

**DECISION DOCUMENT
USAR LOCAL TRAINING AREA (MARION LTA)
MARION, OHIO
MAY 2008**

PART 1 - DECLARATION OF THE DECISION DOCUMENT

SITE NAME AND LOCATION

The Marion U.S. Army Reserve (USAR) Local Training Area (Marion LTA) is located at 2565 Harding Highway East, Marion County, Marion, Ohio.

STATEMENT OF BASIS AND PURPOSE

This decision document presents the selected remedy for Marion LTA in Marion, Ohio. The remedy was chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision is based on the conclusions and recommendations presented in the Proposed Plan (KEMRON, 2008), which is part of the Administrative Record file. The Proposed Plan was submitted to the Ohio Environmental Protection Agency (Ohio EPA) on 14 March 2008.

The State of Ohio has concurred with the technical documents that support the Selected Remedy.

ASSESSMENT OF THE SITE

The U.S. Army, as lead agency has determined that Land Use Controls (LUCs) to restrict the property future use, in conjunction with conduct of CERCLA 121(c) 5-year reviews, are necessary to protect public health or welfare or the environment.

DESCRIPTION OF THE SELECTED REMEDY

The U.S. Army, as the lead agency, has determined that maintenance of LUCs to restrict future property use is the appropriate CERCLA remedy for the Marion LTA because there is no unacceptable risk to receptors based on current and reasonably foreseeable future land use. If any portion of the Marion LTA is remediated to, or otherwise demonstrated to meet, unrestricted use standards, the LUCs will be modified to exclude that portion of the site from land use control. The LUCs will ensure that the property use is restricted such that residential or recreational development is not allowed. The selected remedy is supported based upon the results of implementing all phases of the CERCLA process at the Marion LTA, including: preliminary site assessment; site investigation; ecological and human health risk assessment; a Time Critical Removal Action (TCRA); Engineering Evaluation/Cost Analysis (EE/CA), Action Memorandum (AM), and Removal Action Work Plan (RmAWP), leading to implementation of a Non-Time Critical Removal Action (NTCRA); results of the NTCRA as documented in the Final Removal Action Completion Report (RmACR); and finally the selected alternative as documented in this Decision Document. The remedy decision is based on the Administrative Record file for the Marion US Army Reserve LTA.

STATUTORY DETERMINATIONS

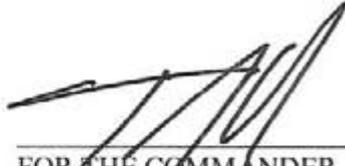
The U.S. Army, as the lead agency, has determined that maintenance of LUCs, in conjunction with conduct of CERCLA 121(c) 5-year reviews, is appropriate for the Marion LTA to ensure protection of human health and the environment. Please note that none of the CERCLA §121 statutory determinations are discussed herein because an active remedy is not being selected.

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DECLARATION

The U.S. Army, as the lead agency, has determined that maintenance of LUCs to prohibit future land use as residential, in conjunction with CERCLA 121(c) 5-year reviews, is appropriate under CERCLA for the Marion LTA to ensure protection of human health and the environment for the current and foreseeable use of the property.

Approved:



FOR THE COMMANDER
Thomas J. Kienlen
Deputy, Management and Support
88th Regional Readiness Command

Date:

22 May 08

Concurrence:

for



David L. Moore
Chief, Environmental Division
88th Regional Readiness Command

Date:

19 May 08

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PART 2 – DECISION SUMMARY

1.0 SITE NAME, LOCATION, AND DESCRIPTION

The Marion Local Training Area (Marion LTA), located at 2565 Harding Highway East in Marion, Ohio consists of the southern 127.1 acres of the former Marion Engineer Depot (MED) facility. Site figures are included at the end of this Decision Document.

The Marion LTA property is located 52 miles north of Columbus, OH and three miles east of the City of Marion, OH between U.S. Route 23, 30, State Route 98, and Rural Route 176 (Patton Pike) in Claridon Township, Marion County, at 2565 Harding Highway East. The LTA property is covered by the Marion East Quadrangle of the USGS Survey 7.5 series topographic maps (Figure 1). The Marion LTA property is owned by the United States Army Reserve (USAR) 88th Regional Readiness Command (RRC) and used as a training facility.

2.0 SITE HISTORY AND RESPONSE ACTIVITIES

The MED facility originally consisted of 653.2 acres of agricultural farmland acquired by the U.S. War Department between 1942 and 1947. The original mission of the MED property was to serve as a reserve depot for engineering supplies and equipment and to repair heavy engineering equipment. The entire MED was placed in inactive status in 1961. The Marion LTA property was officially transferred to the USAR on July 1, 1962. Since that time, the U.S. Army Reserve property had been used for intermittent outdoor training until training was suspended in November 1998 due to environmental concerns. The 88th RRC acquired the property in March 1996.

Previous CERCLA response actions at the site include execution of a Time Critical Removal Action (1999) to address drums identified at the site and a Non-Time-Critical Removal Action at three Areas Requiring Environmental Evaluation (AREEs), identified as LTA-01, LTA-15 and LTA-16 (2007). This DD incorporates by reference multiple reports on the execution of the CERCLA process at Marion LTA. These documents include but are not necessarily limited to:

- Final Supplemental Site Investigation Report (SSI), Revision 3.0, 17 May 2006 (KEMRON 2006);
- Final Engineering Evaluation/Cost Analysis (EE/CA), Revision 2.0, 19 March 2007 (KEMRON 2007);
- Final Action Memorandum, Revision 2.0, 13 June 2007 (KEMRON 2007);
- Final Removal Action Work Plan (RmAWP), Revision 2.0, 12 July 2007 (KEMRON 2007);
- Final Removal Action Completion Report (RmACR), Revision 1.0, 20 February 2008 (KEMRON 2008);
- Final Scoping Level I Ecological Risk Assessment (ERA), Revision 1.0, November 2006 (KEMRON 2006); and
- Final Residual Human Health Risk Assessment (HHRA), Revision 2.0, 27 February 2008 (KEMRON 2008).

All Marion LTA CERCLA project documents were submitted to the Ohio EPA for its review and comment. Ohio EPA also provided oversight of site field work, and all sampling and analyses conducted throughout the CERCLA process conformed to Ohio EPA reviewed and approved plans. The public has

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been kept informed of CERCLA progress primarily via the Restoration Advisory Board (RAB) meetings, conducted throughout the CERCLA process. The Marion LTA CERCLA documents for the Marion LTA have been made available for public review in the project Information Repository at the Marion Public Library. The documents also are retained in the project CERCLA Administrative Record (AR) file. A copy of the Administrative Record Index for the Marion LTA is included as Appendix A to this Decision Document. Several of the documents in the Marion LTA AR file, including the Proposed Plan, HHRA, and RmACR, are located on the U.S. Army Environmental Command's (USAEC's) internet website at:

<http://aec.army.mil/usaec/cleanup/docs/index.html>

Several environmental investigations have been conducted on and in the vicinity of the site. Past site CERCLA actions are summarized in chronological order in the Final Action Memorandum, and are detailed in separate reports available in the administrative record for the Marion LTA. These investigations are summarized here in chronological order.

An environmental assessment of the entire former MED facility including the LTA property was completed by ERM-Midwest in 1990. Analytical results were located and reported by SAIC in a preliminary assessment (PA) report dated 2000.

An environmental baseline survey was completed by JAYCOR Environmental in August 1996. The survey identified several areas of concern.

A relative risk site evaluation was completed by Montgomery Watson in November 1998. This investigation was focused in two areas; the "Dump Area" and the "Disposal Area". The report recommended further investigation within the Dump Area (the vicinity of LTA-15).

Cultural and natural resource surveys were conducted in 1998 and 2005. The results of these surveys found no threatened or endangered species/habitats on the property but did identify the presence of wetlands. Survey information indicated the LTA property was not considered eligible for National Register of Historic Places status.

A drum sampling and surface soil sampling investigation was completed by Jones Technologies Inc. in 1998. As a result, a time critical drum removal action was performed in March 1999 by Montgomery Watson.

A biological and water quality study was conducted by OEPA in 1998 for streams in the Marion area. The Marion County Health Department analyzed drinking water samples from several nearby residences' private drinking water wells in March 1999.

A Preliminary Assessment (PA) of environmental conditions was initiated on the LTA property by SAIC in September 1999. The PA Report (SAIC, 2000) identified a total of 51 Areas Requiring Environmental Evaluation (AREE).

A Phase I Site Investigation (SI) was subsequently undertaken by SAIC in 2000 with the primary focus being the collection and analysis of surface/subsurface soil, sediment, and water samples from the various LTA AREEs. Additional phases of investigation were completed by SAIC in May 2002 (Phase II), March 2003 (Phase III), and August 2003 (Phase IV).

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A geophysical investigation was completed by SAIC in 2001 as part of the SI with the purpose of confirming/denying the presence of buried debris or former excavations within several AREEs. A screening level human health risk assessment was performed by MWH Americas, Inc. in 2003. Based on the data collected during the site investigation activities described above, five areas were identified as requiring possible further investigation. The five identified areas of concern were LTA-01 LTA-11, LTA-15, LTA-16, and LTA-25. Site investigation activities completed in 2005-2006 included collection of additional stream sediment, soil and groundwater samples. As a result of the sediment data evaluation, the Army concluded that the Marion LTA site activities have not impacted sediments and no response action is required under CERCLA for sediments. Ohio EPA concurred with this finding.

A Level 1 Scoping Ecological Risk Assessment (ERA) was conducted in 2006 (KEMRON 2006) and concluded that no important ecological resources at the site have been impacted, excluding the isolated Wetland W3 located within LTA-16. This wetland was addressed by the NTCRA performed at LTA-16. Therefore, the Army determined that a Level II ERA was not required.

2.1 Time Critical Removal Actions

A time critical drum removal action (TCRA) was completed by Montgomery Watson in 1999. A total of 50 drums were removed from three areas on the LTA property; LTA-01 LTA-14, and LTA-15/16. Additional drum and soil characterization was completed.

2.2 Non-Time Critical Removal Actions

Prior to conducting a Non-Time Critical Removal Action (NTCRA), the appropriateness of a removal action was assessed in conformance to §300.415.

Detected contaminants in the three AREEs were determined to pose a potential risk to human health, based upon representative site data. As required by 40 CFR 300.415(b)(4), the Army conducted an Engineering Evaluation and Cost Analysis (EE/CA) and identified removal action alternatives. An NTCRA was designed to remove the COC source materials and associated contaminated soil located at and near the surface at LTA-01, LTA-15 and LTA-16, such that remaining COC concentrations would not exceed the human health based RmGs for lead, arsenic and benzo(a)pyrene. The alternatives identified and evaluated in the EE/CA included No Action; Institutional Controls; Limited Removal and Cover; and Excavation and Off-Site Disposal. Excavation and Off-Site Disposal was selected as it had a high degree of effectiveness that is protective of human health and the environment as detailed in the EE/CA and Action Memorandum.

The 2007 NTCRA was anticipated to mitigate unacceptable risks posed by the contaminants of concern (COCs), with no further action anticipated at these sites. Thus, the RmGs were developed with the understanding that they would be acceptable and able to be adopted as the final remedial goals (RGs) for the NTCRA work areas.

The completed NTCRA addressed removal of contaminated soils and associated COC source material at LTA-01, LTA-15 and LTA-16. Non-friable asbestos was also identified on the surface at LTA-01 and LTA-15, in very small quantities at LTA-01, and in more sizable quantities at LTA-15. LTA-15 was determined to have a limited area containing soils with concentrations of volatile organic compounds (VOCs) that were collocated with elevated metals. The potential risks to human health in the three AREEs were based on the elevated presence of arsenic, lead and benzo(a)pyrene. VOCs detected in the subsurface at LTA-15 were not the COCs that caused an unacceptable risk under CERCLA for the potential future human populations at the site, and thus VOCs were not included in the RmGs for the site.

