

**Appendix A**  
**Reference Sources and Records Reviewed**

## 1 A.1 INTRODUCTION

2  
3 Science Applications International Corporation (SAIC) has been contracted by the United States  
4 Army Corps of Engineers (USACE), Louisville District to conduct Phase I Remedial Investigation  
5 (RI) services at nine (9) Areas of Concern (AOCs) at the former Ravenna Army Ammunition Plant  
6 (RVAAP). This work is being performed in accordance with USACE, Louisville District, Contract  
7 W912QR-08-D-0008, Delivery Order No. 0019. The Phase I RI services consist of a historical data  
8 review and property visit for the AOCs, which are equivalent to a Preliminary Assessment (PA) under  
9 the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The  
10 historical data review focused on the 9 AOCs, which are also referred to in the RVAAP Installation  
11 Restoration Program (IRP) as Compliance Restoration (CR) sites. The 9 CR sites include:

- 12
- 13 • CC-RVAAP-68: Electric Substations (East, West, and No. 3);
- 14 • CC-RVAAP-69: Building 1048 Fire Station;
- 15 • CC-RVAAP-70: East Classification Yard;
- 16 • CC-RVAAP-72: Facility-Wide Underground Storage Tanks (USTs);
- 17 • CC-RVAAP-73: Facility-Wide Coal Storage;
- 18 • CC-RVAAP-74: Building 1034 Motor Pool Hydraulic Lift;
- 19 • CC-RVAAP-75: George Road Sewage Treatment Plant;
- 20 • CC-RVAAP-76: Depot Area; and
- 21 • CC-RVAAP-77: Building 1037 Laundry Waste Water Sump.
- 22

23 This appendix lists persons and organizations contacted to obtain historical information for the 9 CR  
24 sites included in the Historical Records Review Report. This appendix details the scope of research  
25 completed at each repository, including research conducted that provided no useful information. This  
26 appendix allows for assessment of research completed and for later verification if additional research  
27 is required prior to the start of a site investigation (SI). The historical records review focused on topic  
28 information outlined in the *Guidance for Performing Preliminary Assessments under CERCLA*  
29 (USEPA 1991), specifically, the checklist included in Figure 2-1 of the guidance. The following  
30 historical information sources were utilized during preparation of the Historical Records Review  
31 Report:

- 32
- 33 • Interviews of knowledgeable persons, including current and former employees of RVAAP, Ohio  
34 Army National Guard (OHARNG) Camp Ravenna Joint Military Training Center (herein  
35 referred to as Camp Ravenna) personnel, and USACE Louisville District personnel;
- 36
- 37 • OHARNG Camp Ravenna historical hard copy drawings and map files;
- 38
- 39 • RVAAP Administrative Record, RVAAP Environmental Information Management System  
40 (REIMS), RVAAP public information website (*RVAAP Access* at [www.rvaap.org](http://www.rvaap.org)), and historical  
41 records storage (e.g., “RVAAP cold storage files”);
- 42

- 1 • Online information sources detailed in section A.5; and  
2  
3 • Ohio State Fire Marshal Office (OSFM), Ohio Environmental Protection Agency (Ohio EPA)  
4 Division of Emergency and Remedial Response (DERR) Central Office and Northeast District  
5 Office, and the Ravenna City Fire Department for historical closure records for USTs at  
6 RVAAP.  
7

8 SAIC would like to acknowledge the following persons who provided assistance and support during  
9 the historical records review:

- 10  
11 • Ms. Gail Harris, Vista Sciences Corporation, Archivist/Special Librarian at RVAAP who  
12 supported historical records searches; and  
13  
14 • Mr. Tom Chanda, USACE Louisville District, who assisted with coordination of interviews with  
15 former RVAAP employees and AOC visits.  
16

## 17 **A.2 INTERVIEWS**

18  
19 SAIC conducted interviews with knowledgeable persons listed below who have been, or are  
20 currently, involved with RVAAP operations. Interview records are contained in Appendix J of the  
21 Historical Records Review Report.  
22

- 23 • Mr. Gary Wolfgang – former employee of RVAAP from 1968 until 1993 in positions ranging  
24 from safety inspector to safety director. SAIC interviewed Mr. Wolfgang on October 4, 2010.  
25  
26 • Mr. Jim McGee – currently employed by Vista Sciences Corporation, operations and  
27 maintenance contractor for RVAAP. Mr. McGee is a former employee of RVAAP dating from  
28 1964. SAIC interviewed Mr. McGee on August 23, 2010.  
29  
30 • Mr. Larry Johnson – former employee of RVAAP from 1965 to 1999, including 13 years of  
31 experience in the Waste Water Department (1980-1993). SAIC interviewed Mr. Johnson on  
32 November 17, 2010, regarding his knowledge of George Road Sewage Treatment Plant  
33 operations.  
34  
35 • Mr. Mark Patterson – U.S. Army Base Realignment and Closure (BRAC) Command Facility  
36 Manager at RVAAP. Mr. Patterson has been employed at RVAAP since 1997. SAIC interviewed  
37 Mr. Patterson on August 26, 2010.  
38  
39 • Mr. Tom Chanda – USACE, Louisville District Biologist and Contract Officer Technical  
40 Representative supporting the RVAAP IRP. Mr. Chanda was an employee of RVAAP from  
41 1979 to 1993 and held the position of Environmental Manager. SAIC interviewed Mr. Chanda  
42 on September 1, 2010. Mr. Mark Nichter (Geologist) and Ms. Joan Cullen (Geologist) of the

1 USACE, Louisville District also participated in the interview as they had conducted preliminary  
2 research during the development of the project statement of work.

- 3
- 4 • Mr. Tim Morgan – Environmental Supervisor at the OHARNG Camp Ravenna. Mr. Morgan has  
5 managed environmental programs for RVAAP/Camp Ravenna since 1988. SAIC interviewed  
6 Mr. Morgan on September 8, 2010.

