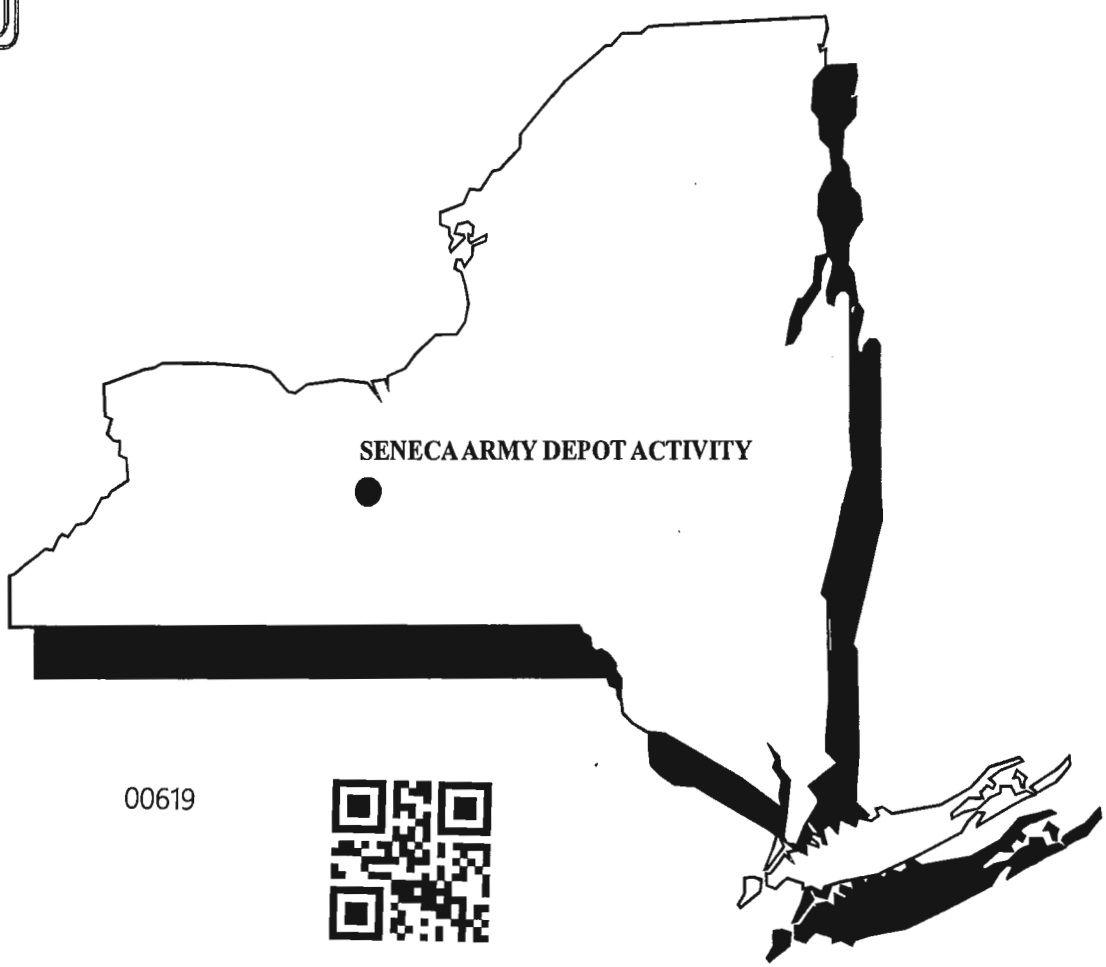
U.S. ARMY ENGINEER DIVISION
HUNTSVILLE, ALABAMA



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FINAL - APPENDIX E

RECORD OF DECISION
FOR THE ASH LANDFILL OPERABLE UNIT
SENECA ARMY DEPOT ACTIVITY (SEDA)

JULY 2004

APPENDIX E

RESPONSE TO EPA AND NYSDEC COMMENTS

Response to Comments from the U. S. Environmental Protection Agency, Region II
Federal Facilities Section

Subject: Draft Final Record of Decision for the Ash Landfill
Seneca Army Depot
Romulus, New York

Comments Dated: February 19, 2004

Date of Comment Response: March 8, 2004

Comment:

Section 1.0. page 1-1: The first sentence of the second and third paragraphs needs to include EPA after the word "Army's" as the selecting agency. The Army is not statutorily empowered to select remedies without EPA concurrence.

