supply for residences in the area based on a drinking water criteria for RDX of 35 parts per billion (ppb). Because explosive compounds were detected in off-post domestic water supply wells at levels above the required water quality criteria levels, an alternative water supply was provided to residences that were affected. From January 1984 through June 1986, the Army supplied bottled water to residents, until a permanent alternative water supply system could be constructed. In August 1986 an extension of the city water system to the affected area began. Due to a shallow water table, a system of dewatering wells was used to lower the water table sufficiently to allow installation of the water mains. The contaminated groundwater from the dewatering wells was discharged into Silver Creek, north of the residential area. Construction was completed in phases with residential hookups completed in December 1988. Approximately 800 residences, including the affected area and adjacent neighborhoods that could be affected in the future, were provided an opportunity to hook up to the northwest Grand Island Water Supply Extension.

From September 1986 to August 1988, contaminated soils were removed and incinerated. Contaminated groundwater has migrated beneath the Capital Heights area of Grand Island, Nebraska, contaminating approximately 246 drinking water sources in residences there. On July 22, 1987 the installation was listed on the NPL with an HRS score of 51.13 due to the groundwater contamination emanating from the load-line cesspools and leach pits.

An FFA was signed by the USEPA, Region VII, the NDEQ and the Army, effective Sept. 4, 1990. The FFA included all RAs, including removal and RA as the terms were defined by the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), to be undertaken at CHAAP. In December 1991 an RI/FS task for all seven study areas (the load-line sites) was awarded. The scope of the contract carried OU1 through the interim ROD. The ROD for OU1's explosive plume was signed by the USEPA, Region VII on Sept. 29, 1994 and by the Army on Nov. 18, 1994. On Dec. 2, 1994 the NDEQ concurred with the Interim ROD and in March 1994 the design contract for the interim action ROD was awarded.

After the installation of the waterline extension, the US Army and the USEPA's office of drinking water published a health advisory, which recommended that the drinking water criteria for the general population be established at 10 ppb for ingestion only and two ppb for multiple pathways. Based upon this recommendation, the US Army, in agreement with the NDEQ, sampled additional residential wells near the AOC using the two-ppb health advisory as the decision point for alternative water implementation. The residents were provided bottled water as an interim action and all affected residents have been provided with the opportunity to access city water. In December 1993 a second waterline extension was constructed. The maintenance of the waterline was transferred to the city. This extension covers the area east of the furthest detection of explosives.

The proposed design for the pump and treat station, included extraction of 750 gallons per minute (gpm) in the source areas on-post, 150 gpm at the 20 ppb isopleth near Capital Heights, and 800 gpm at the distal end of the plume to prevent further migration of the RDX plume to the east. The explanation of significant differences (ESD) implemented work on-post for the primary source areas and discharge to on-post canals. The explosives-contaminated water is pumped through a granular activated carbon system and discharged to on-post canals. On June 13, 1997 a construction contract for the on-post phase was awarded and on Dec. 18, 1998 the official OU1 groundwater treatment plant operation and maintenance began. In September 2001 the amended ROD for OU1 was signed to better define institutional controls. (The city has enacted an ordinance concerning wells within the plume.)

In 1995 the waterline extension was completed, providing service to 50 additional residents in the affected area. In December 1994 the removal of approximately 5000 tons of explosives-contaminated soils was completed. During spring 1995 confirmation of the removal was completed. In July 1994 a contract was awarded to fill data gaps and to complete the remaining RI/FS. This contract completed the final RI for the facility for bringing the entire site to a final ROD and excessing CHAAP. In addition, a preliminary assessment (PA) screening report and statement of condition was completed in FY95 for a portion of the Phase I

### **IRP Contamination Assessment**

property planned for excessing. In November 1996 the final RI was completed and the final FS was approved in February 1998. In September 1998 the final ROD NFA for OU2 was completed, the OU3 ROD was signed in December 1999 and the OU4 ROD was signed in February 2000. The RA for the removal of explosives and lead-contaminated soil was completed in 2000.

Previous investigations will serve to support excessing actions for the preparation of the statement of condition of CHAAP and plans to parcel/excess properties. The Hall County reuse committee determines prioritization of properties for disposal. In December 1997 the reuse plan was completed.

In December 1998 the construction of OU1 pump and treatment plant was completed. Removal from the NPL will be initiated in FY35.

#### The OUs are:

- OU1: Load, assemble and pack (LAP) groundwater plume (primarily trinitrotoluene (TNT) and RDX).
- OU2: NFA; Administration Base Housing Area, Abandoned Burning Ground, Magazine Areas, Drainage Ditches and Miscellaneous Storage Areas
- OU3: Nitrate Area, Pistol Range, Shop Area, Sanitary Landfill (explosives, volatile organic compounds (VOC), and metals). NFA
  - OU4: LAP Facility soils, sediments and surface water. All other AOCs are under institutional control; RIP, therefore, NFA.
  - OU5: Burning and Demo Grounds (explosives and metals)

#### **Cleanup Exit Strategy**

RA(O) will continue to be performed until contamination in the groundwater meets the ROD requirements. Groundwater amendments to the contaminant sources and peripheral areas in the direction of the groundwater flow will be implemented until ROD requirements are met and verified by two years of post-LTM. The entire explosive plume on-site could be remediated prior to 2043, followed by the decommissioning of the groundwater processing plant.

	Title	Author	Date
1990			
	Fact Sheet, RDX Health Effects	USATHAMA	MAR-1990
	Federal Facility Agreement	EPA, NDEQ, and DA	APR-1990
991		1	-
	Community Interviews	USATHAMA	JAN-1991
	Community Relations Plan	USATHAMA	NOV-1991
	Data Management Plan	USATHAMA	NOV-1991
	Sampling & Analysis Plan- Field Sampling Work Plan	USATHAMA	NOV-1991
992		I	I
	Facts Sheet, CAAP Summary of IAG	USAEC	JAN-1992
	Remedial Investigation/Feasibility Study	USAEC	JUN-1992
	Engineering Evaluation/Cost Analysis	USAEC	JUL-1992
	Public Health Assessments for Cornhusker AAP	ATSDR	AUG-1992
	Assessment of Chemical ARARs & Pump Test	USATHAMA	OCT-1992
	Site Characterization Report	USAEC, Stollar	DEC-1992
93	·		
	Facts Sheet, Flooded Basements & RDX	USAEC & Watkins- Johnson Inc.	MAY-1993
	Plant Site Characterization Report	USAEC & Watkins- Johnson Inc.	JUN-1993
	Initial Screening of Technologies	USAEC & Watkins- Johnson Inc.	JUL-1993
994			
	Focused Feasibility Study for Groundwater Operable Unit One	USAEC & Watkins- Johnson Inc	MAR-1994
	Proposed Plan CAAP, Operable Unit One Explosives Groundwater Plume	USAEC	MAY-1994
	Public Availability Session - Groundwater Cleanup	СНААР	MAY-1994
	Record of Decision (ROD) Summary, Operable Unit One	USAEC	SEP-1994
	Groundwater Modeling	Watkins-Johnson Inc	SEP-1994
	Work Plan OU1 Groundwater	RUST Corporation	NOV-1994
	Background Data Review & Evaluation	ICF Kaiser Inc.	DEC-1994
995		·	
	RD/RA Predesign Technical Summary OU1 Groundwater	RUST Corporation	FEB-1995
	Preliminary Assessment Screening (PAS) of Agricultural Tracts 41, 42, 44, 53, 54, 55, 56 & 57	USAEC	MAY-1995
	Technical Plan, Part A & B RI/FS	ICF Kaiser Inc.	JUN-1995
	Quality Assurance Project Plan	ICF Kaiser Inc.	JUN-1995
	Concept Design Analysis, OU-1	RUST Corporation	AUG-1995
	Report, Groundwater Interim Remedial Action Design- Basis Model	Dames & Moore Inc.	SEP-1995
996			
	Report, USAEC/ICF Kaiser Remedial Investigation/Feasibility Study RI/FS of Tanks UST/AST	ICF Kaiser Inc.	MAY-1996

