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8G.120

10CFR50.54(f)
JSP-062-94
February 9, 1994

Docket No. 50-461

Mr. S. A. Varga
Nuclear Regulatory Commission
Acting Associate Director for Projects
Office of Nuclear Reactor Regulation
Washington, D. C. 20555-0001

Subject: Illinois Power's Response to the Nuclear Regulatory Commission's Request for Additional Information Regarding Generic Letter 92-08, "Thermo-Lag 330-1 Fire Barriers"

Dear Mr. Varga:

On December 27, 1993, Illinois Power (IP) received a letter of request for additional information regarding Generic Letter (GL) 92-08. In response to that request, IP has reevaluated the applications of Thermo-Lag 330-1 fire barrier material at Clinton Power Station (CPS). This letter provides the results of this evaluation as well as the information requested in the letter. This letter supersedes our previous response to GL 92-08 (letter U-602124) dated April 16, 1993, and Bulletin 92-01, Supplement 1, "Failure of Thermo-Lag 330 Fire Barrier System to Perform Its Specified Fire Endurance Function" (letter U-602047) dated September 29, 1992.

IP has recognized the importance of this issue since it was initially identified. Due to the scope of the issue, IP is participating in the Nuclear Management and Resources Council (NUMARC) requalification effort. It was IP's intent to resolve our site-specific issues once the results of the NUMARC testing program were provided for use. The current scope of NUMARC's testing is limited to Thermo-Lag fire barrier protecting cables routed in conduits and cable trays. Since ten of the 11 installations (an installation is a location within a fire zone where Thermo-Lag fire barrier is utilized to protect a safe shutdown component) at CPS contain Thermo-Lag to protect cables routed in conduit or cable trays, IP expects that the NUMARC test results can be applied to the Thermo-Lag fire barrier installations at CPS. However, due to the scope of the NUMARC program and the results of the phase 1 tests, IP has decided to pursue a resolution to the Thermo-Lag fire barrier concerns without solely relying on the results of the NUMARC testing program. IP will continue to monitor the industry efforts to resolve the issue. If test results of other utilities or NUMARC provide other options, IP may exercise those options.

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Each installation at CPS was evaluated using the Probabilistic Risk Assessment (PRA) process. Although the fire PRA being performed in accordance with our commitments to GL 88-20, Supplement 4, "Individual Plant Examination of External Events (IPEEE) for Severe Accident Vulnerabilities," is not complete, it was conservatively employed to perform a detailed evaluation of the risk effects of the various Thermo-Lag installations (see Attachment 5). These results are conservative in that more detailed modeling, including the benefits of fire suppression and operator action, would likely reduce the risk from any of the scenarios. The PRA evaluation considered the benefit of Thermo-Lag on core damage frequency, containment isolation, containment heat removal, and containment hydrogen control functions. For safety-significant Thermo-Lag installations, IP also considered the other installed fire protection features and the fire loading indicated by the calculated equivalent fire severity values provided in Appendix E of the CPS Updated Safety Analysis Report to determine the corrective actions necessary to restore the installations to the appropriate levels of protection.

Of the ten fire zones which contain 11 installations of Thermo-Lag, IP has determined that modifications are required in four of the fire zones to ensure that the safe shutdown components are protected to a level that meets IP's commitments to 10 CFR 50, Appendix R, requirements. For the remaining six fire zones, IP will perform safety evaluations in accordance with 10CFR50.59 to accept, where applicable, the Thermo-Lag installations. Compensatory hourly firewatch patrols will continue to ensure safe shutdown capability is maintained until appropriate corrective actions are completed. These compensatory measures remain consistent with the requirements of CPS procedure 1893.01, "Fire Protection Impairment Reporting," and the CPS Technical Specifications.

The paragraphs that follow provide a description of the 11 installations of Thermo-Lag at CPS. Please note that there are two installations in fire zone CB-1f.

1) Fire Zone (also Fire Area) CB-4

This fire zone is the Division 1 cable spreading room located in the Control Building on the 781' elevation. The PRA evaluation indicates that the one-hour rated fire barrier protecting the NSPS Division 2 120V Bus B cables in conduits provides a significant safety benefit to the equipment protected.

IP will design and install a hardware modification in this fire zone prior to or during Refueling Outage No. 6.

2) Fire Zone CB-5a

This fire zone is the Division 3 Switch Gear room located in the Control Building on the 781' elevation. The PRA evaluation indicates that the three-hour rated Thermo-Lag fire barrier which protects the Division 1 power cables in conduits provides significant

safety benefit for the equipment protected. The protected power supplies to NSPS 120V Bus A provide initiation and control power for the Division 1 Emergency Core Cooling System equipment.

IP will design and install a hardware modification in this fire zone prior to or during Refueling Outage No. 6.

3) Fire Zone CB-6d

This fire zone is the cable chase located in the corridor of the Control Building on the 800' elevation. The PRA evaluation indicates that the three-hour rated Thermo-Lag fire barrier protecting the Division 1 4160 volt power supply cables in conduits provides significant safety benefit for the equipment protected.

IP will design and install a hardware modification in this fire zone prior to or during Refueling Outage No. 6.

4) Fire Zone CB-1g

This fire zone is the Insulator's Area located on the 781' elevation of the Control Building. The Thermo-Lag installed in this area protects the Division 2 reactor water level instrumentation cables in a conduit. The PRA evaluation indicates that the three-hour Thermo-Lag fire barrier which protects this conduit has an insignificant impact on core damage frequency. It does, however, provide protection to the containment isolation capability. This fire zone, therefore, was determined to provide significant safety benefit for the equipment protected.

IP will design and install a hardware modification in this fire zone prior to or during Refueling Outage No. 7.

5) Fire Zone CB-1f (two installations)

This fire zone is the 762' elevation of the Control Building. The PRA evaluation indicates that the safety benefit provided by the two, three-hour rated Thermo-Lag fire barrier installations which protect the Division 2 power, control, and instrumentation cables in cable trays to provide a fire barrier between Division 1 and 2 safe shutdown cables in this fire zone is insignificant.

In addition to the lack of safety-significance of the Thermo-Lag in this area, there are several features associated with this fire zone that make it unlikely that a fire would adversely affect the ability to achieve and maintain safe shutdown in the event of a fire. First, the large volume of this fire zone and the use of solid cable tray bottoms and Institute of Electrical and Electronics Engineers (IEEE) 383-rated cables reduce the probability of an exposure fire affecting the cables due to plume, radiant or hot gas layer effects. Second, the calculated equivalent fire severity in this zone is 36 minutes, which is well below the fire rating of the Thermo-Lag in this area. Finally, this fire zone contains an ionization fire detection system, and portable extinguishers and hose stations are available for manual fire fighting.

IP intends to perform a safety evaluation in accordance with 10CFR50.59 by December 31, 1994, to accept the two Thermo-Lag fire barriers as-is.

6) Fire Zone F-1p

This fire zone consists of the 755' and 781' elevations of the Fuel Building. There are no cables protected by Thermo-Lag in this fire zone. The Thermo-Lag protects a pipe penetration through a three-hour rated fire barrier. Since none of the CPS Individual Plant Evaluation (IPE) basic events were affected by a failure of this penetration seal, no impact on core damage frequency or containment degradation was identified. The IPE model of plant equipment included all equipment considered important to plant safety.

In addition to the lack of safety significance of the Thermo-Lag in this area, several features associated with this fire zone make it unlikely that a fire would adversely affect the ability to achieve and maintain safe shutdown. First, the large volume of this fire zone and the use of solid cable tray bottoms and IEEE 383-rated cables reduce the probability of an exposure fire affecting the penetrations due to plume, radiant or hot gas layer effects. Second, the calculated equivalent fire severity in this fire zone is 17 minutes, which is well below the fire rating of the Thermo-Lag in this area. Finally, this fire zone contains an ionization fire detection system, and portable fire extinguishers and hose stations are available for manual fire fighting.

IP intends to perform a safety evaluation in accordance with 10CFR50.59 by December 31, 1994, to accept this Thermo-Lag installation as-is.

7) Fire Zone A-1a

This fire zone is the hallway on the 707' elevation of the Auxiliary Building. The PRA evaluation indicates that the safety benefit provided by the one-hour rated Thermo-Lag fire barrier which protects the Division 2 power, control, and instrumentation cables in cable trays in this fire zone is insignificant.

In addition to the lack of safety significance of the Thermo-Lag in this area, several features associated with this fire zone make it unlikely that a fire would adversely affect the ability to achieve and maintain safe shutdown. First, the large volume and high ceiling of this fire zone and the use of solid cable tray bottoms and IEEE 383-rated cables reduce the probability of an exposure fire affecting the cables due to plume, radiant or hot gas layer effects. Second, the calculated fire severity in this zone is 41 minutes, which is well below the fire rating of the Thermo-Lag in this area. Finally, this fire zone contains an ionization fire detection system, an automatic wet pipe sprinkler system, and portable fire extinguishers and hose stations are available for manual fire fighting.

IP intends to perform a safety evaluation in accordance with 10CFR50.59 by December 31, 1994, to accept the Thermo-Lag fire barriers in this fire zone as-is.

8) Fire Zone CB-1e

This fire zone is the corridor on the 737' elevation and the 751' elevation mezzanine floor of the Control Building. The PRA evaluation indicates that the safety benefit provided by the one-hour Thermo-Lag fire barrier which protects the Division 2 power, control, and instrumentation cables in trays in this fire zone is insignificant.

In addition to the lack of safety significance of the Thermo-Lag in this area, several features associated with this fire zone make it unlikely that a fire would adversely affect the ability to achieve and maintain safe shutdown. First, the large volume of this fire zone, the use of solid cable tray bottoms, and IEEE 383-rated cables reduce the probability of an exposure fire affecting the cables due to plume, radiant or hot gas layer effects. Second, the calculated equivalent fire severity in this zone is 27 minutes, which is well below the fire rating of the Thermo-Lag in this area. Finally, this fire zone contains an ionization detection system, a portion of this fire zone is provided with an automatic wet pipe sprinkler system, and portable fire extinguishers and hose stations are available for manual fire fighting.

IP intends to perform a safety evaluation in accordance with 10CFR50.59 by December 31, 1994, to accept the Thermo-Lag fire barriers in this fire zone as-is.

9) Fire Zone (also Fire Area) C-2

This fire zone is the entire Containment Building except for the Drywell. The Thermo-Lag installed in this fire zone is intended to function as a fire break. Above the 803' elevation, the Division 2 cable trays are routed within six feet of the Division 1 trays which contain the Division 1 Residual Heat Removal system safe shutdown cables. However, at the point of closest proximity of the cable trays there are no Division 2 safe shutdown cables in the tray. The Division 2 safe shutdown cables enter the Division 2 trays at a location which is approximately 80 feet away from the Division 1 safe shutdown cables. The concern was that a fire affecting one of the safe shutdown divisional cables could propagate to the other safe shutdown divisional cables through the Division 2 power, control, and instrumentation trays containing non-safe shutdown cables. This concern was addressed by placing a one-hour rated Thermo-Lag fire break in the Division 2 cable trays. The PRA evaluation for this fire zone has found that the safety benefit provided by the Thermo-Lag fire break in this fire zone is insignificant.

In addition to the lack of safety significance of the Thermo-Lag in this area, several features associated with this fire zone make it unlikely a fire would adversely affect the ability to achieve and maintain safe shutdown. First, the large volume and high ceiling of this fire zone, the use of solid cable tray bottoms, and IEEE 383-rated cables reduce the probability of an exposure fire affecting the cables due to plume, radiant or hot gas layer effects. Second, the calculated equivalent fire severity in this zone is 15 minutes, which is well below the fire rating of the Thermo-Lag in this area. Finally, the three cable trays provided with the Thermo-Lag fire break contain linear thermal detection, and portable fire extinguishers and hose stations are available for manual fire fighting in this fire zone.

IP intends to perform a safety evaluation in accordance with 10CFR50.59 by December 31, 1994, to accept this Thermo-Lag installation as-is.

10) Fire Zone (also Fire Area) D-8

This fire zone is the Division 1 diesel-generator ventilation fan room and an intake area located on the 762' elevation of the Diesel Generator Building. The PRA evaluation indicates that the safety benefit provided by the three-hour rated Thermo-Lag fire barrier protecting the Division 2 diesel-generator main power feed cables in conduits is insignificant.

In addition to the lack of safety significance of the Thermo-Lag in this area, several features associated with this fire zone make it unlikely that a fire would adversely affect the ability to achieve and maintain safe shutdown. First, the large volume of this fire zone and the use of rigid steel conduit and IEEE 383-rated cables reduce the probability of an exposure fire affecting the cables due to plume, radiant or hot gas layer effects. Second, the calculated equivalent fire severity in this fire zone is eight minutes, which is well below the fire rating of the Thermo-Lag in this area. Finally, thermal detectors are provided in the area of the Division 2 power cables, and portable fire extinguishers and manual hose stations are available for manual fire fighting.

IP intends to perform a safety evaluation in accordance with 10CFR50.59 by December 31, 1994, to accept the Thermo-Lag installation in this fire zone as-is.

Five attachments to this letter provide detailed information corresponding to the requests made in your letter. Below is an explanation of the attachments:

Attachment 1 - Affidavit

This attachment is the affidavit required when information is provided per 10CFR50.54(f).

Attachment 2 - Requested Information

This attachment is the additional information requested in your letter. It is organized similar to your request.

Attachment 3 - Thermo-Lag Matrix

Attachment 3 is a matrix designed to provide detailed information regarding the Thermo-Lag installed at CPS. This attachment supports information provided in Attachment 2.

Attachment 4 - Cables Protected by Thermo-Lag

This attachment is a matrix of cables protected by Thermo-Lag. It provides specific information regarding the cables discussed in this letter.

Attachment 5 - PRA Methodology

This attachment explains IP's approach to incorporate the PRA process in evaluating the safety benefit provided by Thermo-Lag.

Sincerely yours,

J. S. Perry
Senior Vice President

WTD/csm

Attachments

cc: NRC Clinton Licensing Project Manager
NRC Resident Inspector, V-690
NRC Region III, Regional Administrator
Illinois Department of Nuclear Safety
Nuclear Management and Resources Council, Attn: Alex Marion

Attachment 1
to U-602250

J. S. Perry, being first duly sworn, deposes and says that he is the Senior Vice President of the Nuclear Program at Illinois Power; that the letter which responds to the Nuclear Regulatory Commission's request for additional information regarding Generic Letter 92-08, "Thermo-Lag 330-1 Fire Barriers," has been prepared under his supervision and direction; that he knows the contents thereof; and that to the best of his knowledge and belief said letter and the facts contained therein are true and correct.

Date: This 9 day of February, 1994

Signed: _____
J. S. Perry

STATE OF ILLINOIS

DeWitt COUNTY

Subscribed and sworn to before me this 9th day of February, 1994.

_____
(Notary Public)

"OFFICIAL SEAL"
Joseph V. Sipek
Notary Public, State of Illinois
My Commission Expires 11/24/97

Requested Information

I. Thermo-Lag Fire Barrier Configurations and Amounts

B. Required Information

1. The purpose of the Thermo-Lag installation is identified in Attachment 3, Column 18. The explanation of abbreviations used in this column is provided in Attachment 4. The dimensions of the protected item are provided in Attachment 3, Column 13 and 14.

2. The amount of Thermo-Lag fire barrier (linear feet) is provided in Attachment 3, Column 20; the square feet is provided in Column 21. The following are totals for primary (dedicated) items only. These totals do not include Thermo-Lag installed on secondary (non-dedicated) items such as hangers, supports, thermal short conduits, and ground straps. All values are approximate.

a. Cable tray fire barriers on primary items:

one-hour - 547 linear ft.; 3334 sq. ft.
three-hour - 149 linear ft.; 661 sq. ft.

b. Conduit fire barriers on primary items:

one-hour - 112 linear ft.
three-hour - 103 linear ft.

c. Other applications (pipe sleeve in F-1p) on primary items:

one-hour - 0 sq. ft.
three-hour - 8 sq. ft.

d. Not applicable - CPS has no radiant energy heat shields.

II. Important Barrier Parameters

B. Required Information

The 24 Thermo-Lag fire barrier parameters of importance discussed in Section II.A of the letter are provided in Attachment 3. The eight cable parameters of importance discussed in Section II.2.A of the letter are provided in Attachments 3 and 4.

In cases where the need for Thermo-Lag fire barriers will be eliminated through plant modifications, or the existing Thermo-Lag fire barrier is accepted as-is, the unknown parameters will not be evaluated. In cases where IP decides to upgrade the existing configuration, the necessary parameters will be obtained through destructive examinations, vendor sources, or further research of installation documentation. If it becomes unreasonably difficult to obtain the information by the above methods, IP will make a "worst-case" assumption for the unknown parameters. Finally, IP will consider the results of the NUMARC test program and Application Guide, and may either remove parameters from or add parameters to the list of important parameters depending upon the test results and Application Guide.

III. Thermo-Lag Fire Barriers Outside the Scope of the NUMARC Prog[illegible]

B. Required Information

1. Ten of the 11 installations at CPS where Thermo-Lag is installed are for electrical raceways, conduits, and cable trays. Since NUMARC's focus is on electrical raceway Thermo-Lag fire barriers, IP expects that when the NUMARC testing program is completed, IP would be able to assess the extent of applicability of the NUMARC tests to the ten installations at CPS. If the tests are satisfactory on the basis of temperatures recorded during the tests as provided for in the NRC draft test acceptance criteria, IP believes that the test results can be applied to the CPS Thermo-Lag installations. Performance parameters, such as the barrier geometry and cable fill percentage, will be evaluated. Until NUMARC's tests are completed, the Application Guide is issued and the CPS applicability evaluation is made, IP cannot state which of the CPS installations are bounded by the NUMARC tests.

2. IP's approach is to use the Probabilistic Risk Assessment (PRA) evaluations to determine the significant safety benefit of the installations and prioritize corrective actions accordingly. Installed fire protection features and the cost-benefit of making hardware modifications will be considerations in determining corrective actions. No plant-specific testing is being considered. In the event that a hardware modification is necessary and an applicable industry test is not available, IP plans to eliminate the need for Thermo-Lag by re-routing the cable or by using other conventional fire barriers.

3. A plant-specific fire endurance test program is not applicable. See item 2 above.

IV. Ampacity Derating

B. Required Information

Ten of the 11 CPS Thermo-Lag installations involve cables. Of these, one installation has no power cables. Ampacity derating is an issue that applies only to cable raceways containing power cables. For the nine installations which involve power cables, IP will participate in NUMARC's ampacity derating testing.

Ampacity derating factors determined for upgraded configurations can be conservatively applied to baseline configurations. The NUMARC program for ampacity derating evaluation contains the following elements.

For upgraded one-hour cable trays and conduits, NUMARC will be discussing with the NRC the generic applicability of ampacity derating factors derived by Texas Utilities Electric Company (TUEC) using the methodology of IEEE P848, Draft 11, with some modifications. The IEEE P848 test methodology has been extensively discussed with the NRC by NUMARC and TUEC. However, the NRC acceptance of the methodology is still pending. The NRC has informed NUMARC that they will issue a request for further information to TUEC regarding the submitted ampacity test report. The TUEC testing provided preliminary ampacity derating factors of 32% for cable trays and 11% for conduits which are within the range of previously reported values.

NUMARC will conduct ampacity testing of upgraded three-hour barriers to the requirements of IEEE P848, following determination of the appropriate fire barrier upgrades for the three-hour installations and agreement with the NRC on ampacity test methodology. It is expected that NUMARC's testing will be conducted in the second quarter of 1994, at the earliest. To the extent that successful upgrades using alternative materials are identified, ampacity testing of these upgrades will be considered as well.

