

Notable Event

Event Title: ENG-20-1215 Heat Exchanger Tube Bundle Procurement

Date Submitted: 03/01/2021 09:58:36 AM

Response Owner: Jennifer Logan (jlogan)

Category: Agreement / Compliance

Date of Occurrence: 01/14/2021 08:00 xm

Event Location: 08

Date Notable Event Report is Due: 02/17/2021

Short Summary of Event and/or Injuries

Full payment was made for a high value item that was not properly inspected prior to acceptance. Investigation revealed that the Lab's tangible material receipt and payment procedures allow payment prior to completion of a comprehensive, complete inspection.

Details of the Event and/or Injuries

On April 10, 2020, a purchase order was initiated for a heat exchanger replacement tube bundle in CHL2. The initial expected ship date was May 2020 but the vendor provided a revised shipping date of September 2020. In order to expedite for a July 2020 arrival, a \$14,525 expediting fee was approved. Upon receipt of this email approval for the expediting fee, Accounts Payable (A/P) assumed the end user was also approving the \$124,998 payment for the equipment (NOTE: ISSUE 1). However, the Lab's material invoice payment procedures require all of the following prior to invoice payment:

1. Material receipt at Shipping/Receiving (system based control)
2. Corresponding Invoice for material (system based control)
3. Corresponding PO line in CostPoint (system based control)
4. Corresponding Technical Representative (TR) validation to A/P (manual email based control)

The process above is part of the DOE-approved purchasing system and codified in the JSA Acquisition Policy Manual. Acceptance of an email approval from the TR is an approved part of the A/P invoice payment process to ensure adequacy of the material received. Invoices that are not paid within 30 days accrue interest payable to the vendor per the terms of their subcontract, which are unallowable contract costs and reportable as improper payments to DOE annually.

In this case, the Lab "received" the crated tube bundle both physically and within the R/I software on July 24, 2020. The TR reviewed quality documentation that came with the equipment, but did not open the crate to conduct a comprehensive inspection at that time. Per PR 393238, inspection was required however no specific acceptance criteria are listed, nor does JSA, as an organization, communicate the expectation that acceptance criteria should be defined and used. The crate the equipment was shipped in was slightly damaged, and was covered with a tarp to protect the contents from accumulating debris.

An installation vendor was selected and the corresponding PO sent on November 5, 2020. The vendor uncrated the unit onsite on December 1, 2020, observed what they considered quality issues, stopped work, and notified the TR.

The TR and other Cryo engineers inspected the uncrated unit and began documenting issues on December 2, 2020. After consultation with both the manufacturer and installation vendor, the Lab decided to move forward with installation, scheduled for December 16, 2020. However the installation vendor required a liability waiver, which was not approved. The installation subcontract was cancelled on January 13, 2021.

Additionally, the incorrect terms and conditions were applied by the assigned Procurement representative. Specifically, Terms and Conditions for a commercial supply subcontract were selected instead of those for a non-commercial supply requirement. (NOTE: ISSUE 2) Though the selection of the wrong Terms and Conditions did not impact the timeliness or adequacy of the inspection, or lack thereof in this case, they do impact contractual remedies available to JSA after invoice payment when deficiencies are discovered.

Equipment inspection requirements are summarily addressed in the TR Responsibility Checklist and TR training, which is required for all Lab TRs. The TR's Responsibility Checklist states that TR's are to "promptly inspect and accept goods and services, and report any discrepancies to the Procurement Officer" while Part 4 of the TR training has multiple references to the requirement for inspection and acceptance. However, there is no definitive guidance on inspection requirements such as when to conduct, criteria to confirm upon arrival, timing to conduct the inspection, or similar. This lack of a formal inspection process prior to material invoice payment applies to the entire JSA organization, and when coupled with the requirement to pay invoices within 30 days (or per the subcontract terms), is a latent organizational weakness.

Causal Analysis

Judgement of Needs

Doer Cause Code: A4: Management Problem, B2: Resource Management LTA, C3: Insufficient manpower to support identified goal / objective

Risk Code: 2

Approved invoice payment processes rely on manual confirmation via email with Technical Rep within 30 days of receipt that the material is acceptable in order to prevent late payments, interest owed to vendors, and unallowable DOE contract costs.

