



Issued By

Instrument Transformers Inc  
1907 Calumet Street, Clearwater, FL 33765

Catalog Number

750X320003

Serial Number

Sample #1 of 10

Model number

JAD-OS 3000:5

Date Issued

8/14/2014

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### TEST EQUIPMENT / ACCESSORIES

Equipment Used during Test	S/N	Calibrated Date	Cal. Due Date	Asset Number
Associated Research, Inc. 00404A Hi-Pot	3262	11/18/2013	11/18/2014	1021
Metering CT	455840	10/2006	10/2016	1795
Fluke DMM	95160524	1/23/2014	1/23/2015	1519
Fluke DMM	58680419	2/25/2014	2/25/2015	0323
Tektronix DMM	152941	7/31/2014	7/31/2015	1663
Dr. Strauss Digital Recorder TR-AS 200-12	468	8/2012	8/2014	1919
Impulse test set	P35-080516-09-83	8/2012	8/2014	1072
Temp & Humidity	9724654	7/2/2014	7/2/2015	1794
Fluke 199C Scopemeter	DM9240382	1/23/2014	1/23/2015	1387
HV Divider	N/A	10/2013	10/2014	1796
Stopwatch	365515	5/30/2014	5/30/2015	1690
Tektronix DMM	B022615	9/3/2013	9/3/2014	1045
CT Test set	n/a	2/25/2014	2/25/2015	1213
Fluke DMM	96450308	1/23/2014	1/23/2015	1602
Megger Low Resistance Ohmmeter DRLO 10	6111-428	5/30/2014	5/30/2015	1608

### RELATED DOCUMENTS

Document Number	Document Name
IEEE C57.13 2008	IEEE Standard Requirements for Instrument Transformers

### TEST CONDITIONS (temp, humidity, barometric pressure)

See impulse section

### PURPOSE

Verify compliance to Standard: IEEE C57.13 2008

### COMMENTS

Test Data below indicates initial routine tests, followed by type tests, followed by routine tests per IEEE C57.13 2008.



