ENGINEERING CHANGE NOTICE

Page 1 of 21. ECN **654680**Proj.
ECN

2. ECN Category (mark one) Supplemental ☐ Direct Revision ☒ Change ECN ☐ Temporary ☐ Standby ☐ Supersedure ☐ Cancel/Void ☐	3. Originator's Name, Organization, MSIN, and Telephone No. TA Nuxall, SNF CVD, R3-86, 372-3739	4. USQ Required? ☐ Yes ☒ No	5. Date 9/15/99
	6. Project Title/No./Work Order No. W-441 Spent Nuclear Fuel Cold Vacuum Drying	7. Bldg./Sys./Fac. No. CVDF	8. Approval Designator SQ
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 Addition of Gasketed Sealing Locknut.		13b. Design Baseline Document? ☐ Yes ☒ No	
14a. Justification (mark one) Criteria Change ☒ Design Improvement ☐ Environmental ☐ Facility Deactivation ☐ As-Found ☐ Facilitate Const ☐ Const. Error/Omission ☐ Design Error/Omission ☐ 14b. Justification Details Technical change.			
15. Distribution (include name, MSIN, and no. of copies) See Distribution		RELEASE STAMP SEP 20 1999 DATE STA: 4 HANFORD RELEASE ID: 4	

A-7900-013-3 (05/96) GEF096

CONDUIT FASTENERS

Carl Van Katwijk
Numatec Hanford, Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-96RL13200

EDT/ECN: 654680
Org Code: 2G300
B&R Code: 39EW40400

UC: 620
Charge Code: 105559/A000
Total Pages: ~~36~~ 35
PF 9-20-99

Key Words: W-441, Cold Vacuum Drying Facility (CVD), CGI, Conduit Fasteners

Abstract: W-441, Cold Vacuum Drying Facility (CVD), CGI, Conduit Fasteners

TRADEMARK DISCLAIMER. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

Printed in the United States of America. To obtain copies of this document, contact: Document Control Services, P.O. Box 950, Mailstop H6-08, Richland WA 99352, Phone (509) 372-2420; Fax (509) 376-4989.

9/20/99
Release Approval

Date

Release Stamp

Approved for Public Release

RECORD OF REVISION

(1) Document Number	
---------------------	--

SNF-5102

Page 1

(2) Title

SNF-5102, CONDUIT FASTENERS

Change Control Record

[illegible]

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. NA	CGI No. CGI-SNF-D-93-2-C1-056	Page 1 of 33
Title: CONDUIT FASTENERS		

Section 1 Part Information		
Item No.: NA	Manufacturer:	Supplier:
Mfg. Part/Model No.:	Supplier's P/N:	
Part Description:		
End Use Description:		

Section 2a Component Information			
Equipment No.: See attached Section 9	Specification No.: W-441-C1, Section 16110	Manufacturer: ABC Fasteners; PowerStrut; Fastenal	Past P.O. No.: NA
Procurement and/or Model No.: See attached Section 9	Equipment Supplier (if different from manufacturer): American Electric; George A, Grant, Inc for Fastenal		Equip. Supplier's Part No.: NA

Component Description: **Fasteners for Safety Class Wiring Conduit.**

Section 2b Commercial Availability of the Item								
<p>1. Is the Item available from a catalogue of a qualified NQA1 supplier? (coordinate with project CGI interface Engineer or BTR)</p> <p>☐ YES (go to #2 below)</p> <p>☒ NO (go to procedure step 6.3.2, proceed to dedicate Item.)</p> <p>If not available from a qualified NQA1 supplier, is it available from an ISO 9000 supplier? (coordinate with project CGI interface Engineer or BTR)</p> <p>☐ YES (go to #2 below, then go to procedure step 6.3.2, proceed to dedicate Item)</p> <p>☒ NO (go to procedure step 6.3.2, proceed to dedicate Item.)</p>								
<p>2. List of Candidate qualified suppliers or ISO 9000 suppliers</p> <table border="1"> <thead> <tr> <th>company name & type</th> <th>contact name</th> <th>phone</th> </tr> </thead> <tbody> <tr> <td colspan="3">NA</td> </tr> </tbody> </table>			company name & type	contact name	phone	NA		
company name & type	contact name	phone						
NA								
<p>3. Recommended Procurement Strategy (coordinate with project CGI interface Engineer or BTR):</p> <p>NA</p>								

Section 2c CGI Determination	
<p>1. Question #1: Is the Item subject to design or specification requirements that are unique to nuclear facilities or activities?</p> <p>☐ YES (the Item is not commercial grade)</p> <p>☒ NO (continue)</p>	
<p>2. Question #2: Is the Item used in applications other than nuclear facilities or activities?</p> <p>☐ NO (the item is not commercial grade)</p> <p>☒ YES (continue)</p>	
<p>3. Question #3: Is the Item ordered from manufacturer/supplier on the basis of specifications set forth in the published product information (e.g. manufacturer's catalog)?</p> <p>☐ NO (the Item is not commercial grade)</p> <p>☒ YES (continue)</p>	

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-93-2-C1-056</u>	Page 2 of 33
Title: CONDUIT FASTENERS		

