

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 9  
270 Michigan Avenue, Buffalo, NY 14203-2915  
P: (716) 851-7220 | F: (716) 851-7226  
www.dec.ny.gov

February 25, 2021

John Haynes  
Army National Guard G9  
111 South George Mason Drive  
Arlington, VA 22204

Joseph Witte  
AECOM  
12429 Milestone Center Drive  
Suite 150  
Germantown, MD 20876

**Camp O’Ryan Rifle Range MRS-2, New York  
NYSDEC Site No. 961012  
Munitions Response Site NYHQ-008-R-02  
Draft Remedial Investigation Report Comments**

Greetings:

The New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) have reviewed the draft Remedial Investigation Report dated January 2021. The NYSDEC and NYSDOH have determined that this document is incomplete. We offer the following comments.

1. The report cover and site references within the report should include the NYSDEC site identification number (961012) designated for this site.
2. Executive Summary – RI Analytical Results: NYS Soil Cleanup Objectives (NYS SCOs) are based on site use and can be found in 6NYCRR Part 375. The NYS SCOs must be considered applicable or relevant and appropriate requirements (ARARs) for the site.
3. Section 2.4 Previous Investigations: This draft Remedial Investigation Report presents the results of the current investigation for the operable unit known as Munitions Response Site 2 (MRS-2). References to previous investigations and evaluations are noted, however, the data from the previous investigations does not appear to have been compiled and utilized in the human and ecological risk assessments. Relevant data is contained in the 2009 Site Investigation Report (MRS-2 focus) by NYSDEC and the 2011 Preliminary Site Investigation Report by Woods Hole Group (WHG). This data was summarized in the 2012 Final Site Investigation Report (statewide sites) by Parsons. In accordance with DER-10, section 3.14(a), where an RI is conducted in several phases, the RI report is to be a comprehensive report of all data collected. The final RI for this operable unit should be a

comprehensive document that integrates data tables, figures, findings, conclusions and all relevant appendices such as any data logs, photo logs and other relevant information from previous investigations into one comprehensive document where all available data is utilized to characterize the site for contaminants of concern and for the risk assessment in this document. Additionally, this RI Report provides a comprehensive public record of these investigations and serves as the basis of the alternatives analysis/feasibility study. Additional commentary on the inclusion and assessment of previous data will be presented in subsequent comments.

4. Section 2.6, Preliminary Conceptual Site Model, Pathways: This section notes that there are no water bodies present in MRS-2, however, the report does note that the Target Berm-Ponded decision unit (DU) consists of an inundated drainage swale and is periodically wet. Sediments sampled in this DU contained elevated levels of lead. Surface water and sediment have the potential to migrate from this DU which could result in a pathway. The 2011 Woods Hole investigation included surface water and pore water sampling downgradient of MRS-2 in general and specifically the Target Berm-Ponded DU. Some of the surface water results would likely have included water emanating from the target berm ponded DU. The water data results from the WHG investigation must be included and considered in the pathway analysis. Additionally, the pore water data from the WHG may offer some relevant data on impacts, or lack of, to groundwater from MRS-2. Therefore, this data should be utilized where deemed relevant to this investigation.
5. Section 5, Remedial Investigation Results: Data from the NYSDEC and WHG investigations must be added to the report as necessary for a comprehensive summary of available data for use in assessing the levels and extent of contaminants of concern at the site and the subsequent risk analysis and feasibility evaluation.
6. Section 5.3, Incremental Sampling Results: This section should be retitled as Soil Sampling Results. The discussion of data results from incremental sampling can be included in a new subsection and an additional subsection containing the soil sampling results from 2009 NYSDEC investigation must be added. Figure 4.25-2 and Table 4.25-2 from the 2012 Parsons report provides a visual and tabular summary of the 2009 NYSDEC sample results. A similar figure with sample locations exceeding soil contaminant criteria for lead and data summary table must be added to this new subsection. The 2011 WHG pore water and surface water results downgradient of MRS-2 must be added to this report as necessary since this data can be used to assess potential surface and groundwater impacts and to support the conclusions on impacts to water quality. Otherwise, surface and groundwater samples from these DUs will be needed to complete the risk assessment with any degree of confidence.
7. Section 6, Contaminant Fate and Transport: The fate and transport evaluation must be re-analyzed to include the data from the 2009 NYSDEC investigation and the 2011 WHG investigation. The surface and pore water data from the WHG investigation can either affirm or revise the conclusions for water. Conceptual site model (CSM) Figure