Corrective Action:

Action Owner(s): Jason Koprowski **Due Date:** 06/30/2021

Provide recurring refresher training to A/P staff on material invoicing procedures. NOTE: it has been confirmed with the Lab's Internal Auditor that review of this process is within scope of the annual scheduled allowable cost audits for A/P and Procurement. Evidence of completion: proof of initial training and recurrence schedule. Jason Koprowski, 6/30/2021

Corrective Action:

Action Owner(s): Linda Stinnett **Due Date:** 06/30/2021

Provide recurring refresher training to Procurement staff on selection of appropriate Terms and Conditions. NOTE: it has been confirmed with the Lab's Internal Auditor that review of this process is within scope of the annual scheduled allowable cost audits for A/P and Procurement. Evidence of completion: proof of initial training and recurrence schedule. Linda Stinnett, 6/30/2021

Root Cause

JSA's A/P group cannot simultaneously support the 30 day invoice payment requirement and await comprehensive equipment inspection which is sometimes delayed by TRs for more than 30 days (as was the case in this situation).

Judgement of Needs

Doer Cause Code: A4: Management Problem, B1: Management Methods LTA, C1: Management policy guidance / expectations not well-defined, understood or enforced

Risk Code: 2

JSA does not have a formal, documented inspection process for material which ensures material is comprehensively inspected prior to required invoice payment due dates (30 days of receipt).

Corrective Action:

Action Owner(s): Steve Smith **Due Date:** 09/30/2021

Propose a path forward for equipment inspection acceptance for the entire JSA organization. Scope the effort appropriately and include equipment acceptance applicability, criteria, timing and similar. Present to senior leadership for approval and request appointment of lead implementer. Evidence of completion: Path forward report encompassing detail above, as well as follow on actions for implementation if appropriate. Stephen Smith, 9/30/2021

Root Cause

JSA does not have an organizational policy or process for equipment inspection upon receipt

Extent of Condition Check

Not Applicable

Records, Documents, Pictures, and Other References

[No Data]

Emergency Notifications Made (Subsequent to the Event)

Other (PA): 01/13/2021

Documentation of Findings

Notable Event Number: ENG-20-1215 **CATS Number:** NE-2021-02 **Lessons Learned Number:** NA
ORPS Number: NA **NTS Number:** [No Data] **CAIRS Entry:** [No Data]
DOE Cause Code: A1B3C01 **ISM Code:** NA

Signatures

Investigation Team Steve Smith (sjsmith) 03/01/2021 09:59:27 AM
Associate Director / Department Manager Linda Stinnett (stinnett) 03/01/2021 02:30:18 PM
Associate Director / Department Manager Jennifer Logan (jlogan) 03/01/2021 02:31:21 PM
Associate Director / Department Manager Jason Koprowski () 03/01/2021 03:23:41 PM

**PURCHASE REQUISITION
JEFFERSON SCIENCE ASSOCIATES, LLC**

PR

PR # 394492
PR Date May 11, 2020, 12:00 AM
Requester Nate Laverdure MS: 55C
Author Nate Laverdure
 ext 6260 nal@jlab.org
Description CHL2 C3 HX tube expedite

Edit Date May 12, 2020, 2:55 PM
Group MSCRYO
Priority 2
Status B=Buyer Assigned

Total Est Cost 14525.00

Shipping Information	Charge Information	Other Information
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Required Date July 17, 2020	FY 11-MAY-20 - (FY 2020)	Radioactive Material No
Deliver To Nate Laverdure Bldg 89_1	POA CHLOPS.MSCRYO.43-065	Work On Site N
Shipping Costs 0		SOTR
		Network Equipment N
		Calibration Equipment N

Notes

Expedite fee for PO 20-D0780, SO = Jami Anthony

Items

#	Part #	Qty	Unit Cost	Units	Line Cost
1	-	1	\$14,525.00	EA	\$14,525.00

Expedite tube bundle to keep original delivery date

Split 100 **POA** CHLOPS.MSCRYO.43-065

Account: 43-065 Org: 1.CO.002.0002.01 Proj: 000001.11.05.001 Period Of Performance End Date: none

Suggested Vendor(s)

1 T314164-35 Mahan's Thermal Products Inc. (770)786-5555 (770)786-3020
 Address: 30 Juniper Court Covington, GA 30016

Contact info

DIRECTED SOURCE

Compatibility with existing equipment and/or standardization of parts.

Mahans acquired the original Alpha Laval IP related to design and construction of this heat exchanger, and this IP is required to fabricate a replacement tube bundle without causing significant downtime for the CHL2 cryoplant.

Description Of Supplies: Replacement tube bundle for CHL2 main compressor C3 shell&tube oil cooler.

