

APPENDIX – E

RESPONSE TO COMMENTS (RTC) TABLE

**FORMER WATER PRODUCTION WELLS SURVEY AT THE RAVENNA ARMY AMMUNITION PLANT AND CAMP RAVENNA
RAVENNA OHIO
COMMENT RESPONSE TABLE
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Ohio EPA – Nancy Zikmanis / Mike Eberle					
O-1	1		Executive Summary (ES). This section describes the types of water wells that were surveyed and includes a secondary task of mapping of abandoned and active oil and gas wells on Ravenna Army Ammunition Plant (RVAAP) property	The ES should also clearly describe the types of wells that were not included in the location survey, i.e., former residential wells on RVAAP property	This survey did not include the identification and location of former residential wells. The primary purpose of the survey was to identify and locate the historical water production wells that were used during the initial construction of the RVAAP facility. Later in the project, the oil and gas wells were included in the survey as requested by the OEPA. The identification and location of former residential wells within the RVAAP property boundary is beyond the contractual scope of work for this survey.
O-2	1		ES, last paragraph, last sentence, states, "...12 wells were not located."	It would clarify the sentence if it would read, "...12 wells could not be located." Please make this change.	This sentence will be revised as follows: '...and twelve (12) wells could not be located.'

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Ohio EPA – Nancy Zikmanis / Mike Eberle					
O-3	Cover and Title Pages		Title of the Document should indicate that oil and gas wells were also located		The title will be revised as follows: “Former Water Production Wells and Oil and Gas Wells Survey at Ravenna Army Ammunition Plant and Camp Ravenna.”
O-4	3		Section 1.0, RVAAP History, was noted to be very minimal.	Additional information related to the dates of acquisition of the property, the development of certain areas, and the historical mission of the facility would be useful. It is anticipated this information could be gathered or cross referenced from existing ‘Facility Wide’ documents	This section will be expanded to include historical land procurement, contractors and the facility’s construction.
O-5	3		Paragraph 1, Sentence 2. A typographical error is noted, “...which quickly grew to almost twelve thousand (1200).”	These two numbers do not agree. It is assumed the number should be twelve hundred. Please make this change.	Will revise the sentence as follows: “...which quickly grew to almost twelve hundred (1200).”

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Ohio EPA – Nancy Zikmanis / Mike Eberle					
O-6	4		<p>Section 2.0, Field Work. Please clarify in this section that the primary target wells in this survey were those unused water production wells considered “temporary construction wells” drilled in the early 1940’s by Hunkin-Conkey Construction Company in support of the war effort as mentioned in the ES. It is a little confusing</p>	<p>This section should also briefly describe the actual field methods and equipment and equipment used to located the wells</p>	<p>The following changes will be made: Section 2.0 Field Work title will be changed to Section 2.0 Initial Investigation</p> <p>In Section 2.0 Initial Investigation (Field Work) the first sentence will be revised as follows: “The purpose of this well survey is to identify and locate the existing historical water production wells remaining on the Ravenna Army Ammunition Plant (RVAAP) property in order to assist in the future plugging and abandonment of the target wells.”</p> <p>Section 3.0 Wells-Tanks-Stacks title will be changed to Section 3.0 Tools Used in Locating Wells (information used will be extracted from Appendix E).</p>

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Ohio EPA – Nancy Zikmanis / Mike Eberle					
O-7	4		Section 2.0, last paragraph, last sentence. The last sentence refers the reader to Figure 4.1. This figure doesn't exist.	Please change the reference as necessary	The reference to non-existent Figure 4.1 will be removed.

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O-8	5		<p>Section 3.0 Provide an introductory paragraph describing this notebook. What year is the notebook from, whose is it, and for what was it originally used? How was it used to locate former wells?</p>	<p>Also in this section, Figures 3.1, 3.2, and 3.3 are presented, but are not included in the Table of Contents. Please include them in the Table of Contents</p>	<p>Original Section 3.0 Wells-Tanks-Stacks will be changed to Section 2.2 Wells-Tank-Stacks and will be revised to address comments:</p> <p>“The field book is a log containing handwritten measurements from observations in the field during the period December 1940 to December 1941.”</p> <p>“The field book notes were kept by survey crews from the Hunkin-Conkey Construction Company who was the Ravenna Arsenal General Contractor.”</p> <p>The raw field data consisting of horizontal angles and measured distances and vertical angles used to determine elevation enabled the survey crews to establish the horizontal location of wells but also their elevation above sea level.</p>
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O-9	8		<p>Section 4.1, sentence 2 states, “All wells which fell into this category were closed and sealed off (see Appendix C).”</p> <p>Ohio EPA needs to understand what the phrase “closed and sealed off” means.</p> <p>Does it mean they were properly abandoned by grouting? Can a procedure be provided that was followed and a date of abandonment?</p> <p>Does evidence of these wells still exist?</p>		<p>Vista will review existing records and if additional information is recovered about the wells being properly abandoned it will be provided.</p> <p>The purpose of the survey was to identify and locate any existing historical water production wells to assist in the proper abandonment of these wells.</p> <p>Based on observations in the field survey any remains pertaining to the well houses no longer exist.</p>

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Ohio EPA – Nancy Zikmanis / Mike Eberle					
O-10	8		Section 4, General Comment. This section is appended by Five Exhibits (A, B, C, D, and E).	<p>Please identify these Exhibits as Figures 4.1, 4.2, 4.3, 4.4 and 4.5 and include them in the Table of Contents.</p> <p>It would be clearer and follow typical RVAAP document formatting. It would also prevent confusion with Exhibit A located in the “Plates” Section.</p>	<p>The terms ‘Exhibit A’ thru ‘Exhibit E’ will be changed to Figures 4.1 thru 4.5 respectively.</p> <p>The Figures will be included and noted in the Table of Contents</p>
O-11	8		Section 4.2, sentence 2, typographical error.	The word “is” should be changed to “in.”	This sentence will be revised as follows: “Well No. 7 was enclosed in a pit below...”