6-1 may require revision based upon re-evaluation that includes data from the NYSDEC and WHG investigations.

8. Section 7, Risk Assessment: The risk assessment evaluation must be re-analyzed to include the data from the 2009 NYSDEC investigation and the 2011 WHG investigation. The surface and pore water data from the WHG investigation could potentially affirm or revise the conclusions for water at the DU.
9. Section 7.1, Human Health Risk Assessment: The human health risk assessment evaluation should be re-analyzed to include the data from the 2009 NYSDEC investigation and the 2011 WHG investigation. The secondary screening evaluation for using mean concentrations for each DU instead of NYS background screening levels does not conform to health risk assessment criteria and requirements contained in NYSDEC DER-10 Appendix 3B. Therefore, the use of mean concentrations is not accepted and the human health risk assessment should be revised using actual levels when comparing to NYS action levels and DER-10 health risk assessment methodology. The NYS SCOs must be considered ARARs for the site. Given the unrestricted nature of the site, the unrestricted use SCOs are the ARARs considered for the site.
10. Section 7.2, Ecological Risk Assessment: The ecological risk assessment evaluation should be re-analyzed to include the data from the 2009 NYSDEC investigation and the 2011 WHG investigation, and updated as necessary.
11. Section 8.3, Health Hazard Evaluation Module: The health hazard evaluation model should be re-analyzed to include the data from the 2009 NYSDEC investigation and the 2011 WHG investigation, and update the evaluation as necessary.
12. Section 9, Summary and Conclusions: General Comment: The summary and conclusions may require revision following re-analysis that includes data from the 2009 NYSDEC investigation and the 2011 WHG investigation. Following the review of the data and conclusions for the 100 yard firing berm, the investigation of the 200 yard firing berm appears necessary and the investigation of MRS-2 is incomplete.
13. Section 9.1.1, 100-yard Firing Berm DU. The title needs to be corrected (change “target” to “firing”). Data from the 2009 NYSDEC investigation should be referenced and must be considered in the conclusion.
14. Section 9.1.2, Target Area DU. Data from the 2009 NYSDEC investigation should be referenced and must be considered in the conclusion.
15. Section 9.1.3, Target Berm - Hillside DU. Data from the 2009 NYSDEC investigation should be referenced and must be considered in the conclusion.

16. Executive Summary: The Executive Summary should be revised based upon the above comments and revision to the body of the report.
17. Appendix E – Human Health Risk Assessment: The human health risk assessment must include the data from the 2009 NYSDEC investigation and the 2011 WHG investigation, and update the assessment as necessary. The secondary screening evaluation for using mean concentrations for each DU instead of NYS background screening levels does not conform to health risk assessment criteria and requirements contained in NYSDEC DER-10 Appendix 3B. Therefore, the use of mean concentrations is not accepted and the human health risk assessment should be revised using actual levels when comparing to NYS action levels and DER-10 health risk assessment methodology. The NYS SCOs must be considered ARARs for the site. Given the unrestricted nature of the site, the unrestricted use SCOs are the ARARs considered for the site.
18. Appendix F, Screening Level Ecological Risk Assessment: The ecological risk assessment must include the data from the 2009 NYSDEC investigation and the 2011 WHG investigation, and update the assessment as necessary.
19. Appendix G, Munitions Response Site Prioritization Protocol Tables
  - Table A, MRS Background Information: The last paragraph of the “Description of Receptors” notes that MRS is primarily used for debris storage. This should be corrected to note that a small portion of the MRS that resides on the subdivided parcel owned by King Brothers Masonry Contracting is used for debris storage.
  - Table 6, EHE Module: Population Density Data Element Table: Correct the notation to note that the rural community of Wethersfield is a town (not a city).
  - Table 21: Groundwater Data Element Table: This table should be revised to include groundwater data collected during the 2011 WHG investigation.
  - Table 22: Surface Water – Human Endpoint Data Element Table: This table should be revised to include surface water data collected during the 2011 WHG investigation.
  - Table 24: Surface Water – Ecological Endpoint Data Element Table: This table should be revised to include surface water data collected during the 2011 WHG investigation.
  - Table 26, Surface Soil Data Element Table: This table must be revised to include surface soil data collected during the 2009 NYSDEC investigation as hazardous levels of lead were detected.
  - Table 28, Determining the HHE Module Rating. This table should be re-evaluated based upon re-evaluations of preceding table revisions noted above.
  - Table 29, MRS Priority: This table should be re-evaluated based upon re-evaluations of preceding table revisions noted above.