	Title	Author	Date
1996			
	Explanation of Significant Differences (ESD) AEC Change in Effluent Water Discharge Location	USAEC	AUG-1996
	Symptom & Disease Prevalence-Health Study- Final Report	ATSDR	SEP-1996
	Remedial Investigation Report CHAAP, US AEC Final Chapters	ICF Kaiser Inc	SEP-1996
	OU2 Remedial Investigation Addendum, Final Document "No Further Action"	USAEC	NOV-1996
1997		1	
	Proposed Plan (Final) No Further Action OU2 (Administration Area, Magazines, Housing, Miscellaneous Storage, Abandoned Burning Grounds, Drainage Ditches)	USAEC	FEB-1997
	Explanation of Significant Differences (ESD) & Related Public Meeting Documents for OU1 Record of Decision (ROD)	USAEC & USEPA	FEB-1997
	Proposed Plan - OU2 Public Meeting includes Restoration Advisory Board (RAB) Briefing	USAEC	MAR-1997
	Feasibility Study - Operable Unit One (Unsaturated Zone) and Operable Unit Three, Final Document	USAEC	MAY-1997
	1996 Annual Sampling LTM Program	URS Woodward Clyde	JUL-1997
	Environmental Assessment / FONSI, OU1 Groundwater Treatment Plant	COE, Omaha District	JUL-1997
	Underground / Above Ground Storage Tanks, UST / AST site Investigation, Final	AEC	OCT-1997
1998			
	Proposed Plan- OU3 and OU4 Public Meeting	USAEC	FEB-1998
	1997 Annual Sampling LTM Program	URS Woodward Clyde	MAR-1998
	OU2, ROD	ICF Kaiser Inc.	SEP-1998
	June 1998 Annual Sampling Event for Long-term Monitoring Program	Woodward Clyde	OCT-1998
	Environmental Baseline Study	USACHPPM	NOV-1998
1999		<u> </u>	
	Groundwater Flow Modeling	URS Woodward Clyde	MAY-1999
	Closure Report for Site Investigation and Screening of Unexploded Ordnance at OB/OD Area, May	MKM Engineers, Inc.	MAY-1999
	1999 Annual Sampling Event for LTM Program	URS Woodward Clyde	JUL-1999
	OU3 ROD	ICF Kaiser Inc	DEC-1999
2000			
	OU4 ROD	ICF Kaiser Inc.	FEB-2000
	Final Groundwater Flow & Contaminant Fate & Transport Modeling	URS Woodward Clyde	MAR-2000
	OU3 and OU5 LTM Report	HydroGeologic Inc.	SEP-2000
	Final Report March 2000 Annual Sampling Event for Long-term Monitoring	URS Woodward Clyde	SEP-2000
	OU3 Final Soils Report	CET	DEC-2000
	Final Report First Annual GW Sampling for OPM for Burning Ground and Shop Area	HydroGeologic	DEC-2000

	Title	Author	Date
2000			
	OU3 final Soils Report	CET	DEC-2000
	Demolition of Load Line #5 at Cornhusker Army Ammunition Plant	MKM Engineers, Inc.	DEC-2000
2001			
	Revised PP for OU1 ROD Amendment	URS Woodward Clyde	FEB-2001
	Annual Sampling LTM March 01	URS Woodward Clyde	JUN-2001
	Workplan Disassembly and Decontamination of Select Process Equipment at Load Lines 1, 2, 3 and 4	MKM Engineers, Inc.	JUL-2001
2002			
	5X Certification of Load Lines 1 through 5 at Cornhusker Army Ammunition Plant	MKM Engineers, Inc.	MAY-2002
	Draft CERCLA Review	HydroGeologic	SEP-2002
2003		1	1
	Draft Annual Sampling Event for LTM	HydroGeologic	JAN-2003
	Final Report - Thermal Decomposition, Demolition and Certification of Nitrate Area and Selected Buildings in Shop Area	MKM Engineers, Inc.	JAN-2003
	Final Work plan for OU1 ROD Amendment	USACE	JAN-2003
	Groundwater Sampling Event Technical Plan Letter Addendum	HydroGeologic, Inc. and URS, Inc	FEB-2003
	Demonstration of Operating Properly & Successfully for Explosive Soil Remediation Actions in the Load Lines in OU4 & No Further Action/No Response Action in OU2 &GWTP, LTM & Off-Site Natural Attenuation of Contaminated Explosive Plume in OU1	USACE	FEB-2003
	Letter CHAAP Review of Quality Assurance Project Plan For Remediation of Lead Impacted Soil at the Pistol Range Static Ejection Site/Backstop Berm,	NDEQ	MAY-2003
	Scope of Work for Contaminated Soil Removal, Cornhusker AAP	Deerinwater Environmental Management Services	MAY-2003
	Closed, Transferring & Transferred/Site Inventory Report	engineering environmental Management Inc./USACE	JUL-2003
	ESTCP Demonstration Project Summary - Oregon Health and Science	University of Oregon	JUL-2003
	Final March 03 Annual Sampling Event	HydroGeologic	AUG-2003
	Scope of Work, Thermal Decomposition and 5X Certification of Load Line #3	MKM Engineers, Inc.	SEP-2003
	Scope of Work for Thermal Decomposition, Demolition and 5X Certification of Select Buildings in Nitrate and Shop Areas	MKM Engineers, Inc.	SEP-2003
	Proposal for Thermal Decomposition, Demolition and 5X Certification of Load Line #4	MKM Engineers, Inc.	SEP-2003
	Final March 03 Annual Sampling Event for LTM	HydroGeologic	SEP-2003
	Draft Project Work Plan, Contaminated Soil Removal, Cornhusker Army Ammunition Plant	Deerinwater Environmental Management Services	OCT-2003
	2003 Monitoring Well Maintenance, Cornhusker Army Ammunition Plant	HydroGeologic, Inc.	OCT-2003
	Environmental Security Testing and Certification Program (ESTCP) Design and Installation Plan	Oregon Health & Science University of Oregon	NOV-2003

	Title	Author	Date
2003			
	Quality Assurance Project Summary for Remediation of Lead Impacted Soil at CHAAP Pistol Range Static Ejection Site/Backstop Berm	Jacobsen/Helgoth Consultants	DEC-2003
	Draft Report Contaminated Soil Removal CHAAP	Deerinwater Environmental Management Services Inc.	DEC-2003
	5X Certification of Load Line #5	MKM Engineers, Inc.	DEC-2003
2004		1	1
	Final Report - Thermal Decomposition, Demolition and Certification of Nitrate Area and Selected Buildings in Shop Area	MKM Engineers, Inc.	JAN-2004
	January 2003-December 2003 Groundwater Treatment System Sampling & Analysis CHAAP (Chemical Quality Control Summary Report)	HydroGeologic, Inc	FEB-2004
	March 2004 Groundwater Sampling Event Draft Technical Plan Addendum, Cornhusker AAP	Hydrogeologic Inc.	FEB-2004
	CAAP Feb 2004 Monitoring Well Installation Trip Report	Hydrogeologic, Inc.	MAR-2004
	Final First Five Year (CERCLA) Review	Hydrogeologic Inc.	MAR-2004
	Final Contaminated Soil Removal OU3, Cornhusker AAP	Deerinwater Environmental Management Services, Inc.	MAR-2004
	Draft LTM Optimization Study for CHAAP	Hydrogeologic Inc.	MAY-2004
	Draft Groundwater Model Review, CHAAP	Hydrogeologic Inc.	MAY-2004
	Long-term Operations (LTO) Groundwater Treatment Facility at OU1 and Long-term Monitoring (LTM) at OU1, OU3, & OU5	USACE	MAY-2004
	Draft March 2004 Annual Sampling Event for the LTM Program	Hydrogeologic Inc.	JUL-2004
	Final LTM Optimization Study	HydroGeologic, Inc.	JUL-2004
	Final March 2004 Annual Sampling Event for LTM Program	HydroGeologic, Inc.	SEP-2004
	Thermal Decomposition and Demolition of Load Line #3	MKM Engineers, Inc.	OCT-2004
	Quality Assurance Project Summary for Remediation of Lead-Impacted Soil at CHAAP Pistol Range Static Ejection Site/Backstop Berm	Jacobsen/Helgoth Consultants	DEC-2004
	Thermal Decomposition, Demolition and 5X Certification of Load Line #1 - Vol 1-5	MKM Engineers, Inc.	DEC-2004
2005			
	Work Plan - Geophysical Survey and Anomaly Investigation and Removal of Industrial And Sewers, Testing Water Supply Lines and Limited Soil Screening for Explosives in Load Lines 3 And 4	PIKE International	JAN-2005
	Work Plan for Geophysical Investigation and Site Survey of the Pistol Range and the New OB/OD Grounds	Lakeshore Engineering	JAN-2005
	Closeout Report for Geophysical Investigation And Site Survey of the Pistol Range and The OB/OD Grounds	Lakeshore Engineering	FEB-2005
	Site Activities Work Plan for Asbestos Abatement Building Demolition, Creosote Wood Removal and Fence Installation	Lakeshore Engineering	FEB-2005
	Geophysical Prove Out Report - Geophysical Survey and Anomaly Investigation and Removal of Industrial and Sewers, Testing of Water Supply Lines and Limited Soil	PIKE International	FEB-2005