[X] All three criteria have been satisfied. The item meets the definition of commercial grade.	
Section 2d Reason for Dedication	
The above described item is being Dedicated for use in the application cited for the following reason(s):	
[X]	Item is being purchased from a non ESL manufacturer supplier as commercial grade to be used in a Safety Class application.
[]	Item is being purchased from a non ESL manufacturer supplier as commercial grade to be used in a Safety Significant application.
[]	Item was purchased from a non ESL manufacturer supplier as commercial grade to be used in a Safety Class application.
[]	Item was purchased from a non ESL manufacturer supplier as commercial grade to be used in a Safety Significant application.
[]	Other ('like-for-like', similar, substitution, replacement evaluation)
Section 3 Failure Effects Evaluation	
A. Part/Component Safety Function:	
1. Provide conduit protection, structural support for safety class wiring conduit.	
2. Maintain critical function before, during, and after Seismic Event.	
B. Part/Component Functional Mode:	
Safety Function #1:	
[]	Active – Mechanical or Electrical change of state is required to occur for the component to perform its safety function
[X]	Passive – Change of state is not required for the component to perform its safety function
Safety Function #2:	
[]	Active – Mechanical or Electrical change of state is required to occur for the component to perform its safety function.
[X]	Passive – Change of state is not required for the component to perform its safety function
Safety Function #3:	
[]	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): NA	
1.	
D. Failure Mode(s) and the effects on component or system safety function (see Worksheet 1):	
1. Fracture or material fatigue leads to loss of structural support and possible damage to wiring.	

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. NA	CGI No. CGI-SNF-D-93-2-C1-056	Page 3 of 33
Title: CONDUIT FASTENERS		

Section 4 Environmental & Natural Phenomena Hazard Design		
Environmental Qualification Required: Yes ☐ No ☒	If yes: Environmental Qualification Requirements Limiting Environmental Conditions: Required Safety Functions: Qualification Period:	
Environmental Condition B		
Natural Phenomena Hazard (NPH) Design Required: Yes ☒ No ☐	If yes: NPH Design Requirements Performance Category: PC-3 NPH Design Req'ts.: Seismic Condition C Required Safety Functions: Provide protection and support for safety class wiring conduit. Maintain critical function before, during, and after Seismic Event.	
HNF-PRO-097, Rev. 0		
Section 5 Component Functional Classification		
☒ Safety Class (SC)	☐ General Service (GS)	☐ Safety Significant (SS)
If part/component classification is different from host component/system, document basis. NA		
Section 6 (Reserved)		
Section 7 (Reserved)		
Section 8 References (for Functional Classification)		
National Codes/Standards: IEEE 628	Safety Analysis Report (SAR): HNF-SD-SNF-SAR-002, Rev. 4A	Drawings: HNF-SD-SNF-SEL-002, Rev. 6A Dwg. H-1-82303
Vendor Manual/Manufacturer/Supplier Information: Fender Washers, Lock Washers, Flat Washers, Hex Head Bolts - ABC Fasteners Page 2-1; PS-146 Continuous Threaded Rod/Clamping Nut with spring - Power Strut Pages 40, 42 Phillips Drive Machine Screws - Fastenal Catalog, Pages 76 and 77 Nylon Insert Lock Nuts, Fastenal Catalog, Page 104 Hex Full Nuts Fastenal Catalog, Page 101 SAE Flat Washers, Fastenal Catalog, Page 115 Medium Split Lock Washers, Fastenal Catalog, Page 116		
Other:		

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-93-2-C1-056</u>	Page 4 of 33
Title: <u>CONDUIT FASTENERS</u>		

Section 9 Critical Characteristics				
Critical Characteristics Verification Document:	Acceptance Criteria/Tolerances	Acceptance Method	ID	Function
HNF-SD-SNF-SEL-002, Rev. 6A DWG. H-1-82303				
1. Item Identification Critical Characteristics (necessary for reasonable assurance that the Item delivered is the Item specified)				
Fender, Flat, and Lock Washers, Page 2-1, Manufacturer	ABC Fasteners	1, IN	X	
Fender, Flat and Lock Washers - Component Number- Procurement and/or Model Number Fender Flat Lock	20004 20008 20015 18020 18025 18030 18035 19020 19025 19030 19035	1, IN	X	
Fender, Flat, and Lock Washers, - Size, inches Fender, 20004 20008 20015 Flat, 18020 18025 18030 18035 Lock 19020 19025 19030 19035	1/4" x 1 1/4" 3/8" x 1 1/2" 1/2" x 2" #1/4 #5/16 #3/8 #1/2 #1/4 #5/16 #3/8 #1/2	1, IN	X	
Hex Nuts, Page 2-1, Manufacturer	ABC Fasteners	1, IN	X	

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. NA	CGI No. CGI-SNF-D-93-2-C1-056	Page 5 of 33
Title: CONDUIT FASTENERS		

Hex Nuts, - Component Number- Procurement and/or Model Number	17025 17030 17035 17040	1, IN	X	
Hex Nuts, - Size/Thread, inch 17025 17030 17035 17040	1/4 - 20 5/16 - 18 3/8 - 16 1/2 - 13	1, IN	X	
Hex Head Bolts, Manufacturer	ABC Fasteners	1, IN	X	
Hex Head Bolts, - Component Number- Procurement and/or Model Number 1/4 inch 5/16 inch 3/8 inch	38110 38111 38112 38113 38114 38115 38126 38127 38128 38141 38142 38143 38144	1, IN	X	
Hex Head Bolts, - Size - Thread x Nominal Length, inch 38110 38111 38112 38113 38114 38115 38126 38127 38128 38141 38142 38143 38144	1/4 - 20 x 1/2 1/4 - 20 x 3/4 1/4 - 20 x 1 1/4 - 20 x 1 1/4 1/4 - 20 x 1 1/2 1/4 - 20 x 2 5/16 - 18 x 3/4 5/16 - 18 x 1 5/16 - 18 x 1 1/4 3/8 - 16 x 3/4 3/8 - 16 x 1 3/8 - 16 x 1 1/4 3/8 - 16 x 1 1/2	1, IN	X	

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-93-2-C1-056</u>	Page 6 of 33
Title: CONDUIT FASTENERS		

