ENGINEERING CHANGE NOTICE

Page 1 of 2

1. ECN 660475

Proj.
ECN

2. ECN Category (mark one) Supplemental ☐ Direct Revision ☒ Change ECN ☐ Temporary ☐ Standby ☐ Supersedeure ☐ Cancel/Void ☐	3. Originator's Name, Organization, MSIN, and Telephone No. T. Nuxall, CVDF, R3-86, 372-3739 6. Project Title/No./Work Order No. SNF/W-441 Spent Nuclear Fuel Cold Vacuum Drying 9. Document Numbers Changed by this ECN (includes sheet no. and rev.) SNF-6218, Rev. 1	4. USQ Required? ☒ Yes ☒ No <i>see 5/10/00</i> 7. Bldg./Sys./Fac. No. CVDF 142-K 10. Related ECN No(s). N/A	5. Date 5/9/00 8. Approval Designator N/A <i>SNF</i> <i>5/10/00</i> 11. Related PO No. N/A
12a. Modification Work ☐ Yes (fill out Blk. 12b) ☒ No (NA Blks. 12b, 12c, 12d)	12b. Work Package No. N/A	12c. Modification Work Complete N/A Design Authority/Cog. Engineer Signature & Date	12d. Restored to Original Condition (Temp. or Standby ECN only) N/A Design Authority/Cog. Engineer Signature & Date
13a. Description of Change FACILITY Addition of Alarm Test Requirements to UPS and added UPS Relay and Socket. <i>USQ: CVD-00-0285 923 5/10/00</i> 13b. Design Baseline Document? ☒ Yes ☒ No <i>5/10/00</i> SS			
14a. Justification (mark one) Criteria Change ☐ Design Improvement ☒ Environmental ☐ Facility Deactivation ☐ As-Found ☐ Facilitate Const ☐ Const. Error/Omission ☐ Design Error/Omission ☐			
14b. Justification Details To obtain labeling of relay and DG control panel. The design verification method for SS/SC components is by independent review in accordance with EN-6-027-01. Documentation of this review is accomplished by the independent reviewer approval signature on page 2 of this ECN.			
15. Distribution (include name, MSIN, and no. of copies) See distribution sheet.

ENGINEERING CHANGE NOTICE				Page 2 of 2		1. ECN (use no. from pg. 1) 660475	
16. Design Verification Required [X] Yes [] No		17. Cost Impact NA ENGINEERING Additional [] \$ Savings [] \$ CONSTRUCTION Additional [] \$ Savings [] \$				18. Schedule Impact (days) NA Improvement [] Delay []	
19. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 13. Enter the affected document number in Block 20.							
SDD/DD []		Seismic/Stress Analysis []		Tank Calibration Manual []			
Functional Design Criteria []		Stress/Design Report []		Health Physics Procedure []			
Operating Specification []		Interface Control Drawing []		Spares Multiple Unit Listing []			
Criticality Specification []		Calibration Procedure []		Test Procedures/Specification []			
Conceptual Design Report []		Installation Procedure []		Component Index []			
Equipment Spec. []		Maintenance Procedure []		ASME Coded Item []			
Const. Spec. []		Engineering Procedure []		Human Factor Consideration []			
Procurement Spec. []		Operating Instruction []		Computer Software []			
Vendor Information []		Operating Procedure []		Electric Circuit Schedule []			
OM Manual []		Operational Safety Requirement []		ICRS Procedure []			
FSAR/SAR []		IEFD Drawing []		Process Control Manual/Plan []			
Safety Equipment List []		Cell Arrangement Drawing []		Process Flow Chart []			
Radiation Work Permit []		Essential Material Specification []		Purchase Requisition []			
Environmental Impact Statement []		Fac. Proc. Samp. Schedule []		Tickler File []			
Environmental Report []		Inspection Plan []					
Environmental Permit []		Inventory Adjustment Request []					
20. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.							
Document Number/Revision		Document Number/Revision		Document Number/Revision		Document Number/Revision	
NA							
21. Approvals							
Signature		Date		Signature		Date	
Design Authority G. Singh		5/10/00		Design Agent			
Cog. Eng. C Van Katwijk		5/11/00		PE			
Cog. Mgr. T. Choho		5-11-00		QA			
QA H. Chafin		5-11-00		Safety			
Safety J. Brehm		5/11/00		Design			
Environ. N/A				Environ.			
Other: * C. Haller N/A				Other Independent Review		5/16/00	
* Approval authorized parallel preparation of USQ screen with implementation of ECN per NSDI-02.							
DEPARTMENT OF ENERGY							
Signature or a Control Number that tracks the Approval Signature							
ADDITIONAL							

