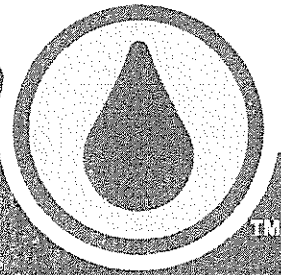


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The Industry Standard™

Carol Wortham
Curtis & Tompkins LTD
2323 Fifth Street
Berkeley, CA 94710

WS-150



Final Report

WatR™ Supply Proficiency Testing

WatR™ Supply Study

Open Date: 01/12/09

Close Date: 02/26/09

Report Issued Date: 03/19/09



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The Industry Standard™

March 19, 2009

Carol Wortham
Curtis & Tompkins LTD
2323 Fifth Street
Berkeley, CA 94710

Enclosed is your final report for ERA's WS-150 WatR™Supply Proficiency Testing (PT) study. Your final report includes an evaluation of all results submitted by your laboratory to ERA.

Data Evaluation Protocols: All analytes in ERA's WS-150 WatR™Supply Proficiency Testing (PT) study have been evaluated using the following tiered approach. If the analyte is listed in the most current National Environmental Laboratory Accreditation Conference (NELAC) PT Field of Testing tables, the evaluation was completed by comparing the reported result to the acceptance limits generated using the criteria contained in the NELAC FoPT tables. If the analyte is not included in the NELAC FoPT tables, 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. 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.

Thank you for your participation in ERA's WS-150 WatR™Supply Proficiency Testing study. If you have any questions, please contact myself, or Curtis Wood, Director of Regulatory Affairs and Business Development, at 1-800-372-0122.

Sincerely,

Handwritten signature of Shawn Kassner.

Shawn Kassner
Proficiency Testing Manager

Handwritten signature of Jay R. McBurney.

Jay R. McBurney
Quality Program Manager

attachments
smk



**ENVIRONMENTAL
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Report Recipient	Contact/Phone Number	Reporting Type
Alaska	Lance Morris / 907-375-8210	All Analytes
Arizona	Terry Norcop / 602-364-0720	All Analytes
California	Fred Choske / 510-620-3175	All Analytes



WS-150 Definitions & Study Discussion

Study Dates: 01/12/09 - 02/26/09

Report Issued: 03/19/09

WS Study Definitions

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

The ERA Assigned Values are compliant with the most current USEPA/NELAC FoPT tables. 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 criteria contained in the most current USEPA/NELAC FoPT tables, or ERA's SOP for the Generation of Performance Acceptance Limits™ as applicable.

The Performance Evaluation:

- Acceptable = Reported Value falls within the Acceptance Limits.
- Not Acceptable = Reported Value falls outside the Acceptance Limits.
- No Evaluation = Reported Value cannot be evaluated.
- Not Reported = No Value reported.

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

WS Study Discussion

ERA's WS-150 WatR™Supply Proficiency Testing study 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), and the criteria contained in the most current NELAC FoPT tables.

ERA's WS-150 WatR™Supply study standards were examined for any anomalies. A full review of all homogeneity, stability and accuracy verification data was completed. All analytical verification data for all analytes in the standards met the acceptance criteria contained in the USEPA's National Criteria Document for Water Proficiency Testing Studies, December 1998, and the criteria contained in the most current NELAC FoPT tables.

The data submitted by participating laboratories was also examined for study anomalies. There were no anomalies observed during the statistical review of the data.

ERA's WS-150 WatR™Supply study 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 any agency of the U. S. government.

The data contained herein are confidential and intended for your use only.

If you have any questions or concerns regarding your assessment in ERA's WatR™Supply Proficiency Testing program, please contact Shawn Kassner, Proficiency Testing Manager, or Curtis Wood, Director of Regulatory Affairs and Business Development, at 1-800-372-0122.





