

Princeton University

**Plasma Physics Laboratory**

James Forrestal Campus  
P.O. Box CN17  
Princeton, N.J. 08543

8 November 2005

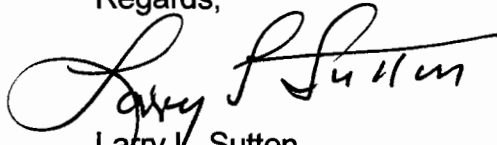
Ms. Nancy Horton  
Energy Industries of Ohio  
6100 Oak Tree Boulevard, Suite 200  
Independence, Ohio 44131

**SUBJECT: Subcontract S005242-F  
MTK Corrective Action Report (Non-Conformance Report) 1379**

Dear Ms. Horton:

Attached for appropriate action is MetalTek International's (MTK's) Corrective Action Report (Non-Conformance Report) 1379, dated 31 August 2005 and the NCSX Project's 7 November 2005 Disposition of that Report, "Since the re-test meets requirements, this NCR can now be closed."

Regards,



Larry L. Sutton  
Senior Subcontract Administrator

Attachment

cc: M. Tyrrell  
F. Malinowski  
P. Heitzenroeder



Corrective Action 1379  
Carondelet Division - CA / PA / RGA Database  
Corrective Action Type NCR  
Date 8/31/2005  
CA Originator C. Ruud  
Applies to: Weld Material Lincoln 3018926-78309

**Description of Defect / Non-Conformance**

Material failed elongation and one of three charpy impact tests at -320 F. The average of the specimens exceeds the minimum. See S8 of ASTM A 703/A 703M.

**Root Cause**

The sample of the weld contained defects not detected.

**Corrective Action**

Retest material already at Lab.  
If needed, make a new weld plate after reviewing process with welder and weld another sample.

**Verification of Corrective Action**

Retest results. If new plates are needed, the new plate will be x-rayed prior to testing.

**Estimated Completion Date**

9-2-05

**Actual Completion Date TBD**

Signed: C. Ruud

A handwritten signature in black ink, appearing to be "C. Ruud".

CC: R. Suria, Barry Craig, Joe Edwards, E.J. Kubick

**Nonconformance Report: CA1379**

**Project Disposition:**

Since the re-test meets requirements, this NCR can now be considered closed.


**Approvals:**

Phil  
Heitzenroeder

Digitally signed by Phil Heitzenroeder  
DN: CN = Phil Heitzenroeder, C = US,  
O = PPPL, OU = Mech. Eng. Division  
Reason: I am approving this document  
Date: 2005.11.07 10:09:53 -0500

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Procurement Technical Representative

 11/7/05

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Responsible Line Manager:

**Frank A. Malinowski**

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**From:** Charles.Ruud@MetalTekInt.Com  
**Sent:** Thursday, September 15, 2005 12:51 PM  
**To:** djord@earthlink.net  
**Cc:** royjratc-aol-com-offsite; NKHFlowen@aol.com; Joe.Edwards@metaltekind.com;  
Rick.Suria@metaltekind.com  
**Subject:** Weld Material Test Report  
**Attachments:** Lincoln 3018926-78309 cryo results.pdf

□ □

Attached is the report from Westmoreland on the Lincoln material lot 3018926-78309.

It has passed all tests.

Please call if there are any questions.

Chuck Ruud

Quality Manager

MetalTek International

Carondelet Division

[cruud@metaltekind.com](mailto:cruud@metaltekind.com)

636-475-2199

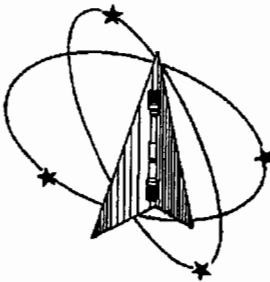
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No virus found in this outgoing message.

Checked by AVG Anti-Virus.