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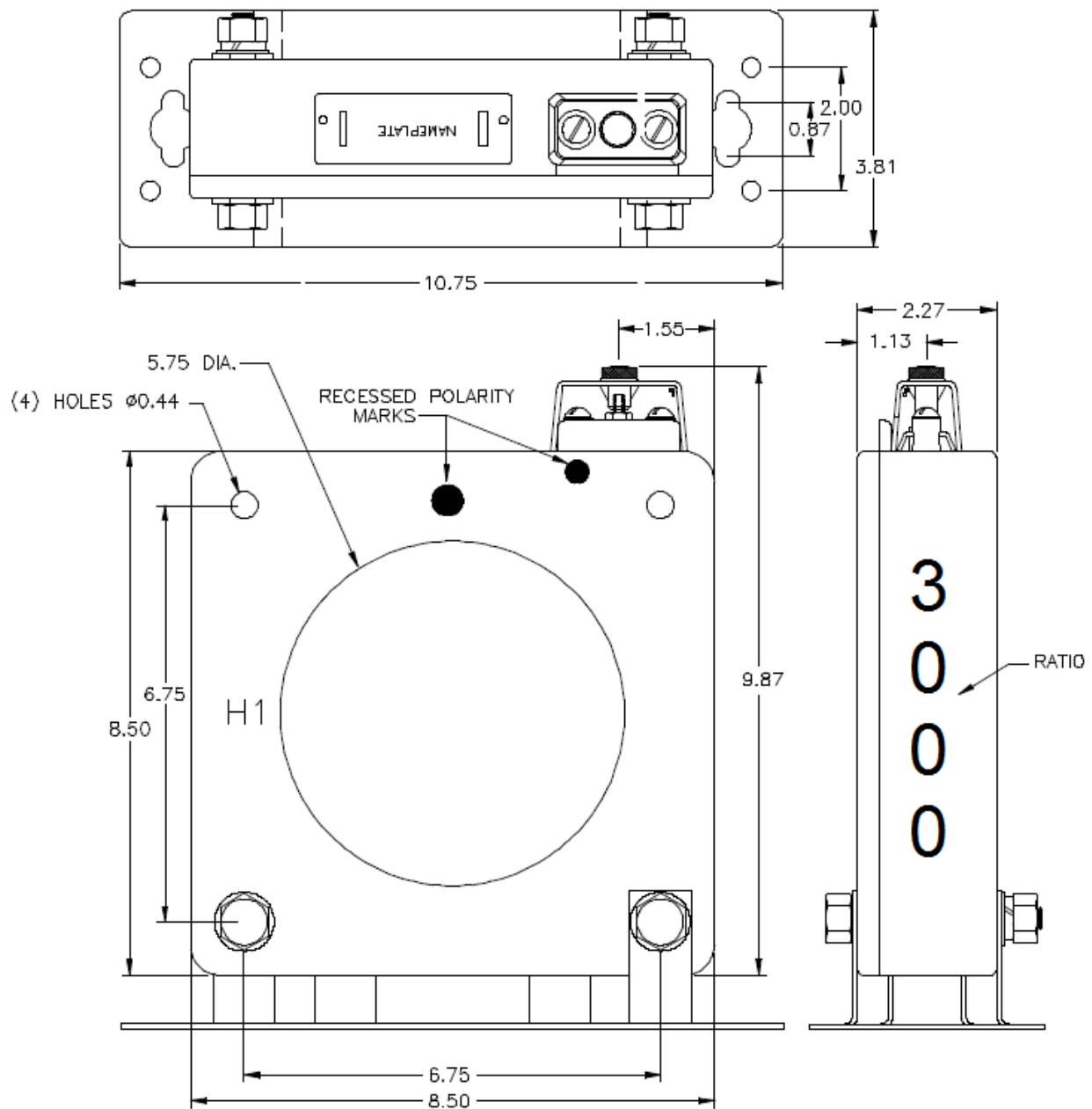
Ratio: 3000:5

Voltage Class: 0.6kV, 10kV BIL

Metering Class: 0.15S B1.8

Rating Factor (30°C Amb.): 1.5

Frequency: 60Hz





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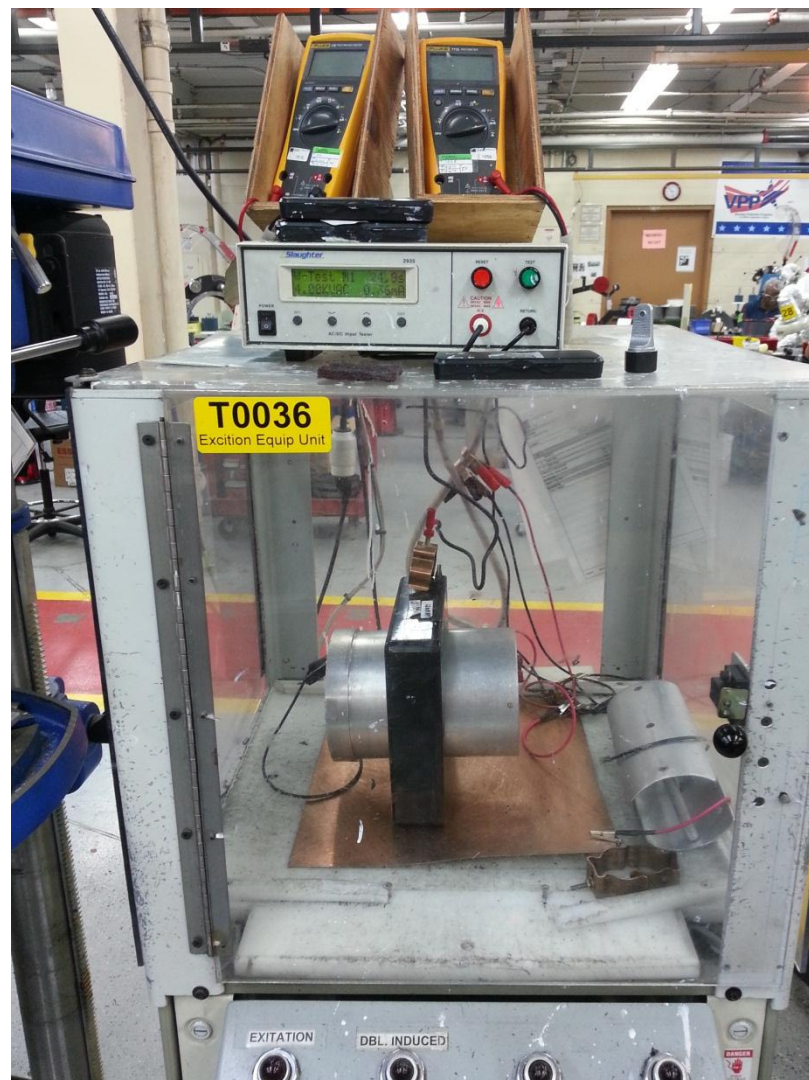
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### I. Routine tests (4.7.2)