7

### 8 **A.3 OHIO ARMY NATIONAL GUARD CAMP RAVENNA MAP FILES**

9

10 On August 20, 2010, in coordination with Ms. Katie Tait, Environmental Specialist 2 with the  
11 OHARNG Camp Ravenna, SAIC conducted an in-person review of the RVAAP historical hard copy  
12 drawings and map files maintained by OHARNG. The files are maintained at the Camp Ravenna  
13 Administration Offices located at 1438 State Route 534 SW, Newton Falls, OH 44444.

14

### 15 **A.4 RVAAP ADMINISTRATIVE RECORD, ENVIRONMENTAL INFORMATION** 16 **MANAGEMENT SYSTEM, AND HISTORICAL RECORDS STORAGE**

17

18 The primary sources of information SAIC reviewed for the Historical Records Review Report  
19 included electronic documents, files, scanned drawings, GIS, and aerial photographs maintained  
20 electronically in REIMS, the RVAAP Administrative Record, the RVAAP public information  
21 website (*RVAAP Access*), and in the RVAAP “cold storage files.” In addition to data storage in web-  
22 accessible platforms, RVAAP provided approximately 300 gigabytes of historical archive information  
23 stored on portable electronic media.

24

25 Historical documents, letters, field notes, drawings, maps, ground-based photos, and aerial  
26 photographs relevant to the 9 CR sites were downloaded and/or copied from these data sources during  
27 the historical records review. As information was discovered, files were placed in directories for each  
28 CR site in order to compile the following appendices:

- 29
- 30 • Appendix G – Textual References of Source Documents;
  - 31 • Appendix H – Historical Photos;
  - 32 • Appendix I – Maps/Drawings References; and
  - 33 • Appendix R – Report Plates.
- 34

35 In the appendices noted above, document file names were retained as indexed on the source media so  
36 that future reference to the original information source can be made. However, in many cases the  
37 original index filename did not provide indication of the file type or content. To allow easier  
38 identification of historical information files, SAIC added prefixes containing descriptive information  
39 about the file to the original filenames (e.g., type, content, map size).

40

41

## 1    **A.5    U.S. ARMY CORPS OF ENGINEERS-DIRECTED DATA CENTERS**

2  
3    SAIC’s research for online information sources began with information available through the  
4    following data centers, as directed by the project scope of work dated January 19, 2010:

- 5  
6    •   National Archives and Records Administration (NARA);  
7    •   Regional Archives or Records Centers;  
8    •   Air Force Historical Research Agency; and  
9    •   U.S. Army Military History Institute (USAMHI).

10  
11   Additional online information sources were researched as discussed in Section A.6.

### 12 13   **A.5.1   National Archives and Records Administration**

14  
15   The NARA website hosts the Archival Research Catalog (ARC), an online catalog of NARA's  
16   holdings. The ARC includes descriptions of data files and other types of electronic records. The  
17   NARA has only a small portion of its holdings available as electronic files; NARA holdings are  
18   primarily hard copy files.

19  
20   Online search engines for the NARA site did not locate specific information on the 9 CR sites.  
21   Broader searches within NARA yielded minimal results. A search for “Ravenna Army Ammunition  
22   Plant” in the ARC revealed the following record:

- 23  
24   •   Record 156.3.1 – Records Relating to Ordnance Property. Textual Records: Contracts, 1812-68,  
25       1883-1910. Statements of purchases, 1861 - 67. Registers of contracts, orders, applications,  
26       proposals, and purchases, 1861-1918. Production studies and analyses, 1917-39. Miscellaneous  
27       records relating to the arming and equipping of the militia, 1808-53. Ledgers and journals of  
28       ordnance and ordnance stores issued to the militia, 1811-1914, with gaps. Quarterly summary  
29       statements of ordnance and ordnance stores on hand at ordnance installations, 1813-41, with  
30       gaps; at forts and batteries, 1838-53, 1862-64; at armories, arsenals, and depots, 1862-63, 1867;  
31       and in the hands of regular army and volunteer regiments, 1862-76, with gaps. Monthly  
32       statements of ordnance stores on hand at ordnance depots, 1890; and at arsenals, 1897-1902,  
33       with gaps. Statements of ordnance stock on hand at arsenals and depots, 1920-29. Digests of  
34       decisions and regulations relating to property accountability, 1875-1916. Journals, registers, and  
35       correspondence relating to the disposition of ordnance property, 1864-1914. Microfilm  
36       Publications: M1281.

37  
38   Record 156.3.1 is not available online. Hard copy or microfilm may be ordered at  
39   <https://eservices.archives.gov/orderon-line/start.swe?SWECmd=Start&SWEHo=eservices.archives.gov>.

40  
41   The National Archives Federal Archive Holdings also include 63 boxes of real property status files  
42   from 1945 to 1952 as found at: [http://www.archives.gov/great-lakes/finding-aids/real-property-status-](http://www.archives.gov/great-lakes/finding-aids/real-property-status-files.html)  
43   files.html. One box pertaining to RVAAP was identified and was labeled as:

- 1 • Box 48: Ravenna Ordnance Works, Newton Falls, OH/Ravenna Ordnance Works, Ravenna, OH.  
2  
3 No mention of contents is provided. The files are not available online. These holdings are available  
4 for hard copy review at the NARA archive in Chicago, Illinois.  
5

6 A search for “Camp Ravenna” in the ARC revealed three records:  
7

- 8 1. Correspondence, *compiled 03/01/1917 - 09/30/1927* Textual Records from the War Department.  
9 Office of the Surgeon General. (1818 - 09/18/1947) ARC Identifier 719020 / MLR Number A1  
10 31. Series from Record Group 112: Records of the Office of the Surgeon General (Army), 1775  
11 – 1994.  
12

13 This series consists of correspondence, reports, memorandums, and other related documents created  
14 by the Office of the Surgeon General in Washington, D.C. Most of the documents relate to medical  
15 aspects of the U.S. Army during World War I and the immediate aftermath in its hospitals,  
16 laboratories, posts, camps, stations, and departments located throughout the United States and Europe.  
17