The IEEE P848 approach provides for testing of a single cable tray, and small and large conduits. The limiting conduit derating factor (of the two sizes tested) is applied to the range of conduit sizes, cable fills, etc. For cable trays, the single cable tray derating factor is applied to all sizes of cable trays, cable fills, etc. Thus, ampacity testing can be performed generically with broad applicability, unlike fire testing where many performance parameters must be considered. The NUMARC program is expected to provide

ampacity derating factors for one- and three-hour barriers, for cable trays and conduits. Assuming NRC agreement with the IEEE P848 approach, few installations are expected to fall outside the generic scope.

Upon NUMARC's issuance of the ampacity derating factors, IP will incorporate the applicable values into the electrical design calculations.

V. Alternatives

B. Required Information

The following six alternatives are being considered for each CPS Thermo-Lag installation.

Four are Hardware Modification Options:

- Upgrade with additional Thermo-Lag material subsequent to successful results from NUMARC tests.
- Remove and replace Thermo-Lag with conventional building materials such as gypsum board, concrete blocks, or reinforced concrete.
- Relocate safe shutdown cables so that Thermo-Lag is not required.
- Qualify three-hour barrier to a one-hour rating by adding sprinklers and detection equipment.

Two are Engineering Evaluation/Exemption Request Options:

- Re-evaluate the fire protection Safe Shutdown analysis to eliminate or reduce the need for the fire barrier.
- Use the PRA evaluation process and existing fire loading as bases for accepting the existing condition.

VI. Schedules

B. Required Information

The cover letter which transmits this attachment provides the corrective action schedule for each of the Thermo-Lag installations at CPS.

VII. Sources and Correctness of Information

The sources used for obtaining the data for Attachments 3 and 5 are design documents, construction documents and walkdowns. In some cases, a worst-case assumption was made. The sources are available for review on-site.

Thermo-Lag Matrix

This attachment provides detailed information concerning the Thermo-Lag installed at Clinton Power Station. Below is an explanation of the terms and symbols used in the matrix.

Definitions

°Verifier -	an individual of sufficient knowledge and/or training to perform an independent validation of the information/data using the same or different sources.
°[illegible] -	as used for this document, is the Thermo-Lag material enclosing the conduit(s), cable tray(s) or cable. It does not include supports, hangers or other such Thermo-Lag-wrapped components.
°Asterisk - in column	to confirm the configuration would require Thermo-Lag dismantling or barrier breech.
°Question - Mark in column	due to the nature of the installation and material characteristics, this item would be indeterminate even upon Thermo-Lag dismantling or barrier breech.
°n/a -	not applicable for the particular configuration or component.
°Y -	Yes
°N -	No

Parameters

For all parameters, the entry is only applicable to raceways covered by Thermo-Lag. All Thermo-Lag-wrapped items are individually identified in the matrix, except for hangers and supports.

1) CPS Fire Zone - Subdivision of a fire area in which the suppression systems, spatial separation, and barriers are combined to combat particular types of fires and limit their potential spread.

2) Identification Number of Thermo-Lag-Coated Item - The individual identification number of the cable tray(s), conduit(s), junction box, pipe, wire, or blank if not numbered. For some fire zones, items are duplicated due to changes in the configuration of the item or of the Thermo-Lag barrier.

3) Type of Item - Common description of the device which has been wrapped in Thermo-Lag i.e., cable tray, conduit, ground strap, pipe, pull box, penetration sleeve, etc.

4) Horizontal - "Y" if the item is horizontal for at least 6" and "N" otherwise.

5) Vertical - "Y" if the item is vertical for at least 6" and "N" otherwise.

6) Radial Bend - "Y" if the item has a partial or full bend from horizontal to vertical, otherwise "N".

7) Lateral Bend - "Y" if the item has a bend in a horizontal plane, otherwise "N."

8) Offset from Straight - "Y" if the item has a jog in it (horizontal or vertical), otherwise "N."

9) Tee-Section - (Applicable for cable trays only.) "Y" if the tray section connects with another tray section perpendicular to it, "N" if the tray section does not, and "n/a" if the item is not a cable tray.

10) Material of Item - "C" for copper, "F" for flex conduit, "A" for aluminum, "S" for steel.

11) Solid or Open (ladder) - (Applicable for cable trays only.) "S" if the tray is solid-backed, "O" if ladder-backed, or "n/a" if the item is not a cable tray.

12) Continuous Tray Covers - (Applicable for cable trays only.) "Y" if the cable tray design specified a 100% tray cover, "N" if partial or none, and "n/a" if the item is not a cable tray.

13) Width or Diameter (inches) - The width of the tray, diameter of conduit, width of (pull, junction, etc.) box, or size of cable outside of raceway.

14) Depth (inches) - The depth of the tray or (pull, junction, etc.) box, or "n/a" otherwise.

15) Air Drop - (Applicable for raceways only.) Locations where a cable is unsupported for approximately ten inches or more and unenclosed by a raceway. "Y" if an air drop exists, "N" if not, and "n/a" if it is an item such as pipe, ground strap, or light fixture.

16) Cable Fill - Percentage of raceway area occupied by cable. Values are identified only for dedicated cable trays and conduits.

17) Intended Rating of the Thermo-Lag (hours) - "1" for one-hour rating or "3" for three-hour rating.

18) Purpose of Thermo-Lag -

a1) rated fire barrier to satisfy IP's commitments to III.G.2 of 10CFR50, App. R

a2) radiant energy heat shield inside inerted containment to satisfy IP's commitments to III.G.2 of 10CFR50, App. R

b1) rated fire barrier to justify an approved deviation from IP's commitments to full area fire detection requirements of III.G.2 of 10CFR50, App. R

b2) rated fire barrier to justify an approved deviation from IP's commitments to full area fire suppression requirement of III.G.2 of 10CFR50, App. R

c) barrier to achieve physical independence of electrical systems per NRC Reg. Guide 1.75

d) rated fire barrier to meet a condition of the CPS operating license

e1) rated fire barrier to satisfy a CPS licensing commitment

e2) fire break to satisfy a CPS licensing commitment

19) Dedicated Item or Thermal Short - "D" (dedicated) if the Thermo-Lag wrap is installed to protect the cables inside the item or provide a rated barrier (original identified scope); "TS" (thermal short) if a secondary item is Thermo-Lag wrapped because it contacts, supports, or interfaces with a primary item (field-added scope).

20) Linear Feet of Thermo-Lag (ft) - Estimation of the total linear feet enclosed in Thermo-Lag for the identified item.

21) Square Feet of Thermo-Lag (sq. ft.) - (Applicable for cable trays only.) Estimation of the total surface area of Thermo-Lag for the identified item.

22) Thermo-Lag Firestop - (Applicable to raceways only.) "Y" if Thermo-Lag is used as a firestop internal to the raceway, "N" if it is not used, and "n/a" if item is not a raceway.

23) Bisco Penetration Seal - (Applicable to raceways only.) "Y" if a Bisco material firestop is internal to the item or as part of the fire barrier, "N" if it is not used, and "n/a" if item is not a raceway.

24) Base Material Application -

1C) One layer of Thermo-Lag preformed for conduit
2C) Two layers of Thermo-Lag preformed for conduit
1P) One layer of Thermo-Lag preformed panel
2P) Two layers of Thermo-Lag preformed panel
T) Trowel grade Thermo-Lag
S) Thermo-Lag spray application.

25) Baseline Min. Barrier Thickness (inches) - The minimum thickness of Thermo-Lag material installed to obtain the intended rating.

26) Stress-Skin Inside or Outside - "I" for inside, "O" for outside, "IO" for both orientations of the stress-skin, and "n/a" if stress-skin was not used.

27) Stress-Skin Ties - "Y" if stress-skin ties (ties which hold the panels together from skin to skin) were installed, "N" if no stress-skin ties exist, and "n/a" if stress-skin was not used.

28) Ribs Inside, Outside, or Pounded Out - "I" for the pre formed panel ribs being installed inside, "O" for outside, "IO" for both (2 panel-3 hour only), "P" if the ribs were pounded out, and "n/a."

29) Ribs Along or Across Raceway - This is an unconfirmable item, so for most cases an asterisk is entered except for conduits and then n/a may be entered.

30) Stainless Steel Bands - "Y" if bands are used or "N" if not used.

31) Tie Wires - Enter "Y" if tie wires are used or "N" if not used.

32) Max. Band to Joint Spacing (inches) - The maximum distance bands or tie wires are located from joints; "n/a" if no joints exist.

33) Max. Band or Tie Spacing (inches) - The maximum spacing between bands and/or tie wires or "n/a" if bands or ties were not used.

34) Internal Bands or Ties - "Y" if internal bands or ties exist, "N" if the bands or ties are not internal and "n/a" if bands or ties were not used.

35) Butt Joints - "Y" if the preformed Thermo-Lag was installed using butt jointed (end to end) installation configuration, if not "N", and "n/a" for non-preformed types of installation.

36) Grooved and Scored Joints - "Y" if there exist grooved and scored joints for preformed panel installation, "N" if not, or "n/a" for non-preformed types of installation.

37) Dry-Fit/Pre-Buttered/Post-Buttered Joints - "D" for dry-fitted (without trowel-grade Thermo-Lag) panel joints, "R" for panel joints pre-buttered with trowel-grade Thermo-Lag, "O" for panel joints filled in with trowel-grade Thermo-Lag after assembly (post-buttered), and "E" for either pre-buttered or post-buttered (but not dry-fit) panel joints. Dry-fit installation was not permitted at CPS; installation procedures allowed either pre- or post-buttering indiscriminately.

38) Max. Joint Gap Width (inches) - The largest acceptable gap between panels at a joint. At CPS this is not a defined limit.

39) Top Coat - "Y" if a top coat (sprayed or brushed on film) was applied over the Thermo-Lag final configuration, "N" if topcoat was not used.

40) Non-T-Lag Material Inside Raceway -

K = Kellem grip
SF = Silicone Foam
SC = Silicone Caulk
CF = Ceramic Fiber
SE = Silicone Elastomer

41) Concrete Interface (wall, floor, ceiling) - "Y" if the item penetrates a wall, floor or ceiling, and "N" if not.

42) Max. Wall Anchor Spacing (inches) - The maximum wall anchor spacing for holding the Thermo-Lag; "n/a" if no wall anchoring.

43) Edge Guards - "Y" if edge guards are installed on the corners of the preformed panel configuration, "N" if not used, and "n/a" if the installation does not have preformed panels.

44) Stress-Skin Over Joints - "Y" if stress-skin was installed over preformed Thermo-Lag joints, "N" if it was not, or "n/a" for non-preformed types of installation. Installation procedures did not require or allow this at CPS.

45) Additional Trowel Material - "Y" if trowel-grade Thermo-Lag was applied over the preformed Thermo-Lag or "N" if it was not. Installation procedures did not require or allow this at CPS.

46) Max. Unsupported Spans (inches) - The maximum span of unsupported Thermo-Lag (distance between inner bands or side-to-side of tray, whichever is larger) for the particular item or "n/a" for non-preformed types of installation.

Thermo-Lag Matrix

Item Parameters (columns 1–16) / **Thermo-Lag (T-L) Fire Barrier Parameters** (columns 17–46)

	CPS Fire Zone	Identification Number of Thermo-Lag coated Item	Type of Item	Horizontal	Vertical	Radial Bend	Lateral Bend	Offset from Straight	Tee-Section	Material of Item	Solid or Open (ladder)	Continuous Tray Covers	Width or Diameter (inches)	Depth (inches)	Air Drop	Cable Fill
NRC 50.54(f) Letter Enclosure Item Number			I.B.1,2,3,5	II.A.1	II.A.1	II.A.1	II.A.3	II.A.1	II.A.5	II.A.6	II.A.4		I.B.1	I.B.1	II.A.8	4 on page 3
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	A-1a	P2E	cable tray	Y	N	N	Y	Y	N	S	S	N	36	6	N	13.5%
2		C61445	conduit	Y	N	Y	N	N	n/a	S	n/a	n/a	1	n/a	N	n/a
3		ground strap		N	Y	N	N	N	n/a	C	n/a	n/a	500 MCM	n/a	N	n/a
4		ground strap		N	Y	N	N	N	n/a	C	n/a	n/a	500 MCM	n/a	N	n/a
5		C2E	cable tray	Y	N	N	Y	Y	N	S	S	N	36	6	N	4.5%
6		C62154	conduit	Y	N	Y	N	N	n/a	F	n/a	n/a	2.5	n/a	N	n/a
7		C6132	conduit	Y	N	N	N	N	n/a	F	n/a	n/a	2	n/a	N	n/a
8		C61446	conduit	N	Y	N	N	N	n/a	S	n/a	n/a	2	n/a	N	n/a
9		C6359	conduit	Y	N	N	N	N	n/a	F	n/a	n/a	3	n/a	N	n/a
10		C6303	conduit	Y	N	N	N	N	n/a	S	n/a	n/a	3	n/a	N	n/a
11		1FP405A	pipe	Y	N	N	N	N	n/a	S	n/a	n/a	3	n/a	N	n/a
12		1FP505A	pipe	Y	N	N	N	N	n/a	S	n/a	n/a	2.5	n/a	N	n/a
13		ground strap		N	Y	Y	N	N	n/a	C	n/a	n/a	500 MCM	n/a	N	n/a
14		ground strap		N	Y	Y	N	N	n/a	C	n/a	n/a	500 MCM	n/a	N	n/a
15		I2E	cable tray	Y	N	N	N	N	N	S	S	Y	24	6	N	0.5%
16		C61577	conduit	Y	N	N	N	N	n/a	S	n/a	n/a	1	n/a	N	n/a
17		ground strap		N	Y	Y	N	N	n/a	C	n/a	n/a	500 MCM	n/a	N	n/a
18	C-2	P2E	cable tray	Y	N	N	N	N	N	S	S	N	24	6	N	8.8%
19		C74240	conduit	Y	Y	Y	N	N	n/a	S	n/a	n/a	3	n/a	N	n/a
20		C74241	conduit	Y	Y	Y	N	N	n/a	S	n/a	n/a	3	n/a	N	n/a
21		C74242	conduit	Y	Y	Y	N	N	n/a	S	n/a	n/a	3	n/a	N	n/a
22		C74243	conduit	Y	Y	Y	N	N	n/a	S	n/a	n/a	3	n/a	N	n/a
23		1REC6AA	pipe	Y	N	N	N	N	n/a	S	n/a	n/a	2	n/a	N	n/a

	Intended Rating of Thermo-Lag (hours)	Purpose of Thermo-Lag	Dedicated Item or Thermal Short	Linear Feet of Thermo-Lag (ft)	Square Feet of Thermo-Lag (sq ft)	Thermo-Lag Firestop	Bisco Penetration Seal	Base Material Application	Baseline Min. barrier thickness (inches)	Stress-skin inside or outside	Stress-skin Ties	Ribs inside, outside, or pounded out	Ribs along or across raceway	Stainless Steel Bands	Tie Wires
NRC 50.54(f) Letter Enclosure Item Number	I.B.1	I.B.1	II.A.7	I.B.2	I.B.2			II.A.10	II.A.9	II.A.13	II.A.15		II.A.11	II.A.19	II.A.19
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	1	a1	D	104.5	731.5	Y	N	1P	0.5*	I*	*	*	*	Y	Y
2			TS	2.0	n/a	N	Y	T	0.5*	n/a	n/a	n/a	n/a	N	N
3			TS	2.0	n/a	N	n/a	1C	0.5*	I*	*	n/a	n/a	N	Y
4			TS	1.5	n/a	N	n/a	T	0.5*	n/a	n/a	n/a	n/a	N	N
5			D	104.5	731.5	Y	N	1P	0.5*	I*	*	*	*	Y	Y
6			TS	1.5	n/a	N	Y	1C	0.5*	I*	*	n/a	n/a	N	Y
7			TS	1.5	n/a	N	Y	T	0.5*	n/a	n/a	n/a	n/a	N	N
8			TS	1.5	n/a	N	Y	1C	0.5*	I*	*	n/a	n/a	N	Y
9			TS	1.5	n/a	N	Y	1C	0.5*	I*	*	n/a	n/a	N	Y
10			TS	6.5	n/a	N	N	1C	0.5*	I*	*	n/a	n/a	N	Y
11			TS	2.0	n/a	N	n/a	1C,1P	0.5*	I*	*	*	*	Y	N
12			TS	1.5	n/a	N	n/a	1C,1P	0.5*	I*	*	*	*	Y	N
13			TS	3.0	n/a	N	n/a	T	0.5*	n/a	n/a	n/a	n/a	N	N
14			TS	1.5	n/a	N	n/a	T	0.5*	n/a	n/a	n/a	n/a	N	N
15		e2	D	22.0	110	Y	N	1P	0.5*	I*	*	*	*	Y	Y
16			TS	1.0	n/a	N	N	1C	0.5*	I*	*	n/a	n/a	N	Y
17			TS	3.0	n/a	N	n/a	T	0.5*	n/a	n/a	n/a	n/a	N	N
18	1	e2	D	22.7	113.5	Y	N	1P	0.5*	I*	*	*	*	Y	Y
19			TS	4.0	n/a	N	Y	1C,1P,T	0.5*	I*	*	*	*	Y	Y
20			TS	4.0	n/a	N	Y	1C,1P,T	0.5*	I*	*	*	*	Y	Y
21			TS	4.0	n/a	N	Y	1C,1P,T	0.5*	I*	*	*	*	Y	*
22			TS	4.0	n/a	N	Y	1C,1P,T	0.5*	I*	*	*	*	Y	*
23			TS	3.0	n/a	N	n/a	1C	0.5*	I*	*	n/a	n/a	Y	Y

	Max. Band to Joint Spacing (inches)	Max. Band or Tie Spacing (inches)	Internal Bands or Ties	Butt Joints	Grooved and Scored Joints	Dry-fit/Pre-Buttered/Post-Buttered Joints	Max. Joint Gap Width (inches)	Top Coat	Non-T-Lag Material Inside Raceway	Concrete interface (wall, floor, ceiling)	Max. Wall Anchor Spacing (inches)	Edge Guards	Stress-skin Over Joints	Additional Trowel Material	Max. Unsupported Spans (inches)
NRC 50.54(f) Letter Enclosure Item Number	II.A.21	II.A.20	II.A.22	II.A.18	II.A.18	II.A.16	II.A.17		6 on page 3	II.A		II.A.24	II.A.14	II.A.23	II.A.12
	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
1	5	11	N	Y	*	E?	?	N	none	Y	12*	N	N	N	34
2	n/a	n/a	N	n/a	n/a	E?	n/a	N	SC,CF	N	n/a	n/a	n/a	N	n/a
3	2	4	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	4
4	n/a	n/a	N	n/a	n/a	E?	n/a	N	none	N	n/a	n/a	n/a	N	n/a
5	10	12	Y	Y	*	E?	?	N	none	Y	12*	N	N	N	34
6	n/a	12	N	Y	*	E?	?	N	SC,CF	N	n/a	n/a	N	N	12
7	n/a	n/a	N	n/a	n/a	E?	n/a	N	SC,CF	N	n/a	n/a	n/a	N	n/a
8	*	n/a	N	Y	*	E?	?	N	SC,CF	N	n/a	n/a	N	N	6
9	n/a	14	[illegible]	Y	*	E?	?	N	SC,CF	N	n/a	n/a	N	N	14
10	3	8	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	8
11	3	5	N	Y	*	E?	?	N	none	N	n/a	N	N	N	5
12	n/a	5	N	Y	*	E?	?	N	none	N	n/a	N	N	N	5
13	n/a	n/a	N	n/a	n/a	E?	n/a	N	none	N	n/a	n/a	n/a	N	n/a
14	n/a	n/a	N	n/a	n/a	E?	n/a	N	none	N	n/a	n/a	n/a	N	n/a
15	5	12	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	12
16	n/a	8	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	8
17	na	n/a	N	N	n/a	E?	n/a	N	none	N	n/a	n/a	n/a	N	n/a
18	5	8	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	22
19	2	4	N	Y	*	E?	?	N	SC,CF	N	n/a	N	N	N	4
20	3	5	N	Y	*	E?	?	N	SC,CF	N	n/a	N	N	N	5
21	n/a	4	N	Y	*	E?	?	N	SC,CF	N	n/a	N	N	N	4
22	3	5	N	Y	*	E?	?	N	SC,CF	N	n/a	N	N	N	5
23	n/a	10	Y	Y	*	E?	?	N	none	N	n/a	n/a	N	N	10