Response:

Agreed. The U.S. Environmental Protection Agency (EPA) has been identified as an agency involved in the selection of the identified remedy.

Comment:

Section 1.0. page 1-2:

1) On the first paragraph after "Description of the Selected Remedy," there should be a dash between "residually" and "contaminated" within the second sentence.

2) The fourth bullet, please add a capital A before "Contingency, and start "plan" with a capital letter as well. This same correction should also be done on Section 11.0.

Response:

1) Agreed. A dash has been added between the words.
2) Agreed. The recommended capitalization has been added to Section 1, Section 5 (for consistency) and Section 11.0.

Comment:

Section 1.0, page 1-2, 5th bullet:

(1) We suggest ending the sentence after "Land Use Controls (LUCs) to attain the remedial action objectives," and include a new subsection titled "Land Use Controls," which would include more clearly specified objectives.

New LUC subsection:

Land Use Controls

The objectives of the land use restrictions are as follows and will also be incorporated into deeds and/or leases for this property:

- Prevent access or use of the groundwater until cleanup levels are met.
- Maintain the integrity of any current or future remedial or monitoring system such as monitoring wells, impermeable reactive barriers.
- Maintain the 12 inch vegetative soil layer to limit ecological contact . .
- Prohibit the development and use of property for residential housing, elementary and secondary schools, child care facilities and playgrounds (Do we need this objective?)
- Do we need an objective to prevent unauthorized excavation?

2) Delete the 3rd paragraph on p. 1-2, and substitute:
"TheLUCs will be continued until the concentration of hazardous substances in the soil and the groundwater beneath have been reduced to levels that allow. for unlimited exposure and unrestricted use. A LUC Remedial Design will be prepared as the land use component of the Remedial Design. Within 90 days of ROD signature, the Army shall prepare and submit to EP A for review and approval a LUC remedial design that shall contain implementation and maintenance actions, including periodic inspections. The Army shall be responsible for implementing, inspecting, reporting on and enforcing the LUCs described in this ROD in accordance with the approved LUC remedial design. Although the Army may later transfer these procedural responsibilities to another party to by contract, property transfer agreement, or through other means, the Army shall retain ultimate responsibility for remedy integrity."

3) Include a figure showing the boundaries of the LUCs.

4) Note that the above LUC modifications are also applicable to Section 5.0, page 5-1 and Section 11.0, page 11-1.

Response:

1) Partially Agree. The suggested changes have been incorporated into the text of the identified bulleted item. However, the recommended text for the Land Use Control Section has been modified as shown below:

Land Use Controls

The objectives of the land use restrictions are as follows and will also be incorporated into deeds and/or leases for this property:

- Prevent access to or use of the groundwater until cleanup levels are met.

- Maintain the integrity of any current or future remedial or monitoring system such as monitoring wells and impermeable reactive barriers.

- Maintain the vegetative soil layer to limit ecological contact.

2) The Army has added a discussion on the LUCs that is similar, but not identical, to what has been requested by the EPA. The Army's version is consistent with language that has been used by the Army in the ROD that has been presented for SEAD-25 and SEAD-26. The Army's proposed language is shown below.