#### a) Applied voltage tests (as applicable)

4.0 kV, 60Hz - between LV winding and ground

(Note: 0.6kV 10kV BIL window style CT's are applied voltage tested by applying 4.0kV between LV winding and ground and a copper foil in the window)





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b) Induced Voltage Test

200 V, 400Hz for 18 Sec (7200 Cycles)

c) Accuracy tests

Frequency: 60

### Metering Accuracy

Burden	Rated Current	RCF Error	PA
1.8	150%	1.00017	0.90
	100%	1.00020	1.40
	1%	1.00014	1.10
0.1	150%	1.00008	0.80
	100%	1.00006	0.80
	1%	1.00010	0.80

d) Polarity tests

OK Subtractive polarity

## II. Type tests (4.7.3):

a) Impulse Tests

Temperature = 26°C

Humidity = 45.2%

Air-Pressure = 1014 hPa

Description	V <sub>Peak</sub> (kV)	T <sub>Rise</sub> (μs)	T <sub>Fall</sub> (μs)	T <sub>Chop</sub> (μs)
50% Reduced Impulse Wave	5.38	0.86	44.2	-
#1 Impulse Chop	12.4	0.88	-	6.86
#2 Impulse Chop	12.5	0.86	-	1.38
100% Full Impulse Wave	10.2	0.85	44.1	-