Is there potential for follow-on work? Y

If yes, can the follow-on work be completed? Y

If yes, value: 123703

If can not be completed, explain why below:

Signatures

Account Group : CPO electronically approved on 11-MAY-20 by Annie Ungaro for \$14525
Account Group : Supplies and Materials electronically approved on 11-MAY-20 by Christian Whalen for \$14525
Organization : MSCRYO electronically approved on 12-MAY-20 by Jonathan Creel for \$14525
Project : CHLOPS electronically approved on 12-MAY-20 by Jonathan Creel for \$14525

**PURCHASE REQUISITION
JEFFERSON SCIENCE ASSOCIATES, LLC**

PR **PR #**393238 **Edit Date**Mar 24, 2020, 8:02 AM
PR DateMar 13, 2020, 12:00 AM **Group**MSCRYO
RequesterNate Laverdure MS: 55C **Priority**2
AuthorNate Laverdure
ext 6260 nal@jlab.org **Status**B=Buyer Assigned
DescriptionCHL2 C3 HX tube bundle **Total Est Cost**123703.00

Shipping Information	Charge Information	Other Information
Required Date July 17, 2020	FY 13-MAR-20 - (FY 2020)	Radioactive Material No
Deliver To Nate Laverdure Bldg 89_1	PO ACHLOPS.MSCRYO.43-065	Work On Site N
Shipping Costs 0		SOTR
		Network Equipment N
		Calibration Equipment N

Notes

ALERT: This a requisition for fabricated materials, construction or services that contain requirements for Code welding or brazing
The fabrication involve Pressure Systems Process Piping Welding or Brazing

Items					
#	Part #	Qty	Unit Cost	Units	Line Cost
1	-	1	\$123,703.00	EA	\$123,703.00
Tube bundle for Model CS 20180R199 CuNi Oil Cooler as defined by Alfa Laval drawing 171-20-19809-001					
		Split 100		POA CHLOPS.MSCRYO.43-065	
Account: 43-065 Org: 1.CO.002.0002.01 Proj: 000001.11.05.001 Period Of Performance End Date: none					

Suggested Vendor(s)

1	T314164-35	Mahan's Thermal Products Inc.	(770)786-5555	(770)786-3020
Address: 30 Juniper Court Covington, GA 30016				

Contact info

DIRECTED SOURCE
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Description Of Supplies: Replacement tube bundle for CHL2 main compressor C3 shell&tube oil cooler.
Is there potential for follow-on work? Y
If yes, can the follow-on work be completed? Y
If yes, value: 123703
If can not be completed, explain why below:

Signatures

Account Group : CPO electronically approved on 13-MAR-20 by Annie Ungaro for \$123703
Account Group : FINANCE electronically approved on 23-MAR-20 by Connie Adams for \$123703
Account Group : Supplies and Materials electronically approved on 16-MAR-20 by Donald Brown for \$123703
Additional Authorization : Quality Assurance electronically approved on 20-MAR-20 by Jenord Alston
Organization : Concurrence 1 MSCRYO electronically approved on 13-MAR-20 by Jonathan Creel for \$50000
Organization : Concurrence 2 MSCRYO electronically approved on 13-MAR-20 by Jonathan Creel for \$100000
Organization : MSCRYO electronically approved on 23-MAR-20 by Will Oren for \$123703
Project : CHLOPS electronically approved on 23-MAR-20 by Will Oren for \$123703
Project : Concurrence 1 CHLOPS electronically approved on 13-MAR-20 by Jonathan Creel for \$50000
Project : Concurrence 2 CHLOPS electronically approved on 13-MAR-20 by Jonathan Creel for \$100000

JSA, LLC / JEFFERSON LAB
 ATTN:PROCUREMENT/(757)269-7060
 628 HOFSTADTER ROAD
 SUITE 5
 NEWPORT NEWS, VA 23606

Purchase Order: 20-D0780
Change Order: 1

Page 1 of 3
 Date Printed: 05/13/20
 Change Date: 05/13/20
 MOD Num: 1

Order To: MAHANS THERMAL PRODUCTS MAHANS **Ship To:** JSA, LLC / JEFFERSON LAB
 30 JUNIPER COURT EEL BLDING
 COVINGTON, GA 30016-1186 12000 JEFFERSON AVE.
 NEWPORT NEWS, VA 23606