18 The ARC indicates two boxes are labeled as:  
19

- 20 • Box 397: 004.05 New London, OH -- 080. Ravenna, OH  
21  
22 • Box 398: 094.-1 Ravenna, OH -- 158.-4 Toledo, OH. Contact: Archives II Reference Section  
23 (Military), Textual Archives Services Division (NWCT2R[M]), National Archives at College  
24 Park, 8601 Adelphi Road, College Park, MD, 20740-6001. Phone: 301-837-3510; FAX: 301-  
25 837-1752; email: Archives2reference@nara.gov.  
26  
27 2. Project Decimal Files, compiled 1941 – 1945, ARC Identifier 1685733 / MLR Number NM3  
28 47C. Maps and Charts, Photographs and other Graphic Materials and Textual Records from the  
29 War Department. Military Intelligence Division. (08/26/1918 – 04/19/1947) Archives II  
30 Reference Section (Military), Textual Archives Services Division, College Park, MD; Record  
31 Group 319: Records of the Army Staff, 1903 – 2009.  
32

33 This collection includes one box labeled as:  
34

- 35 • Box 1288: 000 Ravenna Ordnance Plant – 800 Red River Ordnance Depot.  
36  
37 3. General Correspondence Relating to Places, compiled 1936 - 1945, documenting the period  
38 04/1865? - 1945, ARC Identifier 598886 / MLR Number NM81 1892A Maps and Charts,  
39 Photographs and other Graphic Materials and Textual Records from the War Department. Office  
40 of the Quartermaster General. (1914 - 9/18/1947) Archives II Reference Section (Military),  
41 Textual Archives Services Division, College Park, MD Series from Record Group 92: Records  
42 of the Office of the Quartermaster General, 1774 – 1985.  
43

1 This series consists of correspondence, memoranda, reports, construction plans, and other records  
2 relating to cemeteries and casualties, buildings and construction at military facilities, supplies and  
3 procurement, and additional operational matters of the Army leading up to and during World War II.  
4 The records relate to geographic areas such as towns; cities; counties; states; countries; territories,  
5 such as the Philippines; national cemeteries; and specific Army facilities, such as air fields, camps, or  
6 forts. A large portion of the series relates particularly, within a geographic context, to burials and  
7 cemeteries (under decimal number 293); administrative issues dealing with records, forms, and  
8 inspections (within decimal files 314 - 333); and buildings and construction on Army facilities (under  
9 decimal files in the 600 class). This collection includes one box labeled as:

- 10
- 11 • Box 487: 293 Randolph Field, Texas -- 671 Ravenna Ordnance Plant.
- 12

### 13 **A.5.2 Regional Archives or Records Centers**

- 14

15 The Regional Archives or Records Centers offer three facilities for the Great Lakes Region where  
16 holdings include federal records from Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. A  
17 subject access list search revealed records for Ravenna Arsenal, Ohio, 1945-1950, Record Group 156,  
18 in Records of the Office of the Chief of Ordnance. The U.S. Army Ordnance Department was  
19 responsible for the procurement and distribution of ordnance and equipment, the maintenance and  
20 repair of equipment, and the development and testing of new types of ordnance. The U.S. Army  
21 Ordnance Department was abolished in 1962, and its functions were transferred to the U.S. Army  
22 Materiel Command.

23

24 Records at the U.S. Army Ordnance Department document the administration and operation of all  
25 U.S. ordnance facilities. The records include circulars, correspondence, manuals, memorandums,  
26 orders, planning files, regulations, and reports. Non-textual records include architectural drawings and  
27 maps. The online record search revealed the following record:

- 28

- 29 • Record 156.10.21 – Records of Ravenna Arsenal, OH, Textual Records (in Chicago): General  
30 orders, 1940-1948. Arsenal bulletins, 1945-1950. Arsenal memorandums, 1943-1950. Arsenal  
31 orders, 1945-1950. Center and plant orders, 1940-1945. Disaster plan, 1949. Plant data and  
32 organization records, 1950: Organizational and functional charts, 1946-1948.
- 33

34 These holdings are only available for hard copy review in the Evelyn Wade and Garry D. Ryan  
35 Collection: *Preliminary Inventory of the Textual Records of the Office of the Chief of Ordnance. Part*  
36 *II: Records of Ordnance Field Installations*, NM 59 (1965) in the National Archives regional facility  
37 in Chicago, Illinois.

### 38

### 39 **A.5.3 Air Force Historical Research Agency**

- 40

41 The Air Force Historical Research Agency is the repository for Air Force historical documents and  
42 contains three repositories:

- 43

- 1 • Air Force Institute of Technology;
- 2 • Library of Congress; and
- 3 • Muir S. Fairchild Research Information Center.

4  
5 A search of the term “Ravenna” in the online Air Force Historical Research Agency archive revealed  
6 only information about combat in Ravenna, Italy.

#### 7 8 **A.5.3.1 Air Force Institute of Technology**

9  
10 A search of the Air Force Institute of Technology online library retrieved no record containing the  
11 key word “Ravenna.”

#### 12 13 **A.5.3.2 Library of Congress**

14  
15 The Library of Congress document search retrieved the following online file:

- 16  
17 • *Historic American Engineering Record (HAER)*, National Park Service, Department of the  
18 Interior, 68 pages, 1968, available at <http://www.loc.gov/pictures/item/OH0416/>. This document  
19 reviews the two RVAAP installations—Ravenna Ordnance Plant (production) and the Portage  
20 Ordnance Depot (storage)—and states there are no Category I or II historical properties at  
21 RVAAP.

22  
23 The HAER inventory included 36 individual properties. Of the 9 CR sites, only one was mentioned in  
24 this document. The Ravenna Ordnance Plant and Portage Ordnance Depot were referred to in 1983 as  
25 “the Depot Area” and were concluded to have historical importance. Before the construction of  
26 RVAAP, the 1200-acre Bolton farm held prominence in the community because its owners, Chester  
27 and Frances Bolton, both served as U.S. House Representatives. Following purchase of the property  
28 by the U.S. Government in the early 1940s, the farm became the Depot Administration Area (CC-  
29 RVAAP-76). Of the farm buildings, only the Milk House remained during the HAER inventory and  
30 was described as being in good condition. This document is available online as a low resolution scan  
31 of the photocopied report. Therefore, the photographs and maps in the document are not useful for  
32 gleaning historical information.