_	Title	Author	Date
•	Screening for Explosives in Load Lines 3 And 4		
	Final Estimation of Minimum Distance for Groundwater Extraction Wells and Groundwater Flow Model Update	HydroGeologic, Inc	FEB-2005
	Closeout Report for Geophysical Investigation And Site Survey of the Pistol Range and The OB/OD Grounds, Lakeshore Engineering	MKM Engineers, Inc.	FEB-2005
	Chemical Quality Control Summary Report Jan 04 - Dec 04 Groundwater Treatment System Sampling Analysis	HydroGeologic, Inc.	MAR-2005
	Thermal Decomposition, Demolition and 5X Certification of Load Line #2-3 Volumes	PIKE International	MAR-2005
	Long-Term Monitoring in Support of Natural Attenuation - March 05 Results, CHAAP	EA/URS	MAR-2005
	Workplan Asbestos Abatement at Load Line #4,	PIKE International	APR-2005
	Closeout Report, Asbestos Abatement, Building Demolition, Creosote Wood Removal and Fence Installation	Lakeshore Engineering	JUL-2005
	Disassembly, Decontamination and Demolition of Buildings and Installed Equipment Containing Explosives Residues at Load Line 4, CHAAP, PIKA International	MKM Engineers, Inc.	JUL-2005
	Geophysical Survey and Anomaly Investigation, Removal of Industrial and Sanitary Sewers, Testing of Water Supply Lines and Limited Soil Screening for Explosives in Load Lines 3 & 4, CHAAP, Volumes I, II, III, PIKA International	MKM Engineers, Inc.	OCT-2005
•			
	Asbestos Abatement at Load Line #4 and Asbestos Sewer Removal at Load Lines 1, 2, 3, CHAAP, PIKE International	MKM Engineers, Inc.	FEB-2006
	Asbestos Containing Material Removal at Load Lines 1 and 2, Cornhusker AAP, Grand Island, NE; Final Work Plan Addendum	URS Group, Inc	JUN-2006
	Decant Station Groundwater Remediation, Cornhusker AAP, Grand Island, NE; Draft Work Plan Addendum	URS Group, Inc	OCT-2006
	March 2006 Annual Sampling Event for the Long Term Monitoring Program, Cornhusker AAP, Grand Island, NE	EA Engineering Science and Technology	NOV-2006
,	Explosives Safety Submission for Tract 19 Fuze Destruction Area, Tract 20 Fuze Destruction Area, Tract 20 Ammonium Nitrate Burning Area and Tract 21 Static Ejection Test Site, Cornhusker AAP, Grand Island, NE	URS Group, Inc	DEC-2006
	Pistol Range Open Burning/Open Detonation Freon Site Investigation, Cornhusker AAP, Grand Island, NE, Final Work Plan Addendum	URS Group, Inc	JAN-2007
	March 2007 Long-Term Monitoring Groundwater Sampling Event Technical Plan Letter Addendum, Cornhusker AAP, Grand Island, NE	URS Group, Inc	JAN-2007
	Asbestos Containing Material Removal at Load Lines 1 and 2, Cornhusker AAP, Grand Island, NE; Draft Final Report	URS Group, Inc	FEB-2007
	CHAAP-005 Open Burning/Open Detonation Burning Grounds, Engineering Evaluation/Cost Analysis (EE/CA), Cornhusker AAP, Grand Island, NE, Internal Army Draft	URS Group, Inc	FEB-2007

	Title	Author	Date
2007			
	Subsurface Injection Work Plan Addendum, OU1 Remedial Action Operation, Cornhusker AAP, Grand Island, NE Draft	Bay West, Inc.	FEB-2007
	Pre-Injection Groundwater Investigation Final Letter Work Plan Addendum, Operable Unit 1 Remedial Action Operation, Cornhusker AAP, Grand Island, NE	Bay West, Inc.	MAR-2007
	Chemical Quality Control Summary Report, January 2006 to December 2006, Groundwater Treatment System Sampling and Analysis, Cornhusker AAP, Grand Island, NE	EA Engineering Science and Technology	MAR-2007
	Final Report of March 2007 Annual Sampling Event for the Long-Term Monitoring Program, Cornhusker Army Ammunition Plant, Grand Island, NE.	URS Corporation	OCT-2007
2008			
	CHAAP-005 Demolition and Burning Grounds Engineering Evaluation/Cost Analysis, Cornhusker Army Ammunition Plant, Grand Island, NE (Revised Draft)	URS Corporation	JAN-2008
	Final Report for Explosives Contaminated Soil Investigation and Removal at Load Line 4; Cornhusker Army Ammunition Plant, Grand Island, NE	URS Corporation	JAN-2008
	CHAAP-005 Demolition and Burning Grounds Engineering Evaluation/Cost Analysis, Cornhusker Army Ammunition Plant, Grand Island, NE (Revised)	URS Corporation	FEB-2008
	2007 Draft Subsurface Injection Annual Report, OU1 Remedial Action Operation, Cornhusker Army Ammunition Plant, Grand Island, NE	URS Corporation	MAR-2008
	Pre-Injection Groundwater Investigation Letter Work Plan Addendum, 2008 Operable Unit 1 Remedial Action Operation, Cornhusker Army Ammunition Plant, Grand Island, NE	URS Corporation	MAR-2008
	Explosive Contaminated Soils Investigation and Removal at Load Line 4	Bay West/URS	JUN-2008
	Monitoring Well Installation Letter Work Plan Addendum 2008/2009 OU1 LTM CHAAP	Bay West/URS	AUG-2008
	March 2008 Annual Sampling Event for the LTM Program CHAAP - Draft Report	Bay West/URS	AUG-2008
	March 2008 Annual Long-Term Monitoring Groundwater Sampling Event Draft Final Technical Plan Letter Addendum, Cornhusker Army Ammunition Plant, Grand Island, NE	URS Corporation	SEP-2008
	CHAAP-005 Demolition and Burning Grounds Engineering Evaluation/Cost Analysis, Cornhusker Army Ammunition Plant, Grand Island, NE (Draft Final)	URS Corporation	OCT-2008
	Decant Station Groundwater Pilot Study	Bay West/URS	OCT-2008
	CHAAP-005 Demolition and Burning Grounds Action Memorandum (Interim Removal Action-IRA), Cornhusker Army Ammunition Plant, Grand Island, NE (Draft)	URS Corporation	NOV-2008
2009	,		
	March 2009 LTM Sampling Event Draft Technical Plan Letter Addendum CHAAP	URS/Bay West	JAN-2009
	Monitoring Well Installation and Abandonment Letter Report, 2008 LTM CHAAP	Bay West/URS	JAN-2009

	Title	Author	Date
2009			
	Pre-Injection Groundwater Investigation Letter Work Plan Addendum, 2009 OU1 RAO	Bay West/URS	FEB-2009
	CHAAP-005 Demolition and Burning Grounds Engineering Evaluation/Cost Analysis (Revised Draft)	URS Corporation	FEB-2009
	March 2009 LTM Sampling Event Final Technical Plan Letter Addendum CHAAP	Bay West/URS	FEB-2009
	Pre-Injection Groundwater Investigation Final Letter Work Plan Addendum 2009 OUT RAO CHAAP	Bay West/URS	MAR-2009
	BayWest/URS and USEPA Split Sample Results Comparison Tables 2009 Long Term Monitoring Program at CHAAP	BayWest/URS	JUL-2009
	March 2009 Annual Sampling Event for the LTM Program at CHAAP - Final Report	BayWest/URS	NOV-2009
2010		1	'
	Monitoring Well Installation and Abandonment Letter Report	Bay West / URS	JAN-2010
	Monitoring Well Installation and Abandonment Letter Report 2009 Long Term Monitoring Program at CHAAP	BayWest/URS	JAN-2010
	Preinjection Groundwater Investigation Draft Letter Work Plan Addendum 2010 Operable Unit 1 Remedial Action Operation at CHAAP	BayWest/URS	FEB-2010
	2010 Additional Investigation and Subsurface Injection Letter Work Plan Addendum Decant Station Groundwater Pilot Study at CHAAP	URS	MAR-2010
	March 2010 Long Term Monitoring Sampling Event Final Technical Plan Letter Addendum at CHAAP	BayWest/URS	MAR-2010
	Chemical Quality Control Summary Report January 2009 to December 2009	BayWest	MAR-2010
	Subsurface Injection Design Technical Memorandum	Bay West / URS	APR-2010
	Pre-Injection Groundwater Investigation Final Letter Work Plan Addendum	Bay West / URS	APR-2010
	Final Subsurface Design Technical Memorandum	Bay West / URS	JUN-2010
2011			
	Mar 2011 Annual LTM Sampling Event Draft Technical Plan Letter Addendum	Bay West / URS	JAN-2011
	Preinjection Groundwater Investigation Draft Letter Work Plan Addendum	Bay West / URS	FEB-2011
	Subsurface Injection Design Technical Memorandum	Bay West/URS	JUN-2011
2012			
	Final Facility Wide UFP QAPP	Bay West	JUN-2012
	Final Decant Station Work Plan	Bay West	JUL-2012
2013			
	LTM Report	Bay West	JUN-2013
	2013 UFPQAPP WorkPlan FINAL	Bay West	SEP-2013
	Final Subsurface Injection Annual Report	Bay West	SEP-2013

### **CORNHUSKER ARMY AMMUNITION PLANT**

Non-BRAC Excess
Installation Restoration Program
Site Descriptions

Site ID: CAAP-003

### Site Name: NON ACTIVE DEMOLITION DEBRIS LF(OU3)

## STATUS

Parcel: NONE

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Asbestos, Munitions and explosives of

concern (MEC)

Media of Concern: Groundwater, Soil

<u>Phases</u>	Start	End
PA	197904	198003
SI	197904	199106
RI/FS	199101	199801
RD	199904	199912
RA(C)	200001	200106
RA(O)	199812	203512

**RIP Date:** 200106 **RC Date:** 203512

### SITE DESCRIPTION

This site was reopened in 2013 due to a change in site conditions (i.e., building demolition and slab removal to meet explosive safety requirements). Characterization is required to ensure environmental conditions have not changed. (See the site history of Load Lines 1, 2, 3 and 4 for further details.).