SNF-6218
Revision 2

ECN 660475

Basler Electric BEI-51/27R U3E-Z3P- B1C1F Overcurrent Relay & Tripp Lite Standby

Carl Van Katwijk
Fluor Hanford, Inc.

Date Published
May 2000

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200

Fluor Hanford
P.O. Box 1000
Richland, Washington

5/16/00
Release Approval Date

Total pages 16

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Basler Electric BEI-51/27R U3E-Z3P-B1C1F Overcurrent Relay & Tripp Lite Standby

Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management

Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-96RL13200

Fluor Hanford
P.O. Box 1000
Richland, Washington

RECORD OF REVISION

(1) Document Number

SNF-6218

Page 1

(2) Title

BASLER ELECTRIC OVERCURRENT RELAY

Change Control Record

[illegible]

Commercial Grade Item Upgrade Dedication Form

SNF-6218, Rev. 2

ECN No. N/A

CGI No. CGI-SNF-D-20-1-C1-065

Page 1 of 12

Title: **Basler Electric BEI-51/27R U3E-Z3P-B1C1F Overcurrent Relay, Tripp Lite Standby UPS BC Personal 200 & Macromatic UPS Alarm relay & Socket**

Section 1 Part Information

Item No.: N/A	Manufacturer: N/A	Supplier: N/A
Mfg. Part/Model No.: N/A	Supplier's P/N: N/A	
Part Description: N/A		
End Use Description: N/A		

Section 2a Component Information

Equipment No.: Relays: 51, 51V UPS: UPS; Alarm Relay & Socket	Specification No.: W-441-C1, W-379	Manufacturer: Basler Electric, Tripp Lite, Macromatic	Past P.O. No.: N/A
Procurement and/or Model No.: OC Relay: BEI-51/27R U3E-Z3P-B1C1F; UPS: BC Personal 200; UPS Alarm Relay/Socket: VMP120A/90.109	Equipment Supplier (if different from manufacturer): Allied Electronics (Macromatic)		Equip. Supplier's Part No.: N/A

Component Description: **Control Panels upgrade - Overcurrent Relays, Standby UPS and UPS Alarm Relay/Socket**

Section 2b Commercial Availability of the Item

- Is the Item available from a catalogue from a qualified NQA1 supplier or ISO 9000 supplier (coordinate with project CGI interface Engineer or BTR)? ☐ YES (go to #2 below) ☒ NO (go to procedure step 6.3.2, proceed to dedicate Item)
If not available from a qualified NQA1 supplier, is it available from an ISO 9000 supplier? (coordinate w/ project CGI Interface Engineer or BTR): ☐ YES (go to #2 below, dedicate Item) ☒ NO (dedicate Item)
- List of Candidate qualified suppliers or ISO 9000 suppliers: **N/A**
- Recommended Procurement Strategy (coordinate with project CGI interface Engineer or BTR): **N/A**

Section 2c CGI Determination

CGI Determination Questions:

- #1: Is the Item subject to design or specification requirements that are unique to nuclear facilities or activities?
☐ YES (the Item is not commercial grade) ☒ NO (continue)
- #2: Is the Item used in applications other than nuclear facilities or activities?
☐ NO (the item is not commercial grade) ☒ YES (continue)
- #3: Is the Item ordered from manufacturer/supplier on the basis of specifications set forth in the manufacturer's catalog?
☐ NO (the item is not commercial grade) ☒ YES (continue)
- [X] All three criteria have been satisfied. The Item meets the definition of commercial grade.**

Section 2d Reason for Dedication

The above Commercial Grade (CG) described Item is being Dedicated for use in the application cited for the following reason(s):

	Item is being purchased from a non-ESL manufacturer supplier as CG to be used in a Safety Class application.
X	Item is being purchased from a non-ESL manufacturer supplier as CG to be used in a Safety Significant application.
	Item was purchased from a non-ESL manufacturer supplier as CG to be used in a Safety Class application.
	Item was purchased from a non-ESL manufacturer supplier as CG to be used in a Safety Significant application.
	Other ('like-for-like', similar, substitution, replacement evaluation)

Commercial Grade Item Upgrade Dedication Form

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Title: **Basler Electric BEI-51/27R U3E-Z3P-B1C1F Overcurrent Relay, Tripp Lite Standby UPS BC Personal 200 & Macromatic UPS Alarm relay & Socket**

Section 3 Failure Effects Evaluation

A. Part/Component Safety Function:

1. **Maintain overcurrent protection of the control panels and local Standby UPS with alarm for the overcurrent trip relays**

B. Part/Component Functional Mode:

Safety Function #1:	☒	Active	☐	Passive
Safety Function #2:	☐	Active	☐	Passive
Safety Function #3:	☐	Active	☐	Passive

Active - Mechanical or Electrical change of state is required to occur for the component to perform its safety function

Passive - Change of state is not required for the component to perform its safety function

C. Host Component Safety Function (if applicable): N/A

1.

D. Failure Mode(s) and the effects on component or system safety function (see Worksheet 1):

1. **External events that causes structural component failure**

2. **Seismic 3/1 Protection for adjacent SS SSCs -Containment**

Section 4 Environmental & Natural Phenomena Hazard Design

Environmental Qualification Required:

Yes

☐

No

☒

Environmental Condition A

If yes: Environmental Qualification Requirements

Limiting Environmental Conditions:

Required Safety Functions:

Qualification Period:

Natural Phenomena Hazard (NPH) Design Required:

Yes

☒

HNF-PRO-97, Rev. 0, W-441-C1

No

☐

If yes: NPH Design Requirements

Performance Category: **PC-2**

NPH Design Req'ts.:

Required Safety Functions: **Seismic 3/1 Protection for adjacent SS SSCs - Containment**

Section 5 Component Functional Classification

Safety Class (SC)

General Service

☒

Safety Significant (SS)

If part/component classification is different from host component/system, document basis. N/A

Sections 6 and 7 (Reserved)

Section 8 References (for Functional Classification)

National Codes/Standards: **NEC**

Safety Analysis Report (SAR): **HNF- 3553, Rev. 0a, Annex B**

Drawings: **Nutherm 59729**

Vendor Manual/Manufacturer/Supplier Information: **Catalog Cut Sheets - Basler Electric, Tripp Lite UPS, Macromatic Relays**

Commercial Grade Item Upgrade Dedication Form

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Title: Basler Electric BEI-51/27R U3E-Z3P-B1C1F Overcurrent Relay, Tripp Lite Standby UPS BC Personal 200 & Macromatic UPS Alarm relay & Socket