Thermo-Lag Matrix

Item Parameters

NRC 50.54(f) Letter Enclosure Item Number	CPS Fire Zone	Identification Number of Thermo-Lag coated Item	Type of Item	Horizontal	Vertical	Radial Bend	Lateral Bend	Offset from Straight	Tee-Section	Material of Item	Solid or Open (ladder)	Continuous Tray Covers	Width or Diameter (inches)	Depth (inches)	Air Drop	Cable Fill
			I.B.1,2,3,5	II.A.1	II.A.1	II.A.1	II.A.3	II.A.1	II.A.5	II.A.6	II.A.4		I.B.1	I.B.1	II.A.8	4 on page 3
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
24	↓	C2E	cable tray	Y	N	N	N	N	N	S	S	N	24	6	N	18.4%
25	↓	C74615	conduit	N	Y	Y	N	N	n/a	S	n/a	n/a	1.25	n/a	N	n/a
26	↓	K2E	cable tray	Y	N	N	N	N	N	S	S	Y	24	6	N	0.8%
27	↓	C71987	conduit	N	Y	N	N	N	n/a	S	n/a	n/a	3	n/a	N	n/a
28	↓		house power conduit	Y	N	N	N	N	n/a	S	n/a	n/a	0.75	n/a	N	n/a
29	↓		house power conduit	Y	N	N	N	N	n/a	S	n/a	n/a	0.75	n/a	N	n/a
30	↓		house power conduit	Y	N	N	N	N	n/a	S	n/a	n/a	0.75	n/a	N	n/a
31	↓		house power conduit	Y	N	N	N	N	n/a	S	n/a	n/a	0.75	n/a	N	n/a
32	↓		house power conduit	Y	N	N	N	N	n/a	S	n/a	n/a	1	n/a	N	n/a
33	↓		house power conduit	Y	N	N	N	N	n/a	S	n/a	n/a	0.75	n/a	N	n/a
34	↓		house power conduit	Y	N	N	N	N	n/a	S	n/a	n/a	0.75	n/a	N	n/a
35	↓	C74172	conduit	Y	N	N	Y	Y	n/a	S	n/a	n/a	0.75	n/a	N	n/a
36	↓		house power conduit	N	Y	N	N	N	n/a	S	n/a	n/a	0.75	n/a	N	n/a
37	↓		house power conduit	N	Y	N	N	N	n/a	S	n/a	n/a	0.75	n/a	N	n/a
38	↓		house power conduit	N	Y	N	N	N	n/a	S	n/a	n/a	0.75	n/a	N	n/a
39	↓		house power conduit	N	Y	N	N	N	n/a	S	n/a	n/a	0.75	n/a	N	n/a
40	CB-1e	P2E	cable tray	Y	N	N	N	N	Y	S	S	N	36	6	N	26.9%
41		P2E	cable tray	Y	Y	Y	N	N	Y	S	S	N	24	6	N	32.6%
42		P2E	cable tray	Y	N	N	N	Y	Y	S	S	N	24	6	N	9.9%
43		C2E	cable tray	Y	N	N	Y	N	Y	S	S	N	36	6	N	36.9%
44		C2E	cable tray	Y	N	N	N	N	Y	S	S	N	24	6	N	19.5%
45		C2E	cable tray	Y	Y	Y	N	N	Y	S	S	N	24	6	N	46.6%
46		C2E	cable tray	Y	N	N	N	Y	Y	S	S	N	24	6	N	13.0%

Thermo-Lag (T-L) Fire Barrier Parameters

NRC 50.54(f) Letter Enclosure Item Number	Intended Rating of Thermo-Lag (hours)	Purpose of Thermo-Lag	Dedicated Item or Thermal Short	Linear Feet of Thermo-Lag (ft)	Square Feet of Thermo-Lag (sq. ft)	Thermo-Lag Firestop	Bisco Penetration Seal	Base Material Application	Baseline Min. barrier thickness (inches)	Stress-skin inside or outside	Stress-skin Ties	Ribs inside, outside, or pounded out	Ribs along or across raceway	Stainless Steel Bands	Tie Wires	Max. Band to Joint Spacing (inches)	Max. Band or Tie Spacing (inches)	Internal Bands or Ties	Butt Joints	Grooved and Scored Joints	Dry-fit/Pre-Buttered/Post-Buttered Joints	Max. Joint Gap Width (inches)	Top Coat	Non-T-Lag Material Inside Raceway	Concrete interface (wall, floor, ceiling)	Max. Wall Anchor Spacing (inches)	Edge Guards	Stress-skin Over Joints	Additional Trowel Material	Max. Unsupported Spans (inches)
	I.B.1	I.B.1	II.A.7	I.B.2	I.B.2			II.A.10	II.A.9	II.A.13	II.A.15		II.A.11	II.A.19	II.A.19	II.A.21	II.A.20	II.A.22	II.A.18	II.A.18	II.A.16	II.A.17		6 on page 3	II.A		II.A.24	II.A.14	II.A.23	II.A.12
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
24	↓	↓	D	22.7	113.5	Y	N	1P	0.5*	1*	*	*	*	Y	Y	4	8	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	22
25	↓	↓	TS	2.0	n/a	N	Y	*	*	*	*	*	*	*	*	*	*	*	*	*	E?	?	N	SC,CF	Y	*	n/a	N	N	*
26	↓	↓	D	22.7	113.5	Y	N	1P	0.5*	1*	*	*	*	Y	Y	3	8	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	8
27	↓	↓	TS	3.0	n/a	N	N	1C	0.5*	1*	*	n/a	n/a	Y	N	n/a	12	Y	Y	*	E?	?	N	none	N	n/a	n/a	N	N	12
28	↓	↓	TS	12.0	n/a	N	N	1P,T	0.5*	1*	*	*	*	Y	Y	6	12	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	12
29	↓	↓	TS	12.0	n/a	N	N	1P,T	0.5*	1*	*	*	*	Y	Y	6	12	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	12
30	↓	↓	TS	12.0	n/a	N	N	1P,T	0.5*	1*	*	*	*	Y	Y	6	12	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	12
31	↓	↓	TS	12.0	n/a	N	N	1P,T	0.5*	1*	*	*	*	Y	Y	6	12	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	12
32	↓	↓	TS	12.0	n/a	N	N	1P,T	0.5*	1*	*	*	*	Y	Y	6	12	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	12
33	↓	↓	TS	12.0	n/a	N	N	1P,T	0.5*	1*	*	*	*	Y	Y	6	12	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	12
34	↓	↓	TS	12.0	n/a	N	N	1P,T	0.5*	1*	*	*	*	Y	Y	6	12	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	12
35	↓	↓	TS	1.5	n/a	N	Y	1C,T	0.5*	1*	*	n/a	n/a	Y	N	1	6	N	Y	*	E?	?	N	SC,CF	N	n/a	n/a	N	N	6
36	↓	↓	TS	1.3	n/a	N	N	1C	0.5*	1*	*	n/a	n/a	Y	N	n/a	10	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	10
37	↓	↓	TS	1.3	n/a	N	N	1C	0.5*	1*	*	n/a	n/a	Y	N	n/a	10	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	10
38	↓	↓	TS	1.3	n/a	N	N	1C	0.5*	1*	*	n/a	n/a	Y	N	n/a	10	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	10
39	↓	↓	TS	1.3	n/a	N	N	1C	0.5*	1*	*	n/a	n/a	Y	N	n/a	10	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	10
40	1	b2	D	37.5	262.5	Y	N	1P	0.5*	1*	*	*	*	Y	Y	*	12	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	34
41			D	16.0	80	N	N	1P	0.5*	1*	*	*	*	Y	Y	*	12	Y	Y	*	E?	?	N	none	Y	12*	N	N	N	22
42			D	16.5	82.5	N	N	1P	0.5*	1*	*	*	*	Y	Y	*	12	Y	Y	*	E?	?	N	none	Y	12*	N	N	N	22
43			D	54.0	378	Y	N	1P	0.5*	1*	*	*	*	Y	Y	*	12	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	34
44			D	3.5	17.5	Y	N	1P	0.5*	1*	*	*	*	Y	Y	*	12	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	22
45			D	16.5	82.5	N	N	1P	0.5*	1*	*	*	*	Y	Y	*	12	Y	Y	*	E?	?	N	none	Y	12*	N	N	N	22
46			D	15.5	77.5	N	N	1P	0.5*	1*	*	*	*	Y	Y	*	12	Y	Y	*	E?	?	N	none	Y	12*	N	N	N	22

	CPS Fire Zone	NRC 50.54(f) Letter Enclosure Item Number / Identification Number of Thermo-Lag coated Item	Item Parameters: Type of Item (I.B.1,2,3,5)	Horizontal (II.A.1)	Vertical (II.A.1)	Radial Bend (II.A.1)	Lateral Bend (II.A.3)	Offset from Straight (II.A.1)	Tee-Section (II.A.5)	Material of Item (II.A.6)	Solid or Open (ladder) (II.A.4)	Continuous Tray Covers	Width or Diameter (inches) (I.B.1)	Depth (inches) (I.B.1)	Air Drop (II.A.8)	Cable Fill (4 on page 3)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
47		K2E	cable tray	Y	N	N	Y	N	Y	S	S	Y	24	6	N	1.6%
48		K2E	cable tray	Y	Y	Y	N	N	Y	S	S	Y	24	6	N	1.1%
49		K2E	cable tray	Y	N	N	N	Y	Y	S	S	Y	24	6	N	0.5%
50		C03119	conduit	Y	N	Y	Y	N	n/a	F	n/a	n/a	1	n/a	N	n/a
51		C02093	conduit	Y	N	N	N	N	n/a	S	n/a	n/a	4	n/a	N	n/a
52		1C0479	conduit	Y	N	Y	Y	N	n/a	S	n/a	n/a	5	n/a	N	n/a
53		1C0480	conduit	Y	N	Y	Y	N	n/a	S	n/a	n/a	5	n/a	N	n/a
54		1C02450	conduit	Y	N	Y	Y	N	n/a	S	n/a	n/a	4	n/a	N	n/a
55		1FP39SA	pipe	Y	N	N	N	N	n/a	S	n/a	n/a	2.5	n/a	N	n/a
56		1FP39SA	pipe	Y	N	N	N	N	n/a	S	n/a	n/a	2	n/a	N	n/a
57		1C01983	conduit	Y	N	N	Y	N	n/a	S	n/a	n/a	3	n/a	N	n/a
58		1C01984	conduit	Y	N	N	N	N	n/a	S	n/a	n/a	3	n/a	N	n/a
59		C0510	conduit	Y	N	N	N	N	n/a	S	n/a	n/a	3	n/a	N	n/a
60		1C01985	conduit	Y	N	Y	N	N	n/a	S	n/a	n/a	3	n/a	N	n/a
61		C0478	conduit	Y	N	N	N	N	n/a	S	n/a	n/a	0.5	n/a	N	n/a
62		1TEE8A	pipe	Y	N	N	N	N	n/a	S	n/a	n/a	4	n/a	N	n/a
63		1TEE7AB	pipe	N	Y	N	N	N	n/a	S	n/a	n/a	2	n/a	N	n/a
64		0WO15AA	pipe	Y	N	N	N	N	n/a	S	n/a	n/a	4	n/a	N	n/a
65		ground strap		N	Y	Y	N	N	n/a	C	n/a	n/a	500 MCM	n/a	N	n/a
66		ground strap		Y	N	N	Y	N	n/a	C	n/a	n/a	500 MCM	n/a	N	n/a
67		ground strap		Y	N	Y	Y	N	n/a	C	n/a	n/a	500 MCM	n/a	N	n/a
68		ground strap		Y	N	Y	Y	N	n/a	C	n/a	n/a	500 MCM	n/a	N	n/a
69		ground strap		N	N	Y	Y	N	n/a	C	n/a	n/a	500 MCM	n/a	N	n/a

Thermo-Lag (T-L) Fire Barrier Parameters

	Intended Rating of Thermo-Lag(hours) (I.B.1)	Purpose of Thermo-Lag (I.B.1)	Dedicated Item or Thermal Short (II.A.7)	Linear Feet of Thermo-Lag (ft) (I.B.2)	Square Feet of Thermo-Lag (sq ft) (I.B.2)	Thermo-Lag Firestop	Bisco Penetration Seal	Base Material Application (II.A.10)	Baseline Min. barrier thickness (inches) (II.A.9)	Stress-skin inside or outside (II.A.13)	Stress-skin Ties (II.A.15)	Ribs inside, outside, or pounded out	Ribs along or across raceway (II.A.11)	Stainless Steel Bands (II.A.19)	Tie Wires (II.A.19)	Max. Band to Joint Spacing (inches) (II.A.21)	Max. Band or Tie Spacing (inches) (II.A.20)	Internal Bands or Ties (II.A.22)	Butt Joints (II.A.18)	Grooved and Scored Joints (II.A.18)	Dry-fit/Pre-Buttered/Post-Buttered Joints (II.A.16)	Max. Joint Gap Width (inches) (II.A.17)	Top Coat	Non-T-Lag Material Inside Raceway (6 on page 3)	Concrete interface (wall, floor, ceiling) (II.A)	Max. Wall Anchor Spacing (inches)	Edge Guards (II.A.24)	Stress-skin Over Joints (II.A.14)	Additional Trowel Material (II.A.23)	Max. Unsupported Spans (inches) (II.A.12)
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
47			D	54.5	272.5	Y	N	1P	0.5*	I*	*	*	*	Y	Y	*	12	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	12
48			D	18.0	90	N	N	1P	0.5*	I*	*	*	*	Y	Y	*	12	Y	Y	*	E?	?	N	none	Y	12*	N	N	N	12
49			D	15.5	77.5	N	N	1P	0.5*	I*	*	*	*	Y	Y	*	12	Y	Y	*	E?	?	N	none	Y	12*	N	N	N	12
50			TS	2.0	n/a	N	Y	1C,T	0.5*	I*	*	n/a	n/a	N	Y	4	4	N	Y	*	E?	?	N	SC,CF	N	n/a	n/a	N	N	4
51			TS	2.0	n/a	N	N	2C	0.5*	I*	*	n/a	n/a	Y	Y	n/a	8	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	8
52			TS	8.0	n/a	N	N	1C	0.5*	I*	*	n/a	n/a	Y	Y	4	8	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	8
53			TS	8.0	n/a	N	N	1C,T	0.5*	I*	*	n/a	n/a	Y	Y	5	6	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	6
54			TS	3.0	n/a	N	N	1C	0.5*	I*	*	n/a	n/a	Y	N	3	6	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	6
55			TS	6.0	n/a	N	n/a	1C	0.5*	I*	*	n/a	n/a	Y	Y	n/a	8	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	8
56			TS	2.0	n/a	N	n/a	1C	0.5*	I*	*	n/a	n/a	Y	Y	n/a	4	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	4
57			TS	3.0	n/a	N	N	1C	0.5*	I*	*	n/a	n/a	Y	N	n/a	8	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	8
58			TS	8.0	n/a	N	N	2C	0.5*	I*	*	n/a	n/a	Y	Y	*	8	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	8
59			TS	3.0	n/a	N	N	1C	0.5*	I*	*	n/a	n/a	N	Y	n/a	10	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	10
60			TS	8.0	n/a	N	N	1C	0.5*	I*	*	n/a	n/a	N	Y	n/a	10	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	10
61			TS	1.0	n/a	N	N	1C	0.5*	I*	*	n/a	n/a	Y	N	n/a	6	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	6
62			TS	1.0	n/a	N	n/a	1C	0.5*	I*	*	n/a	n/a	N	Y	n/a	6	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	6
63			TS	2.0	n/a	N	n/a	1C	0.5*	I*	*	n/a	n/a	Y	N	n/a	6	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	6
64			TS	1.3	n/a	N	n/a	1P,1C	0.5*	I*	*	*	*	N	Y	*	*	*	Y	*	E?	?	N	none	N	n/a	N	N	N	*
65			TS	3.0	n/a	N	n/a	1C,T	0.5*	I*	*	n/a	n/a	Y	N	n/a	15	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	15
66			TS	4.0	n/a	N	n/a	1C,T	0.5*	I*	*	n/a	n/a	Y	Y	*	4	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	4
67			TS	2.0	n/a	N	n/a	1C,T	0.5*	I*	*	n/a	n/a	N	Y	1	4	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	4
68			TS	4.0	n/a	N	n/a	1C,T	0.5*	I*	*	n/a	n/a	Y	Y	2	6	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	6
69			TS	3.0	n/a	N	n/a	T	0.5*	n/a	n/a	n/a	n/a	N	N	n/a	n/a	N	n/a	n/a	E?	n/a	N	none	N	n/a	n/a	n/a	N	n/a