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Additional details regarding the human health risk assessment for the NTCRA are included in the EE/CA (KEMRON, 2006).

A Removal Action Completion Report (RmACR, 2008) confirmed that no COCs remained above Removal Action Goals (RmGs) and no asbestos fibers were detected in site confirmatory soil samples. The NTCRA at LTA-01, LTA-15 and LTA-16 was initiated by KEMRON in July 2007 in accordance with the Final Action Memorandum, dated 13 June 2007 (KEMRON 2007), and the Final Removal Action Work Plan (RmAWP), Revision 2.0, dated 12 July 2007 (KEMRON 2007). The Action Memorandum outlined the removal of surface and subsurface soils that contained COCs at levels exceeding the RmGs for site-specific COCs as identified in the Action Memorandum. The Final RmAWP (KEMRON 2007) detailed the procedures that were followed in conducting the removal of contaminated soils and associated COC source material from the defined AREEs.

Based upon the achievement of the RmGs in all three removal action areas, the Army concluded that the NTCRA objectives had been achieved. The Ohio EPA concurred that the Army has achieved the objectives of the NTCRA with Ohio EPA's written approval of the Final RmACR dated 26 March 2008.

2.3 Source, Nature, and Extent of Contamination

Site waste materials and associated contaminated soils that contain metals in excess of the screening Region 9 industrial Preliminary Remediation Goals (PRGs) had been observed and confirmed through laboratory analytical testing in LTA-01, LTA-15, and LTA-16. The waste materials generally consisted of structural demolition debris such as tar/asphalt-based roofing wastes, wood, concrete block, brick, metal debris including nails/spikes, rail ties, discarded appliances, and tires. In some areas such as LTA-01 and LTA-16, waste materials were present as shallow deposits with minimal surface expression. In LTA-15, both shallow buried and surface deposits were apparent. LTA-15 was determined to have an area containing soils with concentrations of volatile organic compounds (VOCs) above Region 9 industrial PRGs. VOC-impacted soils were considered to be a result of waste paint materials within LTA-15. Non-friable asbestos-containing materials (ACM) were also identified at the ground surface in LTA-01 and LTA-15, and in LTA-15 debris piles.

KEMRON installed permanent groundwater monitoring wells in four separate investigation areas (LTA-01, LTA-11, LTA-15 and LTA-16) during the 2005 SSI. The results of groundwater monitoring in these wells was documented in the Final Supplemental Site Investigation Report (KEMRON, 2006). The SSI Report concluded that no impact to groundwater from historic site use exists. As an additional precaution, Ohio EPA commented that the NTCRA should include post-removal groundwater sampling in the three work areas to demonstrate that the field actions did not mobilize contaminants to groundwater in the LTA-01, LTA-15 and LTA-16 monitoring wells. In response to the Agency's comments, the Army conducted post-removal action groundwater monitoring in these wells for total and dissolved metals. The groundwater monitoring activities and results were described in the Final Removal Action Completion Report (KEMRON, 2008). The laboratory analytical results illustrated that the NTCRA did not mobilize COCs and groundwater remains unimpacted by the Marion LTA site activities.

All sampling and analysis activities conducted during the NTCRA were performed in accordance with Ohio EPA-approved plans, including the Quality Assurance Project Plan (KEMRON, 2007), Final Removal Action Work Plan (KEMRON, 2007) and Sampling and Analysis Plan (KEMRON, 2005). By removing all soil with COC concentrations above RGs and the related contaminant source materials, no further action was anticipated to be necessary to address soil contamination and associated pathways at the removal action areas.

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The Action Memorandum described AREE LTA-01, located on the southwestern portion of the Marion LTA (see Figure 2), as having been impacted by apparent fill material and shallow subsurface soils containing various contaminants including metals, PAHs and nonfriable asbestos. Subsequent to clearing vegetation from the site, minimal non-friable asbestos was identifiable. No potentially asbestos containing materials (ACM) were identified in the subsurface during excavation, and only small, localized chips of non-friable ACM were observed on the surface prior to excavation. LTA-15 and LTA-16 were located in the northern third of the parcel adjacent to one another, as shown on Figure 2. LTA-15 was characterized by readily identifiable surface debris. Laboratory analyses of surface and shallow subsurface soils at LTA-15 during SI activities exhibited elevated metals and, in a limited area, volatile organic compounds (VOCs). LTA-16 was located within an isolated 0.47 acre Category 2 wetland, designated as wetland W3 in a 2006 study conducted by BHE on behalf of the 88th RRC. Interviews conducted through the PA/SI phases of the CERCLA process for the Marion LTA indicated that LTA-16 was historically used as a burn area. LTA-16 exhibited elevated metals and PAHs in the surface and shallow subsurface soils.

Subsequent to the EE/CA, the associated public comment period, and Army evaluation of public comments, the recommended alternative for LTA-01, LTA-15 and LTA-16 was selected in the Final Action Memorandum (KEMRON 2007). The NTCRA included excavation of the contaminated surface and shallow subsurface soil and surface and near surface waste source materials in each of the areas that exhibited exceedances of RmGs. Excavating wastes and soil containing elevated levels of COCs was determined as the appropriate means to mitigate the potential public health threat posed by the surface and shallow subsurface soil at the sites under industrial/commercial use scenario. The selected action included disposal of excavated soil and waste in an appropriately permitted off-site landfill and grading and backfilling with clean fill as necessary to establish acceptable drainage. The wetland (W3) at LTA-16 would be restored to approximate pre-excavation grade, planted per the wetland mitigation plan approved by Ohio EPA, and allowed to recover naturally. The removal action areas would be appropriately seeded. Contaminated soil and source material excavation and off-site disposal was determined to meet all CERCLA evaluation criteria, and was the selected alternative for the three areas. The site specific removal action goals were established for the COCs through a streamlined risk assessment presented in the EE/CA. The COCs included benzo[a] pyrene, arsenic, and lead (see Table 1). By removing all soils and source materials containing COCs with concentrations above the RmGs, no further action was anticipated to be necessary in the future to address soil contamination at the remedial action areas.

**Table 1
Marion Non-Time Critical Removal Action – Risk Based Removal Action Goals**

Contaminant of Concern (COC)	Cumulative Target Risk Level of 1×10^{-4} (mg/kg)
Arsenic	95
Benzo(a)pyrene	19.6
Lead	1083

* - (USEPA, 1996 and 2003) Adult Lead Methodology (ALM) used to determine RG.

Note – RmGs based on an exposure duration of 250 days/yr to represent the industrial/commercial worker exposure as outlined in the HHRA workplan.

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3.0 COMMUNITY PARTICIPATION

A Restoration Advisory Board (RAB) was established for this site and has met quarterly in the past. The RAB meets at pre-scheduled meeting dates/times established by the RAB; all meetings are announced in advance and advertised in a local paper.

The EE/CA was issued for public comment per 40 CFR 300.415(n)(4), and made available in the established Marion LTA Information Repository at the local library. Public comments on the EE/CA were considered by the Army and responses to all comments received were provided to the commenters and included in the Action Memorandum. The Action Memorandum was signed by the Army on 25 June 2007, documenting the Army's determination that a NTCRA, including excavation and off-site disposal, was appropriate under CERCLA for the three AREEs within the Marion LTA. The Final Action Memorandum and RmAWP both addressed specifics of the removal actions within LTA-01, LTA-15 and LTA-16. The Army conducted a public availability session on 25 June 2007 to provide the public additional opportunity to ask questions of the Army and its contractor prior to implementation of the NTCRA. The completion of the NTCRA was documented in a Removal Action Completion Report (KEMRON 2008). The RAB was provided updates by the Army via email during the conduct of the NTCRA. The completion of the NTCRA and a summary of the Removal Action Completion Report were presented to the public via a February 2008 RAB meeting.

Documents listed in Section 2, as well as additional historical documents that provide the complete history of the CERCLA process at the Marion LTA, are available in the project Information Repository for public access to information regarding this site at the Marion Public Library. The Proposed Plan, HHRA and RmACR are also located on the USAEC's internet website at:

<http://aec.army.mil/usaec/cleanup/docs/index.html>

The Proposed Plan (KEMRON, 2008) for Marion LTA was placed in the Administrative Record and made available for public review at the Marion Public Library in Marion Ohio. Additionally, a Public Notice was published in the Marion Star on 18 March 2008 to provide notice that the document was available for public review and to announce the Public Comment Period during which the public was given the opportunity to provide comments on the Army's preferred alternative for Marion LTA. A Proposed Plan Fact Sheet, a copy of the Proposed Plan Public Notice, and a comment form for citizen use was mailed to surrounding property owners and the established Marion LTA mailing list to further provide public information regarding the Proposed Plan.

4.0 SCOPE AND ROLE OF RESPONSE ACTION

The U.S. Army, as the lead agency, has determined that maintenance of LUCs to restrict future property use, in conjunction with CERCLA 121(c) 5-year reviews, is the preferred remedial alternative for the Marion LTA. No other remedial action is required at the portions of the property on which a CERCLA removal or remedial action has not been conducted. No other remedial action is necessary on the portions of the property previously subject to CERCLA Removal Action. This remedy is supported based upon the results of implementing all phases of the CERCLA process at the Marion LTA, including: preliminary site assessment; site investigation; ecological and human health risk assessment; a Time Critical Removal Action (TCRA); Engineering Evaluation/Cost Analysis (EE/CA), Action Memorandum (AM), and

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Removal Action Work Plan (RmAWP), all leading to implementation of a Non-Time Critical Removal Action (NTCRA); and results of the NTCRA as documented in the Final Removal Action Completion Report (RmACR).

As detailed in the 2008 RmACR, removal action preparatory activities were initiated in April 2007 with removal of potential bat roost trees and completed with site mobilization and setup through 18 July 2007. Active field work began on 17 July 2007, as clearing and grubbing were initiated, with NTCRA field elements being completed with final site demobilization on 20 October 2007.

A total of 11,058.57 tons of soil were removed from the Marion LTA property (LTA-01, LTA-15, and LTA-16 combined) and disposed of at County Environmental of Wyandot, Carey, Ohio. Using a conversion factor of 1.3 x tons = cubic yards, this equates to approximately 14,376 cy of waste. Analytical results of final confirmatory samples indicate the RmGs, and thus the RGs, were achieved in all areas. The NTCRA work areas are thus available for Reservist training, the designated land use, without restriction. Further, the Army's additional evaluation of the residual risk as presented in Section 4 of this reports has determined that the Ohio EPA risk goal of 1×10^{-5} for the industrial/commercial potential future use scenario also has been achieved.

Subsequent to completion of excavation and receipt of the analytical results for confirmatory samples, the remedial action sites were backfilled with clean soil and restored to usable condition. The wetland W3 was seeded with wetland species, and was planted in November 2007 with appropriate species of trees and shrubs, per the wetland mitigation plan. Results for representative groundwater samples collected from existing monitoring wells indicate no impact to groundwater quality from site activities. Based on 2005 through 2007 groundwater data, the site monitoring wells will be permanently closed per the RmAWP. All equipment was returned to the originator after decontamination as appropriate. All Investigation Derived Waste (IDW) was transported and disposed off-site.

Based on laboratory analytical data for the NTCRA work areas, LTA-01, LTA-15 and LTA-16, all soils and source waste materials have been removed such that no unacceptable risk as defined by CERCLA remains within the three NTCRA work areas.

5.0 SITE CHARACTERISTICS

The Marion LTA is 127.1 acres and consists of unimproved land containing some secondary successional forest growth and open field areas intermitted with sparse to dense brush. Relief is flat with elevations ranging from 982 to 988 feet above sea level. The property is surrounded on the west, south, and east sides by agricultural fields and pastures. Immediately to the north are a large light industrial complex and some institutional properties. The site is designated a non-floodplain area and suitable for use as an industrial site.