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20. NYS requires an electronic data deliverable (EDD) of environmental data for upload to the NYS EQUIS database. Please submit an EDD package for laboratory data for soil and sediment samples collected during the RI. Information on EDD submissions can be found at the following link: <https://www.dec.ny.gov/chemical/62440.html>

In accordance with the terms of the Agreement, revise the RI to address the above comments and submit the revised document. Please advise NYSDEC of an anticipated schedule for resubmittal of the revised document.

If you have any questions regarding the above, please feel free to contact me at 716-851-7220 or by email at [eugene.melnyk@dec.ny.gov](mailto:eugene.melnyk@dec.ny.gov). If necessary, a conference call can be scheduled to discuss the above.

Sincerely,



Eugene W. Melnyk, PE  
Project Manager  
Division of Environmental Remediation

Attachment: Comment Matrix Spreadsheet, Draft Camp O’Ryan RI Report, *NYSDEC*,  
*February 2021*

ec: J. Swartwout – NYSDEC  
A. Caprio – NYSDEC  
G. Austin - NYARNG  
S. Lawrence – NYSDOH  
C. Bethoney - NYSDOH

**Responses to Comments for the  
Draft Final Remedial Investigation Report for Camp O'Ryan Rifle Range, New York  
Remedial Investigation through Decision Document for Six Army National Guard Munitions Response Sites**

Response Code: A = Agree with comment D = Disagree with comment C = Comment requires clarification

Comment Number	Commenter	Page(s)	Section	Line(s)	Comment	Response Code	Response
<b>TECHNICAL COMMENTS</b>							
1	E.Melnyk-DEC	Cover, ES-1, 1-1	Cover, Executive Summary, Section 1	Cover, ES-7, section 1 line 4	Add NYSDEC Site No. 961012		
2	E.Melnyk-DEC	2-8	2.4 Previous investigations	187-194	Data from previous investigations was not utilized in assessing site conditions or in the risk assessments. The final RI for this MRS unit should be a comprehensive document that integrates data tables, figures, findings, conclusions and all relevant appendices such as any data logs, photo logs and other relevant information from previous investigations into one comprehensive document where all available data is utilized to characterize the site for contaminants of concern and for the risk assessment in this document.		
3	E.Melnyk-DEC	2-9	2.6 - Preliminary Conceptual Site Model	244-269	This section notes that there are no water bodies present in MRS-2, however, the report does note that the Target Berm-Ponded decision unit (DU) consists of an inundated drainage swale and is periodically wet. The water data results from the WHG investigation must be included and considered in the pathway analysis. Additionally, the pore water data from the WHG may offer some relevant data on impacts, or lack of, to groundwater from MRS-2.		
4	E.Melnyk-DEC	5-1	5 - RI Results	2-6	Data from the NYSDEC and WHG investigations must be added to the report as necessary for a comprehensive summary of available data for use in assessing the levels and extent of contaminants of concern at the site and the subsequent risk analysis and feasibility evaluation.		
5	E.Melnyk-DEC	5-2	5.3 - Incremental Sampling Results	68-78	This section should be retitled as Soil Sampling Results and include the soil sample results from 2009 NYSDEC investigation. The discussion of data results from incremental sampling can be included in a new subsection. An additional subsection containing the soil sampling results from 2009 NYSDEC investigation must be added to this report.		
6	E.Melnyk-DEC	5-4	5.4.1 - 100-Yard Firing Berm DU	54-68	The soil sampling results from 2009 NYSDEC investigation for this DU must be added and utilized in this report. Figure 4.25-2 and Table 4.25-2 from the 2012 Parsons report provides a visual and tabular summary of the 2009 NYSDEC sample results.		
7	E.Melnyk-DEC	5-15	5.4.3 Target Berm-Hillside DU	86--177	The soil sampling results from 2009 NYSDEC investigation for this DU must be added and utilized in this report. Figure 4.25-2 and Table 4.25-2 from the 2011 Parsons report provides a visual and tabular summary of the 2009 NYSDEC sample results.		