Contact: DAVID HOLLAND Phone: 770-786-5555

Trans Currency: USD

Order	Buyer	Terms	FOB	Sales	Ship Via	Deliver To		
04/10/20	ANTHONY, JAMI	NET 10	O/P-HANDLING		BEST WAY	NATE LAVERDURE BLDG 89_1		
Line	Item/Description	Rev	Due	Desired	U/M	Order	Net Unit	Extended
	CONFIRMATION							
	***** INSERTED: *****							
2	MOD 001: ADDITIONAL FUNDS FOR EXPEDITING FEE		08/15/20	08/15/20	LOT	1.0000	14,525.0000	\$14,525.00
	Req: 394492							
	AOP:6043-065 1.CO.002.0002.01 000001.11.05.001							
	NOTICE: ALL PURCHASES ARE TAX EXEMPT. FOR FASTENERS, CIRCUIT BREAKERS, OR OTHER ITEMS SUBJECT TO COUNTERFEITING, THE OFFICE OF INSPECTOR GENERAL MAY BE ASKED TO INVESTIGATE IF DELIVERED PRODUCTS FAIL TO PASS RECEIPT INSPECTION TESTS. FASTENERS SHOULD NOT HAVE HEAD MARKINGS THAT ARE ON THE U.S. CUSTOMS SERVICE LIST OF SUSPECT/ COUNTERFEIT FASTENERS. SHIPPING AND RECEIVING HOURS ARE MONDAY - FRIDAY 8AM - 5 PM EXCLUDING HOLIDAYS. ALL ITEM(S) ARE TO BE "NEW". NO USED OR REFURBISHED ITEM(S) WILL BE ACCEPTED UNLESS SPECIFICALLY AUTHORIZED. TO AVOID REJECTION OF INVOICE, VENDOR SHALL BILL FOR SPECIFIC LINE ITEMS AS SHOWN ABOVE. PLEASE SEND INVOICES TO FINANCE@JLAB.ORG. WORK SHALL BE PERFORMED IN ACCORDANCE WITH RFQ <u>394492</u> TERMS AND CONDITIONS, INCLUDING ANY AMENDMENTS THERETO. FREIGHT PREPAY AND ADD: SUBCONTRACTOR MAY USE ANY MODE OF TRANSPORTATION							

JSA, LLC / JEFFERSON LAB
 ATTN:PROCUREMENT/(757)269-7060
 628 HOFSTADTER ROAD
 SUITE 5
 NEWPORT NEWS, VA 23606

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 NEWPORT NEWS, VA 23606

Contact: DAVID HOLLAND Phone: 770-786-5555

Trans Currency: USD

Order	Buyer	Terms	FOB	Sales	Ship Via	Deliver To		
04/10/20	ANTHONY, JAMI	NET 10	O/P-HANDLING		BEST WAY	NATE LAVERDURE BLDG 89_1		
Line	Item/Description	Rev	Due	Desired	U/M	Order	Net Unit	Extended
	FOR LESS THAN TRUCKLOAD SHIPMENTS; HOWEVER, SUBCONTRACTOR IS ADVISED THAT THE U.S. DEPARTMENT OF ENERGY (DOE) HAS NEGOTIATED UNIFORM TENDER OF LESS THAN TRUCKLOAD (LTL) MOTOR FREIGHT RATES; ACCORDINGLY SUBCONTRACTOR IS ENCOURAGED TO USE THE BEST AVAILABLE RATES FROM THE FOLLOWING TENDERS WHEN APPROPRIATE: XPO LOGISTICS - ACCOUNT 1436152 YRC LOGISTICS - GOVERNMENT TENDER G2914 UPS FREIGHT - GOVERNMENT TENDER 1172 BILL OF LADING SHOULD IDENTIFY THE JEFFERSON LAB PURCHASE ORDER OR SUBCONTRACT NUMBER AND STATE THAT SHIPPER IS ACTING UNDER CONTRACT DE-AC05-06OR23177 WITH THE U.S. DEPARTMENT OF ENERGY. PROVIDE BACKUP DOCUMENTATION WITH YOUR INVOICE TO SUPPORT FREIGHT CHARGES BILLED IN EXCESS OF \$100.00 REGARDLESS OF MODE OF TRANSPORTATION.							

JSA, LLC / JEFFERSON LAB
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 NEWPORT NEWS, VA 23606

Contact: DAVID HOLLAND Phone: 770-786-5555

Trans Currency: USD

Order	Buyer	Terms	FOB	Sales	Ship Via	Deliver To		
04/10/20	ANTHONY, JAMI	NET 10	O/P-HANDLING		BEST WAY	NATE LAVERDURE BLDG 89_1		
Line	Item/Description	Rev	Due	Desired	U/M	Order	Net Unit	Extended
	MOD 001: ADDED LINE 2, AN INCREASE OF \$14,525.00 FOR A REVISED PO TOTAL AMOUNT OF \$138,228.00. (KDS-5/13/20) Bill To: JSA, LLC / JEFFERSON LAB FINANCE@JLAB.ORG ATTN: ACCOUNTS PAYABLE/(757) 269-7573 628 HOFSTADTER ROAD, SUITE 4 NEWPORT NEWS, VA 23606 <hr/> Authorized Signature(s)						PO Total Amount: PO Net Change:	\$138,228.00 \$14,525.00