Section 9 Critical Characteristics				
Critical Characteristics	Acceptance Criteria/Tolerances	Acc.Method	ID	Function
Overcurrent Trip Relay:				
1. Item Identification Critical Characteristics (necessary for reasonable assurance that the Item delivered is the Item specified)				
Manufacturer	Basler Electric	1, IN	X	
Model Number	BEI-51/27R U3E-Z3P-B1C1F	1, IN	X	
2. Physical Critical Characteristics (for reasonable assurance that the Item delivered is the Item specified)				
Markings	UL Logo	1, IN	X	
3. Performance Critical Characteristics (for reasonable assurance that the Item will perform its intended safety function(s))				
Current carrying capability	0.5V max. voltage drop across closed contacts at 20 amps VAC, resistive	1, T		X
Insulation resistance	10 Megohm min across open contact terminals and terminals to ground at Ohmmeter VDC.	1, T		X
Calibration	Actual current readings are within $\pm 2\%$ amps of trip curves. Identify set points(s) for current trips.	1, T,A		X
Operation comparison	Data taken above is compared with characteristics of existing relays by analysis	1, A		X
Uninterruptable Power Supply (UPS) System:				
1. Item Identification Critical Characteristics (necessary for reasonable assurance that the Item delivered is the Item specified)				
Manufacturer	Tripp Lite	1, IN	X	
Model Number	BC Personal 200	1, IN	X	
2. Physical Critical Characteristics (for reasonable assurance that the Item delivered is the Item specified)				
Capacity (VA/Watts)	200/175	1, IN	X	
Dimensions	8-1/4" H X 4-1/4" W X 5-3/4" D	1, IN	X	
3. Performance Critical Characteristics (for reasonable assurance that the Item will perform its intended safety function(s))				
Capacity Test	UPS disch. capacity test @200 VA for >28 min. Observe "red" alarm indication @ factory setting of $99 \pm 5\%$ VAC (Caution: do not unplug UPS to test its batteries. This will remove safe electrical grounding and may introduce a damaging surge into your network connections)	1, T		X

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Title: **Basler Electric BEI-51/27R U3E-Z3P-B1C1F Overcurrent Relay, Tripp Lite Standby UPS BC Personal 200 & Macromatic UPS Alarm relay & Socket**

Critical Characteristics	Acceptance Criteria/Tolerances	Acc.Method	ID	Function
UPS Alarm Relay/Socket:				
1. Item Identification Critical Characteristics (necessary for reasonable assurance that the Item delivered is the Item specified)				
Manufacturer	Macromatic	1, IN	X	
Model Number - Relay	VMP120A	1, IN	X	
Model Number - Socket	90.109	1, IN	X	
2. Physical Critical Characteristics (for reasonable assurance that the Item delivered is the Item specified)				
Contact Configuration - Relay	DPDT	1, IN	X	
Terminal Type - Socket	Screw Terminals	1, IN	X	
3. Performance Critical Characteristics (for reasonable assurance that the Item will perform its intended safety function(s))				
Pick-up Voltage - Relay	102-138 VAC (responds to adjustment and is repeatable at setting)	1, T		X
Drop-out Voltage - Relay	3% or less than Pick-up Voltage	1, T		X
Insulation Resistance - Relay & Socket	Relay mounted on socket - <10 megohms @ Ohmmeter VDC between terminal to terminal and terminal to ground.	1, T		X
Relays & UPS:				
3. Performance Critical Characteristics (for reasonable assurance that the Item will perform its intended safety function(s))				
Environmental	Note 1			
Seismic Condition A	Note 2			
Notes and Legend: Rev. 1: Added UPS to CGI		Acceptance Method:		
1. These devices have phenolic non-metallic material. These materials are not subject to degradation at 60°F and 40% RH or 75°F and 25% RH and are suitable for Condition A Application.		1. Special Test and Inspection		
2. This equipment is seismically rugged. Evaluation shall be performed to determine potential impact to SS & SC SSCs.		1, IN for Inspection		
Rev. 2: Added alarm test requirements to UPS and added UPS Relay and Socket		1,T for Test		
		2. Commercial Grade Survey		
		3. Source Verification		
		4. Vendor/Item History		
Section 10 Initial Review and Approval				
Approvals:				
Designated Engineer: <i>Carol van Kesteren</i> 5/10/00		QA Engineer: <i>Hank M. Chapin</i> 5-11-00		
Design Authority: <i>[Signature]</i> 5/10/00		Other:		

