# PERFORMANCE EVALUATION

Scheduled Study

## LPTP17-S1

01-Feb-2017 Through 17-Mar-2017

**49978849**
RTC Labcode

**WY00006**
EPA Labcode

**Participating Laboratory:**

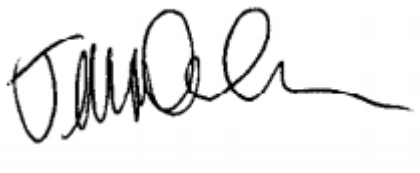
Energy Laboratories-Gillette
Julie Weisz
400 West Boxelder Rd.
Gillette WY 82718 US

Thank you for participating in study LPTP17-S1. Additional information about this study may be found online at www.sigmaaldrich.com/pt.

Sigma-Aldrich RTC Inc.
2931 Soldier Springs Road
Laramie, WY 82070 USA
1-307-742-5452
www.sigmaaldrich.com

This report shall not be reproduced except in full, without written approval of the laboratory. The data and results reported in this document are the property of the participating laboratory and are confidential. If you wish to appeal an evaluation listed in this report, please call our QA Supervisor at (307) 742-5452 or email RTCreports@sial.com

Sincerely,



Jennifer Duhon
Proficiency Testing Supervisor

## Accreditors

Evaluations of this dataset will be sent to the accreditor(s) listed below using your laboratory's labcode listed above each accrediting agency. If any of the information listed below is incorrect, please contact RTC immediately.

RTC is accrediated to perform PT programs for the scope of accredation to ISO/IEC 17043 under ANAB certificate AP-1469

## Miscellaneous Analytes

### Method:ASTM D1429-08 (2008) [30023439]

| Analyte | Result Units | Assigned Value | Accept. Window | Z | Evaluation |
|---|---|---|---|---|---|
| Specific Gravity [2] | 1.05 g/mL | 1.05 | 0.94 to 1.15 | 0 | Acceptable |
| 8042 / SPE066-100ML - Lot LRAA9252 /Analyst:DB/ Analysis Date: 2017-02-09 | *Evaluation Criteria - 1* ☐*Voluntary* | | | *Evaluation Parameter - a:1, b:0, c:0.03333, d:0* | |

### Method:EPA 1010A (2002) [10234807]

| Analyte | Result Units | Assigned Value | Accept. Window | Z | Evaluation |
|---|---|---|---|---|---|
| Ignitability (Flashpoint, ºF) [1,2] | 170 ºF | 160 | 143 to 177 | 1.76 | Acceptable |
| 1780 / SPE029-4X25ML - Lot LRAA8184 /Analyst:DB/ Analysis Date: 2017-02-09 | *Evaluation Criteria - 1* ☐*Voluntary* | | | *Evaluation Parameter - a:1, b:0, c:0, d:5.67* | |

### Method:EPA 9023 (1996) [10195003]

| Analyte | Result Units | Assigned Value | Accept. Window | Z | Evaluation |
|---|---|---|---|---|---|
| Extractable organics halides (EOX) [1,2] | 21.6 mg/kg | 46.2 | 11.6 to 80.9 | -2.12 | Acceptable |
| 1720 / SPE038-100G - Lot LRAB2293 /Analyst:DB/ Analysis Date: 2017-02-28 | *Evaluation Criteria - 1* ☐*Voluntary* | | | *Evaluation Parameter - a:0.8, b:0, c:0.2, d:0* | |

### Method:EPA 9076 (1994) [10202401]

| Analyte | Result Units | Assigned Value | Accept. Window | Z | Evaluation |
|---|---|---|---|---|---|
| Chloride [1,2] | 4270 Wt% | 0.37 | 0.2 to 0.53 | 77771.11 | Not Acceptable |
| 1575 / SPE061-100G - Lot LRAB3763 /Analyst:DB/ Analysis Date: 2017-02-08 | *Evaluation Criteria - 1* ☐*Voluntary* | | | *Evaluation Parameter - a:1, b:0, c:0.15, d:0* | |

# Sample Information

## FLASH POINT - LIQUID - PT

SPE029-4X25ML / Lot LRAA8184

| Analytes | Units | Gravimetric Value | Study Mean | Study Std. Dev. |
|---|---|---|---|---|
| Ignitability (Flashpoint, ºF) [1,2]<br>1780 Miscellaneous Analytes | ºF | 160±1.55 | 167 | 5.52 |
| Screen (+/-) [2]<br>12100 Miscellaneous Analytes | | 160±1.55 | 0 | 0 |
| Ignitability (Flashpoint, ºC) [1,2]<br>1780 Miscellaneous Analytes | ºC | 71.1 | 75.2 | 1.83 |

