

April 19, 2005

Josie Longoria
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933 E Court
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Enclosed is your final report for ERA's WatR™ Supply Proficiency Testing (PT) Study, WS-103. Your final report includes an evaluation of all results submitted by your laboratory to ERA. Attached is a table listing which regulatory agencies have been sent a copy of your final results and the report type received by those agencies.

Data Evaluation Protocols

ERA's WS-103 PT standards contain every analyte included in every state and national PT program. All analytes have been evaluated using the following tiered approach. If an analyte is listed in the USEPA's National Standards for Water Proficiency Testing Studies Criteria Document, December 1998, the evaluation was completed by comparing the reported result to the acceptance limits generated using the EPA's National Standards. If the analyte is not included in the EPA's National Standards, but is included in the National Environmental Laboratory Accreditation Conference (NELAC) PT Field of Testing list (June 2000), the evaluation has been completed by comparing the reported result to the acceptance limits generated using the evaluation criteria contained in the NELAC standards. If the analyte is not included in either national PT program, the reported result has been evaluated using the procedures outlined in ERA's Standard Operating Procedure for the Generation of Performance Acceptance Limits (SOP 0260).

Corrective Action Help

As part of your accreditation(s), you may be required to identify the root cause of any "Not Acceptable" results, implement the necessary corrective actions, and then satisfy your PT requirements by participating in a Supplemental (QuiK™ Response) or future ERA PT study. If you need help, ERA's technical staff is available to help your laboratory resolve any technical issues that may be impairing your PT performance and possibly affecting your routine data quality. Our laboratory and technical staff have well over three hundred years of collective experience in performing the full range of environmental analyses. As part of our technical support, ERA offers QC samples that can be helpful in helping you work through your technical issues.



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Thank you for your participation in ERA's WatR™ Supply Proficiency Testing Study, WS-103. If you have any questions, please contact myself, or Curtis Wood, Quality Assurance Director, at 1-800-372-0122.

Sincerely,

A handwritten signature in black ink that reads "Shawn Kassner".

Shawn Kassner
Proficiency Testing Manager

attachments
smk



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Regulatory Agency	Agency Requested Report Type	Agency Lab ID	Contact
Texas	Complete Report	TX00010	Max Phillips



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In my role as ERA's Quality Assurance Director, I have independently reviewed all aspects of ERA's WatR™ Supply Proficiency Testing Study, WS-103, for compliance with all USEPA, NELAC, NIST NVLAP, and all state technical and program requirements in effect during this study, as well as those of our ISO 9001 Registered Quality System.

All aspects of ERA's WS-103 Study, from standard manufacture to final report generation, were completed by ERA in accordance with the "National Standards for Water Proficiency Testing Studies Criteria Document", USEPA December 30, 1998. ERA has reviewed all of the data that is contained in this report and has made every possible effort to make it complete, accurate and compliant. However, if you find anything in your report that you feel is incomplete, inaccurate or have any quality-related issues, please call me directly at 1-800-372-0122. As required by ERA Standard Operating Procedure for Handling Product and Service Problems (SOP 0150, Rev.7.0), we will initiate an internal investigation and take corrective action as appropriate.

On behalf of ERA, thank you again for your participation in WS-103.

Sincerely,

Curtis J. Wood
Quality Assurance Director



ERA Laboratory Code: G7783-01 EPA ID: TX00010

Report Issued: 04/19/05
Study Dates: 02/14/05 - 03/31/05

WS Study Definitions:

The Reported Value is the value that the laboratory reported to ERA.

The ERA Assigned Values are established per the USEPA's guidelines contained in the National Standards for Water Proficiency Testing Studies Criteria Document, December 1998, and the National Environmental Laboratory Accreditation Conference (NELAC) program criteria as applicable. A parameter not added to the standard is given an Assigned Value of "0" per the guidelines contained in the USEPA's Criteria Document and NELAC standards.

The Acceptance Limits are established per the USEPA's guidelines contained in the National Standards for Water Proficiency Testing Studies Criteria Document, December 1998, the NELAC PT program criteria or ERA's SOP for the Generation of Performance Acceptance Limits™ as applicable. For further discussion of how your results were evaluated, please see the cover letter that accompanied the enclosed report.