Fasteners, Pages 40 and 42 Manufacturer PS 146 Continuous Threaded Rod - Size PS RS Clamping Nut with Regular Spring. PS RS - Size x Thread	Powerstrut Nominal 3/8" Nominal 1/2" Nominal 5/8" Nominal 3/4" 1/4" x 20 3/8" x 16 1/2" x 13 5/8" x 11 3/4" x 10 7/8" x 9	1, IN	X	
Manufacturer, Pan Head Phillips Drive Machine Screws - All - Pages 76 and 77	Fastenal	1, IN	X	
Pan Head Phillips Drive Machine Screws - Size - Thread, Part Number / Nominal Length, Inches	All 6 - 32 28780 / 1/8 28781 / 3/16 28783 / 1/4 28789 / 5/16 28795 / 3/8 28801 / 7/16 28804 / 1/2 28806 / 9/16 28810 / 5/8 28816 / 3/4 28822 / 7/8 28828 / 1 28830 / 1 1/8 28834 / 1 1/4 28836 / 1 3/8 28838 / 1 1/2 28840 / 1 5/8 28842 / 1 3/4 28846 / 2 28852 / 2 1/4 28853 / 2 1/2 28854 / 3	1, IN	X	

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1	
ECN No. NA	CGI No. CGI-SNF-D-93-2-C1-056	Page 7 of 33	
Title: CONDUIT FASTENERS			

Pan Head Phillips Drive Machine Screws - Size - Thread, Part Number / Nominal Length, Inches	All 8 - 32 28856 / 3/16 28858 / 1/4 28864 / 5/16 28870 / 3/8 28876 / 7/16 28879 / 1/2 28881 / 9/16 28885 / 5/8 28891 / 3/4 28897 / 7/8 28903 / 1 28905 / 1 1/8 28909 / 1 1/4 28911 / 1 3/8 28913 / 1 1/2 28917 / 1 3/4 28921 / 2 28928 / 2 1/4 28929 / 2 1/2 28930 / 3	1, IN	X	
Pan Head Phillips Drive Machine Screws - Size - Thread, Part Number / Nominal Length, Inches	All 10- 24 28936 / 1/4 28942 / 5/16 28948 / 3/8 28954 / 7/16 28957 / 1/2 28963 / 5/8 28969 / 3/4 28975 / 7/8 28981 / 1 28987 / 1 1/4 28991 / 1 1/2 28995 / 1 3/4 28999 / 2 29003 / 2 1/4 29007 / 2 1/2 29011 / 2 3/4 29015 / 3	1, IN	X	
Pan Head Phillips Drive Machine Screws - Size - Thread, Part Number / Nominal Length, Inches	All 10- 32 29055 / 5/8 29073 / 1	1, IN	X	
Manufacturer, All Nylon Insert Lock Nuts, Page 104	Fastenal	1, IN	X	

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-93-2-C1-056</u>	Page 8 of 33
Title: CONDUIT FASTENERS		

Part Number - Size - Thread	37010 6 - 32 37012 8 - 32 37014 10 - 24	1, IN	X	
Manufacturer, All Size Hex Full Nuts, Page 101	Fastenal	1, IN	X	
Part Number - Size - Thread	36020 6 - 32 36024 8 - 32 36028 10 - 24	1, IN	X	
Manufacturer, All Size SAE Flat Washers, Page 115	Fastenal	1, IN	X	
Part Number - Size - Nominal OD/ID, Inches	33070 - 6 - 3/8 / 5/32 33072 - 8 - 7/16 / 3/16 33074 - 10 - 1/2 / 7/32	1, IN	X	
Manufacturer, All Size Medium Split Lock Washers, Page 116	Fastenal	1, IN	X	
Part Number - Size	33610 - 6 33612 - 8 33614 - 10	1, IN	X	
2. Physical Critical Characteristics (for reasonable assurance that the Item delivered is the Item specified)				
Fender, Flat, and Lock Washers, Material	Zinc Coated Steel (Note 3)	1, IN 1, T	X	
Hex Nuts, Material	Zinc Coated Steel (Note 3)	1, IN 1, T	X	
Hex Head Bolts, Material	Zinc Coated Steel (Note 3)	1, IN 1, T	X	
Fasteners, PS 146 Continuous Threaded Rod, Material PS RS Clamping Nut with Regular Spring, Material	Steel (Note 3) Steel (Note 3)	1, IN 1, T	X	
All Size Pan Head Phillips Drive Machine Screws, Material	Zinc Plated Steel (Note 3)	1, IN 1, T	X	
All Size Nylon Insert Lock Nuts, Material	Zinc Plated Steel (Note 3)	1, IN 1, T	X	
All Size Hex Full Nuts, Material	Zinc Plated Steel (Note 3)	1, IN 1, T	X	
All Size SAE Flat Washers, Material	Zinc Plated Steel (Note 3)	1, IN 1, T	X	

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. NA	CGI No. CGI-SNF-D-93-2-C1-056	Page 9 of 33
Title: CONDUIT FASTENERS		

All Size Medium Split Lock Washers, Material	Zinc Plated Steel (Note 3)	1, IN 1, T	X	
3. Performance Critical Characteristics (for reasonable assurance that the Item will perform its intended safety function(s))				
Environmental	Note 1			
Seismic Condition C	Note 2	1, T 1, A		X