# PHENOLICS IN SOIL (TOX) - PT

SPE038-100G / Lot LRAB2293

| Analytes | Units | Gravimetric Value | Study Mean | Study Std. Dev. |
|---|---|---|---|---|
| Extractable organics halides (EOX) [1,2]<br>1720 Miscellaneous Analytes | mg/kg | 57.8±0.295 | 0 | 0 |
| Total phenolics [1,2]<br>1905 Miscellaneous Analytes | mg/Kg | 57.8±0.295 | 0 | 0 |
| Total organic halides (TOX) [1,2]<br>2045 Miscellaneous Analytes | mg/Kg | 57.8±0.295 | 0 | 0 |

# FLUORIDE/CHLORIDE IN OIL - PT

SPE061-100G / Lot LRAB3763

| Analytes | Units | Gravimetric Value | Study Mean | Study Std. Dev. |
|---|---|---|---|---|
| Chloride [1,2]<br>1575 | Wt% | 0.366±0.0036 | 0 | 0 |
| Fluoride [1,2]<br>1730 | Wt% | 0.459±0.004 | 0 | 0 |
| Chloride [1,2]<br>1575 Miscellaneous Analytes | Wt% | 0.366±0.0036 | 0 | 0 |
| Fluoride [1,2]<br>1730 Miscellaneous Analytes | Wt% | 0.459±0.004 | 0 | 0 |
| Halogens, total [2]<br>3001 Miscellaneous Analytes | Wt% | 0.825±0.008 | 0 | 0 |

## SPECIFIC GRAVITY - LIQUID - PT

SPE066-100ML / Lot LRAA9252

| Analytes | Units | Gravimetric Value | Study Mean | Study Std. Dev. |
|---|---|---|---|---|
| Specific Gravity [2]<br>8042 | g/mL | 1.0470 | 1.06 | 0.01 |
| Specific Gravity [2]<br>8042 Miscellaneous Analytes | g/mL | 1.0470 | 1.06 | 0.01 |

## Definitions and Interpretation of Statistical Analysis:

**Assigned Value:** Value attributed to a particular quantity and accepted, sometimes by convention, as having an uncertainty appropriate for a given purpose. See ISO/IEC 17043 for additional information. In general the assigned value is the value used to assess proficiency and may or may not be the made to value (gravimetric value).

**Accept. Window:** The range of values that constitute acceptable performance for a laboratory participating in this PT study.

**Z:** A Z-Score tells how a single data point compares to normal data. A Z-Score says not only whether a point was above or below average, but how unusual the measurement is. Generally, a method result with a Z-Score less than |2| is considered to be in control, a Z-Score between |2| and |3| is considered 'Questionable', but still within control and a Z greater than |3| is considered not acceptable and the method is out of control. For WS studies, a z-score greater than |2| is unacceptable. Calculated as **Z = (Reported Value - Assigned Value) / Proficiency Std. Dev.**

**Proficiency Std. Dev.:** Standard deviation calculated based on **Evaluation Criteria.**

**Study Mean:** Statistical study mean calculated using a robust statisitical model (RTC employs the 'Biweight Program'). Robust statistical techniques to minimize the influence that extreme results can have on estimates of the mean and standard deviation. NOTE - These techniques assign less weight to extreme results, rather than eliminate them from a data set.

**Study Std. Dev.:** Standard deviation calculated from study data using robust statisicals (Biweight).

**Gravimetric Value:** The 'prepared to' value, determined by gravimetric means. The uncertainty associated to this value is standard uncertainty and based on RTC's gravimetric tolerances.

## Evaluation Criteria:

**1 - Regression Equation** - Acceptance windows based on TNI adopted equation of proficiency value +/- 3 proficiency standard deviations and check limits of proficiency value +/- 2 proficiency standard deviations. Proficiency value and proficiency standard deviation are calculated from gravimetric variables a, b, c, & d as proficiency value = a * gravimetric + b and proficiency standard deviation = c * gravimetric + d.

**2 - Study Robust Mean and c,d regression** - Acceptance windows based on TNI adopted equation of proficiency value +/- 3 proficiency standard deviations and check limits of proficiency value +/- 2 proficiency standard deviations. Proficiency value and proficiency standard deviation calculated from robust study mean and variables c & d as proficiency value = robust mean and proficiency standard deviation = c * proficiency value + d.