Post-explosive safety removal actions uncovered asbestos debris pits. Removal of concrete slabs/ramps revealed explosive concentration exceeding 10 percent, which were reduced to comply with the DDESB certification and 5X certification for public disposal. The explosives contaminants left in place exceed preliminary remediation goals (PRG) and require remediation.

An explosive safety submission (ESS) was submitted to DDESB for NFA for MEC/ordnance and explosives sub-sites in Tract 19 (fuze destruction area), Tract 20 (fuze destruction area and ammonium nitrate burning ground) and Tract 21 (open burn/open detonation [OB/OD]).

Asbestos-containing material discovered during a geophysical survey of FY05 Load Lines 1 and 2 was excavated and disposed of as discarded military munitions (DMM) anomalies; 5X was certified for public disposal. Soil chemical characterization was completed and explosive-contaminated soils removed.

In FY06 soil chemical characterization and removal of explosives-contaminated soils was completed for Load Line 3. Explosive contaminated soil remediation of Load Lines 1-4 is complete and request for NFA is pending. The pilot test for groundwater remediation at the Decant Station is complete. The ESS for No Department of Defense Action Indicated (NDAI) using existing geophysical RI/FS data was not approved by the US Army Technical Center for Explosives Safety (USATECES) because the geophysical data was for environmental investigation (1995) and was not done in accordance with MMRP protocol. This will continue to delay clean transfer to the Hall County reuse committee designee. This site has been rolled into CAAP-010 as the costs for cleanup are to operate the groundwater treatment plant which is treating contaminated groundwater from this site. Please refer to CAAP-010.

### **CLEANUP/EXIT STRATEGY**

Groundwater injections will be followed by groundwater monitoring. Funding for this site is being tracked under CAAP-010.

# Site ID: CAAP-010 Site Name: OU1 GROUNDWATER



Parcel: NONE

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Explosives

Media of Concern: Groundwater

Phases	Start	End
PA	197901	198003
SI	197904	198410
RI/FS	199101	199405
RD	199405	199704
IRA	198404	199503
RA(C)	199706	199811
RA(O)	199812	204509

**RIP Date:** 199812 **RC Date:** 204509

### SITE DESCRIPTION

The five LAP facilities at CHAAP constituted the major set of buildings and center for operations at the site during munitions production years. Munitions production within the load lines at CHAAP required use and disposal of large amounts of water. Major operations where explosives wastewater was produced included: screening, melting and mixing, rod and pellet manufacturing, remelt and refill, and washing and laundry.

Physical screening operations were conducted as the first process for incorporating explosives (i.e., 2,4,6-TNT and RDX) into munitions. Explosives were received in flake form and screened and sifted for material handling purposes. Wastewater was generated in the operation by the ventilation systems which collected explosive dust generated by the screening operation and washed it from the air with Schneible units (wet scrubbers). The water from the Schneible units was run through settling tanks and recycled; however, excess wastewater was produced. Wastewater was also generated from periodic wash down of machinery and interior building surfaces. The wastewater was disposed of via interior building drains into a sack sump (concrete pit) that was equipped with a filter bag. The bag made of canvas-like material was designed to filter out the solid explosive particles. The wastewater was then transferred via open concrete channels into a circular earthen impoundment. The impoundment wall is masonry-lined with the bottom open to the sand and gravel strata. An overflow channel was routed from the impoundment to a leaching pit that was designed to handle any water that did not infiltrate into the bottom of the impoundment. This overflow occurred due to the limited filtering capacity of the sack sump to trap explosive particulates. Particles were periodically scraped from the bottom of both the earthen impoundments and leaching pits and ignited at the Burning Grounds (CAAP-005, OU5) located in the northwest section of CHAAP.

In 1988 during the Installation Restoration Incineration Program (IRIP), 58 impoundments were determined to have received explosives-contaminated wastewater. A determination was made to remove soil from the impoundments if concentrations were greater than 5 parts per million (ppm) for 2,4,6-TNT, 10 ppm for RDX, 15 ppm for 1,3,5-trinitrobenzene (TNB), and 0.5 ppm for 2,4-dinitrotoluene (DNT). Several guidelines, originally incorporated into the proposed excavation plan related to the distance between the water table and the impoundments bottom and the location of adjacent building foundations. Ongoing treatment and RA(O) at this site are projected to continue until 2044. Costs for CAAP-003 are included in this site as well. The pump and treat addresses the groundwater remedy for both OU1 and OU3, and associated estimates for CAAP-003 and CAAP-010 are combined under one memorandum for record (MFR).

During this activity, soil was removed from the bottoms of the impoundments until action levels were met at a depth of 6 feet or the excavations had reached a depth of 1 foot below the groundwater level, whichever occurred first. Additional guidelines specified that soil be removed laterally until the action levels were met, or until building foundations were threatened by operations. Due to the high water table conditions at the time of the scheduled excavations, the criteria regarding the depth of the soil removal were

# Site ID: CAAP-010 Site Name: OU1 GROUNDWATER

changed to require meeting action levels or until soil had been removed to a depth of 5 feet below the water-table surface, whichever occurred first. In spring 1988 soil was removed in 29 of the 58 impoundments to the point where action levels were met. In the other 29 impoundments, soil was removed to 5 feet below the water table. In these impoundments, concentrations of one or more of the explosive compounds were still above action levels. Action levels were achieved in all but two instances in the lateral direction.

In fall 1990, surface soil samples were collected. Analytical results showed high concentrations of 2,4,6- TNT [3,200 micrograms per gram (ug/g) and 6,000 ug/g] and elevated concentrations of lead (Pb) (175 ug/g) and chromium (Cr) (58.5 ug/g) in samples collected near Building 1L-10 in Load Line 1. Elevated concentrations of Cr (25.1 ug/g) and lead (135 ug/g) occurred in a sample taken southwest of the Building 1L-18 along the railroad tracks at the north end of this load line. RDX, nitrobenzene (NB), HMX and 1,3,5-TNB were detected at concentrations below 100 ug/g, but above certified reporting limits (CRL) in several other samples.

In the Phase I RI, 20 sites with surface soil containing 2,4,6-TNT at concentrations greater than 5 ug/g were identified in the LAP area based on field screening analytical results. The lateral extent of these hot spots ranged from approximately 40 to 380 feet. Three of the remaining cesspools have 2,4,6-TNT level contamination above 5 ug/g. The results also indicate that four non-explosive wastewater cesspools contained Cr and Pb above levels of concern. Isolated areas of petroleum hydrocarbons were detected ranging from 40 to 7,000 ug/g. In 1994 soil removal and off-site treatment of 5,000 tons of soil from 25 removal areas was carried out by the Army.

In the Phase II RI confirmation of the FY94 removal action was completed in June 1996. A more detailed background data collection was conducted to determine the elevation of metals in the LAP soils. In addition, work was carried out to determine the potential of contamination beneath the LAP structures. Samples from the November 1996 RI showed a minimal amount of contamination below the LAP structures and indicated complete removal of explosives from the soil in all but interim remedial action (IRA) Site 4 at Load Line 1 (1,400 ug/g).

In September 2001 the ROD amendment was signed. Explosive safety actions included a media day prior to a controlled burn of Load Lines 1, 2 and 3, and a tour of Load Line 4. Media representatives were given access to observe the controlled burn of Load Lines 1, 2 and 3. In 1998 the RA(O) phase began.

## **CLEANUP/EXIT STRATEGY**

RA(O), which includes the monitoring and application of groundwater amendments (on-site) to accelerate the removal of explosive contaminants, will continue to be performed.

