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PROGRAM MANAGER FOR ROCKY MOUNTAIN ARSENAL

— COMMITTED TO PROTECTION OF THE ENVIRONMENT —

FINAL

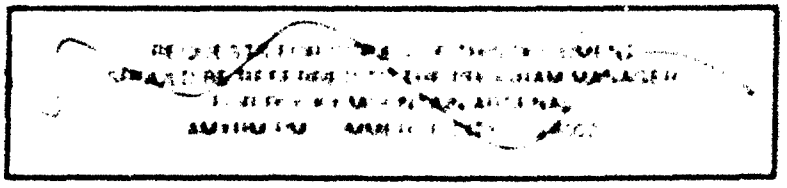
SUMMARY OF OPERATOR KNOWLEDGE OF ROCKY MOUNTAIN ARSENAL STRUCTURES

VERSION 3.2

July 1993
CONTRACT NO DAAA05-92-C-0015

Prepared By

AGEISS ENVIRONMENTAL, INC.



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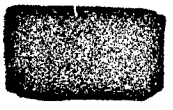
TECHNICAL SUPPORT FOR ROCKY MOUNTAIN ARSENAL



FINAL

SUMMARY OF OPERATOR KNOWLEDGE OF ROCKY MOUNTAIN ARSENAL STRUCTURES

VERSION 3.2

July 1993
CONTRACT NO DAAA05-92-C-0015

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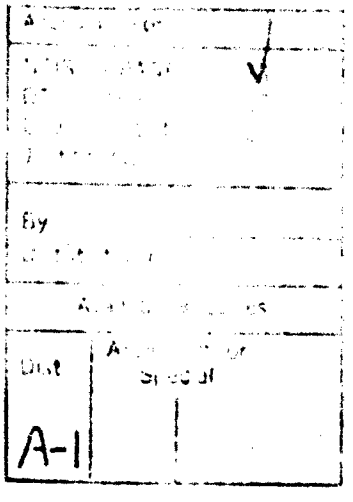


Prepared By:

AGEISS ENVIRONMENTAL, INC.

Prepared For:

U.S. ARMY PROGRAM MANAGER FOR ROCKY MOUNTAIN ARSENAL

TABLE OF CONTENTS

LIST OF ABBREVIATIONS/ACRONYMS

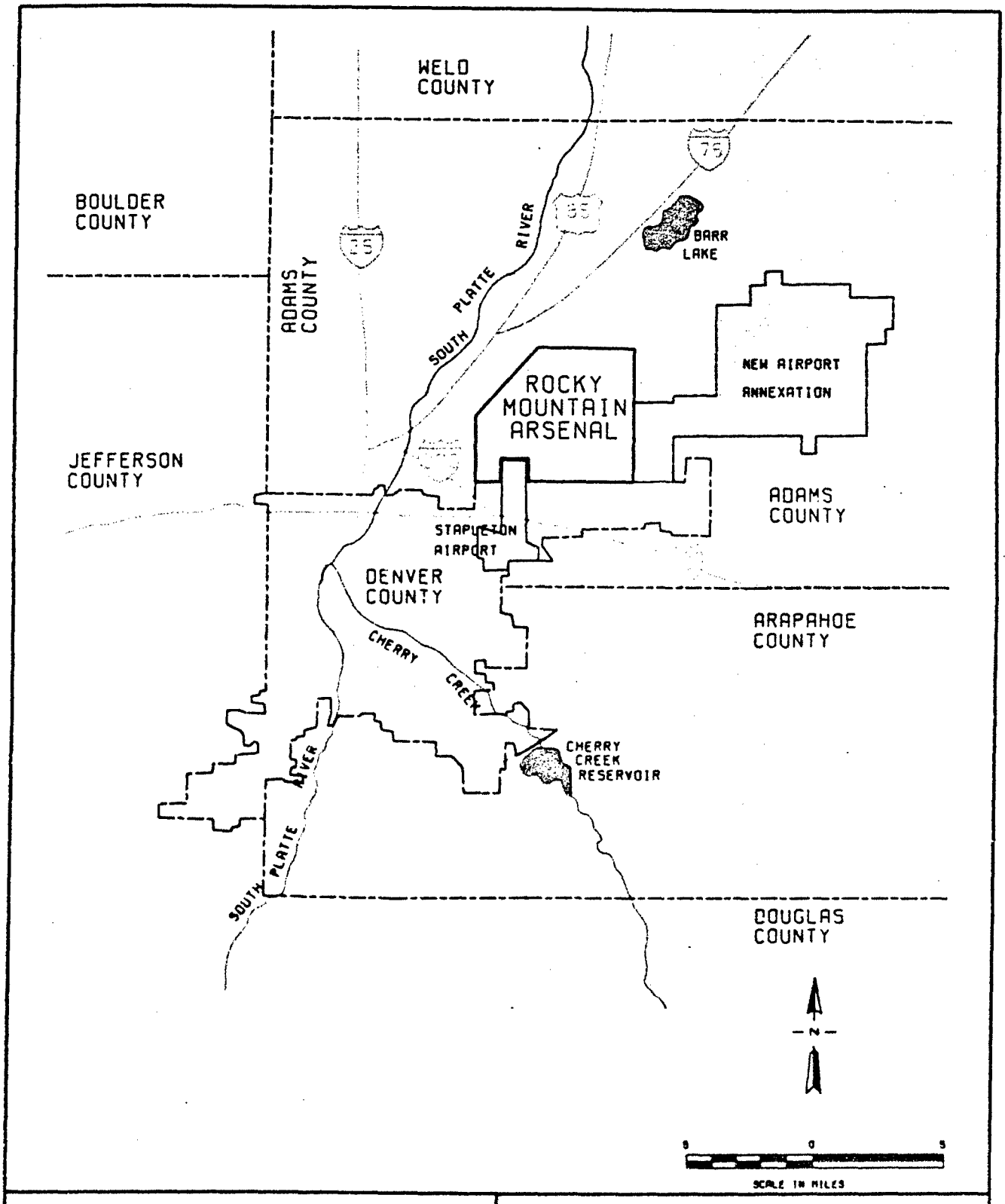
>	Greater than
AB	Asbestos Board
A/C	Asphalt/Composition
ARAR	Applicable or Relevant and Appropriate Requirements
Army	U.S. Army
As	Arsenic
B	Basement
Ba	Barium
Bldg	Building
BR	Brick
C	Concrete
CA	Corrugated Metal with Asbestos
CAIS	Chemical Agent Identification Set
CC	Concrete Columns
Cd	Cadmium
CM	Corrugated Metal
CPMSO	4-Chlorophenylmethyl Sulfoxide
CPMSO2	Chlorophenylmethyl Sulfone
Cr	Chromium
CSA	Central Study Area
Cu	Copper
DBCP	Dibromochloropropane
1,4-DCLB	1,4-Dichlorobenzene
DCPD	Dicyclopentadiene
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltnchloroethane
Dibrom	Phosphoric acid 1,2-dibromo-2,2-dichloroethyl dimethyl ester
DIMP	Diisopropylmethyl phosphonate
DMMP	Dimethylmethyl phosphonate
DRMO	Defense Reutilization and Marketing Design
EPA	U.S. Environmental Protection Agency
ESA	Eastern Study Area
FB	Fiber Board
FG	Fiberglass
FS	Feasibility Study
ft	foot or feet
FU	Future Use
GB (or Sarin)	Isopropyl methylphosphonofluoridate
GF	O-cyclohexyl methylphosphonofluoridate
HD	Mustard
Hg	Mercury
in	inch(es)
IRA	Interim Response Action
lb	pound(s)
LW	Lewisite

LIST OF ABBREVIATIONS/ACRONYMS (Continued)

MB	Masonry Block
mm	millimeter(s)
NA	Not available
NCSA	North Central Study Area
NN	No Number
No.	Number
NPSA	North Plants Study Area
NSC	No Surficial Soil Samples collected within 1,000 feet of building
OHM	O.H. Materials Corporation
Pb	Lead
PCB	Polychlorinated biphenyl
P/D	Plaster/Drywall
PMRMA	U.S. Army Program Manager for Rocky Mountain Arsenal
PMAMR	Project Manager Rocky Mountain Arsenal
PW	Concrete Perimeter Wall
RCRA	Resource Conservation and Recovery Act
RMA	Rocky Mountain Arsenal
S	Steel
SM	Sheet Metal
smv	standing material volume
SOP	Standard Operating Procedure
SPSA	South Plants Study Area
SSA	Southern Study Area
ST	Structural Tile
TC	Thionyl chloride
TCLP	Toxicity Characteristic Leaching Procedure
TNT	2,4,6-Trinitrotoluene
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VX	Methylphosphonothioic acid S-[2-[bis(1-methylethyl)amino]ethyl] O-ethyl ester
WC	Wood Columns
WD	Wood
WSA	Western Study Area
yd^3	cubic yard
Zn	Zinc

INTRODUCTION

This report presents a summary of operator knowledge of Rocky Mountain Arsenal (RMA) structures, and is intended to provide information for use in their remediation through implementation of the Feasibility Study Detailed Analysis of Alternatives or as part of the Interim Response Actions. Operator knowledge (i.e., records and data pertaining to past operations in RMA facilities) will be used to assess the preliminary hazardous nature of each structure, and to determine sampling and demolition strategies for the structures. It has been obtained from historical information, existing sampling data, visual inspection of structures, and knowledge of the waste stream gained through pilot-scale or treatability studies.



Prepared for:

U.S. Army Program Manager
for Rocky Mountain Arsenal

Figure 1
Location Map of
Rocky Mountain Arsenal

Prepared by: AGEISS Environmental Inc.

ble 1. Summary of Previous Studies of Rocky Mountain Arsenal Structures.

PROGRAM	DESCRIPTION	RELEVANT REPORTS
Task 2 Dust Sampling	Results of samples collected from 80 structures in South Plants in 1985. Results reported in Task 24 Structures Survey.	Ebasco, 1985a/RTIC 87006R01
Task 24 Structures Survey	Survey conducted in 1987 that identified 982 structures on RMA, 524 of which were buildings or foundations. Each was assigned one of the following types according to past or current use with the highest potential for contamination: process, chemical storage, warehouse, administration, maintenance, utility, or laboratory. Limited sampling was conducted, and the presence of asbestos noted.	Ebasco, 1988/RTIC 88306R02
Structures Feasibility Study Development and Screening of Alternatives	Includes consideration of the concurrent efforts of the Expert Panel on Building Sampling. Developed alternatives to include a range of options, based on ARARs and structure medium type. Alternatives were screened based on effectiveness, implementability, and cost; and address the range of contaminant and structure types expected at RMA. These will be evaluated during the subsequent Detailed Analysis of Alternatives.	Ebasco, 1992b/RTIC 92233R01
Asbestos	Results of asbestos samples collected under Task 2 were reported in Task 24 Structures Survey. Suspected asbestos was noted in the Structures Survey and limited samples collected. A survey of 32 structures was conducted in 1989 by Ebasco. In 1988 and 1989, OHM conducted an IRA for asbestos removal under Task 5; abatement was conducted on 10 structures. As part of the Hydrazine Blending and Storage Facility IRA, asbestos was decontaminated prior to removal. Under Task 5, asbestos-containing material was surveyed, sampled, and quantified in 486 structures, 19 miles of pipe runs, and over 15,000 pipe fittings, gaskets, etc. Currently, 44 buildings in South Plants containing friable asbestos are being remediated.[1]	Ebasco, 1985a/RTIC 87006R01 Ebasco, 1988/RTIC 88306R02 Ebasco, 1991a/RTIC 91063R01 OHM, 1989/RTIC 90009R04 HLA, 1991b/RTIC 91222R01 Weston, 1992/RTIC 92118R01
SOP for Disposal of Contaminated Buildings	Describes procedures for demolition and disposal of nine buildings in South Plants. Procedures include identification of potential contaminant, sampling and sample analysis, personnel protection, safety and medical, material handlings, decontamination, disposal, and monitoring. Does not include process equipment.	El Dorado Engineering, Inc., 1984/RTIC 85247RI2
Decontamination of Salt Container Storage Buildings and Sheds	In 1986, 73,909 drums containing incinerator salts and chemically neutralized salts were transported to an off-site landfill. The salt container storage buildings were then dismantled, stacked, and stored in the former Toxic Storage Yard. The soil underneath and surrounding their former locations was sampled and analyzed.	Ebasco, 1985b/RTIC 85329R01
Storage Tank Survey Assessment	A detailed survey of all above ground and underground storage tanks at RMA (including those inside and under structures) was completed in January 1992. The survey included location, operational history, integrity, current status, historical releases, and potential for environmental impact from known or suspected leaks. The assessment included some 1,500 underground storage tanks, with some content samples collected.	

Trautmann, 1992
Stockman, 1992a
Barbieri, 1992
Rondinella, 1992
Stockman, 1992b

ARs	Applicable or Relevant and Appropriate Requirements	PCB	Polychlorinated biphenyl
	U.S. Environmental Protection Agency	PMRMA	U.S. Army Program Manager for Rocky Mountain Arsenal
	Feasibility Study	ppm	parts per million
GB (Sarin)	Isopropyl methylphosphonofluoridate	RMA	Rocky Mountain Arsenal
	Mustard	SOP	Standard Operating Procedure
	Interim Response Action	TCLP	Toxicity Characteristic Leaching Procedure
	Lewisite	VX	Methylphosphonothioic acid S-[2-[bis(1 methylethyl)amino]ethyl]O-ethyl ester
	O.H. Materials Corporation		

PROGRAM	DESCRIPTION	RELEVANT REPORTS
olychlorinated Biphenyl ventory	A presampling survey was conducted to identify prospective sampling sites. 75 soil, liquid, sludge, asphalt, and concrete samples were then collected from 17 structures; 10 samples contained concentrations of PCBs above the reporting limit. In early 1993, PCBs detected above 50 ppm will be remediated in areas where people are currently working. This will involve Building 321 in South Plants, and Building 1703 in North Plants.[2]	Ebasco, 1990/RTIC 91337R04V1
ydrazine Blending and torage Facility IRA	Decommissioning included an inventory and asbestos survey; and decontamination, dismantling and disposal of structures and equipment. The wastewater generated during these activities was transferred to Pond A and will be incinerated with the former Basin F liquids.	HLA, 1991a/RTIC 91092R01 PMRMA, 1988/RTIC 88329R02 HLA, 1991c/RTIC 91248R01
ot Gas Decontamination	Battelle has recommended that the pits used for the demilitarization of HD products in Building 537 be used for a demonstration of this process in February 1993. A pilot test was conducted at Dugway Proving Ground, UT in July 1987, where structure materials were spiked with mustard. The mustard was volatilized from the surfaces, and no residual contamination was detected.	Battelle, 1989b Battelle, 1987/RTIC 91310R04 Battelle, 1989a/RTIC 91310R04 SUP
hemical Process-Related ctivities and Pipeline ampling and Analysis	An IRA is currently being conducted to sample chemical agent process equipment/piping; decontaminate if above the reporting limit; and dismantle in preparation for removal/disposal. These activities began in North Plants in November 1991, and are scheduled for completion in December 1993. Operations in South Plants are scheduled to begin in 1993.[3] The Chemical Process Equipment IRA was recently expanded to include nonagent equipment and piping. Removal will begin in 1993.[4] One-ton containers will be sampled for GB, HD, VX, and LW, and will be decontaminated if agent vapor concentrations are above the prescribed limits. Decontamination will then be verified by sampling. Operations began in November 1991, and are scheduled for completion in December 1993.	TVA, 1991a/RTIC 91337R02 TVA, 1991b/RTIC 91331R03 TVA, 1991c/RTIC 91331R04
anitary and Chemical Sewers nd the Process Water System	These systems were investigated under Task 10 to assess the nature and extent of soil contamination resulting from their use. The Sanitary Sewer IRA was then implemented to prevent the spread of contamination through the system. The preferred alternative for North Plants was rehabilitation in place; and for South Plants, abandonment in place. A new force main sanitary sewer was constructed, and select manholes were closed. The IRA was closed out in the fall of 1992.[5]	Ebasco, 1987b/RTIC 87336R03 PMRMA, 1989/RTIC 89100R02 Weston, 1990/RTIC 90232R01

Trautmann, 1992
Stockman, 1992a
Barbieri, 1992
Rondinella, 1992
Stockman, 1992b

.Rs	Applicable or Relevant and Appropriate Requirements	PCB	Polychlorinated biphenyl
	U.S. Environmental Protection Agency	PMRMA	U.S. Army Program Manager for Rocky Mountain Arsenal
	Feasibility Study	ppm	parts per million
(or Sarin)	Isopropyl methylphosphonofluoridate	RMA	Rocky Mountain Arsenal
	Mustard	SOP	Standard Operating Procedure
	Interim Response Action	TCLP	Toxicity Characteristic Leaching Procedure
	Lewisite	VX	Methylphosphonothioic acid S-[2-[bis(1
	O.H. Materials Corporation		methylethyl)amino]ethyl]O-ethyl ester

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PROGRAM	DESCRIPTION	RELEVANT REPORTS
ultural Resource econnaissance Survey	A survey is being initiated at RMA pursuant to Federal preservation legislation and associated regulations for remedial activities. A comprehensive (Class I) literature and records search, review of previous historical surveys, and general documentation regarding the area has been conducted. The field investigation has been proposed, but not yet initiated.	
o Future Use Structures ampling and Analysis rotocol	A sampling and analysis protocol is being developed for no future use structures to provide quantitative analytical data in support of the Structures FS Detailed Analy' s of Alternatives. A panel of national experts has been assembled to assist in developing an unt..ased protocol. A Structures Monitoring Protocol has been issued as a companion to this report.	AGEISS, 1993a
o Future Use Structures ilot Study	Systematic composite sampling was completed in June 1992 for RMA Structures 373 }, 616, 326, 534, 1611, and 515 to determine the types and concentrations of RMA target analytes potentially present in structure materials. Structure matrices were sampled as multi-aliquot composite samples representing a maximum standing material volume of 500 cubic yards. The components of each composite were mixed in a way that properly represented the structure. Target analytes were selected based on the chemical histories of the structures. TCLP extractions were conducted on all composite samples and analyzed using EPA methods or PMRMA-certified methods for water. Sampling results are summarized in the pilot study report. The report also discusses the occupational health and safety of demolition workers, field spike procedures and resulting data, and recommended changes to the protocol.	Woodward-Clyde, 1993b/RTIC 93095R01
tructures Monitoring Protocol	A sampling and analysis protocol is being developed to provide quantitative analytical data for evaluating potential occupational exposure in structures affected by remedial activities at RMA. A panel of national experts has been assembled to assist in developing an unbiased protocol.	AGEISS, 1993b
uture Use Structures ilot Study	Air, dust and wipe sampling was completed in July 1992 for RMA Structures, 311, 321, 331, 612, and 1701. Sampling results are summarized in a pilot study report. The report also discusses the practicality and economy of the protocol, and proposed revisions.	Woodward-Clyde, 1993a/RTIC 93095R02

Trautmann, 1992
Stockman, 1992c
Barbieri, 1992
Rondinella, 1992
Stockman, 1992b

Rs Applicable or Relevant and Appropriate Requirements
U.S. Environmental Protection Agency
Feasibility Study
or Sarin) Isopropyl methylphosphonofluoridate
Mustard
Interim Response Action
Lewisite
I O.H. Materials Corporation

PCB Polychlorinated biphenyl
PMRMA U.S. Army Program Manager for Rocky Mountain Arsenal
ppm parts per million
RMA Rocky Mountain Arsenal
SOP Standard Operating Procedure
TCLP Toxicity Characteristic Leaching Procedure
VX Methylphosphonothioic acid S-[2-(bis(1 methylethyl)amino)ethyl]O-ethyl ester

MATERIALS	PROGRAM	REPORT(S)
Asbestos	Sampling	RTIC 89062R03 O.H. Materials Corp. 1989, January. Asbestos Sampling Report for Rocky Mountain Arsenal in Commerce City, Colorado.
	Survey	RTIC 91063R01 Ebasco (Ebasco Services Inc.) 1991, May. Final Asbestos Survey of 32 Structures, ver. 3.1. RTIC 92118R01 Weston (Roy F. Weston Inc.). 1992, April. Survey of Asbestos Containing Materials at Rocky Mountain Arsenal Final, ver. 3.0. RTIC 91326R01 Weston. 1991, September. Final Technical Plan Task 005. Survey of Asbestos Containing Materials, ver. 3.1.
	Interim Response Action	RTIC 90349R03 O.H. Materials Corp. 1989, April. Final Interim Response Action Report Asbestos Removal Phase-I-Assessment, ver. 3.0. RTIC 89222R02 O.H. Material Corp. 1989, July. Final Interim Response Action Technical Plan Asbestos Removal Phase-II-Removal, ver. 3.0. RTIC 90009R04 O. H. Material Corp. 1989, December. Interim Response Action Final Report Asbestos Removal Phase-II-Removal, ver. 3.0.

MATERIALS	PROGRAM	REPORT(S)
Dust	Comprehensive Monitoring Program	RTIC 88174R01 ESE (Environmental Science and Engineering). 1988, May. Air Remedial Investigation, Task 10, Air Monitoring, Draft Final Report, ver. 2.0. RTIC 83020R02 SRI International. 1982, April. Construction Development and Testing of an Automatic Continuous Air Monitoring System (ACAMS) for Use at the Chemical Munitions Disposal System (CAMDS) Final Report. RTIC 89135R06 Stollar (Robert L. Stollar Associates). 1988, February. Comprehensive Monitoring Program, Draft Field Procedure Manual. RTIC 88340R01 Stollar. 1988, August. Comprehensive Monitoring Program Air Quality Draft Final Technical Plan. RTIC 90190R01 Stollar. 1990, May. Comprehensive Monitoring Program , 1988 Air Quality Data Assessment Report Final, vol. I and II, ver. 2.1.
	Remedial Investigation	RTIC 88203R02 ESE. 1987, February. Rocky Mountain Arsenal Task Number 10, Air Monitoring, Final Technical Plan, vol. I and II. RTIC 88263R01 ESE. 1988, August. Air Remedial Investigation Task Number 10, Air Monitoring Final Report, vol. I and II, ver. 3.1.

MATERIALS	PROGRAM	REPORT(S)
Dust (Continued)	Interim Response Action	RTIC 91347R01 Ebasco. 1991, July. Interim Response Action F Air Quality Monitoring Program Final Report, ver. 2.0. RTIC 90009R01 PMRMA (Program Manager for the Rocky Mountain Arsenal). 1989, December. Implementation Document for the Application of Dust Suppressant at Basin A, Section 36 of Rocky Mountain Arsenal, Interim Response Action Draft. RTIC 91122R01 PMRMA. 1991, April. Implementation Document for the Application of Dust Suppressant at Basin A, Section 36 of Rocky Mountain Arsenal, Interim Response Action.
	Basin A Study	RTIC 89116R01 ESI (Engineering Sciences, Inc.) 1988, March. Data Report for the Health and Safety and Air Monitoring Program for the SIP Engineering Basin F Tankage Project at the Rocky Mountain Arsenal. RTIC 82160R09 Rocky Mountain Arsenal. Undated. Identification of Airborne Pollutants from Waste Basins on Rocky Mountain Arsenal.
PCB	Study	RTIC 91333R07 Envirex, Inc. 1975, December. Laboratory Study of the Release of Pesticide and PCB Material to the Water Column During Dredging and Disposal Operations.
	Inventory	RTIC 91337R03 Ebasco. 1990, March. Polychlorinated Biphenyl (PCB) Inventory, Final Work Plan. RTIC 91337R04 V.1 Ebasco. 1990, November. Polychlorinated Biphenyls (PCB) Inventory Group III Buildings, Final.
Process Equipment and Piping	Contamination Assessment Study	RTIC 88256R04 Ebasco. 1988, August. Final Contamination Assessment Report, Process Water System, Task Number 10, ver. 3.2.

MATERIALS	PROGRAM	REPORT(S)
	Sewers and Process Water Investigations	RTIC 87336R03 Ebasco. November, 1987. Sewers and Process Water System Investigations, Task Number 10, Final Technical Plan, ver. 3.1. RTIC 91337R02 Tennessee Valley Authority (TVA). Apnl, 1991. Proposed Chemical Process - Related Activities at Rocky Mountain Arsenal.
	Decontamination & Dismantling of Process Related Equipment	RTIC 91337R03 TVA. 1991, October. Final Implementation Document for Decontamination & Dismantling of Chemical Process Related Equipment at Rocky Mountain Arsenal.
Sewers - Chemical	Contamination Assessment Study	RTIC 88077R06 Ebasco. 1988, February. Contamination Assessment Report Chemical Sewers - North Plants and South Plants, Task Number 10, Draft Final, ver 2.1. RTIC 88286R08 Ebasco. 1988, September. Final Contamination Assessment Report Chemical Sewers North Plants and South Plans, Task Number 10, ver 3.2 RTIC 88103R02 ESE. 1988, March. Contamination Assessment Report, Phase 1, Site 26-1, Deep Disposal Well and Chemical Sewers, Task Number 6, Sections 26 and 35, Final, ver. 3.2.
	Proposed Activities	RTIC 91337R02 TVA. 1991, Apnl. Proposed Chemical Process-Related Activities at Rocky Mountain Arsenal.
	Decontamination and Dismantling	RTIC 91331R03 TVA. 1991, October. Final Implementation Document for Decontamination and Dismantling of Chemical Process Related Equipment at North Plants at Rocky Mountain Arsenal
Sewers - Sanitary	Investigations	RTIC 87336R03 Ebasco. 1987, November. Sewers and Process Water Systems Investigations, Task Number 10, Final, Technical Plan, ver. 3.1.

MATERIALS	PROGRAM	REPORT(S)
	Response Action	RTIC 88328R01 Ebasco 1988, August Sanitary Sewer Remediation Interim Response Action Alternatives Assessment, Draft Final RTIC 90289R01 Ebasco 1990, October Sanitary Sewer Interim Response Action Final Risk Assessment, ver 3 2 RTIC 89100R02 PMRMA 1989, April Final Decision Document for the Sanitary Sewer System Interim Response Action at the Rocky Mountain Arsenal RTIC 90032R05 Weston 1990, January Rocky Mountain Arsenal Sanitary Sewer Interim Response Action Draft Implementation Plan, vol I and II RTIC 90232R01 Weston 1990 May Rocky Mountain Arsenal, Sanitary Sewer Interim Response Action Final Implementation Plan, vol I and II

MATERIALS	PROGRAM	REPORT(S)
Storage Tanks	Hydrogeologic Study	RTIC 89216R01 MKE (Morrison-Knudsen Engineers, Inc.). 1989, July. Report of Hydrogeologic and Water Quality Investigations in the South Tank Farm Plume, Section 2, Rocky Mountain Arsenal. RTIC 89264R01 MKE. 1989, September, Report of the Investigation of the LNAPL Plume Near Tank 464A, Section 1, Rocky Mountain Arsenal. RTIC 92204R01 MKE. 1992, July. Annual Groundwater Quality Monitoring Report, Other Contamination Sources Interim Response Action, South Tank Plume RTIC 91100R01 Shell Oil Company. 1991, January. Laboratory Studies on Biodegradation of Organics in the South Tank Farm Plume (STFP) Aquifer, Soil, and Microbiological Analysis of STFP Aquifer Core Samples

MATERIALS	PROGRAM	REPORT(S)
Storage Tank (Continued)	Interim Response Action	RTIC 90102R01 MKE. 1990, March. Final Alternatives Assessment Other Contamination Source Interim Response Action, South Tank Farm Plume. RTIC 90262R01 MKE. 1990, August. Final Alternatives Assessment Other Contamination Source Interim Response Action, South Tank Farm Plume. RTIC 91002R06 MKE. 1990, December. Results of the Verification Monitoring Program, South Tank Farm Plume Interim Response Action. RTIC 91122R02 MKE. 1991, May. Final Decision Document Other Contamination Sources Interim Response Action, South Tank Farm Plume. RTIC 91298R01 MKE. 1991, August. Implementation Document Other Contamination Sources, Interim Response Action, South Tank Farm Plume, Final. RTIC 90349R02 Shell Oil Company. 1990, October. Tank Removal for the M-1 Settling Basins Work Plan. RTIC 91331R04 TVA. 1991, October. Implementation Document for Decontamination and Sampling of One Ton Containers at Rocky Mountain Arsenal, Final.

MATERIALS	PROGRAM	REPORT(S)
Surfical Soils and Spills	Contamination Assessment Study	RTIC 87336R06 Ebasco. 1987, November. Program for Army Spill Sites, Phase I, Task Number 24, Final Technical Plan, vol. 1, ver. 3.2. RTIC 88076R04 Ebasco. 1988, March. Contamination Assessment Report, Site 3-4, Nemagon Spill Area, Task Number 20, Lower Lakes, Final, ver. 3.3. RTIC 88076R04A Ebasco. 1988, March. Phase II Data Addendum Site 3-4, Nemagon Spill Area, Task Number 20, Lower Lakes, Final, ver. 3-1. RTIC 88286R07 Ebasco. 1988, July. Final Contamination Assessment Report, Sites 1-13 & 2-18, South Plants Manufacturing Complex, Shell Company Spill Sites, Task Number 2, South Plants. RTIC 88286R10 Ebasco. 1988, September. Final Phase I Data Presentation Report, Army Spill Sites, South Plants Manufacturing Complex, Task Number 24, ver. 3.2. RTIC 93063R01 ESE. 1988, January. Contamination Assessment Report, Site 36-5, Mercury Spill, Task Number 7, Section 35, Final, ver. 3.3. RTIC 92035R01 HWS Technologies, Inc. 1988, October. Revised Proposal for Monitoring and Remediation of a Jet Spill at Concourse D, Stapleton International Airport.

MATERIALS	PROGRAM	REPORT(S)
Surfical Soils and Spills (Continued)	Remedial Investigation	RTIC 89166R03 Ebasco. 1989, May. Final Remedial Investigation Report, vol. XII, Western Study Area, Final, ver. 3.3. RTIC 89166R02 Ebasco. 1989, June. Final Remedial Investigation Report. vol. VII, Eastern Study Area, Final, ver. 3.3. RTIC 89166R02 Ebasco. 1989, June. Final Remedial Investigation Report, vol. VI, Southern Study Area, Final, ver. 3.3. RTIC 89166R06 Ebasco. 1989, July. Final Remedial Investigation Report, vol. X, Central Study Area, Final, ver. 3.3. RTIC 89166R07 Ebasco. 1989, July. Final Remedial Investigation Report, vol. XI, North Central Study Area, Final, ver. 3.3. RTIC 89166R05 Ebasco. 1989, July. Final Remedial Investigation Report, vol. IX, North Plants Study Area, Final, ver. 3.3. RTIC 89166R04 Ebasco. 1989, July. Final Remedial Investigation Report, vol VIII, South Plants Study Area, Final, ver. 3.3. RTIC 92017R01 Ebasco. 1992, January. Final Remedial Investigation Summary Report, ver. 3.2.
	Surficial Soils	RTIC 91121R01 Ebasco. 1991, April. Final Surfical Soil Program Data Summary, ver. 3.1.

Table 2. Structures Related Programs.

MATERIALS	PROGRAM	REPORT(S)
Surfical Soils and Spills (Continued)	Human Health Exposure Assessment	RTIC 90227R01 Ebasco. 1990, September. Final Human Health Exposure Assessment for Rocky Mountain Arsenal, ver. 4.1.
	Control and Counter-measure Plan	RTIC 91322R07 HAZWRAP. 1990, May. Rocky Mountain Arsenal Installation Spill Contingency Plan and Spill Prevention and Control, and Countermeasure Plan.
Utility Lines	Property Inventory and Survey	RTIC 87047R01 Harding Lawson Associates. 1982, September. Property Inventory and Condition Survey for the Group IV Utility Systems Property, and Group II Chemical Plant Property within the Shell Oil Company Leasehold Area at U.S. Army Rocky Mountain Arsenal.

ble 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT* MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd^3)	ESTIMATED TOTAL area* (yd^2)	STRUCTURE MATERIALS* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND VOLUME IN yd^3) ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
111	RMA Administration, Headquarters Office/NCSA	42/35	2	19 000	770	A/C [174]	WD [1.0]	WD [1.0]	C (12) [470]	No prior chemical use reported	HISTORICAL No historically associated chemicals SAMPLING Surficial Soil (0 - 2 in) Aldrin, DDE, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft) Aldrin, chlordane, DDE, DDT, dieldrin, endrin, hexachlorocyclopentadiene, isodrin, lead, mercury, zinc
112	Communications Headquarters/NCSA	42/35	1B	2 400	283	P/G A/C (1) [32]	BR (8) [70]	MB (4) [77]	C (12) [99]	The basement was possibly used as a photographic laboratory	HISTORICAL Photographic chemicals SAMPLING Surficial Soil (0 - 2 in) Aldrin, DDE, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft) Aldrin, DDE, DDT, dieldrin, endrin, isodrin
112A	Emergency Generator Plant/ Communications/NCSA	52/35	1	100	34	A/C	BR	NA	C	The building was used as a communication storage building; previous contents stated are unavailable in Task 24	HISTORICAL Historically associated chemicals not available SAMPLING Surficial Soil (0 - 2 in) Aldrin, DDE, DDT dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft) Aldrin, DDE, DDT, dieldrin, endrin, isodrin
112B	Barbecue - north of 112/ NCSA	NA/35	0	2	2	NP	BR (8) [2]	NP	C (8) [2.0]	No prior chemical use reported	HISTORICAL None
114	Security Incinerator/NCSA	42/35	0	202	8	NP	BR (12) [7.5]	NP	C (18) [5.0]	No prior chemical use reported	HISTORICAL None

A symbol and acronym list is provided on the last page of this table.

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ble 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[4]	STRUCTURE DESCRIPTION[1] STUDY AREA - Subarea	YEAR BUILT[4] MAP SECTION[4]	NO. OF LEVELS[4]	ESTIMATED TOTAL AIR VOLUME[4] (yd^3)	ESTIMATED TOTAL SPACE[4] (yd^3)	STRUCTURE MATRICES[4] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3) ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[4]	POTENTIAL ASSOCIATED CHEMICALS[5]
116	Bus Stop Shelter/SPSA 1g	42/01	1	59	4	NP	NP	NP	WD (7)	No prior chemical use reported	HISTORICAL None
120	Administration/NCSA	NOTE Built since 1986, additional information available from PMRMA									
121	Administration/NCSA	NOTE Built since 1986, additional information available from PMRMA									
124	Administration/NCSA	NOTE Built since 1986, additional information available from PMRMA									
129	Administration/NCSA	NOTE Built since 1986, additional information available from PMRMA									
130	Administration/NCSA-8a	NOTE Built since 1986, additional information available from PMRMA									
132	Remediation Use Structure	NOTE Built since 1986, additional information available from PMRMA									
135	Guard House/WSA	NOTE Built since 1986, additional information available from PMRMA									
136	Garage to 134/NCSA	47/35	0	3	3	NP	NP	NP	C (4) [2]	No prior chemical use reported	HISTORICAL None
137	Garage to 131/NCSA	47/35	0	3	3	NA	NA	NA	NA	No prior chemical use reported	HISTORICAL None
143	West Gate Guardhouse Security/WSA	61/04	1	62	23	A/C (1) [1]	MB (6) [2]	NA	C [2]	No prior chemical use reported	HISTORICAL No historically associated chemicals SAMPLING Surficial Soil (0 - 2 in) DDT, dieldrin, isodrin Surficial Soil (0 - 2 ft) DDT, dieldrin, hexachlorocyclopentadiene, isodrin, lead, zinc
145	South Gate Guardhouse Security/SSA	60/11	1	54	46	A/C [2]	BR (8) [6]	NA	C [11]	The building had a liquid propane gas heating system	HISTORICAL Liquid propane SAMPLING Surficial Soil (0 - 2 in) NSC Surficial Soil (0 - 2 ft) NSC
148	Storage/Pass Office - northwest of 166/NCSA	43/34	1	140	1	CM	CM [0.9]	NP	NP	Diesel fuel leak or cutout near exterior of the building, but historical data do not indicate the proximity of the spill to the building	HISTORICAL None

[4] A symbol and acronym list is provided on the last page of this table.

...le 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTI-MATED TOTAL env* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³] ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
150	Tennis Courts	54/34	0	120	120	NP	NP	NP	A/C (3)	No prior chemical use reported	HISTORICAL: None
154	Bachelor Officers' Quarters Barracks/WSA	42/34	1	51	51	NP	NP	NP	C (24) [41]	No prior chemical use reported	HISTORICAL: None
155	Barracks and Classrooms - north of 151/NCSA	42/34	0	52	52	NP	NP	NP	C (24) [41]	No prior chemical use reported	HISTORICAL: None
157	Mens Barracks - south of 159/NCSA	42/34	0	54	54	NP	NP	NP	C (24) [41]	No prior chemical use reported	HISTORICAL: None
158	Noncommissioned Officers' Service Club - southwest of 159/WSA	42/34	0	36	36	NP	NP	NP	C (24) [41]	No prior chemical use reported.	HISTORICAL: None
162	Noncommissioned Officers' Apartments - southwest of 166/NCSA	42/34	0	37	37	NP	NP	NP	(24) [37]	No prior chemical use reported	HISTORICAL: None
164	Officers' Apartments - west of 166/NCSA	42/34	0	60	60	NP	NP	NP	C (9) [24]	No prior chemical use reported	HISTORICAL: None
169B	Gas Station House - south of 150/WSA	42/34	0	4	4	NP	NP	NP	NA	The building was used by Western Chemical Warfare school as gas chambers and meter pit	HISTORICAL: Gas chambers, gas meter pit
176	Five-Unit Garage and Apartments/WSA	NA/03	0	24	24	NP	NP	NP	C (6) [9]	No prior chemical use reported.	HISTORICAL: None

*F. A symbol and acronym list is provided on the last page of this table

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STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
211	Gas Meter House/ Utility/SPSA-3e	50/02	1	69	20	CM	BR	NA	C	The building was a natural gas metering and regulating station. Later the building was tied into the isopropyl methylphosphonofluoridate (GB) plant area. Task 24 states that the potential for contamination is "quite low" since the building was only used for natural gas metering.	HISTORICAL: GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester, phosphoric acid triphenyl ester), natural gas SAMPLING Surficial Soil (0 - 2 in): Aldrin, DDE, DDT, dieldrin, endrin, hexachlorocyclopentadiene, isodrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, atrazine, cadmium, chlordane, chlorophenylmethyl sulfide, chlorophenylmethyl sulfone, chromium, copper, DDE, DDT, DBCP, DCPD, dieldrin, endrin, fluoranthene, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, thiodiglycol, zinc Groundwater: Benzene, carbon tetrachloride, chloroform, tetrachloroethylene, trichloroethylene
213	Calibration/X-Ray Laboratory/SPSA-3e	54/02	1	3,500	670	A/C [28]	PW (12) C (12) [157]	MB (8) [171]	C (12) [316]	The building was used as an X-ray facility to determine the height of fill in GB (which consisted of sodium chloride, sodium hydroxide, sodium fluoride, phosphorus, sodium methyl phosphonate, and isopropanol) munitions. Also used in processing and developing X-ray film which used film developing chemicals: developer, fixer, and wetting solutions.	HISTORICAL: Film developing chemicals, fixer, wetting solutions, developer, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester, phosphoric acid triphenyl ester)
241	Administration/Laboratory/ Change House/SPSA-3e	42/02	1	1,900	290	A/C [26]	PW (3) MB (8) [83]	P/D [81]	C (9) [100]	The building acted as a change house for the chlorine plant and laboratory. Specific information on the use of the laboratory is unavailable in Task 24.	HISTORICAL: Chlorine, other associated chemicals not available SAMPLING: Dust: Chlorophenylmethyl sulfone, dieldrin, Cd, Cr, Cu, Pb, Zn, As, DDE

A symbol and acronym list is provided on the last page of this table.

3. Inventory List of Rocky Mountain Arsenal Structures.

NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL env* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³) ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
242	Chlorine Production/United States Mint Storage/ SPSA-3c,3e	43/02	1	43,000	3,100	A/C (21)	BR (9) [509]	WC (24)	C (24)	Electrolytic cell building which contained a rectifier room with cathodes containing Hg. Chlorine and caustic (sodium hydroxide) were used in the plant for processing GB brine in an effort to remove fluorides and phosphates. In 1956, a tarpit ignited a firebox causing minor damage. The Denver Mint used the building as storage for copper penny stock.	HISTORICAL: Hg, chlorine, sodium hydroxide, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid tributyl ester, phosphoric acid triphenyl ester), GB brine, fluoride, phosphate, tar, sulfuric acid SAMPLING: Dust - Cd, Cr, Cu, Pb, Zn, # -
243	Chlorine Production Compressor/SPSA-3c,3e	42/02	2B	9,500	1,000	A/C (2) [48]	PW (9) BR (9) [261]	BR (4) [333]	C (24) [357]	Building was used to experiment with oleum (sulfuric acid, fuming) and sulfuric acid as a sealing medium. Sulfuric acid also used for the drying of chlorine gas. Ammonia and freon were used in the cooling process. Later used for processing GB brine and used caustic (sodium hydroxide) and bleach. Spent acid was spilled onto the ground damaging the foundation.	HISTORICAL: Chlorine, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid tributyl ester, phosphoric acid triphenyl ester), GB brine, sulfuric acid, oleum, sodium hydroxide, ammonia, freon, bleach, spent acid SAMPLING: Liquid - Chlor 'orm Dus* - Dieldrin, Cr, Cu, Pb, Zn
244	Three Liquid Chlorine Tank Saddles/SPSA-3c	42/02	0	30	30	NP	NP	NP	C (15) [30]	Building was used for liquid chlorine storage.	HISTORICAL: Chlorine
245	Subs 'tion/SPSA-3c	45/02	1	78	22	WD [1]	BR (8) [15]	NP	C (9) [6]	Built to house transformers and used as an electric substation.	H· TORICAL: PCBs
246	Hydrochloric Acid Production Compressor/SPSA-3e	51/02	0	56	56	NP	PW (8) C (8) [34]	CC (24) [3]	C (12) [19]	Sniff gas (hyd· ·gen, chl· ·ne, carbon dioxide) was burned in hydrogen to form hydrochloric acid. Chemicals were neutralized with sodium hydroxide for sewer disposal.	HISTORICAL: Hydrochloric acid, sniff gas (hydrogen, chlorine, carbon dioxide), sodium hydroxide

A symbol and acronym list is provided on the last page of this table

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[1]	STRUCTURE DESCRIPTION[1] STUDY AREA - Subarea	YEAR BUILT[1] MAP SECTION[2]	NO. OF LEVELS[3]	ESTIMATED TOTAL AREA VOLUME[4] (yd³)	ESTIMATED TOTAL AREA[4] (yd²)	STRUCTURE MATRICES[4] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]				HISTORICAL USE[5]	POTENTIAL ASSOCIATED CHEMICALS[6]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
247	Salt Storage/SPSA-3c	42-02	0	130	1 110	NP	NP	NP	C (24)	The building acted as raw salt storage for chlorine plant complex. Several tank cars of GB scrubber brine which consisted of sodium chloride, sodium hydroxide, sodium fluoride, phosphorus, sodium methyl phosphate, sodium sulfate, sodium phosphate, sodium carbonate, and isopropyl alcohol were emptied onto the pad at one time. Building was also used as a settling basin for calcium treated brine and clarifloculator sludge which consisted of sodium chloride, sodium hydroxide, sodium fluoride, sodium methyl phosphate, calcium chloride, calcium fluoride, calcium methyl phosphate, and calcium carbonate. Shell discharged aldrin and dieldrin filter cake onto the salt pad, and stored drummed waste in building. Aldrin filter cake consists of aldrin, diaduct, toluene, isodrin, and endrin. Used by Shell as a staging area for off-site drum shipments. Contaminated pipe, wooden pallets, soil and concrete also stored here.	HISTORICAL: GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphonic acid, tributyl ester, phosphonic acid, triphenyl ester), GB brine, sodium chloride, sodium hydroxide, sodium fluoride, phosphorus, sodium methyl phosphate, sodium phosphate, sodium sulfate, sodium carbonate, isopropyl alcohol, calcium chloride, calcium fluoride, calcium methyl phosphite, calcium carbonate, aldrin and dieldrin filter cakes, isodrin, aldrin, toluene, diaduct, endrin, clarifloculator sludge, calcium treated brine, raw salt
248	Brine Treatment Plant/ SPSA-3c	42-02	0	160	180	NP	NP	NP	C (6) [91]	The building was part of the chlorine plant used to treat raw brine consisting of sodium carbonate, calcium sulfates, calcium chlorides, magnesium chlorides, and sodium sulfates in reaction tanks by adding soda ash (sodium carbonate) and solution. Any excess sodium hydroxide in the brine was neutralized with muriatic acid. Later GB brine was stored in the tanks.	HISTORICAL: Sodium carbonate, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphonic acid, tributyl ester, phosphonic acid, triphenyl ester), GB brine, sodium chloride, sodium hydroxide, sodium fluoride, phosphorus, sodium methyl phosphonate, isopropanol, calcium sulfates, calcium chlorides, magnesium chlorides, sodium sulfates, muriatic acid, raw brine

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION / STUDY AREA Subarea	YEAR BUILT[a] MAP SECTION[a]	NO. OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd^3)	ESTIMATED TOTAL [blank][a] (yd^3)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd^3]				HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[b]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
249	Brine Storage and Pumphouse/SPSA 3c	42 02	0	260	260	NP	NP	NP	C (6) [255]	The building consisted of ten redwood storage tanks used to store treated brine from Building 248. Also used in the production of chlorine and caustic (sodium hydroxide). Brine was further agitated and clarified. Later, used in the GB brine operations.	HISTORICAL: Treated brine, sodium hydroxide, sodium phosphate, sodium sulfate, GB breakdown products (diisopropylmethyl phosphonate; dimethylmethyl phosphonate; isopropylmethyl phosphonic acid; methylphosphonic acid; phosphonic acid; tributyl ester; phosphonic acid; triphenyl ester), GB brine, sodium chloride, sodium fluoride, chlorine, phosphorus, sodium methyl phosphate, sodium carbonate, isopropyl alcohol
251	Chlorine Evaporator/Storage/SPSA 3c	42 02	3	15 000	1 100	A/C [45]	MB (9) [225]	CC (24) [152] BB (9) [26]	C [615]	Evaporative building used for brine feed (sodium chloride) in chlorine manufacture plant. The sodium hydroxide content of cell liquor was concentrated and undecomposed salt content removed. Also used to remove undesirable sodium sulfate from cell liquor and for GB Plant Step IV and V scrubber effluents brine feed. In 1951, a damage drain line resulted in the discharge of caustic soda through the process water system to the south lakes. Shell later used the building as a RCRA licensed warehouse for handling and storing contaminated wastes prior to being shipped off-site.	HISTORICAL: Sodium hydroxide, unknown contaminated wastes, sodium sulfate, GB breakdown products (diisopropylmethyl phosphonate; dimethylmethyl phosphonate; isopropylmethyl phosphonic acid; methylphosphonic acid; phosphonic acid; tributyl ester; phosphonic acid; triphenyl ester), GB brine, sodium chloride, cell liquor, salt, sodium hydroxide soda, sodium fluoride, sodium methyl phosphate, sodium carbonate, chlorine, herbicides (bladex, planavin)[c] SAMPLING: Dust - Aldrin, atrazine, dieldrin, Cd, Cr, Cu, Pb, Zn, As
252	Cell Liquor Storage/SPSA 3c	42 02	0	29	29	NP	NP	NP	CC (18) [29]	The building was part of chlorine plant evaporation unit consisting of tanks used for storage of sodium chloride and sodium hydroxide. In 1952, a tank car accident resulted in a spill of approximately 3,700 lbs of liquid chlorine and chlorine gas.	HISTORICAL: Chlorine, sodium chloride, sodium hydroxide
253	50 Percent Sodium Hydroxide Storage/SPSA 3c	42 02	0	16	16	NP	NP	NP	C (24) [39]	The building was part of chlorine plant evaporation unit used for storage to concentrate caustic solution and to produce chlorine, caustic soda, and other unspecified chemicals. A spill of caustic on the ground occurred sometime prior to 1949. Specific use of a possible insecticide is not described in Task 24, although it was stated that an insecticide may have been present.	HISTORICAL: Sodium hydroxide, possibly an insecticide, chlorine, sodium hydroxide soda, unspecified chemicals

NOTE: [illegible]

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able 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER	STRUCTURE DESCRIPTION/ STUDY AREA	YEAR BUILT/ MAP SECTION	NO. OF LEVELS	ESTIMATED TOTAL AIR VOLUME (yd³)	ESTIMATED TOTAL (yd³)	STRUCTURE MATRICES (ESTIMATED MAXIMUM THICKNESS IN INCHES AND VOLUME IN yd³): ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE	POTENTIAL ASSOCIATED CHEMICALS
254	Caustic Fusion Plant Drum Storage/SPSA-3e	43-02	1B	15,000	1,200	CM (0.06) [14]	PW (10) AB (1) [16]	CC (14) WD (2) [27]	CC (24) [1,119]	Sodium hydroxide received from the evaporator building was concentrated into 100 percent fused sodium hydroxide where it was discharged into shipping drums for the chlorine manufacturing plant. Later used as a warehouse, leaks or spills of dibrom and bidrin occurred. Azodrin, monomethylchloroacetoacetamide, dieldrin and ciodrin were stored here. In 1980, a laboratory analysis of water from a waste pad near the building contained aldrin, dieldrin, and endrin.	HISTORICAL: Monomethylchloro-acetoacetamide, sodium hydroxide, dibrom, aldrin, dieldrin, endrin, azodrin, bidrin, ciodrin. SAMPLING: Dust - Dieldrin, Cd, Cr, Cu, Pb, Zn, As
255	Fuel Oil Pump Station and Two Tank Pads/SPSA-3d	42-02	1B	170	22	A/C [2]	PW (12) WD (2) [4]	NP	C (62) [16]	The building acted as a pump house and fuel oil storage for chlorine plant. Tanks moved south of Building 472 in 1962.	HISTORICAL: Fuel oil
282	Guard Station - northwest of NN0102/SPSA-1g	43-01	0	7	7	NP	NP	NP	C (12) [7]	No prior chemical use reported	HISTORICAL: None
286	Guard Station - southeast of 557/SPSA-2c	43-01	0	6	6	NP	NP	NP	C (6) [6]	No prior chemical use reported	HISTORICAL: None
287	Guard Tower/SPSA-2e	43-01	0	6	6	NP	NP	NP	C (6) [6]	No prior chemical use reported	HISTORICAL: None
291	Guard Station - 735 ft west of 362/SSA	43-02	0	6	6	NP	NP	NP	C (6) [6]	No prior chemical use reported	HISTORICAL: None
295	Guard Tower - southeast of 112/SPSA	43-02	0	6	6	NP	NP	NP	C (6) [6]	No prior chemical use reported	HISTORICAL: None
296	Guard Tower/SPSA	43-02	0	6	6	NP	NP	NP	C (6) [6]	No prior chemical use reported	HISTORICAL: None
307	Potable Water Valve and Meter Pit/NCSA	54-36	0	29	11	S	3/I C (9) [9]	NP	C [2]	No prior chemical use reported	HISTORICAL: None
309	Maintenance/Storage south of 545/SPSA-1g	54-01	1	10	10	CM (0.05) [1]	CM (0.05) [1]	NP [2]	C (4) [6]	No prior chemical use reported	HISTORICAL: None

[illegible] A symbol and acronym list is provided in the last page of this table.