**ENVIRONMENTAL
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Study: **WS-150**

ERA Customer Number: **C879201**

Laboratory Name: **Curtis & Tompkins LTD**

Inorganic Results





Carol Wortham
QA Director
Curtis & Tompkins LTD
2323 Fifth Street
Berkeley, CA 94710
510-486-0900

EPA ID: CA00128
ERA Customer Number: C879201
Report Issued: 03/19/09
Study Dates: 01/12/09 - 02/26/09

Anal. No.	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
WS Hardness (cat# 555)							
1035	Calcium	mg/L	50.3	55.2	49.2 - 61.3	Acceptable	EPA 200.7
1085	Magnesium	mg/L	10.3	11.5	10.4 - 12.8	Not Acceptable	EPA 200.7
0029	Sodium	mg/L	12.0	12.9	11.3 - 14.3	Acceptable	EPA 200.7
0025	Calcium Hardness as CaCO3	mg/L		138	123 - 153	Not Reported	
1755	Total Hardness as CaCO3	mg/L	168	185	165 - 206	Acceptable	SM2340B

WS Inorganics (cat# 591)

0027	Alkalinity as CaCO3	mg/L	58.6	58.6	52.7 - 64.5	Acceptable	SM2320B
1575	Chloride	mg/L	69.1	70.4	63.4 - 77.4	Acceptable	EPA 300.0
1610	Conductivity at 25 °C	µmhos/cm	675	525	472 - 577	Not Acceptable	SM2510B
0010	Fluoride	mg/L	1.49	1.72	1.55 - 1.89	Not Acceptable	EPA 300.0
1820	Nitrate + Nitrite as N	mg/L		6.79	6.10 - 7.47	Not Reported	
0009	Nitrate as N	mg/L	6.48	6.79	6.11 - 7.47	Acceptable	EPA 300.0
1125	Potassium	mg/L	22.5	22.5	19.4 - 25.9	Acceptable	EPA 200.7
0145	Sulfate	mg/L	46.7	47.6	41.1 - 53.6	Acceptable	EPA 300.0
0024	Total Dissolved Solids at 180°C	mg/L	360	352	228 - 476	Acceptable	SM2540C

WS Metals (cat# 590)

1000	Aluminum	µg/L	1840	1710	1470 - 1890	Acceptable	EPA 200.7
0140	Antimony	µg/L	32.8	33.8	23.7 - 43.9	Acceptable	EPA 200.7
0001	Arsenic	µg/L	40.5	42.2	29.5 - 54.9	Acceptable	EPA 200.7
0002	Barium	µg/L	1490	1440	1220 - 1660	Acceptable	EPA 200.7
0141	Beryllium	µg/L	5.66	5.52	4.69 - 6.35	Acceptable	EPA 200.7
0226	Boron	µg/L		848	751 - 942	Not Reported	
0003	Cadmium	µg/L	49.9	49.1	39.3 - 58.9	Acceptable	EPA 200.7
0004	Chromium	µg/L	12.3	13.7	11.6 - 15.8	Acceptable	EPA 200.7
0091	Copper	µg/L	1130	1140	1030 - 1250	Acceptable	EPA 200.7
1070	Iron	µg/L	401	406	351 - 454	Acceptable	EPA 200.7
0005	Lead	µg/L	53.4	52.4	36.7 - 68.1	Acceptable	EPA 200.7
0236	Manganese	µg/L	116	111	99.1 - 123	Acceptable	EPA 200.7
0237	Molybdenum	µg/L	24.7	23.5	19.4 - 27.1	Acceptable	EPA 200.7
0142	Nickel	µg/L	147	147	125 - 169	Acceptable	EPA 200.7
0007	Selenium	µg/L	45.2	45.4	36.3 - 54.5	Acceptable	EPA 200.7
1150	Silver	µg/L	55.0	54.6	47.0 - 61.8	Acceptable	EPA 200.7
0143	Thallium	µg/L	7.62	7.55	5.28 - 9.82	Acceptable	EPA 200.7
1185	Vanadium	µg/L	434	436	392 - 480	Acceptable	EPA 200.7
0239	Zinc	µg/L	542	522	470 - 574	Acceptable	EPA 200.7

WS Mercury (cat# 551)

0006	Mercury	µg/L	2.6	2.52	1.76 - 3.28	Acceptable	EPA 245.1
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WS Nitrite (cat# 594)

0092	Nitrite as N	mg/L	1.72	1.79	1.52 - 2.06	Acceptable	EPA 300.0
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Carol Wortham
QA Director
Curtis & Tompkins LTD
2323 Fifth Street
Berkeley, CA 94710
510-486-0900

EPA ID: CA00128
ERA Customer Number: C879201
Report Issued: 03/19/09
Study Dates: 01/12/09 - 02/26/09

