

General Information or Other (PAR)

Event # 44129

<b>Rep Org:</b> UNDERWATER ENGINEERING SERVICES, IN		<b>Notification Date / Time:</b> 04/09/2008 11:59 (EDT)	
<b>Supplier:</b> UNDERWATER ENGINEERING SERVICES, INC.		<b>Event Date / Time:</b> 04/08/2008 (EDT)	
<b>Last Modification:</b> 04/09/2008			
<b>Region:</b> 1	<b>Docket #:</b>		
<b>City:</b> PORT SAINT LUCIE	<b>Agreement State:</b> Yes		
<b>County:</b>	<b>License #:</b> NA		
<b>State:</b> FL			
<b>NRC Notified by:</b> CHRIS GRAHAM	<b>Notifications:</b>	RICHARD CONTE	R1
<b>HQ Ops Officer:</b> JEFF ROTTON		ANNE MARIE STONE	R3
<b>Emergency Class:</b> NON EMERGENCY		RICHARD DEESE	R4
<b>10 CFR Section:</b>		VERN HODGE	NRR
21.21	UNSPECIFIED PARAGRAPH	JOHN THORP	NRR
		OMID TABATABAI	NRO

## POTENTIAL PART 21 NOTIFICATION REGARDING TORUS IMMERSION/VAPOR PHASE COATINGS

The reporting organization provided the following information via facsimile:

"NUPIC identified that a potential problem of unqualified coatings exists with results of the 1996 DBA/Irradiation Test on February 29, 2008. UESI initiated Nonconformance Report NCR # 2008-01, insured that no coating applications were scheduled in Nuclear facilities requiring adherence to ANSI N101.2-1972, notified parent company President of potential Part 21 and under his directive began investigation.

"Based on NUPIC Audit No. 08.03SPAFL.08. 1, Finding No. 1, a review of Historical Design Basis Accident (DBA) / Irradiation Test Results dated 12/16/1996, and subsequent internal investigation and evaluation, it has been determined that UESI Proprietary Underwater Coating Picco UT-15, when applied over the substrate Carboline CZ-11 only, does not meet all acceptance criteria of ANSI N101.2-1972 and ANSI N5.12-1974 for DBA qualified Coating Service Level I repair material.

"The evaluation concluded, that while Picco UT-15 is fully qualified to ASTM D-3911-95 for all Service Level I and Torus/Immersion Area coating repairs on all substrates tested, use of the product should have been limited to ANSI N101.2-1972 qualified on all substrates tested with the exception of CZ-11.

"Beginning immediately, UESI will cease to market and install its product as ANSI N101.2-1972 / N5.12-1974 irradiation and DBA qualified when applied as a repair material over Carboline CZ-11 substrate.

"Identification of the facility the activity or the basic component supplied for such facility or such activity within the United States which fails to comply or contains the defect.

JE19  
NRR

General Information or Other (PAR)  
Duane Arnold Energy Center - DAEC has been contacted.

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Facilities with CZ-11 substrate and repairs performed with Picco UT-15, but may be exempt from Part 21 impacts are as noted:

Cooper Nuclear Station- NPPD has been advised of the finding as a courtesy.  
Pilgrim Nuclear Station - PNS has been advised of the finding as a courtesy.  
Peach Bottom - PBAPS has been advised of the finding as a courtesy.

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GREENMAN-PEDERSEN, INC.  
UNDERWATER ENGINEERING SERVICES, INC.  
INSTRUMENT SALES INC. a GPI Company

Mailing Address  
1326 SW Biltmore St.  
Port St. Lucie, FL 34983-2958  
Ph: 772-337-3080 Fax: 772-337-0294

FACSIMILE COVER SHEET

TO:	<sup>NRC</sup> OPERATIONS CENTER
COMPANY:	NUCLEAR REGULATORY Comm.
FAX:	(301) 816-5151
PHONE:	(301) 816-5100
FROM:	CHRIS GRAHAM - QA MANAGER
DATE:	04-09-2008
PAGES INCLUDING COVER PAGE:	4