<p>4. Notes and Legend:</p> <ol style="list-style-type: none"> The components are not subject to degradation from the 40°F or 60% RH or 115°F and 22% RH conditions and are suitable for Environmental Condition B application. Maintain critical function before, during, and after Seismic event. Equipment that has been shaker-table tested should not be installed in a plant (Ref. IEEE Standard 344-1984, Section 7). Consequently, the seismic test constitutes a destructive test. Seismic Design may be verified by analysis of the installed conduit system. Material verification acceptance method may be by either inspection or test. 	<p>Acceptance Method:</p> <ol style="list-style-type: none"> Special Test and Inspection 1, IN for Inspection 1, T for Test 1, A for Acceptance by Analysis Commercial Grade Survey Source Verification Vendor/Item History
--	---

Section 10 Initial Review and Approval	
<p>Approvals:</p> <p>Designated Engineer: <i>C. M. [Signature]</i> 8/16/99</p> <p>Design Authority: <i>[Signature]</i> 9/15/99</p> <p>QA Engineer: <i>[Signature]</i> 9/16/99</p>	

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. NA	CGI No. CGI-SNF-D-93-2-C1-056	Page 10 of 33
Title: CONDUIT FASTENERS		

WORKSHEET 1 DETERMINATION OF FAILURE MECHANISMS/MODES		
Section 1		
Typical Failure Mechanisms	Definition	Applicable to Component under Evaluation
Fracture	Separation of a solid accompanied by little or no macroscopic plastic deformation.	Yes [☒] No [☐]; If Yes, indicate failure Mode: <u>Fracture or material fatigue-loss of structural protection to wiring</u>
Corrosion	The gradual deterioration of a material due to chemical or electrochemical reactions, such as oxidation, between the material and its environment.	Yes [☐] No [☒]; If Yes, indicate failure Mode _____
Erosion	Destruction of materials by the abrasive action of moving fluids, usually accelerated by the presence of solid particles carried with the fluid.	Yes [☐] No [☒]; If Yes, indicate failure Mode _____
Open Circuit	An electrical circuit that is unintentionally broken so that there is no complete path for current flow.	Yes [☐] No [☒]; If Yes, indicate failure Mode _____
Short Circuit	An abnormal connection by which an electrical current is connected to ground, or to some conducting body, resulting in excessive current flow.	Yes [☐] No [☒]; If Yes, indicate failure Mode _____
Blockage	Clogging of a filtering medium resulting in the inability to perform its purification function or blockage of flow.	Yes [☐] No [☒]; If Yes, indicate failure Mode _____
Seizure	Binding of a normally moving item through excessive pressure, temperature, friction, jamming.	Yes [☐] No [☒]; If Yes, indicate failure Mode _____
Unacceptable Vibration	Mechanical oscillations produced are beyond the defined permissible limits due to unbalancing, poor support, or rotation at critical speeds.	Yes [☐] No [☒]; If Yes, indicate failure Mode _____
Loss of Properties	A loss of mechanical and physical properties of a material due to exposure to high temperatures, radiation exposure.	Yes [☐] No [☒]; If Yes, indicate failure Mode _____
Excess Strain	Under the action of excessive external forces the material of the part has been deformed or distorted.	Yes [☒] No [☐]; If Yes, indicate failure Mode; <u>Material fatigue leads to loss of structural support and enclosure of wiring</u>
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.	Yes [☐] No [☒]; If Yes, indicate failure Mode _____
Ductile Fracture	Fracture characterized by tearing of metal accompanied by appreciable gross plastic deformation.	Yes [☒] No [☐]; If Yes, indicate failure Mode: <u>Fracture or material fatigue – loss of structural support and protection of wiring</u>
Section 2 Additional Failure Modes Applicable to the Component Under Evaluation		
1.		
2.		

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-93-2-C1-056</u>	Page 11 of 33
Title: <u>CONDUIT FASTENERS</u>		

CHECKLIST 1
ACCEPTANCE METHOD 1
SPECIAL TEST/INSPECTION VERIFICATION

SECTION 1	
Item Description: Fasteners for Safety Class Wiring Conduit. System #: 93-2	Equip #: NA Procurement and/or Model #: See Catalog Numbers in Section 8 and Characteristics in Section 9.
Manufacturer (Address/Phone): Various - See Sections 8 and 9. P.O. #	Supplier (Address/Phone):

SECTION 2 CRITICAL CHARACTERISTICS TO BE VERIFIED BY METHOD 1.			
Insp	Test	Post-Test	
[X]	[]	[]	1. Fender, Flat, and Lock Washers
[X]	[]	[]	1. Hex Nuts
[X]	[]	[]	2. Hex Head Bolts
[X]	[]	[]	3. Fasteners
[X]	[]	[]	4. Pan Head Phillips Drive Machine Screws
[X]	[]	[]	5. Nylon Insert Lock Nuts
[X]	[]	[]	6. Hex Full Nuts
[X]	[]	[]	7. SAE Flat Washers
[X]	[]	[]	8. Medium Split Lock Washers
[X]	[X]	[]	9. Material, Fender, Flat, and Lock Washers (Verification may be by either inspection or by test)
[X]	[X]	[]	10. Material, Hex Nuts (Verification may be by either inspection or by test)
[X]	[X]	[]	11. Material, Hex Head Bolts (Verification may be by either inspection or by test)
[X]	[X]	[]	12. Material, Fasteners (Verification may be by either inspection or by test)
[X]	[X]	[]	13. Material, Pan Head Phillips Drive Machine Screws (Verification may be by either inspection or by test)
[X]	[X]	[]	14. Material, Nylon Insert Lock Nuts (Verification may be by either inspection or by test)
[X]	[X]	[]	15. Material, Hex Full Nuts (Verification may be by either inspection or by test)
[X]	[X]	[]	16. Material, SAE Flat Washers (Verification may be by either inspection or by test)

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. NA	CGI No. CGI-SNF-D-93-2-C1-056	Page 12 of 33
Title: CONDUIT FASTENERS		