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Comment Number	Commenter	Page(s)	Section	Line(s)	Comment	Response Code	Response
8	E.Melnyk-DEC	5-18	New Section 5.6 Water Results	140	A subsection discusssion the 2011 Woods Hole Group pore water and surface water results downgradient of MRS-2 must be added to this report as necessary since this data can be used to assess potential surface and groundwater impacts and to support the conclusions on impacts to water quality. Otherwise, surface and groundwater samples from these DUs will be needed to complete the risk assessment with any degree of confidence.		
9	E.Melnyk-DEC	6-1	6 - Contaminant Fate and Transport	2-6	The fate and transport evaluation should be re-analyzed to include the data from the 2009 NYSDEC investigation and the 2011 WHG investigation. The surface and pore water data from the WHG investigation can be used to either affirm or revise the conclusions for water. Conceptual site model (CSM) Figure 6-1 may require revision based upon re-evaluation that includes data from the NYSDEC and WHG investigations.		
10	E.Melnyk-DEC	7-1	7 - Risk Assessment	2-7	The risk assessment evaluation must be re-analyzed to include the data from the 2009 NYSDEC investigation and the 2011 WHG investigation. The surface and pore water data from the WHG investigation could potentially affirm or revise the conclusions for water at the DU.		
11	E.Melnyk-DEC; S. Lawrence-DOH	7-1	7.1 - Human Health Risk Assessment	29-142	The human health risk assessment evaluation should be re-analyzed to include the data from the 2009 NYSDEC investigation and the 2011 WHG investigation. The secondary screening evaluation for using mean concentrations for each DU instead of NYS background screening levels does not conform to health risk assessment criteria and requirements contained in NYSDEC DER-10 Appendix 3B. Therefore, the use of mean concentrations is not accepted and the human health risk assessment should revised using actual levels when comparing to NYS action levels and DER-10 health risk assessment methodology. The NYSSCOs must be considered ARARs for the site. Given unrestricted nature of the site, unrestricted use SCOs are the ARARs considered for the site		
12	E.Melnyk-DEC	7-6	7.2 Ecological Risk Assessment	2-68	The ecological risk assessment evaluation should be re-analyzed to include the data from the 2009 NYSDEC investigation and the 2011 WHG investigation, and updated as necessary.		
13	E.Melnyk-DEC	8-2	8.3 Health Hazard Evaluation	68-97	The health hazard evaluation model should be re-analyzed to include the data from the 2009 NYSDEC investigation and the 2011 WHG investigation, and update the evaluation as necessary.		
14	E.Melnyk-DEC	9-1	9 - Summary and Conclusion	2-20	General Comment: The summary and conclusions may require revision following re-analysis that includes data from the 2009 NYSDEC investigation and the 2011 WHG investigation. Following the review of the data and conclusions for the 100 firing berm, the investigation of the 200 yard firing berm appears necessary and the investigation of MRS-2 is incomplete.		