**3 - Fixed Limits** - Acceptance windows based on span of gravimetric percentage from gravimetric as gravimetric +/- gravimetric * percentage.

**4 - Adjustable Fixed Limits** - Acceptance windows base on a span of gravimetric percentage from gravimetric as gravimetric +/- gravimetric * lowPercentage where gravimetric < break and gravimetric +/-

gravimetric * highPercentage where gravimetric >= break.

**5 - Study Statistics** - Acceptance windows based on a number of standard deviations span from the study mean as study mean +/- (deviations * standard deviation).

**6 - Log Transform Statistics** - Acceptance windows based on lognormal distributed data. Acceptance windows = mean(lognormal) +/- span * standard deviation(lognormal).

**7 - Reserved**

**8 - Regression Equation 2SD** - Acceptance windows based on EPA equation of proficiency value +/- 2 proficiency standard deviations. Proficiency value and proficiency standard deviation are calculated from gravimetric variables a, b, c, & d as proficiency value = a * gravimetric + b and proficiency standard deviation = c * gravimetric + d. Generally reserved for drinking water studies.

**Proficiency Test Item Preparation, Homogeneity and Stability Assessment** - RTC uses proprietary and published methods for the manufacture, homogeneity and stability testing of proficiency test items. RTC's proficiency test materials meet requirements of ISO Guide 34. For more information contact RTC. Additionally RTC complies with TNI Volume 3 'General Requirements for Environmental Proficiency Test Providers', EL-V3-2009, 2009 for all TNI Fields of Proficiency Testing analytes.

**Metrological Traceability** - All preparations are made using balances calibrated annually traceable to NIST standards. Where appropriate analytical measurements are traceable through an unbroken chain to NIST standards, or a Certified Reference Material manufactured under ISO Guide 34 in conjunction with ISO/IEC 17025.

**Statistical Analysis** - RTC uses robust statistics to calculate study means and standard deviations - Reference - Kafadar, K, A Biweight Approach to the One-Sample Problem, Journal of the American Statistical Association, Vol. 77, No. 378, June, 1982, pp. 416-424.

**Additional Information** - Go to www.pt.sigmainformatics.com for additional information on summary statistics for specific methods, advice on the interpretation of the statistical analysis, and additional comments/recommendations. If you failed an analyte it may be required to perform a corrective action and/or retest. RTC recommends that you contact your accreditation body for specific instruction.

Program analyte accrediting footnotes

[1] NELAC Compliant, covered by RTC's ANAB Proficiency Testing Provider accreditation, Cert. AP-1469

[2] ISO 17043 Accredited, covered by RTC's ANAB Proficiency Testing Provider accreditation, Cert AP-1469

Authorizing Officer:

Date: 4/7/2017

Patrick Brumfield, ASQ CQA

QA Manager

**This section of the report is for informational purposes only. If you are unsure about specific accreditation requirements, please contact your state coordinator.**

# UNACCEPTABLE ANALYTES

RTC Lab Code: **49978849**

**SPE061-100G**

**FLUORIDE/CHLORIDE IN OIL - PT**

| Analytes | MethodNumber | MethodName |
|---|---|---|
| Chloride [1,2] | 10202401 | EPA 9076 (1994) |

## PASS RATE

| | |
|---|---|
| Number of Reported Results: | 4 |
| Number of Passing Results: | 3 |
| Pass Rate: | 75% |

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Proficiency Testing Provider
Certificate # 2427.02

6390 Joyce Drive
# 100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

March 6, 2017

Ms. Julie Weisz
Energy Laboratories, Inc.
400 West Boxelder Road
Gillette, WY 82718
USA

Dear Julie,

Thank you for participating in the R19390 Rapid Return™ Proficiency Testing Study. Enclosed is your final report, which has been carefully reviewed by the PT specialists at Phenova. A final report for your laboratory has been sent to all accrediting agencies you requested at the time of your data submittal.

Thank you again for participating in the R19390 Rapid Return™ Proficiency Testing Study. We appreciate working with you and look forward to our next study. If you have any questions, please call us at 866-942-2978.

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6390 Joyce Drive
# 100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

**Report Definitions:**

***Assigned Value*** The Assigned Value is determined from the study mean, gravimetric and volumetric true concentration of an analyte to be analyzed, calculation and/or an appropriate reference value as stipulated in the EPA National Standards for Water Proficiency Testing Studies Criteria Document (current version), the National Environmental Laboratory Accreditation Conference (NELAC) criteria (ref: NELAC FOT tables, NELAC PT Committee) and other documents distributed by accrediting agencies as applicable.