Anal. No.	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
WS Cyanide (cat# 556)							
0146	Cyanide	mg/L	0.341	0.325	0.244 - 0.406	Acceptable	SM4500CN E
WS Perchlorate (cat# 903)							
1895	Perchlorate	µg/L	14.8	15.6	12.9 - 17.2	Acceptable	EPA 314.0
WS Silica (cat# 902)							
1990	Silica as SiO ₂	mg/L	29.9	31.4	26.7 - 36.1	Acceptable	SM4500SiO ₂ -C
WS Surfactants - MBAS (cat# 901)							
2025	Surfactants - MBAS	mg/L	0.617	0.654	0.517 - 0.764	Acceptable	SM5540C





27 March 2009

Fred Choske
CA-DHS ELAP
850 Marina Bay Parkway
Bldg P, 1st Floor
Richmond, CA 94804

Subject: Corrective Action Determination for WS-150 Failures

Dear Mr. Choske;

The following corrective actions were taken in response to failures observed in PT samples analyzed in ERA's January 2009 PT study, WS-150 study (C&T Job # 209309).

Magnesium (EPA 200.7): The result (10.3 mg/L) was slightly low outside study acceptance limits (10.4-12.8 mg/L).

Investigation:

- ✓ Data entry into the ERA database was correct.
- ✓ Initial calibration curve passed acceptance limits.
- ✓ CCV recovery of 100% was within acceptance criteria.
- ✓ BS/BSD recoveries of 93% and 100% were within acceptance limits.
- ✓ An SDUP was not performed on this sample.
- ✓ Other runs were within the study acceptance limits and overall higher than the run reported.

Resolution: The results for the run used were overall low for all elements reported. The analysts and manager have been reminded to compare the results of multiple runs for consistency and if there is a discrepancy, to identify the source of the difference or discuss the problem with the manager. A remedial PT sample will be ordered from ERA.

Fluoride (EPA 300.0): The result (1.49 mg/L) was low outside study acceptance limits (1.55 – 1.89 mg/L).

Investigation:

- ✓ Data entry into the ERA database was correct.
- ✓ Initial calibration curve passed acceptance limits.
- ✓ CCV recoveries of 90% and 93% were low but within acceptance criteria.
- ✓ BS/BSD recoveries of 93% and 92% were within acceptance limits.
- ✓ Comparison of the reported run to a run at another dilution had good precision at 2% RPD.

Resolution: Low response is observed for this instrument. Comparisons to other instruments also show a low bias for fluoride. This instrument has been taken off line for fluoride until improvements can be made to the response. A remedial PT sample will be ordered from ERA.

Conductivity (SM 2510B): The result (675 umhos/cm) was high outside the study acceptance limits (472 – 577 umhos/cm).

- ✓ Data entry into the ERA database was correct.
- ✓ Initial calibration passed acceptance limits.
- ✓ Bracketing CCV recoveries of 94% and 98% were within acceptance limits.
- ✓ Sample was not analyzed in duplicate.

Resolution: The probe used was sensitive to temperature changes. A new ATC probe and meter have been ordered to replace this. A remedial PT sample will be ordered from ERA.

Please let me know if any further action is required or you need more information.

Sincerely,

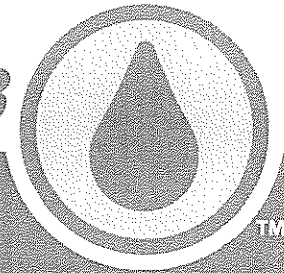
Carol Wortham
Quality Assurance Director
Direct: (510) 204-2237



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Carol Wortham
Curtis & Tompkins LTD
2323 Fifth Street
Berkeley, CA 94710

WS-153



Final Report

WatR™ Supply Proficiency Testing

WatR™ Supply Study

Open Date: 04/06/09

Close Date: 05/21/09

Report Issued Date: 06/09/09



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June 9, 2009

Carol Wortham
Curtis & Tompkins LTD
2323 Fifth Street
Berkeley, CA 94710

Enclosed is your final report for ERA's WS-153 WatR™Supply Proficiency Testing (PT) study. Your final report includes an evaluation of all results submitted by your laboratory to ERA.

Data Evaluation Protocols: All analytes in ERA's WS-153 WatR™Supply Proficiency Testing (PT) study have been evaluated using the following tiered approach. If the analyte is listed in the most current National Environmental Laboratory Accreditation Conference (NELAC) PT Field of Testing tables, the evaluation was completed by comparing the reported result to the acceptance limits generated using the criteria contained in the NELAC FoPT tables. If the analyte is not included in the NELAC FoPT tables, 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. 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.