# **IRP Site Closeout (No Further Action) Summary**

Site ID	Site Name	NFA Date	Documentation
CAAP-001A	PINK WATER DISP DP-01 (LP)	199603	ROD signed by USEPA 200109
CAAP-001AA	PINK WATER DISP DP-27 (CP)	199603	ROD signed by USEPA 200109
CAAP-001AB	PINK WATER DISP DP-28 (CP)	199603	ROD signed by USEPA 200109
CAAP-001AC	L LINE 3 PINK WATER DISP DP-29 (CP)(OU4)	199909	ROD signed by USEPA 200002
CAAP-001AD	PINK WATER DISP DP-30 (CP)	199503	ROD signed by USEPA 200109
CAAP-001AE	PINK WATER DISP DP-31 (CP)	199503	ROD signed by USEPA 200109
CAAP-001AF	L LINE 2 PINK WATER DISP DP-32 (CP)(OU4)	199909	ROD signed by USEPA 200002
CAAP-001AG	PINK WATER DISP DP-33 (CP)	199503	ROD signed by USEPA 200109
CAAP-001AH	PINK WATER DISP DP-34 (CP)	199503	ROD signed by USEPA 200109
CAAP-001AI	PINK WATER DISP DP-35 (CP)	199503	ROD signed by USEPA 200109
CAAP-001AJ	PINK WATER DISP DP-36 (CP)	199503	ROD signed by USEPA 200109
CAAP-001AK	PINK WATER DISP DP-37 (CP)	199503	ROD signed by USEPA 200109
CAAP-001AL	PINK WATER DISP DP-38 (CP)	199503	ROD signed by USEPA 200109
CAAP-001AM	PINK WATER DISP DP-39 (CP)	199503	ROD signed by USEPA 200109
CAAP-001AN	PINK WATER DISP DP-40 (CP)	199503	ROD signed by USEPA 200109
CAAP-001AO	PINK WATER DISP DP-41 (CP)	199503	ROD signed by USEPA 200109
CAAP-001AP	PINK WATER DISP DP-42 (CP)	199503	ROD signed by USEPA 200109
CAAP-001AQ	PINK WATER DISP DP-43 (CP)	199512	ROD signed by USEPA 200109
CAAP-001AR	PINK WATER DISP DP-44 (CP)	199503	ROD signed by USEPA 200109
CAAP-001AS	PINK WATER DISP DP-45 (CP)	199503	ROD signed by USEPA 200109
CAAP-001AT	PINK WATER DISP DP-46 (CP)	199503	ROD signed by USEPA 200109
CAAP-001AU	PINK WATER DISP DP-47 (CP)	199502	ROD signed by USEPA 200109
CAAP-001AV	PINK WATER DISP DP-48 (CP)	199503	ROD signed by USEPA 200109
CAAP-001B	PINK WATER DISP DP-02 (LP)	199503	ROD signed by USEPA 200109
CAAP-001C	PINK WATER DISP DP-03 (CP)	199503	ROD signed by USEPA 200109
CAAP-001D	L LINE 4 PINK WATER DISP DP-04 (LP)(OU4)	199909	ROD signed by USEPA 200002
CAAP-001E	L LINE 5 PINK WATER DSIP DP-05 (LP)(OU4)	199909	ROD signed by USEPA 200002
CAAP-001F	PINK WATER DISP DP-06 (CP)	199503	ROD signed by USEPA 200109
CAAP-001G	PINK WATER DISP DP-07 (CP)	199503	ROD signed by USEPA 200109
CAAP-001H	PINK WATER DISP DP-08 (LP)	199503	ROD signed by USEPA 200109
CAAP-001I	PINK WATER DISP DP-09 (LP)	199503	ROD signed by USEPA 200109
CAAP-001J	PINK WATER DISP DP-10 (CP)	199503	ROD signed by USEPA 200109
CAAP-001K	PINK WATER DISP DP-11 (LP)	199503	ROD signed by USEPA 200109
CAAP-001L	PINK WATER DISP DP-12 (LP)	199503	ROD signed by USEPA 200109
CAAP-001M	PINK WATER DISP DP-13 (CP)	199503	ROD signed by USEPA 200109
CAAP-001N	PINK WATER DISP DP-14 (LP)	199503	ROD signed by USEPA 200109
CAAP-001O	PINK WATER DISP DP-15 (LP)	199503	ROD signed by USEPA 200109

# **IRP Site Closeout (No Further Action) Summary**

Site ID	Site Name	NFA Date	Documentation
CAAP-001P	PINK WATER DISP DP-16 (CP)	199503	ROD signed by USEPA 200109
CAAP-001Q	PINK WATER DISP DP-17 (CP)	199503	ROD signed by USEPA 200109
CAAP-001R	PINK WATER DISP DP-18 (CP)	199503	ROD signed by USEPA 200109
CAAP-001S	PINK WATER DISP DP-19 (CP)	199503	ROD signed by USEPA 200109
CAAP-001T	PINK WATER DISP DP-20 (CP)	199503	ROD signed by USEPA 200109
CAAP-001U	PINK WATER DISP DP-21 (CP)	199503	ROD signed by USEPA 200109
CAAP-001V	PINK WATER DISP DP-22 (CP)	199503	ROD signed by USEPA 200109
CAAP-001W	PINK WATER DISP DP-23 (CP)	199503	ROD signed by USEPA 200109
CAAP-001X	PINK WATER DISP DP-24 (CP)	199503	ROD signed by USEPA 200109
CAAP-001Y	PINK WATER DISP DP-25 (CP)	199503	ROD signed by USEPA 200109
CAAP-001Z	PINK WATER DISP DP-26 (CP)	199503	ROD signed by USEPA 200109
CAAP-002A	L LINE 1 PINK WATER DISP DP-49 (CP)(OU4)	199909	ROD signed by USEPA 200002
CAAP-002B	PINK WATER DISP DP-50 (CP)	199503	ROD signed by USEPA 200109
CAAP-002C	PINK WATER DISP DP-51 (CP)	199503	ROD signed by USEPA 200109
CAAP-002D	PINK WATER DISP DP-52 (CP)	199503	ROD signed by USEPA 200109
CAAP-002E	PINK WATER DISP DP-53 (CP)	199503	ROD signed by USEPA 200109
CAAP-002F	PINK WATER DISP DP-54 (CP)	199503	ROD signed by USEPA 200109
CAAP-002G	PINK WATER DISP DP-55 (CP)	199503	ROD signed by USEPA 200109
CAAP-002H	LAUNDRY FAC PINK WATER DISP DP-56(OU4)	199909	ROD signed by USEPA 200002
CAAP-002I	PINK WATER DISP DP-57 (CP)	199503	ROD signed by USEPA 200109
CAAP-002J	PINK WATER DISP DP-58 (CP)	199503	ROD signed by USEPA 200109
CAAP-004	CLAY PIT DISPOSAL AREA(OU3-4)	200106	ROD signed by USEPA 200109
CAAP-005	DEMO AND BURNG GD(OU5)	200609	ER,A responsibilities transferred to MMRP for RI, MEC/MC removal, IRA, FS, PP, and ROD.
CAAP-006	SWWTP(OU2)	199809	ROD signed by USEPA 199809
CAAP-007	CISD SANITARY WWTF(OU2)	199809	ROD signed by USEPA 199809
CAAP-008	MOTOR POOL(OU3)	200909	ROD signed by USEPA 199809
CAAP-009	UNDERGROUND STORAGE TANKS(INSTALL. WIDE)	200512	ROD signed by USEPA 200002