Version: 7.0.344 / Virus Database: 267.11.0/103 - Release Date: 9/15/2005

9/29/2005



**Westmoreland Mechanical Testing & Research, Inc.**  
 P.O. Box 388  
 Westmoreland Drive  
 Youngstown, Pa. 15696-0388 U.S.A.  
 Telephone: 724-537-3131 Fax: 724-537-3151  
 Website: [www.wmtr.com](http://www.wmtr.com)  
 WMT&R is a technical leader in the material testing industry.



621-01 & 621-02



Materials Testing Laboratory

September 13, 2005

**CERTIFICATION**

MetalTek International  
 The Carondelet Division  
 8600 Commercial Blvd.  
 I-55 Industrial Park  
 Pevely, MO 63070-1528

Attention: Jim Galaske

Subject: All processes, performed upon the material as received, were conducted at WMT&R, Inc. in accordance with the WMT&R Quality Assurance Manual, Rev. 9, dated 4/1/2000.  
 The following tests were performed on this order: **IMPACT and TENSILE**

**IMPACT RESULTS: ASTM E23-02**

**REQUIREMENTS: Energy (Min 35/Max --)**

**MATERIAL: Lincoln LNM4455**

**SAMPLE TYPE: Charpy V-Notch**

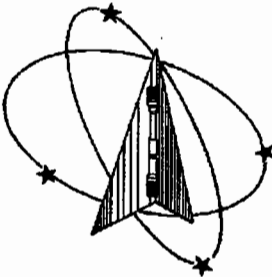
Reference	Lot No.   Batch No.   Specimen ID	Test Log Number	Sample Size	Temp. °F	Energy ft-lbs	Mills Lat Exp	% Shear Fracture	AIUAR	DISPOSITION: Acceptable		
									Standard	Standard	Standard
Lincoln LNM4455	3018926   78309   Cvn-1	C43939	Standard	-320	56	18	40	Acceptable	Standard	Standard	Standard
Lincoln LNM4455	3018926   78309   Cvn-2	C43940	Standard	-320	52	18	40	Acceptable	Standard	Standard	Standard
Lincoln LNM4455	3018926   78309   Cvn-3	C43941	Standard	-320	53	12	40	Acceptable	Standard	Standard	Standard

Requirements supplied by MetalTek International.

*Matthew J. ...*  
 Roy E. Star...  
 Technical Services Manager / Tensile Supervisor  
 9-13-05  
 September 13, 2005

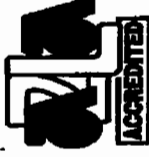
*Testing Specialists for Aerospace, Automotive, and Material Testing Fields*  
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821-01 & 821-02



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September 13, 2005

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 The following tests were performed on this order: IMPACT and TENSILE

TENSILE RESULTS: ASTM E21-03a

Requirements: UTS ksi (Min 95Max →) 0.2% YS ksi (Min 72Max →) 4D Elong. % (Min 32Max →) Modulus Msi (Min 21Max →)

SOAK TIME: 5 Minutes

SPEED OF TESTING: 0.0030 in./in./min., 0.0500 in./min./in.

MATERIAL: 316 S/S

DISPOSITION: Acceptable

Reference	Lot No.   Batch	TestLog Number	Temp. °F	UTS ksi	0.2% YS ksi	Elong %	RA %	Modulus Msi	Ult. Load lbf	0.2% YLD. lbf
Lincoln LNMA4455	3018926   Tensile	C43938	-320	182.1	128.2	34	24	27.0	17560	12360

AUR: A=ACCEPTABLE, U=UNACCEPTABLE, R=REPORT

DISPOSITION: Acceptable

Reference	Lot No.   Batch	TestLog Number	Orig. Dia. (in.)	Final Dia. (in.)	4D Orig GL (in.)	4D Final GL (in.)	Orig. Area (sq. in.)	Machine Number
Lincoln LNMA4455	3018926   Tensile	C43938	0.3504	0.3048	1.40	1.87	0.09643131	M9 A

AUR: A=ACCEPTABLE, U=UNACCEPTABLE, R=REPORT

Requirements supplied by MetalTek International.

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*Matt Starman Wojton*  
 Matt Starman Wojton  
 Technical Services Manager / Tensile Supervisor

September 13, 2005

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