Conduct of Engineering
Request for Variance or Alternate Method

To display the *VAR Request Metadata* pane for this document, click **File > Info > Properties > Show Document Panel.**

1.0 General

1.1 Document Number: VAR-10139	1.2 Revision: 0

1.3 Brief Descriptive Title: Dedicated Equipment-grounding Conductors and Raceways	
1.4 Affected Program: Engineering Standards	1.5 Request Type: Variance
1.6a Affected Tech Area 99	1.6b Affected Buildings Sitewide
1.7 Requestor: Posegate, Benjamin Charles Organization: MOF-CM-CE	

1.8 Revision History
Revision Number   Changes and Comments
R0   Initial issue

2.0 Affected Conduct of Engineering Program/Documents

2.1 Affected "P" Document: P342 Engineering Standards If against the P document itself, revision (or **N/A**): N/A	2.2 Subordinate or related document(s) [AP, master spec, LANL ESM chapter & section; or code, Order, standard, etc.]: Document Title/No.: D5010, Electrical Service & Distribution Revision 5
2.3 Section/Paragraph: Section 3.1.L.2	
2.4 Specific Requirement(s) as Written in the Document(s): Connect a maximum of two double duplex PC receptacles per 20-amp circuit. Install a dedicated grounded conductor for each circuit (no multi-wire branch circuits). Install a dedicated equipment-grounding conductor for each circuit. Install branch circuits to PC receptacles in separate raceways from general-purpose receptacles.	
2.5 Contractual, preference, or other basis for requirement: Preference based on recommendations from IEEE 1100.	

2.6 Type of VAR from ESM Chap 1, Z10 [*Applies only to standards variances*) Type 2	2.7 Discipline Electrical

3.0 Request Information & Comments

3.1 NCR required (work has occurred)?   No
    If Yes, NCR Number: Enter text.

3.2 System/Component Affected

OpSystem Acronym & Name ED_Electrical Distribution

System Number or Name   [Select SystemNumberOrName]

3.3 Highest ML Level

ML-4

3.4 Proposal with Justification/Compensatory Measures:

The ESM requires the installation of dedicated equipment-grounding conductors for PC receptacles. It also requires branch circuits to PC receptacles to be installed in separate raceways.

Proposal: Remove this requirement for office and general process locations where sensitive electronics and instrumentation are not powered from the same panel as the PC receptacles. These requirements are no longer necessary as the technology used in modern PC power supplies greatly reduce the amplitude of the harmonic frequencies generated. The risk of interference to other equipment in office and general process locations is very low.

3.5 Attachments

    Document Title or Description N/A

3.6a Project ID	3.6b: Project Name
N/A	N/A

3.7 Duration:	3.8a Finite Period Start Date:	3.8b End Date:
Lifetime	Click to enter a date.	Click to enter a date

3.8c When finite life, provide the PFITS number for tracking removal/correction: [PFITSNum]

3.9 USQD/USID required (Nuclear, High/Mod Hazard)?   No
    If Yes, USQD/USID Number   Click here to enter text.

3.10 QA Review for process change matters potentially affecting LANL's NQA-1 implementation

    Is a QPA Determination required?: No   If **Yes**, then: Choose an item.

QPA Comments: Enter text..

3.11 POC Determination: Accept
        POC Comments: Enter text..

3.12 Management Program Owner's (SMPO) Approval for P341 and APs; P342, ESM, ML-1 and -2, and Contract Matters; and P343

SMPO Determination: Accept
    Comments: Enter text..

4.0 Participant Signatures   **NOTE***: DO NOT ADD NAMES FROM WITHIN WORD! Save and close the form first, then do 1-4 below:*

1. From the SharePoint library, select the document, then click the **ellipsis (…)** in the second column; a small dialog appears
2. In the small dialog click the **ellipsis** again
3. Click **Edit Properties** and check out the document if prompted toEnter names using the controls provided, then **Save**

	Organization	Signature
4.1 POC (Management Program Owner's Representative): Stromberg, Eric R	ES-EPD	
4.2 Facility Design Authority Representative [FDARName] FDAR signature not required ☒	Enter text..	
4.3 LANL Owning Manager (FOD or R&D/Program) [FODorPrgmMgrName] FOD or Program Manager signature not required ☒	Enter text..	
4.4 Quality Reviewer's Name: [QPAName] QPA review/signature not required ☒	Enter text.	
4.5 Safety or Security Management Program Owner's Approval for P341 and APs; P342, ESM and Contract Matters; and P343 Goen, Lawrence Kenneth SMPO signature not required (Type 1 variance) ☐	ES-DO	
4.6 Additional Signer 1 [AdditionalSigner1] Role: Enter text.	Enter text.	

4.7 Additional Signer 2 [AdditionalSigner2] Role: Enter text.	Organization Enter text.	Signature

4.8 CoE Administrator Signature Salazar-Barnes, Christina L NOTE: The CoE Admin is always the last signature placed on this document. The date of that signing is the date of this document.	Signature