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Table 1. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION / STUDY AREA Subarea	YEAR BUILT[b] MAP SECTION[c]	NO. OF LEVELS[d]	ESTIMATED TOTAL AIR VOLUME[e] (yd^3)	ESTIMATED TOTAL [e] (yd^3)	STRUCTURE MATRICES[f] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3) ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[g]	POTENTIAL ASSOCIATED CHEMICALS[h]
311†	Steams Roger Office/Sample Storage/SPSA 3e	42/02	1B	2,760	267	A/C (2) [80]	BR (4) [102]	P/D (4) [12]	C (10) [7.3]	Shell used the building to store core samples from their exploration and production division. After the building was listed as an active storehouse with precise contents stored unavailable in Task 24.	HISTORICAL Core samples, other historically associated chemicals not available SAMPLING: Surficial Soil (0 - 2 in) NSC Surficial Soil (0 - 2 ft) Aldrin, arsenic, cadmium, chlordane, chlorophenylmethyl sulfide, chlorophenylmethyl sulfone, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, dieldrin, endrin, fluoranthene, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc Subsurface Soil: (5 - 20 ft) *m*-xylenes, xylenes Groundwater: Benzene, carbon tetrachloride, chloroform, *m*-xylene, tetrachloroethylene, toluene, trichloroethylene, xylenes, 1,1-dichloroethylene Air: Mercury, carbon tetrachloride, chloroform, tetrachloroethylene, copper, zinc Dust/Vacuum: Cadmium, chromium, copper, lead, zinc, mercury

NOTE: A symbol and acronym list is provided [illegible]

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able 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] STUDY AREA - Subarea	YEAR BUILT[c] MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (ft^3)	ESTIMATED TOTAL VOLUME[g] (ft^3)	STRUCTURE MATRICES[h] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[i]	POTENTIAL ASSOCIATED CHEMICALS[j]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
312	Fire Station Headquarters Fire Protection/NCSA	42 36	2	5 300	860	A/C [69]	BR (8) [200]	P/D BR [128]	C [313]	No prior chemical use reported	HISTORICAL: No historically associated chemicals SAMPLING Surficial Soil (0 - 2 in): Aldrin, chlordane, DDE, DDT, dieldrin, endrin, hexachlorocyclopentadiene, mercury, isodrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, atrazine, cadmium, chlordane, chloroacetic acid, chlorophenylmethyl sulfide, chlorophenylmethyl sulfone, chlorophenylmethyl sulfoxide, copper, DDE, DDT, DBCP, DCPD, dieldrin, endrin, fluoranthene, fluoroacetic acid, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, thiodiglycol, zinc Groundwater: Benzene, bicycloheptadiene, carbon tetrachloride, chlorobenzene, chloroform, methyl isobutyl ketone, tetrachloroethylene, trichloroethylene, toluene

NOTE: A symbol and accompanying [illegible] preceding the [illegible]

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le 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] STUDY AREA - Subarea	YEAR BUILT[c] MAP SECTION[d]	NO OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (ft^3)	ESTIMATED TOTAL [entry][f] (ft^3)	STRUCTURE MATRICES[g] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[h]	POTENTIAL ASSOCIATED CHEMICALS[h]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
313	Laboratory/SPSA-1a	[illegible]/01	1	6,036	970	A/C (6) [205]	ST (8) [170]	MB (8) [283]	C [316]	The building acted as a central analytical laboratory for HD, LW, white phosphorus, GB, VX, phosgene, and hydrazine, chlorine, sodium hydroxide, chlorinated paraffin, and compounds used in manufacturing processes. Tested a wide variety of products, including paints, petroleum products, raw materials, decontamination agents, bleaches, and napalm. During the 1950s, analyzed the above, as well as oleum (sulfuric acid, fuming), caustic, sulfur monochloride, sulfur dichloride, alcohol, salt, 1,1,2,2-tetrachloroethane, dextrin, red phosphorus, CAIS, incendiary mixes, magnesium powder, blasting caps, methanol, benzene, and impregnite. Shell plant effluent samples were also analyzed. The laboratory supported ongoing RMA activities through analysis of sewage influent and effluent, sludge, fuel oil, and industrial hygiene work (including toxic vapors and dusts). Other identified chemicals include Hg, acid, alkalines, chloroform, p-nitroaniline, benzidine, 1-naphthylamine, fluorine, nitric acid, tetrachloroethylene, carbon tetrachloride, trichloroethylene, hydrochloride, perchloric acid, and chemical reagents. Wastes, including As, were disposed of according to the composition. Laboratory sink water drained into open ditch on the east side of the building. In March 1982, drums containing a mixture of solvents and laboratory reagents stored behind the building leaked. Task 24 reports the only reference that addresses spills stated that all spills were promptly decontaminated. More specific information on chemical use and analytical samples are unavailable in Task 24 due to [illegible] nature.	HISTORICAL: Chemical reagents, acid, alkalines, hydrazine, benzene, oleum, chloroform, p-nitroaniline, benzidine, HD breakdown products (chloroacetic acid, dithane, 1,4 oxathiane, thiodiglycol), GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester, phosphoric acid, triphenyl ester), VX, hydrochloride, perchloric acid, 1-naphthylamine, chlorine, salt, sodium hydroxide, sulfur monochloride, sulfur dichloride, phosgene, alcohol, dextrin, 1,1,2,2-tetrachloroethane, red phosphorus, napalm, white phosphorus, methanol, impregnite, As, fluorine, nitric acid, magnesium powder, blasting caps, tetrachloroethylene, carbon tetrachloride, trichloroethylene, laboratory reagents, chlorinated paraffin, paints, fuel oil, bleach, Hg, LW, CAIS, incendiary mixes, sewage, decontamination agents, various unidentified compounds, solvents, petroleum products, raw materials, Shell plant effluent samples, sludge, toxic vapors, toxic dust, impregnite[i], sodium chloride[i]

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STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] STUDY AREA - Subarea	YEAR BUILT[c] MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (yd^3)	ESTIMATED TOTAL [illegible][f] (yd^3)	STRUCTURE MATRICES[g] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[h]	POTENTIAL ASSOCIATED CHEMICALS[i]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
313A	Sewage Pump Station/ SPSA-1a	NA/01	0	5	2	S	PW (8)	NP	C (48) [2]	The building was part of the South Plants Liquid Waste Collection System used for collecting waste from Buildings 313 and 314	HISTORICAL: Chemicals used in Buildings 313 and 314 SAMPLING: Liquid - Chloroform, methylene chloride, tetrachloroethane, calcium, Cr, Cu, Pb, magnesium, potassium, sodium, Zn, As, Hg, thioglycol, nontarget compounds
314	Fixed Laundry Service/ SPSA-1a	42/01	1	4,500	660	A/C [52]	ST (8) [103]	MB (6) [94]	C [411]	The building was used as the Army's laundry and clothing treatment plant which received, decontaminated, repaired, laundered, impregnated, dyed, and reissued apparel and equipment used to protect personnel working with chemical agents during production, tactical, demilitarization, and disposal operations. The building also housed a laboratory. The following chemicals were used: tetrachloroethylene or 1,1,2,2-tetrachloroethane, chlorinated paraffin, daxad, duponal polyvinyl alcohol, octachlorocarbanilide (both with and without Zn oxide), sodium hypochlorite or paraformaldehyde, acetone, ammonium sulphate, benzene, monochloride, bleach, sodium hydroxide soda, chloride of lime, chloroethane diammonium phosphate, dibasic ammonium sulphate, formaldehyde, monochlorobenzene, naphtha, soda ash (sodium carbonate), and tetrachloromethane. Although mentioned, specific use or occurrence of ammonium chloride, polyvinyl chloride and trichloroethylene are not described in Task 24	HISTORICAL: Trichloroethylene, Zn oxide, daxad, sodium hypochlorite, ammonium chloride, diammonium phosphate, sodium carbonate, polyvinyl alcohol, phosphate detergents, tetrachloroethylene, 1,1,2,2-tetrachloroethane, chlorinated paraffin, duponal, polyvinyl chloride, bleach, paraformaldehyde, acetone, sodium hydroxide, chloride of lime, chloroethane, naphtha, ammonium sulphate, formaldehyde, monochlorobenzene, monochloride, octachlorocarbanilide (both with and without Zn oxide), benzene, dibasic ammonium sulphate
315	Warehouse/Laundry/SPSA-1a	42/01	1	6,500	980	A/C (2) [205]	WC (8) CM (2) [48]	ST [68]	C (6) [659]	The building stored approximately 160 55-gallon drums of tetrachloroethylene contaminated with GB, other specific contents unavailable in Task 24	HISTORICAL: GB breakdown products (isopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphine, acid, phosphonic acid, tributyl ester, phosphine, acid, triphenyl ester), tetrachloroethylene

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ble 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME in yd³): ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
315A†	Steam Meter Pit - west of 315/SPSA-1g	51/01	1B	22	7	A/C (2) [7]	MB (8) [5]	NP	C (8) [1]	No prior chemical use reported	HISTORICAL: No historically associated chemicals SAMPLING: Surficial Soil (0 - 2 in): NSC Surficial Soil (0 - 2 ft): Aldrin, arsenic, atrazine, cadmium, chlordane, chloroacetic acid, chlorophenylmethyl sulfide, chlorophenylmethyl sulfone, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, DCPD, dieldrin, endrin, fluoranthene, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, thiodiglycol, zinc Groundwater: Benzene, carbon tetrachloride, chloroform, m-xylene, tetrachloroethylene, trichloroethylene, toluene, xylenes
316	Plant Dispensing/Clinic/ SPSA-1a	42/01	1	240	240	A/C (3) [55]	WD (6) [70]	CM (2) [56]	C (8) [59]	The building was used as an infirmary or dispensary (chemicals used unavailable in Task 24)	HISTORICAL: Historically associated chemicals not available SAMPLING: Dust - Hexachlorocyclopentadiene, supona, Cd, Cr, Cu, Pb, Zn, As
316A	Morrison-Knudsen/ Change House/SPSA-1a	68/01	1	2,700	340	A/C (3) [47]	MB (8) [101]	P/D (2) [29]	C (8) [162]	A change house which had two locker facilities to separate possible contaminated clothing from personal clothing	HISTORICAL: Not available SAMPLING: DCPD, Cd, Cr, Cu, Pb, Zn
317	Vehicle Maintenance/ Storage/Offices/SPSA-1a	42/01	1	7,600	450	A/C [90]	AB (0 04) [45]	P/D [2] CC (6)	C (6) [313]	The building was utilized as a plant maintenance and electric shop; transportation motor pool shop, and research workshop for a new chemical process (chemical information unavailable in Task 24)	HISTORICAL: Other historically associated chemicals not available SAMPLING: DUST - Cd, Cr, Cu, Pb, Zn, As
317A	Pipe Shop/Grease Pit/Storage/SPSA-1a	43/01	0	48	48	NP	NP	NP	C (6) [48]	No prior chemical use reported	HISTORICAL: None
318	Remediation Use Structure	NOTE Built since 1986, additional information available from PMRMA									

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ble 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³)				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
319	Flammable Material Storage/SPSA-1a	45/01	1	110	52	C (11) [14]	PW (12) MB (8) [15]	NP	C (6) [23]	The building stored M108 bomb fuzes, flammable materials, and various hazardous materials CAIS, crystallized picric acid, two M1A1 chlorine cylinders, and two cans of unidentified chemical agent were reported to be stored in warehouse	HISTORICAL Chemical agent³, chlorine, flammable material, hazardous material, fuzes, picric acid, CAIS

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able 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
321†	Boiler Plant/Central Gas/SPSA-3e	42/02	3	42,000	5,318	C (6) [378]	ST (12) [1,010]	C/WD (6) [79]	6 (12) [1,374]	The building contained a natural gas line and used coal. Shell installed fuel oil pumps, oil heaters, and two fuel oil tanks in building. In 1969 a test burning of bicycloheptadiene bottoms mixed with fuel oil was possibly carried to building. In 1974 the building was used to determine the feasibility of substituting coal for No. 6 fuel oil and natural gas for boiler fuel.	HISTORICAL: Bicycloheptadiene, coal, fluoranthene, fuel oil, oil, methyl naphthalene, natural gas, No. 6 fuel oil, phenanthrene, pyrene SAMPLING: Dust: Arsenic, cadmium, chromium, copper, lead, zinc Surficial Soil (0 - 2 in): NSC Surficial Soil (0 - 2 ft): Aldrin, arsenic, atrazine, cadmium, chlordane, chlorophenylmethyl sulfide, chlorophenylmethyl sulfone, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, dieldrin, endrin, fluoranthene, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc Subsurface Soil: (5 - 20 ft) methylene chloride, m-xylenes, xylenes Groundwater: Carbon tetrachloride, chloroform, ethylbenzene, tetrachloroethylene, toluene, trichloroethylene, xylenes, 1,2-dichloroethylenes Air: Benzene, carbon tetrachloride, chloroform, toluene, copper, ethylbenzene, methylene chloride, tetrachloroethylene, xylenes Dust/Vacuum: Arsenic, cadmium, chromium, copper, lead, zinc, toluene, benzene, mercury, thiodiglycol, methylisobutyl ketone, xylenes Dust/Wipe: Zinc, chromium, copper, lead

NOTE: A symbol and acronym list is provided on the last page of this table

ble 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTI-MATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
321C†	Pumphouse/SPSA-3e	51/02	1B	300	34	A/C (2) [5]	WD (3) [4]	NP	C (8) [25]	Tanks of natural gas and fuel oil were stored in the pumphouse as part of the standby fuel oil system	HISTORICAL Fuel oil, natural gas SAMPLING Surficial Soil (0 -2 in) NSC Surficial Soil (0 - 2 ft) Aldrin, arsenic, atrazine, cadmium, chlordane, chlorophenylmethyl sulfide, chlorophenylmethyl sulfone, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, dieldrin, endrin, fluoranthene, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc Subsurface Soil (5 - 20 ft) methylene chloride, m xylenes, xylenes

TE: A symbol and acronym list is provided on the last page of this table

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3. Inventory List of Rocky Mountain Arsenal Structures.

NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
21D†	Fuel Oil Pumphouse/SPSA-3e	42/02	1	160	32	WD (2) [4]	WD (1) [4]	NP	C (8) [23]	The building was used as a pumphouse for fuel oil	HISTORICAL: Fluoranthene, fuel oil, methyl naphthalene, phenanthrene, pyrene SAMPLING Surficial Soil (0 - 2 in): NSC *Surficial Soil (0 - 2 ft)*: *Aldrin, arsenic, cadmium,* chlordane, chlorophenylmethyl sulfide, chlorophenylmethyl sulfone, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, dieldrin, endrin, fluoranthene, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc *Subsurface Soil* *(5 - 20 ft) methylene chloride,* m-xylenes, xylenes Groundwater: Benzene, carbon tetrachloride, chloroform, ethylbenzene, tetrachloroethylene, toluene, trichloroethylene, xylenes, 1,2-dichloroethylenes
322	Coal Sampling/SPSA-3e	43/02	1	170	30	A/C [3]	AB [4]	NP	C (6) [23]	No prior chemical use reported	HISTORICAL: None
322A	Tractor Storage Shed/ SPSA-3e	42/02	1	190	34	A/C [4]	PW FB [4]	NP	C (3) [26]	No prior chemical use reported	HISTORICAL: None
323	Ash (Coal) Storage Silo-Hopper/SPSA-3e	42/02	2	1,200	340	C [48]	ST [110]	NP	C (18) [179]	No prior chemical use reported	HISTORICAL: None
324	Coal Hopper/SPSA-3e	43/02	0	6	6	NP	WD (2) [6]	NP	NP	No prior chemical use reported	HISTORICAL: None

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le 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION / STUDY AREA - Subarea	YEAR BUILT[a] MAP SECTION[a]	NO. OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd^3)	ESTIMATED TOTAL cmw[a] (yd^3)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[a,b]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
325	Electrical Power Plant/ SPSA-3a	42/02	3B	16,000	2,900	C (6) [174]	ST (8) [781]	CC (24) [403] BR (8) [135]	C (12) [1,377]	No prior chemical use reported	HISTORICAL None
326	Power Plant Pump house/SPSA-12a	42/02	1	2,700	670	WD [4]	ST (8) [2,7]	CC (12)	C (18) [640]	The building was constructed to provide a source of cooling water to the South Plants area	HISTORICAL None SAMPLING Liquid - Calcium, magnesium, potassium, sodium, [illegible] nitrate, nontarget compounds Dust - Chlorophenylmethyl sulfone, dieldrin, Cd, Cr, Cu, Pb, Zn, As Structure Matrices[c] - TCLP Ba, Cr, chloroform, atrazine, CL6CP, CPMSO, D9CP, Hg, methylene chloride, methylethyl ketone, benzene, methylisobutyl ketone, CPeMSO2 Total Waste Methods Cr, dieldrin, Hg, trichloroethene
327	Cafeteria/SPSA-4b	NA/02	0	15	29	NP	NP	NP	C (3) [19]	No prior chemical use reported	HISTORICAL None

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ble 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³] ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
328	Goop Mixing and Filling Building/SPSA-4b	45/02	2	7,000	2,200	C (6) [233]	BR (8) PW (12) [154]	BR (8) [226]	C (12) [1,353]	The building acted as the ?T1 mixing and filling building for M74 bombs which used goop (impure magnesium dust protected from rapid oxidation by an oil asphalt mixture), coarse magnesium metals, dried ground sodium nitrate, gasoline, phenol petroleum oil extract, and isobutyl methacrylate polymer. Also was used for the conversion of M1 thickener and napalm as a M2 thickener (a mixture of santocel and napalm). A drawing indicates that the building was also to be used for manufacturing micrograval bombs containing the explosive cyclonite and as a Pb azide filling operation of 100 lb. bombs with white phosphorus (no information was located to substantiate that these operation transpired). Although mentioned, specific use or occurrence of chemical agents and benzene are not described in Task 24.	HISTORICAL: Chemical agents* magnesium dust, goop, Pb azide, cyclonite, white phosphorus, napalm, santocel, benzene, oil asphalt mixture, magnesium metals, sodium nitrate, gasoline, phenol petroleum oil extract, isobutyl methacrylate polymer
328A	Change House/SPSA-4b	53/02	1	49	15	WD [1]	MB (6) [11]	NP	C (6) [1]	No prior chemical use reported.	HISTORICAL: None
329	Gasoline Pump Building/SPSA-4b	45/02	1	160	44	AC [1]	MB (8) [20]	NP	C (6) [21]	The building stored and pumped gasoline into the M74 production facility. The thickening agents (magnesium dust paste) and benzene were mixed with goop in the building.	HISTORICAL: Gasoline, benzene, magnesium paste, goop, thickening agents

* A symbol and acronym list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION/ STUDY AREA Subarea	YEAR BUILT[c] MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (yd³)	ESTIMATED TOTAL [illegible][f] (yd³)	STRUCTURE MATRICES[g] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³] ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[h]	POTENTIAL ASSOCIATED CHEMICALS[i]
331†	Phosgene Filling Warehouse/SPSA-4b	42 02	1	7,300	960	WD (2) [166]	WD-S (4) [26]	WD (1) [2]	C (6) [709]	This warehouse was used to steam-clean and refurbish Shrike and Sparrow missile containers and to fill bombs with phosgene, during which time leakage of phosgene was reported frequently. This warehouse was also used for the processing of M70 Mustard (HD) filled bombs. The liquid waste from the filling process consisted mainly of spent sodium hydroxide (caustic), naphtha, paint thinner, and some oils. The solid waste consisted of spent coke and caustic sludge. Naphtha was used to wash the outside of bomb casings which were then painted and stenciled. In 1952, heresite coating of M70 HD-filled bombs was also conducted. The warehouse was also used for PX storage and U.S. Geological Survey (USGS) core samples. Later the building was used as a general purpose warehouse with precise storage in building unavailable in Task 24.	HISTORICAL: Core sample, heresite coating, hydroxide sludge, HD breakdown products (chloroacetic acid, dithiane, 1,4-oxathiane, thiodiglycol), naphtha, oil, paint, paint thinner, phosgene, spent sodium hydroxide, sodium spent coke, other historically associated chemicals not available SAMPLING Surficial Soil (0 - 2 in): NSC Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chlordane, chlorophenylmethyl sulfone, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, dieldrin, endrin, fluoranthene, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc Subsurface Soil: (0 - 2 ft) tetrachloroethylene, (2 - 5 ft) methylene chloride, (5 - 20 ft) 1,1,2-trichloroethane, methylene chloride, trichloroethylene, (> 20 ft) carbon tetrachloride, tetrachloroethylene, 1,1,1-trichloroethane Groundwater: Benzene, carbon tetrachloride, chloroform, m-xylene, tetrachloroethylene, toluene, trichloroethylene, xylenes, 1,2-dichloroethylenes Air: Chromium, zinc, mercury, arsenic, copper, benzene, carbon tetrachloride, ethylbenzene, tetrachloroethylene, toluene, xylenes, chloroform Dust/Vacuum: Arsenic, cadmium, chromium, copper, lead, zinc, mercury

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION / STUDY AREA (subarea)	YEAR BUILT* MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL AREA* (yd²)	STRUCTURE MATRICES* (ESTIMATED MATRIX THICKNESS IN INCHES) AND VOLUME IN yd³: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
3329	Warehouse SPSA 4b	42-02	1	7,700	981	WD (12) [374]	WM (4) [119]	WD (2) [75]	C (8) [712]	This warehouse was part of the phosgene filling plant and was used to store and conduct final leakage testing on phosgene filled bombs. Shrike and Sarcine missile containers were steam-cleaned and refurbished. This warehouse was also used for storage of polychlorinated biphenyls (PCB) oil in 55 gallon drums. Fitzsimons Army Medical Center and Shrum and Rodgers used the building for storage with precise content unavailable in Task 24. The USGS used the building for core sample storage.	HISTORICAL: Core samples, PCB oil, phosgene, other historically associated chemicals not available SAMPLING Surficial Soil (0 - 2 in): NSC Surficial Soil (0 - 2 ft): Aldrin, arsenic, atrazine, chlordane, chlorophenylmethyl sulfone, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, dieldrin, endrin, fluoranthene, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc Subsurface Soil: (0 -2 ft) tetrachloroethylene, (2 - 5 ft) methylene chloride, (5 - 20 ft) methylene chloride, 1,1,2 trichloroethane, trichloroethylene, (>20 ft) carbon tetrachloride, 1,1,1 trichloroethane, tetrachloroethylene Groundwater: Benzene, carbon tetrachloride, chloroform, tetrachloroethylene, trichloroethylene

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION / STUDY AREA Subarea	YEAR BUILT[a] MAP MX TRONS[a]	NO. OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd^3)	ESTIMATED TOTAL [illegible][a] (yd^3)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND VOLUME IN (yd^3)				HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[b]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
333f	Warehouse/SPSA-4b	42'02	1	7 100	942	A/C (2) [166]	WD CM (4) [24]	CM (0 364) [1]	C (8) [709]	The warehouse was identified as the Bomb Assembly Branch facility which was used to rework M69 white phosphorous bombs. The building served as a processing and storage warehouse for isobutylmethacrylate and a thickening agent for the gasoline used in M74 white phosphorous incendiary bombs. Drums that contained aldrin, azodrin, DBCP, bidrin, vapona, and other pesticides were also stored in the warehouse. Fitzsimons Medical Center used building for storage of medical supplies with precise contents unavailable in Task 24.	HISTORICAL: Aldrin, azodrin, bidrin, DBCP, gasoline, isobutylmethacrylate, pesticides, thickening agent, vapona, white phosphorous, other historically associated chemicals not available. SAMPLING Dust: Aldrin, cadmium, chlorophenyl methyl sulfone, chromium, dieldrin, endrin, isodrin, lead, zinc. Surficial Soil (0 - 2 in): NSC. Surficial Soil (0 - 2 ft): Aldrin, arsenic, chlordane, chlorophenylmethyl sulfone, chlorophenylmethyl sulfoxide, DDE, DDT, DBCP, dieldrin, endrin, fluoranthene, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc. Subsurface Soil: (0 - 2 ft) tetrachloroethylene, (2 - 5 ft) methylene chloride, (5 - 20 ft) methylene chloride, 1,1,2-trichloromethane, trichloroethylene, (>20 ft) 1,1,1-trichloroethane. Groundwater: Benzene, carbon tetrachloride, chloroform, tetrachloroethylene, trichloroethylene.

NOTE: A symbol and explanation [illegible]

[illegible]

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION / STUDY AREA Subarea	YEAR BUILT* MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd^3)	ESTIMATED TOTAL [illegible]* (yd^3)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd^3]				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
334†	Warehouse/SPSA 4b	42 02	1	7,100	942	AC (12) [166]	WD/CM (4) [24]	CM (0.064) [1]	C (8) [709]	The warehouse was identified as the Bomb Assembly Branch facility which was used to rework M69 white phosphorous bombs; precise contents in warehouse unavailable in Task 24	HISTORICAL: No historically associated chemicals SAMPLING: Surficial Soils (0 - 2 in): Aldrin, chlordane, DDE, dieldrin, endrin, isodrin Surficial Soils (0 - 2 ft): Aldrin, arsenic, atrazine, cadmium, chlordane, chlorophenylmethyl sulfone, chlorophenylmethyl sulfide, chromium, copper, DDE, DDT, DBCP, dieldrin, endrin, isodrin, lead, mercury, zinc Groundwater: Carbon tetrachloride, chloroform, *ethylbenzene, tetrachloroethylene*
335†	Warehouse/SPSA 4b	42 02	1	7,100	942	A/C (2) [166]	WD/CM (4) [24]	CM (0.064) [1]	C (8) [709]	The warehouse was identified as the Bomb Assembly Branch warehouse used to rework M69 white phosphorous bombs, and for the storage and processing of M74 white phosphorous incendiary bombs. Drums of pesticides were stored in the warehouse. The building was also used to package chlorinated hydrocarbons including aldrin, dieldrin, DBCP, and endrin. A spill of DBCP 12.1EC occurred. Ambient air quality samples for DBCP had concentrations up to 17.6 parts per billion in 1977; subsequent improvements to the ventilation system reduced DBCP levels to 0.1 parts per billion. The building was also used for storage of unknown medical supplies by the Fitzsimons Medical Center	HISTORICAL: Aldrin, chlorinated hydrocarbons, DBCP, DBCP 12.1EC, dieldrin, endrin, pesticides, unknown medical supplies, vapona, white phosphorous SAMPLING: Dust: Aldrin, arsenic, cadmium, chromium, dieldrin, hexachlorocyclopentadiene, isodrin, lead, zinc Surficial Soils (0 - 2 ft): Aldrin, arsenic, atrazine, cadmium, chlordane, chlorophenylmethyl sulfide, chlorophenylmethyl sulfone, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, dieldrin, endrin, hexachlorocyclopentadiene, isodrin, lead, mercury, zinc Groundwater: Carbon tetrachloride, chloroform, ethylbenzene, tetrachloroethylene

NOTE: [illegible]

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able 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] STUDY AREA Subarea	YEAR BUILT[c]/ MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (yd^3)	ESTIMATED TOTAL AREA[g] (yd^2)	STRUCTURE MATRICES[h] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[i]	POTENTIAL ASSOCIATED CHEMICALS[j]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
336†	General Purpose Warehouse/SPSA-4b	42/02	1	7,100	942	A/C (2) [166]	WD/CM (4) [24]	CM (0.064) [1]	C (8) [709]	This warehouse was used to store empty drums and pesticides, including DBCP, aldrin, azodrin, bidrin, ciodrin, phosdrin, dibrom, and vapona. The building was used by Fitzsimons Medical Center for storage of unknown medical supplies.	HISTORICAL: Aldrin, azodrin, bidrin, chlorinated hydrocarbons, ciodrin, DBCP, dibrom, pesticides, phosdrin, unknown medical supplies, vapona SAMPLING: Dust: Cadmium, chromium, copper, lead, zinc Surficial Soil (0 - 2 ft): Aldrin, arsenic, atrazine, cadmium, chlordane, chlorophenylmethyl sulfide, chlorophenylmethyl sulfone, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, dieldrin, endrin, hexachlorocyclopentadiene, isodrin, lead, mercury, zinc
337	Locker Room/Change House/SPSA-4b	42/02	1	240	56	A/C [4]	ST (8) [25]	ST (4) [1]	C (8) [26]	Toilet facility, locker room, and change house for warehouse	HISTORICAL: None SAMPLING: Chlorophenylmethyl sulfone, dieldrin, Cd, Cr, Cu, Pb, Zn, As
338	Storage/SPSA-4b	45/02	1	15	12	AB	PW (12) MB (8') [6]	NP	C (6) [7]	The building stored M74 bomb parts and components such as fuzes, M142A1, and powder bags	HISTORICAL: Fuzes, M142A1, powder bags
339	Storage/SPSA-4b	45/02	1	15	14	AB	PW (12) MB (8) [6]	NP	C (6) [8]	A pyrotechnic incendiary plant magazine used for storage of black powder and primacord.	HISTORICAL: Primacord, black powder
340	Storage/SPSA-4b	45/02	1	15	14	AB	PW (12) MB (8) [6]	NP	C (6) [8]	The building stored primacord used in the production of M74 bombs	HISTORICAL: Primacord
341	Change House/SPSA-4b	42/02	1	7,300	1,000	A/C (1) [154]	PW (10) CM (0.5) [71]	NP	C (6) [787]	The building was utilized by the U.S. Post Office for metal container storage	HISTORICAL: None

NOTE: A symbol and acronym list is provided on the first page of this table.

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Rev. 07/15/93, 12:57pm

ble 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME * (yd³)	ESTIMATED TOTAL smv * (yd³)	STRUCTURE MATRICES * (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³] ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS *
341A†	Condensate Pump House/SPSA-4b	44/02	1	42	42	CM [0]	C [9]	CM [2]	C [3]	No prior chemical use reported	HISTORICAL: No historically associated chemicals SAMPLING: Surficial Soil (0 - 2 in): NSC Surficial Soil (0 - 2 ft): Aldrin, chlordane, chlorophenylmethyl sulfone, chromium, copper, D'·E, DDT, DBCP, DCPD, dieldrin, endrin, hexachlorocyclopentadiene, isodrin, lead, mercury, zinc Groundwater: Benzene, carbon tetrachloride, chloroform, chlorobenzene, tetrachloroethylene, trichloroethylene
341B	Sewage Lift Station - Covered Pit/SPSA 4b	44/02	1	42	6	NP	C (8) [5]	NP	C (6) [1]	No prior chemical use reported	HISTORICAL: None
342	Warehouse-M74 Incendiary Bomb Storage/SPSA-4b	42/02	1	7,900	1,000	A/C (1) [175]	CA (0 6) [49]	WD [63]	C (6) [747]	The building was used to rework M69 incendiary bombs (M13 cluster) and for storage of M74 bomb casings, tail cups, tail plugs, adapters, white phosphorus cups, and off-specification incendiary mixes. On November 11, 1944, an M69 bomb exploded causing several minor injuries. A trichloroethylene degreaser and recovery still used to degrease empty M74 casings was installed in 1952. The still recovered trichloroethylene from the oil solvent discharge of the degreaser and piped the solvent back to the degreaser for reuse. An estimated six gallons of trichloroethylene were lost during each 8 hour shift. Nontoxic, nonhazardous dry materials were stored in the building	HISTORICAL: White phosphorus cups, off-specification incendiary mixes, trichloroethylene degreaser, oil solvent, tail cups, adapters, tail plugs

TE A symbol and acronym list is provided on the last page of this table

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- 07/09/93 12:51pm

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[1]	STRUCTURE DESCRIPTION[2] / STUDY AREA - Subarea	YEAR BUILT[3] / MAP SECTION[4]	NO. OF LEVELS[5]	ESTIMATED TOTAL AIR VOLUME[6] (yd^3)	ESTIMATED TOTAL BRW[6] (yd^3)	STRUCTURE MATRICES[6] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[7]	POTENTIAL ASSOCIATED CHEMICALS[8]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
343	Manufacturing/ Preclustering Warehouse/SPSA-4b	42/02	1	8,600	1,000	A/C (1) [183]	CA (0.6) [40]	MB (8) [67]	C (6) [753]	The building was used for final assembling, preclustering, inspecting, painting, and installing fuzes and tail cups on the M74 and E48 bombs. Also used to paint and pack out 105mm white phosphorus shells. Specific use or occurrence of magnesium dust paste, oil-asphalt mixtures, and petroleum oil are not described in Task 24, but were probably used in the M74 and E48 bomb operations.	HISTORICAL: Fuzes, magnesium dust paste, oil-asphalt mixtures, petroleum oil extract, white phosphorus, paint, tailcups
343A	Flammable Materials Storage/SPSA-4b	45/02	1	87	29	C (6) [4]	MB (8) [16]	NP	C (8) [9]	A paint storage annex and flammable materials storehouse.	HISTORICAL: Paint, flammable materials
344	Manufacturing Assembly/ Warehouse/SPSA-4b	42/02	1	9,000	1,100	A/C (1) [213]	CA (0.6) [100]	NP	C (6) [834]	The building acted as part of the M74 White Phosphorus Bomb Plant which conducted the final clustering operations and drop testing. Paint booths were installed in the building. From at least 1971 to 1987, the building was used to store nonhazardous, nontoxic, nonmilitary materials.	HISTORICAL: White phosphorus, paint
345	Manufacturing Assembly/ Warehouse/SPSA-4b	42/02	1	7,900	1,000	A/C (1) [176]	CA (0.6) [96]	NP	C (6) [749]	The building was used for the final assembly of tail fins and release wires, packing, labelling, and palletizing M74 white phosphorus incendiary bombs, and painting and storing M31 cluster casings. Nonhazardous, nontoxic, nonmilitary materials were stored in the building.	HISTORICAL: White phosphorus, paint

NOTE: A symbol and acronym list is provided on the last page of this table.

ble 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[1]	STRUCTURE DESCRIPTION[1] / STUDY AREA - Subarea	YEAR BUILT[1] / MAP SECTION[2]	NO. OF LEVELS[2]	ESTIMATED TOTAL AIR VOLUME[2] (yd^3)	ESTIMATED TOTAL [illegible][2] (yd^3)	STRUCTURE MATRICES[2] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[2]	POTENTIAL ASSOCIATED CHEMICALS[2]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
346†	Warehouse/SPSA-4b	42/02	1	7,100	942	A/C (2) [166]	WD/CM (4) [24]	CM (0.064) [1]	C (8) [709]	The warehouse was used as part of M74 white phosphorous incendiary bomb plant, with precise contents stored unavailable in Task 24. It was also used to store bomb clusters, munition components and containers, unspecified salt drums, with precise contents unavailable in Task 24.	HISTORICAL: Unspecified salt drums, white phosphorous, other historically associated chemicals not available SAMPLING: Surficial Soil (0 - 2 in): Aldrin, dieldrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, atrazine, cadmium, chlordane, chlorophenylmethyl sulfone, chromium, copper, DDE, DDT, dieldrin, endrin, hexachlorocyclopentadiene, isodrin, lead, mercury, zinc Subsurface Soil: (2 - 5 ft) methylene chloride, methyl isobutyl ketone, (5 - 20 ft) tetrachloroethylene Groundwater: Chloroform

'E A symbol and acronym list is provided on the last page of this table.

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able 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] STUDY AREA - Subarea	YEAR BUILT[c]/ MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[e] (yd³)	ESTIMATED TOTAL SMV[e] (yd³)	STRUCTURE MATRICES[e] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[b]
347†	Warehouse/Chemical Storage/SPSA-4b	53/02	1	21,000	1,829	CA (0.25) [370]	MB/S (2) [244]	P/D (5) [87]	C (8) [993]	The east side of the warehouse was used for storage of methyl parathion. In the west side, aldrin, azodrin, dieldrin, endrin, bidrin, nudrin, and DBCP were stored. Organophosphates (insecticides) and oil drums were also stored in the warehouse. Approximately 60 gallons of DBCP were spilled on the south loading docks in 1973. In 1982, the walls, ceilings, and floors were washed, water samples were then analyzed for pesticides, all of which were below the detection limit.	HISTORICAL: Aldrin, azodrin, bidrin, DBCP, dieldrin, endrin, fluoranthene, methyl naphthalenes, methyl parathion, nudrin, oil, organophosphates, phenanthrene, pyrene SAMPLING: Dust: Aldrin, atrazine, cadmium, chlorophenylmethyl sulfone, chlorophenylmethyl sulfoxide, chromium, copper, dieldrin, lead, zinc Surficial Soil (0 - 2 ft): Aldrin, arsenic, atrazine, cadmium, chlordane, chlorophenylmethyl sulfide, chlorophenylmethyl sulfone, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, dieldrin, endrin, hexachlorocyclopentadiene, isodrin, lead, mercury, zinc Subsurface Soil: (2 - 5 ft) methyl isobutyl ketone, (5 - 20 ft) methylene chloride, tetrachloroethylene Groundwater: Carbon tetrachloride, chloroform, ethylbenzene, tetrachloroethylene
351	Change House/SPSA-4b	42/02	1	5,800	920	A/C (1) [75]	AB (0.07) [10]	FB (0.06) [91]	C (6) [744]	The building stored nontoxic, nonhazardous, military dry materials and equipment.	HISTORICAL: None

NOTE: A symbol and acronym list is provided on the last page of this table.

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STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³)				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
352	Open Storage/SPSA-4b	42/02	0	250	250	NP	NP	NP	C (4) [254]	The building was used to repair and recondition Chemical Warfare Service equipment; disassemble power driven decontaminating apparatus and smoke generators, and remove rust from tanks and white phosphorus igniter tubes. Building burned down and foundation was used for open storage of barrels, tanks, drums, containers, and equipment used in pesticide production by Nostrip Chemical Works. Chemicals used by Nostrip include tallow fatty acids, amida amine, tall oil, amino amine soap, rosin acids, hydrochloric acid, ethylene amines, alkylene amines, heterocyclic and aliphatic amines, Amine AL-7, aminoethylpiperazine process residue, and docyl alcohol bottoms. A spill of an oily substance thought to be a mixture of RPB and a cleaning agent, and a spill of an unspecified substance were reported in the building	HISTORICAL: Tallow fatty acids, amida amine, tall oil, amino amine soap, rosin acids, hydrochloric acid, ethylene amines, heterocyclic and aliphatic amines, alkylene amines, Amine AL-7, aminoethylpiperazine process residue, docyl alcohol bottoms, RPB, cleaning agent, white phosphorus, unspecified substance
352A	Quonset Storage/SPSA-4b	47/02	1	280	19	CM (0.06)	PW CM [0.06]	NP	C (4) [19]	The building was initially used for oil and grease, and possible acid storage. Later, leased to Nostrip Chemical Works and used as a storage house and office. Nostrip's production process reacted a long chain fatty acid, such as tall oil, with a short chain amine such as diethylenetriamine which produced an amido amine soap and waste water. A green liquid was observed coming from a tank east of the building, and discharge of material described as containing various amines, including aminoethylpiperazine, and Bromine 20 was also reported	HISTORICAL: Amines, aminoethylpiperazine, bromine 20, a long chain fatty acid, tall oil, short chain amine, diethylenetriamine, amido amine soap, waste water, oil, grease, acid, unspecified green liquid
353	Open Storage/SPSA-4b	42/02	0	760	760	NP	NP	NP	C (4) [761]	The building provided open storage of containers of process chemicals such as sulfuric acid	HISTORICAL: Sulfuric acid

*: A symbol and acronym list is provided on the last page of this table

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...e 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] STUDY AREA - Subarea	YEAR BUILT[c] MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (yd^3)	ESTIMATED TOTAL amv[g] (yd^3)	STRUCTURE MATRICES[h] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd^3]				HISTORICAL USE[i]	POTENTIAL ASSOCIATED CHEMICALS[j]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
354	Warehouse/SPSA-4b	42/02	1	7,500	960	A/C (1) [175]	CM (0.06) [41]	P/D [32]	C (6) [716]	The building was used to relnize approximately 8,000, 4.2 inch high explosive shells. Later used as a general purpose warehouse which may have stored raccine rngs for the GB area; other specific contents are not descnbed in Task 24.	HISTORICAL: Explosive matenal, raccine rngs, fuzes, other historically associated chemicals not available
355	Warehouse/SPSA-4b	42/02	1	7,900	1,000	A/C (1) [175]	CM (0.06) [295]	WD [83]	C (6) [473]	The building was initially used for storage with precise contents unavailable in Task 24. In 1984, stored 134 drums of silicon transformer liquid, 23 drums of chrome oxide or alumina catalyst, six drums of unidentified soil or mineral samples, and one drum of water.	HISTORICAL: Silicon transformer liquid, chrome oxide or alumina catalyst, other historically associated chemicals not available
356	Warehouse/SPSA-4b	42/02	1	7,500	1,000	A/C (1) [175]	CM (0.06) [295]	WD [83]	C (6) [473]	The building was used to repair and recondition *Chemical Warfare Service equipment*. Shell leased the building to store pesticides that were drummed in Building 427 (aldrin, pydrin, and DBCP); Building 451 (aldrin-EC, azodrin, bidrin, ciodrin, dibrom, DBCP, phosdrin, phosdrin-E, and vapona), and planavin, nudrin, empty drums, and *other packing matenal*. Also stored medical supplies, but precise information unavailable in Task 24.	HISTORICAL: Aldrin, pydrin, azodrin, nudrin, *medical supplies*, DBCP, aldrin- EC, bidrin, ciodrin, dibrom, phosdrin, vapona, phosdrine-E, planavin, herbicides (bladex, atrazine)[k], other associated chemicals not available SAMPLING: Dust - Aldrin, dieldrin, Cu, Pb, Zn
361†	Pnmary Electncal Substation/ SPSA	42/02	1	3,600	54	C (11) [13]	MD	NA	C (8) [14]	Possible high levels of PCBs in transformers were at one time suspected in the substation	HISTORICAL: PCB SAMPLING: Surficial Soil (0 - 2 in): Aldrin, DDE, DDT, dieldrin

†: A symbol and acronym list is provided on the last page of this table

le 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION / STUDY AREA - Subarea	YEAR BUILT[b] / MAP SECTION[c]	NO. OF LEVELS[d]	ESTIMATED TOTAL AIR VOLUME[e] (yd^3)	ESTIMATED TOTAL BRV[e] (yd^3)	STRUCTURE MATRICES[e] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[e]	POTENTIAL ASSOCIATED CHEMICALS[e]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
362†	Warehouse/SPSA-7c	53/02	1	44,000	3,941	CA/WD (2)[f] [502]	ME (3) [512]	C/CM (6) [255]	C (8) [1,708]	The warehouse was used as a support warehouse for the manufacturing of incendiary bombs, and the storage of M78 and M79 white phosphorous bombs. Production and testing of XM40 sandwich button bombs (consisting of potassium chlorate, red phosphorous, silica gel, magnesium oxide, and silica) was conducted. The east portion was used for the storage of Titan missiles, with precise contents unavailable in Task 24.	HISTORICAL: Magnesium oxide, potassium chlorate, red phosphorous, silica, silica gel, white phosphorous, other historically associated chemicals not available SAMPLING: Surficial Soil (0 - 2 in): Aldrin, dieldrin, endrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chlordane, chlorophenylmethyl sulfone, chromium, copper, DDE, DDT, dieldrin, endrin, hexachlorocyclopentadiene, isodrin, lead, mercury, zinc Subsurface Soil (2 - 5 ft) methylene chloride, (5 - 20 ft) methylene chloride, tetrachloroethylene Groundwater: Benzene, carbon tetrachloride, chloroform, chlorobenzene, tetrachloroethylene, 1,1 dichloroethane
364	Sewage Lift Station - southeast of 354/SPSA-4b	52/02	0	25	20	C (6)	C (15)	NP	C (6)	A lift station for the sanitary sewer system. No chemicals are suspected to have been used except those associated with routine pump maintenance such as lubricants.	HISTORICAL: Lubricants, sanitary sewage
365	Explosive Blending Building/SPSA-7c	67/02	1	1,500	480	CM (0.5) [264]	PW (8) CM (5) [62]	C (12) [99]	C (8) [59]	This building was utilized as a preparation building for the individual chemical components (red phosphorus, magnesium oxide, and potassium chlorate) of the pyrotechnic mixture used in sandwich button bombs. Also used as part of the M4 burster filling program.	HISTORICAL: Red phosphorus, magnesium oxide, potassium chlorate SAMPLING: Liquid - Chlorophenylmethyl sulfone, calcium, magnesium, potassium, sodium, Zn, nontarget compounds

A symbol and acronym list is provided on the last page of this table.

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3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd^3)	ESTIMATED TOTAL env* (yd^3)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME (yd^3)] ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
368	Swimming Pool and Filter House/Recreational Facility/ SSA	55/02	1	540	610	A/C	MC	NA	C	Chlorine was used for the chlorination process and soda ash was used in the pool.	HISTORICAL: Chlorine, soda ash SAMPLING: Surficial Soil (0 - 2 in): Aldrin, DDE, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft): Aldrin, chlordane, copper, DDE, DDT, DBCP, dieldrin, endrin, hexachlorocyclopentadiene, isodrin, lead, mercury, zinc
369†	Lower Derby Valve Gate and Concrete Vault/SSA-1c	48/01	0B	45	20	NP	C (8) [17]	NP	NP	As part of the water system, sulfate alumina was added to maintain an acceptable clarification level	HISTORICAL: Sulfate alumina SAMPLING Surficial Soil (0 - 2 in): Aldrin, DDT, dieldrin, endrin Surficial Soil (0 - 2 ft): Aldrin, chromium, copper, DDE, DDT, DBCP, dieldrin, endrin, hexachlorocyclopentadiene, isodrin, lead, mercury
370	Remediation Use Structure	NOTE Built since 1986, additional information available from PMRMA									
371†	Water Pumping Station/ SSA-1e	42/02	1B	1,800	816	A/C (2) [19]	ST (6) [48]	BR (6) [11]	C (8) [677]	The station was used for pumping both process and potable water in which chlorine was added to both water systems. Sulfate alumina was also added to the potable water system. Organochlorine pesticides are known to have been present in process water derived from the lakes system. A leak occurred in a process water line in 1957	HISTORICAL: Aldrin, chlordane, chlorine, DDE, DDT, dieldrin, endrin, isodrin, sulfate alumina SAMPLING: Surficial Soil (0 - 2 in): Aldrin, DDE, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft): Aldrin, copper, DBCP, DDE, DDT, dieldrin, endrin, isodrin, lead, mercury, zinc

* A symbol and acronym list is provided on the last page of this table

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3. Inventory List of Rocky Mountain Arsenal Structures.