> "The LUCs will be continued until the concentration of hazardous substances in the soil and the groundwater beneath have been reduced to levels that allow for unlimited exposure and unrestricted use. A LUC Remedial Design for the Ash Landfill, which will comply with New York State requirements outlined in Environmental Conservation Law (ECL) Article 27, Section 1318: *Institutional and Engineering Controls*, will be prepared as the land use component of the Remedial Design. Consistent with Section 14.4 of the Federal Facilities Agreement (FFA), a schedule for completion of the draft Institutional Control Remedial Design Plan (which will detail implementation and maintenance actions, including periodic inspections and monitoring), will be completed within 21 days of the ROD signature. The Army shall be responsible for implementing, inspecting, reporting on and enforcing the LUCs described in this ROD in accordance with the approved LUC remedial design. Although the Army may later transfer these procedural responsibilities to another party by contract, property transfer agreement, or through other means, the Army shall retain ultimate responsibility for remedy integrity."

3) Agreed. A new figure (Figure 1-1) has been added to show the proposed extent of the LUCs at the Ash Landfill.

4) Agreed. Comparable modifications have been made in Section 5.0 and 11.0.

Comment:

Section 1.0. page 1-8: Please change the EPA signatory name and title as follows: Mr. GeorgePavlou, Director, Emergency and Remedial Response Division, U.S. Environmental Protection Agency, Region 2.

Response:
Agreed.

Comment
Section 11.0. page 11-2. 3rd ¶:
Please delete the comma after "Alternative" and after "MC-3a."

Response
Agreed.

Response to Comments from the New York State Department of Environmental Conservation, Division of Environmental Remediation

Subject: Draft Record of Decision for the Ash Landfill
Seneca Army Depot
Romulus, New York

Comments Dated: September 15, 2003

Date of Comment Response: March 8, 2004

General Comment 1: The migration control portion of the remedy (MC-3a) contains the installation of a water line to the potential downgradient receptor (farm house). However, the summary of the selected remedy does not contain this as an element of the remedy. After discussing this with the Project Managers of the Army and EPA it seems that the water line installation is part of a contingency plan should contravention of drinking water standards be found beyond the third barrier wall. I also understand that the contingency would be to provide drinking water that meets regulatory requirements to the farm house and that a number of options are available to do this, of which one is the water line. This concept of a contingency plan is acceptable to us as long as the elements and trigger for the contingency are clearly stated in the ROD in the appropriate places.

Response 1: Acknowledged. The ROD has been revised, as detailed below, to clarify the implementation of a contingency plan to include an alternative water supply or air sparging, if required based on trigger criteria.

Specific Comment 1-1 (Section 9.2.4): The second paragraph of Section 9.2.4 should be rewritten to reflect the proposed contingency plan and what will trigger the plan.

Response 1-1: Section 9.2.4 has been revised to indicate that a contingency plan will be developed as part of the alternative in the event that the remedy is not completely effective. The contingency plan will provide for an alternative water supply for the downgradient receptor (farmhouse) or air sparging. The triggers for implementation of contingency plan (TCE and 1,2-DCE NYSDEC criteria for Class GA groundwater, both 5 µg/L) are presented in Section 12.1.

Specific Comment 1-2 (Section 11.0): The following element of the Selected Remedy: "... Contingency plan including additional monitoring and air sparging, as necessary;" should contain any other important elements included in the plan.

Response 1-2: The Section 11.0 summary of the Selected Remedy has been revised to indicate the contingency plan is to include implementation of an alternative water supply to potential downgradient receptor (farmhouse) or air sparging, if required based on trigger criteria.

Specific Comment 1-3 (Section 12.1): Although the contingency plan is a minor part of the construction

project, it is key to being protective of human health. The contingency plan and what triggers it must be incorporated into this section of the ROD.

Response 1-3: The contingency plan and TCE and 1,2-DCE trigger criteria have been incorporated into Section 12.1.

