

# PERFORMANCE EVALUATION

Quarterly Study

## WSMIC08-4

8-Oct-2008 through 21-Nov-2008

### RT1068

RTC Labcode

### WY00006

US EPA Labcode

Energy Labs  
Terry Friedlan  
400 West Boxelder Rd.  
Gillette WY 82718

Thank you for participating in study WSMIC08-4. Additional information about this study may be found online at [www.rt-corp.com](http://www.rt-corp.com). you have any questions or comments about this study please contact me.

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**This report may contain data that are not covered by the A2LA accreditation.**

Sincerely,



Christopher Rucinski  
Quality Director

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Dataset

## **WSMIC08-4MLI**

**Dataset Analyst**

Ingram, Mary

### **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.

**Accrediting Labcode WY00006**

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UNITED STATES

**217** Jim Gindelberger  
1595 Wynkoop Street  
Denver CO 80202-1129  
UNITED STATES

**231** Aaron Urdiales  
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Denver CO 80202-1129  
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**606** Sandra Spence  
1595 Wynkoop Street  
Denver CO 80202-1129  
UNITED STATES

**Accrediting Labcode WY00006**

Wyoming DEQ

Water Quality Division

**206** Edward Mock  
122 W. 25th Street  
Cheyenne WY 82002  
UNITED STATES



### Microbiology

Analyte

**Total coliforms** 1, 3, 4

2500

#### Series-H

SM/APHA 9223 B 18th ED (1992) - 20037609

Technology Code: COLILERT

Analyst: M. Ingram

Presence/Absence	Result	Assigned Value	Evaluation
Presence/Absence - Sample 1	Absent	Absent	Acceptable
Presence/Absence - Sample 2	Absent	Absent	Acceptable
Presence/Absence - Sample 3	Absent	Absent	Acceptable
Presence/Absence - Sample 4	Present	Present	Acceptable
Presence/Absence - Sample 5	Absent	Absent	Acceptable
Presence/Absence - Sample 6	Present	Present	Acceptable
Presence/Absence - Sample 7	Present	Present	Acceptable
Presence/Absence - Sample 8	Present	Present	Acceptable
Presence/Absence - Sample 9	Present	Present	Acceptable
Presence/Absence - Sample 10	Present	Present	Acceptable

#### Presence/Absence Evaluation

##### Series-H

Method	TechnologyCode	False Positives	False Negatives	Acceptance
Total coliforms	SM/APHA 9223 B 18th ED (1992)	0	0	<b>Acceptable</b>
2500	COLILERT			

MPN	Result	Units	Acceptance Limits	Assigned Value	Evaluation
MPN - Sample 1	0	MPN/100mL	0.0 to 0.0	0.00	Acceptable
MPN - Sample 2	0	MPN/100mL	0.0 to 0.0	0.00	Acceptable
MPN - Sample 3	0	MPN/100mL	0.0 to 0.0	0.00	Acceptable
MPN - Sample 4	414	MPN/100mL	170 to 496	300	Acceptable
MPN - Sample 5	0	MPN/100mL	0.0 to 0.0	0.00	Acceptable
MPN - Sample 6	20	MPN/100mL	13 to 72.2	30.0	Acceptable
MPN - Sample 7	259	MPN/100mL	183 to 528	300	Acceptable
MPN - Sample 8	211	MPN/100mL	174 to 687	300	Acceptable
MPN - Sample 9	31	MPN/100mL	9.11 to 88.8	30.0	Acceptable
MPN - Sample 10	52	MPN/100mL	10 to 83.8	30.0	Acceptable