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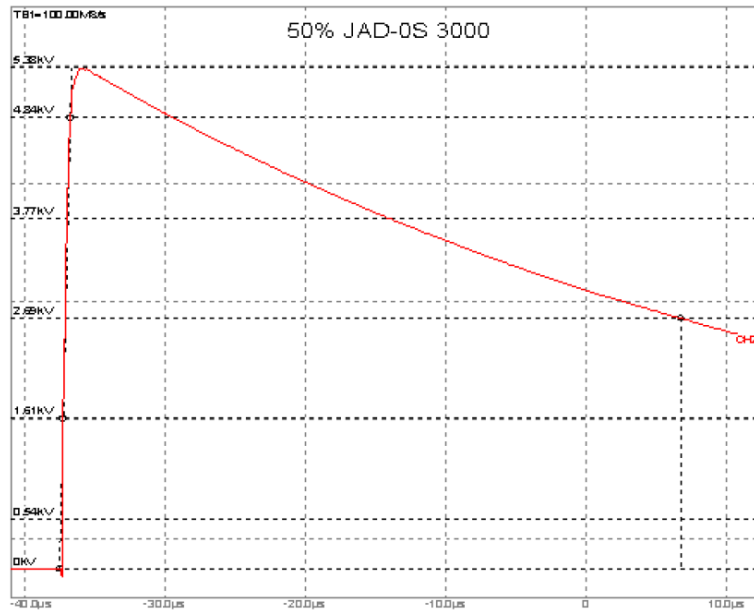
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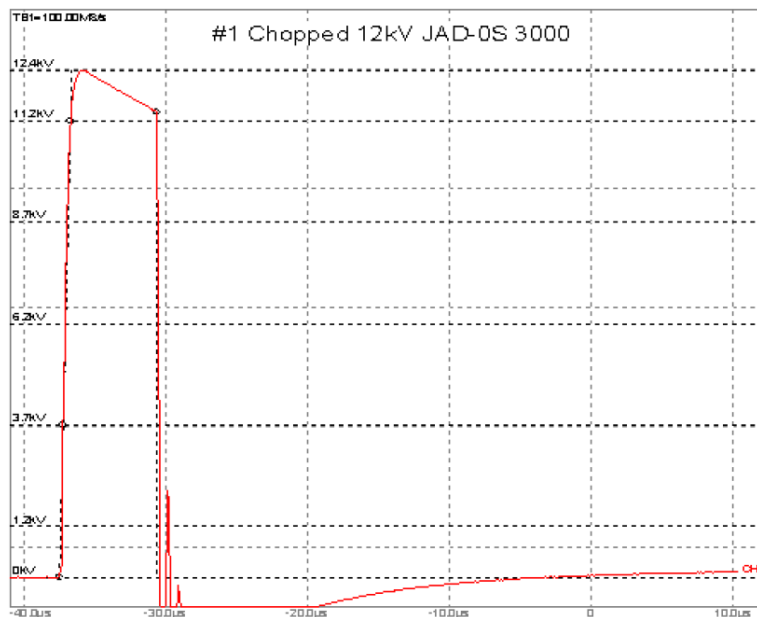


Reduced Wave  
Measured Values:

Vp= 5.38 kV

T1 = 0.86 us

T2 = 44.2 us



Chopped Wave #1

Measured Values:

Vp= 12.2 kV

T1 = 0.87 us

Tc = 5.16 us



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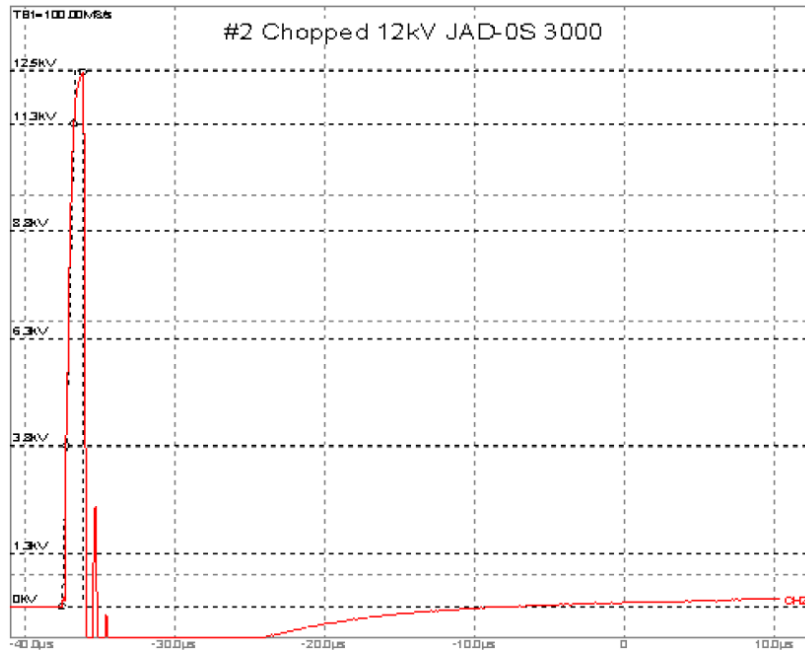
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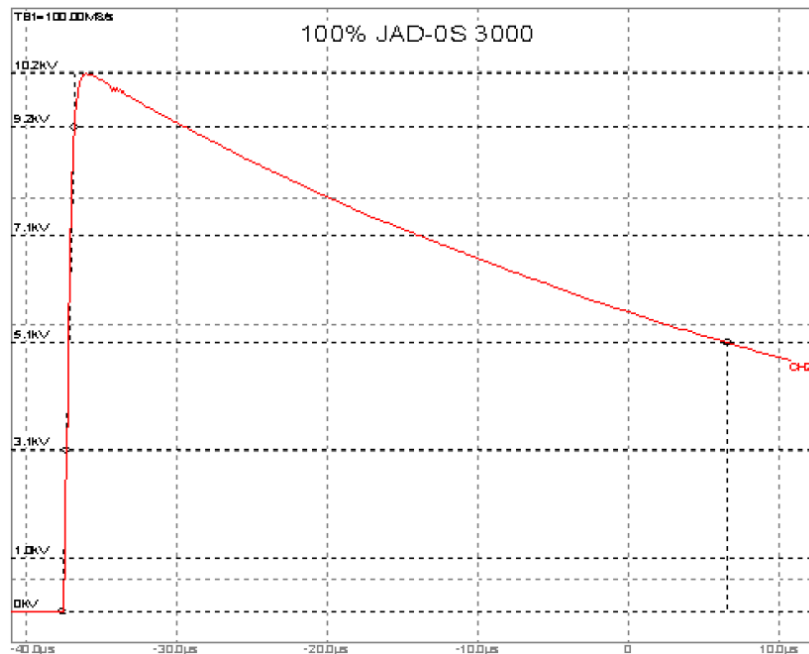
Chopped Wave #2

