Data Validation Report
Remedial Investigation at RVAAP-66 Facility Wide Groundwater
Semi-Annual & Quarterly Sampling Event for December 2017

Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

Contract Number: W9133L-14-D-0008

Task Order Number: 0003

Laboratory SDG 240-89104-1

Prepared For:

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CONTRACTOR STATEMENT OF INDEPENDENT TECHNICAL REVIEW

TEC-WESTON Joint Venture has completed this Data Validation Report. Data validation was performed by the Validator and Secondary QC Review was performed by the Senior Chemist. Signatures indicate the report is approved for release.

Erica Fisher, Validator, TEC-WESTON JV — Date: 12/28/2017

Peter Chapman, Senior Chemist, TEC-WESTON JV — Date: 12/28/2017

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INTRODUCTION

This report summarizes the results of the **EPA Stage 2B** data validation performed on groundwater samples and quality control (QC) sample data for the Remedial Investigation for RVAAP-66, Former Ravenna Army Ammunition Plant, Portage and Trumbull Counties, Ohio. Results are reported in laboratory sample delivery group (SDG) **240-89104-1**.

TestAmerica, Inc., Canton, Ohio performed the analyses listed in the table below:

Parameters	Analytical Method	Laboratory Location
Hexavalent Chromium	7196A	Canton, OH

TestAmerica Canton does not hold DoD accreditation for hexavalent chromium analysis; therefore, method EPA SW-846 Method 7196A is reported.

The data were reviewed using guidance and quality control criteria documented in the *Draft Remedial Investigation Work Plan for Groundwater and Environmental Services for RVAAP-66 Facility-Wide Groundwater, Appendix A: Sampling Analysis Plan, A.2: Uniform Federal Policy Quality Assurance Project Plan (UFP-QAPP) Former Ravenna Army Ammunition Plant, Portage and Trumbull Counties, Ohio Attachment A Data Validation Evaluation Sheets (January 2016)* which are based on the *Department of Defense Quality Systems Manual (DoD QSM), Version 5.0*; *USEPA National Functional Guidelines for Organic Data Review* (*EPA 2014*); and *USEPA National Functional Guidelines for Inorganic Data Review* (*EPA 2014*), the analytical methods, and professional judgment.

During data validation, qualifiers are assigned to assist in proper data interpretation. If values are estimated, data may be used for site evaluation purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. Data that have been rejected (R) should not be used for any purpose. Results with no qualifiers meet all data quality goals as outlined in the UFP-QAPP.

The following samples were validated:

Sample ID	Laboratory ID	Sample Date	Matrix	QC Sample	Hexavalent Chromium
RQLmw-012-120717-GW	240-89104-1	12/07/2017	Groundwater		✓
RQLmw-013-120717-GW	240-89104-2	12/07/2017	Groundwater	MS/MSD Sample	✓
RQLmw-014-120717-GW	240-89104-3	12/07/2017	Groundwater		✓
RQLmw-011-120717-GW	240-89104-4	12/07/2017	Groundwater	MS/MSD Sample	✓

DATA VALIDATION REPORT

1.1 DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative. All requested target analytes were reported for each sample.

1.2 SAMPLE RECEIPT

The samples were received by the laboratory on December 8, 2017; the samples were received in good condition, under chain-of-custody, and custody seals intact. Samples were properly preserved and cooler temperatures were less than 4°C.

1.3 TECHNICAL DATA VALIDATION

1.3.1 Hexavalent Chromium by Method 7196A

The following parameters were evaluated and met the required criteria. No validation flags were assigned based on the following:

- Holding times
- LODs and LOQs
- LCS recovery
- Method blank
- MS/MSD recoveries and RPDs
- Initial calibration verification
- Continuing calibration verification
- Initial calibration blank
- Continuing calibration blank

No analytical or quality parameters requiring further discussion were identified for Method 7196A.

No qualifications were made in this SDG.