MESSAGE:

INITIAL NOTIFICATION OF POTENTIAL PART 21  
RELATING TO TORUS IMMERSION VAPOR PHASE  
COATINGS -



UNDERWATER ENGINEERING SERVICES, Inc.  
1326 S.W. Biltmore Street  
Port Saint Lucie, FL 34983

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Subject: 10CFR Part 21, Initial Notification of Potential Safety Related  
Noncompliance Deviation

Notification By: Underwater Engineering Services, Inc. (Formerly S.G. Pinney and  
Associates - UES)

Phone: (772) 337-3116 (x114 Chris Graham), Fax: (772) 337-0294

Based on NUPIC Audit No. 08.03SPAFL.08.1, Finding No. 1 a review of Historical Design Basis Accident (DBA) / Irradiation Test Results dated 12/16/1996, and subsequent internal investigation and evaluation, it has been determined that UESI Proprietary Underwater Coating Picco UT-15, when applied over the substrate Carboline CZ-11 only, does not meet all acceptance criteria of ANSI N101.2-1972 and ANSI N5.12-1974 for DBA qualified Coating Service Level I repair material.

The evaluation concluded that while Picco UT-15 is fully qualified to ASTM D-3911-95 for all Service Level I and Torus/Immersion Area coating repairs on all substrates tested, use of the product should have been limited to ANSI N 101.2-1972 qualified on all substrates tested with the exception of CZ-11.

Beginning immediately, UESI will cease to market and install its product as ANSI N101.2-1972 / N5.12-1974 irradiation and DBA qualified when applied as a repair material over Carboline CZ-11 substrate.

The following information is provided as required by 10 CFR 21.21(d) (4):

(i) Name and address of individual informing the commission.

Chris Graham, UESI Quality Assurance Manager  
Robert J. Walcheski, UESI Assistant Vic President and Technical Manager  
Jon R. Cavallo, P.E., PCS, Vice President of GPI affiliate Corrosion Control Consultants & Labs, Inc, UESI Certified Level III Coatings Inspector, registered Professional Engineer, ASTM D-33 Nuclear Coatings Committee Chairman, SSFC certified Protective Coatings Specialist.

Underwater Engineering Services, Inc. (formerly SG Pinney & Associates-UES)  
1326 SW Biltmore St.  
Port Saint Lucie, FL 34983  
Ph. 772-337-3116

(ii) Identification of the facility, the activity, or the basic component supplied for such facility or such activity within the United States which fails to comply or contains the defect.

Duane Arnold Energy Center - Picco UT-15 stating ANSI N101.2 coating repairs performed in CZ-11 Torus per Final Engineering Report's (FER) SGPAI 096 (7287), 0980104, 2001103 and 2004106. DAEC has been contacted and issued CAP 0560444 (Eric Sorenson).

Facilities with CZ-11 substrate and repairs performed with Picco UT-15, but may be exempt from Part 21 impacts are as Noted:



(ii) Identification (continued)

**Note 1:** Cooper Nuclear Station- Picco UT-15 stating coating repairs performed in CZ-11 Torus per SGPAI (Final Engineering Report) FER 097 (7301) – Contract # 96-75. Code compliance not referenced in Final Engineering Report nor C of C issued stating ANSI N101.2 conformance. Per NPPD Cooper station personnel, coatings were classified “unqualified” based on revised Drywell and Wetwell curves. NPPD (Joshua Swelc. Russ Wenzl) has been advised of finding as a courtesy.

**Note 2:** UESI (under the name of S.G. Pinney and Associates - UES) has provided UT-15 coating repairs for the Pilgrim Nuclear Station under the contract conditions of ASTM D-3911-95, which product is shown to satisfy the requirements of on CZ-11 substrate, therefore they are exempt from this Part 21 notification, but PNS has been advised of the finding as a courtesy.