5/10/00

Commercial Grade Item Upgrade Dedication Form

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Title: **Basler Electric BEI-51/27R U3E-Z3P-B1C1F Overcurrent Relay, Tripp Lite Standby UPS BC Personal 200 & Macromatic UPS Alarm relay & Socket**

WORKSHEET 1

DETERMINATION OF FAILURE MECHANISMS

Section 1			
Typical Failure Mechanisms	Definition	X = Applicable to Component under Evaluation X?	Indicate Failure Mode
Fracture	Separation of a solid accompanied by little or no macroscopic plastic deformation.		
Corrosion	The gradual deterioration of a material due to chemical or electrochemical reactions, such as oxidation, between the material and its environment.	X	Deterioration of the insulation resulting in a short and loss of power.
Erosion	Destruction of materials by the abrasive action of moving fluids, usually accelerated by the presence of solid particles carried with the fluid.		
Open Circuit	An electrical circuit that is unintentionally broken so that there is no complete path for current flow.	X	An unintentional break of the wire would result in a loss of power.
Short Circuit	An abnormal connection by which an electrical current is connected to ground, or to some conducting body, resulting in excessive current flow.	X	An unintentional connection to ground would result in a loss of power.
Blockage	Clogging of a filtering medium resulting in the inability to perform its purification function or blockage of flow.		
Seizure	Binding of a normally moving item through excessive pressure, temperature, friction, jamming.		
Unacceptable Vibration	Mechanical oscillations produced are beyond the defined permissible limits due to unbalancing, poor support, or rotation at critical speeds.		
Loss of Properties	A loss of mechanical and physical properties of a material due to exposure to high temperatures, radiation exposure.		
Excess Strain	Under the action of excessive external forces the material of the part has been deformed or distorted.		
Mechanical Creep	From prolonged exposure to high temperature and stress, the object will show a slow change in its physical (shape and dimension) and mechanical characteristics.		
Ductile Fracture	Fracture characterized by tearing of metal accompanied by appreciable gross plastic deformation.		
Section 2 Additional Failure Modes Applicable to the Component Under Evaluation			
1. Structural Failure that affects neighboring SS or SC SSCs.			

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Title: **Basler Electric BEI-51/27R U3E-Z3P-B1C1F Overcurrent Relay, Tripp Lite Standby UPS BC Personal 200 & Macromatic UPS Alarm relay & Socket**

Checklist 1 – Acceptance Method 1 – Special Test/Inspection Verification

SECTION 1			
Item Description: Control Panels Overcurrent Protection, UPS & Alarm		Equip #: Overcurrent Trip Relays, UPS and alarm	
System #: 20-6		Procurement and/or Model #: BEI-51/27R U3E-Z3P-B1C1F; BC Personal 200; VMP120A	
Manufacturer (Address/Phone): Basler Electric, P.O. Box 269, Highland, ILL 518-654-2341 Tripp Lite 773-869-1234; Fax: 773-869-1877 Allied - Macromatic 1-800-433-5700		Supplier (Address/Phone):	
SECTION 2 CRITICAL CHARACTERISTICS TO BE VERIFIED BY METHOD 1.			
Insp	Test	Post-Test	
X			1. Manufacturer
X			2. Model Number
X			3. Marking
X			4. Dimensions
X			5. Contact Configuration
X			6. Terminal Type
	X		7. Current carrying Capability
	X		8. Insulation Resistance
	X		9. Calibration
	X		10. Operation comparison
	X		11. Pick-up Voltage
	X		12. Drop-out Voltage
SECTION 3 BY INSPECTION * See Attachment H, Table H-1 of Desk Instruction for Sampling Size; References (See Section 7)			
Overcurrent Trip Relay:			
Characteristic: Manufacturer			Sample Size*: 100%
Acceptance Criteria: Basler Electric			Receipt Inspection Plan / Report #:
Characteristic: Model Number			Sample Size*: 100%
Acceptance Criteria: BEI-51/27R U3E-Z3P-B1C1F			Receipt Inspection Plan / Report #:
Characteristic: Marking			Sample Size*: 100%
Acceptance Criteria: UL Logo			Receipt Inspection Plan / Report #:

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Title: **Basler Electric BEI-51/27R U3E-Z3P-B1C1F Overcurrent Relay, Tripp Lite Standby UPS
BC Personal 200 & Macromatic UPS Alarm relay & Socket**

Uninterruptable Power Supply (UPS) System:

Characteristic: Manufacturer	Sample Size*: 100%
Acceptance Criteria: Tripp Lite	Receipt Inspection Plan / Report #:
Characteristic: Model Number	Sample Size*: 100%
Acceptance Criteria: BC Personal 200	Receipt Inspection Plan / Report #:
Characteristic: Capacity	Sample Size*: 100%
Acceptance Criteria: 200 VA/ 125 Watts	Receipt Inspection Plan / Report #:
Characteristic: Dimensions	Sample Size*: 100%
Acceptance Criteria: 8-1/4" H X 4-1/4" W X 5-3/4" D	Receipt Inspection Plan / Report #:

UPS Alarm Relay/Socket:

Characteristic: Manufacturer	Sample Size*: 100%
Acceptance Criteria: Macromatic	Receipt Inspection Plan / Report #:
Characteristic: Model Number	Sample Size*: 100%
Acceptance Criteria: VMP120A	Receipt Inspection Plan / Report #:
Characteristic: Model Number	Sample Size*: 100%
Acceptance Criteria: 90.109	Receipt Inspection Plan / Report #:
Characteristic: Alarm Relay - Contact Configuration	Sample Size*: 100%
Acceptance Criteria: DPDT	Receipt Inspection Plan / Report #:
Characteristic: Terminal Type - Socket	Sample Size*: 100%
Acceptance Criteria: Screw terminals	Receipt Inspection Plan / Report #:

5/10/00

Commercial Grade Item Upgrade Dedication Form

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Title: **Basler Electric BEI-51/27R U3E-Z3P-B1C1F Overcurrent Relay, Tripp Lite Standby UPS
BC Personal 200 & Macromatic UPS Alarm relay & Socket**

Section 4 By Special Test * See Attachment H, Table H-1 of Desk Instruction for Sampling Size, References (See Section 7)

Characteristic for Test: **Trip Relay - Current carrying Capability**Samp Size*: ☒Normal[]Reduced[]TightenedAcceptance Criteria: **0.5V max. voltage drop across closed contacts at 20 amps VAC, resistive**

Actual Test Value:

Test Plan and Report #:

Characteristic for Test: **Trip Relay - Insulation Resistance**Samp Size*: ☒Normal[]Reduced[]TightenedAcceptance Criteria: **10 Megohm min across open contact terminals and terminals to ground at Ohmeter VDC**

Actual Test Value:

Test Plan and Report #:

Characteristic for Test: **Trip Relay - Calibration**Samp Size*: ☒Normal[]Reduced[]TightenedAcceptance Criteria: **Actual current readings are within $\pm 2\%$ amps of trip curves. Identify set points(s) for current trips.**

Actual Test Value:

Test Plan and Report #:

Characteristic for Test: **Trip Relay - Operation comparison**Samp Size*: ☒Normal[]Reduced[]TightenedAcceptance Criteria: **Data taken above is compared with characteristics of existing relays by analysis**

Actual Test Value:

Test Plan and Report #:

Characteristic for Test: **UPS Capacity Test**Samp Size*: ☒Normal[]Reduced[]TightenedAcceptance Criteria: **UPS disch. capacity test @200 VA for >28 min. Observe "red" alarm indication @ factory setting of $99 \pm 5\%$ VAC (Caution: do not unplug UPS to test its batteries. This will remove safe electrical grounding and may introduce a damaging surge into your network connections)**

