

PUEBLO CHEMICAL DEPOT

Army Cleanup Program

Installation Action Plan Final

June 2024

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STATEMENT OF PURPOSE

The Installation Action Plan (IAP) provides evidence that the Army is firmly committed to expeditious identification and cleanup of environmental contamination, and that the installation has a credible, organized program to carry out that commitment. The IAP provides an outline of the total multi-year environmental cleanup program for each site with ongoing or future planned restoration activity and includes the (1) environmental restoration requirements, (2) the rationale for the selected technical approach, and (3) foundation to develop corresponding financial needs for each cleanup site.

INSTALLATION OVERVIEW

Installation Name: PUEBLO CHEMICAL DEPOT

Installation City: AVONDALE

Installation County: PUEBLO

Installation State: CO

Regulatory Participation - Federal: US ENVIRONMENTAL PROTECTION AGENCY (USEPA), REGION VIII,
FEDERAL FACILITIES BRANCH

Regulatory Participation - State: Colorado Department of Public Health and Environment (CDPHE)

ACRONYMS

Acronym	Definition
AGC	Advanced Geophysical Classification
AOPI	Area of Potential Interest
BLDG	Building
BRAC	Base Realignment and Closure
CC	Compliance-Related Cleanup
CDPHE	Colorado Department of Public Health
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CMI(C)	Corrective Measures Implementation (Construction)
CMI(O)	Corrective Measures Implementation (Operations)
CMS	Corrective Measures Study
CRL	Cleanup Restoration & Liabilities
CS	Confirmation Sampling
DCS	Deputy Chief of Staff
DES	Design
DGM	Digital Geophysical Mapping
ENV	Environmental
FS	Feasibility Study
FYR	Five-Year Review
HE	High Explosive
HEDP	High-Explosive, Dual-Purpose
IAP	Installation Action Plan
ID	Identification
IM	Interim Measure
in	inch
IR	Installation Restoration
IRA	Interim Remedial Action
LTM	Long-Term Management
LUC	Land Use Control
MEC	Munitions and Explosives of Concern
mm	millimeter
MR	Munitions Response
MRSPP	Munitions Response Site Prioritization Protocol
NPL	National Priorities List
PA	Preliminary Assessment
PCD	Pueblo Chemical Depot
PFAS	Per- and Polyfluoroalkyl Substances

Acronym	Definition
ppm	parts per million
PR	Periodic Review
RAB	Restoration Advisory Board
RA(C)	Remedial Action (Construction)
RA(O)	Remedial Action (Operations)
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RIP	Remedy-In-Place
RRSE	Relative Risk Site Evaluation
SC	Site Closeout
SI	Site Inspection
SVOC	Semi-Volatile Organic Compound
SWMU	Solid Waste Management Unit
TAPP	Technical Assistance for Public Participation
USACE	US Army Corps of Engineers
USEPA	US Environmental Protection Agency

PHASE TRANSLATION TABLE

CERCLA Phase	RCRA Phase	RCRA UST Phase
Preliminary Assessment (PA)	RCRA Facility Assessment (RFA)	Initial Site Characterization (ISC)
Site Inspection (SI)	Confirmation Sampling (CS)	Investigation (INV)
Remedial Investigation/ Feasibility Study (RI/FS)	RCRA Facility Investigation/Corrective Measures Study (RFI/CMS)	Corrective Action Plan (CAP)
Remedial Design (RD)	Design (DES)	Design (DES)
Interim Remedial Action (IRA)	Interim Measure (IM)	Interim Remedial Action (IRA)
Remedial Action (Construction) (RA(C))	Corrective Measures Implementation (Construction) (CMI(C))	Implementation (Construction) (IMP(C))
Remedial Action (Operations) (RA(O))	Corrective Measures Implementation (Operations) (CMI(O))	Implementation (Operations) (IMP(O))
Long-Term Management (LTM)	Long-Term Management (LTM)	Long-Term Management (LTM)

PROGRAM SUMMARY

Number of Open Sites with Response Complete/Total Open IR Sites: 0/0

Number of Open Sites with Response Complete/Total Open MR Sites: 0/1

Number of Open Sites with Response Complete/Total Open CC Sites: 0/0

SITE-LEVEL INFORMATION

08505.1070_PUADA-003-R-01_EAST BURN AREA 1

Env Site ID: PUADA-003-R-01

Cleanup Site: EAST BURN AREA 1

Alias: SWMU 4

Regulatory Driver: RCRA-C

RIP Date: 9/28/2027

RC Date: 9/28/2027

RC Reason: Not assigned

SC Date: 9/30/2056

Program: ENV Restoration, Army

Subprogram: MR

NPL Status: No

Hazardous Ranking Score: 0

RRSE: N/A

MRSPP: 4

Phase	Start	End
RFA:	2/15/1988	8/15/1988
CS:	12/15/1988	10/15/1994
RFI/CMS:	12/15/1988	1/13/2022
DES:	1/13/2022	8/1/2023
IRA:	--	--
CMI(C):	8/2/2023	9/28/2027
CMI(O):	--	--
LTM:	9/29/2027	9/30/2056