		Item Parameters																**Thermo-Lag (T-L) Fire Barrier Parameters**																														
		NRC 50.54(f) Letter Enclosure Item Number	I.B.1,2,3,5	II.A.1	II.A.1	II.A.1	II.A.3	II.A.1	II.A.5	II.A.6	II.A.4		I.B.1	I.B.1	II.A.8	4 on page 3	I.B.1	I.B.1	II.A.7	I.B.2	I.B.2			II.A.10	II.A.9	II.A.13	II.A.15		II.A.11	II.A.19	II.A.19	II.A.21	II.A.20	II.A.22	II.A.18	II.A.18	II.A.16	II.A.17		6 on page 3	II.A		II.A.24	II.A.14	II.A.23	II.A.12
	CPS Fire Zone	Identification Number of Thermo-Lag coated Item	Type of Item	Horizontal	Vertical	Radial Bend	Lateral Bend	Offset from Straight	Tee-Section	Material of Item	Solid or Open (ladder)	Continuous Tray Covers	Width or Diameter (inches)	Depth (inches)	Air Drop	Cable Fill	Intended Rating of Thermo-Lag (hours)	Purpose of Thermo-Lag	Dedicated Item or Thermal Short	Linear Feet of Thermo-Lag (ft)	Square Feet of Thermo-Lag (sq. ft)	Thermo-Lag Firestop	Bisco Penetration Seal	Base Ma[illegible] cation	Baseline Min. barrier thickness (inches)	Stress-skin inside or outside	Stress-skin Ties	Ribs inside, outside, or pounded out	Ribs along or across raceway	Stainless Steel Bands	Tie Wires	Max. Band to Joint Spacing (inches)	Max. Band or Tie Spacing (inches)	Internal Bands or Ties	Butt Joints	Grooved and Scored Joints	Dry-fit/Pre-Buttered/Post-Buttered Joints	Max. Joint Gap Width (inches)	Top Coat	Non-T-Lag Material Inside Raceway	Concrete interface (wall, floor, ceiling)	Max. Wall Anchor Spacing (inches)	Edge Guards	Stress-skin Over Joints	Additional Trowel Material	Max. Unsupported Spans (inches)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
70		ground strap		N	N	Y	Y	Y	n/a	C	n/a	n/a	500 MCM	n/a	N	n/a			TS	4.0	n/a	N	n/a	1C,T	0.5*	I*	*	n/a	n/a	N	Y	*	*	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	*
71		ground strap		N	Y	Y	N	N	n/a	C	n/a	n/a	500 MCM	n/a	N	n/a			TS	4.0	n/a	N	n/a	1C,T	0.5*	I*	*	n/a	n/a	Y	N	*	4	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	4
72		ground strap		Y	N	N	Y	N	n/a	C	n/a	n/a	500 MCM	n/a	N	n/a			TS	3.0	n/a	N	n/a	1C,T	0.5*	I*	*	n/a	n/a	N	Y	n/a	5	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	5
73		ground strap		Y	N	Y	Y	N	n/a	C	n/a	n/a	500 MCM	n/a	N	n/a			TS	5.0	n/a	N	n/a	1C,T	0.5*	I*	*	n/a	n/a	N	Y	n/a	5	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	5
74		ground strap		Y	N	Y	Y	N	n/a	C	n/a	n/a	500 MCM	n/a	N	n/a			TS	5.0	n/a	N	n/a	1C,T	0.5*	I*	*	n/a	n/a	N	Y	n/a	5	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	5
75	CB-1f	P2E	cable tray	N	Y	N	N	N	N	S	S	N	24	12	N	16.3%	3	b2	D	18.0	54	N	Y	1P	1.0*	I*O	*	*	*	Y	Y	10	12	Y	Y	*	E?	?	N	K,SE	Y	12*	N	N	N	22
76		C2E	cable tray	N	Y	N	N	N	N	S	S	N	24	12	N	23.5%			D	18.0	36	N	Y	1P	1.0*	I*O	*	*	*	Y	N	10	12	Y	Y	*	E?	?	N	K,SE	N*	12*	N	N	N	22
77		K2E	cable tray	N	Y	N	N	N	N	S	S	Y	24	12	N	1.1%			D	18.0	54	N	Y	1P	1.0*	I*O	*	*	*	Y	Y	10	12	Y	Y	*	E?	?	N	K,SE	Y	12*	N	N	N	12
78		ground strap		Y	Y	Y	N	Y	n/a	C	n/a	n/a	500 MCM	n/a	N	n/a			TS	2.0	n/a	N	n/a	1C,T	1.0*	I*O	*	n/a	n/a	Y	N	4	5	n/a	n/a	*	n/a	?	N	none	N	n/a	n/a	N	N	5
79	CB-1f	C2E	cable tray	N	Y	N	N	N	N	S	S	N	36	12	N	19.4%	3	b2	D	11.8	47.2	N	Y	1P	1.0*	I*O	*	*	*	Y	N	5	12	Y	Y	*	E?	?	N	K,SE	Y	12*	N	N	N	34
80		C2E	cable tray	Y	N	Y	Y	N	N	S	S	N	36	6	N	38.9%			D	38.5	269.5	N	N	1P	1.0*	I*O	*	*	*	Y	Y	5	12	Y	Y	*	E?	?	N	none	Y	12*	N	N	N	34
81		K2E	cable tray	N	Y	N	N	N	N	S	S	Y	24	12	N	2.1%			D	11.8	35.4	N	Y	1P	1.0*	I*O	*	*	*	Y	N	5	12	Y	Y	*	E?	?	N	K,SE	Y	12*	N	N	N	12
82		K2E	cable tray	Y	N	Y	Y	N	N	S	S	Y	24	6	N	4.3%			D	33.0	165	N	N	1P	1.0*	I*O	*	*	*	Y	Y	9	12	Y	Y	*	E?	?	N	none	Y	12*	N	N	N	12
83		11A04A	pipe	Y	Y	Y	N	N	n/a	C	n/a	n/a	3	n/a	N	n/a			TS	8.0	n/a	n/a	n/a	1C,T	1.0*	I*O	*	n/a	n/a	N	Y	4	6	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	6
84		C0610	conduit	Y	N	N	Y	N	n/a	S	n/a	n/a	1.5	n/a	N	n/a			TS	4.9	n/a	N	N	1C,1P,T	1.0*	I*O	*	*	*	Y	N	*	6	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	6
85		P1B	cable tray	Y	N	N	Y	N	N	S	S	N	36	6	N	n/a			TS	4.0	28	Y*	N*	1P	1.0*	I*O	*	*	*	Y	Y	3	6	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	34
86		ground strap		Y	N	N	N	N	n/a	C	n/a	n/a	500 MCM	n/a	N	n/a			TS	1.5	n/a	N	n/a	1C,T	1.0*	I*O	*	n/a	n/a	Y	N	n/a	6	N	Y	*	E?	?	N	none	N	n/a	n/a	N	N	6
87		ground conduit		Y	N	N	N	N	n/a	S	n/a	n/a	1	n/a	N	n/a			TS	9.0	n/a	N	N	1P	1.0*	I*O	*	*	*	Y	N	3	8	Y	Y	*	E?	?	N	none	Y	N	N	N	N	8
88	CB-1g	C03222	conduit	Y	Y	Y	Y	N	n/a	S	n/a	n/a	1.5	n/a	N	22.5%	3	b2	D	10.0	n/a	N	Y	1C,1P,T	1.0*	I*O	*	*	*	Y	N	2	12	n/a	Y	*	E?	?	N	SC,CF	Y	12	N	N	N	12
89	CB-4	C0739	conduit	Y	N	N	N	Y	n/a	S	n/a	n/a	3	n/a	N	32.7%	1	a1	D	17.3	n/a	N	N	1P	0.5*	I*	*	*	*	Y	N	*	5	n/a	Y	*	E?	?	N	none	Y	N	N	N	N	5
90		C0741	conduit	Y	N	N	N	Y	n/a	S	n/a	n/a	2.5	n/a	N	22.9%			D	17.3	n/a	N	N	1P,T	0.5*	I*	*	*	*	Y	N	*	5	n/a	Y	*	E?	?	N	none	Y	N	N	N	N	5
91		1FP155A	pipe	Y	N	N	N	N	n/a	S	n/a	n/a	8	n/a	N	n/a			TS	2.0	n/a	n/a	n/a	1C	0.5*	I*	*	n/a	n/a	Y	N	n/a	8	n/a	Y	*	E?	?	N	none	N	n/a	n/a	N	N	8
92		C02272	conduit	Y	N	Y	N	N	n/a	S	n/a	n/a	2	n/a	N	n/a			TS	1.5	n/a	N	N	1C,T	1.0*	I*	*	n/a	n/a	Y	N	4	4	n/a	Y	*	E?	?	N	none	N	n/a	n/a	N	N	4

Item Parameters

	CPS Fire Zone	Identification Number of Thermo-Lag coated Item (NP… 50.54(f) Letter Enclosure Item Number)	Type of Item (I.B.1,2,3,5)	Horizontal (II.A.1)	Vertical (II.A.1)	Radial Bend (II.A.1)	Lateral Bend (II.A.3)	Offset from Straight (II.A.1)	Tee-Section (II.A.5)	Material of Item (II.A.6)	Solid or Open (ladder) (II.A.4)	Continuous Tray Covers	Width or Diameter (inches) (I.B.1)	Depth (inches) (I.B.1)	Air Drop (II.A.8)	Cable Fill (4 on page 3)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
93	CB-5a	C0734	conduit	Y	N	N	Y	Y	n/a	S	n/a	n/a	2	n/a	N	48.3%
94		C0817	conduit	Y	N	N	Y	N	n/a	S	n/a	n/a	2	n/a	N	48.3%
95		C0735	conduit	Y	N	N	Y	Y	n/a	S	n/a	n/a	2	n/a	N	20.7%
96		C0818	conduit	Y	N	N	Y	N	n/a	S	n/a	n/a	2	n/a	N	20.7%
97		1PB0118	pull box	n/a	n/a	n/a	n/a	n/a	n/a	S	n/a	n/a	12	6	N	n/a
98		C02964	conduit	Y	N	N	N	N	n/a	S	n/a	n/a	3	n/a	N	n/a
99		C0723	conduit	Y	N	Y	N	N	n/a	S	n/a	n/a	1.5	n/a	N	n/a
100		1SA62DE	pipe	Y	N	N	N	N	n/a	S	n/a	n/a	1	n/a	N	n/a
101		house	power conduit	Y	N	N	N	N	n/a	S	n/a	n/a	2	n/a	N	n/a
102		house	power conduit	Y	N	N	N	N	n/a	S	n/a	n/a	2	n/a	N	n/a
103	CB-6d	C02999	conduit	N	Y	N	N	N	n/a	S	n/a	n/a	4	n/a	N	43.5%
104		1C03001	conduit	N	Y	N	N	N	n/a	S	n/a	n/a	2	n/a	N	48.3%
105		1C03002	conduit	N	Y	N	N	N	n/a	S	n/a	n/a	0.75	n/a	N	37.7%
106	D-8	C92118	conduit	Y	N	N	N	N	n/a	S	n/a	n/a	5	n/a	N	45.7%
107		C92120	conduit	Y	N	N	N	N	n/a	S	n/a	n/a	5	n/a	N	45.7%
108	F-1p	FB-781-01-2902	sleeve	Y	N	N	N	N	n/a	S	n/a	n/a	18	12	N	n/a

Thermo-Lag (T-L) Fire Barrier Parameters

	Intended Rating of Thermo-Lag (hours) (I.B.1)	Purpose of Thermo-Lag (I.B.1)	Dedicated Item or Thermal Short (II.A.7)	Linear Feet of Thermo-Lag (ft) (I.B.2)	Square Feet of Thermo-Lag (sq ft) (I.B.2)	Thermo-Lag Firestop	Bisco Penetration Seal	Base Material Application (II.A.10)	Baseline Min. barrier thickness (inches) (II.A.9)	Stress-skin inside or outside (II.A.13)	Stress-skin Ties (II.A.15)	Ribs inside, outside, or pounded out	Ribs along or across raceway (II.A.11)	Stainless Steel Bands (II.A.19)	Tie Wires (II.A.19)	Max. Band to Joint Spacing (inches) (II.A.21)	Max. Band or Tie Spacing (inches) (II.A.20)	Internal Bands or Ties (II.A.22)	Butt Joints (II.A.18)	Grooved and Scored Joints (II.A.18)	Dry-fit/Pre-Buttered/Post-Buttered Joints (II.A.16)	Max. Joint Gap Width (inches) (II.A.17)	Top Coat	Non-T-Lag Material Inside Raceway (6 on page 3)	Concrete interface (wall, floor, ceiling) (II.A)	Max. Wall Anchor Spacing (inches)	Edge Guards (II.A.24)	Stress-skin Over Joints (II.A.14)	Additional Trowel Material (II.A.23)	Max. Unsupported Spans (inches) (II.A.12)
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
93	3	b2	D	15.0	n/a	N	Y	1C,1P	1.0*	I*O	*	*	*	Y	N	4	6	n/a	Y	*	E?	?	N	SF,CF	Y	N	N	N	N	6
94			D	19.0	n/a	N	Y	1C,1P	1.0*	I*O	*	*	*	Y	N	6	6	n/a	Y	*	E?	?	N	SF,CF	Y	N	N	N	N	6
95			D	16.0	n/a	N	Y	1C,1P	1.0*	I*O	*	*	*	Y	N	4	6	n/a	Y	*	E?	?	N	SF,CF	Y	N	N	N	N	6
96			D	18.0	n/a	N	Y	1C,1P	1.0*	I*O	*	*	*	Y	N	5	6	n/a	Y	*	E?	?	N	SF,CF	Y	N	N	N	N	6
97			D	1.5	4.5	N	N	1P	1.0*	I*O	*	*	*	Y	N	2	6	N	Y	*	E?	?	N	none	N	n/a	N	N	N	6
98			TS	11.0	n/a	N	N	1C,1P	1.0*	I*O	*	*	*	Y	N	4	6	n/a	Y	*	E?	?	N	none	Y	N	N	N	N	6
99			TS	11.0	n/a	N	N	1C,1P	1.0*	I*O	*	*	*	Y	N	2	6	Y	Y	*	E?	?	N	none	Y	N	N	N	N	6
100			TS	3.0	n/a	n/a	n/a	1C,1P	1.0*	I*O	*	*	*	Y	N	4	5	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	5
101			TS	3.0	n/a	N	N	1C,1P	1.0*	I*O	*	*	*	Y	N	n/a	6	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	6
102			TS	3.0	n/a	N	N	1C,1P	1.0*	I*O	*	*	*	Y	N	n/a	6	Y	Y	*	E?	?	N	none	N	n/a	N	N	N	6
103	3	b2	D	23.3	n/a	N	N	1P	1.0*	I*O	*	O	L	Y	N	9	11	N	Y	*	E?	?	N	none	Y	12	N	N	N	11
104			D	23.3	n/a	N	N	1P	1.0*	I*O	*	O	L	Y	N	9	11	N	Y	*	E?	?	N	none	Y	12	N	N	N	11
105			D	23.3	n/a	N	N	1P	1.0*	I*O	*	O	L	Y	N	9	11	N	Y	*	E?	?	N	none	Y	12	N	N	N	11
106	1	b1	D	38.8	n/a	N	N	1C	0.5*	I*	*	n/a	n/a	Y	N	5	10	N	Y	*	E?	?	Y	none	Y	12*	n/a	N	N	10
107		b2	D	38.8	n/a	N	N	1C	0.5*	I*	*	n/a	n/a	Y	N	6	10	N	Y	*	E?	?	Y	none	Y	12*	n/a	N	N	10
108	3	a1	D	1.5	8.0	N	N	1P	1.0*	I*O	*	n/a	n/a	Y	N	2*	10	*	Y	*	E?	?	N	none	Y	N	N	N	N	10

Cables Protected by Thermo-Lag

This attachment provides detailed information for cables contained in raceways which are protected by Thermo-Lag. Below is an explanation of the terms used in the cable matrix:

Firezone - Subdivision of a fire area, taken from the Thermo-lag matrix.

Raceway - A three-character designation which identifies the voltage classification (P-power, C-control, K-instrumentation), divisional assignment (1, 2, 3, or 4) and safety function (E-safety, B-non-safety, R-safety [reactor protection], N-safety [neutron monitoring], A-safety associated) of the cables. The designation is used to assure that proper segregation is maintained when routing the cables. This column indicates the type function of the cable as per parameter 1 on page 3 of the NRC letter.

Cable Route Point - The identifier for a section of raceway, either a length of cable tray or a conduit.

Cable Number - The individual identification number assigned to each cable; it contains the system designation of the cable.

Type code - A five-digit number which identifies the cable construction by number of conductors, size of conductor, and insulation rating (i.e., for 03355, the 03 means 3 conductor, 35 stands for 350 MCM, and 5 shows 5000 V-rated insulation).

Cable size - The size of the conductor(s) in the cable. It is given in either wire gauge (AWG) or circular mils (MCM). Due to the designation used at CPS, this includes nominal number 12 AWG shown as 19 strands of # 25 AWG (19/25) and nominal number 9 AWG shown as 19 strands of # 22 AWG (19/22). This column indicates the size as per parameter 1 on page 3 of the NRC letter.

Insulation material - The material used to insulate and jacket the cable. Either ethylene propylene rubber insulation with chlorosulfonated polyethylene jacketing (EPR/HYP) or Tefzel insulation and jacketing. This column provides the data for parameters 2 and 3 on page 3 of the NRC letter.

Cable function - The device which the cable feeds or is serving. Provided for all safe shutdown cables.

Safe Shutdown - Yes or blank. Indicates that the cable performs a function in the safe shutdown of the plant.

Full load Amps - The expected or maximum load associated with a particular end device. Provided for all safe shutdown power cables.

Cable Operating Temp. - The forty-year qualified life operating temperature of the cable. 90°C for all cables on this list. This column provides the data for parameter 7 on page 3 of the NRC letter.

Max. Temp. Limit - The maximum temperature at which the cable would still perform its function. During qualification testing the cables were tested to the Loss of Coolant Accident profile which began with operation in a 346° F ambient for three hours. This represents the highest tested temperature of the cable. But since the cable's flash point is 780° F and the self-ignition temperature is 820° F, it would be extremely unlikely that short-term exposure (3 to 4 hours) to temperatures of even 400° or 500° F would prevent the cable from performing its function. This column provides the data for parameter 8 on page 3 of the NRC letter.

Parameters 4,5,and 6 on page 3 of the NRC letter are not addressed in this matrix. For parameter 4, cable fill data (for trays and safe shutdown conduits) is provided in the Thermo-lag matrix (attachment 3) but the distribution of cables within the tray is an unknown unless the fire wrap is removed to allow inspection. As indicated in "Raceway" above, raceways are dedicated to one type of cable (Power, Control, or Instrumentation). However the cable's location within the envelope of the raceway is a random item based on factors such as what other cables had been or were being pulled at the time of installation. For parameter 5, this same randomness and limitation on inspection affects the ability to state exact distances inside the tray between the cable and Thermo-lag surfaces. For parameter 6, while the cables within conduits are not at issue (five of the ten raceway installations), the cable trays are, as stated above, not open for inspection. We would not expect to find foreign material within the tray boundary, but verifying this presents problems.