Measured Values:

Vp=12.1 kV

T1 = 0.82 us

Tc = 1.08 us



Full Wave

Measured Values:

Vp= 10.5 kV

T1 = 0.87 us

T2 = 44.1 us



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### b) Temperature Rise Test

Primary current measured with 8000:5A CT

Secondary burden for unit under test = Not Applicable

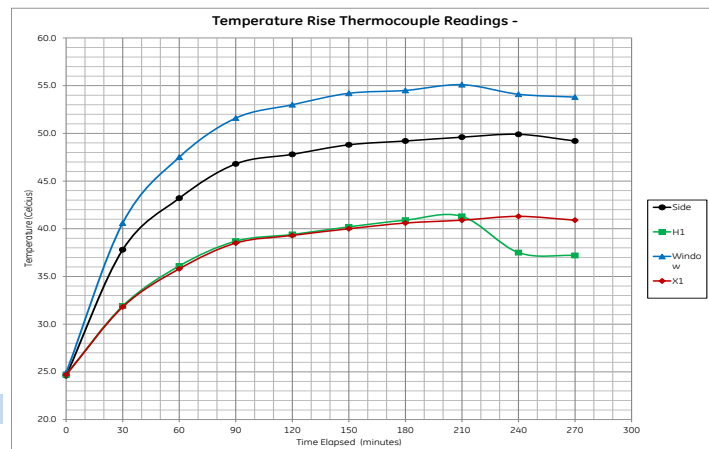
Note: H1 thermocouple was dislodged during the final hour of test.