Actual Test Value:

Test Plan and Report #:

Characteristic for Test: **Alarm Relay - Pick-up Voltage**Samp Size*: ☒Normal[]Reduced[]TightenedAcceptance Criteria: **102-138 VAC (responds to adjustment and is repeatable at setting)**

Actual Test Value:

Test Plan and Report #:

Characteristic for Test: **Alarm Relay - Drop-out Voltage**Samp Size*: ☒Normal[]Reduced[]TightenedAcceptance Criteria: **3% or less than Pick-up Voltage**

Actual Test Value:

Test Plan and Report #:

Characteristic for Test: **Alarm Relay on socket - Insulation Resistance**Samp Size*: ☒Normal[]Reduced[]TightenedAcceptance Criteria: **10 Megohm min across open contact terminals and terminals to ground at Ohmeter VDC**

Actual Test Value:

Test Plan and Report #:

**If Supplier/Manufacturer or Other, Refer to CGI Checklist-2 for Support Information

Commercial Grade Item Upgrade Dedication Form

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ECN No. N/A CGI No. CGI-SNF-D-20-1-C1-065

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Title: Basler Electric BEI-51/27R U3E-Z3P-B1C1F Overcurrent Relay, Tripp Lite Standby UPS
BC Personal 200 & Macromatic UPS Alarm relay & Socket

Section 5 Test / Inspection Summary (Acceptance Method 1)

1. Summary Of Verified Critical Characteristics , Their Verification Methods, and Results

ITEM DESCRIPTION: Overcurrent Trip Relay

Critical Characteristics				Verification Results							
Critical Characteristics	Acceptance Criteria/Tolerances	ID	Function	Method T/N	Procedure or RR#	Check- list ID	Number Tested	Number Failed	Verifying Organization	Printed Name Signature	Date
Manufacturer	Basler Electric	X		1, IN							
Model No.	BEI-51/27R U3E-Z3P-B1C1F	X		1, IN							
Markings	UL Logo	X		1, IN							
Current carrying Capability	0.5V max. voltage drop across closed contacts at 20 amps VAC, resistive		X	1, T							
Insulation Resistance	10 Megohm min across open contact terminals and terminals to ground at Ohmmeter VDC		X	1, T							
Calibration	Actual current readings are within $\pm 2\%$ amps of trip curves. Identify set points(s) for current trips.		X	1, T							
Operation Comparison	Data taken above is compared with characteristics of existing relays by analysis		X	1, T							

2. Disposition Of Unverified or Failed Critical Characteristics

Critical Characteristic	Disposition

3. Signature Indicates All Critical Characteristics Verified Satisfactory or Acceptably Dispositioned and Commercial Grade Dedication Is Satisfactory and Complete.

Testing Agency Approval: _____	Design Authority: _____	Date _____
Testing Agency QA Engineer: _____	QA Engineer: _____	Date _____

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Title: Basler Electric BEI-51/27R U3E-Z3P-B1C1F Overcurrent Relay, Tripp Lite Standby UPS
BC Personal 200 & Macromatic UPS Alarm relay & Socket

Section 5 Test / Inspection Summary (Acceptance Method 1)											
1. Summary Of Verified Critical Characteristics , Their Verification Methods, and Results											
Critical Characteristics					Verification Results						
Critical Characteristics	Acceptance Criteria/Tolerances	ID	Function	Method T/IN	Procedure or RR#	Check-list ID	Number Tested	Number Failed	Verifying Organization	Printed Name Signature	Date
Manufacturer	Tripp Lite	X		1, IN							
Model No.	BC Personal 200	X		1, IN							
Capacity	200 VA / 125 Watts	X		1, IN							
Dimensions	8-1/4" H X 4-1/4" W X 5-3/4" D	X		1, IN							
Capacity Test	UPS disch. capacity test @200 VA for >28 min. Observe "red" alarm indication @ factory setting of 99 ±5%VAC (Caution: do not unplug UPS to test its batteries. This will remove safe electrical grounding and may introduce a damaging surge into your network connections)		X	1, T							
2. Disposition Of Unverified or Failed Critical Characteristics											
Critical Characteristic					Disposition						
3. Signature Indicates All Critical Characteristics Verified Satisfactory or Acceptably Dispositioned and Commercial Grade Dedication Is Satisfactory and Complete.											
Testing Agency Approval: _____ Date _____					Design Authority: _____ Date _____						
Testing Agency QA Engineer: _____ Date _____					QA Engineer: _____ Date _____						