***Evaluation Limits*** Acceptance Limits are derived from fixed limits, coefficients, constants and calculations stipulated in the EPA National Standards for Water Proficiency Testing Studies Criteria Documents (current version), the National Environmental Laboratory Accreditation Conference (NELAC) criteria (ref: NELAC PT FOT tables, NELAC PT Committee) and other documents distributed by accrediting agencies as applicable.

***Evaluation***

| | |
|---|---|
| *Acceptable* | The reported value falls within the Acceptance Limits. |
| *Not Acceptable* | The reported value falls outside the Acceptance Limits. |
| *No Evaluation* | The reported value is non-numeric and can not be evaluated. |
| *NR* | As required by the NELAC standards and requested by state authorities, any analyte purchased but not reported by your facility is listed as NR (Not Reported). |

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# 100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
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State Regulatory Agency Request(s):

No requests were made to send a copy of your R19390 final results to a state agency.

Other Regulatory Agency Request(s):

No requests were made to send a copy of your R19390 final results to an agency.

Third Party Request(s):

No requests were made to send a copy of your R19390 final results to a third party.

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# 100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

# Final Report - Rapid Return™

## Study: R19390

### Opening Date: February 15, 2017 - Closing Date: March 2, 2017

Laboratory: Energy Laboratories, Inc.
400 West Boxelder Road
Gillette, WY 82718
USA

Contact: Ms. Julie Weisz, Quality Assurance Manager
307-686-7175

EPA Lab ID: WY00006

## Total Organic Halides in Soil (RR-TOX-SOIL) — Lot #: R19390-59

| NELAC Code | Analyte | Analysis Date | Analyst | Method Code | Method Description | Units | Assigned Value | Result | Acceptance Limits | Evaluation |
|---|---|---|---|---|---|---|---|---|---|---|
| **Additional State Specific Analytes** | | | | | | | | | | |
| 2045 | Total organic halides (TOX) | 2/28/2017 | David Bowles | 10195003 | Extractable Organic Halides (EOX) in Solids | mg/kg | 109 | 95.7 | 10.9 - 207 | Acceptable |

# PERFORMANCE EVALUATION

Scheduled Study

## LPTP17-S3

26-Jul-2017 Through 08-Sep-2017

**49978849**
RTC Labcode

**WY00006**
EPA Labcode

**Participating Laboratory:**

Energy Laboratories-Gillette
Julie Weisz
400 West Boxelder Rd.
Gillette WY 82718 US

Thank you for participating in study LPTP17-S3. Additional information about this study may be found online at www.sigmaaldrich.com/pt.

Sigma-Aldrich RTC Inc.
2931 Soldier Springs Road
Laramie, WY 82070 USA
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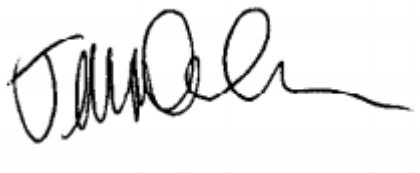
Sincerely,



Jennifer Duhon
Proficiency Testing Supervisor

REVISED REPORT

## Accreditors

Evaluations of this dataset will be sent to the accreditor(s) listed below using your laboratory's labcode listed above each accrediting agency. If any of the information listed below is incorrect, please contact RTC immediately.

RTC is accredited to perform PT programs for the scope of accreditation to ISO/IEC 17043 under ANAB certificate AP-1469

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## Miscellaneous Analytes

### Method:ASTM D1429-08 (2008) [30023439]

| Analyte | Result Units | Assigned Value | Accept. Window | Z | Evaluation |
|---|---|---|---|---|---|
| Specific Gravity [2]<br>8042 / SPE066-100ML - Lot LRAB2639 /Analyst:BB/ Analysis Date: 2017-08-14 | 1.05 g/mL<br>*Evaluation Criteria - 1*<br>☐*Voluntary* | 1.08 | 0.97 to 1.19 | -0.84<br>*Evaluation Parameter - a:1, b:0, c:0.03333, d:0* | Acceptable |