	STRUCTURE DESCRIPTION[1] STUDY AREA - Subarea	YEAR BUILT[2] MAP SECTION[3]	NO. OF LEVELS[4]	ESTIMATED TOTAL AIR VOLUME[5] (yd^3)	ESTIMATED TOTAL [illegible][5] (yd^3)	STRUCTURE MATRICES[6] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd^3]				HISTORICAL USE[7]	POTENTIAL ASSOCIATED MISCALS[8]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
.72	Million Gallon Reservoir (Potable) Water Supply/SSA	42/02	1	12,000	530	WD [180]	WD [24]	NA	C (12) [298]	Chlorine was added to the potable water system. The reservoir acted as a back-up supply for the process and potable water system.	HISTORICAL Chlorine SAMPLING Surficial Soil (0 - 2 in) Aldrin, DDE, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft) Aldrin, chlordane, copper, DDE, DDT, DBCP, dieldrin, endrin, hexachlorocyclopentadiene, isodrin, lead, mercury, zinc
2A1	Chlorinating Station/SSA	56/02	1	140	56	CM	MB	NA	C [30]	Chlorine (hypochlorite solution) was in the potable water chlorination station.	HISTORICAL Chlorine (hypochlorite solution) SAMPLING Surficial Soil (0 - 2 ft) Aldrin, DDE, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft) Aldrin, chlordane, copper, DDE, DDT, DBCP, dieldrin, endrin, hexachlorocyclopentadiene, isodrin, lead, mercury, zinc
73	Officers' Quarters USFWS/SSA	NA/02	1	130	130	A/C	MB	NA	C	No prior chemical use reported.	HISTORICAL No historically associated chemicals SAMPLING Surficial Soil (0 - 2 in) Aldrin, DDE, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft) Aldrin, chlordane, copper, DDE, DDT, dieldrin, endrin, hexachlorocyclopentadiene, isodrin, lead, mercury, zinc

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[1]	STRUCTURE DESCRIPTION / STUDY AREA (Subarea)	YEAR BUILT[2] / MAP SECTION[3]	NO. OF LEVELS[4]	ESTIMATED TOTAL AIR VOLUME[5] (yd^3)	ESTIMATED TOTAL SURFACE[5] (yd^2)	STRUCTURE MATRICES[6] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[7]	POTENTIAL ASSOCIATED CHEMICALS[8]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
373B	Garage to 373/SSA	NA/02	1	290	42	A/C (6) [7]	ST (8) [27]	NP	C (4) [16]	No prior chemical use reported	HISTORICAL: None SAMPLING Structure Matrices[9]: TCLP: Ba, Zn, Hg
374	Water Treatment Plant - west of Lower Derby Lake/ SSA	42/02	1	110	116	NP	NP	NP	C (6) [30]	A water treatment plant for adding aluminum sulfate to lake water, however, treatment operation was never necessary and aluminum sulfate was removed	HISTORICAL: Aluminum sulfate
378†	Chlorinating Station/Well post, south of WSA	42/02	1	61	16	A/C (2)	WD	NA	C [9]	At this station, chlorine (hypochlorite solution) was injected into the main water pipelines to maintain proper clarification levels	HISTORICAL: Chlorine (hypochlorite solution) SAMPLING Surficial Soil (0 - 2 in): NSC
379†	Chlorinating Station - Number 2/WSA	42/03	1	73	17	A/C [1.2]	WD [2.3]	NP	C [9.7]	Chlorine and ammonia were used for potable water treatment at this station	HISTORICAL: Ammonia, chlorine SAMPLING: Surficial Soil (0 - 2 in): DDT, dieldrin, endrin Surficial Soil (0 - 2 ft): Aldrin, DDT, DBCP, dieldrin, endrin Subsurface Soil: (2 - 5 ft, 5 - 20 ft, > 20 ft) *methylene chloride*
382	Chlorinating Station/WSA	42/03	0	14	7	C/C, [2]	C (8) [5]	NP	NP	A chlorinating station which used chlorine and ammonia for potable water treatment	HISTORICAL: Chlorine, ammonia
383	Community Club / Visitor Center/WSA	74/02	1	2,700	310	A/C, S [9†]	SM FB (0.33) [4†]	SM FB (0.33) [20]	C (4) [92]	No prior chemical use reported	HISTORICAL: No historically associated chemicals *Surficial Soil (0 - 2 ft):* *Aldrin, chlordane, copper,* DDE, DDT, dieldrin, endrin, hexachlorocyclopentadiene, isodrin, lead, mercury, zinc

NOTE: A section and accompanying text is provided for each structure listed.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION/ STUDY AREA (Subarea	YEAR BUILT/ MAP SECTION[a]	NO. OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (ft^3)	ESTIMATED TOTAL [a] (ft^3)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[b]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
385†	Water Pump Station - Well Number 1/WSA	54/04	1	37	14	AC [1.0]	C [8.5]		C [3.5]	Used as a pump and control house for process water system Well 1	HISTORICAL: Unknown if water from well was contaminated SAMPLING Surficial Soil (0 - 2 in): DDT, dieldrin, isodrin Surficial Soil (0 - 2 ft): DDT, dieldrin, hexachlorocyclopentadiene, isodrin, lead, zinc
386†	Water Pump Station - Well Number 2/WSA	54/04	1	37	14	AC (2) [1]	C (4) [9]	NP	C (8) [4]	Used as a pump and control house for process water system Well 2	HISTORICAL: Unknown if water from well was contaminated SAMPLING Surficial Soil (0 - 2 in): DDT, dieldrin, isodrin Surficial Soil (0 - 2 ft): DDT, dieldrin, hexachlorocyclopentadiene, isodrin, lead, zinc
387†	Water Pump Station - Well Number 3/WSA	56/04	1	37	14	AC (2) [1]	C (8) [9]	NP	C (8) [4]	Used as a pump and control house for process water system Well 3	HISTORICAL: Unknown if water from well was contaminated SAMPLING Surficial Soil (0 - 2 in): Dieldrin Surficial Soil (0 - 2 ft): Dieldrin, hexachlorocyclopentadiene
391	Sewage Disposal and Treatment Plant NCSA 6b	42/24	1	470	61	CM (0.05) [0.1]	FW (8) CM (0.05) [0.4]	NP	C (8) [61]	Sanitary sewage treatment plant where plant effluent was chlorinated prior to discharge into First Creek during 1943. The plant was discharging DBCP into First Creek in 1977. In 1978, a skid mounted carbon filtration unit was installed to remove contaminants	HISTORICAL: DBCP, chlorine, carbon, sanitary sewage

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL [illegible]* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
392†	Sewage Lift Station - Number 2/NCSA (Sanitary Sewer System)	42/34	0B	130	46	C (8) [6]	BR (12) [27]	NP	C (12) [10]	The station received sewage from the temporary administration area	HISTORICAL: Sewage SAMPLING: Surficial Soil (0 - 2 in): NSC Surficial Soil (0 - 2 ft): Copper, lead, mercury, zinc
393†	Sewage Lift Station - Number 3/WSA-7b	42/34	0B	130	46	C (8) [6]	BR (12) [27]	NP	C (12) [10]	The station received sewage from Rose Hill and the warehouse area	HISTORICAL: Sewage SAMPLING Surficial Soil (0 - 2 in): Dieldrin Surficial Soil (0 - 2 ft): Copper, dieldrin, mercury, zinc
394	West Gate Sewage Treatment Plant/WSA	42/33	0	1	3	C (6) [1]	NA	NP	C (6)	Septic tank for west gate area	HISTORICAL: Sanitary sewage
395	Toxic Yard Sewage Plant - northwest of 667/BESA	42/06	0	16	7	WD [1]	BR (8) [5]	NP	C (4) [1]	Septic tank and drain field associated with the toxic yard treatment plant	HISTORICAL: Sanitary sewage
409	Condensate Pumphouse/ SPSA 1a	45/01	1	40	3	CM (0.2)	CM (0.2)	NP	C (6) [1]	No prior chemical use reported	HISTORICAL: None
411	Sulfur Dichloride and Sulfur Monochloride Manufacturing/Storage/ SPSA 1a	42/01	1	11,000	1,500	AC [80]	PW (18) AB [105]	CC (24)	C (9) [1,288]	The building was used as a sulfur monochloride and sulfur dichloride manufacturing and sulfur storage facility. Produced HD. As trichloride, and thionyl chloride used sulfur, chlorine gas, and caustic chemicals in operations. Mesa Chemical Company produced resorcinol (a benzene derivative), sulfonated detergents, resins, and plastics. The resorcinol waste steam consisting of a sodium sulfate, sodium sulfite solution, and smaller percentages of quinones, hydroxyquinones, and phenolic and polymer residues was stored in a 500 gallon sump	HISTORICAL: Sulfur monochloride, sulfur dichloride, sulfur, chlorine, HD breakdown products (chloroacetic acid, dithiane, 1,4 oxathiane, thiodiglycol), As trichloride, resorcinol (benzene derivative) sulfonated detergents, sodium sulfate, sodium sulfite, quinones, resins, hydroxyquinones, phenolic and polymer residues, thionyl chloride, plastics, sodium hydroxide

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³) ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
411A	Steam Meter House/SPSA 1a	47/01	1	24	5	WD (4) [1]	WD (4) [4]	NP	NP	A steam flow metering facility with several Hg leaks due to steam pressure surges on metering instrumentation	HISTORICAL: Hg SAMPLING: Dust - Cd, Cr, Cu, Pb, Zn
411B	Steam Meter House/SPSA 1a	47/01	1	19	4	WD (4) [1]	WD (4) [4]	NP	NP	A steam flow metering facility with several Hg leaks due to steam pressure surges on metering instrumentation	HISTORICAL: Hg SAMPLING: Dust - Dieldrin, Cd, Cr, Cu, Pb, Zn, As, Hg
412	Mustard Filling/ Manufacturing/Storage/ SPSA 1a	42/01	18	9,000	1,600	A/C [76]	PW (12) AB (0.05) [63]	NP	C (6) [1,487]	HD manufacturing, filling, and storage building which used ethylene and sulfur monochloride. Building periodically cleaned with chlorinated lime and water. Production residues consisting of HD, sulfur monochloride, chlorine, and sulfur were treated with chlorinated carbon tetrachloride, caustic soda, chlorine and bleach treatment. Effluents were drained to Basin A through the chemical sewer. Storage tank containing sludge with free HD were decontaminated with carbon tetrachloride, fuel oil saturated with chlorine, caustic, and chlorinated water. No major leaks or spills of HD are reported. Later production of dichloro occurred which produced toxic vapors containing hydrogen chloride. Following production, equipment was decontaminated with water and sodium bicarbonate. Hydrochloric acid was found to be corroding pipes and causing loss of metal. Building was renovated for production of Super Tropical Bleach, but there is no evidence that the production occurred.	HISTORICAL: HD breakdown products (chloroacetic acid, dithiane, 1,4 oxathiane, thiodiglycol), chlorine, ethylene, sulfur, sulfur monochloride, chlorinated carbon tetrachloride, sodium hydroxide, bleach, fuel oil, dichloro, hydrochloric acid, chlorine, hydrogen chloride, sodium bicarbonate, chlorinated lime, sodium hydroxide soda, carbon tetrachloride, chlorinated water SAMPLING Liquid - Bicycloheptadiene, chloroform, methylene chloride, chlorophenylmethyl sulfone

NOTE: A symbol and acronym list is provided on the first page of this table.

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le 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL env* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³) ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
413	White Phosphorus/ Sulfur Monochloride Storage/SPSA-1a	42/01	1	3,200	660	S [14]	C (8)	NP	C [646]	The building was used to store white phosphorus in the storage tank bottom covered by a blanket of "phossy water" (water that was in contact with elemental phosphorus). Colorado Fuel and Iron leased the building and requested permission to install a sulfuric supply line (further details are not found in Task 24). In 1950, a heavy, dirty residue composed of organic materials had built up on the internal pipe. Shell rectified the problem. In 1951, white phosphorus cup filling operations were resumed. Approximately 16,000 *gallons of an aldrin and benzene solution were* spilled west of the building although historical data do not indicate the proximity of the spill to the building. Shell excavated the solidified aldrin. Although mentioned, specific use or occurrence of sodium monochloride is not described in Task 24	<u>HISTORICAL</u>: White phosphorus, sulfuric acid, sodium monochloride, phossy water, heavy dirty residue composed of organic materials, phosphorus
414	Dichloride/Mustard Scrubber Unit/SPSA-1a	42/01	0	79	79	NP	NP	NP	C (9) [79]	HD vent gas scrubber units that neutralized all vent gas wastes resulting from normal HD operations and noncondensable vent gases from decontamination activities in Building 416. The following chemicals² occurred in Building 416: HD, sodium hydroxide, chlorine, ethylene, sulfur, sulfur monochloride, chlorinated carbon tetrachloride, bleach, fuel oil, and hydrochloric acid. Process vent gases passed through coke-packed scrubber. Later, the building was used in production of dichloro, in which vent gases *consisted primarily of hydrochloric acid and* solvents. Following production, equipment was decontaminated with water and sodium bicarbonate. Although mentioned, chemical use of methylene chloride was not described in Task 24	<u>HISTORICAL²</u>: HD, coke, sodium hydroxide, chlorine, ethylene, sulfur, sulfur monochloride, chlorinated carbon tetrachloride, bleach, fuel oil, hydrochloric acid, methylene chloride, dichloro, dichloro solvents, HD vent gas wastes, dichloro vent gases

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able 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL SMV* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³) ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
415	Caustic Make-up Tank/ SPSA-1a	42/01	0	79	79	NP	NP	NP	C (9)	The building was used as a caustic make-up tank which made and supplied caustic for the HD manufacturing plant (maintained a minimum of 1,500 gallon caustic reserve in tank).	HISTORICAL: Sodium hydroxide
416	Mustard/Dichloride Disposal Reactor/SPSA-1a	42/01	0	79	79	NP	NP	NP	C (9)	HD decontamination reactor for the HD disposal facility was used to neutralize waste resulting from HD manufacturing operations, including off-specification HD lots, runaway HD production reactions, and decontamination washes from Building 412. Equipment considered contaminated by production residues composed of HD, sulfur monochloride, sulfur, and chlorine where neutralized by using chlorinated carbon tetrachloride washes, chlorine caustic soda flushes, bleach, and water. Sludge containing free standing HD was neutralized by a carbon tetrachloride, fuel oil saturated with chlorine, and caustic. Although Building 416 is pictured as a part of the dicloro production unit, detailed information regarding reactor's activities is not described in Task 24. It is also uncertain if the building was used for production of Super Tropical Bleach.	HISTORICAL[1]: HD, sodium hydroxide, sulfur monochloride, chlorine, dichloro, bleach, chlorinated carbon tetrachloride, fuel oil, sulfur, chlorine, sodium hydroxide soda, HD operation waste, HD breakdown products (chloracetic acid, dithiane, 1,4-oxathiane, thiodiglycol), carbon tetrachloride

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STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³)				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
417	Mustard/Dichloride Decon Pit/SPSA 1a	42/01	0	79	79	NP	NP	NP	C (9)	HD decontamination pit was used to neutralize waste from HD manufacturing operations with a caustic solution. Effluent neutralized in pit included: spent caustic from scrubber reservoir, resultant effluent from neutralized off-specification HD batches and runaway production reactions production residues consisting of caustic and bleach residues, HD, fuel oil, ethylene, sulfur monochloride, chlorine, sulfur, chlorinated carbon tetrachloride, and caustic chlorine treatment; reactor resultant vent gases, and disposal washes. The specific chemical composition of resulting effluents that entered and exited the decontamination pit is unavailible in Task 24. Several sources assert that HD contaminated effluents also entered the pit. Pit identified as part of the dichloro unit, but specific information regarding operations was not reported in Task 24. Following operations, production equipment was decontaminated with water and sodium bicarbonate flushes.	HISTORICAL[7]: HD breakdown products (chloracetic acid, dithiane, 1,4-oxathiane, thiodiglycol), sodium hydroxide, ethylene, dichloro, bleach, sulfur monochloride, chlorine, sulfur, sodium bicarbonate, chlorinated carbon tetrachloride, fuel oil, HD operation wastes, caustic, vent gases, caustic chlorine

NOTE: A symbol and acronym list is provided on the last page of this table.

ble 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] STUDY AREA - Subarea	YEAR BUILT[c]/ MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[e] (yd^3)	ESTIMATED TOTAL emv[e] (yd^3)	STRUCTURE MATRICES[e] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[b]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
422	Mustard Manufacturing/ Aldrin Production/SPSA-1a	42/01	1B	17,000	1,600	A/C (1) [54]	PW (12) C (36) [43]	NP	C (6) [1,513]	HD manufacturing facility which housed equipment for HD manufacture, storage, and filling. Ethylene and sulfur monochloride were used to produce HD. Internal maintenance consisted of decontamination of residues of HD, sulfur monochloride, chlorine, and sulfur by a wash of chlorinated carbon tetrachloride and caustic chlorine treatment. In 1950, manufacture of aldrin and unidentified raw materials, pydrin, and DBCP-EC occurred. In the building, a spill of approximately 1,500 gallons of aldrin-benzene occurred which caused an explosion. Shell indicated that a basement sump collected the resulting aldrin-benzene, bicycloheptadiene, and hexachlorocyclopentadiene mixture, and pumped it to the waste ditch. A leak in the spent acid line spilled 100 gallons west of building.	HISTORICAL: HD breakdown products (chloroacetic acid, dithiane, 1,4-oxathiane, thiodiglycol), sulfur, chlorine, ethylene, sulfur monochloride, aldrin, chlorinated carbon tetrachloride, pydrin, DBCP-EC, benzene, bicycloheptadiene, acid, hexachlorocyclopentadiene, caustic chlorine, raw materials SAMPLING: Liquid - DDE, aldrin, dieldrin, hexachlorocyclopentadiene, isodrin, nontarget compounds Dust - Aldrin, dieldrin, Cd, Cr, Cu, Pb, Zn, As
424A	Aldrin Control House/ SPSA-1a	53/01	0	10	10	NA	NA	NA	NA	The building housed a control room, laboratory, and part of aldrin manufacturing facility. Several leaks of approximately 200 gallons of bicycloheptadiene occurred east of building. Process water line leaked near building. Manhole west of building was filled with liquid aldrin which had partially solidified.	HISTORICAL: Aldrin, bicycloheptadiene
424C	Aldrin Filter Building/SPSA-1a	NA/01	0	14	14	NA	NA	NA	NA	The building was used to filter aldrin mixed with benzene or toluene to remove solids. Waste were produced in the form of filter cake. The building was the source of aldrin contamination in a ditch at southwest corner of building. Unknown quantity of aldrin filter cake spilled.	HISTORICAL: Aldrin, benzene, toluene

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STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[a]/ STUDY AREA Subarea	YEAR BUILT/ MAP SECTION[a]	NO. OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd³)	ESTI-MATED TOTAL smv[a] (yd³)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³] ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[a]
426	Aldrin/Mustard Disposal Reactor/SPSA-1a	42/01	0	59	59	NP	NP	NP	C	HD decontamination reactor for the disposal facility servicing the HD manufacturing plant which neutralized off-specification HD, runaway HD production reactions and decontamination washes from Building 422. Chemicals[2] associated with these include HD, ethylene, sulfur monochloride, chlorine, sulfur, chlorinated carbon tetrachloride, aldrin, DHCP-EC, aldrin-benzene, toluene, DCPD, bicycloheptadiene, pydrin, and hexachlorocyclopentadiene. Used caustic solution and recycled condensable gases and vented noncondensable gases in scrubbers. The building also used in the manufacturing of aldrin. A diaphram blew out on a tank adjacent to the building causing a noxious chemical spread in the South Plants area.	HISTORICAL[2]: HD breakdown products (chloracetic acid; dithiane; 1,4 oxathiane; thiodiglycol), aldrin, sodium hydroxide, bicycloheptadiene, sulfur, chlorine, ethylene, sulfur monochloride, chlorinated carbon tetrachloride, pydrin, DBCP-EC, benzene, pydrin, hexachlorocyclopentadiene, toluene, DCPD
427	Pesticide/Mustard/ Decontamination Pit/SPSA-1a	42/01	1	24	4	NP	NP	NP	C (6) [4]	Contaminated waste produced in HD disposal reactor and HD manufacturing facility were piped to the pit for decontamination. Chemicals[2] associated with these include HD, ethylene, sulfur monochloride, chlorine, sulfur, chlorinated carbon tetrachloride, aldrin, toluene, DCPD, DBCP-EC, pydrin, benzene, bicycloheptadiene, and hexachlorocyclopentadiene. The pit was neutralized with a solution of caustic and bleach. Task 24 suggests that the building may be contaminated with pesticides	HISTORICAL[2]: HD breakdown products (chloracetic acid; dithiane; 1,4 oxathiane; thiodiglycol), aldrin, sodium hydroxide, bicycloheptadiene, sulfur, chlorine, ethylene, sulfur monochloride, chlorinated carbon tetrachloride, pydrin, DBCP-EC, benzene, pydrin, bleach, hexachlorocyclopentadiene, pesticides, HD operation wastes, toluene, DCPD, potential pesticides
428	Incinerator/SPSA-1a	42/01	1	25	6	A/C (1) [0.3]	PW (9) WD [6]	NP	C (9) [5]	No prior chemical use reported	HISTORICAL: None

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...le 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
429	Mustard/Brine Mixing/ Pesticide Manufacturing/SPSA-1a	42/01	1	250	15	WD [4]	AB (1) [6]	NP	C (6) [5]	Facility used for salt storage, brine mixing, and calcium chloride brine make-up for the crude HD Manufacturing Plant. Task 24 assert that possible contamination of HD exists. The building also possibly stored aldrite pesticide.	HISTORICAL: Calcium chloride brine, HD breakdown products (chloracetic acid, dithiane, 1,4-oxathiane, thiodiglycol), salts, aldrin, aldrite pesticides, brine SAMPLING: Dust - DDE, aldrin
431	Ethylene Dryer/ Compressor/Refrigeration/ SPSA-1a	42/01	1	5,400	660	C (30) [61]	BR (6) [103]	BR (6) [46]	C (6) [429]	Intermediate facility between ethylene and HD manufacturing units which prepared ethylene and stored calcium carbonate brine. Methylene dichloride was substituted for calcium chloride brine and used as a chilling agent for dichloro production. The building was also possibly used for HD refrigeration and drying. Possible contamination of HD, distilled HD, and LW exists.	HISTORICAL: HD breakdown products (chloracetic acid, dithiane, 1,4-oxathiane, thiodiglycol), LW, calcium chloride brine, ethylene, methylene dichloride, dichloro, calcium carbonated brine SAMPLING: Dust - Dieldrin, Cd, Cr, Cu, Pb, Zn
432	Sand Blasting Pad/Change House/SPSA-1a	42/01	0	180	180	NP	NP	NP	C (6) [176]	The building was used to provide HD plant facility workers with an area to change contaminated clothing	HISTORICAL: HD breakdown products (chloracetic acid, dithiane, 1,4-oxathiane, thiodiglycol).
433	Ethylene Generator/ Research and Development Office/SPSA-1a	42/01	1	12,000	2,600	A/C (1) [144]	BR (8) [618]	P/D (0.06) [29]	C (6) [1,801]	The building was used to form ethylene gas for the HD manufacturing complex utilizing ethyl alcohol and aluminum oxide. Waste products generated include lime acetylene. Spills of 55-gallons of DCPD and 350 gallons D-D soil fumigant (1,2-dichloropropane) occurred near the building. Building later converted to research facility	HISTORICAL: Ethylene, ethyl alcohol, aluminum oxide, DCPD, D-D soil fumigant, lime acetylene, herbicides (bladex, planavin)[4] SAMPLING: Dust - DDE, aldrin, atrazine, dieldrin, Cd, Cr, Cu, Pb, Zn, As

...E. A symbol and acronym list is provided on the last page of this table

	STRUCTURE DESCRIPTION[1] / STUDY AREA - Subarea	YEAR BUILT[2] / MAP SECTION[3]	NO. OF LEVELS[4]	ESTIMATED TOTAL AIR VOLUME[5] (yd^3)	ESTIMATED TOTAL emv[6] (yd^3)	STRUCTURE MATRICES[7] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[8]	POTENTIAL ASSOCIATED CHEMICALS[9]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
1	Warehouse/Production Filling/SPSA-1a	42/01	1	11,000	860	CM (0.06) [2]	CM (0.06) [17]	NP	C (6) [846]	The building was used to store reserve stocks of napalm, maintain field equipment, and package liquid pesticides (aldrin-EC, azodrin, bidrin, ciodrin, dibrom, DBCP, phosdrin, phosdrin E, and vaporia) into drums. Additional materials used in the building include acetone, hexylene glycol, methanol, and xylene. Spills of DBCP and azodrin occurred in and near the building, respectively. Soda ash was spread on the azodrin spill and the affected material was removed.	HISTORICAL: DBCP, azodrin, napalm, aldrin-EC, bidrin, ciodrin, dibrom, phosdrin, phosdrin E, vapona, acetone, hexylene glycol, methanol, xylene, soda ash SAMPLING: Dust - Aldrin, atrazine, dieldrin
	Acetylene Generator Building/SPSA-1g,2a	49/01	2	3,700	220	C [23]	PW (12) BR (8) CM [32]	BR (8) [26]	C (8) [135]	The building was used to produce acetylene from calcium carbide for the aldrin production process.	HISTORICAL: Acetylene, calcium carbide, herbicides (bladex, planavin)[4] SAMPLING: Dust - Atrazine, Cd, Cr, Cu, Pb, Zn, As
1	Lime Slurry Pumphouse/SPSA-1g	49/01	1	24	23	CM (0.06)	PW (*) CM (0.06)	NP	C (6) [15]	The building was used to transfer slurry of lime and water resulting from acetylene production into lime storage basins.	HISTORICAL: Lime slurry, acetylene
3	Lime Slurry Pumphouse/SPSA-1g	70/01	1	49	32	CM (0.06)	PW (8) CM (0.06)	NP	C (6) [11]	The building housed hydraulic equipment for acetylene production (an intermediate for aldrin production). By-products include lime slurry and water.	HISTORICAL: Lime slurry, acetylene SAMPLING: Dust - Aldrin, dieldrin, Cd, Cr, Cu, Pb, Zn, As
2	Small Building - north of 459/SPSA-1g	NA/01	1	53	6	A/C [1]	AB [2]	NP	C (6) [3]	The building housed new hydraulic acetylene production.	HISTORICAL: Acetylene
	Tank Farm Pumphouse/SPSA-2a	42/01	1	150	34	C (5) [7]	BR (8) [2]	NP	C (6) [25]	Pumphouse for storage tank. Fuel oil and ethyl alcohol were unloaded in pumphouse. Also used to pump DBCP and intermediates for aldrin and endrin.	HISTORICAL: Fuel oil, ethyl alcohol, DBCP, intermediates for aldrin and endrin production SAMPLING: Dust - Dieldrin, Cd, Cr, Cu, Pb, Zn

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3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³): ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
464	Sample Building/SPSA-2b	NA/01	1	2	1	CM (0.06) [0.01]	CM (0.06) [0.05]	NP	NP	The building was used for collection and storage of various products (air, water, and soil samples); and to hold samples of ammonium sulfates and spent acid. Specific information on samples is unavailable in Task 24.	HISTORICAL: Ammonium sulfates, spent acid
471	Thionyl Chloride Reactor/ Pesticide Production/ SPSA-1a	42/01	3	6,300	329	CA [25]	BR CA (0.06) [35]	MB (8) [44]	C (7) [214]	The plant was originally used for manufacturing thionyl chloride which used sulfur dichloride, antimony trichloride, oleum, chlorine, monochlorobenzene, and caustic. Finished thionyl chloride was stored in a 10,000 gallon tank. A request to install a line for sulfuric acid was submitted, but no information is available to substantiate approval or completion of work. Plant also used to manufacture DDT, chlorinated paraffin, dibrom, supona, vapona, epon adhesives, pydrin, DBCP, gardona, akton, Bisphenol A (phenol, acetone, hydrochloric acid, and methyl mercaptan), Phosdrin 4-EC, and ionol flaker. The dibrom process involved peroxide-catalyzed bromination of vapona in carbon tetrachloride. In 1972, a nalgene vent line from the azodrin unit replaced the trimethyl phosphite line. The following spills occurred: numerous spills of bromine and bromine vapors, chlorothiophenol, DBCP, allylchloride, chloral distillation bottoms containing sulfuric acid, sodium hydroxide and acid, trimethyl phosphite, and brown liquid.	HISTORICAL: Thionyl chloride, sulfur dichloride, antimony trichloride, oleum, chlorine, monochlorobenzene, sodium hydroxide, chlorinated paraffin, DDT, sulfuric acid, dibrom, supona, vapona, epon adhesives, pydrin, DBCP, gardona, akton, Bisphenol A, phenol, acetone, hydrochloric acid, methyl mercaptan, ionol flaker, carbon tetrachloride, Phosdrin 4-EC, bromine, trimethyl phosphite, chlorothiophenol, allylchloride, chloral distillation bottoms, sulfuric acid, sodium hydroxide, acid, nalgene, brown liquid SAMPLING: Dust - DDE, DBCP, aldrin, chlorophenylmethyl sulfone, dieldrin, supona, vapona, Cd, Cr, Cu, Pb, Zn, As
471B	Electrical Vault/SPSA-1a	64/01	1	64	4	CM	PW (6) CM [0.06]	NP	C (6) [4]	Supplied power to Building 471 for manufacturing various compounds	SAMPLING: Dust - Dieldrin
471C	Thionyl Chloride Refrigeration/SPSA-1a	64/01	1	460	36	CM (0.06) [5]	CM (0.06) [21]	NP	C (6) [10]	No prior chemical use reported	HISTORICAL: Organochlorine compounds

* A symbol and acronym list is provided on the last page of this table.

3. Inventory List of Rocky Mountain Arsenal Structures.

NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL amv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
172	Thionyl Chloride Refrigeration/SPSA-1a	42/01	1	690	96	A/C (2) [9]	WD (6) [12]	NP	C (6) [75]	Refrigeration building for thionyl chloride manufacturing complex which used monochlorobenzene as a refrigerant and ammonia compressors.	HISTORICAL: Thionyl chloride, monochlorobenzene, ammonia SAMPLING: Dust - Aldrin, dieldrin
72A	Lunchroom/Maintenance Equipment Storage/SPSA-1a	67/01	1	110	20	CM (4) [4]	CM (4) [8]	NP	C [8]	The building was used for maintenance equipment, storage, and a lunch room.	HISTORICAL: None SAMPLING: Dust - Aldrin
173	Thionyl Chloride/Pesticide Packaging/SPSA-1a	42/01	1	1,400	84	CA [2]	WD [17]	NP	C (6) [65]	Thionyl chloride drum loading facility, also used to store and package DBCP, dibrom, and supona; store chlordane; and package vapona. The building was potentially contaminated with unspecified industrial chemicals.	HISTORICAL: Thionyl chloride, DBCP, chlordane, vapona, supona, dibrom, industrial chemicals SAMPLING: Dust - Aldrin, dieldrin, Cd, Cr, Cu, Pb, Zn, As
474	Electrical Control House/SPSA-1a	42/01	1	33	8	AB (0.2)	AB (0.2)	NP	C (6) [8]	The building was used to provide electricity to transformers and switch gear in the thionyl chloride complex.	HISTORICAL: None SAMPLING: Dust - Aldrin, chlorophenylmethyl sulfone, dieldrin
475	Railroad Car Warmer Shed/SPSA-1a	42/01	1	600	170	C (12) [37]	C (13) [94]	NP	C (12) [33]	Part of Thionyl Chloride Plant used to heat carloads of solid material. Also possibly used to thaw carloads of dichloro and hydrazine. Fifty-five gallons of azodrin exploded in warming shed. Soda ash was spread on affected area and area was excavated and removed.	HISTORICAL: Thionyl chloride, hydrazine, azodrin, dichloro, soda ash SAMPLING: Dust - Cd, Cr, Cu, Pb, Zn, As

* A symbol and acronym list is provided on the last page of this table.

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3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] / STUDY AREA - Subarea	YEAR BUILT[c] / MAP SECTION[d]	NO OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (yd^3)	ESTIMATED TOTAL BMV[g] (yd^3)	STRUCTURE MATRICES[h] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[i]	POTENTIAL ASSOCIATED CHEMICALS[j]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
502	West Chemical Metering Pump/SPSA-1a	75/01	1	210	38	CA (0.7) [1]	CA (0.7) [16]	NP	C (8) [17]	Part of Denver Effluent Treatment Facility used to collect and transfer the chemical waste stream to the pretreatment operation of the Denver Effluent Treatment facilities. Chemical wastes were neutralized with sodium hydroxide. Chemical wastes could include: carbon tetrachloride, chlorobenzene, chloroform, methylene chloride, 1,1,2,2-tetrachloroethylene, trichloroethylene, tetrachloroethylene, bicycloheptadiene, DCPD, benzene, chloroacetic acid, dithiane, 1,4-oxathiane, thiodiglycol, benzothiazole, chlorophenylmethyl sulfide, chlorophenylmethyl sulfone, dimethyldisulfide, atrazine, supona, vapona, DBCP, hydrazine, hexachlorobenzene, hexachlorocyclopentadiene, aldrin, chlordane, DDE, DDT, dieldrin, endrin, isodrin, As, Hg, Cd, Cr, Cu, Pb, Zn, HD, phosgene, 1,1-dichloroethane, 1,2-dichloroethane, 1,1-dichloroethylene, trans 1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2 trichloroethane, trichloropropane, 2 butoxyethanol, 4 hydroxy-4 2-pentanone, methylcyclohexane, 1-methyl 1,3-cyclopentadiene, methylisobutyl ketone, 2,2-oxybisethanol, 2 pentanone, ethylbenzene, toluene, m xylene, o- and p xylene, chlorophenylmethyl sulfoxide, DIMP, DMMP, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphonic acid tributyl ester, phosphonic acid triphenyl ester, malathion, parathion, caprolactam, methylhydrazine, n-nitrosodimethylamine, n nitrosodi n propylamine, fluoracetic acid, fluoranthene, methylnaphthalene, phenanthrene, pyrene, hexachlorobutadiene, pentachlorobenzene, tetrachlorobenzene trichlorobenzene, and LW	HISTORICAL: Chemical sewer contaminants[k] which could include: carbon tetrachloride, chlorobenzene, chloroform, methylene chloride, 1,1,2,2-tetrachloroethylene, trichloroethylene, tetrachloroethylene, bicycloheptadiene, DCPD, benzene, chloroacetic acid, dithiane, 1,4-oxathiane, thiodiglycol, benzothiazole, chlorophenylmethyl sulfide, chlorophenylmethyl sulfone, dimethyldisulfide, atrazine, supona, vapona, DBCP, hydrazine, hexachlorobenzene, hexachlorocyclopentadiene, 1,1-dichloroethane, 1,2-dichloroethane, 1,1-dichloroethylene, trans-1,2-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloropropane, 2-butoxyethanol, 4-hydroxy-4-2-pentanone, methylcyclohexane, 1-methyl-1,3-cyclopentadiene, methylisobutyl ketone, 2,2-oxybisethanol, 2-pentanone, ethylbenzene, toluene, m xylene, o- and p xylene, chlorophenylmethyl sulfoxide, DIMP, DMMP, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphonic acid tributyl ester, phosphonic acid triphenyl ester, malathion, parathion, caprolactam, methylhydrazine, n-nitrosodimethylamine, n nitrosodi-n-propylamine, fluoracetic acid, fluoranthene, methylnaphthalene, phenanthrene, pyrene, hexachlorobutadiene, pentachlorobenzene, tetrachlorobenzene, trichlorobenzene, aldrin, chlordane, DDE, DDT, dieldrin, endrin, isodrin, As, Hg, Cd, Cr, Cu, Pb, Zn, HD breakdown products (thiodiglycolic acid, arsenic, 1,4-oxathiane, thiodiglycol), phosgene, LW SAMPLING: Dust - Aldrin, atrazine, chlorophenylmethyl sulfone, dieldrin

[a] A symbol and acronym list is provided on the last page of this table.

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION / STUDY AREA (Subarea)	YEAR BUILT[b] MAP SECTION[c]	NO. OF LEVELS[d]	ESTIMATED TOTAL AIR VOLUME[e] (yd^3)	ESTIMATED TOTAL SURFACE[e] (yd^2)	STRUCTURE MATRICES[e] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (TOTAL AREA IN yd^2)				HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[a]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
503	East Chemical Metering Pump SPSA 1a	75-01	1	160	34	CA (0.7) [1]	CA (0.7) [16]	NP	C (8) [17]	Part of Denver Effluent Treatment Facility used to collect and transfer the chemical waste stream to the pretreatment operation of the Denver Effluent Treatment facilities. Chemical wastes were neutralized with sodium hydroxide. Chemical wastes[1] could include the same compounds listed for Building 502.	HISTORICAL: Chemical sewer contaminants[1] which could include the same compounds listed for Building 502: herbicides (bladex, planavin)[4] SAMPLING: Dust - Aldrin, atrazine, chlorophenylmethyl sulfone, Cd, Cr, Cu, Pb, Zn, As
504	Denver Effluent Treatment Emergency Diesel Generator SPSA 1a	76-01	1	140	24	CA (0.25) [1]	CA (0.25) [1]	NP	C (.5) [23]	Diesel operated electric generator used to provide back up power for Denver Effluent Treatment Facility.	HISTORICAL: Diesel fuel SAMPLING: Dust - Cd, Cr, Cu, Pb, Zn, As
504A	Denver Effluent Treatment Maintenance Shop Storage/SPSA 1a	76-01	1	250	44	CM (0.06) [1]	CM (0.06) [1]	NP	C (6) [43]	The building was used for storage of small parts, shop area, and maintenance facility. Chemical use in building is unavailable in Task 24.	HISTORICAL: Not available
505	Denver Effluent Treatment Pretreatment Feed Pumphouse/SPSA 1a	76-01	1	260	27	CA (0.2)	PW (8) CA (0.2) [1]	NP	CC (6) [26]	Pretreatment pumps built to treat chemical waste effluent as part of the Denver Effluent Treatment Facility. Chemical wastes were neutralized with sodium hydroxide. Chemical wastes[1] could include the same compounds listed for Building 502.	HISTORICAL: Chemical sewer contaminants[1] which could include the same compounds listed for Building 502: herbicides (bladex, planavin)[4] SAMPLING: Dust - Aldrin, atrazine, chlorophenylmethyl sulfone, Cd, Cr, Cu, Pb, Zn, As
506	Denver Effluent Treatment Control House/SPSA 1a	76-01	1	360	57	CM (0.06) [1]	CM (0.06) [1]	P.O (5) [8]	C (6) [46]	The building was used to house instrumentation that controlled Denver Effluent Treatment process equipment. A spill of 200 hundred gallons of Shell fertilizer 6-0-0.1S (zeolite raffinate fertilizer containing eight percent nitrogen) occurred on ground north of the building. The liquid was removed with a vacuum and the contaminated soil removed.	HISTORICAL: None

NOTE: [illegible]

(a) [illegible]
(b) [illegible]

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[1]	STRUCTURE DESCRIPTION[1] STUDY AREA (Subarea	YEAR BUILT[1] MAP SECTION[2]	NO. OF LEVELS[3]	ESTIMATED TOTAL AIR VOLUME[4] (yd^3)	ESTIMATED TOTAL SURFACE[4] (yd^2)	STRUCTURE MATRICES[4] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3) ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[4]	POTENTIAL ASSOCIATED CHEMICALS[5]
507	Denver Effluent Treatment Separator Pumphouse; SPSA-1g	76-01	1	260	31	CA [1]	CA (0.2) [1]	NP	C (6) [31]	The building was part of the chemical waste treatment facility and housed three pumps which alternately transferred heavy organics (mainly chloroform and light organics) to vent gas burner liquid storage tanks. Also used to transfer clarified effluent to final treatment surge tank. Chemical wastes were neutralized with sodium hydroxide. Chemical wastes[3] could include the same compounds listed in Building 502.	HISTORICAL: Chemical sewer contaminants[3] which could include the same compounds listed for Building 502, herbicides (bladex, planavin)[4] SAMPLING: Dust - Aldrin, atrazine, chlorophenylmethyl sulfone, Cd, Cr, Cu, Pb, Zn, As
508	Denver Effluent Treatment/ Copper Sulfate Treatment; SPSA-1g	75-01	3	2,200	150	CA (0.1) [2]	PW (12) CA (0.1) [12]	NP	C (6) [137]	The building was part of the chemical waste effluent treatment facility used to precipitate Cu by reaction with hydrogen sulfide creating cuprous sulfide. The Cu free raffinate was then piped to the tanks. The principle waste stream from arsine production was monomethylacetoacetamide.	HISTORICAL: Cu sulfate, Cu sulfide, monomethylacetoacetamide, hydrogen sulfide, Cu free raffinate SAMPLING: Dust - Cd, Cr, Cu, Pb, Zn, As
509	Denver Effluent Treatment Methyl Chemical Ionization Compressor-Liquefier; SPSA-1a	75-01	1	240	42	CA (0.5) [1]	CA (x.d) [3]	NP	C [38]	The compress or liquefier served as a methyl chloride recovery unit for the chemical waste effluent treatment facility. Waste vapor stream was composed of 86 percent methyl chloride, 12 percent chloride, and small amounts of other impurities. Freon 22 refrigerant liquid methyl chloride and noncondensables were also used.	HISTORICAL: Methyl chloride, chloride, Freon-22, unspecified impurities SAMPLING: Dust - Cd, Cr, Cu, Pb, Zn, As
510	Methyl Isocyanate Refrigeration; SPSA-1a	76-01	1	110	23	CM (0.06)	CM (0.06) [3]	NP	C (12) [20]	The building was used as a methyl isocyanate refrigeration storage unit.	HISTORICAL: Methyl isocyanate

NOTE: A symbol and acronym list is provided at the end of the table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION/ STUDY AREA Subarea	YEAR BUILT[a] MAP SECTION[a]	NO OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd³)	ESTIMATED TOTAL sww[a] (yd³)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]				HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[b]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
511	Chlorinated Paraffin Manufacturing/Storage/ SPSA-1a	43/01	3	13,000	2,400	C (6) [172]	PW (48) MB (8)	CC C (6) [212]	C (9) [1,986]	The facility was used to manufacture chlorinated paraffin and later used as offices, formulation laboratory, and storage area for chemicals. North of the building were minor spills of toluene and hexane. The eastern courtyard surface drainage sump was used by Shell to discharge condensate. The following are chemicals that were stored in building: acetic acid, acetone, acetonitrile, acetonitrile UV, alcozme, ammonium hydroxide, barium oxide, calcium carbonate, calcium chloride, dihydrate, chloroform, chloroform nanograde cyclohexanone, dibromomethane, methylene chloride AR, methylene chloride-nanograde, methylene chloride spectar, dimethylformamide, emulsifiers, ethyl acetate, ethylene dichloride, ethlene glycol, heptane, hexane, hydrochloric acid, magnesium oxide, methyl alcohol, methyl alcohol-spectar, N-amyl alcohol, nitric acid, nitrobenzene, nonane, normal octane, phosphoric acid, potassium hydroxide, potassium thiocyanate, propanol 2, pyridine, silicic acid, sodium chromate, sodium thiosulfate, sulfuric acid, thionyl chloride, triethylamine, 1,1,2 trichloroethane, and uranine	HISTORICAL. Chlorinated paraffin, toluene, hexane, acetic acid, acetone, acetonitrile, acetonitrile-UV, alcozyme, ammonium hydroxide, barium oxide, calcium carbonate, calcium chloride dihydrate, chloroform, chloroform-nanograde, cyclohexanone, dibromomethane, methylene chloride, dimethylformaldehyde, emulsifiers, ethyl acetate, ethylene dichloride, ethylene glycol, heptane, hexane, hydrochloric acid, magnesium oxide, methyl alcohol, methyl alcohol-spectar, N-amyl alcohol, nitric acid, nitrobenzene, nonane, normal octane phosphoric acid, potassium hydroxide, potassium thiocyanate, propanol 2, pyridine, silicic acid, sodium chromate, sodium thiosulfate, sulfuric acid, thionyl chloride, triethylamine, 1,1,2 trichloroethane, uranine, isopropyl alcohol[4] SAMPLING. Dust - Aldrin, dieldrin, Cd, Cr, Cu, Pb, Zn, As
511A	Chlorinated Paraffin/Change House/SPSA-1a	43/01	1	2,200	160	A-C (1) [14]	FW (12) AB	NP	C [144]	The building was used as part of the chlorinated paraffin manufacturing facility. It was later used by Shell as a change house	HISTORICAL. Chlorinated paraffin

NOTE: A symbol and acronym list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[1]	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT[2]/ MAP SECTION[2]	NO. OF LEVELS[3]	ESTIMATED TOTAL AIR VOLUME[4] (yd^3)	ESTIMATED TOTAL MATRIX[4] (yd^3)	STRUCTURE MATRICES[4] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[5]	POTENTIAL ASSOCIATED CHEMICALS[5]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
512	Filling/Pesticide Production/SPSA-1a	43'01	1	3,300	470	A/C (1) [22]	PW (12) MB (8)	BC (18) BR (8) [21]	C (6) [430]	The building was part of the LW plant used to fill ton containers and 55 gallon drums with LW and later to fill containers with distilled HD. Shell used the building for manufacturing chlordane, other unspecified pesticides, endrin *intermediates*, bicycloheptadiene, and possibly Compound SD-15803[1]. Spills of hexane, heptachlorobicycloheptene, hexachlorocyclopentadiene, Compound 773[1], isopropanol, and chlorothiophenol occurred	HISTORICAL: LW, HD breakdown products (chloroacetic acid; dithiane, 1,4 oxathiane, thiodiglycol), chlordane, pesticides, endrin intermediates, bicycloheptadiene, heptachlorobicycloheptene, *hexachlorocyclopentadiene*, hexane, isopropanol, chlorothiophenol, Compound SD-15803[1], Compound 773[1] SAMPLING: Dust - Chlorophenylmethyl sulfone, dieldrin, Cd, Cr, Cu, Pb, Zn, As
512A	Flammable Solvent Storage Shed/SPSA-1a	55'01	1	75	7	CA	NP	NP	C (9) [7]	The building stored flammable solvents.	HISTORICAL: Flammable solvents

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able 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[4]	STRUCTURE DESCRIPTION[1] STUDY AREA - Subarea	YEAR BUILT[2] MAP SECTION[3]	NO OF LEVELS[4]	ESTIMATED TOTAL AIR VOLUME[5] (yd^3)	ESTIMATED TOTAL [illegible][5] (yd^3)	STRUCTURE MATRICES[6] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd^3]				HISTORICAL USE[6]	POTENTIAL ASSOCIATED CHEMICALS[6]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
514	Lewisite/Dichlorodiethyl Sulfide Production/SPSA-1a	42/01	4B	12,000	2,700	CA [672]	BR (18) [16]	CC (18) MB (12) [268]	C (9) [1,715]	The building was used for LW and HD manufacturing, and pesticide production including chlordane, endrin, phosdrin, methyl parathion, vapona, ciodrin, bidrin, ethyl parathion, and azodrin. The reactors were charged with mercuric chloride catalyst, As trichloride, acetylene, and thionyl chloride for LW manufacturing. Crude LW was piped to tanks in the basement. The reactors were also used as part of the distilled HD plant with batches of HD piped to storage tanks and the demulsifying agent "Tret-O-Lite" added. Chemicals associated with these operations include hexachlorocyclopentadiene, vinyl chloride, sodium hydroxide, cyclopentadiene, acetic acid, hydrogen peroxide, methylacetoacetate, sulfuryl chloride, trimethyl phosphite, p-nitro sodium phenolate, chloral, sulfuric acid, alphamethylbenzyl alcohol, diketene sulfuryl chloride, diketene, dimethylamine, urea, chlorine, 0,0-diethylphosphorochloridothionate, methylamine, sulfur dioxide, copper sulfate, soluble iron, sulfur compounds, HD, LW, and other toxic impurities. Shell also installed a bicycloheptadiene bottoms flasher unit. A leaking contaminated sewer line was abandoned near the building. A concrete sump which adjoins the building contained acetic acid, aldrin, benzene, caustic soda, dieldrin, endrin, and toluene. Spills of crude azodrin, monomethylchloroacetoacetamide, acetone, chloroform, trimethyl phosphite, LW, hexachlorocyclopentadiene, and a solution composed of crude azodrin, bidrin, azodrin acetone, chloroform, monomethylchloroacetoacetamide, trimethyl phosphite, and monomethylamine occurred. Specific use or occurrence of heptachlor, strauss	HISTORICAL: LW, As trichloride, thionyl chloride, acetylene, mercuric chloride, HD breakdown products (chloroacetic acid; dithiane, 1,4-oxathiane, thioglycol), Tret-O-Lite, soluble iron, sulfur compounds, chlordane, heptachlor, strauss hex, aldrin, sodium hypochlorite, azodrin, dieldrin, napalm, toluene, DCPD, Hg, As oxide, benzene, acetic acid, sodium hydroxide, cyclopentadiene, endrin, monomethylchloroacetoacetamide, chloroform, bidrin, dimethylamine, acetone, monomethylamine, phosdrin, methyl parathion, vapona, ciodrin, ethyl parathion, hexachlorocyclopentadiene, vinyl chloride, hydrogen peroxide, methylacetoacetate, sulfuryl chloride, p-nitro sodium phenolate, chloral, trimethyl phosphite, sulfuric acid, alphamethylbenzyl alcohol, diketene, diketene sulfuryl chloride, chlorine, pesticides, urea, 0,0-diethylphosphoro-chloridoethionate, methylamine, bicycloheptadiene, sulfur dioxide, copper sulfate, toxic impurities, caustic soda, bleach (calcium hypochlorite)[4] SAMPLING: Liquid - Chloroform, methylene chloride, chlorophenylmethyl sulfone, dieldrin, endrin, nontarget compounds Dust - Dieldrin, Cd, Cr, Cu, Pb, Zn, As

[illegible] A symbol and acronym list is provided on the last page of this table.

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able 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTI-MATED TOTAL amv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
514A	Lewisite M-1 Storage/Dowtherm Boiler/SPSA-1a	42/01	1	1,200	110	CA [1]	CA [3]	NP	C (12) [109]	The building initially provided storage for crude LW, mercuric chloride, As trichloride, and acetylene. It later was refurbished as a Dowtherm boiler unit for the HD distillation plant. Shell rebuilt the building after an explosion in Building 516 destroyed it and used the Dowtherm boilers for aldrin production. A tube ruptured causing liquid Dowtherm to spray in the building. The building also contained an 8,000-gallon fuel oil tank. Specific use or occurrence of As oxide and napalm are not described in Task 24 although As oxide could be associated with As trichloride manufacturing	HISTORICAL: LW, mercuric chloride, As oxide, acetylene, Dowtherm, napalm, fuel oil, As trichloride SAMPLING: Dust - Cd, Cr, Cu, Pb, Zn, As
514C	Pumphouse/SPSA-1a	55/01	1	28	1	NP	CM (0 04)	NP	C (4) [1]	The building housed pumps for transferring raw material to Building 514. Precise chemicals in the raw material unavailable in Task 24. Specific use or occurrence of acetic acid and chlorine are not described in Task 24	HISTORICAL: Acetic acid, chlorine gas, raw material assumed to consist of same chemicals historically associated with Budling 514
514D	Refrigeration Compressor/SPSA-1a	NA/01	1	73	4	CM (0 08)	CM (0 04)	CM (0 08)	C (6) [4]	The building housed refrigeration compressors for coolants used within the 514 complex. Specific use or occurrence of white residue are is not described in Task 24	HISTORICAL: White residue SAMPLING: Dust - Dieldrin
514E	Monomethylamine Dilution Control/SPSA-1a	NA/01	1	33	2	CM (0 06)	CM (0 06)	NP	C (6) [2]	The building was used for monomethylamine dilution (an intermediate used in the azodrin process).	HISTORICAL: Monomethylamine SAMPLING: Dust - Chlorophenylmethyl sulfone, dieldrin

NOTE A symbol and acronym list is provided on the last page of this table

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le 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION / STUDY AREA - Subarea	YEAR BUILT / MAP SECTION[a]	NO. OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd^3)	ESTIMATED TOTAL smv[a] (yd^3)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[a]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
515	Chlorinated Paraffin/ Dichlorodiphenyltrichloro-ethane/Pesticide Production/SPSA-1a	42/01	3	12,000	1,300	C (4)	WD AB [21]	CC (30) C (9)	C (6) [1,242]	The building was initially constructed as a distillation facility for LW but was only used for storage and contractor shop space. The building is identified as a chlorinated paraffin manufacturing structure, but Task 24 states that chlorinated paraffin was not produced in the building. Later the building was used to produce DDT, monochlorobenzene, endrin, nudrin, planavin, and bladex herbicide. Intermediates of endrin include DCPD, bicycloheptadiene, hexachlorocyclopentadiene, and isodrin. A flash fire in the isodrin centrifuge and a chemical fire involving crystalline endrin occurred and caused an explosion. Due to decomposition in Vessel 1033, endrin and toluene were discharged into the chemical sewers. A spill of 3,000 gallons of benzene were reported north of the building. Specific use or occurrence of napalm, distilled HD, and triethanolamine are not described in Task 24 although triethanolamine is associated with chlorinated paraffin manufacturing	HISTORICAL: LW, napalm, chlorinated paraffin, triethanolamine, DDT, planavin, endrin, isodrin, bladex, nudrin, distilled HD breakdown products (chloroacetic acid, dithiane, 1,4 oxathiane, thioglycol), toluene, benzene, hexachlorocyclopentadiene, monochlorobenzene, DCPD, bicycloheptadiene, Tret-O-Lite[4] SAMPLING: Dust - Atrazine, monochlorobenzene, Cd, Cr, Cu, Pb, Zn, As Structure Matrices[4] - TCLP: Ba, Cr, Hg, aldrin, dieldrin, endrin, isodrin, CPMSO2, 1,4-DCLB, chlordane, heptachlor, heptachlor epoxide, lindane, methoxychlor, DDE, DDT, CPMSO Total Waste Methods: Cr, endrin, isodrin, DDT, Cd, dieldrin, chloroform
515A	Nudrin/Endrin Storage/ SPSA 1a	54/01	1	2,000	72	AB [2]	PW (8) CA	NP	C (6) [71]	The building was used in conjunction with operations in the pesticide production facility and originally stored endrin and nudrin	HISTORICAL: Endrin, nudrin SAMPLING: Dust - Cd, Cr, Cu, Pb, Zn, As

[illegible] symbol and acronym list is provided on the last page of this table.