☒ [X]	☒ [X]	☐ []	17. Material, Medium Split Lock Washer (Verification may be by either inspection or by test)
☐ []	☒ [X]	☐ []	18. Seismic Condition C (Seismic verification may be by test or by analysis)

SECTION 3 VERIFIED BY INSPECTION

*** See Attachment H of Desk Instruction for Sampling Size: Reduced Sampling Plan Was Selected Due to The Product History and Simplicity of Product**

Characteristic: **Manufacturer, Fender, Flat, and Lock Washers**

Sample Size*: **REDUCED SAMPLING PLAN**

Acceptance Criteria: **ABC Fasteners**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Characteristic: **Fender, Flat, and Lock Washers - Component Number- Procurement and/or Model Number and Size, inches**

Sample Size*: **REDUCED SAMPLING PLAN**

ID Number/Acceptance Criteria:

Fender	20004	1/4 x 1 1/4
	20008	3/8 x 1 1/2
	20015	1/2 x 2
Flat	18020	#1/4
	18025	#5/16
	18030	#3/8
	18035	#1/2
Lock	19020	#1/4
	19025	#5/16
	19030	#3/8
	19035	#1/2

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Characteristic: **Hex Nuts, Manufacturer**

Sample Size*: **REDUCED SAMPLING PLAN**

Acceptance Criteria: **ABC Fasteners**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Commercial Grade Item Upgrade Dedication Form

SNF-5102 Rev. 1

ECN No. **NA** CGI No. **CGI-SNF-D-93-2-C1-056**

Page 13 of 33

Title: **CONDUIT FASTENERS****Characteristic: Hex Nuts - Component Number- Procurement and/or Model Number and Size/Thread, inches**Sample Size*: **REDUCED SAMPLING PLAN**

ID Number - Size / Acceptance Criteria:

17025	1/4 - 20
17030	5/16 - 18
17035	3/8 - 16
17040	1/2 - 13

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Characteristic: Hex Head Bolts - ManufacturerSample Size*: **REDUCED SAMPLING PLAN**Acceptance Criteria: **ABC Fasteners**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Characteristic: Hex Head Bolts - Component Number- Procurement and/or Model Number - Size/Thread and Nominal Length, inchesSample Size*: **REDUCED SAMPLING PLAN**

ID Number - Size - Thread - Nominal Length / Acceptance Criteria:

1/4	38110	1/4 - 20 x 1/2
	38111	1/4 - 20 x 3/4
	38112	1/4 - 20 x 1
	38113	1/4 - 20 x 1 1/4
	38114	1/4 - 20 x 1 1/2
	38115	1/4 - 20 x 2

5/16	38126	5/16 - 18 x 3/4
	38127	5/16 - 18 x 1
	38128	5/16 - 18 x 1 1/4

3/8	38141	3/8 - 16 x 3/4
	38142	3/8 - 16 x 1
	38143	3/8 - 16 x 1 1/4
	38144	3/8 - 16 x 1 1/2

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Commercial Grade Item Upgrade Dedication Form

SNF-5102 Rev. 1

ECN No. **NA**CGI No. **CGI-SNF-D-93-2-C1-056**

Page 14 of 33

Title: **CONDUIT FASTENERS**Characteristic: **Manufacturer, Fasteners**Sample Size*: **REDUCED SAMPLING PLAN**Acceptance Criteria: **Powerstrut**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Characteristic: **Fasteners - Component Number- Procurement and/or Model Number and Size, inches**Sample Size*: **REDUCED SAMPLING PLAN**ID Number - Size/Acceptance Criteria: **PS 146 Continuous Threaded Rod / Nominal 3/8"**

Size / Nominal 1/2"

/ Nominal 5/8"

/ Nominal 3/4"

PS RS Clamping Nut with Regular Spring / 1/4" x 20

Size x Thread / 3/8" x 16

/ 1/2" x 13

/ 5/8" x 11

/ 3/4" x 10

/ 7/8" x 9

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Characteristic: **Manufacturer, All Pan Head Phillips Drive Machine Screws**Sample Size*: **REDUCED SAMPLING PLAN**Acceptance Criteria: **Fastenal**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-93-2-C1-056</u>	Page 15 of 33
Title: <u>CONDUIT FASTENERS</u>		

Characteristic: **Pan Head Phillips Drive Machine Screws**

Sample Size*: **REDUCED SAMPLING PLAN**

ID All Size – Thread Part Number / Nominal Length, Inches / Acceptance Criteria:

All 6 - 32	28780 / 1/8
	28781 / 3/16
	28783 / 1/4
	28789 / 5/16
	28795 / 3/8
	28801 / 7/16
	28804 / 1/2
	28806 / 9/16
	28810 / 5/8
	28816 / 3/4
	28822 / 7/8
	28828 / 1
	28830 / 1 1/8
	28834 / 1 1/4
	28836 / 1 3/8
	28838 / 1 1/2
	28840 / 1 5/8
	28842 / 1 3/4
	28846 / 2
	28852 / 2 1/4
	28853 / 2 1/2
	28854 / 3

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): Machine Screws - Fastenal Catalog, Pages 76 and 77

Commercial Grade Item Upgrade Dedication Form

SNF-5102 Rev. 1

ECN No. **NA** CGI No. **CGI-SNF-D-93-2-C1-056**

Page 16 of 33

Title: **CONDUIT FASTENERS**Characteristic: **Pan Head Phillips Drive Machine Screws**Sample Size*: **REDUCED SAMPLING PLAN**

ID All Size -- Thread Part Number / Nominal Length, Inches / Acceptance Criteria:

All 8 - 32	28856 / 3/16
	28858 / 1/4
	28864 / 5/16
	28870 / 3/8
	28876 / 7/16
	28879 / 1/2
	28881 / 9/16
	28885 / 5/8
	28891 / 3/4
	28897 / 7/8
	28903 / 1
	28905 / 1 1/8
	28909 / 1 1/4
	28911 / 1 3/8
	28913 / 1 1/2
	28917 / 1 3/4
	28921 / 2
	28928 / 2 1/4
	28929 / 2 1/2
	28930 / 3

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): **Machine Screws - Fastenal Catalog, Pages 76 and 77**

Commercial Grade Item Upgrade Dedication Form

SNF-5102 Rev. 1

ECN No. NA CGI No. CGI-SNF-D-93-2-C1-056

Page 17 of 33

Title: **CONDUIT FASTENERS**Characteristic: **Pan Head Phillips Drive Machine Screws**Sample Size*: **REDUCED SAMPLING PLAN**

ID All Size – Thread Part Number / Nominal Length, Inches / Acceptance Criteria:

All 10- 24 **28936 / 1/4**
 28942 / 5/16
 28948 / 3/8
 28954 / 7/16
 28957 / 1/2
 28963 / 5/8
 28969 / 3/4
 28975 / 7/8
 28981 / 1
 28987 / 1 1/4
 28991 / 1 1/2
 28995 / 1 3/4
 28999 / 2
 29003 / 2 1/4
 29007 / 2 1/2
 29011 / 2 3/4
 29015 / 3

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): **Machine Screws - Fastenal Catalog, Pages 76 and 77**Characteristic: **Pan Head Phillips Drive Machine Screws**Sample Size*: **REDUCED SAMPLING PLAN**

ID All Size – Thread Part Number / Nominal Length, Inches / Acceptance Criteria:

All 10- 32 **29055 / 5/8**
 29073 / 1

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): **Machine Screws - Fastenal Catalog, Pages 76 and 77**Characteristic: **Manufacturer, All Nylon Insert Lock Nuts**Sample Size*: **REDUCED SAMPLING PLAN**Acceptance Criteria: **Fastenal**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Commercial Grade Item Upgrade Dedication Form

SNF-5102 Rev. 1

ECN No. **NA** CGI No. **CGI-SNF-D-93-2-C1-056**

Page 18 of 33

Title: **CONDUIT FASTENERS**Characteristic: **Nylon Insert Lock Nuts**Sample Size*: **REDUCED SAMPLING PLAN**

ID Part Number Size – Thread / Acceptance Criteria:

37010	6 - 32
37012	8 - 32
37014	10 - 24

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): **Nylon Insert Lock Nuts, Fastenal Catalog, Page 104**Characteristic: **Manufacturer, All Size Hex Full Nuts**Sample Size*: **REDUCED SAMPLING PLAN**Acceptance Criteria: **Fastenal**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8):

Characteristic: **All Size Hex Full Nuts**Sample Size*: **REDUCED SAMPLING PLAN**

ID – Part Number – Size-Thread / Acceptance Criteria:

36020	- 6-32
36024	- 8-32
36028	- 10-24

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): **Hex Full Nuts, Fastenal Catalog, Page 101**Characteristic: **Manufacturer, All Size SAE Flat Washers**Sample Size*: **REDUCED SAMPLING PLAN**Acceptance Criteria: **Fastenal**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8):

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. NA	CGI No. CGI-SNF-D-93-2-C1-056	Page 19 of 33
Title: CONDUIT FASTENERS		

Characteristic: **SAE Flat Washers**

Sample Size*: **REDUCED SAMPLING PLAN**

ID - Part Number - Size - Nominal OD/ID, Inches / Acceptance Criteria:

33070 - 6 - 3/8 / 5/32

33072 - 8 - 7/16 / 3/16

33074 - 10 - 1/2 / 7/32

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): **SAE Flat Washers, Fastenal Catalog, Page 115**

Characteristic: **Manufacturer, All Size Medium Split Lock Washers**

Sample Size*: **REDUCED SAMPLING PLAN**

Acceptance Criteria: **Fastenal**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8):

Characteristic: **Medium Split Lock Washers**

Sample Size*: **REDUCED SAMPLING PLAN**

ID - Part Number - Size / Acceptance Criteria:

33610 6

33612 8

33614 10

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): **Medium Split Lock Washers, Fastenal Catalog, Page 116**

Characteristic: **Material, Fender, Flat, and Lock Washers**

Sample Size*: **REDUCED SAMPLING PLAN**

Acceptance Criteria: **Zinc Coated Steel**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Commercial Grade Item Upgrade Dedication Form

SNF-5102 Rev. 1

ECN No. NA CGI No. CGI-SNF-D-93-2-C1-056

Page 20 of 33

Title: **CONDUIT FASTENERS**Characteristic: **Material, Hex Nuts**Sample Size*: **REDUCED SAMPLING PLAN**Acceptance Criteria: **Zinc Coated Steel**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Characteristic: **Material, Hex Head Bolts**Sample Size*: **REDUCED SAMPLING PLAN**Acceptance Criteria: **Zinc Coated Steel**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Characteristic: **Material, Fasteners**Sample Size*: **REDUCED SAMPLING PLAN**

Acceptance Criteria:

PS 146 Continuous**Threaded Rod.****Steel****PS RS Clamping Nut with****Regular Spring.****Steel**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Characteristic: **Material, All Pan Head Phillips Drive Machine Screws**Sample Size*: **REDUCED SAMPLING PLAN**Acceptance Criteria: **Zinc Plated Steel**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Characteristic: **Material, All Nylon Insert Lock Nuts**Sample Size*: **REDUCED SAMPLING PLAN**Acceptance Criteria: **Zinc Plated Steel**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Commercial Grade Item Upgrade Dedication Form