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
A-1a	P2E	165D	1AP29B	03355	350 MCM	EPR-HYP	AUX TRANSF B1 FEED FROM 4.16 BUS 1B1	YES	20.4	90 C	346 F
			1AP34G	02096	#19/22 AWG	EPR-HYP	FEED		0.1	90 C	346 F
			1AP34H	02096	#19/22 AWG	EPR-HYP	FEED		0.1	90 C	346 F
			1AP34J	02096	#19/22 AWG	EPR-HYP	FEED		0.1	90 C	346 F
			1AP34N	04201	#2/0 AWG	EPR-HYP	125VDC DIST PNL TO 480V UNIT SUB B	YES	0.7	90 C	346 F
			1AP34V	03101	#1/0 AWG	EPR-HYP	125VDC TO SPARE PULLOUT 100A FUSE BOX	YES	34.0	90 C	346 F
			1AP34W	03101	#1/0 AWG	EPR-HYP	125VDC TO SPARE PULLOUT 100A FUSE BOX	YES	36.0	90 C	346 F
			1AP36E	03351	350 MCM	EPR-HYP	DG MCC 1B FEED		42.1	90 C	346 F
			1DG21J	03101	#1/0 AWG	EPR-HYP	DC PWR TO DG1B CONT PNL 1FL12JB	YES	0.7	90 C	346 F
			1RD31B	03061	#6 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1RP02C	04201	#2/0 AWG	EPR-HYP	NSPS INV/STATIC BYPASS SW B, 1C71-S001B	YES	80.0	90 C	346 F
			1SX29A	03091	#19/22 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1VD02A	03401	#4/0 AWG	EPR-HYP	DG RM 1B VENT FAN, 1VC01CD	YES	14.1	90 C	346 F
			1VD10A	03091	#19/22 AWG	EPR-HYP	OUTSIDE AIR DMPR 1YB MTR, 1TZ-VD002A	YES	0.2	90 C	346 F
			1VD10B	03091	#19/22 AWG	EPR-HYP	RETURN AIR DMPR 2YB MTR, 1TZ-VD002B	YES	0.2	90 C	346 F
			1VD10C	03091	#19/22 AWG	EPR-HYP	EXHAUST AIR DMPR 3YB MTR, 1TZ-VD002C	YES	0.2	90 C	346 F
			1VD10D	03091	#19/22 AWG	EPR-HYP	ABANDONED-SPARE	YES	0.0	90 C	346 F
			1VG26B	03091	#19/22 AWG	EPR-HYP	SBGT SET B DMPR FEED		0.0	90 C	346 F
		▼	1VG28A	03091	#19/22 AWG	EPR-HYP	SBGT SET B DMPR FEED		0.0	90 C	346 F
A-1a	P2E	166D	SAME AS 165D								
A-1a	P2E	167D	SAME AS 165D								
A-1a		C61445	1VG24A	03091	#19/22 AWG	EPR-HYP	SBGT SET B DMPR FEED		0.0	90 C	346 F
A-1a	P2E	168D	SAME AS 165D PLUS								
		▼	1VG24A	03091	#19/22 AWG	EPR-HYP	SBGT SET B DMPR FEED		0.0	90 C	346 F
A-1a	P2E	169D	SAME AS 165D PLUS								
		▼	1VG24A	03091	#19/22 AWG	EPR-HYP	SBGT SET B DMPR FEED		0.0	90 C	346 F
A-1a	C2E	165E	1LD08J	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1PS10P	07126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1PS10T	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1RH04J	07126	#19/25 AWG	EPR-HYP	RHR PWR FEEDS CONT		0.0	90 C	346 F
			1RH34D	03126	#19/25 AWG	EPR-HYP	POT CONT		0.0	90 C	346 F
			1RH65A	02126	#19/25 AWG	EPR-HYP	SOL CONT		0.0	90 C	346 F
			1RI19C	12126	#19/25 AWG	EPR-HYP	STM IB ISOL VLV CONT	YES	0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1SC02G	15126	#19/25 AWG	EPR-HYP	1H13-P702A		0.0	90 C	346 F
			1SF07B	02126	#19/25 AWG	EPR-HYP	SF-SL-I/I-VLV CONT		0.0	90 C	346 F
			1VD10J	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VD10K	04126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE	YES	0.0	90 C	346 F
			1VG26C	04126	#19/25 AWG	EPR-HYP	LIM SWS CONT		0.0	90 C	346 F
			1VG26G	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG28C	04126	#19/25 AWG	EPR-HYP	LIM SWS CONT		0.0	90 C	346 F
			1VG28F	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG32N	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VP20L	02096	#19/22 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VY05D	07126	#19/25 AWG	EPR-HYP	RHR HT EXCH FAN CONT		0.0	90 C	346 F
			1VY06F	07126	#19/25 AWG	EPR-HYP	RHR PMP RM FAN CONT		0.0	90 C	346 F
			1VY11A	02126	#19/25 AWG	EPR-HYP	L0C PNL 1PL61JC CONT		0.0	90 C	346 F
			1VY13B	15126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
		▼	1VY13D	04126	#19/25 AWG	EPR-HYP	NOT IN SERVICE		0.0	90 C	346 F
A-1a	C2E	166E	SAME AS 165E PLUS								
		▼	1VY07F	07126	#19/25 AWG	EPR-HYP			0.0	90 C	346 F
A-1a		C62154	1VY13B	15126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VY13C	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
		▼	1VY13D	04126	#19/25 AWG	EPR-HYP	NOT IN SERVICE		0.0	90 C	346 F
A-1a		C6132	1RH57D	07126	#19/25 AWG	EPR-HYP	SOL CONT		0.0	90 C	346 F
A-1a	C2E	167E	1LD08J	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1PS10P	07126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1PS10T	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1RH04J	07126	#19/25 AWG	EPR-HYP	RHR PWR FEEDS CONT		0.0	90 C	346 F
			1RH34D	03126	#19/25 AWG	EPR-HYP	POT CONT		0.0	90 C	346 F
			1RH57D	07126	#19/25 AWG	EPR-HYP	SOL CONT		0.0	90 C	346 F
			1RH65A	02126	#19/25 AWG	EPR-HYP	SOL CONT		0.0	90 C	346 F
			1RI19C	12126	#19/25 AWG	EPR-HYP	STM IB ISOL VLV CONT	YES	0.0	90 C	346 F
			1SC02G	15126	#19/25 AWG	EPR-HYP	1H13-P702A		0.0	90 C	346 F
			1SF07B	02126	#19/25 AWG	EPR-HYP	SF-SL-I/I-VLV CONT		0.0	90 C	346 F
			1VD10J	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VD10K	04126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE	YES	0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1VG26C	04126	#19/25 AWG	EPR-HYP	LIM SWS CONT		0.0	90 C	346 F
			1VG26G	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG28C	04126	#19/25 AWG	EPR-HYP	LIM SWS CONT		0.0	90 C	346 F
			1VG28F	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG32N	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VP20L	02096	#19/22 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VY05D	07126	#19/25 AWG	EPR-HYP	RHR HT EXCH FAN CONT		0.0	90 C	346 F
			1VY06F	07126	#19/25 AWG	EPR-HYP	RHR PMP RM FAN CONT		0.0	90 C	346 F
			1VY07F	07126	#19/25 AWG	EPR-HYP	RHR PMP RM FAN CONT		0.0	90 C	346 F
			1VY11A	02126	#19/25 AWG	EPR-HYP	L0C PNL 1PL61JC CONT		0.0	90 C	346 F
		▼	1VY13C	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
A-1a		C61446	1VG24C	04126	#19/25 AWG	EPR-HYP	LIM SWS CONT		0.0	90 C	346 F
			1VG24F	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
		▼	1VG93C	04164	2 PR #16	TEFZEL	CONT		0.0	90 C	346 F
A-1a	C2E	168E	SAME AS 167E PLUS								
			1VG24C	04126	#19/25 AWG	EPR-HYP	LIM SWS CONT		0.0	90 C	346 F
		▼	1VG93C	04164	2 PR #16	TEFZEL	CONT		0.0	90 C	346 F
A-1a		C6359	1PS10N	07126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1PS10S	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1SF07A	07126	#19/25 AWG	EPR-HYP	SF-SL-I/I-VLV CONT		0.0	90 C	346 F
		▼	1SF07B	02126	#19/25 AWG	EPR-HYP	SF-SL-I/I-VLV CONT		0.0	90 C	346 F
A-1a	C2E	169E	1LD08J	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1PS10N	07126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1PS10P	07126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1PS10S	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1PS10T	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1RH04J	07126	#19/25 AWG	EPR-HYP	RHR PWR FEEDS CONT		0.0	90 C	346 F
			1RH34D	03126	#19/25 AWG	EPR-HYP	POT CONT		0.0	90 C	346 F
			1RH57D	07126	#19/25 AWG	EPR-HYP	SOL CONT		0.0	90 C	346 F
			1RH65A	02126	#19/25 AWG	EPR-HYP	SOL CONT		0.0	90 C	346 F
			1RI19C	12126	#19/25 AWG	EPR-HYP	STM IB ISOL VLV CONT	YES	0.0	90 C	346 F
			1SC02G	15126	#19/25 AWG	EPR-HYP	1H13-P702A		0.0	90 C	346 F
			1SF07A	07126	#19/25 AWG	EPR-HYP	SF-SL-I/I-VLV CONT		0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1VD10J	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VD10K	04126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE	YES	0.0	90 C	346 F
			1VG24C	04126	#19/25 AWG	EPR-HYP	LIM SWS CONT		0.0	90 C	346 F
			1VG24F	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG26C	04126	#19/25 AWG	EPR-HYP	LIM SWS CONT		0.0	90 C	346 F
			1VG26G	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG28C	04126	#19/25 AWG	EPR-HYP	LIM SWS CONT		0.0	90 C	346 F
			1VG28F	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG32N	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG93C	04164	2 PR #16	TEFZEL	CONT		0.0	90 C	346 F
			1VP20L	02096	#19/22 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VY05D	07126	#19/25 AWG	EPR-HYP	RHR HT EXCH FAN CONT		0.0	90 C	346 F
			1VY06F	07126	#19/25 AWG	EPR-HYP	RHR PMP RM FAN CONT		0.0	90 C	346 F
			1VY07F	07126	#19/25 AWG	EPR-HYP	RHR PMP RM FAN CONT		0.0	90 C	346 F
			1VY11A	02126	#19/25 AWG	EPR-HYP	LOC PNL 1PL61JC CONT		0.0	90 C	346 F
		▼	1VY13C	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
A-1a	K2E	165F	1LD26E	02166	1PR#16 CRC	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1LD26F	02166	1PR#16 CRC	EPR-HYP		YES	0.0	90 C	346 F
			1LD26G	02166	1PR#16 CRC	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1LD28C	02166	1PR#16 CRC	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
		▼	1LD28D	02166	1PR#16 CRC	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
C-2	P2E	17199D	1CC16J	03091	#19/22 AWG	EPR-HYP	FEED		0.80	90 C	346 F
			1CC16S	03091	#19/22 AWG	EPR-HYP	FEED		0.80	90 C	346 F
			1CY06G	03091	#19/22 AWG	EPR-HYP	FEED		0.80	90 C	346 F
			1FC05B	03091	#19/22 AWG	EPR-HYP	FEED		0.80	90 C	346 F
			1FC20B	03091	#19/22 AWG	EPR-HYP	FEED		0.80	90 C	346 F
			1FP62C	03091	#19/22 AWG	EPR-HYP	FEED		0.80	90 C	346 F
			1FP65C	03091	#19/22 AWG	EPR-HYP	FEED		0.80	90 C	346 F
			1HG20A	02126	#19/25 AWG	EPR-HYP	FEED		0.60	90 C	346 F
			1HG20B	02126	#19/25 AWG	EPR-HYP	FEED		0.60	90 C	346 F
			1HG20C	02126	#19/25 AWG	EPR-HYP	FEED		0.60	90 C	346 F
			1HG20J	02126	#19/25 AWG	EPR-HYP	FEED		0.60	90 C	346 F
			1HG21H	02126	#19/25 AWG	EPR-HYP	FEED		0.60	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1HG21M	02126	#19/25 AWG	EPR-HYP	FEED		0.60	90 C	346 F
			1HG21N	02126	#19/25 AWG	EPR-HYP	FEED		0.60	90 C	346 F
			1HG21P	02126	#19/25 AWG	EPR-HYP	FEED		0.60	90 C	346 F
			1HG22D	02126	#19/25 AWG	EPR-HYP	FEED		0.60	90 C	346 F
			1HG22E	02126	#19/25 AWG	EPR-HYP	FEED		0.60	90 C	346 F
			1HG22F	02126	#19/25 AWG	EPR-HYP	FEED		0.60	90 C	346 F
			1HG22P	02126	#19/25 AWG	EPR-HYP	FEED		0.60	90 C	346 F
			1HG23E	02126	#19/25 AWG	EPR-HYP	FEED		0.60	90 C	346 F
			1HG23F	02126	#19/25 AWG	EPR-HYP	FEED		0.60	90 C	346 F
			1HG23G	02126	#19/25 AWG	EPR-HYP	FEED		0.60	90 C	346 F
			1HG25K	03091	#19/22 AWG	EPR-HYP	FEED		0.80	90 C	346 F
			1MC03B	03091	#19/22 AWG	EPR-HYP	FEED		0.80	90 C	346 F
			1SC02B	03021	#2 AWG	EPR-HYP	STBY LIQ PU 1B FEED		1.30	90 C	346 F
			1SC06B	03091	#19/22 AWG	EPR-HYP	FEED		0.80	90 C	346 F
			1VQ24B	03091	#19/22 AWG	EPR-HYP	FEED		0.80	90 C	346 F
			1VR09B	03091	#19/22 AWG	EPR-HYP	FEED		0.80	90 C	346 F
			1WO14B	03091	#19/22 AWG	EPR-HYP	FEED		0.80	90 C	346 F
		▼	1WO16B	03091	#19/22 AWG	EPR-HYP	FEED		0.80	90 C	346 F
C-2		C74240	1HG21A	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG21C	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG21D	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG21H	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG21J	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG21K	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG21L	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG21M	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG21N	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG21P	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
		▼	1HG25L	03091	#19/22 AWG	EPR-HYP	FEED		0.0	90 C	346 F
C-2		C74241	1HG22D	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG22E	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG22F	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG22G	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1HG22H	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG22J	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG22K	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG22L	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG22M	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG22N	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG22P	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
		▼	1HG25M	03091	#19/22 AWG	EPR-HYP	FEED		0.0	90 C	346 F
C-2		C74242	1HG23A	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG23B	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG23C	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG23D	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG23E	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG23F	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG23G	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG23L	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG23M	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG23N	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG23P	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
		▼	1HG25N	03091	#19/22 AWG	EPR-HYP	FEED		0.0	90 C	346 F
C-2		C74243	1HG25P	03091	#19/22 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG27A	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG27B	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG27C	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG27D	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG27E	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG27F	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG27G	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG27H	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG27J	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG27K	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1HG27L	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F
		▼	1HG27M	02126	#19/25 AWG	EPR-HYP	FEED		0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
C-2		C74123	1HG14L	02126	#19/25 AWG	EPR-HYP			0.0	90 C	346 F
C-2	C2E	17199E	1CC16K	12126	#19/25 AWG	EPR-HYP	LIM SW CONT		0.0	90 C	346 F
			1CC16T	12126	#19/25 AWG	EPR-HYP	LIM SW CONT		0.0	90 C	346 F
			1CM06L	07126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1CM06P	07126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1CM07G	12126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1CM12B	02096	#19/22 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1CM12F	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1CY06J	12126	#19/25 AWG	EPR-HYP	LIM SW CONT		0.0	90 C	346 F
			1FC05D	12126	#19/25 AWG	EPR-HYP	LIM SW CONT		0.0	90 C	346 F
			1FC20D	12126	#19/25 AWG	EPR-HYP	LIM SW CONT		0.0	90 C	346 F
			1FP62D	12126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1FP65D	12126	#19/25 AWG	EPR-HYP	K2983 IT 6		0.0	90 C	346 F
			1IA06A	07126	#19/25 AWG	EPR-HYP	ISOL VLV IA007 CONT		0.0	90 C	346 F
			1IA06F	07126	#19/25 AWG	EPR-HYP	ISOL VLV IA006 CONT		0.0	90 C	346 F
			1LD08I	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1MC03D	12126	#19/25 AWG	EPR-HYP	LIM SW CONT		0.0	90 C	346 F
			1PS13D	15126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1PS13W	15126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1RA03G	07126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1RA03H	07126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1RE06J	02096	#19/22 AWG	EPR-HYP	LIM SWS CONT		0.0	90 C	346 F
			1RE06L	09126	#19/25 AWG	EPR-HYP	INBD ISO VLV CONT		0.0	90 C	346 F
			1RP13D	0409S	#19/22 ARM	EPR-HYP	SOL FOR I A CONT		0.0	90 C	346 F
			1RP13P	0409S	#19/22 ARM	EPR-HYP	CONT		0.0	90 C	346 F
			1RP13Q	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1RP13T	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1RP16X	0409S	#19/22 ARM	EPR-HYP	SOL-A CONT		0.0	90 C	346 F
			1RP30D	02126	#19/25 AWG	EPR-HYP	SOL CONT		0.0	90 C	346 F
			1SA11G	07126	#19/25 AWG	EPR-HYP	1SA030 ISOL VLV CONT		0.0	90 C	346 F
			1SA11H	07126	#19/25 AWG	EPR-HYP	1SA031 ISOL VLV CONT		0.0	90 C	346 F
			1SC02D	12126	#19/25 AWG	EPR-HYP	SLC SYS INS PNL CONT		0.0	90 C	346 F
			1SC02E	02126	#19/25 AWG	EPR-HYP	SPACE HTR CONT		0.0	90 C	346 F

