

STL

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ANALYTICAL REPORT

REVISED

PROJECT NO. 04020-023-401

Henderson, NV Source Area Inv.

Lot #: F6L050180
SDG #: ENSR120506

Robert Kennedy

ENSR International
2 Technology Park Drive
Westford, MA 01886-3140

TESTAMERICA LABORATORIES, INC. (FKA STL)



Jerry Everett
Project Manager

August 10, 2007

ADDENDUM

Case Narrative SDG Number: ENSR120506

This report contains the analytical results for the 24 samples received under chain of custody by STL St. Louis between December 5, 2006 and December 8, 2006. These samples are associated with your Henderson, NV Source Area Inv. project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following pages.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by STL St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise.

Observations/Nonconformances

I. Sample Receipt and Log In

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

II. Sample Analysis

The sample data from both IC instruments were reviewed. The sample non-chlorate/phosphate anion concentrations on the two instruments were comparable. Due to a difference in the age of the column and slight variations flow rate, injection, etc., the Retention Times on the two instruments are different. This is more obvious for the later eluting peaks such as Nitrate, Chlorate, Phosphate and Sulfate.

Chlorate was not included in the anion calibration performed on 4000 IC instrument (denoted as PeakNet 5.1 in the bottom left hand corner of the analysis page) in which Phosphate was analyzed for a number of samples.

Chlorate was added to the anion calibration performed on the 2500 IC (denoted as PeakNet 6 in the bottom right hand corner of the analysis page). On the 2500IC, Chlorate and Phosphate Retention Times are close, about 1 minute apart.

Analysis on the 4000 IC observed a peak in the phosphate retention time window (RTW). Analysis on the 2500 IC observed a peak in the chlorate retention time window; no peak was observed in the phosphate retention time window. We have determined that under the column/instrument conditions on the 4000 IC at the time of these analyses, that chlorate and phosphate peaks co-elute or too closely elute to distinguish between the two. The peak on the 4000 IC in the phosphate RTW is not phosphate, as demonstrated on the 2500IC.

Affected Samples:

F6L080240 (2): M55
F6L080240 (3): M55D
F6L060222 (1): M12A

F6L070281 (1): M48
F6L070281 (3): M31A
F6L070281 (4): M11

Affected Samples (cont):

F6L060222 (2): M39
F6L060222 (3): M89

F6L070281 (5): M11D

Analysis on the 4000 IC observed a peak in the phosphate retention time window (RTW). Analysis on the 2500 IC observed two peaks one in the chlorate retention time window; the other in the phosphate RTW. The concentrations of the phosphate and chlorate peaks observed on the 2500 IC cumulatively are comparable to the phosphate concentration observed on the 4000IC. We have determined that on the 4000 IC, that chlorate and phosphate peaks co-elute or too closely elute to distinguish between the two. The peak on the 4000 IC in the phosphate RTW is chlorate/phosphate, as demonstrated on the 2500 IC.

Affected Samples:

F6L050180 (2): M100

F6L050180 (3): M100D

Analysis on the 4000 IC observed a peak in the phosphate retention time window (RTW). Although within the RTW, it is noted that the observed peak is just within the early RT. (phosphate peak RT in the standards is approx 9.2-9.5 minutes, peak RT in samples 8.2 – 8.9 minutes). Analysis on the 2500 IC observed a peak in the chlorate retention time window; no peak was observed in the phosphate retention time window. We have determined that on the 4000 IC, that chlorate and phosphate peaks co-elute or too closely elute to distinguish between the two. The peak on the 4000 IC in the phosphate RTW is not phosphate, as demonstrated on the 2500IC.

Affected Samples:

F6L050180 (4): M2A

F6L050180 (6): M95

No change was necessary for ortho-phosphate result.

Affected Samples:

F6L070281 (2): MC45

METHODS SUMMARY

ENSR120506

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Phosphate, ortho as P	SW846 9056A	

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

TestAmerica Laboratories, Inc.

SAMPLE SUMMARY

ENSR120506 : F6L050180

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
JKR7D	002	M100	12/04/06	09:45
JKR7F	003	M100D	12/04/06	
JKR7G	004	M2A	12/04/06	13:00
JKR78	006	M95	12/04/06	14:50

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

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SAMPLE SUMMARY

ENSR120506 : F6L060222

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
JKWQM	001	M12A	12/04/06	08:00
JKWVW	002	M39	12/04/06	10:45
JKWWK	003	M89	12/04/06	12:45

NOTE(S) :

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SAMPLE SUMMARY

ENSR120506 : F6L070281

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
JK163	001	M48	12/06/06	07:30
JK17W	002	MC45	12/06/06	09:00
JK173	003	M31A	12/06/06	11:25
JK176	004	M11	12/06/06	13:30
JK177	005	M11D	12/06/06	

NOTE(S) :

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- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

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SAMPLE SUMMARY

ENSR120506 : F6L080240

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
JK40F	002	M55	12/07/06	07:20
JK40P	003	M55D	12/07/06	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
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- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ENSR International Corporation

Client Sample ID: M100

General Chemistry

Lot-Sample #...: F6L050180-002 Work Order #...: JKR7D Matrix.....: W
Date Sampled...: 12/04/06 09:45 Date Received...: 12/05/06

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Phosphate as P, Ortho	ND	5.0	mg/L	SW846 9056A	12/05/06	6340466
		Dilution Factor: 10		Analysis Time...: 04:16	MDL.....: 1.0	