SNF-5102 Rev. 1

ECN No. **NA** CGI No. **CGI-SNF-D-93-2-C1-056**

Page 21 of 33

Title: **CONDUIT FASTENERS**Characteristic: **Material, All Size Hex Full Nuts**Sample Size*: **REDUCED SAMPLING PLAN**Acceptance Criteria: **Zinc Plated Steel**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Characteristic: **Material, All Size SAE Flat Washers**Sample Size*: **REDUCED SAMPLING PLAN**Acceptance Criteria: **Zinc Plated Steel**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

Characteristic: **Material, All Size Medium Split Lock Washers**Sample Size*: **REDUCED SAMPLING PLAN**Acceptance Criteria: **Zinc Plated Steel**

As Found: _____ Passed: Y / N (Circle)

Receipt Inspection Plan / Report #: _____

References (see Section 8): _____

SECTION 4 VERIFIED BY SPECIAL TEST* See Attachment H of Desk Instruction for Sampling Size: **NA**Characteristic for Test: **Seismic Condition C - All Items**Acceptance Criteria: **Maintain Critical Function Before, During, and After Seismic Event.**Sample Size*: **Sample Size is NA because seismic verification of the installed conduit system with fittings, supports, etc, will be done by analysis. Physical testing is not anticipated.**

Actual Test Value:

Test Plan and Report #: _____ References (see Section 8): _____

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-93-2-C1-056</u>	Page 22 of 33
Title: <u>CONDUIT FASTENERS</u>		

Section 5 Test / Inspection Summary (Acceptance Method 1)											
1. SUMMARY OF VERIFIED CRITICAL CHARACTERISTICS, THEIR VERIFICATION METHODS, AND RESULTS											
ITEM DESCRIPTION:											
Critical Characteristics						Verification Results					
Critical Characteristics	Acceptance Criteria/Tolerances	ID	Function	Method I/IN	Procedure or R/R#	Check- list ID	Number Tested	Number Failed	Verifying Organization	Printed Name Signature	Date
Fender, Flat, and Lock Washers - Manufacturer	ABC Fasteners	X		IN							
Fender, Flat and Lock Washers - Component Number- Procurement and/or Model Number Fender	20004 20008 20015	X		IN							
Flat	18020 18025 18030 18035										
Lock	19020 19025 19030 19035										

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-93-2-C1-056</u>	Page 23 of 33
Title: <u>CONDUIT FASTENERS</u>		

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
Fender, Flat, and Lock Washers, - Size, inches		X		IN							
Fender 20004	1/4" x 1 1/4"										
20008	3/8" x 1 1/2"										
20015	1/2" x 2"										
Flat											
18020	#1/4										
18025	#5/16										
18030	#3/8										
18035	#1/2										
Lock											
19020	#1/4										
19025	#5/16										
19030	#3/8										
19035	#1/2										
Hex Nuts - Manufacturer	ABC Fasteners	X		IN							
Hex Nuts, - Component Number- Procurement and/or Model Number		X		IN							
	17025										
	17030										
	17035										
	17040										
Hex Nuts, - Size - Thread, inch		X		IN							
17025	1/4 - 20										
17030	5/16 - 18										
17035	3/8 - 16										
17040	1/2 - 13										

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. NA	CGI No. CGI-SNF-D-93-2-C1-056	Page 24 of 33
Title: CONDUIT FASTENERS		

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
Hex Head Bolts - Manufacturer	ABC Fasteners	X		IN							
Hex Head Bolts, - Component Number- Procurement and/or Model Number 1/4 inch		X		IN							
	38110										
	38111										
	38112										
	38113										
	38114										
	38115										
5/16 inch	38126										
	38127										
	38128										
3/8 inch	38141										
	38142										
	38143										
	38144										

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-93-2-C1-056</u>	Page 25 of 33
Title: CONDUIT FASTENERS		

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
Hex Head Bolts, - Size - Thread x Nominal Length, inches		X		IN							
	38110	1/4 - 20 x 1/2									
	38111	1/4 - 20 x 3/4									
	38112	1/4 - 20 x 1									
	38113	1/4 - 20 x 1 1/4									
	38114	1/4 - 20 x 1 1/2									
	38115	1/4 - 20 x 2									
	38126	5/16 - 18 x 3/4									
	38127	5/16 - 18 x 1									
	38128	5/16 - 18 x 1 1/4									
	38141	3/8 - 16 x 3/4									
	38142	3/8 - 16 x 1									
	38143	3/8 - 16 x 1 1/4									
	38144	3/8 - 16 x 1 1/2									

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. NA	CGI No. CGI-SNF-D-93-2-C1-056	Page 26 of 33
Title: CONDUIT FASTENERS		

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
Fasteners - Manufacturer PS 146 Continuous Threaded Rod, Size	Powerstrut	X		IN							
	Nominal 3/8"										
	Nominal 1/2"										
	Nominal 5/8"										
	Nominal 3/4"										
PS RS Clamping Nut with Regular Spring PS RS Size x Thread	1/4" x 20										
	3/8" x 16										
	1/2" x 13										
	5/8" x 11										
	3/4" x 10										
	7/8" x 9										
All Size Pan Head Phillips Drive Machine Screws - Manufacturer	Fastenal	X		IN							

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. NA	CGI No. CGI-SNF-D-93-2-C1-056	Page 27 of 33
Title: CONDUIT FASTENERS		