#### 33 34 **A.5.3.3 Muir S. Fairchild Research Information Center**

35  
36 A search of this repository revealed no information relevant to RVAAP. Search terms included  
37 “Ravenna Army Ammunition Plant,” “Camp Ravenna,” “Ravenna,” and “RVAAP.”

#### 38 39 **A.5.4 U.S. Army Military History Institute**

40  
41 The USAMHI is housed on the U.S. Army Heritage and Education Center website. The Institute hosts  
42 one of the largest military history libraries in the world. With almost 300,000 volumes, this collection



1 covers nearly every facet of U.S. Army and military history. The online record search revealed the  
2 following records:

- 3
- 4 • *A Working Bibliography of MHI Sources* - this bibliography did not contain any references to  
5 RVAAP; and
- 6
- 7
- 8 • U.S. Army. AMCCOM. *Installation Profile Ravenna AAP*. Rock Island, IL: AMCCOM, 1988.  
14p. UL171.23L66U54 - this document is not available electronically.
- 9

10 A digitized material search in the USAMHI Digital Document System found 36 publications that  
11 included the key word “Ravenna,” none of which held relevance to the 9 CR sites. Examples include  
12 documents with Ravenna in distribution lists. For example, “Operator and Organizational  
13 Maintenance Repair Parts and Special Tool Lists for Caliber .30 JJ Rifle M1,” (Department of the  
14 Army Technical Manual, Headquarters, July 1961), listed Ravenna as a recipient of the booklet.

15  
16 In addition, “Meeting Minutes of the General Council,” (War Department 1945) and an “Index of  
17 Administrative Publications,” (Department of the Army 1954) included notations of “Ravenna”  
18 within the documents as follows:

- 19
- 20 • Ravenna Arsenal, Apco, Ohio  
21 Activation CO 38-11-53  
22 Mission SR 780-11\*-1.
- 23

24 All other searches resulted in the message: “Internet Explorer cannot display the webpage.” On  
25 November 18, 2010, SAIC sent an inquiry about the research catalog to the Institute and received the  
26 response, “All inquiries are reviewed soon after receipt. As an agency of the government, we respond  
27 first to official inquiries.” No additional response was received as of the time of this submittal.

## 28

### 29 **A.6 OTHER ONLINE DATA SOURCES**

30  
31 The search for relevant information to support the historical records review extended beyond the  
32 USACE-directed search sites outlined in Section A.5. Additional sites and findings are identified  
33 below.

#### 34

##### 35 **A.6.1 Findings from USACE-directed Site Links**

36  
37 Several of the USACE-directed sites contained Internet links that extended the search to the following  
38 historical information sources:

- 39
- 40 • U.S. Army Center of Military History (CMH); and
- 41 • U.S. Army Publishing Directorate (APD).
- 42
- 43

1 **A.6.1.1 U.S. Army Center of Military History**

2  
3 The CMH divides its online bookshelves of 600 publications into five sections:

- 4  
5 1. Books and Research Materials (organized by time periods);  
6 2. CMH Series and Collections;  
7 3. Out-of-Print Section;  
8 4. Army Regulations (with CMH Proponency); and  
9 5. CMH Publication Catalog.

10  
11 The CMH Books and Research Materials archives included the following general references to  
12 ammunition plants, neither of which provided information relevant to the 9 CR sites:

- 13  
14 • *The Ordnance Department: Procurement and Supply*. By Harry C. Thomson and Lida Mayo.  
15 (1960, 1980, 1991; 504 pages, 24 tables, 2 charts, 52 illustrations, bibliographical note, glossary,  
16 index, CMH Pub 10-10.)  
17  
18 • *The Ordnance Department: Planning Munitions for War*. By Constance McLaughlin Green,  
19 Harry C. Thomson, and Peter C. Roots. (1955, 1970, 1990; 542 pages, 14 tables, 18 charts, 54  
20 illustrations, bibliographical note, glossary, index, CMH Pub 10-9.)

21  
22 CMH Series and Collections include annual reports from the Secretary of War and commemorative  
23 war series brochures. Their content was irrelevant to the 9 CR sites. The CHS Out-of-Print collection,  
24 Army Regulations, and Publications Catalog yielded no useable results.

25  
26 **A.6.1.2 U.S. Army Publishing Directorate**

27  
28 The APD at <http://www.apd.army.mil/> publishes and distributes the Army's official authenticated  
29 information products via the Internet. The APD website did not include data relevant to the historical  
30 records review.

31  
32 **A.6.2 Findings from Leading Internet Search Engines**

33  
34 SAIC's research for relevant online information included a search using leading Internet search  
35 engines Google, AOL, MSN, and Yahoo! in order to employ each search engine's unique ranking  
36 algorithms.

37  
38 Search results varied in usefulness, and because of the great volume of results for some entries, only  
39 the top 20 results were retrieved and summarized in this report. However, SAIC systematically  
40 examined the top-ranked results for information unique to RVAAP and the 9 CR sites. Overlapping  
41 results are eliminated in this summary. Likewise, this historical search does not include findings from  
42 REIMS and *RVAAP Access*, which are addressed in Section A.4.

1 Queries began with the 9 CR site names listed in Section A.1. Research also included an internet  
2 search for the following key words:

- 3
- 4 • RVAAP inventories;
- 5 • RVAAP descriptions of facilities or buildings;
- 6 • RVAAP depot administration area operations;
- 7 • RVAAP USTs;
- 8 • RVAAP spill response records;
- 9 • RVAAP powerhouse; and
- 10 • RVAAP boiler house operations.

11  
12 Independent, publically accessible findings are listed here by the key word search. Results from the  
13 search are listed here in the order in which they were received, with the top results meeting the most  
14 key word “results.”

