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

Former Ravenna Army Ammunition Plant
Portage and Trumbull Counties, Ohio

Contract Number: W9133L-14-D-0008

Task Order Number: 0003

Laboratory SDG 280-96754-1

Prepared For:

National Guard Bureau

NGB-ZC-AQ
111 South George Mason Drive
Building 2, 4th Floor
Arlington, VA 22204-1373

Prepared By:

TEC-WESTON Joint Venture

2496 Old Ivy Road, Suite 300
Charlottesville, VA 22903-4895

THIS PAGE INTENTIONALLY LEFT BLANK

CONTRACTOR STATEMENT OF INDEPENDENT TECHNICAL REVIEW

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

Travis Withers
2017.05.24 10:58:36 -06'00'

Travis Withers, Validation Chemist, TEC-WESTON JV Date

5/23/17

Peter Chapman, Senior Chemist, TEC-WESTON JV Date

THIS PAGE INTENTIONALLY LEFT BLANK

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) **280-96754-1**.

TestAmerica, Inc., Denver, Colorado performed the analyses listed in the table below:

Parameters	Analytical Method	Laboratory Location
Hexavalent Chromium	7196A	Denver, CO

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
BKGmw-008-050417-GW	280-96754-1	05/04/2017	Groundwater		✓
BKGmw-015-050417-GW	280-96754-2	05/04/2017	Groundwater		✓

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 May 5, 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 6°C.

1.3 DEFINITIONS

Detection limit (DL): The smallest analyte concentration that can be demonstrated to be different from zero or a blank concentration with 99% confidence. At the DL, the false positive rate is 1%. A DL may be used as the lowest concentration for reliably reporting a detection of a specific matrix with a specific method with 99% confidence.

Limit of detection (LOD): The smallest concentration of a substance that must be present in a sample in order to be detected at the DL with 99% confidence. At the LOD, the false negative rate is 1%. An LOD may be used as the lowest concentration for reliably reporting a non-detect of a specific analyte in a specific matrix with a specific method with 99% confidence.

Limits of Quantitation (LOQ): The smallest concentration that produces a quantitative result with known and recorded precision and bias. For DoD/DOE projects, the LOQ shall be set at or above the concentration of the lowest initial calibration standard and within the calibration range.

1.4 TECHNICAL DATA VALIDATION

1.4.1 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 recoveries
- Method blank
- 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.