The Performance Evaluation:

- Acceptable = Reported Value falls within the Acceptance Limits.
- Not Acceptable = Reported Value falls outside of the Acceptance Limits.
- No Evaluation = Reported Value cannot be evaluated.
- Not Reported = Result not reported for an analyte.

The Method Description is the method the laboratory reported to ERA.

Any Performance Evaluation left blank indicates results were evaluated as 'Not Reported'.

WS Study Discussion:

ERA's WatR™ Supply Proficiency Testing Study, WS-103, has been reviewed by ERA Senior Management and certified compliant with the requirements of the USEPA's National Standards for Water Proficiency Testing Studies Criteria Document (December 1998), the NELAC Standards Chapter 2 and Associated Appendices, applicable state PT programs, and those contained in the National Institute of Standards and Technology NVLAP Handbooks 150 and 150-19. ERA is a NIST NVLAP accredited PT Provider (Lab Code 200386-0).

This report contains data that are not covered by the NVLAP accreditation.

ERA's WatR™ Supply Study, WS-103, standards were examined for any anomalies. A full review of all accuracy verification, homogeneity and stability (VHS) data was completed. All analytical verification data for all analytes in the WS-103 standards met the acceptance criteria contained in the USEPA's National Criteria Document for Water Proficiency Testing Studies, December 1998, and the National Voluntary Laboratory Accreditation Program Handbook 150-19 for Chemical Calibration for Providers of Proficiency Testing.

The data submitted by participating laboratories was also examined for study anomalies. There was one study anomaly found during the review of the study data. This anomaly is addressed on the following page.

WatR™ Supply Study, WS-103, reports shall not be reproduced except in their entirety and not without the permission of the participating laboratories. The report must not be used by the participating laboratories to claim product endorsement by NVLAP or any agency of the U. S. government.

If you have any questions regarding ERA's WatR™ Supply Proficiency Testing Study, WS-103, please contact Shawn Kassner, Proficiency Testing Manager, or Curtis Wood, Quality Assurance Director, at 1-800-372-0122.



ERA Laboratory Code: G7783-01 EPA ID: TX00010

Report Issued: 04/19/05
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- Study Discussion: Unregulated Volatiles - Chloroethane

During the statistical review of the WS-103 Unregulated Volatiles data set, ERA observed what we consider to be a high failure rate of 31.8% for chloroethane. We carefully reviewed all data related to proving the efficacy of the standard including manufacturing, internal analytical verification and stability data for both accuracy and homogeneity. Our review of the data confirmed that the standard is 'fit for use'.

Per the USEPA Criteria Document, the acceptance limits for chloroethane are $\pm 20\%$ of the assigned value when the concentration is greater than or equal to $10.0 \mu\text{g/L}$, as was the case with WS-103, and $\pm 40\%$ of the assigned value when the concentration is less than $10.0 \mu\text{g/L}$. Of the last forty-eight PT studies conducted by ERA, when chloroethane has been present at a concentration greater than or equal to $10 \mu\text{g/L}$, ERA has documented an average failure rate of 29.1%. The average failure rate when chloroethane has been present at a concentration less than $10 \mu\text{g/L}$ is 9.04%. To the best of our knowledge the USEPA never conducted a study containing chloroethane so a failure rate is not available for comparison. The USEPA's criteria require that this analyte be manufactured at concentrations both above and below $10.0 \mu\text{g/L}$ and randomly assigned in each study.

The high failure rate causes us to question the appropriateness of the acceptance limit criteria provided in the USEPA Criteria Document. On November 10, 2004, NELAC published new Field of Proficiency Testing (FoPT) tables for Potable and Non-Potable Water. In the FoPT tables for Potable Water, NELAC has addressed the issue of the inappropriate limits for volatile gases by setting the acceptance criteria to $\pm 40\%$ for all concentrations. The FoPT tables are scheduled to be implemented in June 2005, by PT providers.