The geology of the area is made up of limestone bedrock with unconsolidated soils overlying the bedrock that include deposits of unsorted calcareous rock debris, till, and stratified sand and gravel (USACE, 1996). The LTA property is located within the Upper Scioto River Basin. The primary local drainage features include Riffle Creek and open drainage ditches on the LTA property.

Groundwater, primarily from the bedrock aquifer, is used as a source for drinking water in the vicinity of the LTA property and throughout the region. No public water supply system wells are located on or immediately adjacent to the LTA property.

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A natural resource survey conducted for the 88th RSC (USARC 1998) indicated the presence of two wetland areas located in the west-central portion of the LTA property. A March 2006 wetland delineation report concluded that fifteen wetlands exist within the Marion LTA boundaries.

SI activities were conducted in phases from 2000 to 2006, including collection and analyses of soil, surface water, stream sediment and groundwater samples. A detailed discussion of the site characteristics and contamination assessment are presented in the SI Reports in the Information Repository and Administrative Record of this action.

6.0 CURRENT AND POTENTIAL FUTURE SITE AND RESOURCE USES

6.1 Land Use

The current land use of the facility is as an active U.S. Army Reserve Local Training Area. The U.S. Army has identified that the reasonably foreseeable future land use for the property is anticipated to remain military and/or industrial/commercial (i.e., non-residential).

6.2 Water Use

There are no potable water sources or drinking water wells for human use on the Marion USAR LTA. Site specific data from the CERCLA SI and following the NTCRA demonstrated that groundwater and streams are not impacted by historic activities at the Marion LTA. Streams and wetlands on the Marion USAR LTA pose no impacts to wildlife. The Final Level I Scoping Ecological Risk Assessment (KEMRON 2006) concluded that no further ecological assessment was required at the Marion LTA based upon the absence of potential for impacts to important ecological resources. The Ohio EPA-approved wetland mitigation plan for wetland W3 within LTA-16 has been fully implemented and the wetland will be allowed to continue to restore naturally.

6.3 Land Use Controls

The current land use of the facility is as an active U.S. Army Reserve Local Training Area. The U.S. Army has identified that the reasonably foreseeable future land use for the property is anticipated to remain military and/or industrial/commercial (i.e., non-residential).

The Final Marion LTA Residual HHRA (KEMRON, 2008) concluded that the estimated risk values for each assessed portion of the property conforms to the CERCLA acceptable risk range of 1×10^{-4} to 1×10^{-6} and a Hazard Index below 1 for the industrial worker, construction worker, reservist, and adolescent trespasser. The Final RmACR similarly demonstrated that the site is safe for these same populations.

LUCs shall be maintained until the concentrations of hazardous substances in the soil are reduced to levels that allow for unrestricted use. If any portion of the Marion LTA is remediated to, or otherwise demonstrated to meet, unrestricted use standards, the LUCs will be modified to exclude that portion of the site from land use control.

If the Army proposes to modify the LUCs for the Marion LTA, the Army shall submit a notification to modify the LUC to Ohio EPA for review and comment. CERCLA 121(c) 5-year reviews shall be conducted to assess the long-term effectiveness of the remedy, including LUCs.

The remedial design shall include a LUC component describing the details of LUC implementation and maintenance, including periodic inspections. The Army is responsible for implementation, maintenance,

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periodic reporting, and enforcement of LUCs in accordance with the remedial design. Although the Army may transfer these responsibilities to another party by contract, property transfer agreement, or through other means, the Army remains responsible for remedy integrity to include (1) CERCLA 121(c) 5-year reviews; (2) notification of the appropriate regulators and/or local government representatives of any known LUC deficiencies or violations; (3) provision of access to the property to conduct any necessary response; (4) the ability to change, modify, or terminate LUCs and any related deed or lease provisions; and (5) assurance that the LUC objectives are met to maintain remedy protectiveness.

If the Army determines that there is non-compliance with a LUC, the Army will address the effectiveness of the LUC, including any required notifications and corrective measures. The Army will seek Ohio EPA review and comment prior to a land use change that is inconsistent with the LUC objectives, the use assumptions of the remedy, or results in the termination of LUCs.

The Army will provide notice to Ohio EPA prior to any transfer or sale of the Marion LTA or any portion thereof.

If the Army transfers ownership of the Marion LTA or any portion thereof to another federal agency, department or entity, the transfer documents shall require that the federal transferee include the LUCs in its property management plan or equivalent document. The Army shall advise the federal transferee of all obligations contained in this Decision Document and the associated LUC.

If the Army transfers ownership of the Marion LTA or any portion thereof to a non-federal entity, the Army will provide information to that entity in the draft deed and transfer documents regarding necessary LUCs.

The Army will, upon transfer of fee title, ensure that the transferee executes and records an environmental covenant acceptable to Ohio EPA that would impose the LUC terms and conditions of this Decision Document against the transferee(s), as well as subsequent property owner(s) or user(s) or their contractors, tenants, lessees, or other parties. This covenant will be recorded in the deed records of the Marion County Recorder's office immediately following the recording of the transfer deed and will run with the land in accordance with state law. Ohio EPA's right to enforce the LUCs would supplement, not replace, the Army's right and responsibility to enforce the LUCs. As a condition of property transfer, lease, or license, the Army may require the transferee or lessee in cooperation with other stakeholders to assume responsibility for various implementation actions. Third-party LUC responsibility will also be incorporated into pertinent contractual, property, and remedial documentation, such as a purchase agreement, deed, lease, license, or permit and a remedial design addendum.

7.0 SITE RISKS

During site investigation and cleanup activities, potential risks associated with this site were evaluated for human health and ecological receptors in accordance with U.S. EPA Guidelines. One isolated wetland designated as W-3 was found within the perimeter of LTA-16. As documented in the RmACR, wetland W-3 was restored and replanted in conformance with Ohio EPA oversight to allow natural recovery following removal of COCs from LTA-16. No additional wetland evaluation or monitoring is required under the Ohio EPA isolated wetland permit or the wetland mitigation plan. The Final Level I Scoping Ecological Risk Assessment (KEMRON 2006) concluded that no further ecological assessment was required at the Marion LTA based upon the absence of potential for impacts to important ecological resources. Evaluation of Human Health risks are discussed below.

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7.1 Summary of Risks: Non-Time-Critical Removal Action Areas

The Marion LTA EE/CA (2006) presented the streamlined human health risk evaluation related to the portions of the site examined for the NTCRA. As the Army documented in the EE/CA, Action Memorandum and RmAWP, a human health risk-based goal that achieves the CERCLA standard of 1×10^{-4} (also denoted as 1E-4) for carcinogenic compounds was used in establishing the RmGs for the removal areas. Non-carcinogenic compounds are evaluated to ensure a Hazard Index (HI) of 1 is not exceeded. The Army also evaluated the data from the NTCRA in the RmACR and concluded that the Ohio EPA Technical Decision Compendium goal of 1×10^{-5} is achieved by the RmGs under the Reservist exposure scenario. Additional details are provided in the Final RmACR (KEMRON, 2008) and are summarized below.

The Reservist exposure scenario (as defined in the Marion LTA Final HHRA Work Plan, KEMRON, 2007) includes Reservist exposure duration of six years at a frequency of six days per year, eight hours a day. Implementing the same calculation methodologies of the Final HHRA Work Plan, the following RmGs (Table 2) would be derived for the protection of a Reservist exposure; lead risk is discussed in the text following Table 2.

**Table 2
Hypothetical RmGs for Soils Based on the Reservist Exposure Scenario**

Reservist Exposure Reservist 10^{-5} RmGs	
Contaminant of Concern (COC)	RmG as concentration in soil (mg/kg)
Arsenic	1656
Benzo(a)pyrene	340
Lead	14,233

The lead risk goal is a blood lead level not to exceed 10 ug/dl per the USEPA Adult Lead Model (ALM) and USEPA risk assessment guidance. The 14,233 mg/kg RmG for lead in soil is protective of a Reservist exposure, as defined in the HHRA workplan, based on an acceptable blood lead level not to exceed 10 ug/dl.

All of the Reservist 1×10^{-5} RmGs were well above the RmGs developed and applied by the Army in the NTCRA based on the industrial/commercial 1×10^{-4} exposure scenario. Soil confirmatory sample concentrations within the three NTCRA work areas did not approach or exceed the Reservist 1×10^{-5} RmGs. Therefore, the Army has demonstrated that the three NTCRA work areas on the property meet the Ohio EPA human health risk based goals protective of the potential exposures based on the future use of the site as a Reservist training facility.

Representative samples collected and analyzed through the CERCLA SI process within the NTCRA work areas demonstrate that the concentrations of these COCs were below the Reservist 1×10^{-5} risk goals in the vast majority of samples. The data thus illustrate that the Army's RmGs, which serve as the final RGs, were very conservative for the site designated use as a Reservist training area.

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In addition, it is noted that a minimum of six (6) inches of cover soil were placed in all removal action areas. Within LTA-01, clean backfill was placed in thicknesses of 6 inches up to over eighteen (18) inches. Within LTA-16, backfill was placed to return the area to the approximate pre-excavation elevation, consistent with the wetland mitigation goals. Therefore, backfill was placed in the LTA-16 removal action area in thicknesses of up to two (2) feet. Within LTA-15, backfill thicknesses were up to four (4) feet or more. As a result, consistent with EPA risk exposure guidance, the soil exposure pathway for any receptor within each removal action area is now considered incomplete. Further evaluation of the achievement of Ohio EPA risk goals was conducted to assess the potential human health risk posed by the removal action work areas based upon potential future industrial/commercial use.

The Final RmACR (KEMRON, 2008) presented a summary of risk estimates using the 95% UCL of the mean for each compound driving risk in each work area (LTA-01, LTA-15, and LTA-16). No risk estimate exceeded the Ohio EPA Technical Decision Compendium goal of 1×10^{-5} , a Hazard Index of 1 or a blood lead level of 10 $\mu\text{g}/\text{dl}$. As a result, the Army has demonstrated that the three NTCRA work areas meet the Ohio EPA human health risk based goals for both future use as a Reservist training facility and potential future industrial/commercial use.

As further confirmation that the NTCRA was successful, groundwater samples were taken in the Removal Action Areas as described in the RmAWP. The post-removal action groundwater data indicate that no adverse impact to the monitored aquifer occurred as a result of the removal action. The Supplemental SI Report concluded that groundwater quality has not been impacted by historic site activities. Ohio EPA concurred with the Supplemental SI Report conclusions. The 2007 groundwater data were consistent with the 2006 groundwater data. Based on the results of the post-removal groundwater monitoring event and the groundwater data presented in the 2006 Supplemental SI Report, no further groundwater monitoring is necessary and no response action under CERCLA is necessary for site groundwater.

7.2 Summary of Residual Risks from Non-Removal Action Areas

A Residual Human Health Risk Assessment (HHRA) was conducted per the Final HHRA Work Plan (KEMRON, 2007) to assess potential human health risks posed outside of the NRCRA work areas (e.g., outside of LTA-01, LTA-15 and LTA-16). As is detailed in the Final HHRA (KEMRON, 2008), residual soil contamination was evaluated from the ground surface to approximately 12 feet below grade, consistent with the Final HHRA Work Plan.

The site dataset was divided into three Exposure Units and hazard/risk estimates were developed for each Exposure Unit. Four hypothetical exposure scenarios were developed for this property: a hypothetical on-site industrial/commercial worker, a potential future construction worker, a Reservist and a potential adolescent trespasser exposed to soils. These scenarios were developed assuming that all exposures would include direct contact with residual contamination and provide a very conservative estimate of the actual risk since they assume an exposure duration that most likely will never or rarely exist.