Date of IRP Inception: 197901

#### **Past Phase Completion Milestones**

1980

PA

(CAAP-001A - PINK WATER DISP DP-01 (LP), CAAP-001AA - PINK WATER DISP DP-27 (CP), CAAP-001AB - PINK WATER DISP DP-28 (CP), CAAP-001AC - L LINE 3 PINK WATER DISP DP-29 (CP)(OU4), CAAP-001AD - PINK WATER DISP DP-30 (CP), CAAP-001AE - PINK WATER DISP DP-31 (CP), CAAP-001AF - L LINE 2 PINK WATER DISP DP-32 (CP)(OU4), CAAP-001AG - PINK WATER DISP DP-33 (CP), CAAP-001AH - PINK WATER DISP DP-34 (CP), CAAP-001AI - PINK WATER DISP DP-35 (CP), CAAP-001AJ - PINK WATER DISP DP-36 (CP), CAAP-001AK - PINK WATER DISP DP-37 (CP), CAAP-001AL - PINK WATER DISP DP-38 (CP), CAAP-001AM - PINK WATER DISP DP-39 (CP), CAAP-001AN - PINK WATER DISP DP-40 (CP), CAAP-001AO - PINK WATER DISP DP-41 (CP), CAAP-001AP - PINK WATER DISP DP-42 (CP), CAAP-001AQ - PINK WATER DISP DP-43 (CP), CAAP-001AR - PINK WATER DISP DP-44 (CP), CAAP-001AS - PINK WATER DISP DP-45 (CP), CAAP-001AT - PINK WATER DISP DP-46 (CP), CAAP-001AU - PINK WATER DISP DP-47 (CP), CAAP-001AV - PINK WATER DISP DP-48 (CP), CAAP-001B - PINK WATER DISP DP-02 (LP), CAAP-001C - PINK WATER DISP DP-03 (CP), CAAP-001D - L LINE 4 PINK WATER DISP DP-04 (LP)(OU4), CAAP-001E - L LINE 5 PINK WATER DSIP DP-05 (LP)(OU4), CAAP-001F - PINK WATER DISP DP-06 (CP), CAAP-001G - PINK WATER DISP DP-07 (CP), CAAP-001H - PINK WATER DISP DP-08 (LP), CAAP-001I - PINK WATER DISP DP-09 (LP), CAAP-001J - PINK WATER DISP DP-10 (CP), CAAP-001K - PINK WATER DISP DP-11 (LP), CAAP-001L -PINK WATER DISP DP-12 (LP), CAAP-001M - PINK WATER DISP DP-13 (CP), CAAP-001N - PINK WATER DISP DP-14 (LP), CAAP-001O - PINK WATER DISP DP-15 (LP), CAAP-001P - PINK WATER DISP DP-16 (CP), CAAP-001Q - PINK WATER DISP DP-17 (CP), CAAP-001R - PINK WATER DISP DP-18 (CP), CAAP-001S - PINK WATER DISP DP-19 (CP), CAAP-001T - PINK WATER DISP DP-20 (CP), CAAP-001U - PINK WATER DISP DP-21 (CP), CAAP-001V - PINK WATER DISP DP-22 (CP), CAAP-001W - PINK WATER DISP DP-23 (CP), CAAP-001X - PINK WATER DISP DP-24 (CP), CAAP-001Y - PINK WATER DISP DP-25 (CP), CAAP-001Z - PINK WATER DISP DP-26 (CP), CAAP-002A - L LINE 1 PINK WATER DISP DP-49 (CP)(OU4), CAAP-002B - PINK WATER DISP DP-50 (CP), CAAP-002C - PINK WATER DISP DP-51 (CP), CAAP-002D - PINK WATER DISP DP-52 (CP), CAAP-002E - PINK WATER DISP DP-53 (CP), CAAP-002F -PINK WATER DISP DP-54 (CP), CAAP-002G - PINK WATER DISP DP-55 (CP), CAAP-002H -LAUNDRY FAC PINK WATER DISP DP-56(OU4), CAAP-002I - PINK WATER DISP DP-57 (CP), CAAP-002J - PINK WATER DISP DP-58 (CP), CAAP-003 - NON ACTIVE DEMOLITION DEBRIS LF(OU3), CAAP-004 - CLAY PIT DISPOSAL AREA(OU3-4), CAAP-005 - DEMO AND BURNG GD(OU5), CAAP-006 - SWWTP(OU2), CAAP-007 - CISD SANITARY WWTF(OU2), CAAP-008 -MOTOR POOL(OU3), CAAP-009 - UNDERGROUND STORAGE TANKS(INSTALL. WIDE), CAAP-010 - OU1 GROUNDWATER)

1985

#### 1985

SI

(CAAP-001A - PINK WATER DISP DP-01 (LP), CAAP-001AA - PINK WATER DISP DP-27 (CP), CAAP-001AB - PINK WATER DISP DP-28 (CP), CAAP-001AC - L LINE 3 PINK WATER DISP DP-29 (CP)(OU4), CAAP-001AD - PINK WATER DISP DP-30 (CP), CAAP-001AE - PINK WATER DISP DP-31 (CP), CAAP-001AF - L LINE 2 PINK WATER DISP DP-32 (CP)(OU4), CAAP-001AG - PINK WATER DISP DP-33 (CP), CAAP-001AH - PINK WATER DISP DP-34 (CP), CAAP-001AI - PINK WATER DISP DP-35 (CP), CAAP-001AJ - PINK WATER DISP DP-36 (CP), CAAP-001AK - PINK WATER DISP DP-37 (CP), CAAP-001AL - PINK WATER DISP DP-38 (CP), CAAP-001AM - PINK WATER DISP DP-39 (CP), CAAP-001AN - PINK WATER DISP DP-40 (CP), CAAP-001AO - PINK WATER DISP DP-41 (CP), CAAP-001AP - PINK WATER DISP DP-42 (CP), CAAP-001AQ - PINK WATER DISP DP-43 (CP), CAAP-001AR - PINK WATER DISP DP-44 (CP), CAAP-001AS - PINK WATER DISP DP-45 (CP), CAAP-001AT - PINK WATER DISP DP-46 (CP), CAAP-001AU - PINK WATER DISP DP-47 (CP), CAAP-001AV - PINK WATER DISP DP-48 (CP), CAAP-001B - PINK WATER DISP DP-02 (LP), CAAP-001C - PINK WATER DISP DP-03 (CP), CAAP-001D - L LINE 4 PINK WATER DISP DP-04 (LP)(OU4), CAAP-001E - L LINE 5 PINK WATER DSIP DP-05 (LP)(OU4), CAAP-001F - PINK WATER DISP DP-06 (CP), CAAP-001G - PINK WATER DISP DP-07 (CP), CAAP-001H - PINK WATER DISP DP-08 (LP), CAAP-001I - PINK WATER DISP DP-09 (LP), CAAP-001J - PINK WATER DISP DP-10 (CP), CAAP-001K - PINK WATER DISP DP-11 (LP), CAAP-001L -PINK WATER DISP DP-12 (LP), CAAP-001M - PINK WATER DISP DP-13 (CP), CAAP-001N - PINK WATER DISP DP-14 (LP), CAAP-001O - PINK WATER DISP DP-15 (LP), CAAP-001P - PINK WATER DISP DP-16 (CP), CAAP-001Q - PINK WATER DISP DP-17 (CP), CAAP-001R - PINK WATER DISP DP-18 (CP), CAAP-001S - PINK WATER DISP DP-19 (CP), CAAP-001T - PINK WATER DISP DP-20 (CP), CAAP-001U - PINK WATER DISP DP-21 (CP), CAAP-001V - PINK WATER DISP DP-22 (CP), CAAP-001W - PINK WATER DISP DP-23 (CP), CAAP-001X - PINK WATER DISP DP-24 (CP), CAAP-001Y - PINK WATER DISP DP-25 (CP), CAAP-001Z - PINK WATER DISP DP-26 (CP), CAAP-002A - L LINE 1 PINK WATER DISP DP-49 (CP)(OU4), CAAP-002B - PINK WATER DISP DP-50 (CP), CAAP-002C - PINK WATER DISP DP-51 (CP), CAAP-002D - PINK WATER DISP DP-52 (CP), CAAP-002E - PINK WATER DISP DP-53 (CP), CAAP-002F -PINK WATER DISP DP-54 (CP), CAAP-002G - PINK WATER DISP DP-55 (CP), CAAP-002H -LAUNDRY FAC PINK WATER DISP DP-56(OU4), CAAP-002I - PINK WATER DISP DP-57 (CP), CAAP-002J - PINK WATER DISP DP-58 (CP), CAAP-010 - OU1 GROUNDWATER)

1989

SI (CAAP-008 - MOTOR POOL(OU3), CAAP-009 - UNDERGROUND STORAGE TANKS(INSTALL.

WIDE))

**1991** SI

(CAAP-003 - NON ACTIVE DEMOLITION DEBRIS LF(OU3), CAAP-004 - CLAY PIT DISPOSAL

AREA(OU3-4), CAAP-005 - DEMO AND BURNG GD(OU5), CAAP-006 - SWWTP(OU2), CAAP-007 -

CISD SANITARY WWTF(OU2))

1994

RI/FS (CAAP-010 - OU1 GROUNDWATER)

IRA (CAAP-009 - UNDERGROUND STORAGE TANKS(INSTALL. WIDE))