### 15 16 **A.6.2.1 Name Search for 9 Compliance Restoration Sites**

17  
18 The Internet search engines retrieved the following findings based on place names for the 9 CR sites:

- 19
- 20 • **CC-RVAAP-68: Electric Substations (East, West, and No. 3)**

- 21
- 22 - Multiple files from rvaap.org, linking to REIMS.
- 23
- 24 - Request for proposal at <ftp://ftp.fbo.gov/FBOFeed20090708>.
- 25

- 26 • **CC-RVAAP-69: Building 1048 Fire Station**

- 27
- 28 - Multiple files from rvaap.org, linking to REIMS.
- 29
- 30 - One file was posted on the Citizens for Responsibility and Ethics in Washington (CREW)  
31 website and restricted by SAIC firewall: CREW: Department of Defense: Department of the  
32 Air Force... Nov 3, 2010 ... Number of Pages: 200; FOIA Request: CREW: Department of  
33 Defense: ... civilian personnel who operate rockets or fire munitions in the field.  
34 ...[www.scribd.com/.../CREW-Department-of-Defense-Department-of-the-Air-Force-Regarding-Perchlorate-Scanned-Perchlorate-October-2008-H...](http://www.scribd.com/.../CREW-Department-of-Defense-Department-of-the-Air-Force-Regarding-Perchlorate-Scanned-Perchlorate-October-2008-H...) - Cached.
- 35
- 36

- 37 • **CC-RVAAP-70: East Classification Yard**

- 38
- 39 - Multiple files from rvaap.org, linking to REIMS.
- 40
- 41 - More Scribd documents, including CREW: Department of Defense: Department of the Air  
42 Force ... Promised Information Page 1 of 1 (b) (6) From: Sent: To: Cc: Subject: Kratz....  
43 GENERAL DEPOT AF PLANT #71(AIR PROD&CHE CLASSIFICATION YARD

1 KINSBURY AUX FLD ...www.scribd.com/.../CREW-Department-of-Defense-Department-  
2 of-the-Air- Force-Regarding-Perchlorate-Scanned-Perchlorate-October-2008-P - Cached.

- 3  
4 - Scanned copy of Department of Defense (DoD) Percolate Survey (195 pages) from CREW  
5 was available as a document independent from the CREW website at  
6 <http://www.citizensforethics.org/files/I.pdf>. RVAAP is mentioned on pages 12, 54, and  
7 Appendix B. This information, however, is not directly related to the East Classification Yard.

8  
9 • **CC-RVAAP-72: Facility-Wide USTs**

- 10  
11 - Multiple files from rvaap.org, linking to REIMS.  
12  
13 - “Develop CC sites for appropriate sewer lines and the 1.5 acre RCRA unit in ODA#2” in  
14 summary page at <https://aero.apgea.army.mil/pIAP-Doc/ravennaap/ravennaap.html>.

15  
16 • **CC-RVAAP-73: Facility-Wide Coal Storage**

- 17  
18 - Multiple files from rvaap.org, linking to REIMS.  
19  
20 - Division of Emergency and Remedial Response, DERR State Fiscal Year 2010 Workload,  
21 pg. 13 (July 1, 2009 to June 30, 2010), at  
22 <http://www.epa.state.oh.us/LinkClick.aspx?fileticket=VCMEok%2FUTfU%3D&tabid=1663>.

23  
24 • **CC-RVAAP-74: Building 1034 Motor Pool Hydraulic Lift**

- 25  
26 - Multiple files from rvaap.org, linking to REIMS.  
27  
28 - City - Ohio Auditor of State Mary Taylor, CPA: Home, Excel file, 1762,  
29 Maintenance/Operations: Portage County Park District received 3 discarded trucks from other  
30 departments through County Motor Pool Park District gains...at  
31 [www.auditor.state.oh.us/.../LeadingPracticesLocalGovConsolidationReports.xlsx](http://www.auditor.state.oh.us/.../LeadingPracticesLocalGovConsolidationReports.xlsx).

32  
33 • **CC-RVAAP-75: George Road Sewage Treatment Plant**

- 34  
35 - Multiple files from rvaap.org, linking to REIMS.  
36  
37 - 2009 RVAAP Installation Action Plan page at [https://aero.apgea.army.mil/pIAP-](https://aero.apgea.army.mil/pIAP-Doc/ravennaarmyammunitionplant/ravennaarmyammunitionplant_2009_EX_v1.html)  
38 [Doc/ravennaarmyammunitionplant/ravennaarmyammunitionplant\\_2009\\_EX\\_v1.html](https://aero.apgea.army.mil/pIAP-Doc/ravennaarmyammunitionplant/ravennaarmyammunitionplant_2009_EX_v1.html)  
39 Site ID: RVAAP-22 Site Name: GEORGE RD STP Alias: NFA Date: 198906  
40 Documentation Title: Activities for this site are carried under CC RVAAP-75.  
41  
42 - Fiscal year (FY)2006 RVAAP Installation Action Plan posted on public page at  
43 <http://www.paris-township.com/Arsenal/RVAAP%20Public%20IAP%20FY06.pdf>

1 Plan refers to Sand Creek Sewage Treatment Plant and Depot Sewage Treatment Plant in  
2 table, Response Complete Site Detail, on page 59.

3

4 - Posted on CREW website at <http://www.scribd.com/doc/29933195/CREW-Department-of-Defense-Department-of-the-Air-Force-Regarding-Perchlorate-Scanned-Perchlorate-October-2008-I>, “Sep 21, 2004 ... subcommittees on Recycle and Sewage Sludge, and participation in ... fluoride residues, and wastewater treatment residues containing ...”

8

9 • **CC-RVAAP-76: Depot Area**

10

11 - Multiple files from rvaap.org, linking to REIMS

12

13 - On AEC website, a pdf of FY2010 Program Management Plan at  
14 <http://aec.army.mil/usaec/cleanup/fy10pmp.pdf> “75% decrease in area of concern has  
15 significantly reduced the costs ...CC RVAAP-76 SI. 9/30/2010.”

16

17 - Installation Action Plan page at [https://aero.apgea.army.mil/pIAP-](https://aero.apgea.army.mil/pIAP-Doc/ravennaarmyammunitionplant/ravennaarmyammunitionplant_2009_EX_v1.html)  
18 [Doc/ravennaarmyammunitionplant/ravennaarmyammunitionplant\\_2009\\_EX\\_v1.html](https://aero.apgea.army.mil/pIAP-Doc/ravennaarmyammunitionplant/ravennaarmyammunitionplant_2009_EX_v1.html)

19

20 Site ID: RVAAP-24,

21

22 Site Name: DEPOT AREA

23

24 Alias:  
25 NFA Date: 198906  
26 Documentation Title: Activities for this site are carried under CC RVAAP-76.

27

28 - PDF of Munitions Response Sites in Inventory but without maps, 9/30/09 available at  
29 [http://deparc.xservices.com/PDFS/MRS/FY09DEPARC\\_MRSs\\_without\\_maps.pdf](http://deparc.xservices.com/PDFS/MRS/FY09DEPARC_MRSs_without_maps.pdf).