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[illegible]

able 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] STUDY AREA - Subarea	YEAR BUILT[c] / MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (yd^3)	ESTIMATED TOTAL smv[g] (yd^3)	STRUCTURE MATRICES[h] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd^3]				HISTORICAL USE[i]	POTENTIAL ASSOCIATED CHEMICALS[k]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
516	Lewisite Distillation/ Pesticide Production/ SPSA-1a	42/01	3	8,300	1,300	C (6) [34]	C [437]	CC (24)	C (9) [882]	The building was used to distill crude LW into finished LW. It also manufactured and drummed chlordane, aldrin, isodrin, dieldrin, azodrin, and endrin. Also produced in the building was chlordene (an intermediate of chlordane), the sulfone oxidation phase of planavin production; and the amino isobutylronitrile reaction and flashing phase of bladex. A leak of semi-finished dieldrin consisting of aldrin crystals, benzene, acetic acid, and peroxide occurred. Spills of sulfuric acid, hydrogen peroxide, benzene, liquid chlorine, aldrin, chlorine gas, acetic acid, caustic soda, dieldrin, endrin, toluene, and sulfone also occurred. The building is the suspected source of the chloroform detected in ground- water in a nearby well. Vapona scatter bait was leaking. Leaks of dieldrin dust and toluene were also noted. Although mentioned, specific use or occurrence of muriatic acid is not described in Task 24.	HISTORICAL: LW, chlordene, chlordane, aldrin, dieldrin, muriatic acid, endrin, isodrin, azodrin, amino isobutylronitrile, benzene, peroxide, sulfuric acid, hydrogen peroxide, chlorine, toluene, chlorophenylmethyl sulfone, vapona, sodium hydroxide soda, chloroform, acetic acid, bladex, chlorinated paraffin[4], hydrogen chloride (hydrochloric acid)[4], supona[4], planavin[4] SAMPLING: Dust - Aldrin, dieldrin, chlorophenylmethyl sulfone, Cd, Cr, Cu, Pb, Zn, As
5168	Electrical Equipment Storage/SPSA-1a	NA/01	1	84	16	CA (0.2)	PW (8) CA (0.2)	NP	C [16]	The building was used for storage of miscellaneous electrical equipment.	HISTORICAL: None SAMPLING: Dust - Aldrin, chlordane, chlorophenylmethyl sulfone, dieldrin, endrin, hexachlorocyclopentadiene, isodrin, supona, Cd, Cr, Cu, Pb, Zn, As
517	Offices/Change House/Laboratory/SPSA-1a	42/01	2	9,600	1,300	A/C [88]	PW (12) C (10)	MB (8) [178]	C (9) [1,055]	The building was used as a change house and control laboratory for the LW plant, white phosphorus cup filling, chlorinated paraffin plant, and HD distillation plant.	HISTORICAL: HD breakdown products (chloroacetic acid, dithiane, 1,4 oxathiane, thiodiglycol), LW, white phosphorus, chlorinated paraffin

NOTE: A symbol and acronym list is provided on the last page of this table.

ble 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION† / STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME * (yd^3)	ESTIMATED TOTAL emv * (yd^3)	STRUCTURE MATRICES * (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS *
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
518A†	Emergency Fire Protection Pumphouse/SPSA-1a	55/01	1	100	22	CM (0.064) [0]	CM (0.064) [0]	NP	C (12) [11]	The building housed a diesel engine and pump.	HISTORICAL: Diesel fuel SAMPLING: Surficial Soil (0 - 2 in): Aldrin, chlordane, DDE, dieldrin, endrin, mercury, isodrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, atrazine, cadmium, chlordane, chloroacetic acid, chlorophenylmethyl sulfide, chlorophenylmethyl sulfone, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, DCPD, dieldrin, dithiane, endrin, fluoranthene, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, supona, thiodiglycol, zinc Subsurface Soil: (2 - 5 ft) methylene chloride, tetrachloroethylene, toluene, (5 - 20 ft) benzene, bicycloheptadiene, carbon tetrachloride, chloroform Groundwater: Benzene, bicycloheptadiene, carbon tetrachloride, chlorobenzene, chloroform, ethylbenzene, m-xylene, methylene chloride, methyl isobutyl ketone, tetrachloroethylene, toluene, trichloroethylene, xylenes, 1,1-dichloroethane, 1,1-dichloroethylene, 1,2-dichloroethylenes, 1,1,1-trichloroethane, 1,1,2-trichloroethane
519	Hydrogen Peroxide Storage/SPSA-1a	51/01	1	170	81	CM (0.06) [2]	PW (9) BR (9)	NP	C (9) [80]	The building was originally used as an acetylene gas holder used in conjunction with LW production but was dismantled and used as a tankage for a chlorinated paraffin plant to dilute and store hydrogen peroxide	HISTORICAL: Hydrogen peroxide, acetylene SAMPLING: Dust - Aldrin, dieldrin, chlorophenylmethyl sulfone, chlorophenylmethyl sulfoxide, Cd, Cr, Cu, Pb, Zn, As

TE: A symbol and acronym list is provided on the last page of this table.

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ible 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTI-MATED TOTAL sm* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
519A	Hydrogen Peroxide Pumphouse/SPSA-1a	51/01	1	180	4	CM (0.06)	BR (8) [1]	NP	C (6) [3]	The building was used to transfer and pump hydrogen peroxide	HISTORICAL: Hydrogen peroxide SAMPLING: Dust - Aldrin, chlorophenylmethyl sulfone, chlorophenylmethyl sulfoxide, Cd, Cr, Cu, Pb, Zn, As
520	Sample Pump/pH Probes Storehouse/SPSA-1a	NA/01	1	11	1	CM (0.06)	CM (0.06)	NP	C (6) [4]	No prior chemical use reported.	HISTORICAL: None
521	Acetylene Compressor/ Pesticide Manufacturing/SPSA-1a	42/01	3	773	220	M. (8) [7]	PW (11)	CC BR (8) [8]	C (6) [209]	The building was part of the acetylene plant for the LW complex. Sulfuric acid and caustic were used in the building. It was also used for storage and to house testing facilities for the white phosphorus cup filling plant. Later, it was used for fuel oil for DCPD and cyclopentadiene production. Shell installed a Thermal Hex *hexachlorocyclopentadiene and hydrochloric acid* unit. Hexachlorocyclopentadiene was produced by dechlorinating octachlor (octachlorocyclopentadiene). Later the building was used for miscellaneous storage and laboratory facilities. Spills of hexachlorocyclopentadiene, DCPD, and cyclopentadiene, and a leak of octachlor occurred. Although mentioned, specific use or *occurrence of chlordane is not described in Task* 24	HISTORICAL: Sulfuric acid, sodium hydroxide, acetylene, white phosphorus, fuel oil, hydrochloric acid, chlordane, DCPD, cyclopentadiene, octachlor, hexachlorocyclopentadiene SAMPLING: Dust - Dieldrin, *hexachlorocyclopentadiene*
521A	Refrigeration/ Dicyclopentadiene Cracking/SPSA-1a	42-43 /01	1	140	16	CA (2)	PW (6) CA (2)	NP	C (6) [16]	The building was part of the DCPD unit which produced cyclopentadiene and also possibly used in the Thermal Hex *(hexachlorocyclopentadiene)* Unit. Although mentioned, specific use or occurrence of ammonia is not described in Task 24	HISTORICAL: Ammonia, cyclopentadiene, DCPD, hexachlorocyclopentadiene SAMPLING: Dust - Dieldrin

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STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
521B	Compressor House/ Maintenance/SPSA-1a	51/01	1	340	91	A/C (6) [12]	PW (10) WD (6)	NP	C (6) [79]	The building was originally built as a compressor building for the Thermal Hex (hexachlorocyclopentadiene) Unit. Later used as a field maintenance shop and shift shack for maintenance employees	HISTORICAL: Hexachlorocyclopentadiene SAMPLING: Dust - Dieldrin, endrin
521C	Lunchroom/Field Foreman Office/SPSA-1a	69/01	1	210	40	CM (0.06)	PW (12) CM (0.06)	WD (2) [1]	C (6) [39]	The building was used as a lunchroom and field foreman office.	SAMPLING: Dust - Chlorophenylmethyl sulfone, dieldrin
522	White Phosphorus Cup Filling/Acetylene Manufacturing/SPSA-1a	42/01	1	4,600	840	A/C (5)	ST (8)	CC (18)	C (6)	The building acted as an acetylene manufacturing plant which used calcium carbide to produce acetylene gas, by-products included quick lime and lime sludge (calcium oxide, calcium hydroxide). Later converted to a filling and assembly building for the white phosphorus cup filling plant which used sodium silicate, alcohol, white phosphorus, and Cu sulfate. The building also stored filling equipment and produced M23 fire bomb igniters and M15 grenades. M15 grenades went through tanks containing phosphate and oakite. Decontamination and disposal for white phosphorus filling equipment including white phosphorus and phossy water occurred. White phosphorus contaminated scrap metal was stored in the building	HISTORICAL: White phosphorus, acetylene, calcium carbide, calcium oxide, calcium hydroxide, sodium silicate, alcohol, Cu sulfate, oakite, bomb igniters, phosphate, phossy water
522B	Change House/ Administration Building/ SPSA-1a	52/01	1	2,200	420	A/C (5) [40]	C (12) [162]	C (8) [5]	C (6) [210]	The building acted as a change house for white phosphorus and HD demilitarization operations.	HISTORICAL: White phosphorus, HD breakdown products (chloracetic acid, dithiane, 1,4-oxathiane, thiodiglycol)
523	Arsenic Trichloride Manufacturing Building/ Igniter Tube Filling/SPSA-1a	43/01	1	2,600	220	CM (0.06) [1]	PW (12) CM (0.06)	NP	C (12) [222]	The building was originally an As trichloride manufacturing plant which used As oxide and sulfur monochloride. Later converted for white phosphorus, igniter filling, and producing an insulating plaster base composed of perlite. Other operations included white phosphorus filling pipettes, paint booth, phosphate, stripping and water tanks	HISTORICAL: As oxide, sulfur monochloride, As trichloride, white phosphorus, paint, perlite, phosphate

A symbol and acronym list is provided on the last page of this table

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³)				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
523A	White Phosphorus and Arsenic Trichloride Storage Tank House/SPSA-1a	42/01	0	620	140	C (9)	C (9)	NP	C (24)	The building originally stored As trichloride; later converted for use in white phosphorus storage and white phosphorus cup filling and igniter filling operations. White phosphorus tanks were used in the demilitarization of M78 and M79 white phosphorus filled bombs and in dry filling of demilitarized HD shells with white phosphorus	HISTORICAL: As trichloride, white phosphorus
523C	Arsenic Trioxide Dry Storage Silo/SPSA-1a	42/01	1	230	71	C (9) [6]	C (9) [41]	NP	C (24) [24]	The building stored As trioxide for As trichloride manufacturing operations. Later used by Shell for miscellaneous storage	HISTORICAL: As trioxide
523D	Arsenic Trioxide Dry Storage Silo/SPSA-1a	42/01	1	670	96	C (9) [10]	C (9) [46]	NP	C (24) [40]	The building stored As trioxide for As trichloride manufacturing operations. Later used by Shell for miscellaneous storage	HISTORICAL: As trioxide
523E	Arsenic Trioxide Dry Storage Silo/SPSA-1a	42/01	1	670	96	C (9) [10]	C (9) [46]	NP	C (24) [40]	The building stored As trioxide for As trichloride manufacturing operations. Later used by Shell for miscellaneous storage.	HISTORICAL: As trioxide
523F	Arsenic Trioxide Dry Storage Silo/SPSA-1a	42/01	1	670	96	C (9) [10]	C (9) [46]	NP	C (24) [40]	The building stored As trioxide for As trichloride manufacturing operations. Later used by Shell for miscellaneous storage	HISTORICAL: As trioxide
523G	Arsenic Trioxide Dry Storage Silo/SPSA-1a	42/01	1	670	96	C (9) [10]	C (9) [46]	NP	C (24) [40]	The building stored As trioxide for As trichloride manufacturing operations. Later used by Shell for miscellaneous storage	HISTORICAL: As trioxide
524	White Phosphorus Filling and Sulfur Dioxide Disposal/ SPSA-1a	43/01	0	27	27	NP	NP	NP	C (6) [27]	The building originally housed sulfur dioxide and sulfur monochloride auxiliary reactor vent gas disposal equipment. Later converted to a heavy equipment shop, also used to fill empty M78 and M79 bomb casings with white phosphorus. Utilized in the demilitarization of M78 and M79 white phosphorus bombs	HISTORICAL: Sulfur dioxide, sulfur monochloride, white phosphorus

A symbol and acronym list is provided on the last page of this table

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	*NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME * (yd³)	ESTIMATED TOTAL smv * (yd³)	STRUCTURE MATRICES * (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS *
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
525	Product Development Laboratory/Nudrin Manufacturing/SPSA-1a	42/01	3	5,100	260	CM A/C [7]	BR (8) CM (0 06) [121]	NP	C (6) [129]	The building acted as an acetylene scrubber and compressor house used to pump raw acetylene gas through scrubbers containing sulfuric acid and caustic. The building later was converted to a process development laboratory used for development and/or production of phosdrin, bidrin, ciodrin, supona, hexacetylene, gardona, akton, landrin, and rabon and revap emulsible concentrates. The building also used in the first two phases in nudrin process involving the chlorinator reactor and crystallization steps. Spills of hexachlorocyclopentadiene, cyclopentadiene bottoms, methylisobutyl ketone, and caustic water containing mercaptan occurred. Although mentioned, specific use or occurrence of bleach is not described in Task 24	HISTORICAL: Acetylene, sulfuric acid, sodium hydroxide, phosdrin, bidrin, ciodrin, supona, hexacetylene, gardona, akton, landrin, rabon and revap emulsible concentrates, nudrin, hexachlorocyclopentadiene, cyclopentadiene, methylisobutyl ketone, mercaptan, bleach (calcium hypochlorite, sodium hypochlorite)*, herbicides (bladex, planavin)* SAMPLING Dust - Atrazine, Cd, Cr, Cu, Pb, Zn
525A	Refrigeration Compressor/ Electrical Vault/SPSA-1a	65/01	1	13	16	CA (0 7) [7]	CA (0 7) [1]	MB (8)	C (6) [8]	The building was used as a refrigeration building associated with Building 525	HISTORICAL Historically associated chemicals not available
526	Pesticide Filter/SPSA-1a	51/01	0	26	26	NA	NA	NA	NA	The building filtered solutions of aldrin/benzene, aldrin/toluene, and isodrin/toluene for aldrin, dieldrin, and endrin production. Spills of dieldrin noted, and Task 24 reported that dieldrin in the air exceeded threshold limits	HISTORICAL Aldrin, dieldrin, endrin, benzene, toluene, isodrin
527	Change House/Quonset Hut/SPSA-1b	50/01	1	370	16	CM (0 06)	PW (24) CM (0 06)	NP	C (4) [16]	The building acted as a lunchroom, supply building, and change room for contaminated clothing for personnel involved with HD demilitarization operations	HISTORICAL HD breakdown products ([illegible] dithiane, 1,4 oxathiane, thiodiglycol)

*: A symbol and acronym list is provided on the last page of the table

3. Inventory List of Rocky Mountain Arsenal Structures.

NUMBER[1]	STRUCTURE DESCRIPTION[2] STUDY AREA - Subarea	YEAR BUILT[3] MAP SECTION[4]	NO. OF LEVELS[5]	ESTIMATED TOTAL AIR VOLUME[6] (yd^3)	ESTIMATED TOTAL area[6] (yd^2)	STRUCTURE MATRICES[6] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[7]	POTENTIAL ASSOCIATED CHEMICALS[8]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
528	Dichlorodiethyl Sulfide Burning/Pesticide Manufacturing/SPSA-1a	45/01	1	2,000	300	A/C (1) [18]	CA (0.7) [4]	NP	C (18) [280]	The building was used as a residue burning area for HD distillation. Residue was burned in the furnace and disposed of by combustion supplemented by fuel oil. Combustion gases contained sulfur dichloride, hydrogen chloride, carbon dioxide and carbon monoxide. Spills of DCPD, sodium hypochlorite, and sulfuryl chloride occurred.	HISTORICAL: HD breakdown products (chloroacetic acid, dithiane, 1,4 oxathiane, thiodiglycol) distillation residues, fuel oil, sulfur dichloride, hydrogen chloride, DCPD, sodium hypochlorite, sulfuryl chloride, carbon monoxide, carbon dioxide, bleach (calcium, hypochlorite)[9] SAMPLING: Dust - Dieldrin, Cd, Cr, Cu, Pb, Zn, As
529	Sodium Hydroxide Make-up/Azodrin Support Structure/SPSA-1a	45/01	1	720	64	A/C (1) [2]	MB (8) [41]	NP	C (6) [20]	The building housed a caustic make up tank and pH control equipment used in the neutralization of the effluent from the distilled HD decontamination pit. Shell claimed they encountered HD between Buildings 514 and 529.	HISTORICAL: Sodium hydroxide, HD breakdown products (chloroacetic acid, dithiane 1,4-oxathiane thiodiglycol)
531	Warehouse/SPSA-1a,1g	42/01	1	7,200	970	A/C (1) [167]	BR [24]	WD (5) [2]	C (6) [773]	The building stored process chemicals such as iron sulfate and clay.	HISTORICAL: Process chemicals such as iron sulfate SAMPLING: Dust - Aldrin, dieldrin, Cd, Cr, Cu, Pb, Zn, As
532	Pesticide Storage/ Warehouse/SPSA-1a,1g	42/01	1	7,800	1,000	A/C (1) [192]	NA [25]	P.D (2) [6]	C (6) [783]	Shell stored dieldrin, formulated and packaged atrazine, and mixed chemical SMA-1044OH[1] with emulphogene, maraperse, bentonite, formalin, ethylene glycol, kelzan, and technical atrazine to produce Atrazine 4L in the building. Filled containers with phosdrin, planavin, and bladex in building. Previously used for storage with pre-use contents unavailable in Task 24. Although mentioned, the specific use or occurrence of sulfur mono chloride is not described in Task 24.	HISTORICAL: Planavin, bladex, atrazine, phosdrin, dieldrin, sulfur monochloride, emulphogene, maraperse, formalin, ethylene glycol, kelzan, SMA-1044OH[2], Atrazine 4L SAMPLING: Dust - Aldrin, atrazine, dieldrin, endrin, Cd, Cr, Cu, Pb, Zn, As

[1] Symbol and acronym list is provided on [illegible] page of this table.

[illegible]

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[a] STUDY AREA Subarea	YEAR BUILT[a] MAP SECTION[a]	NO. OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd³)	ESTIMATED TOTAL SURFACE[a] (yd²)	STRUCTURE MATRICES[a] (ESTIMATED MASONRY THICKNESS IN INCHES) AND (VOLUME in yd³) ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[b]
533	Flammable Materials Storehouse/SPSA 1a	42 01	1	43	19	C (8) [1]	FW (12) BR (8)	[4]	C (4) [16]	Inflammable storehouse used in conjunction with chlorinated paraffin operations with precise contents unavailable in Task 24. Shell used the building for paint, solvent, and planavin storage.	HISTORICAL: Paints, cleaning solvent, planavin, chlorinated paraffin, herbicides (bladex)[4] SAMPLING: Dust - Aldrin, atrazine, chlorophenylmethyl sulfone, dieldrin, isodrin, Cd, Cr, Cu, Pb, Zn, As
534	Pumphouse Storage/ SPSA 1a	42 01	1	450	330	A-C (1) [8]	FW (8) MR (8)	BR (8) [6]	C (6) [312]	Pumphouse for chlorinated paraffin plant and also used to store paraffin in storage tanks. Later used in association with hydrochloric acid, Thermal Hex (hexachlorocyclopentadiene), and to store equipment used to support planavin process. It was later used for storage of miscellaneous items and resins used in Cu removal. Benzene and heptane leaks occurred near the building. Although mentioned, specific use or occurrence of Hg, mixed acid, hexane, and acetone are not described in Task 24.	HISTORICAL: Heptane, Hg, paraffin, mixed acid, hexane, acetone, benzene, hydrochloric acid, chlorinated paraffin, hexachlorocyclopentadiene, planavin, Cu, herbicides (bladex)[4] SAMPLING: Dust - DDE, atrazine, chlorophenylmethyl sulfone, dieldrin, Cd, Cr, Cu, Pb, Zn, As Structure Matrices[4]: TCLP: Ba, aldrin, dieldrin, benzene, methylene chloride, methylethyl ketone Total Waste Methods: Cr, Zn, Hg, dieldrin
534A	Drum Storage/Field Shop/Office/SPSA 1a	47 01	1	1,500	250	NA [15]	FW (8) NA (8)	NA (4) [7]	C (6) [276]	Two storage tanks used for paraffin storage were removed from the site so that Building 534A could be built. Building was used as a drum storage facility with precise contents unavailable in Task 24.	HISTORICAL: Paraffin, herbicides (bladex, planavin)[4] SAMPLING: Dust - Aldrin, atrazine, chlorophenylmethyl sulfone, dieldrin, Cd, Cr, Cu, Pb, Zn, As

[a] [illegible]

[b] As [illegible]

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION/ STUDY AREA Subarea	YEAR BUILT[a] MAP SECTION[a]	NO. OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd³)	ESTIMATED TOTAL [illegible][a] (yd³)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³): ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[b]
534B	Planavin Manufacturing/SPSA 1a	65/01	3	7,500	400	CA (0.7) [4]	CA (0.7) [10]	CC (4.2) C (10) [112]	C (6) [273]	The building housed nitration process maintenance and pipe fitting equipment for the planavin unit. Acid spills occurred and a puddle was reported containing 65 percent sulfuric acid. Contaminated sump and sewer fumes, and sulfone vent vapors were reported to enter the building. Building operations emitted nitrogen emissions. A heavy bromine vapor, a leak of sulfone, and a leak of dinitro and acid occurred. Shell applied soda ash to a spill of dinitro and mixed acid.	HISTORICAL: Planavin, dinitro, mixed acid, sulfuric acid, sulfone vent vapors, bromine vapors, sewer fumes, nitrogen vapors, soda ash, sulfone, herbicides (bladex)[4], supona[4] SAMPLING: Dust - Atrazine, chlorophenylmethyl sulfone, Cd, Cr, Cu, Pb, Zn, As
534C	Emergency Generator/ Electrical Vault/SPSA 1a	NA/01	1	83	20	CA	CA (2)	NP	C (6)	The building was used as an electrical vault which housed electrical switch gear.	HISTORICAL: Herbicides (bladex, planavin)[4] SAMPLING: Dust - Aldrin, atrazine, chlorophenylmethyl sulfone, dieldrin, parathion, Cd, Cr, Cu, Pb, Zn, As
534D	Emergency Generator SPSA 1a	NA/01	1	180	35	CM (1) [1]	C (8) [6]	NP	C (6) [8]	The building used to house an emergency generator.	SAMPLING: Dust - Dieldrin, Cd, Cr, Cu, Pb, Zn, As
536	Ammunition Demolition Facility/Crude Mustard Storage/SPSA 1a	45/01	2	3,900	680	C (12) [76]	C (12) [327]	NP	C (12) [272]	The building stored liquid crude HD in storage tanks. After HD operations, storage tanks were decontaminated with sulfuric acid. Later the building was used to store acid, caustic, and mixed acid (sulfuric and nitrogen). 155mm, 105mm, and 75mm shells filled with crude HD were drained in the building, and oleum (fuming sulfuric acid) was used to decontaminate the shells.	HISTORICAL: Mixed acid (sulfuric and nitrogen acid[4]), oleum, HD breakdown products (chloroacetic acid, dithiane, 1,4-oxathiane, thiodiglycol), sulfuric acid, acid, caustic, LW[4]

NOTE: [illegible]

[illegible]
[illegible]

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA Subarea	YEAR BUILT* MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME in yd³] ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
537	Thaw House/SPSA-1a	45-01	18	16,000	2,100	C (8) [355]	MB (8) [257]	CC (24) C (8) [191]	C (12) [1,328]	The building acted as a thaw house in which levinstein HD was purified and "Tret-O-Lite" was added to crude HD. The building was also used to recondition ton containers previously filled with HD, phosgene, and LW, and to demilitarize HD-filled munitions by extracting agent and pumping the agent into ton containers. The munition shells were dropped into decontamination tanks containing oleum nitric acid. Phosgene was transferred from existing containers to modified containers and cyanogen chloride bombs were demilitarized in the building. Equipment was decontaminated with sulfuric acid and caustic following HD operations. A spill of HD was decontaminated with Super Tropical Bleach.	HISTORICAL: HD breakdown products (chloroacetic acid, dithiane, 1,4-oxathiane, thiodiglycol), Tret-O-Lite, phosgene, LW, sulfuric acid, sodium hydroxide, oleum nitric acid, cyanogen chloride, Super Tropical Bleach
538	Ton Container Reconditioning Plant/SPSA-1a,1b,1g	45-01	1	12,000	1,100	A/C (1) [73]	PW (9) CA (0.2)	NP	C (6) [1,055]	The building was used to thermally decontaminate containers which previously contained crude HD and GB. Following operations, the facility was decontaminated with sulfuric acid. Building was later used to recondition containers which previously stored HD, phosgene, and LW. Sulfuric acid and caustic were used in the operations. It was also used to demilitarize HD bombs and cyanogen chloride bombs. HD was incinerated in oil fired furnaces and shells were decontaminated in sulfuric and nitric acid. Off specification hydrazine and HD were burned in the hydrazine furnace. Sodium hydroxide, sulfur dioxide, and hydrogen chloride were used in building operations.	HISTORICAL: HD breakdown products (chloroacetic acid, dithiane, 1,4-oxathiane, thiodiglycol), hydrazine, sulfuric acid, nitric acid, phosgene, cyanogen chloride, LW, GB, sodium hydroxide, sulfur dioxide, hydrogen chloride, oil
538A	Compressor Building/ SPSA-1b,1g	45-01	1	380	66	A/C (1) [4]	MB (6) [36]	FB (0.5) [2]	C (6) [24]	The building acted as a change house where personnel from HD operations could change clothing and take a break.	HISTORICAL: HD breakdown products (chloroacetic acid, dithiane, 1,4-oxathiane, thiodiglycol)
539	Electrical Substation Building/SPSA-1a	45-01	1	260	15	NA	NA	NA	NA	No prior chemical use reported.	HISTORICAL: None

NOTE: A symbol and acronym [illegible]

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA Subarea	YEAR BUILT/ MAP SECTION	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
540	Ton Container Renovation Plant/SPSA 1b/1g	57/01	1	3,200	250	CA (0.2) [4]	PW (9) CA (0.2)	NP	C (6) [248]	The building was used in renovation (chemical neutralization, cleaning, and painting) of ton containers that temporarily stored HD. Empty cyanogen chloride bomb casings were cleaned in the building by removing a sodium metaphosphate compound. Empty HD shell casings went through several chemical filled vats including chromic acid. Building contained ash residue (primarily of iron carbide, oxides, and sulfur) from operations that occurred in the building. It was also used to vaporize brine from scrubbing effluent and to store brine salt from phosgene operations	HISTORICAL: HD breakdown products (chloracetic acid, dithiane, 1,4 oxathiane, thiodiglycol), brine salts, chromic acid, cyanogen chloride, paint, iron carbide, oxides, sulfur, sodium metaphosphate compound, phosgene brine
541	Warehouse-White Phosphorus Filling/ SPSA-1a,1g	42/01	1	7,700	770	A/C (1) [91]	CM (0.06) [7]	NP	C (6) [673]	Originally a warehouse for LW which was later converted to a white phosphorus filling facility which used a solution of sodium silicate. Building was converted back to a warehouse to store and paint granades. Phossy water was diverted to a surface drainage ditch north of the building	HISTORICAL: White phosphorus, LW, paint, phossy water, sodium silicate
541A	Warehouse-SPSA-1g	53/01	1	26	9	CA	MB (8) [7]	NP	C (6) [2]	The building stored GF (o-cyclohexyl methylphosphono fluoridate) fuzes for M15 grenades	HISTORICAL: GF
542	Drummed Product Storage/ General Storage-SPSA-1a,1g	42/01	1	7,100	1,000	A/C (0.8) [18?]	CA (12) [4.8]	WD (9) [43]	C (6) [751]	A storage warehouse for LW and white phosphorus complex and Shell drummed products with precise contents unavailable in Task 24. Fitzsimmons Army Medical Center stored unspecified miscellaneous products and 10 gallons of acetone	HISTORICAL: LW, white phosphorus, acetone, other historically associated chemicals not available SAMPLING: Dust - aldrin, dieldrin, chlorophenylmethyl sulfone, isodrin, Cd, Cr, Cu, Pb, Zn, As, Hg

NOTE: A symbol and acronym list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] / STUDY AREA - Subarea	YEAR BUILT[c] / MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[e] (yd^3)	ESTIMATED TOTAL sow[e] (yd^3)	STRUCTURE MATRICES[e] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd^3]				HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[b]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
543†	Maintenance Shops/Instrument Lab/ SPSA-1g	45/01	1	16 000	2 000	A/C (4) [232]	MB (8) [65]	BR, C [65]	C (12) [769]	As a maintenance shop, petroleum products, paints, thinners, and other solvents were utilized. In the instrument lab, mercury was found to be used and a spill of mercury was reported in 1983.	HISTORICAL: Mercury, paints, petroleum products, solvents, thinners SAMPLING: Surficial Soil (0 - 2 in): Aldrin, DDE, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chlordane, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, DCPD, dieldrin, dithiane, endrin, fluoranthene, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, supona, thiodiglycol, zinc Subsurface Soil: (2 - 5 ft) 1,1,1-trichloroethane, (5 - 20 ft) benzene, bicycloheptadiene, chloroform, tetrachloroethylene Groundwater: Benzene, bicycloheptadiene, carbon tetrachloride, chlorobenzene, chloroform, ethylbenzene, m-xylene, tetrachloroethylene, toluene, trichloroethylene, xylenes, 1,1-dichloroethane, 1,1-dichloroethylene, 1,2-dichloroethylenes, 1,1,1-trichloroethane, 1,1,2-trichloroethane

NOTE: A symbol and acronym list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION / STUDY AREA - Subarea	YEAR BUILT / MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd^3)	ESTIMATED TOTAL env* (yd^3)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
543A†	Steam Meter Pit/SPSA-1g	52:01	1B	892	11	AC [1]	MB (8) [9]	NP	C (8) [2]	In the steam meter station, mercury was used and was reported as spilled in 1975. A Shell survey of this pit indicated that mercury leaked from instruments during steam pressure surges; however, air samples did not indicate any presence of mercury.	HISTORICAL: Mercury SAMPLING: Surficial Soil (0 - 2 in): Aldrin, DDE, DDT, dieldrin, isodrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chlordane, chlorophenylmethyl sulfide, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, DCPD, dieldrin, dithiane, endrin, fluoranthene, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, supona, thiodiglycol, zinc Subsurface Soil (2 - 5 ft) 1,1,1-trichloroethane, (5 - 20 ft) methylene chloride, tetrachloroethylene Groundwater: Benzene, bicycloheptadiene, carbon tetrachloride, chlorobenzene, chloroform, m xylene, tetrachloroethylene, toluene, trichloroethylene, xylenes, 1,1,1-trichloroethane

[illegible] A symbol and annotation list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*, MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL sow* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
543B†	Maintenance/Office/SPSA-1g	52/05	1	4,200	590	C (6) [161]	MB (8) [121]	NP	C [173]	In the maintenance shop, chemicals used consisted of petroleum products, paints, thinners, and solvents	<u>HISTORICAL</u>: Paints, petroleum products, solvents, thinners <u>SAMPLING</u>: <u>Surficial Soil (0 - 2 in)</u>: Aldrin, DDE, DDT, dieldrin, endrin, isodrin <u>Surficial Soil (0 - 2 ft)</u>: Aldrin, arsenic, cadmium, chlordane, chlorophenylmethyl sulfide, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, DCPD, dieldrin, endrin, fluoranthene, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, supona, zinc <u>Subsurface Soil</u> (2 - 5 ft) methylene chloride, 1,1,1-trichloroethane, (5 - 20 ft) benzene, bicycloheptadiene, chloroform, methylene chloride, tetrachloroethylene <u>Groundwater</u>: Benzene, bicycloheptadiene, chloroform, methylene chloride, tetrachloroethylene, 1,1,1-trichloroethane

NOTE: A symbol and acronym list is provided on the last page of this table.

ble 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
544	Heavy Equipment Maintenance Shop/SPSA-1g	53/01	1	2,300	170	CM (0.06) [7]	CM (0.06) [1]	WD (4) [21]	C (8) [142]	The building served as a heavy equipment and maintenance repair shop. It also stored petroleum products, paints, thinners, solvents, degreasers, trichloroethylene, kerosene, and the following pesticides: Cu acetoarsenite, chlordane, lindane, DDT, dieldrin, malathion, diazinon, vapona, naled, carbaryl, propoxur, baygon propoxur, pyrethrum, warfarin, strychnine grain, poison grain, anticoagulant dusting powder, calcium cyanide, diquat, duron, borate bromacil mixture, simazine, bordeaux mixture, 2,4,5-T¹, 2,4-D¹, sodium 2,2-dichloropropionate, thiram, boric acid, dalapon, endrin, pyrethrins, alsnn, de-pester, ded weed, diquate water weed killer, insecticide chlordane, insecticide naled, insecticide strip dichlorovos, 797-A powdered insecticide, pyrethrine, silica gel, aranan, thiram, arsenate of Pb, baygon roach, propoxur, cyanogas, calcium cyanide, herbicide dimethyl tetrachloroterephalate, malathion, and Zn phosphide.	HISTORICAL: Petroleum products, paints, thinners, solvents, degreasers, trichloroethylene, kerosene, Cu acetoarsenite, chlordane, lindane, DDT, dieldrin, malathion, diazinon, vapona, naled, carbaryl, propoxur, baygon propoxur, pyrethrum, warfarin, strychnine grain, poison grain, anticoagulant dusting powder, calcium cyanide, diquat, duron, borate-bromacil mixture, simazine, bordeaux mixture, 2,4,5-T¹, 2,4-D¹, sodium 2,2-dichloropropionate, thiram, boric acid, dalapon, endrin, pyrethrins, alsnn, de-pester, ded weed, diquate water weed killer, insecticide chlordane, insecticide naled, insecticide strip dichlorovos, 797-A powdered insecticide, pyrethrine, silica gel, aranan, thiram, arsenate of Pb, baygon roach, propoxur, cyanogas, calcium cyanide, herbicide dimethyl tetrachloroterephalate, malathion, Zn phosphide
545	Paint Shop/SPSA-1g	53/01	1	490	20	CM (0.04)	CM (0.04) [3]	NP	C (6) [17]	Maintenance shop which used petroleum products, paints, thinners, and solvents to paint and clean equipment	HISTORICAL: Petroleum products, paints, thinners, solvents
546	Sewage Lift Station/SPSA-1g	54/01	0	25	11	C (8)	C (8)	NP	C [11]	No prior chemical use reported	HISTORICAL: None
548	Water Pumping Station/ SPSA-1g	62/01	0	1,400	320	C (2) [27]	C (12) [179]	NP	C (12) [96]	No prior chemical use reported	HISTORICAL: None
549	Reservoir and Cooling Tower/SPSA-1g	57/01	2B	5,600	620	C (8) [10]	PW (12) WD	WD [120]	C [488]	No prior chemical use reported.	HISTORICAL: None
550	Lift Station/SPSA 1d,1g	64/01	0	5	5	C (6)	NP	NP	C [5]	No prior chemical use reported	HISTORICAL: None

*: A symbol and acronym list is provided on the last page of this table.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL env* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³] ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
552†	Valve Pit (control station for Building 551, the elevated water storage tank)/SPSA-1g	57/01	0	93	49	C (12) [12]	C (12) 18	NP	C (12) [25]	No prior chemical use reported	HISTORICAL: No historically associated chemicals SAMPLING: Surficial Soils (0 - 2 in): Aldrin, DDE, DDT, dieldrin, endrin, isodrin Surficial Soils (0 - 2 ft): Aldrin, arsenic, cadmium, chlordane, chlorophenylmethyl sulfide, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, DCPD, dieldrin, dithiane, endrin, fluoranthene, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, supona, thiodiglycol, zinc Subsurface Soil: (5 - 20 ft) methylene chloride Groundwater: Benzene, bicycloheptadiene, carbon tetrachloride, chlorobenzene, chloroform, tetrachloroethylene, toluene, trichloroethylene
553	Vault/SPSA-1g	57/01	1	19	7	CM (2)	CM (2) [1]	NP	C (30) [6]	No prior chemical use reported	HISTORICAL: None
555	Guardhouse/Gas Mask Training/SPSA-1g	53/01	1	61	5	A/C [2]	AB [2]	NP	WD (3) [1]	No prior chemical use reported	HISTORICAL: None
557	Salvage Yard Storage/Maintenance/ SPSA-2c	60/01	1	400	48	CM (0.06)	CM (0.06) [3]	NP	C (6) [45]	The building stored salvage yard equipment with precise contents unavailable in Task 24	HISTORICAL: Historically associated chemicals not available SAMPLING: Dust - Aldrin, chlorophenylmethyl sulfone, dieldrin

NOTE: A symbol and acronym list is provided on the last page of this table.

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Rev 07/09/93, 1:16pm

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT[a]/ MAP SECTION[a]	NO OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd³)	ESTIMATED TOTAL smv[a] (yd³)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³] ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[a]
561	Bicyclo[2.2.1]hepta-2,5-diene Unit Control House/SPSA-1a	50/01	1	740	170	C (6) [23]	PW (12) BR (10)	NP	C (6) [148]	The building acted as the process unit for bicycloheptadiene and intermediate product used in aldrin production. Chemicals used in production include cyclopentadiene, acetylene, DCPD, hexachlorocyclopentadiene, No 2 fuel oil, and bicycloheptadiene bottoms. The area around the building was often hydrocarbon soaked and weekly cleaning procedures were implemented	HISTORICAL: Bicylopentadiene, cyclopentadiene, acetylene, DCPD, hexachlorocyclopentadiene, bicyclopentadiene bottoms, No 2 fuel oil, hydrocarbons, aldrin intermediates
561A	Acetylene Compressor/ SPSA-1a	49/01	1	400	400	NP	NP	NP	C (4) [138]	The building acted as an acetylene compressor unit for the bicycloheptadiene operations which used cyclopentadiene and bicycloheptadiene. An unknown quantity of Hg spilled near the building. Although mentioned, specific use or occurrence of calcium carbide is not described in Task 24, however, calcium carbide is associated with acetylene production	HISTORICAL: Acetylene, calcium carbide, Hg, bicycloheptadiene, cyclopentadiene
571	Vent Gas Burner/SPSA-1a	68/01	1	350	28	CM	CM	CM	C (6) [24]	The building was used to burn and scrub vent gases and waste liquids comprised of acetone, methanol, hexane, chloroform, carbon tetrachloride, methyl chloride, trimethyl phosphite, natural gas, azodrin, vapona, nudrin, methylisobutyl ketone, and acetaldehyde. A spill of 50 percent methylisobutyl ketone and other related process impurities occurred	HISTORICAL: Methylisobutyl ketone, azodrin, nudrin, vapona, methylbutyl ketone, acetaldehyde, natural gas, acetone, methanol, hexane, chloroform, carbon tetrachloride, methyl chloride, trimethyl phosphite SAMPLING: Dust - Dieldrin
571A	Electrical Vault/SPSA-1a	68/01	1	35	8	CM (2) [1]	PW (8) CM (2)	NP	C (6) [8]	No prior chemical use reported	HISTORICAL: None

E A symbol and acronym list is provided on the last page of this table

SAV ... 07/08/93, 1:16pm

3. Inventory List of Rocky Mountain Arsenal Structures.

NUMBER[a]	STRUCTURE DESCRIPTION[b] / STUDY AREA - subarea	YEAR BUILT[c] / MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (yd^3)	ESTIMATED TOTAL AIR emv[g] (yd^3)	STRUCTURE MATRICES[h] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd^3]				HISTORICAL USE[i]	POTENTIAL ASSOCIATED CHEMICALS[j]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
571B	Tank Room/ Hexachlorocyclo-pentadiene Drum Storage/SPSA-1a,1f	NA/01	1	2,700	110	CM [1]	CM	NP	C (12) [113]	A storage tank area for heavy and light organic liquids drums of hexachlorocyclopentadiene bottoms, acetone washes from the azodrin and vapona production, and recovered chloroform Building was also used for emergency storage of possible waste of mudrin, DET knockout pots, and azodrin and vapona vent line knockout pots Spills of hexachlorocyclopentadiene, sulfuryl chloride, and methylisobutyl ketone mixture occurred Although mentioned, specific use or occurrence of bleach is not described in Task 24.	HISTORICAL: Azodrin, hexachloro-cyclopentadiene, heavy and light organic liquids, sulfuryl chloride, methylisobutyl ketone, bleach, azodrin, vapona, acetone, chloroform, mudrin, DET knockout pots SAMPLING: Dust - Aldrin, Cd, Cr, Cu, Pb, Zn, As
605	Flammable Materials Storehouse/WSA	57/03	1	65	2	CM	CM	NP	WD Piers (6) [1]	The building stored cylinders of compressed gases such as nitrogen, oxygen, and acetylene and flammable material	HISTORICAL: Gas cylinders of nitrogen, oxygen, acetylene, flammable material
606	F... able Materials Storeh ...se/WSA	57/03	0	1	1	NP	NP	NP	WD Piers (6) [1]	The building stored gas cylinders of compressed gases such as nitrogen, oxygen, acetylene, and empty gas cylinders.	HISTORICAL: Gas cylinders of nitrogen, oxygen, acetylene
607	Flammable Materials Storehouse/WSA	57/03	1	54	2	NP	NP	NP	WD Piers (6) [1]	The building stored flammable materials and cylinders of compressed gas such as nitrogen, oxygen, and acetylene	HISTORICAL: Flammable materials, gas cylinders of nitrogen, oxygen, acetylene
608	Flammable Materials Storehouse/WSA	57/03	1	54	2	CM	CM	NP	WD Piers (6) [1]	The building stored flammable materials and cylinders of compressed gas such as nitrogen, oxygen, and acetylene	HISTORICAL: Gas cylinders of nitrogen, oxygen, acetylene
611	Data Processing Building Logistics Area Administration/ WSA	42/02	1	2,800	440	A/C (1) [41]	MB [210]	MB (6) [72]	C (6) [114]	No prior chemical use reported.	HISTORICAL: No historically associated chemicals SAMPLING: Surficial Soil (0 - 2 in): DDT, dieldrin, endrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chlordane, chromium, copper, DDE, DDT, DBCP, dieldrin, endrin, fluoranthene, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc

[a] symbol and acronym list is provided on the last page of this table

le 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION / STUDY AREA - Subarea	YEAR BUILT* MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL em* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
612	Counar Building Logistics Area Administration/ WSA	42/04	1	2,900	240	AC (1) [53]	C (8) [54]	P/D [10]	C (8) [60]	The building was originally constructed as an infirmary. Although unspecified chemicals were used for blood and urine analyses and wash water from X-ray processing were reported in Task 24, no further information was given	HISTORICAL Unspecified chemical used for blood and urine analysis, X-ray chemicals SAMPLING Surficial Soil (0 - 2 in) DDT, dieldrin, endrin Surficial Soil (0 - 2 ft) Aldrin, arsenic, cadmium, chlordane, chromium, copper, DDE, DDT, DBCP, dieldrin, endrin, fluoranthene, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc Air Mercury, chromium, toluene, copper, zinc Dust/Vacuum Cadmium, chromium, copper, lead, zinc, toluene, mercury
613	Management Information/ [illegible] Processing Logistics Area Administration WSA	42/04	2	3,300	480	C (7) [88]	BR (8) [180]	P/D [16]	C (8) [149]	No prior chemical use reported	HISTORICAL No historically associated chemicals SAMPLING Surficial Soil (0 - 2 in) Aldrin, DDT, dieldrin Surficial Soil (0 - 2 ft) Aldrin, arsenic, cadmium, chlordane, chromium, copper, DDE, DDT, dieldrin, endrin, fluoranthene, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc
614	Warehouse/WSA 7a	42/03	1	7,100	910	A/C (1) [167]	CA (0.5) [24]	WC (6) P/D [3]	C (24) [713]	The building stored materials such as solvents, paints, oils, thinners, and possibly trichloroethylene	HISTORICAL Solvents, paints, thinners, trichloroethylene, oils
615	Warehouse/WSA-7a	42/03	1	7,100	910	A/C (1) [167]	CA (0.5) [24]	WC (6) P/D [3]	C (24) [713]	The building stored solvent, paints, oils, and railroad box cars. Later, NOAA stored nontoxic, nonhazardous, nonflammable materials and equipment	HISTORICAL Solvents, paints, oils

A symbol and acronym list is provided on the last page of this table.

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7/8/93, 1:15pm

3. Inventory List of Rocky Mountain Arsenal Structures.

NUMBER[a]	STRUCTURE DESCRIPTION[b] STUDY AREA - Subarea	YEAR BUILT[c] MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (yd^3)	ESTIMATED TOTAL STRUCTURE[g] (yd^3)	STRUCTURE MATRICES[h] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[i]	POTENTIAL ASSOCIATED CHEMICALS[j]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
016	Warehouse/WSA	42/03	1	11,000	910	A/C (1) [167]	CA (0.5) [24]	WC (6) P/D [3]	C (24) [713]	The building stored bulk quantities of pesticides and other material including paint, thinners, solvents, oxygen gas cylinders, acetylene gas cylinders, DDT, granular polyvinyl alcohol, laboratory reagents, ether, acetone, RTV[1], DB-3[1], sodium carbonate, tetrachloroethylene, methanol, xylol, and toluene.	HISTORICAL: Pesticides, paint, solvents, thinners, gas cylinders - acetylene and oxygen, DDT, polyvinyl alcohol, laboratory reagents, ether, acetone, RTV[1], DB-3[1], sodium carbonate, tetrachloroethylene, methanol, xylol, toluene Structure Matrices[k] - TCLP Ba, methylene chloride, toluene, methoxychlor Total Waste Methods Cr, Pb, Zn, methylene chloride, toluene, hexachlorobenzene, tetrachloroethene
017	Warehouse/WSA	42/03	1	11,000	910	A/C (1) [167]	CA (0.5) [24]	WC (6) P/D [3]	C (24) [713]	The building stored solvents, paints, oils, equipment, and field survey material. It also was used as a cold storage warehouse with precise contents unavailable in Task 24.	HISTORICAL: Solvents, paints, oils, other historically associated chemicals unavailable

Symbol and acronym list is provided on the last page of this table.

3. Inventory List of Rocky Mountain Arsenal Structures.

NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME * (yd^3)	ESTIMATED TOTAL entry * (yd^3)	STRUCTURE MATRICES * (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS *
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
618]	Warehouse/WSA	42/03	1	98,000	5,300	A/C (2) [656]	BR (12) [1,354]	P/D (2) [25]	C (12) [2,519]	The warehouse stored a variety of contaminated drums (unknown contents), various chemicals containing chlorinated lime, supertropical bleach, calcium hypochlorite, and pesticides such as Bordeaux mixture, boric acid, Caw Caw Rope-bird repellant, DED-Weed, Dowpon-dalapon, herbicide, insecticide diazinon, insecticide lindane, insecticide mixed concentrate, poison grain strychnine, Torodon 101 mixture picloram, and Wilco Ground Squirrel Bait chlorophacinon. PCBs may also be present in electrical transformers.	HISTORICAL: Bleach, Bordeaux mixture - copper 12.75 percent, boric acid, calcium hypochlorite, chlorinated lime, Caw Caw Rope-bird repellant, DED-Weed (2,4-D, 2,4, 5-T), diazinon 2 percent, Dowpon-dalapon 85 percent, herbicide 2,4-D 50 percent, lindane, mixed concentrate, PCBs, poison grain strychnine 0.5 percent, Torodon 101 mixture picloram 39 percent, Wilco Ground Squirrel Bait chlorophacinon 0.5, pesticides SAMPLING Surficial Soil (0 - 2 in): DDT, dieldrin, endrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chlordane, chromium, copper, DDE, DDT, DBCP, dieldrin, endrin, fluoranthene, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc
619]	Warehouse/WSA	42/03	1	98,000	5,200	A/C (2) [656]	BR (12) [1,354]	P/D (2) [22]	C (12) [2,519]	The building was used for storage with precise contents unavailable in Task 24.	HISTORICAL: No historically associated [illegible] SAMPLING Surficial Soil (0 - 2 in): DDT, dieldrin, endrin Surficial Soil (0 - 2 ft): Aldrin, cadmium, chromium, copper, DDT, DBCP, dieldrin, endrin, fluoranthene, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc Subsurface Soil (2 - 5 ft, 5 - 20 ft), (> 20 ft): methylene chloride Groundwater: Benzene, chlorobenzene, chloroform, 1,2-dichloroethane, tetrachloroethylene

A symbol and acronym list is provided on the last page of this table.