The highest residual risks associated with the hypothetical exposure scenarios quantified for the three exposure units are summarized in Table 3.

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**Table 3
Summary of Residual Human Health Risks, Marion LTA
(Excluding LTA-01, LTA-15 and LTA-16)**

Hypothetical Receptor	Highest ^a Estimated Excess Lifetime Cancer Risk		Highest ^a Estimated Total Hazard Index	
	Surface Soil	Sub-surface Soil	Surface Soil	Sub-surface Soil
Industrial/Commercial Worker	6.4 X 10 ⁻⁶	2.2 x 10 ⁻⁶	9.4 x 10 ⁻³	9.0 x 10 ⁻³
Construction Worker	3.5 x 10 ⁻⁶	3.6 x 10 ⁻⁷	6.6 x 10 ⁻²	7.5 x 10 ⁻²
Reservist	1.4 x 10 ⁻⁷	1.2 x 10 ⁻⁸	1.7 x 10 ⁻⁴	1.7 x 10 ⁻⁴
Adolescent Trespasser	1.2 x 10 ⁻⁶	7.5 x 10 ⁻⁸	7.7 x 10 ⁻⁴	7.3 x 10 ⁻⁴

^a Highest Estimated Excess Lifetime Cancer Risk (ELCR) and Hazard Index (HI) of the estimates for the three Exposure Units at the site.

The Final Residual HHRA (KEMRON 2008), in conformance to the approved Final HHRA Work Plan and US EPA Risk Assessment Guidance for Superfund (RAGS), demonstrates that the residual risk at the Marion LTA outside of the three work areas involved in the 2007 NTCRA meets the Ohio EPA Technical Decision Compendium risk goal of 1X10⁻⁵ for excess lifetime cancer risk. Specifically, the final risk estimate for Exposure Unit 3 for exposure of an Industrial/Commercial worker to surface soil is 6.4X10⁻⁶. All hazard indices calculations have results below 1.

7.3 Human Health Risk for Entire Marion LTA

Receptors at the site are not anticipated to experience an exposure that would result in an unacceptable cancer or non-cancer health risk. The estimated risk values for each assessed portion of the property conforms to the CERCLA acceptable risk range of 1 X 10⁻⁴ to 1 X 10⁻⁶ and a Hazard Index below 1 for the reservist, construction worker, and trespasser. Further, the residual risk at the site has been demonstrated to meet the Ohio EPA Technical Compendium Document human health carcinogenic compound risk goal of 1 X 10⁻⁵ for potential future populations, including the US Army Reservist trainee and the potential commercial/industrial user. As demonstrated through the Final Marion LTA Residual HHRA (KEMRON, 2008) and the Final RmACR (KEMRON, 2008), no unacceptable risk to human health, as defined by CERCLA and the Marion LTA CERCLA documents, exists at the US Army Reserve Marion Local Training Area in Marion, Ohio.

8.0 STATUTORY DETERMINATIONS

It is the Army's judgment that the remedy described in this Decision Document is required to protect public health or welfare and the environment. The response action was described in the Proposed Plan for the Marion LTA. No further environmental investigation or active remediation is necessary. Because site conditions, together with the maintenance of LUCs and conduct of CERCLA 121(c) 5-year reviews, are protective of human health and the environment, it was not necessary to develop and evaluate remedial

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action objectives or remedial alternatives beyond the previously developed and implemented removal action alternatives as described in the EE/CA and Action Memorandum.

The Selected Remedy is protective of human health and the environment, is cost-effective, and utilizes permanent solutions to the maximum extent practicable. Because no remedial action is required under CERCLA and the NCP, there are no federal and state requirements that are applicable or relevant and appropriate. The remedy satisfies the statutory preference for treatment as a principal element of the remedy by reducing the toxicity, mobility, or volume of hazardous substances, pollutants, or contaminants as a principal element through treatment.

It has been determined that this remedy is protective of human health because it does not result in hazardous substances, pollutants, or contaminants remaining on-site above levels that allow for unlimited and unrestricted exposure based on the intended future use as Reservist Training, or potential future use as an industrial/commercial property.

As described in Section 6.3, LUCs shall be maintained to ensure that the site continues to be used as a Reservist training facility or for industrial/commercial use or until the concentrations of hazardous substances in the soil are reduced to, or otherwise demonstrated to be at, levels that allow for unlimited use and unrestricted exposure. If the site or a portion thereof is subsequently remediated or otherwise demonstrated to meet, unrestricted use, the LUCs will be modified to exclude that portion of the site from land use control. CERCLA 121(c) 5-year reviews shall be conducted to assess the long-term effectiveness of the remedy, including LUCs.

9.0 DOCUMENTATION OF SIGNIFICANT CHANGES

Based on the conclusions presented in the Final Removal Action Completion Report (RmACR), Revision 1.0 (KEMRON 2008) and the Final Residual Human Health Risk Assessment, Revision 2.0, (KEMRON 2008), the U.S. Army, as the lead agency, has determined that implementation of LUCs to restrict future land use of the Marion LTA to Reservist training or industrial/commercial use, in conjunction with CERCLA 121(c) 5-year reviews, is appropriate under CERCLA.

No significant changes have been made to the selected remedy as presented in the Final EE/CA and Final Action Memorandum (KEMRON, 2007), or the Proposed Plan (KEMRON, 2008).

PART 3 - RESPONSIVENESS SUMMARY

The Selected Remedy will be implemented following the Army's signature of this Decision Document. Associated documents supporting this Decision Document will be available in the Information Repository and Administrative Record for the Marion U.S. Army Reserve LTA.

Stakeholder Comments and Lead agency Response

The Ohio EPA provided comments on the remedy as presented in the Proposed Plan in a letter dated 16 April 2008. Comments were received from two additional commenters during the public comment period, which was established from 18 March 2008 through 16 April 2008. All comments received were considered by the Army. No substantive changes in the preferred remedy were necessary based upon the comments received. A summary of the comments received and the Army's responses to the comments are included in the Responsiveness Summary included in this Decision Document as Appendix B. A

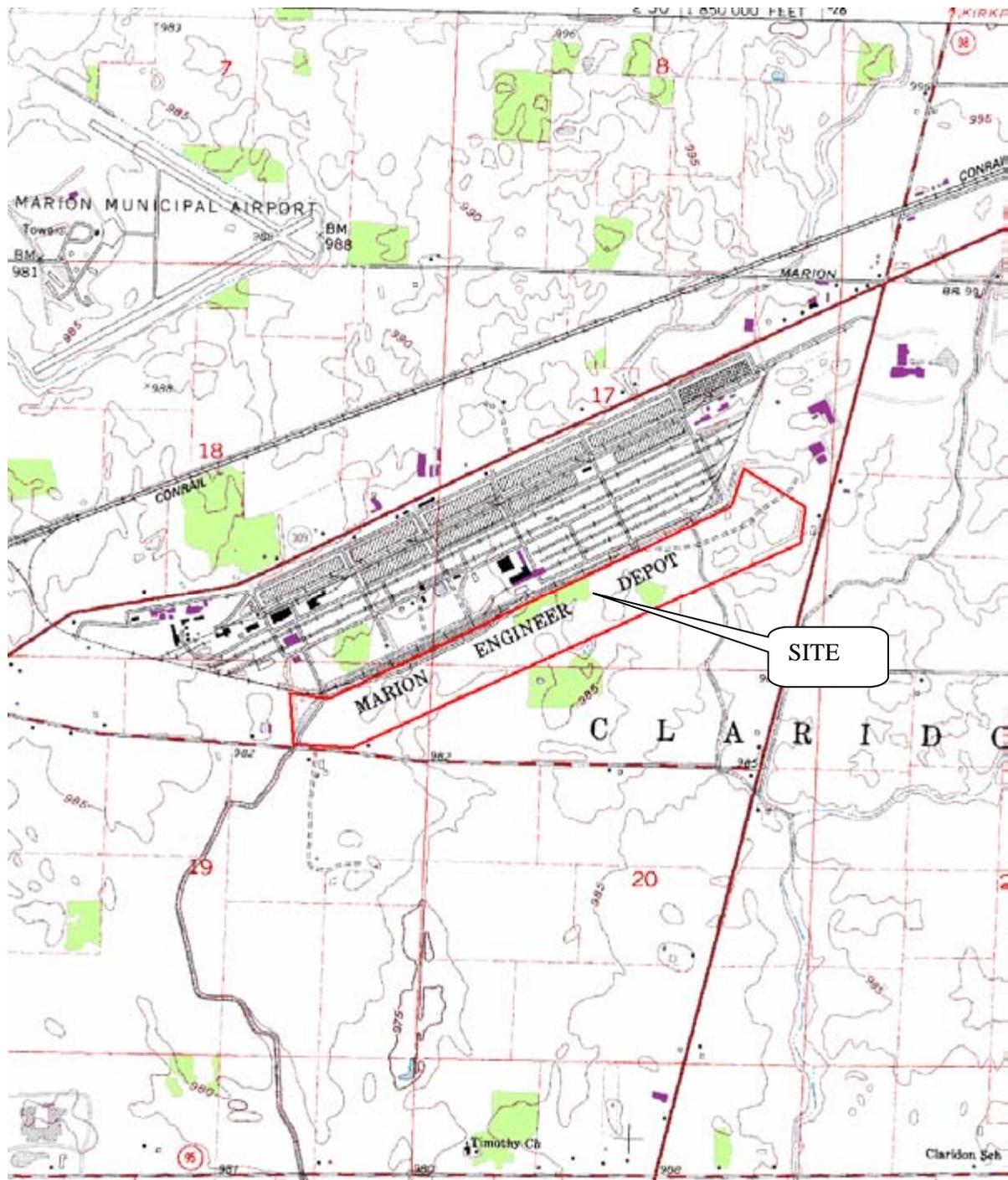
complete record of the comments received on the Proposed Plan is available in the administrative record file for the Marion LTA.

Copies of public notices relevant to the Army's decision for this site and a transcript of the 27 March 2008 public information meeting are available in the administrative record of this action.

Technical and Legal Issues

No technical or legal issues are identified in association with this action.