### Method:EPA 1010A (2002) [10234807]

| Analyte | Result Units | Assigned Value | Accept. Window | Z | Evaluation |
|---|---|---|---|---|---|
| Ignitability (Flashpoint, ºF) [1,2]<br>1780 / SPE029-4X25ML - Lot LRAB4015 /Analyst:DB/ Analysis Date: 2017-08-14 | 150 ºF<br>*Evaluation Criteria - 1*<br>☐*Voluntary* | 150 | 133 to 167 | 0<br>*Evaluation Parameter - a:1, b:0, c:0, d:5.67* | Acceptable |

### Method:EPA 9023 (1996) [10195003]

| Analyte | Result Units | Assigned Value | Accept. Window | Z | Evaluation |
|---|---|---|---|---|---|
| Extractable organics halides (EOX) [1,2]<br>1720 / SPE038-100G - Lot LRAB3977 /Analyst:DB/ Analysis Date: 2017-08-31 | 11 mg/kg<br>*Evaluation Criteria - 1*<br>☐*Voluntary* | 19.2 | 5.9 to 32.5 | -1.85<br>*Evaluation Parameter - a:0.65, b:0, c:0.15, d:0* | Acceptable |

### Method:EPA 9076 (1994) [10202401]

| Analyte | Result Units | Assigned Value | Accept. Window | Z | Evaluation |
|---|---|---|---|---|---|
| Chloride [1,2]<br>1575 / SPE061-100G - Lot LRAB4332 /Analyst:DB/ Analysis Date: 2017-08-30 | 1.01 Wt%<br>*Evaluation Criteria - 1*<br>☐*Voluntary* | 0.88 | 0.482 to 1.27 | 1.02<br>*Evaluation Parameter - a:1, b:0, c:0.15, d:0* | Acceptable |

REVISED REPORT

# Sample Information

## FLASH POINT - LIQUID - PT

SPE029-4X25ML / Lot LRAB4015

| Analytes | Units | Gravimetric Value | Study Mean | Study Std. Dev. |
|---|---|---|---|---|
| Ignitability (Flashpoint, ºF) [1,2]<br>1780 Miscellaneous Analytes | ºF | 150±2.25 | 148 | 5.86 |
| Screen (+/-) [2]<br>12100 Miscellaneous Analytes | | 1 | 0 | 0 |
| Ignitability (Flashpoint, ºC) [1,2]<br>1780 Miscellaneous Analytes | ºC | 67±1.08 | 67.4 | 5.28 |

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# PHENOLICS IN SOIL (TOX) - PT

SPE038-100G / Lot LRAB3977

| Analytes | Units | Gravimetric Value | Study Mean | Study Std. Dev. |
|---|---|---|---|---|
| Extractable organics halides (EOX) [1,2]<br>1720 Miscellaneous Analytes | mg/kg | 29.5±0.456 | 0 | 0 |
| Total phenolics [1,2]<br>1905 Miscellaneous Analytes | mg/Kg | 89.5±0.456 | 57.9 | 11.2 |
| Total organic halides (TOX) [1,2]<br>2045 Miscellaneous Analytes | mg/Kg | 89.5±0.456 | 0 | 0 |

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# FLUORIDE/CHLORIDE IN OIL - PT

SPE061-100G / Lot LRAB4332

| Analytes | Units | Gravimetric Value | Study Mean | Study Std. Dev. |
|---|---|---|---|---|
| Chloride [1,2] 1575 | Wt% | 0.876±0.00850 | 0 | 0 |
| Fluoride [1,2] 1730 | Wt% | 0.689±0.00668 | 0 | 0 |
| Chloride [1,2] 1575 Miscellaneous Analytes | Wt% | 0.876±0.00850 | 0 | 0 |
| Fluoride [1,2] 1730 Miscellaneous Analytes | Wt% | 0.689±0.00668 | 0 | 0 |
| Halogens, total [2] 3001 Miscellaneous Analytes | Wt% | 1.57±0.0152 | 0 | 0 |

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## SPECIFIC GRAVITY - LIQUID - PT

SPE066-100ML / Lot LRAB2639

| Analytes | Units | Gravimetric Value | Study Mean | Study Std. Dev. |
|---|---|---|---|---|
| Specific Gravity [2]<br>8042 | g/mL | 1.078 | 0 | 0 |
| Specific Gravity [2]<br>8042 Miscellaneous Analytes | g/mL | 1.078 | 0 | 0 |

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## Definitions and Interpretation of Statistical Analysis:

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**Proficiency Std. Dev.:** Standard deviation calculated based on **Evaluation Criteria.**

**Study Mean:** Statistical study mean calculated using a robust statisitical model (RTC employs the 'Biweight Program'). Robust statistical techniques to minimize the influence that extreme results can have on estimates of the mean and standard deviation. NOTE - These techniques assign less weight to extreme results, rather than eliminate them from a data set.