[illegible]
[illegible]

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA Subarea	YEAR BUILT* MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL SOW* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
621†	Property Disposal Surplus Salvage Office WSA	42/04	1	14 000	890	A/C (2) [158]	BR (8) [247]	BR (8) [5]	C (12) [579]	Chemical wastes stored in the building included paints, thinners, lacquers, chemical solvents, and industrial chemicals. Transformers and decontaminated hardware from chemical agent production facilities were also stored here. Defense Property Disposal Office used building for storage of nontoxic, nonhazardous, and nonflammable material.	HISTORICAL: Industrial chemicals, lacquers, paints, solvents, thinner SAMPLING Surficial Soil (0 - 2 in): Aldrin, DDT, dieldrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chromium, copper, DDT, dieldrin, fluoranthene, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc
621A†	Truck Scale Platform/WSA	56/04	0	160	56	NP	NP	NP	C (12) [54]	Reportedly weighed trucks carrying substances such as hydrazine; no other information was provided in Task 24.	HISTORICAL: Hydrazine, N-nitrosodimethylamine, N-nitrosodi-n-propylamine, other historically associated chemicals not available SAMPLING Surficial Soil (0 - 2 in): Aldrin, DDT, dieldrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chromium, copper, DDT, dieldrin, fluoranthene, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc
622	Paint Shop Material Storage WSA	4[illegible]/04	1	1 400	160	A/C (0.5) [13]	PW (18) BR (8)	BR (8) [12]	C (6) [1[illegible]]	The building was used as a paint shop and to store equipment, nontoxic, nonhazardous supplies, [illegible] and possibly pesticides and [illegible] in Task 24.	HISTORICAL: Solvents, paints, may have contained pesticides and insecticides
623	Carpenter Shop [illegible] WSA	4[illegible]/04	[illegible]	[illegible]	2[illegible]	A/C (0.5) [18]	AB (0.1) [19]	NP	C ([illegible]) [[illegible]]	[illegible] was used as an engineer [illegible] building [illegible]	HISTORICAL: Oil, grease

Table 3 Inventory List of Rocky Mountain Arsenal Structures

[illegible]	[illegible]	POTENTIAL ASSOCIATED CHEMICALS*
[illegible]	[illegible]	[illegible] Ar Cold solvent No 1600A gear oil, [illegible] [illegible] breakdown products [illegible] degreaser solvents paints [illegible] petroleum products phosphate [illegible] solvents [illegible]
		[illegible] Aldrin DDT dieldrin
		[illegible] Aldrin arsenic cadmium, [illegible] copper DDE DDT [illegible] lead mercury [illegible]
		[illegible] trichloroethylene [illegible] tetrachloroethylene
		[illegible] chloroform, [illegible] 1,1,2 [illegible]

Table 3 Inventory List of Rocky Mountain Arsenal Structures

STRUCTURE NUMBER	STRUCTURE DESCRIPTION / STUDY AREA / Subarea	YEAR BUILT / MAP REFERENCE	NO. OF LEVELS	ESTIMATED TOTAL AREA (sq ft)	ASSIGNED TOTAL AREA (sq ft)						POTENTIAL ASSOCIATED CHEMICALS
42/04	Warehouse/W-A Area	42/04	1	[illegible]	4[illegible]7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] Acids paints solvents thinners [illegible] (AMES) [illegible] [illegible] DDD DDT dieldrin aldrin [illegible] Arsenic cadmium chromium copper DDE DDT [illegible] dieldrin aldrin fluoranthene lead [illegible] methylene chloride phenanthrene [illegible] [illegible] Tetrachloroethylene (Perchloroethylene) [illegible] [illegible] Trichloroethylene 1,1,2 [illegible]
6/26	Machine and Welding Shop W-A	42/04	0	100	100	NP	NP	NP	NA	[illegible]	[illegible]
6/26C	Heavy Equipment Shop W-A	47/04	0	10	10	NP	NP	NP	[illegible]	[illegible]	[illegible]

[illegible]

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (ft³)	ESTIMATED TOTAL AREA* (ft²)	STRUCTURE MATRICES (ESTIMATED MAXIMUM THICKNESS IN INCHES AND VOLUME IN ft³): ROOF	[illegible]	[illegible]	[illegible]	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
627I	Vehicle Maintenance Shop/Storehouse WSA	42/04	1	13,000	[illegible]	A [illegible] (145)	AB [illegible]	[illegible]	[illegible]	[illegible] ... Army ...	HISTORICAL: [illegible] ethanol, degreasers, [illegible], paint, [illegible], substituted naphthalenes, tridecane, trime[illegible] benzene, [illegible] phenols, waste oil SAMPLING Surface Soil (0 - 2 in): DDT, dieldrin, endrin Surficial Soil (0 - 2 ft): Arsenic, atrazine, [illegible], chlordane, chromium, copper, DDE, [illegible], dieldrin, endrin, fluoranthene, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc Subsurface Soil: (0 - 2 ft) toluene (2 - 5 ft) ethyl benzene, methylene chloride, m-xylenes, [illegible] (5 - 20 ft) tetrachloroethylene Groundwater: Benzene, carbon tetrachloride, chlorobenzene, chloroform, tetrachloroethylene, toluene, trichloroethylene, 1,1-dichloroethane, 1,2-dichloroethane, 1,1-dichloroethylene, 1,2-dichloroethylenes 1,1,1-trichloroethane, 1,1,2-trichloroethane
627H	Flammable Materials Storehouse/WSA [illegible]	4[illegible]/04	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	HISTORICAL: Paints, pesticides, herbicides, flammable materials
629	Service Station/WSA	4[illegible]/04	1	[illegible]	4[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	HISTORICAL: Gasoline, kerosene, diesel, [illegible]
625E	Service Station [illegible]	4[illegible]	1	[illegible]	[illegible]	A[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]: None

[illegible]

Table 3. Inventory List of Rocky Mountain Arsenal Structures

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION / STUDY AREA Subarea	YEAR BUILT[a] MAP SECTION[a]	NO. OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME (ft³)	EST. RATED TOTAL [illegible] (gpm) (ft³/s)	STRUCTURE MATERIALS[a] (ESTIMATED MATERIALS THE WALLS WERE MADE OF AND ROOF TYPE) ROOF	WALLS	FLOORS	FOUNDATION	HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[b]
630?	Gas Meter House/WSA	[illegible]	1	[illegible]	17	[illegible]	[illegible]	[illegible]	[illegible]	The building was a natural gas metering and regulating station	HISTORICAL: Natural gas SAMPLING: Surficial Soil (0 - 2 in): NSC Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chromium, copper, DDT, dieldrin, fluoranthene, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc
631?	Repair Maintenance Roundhouse (Railroad Car Engine Shops)/WSA 4c 6d	42 04	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Some solvents possibly were used in the cleaning of the car of locomotives and railcars, and the wash waters were discharged to a ditch east of the facility. No other information was provided in [illegible]	HISTORICAL: Solvents SAMPLING: Surficial Soil (0 - 2 in): Aldrin, DDT, dieldrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chlordane, chromium, copper, DBCP, DDE, DDT, dieldrin, fluoranthene, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc Subsurface Soil (2 - 5 ft) trichloroethylene, (5 - 20 ft) methylene chloride, tetrachloroethylene Groundwater: Benzene, chloroform, trichloroethylene, 1,2-dichloroethylenes, 1,1,2-trichloroethane
631A	Flammable Materials Storehouse/WSA 4c	42 04	1	[illegible]	[illegible]	[illegible]	FW CM	[illegible]	[illegible]	The building stored paint, oil, parts for diesel engine [illegible], flammable materials, cleaning [illegible], and paint thinners	HISTORICAL: Paint, oil, cleaning solvents, paint thinner, flammable material, acid[a]

[illegible]

Table 3. Inventory List of Rocky Mountain Arsenal Structures

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION / STORAGE AREA / Subarea	YEAR BUILT / MAP REFERENCE	NO. OF LEVELS[b]	ESTIMATED TOTAL ANN VOLUME[c]	ESTIMATED TOTAL ANN MASS[c]	STRUCTURE MATERIALS[d] (ESTIMATED MAXIMUM ONE-TIME MASS HELD) AND VOLUME (kg/yr)				HISTORICAL USE[e]	POTENTIAL ASSOCIATED CHEMICALS[f]
						WOOD	METAL & METAL ALLOYS	MASONRY & CONCRETE	FOUNDATION		
639T	Gas Fired Heating Plant WSA	42-04	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	The plant at one time had coal and fired boiler heat but was converted to accommodate natural gas and fuel oil heat. There is also an underground storage tank containing diesel fuel [illegible]	HISTORICAL: Coal, diesel fuel, fuel oil, natural gas SAMPLING: Subsurface Soil (0 - 2 m): Aldrin, DDT, dieldrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chlordane, chromium, copper, DDE, DDT, dieldrin, fluoranthene, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc
639	Laboratory Laboratory Motor Chamber WSA	42-04	1	[illegible]	[illegible]	All [illegible]	[illegible]	Nil	[illegible]	The building was initially used as a laboratory to test [illegible] and later stored semi-hazardous materials such as paints and thinners.	HISTORICAL: Insecticides, paints, thinners,
639A	Laboratory [illegible] WSA	42-04	1	[illegible]	[illegible]	All [illegible]	[illegible]	Nil	[illegible]	The building was used as part of an insecticide testing laboratory. It was later used to store semi-hazardous materials such as paints and thinners.	HISTORICAL: Insecticides, paints, thinners, acid[g]
639BT	Hazardous Material Storage WSA	[illegible]	1	[illegible]	[illegible]	[illegible] [illegible]	[illegible]	[illegible] [illegible]	[illegible]	The building was originally used as a pathology laboratory and greenhouse. Task 24 does not describe any chemicals used in the laboratory. The building was later used for storage of paints, solvents, thinners, and acids.	HISTORICAL: Acids, laboratory chemicals, paints, solvents, thinners SAMPLING: Subsurface Soil (0 - 2 m): Aldrin, DDT, dieldrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chromium, copper, DDT, dieldrin, fluoranthene, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc

[illegible]

Table 3. Inventory List of Rocky Mountain Arsenal Structures

STRUCTURE NUMBER	STRUCTURE DESCRIPTION / STUDY AREA	YEAR BUILT / MAP SECTION	NO. OF LEVELS	ESTIMATED TOTAL AIR VOLUME (yd³)	ESTIMATED TOTAL [illegible] (yd³)	STRUCTURE MATRICES (ESTIMATED MAXIMUM THICKNESS IN INCHES AND VOLUME IN yd³): ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE	POTENTIAL ASSOCIATED CHEMICALS
634†	Flammable Materials Storehouse WSA	42/04	1	[illegible]	[illegible]	C (6) [14]	[illegible] [illegible]	NP	C (6) [14]	The building was originally equipped with oil dispensing and storage tanks and was later used for storage of paint, alcohol, ether, and chloroform	HISTORICAL: Alcohol, chloroform, ether, oil, paints SAMPLING: Surficial Soil (0 - 2 in): Aldrin, DDT, dieldrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chlordane, chromium, copper, DDE, DDT, dieldrin, fluoranthene, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc
635	Administration Offices Rocky Mountain Arsenal WSA	42/03	1	250	47	CM	CW (6) [illegible]	PD [1]	C (6) [4]	No prior chemical use reported	HISTORICAL: None
639	Lumber Storage WSA	52/04	1	2,600	14	CM	PD	NP	C (6)	No prior chemical use reported	HISTORICAL: None
641	Warehouse WSA	42/04	0	96	96	NA	NA	NA	NA	The building was used as a warehouse with precise contents unavailable in Task 24	HISTORICAL: Historically associated chemicals not available
643	Flammable Materials Storehouse WSA	42/03	1	120	55	C [9]	[illegible] [4]	NP	C (8) [17]	The building was used to store small arms ammunition, DDT, DED Weed, a rodenticide, wilco ground squirrel bait, diazinon insecticide, Tordon 101 mixture, bordeaux mixture, aldrin insecticide, and herbicide 2,4-D', and repackage [illegible] containing 85 percent naled	HISTORICAL: DDT, naled, wilco ground squirrel bait, aldrin, DED Weed, diazinon, Tordon 101 mixture, bordeaux mixture, herbicide 2,4-D³
644	Noncommissioned Officers Quarters WSA	NA/03	0	[illegible]	[illegible]	NA	NA	NA	NA	No prior chemical use reported	HISTORICAL: None
644A	Garage/Storage WSA	NA/03	0	[illegible]	[illegible]	NA	NA	NA	NA	The building was used as a garage and storage shed with precise contents unavailable in Task 24	HISTORICAL: Historically associated chemicals not available
646	Rodent Control Building WSA	52/04	0	5	5	NP	NP	NP	NA [illegible]	The building was used for storage and mixing of pesticides and herbicides with precise contents unavailable in Task 24	HISTORICAL: Pesticides, herbicides
647A	Motor Pool Dispatch Office WSA	42/04	1	440	[illegible]	A [illegible]	AH [illegible]	PD	C [illegible]	No prior chemical use reported	HISTORICAL: None

[illegible]

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION / STUDY AREA Subarea	YEAR BUILT[b] MAP SECTION	NO. OF LEVELS[c]	ESTIMATED TOTAL AIR VOLUME (yd³)	ESTIMATED TOTAL [illegible] (yd³)	STRUCTURE MATRICES (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[e]	POTENTIAL ASSOCIATED CHEMICALS[f]
647B	Motor Pool Vehicle Storage/WSA 7a	42/04	1	[illegible]	[illegible]	A [illegible] [50]	W [illegible] [43]	WO [3]	NP	No prior chemical use reported	HISTORICAL: None
647C	Motor Pool Vehicle Storage/WSA 7a	42/04	[illegible]	[illegible]	[illegible]	A (1) [18]	WO (1) [11]	W (4)	NP	No prior chemical use reported	HISTORICAL: None
647D	Motor Pool Vehicle Storage/WSA 6a	42/04	1	[illegible]	[illegible]	A (1) [18]	WO (1) [11]	W (4)	NP	No prior chemical use reported	HISTORICAL: None
648	Road Oil Pump and Boiler House/WSA 6a	42/04	1	[illegible]	48	C (8) [illegible]	FW (8) BR (8)	BR (8) [4]	C (4) [illegible]	No prior chemical use reported	HISTORICAL: None
670	Remediation Use Structure	NOTE: Built since 1986; additional information available from PMRMA									
673A	Railroad Scale House/ WSA 1c	49/03	1	26	[illegible]	A (1) [1]	M (0.0[illegible]) [0.1]	NP	C (6) [2]	The building stored nontoxic, nonhazardous, nonmilitary boxcars. Other materials stored are unavailable in Task 24	HISTORICAL: No historically associated chemicals SAMPLING: Surficial Soil (0 - 2 in): NSC Surficial Soil (0 - 2 ft): Dieldrin, fluoranthene, methyl naphthalenes, phenanthrene, pyrene Subsurface Soil: (2 - 5 ft, 5 - 20 ft, > 20 ft) methylene chloride
679	Warehouse/Can Scrounging(?) post, south of WSA	43/10	0	62	62	NA	NA	NA	NA	The building was used to dispose sanitary waste from chemical toilets and to wash and disinfected containers; precise chemicals used unavailable in Task 24	HISTORICAL: Sanitary wastes from chemical toilets
680	Radar Range B/WSA	58/09	0	2	2	NP	NP	NP	NA [illegible]	No prior chemical use reported	HISTORICAL: None
684	Guard Tower, east of 644, north of 675/WSA	43/03	0	6	6	NP	NP	NP	NA [4]	No prior chemical use reported	HISTORICAL: None
685	Guard Tower, southeast of 673/WSA	43/03	0	6	6	NP	NP	NP	C (4) [1]	No prior chemical use reported	HISTORICAL: None

[illegible footnotes]

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION/ STUDY AREA Subarea	YEAR BUILT[b]/ MAP SECTION[c]	NO. OF LEVELS[d]	ESTIMATED TOTAL AIR VOLUME[e] (yd³)	ESTIMATED TOTAL env[e] (yd³)	STRUCTURE MATRICES[f] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[g]	POTENTIAL ASSOCIATED CHEMICALS[h]
688	Guard Tower east of 615/ WSA	43/03	0	6	6	NA	NA	NA	NA	No prior chemical use reported	HISTORICAL None
702	Remediation Use Structure	NOTE Built since 1986 additional information available from PMRMA									
724	Incinerator/Electrostatic Precipitator/SPSA 1g	77/01	4	4 000	370	C (6) [20]	CA [17]	NP	C (24) [133]	The building was used to incinerate effluent from the Denver Effluent Treatment Plant, and treated liquid effluent with sulfuric acid. By products included carbon dioxide, carbon monoxide and salts. The chemicals[i] in liquid waste could include the same compounds listed for Building 502	HISTORICAL Denver Effluent Treatment[i] wastes could include the same compounds listed for Building 502, PCBs[k] SAMPLING Dust - Chlorophenylmethyl sulfone, dieldrin, Cd, Cr, Cu, Pb, Zn, As
725	Bomb Testing Station/ CSA 2a	45/[illegible]	1	99	99	A/C [4]	MB (12) [42]	P D (4) [1]	C (36) [57]	The building was used as a testing structure for bombs including M69X (napalm), M69 (white phosphorus) incendiary bomblets, M13 and M19 clusters, goop, M74 incendiary bomblets, E48 clusters, M50 incendiary bomblets, M17A1 clusters, M139 GB bomblets, and numerous other types of munitions. It was also used for detonation of munitions including white phosphorus grenades. It stored various conventional and chemical agent[i] munitions. Leaks from GB filled E139 Lance Warhead bomblets occurred	HISTORICAL White phosphorus, napalm, HD breakdown products (chloroacetic acid, dithiane, 1,4 oxathiane, thiodiglycol), GB breakdown products ([illegible] phosphonate, dimethyl methyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid tributyl ester, phosphoric acid triphenyl ester), goop, chemical agent
726	Bomb Testing Building/ CSA 2a,4	68/36	1	140	40	CM (2) [2]	CM (2) [4]	CA (0.4)	C (12) [34]	Test building for sandwich button bomb (red phosphorus and potassium chlorate) loaded in freon filled canisters. Also possibly conducted vibration testing on GB and VX filled munitions. HD detected in the building	HISTORICAL HD breakdown products (chloroacetic acid, dithiane, 1,4 oxathiane, thiodiglycol), GB breakdown products ([illegible] phosphonate, dimethyl methyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid tributyl ester, phosphoric acid triphenyl ester), VX, freon, red phosphorus, potassium chlorate

NOTE A symbol and acronym list is provided on the last page of this table

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA Subarea	YEAR BUILT/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL area* (yd²)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³)				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
727†	Facilities Maintenance/ SPSA-1b	60/01	1	2,100	98	CM (1) [1]	CM (0.064) [1]	NP	C (6) [77]	The building was used to house electrical, automotive, and carpenter shops. Any chemical use in the building is not described in Task 24.	HISTORICAL: Other historically associated chemicals not available SAMPLING Dust: Dieldrin Surficial Soil (0 - 2 in): NSC Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chlordane, chloroacetic acid, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, DCPD, dieldrin, dithiane, endrin, fluoranthene, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, supona, thiodiglycol, zinc Subsurface Soil: (2 - 5 ft) tetrachloroethylene, 1,1,1-trichloroethane Groundwater: Benzene, carbon tetrachloride, chlorobenzene, chloroform, m-xylene, tetrachloroethylene, toluene, trichloroethylene, xylenes, 1,1,1-trichloroethane

NOTE: A symbol and acronym key is provided at the end of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA Subarea	YEAR BUILT/* MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³] ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
728†	Dichlorodiethyl Sulfide Filling/Pesticide Storage/Warehouse/SPSA-1g	45/01	1	2 100	1,408	A/C (2) [197]	MB (12) [350]	BR (8) [41]	C (12) [696]	The warehouse was used for storage of 105 mm HD shells and sandwich button bomb wooden kits (consisting of potassium chlorate, red phosphorous, silica gel magnesium oxide, and silica), and pesticides such as pydrin, azodrin and planavin. Building was used to recover HD from containers	HISTORICAL Azodrin, magnesium oxide, HD breakdown products (chloracetic acid, dithiane 1,4 oxathiane thiodiglycol), pesticides, planavin potassium chlorate, pydrin, red phosphorous, silica silica gel SAMPLING Dust Aldrin, arsenic cadmium, chlordane chlorophenylmethyl sulfone, chromium, copper, DBCP DDT dieldrin, endrin lead Surficial Soil (0 - 2 in) Aldrin, chlordane, DDE, DDT dieldrin endrin hexachlorocyclopentadiene, isodrin Surficial Soil (0 - 2 ft) Aldrin, arsenic cadmium, chlordane, chloroacetic acid, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, DCPD dieldrin, dithiane endrin, fluoranthene, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene thiodiglycol zinc Subsurface Soil (2 - 5 ft) tetrachloroethylene, 1 1 1 trichloroethane Groundwater Benzene carbon tetrachloride, chlorobenzene, chloroform, tetrachloroethylene toluene, trichloroethylene, xylenes 1 1 dichloroethane 1 1 dichloroethylene 1 2 dichloroethane, 1,2-dichloroethylenes 1 1 1 trichloroethane

NOTE A symbol and acronym list is provided on the last page of this table

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³] ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
729†	General Purpose Warehouse/SPSA 1g	45/01	1	18,000	1,600	A/C (2) [198]	MB (8) [338]	3R P/D AB (8) [78]	C (10) [670]	The warehouse was used to store miscellaneous equipment and office supplies. Specific use of cupric sulfate and sodium nitrate are not described in Task 24	HISTORICAL Cupric sulfate, sodium nitrate SAMPLING Dust Arsenic, cadmium, chromium, copper, lead, zinc Surficial Soil (0 - 2 in) Aldrin, chlordane, DDE, DDT, dieldrin, endrin, hexachlorocyclopentadiene, isodrin Surficial Soil (0 - 2 ft) Aldrin, arsenic, cadmium, chlordane, chlorophenylmethyl sulfoxide, chromium, copper, DDE, DDT, DBCP, DCPD, dieldrin, dithiane, endrin, fluoranthene, hexachlorocyclopentadiene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, thiodiglycol, zinc Subsurface Soil (2 - 5 ft) tetrachloroethylene, 1,1,1-trichloroethane Groundwater: Benzene, carbon tetrachloride, chlorobenzene, chloroform, tetrachloroethylene, trichloroethylene, 1,1,1-trichloroethane
730	Decontamination Pad/ CSA 4	NA/36	0'	NA	NA	NA	NA	NA	NA	The pad is used for decontamination of vehicles'	NA
731	Reserve Center/Office/ Change House/SPSA 5b	45/01	2	4,900	760	C (12) [219]	PW (9) MB (8)	P/D [48]	C (9) [521]	The building was used as [illegible] shop and training and [illegible] stored equipment such as earth mover [illegible]	HISTORICAL None

NOTE: A symbol and acronym list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT/ MAP SECTION[a]	NO. OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd³)	ESTIMATED TOTAL amv[a] (yd³)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[a]
732	Army Reserve Warehouse/ M19 Bombs Reworked/ SPSA-5b	45/01	2	3,800	3,900	C (6) [538]	MB (8) [861]	CC (18) P/D [167]	C (6) [2,376]	The building was used to paint, rework, and/or disassemble M19 (napalm, white phosphorus) incendiary clusters, M69 (white phosphorus) bomblets, and M25 casing adapters (M31 cluster). Installation of a white phosphorus shell-filling line was initiated but never completed. The building was later used for office space and storage of equipment and supplies. NOAA stored equipment and supplies for a research laboratory, but specified no flammable, toxic, or dangerous materials were stored. In 1983, oil filled capacitors, transformers, photographic chemicals, and reactants were stored in the building. The building also stored napalm mixing kettles, black powder, and magnesium.	HISTORICAL: White phosphorus, napalm, black powder, magnesium, oil, photographic chemicals, paint, HD[a] breakdown products (chloroacetic acid, dithiane, 1,4 oxathiane, thiodiglycol), distilled HD[a], nitrogen HD[a], LW[a], PCBs
733A	Warehouse/SPSA-5b	45/01	1	130	34	C (6) [7]	MB (8) [17]	NP	C (8) [10]	The building stored picric acid, black powder, metal and plastic adapter sleeves, arming wire assemblies, and M108 fuze seats, and was used as magazine for M19 (white phosphorus and napalm) incendiary bomb operations.	HISTORICAL: Picric acid, black powder, napalm, white phosphorus, fuzes
733B	Warehouse/SPSA-5b	45/01	1	130	34	C (6) [7]	MB (8) [17]	NP	C (8) [10]	The building stored signal flares, smoke grenades, and small arms ammunition, and was used as a magazine for M19 (white phosphorus and napalm) incendiary bomb operations.	HISTORICAL: Napalm, white phosphorus
733C	Warehouse/SPSA-5b	45/01	1	130	34	C (6) [7]	MB (8) [17]	NP	C (8) [10]	The building stored bleach and was used as a magazine for M19 (white phosphorus and napalm) incendiary bomb operations.	HISTORICAL: Napalm, bleach, white phosphorus, HD[a] breakdown products (chloroacetic acid, dithiane, 1,4 oxathiane, thiodiglycol), distilled HD[a], nitrogen HD[a], LW[a]
733D	Warehouse/SPSA-5b	45/01	1	130	58	C (6) [7]	C (12) WD (3) [17]	NP	C (8) [34]	The building stored bleach, small arms ammunition, and was used as a magazine for M19 (white phosphorus and napalm) incendiary bomb operations.	HISTORICAL: Napalm, bleach, white phosphorus, HD[a] breakdown products (chloroacetic acid, dithiane, 1,4 oxathiane, thiodiglycol), distilled HD[a], nitrogen HD[a], LW[a]

NOTE: A symbol and acronym list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] / STUDY AREA - Subarea	YEAR BUILT[c] MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (yd^3)	ESTIMATED TOTAL [same][f] (yd^3)	STRUCTURE MATRICES[g] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[h]	POTENTIAL ASSOCIATED CHEMICALS[i]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
733E	General Purpose Warehouse/SPSA-5b	45/01	1	130	65	C (6) [7]	C (12) WD (3) [17]	NP	C (8) [43]	The building stored bleach and was used as magazine for M19 (white phosphorus and napalm) incendiary bomb operations.	HISTORICAL: Napalm, bleach, white phosphorus
733F	General Purpose Warehouse/SPSA-6	45/01	1	130	69	C (6) [7]	C (12) WD (3) [22]	NP	C (8) [40]	The building stored bleach, grenades, small arms, also used as a magazine for M69X (white phosphorus and napalm) incendiary bomb operations. Later used by the Reserves, Fort Carson Medical Detach with precise contents unavailable in Task 24.	HISTORICAL: Napalm, bleach, white phosphorus, other historically associated chemicals not available
735	Foamite/Oil Product Storage/SPSA 5b	45/01	1	48	36	C (6) [3]	FW (12) MU (8)	NP	C (4) [10]	The building was used as a foamite, alcoloam, and oil product storage facility.	HISTORICAL: Foamite, oil products, alcoloam SAMPLING: Dust: Aldrin, dieldrin, chlorophenylmethyl sulfone

NOTE: A symbol and acronym list is provided on the last page of this table.

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION/ STUDY AREA Subarea	YEAR BUILT[a] MAP SECTION[a]	NO OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd³)	ESTIMATED TOTAL env[a] (yd³)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]				HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[a]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
741	Refrigeration Building/ SPSA-1g,5b	43/01	2	3,600	880	A,C (1) [49]	ST (8) [144]	CC (12) P,D (0.5) [27]	C (6) [664]	The building was part of the incendiary oil bomb plant which manufactured and stored napalm and bombs. Used gasoline, benzene, napalm powder, napalm gel, and nitrogen in production. Also used hoist mechanism equipment previously used to lift thionyl chloride drums in the LW plant and compressor condenser and evaporator system from the thionyl chloride plant. The building was possibly used to manufacture and package sodium hypochlorite and recondition M70 HD filled bombs. Later used as a processing plant in the demilitarization of the microbiological anticrop agent wheat rust which used nitrogen, ethylene oxide, Freon 12, jet fuel, carbonic gas and detergent solution. A small spill of wheat rust was decontaminated by paraformaldehyde fumigation. Later used as soils and biological specimen laboratory. Building contains possible Basin A dust contaminants. Found in the dust include aldrin, dieldrin, endrin, [illegible] DDT [illegible] and As). The building sump contained [illegible] pesticides such as aldrin, dieldrin, endrin, isodrin, DBCP and heavy metals. The building was also used as a battery charging facility. Although monitored, [illegible] sulfuric acid and ammonia [illegible] Task 4	HISTORICAL: Napalm, wheat rust, aldrin, dieldrin, endrin, isodrin, As, DCPD, benzene, sulfuric acid, gasoline, ammonia, sodium hypochlorite, ethylene oxide, Freon 12, paraformaldehyde, DBCP, carbonic gas, HD breakdown products [illegible] nitrogen, thionyl chloride, jet fuel, DDT, Basin A dust, heavy metals (Cd, Cr, Cu, Pb, Zn, Hg), Freon [illegible] SAMPLING: Liquid: chloroform, methylene chloride, toluene, nontarget compounds

NOTE: A symbol and acronym list is provided on the last page of this table.

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT[b]/ MAP SECTION[c]	NO OF LEVELS[d]	ESTIMATED TOTAL AIR VOLUME[e] (yd³)	ESTIMATED TOTAL (yd³)	STRUCTURE MATRICES[f] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND VOLUME (yd³): ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORY OF USE[g]	[illegible]
742†	Warehouse/SPSA-1g,5a,5b	42/01	1	42,000	4,800	WD (1) [513]	ST [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
742A	Tank House/SPSA-5b	52/01	1B	940	220	WD CM (12) [55]	ST (8)	NO	C (12) [109]	[illegible]	[illegible]

NOTE: A symbol and acronym list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] STUDY AREA: Subarea	YEAR BUILT[c] MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (m^3) (yd^3)	ESTIMATED TOTAL [illegible] (m^3) (yd^3)	STRUCTURE MATRICES[g] (ESTIMATED MAXIMUM THICKNESS (IN INCHES) AND (VOLUME IN yd^3)				USE(S) OR ACTIVITY(IES) AT USE[h]	POTENTIAL CONTAMINANTS OF CONCERN[i]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
743	Rocky Mountain Arsenal Laboratory/Change House/ Office/SPSA-1g,5b	42/01	1	3,200	350	A/C (4.5) [45]	PW (18) MP (6)	MR (6) [56]	C (4) [2.05]	The building started as an office laboratory and supply room for M47 incendiary oil bombs and used gasoline barracks and repairs. Also used as a change house for HD operations. Although mentioned specific use or occurrence of chloroform, carbon tetrachloride, formaldehyde, Cd, As, dimethyl sulfate, DBCP, and beryllium is not described in Task 24.	HISTORICAL: Gasoline, benzene, napalm, chloroform, carbon tetrachloride, formaldehyde, Cd, As, dimethyl sulfate, DBCP, beryllium, HD breakdown products [illegible]
743A	Chemical Sewer Lift Station for Buildings 741, 742, and 743/SPSA-1g	NA/01	0	9	4	S	C (6) [3]	NP	C (6) [1]	The building was constructed as a sewage pumping system. Specific use as a chemical lift station for Buildings 741, 742 (before use as Structure) and 743 is not described in Task 24.	HISTORICAL: Chemicals associated with Buildings 741, 742, 743
744	Gasoline/Benzol Pumphouse/SPSA-5b	43/01	1	280	76	C (11) [55]	BR (6) [22]	NP [4]	C (4) [25]	The building acted as a pump house for the incendiary oil bomb plant which fabricated gasoline and benzene to plant. Later used by Shell to store DCPD.	HISTORICAL: Gasoline, benzene, DCPD; SAMPLING: Dust, DCPD, Cd, Cr, Cu, Pb, Zn, As
745	Fire Fighting Manifolds for 745 A, B, and C/SPSA-5b	43/01	0	110	20	NP	PW (12) BR (6)	NP	C [illegible] [20]	No prior chemical use [illegible]	HISTORICAL: None
746	Gasoline Unloading Rack/ SPSA-5b	43/01	0	2	1	NP	NP	NP	NA [1]	The building was used to unload gasoline shipments and possibly by Shell in DCPD operations. A spill of diesel fuel occurred near building.	HISTORICAL: Gasoline, diesel fuel, DCPD
748	Flammable Materials Storehouse/SPSA-1g	42/01	1	140	49	C (8) [10]	PW (8) BR (8)	NP	C (8) [14]	The building stored oil paint, lacquer, thinner and other flammables. Possibly used in the M47 incendiary oil Bomb Filling Plant for storage of paint and other contents not described in Task 24.	HISTORICAL: Oil paint, lacquer, thinner. Potentially chemical off or hydrolysis associated chemicals not available.

NOTE: A symbol and acronym list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA Subarea	YEAR BUILT* MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd^3)	ESTIMATED TOTAL SURFACE AREA* (yd^2)	STRUCTURE MATERIALS* (ESTIMATED MAXIMUM THICKNESS IN MILLIMETERS) AND VOLUME (yd^3)* ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
751	Paint and Process Shop/SPSA-5b	43/01	1B	3,000	630	A[illegible] (1) [56]	[illegible] [76]	MB (4) [77]	[illegible] [4,111]	The building was initially used for storage of bombs or similar items in the Incendiary Oil Bomb Plant. Later used for heavy equipment maintenance which included cleaning and preparing for overhaul or for storage. The building contained two tanks for degreasing and paint stripping. Carbon was generally used in the tanks, although chlorothene, stoddard and stripper solutions were also used. Additional chemical solvents used in the building include organochlorine degreaser solvents, paint strippers such as Turco, rust removers, paints, thinners, solvents, rust inhibitors, gear oil, lubricating oil, grease, and other petroleum products.	HISTORICAL Oakite chlorothene stoddard, panther, organochlorine degreasing solvents, paint strippers, Turco, rust removers, paints, thinners, solvents, gear oil, rust inhibitors, lubricating oil, grease, petroleum products, chloride*
752	Carpenter Shop/Storage/ SPSA-5b, 9b	43/01	1	2,800	670	WD (1) [56]	[illegible] [76]	[illegible] WD (19) [76]	[illegible] [1,852]	The building stored miscellaneous equipment and materials using supplies with precise contents unavailable in Task 24.	HISTORICAL Historically associated chemicals not available
752A	Lumber Storage/SPSA-5b, 9b	53/01	1	340	110	CM (0.06)	[illegible] CM (0.06)	NP*	[illegible] [100]	No prior chemical use reported.	HISTORICAL None
753	Steam Fitter Maintenance/Storage/ SPSA-5b	52/01	1	140	52	CM (0.06)	CM (0.06)	FB (0.3) [76]	[illegible] (5) [50]	The building was used to store paint. Later used as steam fitting shop, maintenance shop for overall process storage with precise contents unavailable in Task 24. Although mentioned specific use or occurrence of herbicides and pesticides is not documented in Task 24.	HISTORICAL Herbicides pesticides paint, other associated chemicals not available
754	Lumber Storage/SPSA-5b	52/01	1	510	49	CM (0.06)	CM (0.06)	NP*	[illegible] [3.4]	No prior chemical use reported.	HISTORICAL None
755	Change House/Storage/ SPSA-5b	NA/NA	NA	NA	NA	NA	NA	NA	NA	The building was used as a change house and to store supplies such as clothes, tools and [illegible]. No chemical storage or use is documented in Task 24.	HISTORICAL None

NOTE: A symbol and acronym list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] STUDY AREA - Subarea	YEAR BUILT[c] MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (ft^3)	ESTIMATED TOTAL SURFACE AREA[g] (ft^2)	STRIKE TIME MATRIX[h] ESTIMATED MAXIMUM THICKNESS OF CONTAMINATED SOIL (inches)				HISTORICAL USE[i]	POTENTIAL ASSOCIATED CHEMICALS[j]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
756	Blender/Scrubber Metering House/SPSA 5b	NA/NA	NA	NA	140	NA	NA	NA	NA	The building was used as a mixing facility for blending fuels for use as propellant. Fuels that were handled included unsymmetrical dimethyl hydrazine, nitromethylamine, hydrazine and Aerozine 50, and monopropellant hydrazine. The existing scrubber vent pipe emitted a large percentage of propellant vapors. The Installation Assessment conducted in 1977 indicates that hydrazine is a potential contaminant and a 1978 study identified low concentrations of n-nitrosodimethylamine in the hydrazine plant area but it could not be determined if the building was included in the study.	HISTORICAL: Unsymmetrical dimethyl hydrazine, nitromethylamine, hydrazine, Aerozine 50, monopropellant hydrazine, n-nitrosodimethylamine
758A	Fire Protection Valve Pit/ SPSA 6	NA/NA	NA	NA	10	NA	NA	NA	NA	NA	NA
759	Drum Cleaning/SPSA 6	NA/NA	NA	NA	32	NA	NA	NA	NA	The building was used to store fuels, nonsparking tools, and protective clothing. Fuel stored at this building included hydrazine and unsymmetrical dimethyl hydrazine. A 1978 study identified low concentrations of n-nitrosodimethylamine in the hydrazine plant area but it could not be determined if the building was included in the study.	HISTORICAL: Hydrazine, unsymmetrical dimethyl hydrazine, n-nitrosodimethyl amine
760	Drum Storage Facility/ SPSA 6	NA/NA	NA	NA	[illegible]	NA	NA	NA	NA	The building was used to store and retrieve propellant fuel 55-gallon drums. The drums also contained hydrazine. A 1978 study identified low concentrations of n-nitrosodimethylamine in the hydrazine plant area but it could not be determined if the building was included in the study.	HISTORICAL: Hydrazine propellant, n-nitrosodimethylamine
761	Drum Loading Station/ SPSA 6	NA/NA	NA	NA	[illegible]	[illegible] M	PW [illegible] M	NP	[illegible]	The building was used to transfer 55-gallon drums of fuel into storage tanks and tank trucks. [illegible] included Aerozine 50, hydrazine, unsymmetrical dimethyl hydrazine	HISTORICAL: Aerozine 50, hydrazine, unsymmetrical dimethyl hydrazine

NOTE: [illegible]

[illegible]

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA Subarea	YEAR BUILT* MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME * (yd³)	ESTIMATED TOTAL (gray * (yd³)	STRUCTURE MATRICES * (ESTIMATED MASS/SURFACE THICKNESS/VOLUME) AND VOLUME (yd³)				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS *
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
765	Remediation Use Structure SPSA 6	NOTE Built since 1946; additional information available from HMMUA									
784	Guard Station - southeast of 742/SPSA	4101	0	6	6	NA	NA	NA	NA	No prior chemical use reported	HISTORICAL None
785	Warehouse/ Remediation Storage/ESA	5206	1	23,000	1,450	C	MR	NA	C	The warehouse stored various items such as GB-filled bombs (nine leaking bombs were removed), GB-filled T-77 (two leaking shells were set) and T-972 shells, chlorinated lime bleach, calcium hypochlorite, sodium hydroxide, sodium carbonate, Oxy Boncid IV pesticides, GB salts, Chemical Agent Identification Set (CAIS) salts, CAIS Wetaye salt, salt dryer residue, quench EP salt drums, phosgene scrubber packing material, HD salt, arsenic, DDT residue, salt ammo, dry caustic cleanup, M34 salt, methylene chloride, herbicides, para-formaldehyde, antiweze, and drums containing contaminated water, soil, and clothing. The building was decontaminated with a high pressure water and detergent solution and was certified as nonhazardous.	HISTORICAL Antiweze, arsenic, bleach, bleach detergent solution, CAIS, CAIS salts, calcium hypochlorite, chlorinated lime, DDT, EP salts, GB breakdown products, [illegible], HD breakdown products, [illegible], HD salts, methylene chloride, M34, GB salts, Oxy Boncid IV pesticides, paraformaldehyde, phosgene, residue, salt ammo, sodium carbonate, sodium hydroxide, wetaye salt SAMPLING Surficial Soil (0 - 2 ft): Aldrin, DDT, dieldrin, endrin Surficial Soil (0 - 2 ft): Aldrin, cadmium chloride, DDE, DDT, dieldrin, endrin, lindane, lead, mercury, zinc Grab Sample: Benzene, chlorobenzene, chloroform, tetrachloroethylene

NOTE: [illegible]

[illegible]

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

Structure Number[a]	Structure Description/Study Area	Year Built/Map Section	No. of Levels	Estimated Total Air Volume (m³)	Estimated Total Area (yd²)	Structure Matrices (Estimated Maximum Thickness in Inches and Volume in yd³): Roof	Exterior Walls	Interior Walls	Foundation	Historical Use	Potential Associated Chemicals
786†	Warehouse/ESA	53/06	1	7,800	480	C [8]	MB (8) [216]	NP	C [257]	The warehouse stored chemical munitions, torpedo propellant, hydrogen salt, GB, GB salt from M11 and thionyl chloride (TC) drain, HD salt, M34 GB salt and HD salt. The building was decontaminated with [illegible] pressure water and detergent solution and was certified as nonhazardous.	HISTORICAL: Chemical munitions, detergent solution, GB breakdown products ([illegible]), HD salts, hydrogen salts, HD breakdown products ([illegible]), HD salts, M11 salts, M34 GB salts, torpedo propellant SAMPLING Surficial Soil (0 - 2 in): Aldrin, DDT, dieldrin, endrin Surficial Soil (0 - 2 ft): Aldrin, DDT, dieldrin, endrin, mercury
787†	Warehouse/ESA	53/06	1	7,800	48	C [8]	MB (8) [216]	NP	C [257]	HD and GB salts, M14 GB salt, TC salts and drums of "hazardous waste" pre- [illegible] contents unavailable in Task 24. The building was decontaminated with a high pressure water and detergent solution and was certified as nonhazardous.	HISTORICAL: Detergent solution, GB breakdown products ([illegible]), HD breakdown products ([illegible]), HD salts, M34 GB salts, TC salts, unspecified hazardous waste drums SAMPLING Surficial Soil (0 - 2 in): Aldrin, DDT, dieldrin, endrin, [illegible] Surficial Soil (0 - 2 ft): Aldrin, DDT, dieldrin, endrin, [illegible]

NOTE: A symbol and acronym list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA	YEAR BUILT* MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL AREA* (yd²)	STRUCTURE MATERIALS* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND VOLUME (yd³): ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
788†	Warehouse/ESA	5306	1	7,800	480	C [8]	MI (H) [2/16]	NP	[257]	The warehouse stored GB munitions, M78 and M74 white phosphorous, salt drums, M34 GB grenades, wet and dry HD salts (three leaking drums removed), HD salts contaminated with arsenic and decontaminated GB or phosgene ton containers. Phosgene was drained from bombs, pressurized with nitrogen gas and transferred into ton containers. Soil samples taken near perimeter of building contained lead. The building was decontaminated with a high pressure water and detergent solution and was certified as nonhazardous.	HISTORICAL: Arsenic, detergent solution, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid tributyl ester, phosphoric acid triphenyl ester), lead, HD breakdown products (chloroacetic acid, dithiane, 1,4-oxathiane, thiodiglycol), M34, phosgene, white phosphorus SAMPLING Surficial Soil (0 - 2 in): Aldrin, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft): Aldrin, chromium, copper, DDT, dieldrin, endrin, isodrin, lead, zinc
791†	Warehouse/ESA	5331	1	7,800	480	C [8]	MI (H) [2/16]	NP	C [257]	The warehouse stored drums of GB filled ton containers or munitions, unspecified salts, HD salts (three leaking drums removed), HD salts contaminated with arsenic, and miscellaneous storage. The building was decontaminated with a high pressure water and detergent solution and was certified as nonhazardous. Specific use or occurrence of sodium fluoride, caustic, sodium chloride, sodium sulfate, sodium sulfite, and sodium bicarbonate are not described in Task 24 but are probably constituents of salts.	HISTORICAL: Arsenic, detergent solutions, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid tributyl ester, phosphoric acid triphenyl ester), HD breakdown products (chloroacetic acid, dithiane, 1,4-oxathiane, thiodiglycol), sodium bicarbonate, sodium chloride, sodium fluoride, sodium sulfate, sodium sulfite, unspecified salts SAMPLING Surficial Soil (0 - 2 in): Aldrin, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft): Aldrin, DDT, dieldrin, endrin, isodrin

NOTE: A symbol and an explanation is provided at the end of the table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[a] / STUDY AREA Subarea	YEAR BUILT[a] MAP SECTION[a]	NO OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd³)	ESTIMATED TOTAL sms[a] (yd²)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES AND (VOLUME IN yd³)): ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[a]
792†	Drum Storage Warehouse ESA	52/31	1	7,900	440	C,A [8]	C [129]	NP	C [178]	The warehouse stored GB filled ton containers or munitions, XM40 sandwich button bombs (consisting of potassium chlorate, red phosphorous, silica gel, magnesium oxide, and silica) stored in freon, and nonhazardous nontoxic nonexplosive materials.	HISTORICAL: Freon, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester phosphoric acid, triphenyl ester), magnesium oxide, potassium chlorate, red phosphorous, silica, silica gel SAMPLING Surficial Soil (0 - 2 in): Aldrin, DDT, dieldrin, endrin Surficial Soil (0 - 2 ft): Aldrin, DDT, dieldrin, endrin
793†	Drum Storage Warehouse ESA	52/31	1	7,900	470	C [8]	C [120]	NP	C [178]	The warehouse stored GB filled ton containers or munitions, unspecified salts, phosgene salts (which contained sodium chloride and sodium carbonate), laboratory waste solvents, waste solvents, dry and wet salts, GB salts, GB weteye salt, GB filled contaminated hydraulic oil, pesticides, caustic, Heptachlor, waste fuel oil and miscellaneous salts. The building was decontaminated with a high pressure water and detergent solution and was certified as nonhazardous. Specific use of or occurrence of HD salts, sodium fluoride, sodium isopropyl methylphosphonate, sodium sulfite, sodium sulfate, sodium carbonate are not described in Task 24 although most are probably contained in the salts.	HISTORICAL: Caustic, detergent solutions, fuel oil, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester phosphoric acid, triphenyl ester), laboratory wastes solvents, Heptachlor, hydraulic oil, HD breakdown products (chloroacetic acid, dithiane, 1,4-oxathiane, thiodiglycol), HD salts, sodium fluoride, sodium carbonate, sodium chloride, sodium isopropyl methyl phosphonic, sodium sulfate, sodium sulfite, pesticides, phosgene salts, unspecified salts, waste solvents, weteye salts SAMPLING Surficial Soil (0 - 2 in): Aldrin, chlordane, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft): Aldrin, chlordane, DDT, dieldrin, endrin, isodrin

NOTE: [illegible]

[illegible]

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA Subarea	YEAR BUILT* MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd^3)	ESTIMATED TOTAL [illegible] (yd^3)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME yd^3)				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
794†	Drum Storage Warehouse ESA	52/51	1	7,800	480	C [8]	MB (8) [216]	NP	C [257]	The warehouse stored GB filled ton containers or munitions, scrubber residue, unspecified salts, arsenic contaminated salts, wet and dry HD salts, CAIS arsenic contaminated CAIS salts, CAIS wastes, GB salts, phosgene scrubber packing, burned HD residue, and ash residue. In April of 1982 it was noted that ten drums of HD salts were corroded and apparently leaking. In 1983, leakers were found of wet HD salts, burned HD residue, and GB salts. The building was decontaminated with a high pressure water and detergent solution and was certified as nonhazardous. Specific use or occurrence of sodium bicarbonate, sodium carbonate, sodium chloride, sodium sulfite, sodium sulfate, sodium fluoride, and caustic are not described in Task 24 although most were probably constituents in the salts.	HISTORICAL: Arsenic, caustic, detergent solution, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester, phosphonic acid, triphenyl ester), HD breakdown products (chloracetic acid, dithiane, 1,4 oxathiane, thiodiglycol), HD residue, phosgene, sodium bicarbonate, sodium carbonate, sodium chloride, sodium fluoride, sodium sulfate, sodium sulfite, unspecified salts SAMPLING Surficial Soil (0 - 2 in): Aldrin, chlordane, DDE, DDT, dieldrin, endrin, hexachlorocyclopentadiene, isodrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, chlordane, DDE, DDT, dieldrin, endrin, isodrin, hexachlorocyclopentadiene, lead, mercury Groundwater: Benzene, chloroform

NOTE: A symbol and [illegible] provided on the last page of this report.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT**/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL sav* (yd³)	STRUCTURAL MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³): ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
795†	Drum Storage Warehouse/ ESA	52/31	1	7,800	480	C (0.064) [8]	MB (8) [216]	NP	C [257]	The warehouse stored GB filled ton containers or munitions, spray dried salts from HD neutralization military equipment, munitions, unspecified salts, and HD salts contaminated with arsenic. The HD salts consisted of sodium chloride, sodium sulphite, sodium carbonate, and iron oxide. Specific use or occurrence of sodium sulfate, sodium fluoride, caustic, sodium bicarbonate are not described in Task 24, but are probably constituents in the salts. The building was decontaminated with a high pressure water and detergent solution and was certified as nonhazardous.	HISTORICAL: Arsenic, caustic, detergent solutions, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid tributyl ester, phosphoric acid, triphenyl ester), iron oxide, HD breakdown products (chloroacetic acid, dithiane, 1,4 oxathiane, thiodiglycol), sodium bicarbonate, sodium carbonate, sodium chloride, sodium fluoride, sodium sulfate, sodium sulfite, unspecified salts SAMPLING: Surficial Soil (0 - 2 in): Aldrin, chlordane, DDT, dieldrin, endrin, hexachlorocyclopentadiene, isodrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, chlordane, DDE, DDT, dieldrin, endrin, isodrin, hexachlorocyclopentadiene, mercury

NOTE: A symbol and acronym list is provided on the first page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[a]/ STUDY AREA Subarea	YEAR BUILT[a]/ MAP SECTION[a]	NO OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd³)	ESTIMATED TOTAL env[a] (yd³)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[b]
796†	Warehouse/ CSA	53/31	1	7 800	480	C [8]	MB (8) [216]	NP	C [257]	The warehouse stored GB filled ton containers or munitions, rocket propellant, HD salts. HD salts contaminated with arsenic, unspecified salts, and waste salts. In 1983, several drums of HD salts were reported to be leaking. The building was decontaminated with a high pressure water and detergent solution and was certified as nonhazardous.	HISTORICAL: Arsenic, detergent solutions, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid tributyl ester, phosphoric acid triphenyl ester), HD breakdown products (chloroacetic acid, dithiane, 1,4-oxathiane, thiodiglycol), rocket propellant, unspecified salts SAMPLING Surficial Soil (0 - 2 in): Aldrin, chlordane, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft): Aldrin, cadmium, chlordane, DDE, DDT, dieldrin, endrin, isodrin, hexachlorocyclopentadiene, mercury Groundwater: Benzene, chlorobenzene, chloroform, 1,1-dichloroethane, 1,1,1-trichloroethane

NOTE: A symbol and acronym list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] STUDY AREA - Subarea	YEAR BUILT[c] MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (yd^3)	ESTIMATED TOTAL area[g] (yd^2)	STRUCTURE MATRICES[h] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd^3]				HISTORICAL USE[i]	POTENTIAL ASSOCIATED CHEMICALS[j,k]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
797†	Drum Storage Warehouse/ ESA	52/31	1	7 800	480	C [8]	MB (8) [216]	NP	C [257]	The warehouse stored GB filled ton containers or munitions, M55 rocket propellant, unspecified salts, dried salts, GB salts, and GB salts stabilized with diisopropyl carbodimide were stored here. Specific use or occurrence of sodium fluoride, sodium isopropyl methyl phosphonate, caustic, sodium chloride, sodium sulfide, sodium sulfate, sodium carbonate, and sodium bicarbonate are not described in Task 24, but are probably constituents in the salts. The building was decontaminated with a high pressure water and detergent solution and was certified as nonhazardous.	HISTORICAL: Caustic, detergent solutions, diisopropyl carbodimide, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphonic acid, tributyl ester, phosphonic acid, triphenyl ester), HD breakdown products (chloroacetic acid, dithiane, 1,4 oxathiane, thiodiglycol), rocket propellant, sodium bicarbonate, sodium carbonate, sodium chloride, sodium fluoride, sodium isopropyl methyl phosphonate, sodium sulfate, sodium sulfite, unspecified salts SAMPLING: Surficial Soil (0 - 2 in): Aldrin, chlordane, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft): Aldrin, cadmium, chlordane, DDT, dieldrin, endrin, isodrin, mercury Groundwater: Benzene, chlorobenzene, chloroform, 1,1-dichloroethane, 1,1,1 trichloroethane

NOTE: A symbol and acronym list is provided on the last page of this table.