Cables Protected by Thermo-Lag

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1SC02F	04163	2 PR #16	EPR-HYP	PUMP 1B CONT		0.0	90 C	346 F
			1SC06D	12126	#19/25 AWG	EPR-HYP	LIM SW CONT		0.0	90 C	346 F
			1SC06F	04126	#19/25 AWG	EPR-HYP	LIQ ST TNK VLV CONT		0.0	90 C	346 F
			1VQ22J	09126	#19/25 AWG	EPR-HYP	DW DMPR 1VQ004B CONT		0.0	90 C	346 F
			1VQ22R	09126	#19/25 AWG	EPR-HYP	DW DMPR 1VQ003 CONT		0.0	90 C	346 F
			1VQ24E	12126	#19/25 AWG	EPR-HYP	1S0 VLV CONT		0.0	90 C	346 F
			1VR07F	12126	#19/25 AWG	EPR-HYP	1FSV-VR009 CONT		0.0	90 C	346 F
			1VR09E	12126	#19/25 AWG	EPR-HYP	1S0 VLV CONT		0.0	90 C	346 F
			1VR25L	09126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VR26L	09126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VR28F	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VR28J	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1WO14D	12126	#19/25 AWG	EPR-HYP	LIM SW CONT		0.0	90 C	346 F
		▼	1WO16D	12126	#19/25 AWG	EPR-HYP	LIM SW CONT		0.0	90 C	346 F
C-2		C74615	1CM06L	07126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
C-2	K2E	17199F	1CM67B	03163	#16 AWG	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1CM88T	02166	1PR#16 CRC	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1CM88U	02166	1PR#16 CRC	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1CM94B	03163	#16 AWG	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1CM94C	03163	#16 AWG	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1CM94E	03163	#16 AWG	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1LD43D	02166	1PR#16 CRC	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1LD43E	02166	1PR#16 CRC	EPR-HYP	SIGNAL		0.0	90 C	346 F
		▼	1LD43H	02166	1PR#16 CRC	EPR-HYP	SIGNAL		0.0	90 C	346 F
C-2		C71987	1VP73B	03164	#16 AWG	TEFZEL	SIGNAL		0.0	90 C	346 F
			1VP74V	08163	4 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VP97H	03164	#16 AWG	TEFZEL	SIGNAL		0.0	90 C	346 F
			1VP97L	03164	#16 AWG	TEFZEL	SIGNAL		0.0	90 C	346 F
			1VP97S	08164	4 PR #16	TEFZEL	SIGNAL		0.0	90 C	346 F
			1VP97Y	03164	#16 AWG	TEFZEL	SIGNAL		0.0	90 C	346 F
			1VP99B	03164	#16 AWG	TEFZEL	SIGNAL		0.0	90 C	346 F
			1VP99E	03164	#16 AWG	TEFZEL	SIGNAL		0.0	90 C	346 F
		▼	1VP99H	08163	4 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
C-2		house power									
C-2		house power									
C-2		house power									
C-2		house power									
C-2		house power									
C-2		house power									
C-2		house power									
C-2		C74172	1CM94B	03163	#16 AWG	EPR-HYP	SIGNAL		0.0	90 C	346 F
C-2		house power									
C-2		house power									
C-2		house power									
C-2		house power									
CB-1e	P2E	10109D	1AP29B	03355	350 MCM	EPR-HYP	AUX TRANSF B1 FEED FROM 4.16 BUS 1B1	YES	20.4	90 C	346 F
			1AP34G	02096	#19/22 AWG	EPR-HYP	FEED		0.1	90 C	346 F
			1AP34H	02096	#19/22 AWG	EPR-HYP	FEED		0.1	90 C	346 F
			1AP34N	04201	#2/0 AWG	EPR-HYP	125VDC DIST PNL TO 480V UNIT SUB B	YES	0.7	90 C	346 F
			1AP34V	03101	#1/0 AWG	EPR-HYP	125VDC TO SPARE PULLOUT 100A FUSE BOX	YES	34.0	90 C	346 F
			1AP34W	03101	#1/0 AWG	EPR-HYP	125VDC TO SPARE PULLOUT 100A FUSE BOX	YES	36.0	90 C	346 F
			1AP37D	03351	350 MCM	EPR-HYP	VARIOUS VC & VG DMPR'S, HTR'S & FANS	YES	50.0	90 C	346 F
			1AP37J	03351	350 MCM	EPR-HYP	VARIOUS VC & VG DMPR'S, HTR'S & FANS	YES	50.0	90 C	346 F
			1CM09H	03061	#6 AWG	EPR-HYP	FEED		16.0	90 C	346 F
			1CM09K	03061	#6 AWG	EPR-HYP	FEED		32.0	90 C	346 F
			1DG21J	03101	#1/0 AWG	EPR-HYP	DC PWR TO DG1B CONT PNL 1PL12JB	YES	0.7	90 C	346 F
			1DG24B	03091	#19/22 AWG	EPR-HYP	FEED		3.2	90 C	346 F
			1DG25B	03091	#19/22 AWG	EPR-HYP	ENG GAUGE PNL 2 FEED		3.2	90 C	346 F
			1DG26B	03061	#6 AWG	EPR-HYP	FEED		18.8	90 C	346 F
			1DG27B	03061	#6 AWG	EPR-HYP	ENG GAUGE PNL 2 FEED		18.8	90 C	346 F
			1DG28B	03091	#19/22 AWG	EPR-HYP	FEED		2.5	90 C	346 F
			1DG29A	03061	#6 AWG	EPR-HYP	DG STARTING AIR SKID, 1DG06SB	YES	27.0	90 C	346 F
			1DG30A	03061	#6 AWG	EPR-HYP	DG STARTING AIR SKID, 1DG06SB	YES	27.0	90 C	346 F
			1DO02A	03091	#19/22 AWG	EPR-HYP	DG FUEL OIL XFER PUMP 1B, 1DO01PB	YES	2.0	90 C	346 F
			1RD31H	03021	#2 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1RP02C	04201	#2/0 AWG	EPR-HYP	NSPS INV/STATIC BYPASS SW B, 1C71-S001B	YES	80.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1SX27A	03091	#19/22 AWG	EPR-HYP	MCR COOLING COIL FLOW CONT VLV, 1SX01	YES	1.1	90 C	346 F
			1SX31A	03091	#19/22 AWG	EPR-HYP	DG 1B HX OUTLET VLV, 1SX063B	YES	1.1	90 C	346 F
			1SX40A	03091	#19/22 AWG	EPR-HYP	MCR COOLING COIL 1B INLET VLV, 1SX017B	YES	0.1	90 C	346 F
			1VC25B	03091	#19/22 AWG	EPR-HYP	TRN B ISO DMPR 21YB, 0FZ-VC103A	YES	0.2	90 C	346 F
			1VC25C	03091	#19/22 AWG	EPR-HYP	TRN B ISO DMPR 24YB, 0FZ-VC103B	YES	0.2	90 C	346 F
			1VC25D	03091	#19/22 AWG	EPR-HYP	TRN B ISO DMPR 27YB, 0FZ-VC103C	YES	0.2	90 C	346 F
			1VC26B	03091	#19/22 AWG	EPR-HYP	TRN B DMPR 14YB MTR, 0TZ-VC135	YES	0.2	90 C	346 F
			1VC26C	03091	#19/22 AWG	EPR-HYP	TRN B DMPR 13YB MTR, 0TZ-VC134	YES	0.2	90 C	346 F
			1VC26D	03091	#19/22 AWG	EPR-HYP	TRN B DMPR 12YB MTR, 0TZ-VC133	YES	0.2	90 C	346 F
			1VC27B	03091	#19/22 AWG	EPR-HYP	TRN B ISO DMPR 30YB, 0FZ-VC103D	YES	0.2	90 C	346 F
			1VC27C	03091	#19/22 AWG	EPR-HYP	TRN B ISO DMPR 33YB, 0FZ-VC103E	YES	0.2	90 C	346 F
			1VC27D	03091	#19/22 AWG	EPR-HYP	TRN B ISO DMPR 36YB, 0FZ-VC103F	YES	0.2	90 C	346 F
			1VC28B	03091	#19/22 AWG	EPR-HYP	TRN B DMPR 17YB MTR, 0TZ-VC138	YES	0.2	90 C	346 F
			1VC28C	03091	#19/22 AWG	EPR-HYP	TRN B DMPR 16YB MTR, 0TZ-VC137	YES	0.2	90 C	346 F
			1VC28D	03091	#19/22 AWG	EPR-HYP	TRN B DMPR 15YB MTR, 0TZ-VC136	YES	0.2	90 C	346 F
			1VC28F	03091	#19/22 AWG	EPR-HYP	TRN B DMPR 18YB MTR, 0TZ-VC139	YES	0.2	90 C	346 F
			1VC35B	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC35C	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC35D	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC35P	03091	#19/22 AWG	EPR-HYP	TRN A MIN OA DMPR 115YA, 0FZ-VC096	YES	0.2	90 C	346 F
			1VC35S	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC36B	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC36C	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC36D	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC36[illegible]	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC36Q	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC50B	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC50C	03091	#19/22 AWG	EPR-HYP	TRN B DMPR 01YB, 0FZ-VC114	YES	0.2	90 C	346 F
			1VC51B	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC51C	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC51D	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC51E	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC56B	03091	#19/22 AWG	EPR-HYP	TRN B ISO DMPR 39YB, 0FZ-VC103G	YES	0.2	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1VC56C	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC56D	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VD02A	03401	#4/0 AWG	EPR-HYP	DG RM 1B VENT FAN, 1VC01CD	YES	14.1	90 C	346 F
			1VD05A	03091	#19/22 AWG	EPR-HYP	DG VENT OIL RM 1B EXH FAN, 1VD01CB	YES	6.5	90 C	346 F
			1VD10A	03091	#19/22 AWG	EPR-HYP	OUTSIDE AIR DMPR 1YB MTR, 1TZ-VD002A	YES	0.2	90 C	346 F
			1VD10B	03091	#19/22 AWG	EPR-HYP	RETURN AIR DMPR 2YB MTR, 1TZ-VD002B	YES	0.2	90 C	346 F
			1VD10C	03091	#19/22 AWG	EPR-HYP	EXHAUST AIR DMPR 3YB MTR, 1TZ-VD002C	YES	0.2	90 C	346 F
			1VD10D	03091	#19/22 AWG	EPR-HYP	ABANDONED-SPARE	YES	0.0	90 C	346 F
			1VG38A	03091	#19/22 AWG	EPR-HYP	FEED		9.9	90 C	346 F
			1VG40A	03091	#19/22 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1VQ05A	03091	#19/22 AWG	EPR-HYP	FEED		1.7	90 C	346 F
		▼	1VQ14A	03091	#19/22 AWG	EPR-HYP	FEED		2.4	90 C	346 F
CB-1e	P2E	10110D	No Cables								
CB-1e	P2E	10112D	No Cables								
CB-1e	P2E	10113D	1AP29B	03355	350 MCM	EPR-HYP	AUX TRANSF B1 FEED FROM 4.16 BUS 1B1	YES	20.4	90 C	346 F
			1AP34G	02096	#19/22 AWG	EPR-HYP	FEED		0.1	90 C	346 F
			1AP34H	02096	#19/22 AWG	EPR-HYP	FEED		0.1	90 C	346 F
			1AP34N	04201	#2/0 AWG	EPR-HYP	125VDC DIST PNL TO 480V UNIT SUB B	YES	0.7	90 C	346 F
			1AP34V	03101	#1/0 AWG	EPR-HYP	125VDC TO SPARE PULLOUT 100A FUSE BOX	YES	34.0	90 C	346 F
			1AP34W	03101	#1/0 AWG	EPR-HYP	125VDC TO SPARE PULLOUT 100A FUSE BOX	YES	36.0	90 C	346 F
			1AP37D	03351	350 MCM	EPR-HYP	VARIOUS VC & VG DMPR'S, HTR'S & FANS	YES	50.0	90 C	346 F
			1AP37J	03351	350 MCM	EPR-HYP	VARIOUS VC & VG DMPR'S, HTR'S & FANS	YES	50.0	90 C	346 F
			1CM09H	03061	#6 AWG	EPR-HYP	FEED		16.0	90 C	346 F
			1CM09K	03061	#6 AWG	EPR-HYP	FEED		32.0	90 C	346 F
			1RD31H	03021	#2 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1RP02C	04201	#2/0 AWG	EPR-HYP	NSPS INV/STATIC BYPASS SW B, 1C71-S001B	YES	80.0	90 C	346 F
			1SX27A	03091	#19/22 AWG	EPR-HYP	MCR COOLING COIL FLOW CONT VLV, 1SX01	YES	1.1	90 C	346 F
			1SX40A	03091	#19/22 AWG	EPR-HYP	MCR COOLING COIL 1B INLET VLV, 1SX017B	YES	0.1	90 C	346 F
			1SX51A	03091	#19/22 AWG	EPR-HYP	FEED		0.3	90 C	346 F
			1SX51D	03091	#19/22 AWG	EPR-HYP	FEED		0.3	90 C	346 F
			1SX51G	03091	#19/22 AWG	EPR-HYP	ABANDONED-SPARE		0.3	90 C	346 F
			1VC25B	03091	#19/22 AWG	EPR-HYP	TRN B ISO DMPR 21YB, 0FZ-VC103A	YES	0.2	90 C	346 F
			1VC25C	03091	#19/22 AWG	EPR-HYP	TRN B ISO DMPR 24YB, 0FZ-VC103B	YES	0.2	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1VC25D	03091	#19/22 AWG	EPR-HYP	TRN B ISO DMPR 27YB, 0FZ-VC103C	YES	0.2	90 C	346 F
			1VC26B	03091	#19/22 AWG	EPR-HYP	TRN B DMPR 14YB MTR, 0TZ-VC135	YES	0.2	90 C	346 F
			1VC26C	03091	#19/22 AWG	EPR-HYP	TRN B DMPR 13YB MTR, 0TZ-VC134	YES	0.2	90 C	346 F
			1VC26D	03091	#19/22 AWG	EPR-HYP	TRN B DMPR 12YB MTR, 0TZ-VC133	YES	0.2	90 C	346 F
			1VC27B	03091	#19/22 AWG	EPR-HYP	TRN B ISO DMPR 30YB, 0FZ-VC103D	YES	0.2	90 C	346 F
			1VC27C	03091	#19/22 AWG	EPR-HYP	TRN B ISO DMPR 33YB, 0FZ-VC103E	YES	0.2	90 C	346 F
			1VC27D	03091	#19/22 AWG	EPR-HYP	TRN B ISO DMPR 36YB, 0FZ-VC103F	YES	0.2	90 C	346 F
			1VC28B	03091	#19/22 AWG	EPR-HYP	TRN B DMPR 17YB MTR, 0TZ-VC138	YES	0.2	90 C	346 F
			1VC28C	03091	#19/22 AWG	EPR-HYP	TRN B DMPR 16YB MTR, 0TZ-VC137	YES	0.2	90 C	346 F
			1VC28D	03091	#19/22 AWG	EPR-HYP	TRN B DMPR 15YB MTR, 0TZ-VC136	YES	0.2	90 C	346 F
			1VC28F	03091	#19/22 AWG	EPR-HYP	TRN B DMPR 18YB MTR, 0TZ-VC139	YES	0.2	90 C	346 F
			1VC35B	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC35C	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC35D	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC35P	03091	#19/22 AWG	EPR-HYP	TRN A MIN OA DMPR 115YA, 0FZ-VC096	YES	0.2	90 C	346 F
			1VC35S	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC36B	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC36C	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC36D	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC36P	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC36Q	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC50B	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC50C	03091	#19/22 AWG	EPR-HYP	TRN B DMPR 01YB, 0FZ-VC114	YES	0.2	90 C	346 F
			1VC51B	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC51C	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC51D	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC51E	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VC56B	03091	#19/22 AWG	EPR-HYP	TRN B ISO DMPR 39YB, 0FZ-VC103G	YES	0.2	90 C	346 F
			1VC56C	03091	#19/22 AWG	EPR-HYP	FEED	YES	0.2	90 C	346 F
			1VC56D	03091	#19/22 AWG	EPR-HYP	FEED		0.2	90 C	346 F
			1VG38A	03091	#19/22 AWG	EPR-HYP	FEED		9.9	90 C	346 F
			1VG40A	03091	#19/22 AWG	EPR-HYP	FEED		0.0	90 C	346 F
			1VQ05A	03091	#19/22 AWG	EPR-HYP	FEED		1.7	90 C	346 F

Cables Protected by Thermo-Lag

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1VQ14A	03091	#19/22 AWG	EPR-HYP	FEED		2.4	90 C	346 F
CB-1e	P2E	10114D	No Cables								
CB-1e	P2E	10115D	1DG21J	03101	#1/0 AWG	EPR-HYP	DC PWR TO DG1B CONT PNL 1PL12JB	YES	0.7	90 C	346 F
			1DG24B	03091	#19/22 AWG	EPR-HYP	FEED		3.2	90 C	346 F
			1DG25B	03091	#19/22 AWG	EPR-HYP	ENG GAUGE PNL 2 FEED		3.2	90 C	346 F
			1DG26B	03061	#6 AWG	EPR-HYP	FEED		18.8	90 C	346 F
			1DG27B	03061	#6 AWG	EPR-HYP	ENG GAUGE PNL 2 FEED		18.8	90 C	346 F
			1DG28B	03091	#19/22 AWG	EPR-HYP	FEED		2.5	90 C	346 F
			1DG29A	03061	#6 AWG	EPR-HYP	DG STARTING AIR SKID, 1DG06SB	YES	27.0	90 C	346 F
			1DG30A	03061	#6 AWG	EPR-HYP	DG STARTING AIR SKID, 1DG06SB	YES	27.0	90 C	346 F
			1DO02A	03091	#19/22 AWG	EPR-HYP	DG FUEL OIL XFER PUMP 1B, 1DO01PB	YES	14.1	90 C	346 F
			1SX31A	03091	#19/22 AWG	EPR-HYP	DG 1B HX OUTLET VLV, 1SX063B	YES	1.1	90 C	346 F
			1SX51A	03091	#19/22 AWG	EPR-HYP	FEED		0.3	90 C	346 F
			1SX51D	03091	#19/22 AWG	EPR-HYP	FEED		0.3	90 C	346 F
			1SX51G	03091	#19/22 AWG	EPR-HYP	ABANDONED-SPARE		0.3	90 C	346 F
			1VD02A	03401	#4/0 AWG	EPR-HYP	DG RM 1B VENT FAN, 1VC01CD	YES	14.1	90 C	346 F
			1VD05A	03091	#19/22 AWG	EPR-HYP	DG VENT OIL RM 1B EXH FAN, 1VD01CB	YES	6.5	90 C	346 F
			1VD10A	03091	#19/22 AWG	EPR-HYP	OUTSIDE AIR DMPR 1YB MTR, 1TZ-VD002A	YES	0.2	90 C	346 F
			1VD10B	03091	#19/22 AWG	EPR-HYP	RETURN AIR DMPR 2YB MTR, 1TZ-VD002B	YES	0.2	90 C	346 F
			1VD10C	03091	#19/22 AWG	EPR-HYP	EXHAUST AIR DMPR 3YB MTR, 1TZ-VD002C	YES	0.2	90 C	346 F
			1VD10D	03091	#19/22 AWG	EPR-HYP	ABANDONED-SPARE	YES	0.0	90 C	346 F
CB-1e	P2E	10116D	SAME AS 10115D								
CB-1e	C2E	10109E	1AP21K	02163	1 PR #16	EPR-HYP	MAIN FEED CONT	YES	0.0	90 C	346 F
			1AP21L	02126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1AP23L	02163	1 PR #16	EPR-HYP	1B1 RES FEED CONT	YES	0.0	90 C	346 F
			1AP23M	02126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1AP29Q	02126	#19/25 AWG	EPR-HYP	0C GND RLY CONT	YES	0.0	90 C	346 F
			1AP60B	12126	#19/25 AWG	EPR-HYP	MISC ALM CONT		0.0	90 C	346 F
			1AP60C	03096	#19/22 AWG	EPR-HYP	PT METERING CONT		0.0	90 C	346 F
			1DG21A	15126	#19/25 AWG	EPR-HYP	D GEN 1B CONT	YES	0.0	90 C	346 F
			1DG21B	15126	#19/25 AWG	EPR-HYP	D GEN 1B CONT	YES	0.0	90 C	346 F
			1DG21C	15126	#19/25 AWG	EPR-HYP	D GEN 1B CONT	YES	0.0	90 C	346 F
			1DG21D	07126	#19/25 AWG	EPR-HYP	D GEN 1B CONT	YES	0.0	90 C	346 F