#### Temperature Rise Worksheet

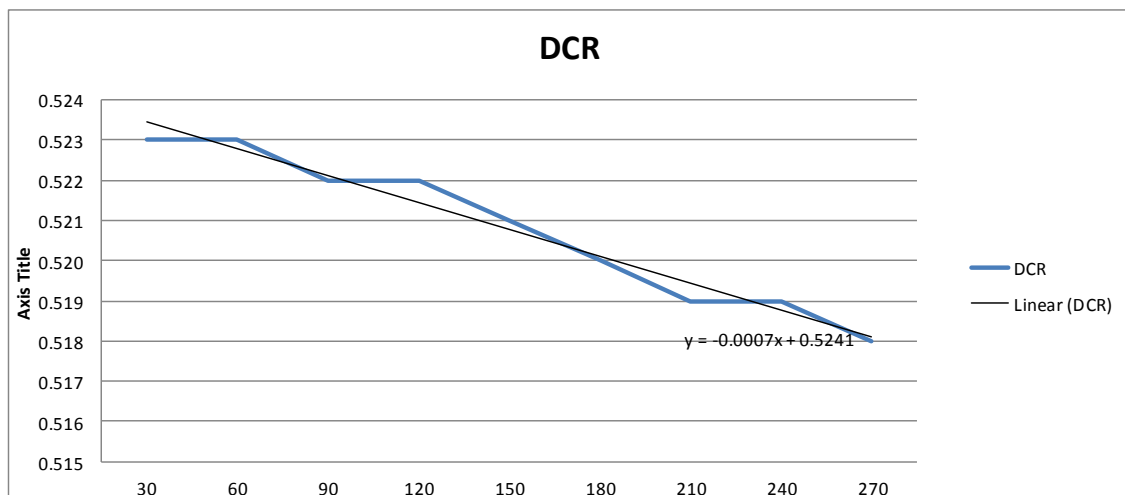
Initial Resistance 0.46300 ohms  
Initial Ambient 24.7 deg C  
Final Resistance 0.52410 ohms  
Final Ambient 25.5 deg C

Catalog Number: 750X320003  
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Rating Factor 1.50  
Accuracy Class 0.15S B1.8

Time	Resistance
30	0.523
60	0.523
90	0.522
120	0.522
150	0.521
180	0.520
210	0.519
240	0.519
270	0.518
300	0.517



Temperature Rise: 33.4 deg C



Tested by: Ryan Alkire

Date:

7/30/2014

- Sample CT is 8000:5 and is used to measure primary loop current



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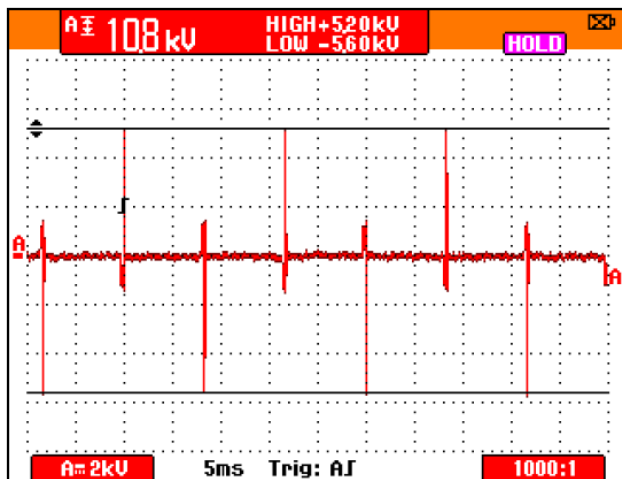
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c) Open circuit secondary voltage withstand test

Voltage: 5.20kV peak Primary Current: 1056A Frequency: 60Hz

Measured with 10 Meg Ohm probe (996:1 ratio) ITI #1796



### III. Routine tests (4.7.2)

a) Applied voltage tests (as applicable)

4.0 kV, 60Hz - between LV winding and ground

b) Induced Voltage Test

200 V, 400Hz for 18 Sec (7200 Cycles)

c) Accuracy tests

Frequency: 60

Secondary Connection	Burden	Metering Accuracy		Phase Angle (min)
		% Rated Current	Ratio Correction Factor	
X1-X2	B1.8	100	1.00021	+1.3
		1	1.00015	+1.1

d) Polarity tests

ok Subtractive polarity





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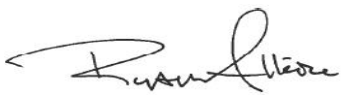
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### SIGNATURES

	Name	Date	Signature
Test performed by	Ryan Alkire	8/14/2014	

END OF REPORT