1995

1995

IRA

(CAAP-001AC - L LINE 3 PINK WATER DISP DP-29 (CP)(OU4), CAAP-001AD - PINK WATER DISP DP-30 (CP), CAAP-001AE - PINK WATER DISP DP-31 (CP), CAAP-001AF - L LINE 2 PINK WATER DISP DP-32 (CP)(OU4), CAAP-001AG - PINK WATER DISP DP-33 (CP), CAAP-001AH - PINK WATER DISP DP-34 (CP), CAAP-001AI - PINK WATER DISP DP-35 (CP), CAAP-001AJ - PINK WATER DISP DP-36 (CP), CAAP-001AK - PINK WATER DISP DP-37 (CP), CAAP-001AL - PINK WATER DISP DP-38 (CP), CAAP-001AM - PINK WATER DISP DP-39 (CP), CAAP-001AN - PINK WATER DISP DP-40 (CP), CAAP-001AO - PINK WATER DISP DP-41 (CP), CAAP-001AP - PINK WATER DISP DP-42 (CP), CAAP-001AR - PINK WATER DISP DP-44 (CP), CAAP-001AS - PINK WATER DISP DP-45 (CP), CAAP-001AT - PINK WATER DISP DP-46 (CP), CAAP-001AU - PINK WATER DISP DP-47 (CP), CAAP-001AV - PINK WATER DISP DP-48 (CP), CAAP-001B - PINK WATER DISP DP-02 (LP), CAAP-001C - PINK WATER DISP DP-03 (CP), CAAP-001D - L LINE 4 PINK WATER DISP DP-04 (LP)(OU4), CAAP-001E - L LINE 5 PINK WATER DSIP DP-05 (LP)(OU4), CAAP-001F - PINK WATER DISP DP-06 (CP), CAAP-001G - PINK WATER DISP DP-07 (CP), CAAP-001H - PINK WATER DISP DP-08 (LP), CAAP-001I - PINK WATER DISP DP-09 (LP), CAAP-001J - PINK WATER DISP DP-10 (CP), CAAP-001K - PINK WATER DISP DP-11 (LP), CAAP-001L -PINK WATER DISP DP-12 (LP), CAAP-001M - PINK WATER DISP DP-13 (CP), CAAP-001N - PINK WATER DISP DP-14 (LP), CAAP-001O - PINK WATER DISP DP-15 (LP), CAAP-001P - PINK WATER DISP DP-16 (CP), CAAP-001Q - PINK WATER DISP DP-17 (CP), CAAP-001R - PINK WATER DISP DP-18 (CP), CAAP-001S - PINK WATER DISP DP-19 (CP), CAAP-001T - PINK WATER DISP DP-20 (CP), CAAP-001U - PINK WATER DISP DP-21 (CP), CAAP-001V - PINK WATER DISP DP-22 (CP), CAAP-001W - PINK WATER DISP DP-23 (CP), CAAP-001X - PINK WATER DISP DP-24 (CP), CAAP-001Y - PINK WATER DISP DP-25 (CP), CAAP-001Z - PINK WATER DISP DP-26 (CP), CAAP-002A - L LINE 1 PINK WATER DISP DP-49 (CP)(OU4), CAAP-002B - PINK WATER DISP DP-50 (CP), CAAP-002C - PINK WATER DISP DP-51 (CP), CAAP-002D - PINK WATER DISP DP-52 (CP), CAAP-002E - PINK WATER DISP DP-53 (CP), CAAP-002F -PINK WATER DISP DP-54 (CP), CAAP-002G - PINK WATER DISP DP-55 (CP), CAAP-002H -LAUNDRY FAC PINK WATER DISP DP-56(OU4), CAAP-002I - PINK WATER DISP DP-57 (CP), CAAP-002J - PINK WATER DISP DP-58 (CP), CAAP-004 - CLAY PIT DISPOSAL AREA(OU3-4), CAAP-010 - OU1 GROUNDWATER)

1996

IRA

(CAAP-001A - PINK WATER DISP DP-01 (LP), CAAP-001AA - PINK WATER DISP DP-27 (CP), CAAP-001AB - PINK WATER DISP DP-28 (CP), CAAP-001AQ - PINK WATER DISP DP-43 (CP))

**1997** RD

(CAAP-010 - OU1 GROUNDWATER)

1998

RI/FS

(CAAP-001AC - L LINE 3 PINK WATER DISP DP-29 (CP)(OU4), CAAP-001AF - L LINE 2 PINK WATER DISP DP-32 (CP)(OU4), CAAP-001D - L LINE 4 PINK WATER DISP DP-04 (LP)(OU4), CAAP-001E - L LINE 5 PINK WATER DSIP DP-05 (LP)(OU4), CAAP-002A - L LINE 1 PINK WATER DISP DP-49 (CP)(OU4), CAAP-002H - LAUNDRY FAC PINK WATER DISP DP-56(OU4), CAAP-003 - NON ACTIVE DEMOLITION DEBRIS LF(OU3), CAAP-004 - CLAY PIT DISPOSAL AREA(OU3-4), CAAP-006 - SWWTP(OU2), CAAP-007 - CISD SANITARY WWTF(OU2))

1999

RA(C) (CAAP-010 - OU1 GROUNDWATER)

LTM

(CAAP-001AC - L LINE 3 PINK WATER DISP DP-29 (CP)(OU4), CAAP-001AF - L LINE 2 PINK WATER DISP DP-32 (CP)(OU4), CAAP-001D - L LINE 4 PINK WATER DISP DP-04 (LP)(OU4), CAAP-001E - L LINE 5 PINK WATER DSIP DP-05 (LP)(OU4), CAAP-002A - L LINE 1 PINK WATER DISP DP-49 (CP)(OU4), CAAP-002H - LAUNDRY FAC PINK WATER DISP DP-56(OU4))

2000

RD

(CAAP-003 - NON ACTIVE DEMOLITION DEBRIS LF(OU3), CAAP-004 - CLAY PIT DISPOSAL AREA(OU3-4))

## **IRP Schedule**

2000

IRA (CAAP-005 - DEMO AND BURNG GD(OU5), CAAP-008 - MOTOR POOL(OU3))

2001

RA(C) (CAAP-003 - NON ACTIVE DEMOLITION DEBRIS LF(OU3), CAAP-004 - CLAY PIT DISPOSAL

AREA(OU3-4))

RI/FS (CAAP-008 - MOTOR POOL(OU3))

2003

RD (CAAP-009 - UNDERGROUND STORAGE TANKS(INSTALL. WIDE))

2004

RA(C) (CAAP-009 - UNDERGROUND STORAGE TANKS(INSTALL. WIDE))

2006

LTM (CAAP-005 - DEMO AND BURNG GD(OU5), CAAP-009 - UNDERGROUND STORAGE

TANKS(INSTALL. WIDE))

2009

LTM (CAAP-008 - MOTOR POOL(OU3))

**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: 200403

Schedule for Next Five-Year Review: 2015

Estimated Completion Date of IRP at Installation (including LTM phase): 204509

## **CORNHUSKER ARMY AMMUNITION PLANT IRP Schedule**

							= phase underway		
SIT	TE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
CAA	P-003	NON ACTIVE DEMOLITION DEBRIS	RA(O)						
		LF(OU3)							
SIT	TE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
CAA	P-010	OU1 GROUNDWATER	RA(O)						
SIT	TE ID	LF(OU3) SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	F

## **CORNHUSKER ARMY AMMUNITION PLANT**

**Non-BRAC Excess Military Munitions Response Program** 

## **MMRP Summary**

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 1/0

## Installation Site Types with Future and/or Underway Phases

Open Burn

(CHAAP-005-R-01)

#### **Most Widespread Contaminants of Concern**

Explosives, Metals, 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 Cost

N/A

#### **Duration of MMRP**

Year of MMRP Inception: 200201

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201809/201809

Date of MMRP completion including Long Term Management (LTM): 201809

## **MMRP Contamination Assessment**

#### **Contamination Assessment Overview**

In May 2003 the Phase III Army Range Inventory was completed at CHAAP. One site was identified as eligible for the MMRP, (CHAAP-005-R-01) formerly known as site CAAP-05. The Phase III inventory serves as a PA under CERCLA.

In October 2004 a site inspection (SI) was initiated and was completed in October 2006. The site is currently operating under an EE/CA. Upon removal of the risk, the RI program will be initiated.

### **Cleanup Exit Strategy**

For site CHAAP-005-R-01, removal of the MEC, DMM, and MC through an IRA will be conducted prior to the RI/FS. This was due to the high volume of ordinance scattered above ground throughout the site. The site was deemed too hazardous to wait for the completion of the RI/FS. The IRA consists of remote excavation and sifting to a depth of native soil. No additional groundwater work is proposed for the site. An EE/CA and action memorandum were prepared and approved prior to the IRA. An RI/FS, PP and a ROD will be prepared after completion of the IRA. An NFA ROD is anticipated for the site.