Commercial Grade Item Upgrade Dedication Form

SNF-6218, Rev. 2

ECN No. N/A CGI No. CGI-SNF-D-20-1-C1-065
 Title: Basler Electric BEI-51/27R U3E-Z3P-B1C1F Overcurrent Relay, Tripp Lite Standby UPS
BC Personal 200 & Macromatic UPS Alarm relay & Socket

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Section 5 Test / Inspection Summary (Acceptance Method 1)											
1. Summary Of Verified Critical Characteristics , Their Verification Methods, and Results											
ITEM DESCRIPTION: UPS Alarm relay and socket											
Critical Characteristics						Verification Results					
Critical Characteristics	Acceptance Criteria/Tolerances	ID	Function	Method T/IN	Procedure or RR#	Check-list ID	Number Tested	Number Failed	Verifying Organization	Printed Name Signature	Date
Manufacturer	Macromatic	X		1, IN							
Model No. - Relay	VMP120A	X		1, IN							
Model No. - Socket	90.109	X		1, IN							
Contact	DPDT	X		1, IN							
Configuration - Relay											
Terminal Type - Socket	Screw Terminals	X		1, IN							
Alarm Relay - Pick-up Voltage	102-138 VAC (responds to adjustment and is repeatable at setting)		X	1, T							
Alarm Relay - Drop-out Voltage	3% or less than Pick-up Voltage		X	1, T							
Alarm Relay on socket - Insulation Resistance	10 Megohm min across open contact terminals and terminals to ground at Ohmeter VDC		X	1, T							
2. Disposition Of Unverified or Failed Critical Characteristics											
Critical Characteristic	Disposition										
3. Signature Indicates All Critical Characteristics Verified Satisfactory or Acceptably Dispositioned and Commercial Grade Dedication Is Satisfactory and Complete.											
Testing Agency Approval: _____ Date _____						Design Authority: _____ Date _____					
Testing Agency QA Engineer: _____ Date _____						QA Engineer: _____ Date _____					

Commercial Grade Item Upgrade Dedication Form

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Title: **Basler Electric BEI-51/27R U3E-Z3P-B1C1F Overcurrent Relay, Tripp Lite Standby UPS
BC Personal 200 & Macromatic UPS Alarm relay & Socket**

Section 6 Contacts / Phone Numbers		
Title	Name	Phone
Design Authority		
QA		
QC		
Cog - Engineer		
CGI Engineer	Larry Price	372-8770
Procurement Engineer		
Other		

Section 7 Supporting Documentation for This Checklist		
Initial Procurement Documents		For Critical Characteristics
☐	Drawings:	
☐	Manuals (specify type & number):	
☐	Design Calculations	
☐	Installation Instructions	
☐	Operation Instructions	
☐	Calibration Instructions	
☐	Manufacturer's Recommended Spare Parts List	
X	Other: : Catalog Cut Sheets - Basler Electric, Tripp Lite UPS, Macromatic	All
Procurement Documents		
☐	Certificate of Conformance/Compliance	
☐	Seismic Qualification Certificate	
☐	Environmental Qualification Certificate	
☐	Test Report (s):	
☐	Inspection Report (s):	
☐	CMTRs for ASME Pressure Retaining Materials	
☐	Valve Seat Leakage Report	
☐	Weld Records	
☐	Material Traceability Record	
☐	Other:	

[illegible]