**Study Std. Dev.:** Standard deviation calculated from study data using robust statisicals (Biweight).

**Gravimetric Value:** The 'prepared to' value, determined by gravimetric means. The uncertainty associated to this value is standard uncertainty and based on RTC's gravimetric tolerances.

## Evaluation Criteria:

**1 - Regression Equation** - Acceptance windows based on TNI adopted equation of proficiency value +/- 3 proficiency standard deviations and check limits of proficiency value +/- 2 proficiency standard deviations. Proficiency value and proficiency standard deviation are calculated from gravimetric variables a, b, c, & d as proficiency value = a * gravimetric + b and proficiency standard deviation = c * gravimetric + d.

**2 - Study Robust Mean and c,d regression** - Acceptance windows based on TNI adopted equation of proficiency value +/- 3 proficiency standard deviations and check limits of proficiency value +/- 2 proficiency standard deviations. Proficiency value and proficiency standard deviation calculated from robust study mean and variables c & d as proficiency value = robust mean and proficiency standard deviation = c * proficiency value + d.

**3 - Fixed Limits** - Acceptance windows based on span of gravimetric percentage from gravimetric as gravimetric +/- gravimetric * percentage.

**4 - Adjustable Fixed Limits** - Acceptance windows base on a span of gravimetric percentage from gravimetric as gravimetric +/- gravimetric * lowPercentage where gravimetric < break and gravimetric +/-

REVISED REPORT

gravimetric * highPercentage where gravimetric >= break.

**5 - Study Statistics** - Acceptance windows based on a number of standard deviations span from the study mean as study mean +/- (deviations * standard deviation).

**6 - Log Transform Statistics** - Acceptance windows based on lognormal distributed data. Acceptance windows = mean(lognormal) +/- span * standard deviation(lognormal).

**7 - Reserved**

**8 - Regression Equation 2SD** - Acceptance windows based on EPA equation of proficiency value +/- 2 proficiency standard deviations. Proficiency value and proficiency standard deviation are calculated from gravimetric variables a, b, c, & d as proficiency value = a * gravimetric + b and proficiency standard deviation = c * gravimetric + d. Generally reserved for drinking water studies.

**Proficiency Test Item Preparation, Homogeneity and Stability Assessment** - RTC uses proprietary and published methods for the manufacture, homogeneity and stability testing of proficiency test items. RTC's proficiency test materials meet requirements of ISO Guide 34. For more information contact RTC. Additionally RTC complies with TNI Volume 3 'General Requirements for Environmental Proficiency Test Providers', EL-V3-2009, 2009 for all TNI Fields of Proficiency Testing analytes.

**Metrological Traceability** - All preparations are made using balances calibrated annually traceable to NIST standards. Where appropriate analytical measurements are traceable through an unbroken chain to NIST standards, or a Certified Reference Material manufactured under ISO Guide 34 in conjunction with ISO/IEC 17025.

**Statistical Analysis** - RTC uses robust statistics to calculate study means and standard deviations - Reference - Kafadar, K, A Biweight Approach to the One-Sample Problem, Journal of the American Statistical Association, Vol. 77, No. 378, June, 1982, pp. 416-424.

**Additional Information** - Go to www.pt.sigmainformatics.com for additional information on summary statistics for specific methods, advice on the interpretation of the statistical analysis, and additional comments/recommendations. If you failed an analyte it may be required to perform a corrective action and/or retest. RTC recommends that you contact your accreditation body for specific instruction.

Program analyte accrediting footnotes

[1] NELAC Compliant, covered by RTC's ANAB Proficiency Testing Provider accreditation, Cert. AP-1469

[2] ISO 17043 Accredited, covered by RTC's ANAB Proficiency Testing Provider accreditation, Cert AP-1469

Authorizing Officer: _____ Date: 10/11/2017

Patrick Brumfield, ASQ CQA

QA Manager

REPORT

**This section of the report is for informational purposes only. If you are unsure about specific accreditation requirements, please contact your state coordinator.**

## UNACCEPTABLE ANALYTES

REVISED REPORT

## PASS RATE

| | |
|---|---|
| Number of Reported Results: | 4 |
| Number of Passing Results: | 4 |
| Pass Rate: | 100% |

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