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] STUDY AREA Subarea	YEAR BUILT[c] MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (yd^3)	ESTIMATED TOTAL STRUCTURE VOLUME[g] (yd^3)	STRUCTURE MATRICES[h] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd^3]				HISTORICAL USE[i]	POTENTIAL ASSOCIATED CHEMICALS[j]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
798†	Drum Storage Warehouse/ ESA	52/31	1	7,800	470	C [8]	C [170]	NP	C [178]	The warehouse stored GB filled ton containers of munitions, MC1 GB bombs, sandwich button bombs in cadmium 10/B canisters (consisting of potassium chlorate, red phosphorous, silica gel, magnesium oxide, and silica), unspecified salts, GB salts, caustic, M34 GB salts, MK-116 (Weteye) salts, GB salts with stabilizer diisopropyl carbodiimide, and waste salts. Sodium carbonate, sodium fluoride, sodium isopropyl methyl phosphonate, sodium chloride, sodium sulfite, sodium sulfate, sodium bicarbonate are not described in Task 24, but are probably constituents in the salts. Late in 1982, it was noted that there were two leaking drums of unspecified content. The building was *decontaminated with a high pressure water* and detergent solution and was certified as nonhazardous.	HISTORICAL: Caustic, detergent solutions, diisopropyl carbodiimide, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphanic acid, tributyl ester, phosphonic acid, triphenyl ester), magnesium oxide, HD breakdown products (chloroacetic acid, dithiane, 1,4 oxathiane, thiodiglycol), M34 salts, potassium chloride, *red phosphorous*, silica, silica gel, sodium bicarbonate, sodium carbonate, sodium chloride, sodium fluoride, sodium isopropyl methyl phosphonate, sodium sulfite, sodium sulfate, unspecified salts, weteye salts SAMPLING: Surficial Soil (0 - 2 in): Aldrin, chlordane, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft): Aldrin, cadmium, chlordane, DDT, dieldrin, endrin, isodrin, mercury Groundwater: Benzene, chlorobenzene, chloroform, tetrachloroethylene, trichloroethylene, 1,1 dichloromethane, 1,1-dichloroethylene, 1,1,1-trichloroethane
801†	Radio Relay Station/NPSA	61/25	1	63	12	SM (0.05-1) [1]	SM (1) [2]	NP	C [1]	No prior chemical use reported	HISTORICAL: No historically associated chemicals SAMPLING Surficial Soil (0 - 2 in): Aldrin, DDE, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft): Aldrin, chromium, DDE, DDT, dieldrin, endrin, isodrin, mercury, zinc

NOTE: A symbol and acronym list is provided on the next page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³)				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
808†	North Boundary Groundwater Treatment Plant/NCSA	78/23	1	2,800	650	CM (0.064) [1]	CM (0.064) [1]	CM (0.064) [0.12]	C [393]	The treatment system removed diisopropylmethyl phosphonate and dicyclopentadiene from groundwater plumes by using a bentonite filter and calgon treatment system	HISTORICAL: Bentonite, calgon treatment, DCPD, diisopropylmethyl phosphonate SAMPLING: Surficial Soil (0 - 2 in): NSC Surficial Soil (0 - 2 ft): Aldrin, chlordane, DDE, DDT, dieldrin, endrin, isodrin, mercury
809†	Irondale Groundwater Treatment Plant/WSA	81/33	1	2,600	320	SM (0.064) [1]	SM (0.064) [1]	SM (0.064) [0.2]	C [78]	The treatment system removed DBCP from groundwater by using a carbon filter	HISTORICAL: Carbon, DBCP SAMPLING: Surficial Soil (0 - 2 in): NSC
810†	Northwest Boundary Groundwater Treatment Plant/NCSA	NA/27	1	3,800	490	CM (0.064) [1]	CM (0.064) [1]	NA	C [248]	VHOs, benzene (VAO), and DBCP removed from groundwater	HISTORICAL: Benzene, carbon tetrachloride, chlorobenzene, chloroform, DBCP, 1,1-dichloroethane, 1,2-dichlorethane, 1,1-dichloroethylene, *trans*-1,2-dichlorethylene, methylene chloride, 1,1,2,2 tetrachloroethane, tetrachloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, trichloropropene SAMPLING Surficial Soil (0 - 2 in): NSC Surficial Soil (0 - 2 ft): Arsenic, cadmium
825	Remediation Use Structure	NOTE: Built since 1986, additional information available from PMRMA									
831†	Technical Escort/Officer's Quarters/NCSA	NA/35	1B	1,000	120	A/C (2)	MB	NA	C [35]	No prior chemical use reported	HISTORICAL: No historically associated chemicals SAMPLING Surficial Soil (0 - 2 in): Aldrin, DDT, dieldrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chlordane, DDE, DDT, dieldrin, diisopropylmethyl phosphonate, endrin, isodrin, lead, mercury

NOTE: A symbol and acronym list is provided on the last page of this table.

OSSA/EUROEXT/STab3.ROPK
Rev. 07/08/93, 1:34pm

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL sm^{*} (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³)				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
831A†	Garage/Storage Shed NCSA	42/35	1	130	27	A/C (92) [3]	BR (8) [18]	NP	C [7]	No prior chemical use reported.	HISTORICAL: No historically associated chemicals SAMPLING: Surficial Soil (0 - 2 in). Aldrin, DDT, dieldrin Surficial Soil (0 - 2 ft). Aldrin, arsenic, cadmium, chlordane, DDE, DDT, dieldrin, diisopropylmethyl phosphonate, endrin, isodrin, lead, mercury
833	Lumber Storage/NCSA	53/35	1	260	79	NA	NA	NA	NA	The building was used for storage with precise contents unavailable in Task 24	HISTORICAL: Historically associated chemicals not available
834	Incinerator/CSA-1d	67/36	1	27	120	CM (0.06)	CM (0.06)	NP	C (18) [115]	The building was used to incinerate sanitary waste, and for disposal of contaminated solid waste and chemical waste including spent acid filter cartridges, scrap metal and drums contaminated with aldrin, dieldrin, planavin, and endrin, allyl chloride filters, chlorophenylmethyl sulfone, solid aldrin and dieldrin, azodrin, bidrin, gardona, supona, hexane, unspecified flammable solvents, isopropyl alcohol, substance contaminated with acetone, benzene, hexane, and methanol, trash generated from wheat rust, wood, and metals. Also used to decontaminate glass lined HD reactor vessel which also used methyl cellosolve and solution containing calcium hypochlorite	HISTORICAL: Spent acid filter cartridges, aldrin, dieldrin, planavin, endrin, allyl chloride filters, chlorophenylmethyl sulfone, azodrin, bidrin, gardona, supona, unspecified flammable solvents, isopropyl alcohol, acetone, benzene, methanol, HD, calcium hypochlorite, hexane, wheat rust trash, methyl cellosolve, metal, chemical waste, herbicides (bladex, atrazine)*
836	Air Force Seismic Monitoring Facility/NCSA-4b,8a	63/24	1	3,800	580	A/C [59]	MB (10) [206]	P:D [49]	C (6) [253]	No prior chemical use reported	HISTORICAL: None
840	Remediation Use Structure	NOTE: Built since 1986, additional information available from PMRMA									
851	Pistol Range House/ESA	42/19	1	83	6	A/C [2]	WD (5) [2]	NP	WD [2]	Pistol range target house with possible contamination from Pb bullets	HISTORICAL: Pb

NOTE: A symbol and acronym list is provided on the last page of this table

OSSA/FUB/OPK/TRTab3I-R.OFK
Rev 07/06/92 1:34pm

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION/ STUDY AREA Subarea	YEAR BUILT[a]/ MAP SECTION[a]	NO OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd³)	ESTIMATED TOTAL sew[a] (yd³)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³] ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[b]
853	Observation Pit/Mortar Range/ESA	45/30	1	710	94	C (14) [6]	C (14) [15]	C (14) [2]	C (14) [71]	The building was used to store blasting caps	HISTORICAL: Blasting caps
854	Concrete Wall/NCSA	NA/26	1	12	12	NP	C (9) [7]	NP	C (9) [6]	NA	NA
863	Target Range House/SSA	52/12	1	77	5	A/C [2]	WD [2]	NP	WD [1]	The building was used for miscellaneous storage with precise contents unavailable in Task 24	HISTORICAL: Other associated chemicals not available
864	General Storehouse/ESA-3b	52/06	1	170	10	A/C [3]	AB [6]	AB [1]	NP	In 1973 after the toxic storage yard operations, the building was moved to the former toxic gas storage yard. In 1980, the building was moved out of toxic gas storage area. Precise contents stored are unavailable in Task 24	HISTORICAL: Other associated chemicals not available
865	Warehouse/ESA-3b	53/06	1	320	41	CM (0 06)	PW (9) CM (0 06)	NP	C (6) [41]	The building acted as a storage warehouse for the toxic storage yard where of HD and phosgene were stored, and spills of HD occurred, precise contents stored are unavailable in Task 24. A spill of fuel oil occurred, within the structure	HISTORICAL: HD breakdown products (chloracetic acid, dithiane, 1,4 oxathiane, thiodiglycol), phosgene, fuel oil, other historically associated chemicals not available
866†	Office and Change House/ Toxic Yard Office/ESA-3b	42/06	1	1,100	140	A/C (2) [20]	BR (8) [27]	BR (8) [20]	C (6) [63]	Materials contained in the storage yard outside the office and change house included HD, phosgene, and Heptachlor. Calcium hypochlorite powder and unspecified solutions were used for decontamination. Spills of HD and distilled HD were reported, however, no dates were listed	HISTORICAL: Calcium hypochlorite powder, HD breakdown products (chloracetic acid, dithiane, 1,4-oxathiane, thiodiglycol), Heptachlor, phosgene, unspecified solutions SAMPLING Surficial Soil (0 - 2 in): Aldrin, chlordane, DDE, DDT, dieldrin, endrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chlordane, DDE, DDT, dieldrin, dithiane, endrin, oxathiane, thiodiglycol
867A	Toxic Yard/Metal and Wood Shop/ESA	NA/06	1	580	67	A/C [14]	BR (4) [9]	NP	C (6) [44]	The building acted as a carpenter shop used for cutting lumber for the toxic storage yard. Later used for miscellaneous storage with precise contents unavailable in Task 24	HISTORICAL: Other associated chemicals not available

NOTE: A symbol and acronym list is provided on the last page of this table

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Rev 07/19/93 1 43pm

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL amv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
867B	Flammable Materials Storehouse/ESA	NA/06	1	71	13	A/C [2]	WD [2]	C (5)	C (4) [9]	The building stored paint and flammable materials	HISTORICAL: Paint, flammable material
868C	Office/Ton Container Storage Shed/SPSA-6	47/01	1	97	24	NA	NA	NA	NA	The building was used to store miscellaneous parts for the hydrazine facility with precise contents unavailable in Task 24	HISTORICAL: Historically associated chemicals not available
871A	Warehouse/ESA	45/06	1	200	66	C (6) [12]	PW (12) MB (8)	NP	C (6) [53]	The building stored powder bags, M142 fuzes, ignition cartridges, and blasting caps	HISTORICAL: Powder bags, fuzes, ignition cartridges, blasting caps
871B	Warehouse/ESA	45/06	1	200	66	C (6) [12]	PW (12) MB (8)	NP	C (6) [53]	The building acted as a loading facility for M74 programs and stored powder bags, M142 fuzes, shells, propellant charges, and tail assemblies	HISTORICAL: Powder bags, fuzes, propellant charges, tail assemblies
871C	Warehouse/ESA	45/06	1	200	66	C (6) [12]	PW (12) MB (8)	NP	C (6) [53]	The building acted as a loading facility for M74 programs and stored powder bags, M142 fuzes, 209 primers, and fuze splitters	HISTORICAL: Powder bags, fuzes, primers, fuze splitters
871D	Warehouse/ESA	45/06	1	270	86	C (6) [18]	PW (12) MB (8)	NP	C (6) [69]	The building stored munition, explosive devices, powder bags, fuzes, and miscellaneous items	HISTORICAL: Powder bags, fuzes, explosive devices, other associated chemicals not available
872A	Warehouse/ESA	45/06	1	270	86	C (6) [18]	PW (12) MB (8)	NP	C (6) [69]	The building stored ammunition, explosives, powder bags, M142 fuzes, M115A2, booster adaptors, M76, M12, M13, M12B, M4, and M14 bursters, and M76 boosters	HISTORICAL: Expolsives, powder bags, fuzes, bursters, booster adapters, boosters
872B	Warehouse/ESA	45/06	1	270	86	C (6) [18]	PW (12) MB (8)	NP	C (6) [69]	The building stored ammunition, explosives, powder bags, M142 fuzes, M115A2, booster adaptors, M76, M12, M13, M12B, M4, and M14 bursters, and M76 boosters	HISTORICAL: Powder bags, explosives, fuzes, bursters, booster adapters, boosters
872C	Warehouse/ESA	45/06	1	270	86	C (6) [18]	PW (12) MB (8)	NP	C (6) [69]	The building stored ammunition, explosives, powder bags, M142 fuzes, M115A2, booster adaptors, M76, M12, M13, M12B, M4, and M14 bursters, M76 boosters, and M126A fuzes	HISTORICAL: Powder bags, explosives, fuzes, bursters, booster adapters, boosters

NOTE: A symbol and acronym list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] STUDY AREA - Subarea	YEAR BUILT[c] MAP SECTION[d]	NO OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME [f] (yd^3)	ESTIMATED TOTAL [g] (yd^3)	STRUCTURE MATRICES [h] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[i]	POTENTIAL ASSOCIATED CHEMICALS [j]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
872D	Warehouse/ESA	45/06	1	270	86	C (6) [18]	PW (12) MB (8)	NP	C (6) [69]	The building stored ammunition, explosives, powder bags, M142 fuzes, tetryl cups with high explosive material, cups for M69X bombs, and white phosphorus items	HISTORICAL: Explosives, powder bags, fuzes, tetryl cups, white phosphorus
873A	Warehouse/ESA	45/06	1	270	86	C (6) [18]	PW (12) MB (8)	NP	C (6) [69]	The building stored powder bags, M142 fuzes, M106 detonators from M69X bombs, M142A and M126A1 fuzes, highly explosive materials, components of Honest John GB Warhead, M421 fuzes, composition "B" M45 bursters, XM912 fuzes, and M140 cyclonite pellets	HISTORICAL: Powder bags, fuzes, explosives, cyclonite pellets, detonators, bursters
873B	Warehouse/ESA	45/06	1	270	86	C (6) [18]	PW (12) MB (8)	NP	C (6) [69]	The building stored powder bags, M142 fuzes, primacord, and demolition blocks	HISTORICAL: Powder bags, fuzes, primacord, demolition blocks
873C	Warehouse/ESA	45/06	1	270	86	C (6) [18]	PW (12) MB (8)	NP	C (6) [69]	The building stored powder bags, M142 fuzes, and TNT	HISTORICAL: Powder bags, fuzes, TNT
874A	Warehouse/ESA	45/06	1	270	86	C (6) [18]	PW (12) MB (8)	NP	C (6) [69]	The building stored powder bags, M142 fuzes, black powder bursters, white phosphorus shells, high explosive material, M45 bursters, composition "B" M45 burster, and components for Honest John GB filled munitions	HISTORICAL: White phosphorus, powder bags, fuzes, black powder bursters, explosives
874B	Warehouse/ESA	45/06	1	270	86	C (6) [18]	PW (12) MB (8)	NP	C (6) [69]	The building stored powder bags, M142 fuzes, and M126A1 fuzes	HISTORICAL: Powder bags, fuzes
874C	Warehouse/ESA	45/06	1	270	86	C (6) [18]	PW (12) MB (8)	NP	C (6) [69]	The building stored powder bags, M142 fuzes, MX912 bomb fuzes, and components of Honest John GB filled munitions	HISTORICAL: Powder bags, fuzes
874D	Warehouse/ESA	45/06	1	270	86	C (6) [18]	PW (12) MB (8)	NP	C (6) [69]	The building stored powder bags, M142 fuzes, and M69X fuzes, M206A1 hand grenade fuzes, highly explosive material, M62 rocket igniters, and components for M55 rockets and Honest John GB filled munitions;	HISTORICAL: Powder bags, fuzes, explosives, rocket igniters

NOTE: A symbol and acronym list is provided on the last page of this table.

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*, MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL sms* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
881†	Igloo Storage/ESA	45/06	1	670	210	C (6) [54]	C (12) [86]	NP	C [72]	The building was used to store white phosphorous, GB, Honest John GB M190 Warheads, M139 GB bomblets, DDT contaminated ammunition, wet and dry adamsite, GB scrubber salts, GB wet salts, M34 GB salts, fuzes, bursters, explosives, and waste salts	HISTORICAL Adamsite, bursters, DDT, explosives, fuzes, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester, phosphoric acid, triphenyl ester), M34 GB salts, waste salts, white phosphorous SAMPLING Surficial Soil (0 - 2 in): Dieldrin Surficial Soil (0 - 2 ft): Copper, dieldrin
882†	Igloo Storage/ESA	45/06	1	670	210	C (6) [54]	C (12) [86]	NP	C [72]	The igloo was used for storage of phosgene, white phosphorous, Honest John GB M190 Warheads, M139 GB bomblets, adamsite, grenades, tear gas, bomb components, fuzes, bursters, explosives, and chloroacetophene	HISTORICAL Adamsite, arsenic, bursters, chloroacetophenone, explosives, fuzes, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester; phosphoric acid, triphenyl ester), phosgene, tear gas, white phosphorous SAMPLING Surficial Soil (0 - 2 in): DDT, dieldrin, endrin Surficial Soil (0 - 2 ft): Copper, DDT, dieldrin, endrin
883	Igloo Storage/ESA	45/06	1	670	210	C (6) [54]	C (12) [86]	NP	C (6) [72]	The building stored bomb components, fuzes, bursters, highly explosive material, mortar shells, white phosphorus filled igniters, burster tubes for M14 cluster bombs, blasting fuzes, M6 electric and M7 nonelectric blasting caps, and GB-contaminated hydraulic oil. Floor decontaminated with detergent solution and resultant water was tested and certified as nonhazardous	HISTORICAL White phosphorus, GB-contaminated hydraulic oil, fuzes, bursters, explosives, ignitors, blasting caps

NOTE: A symbol and acronym list is provided on the last page of this table.

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Rev 07/09/93, 1:43pm

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT/ MAP SECTION	NO. OF LEVELS	ESTIMATED TOTAL AIR VOLUME (yd3)	ESTIMATED TOTAL AREA (ft2)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd3]				HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[a]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
884	Igloo Storage/ESA	45/06	1	670	210	C (6) [54]	C (12) [86]	NP	C (6) [72]	The building stored bomb components, fuzes, bursters, phosgene and smoke filler mortar shells, white phosphorus, igniters, explosive components including M34 cluster bombs burster tubes, DDT-contaminated ammunition, and steel drums of GB scrubber salts. The floor was decontaminated with detergent water and resultant water was tested and certified as nonhazardous	HISTORICAL: DDT, white phosphorus, phosgene, smoke filler, fuzes, bursters, ignitors, explosives, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphonic acid, tributyl ester, phosphoric acid, triphenyl ester)
885†	Igloo Storage/ESA	45/06	1	670	210	C (6) [54]	C (12) [86]	NP	C [72]	The igloo was used for storage of white phosphorous igniters, Honest John GB M190 Warheads, GB M139 bomblets, DDT contaminated ammunition, bursters, fuzes, bomb components, adamsite, GB, and GB salts	HISTORICAL: Adamsite, arsenic, bursters, DDT, fuzes, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphonic acid, tributyl ester, phosphoric acid, triphenyl ester), white phosphorous SAMPLING: Surficial Soil (0 - 2 in): DDT, dieldrin, endrin Surficial Soil (0 - 2 ft): Aldrin, DDT, dieldrin, endrin
886†	Igloo Storage/ESA	45/06	1	670	210	C (6) [54]	C (12) [86]	NP	C [72]	The igloo was used for storage of bleach, white phosphorous igniters, Honest John GB M190 Warheads, M139 bomblets, and DDT contaminated ammunition. Adamsite and adamsite-related grenades, tablets, purification agent, M2 candles, adamsite 1 agent, tear gas grenades, drums containing adamsite, 37mm projectiles, fuzes, bursters and other unspecified chemical agents were also stored here	HISTORICAL: Adamsite, arsenic, bleach, bursters, DDT, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphonic acid, tributyl ester, phosphoric acid, triphenyl ester), white phosphorous, fuzes, white phosphorous, tear gas, unspecified chemical agent SAMPLING Surficial Soil (0 - 2 in): DDT, dieldrin, endrin Surficial Soil (0 - 2 ft): Aldrin, DDT, dieldrin, endrin
890	Submerged Quench Incinerator/NCSA-4b	NOTE: Built since 1986, additional information available from PMRMA									

NOTE: A symbol and acronym list is provided on the last page of this table

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL AREA* (yd²)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³): ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
891	Submerged Quench Incinerator/NCSA-4b	NOTE Built since 1986, additional information available from PMRMA									
892	Submerged Quench Incinerator/NCSA-4b	NOTE Built since 1986, additional information available from PMRMA									
893	Submerged Quench Incinerator/NCSA-4b	NOTE Built since 1986, additional information available from PMRMA									
894	Submerged Quench Incinerator/NCSA-4b	NOTE Built since 1986, additional information available from PMRMA									
896	Submerged Quench Incinerator/NCSA-4b	NOTE Built since 1986, additional information available from PMRMA									
1501	GB Manufacturing/ Demilitarization Building/NPSA-3	53/25	7B	55,000	8,000	C	C (16) [2,405]	CC (36) C (8)	C (11) [2,841]	GB manufacturing facility used to manufacture GB from raw chemicals Some chemicals used in the process include caustic, deobase oil, methylene chloride, hydrofluoric acid, diisopropyl carbodiimide, solvents, and tributylamine Spills of xylene, GB, dichloro, methylene chloride, and hydrofluoric acid occurred The building was also used to demilitarize VX filled ton containers with a chlorinated mixture and caustic Also demilitarized M34 clusters and neutralized GB with caustic and brine solutions which resulted in GB brine salts (halide and tributylaminonium salts) In 1977 all caustic, steam, and water lines were drained tanks and reactors were flushed with caustic and water, pipe connections for Buildings 1501 and 1703 were flushed and glycol was poured into all water traps Although mentioned, specific use or occurrence of Dowtherm A is not described in Task 24	HISTORICAL: GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester, phosphoric acid, triphenyl ester), tributylamine, halide salts, tributylaminonium salts, xylene, vapona, sodium hydroxide, deobase oil, methylene chloride, hydrofluoric acid, Dowtherm A, dichloro, diisopropyl carbodiimide, chlorinated mixture, VX, glycol SAMPLING Liquid - DIMP

NOTE A symbol and acronym list is provided on the last page of this table

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL SMV* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME in yd³): ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
1503A	Scrubber Facility/NPSA-3	53/25	1B	210	430	CM (0.06)	PW (9) CM (0.06)	NP	C (24) [434]	Part of GB complex scrubber system which neutralized residual toxic gas from GB processing and storage facilities. Upper and lower scrubber chambers and drain system were considered to be contaminated with GB. Chemicals used in the GB processing and storage facilities² included caustic, dichloro, diisopropyl carbodiimide, chlorinated water, GB, tributylamine, halide salts, tributyl ammonium salts, xylene, chloroform, deobase oil, hydrofluoric acid, and Dowtherm A. Solvents were also used. VX was also demilitarized in associated structures.	HISTORICAL: Toxic gases from the GB processing and storage facilities² which could include: sodium hydroxide, solvents, dichloro, diisopropyl carbodiimide, chlorinated water, VX, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester, phosphoric acid, triphenyl ester), tributylamine, halide salts, caustic, tributyl ammonium salts, xylene, chloroform, deobase oil, hydrofluoric acid, Dowtherm A
1503B	Scrubber Facility/NPSA-3	53/25	1B	210	75	CM (0.06)	PW (9) CM (0.06)	NP	C (24) [75]	Part of GB complex scrubber system which neutralized residual toxic gas from GB processing and storage facilities. Associated chemicals include the same compounds listed for Building 1503A.	HISTORICAL: Same compounds listed for Building 1503A SAMPLING: Liquid - Chloroform, DIMP, DMMP
1503C	Scrubber Facility/NPSA-3	53/25	1	210	75	CM (0.06)	PW (9) CM (0.06)	NP	C (24) [75]	Part of GB complex scrubber system which neutralized residual toxic gas from GB processing and storage facilities. Associated chemicals include the same compounds listed for Building 1503A.	HISTORICAL: Same compounds listed for Building 1503A
1504	Steel Stack/NPSA-3	52/25	0	600	630	NP	S (9) [17]	NP	C (12) [617]	Tall stack which vented air from the GB scrubber facilities (i.e., Buildings 1503A, 1503B, and 1503C) into the atmosphere. Associated chemicals include the same compounds listed for Building 1503A. Solvents were also used. Stack emission contained GB emissions in the early 1970s.	HISTORICAL: Same compounds listed for Building 1503A
1504A	Monitoring Shed/NPSA-3	45/25	1	69	7	A/C [1]	AB	NP	C (6) [5]	Initially located in North Plants with precise use unavailable in Task 24. Later moved and used as part of a gas station. Moved back to North Plants where it was used as a monitoring station	HISTORICAL: Gasoline, other historically associated chemicals not available

NOTE: A symbol and acronym list is provided on the last page of this table.

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Rev. 07/09/93, 1:43pm

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION/ STUDY AREA Subarea	YEAR BUILT[b]/ MAP SECTION[c]	NO. OF LEVELS[d]	ESTIMATED TOTAL AIR VOLUME[e] (yd^3)	ESTIMATED TOTAL area[e] (yd^2)	STRUCTURE MATRICES[e] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[f]	POTENTIAL ASSOCIATED CHEMICALS[g]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
1505A	Sentry Station/NPSA	52/25	1	28	2	A/C (2)	WD (2)	NP	WD (2) [1]	No prior chemical use reported	HISTORICAL None
1506	GB Storage Vaults/ NPSA-3.9c	53/25	2B	5,700	1,800	C (6) [80]	C (12) [208]	C (12) [66]	C (12) [1,412]	The building was used to fill, store, load, and redrain GB and to demilitarized M125 GB filled bombs, M139 bomblets, and M56 warheads. Bombs were decontaminated by draining the agent, washing shell with caustic and water, and burning in pit. Building also used to store off-specification GB. In 1971, HD and GB filled ton containers were stored in building. Stored GB from Honest John GB demilitarization project, Project Eagle, and M34 GB cluster bombs. *Several leaks and spills of GB occurred.* Detectable limits of GB were found in air from pro/scrubber exhaust duct in 1978.	HISTORICAL GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester, phosphonic acid triphenyl ester), HD breakdown products (chloroacetic acid, dithiane, 1,4 oxathiane, thiodiglycol), sodium hydroxide SAMPLING Liquid - Nontarget compound
1509	Isopropanol Dehydration Unit/NPSA-2	53/25	0	39	39	NA	NA	NA	NA	Dehydration unit for isopropanol used in GB manufacturing process. Unit used isopropanol, *ethyl ether, and freon in the refrigeration system.*	HISTORICAL Isopropanol, ethyl ester, freon
1510A	Foam Storage/NPSA-1	57/25	1	49	15	A/C	PW (6) MB (6)	NP	C (6) [15]	The building stored a foam blanket for fire fighting.	HISTORICAL None
1512	Sentry Station/Gate House/NPSA-9d	52/25	1	47	18	A/C [1]	PW (6) MB (6)	NP	C (6) [17]	No prior chemical use reported	HISTORICAL None

NOTE: A symbol and acronym list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] STUDY AREA Subarea	YEAR BUILT[b] MAP SECTION[c]	NO. OF LEVELS[d]	ESTIMATED TOTAL AIR VOLUME[e] (yd^3)	ESTIMATED TOTAL area[e] (yd^2)	STRUCTURE MATRICES[e] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[e]	POTENTIAL ASSOCIATED CHEMICALS[b]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
1601	GB Filling/NPSA-9b	53/25	1	76 000	6,500	C (4) [1,100]	C (20)	C (16)	C (6) [5 259]	The building was used to fill munitions with GB, assemble 155mm rocket and fill M34 cluster bombs. Industrial X-rays using radioactive isotopes were used in the building. The X-ray machine was a sealed source that contained Cesium 27 and produced no wastes. Shells were filled with GB, sprayed with caustic, and painted in the building. Later phosgene demilitarization operations occurred; M-type bombs were filled with a simulated ferotal represent GB, and GB demilitarization/ disposal operation involving ton containers of GB and M34 bombs occurred in building. Several spills of GB, phosgene, a small leak of Pb azide, and a large Hg spill occurred. Some of the spills and leaks were treated with caustic, water, and bleach.	HISTORICAL: GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphonic acid, tributyl ester, phosphonic acid triphenyl ester), phosgene, Pb azide, Hg, sodium hydroxide, simulated ferotal, bleach, Cesium 27, paint
1601A	Ammunitions Demilitarization Facility NPSA 9c	60/25	1	2 000	270	C (4) [17]	MB (8) [249]	MB (8) [17]	C (10)	The building was used as a ton container storage and unloading facility for GB operations attached to Building 1601. Later used in demilitarization of bulk GB agent and munitions. Several spills of GB occurred and were cleaned with caustic solutions. Prior chemical use includes all compounds listed for Building 1601.	HISTORICAL: Same compounds as listed for Building 1601
1602	Paint Storage/NPSA-3	53/25	1	1 800	270	CM [12]	MB (8) [254]	MB (8) [12]	C (6)	The building was constructed as a paint storage and cleaning facility containing stripper tanks that contained caustic solution (possibly okite). Later used in microgravel mine production activities which used an acid tank to mix raw ingredients, including cyclonite, Pb azide, ethyl-water mixture, caustic, and powder. Building contained packed scrubbers used to process ventilation air from Buildings 1601A and 1506 and to remove GB scrubber brine (containing sodium hydroxide). Duct chow scrubber was contaminated with GB. Prior chemical use includes all compounds listed for Buildings 1601A and 1506.	HISTORICAL: Same compounds listed for Building 1601, acid, powder, cyclonite, ethyl-water, okite, raw ingredients, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphonic acid, tributyl ester, phosphonic acid triphenyl ester), GB scrubber brine

NOTE: A symbol and accompanying text is provided on the last page of this table.

able 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b]/ STUDY AREA - Sub-area	YEAR BUILT[c]/ MAP SECTION[d]	NO OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (yd³)	ESTIMATED TOTAL smv[f] (yd³)	STRUCTURE MATRICES[g] (ESTIMATED MAXIMUM THICKNESS IN INCHES AND (VOLUME IN yd³)) ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[h]	POTENTIAL ASSOCIATED CHEMICALS[i]
1603A	Scrubber Facility/NPSA-3	52/25	1B	210	75	CM (0.06)	PW (9) CM (0.06)	NP	C (24) [75]	Scrubber facility used for GB operations to reduce GB ventilations. Chemicals used in the GB processing and storage facilities[2] could include the same compounds listed for Building 1503A. Also used in demilitarization activities of GB munitions. A 1977 assessment states lower chamber scrubbers, drain system, and upper chambers were considered to be GB contaminated. Caustic solution was used in operations.	HISTORICAL: Same compounds listed for Building 1503A
1603B	Scrubber Facility/NPSA-3	53/25	1B	210	75	CM (0.06)	PW (9) CM (0.06)	NP	C (24) [75]	Scrubber facility used for GB operations to reduce GB ventilations. Chemicals used in the GB processing and storage facilities[2] could include the same compounds listed for Building 1503A. Also used in demilitarization activities of GB munitions. A 1977 assessment states lower chamber scrubbers, drain system, and upper chambers were considered to be GB contaminated. Caustic solution was used in operations.	HISTORICAL: Same compounds listed for Building 1503A

NOTE: A symbol and acronym list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] STUDY AREA - Subarea	YEAR BUILT[c]/ MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (yd^3)	ESTIMATED TOTAL smv[g] (yd^3)	STRUCTURE MATRICES[h] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[i]	POTENTIAL ASSOCIATED CHEMICALS[j]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
1605	Munitions Storage Igloo/NPSA	53/25	1	360	150	C (12) [51]	C (12)	NP	C (6) [100]	Building 1605 stored CAIS which included X545 (triphosgene, phosgene simulant), X546 chloroacetophenone, X549 adamsite, X550 nitrogen HD, X551 nitrogen HD, X552 chloropicrin, K955 LW, HD, chloropicrin, triphosgene, chloroacetophenone, adamsite; K945 GB, LW, phosgene simulant, potassium cyanide simulant, simulants for G-, V-, H-type[3] agents, X302 nitrogen HD, X547 HD gas, and X548 LW. The following material was stored in unspecified igloos in the North Plants which may include Building 1605: chemical ammunition, contaminated material from Basin A including scrap metal and chemical agent[1] bombs, miscellaneous chemical agent materials, laboratory materials and chemicals, fuzes, piggybacks, tetryl explosives, Pb azide, cyclonite, DDT contaminated small arms munition, possible mustaye bombs, and CAIS	HISTORICAL: Fuzes, Pb azide, simulants for chemical agents[3], DDT, laboratory chemicals piggybacks, tetryl explosives, triphosgene, chloroacetophenone, adamsite, nitrogen HD chloropicrin, LW, HD breakdown products (chloracetic acid, dithiane, 1,4 oxathiane, thiodiglycol), GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphonic acid, tributyl ester, phosphonic acid, triphenyl ester), VX, potassium cyanide simulant, CAIS, phosgene simulant, cyclonite, chemical agent materials, Basin A material
1606	Cluster Assembly Building/NPSA-9a	51/25	3	76,00	13,000	C (4) [1,355]	C (12) [4,467]	P/D [36]	C (12) [6,849]	The building was used for production and packaging of GB-filled munition assembly of M-94, M29, M125 bombs, rocket filling assembly, production of microgravel and XM47 mines which contained Pb azide, cyclonite, potassium chlorate, red phosphorus, and silica. Demilitarization of GB filled munitions occurred in building. Building was decontaminated with caustic and water detergent solution. During demilitarization there were several chemical agent exposures and explosions.	HISTORICAL: GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphonic acid, tributyl ester, phosphonic acid, triphenyl ester), Pb azide, sodium hydroxide, cyclonite, potassium chlorate, red phosphorus, silica

NOTE: A symbol and acronym list is provided on the last page of this table.

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT/ MAP SECTION[a]	NO OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd³)	ESTIMATED TOTAL smv[a] (yd³)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[b]
1607†	Warehouse-NPSA	53/25	1	27,000	1,700	CA [21]	MB (19) [621]	BR [7]	C (8) [700]	The warehouse stored CAIS, GB, lewisite, phosgene simulant, potassium cyanide, HD, chloropicrin, chloroacetophenone, triphosgene, adamsite, nitrogen HD, tear gas, phosgene, gallium simulant, waste salts, raw materials, storage acids, and DDT contaminated ammunition	HISTORICAL: Acids, adamsite, arsenic, CAIS, chemical agent salts, chloroacetophenone, chloropicrin, DDT, gallium simulant, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphonic acid, tributyl ester, phosphoric acid, triphenyl ester), lewisite, HD breakdown products (chloroacetic acid, dithiane, 1,4 oxathiane, thiodiglycol), nitrogen HD, phosgene simulant, potassium cyanide, tear gas, triphosgene, waste salts SAMPLING Surficial Soil (0 - 2 in): Aldrin, DDE, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft): Aldrin, cadmium, chloroacetic acid, chromium, DDE, dieldrin, endrin, fluoranthene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc Subsurface Soil (2 - 5 ft) benzene Groundwater: Chloroform

NOTE: A symbol and acronym list is provided on the last page of this table.

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Rev 07/09/93, 1:41pm

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³)				HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
1608	Munitions Storage Igloo-NPSA-4	53/25	1	360	150	C (12) [51]	C (12)	NP	C (6) [100]	Building 1608 stored conventional ammunition, explosives, primercord, chemical agent materials, filled munitions, CNU 80s containing liquid filled munitions, nonburstered and burstered munitions, nonstandard chemical agent items, micrograval mines containing Pb azide and cyclonite, 300-gallon vessel and contaminated materials from HD operations, recovered chemical munitions, six CNU 80' containers which contain either unknown agent' or HD agent, and liquid samples from Basin A. The following material was stored in unspecified igloos in the North Plants which may include Building 1608: chemical ammunition contaminated material from Basin A including scrap metal, chemical agent' bombs, miscellaneous chemical agent materials, laboratory materials and chemicals, fuzes, piggybacks, tetryl explosives, Pb azide, cyclonite, DDT-contaminated small arms munition, possible wetaye bombs, and CAIS	HISTORICAL: Pb azide, cyclonite, DDT, HD breakdown products (chloracetic acid, dithiane, 1,4-oxathiane, thiodiglycol), LW, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester; phosphoric acid, triphenyl ester), VX, chemical agent materials, explosives, primercord, Basin A materials, Basin A liquid samples, laboratory chemicals, fuzes, piggybacks, tetryl explosives, CAIS

NOTE: A symbol and acronym list is provided on the last page of this table.

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Rev. 07/19/93, 1:43pm

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smy* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
1609	Munitions Storage Igloo/ NPSA	53/25	1	360	150	C (12) [51]	C (12) [100]	NP	C (6)	The building stored conventional ammunition and explosives, CAIS containing HD, LW, chloropicrin, phosgene cyanogen chloride, nitrogen HD, tabun stimulant, chloroacetophenone, adamsite, triphosgene, fuze igniters, time blasting fuzes, 50 caliber shells; H5 caliber ammunition; M16 *ammunition, blasting cord, and M72A2 light* antitank weapons. The following materials were stored in unspecified igloos in the North Plants which may include Building 1609: chemical ammunition, contaminated material from Basin A including scrap metal and chemical agent' bombs, miscellaneous chemical agent materials, laboratory materials and chemicals, fuzes, *piggybacks, tetryl explosives,* Pb azide, cyclonite, ammunition suspected of containing chemical agent' as filler, DDT-contaminated small arms ammunitions, possible weteye bombs, and CAIS	HISTORICAL: Fuzes, piggybacks, tetryl explosives, Pb azide, cyclonite, HD breakdown products (chloroacetic acid, dithiane, 1,4-oxathiane, thiodiglycol), LW, GB *breakdown products* (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphonic acid, tributyl ester, phosphoric acid, triphenyl ester), VX, chloropicrin, *phosgene, cyanogen chloride, nitrogen HD,* tabun stimulant, chloroacetophenone, adamsite, triphosgene, DDT, CAIS, blasting cord, laboratory chemicals, chemical agent materials, Basin A material, CAIS
1610	Munitions Storage Igloo/ NPSA	53/25	1	360	150	C (12) [51]	C (12) [100]	NP	C (6)	The building stored conventional explosives; chemical agent materials including the following: *laboratory samples, LW, and HD, and* nonstandard chemical agent items (not specifically identified). The following materials were stored in unspecified igloos in the North Plants which may include Building 1610: contaminated materials from Basin A including scrap metal and chemical agent' bombs, miscellaneous chemical agent materials; *fuzes,* piggybacks, tetryl explosives, Pb azide, cyclonite, ammunition suspected of containing chemical agent' as *filler,* DDT *contaminated small arms* ammunitions, weteye bombs, and CAIS	HISTORICAL: LW, HD, GB, VX, Pb azide, cyclonite, DDT, fuzes, piggybacks, tetryl *explosives,* weteye, CAIS, Basin A materials

NOTE: A symbol and acronym list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT[b]/ MAP SECTION[c]	NO. OF LEVELS[d]	ESTIMATED TOTAL AIR VOLUME[d] (yd³)	ESTIMATED TOTAL smv[d] (yd³)	STRUCTURE MATRICES[e] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[f]	POTENTIAL ASSOCIATED CHEMICALS[g]
1611	Demilitarization Facility/ NPSA-5	53/25	3	26,000	2,400	C (9) [219]	MB (8) [1,447]	MB (8) [618]	C (6)	The building was used for an instrument shop; gymnasium; demilitarization of GB-filled M190 (Honest John) warheads; demilitarization of DDT-contaminated small arms, incineration of M-34 clusters inert parts, destruction of CAIS containing HD, LW, GB, adamsite, potassium cyanide, triphosgene, chloroacetophenone, chloropicrin, cyanogen chloride, nitrogen HD, and simulated tabun, and incineration of adamsite, Basin A contaminated equipment, and white phosphorus facility pipes and equipment. Incineration and decontamination wastes included sodium carbonate, sodium chloride, fly ash, heavy metals and As contaminated dust, ammonia, hydrogen chloride, As pentoxide, As oxides, and As trioxide. Spills of fuel oil and No 2 fuel oil occurred	<u>HISTORICAL:</u> As oxides, As pentoxide, As trioxide, sodium carbonate, No. 2 fuel oil, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester, phosphoric acid, triphenyl ester), DDT, CAIS, LW, HD breakdown products (chloroacetic acid, dithiane, 1,4-oxathiane, thiodiglycol), adamsite, potassium cyanide, triphosgene, cloroacetophenone, chloropicrin, cyanogen chloride, nitrogen HD, simulated tabun, white phosphorus equipment, fly ash, As oxides, ammonia, hydrogen chloride, fuel oil, heavy metals, sodium chloride, hydrogen chloride, As-contaminated dust, Basin A equipment <u>SAMPLING:</u> <u>Liquid</u> - As, Hg, thiodiglycol, thiodiglycolic acid, nontarget compounds <u>Structure Matrices</u>[e] - TCLP: Ba, Cd, Zn, Hg, 1,4-DCLB, Cr, chloroform Total Waste Methods: DDT, DDE, As, Hg
1611A	Sentry Station/NPSA	81/25	1	31	4	CM (0.06)	CM (0.06) [3]	NP	WD	No prior chemical use reported	<u>HISTORICAL:</u> None
1613	Explosive Unpacking Building/NPSA	53/25	1	330	77	A/C [5]	PW (8) MB (8)	C (12)	C (6) [73]	The building was used to unload fuzes and bursters. Potentially contaminated with GB, however, Task 24 located no potential source for this contamination	<u>HISTORICAL:</u> GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester, phosphoric acid, triphenyl ester), fuzes, bursters[1]

NOTE: A symbol and acronym list is provided on the last page of this table.

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[a]/ STUDY AREA Subarea	YEAR BUILT[a]/ MAP SECTION[a]	NO OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd³)	ESTIMATED TOTAL area[a] (yd²)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³)				HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[b]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
1614	Warehouse/NPSA	53/25	1	5,800	260	CM (0 06) [4]	PW (12) CM (0 06)	NP	C (6) [255]	The building stored contaminated equipment including spare items for the GB plant and GB munitions filling decontaminated equipment. Other contaminated equipment not specified in Task 24	HISTORICAL: GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester, phosphoric acid, triphenyl ester), other historically associated chemicals not available
1615	Warehouse/NPSA	53/25	1	2,800	170	CM (0 06)	CM (0 06) [68]	NP	C (6)	The building stored contaminated equipment including spare items for the GB plant and GB munitions filling decontaminated equipment. Other contaminated equipment not specified in Task 24	HISTORICAL: GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester, phosphoric acid, triphenyl ester), other historically associated chemicals not available
1616	Warehouse/NPSA	53/25	1	2,800	82	CM (0 06) [2]	CM (0 06) [79]	P/D	C (6)	The building stored contaminated equipment including spare items for the GB plant and GB munitions filling decontaminated equipment. Other contaminated equipment not specified in Task 24	HISTORICAL: GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester, phosphoric acid, triphenyl ester); other historically associated chemicals not available
1618	General Storehouse - north of North Plants/NPSA	48/25	1	440	36	CM (0 06)	PW (6) CM (0 06)	WD	C (6) [35]	The building originally acted as an oil and grease house. Later the building was moved and used by personnel involved in the wheat rust program as a miscellaneous shop. A 1977 report indicates that no potential contamination exists	HISTORICAL: Oil, grease, wheat rust
1619	Administration Building - north of North Plants/NPSA	45/25	1	91	8	A/C [3]	WD [6]	P/D	C [4]	The building originally served as a railroad office. Later building was moved and possibly involved in the wheat rust program with precise use unavailable in Task 24.	HISTORICAL: Wheat rust
1622	General Storehouse - north of North Plants/NPSA	63/25	1	330	34	A/C	PW (6) CM (0 06)	NP	C (6) [33]	The building was used as a miscellaneous building and by personnel involved in the wheat rust program with precise use unavailable in Task 24	HISTORICAL: Wheat rust

NOTE: A symbol and acronym list is provided on the last page of this table.