General Comment 2: The "Tables" included in the ROD are confusing. The mean plus 2X the standard deviation do not seem to add up to the 95th UCL. We could use some explanation as to what these numbers are trying to illustrate. Likewise the "Exposure Point Concentration" is confusing. It appears that sometimes it is the 95th UCL and in other tables it is different. I'm sure that your calculations are correct, but we need some explanation to understand the point of this information. This comment has no bearing on the remedy being selected but rather on understanding the illustration being made with this data.

Response 2: As presented in the Baseline Risk Assessment included in the June 1994 Remedial Investigation Report at the Ash Landfill Site, the 95th Upper Concentration Limit (UCL) is the value for which there is 95 percent confidence that the true site mean will not exceed this value, and is calculated as follows:

$$95th\,UCL = \bar{x} + t\frac{s}{\sqrt{n-1}}$$

where:

x = the mean concentration
s = the standard deviation of the sample results
n = the number of samples
t = the statistic for a one tailed t-test at the 95th confidence level

For each contaminant found on the Ash Landfill respective to the media which was sampled, when the calculated 95th UCL is less than the maximum detected concentration, the 95th UCL was used as the Exposure Point Concentration (EPC). However, when the 95th UCL exceeded the maximum detected value, then the maximum detected value was used as the EPC.

Response to Comments from the United States Environmental Protection Agency

Subject: Draft Record of Decision for the Ash Landfill (OU-1)
Seneca Army Depot
Romulus, New York

Comments Dated: June 26, 2003

Date of Comment Response: August 19, 2003

General Comments:

Comment 1: Based on our last iteration regarding this Operable Unit (OU-01), an agreement was reached between the Army and EPA to re-grade the depression area called the Cooling Pond (SEAD-3). This agreement was mainly due to a gap of sampling data within the depression area. Please add the agreed action mentioned above within the ROD document.

Response 1: As part of the remedy, during the excavation of the debris piles, the Ash Cooling Pond (SEAD-3) will be backfilled and re-graded to fill the pond. This statement has been added to the text throughout the document.

Comment 2: There is a lack of substantiation regarding the ecological risk assessment. The conclusion of the Baseline Ecological Risk Assessment (ERA) suggests that the site conditions may pose a slightly elevated ecological risk due to the presence of heavy metals. However, no additional information has been presented within the ROD document to rule out the need for remedial action at this site. The Army made reference to field observation and monitoring data within the RI Report, however no further information has been furnished to substantiate its position.

Response 2: Field observations and monitoring data were presented in the Remedial Investigation (RI) at the Ash Landfill Site (Parsons, 1994) in Section 6.6. *Ecological Risk Assessment.* The last paragraph in Section 7 of the ROD has been updated to include more detailed information on field activities.

> Metal exceedances were identified for ecological guidelines and reported literature values for on-site soil, sediment, and surface water. The actual ecological risk caused by these exceedances is not readily observable. Phase I and Phase II field evaluations for the RI included fish trapping and counting, benthic macroinvertibrate sampling and counting, and small mammal species sampling and counting. Trapping of small mammals was performed within a 0.5 mile radius to evaluate the diversity and abundance of species within an area closer to the actual site. In addition, a vegetation survey was performed, identifying major vegetation and understory types. Site ecological characterization activities included a site reconnaissance by field biologists in 1992, terrestrial trapping, fish captures, qualitative evaluation of plant communities, quantitative sorting of the macroinvertibrate data, and identification and descriptions of visible evidence of environmental stresses. Sampling of sediments

and macroinvertibrate identification and counting was used to identify the macroinvertibrate biological community. The conclusions determined from these field efforts indicated a diverse and healthy aquatic and terrestrial environment. The results of the phase I data collection did not indicate stressed biological or plant communities. Furthermore, the use of the on-site wetlands and surface waters by aquatic species is unlikely since these wetlands are small and dry during a large portion of the year.

Specific Comments:

Comment 1: Page 6-1, last ¶: The description of the Debris Piles (SEAD-14) as small surface features within this context is confusing. Please delete the third to last sentence.