30

31 • **CC-RVAAP-77: Building 1037 Laundry Waste Water Sump**

32

33 - Multiple files from rvaap.org, linking to REIMS.

34

35 - FY2007 Installation Action Plan page at [https://aero.apgea.army.mil/pIAP-](https://aero.apgea.army.mil/pIAP-Doc/ravennaarmyammunitionplant/ravennaarmyammunitionplant_2009_EX_v1.html)  
36 [Doc/ravennaarmyammunitionplant/ravennaarmyammunitionplant\\_2009\\_EX\\_v1.html](https://aero.apgea.army.mil/pIAP-Doc/ravennaarmyammunitionplant/ravennaarmyammunitionplant_2009_EX_v1.html)

37

38 Table, Parcel Summary: Summary of Parcel Prioritization and Transfer Strategy, included  
39 Building 1037 as National Guard recipient; transfer strategy Army Retained; current land use  
40 as BRAC Non-Excess, and future land use is military training.

41

42 - FY2006 Installation Action Plan posted on public page at

43

44 <http://www.paris-township.com/Arsenal/RVAAP%20Public%20IAP%20FY06.pdf>.

45

46 **A.6.2.2 Keyword Search**

47

48 The key word search retrieved the following findings:

- 1 • **RVAAP inventories** (285 results)
- 2
- 3 - Multiple files from rvaap.org, linking to REIMS.
- 4
- 5 - PDF of RVAAP RAB minutes, 2006: [www.rvaap.org/minutes/RAB\\_Min\\_092706.pdf](http://www.rvaap.org/minutes/RAB_Min_092706.pdf).
- 6
- 7 - PDF of *Watershed Inventory, Ravenna Training and Logistics Site*, 2003, on United States
- 8 Geological Survey (USGS) website (<http://oh.water.usgs.gov/reports/ofr/ofr.02-495.pdf>)
- 9 “Ravenna” and “inventory” are used to describe natural resources onsite.
- 10
- 11 - Paris Township website has a PDF of the community facilities that includes historical
- 12 inventories. “There is one building on the Ohio Historic Inventory in Wayland, the Marian
- 13 King House, built in approximately 1835” pg. 4 at [http://www.paris-](http://www.paris-township.com/Zoning/Paris_study/Paris_Ch4_CommunityFac.pdf)
- 14 [township.com/Zoning/Paris\\_study/Paris\\_Ch4\\_CommunityFac.pdf](http://www.paris-township.com/Zoning/Paris_study/Paris_Ch4_CommunityFac.pdf).
- 15
- 16 - PDF of Solicitation/contract/order for commercial items, May 2006. “The objectives of
- 17 conducting the evaluation of sewer pipes at RVAAP are to: (1) provide the ..... (i) Parts,
- 18 materials, inventories, and work in process.”
- 19 <https://aais.ria.army.mil/aais/IM/Awards/FY06/.../W52H09-06-C-5024.pdf>.
- 20
- 21 - PDF of *Northern Region Environmental Monitor*, Winter 1999/2000. Article on ecological
- 22 baseline of facility pg. 5 at <http://www.p2pays.org/ref/16/15265.pdf>.
- 23
- 24 - PDF of Amendment of Solicitation/Modification of Contract on Army website
- 25 <https://aais.ria.army.mil/aais/IM/Awards/FY05/05C5014/0007.pdf>.
- 26
- 27 • **RVAAP descriptions of facilities or buildings** (504 results)
- 28
- 29 - Multiple files from rvaap.org, linking to REIMS.
- 30
- 31 - General history of RVAAP facility at [http://www.globalsecurity.org/military/facility/aap-](http://www.globalsecurity.org/military/facility/aap-ravenna.htm)
- 32 [ravenna.htm](http://www.globalsecurity.org/military/facility/aap-ravenna.htm). Internal search of individual CR sites had no matches.
- 33
- 34 - Kaspar Group website describes asbestos abatement project at RVAAP without reference to
- 35 specific buildings at <http://www.kaspargroup.com/experience.htm>.
- 36
- 37 - Ask.com pulls from Wikipedia to describe Camp Ravenna, offering general historical
- 38 information about the buildings at RVAAP at
- 39 [http://www.ask.com/wiki/Ravenna\\_Training\\_and\\_Logistics\\_Site](http://www.ask.com/wiki/Ravenna_Training_and_Logistics_Site).
- 40
- 41 - Ohio EPA, Todd Fisher, published a presentation entitled “Challenges in Dealing with
- 42 Explosively Contaminated Buildings at RVAAP” at

1 [http://www.astswmo.org/files/meetings/2009FFMunitions/Presentations/Fisher\\_Ravenna.pdf](http://www.astswmo.org/files/meetings/2009FFMunitions/Presentations/Fisher_Ravenna.pdf).  
2 Primarily Load Lines 2, 3, and 4 are discussed.