Analyte

**Escherichia coli** 1, 4

2525

**Series-H**

SM/APHA 9223 B 18th ED (1992) - 20037609

Technology Code: COLILERT

Analyst: M. Ingram

Presence/Absence	Result	Assigned Value	Evaluation
Presence/Absence - Sample 1	Absent	Absent	<b>Acceptable</b>
Presence/Absence - Sample 2	Absent	Absent	<b>Acceptable</b>
Presence/Absence - Sample 3	Absent	Absent	<b>Acceptable</b>
Presence/Absence - Sample 4	Absent	Absent	<b>Acceptable</b>
Presence/Absence - Sample 5	Absent	Absent	<b>Acceptable</b>
Presence/Absence - Sample 6	Present	Present	<b>Acceptable</b>
Presence/Absence - Sample 7	Absent	Absent	<b>Acceptable</b>
Presence/Absence - Sample 8	Absent	Absent	<b>Acceptable</b>
Presence/Absence - Sample 9	Present	Present	<b>Acceptable</b>
Presence/Absence - Sample 10	Present	Present	<b>Acceptable</b>

**Presence/Absence Evaluation**

**Series-H**

Method TechnologyCode	False Positives	False Negatives	Acceptance
Escherichia coli 2525 SM/APHA 9223 B 18th ED (1992) COLILERT	0	0	<b>Acceptable</b>

MPN	Result	Units	Acceptance Limits	Assigned Value	Evaluation
MPN - Sample 1	0	MPN/100mL	0.0 to 0.0	0.00	<b>Acceptable</b>
MPN - Sample 2	0	MPN/100mL	0.0 to 0.0	0.00	<b>Acceptable</b>
MPN - Sample 3	0	MPN/100mL	0.0 to 0.0	0.00	<b>Acceptable</b>
MPN - Sample 4	0	MPN/100mL	0.0 to 0.0	0.00	<b>Acceptable</b>
MPN - Sample 5	0	MPN/100mL	0.0 to 0.0	0.00	<b>Acceptable</b>
MPN - Sample 6	20	MPN/100mL	13 to 72.7	30.0	<b>Acceptable</b>
MPN - Sample 7	0	MPN/100mL	0.0 to 0.0	0.00	<b>Acceptable</b>
MPN - Sample 8	0	MPN/100mL	0.0 to 0.0	0.00	<b>Acceptable</b>
MPN - Sample 9	31	MPN/100mL	9.62 to 90.3	30.0	<b>Acceptable</b>
MPN - Sample 10	52	MPN/100mL	10 to 90.8	30.0	<b>Acceptable</b>



End of WSMIC08-4MLI



Dataset

## **WSMIC08-4SMR**

### **Dataset Analyst**

Rasmussen, Sheena

### **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.

#### **Accrediting Labcode WY00006**

USEPA Region VIII

**370** Aaron Urdiales  
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#### **Accrediting Labcode WY00006**

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**206** Edward Mock  
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Cheyenne WY 82002  
UNITED STATES



### Microbiology

Analyte

**Total coliforms** 1, 3, 4

2500

#### Series-H

SM/APHA 9223 B 18th ED (1992) - 20037609

Technology Code: COLILERT

Analyst: S. Rasmussen

Presence/Absence	Result	Assigned Value	Evaluation
Presence/Absence - Sample 1	Absent	Absent	Acceptable
Presence/Absence - Sample 2	Absent	Absent	Acceptable
Presence/Absence - Sample 3	Absent	Absent	Acceptable
Presence/Absence - Sample 4	Present	Present	Acceptable
Presence/Absence - Sample 5	Absent	Absent	Acceptable
Presence/Absence - Sample 6	Present	Present	Acceptable
Presence/Absence - Sample 7	Present	Present	Acceptable
Presence/Absence - Sample 8	Present	Present	Acceptable
Presence/Absence - Sample 9	Present	Present	Acceptable
Presence/Absence - Sample 10	Present	Present	Acceptable

#### Presence/Absence Evaluation

##### Series-H

Method	TechnologyCode	False Positives	False Negatives	Acceptance
Total coliforms	SM/APHA 9223 B 18th ED (1992)	0	0	<b>Acceptable</b>
2500	COLILERT			