Response 1: The sentence has been removed.

Comment 2: Page 6-2, 2nd ¶: Quarterly groundwater monitoring in 1996, 1997, and 1998 seems to have had a much lower detection limit (<0.2 µg/L) than the most recent January 2000 sampling effort (>1 µg/L). Consequently, the comparison is inconsistent. Please modify your basic reference point of sampling results to 1 µg/L.

Response 2: The reference point has been modified to 1 µg/L. It should be noted that reported detection limits for volatile organic compounds (VOCs) have varied since different analytical methods have been used in various sampling rounds. Part of the quarterly sampling program design calls for alternating between EPA Method 524.2 (EPA's referenced drinking water method) and EPA Method SW846 8260B (EPA's referenced method for Hazardous Waste Programs) for the determination of VOCs. These methods, while capable of characterizing the same analytes, are based on different procedures and inherently have different reporting limits or detection limits. Additionally, since the beginning of the monitoring program at the Ash Landfill in the mid 1990s, instrumentation and procedures defined by the two methods have improved, allowing laboratories to report lower detection limits for the same method. This is the cause for the variation in detection limits.

It should be noted that the different methods are being performed in response to a previous EPA comment. The previous EPA comment required the army to analyzed non-detects under SW846 8260B by using Method 524.2 due to the lower detection limit.

Comment 3: Page 6-2, last sentence: EPA has no record of the Bench Scale Treatability Report (Environmental Technologies, Inc., September 25, 2001). Please furnish a copy to EPA.

Response 3: The report is authored by Enviromental Technologies, Inc. A copy of the report will be provided to the EPA.

Comment 4: Page 6-4, last ¶: This paragraph documents the impact of sediment found at the different investigations. However, the reviewer could not find how the documented impact to sediment is or will be addressed. This issue seems to be related to General Comment 2 above.

Response 4: The ecological risk assessment suggested that, based upon a comparison with all available state and federal guidelines, in addition to literature information, there may exist a slight threat due to the presence of nine metals (arsenic, cadmium, copper, iron, lead, manganese, mercury, nickel, and zinc). Consequently, during the 1994 IRM for the Ash Landfill, the sediments representing the potential slight risk were excavated. Following treatment, post-remediation sampling showed that the soils and sediments met the project-specific cleanup goals and were used as backfill at the "Bend in the Road" area and in the excavated wetland areas. It was judged that further remediation for wetland sediments would not be required.

In addition, as noted above in response to General Comment #2, an extensive field investigation was conducted and there was no evidence of a stressed terrestrial or aquatic population.

Comment 5: Page 7-1, 1st ¶: Although EPA agreed to the language included at the second to last sentence, there are certain actions needed to be included as part of the agreed language. See General Comment 1 above.

Response 5: An additional statement has been added that the Cooling Pond (SEAD-3) will be addressed by re-grading the depression area.

Comment 6: Page 8-1, 3rd ¶ and page 9-2, 2nd ¶: Remedial Action Objectives and Remedial Alternatives include mitigation of soil/sediment. Please identify sediments to be remediated.

Response 6: For the reasons discussed in response to Comment 4, sediment is not a media of concern. The text has been revised to state that the remedial action objectives are for soil.

Comment 7: Page 9-7, Section 9.1.5: Please add the re-grade of SEAD-3 for this alternative. See General Comment 1 above.

Response 7: As part of the remedy, during the excavation of the debris piles, the Ash Cooling Pond (SEAD-3) will be backfilled and re-graded to fill the pond. This statement has been added to the text throughout the document.

Comment 8: Appendix A & C: These sections were referenced within the document but were missing from the document. Please add the referenced document.

Response 8: The Administrative Record (Appendix A) has been added. No public comments were received. This will be indicated in Appendix C.