FIGURES

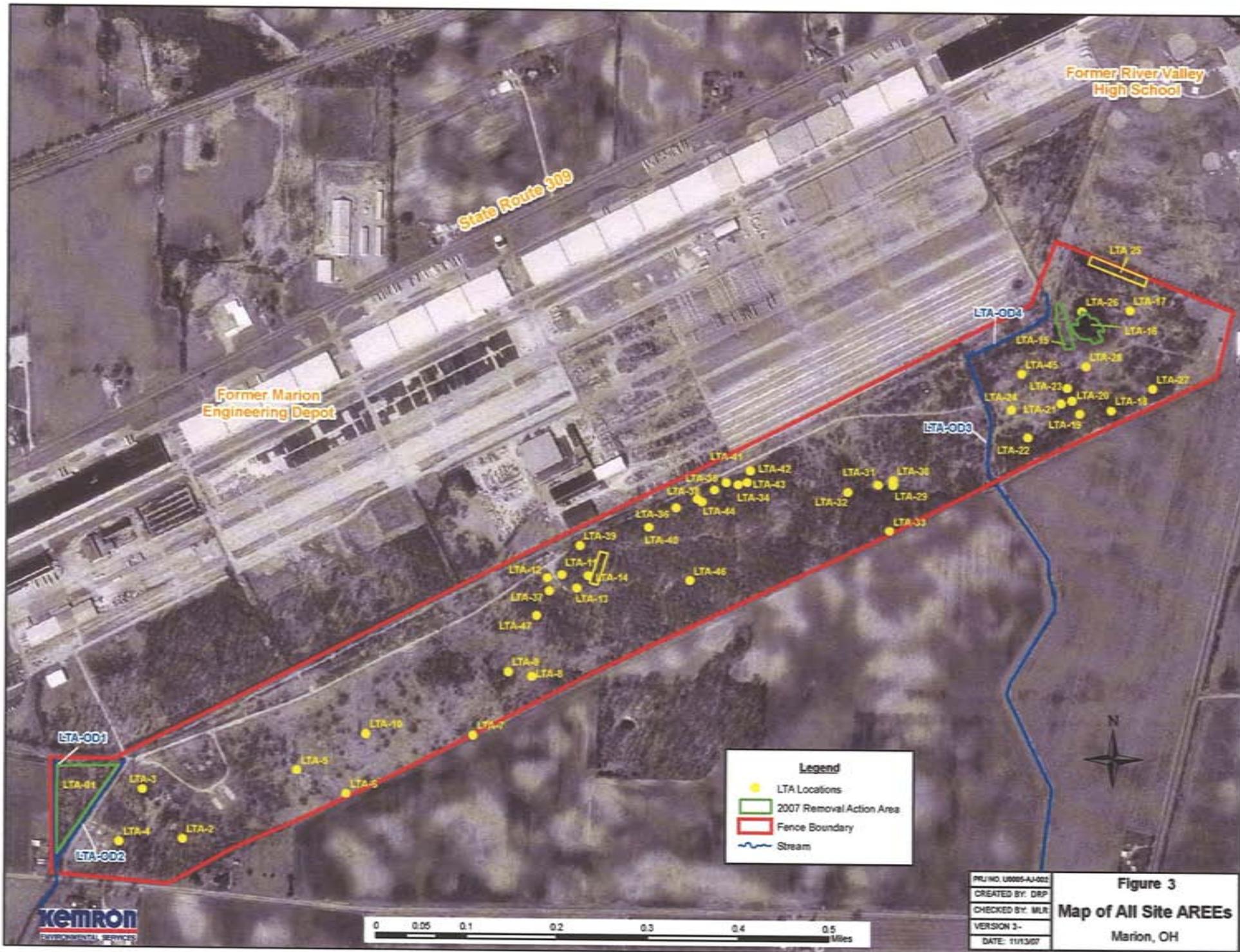



 NORTH
 MARION EAST, OH
 QUADRANGLE
 1:24,000
 SCALE 1" = 2000'

FIGURE 1
SITE LOCATION MAP
MARION LTA USARC SITE
1565 HARDING HIGHWAY EAST
MARION, OH

PROJECT NUMBER:	U0005-AJ-001
PREPARED BY:	DAVE PITZER
REVIEWED BY:	CHARLIE MARTIN
DATE:	11/07/07





APPENDIX A
ADMINISTRATIVE RECORD INDEX

AR Index Document Type	Document Number	Document Date	Document Title	Author(s)	Recipient(s)	Document Location
1.0 SITE IDENTIFICATION						
1.1 Background-RCRA and Other Information	1.1.1	Jan 2002	Technical Memorandum - Development of Background Levels in Soil and Groundwater - Operable Unit 1 Remedial Investigation, River Valley School, Former Marion Engineer Depot, Marion, Ohio. As contained in: Appendix K of Formerly Used Defense Site, Marion Engineer Depot, Marion Ohio, River Valley School Property Operable Unit 1 - Former Disposal Area Remedial Investigation Report	Montgomery Watson	88th RRC	88th RRC
	1.1.2	Mar 21, 1988	Plant City Steel Co., Marion, Ohio - Environmental Audit	Benatec Assoc.	Ohio EPA	OEPA - Northwest District Office
	1.1.3	Aug 31, 1988	Plant City Steel Co., Marion, Ohio - Phase II Environmental Sampling Report	Benatec Assoc.	Ohio EPA	OEPA - Northwest District Office
1.2 Notification/Site Inspection Reports	1.2.1	Aug 1996	Environmental Baseline Survey (EBS) Marion Outdoor Training Area (OTA), Marion, OH	JAYCOR Environmental	USACE - Louisville District	88th RRC
1.3 Preliminary Assessment (PA) Report	1.3.1	Oct 2000	Preliminary Assessment Report - Marion Local Training Area, Marion, OH	Science Applications International Corporation	USACE - Louisville District	88th RRC
1.4 Site Investigation (SI) Report	1.4.1	May 2004	Final Site Inspection Report, Marion Local Training Area, Marion, Ohio	Science Applications International Corporation	88th RRC	88th RRC
	1.4.2	May 2006	Final Rev. 3 - USARC GFPR Supplemental Site Investigation Report, U. S. Army Reserve Local Training Area, Marion, Ohio, Contract #W911SO-04-F0017	KEMRON	USAEC; 88th RRC	USAEC; USACE; 88th RRC; Information Repository
2.0 REMOVAL RESPONSE						
2.1 Sampling and Analysis Plans						
2.2 Sampling and Analysis Data/Chain of Custody Forms	2.2.1	Jan 1999	Marion LTA Drum Sampling, Marion, OH	Jones Technologies Incorporated (JTI)	88th RRC	88th RRC
2.3 EE/CA Approval Memorandum (for non-time-critical removals)						
2.4 EE/CA	2.4.1	Nov 2006	Draft Final Marion LTA EE/CA - Rev 1.0	KEMRON	Ohio EPA; Information Repository	USAEC; USACE; 88th RRC; Information Repository
	2.4.2	Mar 2007	Final Marion LTA EE/CA	KEMRON	Ohio EPA; Information Repository	USAEC; USACE; 88th RRC; Information Repository
	2.4.3	May 2007	Ohio EPA Concurrence Letter: Final Marion LTA EE/CA	Ohio EPA	KEMRON; 88th RRC	88th RRC; USAEC; USACE
2.5 Action Memorandum	2.5.1	June 2007	USARC GFPR Final Action Memorandum, Marion, OH, Revision 2.0	KEMRON	Ohio EPA; Information Repository	USAEC; USACE; 88th RRC; Information Repository
2.6 Amendments to Action Memorandum						

NOTE: Documents listed as bibliographic sources/references in site documents may not be listed separately in the Administrative Record Index.

AR Index Document Type	Document Number	Document Date	Document Title	Author(s)	Recipient(s)	Document Location	
2.7	Time Critical Removal Actions	2.7.1	July 1999	Montgomery Watson, United States Army Reserve Drum Removal Project, Marion, Ohio	Montgomery Watson	88th RRC	88th RRC
2.8	Work Plans	2.8.1	July 2007	USARC GFPR Final Removal Action Work Plan, Marion, OH Revision 2.0	KEMRON	USAEC; 88th RRC; OEPA	USAEC; USACE; 88th RRC; Information Repository
		2.8.2	February 2008	Final Removal Action Completion Report, US Army Reserve, Marion Local Training Area, Marion, Ohio Revision 2.0	KEMRON	USAEC, 88th RRC	USAEC, 88TH RRC
3.0 REMEDIAL INVESTIGATION (RI)							
3.1	Sampling and Analysis Plan (SAP)	3.1.1	Jul 2005	USARC GFPR Final Quality Assurance Project Plan, Kings Mills, OH and Marion, OH - Final Rev 2.0	KEMRON	USAEC; 88th RRC	USAEC; 88th RRC
		3.1.2	May 2005	Final Sampling and Analysis Plan - Marion, Ohio - Rev 1.0 AND a copy of Addendum #1 to the Final SAP, dated 10-7-05. EPA's response to Addendum 1 - letter dated 10/28/05 from P. Jayko.	KEMRON	USAEC; 88th RRC	USAEC; 88th RRC
		3.1.3	Nov 2005	USARC GFPR Final Quality Assurance Project Plan, Kings Mills, OH and Marion, OH - Final Rev 3.0	KEMRON	USAEC; USACE; OEPA; 88th RRC	USAEC; 88th RRC
		3.1.4	August 2007	USARC GFPR Quality Assurance Project Plan, Kings Mills, OH and Marion, OH - Final Rev 4.0	KEMRON	USAEC; 88th RRC; OEPA	USAEC; USACE; 88th RRC; Information Repository
3.2	Sampling and Analysis Data/Chain of Custody Forms						
3.3	Work Plan						
3.4	RI Reports	3.4.1	2002	Montgomery Watson, River Valley School, Operation Unit 1-Former Disposal Area, Remedial Investigation Report, Marion Ohio	Montgomery Watson		88th RRC
4.0 FEASIBILITY STUDY (FS)							
4.1	Proposed Plan	4.1.1	March 2008	USARC GFPR No Action/No Further Action Proposed Plan, U.S. Army Reserve Local Training Area, Marion, Ohio	KEMRON		USAEC; 88th RRC; Information Repository
5.0 RECORD OF DECISION (ROD)							
5.1	Decision Document	5.1.1	May 2008	Decision Document, USARC Local Training Area, Marion, Ohio	KEMRON	USAEC; USACE; 88th RRC	USAEC; USACE; 88th RRC; Information Repository
6.0 STATE COORDINATION							

NOTE: Documents listed as bibliographic sources/references in site documents may not be listed separately in the Administrative Record Index.

AR Index Document Type	Document Number	Document Date	Document Title	Author(s)	Recipient(s)	Document Location
7.0 ENFORCEMENT						
8.0 HEALTH ASSESSMENTS						
8.1	ATSDR Health Assessments					
8.2	Toxicological Profiles					
8.3	Risk Assessments	8.3.1	Nov 1998	Relative Risk Site Evaluation, U.S. Army Reserve Property, Former Marion Engineering Depot, Marion, OH	Montgomery Watson	88th RRC
		8.3.2	Feb 2004	Screening Level Human Health Risk Assessment, US Army Reserve Property, Marion, OH	Montgomery Watson	88th RRC
		8.3.3	February 2004	Baseline Human Health Risk Assessment Work Plan. Marion Local Training Area, Marion, Ohio.	MWH Americas, Inc.	88th RRC
		8.3.4	May 2007	Final Residual Human Health Risk Assessment Work Plan, Local Training Area, Marion, Ohio	KEMRON	88th RRC; USAEC, USACE
		8.3.5	February 2008	Final Residual Human Health Assessment, Local Training Area, Marion, Ohio	KEMRON	88th RRC; USAEC, USACE
9.0 NATURAL RESOURCE TRUSTEES						
9.1	Notices Issued					
9.2	Finding of Fact	9.2.1	Aug 29, 2006	Wetlands jurisdictional determination letter	USACE	88th RRC
9.3	Reports	9.3.1	Oct 1998	Wetland and Endangered Species Survey	USARC - Marion Engineer Depot East, Marion, Ohio	USACE. CSU/Fort McCoy DTM Natural Resources Office
		9.3.2	Sep 2005	88th RRC Natural Resources Surveys - Ohio. For Facility OH041 - LTA Marion Engineer Depot East	Parsons	88th RRC
		9.3.3	Apr 2006	Wetland Delineation for Local Training Area, Marion Engineer Depot East 88th Regional Readiness Command, Marion County, Ohio	BHE Environmental	USACE - Kansas City District; 88th RRC
		9.3.4	Jun 6, 2006	United States Department of Interior correspondence to the 88th RRC regarding the Indiana bat.	Mary Knapp - USDOJ	88th RRC
		9.3.5	Sep 2006	Final Report: Mist Net Surveys at Marion Engineer Depot East Local Training Area. Marion County, Ohio.	BHE Environmental	USACE - Kansas City District; 88th RRC
		9.3.6	Oct 5, 2006	Department of the Army correspondence to the USFWS regarding the interpretation of the Mist Net Survey results for the Indiana bat.	David L. Moore - USACE	Dr. Mary Knapp - USFWS
		9.3.7	Nov 2006	USARC GFPR Scoping Level 1 Ecological Risk Assessment, Marion, OH, - Final - Rev 1.0	KEMRON	88th RRC; USAEC, USACE