MPN	Result	Units	Acceptance Limits	Assigned Value	Evaluation
MPN - Sample 1	0	MPN/100mL	0.0 to 0.0	0.00	Acceptable
MPN - Sample 2	0	MPN/100mL	0.0 to 0.0	0.00	Acceptable
MPN - Sample 3	0	MPN/100mL	0.0 to 0.0	0.00	Acceptable
MPN - Sample 4	249	MPN/100mL	170 to 496	300	Acceptable
MPN - Sample 5	0	MPN/100mL	0.0 to 0.0	0.00	Acceptable
MPN - Sample 6	20	MPN/100mL	13 to 72.2	30.0	Acceptable
MPN - Sample 7	317	MPN/100mL	183 to 528	300	Acceptable
MPN - Sample 8	350	MPN/100mL	174 to 687	300	Acceptable
MPN - Sample 9	52	MPN/100mL	9.11 to 88.8	30.0	Acceptable
MPN - Sample 10	10	MPN/100mL	10 to 83.8	30.0	Acceptable



Analyte

**Escherichia coli 1, 4**

2525

**Series-H**

SM/APHA 9223 B 18th ED (1992) - 20037609

Technology Code: COLILERT

Analyst: S. Rasmussen

Presence/Absence	Result	Assigned Value	Evaluation
Presence/Absence - Sample 1	Absent	Absent	<b>Acceptable</b>
Presence/Absence - Sample 2	Absent	Absent	<b>Acceptable</b>
Presence/Absence - Sample 3	Absent	Absent	<b>Acceptable</b>
Presence/Absence - Sample 4	Absent	Absent	<b>Acceptable</b>
Presence/Absence - Sample 5	Absent	Absent	<b>Acceptable</b>
Presence/Absence - Sample 6	Present	Present	<b>Acceptable</b>
Presence/Absence - Sample 7	Absent	Absent	<b>Acceptable</b>
Presence/Absence - Sample 8	Absent	Absent	<b>Acceptable</b>
Presence/Absence - Sample 9	Present	Present	<b>Acceptable</b>
Presence/Absence - Sample 10	Present	Present	<b>Acceptable</b>

**Presence/Absence Evaluation**

**Series-H**

Method TechnologyCode	False Positives	False Negatives	Acceptance
Escherichia coli 2525 SM/APHA 9223 B 18th ED (1992) COLILERT	0	0	<b>Acceptable</b>

MPN	Result	Units	Acceptance Limits	Assigned Value	Evaluation
MPN - Sample 1	0	MPN/100mL	0.0 to 0.0	0.00	<b>Acceptable</b>
MPN - Sample 2	0	MPN/100mL	0.0 to 0.0	0.00	<b>Acceptable</b>
MPN - Sample 3	0	MPN/100mL	0.0 to 0.0	0.00	<b>Acceptable</b>
MPN - Sample 4	0	MPN/100mL	0.0 to 0.0	0.00	<b>Acceptable</b>
MPN - Sample 5	0	MPN/100mL	0.0 to 0.0	0.00	<b>Acceptable</b>
MPN - Sample 6	20	MPN/100mL	13 to 72.7	30.0	<b>Acceptable</b>
MPN - Sample 7	0	MPN/100mL	0.0 to 0.0	0.00	<b>Acceptable</b>
MPN - Sample 8	0	MPN/100mL	0.0 to 0.0	0.00	<b>Acceptable</b>
MPN - Sample 9	52	MPN/100mL	9.62 to 90.3	30.0	<b>Acceptable</b>
MPN - Sample 10	10	MPN/100mL	10 to 90.8	30.0	<b>Acceptable</b>



End of WSMIC08-4SMR

## Definitions:

**Assigned Value:** Value attributed to a particular quantity and accepted, sometimes by convention, as having an uncertainty appropriate for a give purpose. See ISO Guide 43 for additional information.

**Accept. Window:** The range of values that constitute acceptable performance for a laboratory participation 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.

**Study Mean:** Statistical study mean calculated using a robust statistical 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 statisticals (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.

Program analyte accrediting footnotes

<sup>1</sup> NELAC

<sup>3</sup> Other

<sup>5</sup> NELAC Experimental

<sup>2</sup> EPA

<sup>4</sup> A2LA