Site Narrative: The East Burn Area No. 1 (Solid Waste Management Unit (SWMU) 4) formerly PUADA-003-R-01) is located in the east-central portion of PCD on property that is not currently excess and is approximately 429 acres (acreage increased due to step-out investigation during Corrective Measures Study (CMS)). SWMU 4 lies within a larger area known as the East Burn Area comprising approximately 1,000 acres and encompassing SWMUs 32 and 33. These three SWMUs have often been investigated as one area. The East Burn Area No. 1 was used for demilitarization activities from 1946 to 1953. Aerial photographs depict several overlapping burn sites including scattered trenches within SWMU 4. This site was included in BRAC 1988 but the cleanup responsibility for this site transferred to the Army active program as of October 1, 2014. Metallic scrap, small-caliber munitions jackets, and other items such as wooden boxes were visible at the East Burn Area during site visits in the 1980s. Media of concern at the East Burn Area No. 1 are soil, surface water, and groundwater. The SWMU 4 RCRA Facility Investigation (RFI) was submitted to Colorado Department of Public Health and Environment (CDPHE) in October 1994. A Supplemental RFI report was approved by CDPHE in December 2015. The primary hazardous soil contaminants are Semi-volatile Organic Compounds (SVOC) metals and explosives. Historical high concentrations detected in the soil include 246- Trinitrotoluene at 6,600 ppm, antimony at 11,100 ppm, and lead at 166,000 ppm. Contamination was associated with features such as trenches, pits, and burn areas related to historic demilitarization. A US Army Corps of Engineers (USACE) contractor performed one-foot Munitions and Explosives of Concern (MEC) clearance at this site in the late 1990s. However, the work was not properly verified and the clearance depths were determined to be insufficient. A MEC RFI consisting of surface clearance and digital geophysical mapping (DGM) was completed in FY18. A MEC Supplemental RFI report was approved in August 2019. A Draft Final Corrective Measure Study (CMS) was conducted in 2020. The CMS work included investigation of step-out grids on the southwest boundary of SWMU 4, interrogation of approximately 12,000 targets of interest, and work to determine the depths of potential burn pits and trenches identified in the MEC RFI. Based on the step-out investigation the CMS recommended the SWMU 4 boundary be expanded by 10 acres on its southwestern boundary. The CMS identified that approximately 25 acres of the saturated response areas

were shallow/near surface debris between 0 to 2 feet. The total area identified as burn pits and trenches was one acre and the pits and trenches ranged in depth from 2 feet to 6.5 feet deep. A CMS report was completed in May 2021 and submitted to CDPHE in June 2021. The CMS was approved by CDPHE in January 2021. Based on the summary of site history and investigations, MEC items potentially present at SWMU 4 are suspected to include - M10/ M104/ M401/ M605/M72/M66 fuzes, 20 millimeter (mm) projectiles, 37mm projectiles, 40mm M433 High-Explosive Dual-Purpose (HEDP) grenades, 40mm projectiles (Bofors), 40mm practice grenades, 57mm projectiles, 75mm High Explosive (HE) projectile (T38), 90mm projectiles, 105mm HE M26 projectiles, 105mm projectiles, M60 burster 2.36 inch (in) rocket motors, 2.36in rocket warheads, 2.36in white phosphorous warheads (M10), 2.36in rocket burster tubes, 16in naval rounds M88 bombs, 500lb Composition B bombs, M1 ignitors, M1 propellant grains, M6/M2A1 landmine boosters, M1B1A2 percussion primers, M1A2 spotting charges, M14 primer detonators, rifle grenades, and bulk explosives.

Cleanup/Exit Strategy - Cleanup strategy for the Corrective Measures Implementation (Construction) (CMI(C)) phase includes subsurface MEC removal and soil excavation in accordance with the preferred May 2021 CMS Alternative Number 3- Subsurface Removal with Advanced Geophysical Classification (AGC). The alternative includes all required planning and project completion reports. The Long-Term Management (LTM) phase will include USACE oversight and land use controls (LUCs) based on state of Colorado requirement for LUCs for the planned cleanup to industrial reuse standards. The LUCs will consist of annual letter reports as specified in the RCRA permit. Periodic reviews will also be required per Army policy when they are not otherwise required by the regulatory authority. LTM will continue indefinitely because cleanup will be completed to industrial levels.

SITE SUMMARY

SITE CLOSEOUT SUMMARY

CRL ID	Site Name	Site Closeout Date
08505.1084	PUADA-082_SURVEILLANCE TEST RANGE	10/31/1994
08505.1087	PUADA-083_PFAS	10/1/2022
08505.1076	PUADA-009-R-01_EAST CHEMICAL BURIAL GROU	8/1/2020

COMMUNITY INVOLVEMENT

Community Involvement Plan (Date Last Reviewed):	3/15/2001
Technical Review Committee Establishment Date:	9/15/1993
Restoration Advisory Board (RAB) Establishment Date:	10/15/1994
RAB Adjournment Date:	N/A
RAB Adjournment Reason:	N/A
Reasons for Not Establishing RAB:	N/A
RAB Date of Solicitation from Community:	N/A
RAB Results of Solicitation:	N/A
Current Technical Assistance for Public Participation (TAPP):	N/A
TAPP Title:	N/A
Potential TAPP:	N/A
Administrative Record Location:	Pueblo Chemical Depot Environmental Management Office 45825 Highway 96 East, Pueblo CO 81006
Information Repository Location:	Robert Hoag Rawlings Public Library 100 East Abriendo, Pueblo CO 81004

FIVE-YEAR / PERIODIC REVIEW SUMMARY

Status	Review Type	Start Date	End Date	Plans Narrative	Actions Narrative	Results Narrative
Completed	PR	N/A	N/A	N/A	N/A	N/A
Planned	PR	9/29/2031	9/29/2032	N/A	N/A	N/A