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AR Index Document Type	Document Number	Document Date	Document Title	Author(s)	Recipient(s)	Document Location
10.0 PUBLIC PARTICIPATION						
10.1	Comments and Responses					
10.2	Community Relations Plan (CIP)	10.2.1	Feb 16, 2006	Final Community Involvement Plan, Rev. 2.0	KEMRON	Ohio EPA; USACE; USAEC; 88th RRC; Information Repository
		10.2.2	Nov 29, 2006	Final Community Involvement Plan, Rev. 3.0 - reflects changes in points of contacts.	KEMRON	Ohio EPA; USACE; USAEC; 88th RRC; Information Repository
		10.2.3	Feb 9, 2007	Final Community Involvement Plan, Rev. 4.0 - reflects changes in elected officials.	KEMRON	Ohio EPA; USACE; USAEC; 88th RRC; Information Repository
10.3	Public Notice(s) (Availability of the Administrative Record File, Availability the Proposed Plan, Public Meetings)	10.3.1	Mar 23, 2006	Proof of Publication - Legal Notice in "The Marion Star" - Information Repository Access for Marion US Army Reserve LTA Environmental Restoration (Affidavit)	KEMRON USAEC	88th RRC Information Repository USAEC
		10.3.2	Dec 2006	Proof of Publication - Legal Notice in "The Marion Star" - Public Notice of Availability of Draft Final Marion LTA EE/CA (Affidavit)	KEMRON USAEC	88th RRC USAEC
		10.3.3	June 2007	Proof of Publication Legal Notice - "The Marion Star" - Public Availability Session June 25, 2007 - RmAWP (Affidavit)	KEMRON	USAEC; USACE; 88th RRC
		10.3.4	March 2006	Proof of Publication Legal Notice - "The Marion Star" - Public Meeting March 27, 2008 - Proposed Plan (Affidavit)	KEMRON	USAEC; USACE; 88th RRC
10.4	Public Meeting Transcripts					
		10.4.1	March 27, 2008	Transcript of Public Meeting for Proposed Plan, March 27, 2008	Terri Hall, Court Reporter	USAEC; USACE; 88th RRC
10.5	Documentation of Other Public Meetings					
		10.5.1	Jul 24, 2003	RAB Minutes of Meeting	USACE Contractor	RAB; USAEC; USACE; 88th RRC
		10.5.2	Nov 20, 2003	Transcript of RAB Meeting	USACE Contractor	RAB; USAEC; USACE; 88th RRC
		10.5.3	Apr 22, 2004	RAB Minutes of Meeting	USACE Contractor	RAB; USAEC; USACE; 88th RRC
		10.5.4	Feb 24, 2005	RAB Meeting Minutes	USACE Contractor	RAB; USAEC; USACE; 88th RRC
		10.5.5	Apr 28, 2005	RAB Minutes of Meeting	USACE Contractor	RAB; USAEC; USACE; 88th RRC
		10.5.6	July 28, 2005	RAB Minutes of Meeting	USACE Contractor	RAB; USAEC; USACE; 88th RRC
		10.5.7	Jan 26, 2006	RAB Minutes of Meeting and Transcript (no agenda available)	USACE Contractor	RAB; USAEC; USACE; 88th RRC
		10.5.8	Apr 27, 2006	RAB Agenda, Minutes of Meeting and Transcript	USACE Contractor	RAB; USAEC; USACE; 88th RRC
		10.5.9	Jul 27, 2006	RAB Agenda, Minutes of Meeting and copy of the Presentation (no transcript available)	USACE Contractor	RAB; USAEC; USACE; 88th RRC

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AR Index Document Type	Document Number	Document Date	Document Title	Author(s)	Recipient(s)	Document Location	
	10.5.10	Apr 26, 2007	RAB Agenda, Meeting Minutes & Transcript	USACE Contractor	RAB; USAEC; USACE; 88th RRC	USAEC; USACE; 88th RRC	
	10.5.11	Jul 26, 2007	RAB Agenda, Meeting Minutes & Transcript	USACE Contractor	RAB; USAEC; USACE; 88th RRC	USAEC; USACE; 88th RRC	
	10.5.12	Feb 28, 2008	RAB Agenda	USACE Contractor	RAB; USAEC; USACE; 88th RRC	USAEC; USACE; 88th RRC	
10.6	Fact Sheets and Press Releases	10.6.1	Nov 2006	Fact Sheet for Draft final EE/CA	KEMRON	RAB; USAEC; USACE; 88th RRC; Information Repository	USAEC; USACE; 88th RRC; Information Repository
	10.6.2	June 2007	Fact Sheet for RmAction Work Plan	KEMRON	RAB; USAEC; USACE; 88th RRC	USAEC; USACE; 88th RRC	
	10.6.3	March 2008	Fact Sheet for Proposed Plan	KEMRON	RAB; USAEC; USACE; 88th RRC	USAEC; USACE; 88th RRC	
10.7	Responsiveness Summary	10.7.1	June 2006	Final Action Memorandum - Appendix C	KEMRON	Ohio EPA; USACE; USAEC; 88th RRC; Information Repository	USACE; USAEC; 88th RRC; Information Repository
10.8	Late Comments						
10.9	Public Presentations and Information	10.9.1	Mar 8, 2006	email: Community Involvement Plan	USACE, H. Novotny	RAB	USAEC; USACE; 88th RRC
	10.9.2	Mar 23, 2006	Public Notice of Availability of Information Repository for Marion LTA - THE MARION STAR	KEMRON	RAB; USAEC; USACE; 88th RRC	USAEC; USACE; 88th RRC	
	10.9.3	Jul 27, 2006	RAB presentation: Agenda & Meeting Minutes	KEMRON	USACE; USAEC; 88th RRC	USACE; USAEC; 88th RRC	
	10.9.4	Nov 2006	Public Notice of Availability of Draft Final Marion LTA EE/CA - THE MARION STAR (Affidavit)	KEMRON	RAB; USAEC; USACE; 88th RRC	USAEC; USACE; 88th RRC	
	10.9.5	Apr 26, 2007	RAB Presentation, Agenda, Minutes of Meeting and Transcript	KEMRON	USAEC; USACE; 88th RRC	USAEC; USACE; 88th RRC	
	10.9.6	July 2007	RAB Presentation, Agenda and Meeting Minutes	KEMRON	USAEC; USACE; 88th RRC	USAEC; USACE; 88th RRC	
	10.9.7	Feb 2008	RAB Presentation	KEMRON	USAEC; USACE; 88th RRC	USAEC; USACE; 88th RRC	
	10.9.8	March 2008	Public Meeting Presentation	KEMRON	USAEC; USACE; 88th RRC	USAEC; USACE; 88th RRC	
11.0 TECHNICAL SOURCES AND GUIDANCE DOCUMENT							
11.1	EPA Headquarters Guidance	11.1.1	1989a	Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part A), EPA/540/1-89/002	USEPA		www.epa.gov
		11.1.2	1989b	Methods for Evaluating the Attainment of Cleanup Standards, Volume I: Soils and Solid Media. EPA 230/02-89-042	USEPA - Office of Planning, Policy and Evaluation		www.epa.gov

AR Index Document Type	Document Number	Document Date	Document Title	Author(s)	Recipient(s)	Document Location
	11.1.3	1991a	Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part A), Supplemental Guidance, Standard Default Exposure Factors	USEPA - Office of Emergency and Remedial Response, Washington, DC		www.epa.gov
	11.1.4	1991b	Risk Assessment Guidance for Superfund (RAGS), Volume I: Human Health Evaluation Manual, (Part B, Development of Risk-Based Preliminary Remediation Goals)	USEPA		www.epa.gov
	11.1.5	1992a	Guidance for Data Usability in Risk Assessment. EPA/540/G-90/008	USEPA - Office of Emergency and Remedial Response		www.epa.gov
	11.1.6	1992b	Supplemental Guidance to RAGS: Calculating the Concentration Term. OSWER 9285.6-10	USEPA		www.epa.gov
	11.1.7	1995	Supplemental Guidance to RAGS: Region 4 Bulletins, Human Health and Risk Assessment (Interim Guidance)	USEPA - Waste Management Division, Office of Health Assessment		www.epa.gov
	11.1.8	1996	Soil Screening Guidance: Technical Background Document. EPA/540/R95/128	USEPA - Office of Solid Waste and Emergency Response		www.epa.gov
	11.1.9	1997a	Exposure Factors Handbook Volume I - III. EPA/600/P-95/002Fa, Fb and Fc.	USEPA - Office of Research and Development, Washington, DC		www.epa.gov
	11.1.10	1997b	Health Effects Assessment Summary Tables. FY 1997 Update. EPA/540/R-97/036	USEPA		www.epa.gov
	11.1.11	Jun 5, 1997	Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, Interim Final, June 5, 1997. EPA 540-R-97-006	USEPA		www.epa.gov
	11.1.12	1998	Risk Assessment Guidance for Superfund: Volume I Human Health Evaluation Manual (Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments). Publication 9285.7-01D	USEPA		www.epa.gov
	11.1.13	Apr 1998	Guidelines for Ecological Risk Assessment, Final, April 1998. EPA 630-R-95-002F	USEPA		www.epa.gov
	11.1.14	2000	Region IX Preliminary Remediation Goals (PRGs)	USEPA		www.epa.gov
	11.1.15	2001	Risk Assessment Guidance for Superfund: Volume 1 Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessments). EPA/540/R/99/005	USEPA		www.epa.gov

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AR Index Document Type	Document Number	Document Date	Document Title	Author(s)	Recipient(s)	Document Location
	11.1.16	2002	Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites. OSWER 9285.6-10	USEPA - Office of Emergency and Remedial Response		www.epa.gov
	11.1.17	2003	Recommendations for the Technical Review Workgroup for Lead for an Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil. EPA-540-R-03-001	USEPA		www.epa.gov
	11.1.18	1996	Gilbert, R.O., T. LeGore, and R.F. O'Brian. An overview of Methods for Evaluating the Attainment of Cleanup Standards for Soils, Soil Media, and Groundwater, EPA Volumes 1, 2, and 3. Prepared for the USEPA under contract DE-AC06-76R10 1830	R.O. Gilbert T. LeGore R.F. O'Brian		www.epa.gov
	11.1.19	November 2006	Integrated Risk Information System (IRIS) Database	USEPA		www.epa.gov/iris
	11.1.20	Dec-90	US Environmental Protection Agency, Superfund Removal Procedures, Action Memorandum Guidance. EPA 540/p.90/004, OSWER Directive 9360.3-01	USEPA		www.epa.gov
	11.1.21	2000	US Environmental Protection Agency, Data Quality Objectives Process for Hazardous Waste Site Investigations, EPA/600-R-00-007	USEPA		www.epa.gov
	11.1.22	1993	US Environmental Protection Agency, Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA. EPA540-R-93-057	USEPA		www.epa.gov
	11.1.23	1990	US Environmental Protection Agency, Quality Assurance/Quality Control Guidance for Remedial Activities: Sampling QA/QC Plan and Data Validation Procedures. EPA 540/G-90-004	USEPA		www.epa.gov
	11.1.24	November-92	US Environmental Protection Agency, RCRA Groundwater Monitoring: Draft Technical Guidance. EPA 530-R-93-001. United States Environmental Protection Agency	USEPA		www.epa.gov
	11.1.25	December-06	US Environmental Protection Agency, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods SW-846, Third Edition, November 1986; Revision 1, July 1992; Revision 2, November 1992; Update II, September 1994; Update III, December 1996.	USEPA		www.epa.gov
	11.1.26	February-00	US Environmental Protection Agency, Use of Non-Time Critical Removal Authority in Superfund Response Actions. (Luftig, Steve, Breen, Barry	USEPA		www.epa.gov
	11.1.27	1982	US Geological Survey, Marion East Quadrangle, Ohio, 7.5 Minute Series Topographic Map			www.usgs.gov

NOTE: Documents listed as bibliographic sources/references in site documents may not be listed separately in the Administrative Record Index.