3

4 - Webster's Online Dictionary includes an 800-word description of the Ravenna Training and  
5 Logistics Site with a history at [http://www.websters-online-](http://www.websters-online-dictionary.org/definitions/Ravenna+Training+and+Logistics+Site?cx=partner-pub-0939450753529744%3Av0qd01-tdlq&cof=FORID%3A9&ie=UTF-8&q=Ravenna+Training+and+Logistics+Site&sa=Search#922)  
6 [dictionary.org/definitions/Ravenna+Training+and+Logistics+Site?cx=partner-pub-](http://www.websters-online-dictionary.org/definitions/Ravenna+Training+and+Logistics+Site?cx=partner-pub-0939450753529744%3Av0qd01-tdlq&cof=FORID%3A9&ie=UTF-8&q=Ravenna+Training+and+Logistics+Site&sa=Search#922)  
7 [0939450753529744%3Av0qd01-tdlq&cof=FORID%3A9&ie=UTF-](http://www.websters-online-dictionary.org/definitions/Ravenna+Training+and+Logistics+Site?cx=partner-pub-0939450753529744%3Av0qd01-tdlq&cof=FORID%3A9&ie=UTF-8&q=Ravenna+Training+and+Logistics+Site&sa=Search#922)  
8 [8&q=Ravenna+Training+and+Logistics+Site&sa=Search#922](http://www.websters-online-dictionary.org/definitions/Ravenna+Training+and+Logistics+Site?cx=partner-pub-0939450753529744%3Av0qd01-tdlq&cof=FORID%3A9&ie=UTF-8&q=Ravenna+Training+and+Logistics+Site&sa=Search#922).

9

10 Webster footnotes some references not previously included in this report:

- 11 ○ Ohio History Central website has history of Ravenna Arsenal at  
12 <http://www.ohiohistorycentral.org/entry.php?rec=1707>.
- 13 ○ Two sites no longer available: [www.ohiotrespassers.com/arsenal.html](http://www.ohiotrespassers.com/arsenal.html) and  
14 <http://windham.sparcc.org/about2.html>.
- 15 ○ An article from the News-Leader.com 2007, "Kaleidoscope: Big changes under way at  
16 Ravenna Arsenal" at <http://www.the-news-leader.com/news/article/2568102>.

17

18 • **RVAAP depot administration area operations** (189 results)

19

20 - Multiple files from [rvaap.org](http://rvaap.org), linking to REIMS.

21

22 - Many results redundant to preceding searches.

23

24 - A 2006 ancestry message board thread "Forced Relocation by Government - Ravenna  
25 Arsenal 1940," describes the Hall family's relocation from family farm in Lordstown, Ohio,  
26 for the Ravenna Arsenal.

27

28 - This message is an excerpt from Records of the War Assets Administration (Record Group  
29 270) held in NARA's Great Lakes Region (Chicago, IL), Appraisal and Engineering Reports,  
30 1945-1947. Records contain 54 Boxes:

31

Box 38

32

Plum Brook Ordnance Works, Sandusky, OH

33

William B. Pollack Company, Youngstown, OH, Plancor 604

34

William Powell Company, Cincinnati, OH, NOBS 154

35

Ravenna Ordnance Plant, Apco, OH

36

37 Box 39

38

Ravenna Ordnance Plant, Apco, OH

39

Transmitting Zone Approved Copies of Memo to Washington, Letter 4

40

Transmitting Board Memo to Zone Administrator, Ex #6A Letter 4

41

Airport Application by State, Pol. Subd. or Municipality

42

Bid Specifications

43

Regulation 10

- 1 Excerpts from Regs. 10  
2 Regulation 16  
3 War Lease (Standard)  
4 Notice of Availability, Surplus Gov't Airport Property  
5 Application for Airport Property, Exhibit 4  
6 Procedure Forms, Advertising thru Review Board Memo  
7 Abstract of Proposals, Ex #1 from R.P., Letter 4  
8 Transmitting Abstract of Proposals, Ex #2 from R.P., Letter 4  
9 Recommendation for Disposal of Real Property, Ex #3 from R.P. Letter 4 URL:  
10 <http://boards.ancestry.co.uk/localities.northam.usa.states.ohio.counties.portage/1447/mb.ash>  
11 [x?pnt=1](http://boards.ancestry.co.uk/localities.northam.usa.states.ohio.counties.portage/1447/mb.ash).  
12  
13 - Also linked from this message board is a 108-page military sciences publication called *The*  
14 *World War II Ordnance Department's Government-Owned Contractor-Operated (GOCO)*  
15 *Industrial Facilities: Ravenna Ordnance Plant Historic Investigation*, Rita Walsh; Geo-  
16 Marine Inc., Plano, TX, 1995. The abstract states “report presents the results of an  
17 examination of historical records related to the construction and operations” of RVAAP and  
18 also aims to “document the impacts that the facility had on the state and local environments.”  
19 Abstract at <http://www.stormingmedia.us/08/0865/A086513.html>. Full document is found at  
20 <http://www.dtic.mil/cgi-bin/GetTRDoc?Location=U2&doc=GetTRDoc.pdf&AD=ADA315680>.  
21  
22 • **RVAAP USTs (35 results)**  
23  
24 - Multiple files from [rvaap.org](http://rvaap.org), linking to REIMS.  
25  
26 - Many results related to USTs in general. One hit specific to RVAAP was the Paris township  
27 website that included a PDF of FY2006 Installation Action Plan.  
28  
29 - Global Security includes a PDF of FY2001 Installation Action Plan.  
30  
31 - Global Security also includes news article: USACE Louisville District awards record amount  
32 of contracts within hours Army News 07 May 2010 -- In approximately four hours, the U.S.  
33 Army Corps of Engineers Louisville District awarded more than \$10 million in contracts for  
34 remedial work at Ravenna Army Ammunition Plant (RVAAP) in Ravenna, Ohio.  
35  
36 - PDF on website by PIKA International, Inc., “Building a Clean and Secure Future,” gives  
37 project description and illustrations of remediation services at RVAAP, see  
38 [http://www.pikainc.com/FORMS/PIKA\\_SOQ\\_Revision%20070507.pdf](http://www.pikainc.com/FORMS/PIKA_SOQ_Revision%20070507.pdf).  
39  
40 • **RVAAP spill response records (71 results)**  
41  
42 - Multiple files from [rvaap.org](http://rvaap.org) linking to REIMS.  
43