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Rev 07/06/93, 1:52pm

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b]/ STUDY AREA - Subarea	YEAR BUILT[c]/ MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[e] (yd³)	ESTIMATED TOTAL smv[e] (yd³)	STRUCTURE MATRICES[e] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³] ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[e]	POTENTIAL ASSOCIATED CHEMICALS[e]
1701†	Warehouse/NPSA	53/25	1	30,000	2,300	A/C (3) [236]	MB (8) [468]	MB (8) [6]	C (12) [1,084]	The warehouse stored munition components and diisopropylcarbodiimide. In 1977, ton drums of diisopropyl carbodiimide were reported leaking	HISTORICAL: Diisopropyl carbodiimide SAMPLING: Surficial Soil (0 - 2 in): Aldrin, DDE, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chromium, DDE, DDT, dieldrin, endrin, fluoranthene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc Air: Mercury, benzene, carbon tetrachloride, chloroform, tetrachloroethylene, copper, zinc Dust/Vacuum: Arsenic, cadmium, chromium, copper, lead, zinc, dieldrin, mercury
1702	Weld Shop/NPSA	53/25	1	1,800	49	CM (0.06) [1]	CM (0.06) [49]	NP	C (6)	The building was used as a welding shop and erected from dismantled components of the North Plants structure TW 8. The building may have been contaminated with GB according to a 1977 report	HISTORICAL: GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphonic acid, tributyl ester; phosphonic acid, triphenyl ester)

NOTE: A symbol and acronym list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER^a	STRUCTURE DESCRIPTION^a/ STUDY AREA - Subarea	YEAR BUILT^a/ MAP SECTION^a	NO OF LEVELS^a	ESTIMATED TOTAL AIR VOLUME^a (yd³)	ESTIMATED TOTAL smv^a (yd³)	STRUCTURE MATRICES^a (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³] ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE^a	POTENTIAL ASSOCIATED CHEMICALS^b
1703	Spray Dryer Facility Ammunition Demilitarization/ Maintenance Shop/NPSA-6	53/25	1	34,000	2,500	C (6) [300]	PW (10) MB (8)	MB (12)	C (6) [2,240]	The building contained caustic bath tank, TM oil bath, decontamination pit, and spray dryer. The building was used as a warehouse; maintenance shop, and for demilitarization of CAIS sets, heavy metals, carcenogenics, possibly HD, LW, *phosgene, adamsite, cyanogen chloride,* taban stimulant, and DDT-contaminated small arms. The building stored diisopropyl carbodiimide brine consisting of scrubber and quench liquids created during neutralization of GB munitions and demilitarization operations. The brine was spray dried in the building and produced sodium carbonate and sodium chloride salts which consisted of sodium isopropylmethyl phosphonate, organic phosphorus compounds, sodium fluoride, sodium hydroxide, As, Hg, Cd, Cr, Cu, Pb, Zn, manganese, silver, molybdenum, and by products of adamsite. The building used Building 1727 chemical sump water. The building also stored effluent from brines from demilitarization of potentially contaminated HD and GB materials that were withdrawn from Basin A. Building 1501 sodium hydroxide neutralized product, and Pb contaminated brine from DDT ammunition. Brine from the adamsite disposal spray contaminated the dryer with As. The soil was removed and replaced	<u>HISTORICAL:</u> GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphonic acid, tributyl ester, phosphonic acid, triphenyl ester), GB brine, sodium hydroxide, dried salts, sodium carbonate salts, sodium chloride salts, phosphates, fluorine, sodium isopropylmethyl phosphonate, sodium fluoride, Hg, Cd, Cr, Cu, Zn, Pb, manganese, silver, molybdenum, As, organic phosphorus compounds, HD, LW, adamsite, cyanogen chloride, tabun stimulant, DDT, phosgene, diisopropyl carbodiimide brine, CAIS, heavy *metals, carcenogenics, adamsite by-products,* VX, GB, HD breakdown products (chloracetic acid; dithiane, 1,4 oxathiane, thiodiglycol), HD brine, TM oil, heavy metals, chemical sewer fluid <u>SAMPLING LIQUID:</u> 1,1-Dichloroethane, calcium, Cu, Pb, potassium, sodium, Hg, Zn, As
1704	Compressed Air Plant/ NPSA 6	53/25	1	7,200	1,100	A/C [55]	MB (8) [943]	MB (8) [75]	C (16)	The building was constructed as a compressed air and refrigeration building for the GB complex. Although mentioned, specific use of freon, Dowtherm A, and fuel oil is not reported in Task 24	<u>HISTORICAL:</u> Fuel oil, freon, Dowtherm A
1705	Instruction Building/Cafeteria/ NPSA	52/25	1	1,900	250	A/C [24]	PW (12) MB (8)	P/D	C (4) [225]	No prior use of chemicals reported	<u>HISTORICAL:</u> None

NOTE: A symbol and acronym list is provided on the last page of this table

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT[b]/ MAP SECTION[c]	NO OF LEVELS[d]	ESTIMATED TOTAL AIR VOLUME[e] (yd^3)	ESTIMATED TOTAL smv[e] (yd^3)	STRUCTURE MATRICES[e] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd^3]				HISTORICAL USE[e]	POTENTIAL ASSOCIATED CHEMICALS[h]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
1706	Sentry Station/Gatehouse/ NPSA	53/25	1	140	44	C (3) [5]	PW (8) MB (8)	MB (8)	C (4) [40]	No prior use of chemicals reported	<u>HISTORICAL</u>: None
1707	Cooling Tower/NPSA-1	53/25	2B	2,800	530	NP [27]	CC (18) WO (2) [488]	WC (4) [15]	C (9)	No prior use of chemicals reported	<u>HISTORICAL</u>: None
1710†	Clinic and Administration Building/NPSA	53/25	1	7,400	920	A/C (2) [137]	MB (12) [430]	P/D (4) [68]	C (12) [337]	The building contained an X-ray and extensive laboratory facilities and blood analysis equipment. Any chemical usage in Building is not described in Task 24.	<u>HISTORICAL</u>: *Other historically associated* chemicals not available <u>SAMPLING</u>: <u>Surficial Soil (0 - 2 in)</u>: Aldrin, DDE, DDT, dieldrin, endrin, isodrin <u>Surficial Soil (0 - 2 ft)</u>: Aldrin, arsenic, cadmium, chromium, copper, DDE, DDT, dieldrin, endrin, fluoranthene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc <u>Subsurface Soil</u>: (2 - 5 ft) benzene, (5 - 20 ft) benzene, chloroform, tetrachloroethylene

NOTE: A symbol and acronym list is provided on the last page of this table

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b] STUDY AREA Subarea	YEAR BUILT[c] MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (yd^3)	ESTIMATED TOTAL ARMY[g] (yd^3)	STRUCTURE MATRICES[h] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd^3]				HISTORICAL USE[i]	POTENTIAL ASSOCIATED CHEMICALS[k]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
1711†	Gas Meter House/NPSA-6	59/25	1	5	6	CM (0.064) [0.03]	CM (1) [0.4]	NP	C (12) [4]	This building was used as storage for fuel oil. It was reported in Task 24 that on April 1982, a fuel oil spill occurred along the southeast side of Buildings 1711 and 1712	HISTORICAL: Fluoranthene, fuel oil, methyl naphthalene, phenanthrene, pyrene SAMPLING: Surficial Soil (0 - 2 in): Aldrin, DDE, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chromium, copper, DDE, DDT, dieldrin, endrin, fluoranthene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc Subsurface Soil: (2 - 5 ft, 5 - 20 ft) benzene Groundwater: Benzene, carbon tetrachloride, chloroform, tetrachloroethylene, trichloroethylene, 1,1-dichloroethylene, 1,2-dichloroethane, 1,1,1-trichloroethane
1712	Gas Heating Plant/NPSA-6	59/25	1	36	36	CM (0.06)	CM (0.06) [37]	NP	C (6)	The building acted as a boiler plant. Contaminated soil was removed and replaced	HISTORICAL: None SAMPLING: Liquid - Carbon tetrachloride, tetrachloroethane, nontarget compounds

NOTE: A symbol and acronym list is provided on the last page of this table.

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL sump* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
1713†	Standby Generator Plant/NPSA-1,6	75/25	1	1,600	100	C (0 064) [0 5]	CM (0 064) [0 7]	NA	[53]	Each generator in the plant holds a fuel oil tank and gauge and an oil cooler	HISTORICAL: Fuel oil, oil SAMPLING: Surficial Soil (0 - 2 in): Aldrin, DDE, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, cadmium, chromium, copper, DDE, DDT, dieldrin, endrin, fluoranthene, isodrin, lead, mercury, methyl naphthalenes, phenanthrene, pyrene, zinc Subsurface Soil (2 - 5 ft) benzene, (5 - 20 ft) benzene, chloroform, tetrachloroethylene Groundwater: Chloroform, tetrachloroethylene, 1,2 dichloroethane
1715	Remediation Use Structure	NOTE Built since 1986, additional information available from PMRMA									
1717†	Chlorinating Station/Water Purification NPSA	53/25	1	31	11	A/C (2) [1]	C (8) [8]	NA	NA	Chlorine was used in the process of chlorinating water in the structure	HISTORICAL Chlorine SAMPLING Surficial Soil (0 - 2 in): Aldrin, DDE, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft) Aldrin, chromium, DDE, DDT, dieldrin, endrin, isodrin, mercury, zinc
1718†	Valve Pit and Chlorinating Station/NPSA	53/25	1	76	24	CM (0 064) [0 03]	MB (6) [7]	NA	C	Chlorine was used in the process of chlorinating water in the structure	HISTORICAL Chlorine SAMPLING Surficial Soil (0 - 2 in): Aldrin, DDE, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft) Aldrin, chromium, DDE, DDT, dieldrin, endrin, isodrin, mercury, zinc

NOTE A symbol and acronym list is provided on the last page of this table

ble 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO. OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL AREA* (yd²)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³] ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
1719†	Electrical Distribution System/ NPSA	53/25	1	36	13	CM (0.064) [0.03]	BR [7]	NA	C [7]	No prior chemical use reported	HISTORICAL: No historically associated chemicals SAMPLING Surficial Soil (0 - 2 in): Aldrin, DDE, DDT, dieldrin, endrin, isodrin Surficial Soil (0 - 2 ft): Aldrin, arsenic, chlordane, copper, DDE, DDT, dieldrin, endrin, isodrin, lead, mercury, zinc
1726A	Water Metering House/NPSA	NA/25	1'	26'	NA	NA	NA	NA	NA	The structure is part of the fire protection system'	No historically associated chemicals'
1727	Industrial Waste Sewer Chemical Sump/NPSA-6	52/25	0	470	26	S (0.3)	PW (12) C (7)	NP	C (12) [26]	Liquid and process wastes generated during GB production and demilitarization operations were collected and neutralized in the 1727 chemical sump prior to discharge in the chemical sewer system and later Basin F. This waste consisted of all industrial chemicals used in North Plants washdown water, scrubber overflow and some water from the heat exchangers. In 1956, liquid leaked from the sump onto the walkway between Buildings 1703 and 1710. In 1982, all liquid in the sump was spray dried. In 1982 waste water was hauled from South Plants to the 1727 sump. After 1982, the sump occasionally overflowed and migrated along a drainage ditch towards First Creek. Trichloroethylene was detected in five of ten drummed sludge samples from the sump'	HISTORICAL: All liquid wastes generated in North Plants, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester, phosphoric acid, triphenyl ester)
1730	Guard Station/ESA-3c	53/31	1	38	13	A/C [1]	PW (9) MB (8)	NP	C (4) [1?]	A water well associated with this building contained elevated nitrate levels in 1975, but the source of nitrate contamination was not established	HISTORICAL: Nitrate

F A symbol and acronym list is provided on the last page of this table

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ble 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[a]/ STUDY AREA - Subarea	YEAR BUILT[a]/ MAP SECTION[a]	NO. OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd³)	ESTIMATED TOTAL amv[a] (yd³)	STRUCTURAL MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd³): ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[a]
1734	Change House/ESA	55/31	1	190	49	A/C [3]	PW (8) MB (8)	MB (8)	C (4) [46]	The building was constructed as a change house and personnel decontamination facility for individuals working in chemical agent operations. Precise chemical agents are unavailable in Task 24.	<u>HISTORICAL</u>: Chemical agents[1]
1735	Loading Dock/ESA-31	NA/31	1	1,500	670	CM (0.06)	PW (12)	NP	C (8) [671]	Due to its proximity to the new toxic gas storage yard, it is possible that chemicals such as LW, HD, phosgene, VX, and GB may have passed through this building. It has been indicated that weteye bombs were moved through the building. However, no reports were located in Task 24 confirming contamination of this building.	<u>HISTORICAL</u>: LW, HD breakdown products (chloracetic acid, dithiane, 1,4-oxathiane, thiodiglycol), phosgene, VX, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester; phosphoric acid, triphenyl ester)
1736	Storage Area (The storage area consists of 37 sheds all named 1736)/ESA	56/31	NA	NA	1,739 total (47 for each building)	NA	NA	NA	NA	The area was used for open storage of chemicals that were manufactured on or shipped to RMA. The stored materials included chemical agents[1], HD, *distilled HD, phosgene- and GB filled ton containers*, cluster bombs, distilled HD-filled bombs, drums containing demilitarized salts, MC-1 bombs, GB bomblets, phosgene containers, weteye bombs, M34 demilitarized salts, CAIS, *laboratory sample bottles (containing HD, LW, and phosgene)*, GB salts, drums with contaminated material and trash, drums of hydraulic oil and furnace soot, six torpedos, assorted pails and containers, and miscellaneous material. *Spills of distilled HD and caustic soda occurred.* The HD contaminated soil was drummed and stored in area.	<u>HISTORICAL</u>: HD breakdown products (chloracetic acid, dithiane, 1,4-oxathiane, thiodiglycol), LW, GB breakdown products (diisopropylmethyl phosphonate, dimethylmethyl phosphonate, isopropylmethyl phosphonic acid, methylphosphonic acid, phosphoric acid, tributyl ester, phosphoric acid, triphenyl ester), VX, *sodium hydroxide soda, chemical agents*[1], phosgene, demilitarized salts, CAIS, hydraulic oil
NN0101	Valve Gate - west side of Upper Derby/SSA-1b	NA/01	0	NA	20	NA	NA	NA	NA	NA	NA
NN0102	Foundation - north of 534B/ SPSA-1a	NA/01	1	NA	19	NP	NP	NP	C (12) [13]	NA	NA
NN0103	Bathroom - north of 533/SPSA-1a	NA/01	1	NA	3	NP	NP	NP	C (9) [3]	NA	NA

OTE: A symbol and acronym list is provided on the last page of this table.

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3. Inventory List of Rocky Mountain Arsenal Structures.

NUMBER*	STRUCTURE DESCRIPTION*/ SITE BY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
N0104	Flare Tower - north of 571B, northwest of 571-SPSA-1a,1f	NA/01	1	NA	17	NP	S (0.02)	NP	C (6) [17]	NA	NA
N0105	Gas Meter House - southwest of 508/SPSA-1a	NA/01	1	59	5	CM (0.06)	CM (0.06)	NP	C (6) [5]	NA	NA
N0106	Fertilizer and Waste Loading Facility - north of 728/ SPSA-1g	NA/01	2	43	77	CA (0.3)	CA (0.3)	NP	C (6) [75]	NA	NA
N0107	Metal Shed - west of 733B/SPSA-5b	NA/01	1	102	1	CM (0.06)	CM (0.06)	NP	NP	NA	NA
N0108	Metal Shed - west of 733C/SPSA-5b	NA/01	1	102	1	CM (0.06)	CM (0.06)	NP	NP	NA	NA
N0109	Guard Station - northeast of 732/SPSA-5b	NA/01	NA	NA	1	NP	PW (8)	NP	C (4) [1]	NA	NA
N0110	Metal Shed - south of 521B/SPSA-1a	NA/01	1	26	2	CM (0.06)	CM (0.06)	NP	C (6) [2]	NA	NA
N0111	Three Metal Incinerators - northwest of 541/SPSA-1a	NA/01	1	NA	150	NP	PW (4) BR (20)	NP	C (24) [148]	NA	NA
N0112	Stack Observation Station - east of 527/SPSA-1b	NA/01	1	NA	10	NA	NA	NA	NA	NA	NA
N0113	Two Metal Sheds - south of 474/SPSA-1a	NA/01	1	72	27	CM (0.06)	CM (0.06) [0.2]	NP	C (4) [26]	NA	NA
N0114	Wooden Hut - southwest of 461/SPSA-2a	NA/01	1	4	2	A/C	WD [4]	NP	NP	NA	NA
N0115	Flare Tower - north of Lime Pond/SPSA-1g	NA/01	1	NA	17	NP	S (0.2)	NP	C (6) [17]	NA	NA
N0116	Long Metal Shed - south of 544/SPSA-1g	NA/01	1	NA	47	CM (0.06) [1]	CM (0.06) [1]	NP	NP [2]	NA	NA

A symbol and acronym list is provided on the last page of this table.

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[a]/ STUDY AREA Subarea	YEAR BUILT[a]/ MAP SECTION[a]	NO. OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME[a] (yd³)	ESTIMATED TOTAL smv[a] (yd³)	STRUCTURE MATRICES[a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]				HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS[b]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
NN0117	Two Sheds - southwest of 557/SPSA-2c	NA/01	1	79	4	NP	WD (8) [45]	NP	NP	NA	NA
NN020[illegible]	Concrete Silo - northwest of 254/SPSA-[illegible]	NA/02	1	132	350	NP	C	NP	NA [352]	NA	NA
NN0202	Brick Structure - east of 361/ SPSA	NA/02	1	37	15	A/C	BR (9)	NP	C (9) [14]	NA	NA
NN0203	Fire Equipment Storage - southwest of 254/SPSA-3e	NA/02	1	24	29	CM (0.06)	CM (0.06)	NP	C (6) [29]	NA	NA
NN0204	Coal Hopper - north of 334/ SPSA-3a	NA/02	1	NA	38	NP	PW (10)	NP	C (6) [38]	NA	NA
NN0205	Brick Valve House - south of 321B/SPSA-3e	NA/02	1	4	24	C (4) [2]	BR (8)	NP	C [22]	NA	NA
NN0301	Metal Shed - north of 618/ WSA	NA/03	1	86	1	CM (0.06)	CM (0.06)	NP	NP	NA	NA
NN0302	Metal Shed - north of 618/ WSA	NA/03	1	136	1	NA	NA	NA	NA	NA	NA
NN0303	Metal Shed - north of 619/ WSA	NA/03	1	NA	1	NA	NA	NA	NA	NA	NA
NN0304	Metal Shed - north of 619/ WSA	NA/03	1	NA	1	NA	NA	NA	NA	NA	NA
NN0501	Abandoned School/ESA	NA/05	0	NA	45	NP	NP	NP	C (12) [25]	NA	NA
NN0601	Loading Dock - west of 866/ ESA-3b	NA/06	NA	NA	150	NP	NP	NP	WD Piers (8) [157]	NA	NA
NN0602	Long Metal Shed - west of 865/ESA-3b	NA/06	1	1,092	1	NA	NA	NA	NA [1]	NA	NA

NOTE: A symbol and acronym list is provided on the last page of this table.

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION/ STUDY AREA Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME * (yd³)	ESTIMATED TOTAL env * (yd³)	STRUCTURE MATRICES * (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³] ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
NN0603	Metal Shed - east of 367A/ ESA	NA/06	1	170	1	NA	NA	NA	NA	NA	NA
NN0901	Construction Structure - 1,300 ft southeast of 6th and A Street/WSA	NA/09	NA	NA	8	NP	NP	NP	C (6), [8]	NA	NA
NN0902	Survey Tower - north of Post Office/WSA	NA/09	NA	NA	1	NA	NA	NA	NA [1]	NA	NA
NN0903	VORTAC Station/WSA	NA/09	0	NA	100	C [19]	MB [15]	NA	C (4) [83]	NA	NA
NN1201	Long Metal Shed - 25 ft west of 846/SSA	NA/12	1	283	4	NA	NA	NA	WD [3]	NA	NA
NN1202	Square Metal Shed - west of 846/SSA	NA/12	1	121	2	CM (0.06)	CM (0.06)	NP	WD (8) [2]	NA	NA
NN1203	Wooden Shed - west of 846/ SSA	NA/12	1	62	5	A/C [2]	WD [1.8]	WD [0.3]	WD [0.8]	NA	NA
NN1204	Wooden Frame - south of 846/SSA	NA/12	NA	NA	4	NP	NP	NP	C (9) [3]	NA	NA
NN1205	Wooden Shed - south of 846/ SSA	NA/12	1	25	3	A/C [1]	WD (1)	NP	C (4) [1]	NA	NA
NN1206	Shooting Bunker - south of 846/SSA	NA/12	1	17	6	C (4) [1]	C (5)	C (18)	C (6) [5]	NA	NA
NN1207	Shooting Bunker Number 2 - south of 846/SSA	NA/12	1	17	14	C (4) [1]	C (5)	C (18)	C (6) [13]	NA	NA
NN1208	Brick Structure - 900 ft southwest of 846/SSA	NA/12	1	26	9	WD [1]	BR (6)	NP	C (12) [9]	NA	NA

NOTE: A symbol and acronym list is provided on the last page of this table

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[b]/ STUDY AREA - Subarea	YEAR BUILT[c]/ MAP SECTION[d]	NO. OF LEVELS[e]	ESTIMATED TOTAL AIR VOLUME[f] (yd³)	ESTIMATED TOTAL smv[f] (yd³)	STRUCTURE MATRICES[g] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]				HISTORICAL USE[c]	POTENTIAL ASSOCIATED CHEMICALS[h]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
NN1209	Concrete Bunker - 1,100 ft south of 846/SSA	NA/12	1	29	14	NP	MB (8)	NP	C (8) [13]	NA	NA
NN1210	Concrete Bunker - 1,250 ft south of 846/SSA	NA/12	1	17	10	WD	MB (8)	NP	C (6) [9]	NA	NA
NN1211	Concrete Bunker - 1,300 ft south of 846/SSA	NA/12	1	29	14	NP	MB (8)	NP	C (8) [15]	NA	NA
NN1212	Concrete Bunker - 1,350 ft south of 846/SSA	NA/12	1	14	6	C (5) [1]	C (6)	NP	C (4) [6]	NA	NA
NN1213	AMSA/OMS Maintenance Shop - north of 841/SSA	NA/12	1	6,561	780	A/C [63]	MB (12)	MB (12)	C (6) [713]	NA	NA
NN2001	Antenna Installation - 1/2 mile north of 9th Street/ESA	NA/20	1	9	15	NP	FG	NP	C (9) [15]	NA	NA
NN2002	Tank Pad - north of 9th, 2/3 mile east of F Street/ESA	NA/20	1	NA	14	NP	NP	NP	C (12) [14]	NA	NA
NN2301	Abandoned Water Purification Plant/NCSA	NA/23	1	NA	59	NP	C (1)	NP	NA [59]	NA	NA
NN2401	Concrete Structure - east of Bog/NCSA	NA/24	1	4	3	C (6) [1]	C (6)	NP	C (6) [3]	NA	NA
NN2402	Wooden Shed - north of Trickling Filters/NCSA-8b	NA/24	1	47	7	A/C [1]	WD (1)	NP	C (6) [5]	NA	NA
NN2403	Two Trickling Filters - south of 391/NCSA	NA/24	1	NA	1,800	NP	NF	NP	C (12) [1,773]	NA	NA
NN2404	Imhoff Tank - south of 391	NA/24	0	410	408	NA	[141]	NA	C [398] WD [10]	NA	NA
NN2405	Antenna Installation - north of 836/NCSA-8a	NA/24	1	10	12	NP	FG	NP	NA [12]	NA	NA

NOTE: A symbol and acronym list is provided on the last page of this table.

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ble 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER*	STRUCTURE DESCRIPTION*/ STUDY AREA - Subarea	YEAR BUILT*/ MAP SECTION*	NO OF LEVELS*	ESTIMATED TOTAL AIR VOLUME* (yd³)	ESTIMATED TOTAL smv* (yd³)	STRUCTURE MATRICES* (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND [VOLUME IN yd³]: ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION	HISTORICAL USE*	POTENTIAL ASSOCIATED CHEMICALS*
NN2501	Shed northwest of 1618/ NPSA	NA/24	1	NA	8	A/C [3]	WD	P/D	C (4) [8]	NA	NA
NN2502	Gas Pump and Pad - northeast of 1618/NPSA	NA/25	1	33	32	NP	WD (6)	NP	C (6) [5]	NA	NA
NN2503	Pumping Station - south of 1510/NPSA-7	NA/25	1	NA	3	NP	NP	NP	C (12) [3]	NA	NA
NN2601	Decon Pad/Tank - northeast of Basin F/NCSA-4a,4b	NA/26	1	NA	58	NP	CM [0.3]	NP	C (8) [56]	NA	NA
NN2602	Valve Gate - north End of Reservoir C/NCSA-2a	NA/26	1	31	19	C (6) [1]	C (15)	NP	C (15) [18]	NA	NA
NN3001	Metal Shed - east of 853/ESA-5	NA/30	1	NA	1	NA	NA	NA	NA	NA	NA
NN3002	Metal Shed - east of 853/ESA-5	NA/30	1	NA	1	NA	NA	NA	NA	NA	NA
NN3101	Metal Shed - north of 1734/ ESA	NA/31	1	27	1	CM (0.06)	CM (0.06)	NP	C Piers (10)	NA	NA
NN3102	Three Sets of Shed Siding - 1,100 ft southeast of 1735/ ESA-3d	NA/31	1	NA	2,400	NA	NA	NA	NA	NA	NA
NN3103	Storage Building/Toxic Storage Yard/ESA-3d	NA/31	1	563	1	CM (0.06)	CM (0.06)	NP	NP	NA	NA
NN3104	Shack - west of Berms/Toxic Storage Yard/ESA	NA/31	1	18	1	NP	CM	NP	NP	NA	NA
NN3105	Shed - northwest end of Berms/Toxic Storage Yard/ ESA-3d	NA/31	1	810	1	WD (0.5)	WD (0.5)	NP	WD (2)	NA	NA

TE: A symbol and acronym list is provided on the last page of this table.

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Table 3. Inventory List of Rocky Mountain Arsenal Structures.

STRUCTURE NUMBER[a]	STRUCTURE DESCRIPTION[a] / STUDY AREA - Subarea	YEAR BUILT[a] / MAP SECTION[a]	NO. OF LEVELS[a]	ESTIMATED TOTAL AIR VOLUME [a] (yd^3)	ESTIMATED TOTAL smv [a] (yd^3)	STRUCTURE MATRICES [a] (ESTIMATED MAXIMUM THICKNESS IN INCHES) AND (VOLUME IN yd^3)				HISTORICAL USE[a]	POTENTIAL ASSOCIATED CHEMICALS [b]
						ROOF	EXTERIOR WALLS	INTERIOR WALLS	FOUNDATION		
NN3106	Shed - northeast end of Berms/Toxic Storage Yard/ ESA-3d	NA/31	1	1,394	2	CM (0.06) [1]	CM (0.06)	NP	NA [1]	NA	NA
NN3107	Antenna Station/ Toxic Storage Yard/ESA	NA/31	1	9	3	NP	NP	NP	C (4) [3]	NA	NA
NN3108	Shed - southwest end of 1st Berm/Toxic Storage Yard/ ESA-3d	NA/31	1	27	1	CM (0.06)	CM (0.06)	NP	NA [1]	NA	NA
NN3109	Shed - southeast end of 1st Berm/Toxic Storage Yard/ ESA-3d	NA/31	1	1,394	2	CM (0.06) [1]	CM (0.06)	NP	NA [1]	NA	NA
NN3501	Three Communication Antenna Pits/NCSA	NA/35	1	NA	6	C (9) [1]	C (6)	NP	C (6) [5]	NA	NA
NN3601	Incinerator - 500 ft northeast of 834/CSA	NA/36	1	13	26	NP	C (12)	NP	NA [26]	NA	NA
NN3602	Incinerator - 1,000 ft southeast of 834/CSA-1c	NA/36	1	22	3	NP	C (6)	NP	C (6) [3]	NA	NA
NN3603	Metal Shed - northwest of 725/CSA-2a	NA/36	1	36	4	A/C [1]	CM (0.06) [1]	P/D	WD (5) [3]	NA	NA
NN3604	Metal Shed - southwest of 725/CSA-2a	NA/36	1	68	6	CM (0.06)	CM (0.06) [1]	NP	C (6) [5]	NA	NA
NN3605	Metal Shed - southeast of 725/CSA-2a	NA/36	1	60	2	CM (0.06)	CM (0.06)	NP	NA [1]	NA	NA
NNDP0101	Storage Shed/SPSA-1b	NA/01	1[f]	44[f]	NA	NA	NA	NA	NA	The structure is used for storage[f].	No historically associated chemicals[f]
TW-13	Open Storage - north of 1611/NPSA	NA/25	1	NA	120	NA	NA	NA	NA	NA	NA

NOTE: A symbol and acronym list is provided on the last page of this table.

Table 3. Inventory List of Rocky Mountain Arsenal Structures.

>	Greater than
*	Structures classified in Feasibility Study as potential remediation support structures (Ebasco, 1992b/RTIC 92233R01)

1 Chemical agent not identified in Task 24 (Ebasco, 1988/RTIC 88306R02)
2 All reactions may not have gone to completion and therefore similar chemicals may be present in downstream structures connected via pipelines.
3 Chemical abbreviations and/or constituents of chemicals are not identified in Task 24 (Ebasco, 1988/RTIC 88306R02)
4 Chemicals associated with building, but not indicated in Task 24 (Lee Wan and Associates, 1990)

AB	Asbestos Board
AC	Asphalt Composition
Army	U.S. Army
As	Arsenic
B	Basement
Ba	Barium
Bldg	Building
Brk	Brick
C	Concrete
CA	Corrugated Metal with Asbestos
CC	Concrete Columns
CAIS	Chemical Agent Identification Set
Cd	Cadmium
CM	Corrugated Metal
CPMSO	4-Chlorophenylmethyl Sulfoxide
CPMSO2	Chlorophenylmethyl Sulfone
Cr	Chromium
CSA	Central Study Area
Cu	Copper
DBCP	Dibromochloropropane
DCPD	Dicyclopentadiene
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
Dibrom	Phosphoric acid 1,2-dibromo-2,2-dichloroethyl dimethyl ester
DIMP	Diisopropylmethyl phosphonate
1,4-DCLB	1,4-Dichlorobenzene
DMMP	Dimethylmethyl phosphonate
DRMO	Defense Reutilization and Marketing Design
ESA	Eastern Study Area
FB	Fiber Board
FG	Fiberglass
ft	*foot or feet*
FU	Future Use
GB (or Sarin)	Isopropyl methylphosphonofluoridate
GF	O-cyclohexyl methylphosphonofluoridate
HD	Mustard
Hg	*Mercury*
in	inch(es)
lb	pound(s)
LW	Lewisite
MB	Masonry Block
mm	*millimeter(s)*
NA	Not available
NCSA	North Central Study Area
NN	No Number
NOAA	National Oceanic and Atmospheric Administration
No	*Number*
NP	Not Present
NPSA	North Plants Study Area
NSC	No Surficial Soil Samples collected within 1,000 feet of building
Pb	Lead
PCB	*Polychlorinated biphenyls*
P/D	Plaster/Drywall
PMRMA	Project Manager Rocky Mountain Arsenal
PW	Concrete Perimeter Wall
RCRA	Resource Conservation and Recovery Act
RMA	*Rocky Mountain Arsenal*
S	Steel
SM	Sheet Metal
smv	standing material volume
SPSA	South Plants Study Area
SSA	Southern Study Area
ST	Structural Tile
TC	Thionyl chloride
TCLP	Toxicity Characteristic Leaching Procedure
TNT	2,4,6-Trinitrotoluene
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VX	Methylphosphonothioic acid S-[2-[bis(1-methylethyl)amino]ethyl] O-ethyl ester
WC	Wood Columns
WD	Wood
WSA	Western Study Area
yd^3	cubic yard
Zn	Zinc

NOTE: This table does not include tanks or substations.

SOURCES:
a Ebasco, 1988/RTIC 88306R02, except where noted
b HISTORICAL: Ebasco, 1988/RTIC 88306R02
SAMPLING:
Dust - Ebasco, 1988/RTIC 88306R02
Liquid - Ebasco, 1988/RTIC 88306R02
Surficial Soil (0-2 in, Nonvolatile analytes detected within 1,000 ft of structure) - Ebasco, 1991b/RTIC 91121R01
Surficial Soil (0-2 ft, Nonvolatile analytes detected within 1,000 ft of structure) - RMA Environmental Database, 1992b (Chemical Soil File)
Subsurface Soil (Volatile analytes detected within 300 ft of structure) - RMA Environmental Database, 1992b (Chemical Soil File)
Groundwater (Volatile analytes detected within 300 ft of structure) - RMA Environmental Database, 1992a (Chemical Groundwater File)
Air - Woodward-Clyde, 1993a/RTIC 93095R02
Dust/Vacuum - Woodward-Clyde, 1993a/RTIC 93095R02
Dust/Wipe - Woodward-Clyde, 1993a/RTIC 93095R02
c Ebasco, 1989/RTIC 89166R05
d Woodward-Clyde, 1993c/RTIC 93095R01
e Ebasco, 1987a
f Warren, 1993

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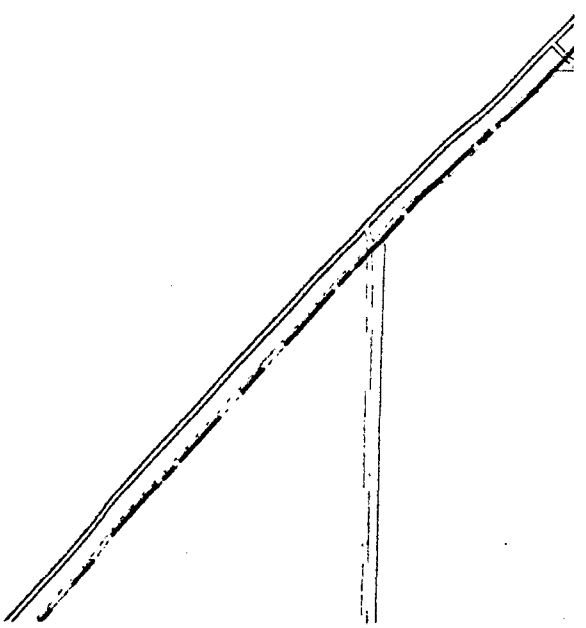

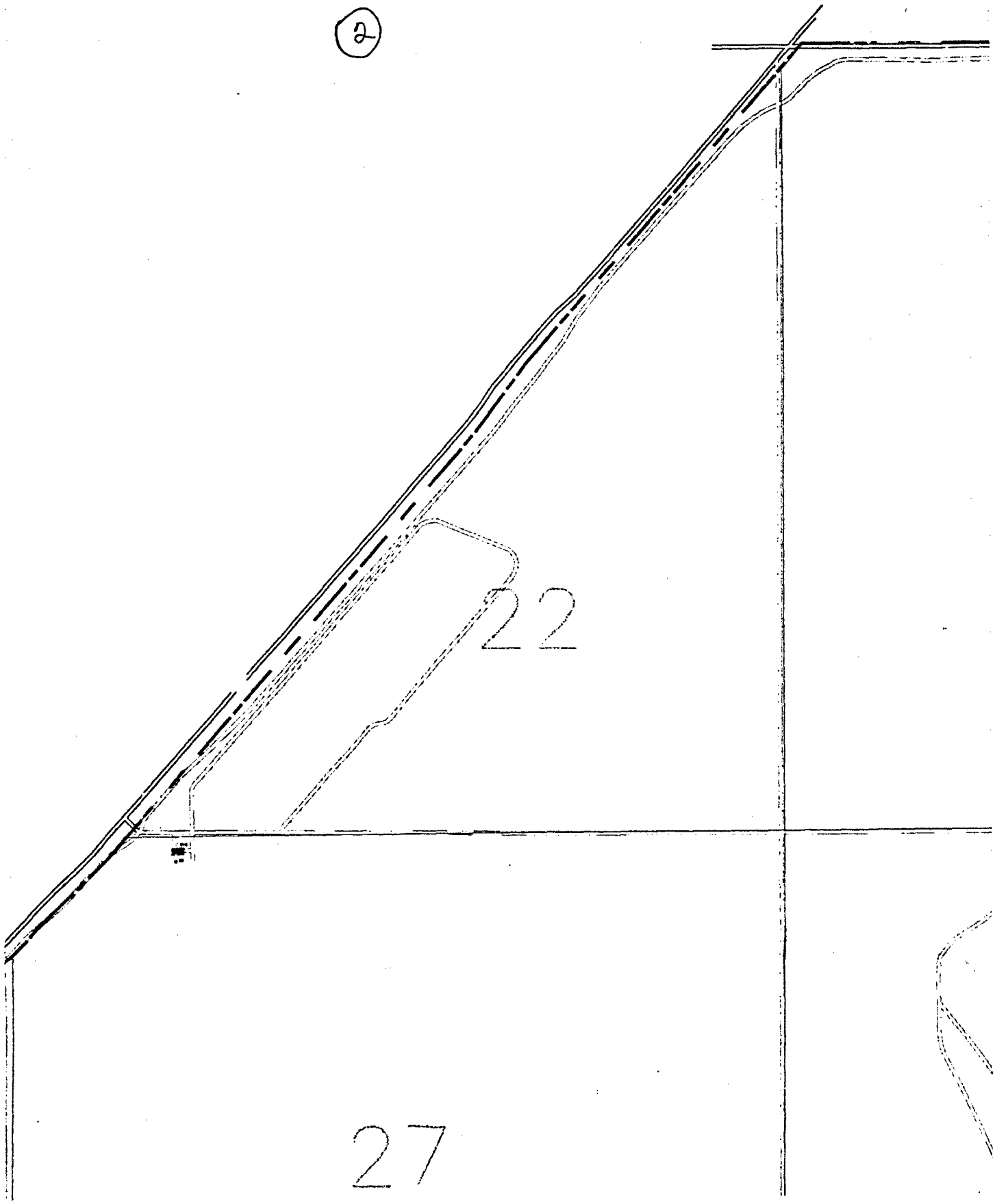
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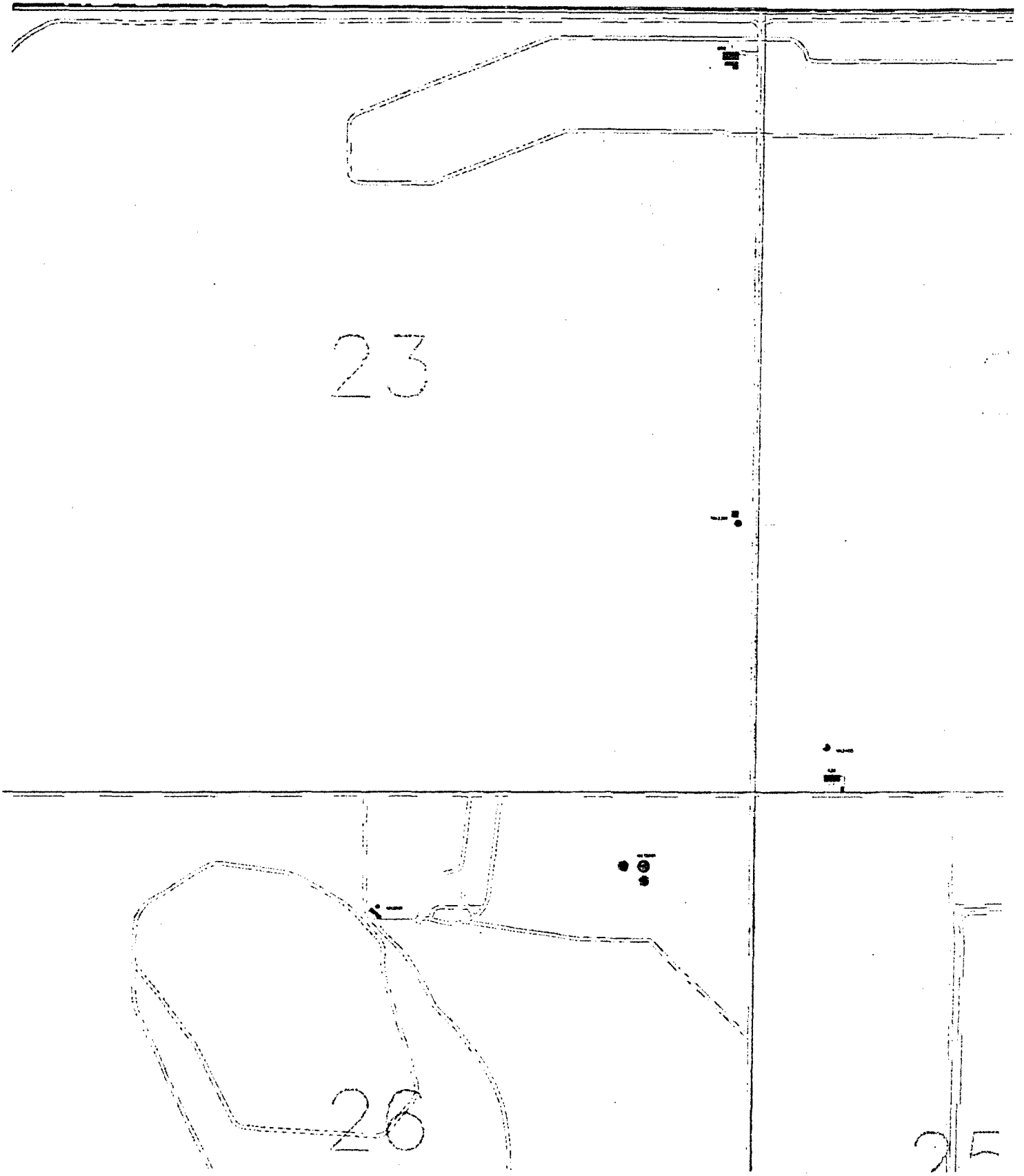
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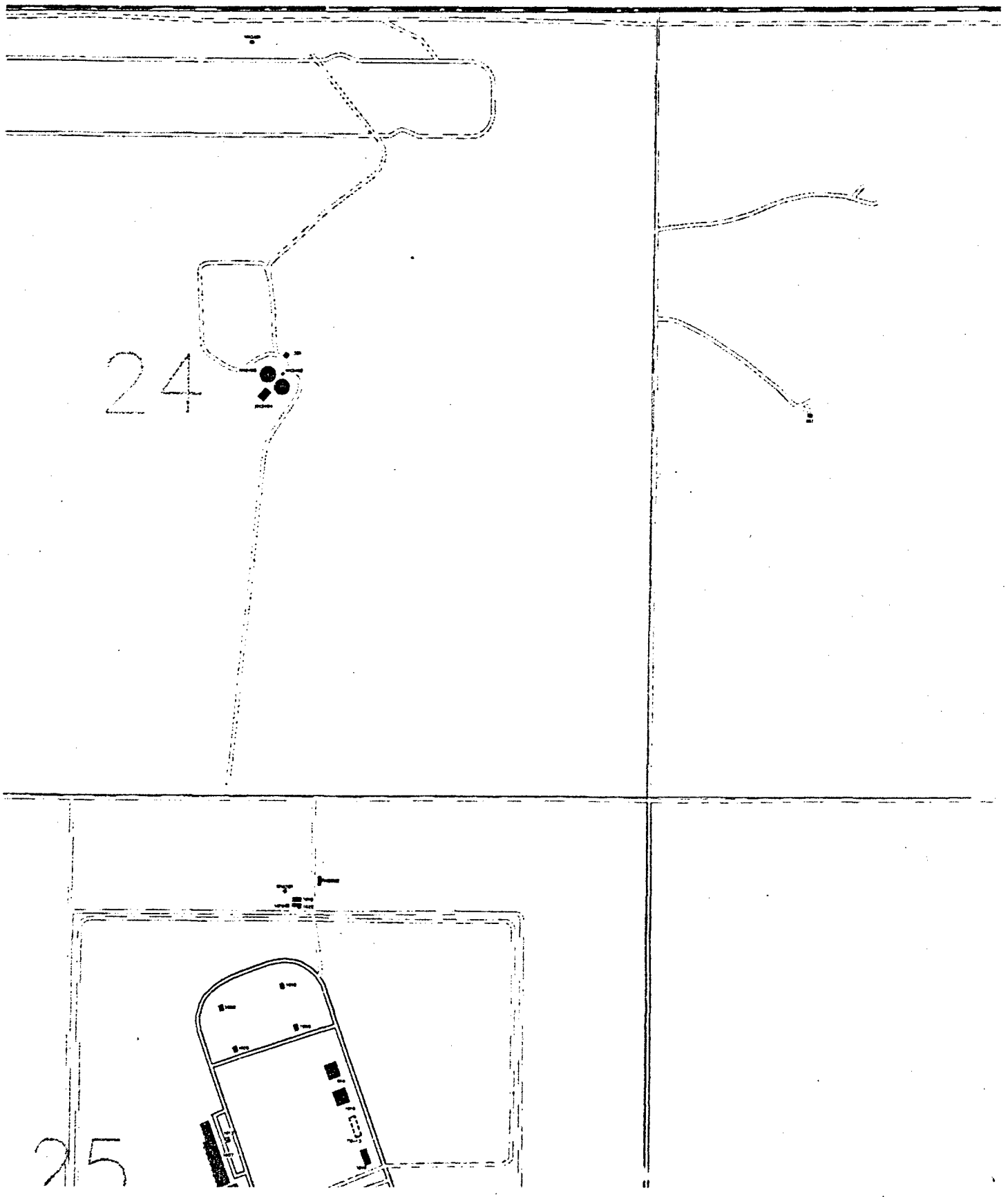
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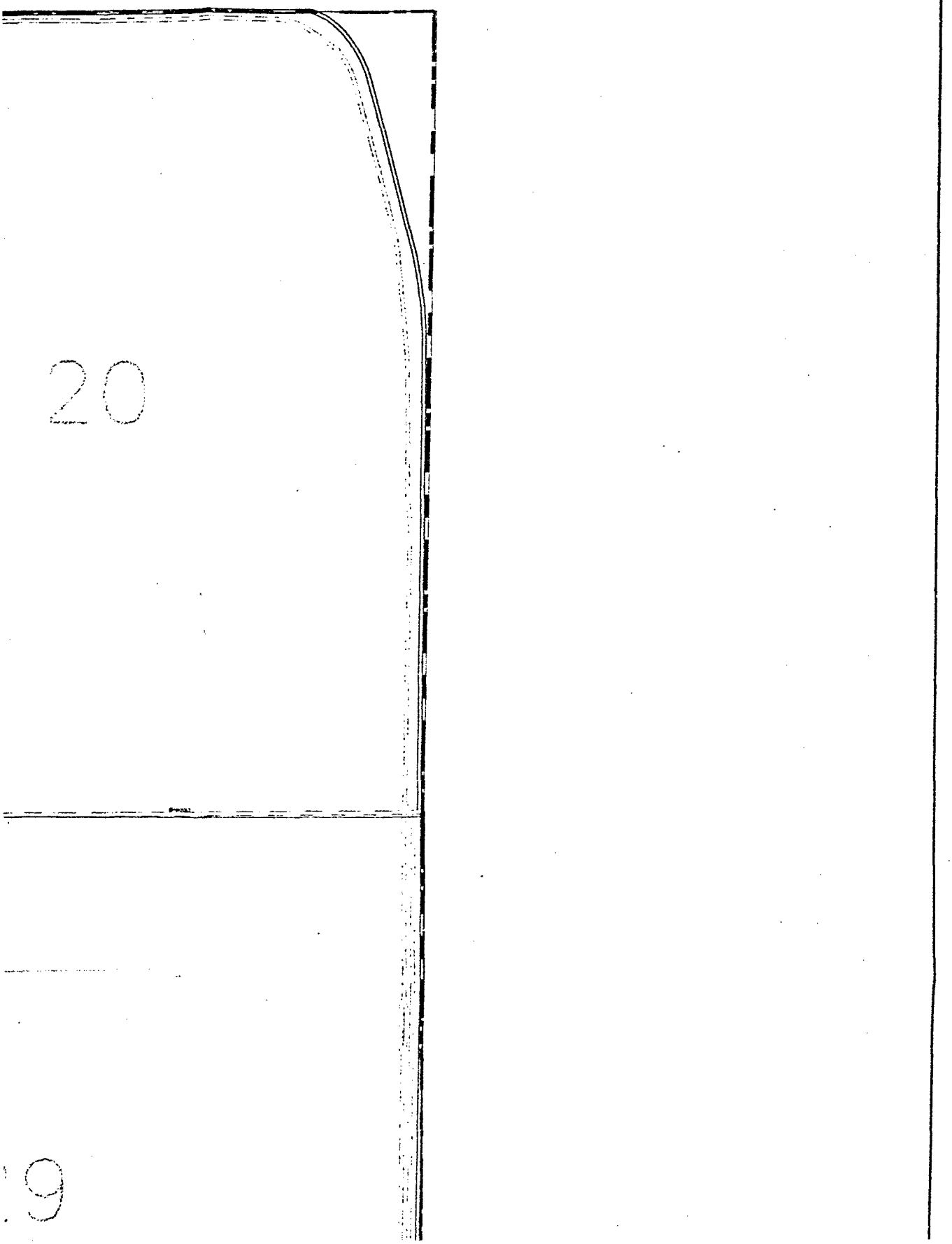
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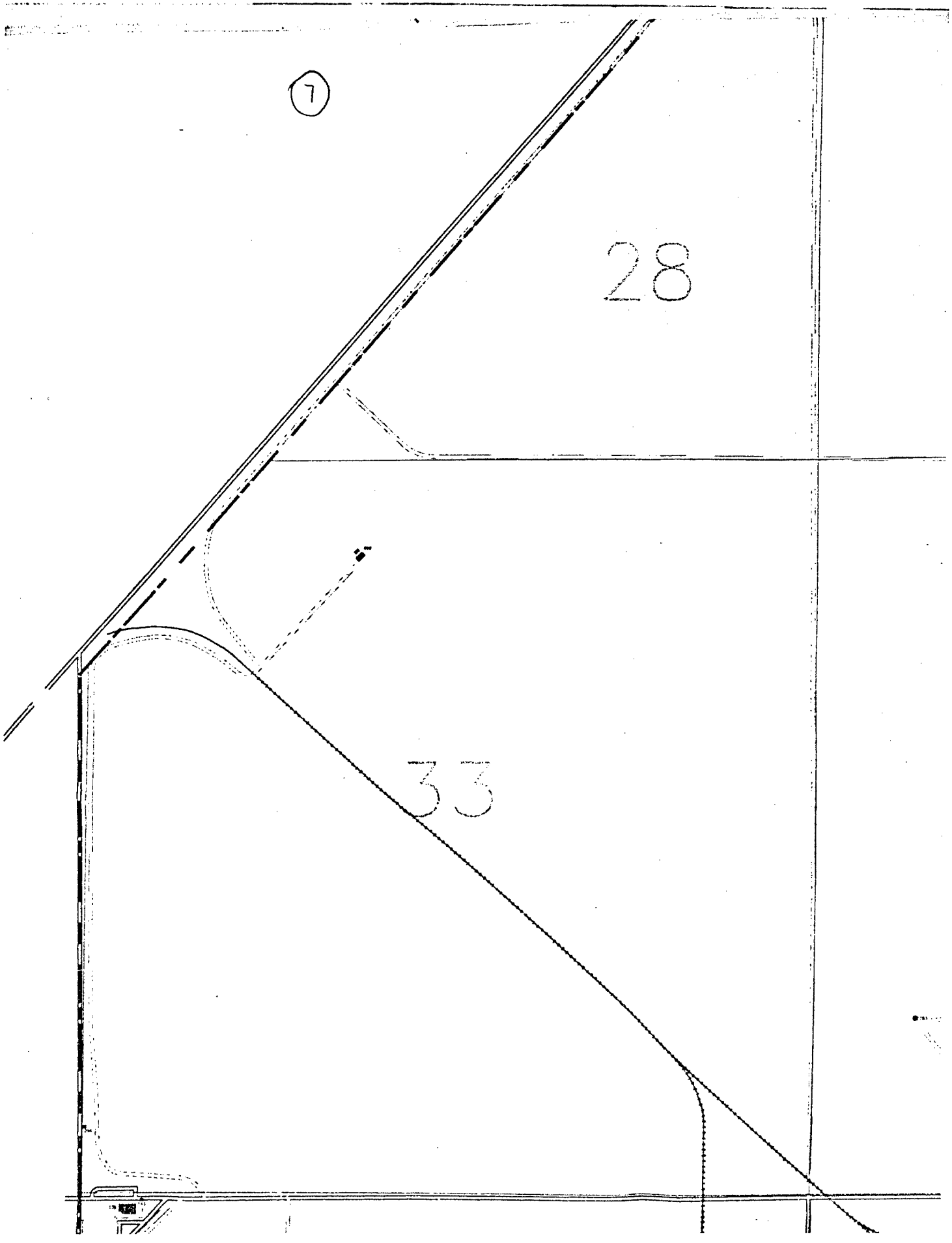
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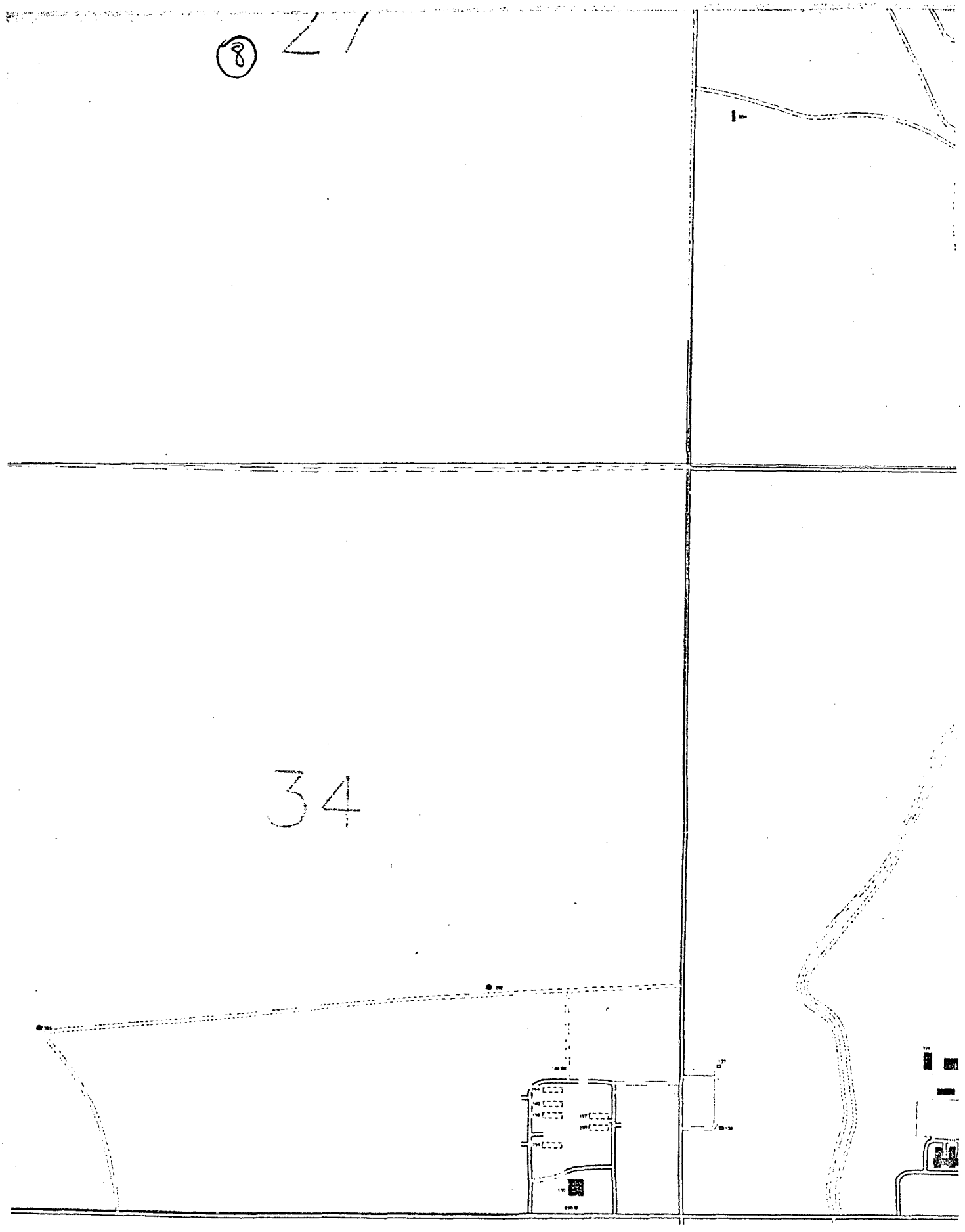
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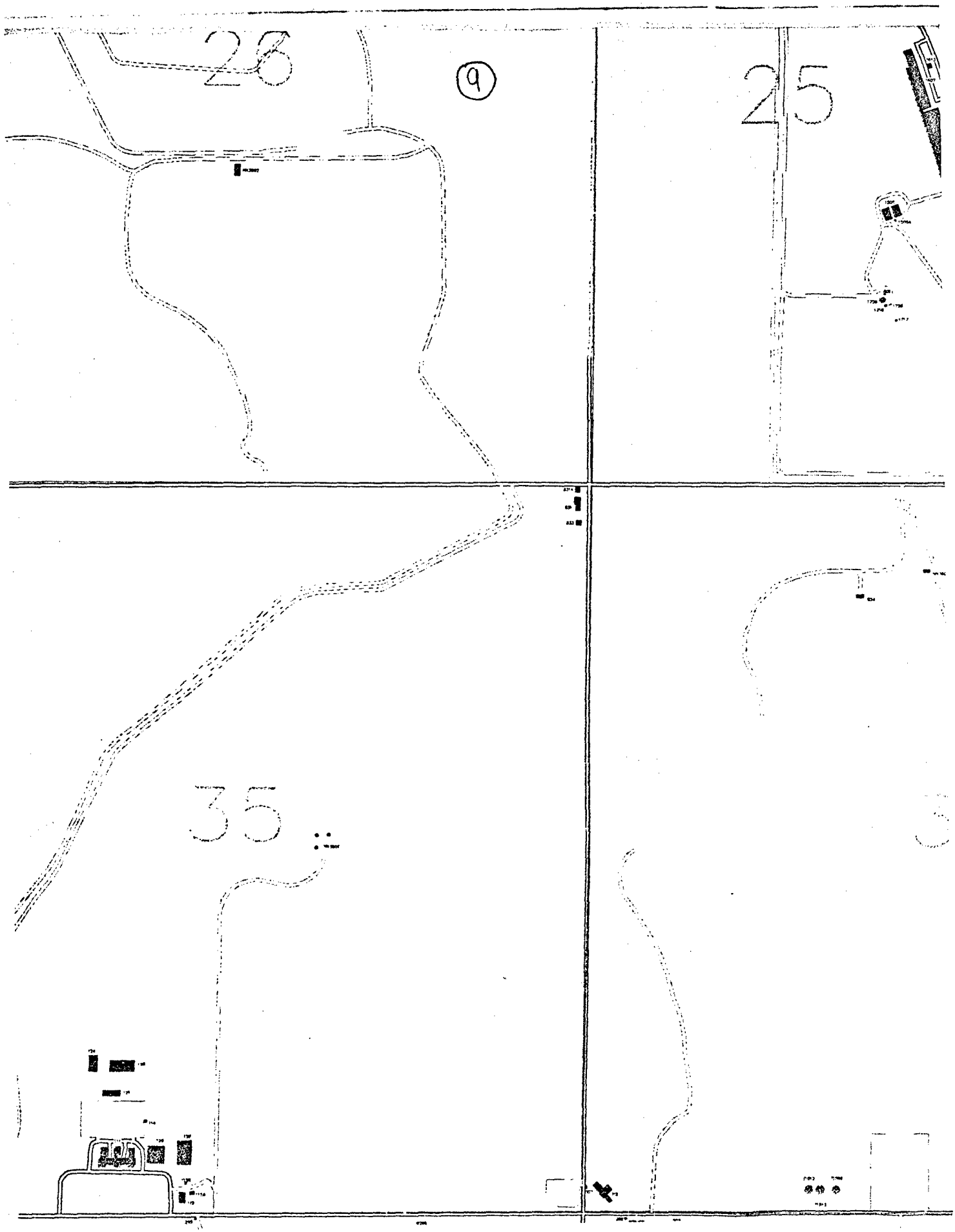
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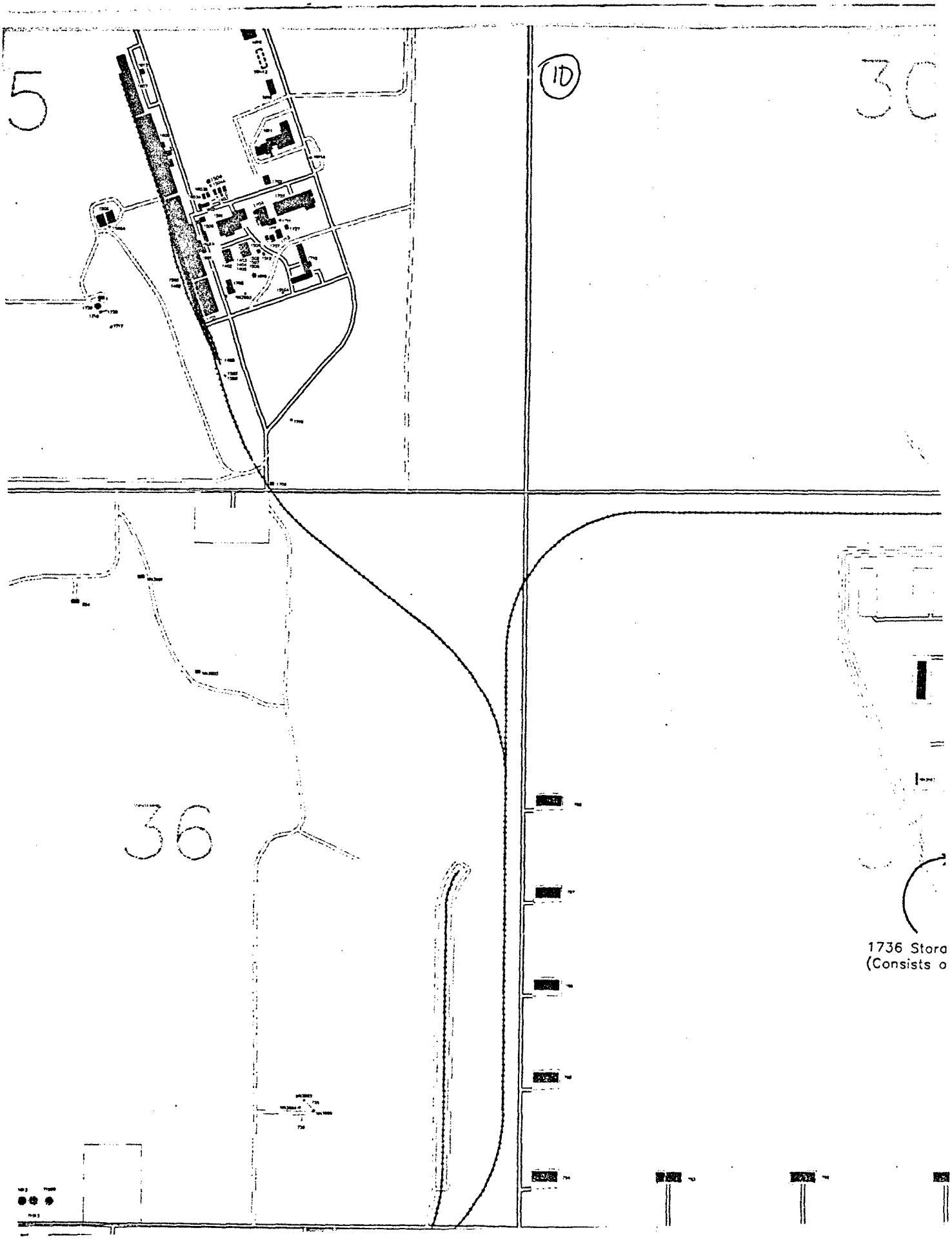
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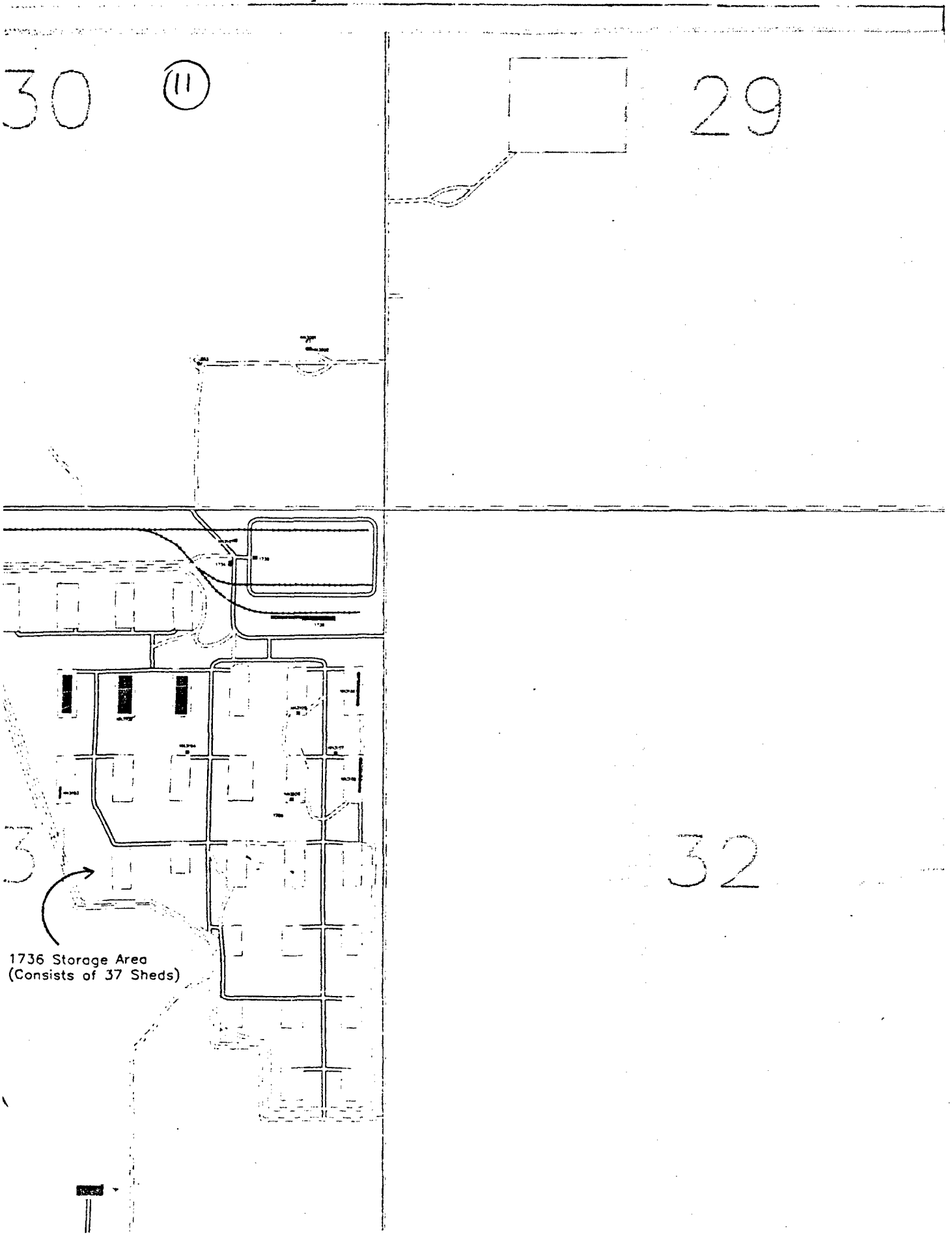
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1736 Storage Area
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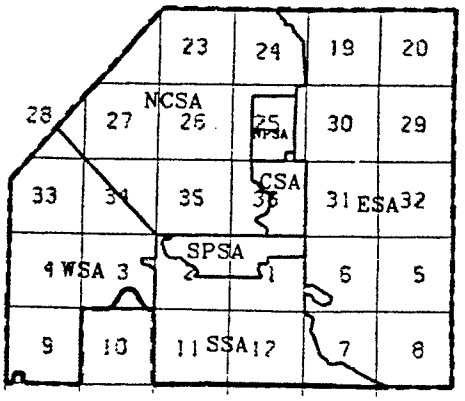
STUDY AREA MAP