## **MMRP Previous Studies**

	Title	Author	Date
2003			
	US Army Closed Transferring and Transferred Range/Site Inventory for Cornhusker Army Ammunition Plant, Nebraska	Engineering- Environmental Management, Inc	OCT-2003
2005			
	Military Munitions Response Program (MMRP) Limited Site Inspection, Cornhusker Army Ammunition Plant, Grand Island Nebraska	Engineering- Environmental Management, Inc.	MAR-2005
2006			
	Draft Military Munitions Response Program Site Inspection for Cornhusker Army Ammunition Plant, Nebraska	Engineering- Environmental Management, Inc.	APR-2006
2009			
	Explosive Safety Submission - Removal of Munitions and Explosives of Concern (MEC) at the Demolition and Burning Grounds (DBG) at CHAAP	PIKA International	DEC-2009
2010		I .	
	Final Explosives Safety Submission, Removal of Munitions and Explosives of Concern at OBOD	PIKA International	FEB-2010
	Final Work Plan - Removal of Munitions and Explosives of Concern at Demolition and Burning Grounds at CHAAP	PIKA International	FEB-2010
	Final Quality Assurance Surveillance Plan Removal of Munitions and Explosives of Concern at Demolition and Burning Grounds at CHAAP	PIKA International	FEB-2010
	Final Project Management Plan - Removal of Munitions and Explosives of Concern at Demolition and Burning Grounds at CHAAP	PIKA International	FEB-2010
	Final Project Management Plan, Removal of Munitions and Explosives of Concern at OBOD	PIKA International	APR-2010
2012			,
	Final Explosives Site Plan, SI Former Burning Ground	PIKA	APR-2012
	Final Explosives Safety Submission Plan, Burning Ground	PIKA	MAY-2012
	Final Explosvie Safety Work Plan, SI Former Burning Ground	PIKA	OCT-2012

## **CORNHUSKER ARMY AMMUNITION PLANT**

Non-BRAC Excess

Military Munitions Response Program

Site Descriptions

# Site ID: CHAAP-005-R-01 Site Name: Demolition and Burning Grounds



Parcel: NONE

Regulatory Driver: CERCLA

MRSPP Score: 04

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

Media of Concern: Groundwater, Soil

<u>Phases</u>	Start	<u>End</u>
PA	200201	200305
SI	200410	200610
RI/FS	200607	201809
IRA	200907	201510

**RIP Date:** N/A **RC Date:** 201809

## SITE DESCRIPTION

The Demolition and Burning Grounds site (CHAAP-005-R-01) is located in the northwest corner of the installation and covers an area of approximately 22 acres. It is surrounded by chain-link fence (restricted zone) and a locked gate. A small area, known as IRA Site 1, is located to the west and outside of the restricted zone fence. The exclusion zone area consisted of a "T" shaped area with a separate fence inside the restricted zone. Inside the exclusion zone there were the remains of two burning pads used for detonation and burning explosives. Other areas within the restricted zone include the following: a drainage ditch area; a stressed vegetation area near the northeast corner of the OB/OD area; a metal flashing area used to burn explosives contaminated machinery, equipment, scrap metal, pipe, and bomb casings; and an ammonium nitrate/aluminum powder burning area that may have extended 100 to 200 feet west (outside) of the restricted zone.

Dispersion Area, residue from explosives burning in the OB/OD area were collected and tested, and if the material was certified to contain less than one percent residue, it was dispersed in this area. Types of MEC, DMM, and MC observed in the OB/OD include aluminum munitions scrap, fuse components type 404A1, plastic explosive waste, micro-gravel mines, and other MEC, plus significant amounts of MC (tritonals and lead azide).

From 1991 through 2000 investigations were conducted and completed under CAAP-005. These investigations included an environmental assessment in 1991, a site conceptual design study in 1993, and an RI in 1995. The investigations included the collection of surface and subsurface soil and groundwater samples. As part of the 1991 environmental assessment and 1993 site conceptual design study, geophysical surveys (electro-magnetic and ground penetrating radar) were also completed to help screen the area for contamination.

In 1967 several attempts were made to detonate canisters and drums filled with micro-gravel mines within the southern part of the exclusion zone. Apparently, these canisters were filled with Freon 113 to desensitize the lead azide contained in the micro-gravel mines. Any scattered debris from these failed detonation attempts was saturated with Freon 113, transported back to the burning pads, and re-detonated. As a result of this activity, groundwater in the area contains Freon, but levels below the cleanup criteria. In 2000 groundwater sampling at several monitoring wells in the area was initiated to monitor for Freon. In 1994 an IRA was completed which included the excavation of explosives in the soil within IRA Site 1.

From 1999 to 2002, a munitions response was performed by the Army Industrial Operations Command. Grids measuring 100 feet by 100 feet were surveyed within the exclusion zone, and remote excavation and sifting was used to clear the grids of munitions. Several of the grids were cleared only by locating anomalies and excavating them, while other grids were excavated entirely to a depth of 4 feet.

In 2002, under the MMRP, a site inventory was completed for CHAAP which identified the Demolition and Burning Grounds as a munitions response site (MRS). In May 2004, the environmental restoration, Army (ER,A) responsibilities for IRP CAAP-005 were transferred to MMRP (now CHAAP-005-R-01).

# Site ID: CHAAP-005-R-01 Site Name: Demolition and Burning Grounds

In March 2005 limited soil samples were collected at the MRS as part of the SI phase within the MMRP. In April 2006 a draft SI report was issued. In October 2006 the SI report, which recommended further investigation and action to address the MEC, DMM, and MC at the site, was finalized.

In February 2007 a draft EE/CA report was prepared and was finalized in 2012. A performance-based acquisition for MEC removal was prepared in May 2009 and awarded in early July 2009. A new contract for site completion to native soil was awarded in FY13. Removal action will continue until 2016, and the IRA will be completed in 2018. Due to safety concerns limited work can be conducted under CERCLA until after the removal action.

## **CLEANUP/EXIT STRATEGY**

The Central Platte Natural Resource District (CPNRD) has acquired adjoining tracks of land from the Army and has expressed interest in Track 19C. The CPNRD is currently completing a final design for a Flood Control Project within the area. Prior to their acquisition of Track 19C, the CPNRD has required that the site be cleared of MEC in order to construct a storm detention cell. Removal of the MEC, DMM, and MC through an IRA is being conducted. The IRA consists of remote excavation and sifting to a depth of undisturbed soil. A final EE/CA was signed. The action memorandum is complete. An RI/FS and a ROD will be required after the completion of the IRA. An NFA ROD is anticipated for the site. A new contract to complete excavation and sifting of the remaining grids was awarded in FY13. Fieldwork will continue through 2015.

## MMRP Site Closeout (No Further Action) Summary

Site ID Site Name NFA Date Documentation

There are no NFA sites

## **MMRP Schedule**

Date of MMRP Inception 200201

**Past Phase Completion Milestones** 

2003

PA (CHAAP-005-R-01 - Demolition and Burning Grounds)

2007

SI (CHAAP-005-R-01 - Demolition and Burning Grounds)

**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:

Schedule for Next Five-Year Review: 2015

Estimated Completion Date of MMRP at Installation (including LTM phase): 201809

## **CORNHUSKER ARMY AMMUNITION PLANT MMRP Schedule**

= phase underway

						P.10.0		~,
SITE ID	SITE NAME	PHASE	FY16	FY17	FY18	FY19	FY20	FY21+
CHAAP-005-R-0	Demolition and Burning Grounds	RI/FS						
		IRA						

## **Community Involvement**

Technical Review Committee (TRC): None

Community Involvement Plan (Date Published): 199504

Restoration Advisory Board (RAB): No

Reason Not Established: The community has expressed no sufficient, sustained interest in a RAB.

Community Interest Solicited on: 200903

#### **Efforts Taken to Determine Interest**

In spring 1995, Headquarters (HQ), IOC and the USAEC conducted community interviews to determine interest in a RAB, and on April 19, 1995 the initial RAB orientation session was held at Grand Island City Hall. News releases were printed in the newspaper and announced on TV and radio. Fact sheets were printed and distributed in the community.

#### Results

Less than a dozen citizens attended the initial meeting along with an equal number of government personnel. Many of the citizens were interested in contracts and doing business with the Army.

In September 2001 a public meeting was held for comment concerning the OU1 ROD amendment. No citizens attended.

Attendance was poor (as few as three citizens) at follow-on RAB meetings in 1998 and 1997 with very little media interest

### **Follow-up Procedures**

Due to the limited amount of local interest, the installation does not plan on pursuing a RAB and the technical review committee was discontinued due to lack of public attendance at meetings.

Public availability sessions will be held for the remaining FS, PP, and ROD signing. Public affairs statements are issued after significant events. Public notice of annual LTM sampling dates and results are issued by the news media.

#### **Additional Community Involvement Information**

CHAAP, regulators, and advisory members of the reuse committee work together on decisions; the public has given their representation to the CPNRD for groundwater issues. Public notification was made of CHAAP transfer to USACE.

Explosive safety actions included a media day prior to a controlled burn of Load Lines 1, 2 and 3, and a tour of Load Line 4. Media were given access to observe the controlled burn of Load Lines 1, 2 and 3.

A public notice was posted in the local newspaper in March 2009 soliciting comments on the EE/CA. In April 2009 a public notice was posted in the local newspaper soliciting comments on the five-year review. The next public notice will be posted when CHAAP enters the RI/FS phase.

### Administrative Record is located at

The AR was moved from the CHAAP office to the Omaha USACE in September 2011.

USACE, Omaha District 1616 Capitol Avenue Omaha, NE 68102 Phone: 402-995-2753

#### Information Repository is located at

The information repository is located at the Grand Island Public Library.

## **Community Involvement**

Grand Island Public Library 211 North Washington Street Grand Island, NE 68801 Phone: 308-385-5336

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

TAPP Title: N/A

Potential TAPP: N/A