Response to Comments from the New York State Department of Environmental Conservation, Division of Environmental Remediation

Subject: Draft Record of Decision for the Ash Landfill
Seneca Army Depot
Romulus, New York

Comments Dated: May 9, 2003

Date of Comment Response: August 19, 2003

General Comments:

Comment 1: The date of the public participation activities should be included in the document.

Response 1: The public comment period on the Propose Plan was January 9, 2003 through February 7, 2003. A notice was placed in the local papers on January 9, 10, and 12, 2003. The date of the public meeting was January 21, 2003.

A public comment period on the non-time critical removal action to address VOCs in the soil was held from August 10, 1994 until September 10, 1994. A public notice was placed in the local papers on August 10, 1994, and a public meeting was held on August 17, 1994. This information has been added to the text.

Comment 2: Please include a clause compelling the property owner to annually certify to the New York State Department of Environmental Conservation that the deed restriction is in place, and that the use of the property is consistent with that restriction.

Response 2: Details on the implementation and enforcement of the institutional controls (ICs) will be specified in the Remedial Design (RD) Plan. The Ash Landfill RD Plan will include: a Site Description; the IC Land Use Restrictions; the IC Mechanism to ensure that the land use restrictions are not violated in the future; and, Reporting/Notification requirements.

Comment 3: Were any public comments received during the public comment period for the Ash Landill Proposed Plan? If so, they should be included along with the Army's responses. If not, then the document should indicate such.

Response 3: There were no public comments. This information has been added to the text.

Comment 4: Page 1-2: Please spell out ARARS.

Response 4: Agreed. ARAR has been defined as Applicable or Relevant and Appropriate Requirement in the

text.

Comment 5: Page 1-3: Include New York State Department of Health (NYSDOH) with NYSDEC in the State Concurrence statement.

Response 5: The statement has been revised as follows:

> NYSDOH forwarded a letter of concurrence regarding the selection of a remedial action to NYSDEC, and NYSDEC, in turn, forwarded to USEPA a letter of concurrence regarding the selection of a remedial action in the future. This letter of concurrence has been placed in Appendix B.

Comment 6: Page 1-3, Declaration: Are both remedies stated considered "permanent"? Clarification is needed.

Response 6: Both remedies are considered permanent.

Comment 7: Page 1-6, Section 1.0, Declaration: The names of all signatories should be provided.

Response 7: The names will be added when the Final ROD is submitted.

Comment 8: Page 2-1: Paragraph 1 and 2 definitions of the Ash Landfill site (Operable Unit/Ash Landfill) are very confusing. The terms of "site", "operable unit", and the physical landfill itself are used interchangeably for the same areas. Further clarification is needed.

Response 8: The text has been revised to clarify that the "site" and the "operable unit" are the same thing.

Comment 9: Page 2-1: The groundwater plume still emanates for the site, it is not in past tense.

Response 9: The text has been revised accordingly.

Comment 10: Page 2-2: Groundwater is classified as "Class Fresh Groundwater GA (GA). The department is not familiar with this classification. Is "Class Fresh" a correct term?

Response 10: The statement has been revised to "the site groundwater is classified as Class GA groundwater

by NYSDEC. . ."

Comment 11: Page 3-1: How was the trash that was burned in the incinerator determined to be "uncontaminated"? Additional information is needed.

Response 11: The word "uncontaminated" has been removed from the text. The sentence has been revised to read "From 1941 to 1974, household trash and depot refuse was burned in a series of Refuse Burning Pits (SEAD-14) near the Abandoned Incinerator Building (Building 2207) (SEAD-15)."

Comment 12: Page 3-2: Please spell out RCRA.

Response 12: Agreed. Resource Conservation and Recovery Act has been spelled out in the text.

Comment 13: Page 3-3, last bullet: It is Proposed Plan, not a Proposed Remedial Action Plan as stated. In addition, please include the date of the Final Proposed Plan.

Response 13: The bulleted statement has been revised to state Proposed Plan (December 2002).