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Ohio EPA – Nancy Zikmanis / Mike Eberle					
O-12	8		Section 4.3, sentence 3 states, “Well No. 95’s location was shown by (to?) Sergeant Rex Huffenbach from the Ohio National Guard (OHARNG), who indicated they would like to retain this for future use.”	The status of this well needs to be documented. What are the depth, casing length, and diameter? Does a log exist? Is a cover welded or secured firmly in place?	<p>Section 4.3 sentence 3 will be revised to: “Well No. 95’s location was shown to VSC surveyor Don Trocchio by MSG Rex Huffenbach from the Ohio Army Nation Guard...”</p> <p>Visual details of this well are currently shown in Appendix A, Detail Sheet for Water Well No. 95, page A-81. The physical details for this well are presented on the Well Summary Table, (Table 5.1) page 16 of the main text.</p> <p>Diameter of the casing is 6”. Depth was not recorded as this was not part of the survey scope. The photos depict a wooden cover over the well casing pit. No record or log of this well could be located.</p>

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Ohio EPA – Nancy Zikmanis / Mike Eberle					
O-13	8		Section 4.4. This section describes the map that was created with the locations of the identified wells. Section 5.0 also includes the Well Summary table, a table that provides the X, Y, and Z coordinates for each located well.	Provide the appropriate Geographic Coordinate System and reference measurements (i.e., feet or meters). Please make this notation on the Table and on Exhibit A.	<p>Each of the Detail Sheets of the Wells currently include the following Geographic information:</p> <ol style="list-style-type: none"> 1. A Vicinity Map 2. A Bar Scale in Feet 3. State Plane Coordinates and Reference DATUM <p>The Summary Well Table currently includes the following Geographic information:</p> <ol style="list-style-type: none"> 1. X Coordinate 2. Y Coordinate 3. Z Elevation <p>Exhibit A (pending Figure 4.1) currently includes the following Geographic information:</p> <ol style="list-style-type: none"> 1. General Area map showing well locations 2. A Bar scale in Feet 3. Projection Datum (NAD83) and Ohio State Plane Rectangular Grid (North Zone)

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O-14	Appendix		Appendix A, “Detail Sheets for Water Wells,” should have a sub title that allows the reader to understand these are the located former water wells identified on Exhibit C (Figure 4.3?).		Will change Appendix A Cover/Fly page title to the following: APPENDIX – A DETAIL SHEETS OF EACH LOCATED FORMER PRODUCTION WELLS AS SHOWN ON FIGURE 4.1
O-15	TOC		Table of Contents	Please give each plate a unique number and title.	There are inherent technological difficulties in reproducing historical maps to include a caption or page number on the image. A cover page will be inserted before each plate with a plate number and a description to uniquely identify them in the table of contents.

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Ohio EPA – Nancy Zikmanis / Mike Eberle					
O-16	Exhibit A		Exhibit A in Section 4 and in the Plate Section show “yellow stars” representing the located wells. Several of the stars are missing (hidden) under CAD layers, i.e., wells 49, 49A and 55.	Please show these locations.	<p>The following corrections will be made on Exhibit A – Former Water Production Wells Survey Well Location Index Map (pending Figure 4.1):</p> <p>Wells 49 & 49A Visibility– Due to the close proximity of these wells and the visual limitation with map size a Detail Inset box will be utilized. Under Wells 49 & 49A yellow call-out markers will be text which directs the user to, “See Detail Inset at left for Wells 49 & 49A.” The Detail Inset area will identify the location of these wells in relationship to each other using and will include a distance scale ratio of 1” = 20’.</p> <p>Well No. 55 will be visible displaying a yellow call-out and star symbol which will mark its location.</p>

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O-17	Plates		Plates. There are four maps that make up the Plates. Three are historical. It was noted by Ohio EPA that numerous residential wells are visible on these maps.	Were the residential wells a target of the study? Why not?	Vista Sciences' scope includes only Hunkin-Conkin former water production wells.
O-18	Plates		Exhibit A. There is a notation at the bottom of the map that states, "All but 4 of the wells shown above (95, 96, and 98, 100) were considered temporary wells drilled circa 1940-41 for construction at RVAAP in support of the war effort."	How are these four wells different?	<p>These are wells with no public or internal records that could be found (See section 4.3).</p> <p>The note on Exhibit A (pending Figure 4.1) will be expanded to read as follows:</p> <p>"Note: All but 5 of the wells shown above (49A, 95, 96, 98, and 100) were considered temporary wells drilled circa 1940-41 for construction at RVAAP in support of the war effort. No record of these 5 well could be located. They were found by chance."</p>

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O-19	16		Well Summary Table.	Please label this table as Table 5.1 and include it in the Table of Contents.	The Well Summary Table will be changed to the following: Table 5.1 Well Summary Table The table will be included in the table of contents.
O-20	15		Section 5.0. This section should provide a recommendation for a “path forward” to properly abandon all located wells that could provide a conduit for contaminants reaching the groundwater		The Army plans to properly abandon the referenced wells. The USACE is currently preparing a FY-2013 contract award to implement this action. The new contract is currently scheduled for award in July 2013