ENSR International Corporation

Client Sample ID: M100D

General Chemistry

Lot-Sample #...: F6L050180-003
Date Sampled...: 12/04/06

Work Order #...: JKR7F
Date Received...: 12/05/06

Matrix.....: W

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Phosphate as P, Ortho	ND	5.0	mg/L	SW846 9056A	12/05/06	6340466

Dilution Factor: 10

Analysis Time...: 05:31

MDL.....: 1.0

ENSR International Corporation

Client Sample ID: M2A

General Chemistry

Lot-Sample #...: F6L050180-004 Work Order #...: JKR7G Matrix.....: W
Date Sampled...: 12/04/06 13:00 Date Received...: 12/05/06

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Phosphate as P, Ortho	ND	500	mg/L	SW846 9056A	12/05/06	6340466

Dilution Factor: 1000 Analysis Time...: 06:08 MDL.....: 100

ENSR International Corporation

Client Sample ID: M95

General Chemistry

Lot-Sample #...: F6L050180-006 Work Order #...: JKR78 Matrix.....: W
Date Sampled...: 12/04/06 14:50 Date Received...: 12/05/06

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Phosphate as P, Ortho	ND	5.0	mg/L	SW846 9056A	12/05/06	6340466

Dilution Factor: 10 Analysis Time..: 06:45 MDL.....: 1.0

ENSR International Corporation

Client Sample ID: M12A

General Chemistry

Lot-Sample #...: F6L060222-001 Work Order #...: JKWQM Matrix.....: W
Date Sampled...: 12/04/06 08:00 Date Received...: 12/06/06

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Phosphate as P, Ortho	ND	500	mg/L	SW846 9056A	12/06/06	6348081

Dilution Factor: 1000 Analysis Time..: 00:00 MDL.....: 100

ENSR International Corporation

Client Sample ID: M39

General Chemistry

Lot-Sample #...: F6L060222-002 Work Order #...: JKWVW Matrix.....: W
Date Sampled...: 12/04/06 10:45 Date Received...: 12/06/06

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Phosphate as P, Ortho	ND	5.0	mg/L	SW846 9056A	12/07/06	6348081

Dilution Factor: 10 Analysis Time...: 12:52 MDL.....: 1.0

ENSR International Corporation

Client Sample ID: M89

General Chemistry

Lot-Sample #...: F6L060222-003 Work Order #...: JKWWK Matrix.....: W
Date Sampled...: 12/04/06 12:45 Date Received...: 12/06/06

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Phosphate as P, Ortho	ND	5.0	mg/L	SW846 9056A	12/06/06	6348081

Dilution Factor: 10 Analysis Time...: 11:56 MDL.....: 1.0

ENSR International Corporation

Client Sample ID: M48

General Chemistry

Lot-Sample #....: F6L070281-001 Work Order #....: JK163 Matrix.....: W
Date Sampled....: 12/06/06 07:30 Date Received...: 12/07/06

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Phosphate as P, Ortho	ND	5.0	mg/L	SW846 9056A	12/07/06	6348196
		Dilution Factor: 10		Analysis Time...: 08:57		MDL.....: 1.0

ENSR International Corporation

Client Sample ID: MC45

General Chemistry

Lot-Sample #...: F6L070281-002 Work Order #...: JK17W Matrix.....: W
Date Sampled...: 12/06/06 09:00 Date Received...: 12/07/06

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Phosphate as P, Ortho	ND	5.0	mg/L	SW846 9056A	12/07/06	6348196

Dilution Factor: 10 Analysis Time..: 07:43 MDL.....: 1.0

ENSR International Corporation

Client Sample ID: M31A

General Chemistry

Lot-Sample #...: F6L070281-003 Work Order #...: JK173 Matrix.....: W
Date Sampled...: 12/06/06 11:25 Date Received...: 12/07/06

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Phosphate as P, Ortho	ND	500	mg/L	SW846 9056A	12/08/06	6348196
		Dilution Factor: 1000		Analysis Time...: 02:13	MDL.....: 100	

ENSR International Corporation

Client Sample ID: M11

General Chemistry

Lot-Sample #...: F6L070281-004 Work Order #...: JK176 Matrix.....: W
Date Sampled...: 12/06/06 13:30 Date Received...: 12/07/06

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Phosphate as P, Ortho	ND	5.0	mg/L	SW846 9056A	12/08/06	6348196

Dilution Factor: 10 Analysis Time...: 12:03 MDL.....: 1.0

ENSR International Corporation

Client Sample ID: M11D

General Chemistry

Lot-Sample #...: F6L070281-005

Work Order #...: JK177

Matrix.....: W

Date Sampled...: 12/06/06

Date Received...: 12/07/06

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Phosphate as P, Ortho	ND	5.0	mg/L	SW846 9056A	12/07/06	6348196

Dilution Factor: 10

Analysis Time...: 10:49

MDL.....: 1.0

ENSR International Corporation

Client Sample ID: M55

General Chemistry

Lot-Sample #...: F6L080240-002 Work Order #...: JK40F Matrix.....: W
Date Sampled...: 12/07/06 07:20 Date Received...: 12/08/06

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Phosphate as P, Ortho	ND	500	mg/L	SW846 9056A	12/08/06	6347102

Dilution Factor: 1000 Analysis Time..: 08:34 MDL.....: 100

ENSR International Corporation

Client Sample ID: M55D

General Chemistry

Lot-Sample #...: F6L080240-003
Date Sampled...: 12/07/06

Work Order #...: JK40P
Date Received...: 12/08/06

Matrix.....: W

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Phosphate as P, Ortho	ND	500	mg/L	SW846 9056A	12/08/06	6347102
		Dilution Factor: 1000		Analysis Time...: 09:29	MDL.....: 100	