Comment 14: Page 3-4: Please remove the statement "(T)he non-time critical removal action was conducted...groundwater plume of VOCs" as it is redundant to a previous statement in the paragraph.

Response 14: Agreed. The statement has been removed.

Comment 15: Page 3-4, last sentence: insert "in groundwater" after "VOCs". Shouldn't the treatability study that was conducted be included in this section as well?

Response 15: The sentence has been revised as " . . .the positive benefits of the IRM have been observed as the concentrations of VOCs in groundwater in the removal area have decreased by more than 95 percent."

The treatability study is described in Section 6.2.

Comment 16: Page 4-1, Community Participation: RAB meetings are, at best, held bimonthly, not monthly as stated.

Response 16: The text has been revised as follows: "To encourage this exchange, meetings and presentations, occurring at approximately a bi-monthly basis, have been made to the RAB regarding the overall CERCLA progress that has been made at several sites within the Depot, including the Ash Landfill site."

Comment 17: Page 6-1, Section 6.0 Site Characteristics: Contrary to the statement "(T)his section provides an overview of...the actual and potential routes of exposure posed by the conditions at the site", the section does not identify the actual and potential routes of exposure. Revisions are necessary.

Response 17: The sentence has been revised to state that "(T)this section provides an overview of the site impacts."

Comment 18: Page 6-1, Section 6.1, impacts to Soil, 2nd Paragraph: Insert "chlorinated" before "VOCs" in the first sentence and change "aromatic COCs" to aromatic VOCs" in the second sentence. In addition, please change the 2nd to the last sentence on the page to "(T)he extent of the aromatic VOCs in..."

Response 18: Agreed. The text has been revised accordingly.

Comment 19: Page 6-2, Section 6.2, Impacts to Groundwater: The "Bend in the Road" area described as near the western edge of the landfill, yet on page 2-1, it is described as the northern side of the landfill. Please correct this discrepancy.

Response 19: The "Bend in the Road" area is located around the north western edge of the landfill. The text in Section 2.1 and Section 6.2 has been revised accordingly.

Comment 20: Page 6-4: Please check the spelling in the first sentence.

Response 20: No spelling mistake is noted. If NYSDEC is referring to "Enviremetal", this is the proper name of a company and does not reflect a spelling error.

Comment 21: Page 7-1, Section 7.0, Summary of Site Risks: Revise the following statement to include the underlined word in "...SEAD-15 (Abandoned Incinerator Building) are not of health or environmental concern".

Response 21: The text has been revised accordingly.

Comment 22: Page 8-1, last bullet: Change "through" to "to".

Response 22: It is the Army's understanding that the suggested change would make the sentence confusing. The intent of the statement is to express that exposure to off-site receptors could occur in the event that the VOC plume migrated off-site. The statement remains unchanged.

Comment 23: Page 9-8: Change the sentence "(S)ince this alternative would result in…" to "(S)ince these alternatives would result in…".

Response 23: The text has been revised accordingly.

Comment 24: Page 9-13: It is stated in the 2nd paragraph that the water line would be extended to the off-site farmhouse, yet this proposed water line extension is not discussed in the earlier description of Alternative MC-3A. Page 10-9 contains a reference that Alternative MC-3A would include this water line extension also. Further clarification is needed.

Response 24: The Army is not clear on the reference of the "earlier description" of Alternative MC-3a. Section 9.2.4 is the first time that the alternative is described in its entirety. Since Alternative MC-3a is the Selected Remedy, the major components of this alternative were listed in Section 1. The water line is not considered a major component of the alternative, and the Army believes it is inappropriate to include a full description of the remedy in Section 1.

Comment 25: Page 11-2, Section 11.0, Selected Remedy: In several instances, "would" should be replaced with "will".

Response 25: The changes have been made to the text.

Comment 26: Figure 11-1: This figure did not reproduce well and there is a typographical error in the title.

Response 26: The figure has been revised.