SOURCE: Ebasco, 1992a/RTIC 92017R01

CSA -- Central Study Area
ESA -- Eastern Study Area
NCSA -- North Central Study Area
NPSA -- North Plants Study Area
SPSA -- South Plants Study Area
SSA -- Southern Study Area
WSA -- Western Study Area

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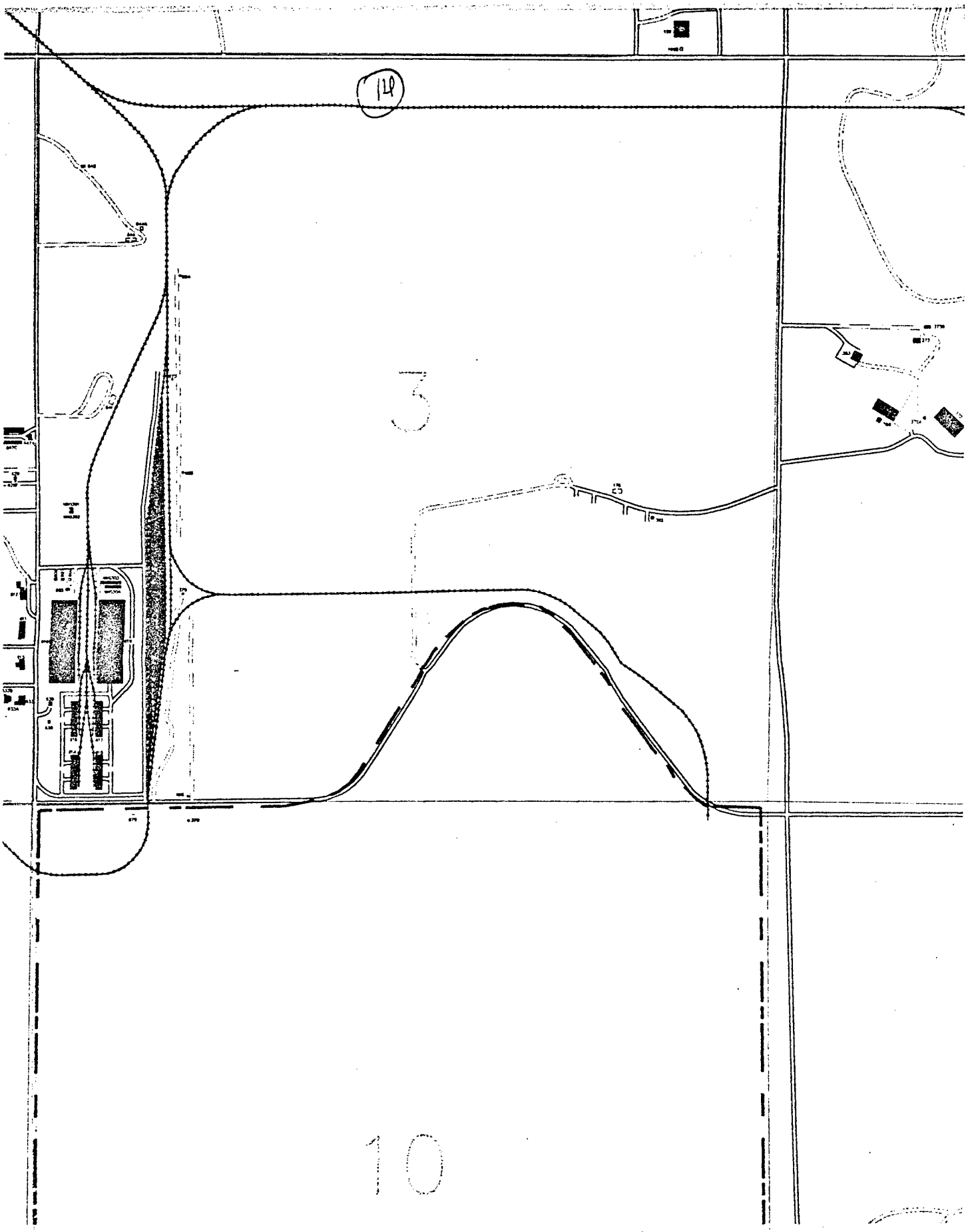
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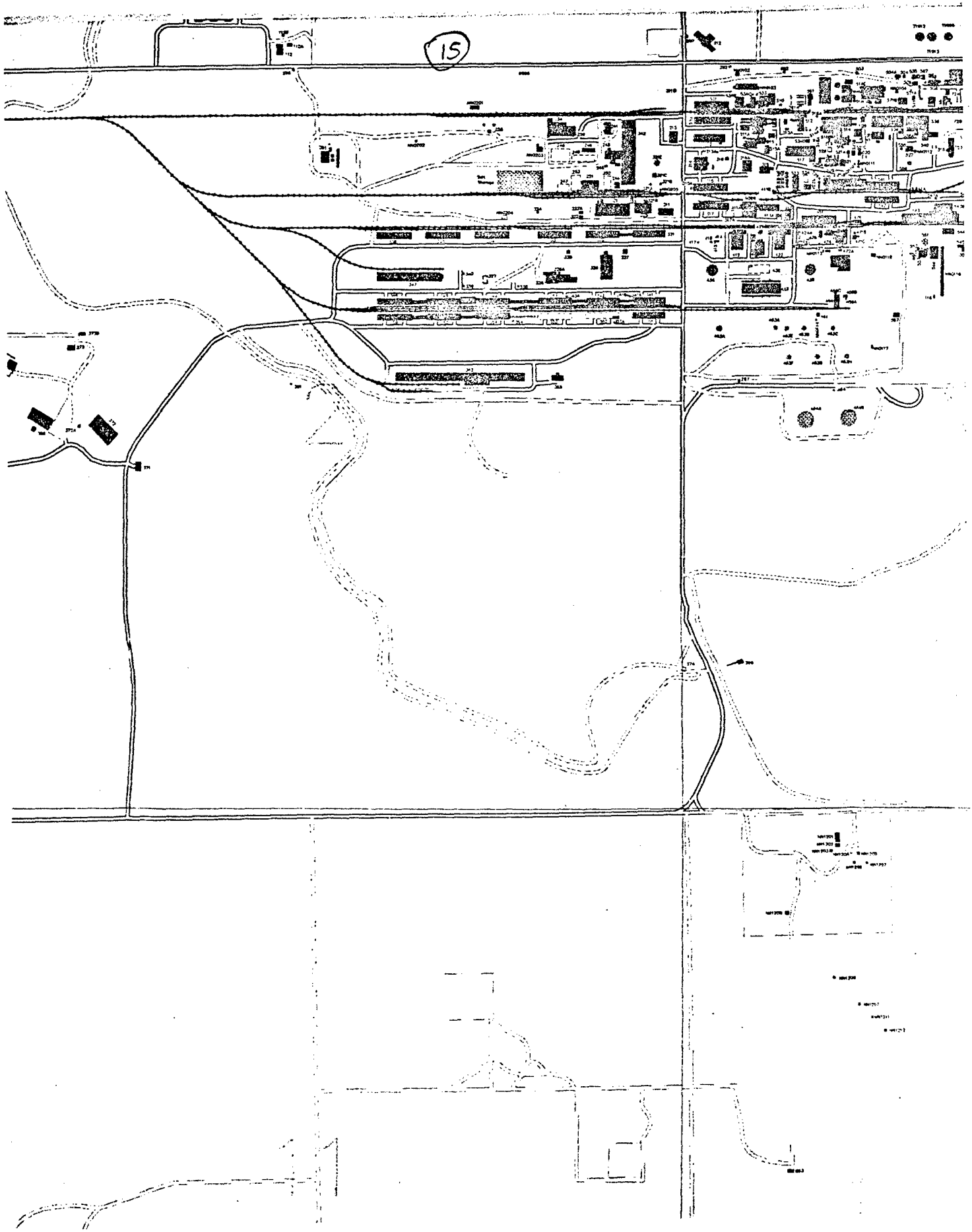
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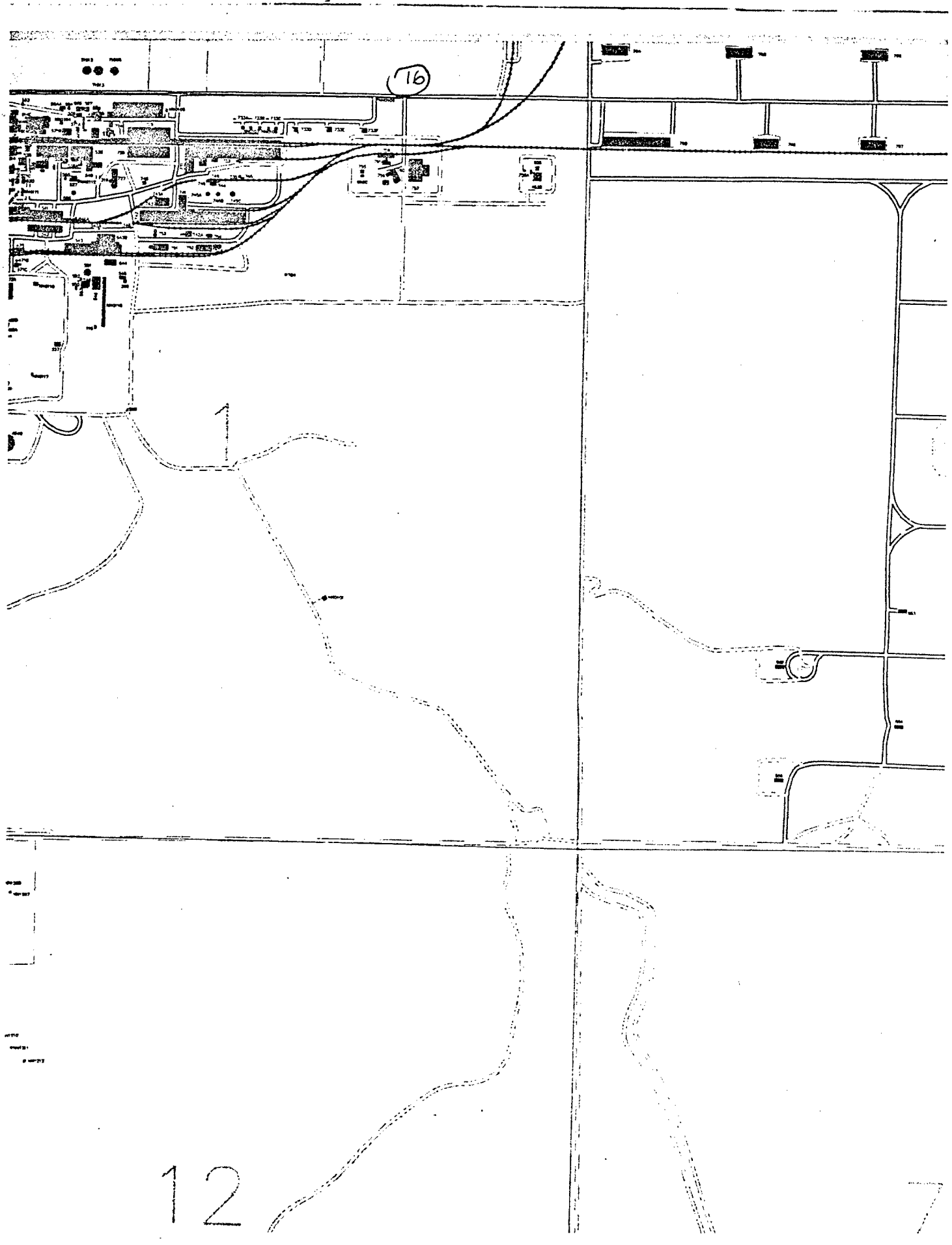
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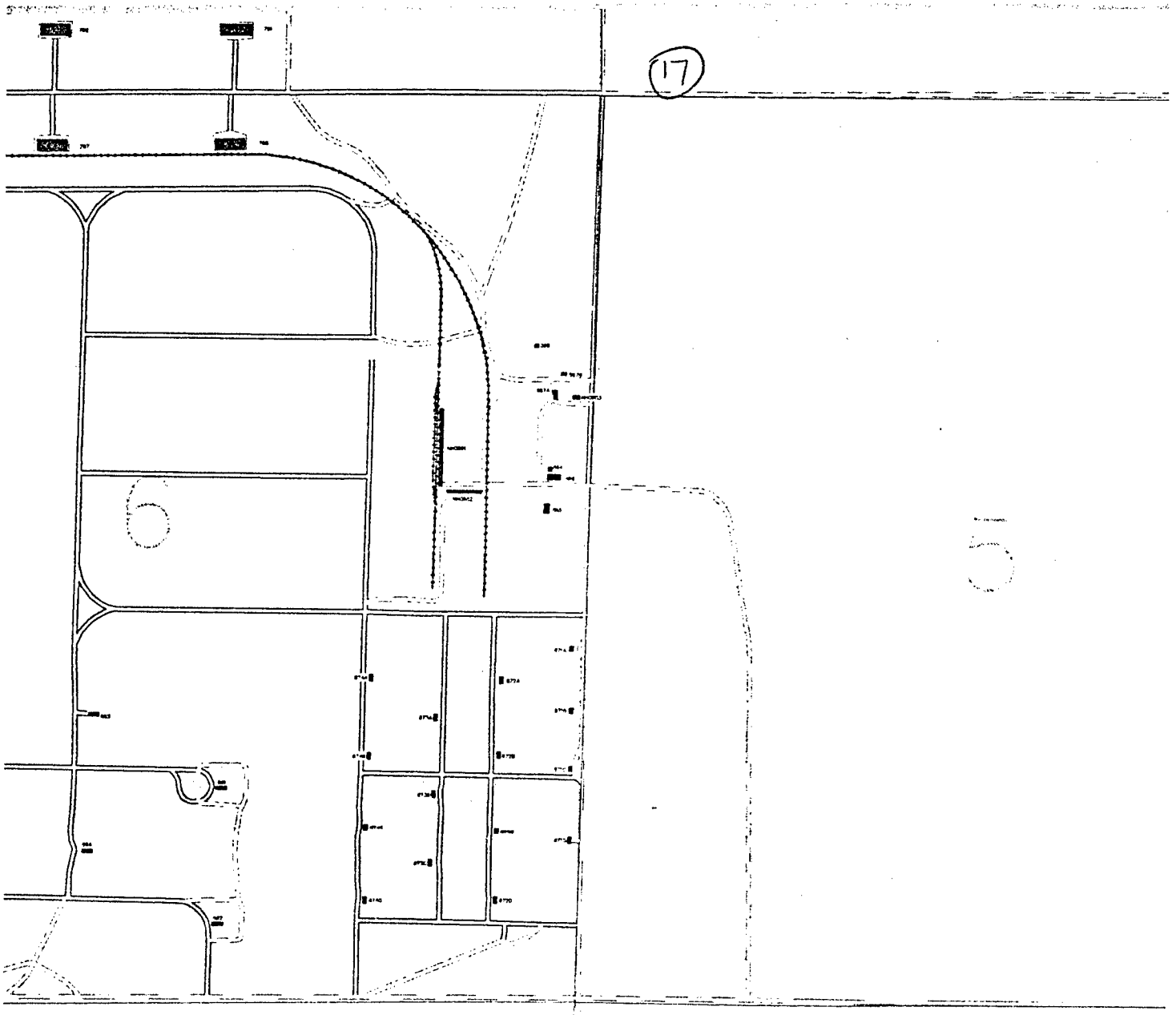
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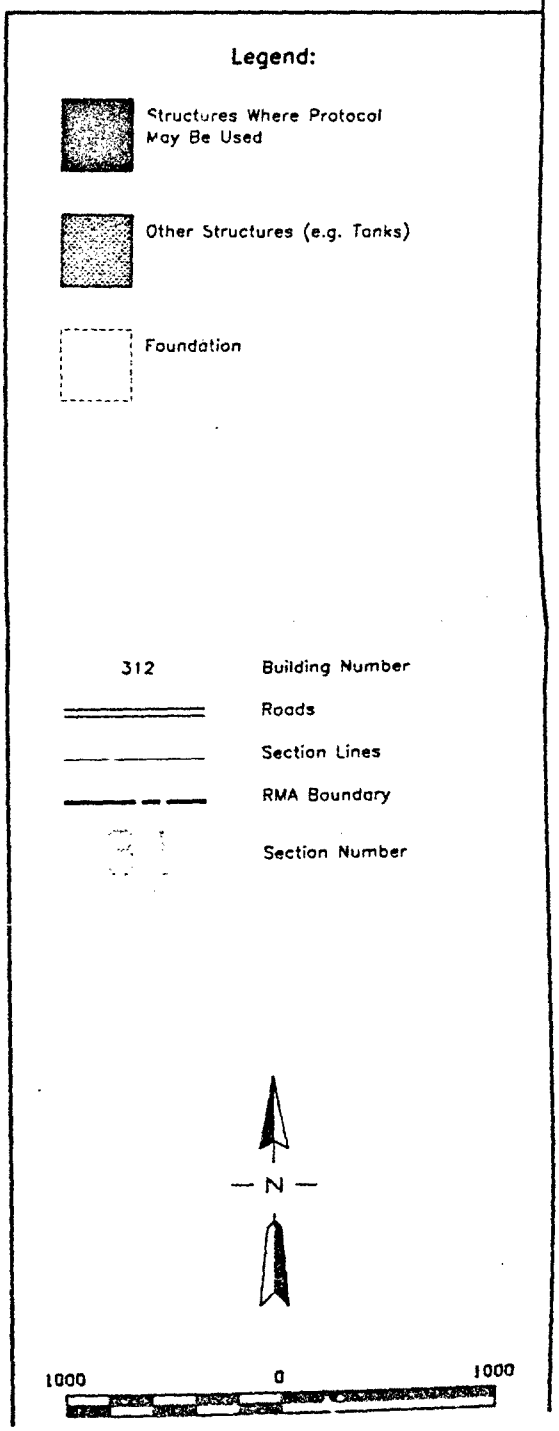
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Structures Where Protocol May Be Used
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RMA Boundary
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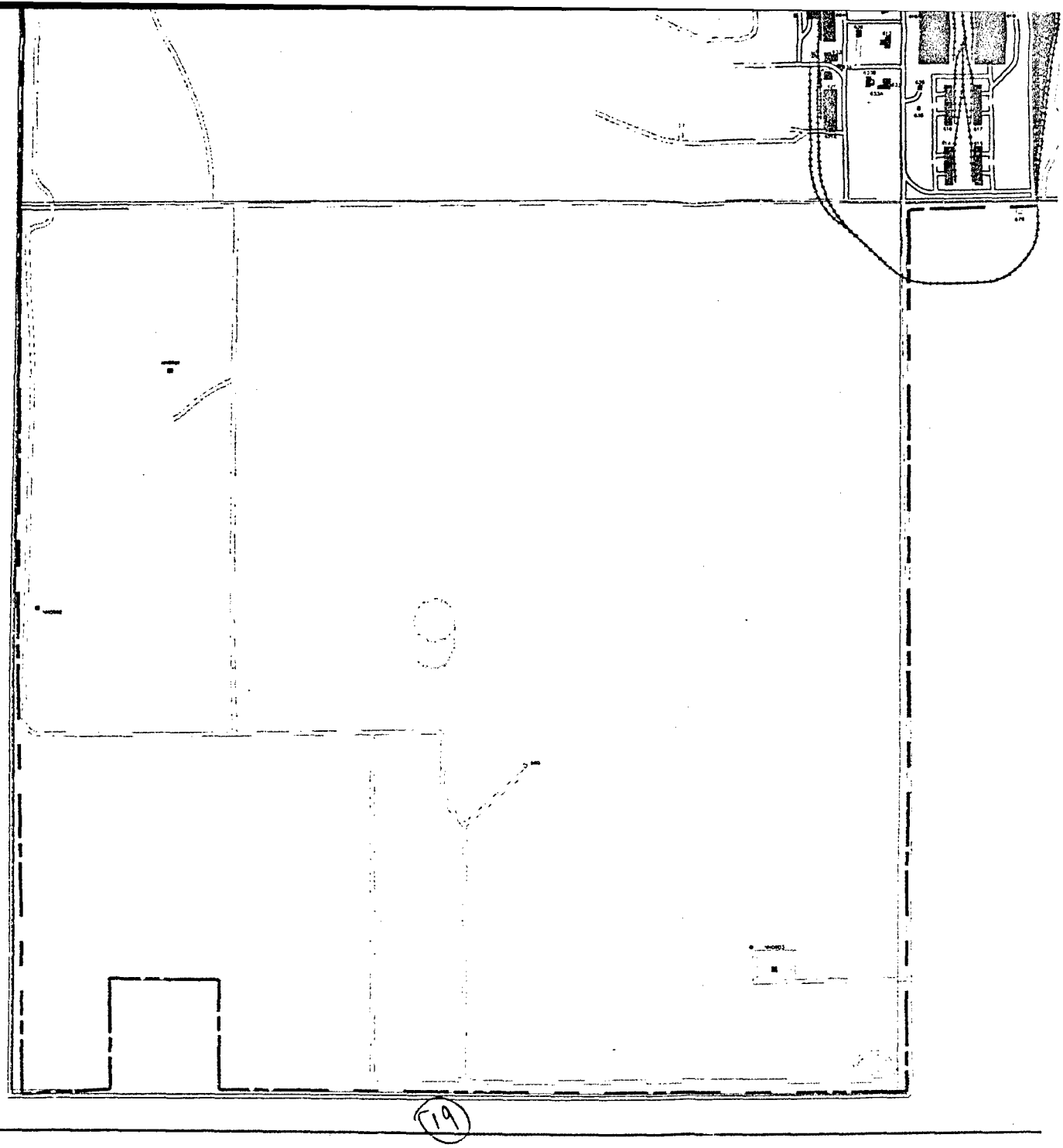
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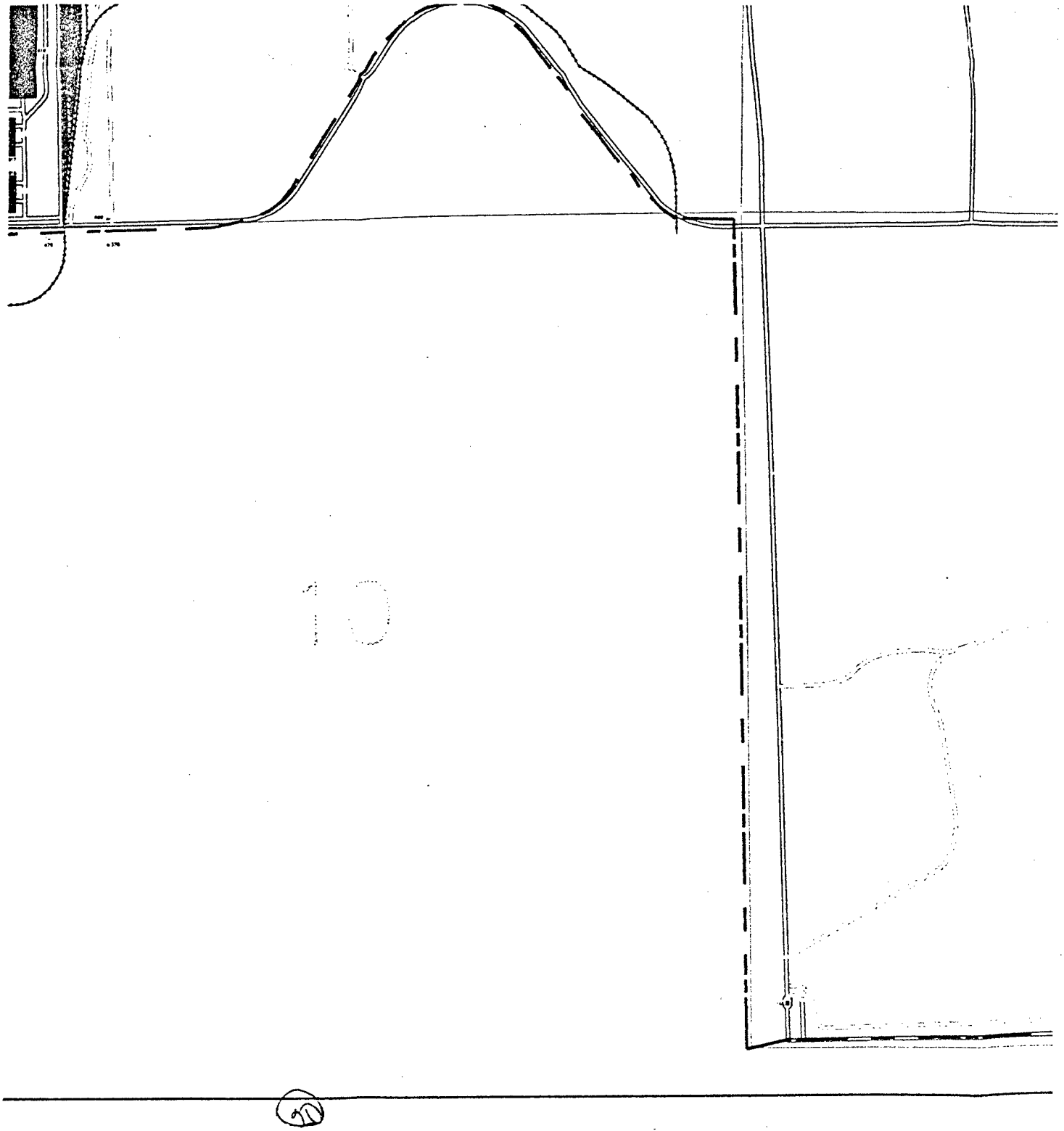

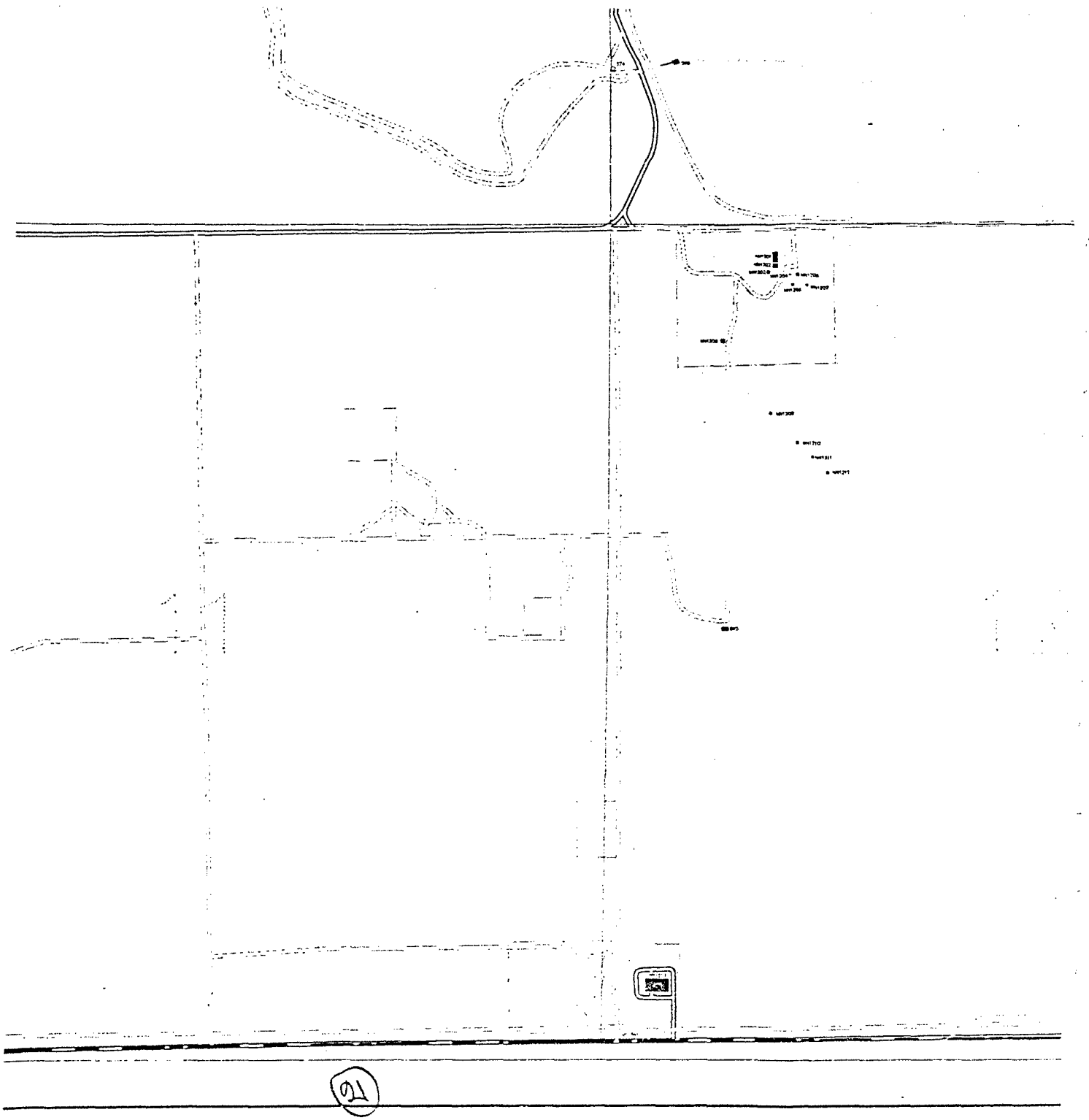

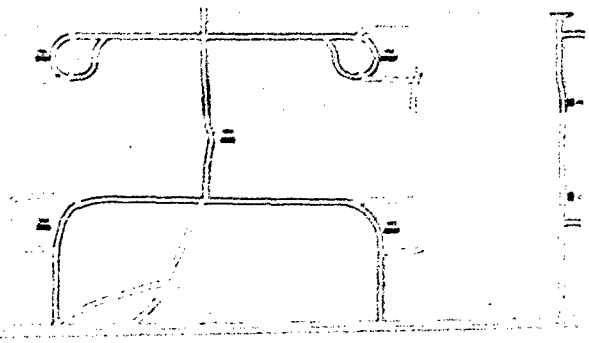

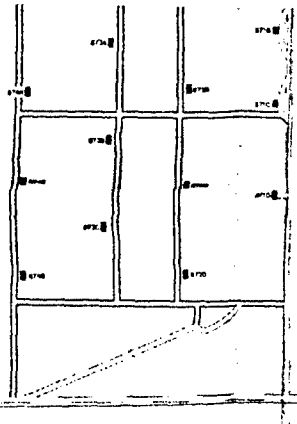

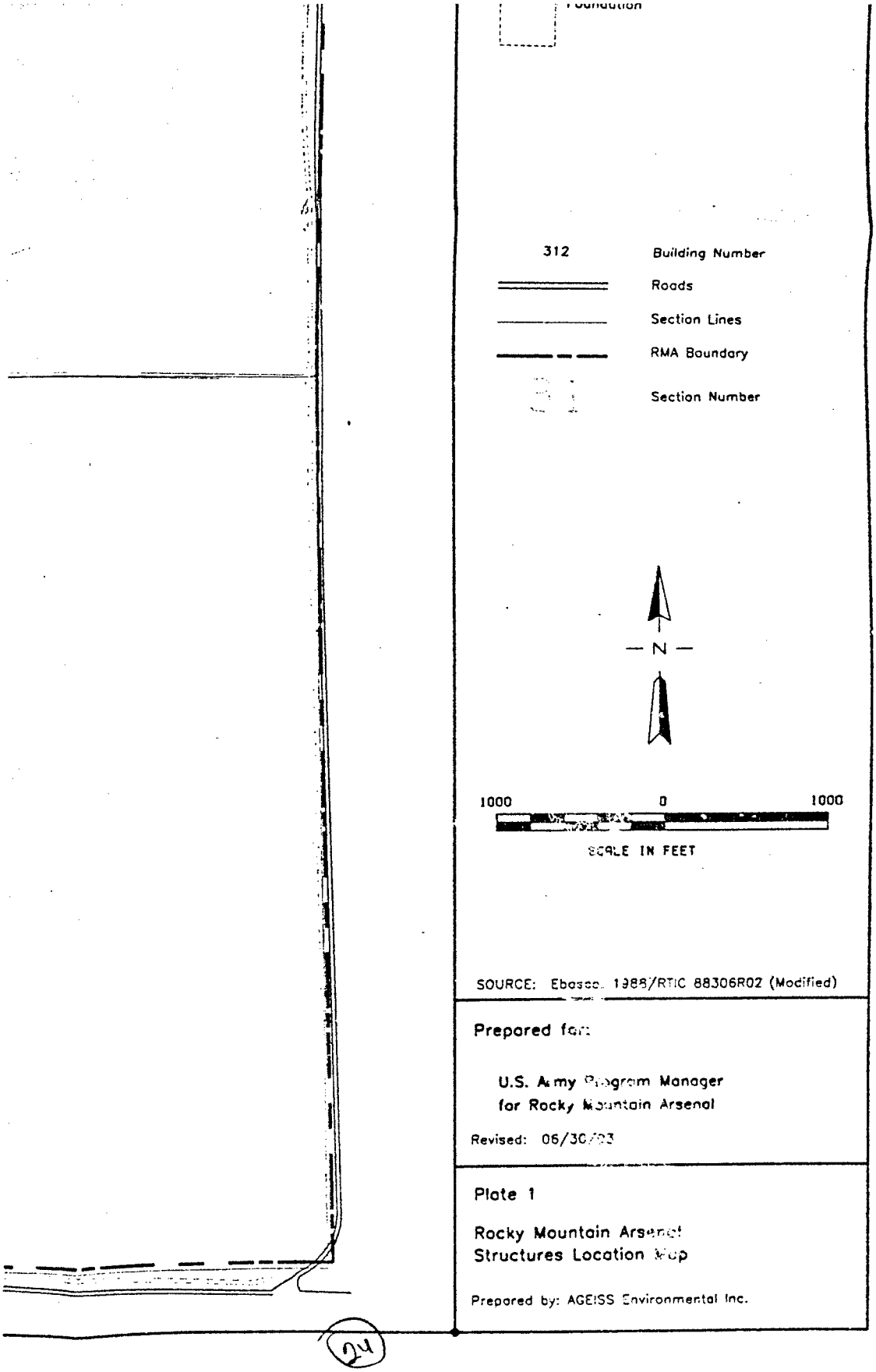

SOURCE: Ebasco, 1988/RTIC 88306R02 (Modified)

Prepared for:

U.S. Army Program Manager
for Rocky Mountain Arsenal

Revised: 06/30/93

Plate 1

Rocky Mountain Arsenal
Structures Location Map

Prepared by: AGEISS Environmental Inc.