AR Index Document Type	Document Number	Document Date	Document Title	Author(s)	Recipient(s)	Document Location
	11.1.28	March 1991	USEPA, 1991c. Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual Supplemental Guidance. Standard Default Exposure Factors. OSWER Directive 9285.6-03	USEPA		www.epa.gov
	11.1.29	November 1993	USEPA, Superfund Standard Default Exposure Factors for the Central Tendency and RME	USEPA		www.epa.gov
	11.1.30	1996	USEPA, Recommendations of the Technical Review Workgroup for Lead for an Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil. EPA-540-R-03-001.	USEPA		www.epa.gov
	11.1.31	2003a	USEPA, 2003a. Human Health Toxicity Values in Superfund Risk Assessments. Memorandum by: Michael B. Cook. Office of Superfund Remediation and Technology Innovation. OSWER 9285.7-53. December 5, 2003.	USEPA		www.epa.gov
11.2	EPA Regional Guidance					
11.3	State Guidance	11.3.1	Feb 1995	Technical Guidance Manual for Hydrogeologic Investigations and Groundwater Monitoring	Ohio EPA	www.epa.state.oh.us
		11.3.2	Feb 2003	Guidance for Conducting Ecological Risk Assessments. DERR-00-RR-031	Ohio EPA - Division of Emergency and Remedial Response, Columbus, Ohio.	www.epa.state.oh.us
		11.3.3	Apr 2004	Division of Emergency and Remedial Response, Technical Decision Compendium: Human Health Cumulative Carcinogenic Risk and Non-carcinogenic Hazard Goals for DERR Remedial Response and Office of Federal Facilities Oversight	Ohio EPA	www.epa.state.oh.us
		11.3.4	Apr 28, 2004	Use of USEPA Region 9 PRGs as Screening Values in Human Health Risk Assessments. (Reference also made to ecological risk assessment requirements)	Ohio EPA	www.epa.state.oh.us
		11.3.5	1994	Illinois Environmental Protection Agency (IEPA), Interim Default Values for the Estimation of the Dermal Absorption of Chemicals from Soil	IEPA	www.epa.state.il.us
11.4	Other Guidance	11.4.1	1995	ASTM (American Society for Testing and Materials), Standard Guide for Developing Conceptual Site Models for Contaminated Sites, E1689-95. ASTM Philadelphia, PA.	ASTM	www.astm.org

APPENDIX B
RESPONSIVENESS SUMMARY

APPENDIX B RESPONSIVENESS SUMMARY

This Appendix responds to public comments directed to the US Army regarding the *USARC GFPR No Action/No Further Action Proposed Plan, U.S. Army Reserve Local Training Area (LTA), Marion, Ohio*, Revision 0.0, March 2008. As appropriate, public comments and concerns have been addressed in this Responsiveness Summary and incorporated into the decision making process for determining final remaining actions necessary to complete remediation of the Marion LTA under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as documented in the Marion LTA Decision Document, May 2008.

Summaries of the history of the site and investigations of contamination at the site, an analysis of remedial alternatives, and the Army's preferred alternative regarding remaining actions for final cleanup of the Marion LTA were presented in the Proposed Plan, for which a public comment period was begun on March 18, 2008 and concluded on April 16, 2008. The issuance of the Proposed Plan was advertised in a public notice published in a local newspaper on March 18, 2008. Copies of the Proposed Plan were made available to the public in the project Information Repository at the Marion Public Library, through the Restoration Advisory Board (RAB) Technical Committee, members of which received a copy of the Proposed Plan, through the Army's website as advertised in the public notice of the Proposed Plan, and through contacting the US Army Environmental Command Restoration Oversight Manager. A fact sheet also was prepared and mailed with the public notice to the current mailing list for the site and to all property owners adjacent to the site.

The public was able to present comments during the public meeting, and via email and US Postal Service to the US Army Environmental Command. Comments were received from Ohio EPA and two members of the general public. The US Army has considered all comments received, incorporated information into the Decision Document as appropriate in response to the public comments, and has prepared this Responsiveness Summary consistent with applicable guidance and regulations. Responses to all significant comments are provided below. Each response includes the original comment or a summary thereof, followed by the US Army's response. The original comments, affidavit of the public notice and the fact sheet all are available in the project administrative record file.

Comment 1: The *Proposed Plan*, as presented, does not represent a No Action/No Further Action remedy. The remedy is based on a human health risk assessment which did not evaluate an unrestricted use scenario. As presented, the *Plan* includes restricted access and a restricted future use.

Response: The U.S. Army has identified that the reasonably foreseeable future land use for the property is a Reservist training facility and/or industrial/commercial (i.e., non-residential). The Agency is correct that the underlying determination of no residual unacceptable risk at the site is based upon property uses being limited to these scenarios. Therefore, the Army has specified in the Proposed Plan, and will further elaborate in the Decision Document, that Land Use Controls (LUCs) will be maintained for the Marion LTA parcel. The LUCs will be maintained until the concentrations of hazardous substances in the soil are reduced to levels that allow for unrestricted use. If any portion of the Marion LTA is remediated to, or otherwise demonstrated to meet, unrestricted use standards, the LUCs will be modified to exclude that portion of the site from land use control.

If the Army proposes to modify the LUCs for the Marion LTA, the Army will submit a notification to modify the LUC to Ohio EPA for review. CERCLA 121(c) five-year reviews will be conducted to assess the long-term effectiveness of the remedy, including LUCs.

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The Army has prepared a LUC RD document that describes the details of LUC implementation and maintenance, including periodic inspections via the five-year review process. The Army is responsible for implementation, maintenance, periodic reporting, and enforcement of LUCs in accordance with the remedial design. Although the Army may transfer these responsibilities to another party by contract, property transfer agreement, or through other means, the Army remains responsible for remedy integrity to include (1) CERCLA 121(c) 5-year reviews; (2) notification of the appropriate regulators and/or local government representatives of any known LUC deficiencies or violations; (3) provision of access to the property to conduct any necessary response; (4) the ability to change, modify, or terminate LUCs and any related deed or lease provisions; and (5) assurance that the LUC objectives are met to maintain remedy protectiveness.

If the Army determines that there is non-compliance with a LUC, the Army will address the effectiveness of the LUC, including any required notifications and corrective measures. The Army will seek Ohio EPA concurrence prior to a land use change that is inconsistent with the LUC objectives, the use assumptions of the remedy, or results in the termination of LUCs.

The Army will provide notice to Ohio EPA prior to any transfer or sale of the Marion LTA or any portion thereof.

If the Army transfers ownership of the Marion LTA or any portion thereof to another federal agency, department or entity, the transfer documents will require that the federal transferee include the LUCs in its property management plan or equivalent document. The Army will advise the federal transferee of all obligations contained in the Decision Document and the associated LUC.

If the Army transfers ownership of the Marion LTA or any portion thereof to a non-federal entity, the Army will provide information to that entity in the draft deed and transfer documents regarding necessary LUCs.

The Army will, upon transfer of fee title, ensure that the transferee executes and records an environmental covenant acceptable to Ohio EPA that would impose the LUC terms and conditions of the Decision Document against the transferee(s), as well as subsequent property owner(s) or user(s) or their contractors, tenants, lessees, or other parties. This covenant will be recorded in the deed records of the Marion County Recorder's office immediately following the recording of the transfer deed and will run with the land in accordance with state law. Ohio EPA's right to enforce the LUCs would supplement, not replace, the Army's right and responsibility to enforce the LUCs. As a condition of property transfer, lease, or license, the Army may require the transferee or lessee in cooperation with other stakeholders to assume responsibility for various implementation actions. Third-party LUC responsibility will also be incorporated into pertinent contractual, property, and remedial documentation, such as a purchase agreement, deed, lease, license, or permit and a remedial design addendum.

Comment 2: In Section 2.4, page 12, the document states, "*The site is intended to continue to be used for US Army Reservist training. Access to the facility is restricted by fencing and locked gates. When any intrusive action is proposed ... the activities are coordinated through the US Army Reserve 88th RRC . . .*"

A similar rationale was used in the Human Health Risk Assessment to restrict risk evaluation to non-residential receptors (quoted from Residual Human Health Risk Assessment document of February 2008; section 1.1.1; page 2, "*future residential use was not applicable to the property...*")

The above statements imply that the preferred remedial alternative is not a bonafide "No Action/No Further Action" alternative, but rather one which includes both institutional control and engineering

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remedies. Such a remedial alternative necessitates operation and maintenance (O&M) obligations (“fencing and locked gates”).

Additionally, USEPA (1995) requires formal institutional control when “... risk assessment, evaluates a future use, under which exposure is limited, it will not serve the traditional role, evaluating a “no action” scenario. A remedy, i.e.; institutional control to limit future exposure, will be required to protect human health and the environment...”

Response: Please see response to Comment 1 regarding the Army’s plans for ensuring the future use of the property excludes residential or recreational development.

With regard to operation and maintenance obligations, the Final Marion LTA Residual HHRA (KEMRON, 2008) and Final Removal Action Completion Report (KEMRON, 2008) both concluded that the estimated risk values for each assessed portion of the property conforms to the CERCLA acceptable risk range of 1×10^{-4} to 1×10^{-6} and a Hazard Index below 1 for the industrial worker, construction worker, Reservist, and adolescent trespasser. These documents also demonstrated that the industrial/commercial use standards have been met for the property as well. Fencing and locked gates are not required to exclude trespassers or to control risk to human health or the environment. The exposures included in the assessment of potential risk to human health all demonstrate no unacceptable risk under either the NCP/CERCLA or Ohio EPA risk goals for both industrial or commercial use of the parcel and use as a Reservist training facility. The Army maintains the fencing and locked gates as part of the US Army security standards for the site, but the fencing and gates are not necessary to protect human health. The risk assessment for the site included an adolescent trespasser scenario and the resultant risk estimate for this scenario is below federal and state risk standards and goals. As long as the property is not developed as a residential or recreational use facility, there is no unacceptable risk to human health or the environment posed by exposure to the Marion LTA property. Therefore, no operation and maintenance beyond restrictions to ensure the appropriate use as a Reservist training facility or industrial/commercial facility apply to this parcel.

Comment 3: Ohio EPA recognizes that. . . “... the U.S. Army will establish land use controls for the Marion LTA, as necessary, to ensure that the Marion LTA will not be used for purposes other than industrial/commercial (i.e., residential and recreational use will be prohibited).” As required by both DoD and Army policy on LUCS, the Army will need to prepare a Land Use Control Plan that will maintain, monitor, and enforce these land use controls. This plan should be submitted to Ohio EPA for review, along with a detailed description of the land use control as it will be detailed in the Record of Decision.

If the U.S. Army divests itself of the property in the future, Ohio EPA would expect that a deed restriction (Environmental Covenant) should be put in place (OEPA (2005)) for future owners to exclude the possibility of future residential land use. Details of a potential property transfer should also be included in the ROD. If necessary, Ohio EPA can provide examples of ROD language proposed for use at another Army facility in Ohio.

Response: The Army agrees that if the property were transferred in the future to a non-federal entity, the Army would ensure that the transferee executes and records an environmental covenant acceptable to Ohio EPA that would impose the LUC terms and conditions. Please see response to Comment 1 regarding the Army’s commitment to maintaining the site LUCs, and assurance regarding transfer responsibilities. The response to comment 1 also provides additional detail of how the Army will ensure property use remains within the scenarios considered in the CERCLA site evaluation and the basis of the Decision that no additional response action is necessary other than maintenance of the LUCs.

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For clarification, please note that the Army is developing a Decision Document, not a Record of Decision, since the Marion LTA is not an NPL site.

