



WEC Carolina Energy Solutions  
244 E. Mt. Gallant Road  
Rock Hill, South Carolina 29730  
USA

Original  
12/15/14 to

Date: 11/24/2014

SUNSI  
Review complete

Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

To: Ed Roach:

This letter provides requested clarifications and additional information regarding WEC Carolina Energy Solutions, LLC. (CES) response to the Nonconformance's documented by the NRC in Vendor Inspection Report No. 99901438/2014-201.

**NRC provided this response dated September. 4, 2014**

Nonconformances (NON) discussed in IR 99901438/2014-201.  
Specifically, in your response to NON 99901438/2014-201-01 it was stated that Carolina Energy Solutions (CES) took corrective action to verify the chemical content of a penetrant testing (PT) material by testing and review of the chemical manufacturer's (Magnaflux) certificate of conformance (CFC). Qualification of commercial manufacturers is required for the purpose of verifying adequacy of quality controls. Further, qualification of commercial manufacturers must be established and maintained for acceptance of critical characteristics of safety related parts, materials, and services. Additionally, your response lacked documentary evidence of the chemical testing performed by Applied Technical Services (ATS).

Please describe how CES qualified the chemical manufacturer and also provide the ATS test results of the PT material. Please describe the acceptance criteria used to determine whether the test was satisfactory.

**CES Response:**

CES procures Liquid Penetrant NDE materials as commercial items meeting the requirements of the ASME for NDE materials. CES understands that NDE materials have requirements in ASME Section V, Nondestructive Examination, and ASME Section III, Rules for Construction of Nuclear Facility Components that must be met. To address these requirements, CES applies quality requirements to purchase orders to ensure documentation is provided by the manufacturer (Magnaflux) to meet the ASME requirements for the penetrant material consumables. CES performs a formal and documented receipt inspection to verify the documentation from the manufacturer provides confirmation that the supplied materials meet the ASME requirements and the requirements of the purchase order.

IE09  
MRO

CES considers the following as the basis for use of the NDE materials as commercial grade:

- 1) Evidence that the chemical manufacturer (Magnaflux) has an audited process that confirms quality controls are in place.
- 2) The manufacturer has demonstrated by testing that the chemicals meet the ASME requirements
- 3) The materials have been used historically as an industry standard
- 4) The CES NDE procedures have been demonstrated and approved by the ANI utilizing the manufacturer's NDE materials
- 5) CES applies a formal receipt inspection within the QA process which verifies materials meet the ASME requirements and is documented as such on the manufacturer's Certificate of Certification.
- 6) CES has no knowledge of any OE where the NDE chemicals have had any detrimental effect on materials or components in the industry.
- 7) The ASME survey, the ANIS audits, the NUPIC audits to approve the CES QA Programs and Procedures have never identified any issue with the purchase of NDE materials nor questioned the use as a commercial grade product
- 8) CES has not had any formal requests in Purchase Orders from our customers identifying this as a requirement to provide NDE materials as Safety Related

**Requested Response for ATS application to CES Approved Suppliers List**

ATS (Applied Technical Services) was approved for use on Carolina Energy Solutions Approved Suppliers List as follows:

- 1) ATS is an approved, qualified supplier. ATS was approved as a CES Approved Supplier through the NIAC processes per the procedures within the CES QA Program. (NIAC Audit 19045, CES Audit V14-03)
- 2) The audit and audit team personnel were evaluated per the requirements defined in the CES QA Program.
- 3) CES maintains ATS as an approved supplier through vendor evaluations in accordance with the CES QA program.

The chemical testing performed by ATS was intended and verified to meet customer (Westinghouse) specification APP-GW-VLR-002 for non-product and prohibited materials on AP1000 components (which the chemical test report states). The Chemical Test Report is attached.

If you have any questions or would like to discuss this response, please call me at (847)-990-7525

Respectfully,



Charles Ginn

Manager, Quality Assurance  
WEC Carolina Energy Solutions, LLC  
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# APPLIED TECHNICAL SERVICES, INCORPORATED

1049 Triad Court, Marietta, Georgia 30062 • (770) 423-1400 Fax (770) 424-6415

## CHEMICAL TEST REPORT

Ref. C216269N

Date May 28, 2014

Page 1 of 1

Customer: Carolina Energy Solutions, 244 E Mount Gallant Rd., Rock Hill, SC 29730-8993

Attention: Thomas Franchuk

Purchase Order #: 4500641116 Part #/Name: See Below (Wipe Samples)

Material Designation: Surface material contaminants obtained with wipe clothes

Special Requirement: Analyzed in accordance with ATS QA Manual, Rev. 11, dated 3/1/2014.