Study: **WS-103**

ERA Laboratory Code: **G7783-01**

Laboratory Name: **Guadalupe Blanco River
Auth**

Report Type: **Complete**

Report Method: **Method A**

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EPA ID: TX00010
ERA Laboratory Code: G7783-01
Report Issued: 04/19/05
Study Dates: 02/14/05 - 03/31/05

Anal. No.	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
Metals							
1000	Aluminum	µg/L		887	797 - 973		
0140	Antimony †	µg/L		35.1	24.6 - 45.6		
0001	Arsenic †	µg/L	83.5	79.3	69.4 - 88.6	Acceptable	SM 3113 B.
0002	Barium †	µg/L		1530	1300 - 1760		
0141	Beryllium †	µg/L		5.97	5.07 - 6.87		
0226	Boron †	µg/L		1300	1200 - 1440		
0003	Cadmium †	µg/L	12.2	12.7	10.2 - 15.2	Acceptable	SM 3113 B.
0004	Chromium †	µg/L	75.2	83.0	70.6 - 95.5	Acceptable	SM 3113 B.
0091	Copper †	µg/L	156	154	139 - 169	Acceptable	SM 3111 B.
1070	Iron	µg/L	407	406	371 - 443	Acceptable	SM 3111 B.
0005	Lead †	µg/L	61.5	63.6	44.5 - 82.7	Acceptable	SM 3113 B.
0236	Manganese †	µg/L	574	495	461 - 521	Not Acceptable	SM 3111 B.
0237	Molybdenum †	µg/L		104	87.6 - 120		
0142	Nickel †	µg/L	324	332	282 - 382	Acceptable	SM 3113 B.
0007	Selenium †	µg/L	58.3	63.0	50.4 - 75.6	Acceptable	SM 3113 B.
1150	Silver	µg/L	165	157	142 - 172	Acceptable	SM 3113 B.
0143	Thallium †	µg/L		5.36	3.75 - 6.97		
1185	Vanadium	µg/L		693	646 - 738		
0239	Zinc †	µg/L	1246	1270	1170 - 1360	Acceptable	SM 3111 B.
pH							
0026	pH †	S.U.	6.61	6.60	5.94 - 7.26	Acceptable	SM 4500 H+
Inorganics							
1575	Chloride	mg/L	52.2	51.4	47.6 - 54.7	Acceptable	EPA 300.0
1610	Conductivity	µmhos/cm	340	326	309 - 343	Acceptable	SM 2510
0010	Fluoride †	mg/L	1.97	2.02	1.82 - 2.22	Acceptable	EPA 300.0
0009	Nitrate as N †	mg/L	4.68	4.40	3.96 - 4.84	Acceptable	EPA 300.0
1820	Nitrate + Nitrite as N	mg/L		4.40	3.96 - 4.84		
1125	Potassium	mg/L	15.4	16.4	14.8 - 18.0	Acceptable	SM 3111 B.
0145	Sulfate †	mg/L	15.0	15.6	13.4 - 17.5	Acceptable	EPA 300.0
0024	Total Dissolved Solids at 180°C †	mg/L	220	216	145 - 287	Acceptable	SM 2540 C.
Alkalinity & Sodium							
0027	Alkalinity (as CaCO3) †	mg/L	37.2	34.1	32.5 - 38.8	Acceptable	SM 2320 B.
0029	Sodium †	mg/L	15.2	15.7	14.5 - 17.4	Acceptable	SM 3111 B.
Turbidity							
0023	Turbidity †	NTU	5.23	5.41	4.76 - 6.41	Acceptable	SM 2130 B.

All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01

† Indicates analytes included in ERA's NIST/NVLAP accreditation. Lab Code 200386-0

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EPA ID: TX00010
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Anal. No.	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
Residual Chlorine							
0022	Free residual chlorine †	mg/L		1.07	0.861 - 1.28		
1940	Total residual chlorine	mg/L	1.09	1.11	0.922 - 1.30	Acceptable	SM 4500 Cl G.
Nutrients							
0261	ortho-Phosphate as P †	mg/L	1.42	1.47	1.39 - 1.54	Acceptable	EPA 300.0
Total Organic Carbon							
0263	Total organic carbon †	mg/L	4.24	4.24	3.83 - 4.86	Acceptable	SM 5310 C.
Chlorite							
0195	Chlorite †	µg/L	600	524	375 - 778	Acceptable	EPA 300.0
Hardness							
1755	Total Hardness as CaCO ₃	mg/L	196	194	175 - 208	Acceptable	SM 2340 C. EDTA
0025	Calcium Hardness as CaCO ₃ †	mg/L	185	140	131 - 151	Not Acceptable	SM 3500 Ca D.
1035	Calcium	mg/L	74.0	56.3	50.7 - 63.4	Not Acceptable	SM 3111 B.
1085	Magnesium	mg/L	12.4	12.9	11.7 - 14.0	Acceptable	SM 3111 B.