**Note 3:** UESI (under the name of S.G. Pinney and Associates - UES) has provided UT-15 coating repairs for the Peach Bottom Nuclear facility, but the coatings material was determined to be considered not a “Qualified Repair” due to the SGPAI-UES Inspectors not being provided opportunity to perform a final visual examination of the applied coatings due to time constraints. On this basis, PECO must evaluate impact of this Part 21 notification, and have been advised (Dan Testa, Paul Macuiba) of the finding as a courtesy.

(iii) Identification of the firm constructing the facility or supplying the basic component which fails to comply with or contains the defect.

Underwater Engineering Services, Inc  
1326 SW Biltmore St.  
Port Saint Lucie, FL 34983  
Ph. 772-337-3116

(iv) Nature of the defect or failure to comply and the safety hazard which is created by such a defect or failure to comply.

Review of Design Basis Accident Reports revealed that the post DBA/Irradiation test acceptance criteria for blistering was exceeded on 4 of 16 test panels tested on CZ-11 substrate, when evaluated to the requirements of ANSI N101.2-1972. Blisters and adjacent repair coating were noted as “sound and fully intact”, which complies with ASTM D-3911-95, but the size of blisters was documented as size #2 and larger. ANSI N101.2-1972 requires that blister size be limited to few, size #4 and smaller. Picco UT-15 satisfactorily passed all other acceptance criteria established in ANSI N101.2-1972 (flaking, cracking, delamination, peeling and chalking).

**Safety Hazard:** On the basis of the UESI evaluation, while the Picco UT-15 coating was incorrectly presented as ANSI N101.2/N5.12 qualified over Carboline Carbo-Zinc 11 substrate, the results of the irradiation and DBA testing confirm that UT-15 remained sound and fully intact with no other coating failures noted. UESI is confident in assessing that UT-15 poses no substantial safety hazard, as it will not contribute to the ECCS debris source term inventory of coatings debris. As the seller and installer of the UT-15 coating material, UESI cannot adequately evaluate the product for purchaser/affected licensee with regard to facility specific Safety Analysis requirements. As referenced in Part 21.21(3)(ii)(b) UESI is



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1326 S.W. Biltmore Street  
Port Saint Lucie, FL 34983

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informing licensees (within 5 days of this determination) where Picco UT-15 was sold and installed on CZ-11 substrate under the auspices of ANSI N101.2 so that they may properly evaluate in accordance with their 10CFR50 App. B quality program.

(v) The date on which the information of such defect or failure to comply was obtained.

NUPIC identified that a potential problem of unqualified coatings exists with results of the 1996 DBA/Irradiation Test on February 29, 2008. UESI initiated Nonconformance Report NCR # 2008-01, insured that no coating applications was scheduled in Nuclear facilities requiring adherence to ANSI N101.2-1972, notified parent company President of potential Part 21 and under his directive began investigation.

(vi) In the case of a basic component which contains a defect or fails to comply, the number and location of all such components in use at, supplied for, or being supplied for one or more facilities or activities subject to the regulations in this part.

Duane Arnold Energy Center: undetermined sq. ft.

(vii) The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

UESI Quality Assurance shall issue a Records Correction Notice to amend the DBA/Irradiation Test dated 12/16/1996. This record will limit the use Picco UT-15 on substrate material Carboline Carbo-Zinc 11 under the auspices of ASTM D-3911-95 only. The records correction shall also amend the report to indicate acceptance of product test to ANSI N101.2 for other DBA/Irradiation Tested substrates. This action item is planned to be completed within 60 days of this report.

(viii) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.

Picco UT-15 is DBA qualified for Service Level I coatings applications in accordance with ASTM D-3911-95 and subsequent revisions to date.

Picco UT-15 is DBA qualified for Service Level I coatings applications in accordance with ANSI N101.2-1972, excluding application on Carboline CZ-11 substrate.

Picco UT-15 maintains excellent adhesion and resistance to peeling, cracking, flaking and delamination, and, based on irradiation and DBA test results, will not contribute to the coatings component of the ECCS debris source term.

If you have any questions or need additional information concerning this notification, please contact Chris Graham, UESI QA Manager or Robert Walcheski, UESI Assistant VP and Technical Manager, at (772) 337-3116.

 4-08-08