Lab Comment: Analyzed by ICP-atomic emission (ASTM E1479-99(2011)) and ion chromatography techniques (ASTM D4327-11).

### Test Results

Composition: total micrograms (µg)

Identification	Cl <sup>-</sup>	F <sup>-</sup>	S	Zn	Hg	As	Pb
Alloy or Spec. Req.	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Lot 8041, 100913 Control	3	<3	<10	<10	<2	<10	<2
Lot 8041, 100913, 4401705-01	25	<3	11	<10	<2	<10	<2
Lot 8041, 100913, 4401705-02	17	<3	<10	<10	<2	<10	<2

(1) None Supplied

**ISO 9001**

Prepared by: Kelly L. Lawson Kelly L. Lawson  
Technician

Approved by: W. M. Katter W. M. Katter  
Senior Chemist

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CHEMICAL TEST REPORT

Ref. C216269-1N

Date May 28, 2014

Page 1 of 2

Customer: Carolina Energy Solutions, 244 E Mount Gallant Rd., Rock Hill, SC 29730-8993

Attention: Thomas Franchuk

Purchase Order #: 4500641116 Part #/Name: See Below (Magnaflux Chemicals)

Material Designation: Analyzed on a from can- liquid-weight basis

Special Requirement: Analyzed in accordance with ATS QA Manual, Rev. 11, dated 3/1/2014.

Lab Comment: Analyzed by ICP-atomic emission (ASTM E1479-99(2011)) and ion selective electrode chemistry (ASTM D1179-10). ASTM D808-11 and ASTM D129-13 used as prep guides.

Test Results

Composition: parts per million (mg/kg)

Table with 7 columns: Identification, S, Cl, Br, I, F, Total Halogens. Rows include Penetrant SKL SP2, Cleaner SKC-S, and Developer SKD-S2.

(1) Meets APP-GW-VI.R-002, Reference 11 Chemical Requirements (Supplied)



Prepared by: Kelly L. Lawson Technician

Approved by: W. M. Katter Senior Chemist

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# APPLIED TECHNICAL SERVICES, INCORPORATED

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## CHEMICAL TEST REPORT

Ref. C216269-IN

Date May 28, 2014

Page 2 of 2

Customer: Carolina Energy Solutions, 244 E Mount Gallant Rd., Rock Hill, SC 29730-8993

Attention: Thomas Franchuk

Purchase Order #: 4500641116 Part #/Name: See Below (Magnaflux Chemicals)

Material Designation: Analyzed on a from can- liquid-weight basis

Special Requirement: Analyzed in accordance with ATS QA Manual, Rev. 11, dated 3/1/2014.

Lab Comment: Analyzed by ICP-atomic emission (ASTM E1479-99(2011)) and ion selective electrode chemistry (ASTM D1179-10). ASTM D808-11 and ASTM D129-13 used as prep guides.

### Test Results

Composition: parts per million (mg/kg)

Identification	Zn	As	Pb	Bi	Cd	Sn	Sb	Hg	P	Cu
Alloy or Spec. Req.	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	—	—
Penetrant SKL SP2, 13E14K	<4	2	7	<4	<4	<4	<4	<1	7	42
Penetrant SKL SP2, 12G13K	4	2	<4	<4	<4	<4	<4	<1	10	63
Cleaner SKC-S, 13M01K	70	1	<4	<4	<4	<4	<4	<1	10	84
Cleaner SKC-S, 13F01K	5	1	<4	<4	<4	<4	<4	<1	8	73
Developer SKD-S2 13D18K	<4	<1	<4	<4	<4	<4	<4	<1	<4	5
Developer SKD-S2 13G07K	<4	<1	<4	<4	<4	<4	<4	<1	<4	<4

(1) Meets APP-GW-VLR-002, Reference 11 Chemical Requirements (Supplied)

**ISO 9001**

Prepared by: Kelly L. Lawson Kelly L. Lawson  
Technician

Approved by: W. M. Katter W. M. Katter  
Senior Chemist

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