Cables Protected by Thermo-Lag

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1DG21F	04096	#19/22 AWG	EPR-HYP	DG 1B CONT PNL CONT	YES	0.0	90 C	346 F
			1DG21K	07126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1DG21M	07126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1DG24A	09126	#19/25 AWG	EPR-HYP	L0 CIRC PUMP CONT	YES	0.0	90 C	346 F
			1DG25A	09126	#19/25 AWG	EPR-HYP	L0 CIRC PUMP CONT	YES	0.0	90 C	346 F
			1DG26A	07126	#19/25 AWG	EPR-HYP	1DG01KB WTR HTR CONT		0.0	90 C	346 F
			1DG27A	07126	#19/25 AWG	EPR-HYP	WATER HTR H1A CONT		0.0	90 C	346 F
			1DG28A	07126	#19/25 AWG	EPR-HYP	GEN HTR H3 CONT		0.0	90 C	346 F
			1DG29B	07126	#19/25 AWG	EPR-HYP	DG 1B CONT	YES	0.0	90 C	346 F
			1DG30B	07126	#19/25 AWG	EPR-HYP	DG 1B CONT	YES	0.0	90 C	346 F
			1DG31C	04096	#19/22 AWG	EPR-HYP	252 DG 1B CONT	YES	0.0	90 C	346 F
			1DG31D	04096	#19/22 AWG	EPR-HYP	252 DG 1B CONT	YES	0.0	90 C	346 F
			1DG31E	03096	#19/22 AWG	EPR-HYP	252 DG 1B CONT	YES	0.0	90 C	346 F
			1DG31F	03096	#19/22 AWG	EPR-HYP	252 DG 1B CONT	YES	0.0	90 C	346 F
			1DG31R	02163	1 PR #16	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1DG31S	07126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1DG31T	07126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1HG11H	03126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1HG11J	03126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1HG11K	03126	#19/25 AWG	EPR-HYP	H2 RCOMBR CONT		0.0	90 C	346 F
			1IP04A	02096	#19/22 AWG	EPR-HYP	FEED	YES	0.0	90 C	346 F
			1IP04B	02096	#19/22 AWG	EPR-HYP	FEED	YES	0.0	90 C	346 F
			1LV14A	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT		0.0	90 C	346 F
			1LV14B	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14C	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT		0.0	90 C	346 F
			1LV14D	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14E	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14F	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14G	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14H	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14J	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14K	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14L	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1LV14M	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14P	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1RA01F	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1RP35B	02096	#19/22 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1SC08G	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1SX27B	02126	#19/25 AWG	EPR-HYP	LIM SW CONT	YES	0.0	90 C	346 F
			1SX31B	09126	#19/25 AWG	EPR-HYP	LIM SW CONT	YES	0.0	90 C	346 F
			1SX40B	09126	#19/25 AWG	EPR-HYP	LIM SW CONT	YES	0.0	90 C	346 F
			1SX51C	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX51F	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX51J	09126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1SX51M	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX51Q	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX51T	09126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1SX52C	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX52F	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX52J	09126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1SX54L	09126	#19/25 AWG	EPR-HYP	SX MISC VLV CONT		0.0	90 C	346 F
			1SX54P	12126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1SX66A	02126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1VC02C	12126	#19/25 AWG	EPR-HYP	SUP AIR FAN B CONT	YES	0.0	90 C	346 F
			1VC04C	12126	#19/25 AWG	EPR-HYP	RET AIR FAN B CONT	YES	0.0	90 C	346 F
			1VC06B	12126	#19/25 AWG	EPR-HYP	MUAT FAN B CONT		0.0	90 C	346 F
			1VC08B	12126	#19/25 AWG	EPR-HYP	CHILLED WP B CONT		0.0	90 C	346 F
			1VC12C	12126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC14B	15126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC25G	09126	#19/25 AWG	EPR-HYP	DMPR OPRS CONT	YES	0.0	90 C	346 F
			1VC25O	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC25P	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC25Q	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC26E	09126	#19/25 AWG	EPR-HYP	MODULATING DMPR CONT	YES	0.0	90 C	346 F
			1VC27G	09126	#19/25 AWG	EPR-HYP	DMPR OPRS CONT	YES	0.0	90 C	346 F
			1VC27O	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1VC27P	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC27Q	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC27R	02096	#19/22 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC28E	09126	#19/25 AWG	EPR-HYP	MODULATING DMPR CONT	YES	0.0	90 C	346 F
			1VC35G	15126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC35T	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC35U	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC35W	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC36G	15126	#19/25 AWG	EPR-HYP	DMPR CPRS CONT		0.0	90 C	346 F
			1VC36R	15126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC36S	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC40A	02126	#19/25 AWG	EPR-HYP	RADIATION DET CONT		0.0	90 C	346 F
			1VC40E	07126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1VC40L	07126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC45A	15126	#19/25 AWG	EPR-HYP	TC/PE/INSTR PS CONT	YES	0.0	90 C	346 F
			1VC45B	15126	#19/25 AWG	EPR-HYP	TC/PE/INSTR PS CONT	YES	0.0	90 C	346 F
			1VC45C	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC45D	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC45E	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC45F	09126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT	YES	0.0	90 C	346 F
			1VC45G	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC45H	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT	YES	0.0	90 C	346 F
			1VC46B	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC46C	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC46D	12126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC46E	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT	YES	0.0	90 C	346 F
			1VC46F	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT	YES	0.0	90 C	346 F
			1VC46G	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT	YES	0.0	90 C	346 F
			1VC47C	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC50D	12126	#19/25 AWG	EPR-HYP	RETURN DAMPERS CONT	YES	0.0	90 C	346 F
			1VC50K	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC50L	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC50M	02096	#19/22 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1VC51F	12126	#19/25 AWG	EPR-HYP	DAMPER PNL CONT		0.0	90 C	346 F
			1VC51T	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC51U	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC51V	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC51W	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC56E	12126	#19/25 AWG	EPR-HYP	ISOL DAMPERS CONT	YES	0.0	90 C	346 F
			1VC56N	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC56O	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC56P	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC66A	24164	12 PR #16	TEFZEL	CONT		0.0	90 C	346 F
			1VC68A	16163	8 PR #16	EPR-HYP	CONT		0.0	90 C	346 F
			1VC68B	16163	8 PR #16	EPR-HYP	CONT		0.0	90 C	346 F
			1VC70A	24164	12 PR #16	TEFZEL	CONT		0.0	90 C	346 F
			1VC70D	04163	2 PR #16	EPR-HYP	CONT		0.0	90 C	346 F
			1VC70E	24164	12 PR #16	TEFZEL	CONT		0.0	90 C	346 F
			1VD02D	07126	#19/25 AWG	EPR-HYP	LOC PNL CONT		0.0	90 C	346 F
			1VD02E	09126	#19/25 AWG	EPR-HYP	DGR 1B S&E FANS CONT	YES	0.0	90 C	346 F
			1VD05E	07126	#19/25 AWG	EPR-HYP	EXHAUST FAN 1B CONT	YES	0.0	90 C	346 F
			1VD10J	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VD10K	04126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE	YES	0.0	90 C	346 F
			1VD18C	02126	#19/25 AWG	EPR-HYP	PNL 1PL54JB CONT		0.0	90 C	346 F
			1VF07J	09126	#19/25 AWG	EPR-HYP	ISOL DMPRS CONT		0.0	90 C	346 F
			1VF13G	04126	#19/25 AWG	EPR-HYP	LOC PNL 1PL44J CONT		0.0	90 C	346 F
			1VF86A	04164	2 PR #16	TEFZEL	CONT		0.0	90 C	346 F
			1VG32G	02126	#19/25 AWG	EPR-HYP	0PL39JB CONT		0.0	90 C	346 F
			1VG32M	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG38B	15126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG38E	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG38F	09126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG40B	15126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG95C	04164	2 PR #16	TEFZEL	CONT		0.0	90 C	346 F
			1VP20L	02096	#19/22 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VQ05B	15126	#19/25 AWG	EPR-HYP	DW PRG EXH FAN CONT		0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1VQ08L	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VQ08M	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VQ14B	12126	#19/25 AWG	EPR-HYP	DW LPE HTR B CONT		0.0	90 C	346 F
			1VR05Q	04126	#19/25 AWG	EPR-HYP	NOT IN SERVICE		0.0	90 C	346 F
			1VR05V	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VR18C	12126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VX25C	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VX28F	12126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VX28K	12126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
		▼	1VX28N	02126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VX28P	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
CB-1e	C2E	10110E	SAME AS 10109E								
CB-1e	C2E	10112E	SAME AS 10109E								
CB-1e	C2E	10113E	1AP29Q	02126	#19/25 AWG	EPR-HYP	0C GND RLY CONT	YES	0.0	90 C	346 F
			1AP60B	12126	#19/25 AWG	EPR-HYP	MISC ALM CONT		0.0	90 C	346 F
			1AP60C	03096	#19/22 AWG	EPR-HYP	PT METERING CONT		0.0	90 C	346 F
			1HG11H	03126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1HG11J	03126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1HG11K	03126	#19/25 AWG	EPR-HYP	H2 RCOMBR CONT		0.0	90 C	346 F
			1IP04A	02096	#19/22 AWG	EPR-HYP	FEED	YES	0.0	90 C	346 F
			1IP04B	02096	#19/22 AWG	EPR-HYP	FEED	YES	0.0	90 C	346 F
			1LV14A	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT		0.0	90 C	346 F
			1LV14B	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14C	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT		0.0	90 C	346 F
			1LV14D	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14E	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14F	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14G	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14H	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14J	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14K	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14L	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14M	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1LV14P	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1RA01F	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1RP35B	02096	#19/22 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1SC08G	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1SX27B	02126	#19/25 AWG	EPR-HYP	LIM SW CONT	YES	0.0	90 C	346 F
			1SX40B	09126	#19/25 AWG	EPR-HYP	LIM SW CONT	YES	0.0	90 C	346 F
			1SX51B	12126	#19/25 AWG	EPR-HYP	LIM SW CONT		0.0	90 C	346 F
			1SX51C	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX51E	12126	#19/25 AWG	EPR-HYP	LIM SW CONT		0.0	90 C	346 F
			1SX51F	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX51H	12126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1SX51J	09126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1SX51M	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX51Q	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX51T	09126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1SX52C	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX52F	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX52J	09126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1SX54L	09126	#19/25 AWG	EPR-HYP	SX MISC VLV CONT		0.0	90 C	346 F
			1SX54P	12126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC02C	12126	#19/25 AWG	EPR-HYP	SUP AIR FAN B CONT	YES	0.0	90 C	346 F
			1VC04C	12126	#19/25 AWG	EPR-HYP	RET AIR FAN B CONT	YES	0.0	90 C	346 F
			1VC06B	12126	#19/25 AWG	EPR-HYP	MUAT FAN B CONT		0.0	90 C	346 F
			1VC08B	12126	#19/25 AWG	EPR-HYP	CHILLED WP B CONT		0.0	90 C	346 F
			1VC12C	12126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC14B	15126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC25G	09126	#19/25 AWG	EPR-HYP	DMPR OPRS CONT	YES	0.0	90 C	346 F
			1VC25O	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC25P	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC25Q	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC26E	09126	#19/25 AWG	EPR-HYP	MODULATING DMPR CONT	YES	0.0	90 C	346 F
			1VC27G	09126	#19/25 AWG	EPR-HYP	DMPR OPRS CONT	YES	0.0	90 C	346 F
			1VC27O	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1VC27P	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC27Q	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC27R	02096	#19/22 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC28E	09126	#19/25 AWG	EPR-HYP	MODULATING DMPR CONT	YES	0.0	90 C	346 F
			1VC35G	15126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC35T	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC35U	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC35W	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC36G	15126	#19/25 AWG	EPR-HYP	DMPR OPRS CONT		0.0	90 C	346 F
			1VC36R	15126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC36S	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC40A	02126	#19/25 AWG	EPR-HYP	RADIATION DET CONT		0.0	90 C	346 F
			1VC40E	07126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1VC40L	07126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC45A	15126	#19/25 AWG	EPR-HYP	TC/PE/INSTR PS CONT	YES	0.0	90 C	346 F
			1VC45B	15126	#19/25 AWG	EPR-HYP	TC/PE/INSTR PS CONT	YES	0.0	90 C	346 F
			1VC45C	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC45D	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC45E	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC45F	09126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT	YES	0.0	90 C	346 F
			1VC45G	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC45H	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT	YES	0.0	90 C	346 F
			1VC46B	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC46C	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC46D	12126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC46E	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT	YES	0.0	90 C	346 F
			1VC46F	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT	YES	0.0	90 C	346 F
			1VC46G	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT	YES	0.0	90 C	346 F
			1VC47C	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC50D	12126	#19/25 AWG	EPR-HYP	RETURN DAMPERS CONT	YES	0.0	90 C	346 F
			1VC50K	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC50L	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC50M	02096	#19/ AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1VC51F	12126	#19/25 AWG	EPR-HYP	DAMPER PNL CONT		0.0	90 C	346 F
			1VC51T	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC51U	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC51V	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC51W	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC56E	12126	#19/25 AWG	EPR-HYP	ISOL DAMPERS CONT	YES	0.0	90 C	346 F
			1VC56N	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC56O	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC56P	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC66A	24164	12 PR #16	TEFZEL	CONT		0.0	90 C	346 F
			1VC68A	16163	8 PR #16	EPR-HYP	CONT		0.0	90 C	346 F
			1VC68B	16163	8 PR #16	EPR-HYP	CONT		0.0	90 C	346 F
			1VC70A	24164	12 PR #16	TEFZEL	CONT		0.0	90 C	346 F
			1VC70D	04163	2 PR #16	EPR-HYP	CONT		0.0	90 C	346 F
			1VC70E	24164	12 PR #16	TEFZEL	CONT		0.0	90 C	346 F
			1VD18D	02096	#19/22 AWG	EPR-HYP	PNL 1PL54JB CONT	YES	0.0	90 C	346 F
			1VF07J	09126	#19/25 AWG	EPR-HYP	ISOL DMPRS CONT		0.0	90 C	346 F
			1VF13G	04126	#19/25 AWG	EPR-HYP	L0C PNL 1PL44J CONT		0.0	90 C	346 F
			1VF86A	04164	2 PR #16	TEFZEL	CONT		0.0	90 C	346 F
			1VG32G	02126	#19/25 AWG	EPR-HYP	0PL39JB CONT		0.0	90 C	346 F
			1VG32M	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG38B	15126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG38E	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG38F	09126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG40B	15126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG95C	04164	2 PR #16	TEFZEL	CONT		0.0	90 C	346 F
			1VP20L	02096	#19/22 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VQ05B	15126	#19/25 AWG	EPR-HYP	DW PRG EXH FAN CONT		0.0	90 C	346 F
			1VQ14B	12126	#19/25 AWG	EPR-HYP	DW LPE HTR B CONT		0.0	90 C	346 F
			1VR05Q	04126	#19/25 AWG	EPR-HYP	NOT IN SERVICE		0.0	90 C	346 F
			1VR05V	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VR18C	12126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VX25C	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1VX28F	12126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VX28K	12126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VX28N	02126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
		▼	1VX28P	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
CB-1e	C2E	10114E	SAME AS 10109E								
CB-1e	C2E	10115E	1AP21K	02163	1 PR #16	EPR-HYP	MAIN FEED CONT	YES	0.0	90 C	346 F
			1AP21L	02126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1AP23L	02163	1 PR #16	EPR-HYP	1B1 RES FEED CONT	YES	0.0	90 C	346 F
			1AP23M	02126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1DG21A	15126	#19/25 AWG	EPR-HYP	D GEN 1B CONT	YES	0.0	90 C	346 F
			1DG21B	15126	#19/25 AWG	EPR-HYP	D GEN 1B CONT	YES	0.0	90 C	346 F
			1DG21C	15126	#19/25 AWG	EPR-HYP	D GEN 1B CONT	YES	0.0	90 C	346 F
			1DG21D	07126	#19/25 AWG	EPR-HYP	D GEN 1B CONT	YES	0.0	90 C	346 F
			1DG21F	04096	#19/22 AWG	EPR-HYP	DG 1B CONT PNL CONT	YES	0.0	90 C	346 F
			1DG21K	07126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1DG21M	07126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1DG24A	09126	#19/25 AWG	EPR-HYP	L0 CIRC PUMP CONT	YES	0.0	90 C	346 F
			1DG25A	09126	#19/25 AWG	EPR-HYP	L0 CIRC PUMP CONT	YES	0.0	90 C	346 F
			1DG26A	07126	#19/25 AWG	EPR-HYP	1DG01KB WTR HTR CONT		0.0	90 C	346 F
			1DG27A	07126	#19/25 AWG	EPR-HYP	WATER HTR H1A CONT		0.0	90 C	346 F
			1DG28A	07126	#19/25 AWG	EPR-HYP	GEN HTR H3 CONT		0.0	90 C	346 F
			1DG29B	07126	#19/25 AWG	EPR-HYP	DG 1B CONT	YES	0.0	90 C	346 F
			1DG30B	07126	#19/25 AWG	EPR-HYP	DG 1B CONT	YES	0.0	90 C	346 F
			1DG31C	04096	#19/22 AWG	EPR-HYP	252 DG 1B CONT	YES	0.0	90 C	346 F
			1DG31D	04096	#19/22 AWG	EPR-HYP	252 DG 1B CONT	YES	0.0	90 C	346 F
			1DG31E	03096	#19/22 AWG	EPR-HYP	252 DG 1B CONT	YES	0.0	90 C	346 F
			1DG31F	03096	#19/22 AWG	EPR-HYP	252 DG 1B CONT	YES	0.0	90 C	346 F
			1DG31R	02163	1 PR #16	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1DG31S	07126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1DG31T	07126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1SX31B	09126	#19/25 AWG	EPR-HYP	LIM SW CONT	YES	0.0	90 C	346 F
			1SX51B	12126	#19/25 AWG	EPR-HYP	LIM SW CONT		0.0	90 C	346 F
			1SX51E	12126	#19/25 AWG	EPR-HYP	LIM SW CONT		0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1SX51H	12126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1SX66A	02126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1VD02D	07126	#19/25 AWG	EPR-HYP	LOC PNL CONT		0.0	90 C	346 F
			1VD02E	09126	#19/25 AWG	EPR-HYP	DGR 1B S&E FANS CONT	YES	0.0	90 C	346 F
			1VD05E	07126	#19/25 AWG	EPR-HYP	EXHAUST FAN 1B CONT	YES	0.0	90 C	346 F
			1VD10J	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VD10K	04126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE	YES	0.0	90 C	346 F
			1VD18C	02126	#19/25 AWG	EPR-HYP	PNL 1PL54JB CONT		0.0	90 C	346 F
			1VD18D	02096	#19/22 AWG	EPR-HYP	PNL 1PL54JB CONT	YES	0.0	90 C	346 F
			1VQ08L	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
		▼	1VQ08M	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
CB-1e	C2E	10116E	SAME AS 10115E PLUS								
		▼	1DG21L	07126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
CB-1e	C2E	10120E	1DG21D	07126	#19/25 AWG	EPR-HYP	D GEN 1B CONT	YES	0.0	90 C	346 F
			1DG24A	09126	#19/25 AWG	EPR-HYP	L0 CIRC PUMP CONT	YES	0.0	90 C	346 F
			1DG25A	09126	#19/25 AWG	EPR-HYP	L0 CIRC PUMP CONT	YES	0.0	90 C	346 F
			1DG26A	07126	#19/25 AWG	EPR-HYP	1DG01KB WTR HTR CONT		0.0	90 C	346 F
			1DG27A	07126	#19/25 AWG	EPR-HYP	WATER HTR H1A CONT		0.0	90 C	346 F
			1DG28A	07126	#19/25 AWG	EPR-HYP	GEN HTR H3 CONT		0.0	90 C	346 F
			1DG29B	07126	#19/25 AWG	EPR-HYP	DG 1B CONT	YES	0.0	90 C	346 F
			1DG30B	07126	#19/25 AWG	EPR-HYP	DG 1B CONT	YES	0.0	90 C	346 F
			1DG31K	04126	#19/25 AWG	EPR-HYP	252 DG 1B CONT	YES	0.0	90 C	346 F
			1DO02B	09126	#19/25 AWG	EPR-HYP	DGFOT PUMP 1B CONT	YES	0.0	90 C	346 F
			1D002C	12126	#19/25 AWG	EPR-HYP	DGFOT PUMP 1B CONT		0.0	90 C	346 F
			1SX27B	02126	#19/25 AWG	EPR-HYP	LIM SW CONT	YES	0.0	90 C	346 F
			1SX29B	09126	#19/25 AWG	EPR-HYP	LIM SW CONT		0.0	90 C	346 F
			1SX29C	09126	#19/25 AWG	EPR-HYP	DW CHILLER VLV CONT		0.0	90 C	346 F
			1SX31B	09126	#19/25 AWG	EPR-HYP	LIM SW CONT	YES	0.0	90 C	346 F
			1SX31C	09126	#19/25 AWG	EPR-HYP	DG 1B OUTL VLV CONT	YES	0.0	90 C	346 F
			1SX40B	09126	#19/25 AWG	EPR-HYP	LIM SW CONT	YES	0.0	90 C	346 F
			1SX40C	09126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1SX54C	09126	#19/25 AWG	EPR-HYP	VLV TST & ALM CONT		0.0	90 C	346 F
			1VC25G	09126	#19/25 AWG	EPR-HYP	DMPR OPRS CONT	YES	0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1VC25O	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC25P	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC25Q	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC26E	09126	#19/25 AWG	EPR-HYP	MODULATING DMPR CONT	YES	0.0	90 C	346 F
			1VC27G	09126	#19/25 AWG	EPR-HYP	DMPR OPRS CONT	YES	0.0	90 C	346 F
			1VC27O	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC27P	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC27Q	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC27R	02096	#19/22 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC28E	09126	#19/25 AWG	EPR-HYP	MODULATING DMPR CONT	YES	0.0	90 C	346 F
			1VC35G	15126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC35T	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC35U	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC35W	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC36G	15126	#19/25 AWG	EPR-HYP	DMPR OPRS CONT		0.0	90 C	346 F
			1VC36R	15126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC36S	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC50D	12126	#19/25 AWG	EPR-HYP	RETURN DAMPERS CONT	YES	0.0	90 C	346 F
			1VC50K	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC50L	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC50M	02096	#19/22 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC51F	12126	#19/25 AWG	EPR-HYP	DAMPER PNL CONT		0.0	90 C	346 F
			1VC51T	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC51U	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC51V	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC51W	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC56E	12126	#19/25 AWG	EPR-HYP	ISOL DAMPERS CONT	YES	0.0	90 C	346 F
			1VC56N	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC56O	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VC56P	04126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VD02F	04126	#19/25 AWG	EPR-HYP	D G 1B PANEL CONT		0.0	90 C	346 F
			1VD05B	12126	#19/25 AWG	EPR-HYP	D G EXH FAN 1B CONT	YES	0.0	90 C	346 F
			1VD05C	07126	#19/25 AWG	EPR-HYP	D G EXH FAN 1B CONT		0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1VD05E	07126	#19/25 AWG	EPR-HYP	EXHAUST FAN 1B CONT	YES	0.0	90 C	346 F
			1VQ08E	12126	#19/25 AWG	EPR-HYP	DW PURGE DMPRS CONT		0.0	90 C	346 F
			1VQ08H	12126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VQ08L	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
		▼	1VQ08M	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
CB-1e	K2E	10109F	1DG80A	04163	2 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1DO78A	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1DO78B	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1VC83D	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC83F	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC83G	03164	#16 AWG	TEFZEL	SIGNAL		0.0	90 C	346 F
			1VC86B	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC86C	03164	#16 AWG	TEFZEL	SIGNAL		0.0	90 C	346 F
			1VC87B	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC91Q	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1VC91R	02163	1 PR #16	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1VC93D	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC94B	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC94E	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC95F	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
		▼	1VD10P	02164	1 PR #16	TEFZEL	SIGNAL	YES	0.0	90 C	346 F
CB-1e	K2E	10110F	SAME AS 10109F								
CB-1e	K2E	10112F	SAME AS 10109F								
CB-1e	K2E	10113F	1VC83D	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC83F	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC83G	03164	#16 AWG	TEFZEL	SIGNAL		0.0	90 C	346 F
			1VC86B	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC86C	03164	#16 AWG	TEFZEL	SIGNAL		0.0	90 C	346 F
			1VC87B	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC91Q	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1VC91R	02163	1 PR #16	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1VC93D	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC94B	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
		▼	1VC94E	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC95F	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
CB-1e	K2E	10114F	1DG80A	04163	2 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1DO78A	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1DO78B	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
		▼	1VD10P	02164	1 PR #16	TEFZEL	SIGNAL	YES	0.0	90 C	346 F
CB-1e	K2E	10115F	SAME AS 10114F								
CB-1e		C03119	1DG80A	04163	2 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
CB-1e	K2E	10116F	1DG76A	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1DG76B	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1DO78A	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1DO78B	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
		▼	1VD10P	02164	1 PR #16	TEFZEL	SIGNAL	YES	0.0	90 C	346 F
CB-1f	P2E	10R60	SAME AS 10113D								
CB-1f	C2E	10R61	SAME AS 10113D PLUS								
			1VC57S	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
		▼	1VC57T	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
CB-1f	K2E	10R62	1VC83D	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC83F	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC83G	03164	#16 AWG	TEFZEL	SIGNAL		0.0	90 C	346 F
			1VC86B	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC86C	03164	#16 AWG	TEFZEL	SIGNAL		0.0	90 C	346 F
			1VC87B	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC91A	03163	#16 AWG	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1VC91E	03163	#16 AWG	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1VC91G	03163	#16 AWG	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1VC91J	03163	#16 AWG	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1VC91L	03163	#16 AWG	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1VC91N	03164	#16 AWG	TEFZEL	SIGNAL	YES	0.0	90 C	346 F
			1VC91Q	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1VC91R	02163	1 PR #16	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1VC93D	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC94B	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F