The Army is developing a Land Use Control Remedial Design (LUC RD), which will be completed following the Decision Document. The LUC RD will provide additional detail regarding the LUCs. The Army will provide a copy of the Decision Document to Ohio EPA, and anticipates sharing the LUC RD with the Agency as well.

Comment 4: Since the property is not being remediated for unrestricted reuse, under CERCLA, the U.S. Army is required to conduct a CERCLA five year review. The results of this review should be forwarded to Ohio EPA for our review, until the land use controls are no longer necessary.

Response: The Proposed Plan notes in Section 4.3, page 20: "Because this remedy does not result in remediation of hazardous substances, pollutants, or contaminants on-site such that the property is available for unlimited or unrestricted use, the remedy will be evaluated through the conduct of a CERCLA five-year review, in accordance with applicable USEPA guidelines." For additional discussion of the Army's commitment to conduct the appropriate CERCLA 121(d) reviews, please see response for Comment 1.

Consistent with USEPA guidance regarding conduct of CERCLA five-year reviews, a copy of the report generated will be submitted to Ohio EPA.

Comment 5 - Our son is in the Army and the history of toxic substances at the training site are too great to allow anyone to use it in the future. There are too many other pieces of land to train on.

Response

The Army environmental restoration program for the Marion Local Training Area (LTA) site is designed to provide assessment and remediation, where required, of impacted environmental media on the site. Several environmental investigations have been conducted on and in the vicinity of the site in conformance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) process and associated requirements. Site Investigation (SI) activities conducted on the Marion LTA property and past site CERCLA actions for adjacent parcels are documented in the Information Repository and the Administrative Record file for each parcel. The CERCLA process at the Marion LTA has been summarized in chronological order in several documents, including the Final Supplemental SI Report (KEMRON, 2006), Final Action Memorandum (KEMRON 2007) and the Proposed Plan (KEMRON, 2008).

The Army is required by CERCLA and the National Contingency Plan (NCP) to appropriately assess risks posed by contaminants at Army sites. The NCP requires that a risk assessment "characterize the current and potential threats to human health and the environment" (40 CFR §300.430(d)(4)). The Army has followed the CERCLA process to investigate and clean up environmental contamination that may pose unacceptable risk to human health or the environment as required by federal regulations. As is documented in the 2008 Final Removal Action Completion Report and Final Residual Human Health Risk Assessment for the Marion LTA, the site is safe for the reasonably anticipated future use of the property. The reasonably anticipated future uses include US Army Reservist training or industrial or commercial property use.

Comment 6 –

a) The commenter noted that the Army stated that excessive lead was found at the site. The commenter noted that when radiation decays, it reverts back to lead as decaying. The commenter stated that he felt testing conducted at the Marion LTA have been flawed.

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- b) The commenter stated that the Army is working on Pole Lane Road, removing tanks, and sneaking them out at night, stating this is resented and the public should know about the work.
- c) The commenter stated that a past USACE Restoration Advisory Board (RAB) co-chair, Mr. Kevin Jasper, in the past had altered the minutes of the meeting and made false statements.
- d) The commenter stated that the Army collected water samples up in the north end of Marion that it showed beryllium, polonium, corrdium, out of 300 wells that they were to test, 30 of them showed positive for radiation.
- e) The commenter stated that he had a letter that they stated that in 1952, the government was going to use the reactor here in Marion to build and make polonium in Marion. The commenter stated, "Now, in 1957 there was another order that come out of Chicago, Illinois that the people that worked at 517, it so happens, that anybody that worked at 517 should be monitored and if they should receive radiation at .007, that they should be -- action should be taken immediately. All right. Now, I can tell you for a fact that my dad's badges ran from 65 to 385. Now, you're telling us that there was no radiation out here. Now, something is seriously wrong. Now, you're also showing us -- these trees, these trees was that size when I was a youngster, when I was seven years old them trees were the very same thing. We know that when you have pollution and radiation in our soils and stuff, that our growth, it does not grow."
- f) The commenter stated that the Courts have indicated that the government was lying.
- g) The commenter raised questions about radiation testing at sites other than the Marion LTA.
- h) The commenter raised concerns that the Ohio EPA currently does not have a representative as a member of the Marion RAB, and raised questions about alleged past statements by Ohio EPA employees regarding Marion and the Marion RAB.
- i) The commenter raised questions about Ohio EPA requirements regarding sewers in the City of Marion. The commenter raised concerns about local citizens who have died from cancer, and expressed his opinion that the cancer was caused by exposures from government sites in the Marion area.
- j) The commenter raised questions about trenches that were historically photographed at the Marion Engineer Depot. The commenter notes that the trenches were approximately "50 feet long, I forget how deep, they extended one to 150 feet and extended the other to 100. We also know that they put asbestos and they spread the radiation upon the ground with a road grader and they spread it over a 90 acre plot. How's come none of this has been tested? We have pictures showing of them doing it. We've got pictures of them washing out cars, we've got pictures of them putting tow motors on railroad cars that's contaminated, how's come none of this is taken into effect, how's come, there's pictures coming from the government, but yet still you people totally ignore it. Why? You can pick and chose the areas that you want to pick, you want to pick -- you want to test here, but you don't want to test there."

Response

- a) Lead wastes identified in soil at the Marion LTA at LTA-15 were associated with apparent paint wastes. No wastes were identified on the property that are indicative of any type of radioactive waste materials or sources. Radioactivity monitoring was performed in multiple phases of the site investigation. Radioactive screening was performed using a Pancake Geiger-Mueller detector utilized for the first phases of the SI and the drum removal, and using a Ludlum Model 3 Radiation Survey Instrument with scanning pan probe during the 2005 SI work. Areas of the parcel in which the radioactive screening were performed were detailed in the SI reports, and were based upon the information regarding historic site

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use, including potential radioactive releases or disposal on the Marion LTA as indicated in interviews during the site assessment. The screening was conducted with Ohio EPA oversight and in conformance with manufacturer specifications. The screening was performed in multiple areas, and included screening of the ground surface, excavated test pits, retrieved soil borings to depths of up to 30 feet below grade, and drums retrieved during the 1999 drum removal action. At no time were the instrument readings abnormally elevated or otherwise indicative of radioactive wastes.

A Non-Time Critical Removal Action was completed in 2007 on three areas of the Marion Local Training Area. During this removal action, approximately 400 cubic yards of contaminated soil from within LTA-15 were determined to exceed the acceptable regulatory standard for lead content. The contaminated soil included visually identifiable flecks of paint as well that indicate the residual paint-related waste is the source of the elevated lead content. The soil with elevated lead was treated to stabilize the elevated lead concentrations such that the final lead concentrations were within the regulatory standards to allow the soil to be disposed in a landfill. All the soil and wastes were disposed off-site at an approved landfill. The removal activities and all other field work at this site were overseen by the Ohio Environmental Protection Agency.

Confirmatory soil samples after excavation was complete demonstrated that the contaminants had been removed to levels that allowed safe use of the property for US Army Reservist training or potential future industrial or commercial development.

b) No tanks have been identified on or removed from the Marion LTA, and no site data indicate any tanks potentially are present on the property. No work at the Marion LTA has been performed at night by the Army or its contractors.

c) All RAB meetings have a complete transcript prepared by a court reporter. All RAB meeting minutes, which summarize the meetings but do not replace the complete transcripts, are reviewed and subject to approval of the RAB members for each RAB meeting.

d) Groundwater sampling on the Marion LTA was conducted in accordance with Ohio EPA reviewed and approved sampling and analysis plans. The Army is not aware of the sampling event the commenter is referencing regarding 300 wells tested with 30 positive detections of radiological parameters. The local health department has sampled some residential wells in the past for radiological parameters, some of which showed naturally occurring radiological elements at levels considered to be background or below screening levels and federal and state regulatory maximum contaminant levels.

No potential sources of radioactive wastes have been observed nor any abnormal instrument readings recorded at the Marion LTA during the entire CERCLA site evaluation. Ohio EPA has agreed with the Army's findings that groundwater at the Marion LTA has not been contaminated by site activities and that no action is required under CERCLA for site groundwater.

e) Soil concentrations of contaminants found at the Marion LTA during the several site investigations conducted over the years did not indicate levels that would be harmful to the plant species endemic to the site. Ohio EPA concurred with this finding in its approval of the Marion LTA ecological risk assessment (KEMRON, 2006). Natural resource evaluations of the property have not identified stunted or abnormal tree growth. Following the removal action, confirmatory sampling demonstrated that levels remaining on site were within the acceptable risk range and were protective of human health and the environment. Please also see previous responses to comments regarding radiation monitoring conducted at the site.

f) All records of the CERCLA site evaluation and investigation have been presented to the public in RAB meetings, and through placement of documents in the Information Repository at the Marion Public

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Library. The Army's investigation of the Marion LTA has disclosed all results of site assessment, sampling and analysis, and no records have been altered or falsified in any way.

g) Please see responses above regarding radiation monitoring at the site. Information regarding radioactive sampling and analysis as well as other investigation details for other US Army sites in the Marion area is available in the respective Information Repository documents for those sites at the Marion Public Library. Additionally, the commenter may contact the US Army Corps of Engineers Formerly Utilized Defense Sites (FUDS) Marion Engineer Depot Point of Contact, Dr. Nathaniel Peters, at:

Dr. Nathaniel Peters, II, P.E.
Environmental Engineering Section ED-E-E
U.S. Army Corps of Engineers
Louisville District
600 Dr. Martin Luther King, Jr. Place
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h) The comment has been shared with the Marion RAB co-chairs. This topic has been discussed at recent RAB meetings. The USAEC and the 88th RRC have not discouraged Ohio EPA participation at the RAB and have expressed appreciation for the Ohio EPA's regular attendance at RAB meetings by at least two Agency employees and the Agency's comments and technical input on the CERCLA evaluation of the Marion LTA.

i) The Marion LTA is not sewered and is not related to sewer issues within the City of Marion. Risk assessment documentation, based on site-specific data from the Marion LTA, does not indicate that the site poses a risk to off-site persons or that significant risk was posed to Reservists historically during training exercises. Site data are detailed in the various site reports in the Information Repository at the Marion Public Library.

j) There are several ditches that extend onto the Marion LTA that are primarily fed by stormwater from upgradient properties, which include portions of the former Marion Engineer Depot. Based on information available, it is not certain if the trenches were related to these streams/ditches. However, given the historic information provided to the Army during record reviews and interviews as part of the CERCLA process, the sediments of the stream and stream waters on the Marion LTA were sampled and analyzed in accordance with Ohio EPA reviewed and approved sampling and analysis plans. The data from the sampling and analyses were presented in the Final Supplemental SI Report (KEMRON, 2006), with the associated conclusion that site activities had not impacted the streams. No evidence of historic trenches containing wastes was identified on the Marion LTA, although a total of 51 Areas Requiring Environmental Evaluation (AREEs) were investigated through the CERCLA process. As described in previous responses, no evidence of radioactive wastes was identified on the Marion LTA.

Non-friable asbestos was identified at the ground surface in LTA-01 in extremely small quantities, and at LTA-15. Significant quantities of roofing material were identified at LTA-01 of the Marion LTA. These materials had been spread over the entirety of the LTA-01 surface area. All of these materials were excavated and disposed off-site at an approved landfill during the 2007 Non-Time-Critical Removal Action at the Marion LTA. One twenty (20) cubic yard roll-off box of non-friable asbestos was recovered from LTA-15 and properly disposed off-site during a 2007 Non-Time-Critical Removal Action. A thorough evaluation of the remainder of the site reveals no additional asbestos waste deposits on the Marion LTA. Additional information regarding the wastes excavated and disposed from the Marion LTA

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during a 1999 Time Critical Removal Action regarding site drums and the 2007 Non-Time Critical Removal Action are provided in the respective reports for these actions. The reports are available in the Information Repository at the Marion Public Library.