Critical Characteristics			Verification Results								
Critical Characteristics	Acceptance Criteria/Tolerances	ID	Function	Method T/IN	Procedure of RR#	Check- list ID	Number Tested	Number Failed	Verifying Organization	Printed Name Signature	Date
Pan Head Phillips Drive Machine Screws - Size 6 - 32 Part Number / Nominal Length, Inches	28780 / 1/8	X		IN							
	28781 / 3/16										
	28783 / 1/4										
	28789 / 5/16										
	28795 / 3/8										
	28801 / 7/16										
	28804 / 1/2										
	28806 / 9/16										
	28810 / 5/8										
	28816 / 3/4										
	28822 / 7/8										
	28828 / 1										
	28830 / 1 1/8										
	28834 / 1 1/4										
	28836 / 1 3/8										
	28838 / 1 1/2										
	28840 / 1 5/8										
	28842 / 1 3/4										
	28846 / 2										
	28852 / 2 1/4										
28853 / 2 1/2											
28854 / 3											

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. NA	CGI No. CGI-SNF-D-93-2-C1-056	Page 28 of 33
Title: CONDUIT FASTENERS		

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
Pan Head Phillips Drive Machine Screws - Size 8 - 32 Part Number / Nominal Length, Inches	28856 / 3/16	X		IN							
	28858 / 1/4										
	28864 / 5/16										
	28870 / 3/8										
	28876 / 7/16										
	28879 / 1/2										
	28881 / 9/16										
	28885 / 5/8										
	28891 / 3/4										
	28897 / 7/8										
	28903 / 1										
	28905 / 1 1/8										
	28909 / 1 1/4										
	28911 / 1 3/8										
	28913 / 1 1/2										
28917 / 1 3/4											
28921 / 2											
28928 / 2 1/4											
28929 / 2 1/2											
28930 / 3											

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. NA	CGI No. CGI-SNF-D-93-2-C1-056	Page 29 of 33
Title: CONDUIT FASTENERS		

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
Pan Head Phillips Drive Machine Screws - Size 10 - 24 Part Number / Nominal Length, Inches	28936 / 1/4	X		IN							
	28942 / 5/16										
	28948 / 3/8										
	28954 / 7/16										
	28957 / 1/2										
	28963 / 5/8										
	28969 / 3/4										
	28975 / 7/8										
	28981 / 1										
	28987 / 1 1/4										
Pan Head Phillips Drive Machine Screws - Size 10 - 32 Part Number / Nominal Length, Inches	28991 / 1 1/2	X		IN							
	28995 / 1 3/4										
	28999 / 2										
	29003 / 2 1/4										
	29007 / 2 1/2										
	29011 / 2 3/4										
	29015 / 3										
	29055 / 5/8										
	29073 / 1										
All Size Nylon Insert Lock Nuts - Manufacturer	Fastenal	X		IN							
Nylon Insert Lock Nuts - Part Number - Size - Thread	37010 6 - 32 37012 8 - 32 37014 10 - 24	X		IN							

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-93-2-C1-056</u>	Page 30 of 33
Title: <u>CONDUIT FASTENERS</u>		

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
All Size Hex Full Nuts - Manufacturer	Fastenal	X		IN							
Hex Full Nuts - Part Number - Size - Thread	36020 6 - 32 36024 8 - 32 36028 10 - 24	X		IN							
All Size SAE Flat Washers - Manufacturer	Fastenal	X		IN							
SAE Flat Washers - Part Number - Size - Nominal OD/ID, Inches	33070 - 6 - 3/8 / 5/32 33072 - 8 - 7/16 / 3/16 33074 - 10 - 1/2 / 7/32	X		IN							
All Size Medium Split Lock Washers - Manufacturer	Fastenal	X		IN							
Medium Split Lock Washers - Part Number - Size	33610 - 6 33612 - 8 33614 - 10	X		IN							
Material Identification:											
Fender, Flat, and Lock Washers	Zinc Coated Steel	X		IN, T							
Hex Nuts	Zinc Coated Steel	X		IN, T							
Hex Head Bolts	Zinc Coated Steel	X		IN, T							

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. NA	CGI No. CGI-SNF-D-93-2-C1-056	Page 31 of 33
Title: CONDUIT FASTENERS		

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
Fasteners, PS 146 Continuous Threaded Rod. PS RS Clamping Nut with Regular Spring.	Steel	X		IN, T							
	Steel										
	Zinc Plated Steel	X		IN, T							
Pan Head Phillips Drive Machine Screws	Zinc Plated Steel	X		IN, T							
Nylon Insert Lock Nuts	Zinc Plated Steel	X		IN, T							
All Size Hex Full Nuts	Zinc Plated Steel	X		IN, T							
All Size SAE Flat Washers	Zinc Plated Steel	X		IN, T							
All Size Medium Split Lock Washers	Zinc Plated Steel	X		IN, T							
Seismic Condition C	Maintain Critical Function Before, During, and After Seismic Event. Seismic verification of the installed conduit system will be provided by analysis.		X	Analysis							

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. <u>NA</u>	CGI No. <u>CGI-SNF-D-93-2-C1-056</u>	Page 32 of 33
Title: CONDUIT FASTENERS		

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 _____	BUYER VERIFICATION
Testing Agency QA Engineer: _____ Date _____	Design Authority: _____ Date _____
	QA Engineer: _____ Date _____

Commercial Grade Item Upgrade Dedication Form		SNF-5102 Rev. 1
ECN No. NA	CGI No. CGI-SNF-D-93-2-C1-056	Page 33 of 33
Title: CONDUIT FASTENERS		

SECTION 6 CONTACTS / PHONE NUMBERS	
Name	Phone
Design Authority	()
QA	()
QC	()
Cog - Engineer	()
CGI Engineer	()
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	
☐ Other:	
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]