Cables Protected by Thermo-Lag

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1VC94E	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC95D	04163	2 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1VC95E	04163	2 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
		▼	1VC95F	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
CB-1f	C2E	10R51	SAME AS 10199E PLUS								
		▼	1SX66A	02126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
CB-1f	C2E	10200E	SAME AS 10199E								
CB-1f	C2E	10199E	1AP21K	02163	1 PR #16	EPR-HYP	MAIN FEED CONT	YES	0.0	90 C	346 F
			1AP21L	02126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1AP23L	02163	1 PR #16	EPR-HYP	1B1 RES FEED CONT	YES	0.0	90 C	346 F
			1AP23M	02126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1AP29Q	02126	#19/25 AWG	EPR-HYP	0C GND RLY CONT	YES	0.0	90 C	346 F
			1AP60B	12126	#19/25 AWG	EPR-HYP	MISC ALM CONT		0.0	90 C	346 F
			1AP60C	03096	#19/22 AWG	EPR-HYP	PT METERING CONT		0.0	90 C	346 F
			1CM07L	02096	#19/22 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1CZ02B	02096	#19/22 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1DG21A	15126	#19/25 AWG	EPR-HYP	D GEN 1B CONT	YES	0.0	90 C	346 F
			1DG21B	15126	#19/25 AWG	EPR-HYP	D GEN 1B CONT	YES	0.0	90 C	346 F
			1DG21C	15126	#19/25 AWG	EPR-HYP	D GEN 1B CONT	YES	0.0	90 C	346 F
			1DG21F	04096	#19/22 AWG	EPR-HYP	DG 1B CONT PNL CONT	YES	0.0	90 C	346 F
			1DG21K	07126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1DG21M	07126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1DG31C	04096	#19/22 AWG	EPR-HYP	252 DG 1B CONT	YES	0.0	90 C	346 F
			1DG31D	04096	#19/22 AWG	EPR-HYP	252 DG 1B CONT	YES	0.0	90 C	346 F
			1DG31E	03096	#19/22 AWG	EPR-HYP	252 DG 1B CONT	YES	0.0	90 C	346 F
			1DG31F	03096	#19/22 AWG	EPR-HYP	252 DG 1B CONT	YES	0.0	90 C	346 F
			1DG31K	04126	#19/25 AWG	EPR-HYP	252 DG 1B CONT	YES	0.0	90 C	346 F
			1DG31R	02163	1 PR #16	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1DG31S	07126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1DG31T	07126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1DO02B	09126	#19/25 AWG	EPR-HYP	DGFOT PUMP 1B CONT	YES	0.0	90 C	346 F
			1DO02C	12126	#19/25 AWG	EPR-HYP	DGFOT PUMP 1B CONT	YES	0.0	90 C	346 F
			1HG11E	12126	#19/25 AWG	EPR-HYP	H2 RECOMBINER 2 CONT		0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1HG11F	12126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1HG11L	03126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1IP04A	02096	#19/22 AWG	EPR-HYP	FEED	YES	0.0	90 C	346 F
			1IP04B	02096	#19/22 AWG	EPR-HYP	FEED	YES	0.0	90 C	346 F
			1LD08J	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1LV14A	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT		0.0	90 C	346 F
			1LV14B	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14C	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT		0.0	90 C	346 F
			1LV14D	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14E	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14F	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14G	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14H	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14J	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14K	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14L	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14M	02096	#19/22 AWG	EPR-HYP	120V DISTR PNL CONT	YES	0.0	90 C	346 F
			1LV14P	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1PS10N	07126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1PS10P	07126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1PS10S	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1PS10T	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1RA01F	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1RH04J	07126	#19/25 AWG	EPR-HYP	RHR PWR FEEDS CONT		0.0	90 C	346 F
			1RH34D	03126	#19/25 AWG	EPR-HYP	POT CONT		0.0	90 C	346 F
			1RH57D	07126	#19/25 AWG	EPR-HYP	SOL CONT		0.0	90 C	346 F
			1RH65A	02126	#19/25 AWG	EPR-HYP	SOL CONT		0.0	90 C	346 F
			1RI19C	12126	#19/25 AWG	EPR-HYP	STM IB ISOL VLV CONT	YES	0.0	90 C	346 F
			1RP35B	02096	#19/22 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1SC02G	15126	#19/25 AWG	EPR-HYP	1H13-P702A		0.0	90 C	346 F
			1SC08G	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1SF07A	07126	#19/25 AWG	EPR-HYP	SF-SL-I/I-VLV CONT		0.0	90 C	346 F
			1SX29B	09126	#19/25 AWG	EPR-HYP	LIM SW CONT		0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1SX29C	09126	#19/25 AWG	EPR-HYP	DW CHILLER VLV CONT		0.0	90 C	346 F
			1SX31C	09126	#19/25 AWG	EPR-HYP	DG 1B OUTL VLV CONT	YES	0.0	90 C	346 F
			1SX40C	09126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1SX51C	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX51F	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX51J	09126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1SX51M	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX51Q	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX51T	09126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1SX52C	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX52F	09126	#19/25 AWG	EPR-HYP	SBGT DELUGE VLV CONT		0.0	90 C	346 F
			1SX52J	09126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1SX54C	09126	#19/25 AWG	EPR-HYP	VLV TST & ALM CONT		0.0	90 C	346 F
			1SX54L	09126	#19/25 AWG	EPR-HYP	SX MISC VLV CONT		0.0	90 C	346 F
			1SX54P	12126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC02C	12126	#19/25 AWG	EPR-HYP	SUP AIR FAN B CONT	YES	0.0	90 C	346 F
			1VC04C	12126	#19/25 AWG	EPR-HYP	RET AIR FAN B CONT	YES	0.0	90 C	346 F
			1VC06B	12126	#19/25 AWG	EPR-HYP	MUAT FAN B CONT		0.0	90 C	346 F
			1VC08B	12126	#19/25 AWG	EPR-HYP	CHILLED WP B CONT		0.0	90 C	346 F
			1VC12C	12126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC14B	15126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC40A	02126	#19/25 AWG	EPR-HYP	RADIATION DET CONT		0.0	90 C	346 F
			1VC40E	07126	#19/25 AWG	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1VC40L	07126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC45A	15126	#19/25 AWG	EPR-HYP	TC/PE/INSTR PS CONT	YES	0.0	90 C	346 F
			1VC45B	15126	#19/25 AWG	EPR-HYP	TC/PE/INSTR PS CONT	YES	0.0	90 C	346 F
			1VC45C	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC45D	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC45E	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC45F	09126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT	YES	0.0	90 C	346 F
			1VC45G	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC45H	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT	YES	0.0	90 C	346 F
			1VC46B	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1VC46C	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC46D	12126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT		0.0	90 C	346 F
			1VC46E	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT	YES	0.0	90 C	346 F
			1VC46F	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT	YES	0.0	90 C	346 F
			1VC46G	15126	#19/25 AWG	EPR-HYP	TC/G X/PLT ELEC CONT	YES	0.0	90 C	346 F
			1VC47C	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VC66A	24164	12 PR #16	TEFZEL	CONT		0.0	90 C	346 F
			1VC68A	16163	8 PR #16	EPR-HYP	CONT		0.0	90 C	346 F
			1VC68B	16163	8 PR #16	EPR-HYP	CONT		0.0	90 C	346 F
			1VC70A	24164	12 PR #16	TEFZEL	CONT		0.0	90 C	346 F
			1VC70D	04163	2 PR #16	EPR-HYP	CONT		0.0	90 C	346 F
			1VC70E	24164	12 PR #16	TEFZEL	CONT		0.0	90 C	346 F
			1VD02D	07126	#19/25 AWG	EPR-HYP	LOC PNL CONT		0.0	90 C	346 F
			1VD02E	09126	#19/25 AWG	EPR-HYP	DGR 1B S&E FANS CONT	YES	0.0	90 C	346 F
			1VD02F	04126	#19/25 AWG	EPR-HYP	D G 1B PANEL CONT		0.0	90 C	346 F
			1VD05B	12126	#19/25 AWG	EPR-HYP	D G EXH FAN 1B CONT	YES	0.0	90 C	346 F
			1VD05C	07126	#19/25 AWG	EPR-HYP	D G EXH FAN 1B CONT		0.0	90 C	346 F
			1VD18C	02126	#19/25 AWG	EPR-HYP	PNL 1PL54JB CONT		0.0	90 C	346 F
			1VF07J	09126	#19/25 AWG	EPR-HYP	ISOL DMPRS CONT		0.0	90 C	346 F
			1VF13G	04126	#19/25 AWG	EPR-HYP	LOC PNL 1PL44J CONT		0.0	90 C	346 F
			1VF86A	04164	2 PR #16	TEFZEL	CONT		0.0	90 C	346 F
			1VG02B	15126	#19/25 AWG	EPR-HYP	SGTSET EF B CONT		0.0	90 C	346 F
			1VG02C	07126	#19/25 AWG	EPR-HYP	SGTSET EF B CONT		0.0	90 C	346 F
			1VG04B	09126	#19/25 AWG	EPR-HYP	SGTSET CF B CONT		0.0	90 C	346 F
			1VG04C	12126	#19/25 AWG	EPR-HYP	SGTSET CF B CONT		0.0	90 C	346 F
			1VG06B	15126	#19/25 AWG	EPR-HYP	SGTSET EH B CONT		0.0	9 C	346 F
			1VG08C	09126	#19/25 AWG	EPR-HYP	SGTSET B MID CONT		0.0	90 C	346 F
			1VG08G	09126	#19/25 AWG	EPR-HYP	SGTSET B MID CONT		0.0	90 C	346 F
			1VG12F	12126	#19/25 AWG	EPR-HYP	SGTSET B DID CONT		0.0	90 C	346 F
			1VG18C	12126	#19/25 AWG	EPR-HYP	SGTSET B EFDD CONT		0.0	90 C	346 F
			1VG20F	12126	#19/25 AWG	EPR-HYP	INLT DMPR CONT		0.0	90 C	346 F
			1VG26F	12126	#19/25 AWG	EPR-HYP	SGTSET B DMPR CONT		0.0	90 C	346 F
			1VG32G	02126	#19/25 AWG	EPR-HYP	0PL39JB CONT		0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1VG32H	15126	#19/25 AWG	EPR-HYP	0PL39JB CONT		0.0	90 C	346 F
			1VG32J	12126	#19/25 AWG	EPR-HYP	0PL39JB CONT		0.0	90 C	346 F
			1VG38C	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG40C	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VG91B	08163	4 PR #16	EPR-HYP	CONT		0.0	90 C	346 F
			1VG92B	16163	8 PR #16	EPR-HYP	CONT		0.0	90 C	346 F
			1VG93B	04163	2 PR #16	EPR-HYP	CONT		0.0	90 C	346 F
			1VG93C	04164	2 PR #16	TEFZEL	CONT		0.0	90 C	346 F
			1VG95C	04164	2 PR #16	TEFZEL	CONT		0.0	90 C	346 F
			1VG95E	04163	2 PR #16	EPR-HYP	CONT		0.0	90 C	346 F
			1VQ05B	15126	#19/25 AWG	EPR-HYP	DW PRG EXH FAN CONT		0.0	90 C	346 F
			1VQ08E	12126	#19/25 AWG	EPR-HYP	DW PURGE DMPRS CONT		0.0	90 C	346 F
			1VQ14B	12126	#19/25 AWG	EPR-HYP	DW LPE HTR B CONT		0.0	90 C	346 F
			1VR05Q	04126	#19/25 AWG	EPR-HYP	NOT IN SERVICE		0.0	90 C	346 F
			1VR05V	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VR18C	12126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VX25C	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VX28F	12126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VX28K	12126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VX28N	02126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
			1VX28P	02126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
			1VY05D	07126	#19/25 AWG	EPR-HYP	RHR HT EXCH FAN CONT		0.0	90 C	346 F
			1VY06F	07126	#19/25 AWG	EPR-HYP	RHR PMP RM FAN CONT		0.0	90 C	346 F
			1VY07F	07126	#19/25 AWG	EPR-HYP	RHR PMP RM FAN CONT		0.0	90 C	346 F
			1VY11A	02126	#19/25 AWG	EPR-HYP	L9C PNL 1PL61JC CONT		0.0	90 C	346 F
		▼	1VY13C	04126	#19/25 AWG	EPR-HYP	CONT		0.0	90 C	346 F
CB-1f	C2E	10R138	SAME AS 10199E								
CB-1f	K2E	10R50	SAME AS 10199F								
CB-1f	K2E	10200F	SAME AS 10199F								
CB-1f	K2E	10199F	1DG80A	04163	2 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1DO78A	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1DO78B	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1LD26E	02166	1PR#16 CRC	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1LD26F	02166	1PR#16 CRC	EPR-HYP		YES	0.0	90 C	346 F
			1LD26G	02166	1PR#16 CRC	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1LD28A	02166	1PR#16 CRC	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1LD28B	02166	1PR#16 CRC	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1LD28C	02166	1PR#16 CRC	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1LD28D	02166	1PR#16 CRC	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1LD44D	02166	1PR#16 CRC	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1LD44E	02166	1PR#16 CRC	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1LD44F	02166	1PR#16 CRC	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1LD45D	02166	1PR#16 CRC	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1LD45E	02166	1PR#16 CRC	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1LD45F	02166	1PR#16 CRC	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1LD61D	02166	1PR#16 CRC	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1LD61E	02166	1PR#16 CRC	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1LD61F	02166	1PR#16 CRC	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC83D	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC83F	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC83G	03164	#16 AWG	TEFZEL	SIGNAL		0.0	90 C	346 F
			1VC86B	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC86C	03164	#16 AWG	TEFZEL	SIGNAL		0.0	90 C	346 F
			1VC87B	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC91Q	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1VC91R	02163	1 PR #16	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1VC93D	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC94B	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC94E	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VC95F	02163	1 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
			1VG77A	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VG81A	02163	1 PR #16	EPR-HYP	V1A CTB		0.0	90 C	346 F
			1VG82A	02163	1 PR #16	EPR-HYP	V1A CTA		0.0	90 C	346 F
			1VG85A	02163	1 PR #16	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F
			1VG85B	03163	#16 AWG	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VG86A	02163	1 PR #16	EPR-HYP	ABANDONED-SPARE		0.0	90 C	346 F

Firezone	Raceway	Cable Route Point	Cable Number	Type Code	Cable Size	Insulation Material	Cable Function	Safe Shutdown?	Full Load Amps	Cable Operating Temp.	Max. Temp. Limit
			1VG86B	03163	#16 AWG	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VG87C	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VG88C	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
		▼	1VG88D	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
			1VG88F	02163	1 PR #16	EPR-HYP	SIGNAL		0.0	90 C	346 F
CB-1f	K2E	10R137	SAME AS 10199F								
CB-1g		C03222	1NB65J	02164	1 PR #16	TEFZEL	SIGNAL	YES	0.0	90 C	346 F
			1RH79E	04163	2 PR #16	EPR-HYP	SIGNAL	YES	0.0	90 C	346 F
		▼	1RP76E	02164	1 PR #16	TEFZEL	SIGNAL	YES	0.0	90 C	346 F
CB-4		C0739	1RP02C	04201	#2/0 AWG	EPR-HYP	NSPS INV/STATIC BYPASS SW B, 1C71-S001B	YES	80.0	90 C	346 F
CB-4		C0741	1RP02H	03061	#6 AWG	EPR-HYP	480VAC TO NSPS DIV2 REG ISO XFMR 1RP02	YES	0.1	90 C	346 F
		▼	1VX28E	03091	#19/22 AWG	EPR-HYP	DIV 2 INV. RM CUBICLE COOLER FAN, 1VX13	YES	0.6	90 C	346 F
CB-5a		C0734	1RP01C	03101	#1/0 AWG	EPR-HYP	NSPS INV/STATIC BYPASS SW A, 1C71-S001A	YES	80.0	90 C	346 F
CB-5a		C0817	1RP01C	03101	#1/0 AWG	EPR-HYP	NSPS INV/STATIC BYPASS SW A, 1C71-S001A	YES	80.0	90 C	346 F
CB-5a		C0735	1RP01H	03061	#6 AWG	EPR-HYP	480VAC TO NSPS DIV 1 REG ISO XFMR 1RP01	YES	0.1	90 C	346 F
CB-5a		C0818	1RP01H	03061	#6 AWG	EPR-HYP	480VAC TO NSPS DIV 1 REG ISO XFMR 1RP01	YES	0.1	90 C	346 F
CB-5a		1PB0118	1RP01C	03101	#1/0 AWG	EPR-HYP	NSPS INV/STATIC BYPASS SW A, 1C71-S001A	YES	80.0	90 C	346 F
		▼	1RP01H	03061	#6 AWG	EPR-HYP	480VAC TO NSPS DIV 1 REG ISO XFMR 1RP01	YES	0.1	90 C	346 F
CB-5a		C02964	1CM09G	03061	#6 AWG	EPR-HYP	FEED		0.3	90 C	346 F
			1CM09J	03061	#6 AWG	EPR-HYP	FEED		0.3	90 C	346 F
		▼	1RM16A	03061	#6 AWG	EPR-HYP	FEED		24.0	90 C	346 F
CB-5a		C0723	1VX24A	03091	#19/22 AWG	EPR-HYP	SWGR HEAT REMOVAL RET FAN A, 1VX12CA	YES	4.6	90 C	346 F
CB-5a		house power									
CB-5a		house power									
CB-6d		C02999	1AP28T	03355	350 MCM	EPR-HYP	4.16 BUS 1A1 BKR TO 480V AUX XFMR A1	YES	104.2	90 C	346 F
CB-6d		1C03001	1AP34J	03101	#1/0 AWG	EPR-HYP	125VDC CONT PWR TO 480V UNIT SUB 1A	YES	48.0	90 C	346 F
CB-6d		1C03002	1AP28U	02126	#19/25 AWG	EPR-HYP	CONT	YES	0.0	90 C	346 F
D-8		C92118	1DG31A	03755	750 MCM	EPR-HYP	DG 1B OUTPUT TO 4.16 BUS 1B1	YES	338.3	90 C	346 F
D-8		C92120	1DG31B	03755	750 MCM	EPR-HYP	DG 1B OUTPUT TO 4.16 BUS 1B1	YES	338.3	90 C	346 F
F-1p		-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

Probabilistic Risk Assessment (PRA) Methodology

Because the fire PRA is not complete, the evaluation performed is conservative.

The fire PRA has three major steps for each fire zone. They are:

1) To identify the frequency of fire ignition in the zone, based on the components and transients in the zone.

2) Assuming that a fire does occur in a zone, to determine the conditional probability of core damage based on the following two very conservative assumptions:

   a) The probability of a fire occurring in each area of concern is 1.0.

   b) The fire destroys all the cables and components in the area of concern.

3) For those areas which cannot be shown to be unimportant contributors to core damage risk based on steps 1 and 2, to determine the likely extent of damage to components from postulated fires based on fire loading, suppression, fire brigade actions, etc.

At this point, steps 1 and 2 have been completed for all zones. This Thermo-Lag analysis is based on steps 1 and 2. It is expected that the impact in some areas will be less when step 3 is included.