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15	E.Melnyk-DEC	9-1	9.1.1 100 Yard Firing Berm DU	27 - 34	The summary and conclusions may require revision following re-analysis that includes data from the 2009 NYSDEC investigation.		
16	E.Melnyk-DEC	9-2	9.1.2 Target Area DU	36 - 44	The summary and conclusions may require revision following re-analysis that includes data from the 2009 NYSDEC investigation.		
17	E.Melnyk-DEC	9-2	9.1.3 Target Berm - Hillside DU	46 - 59	The summary and conclusions may require revision following re-analysis that includes data from the 2009 NYSDEC investigation.		
18	E.Melnyk-DEC; S. Lawrence-DOH	ES 1 - 19	Executive Summary	2 - 210	The Executive Summary should be revised based upon the above comments and revision to the body of the report. The NYSSCOs must be considered ARARs for the site. Given unrestricted nature of the site, unrestricted use SCOs are the ARARs considered for the site		
19	E.Melnyk-DEC; S. Lawrence-DOH	Appendix E	Human Health Risk Assessment	2 - 119+++	The human health risk assessment must include the data from the 2009 NYSDEC investigation and the 2011 WHG investigation, and update the assessment as necessary. The secondary screening evaluation for using mean concentrations for each DU instead of NYS background screening levels does not conform to health risk assessment criteria and requirements contained in NYSDEC DER-10 Appendix 3B. Therefore, the use of mean concentrations is not accepted and the human health risk assessment should be revised using actual levels when comparing to NYS action levels and DER-10 health risk assessment methodology. The NYSSCOs must be considered ARARs for the site. Given unrestricted nature of the site, unrestricted use SCOs are the ARARs considered for the site		
20	E.Melnyk-DEC	Appendix F	Screening Level Ecological Risk Assessment		The ecological risk assessment must include the data from the 2009 NYSDEC investigation and the 2011 WHG investigation, and update the assessment as necessary. Section 3.4 notes that the surface soil data from the 2020 sampling were used in this evaluation.		
21	E.Melnyk-DEC	Appendix G Table 21	HHE Module Groundwater Data Element		This table should be revised to include groundwater data collected during the 2011 Woods Hole Group investigation.		
22	E.Melnyk-DEC	Appendix G Table 22	HHE Module Surface Water Human Endpoint Data Element		This table should be revised to include surface water data collected during the 2011 Woods Hole Group investigation.		
23	E.Melnyk-DEC	Appendix G Table 24	HHE Module Surface Water Ecological Endpoint Data Element		This table should be revised to include surface water data collected during the 2011 Woods Hole Group investigation.		



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Comment Number	Commenter	Page(s)	Section	Line(s)	Comment	Response Code	Response
24	E.Melnyk-DEC	Appendix G Table 26	HHE Module Surface Soil - Data Element Contaminant Hazard Factor		This table must be revised to include surface soil data collected during the 2009 NYSDEC investigation as hazardous levels of lead were detected		
25	E.Melnyk-DEC	Appendix G Table 28	Determining the HHE Module Rating		This table should be re-evaluated based upon re-evaluations of preceding table revision noted above.		
26	E.Melnyk-DEC	Appendix G Table 29	MRS Priority		This table should be re-evaluated based upon re-evaluations of preceding table revision noted above.		
<b>EDITORIAL COMMENTS</b>							
1	E.Melnyk-DEC	9-1	9.1.1 100 Yard Firing Berm DU	26	The title needs to be corrected (change "target" to "firing").		
2	E.Melnyk-DEC	Appendix G, Table A	Description of Receptors		The last paragraph of the "Description of Receptors" notes that MRS is primarily used for debris storage. This should be corrected to note that a small portion of the MRS that resides on the subdivided parcel owned by King Brothers Masonry Contracting is used for debris storage.		
3	E.Melnyk-DEC	Appendix G, Table 6	EHE Module - Population Density		Correct the notation to note that the rural community of Weathersfield is a town (not a city).		