Thank you for your participation in ERA's WS-153 WatR™Supply Proficiency Testing study. If you have any questions, please contact myself, or Curtis Wood, Director of Regulatory Affairs and Business Development, at 1-800-372-0122.

Sincerely,

Handwritten signature of Shawn Kassner in black ink.

Shawn Kassner
Proficiency Testing Manager

Handwritten signature of Jay R. McBurney in black ink.

Jay R. McBurney
Quality Program Manager

attachments
smk



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Report Recipient	Contact/Phone Number	Reporting Type
Alaska	Lance Morris / 907-375-8210	All Analytes
Arizona	Terry Norcop / 602-364-0720	All Analytes
California	Fred Choske / 510-620-3175	All Analytes



WS-153 Definitions & Study Discussion

Study Dates: 04/06/09 - 05/21/09

Report Issued: 06/09/09

WS Study Definitions

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

The ERA Assigned Values are compliant with the most current USEPA/NELAC FoPT tables. 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 criteria contained in the most current USEPA/NELAC FoPT tables, or ERA's SOP for the Generation of Performance Acceptance Limits™ as applicable.

The Performance Evaluation:

- Acceptable = Reported Value falls within the Acceptance Limits.
- Not Acceptable = Reported Value falls outside the Acceptance Limits.
- No Evaluation = Reported Value cannot be evaluated.
- Not Reported = No Value reported.

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

WS Study Discussion

ERA's WS-153 WatR™Supply Proficiency Testing study 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), and the criteria contained in the most current NELAC FoPT tables.

ERA's WS-153 WatR™Supply study standards were examined for any anomalies. A full review of all homogeneity, stability and accuracy verification data was completed. All analytical verification data for all analytes in the standards met the acceptance criteria contained in the USEPA's National Criteria Document for Water Proficiency Testing Studies, December 1998, and the criteria contained in the most current NELAC FoPT tables.

The data submitted by participating laboratories was also examined for study anomalies. There were no anomalies observed during the statistical review of the data.

ERA's WS-153 WatR™Supply study 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 any agency of the U. S. government.

The data contained herein are confidential and intended for your use only.

If you have any questions or concerns regarding your assessment in ERA's WatR™Supply Proficiency Testing program, please contact Shawn Kassner, Proficiency Testing Manager, or Curtis Wood, Director of Regulatory Affairs and Business Development, at 1-800-372-0122.





**ENVIRONMENTAL
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Study: **WS-153**

ERA Customer Number: **C879201**

Laboratory Name: **Curtis & Tompkins LTD**

Inorganic Results





Carol Wortham
QA Director
Curtis & Tompkins LTD
2323 Fifth Street
Berkeley, CA 94710
510-486-0900

EPA ID: CA00128
ERA Customer Number: C879201
Report Issued: 06/09/09
Study Dates: 04/06/09 - 05/21/09

Anal. No.	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
WS Hardness (cat# 555)							
1035	Calcium	mg/L		47.5	42.3 - 53.0	Not Reported	
1085	Magnesium	mg/L	12.6	12.5	11.3 - 14.0	Acceptable	EPA 200.7
0029	Sodium	mg/L		20.2	17.8 - 22.2	Not Reported	
0025	Calcium Hardness as CaCO3	mg/L		119	106 - 133	Not Reported	
1755	Total Hardness as CaCO3	mg/L		170	152 - 190	Not Reported	

WS Inorganics (cat# 591)

0027	Alkalinity as CaCO3	mg/L		41.7	37.5 - 45.9	Not Reported	
1575	Chloride	mg/L		79.3	71.4 - 87.2	Not Reported	
1610	Conductivity at 25°C	µmhos/cm	458	462	416 - 508	Acceptable	SM2510B
0010	Fluoride	mg/L	6.79	7.44	6.70 - 8.18	Acceptable	EPA 300.0
1820	Nitrate + Nitrite as N	mg/L		3.75	3.31 - 4.12	Not Reported	
0009	Nitrate as N	mg/L		3.75	3.38 - 4.12	Not Reported	
1125	Potassium	mg/L		25.8	22.2 - 29.5	Not Reported	
0145	Sulfate	mg/L		16.5	13.4 - 19.1	Not Reported	
0024	Total Dissolved Solids at 180°C	mg/L		280	184 - 376	Not Reported	