- 1 - Many results redundant to preceding searches.
- 2
- 3 - PDF of *Conference Summary Papers*, Green Remediation Conference, June 2010, includes
- 4 “Rapid Chemical Degradation of Bulk Explosives and Munitions Constituents Using
- 5 MuniRem®,” by Chunhui Luo and Valentine Nzengung of PLANTECO Environmental
- 6 Consultants LLC, University of Georgia, pg. 30 at
- 7 [http://www.umass.edu/tei/conferences/GreenRemediation/PDF/Conference\\_Summary\\_Paper](http://www.umass.edu/tei/conferences/GreenRemediation/PDF/Conference_Summary_Papers.pdf)
- 8 [s.pdf](http://www.umass.edu/tei/conferences/GreenRemediation/PDF/Conference_Summary_Papers.pdf). Excerpt: “The dem/val site was formerly a production building of Ravenna Army
- 9 Ammunition Plant (RVAAP), Ravenna, OH that was demolished as part of ongoing
- 10 remediation efforts. The treated location is a 20 x 45 ft (900 square ft) TNT, RDX and HMX
- 11 contaminated soil area (the “decision unit”)... At Ravenna Army Ammunition Plant in Ohio
- 12 (Task #1), MuniRem® successfully treated DNTs, ADNTs, TNT, RDX, and HMX (total
- 13 explosive concentration >20%) and achieved Response Complete (RC) in less than 24
- 14 hours.”
- 15
- 16 - PDF of statement of qualifications from Chemistry Consulting, at
- 17 <http://www.mecx.net/papers/SOQs/MECX%20Chemistry%20Consulting.pdf>.
- 18
- 19 • **RVAAP powerhouse** (30 results)
- 20
- 21 - Multiple files from [rvaap.org](http://rvaap.org), linking to REIMS.
- 22
- 23 - From Army website, <http://www.army.mil/news/jumparchive/usace/#>, one news articles on
- 24 RVAAP not specific to the powerhouse: “USACE Louisville District awards record amount
- 25 of contracts within hours” (May 2010).
- 26
- 27 - PDF from USAEC, Army Ammunition Production during the Cold War (1946 – 1989),
- 28 discusses the Army’s ammunition production capacity in six arsenals, including Ravenna.
- 29 202 pages at <http://aec.army.mil/usaec/cultural/ammo-storage02.pdf>. Excerpt: “In addition to
- 30 the buildings directly related to production, the plant contained a power house... (Plate
- 31 5.36).” RVAAP specific information also on pages 163 – 164.
- 32
- 33 • **RVAAP boiler house operations** (39 results)
- 34
- 35 - Multiple files from [rvaap.org](http://rvaap.org), linking to REIMS.
- 36
- 37 - Department of the Interior USGS has general reference to RVAAP followed by an unrelated
- 38 reference to key word “boiler house”: “Plant Protection and Installation Support Services at
- 39 the Ravenna Army Ammunition Plant (RVAAP) W52H09-05-C-5014 Struvea, 309-782-0920
- 40 W52H09-05-C-5014 \$620000 050605 0001 05212005 MKM Engineers 4153 Bluebonnet
- 41 Drive Staffors, TX 77477-3909
- 42 <http://www.eps.gov/spg/USA/USAMC/DAAE20/Awards/W52H09-05-C-5014Ln0001.html>
- 43 Link to FedBizOpps document. [struvea@ria.army.mil](mailto:struvea@ria.army.mil) TACOM - Rock Island 0510 05

1 Department of the Army U.S. Army Materiel Command TACOM - Rock Island 61299-7630  
2 99 562910 TACOM - Rock Island, ATTN: AMSTA-AQ-AR, Rock Island Arsenal, Rock  
3 Island, IL 61299-7630 99--Demolition of Boiler House at Load Line 4, at the Cornhusker  
4 AAP.

5  
6 - Open construction bids for new boiler house listed.

7

## 8 **A.7 UNDERGROUND STORAGE TANK INFORMATION SEARCH**

9

10 In addition to the RVAAP Administrative Record, REIMS, and historical records “cold storage” files  
11 described in Section A.4, records searches specific to UST regulatory closures included the following  
12 information sources:

13

- 14 • OSFM Central Office, Bureau of Underground Storage Tank Regulations (BUSTR);
- 15
- 16 • Ohio EPA Central and Northeast District Offices;
- 17
- 18 • Ravenna City Fire Department; and
- 19
- 20 • Ravenna City Health Department.

21

22 The OSFM, BUSTR was initially contacted for a file review request for USTs at RVAAP. The  
23 BUSTR contact for the file request was Ms. Nancy Caldwell. BUSTR provided SAIC with multiple  
24 electronic records for RVAAP. These records included documentations of No Further Action, tank  
25 removals, submitted reports, letters, analytical documentation, and other correspondence. Some  
26 BUSTR documentation indicated BUSTR was not the regulatory entity for about five USTs; rather  
27 Ohio EPA was the lead regulatory agency. BUSTR correspondence suggested contacting the Ohio  
28 EPA DERR Central Office and New Energy and Industrial Technology Development  
29 Organization (NEDO) for further information regarding USTs not regulated by BUSTR.

30

31 SAIC also contacted the OSFM Central Office for potential records for USTs at RVAAP. The  
32 Central Office indicated they retained some records of USTs at RVAAP separately from BUSTR. A  
33 file review request was sent to the attention of Chief Patrick Wambo. The Central Office indicated  
34 there was limited available information for those USTs not having requirements for regulatory  
35 closure.

36

37 A public record review request was submitted to Ms. Nicole Patella at Ohio EPA NEDO. Ohio EPA  
38 NEDO was unable to provide any records relating to USTs as part of the request. Following the Ohio  
39 EPA NEDO review, a review request was sent to Mr. Rich Boudier at the Ohio EPA Central Office.  
40 Review of records at Ohio EPA Central Office did not reveal any information related to USTs at  
41 RVAAP.

42

1 The city of Ravenna Fire Department was contacted to determine whether they held historical files  
2 related to USTs at RVAAP. The Fire Department indicated they do not have licensure for USTs and  
3 BUSTR would be the repository for files. The Fire Department also indicated that any historical  
4 records they may have had would have been transferred to BUSTR.

5  
6 In addition, the Ravenna City Health Department was contacted. No response was received as of the  
7 time of this submittal.

8  
9 **A.8 REFERENCES**

10  
11 USEPA (United States Environmental Protection Agency) 1991. *Guidance for Performing*  
12 *Preliminary Assessments Under CERCLA*, Office of Emergency and Remedial Response,  
13 EPA/540/G-91/013. September 1991.