



Conduct of Engineering Request for Variance or Alternate Method

Assigned by SMPO or SMPOR: [X] Alternate Method [] Variance

Tracking number VAR- 2015-058

1.0 Affected Document(s)

Form with checkboxes for Engineering Processes, Standards, and Training, and fields for document title and revision.

Section/Para: Figure 1. IBC Program Three-Tiered Admin Approach Flowchart. Specific Requirement(s): Flowchart directs all Level 2 Alterations to follow Highest Risk requirements (full admin program)

2.0 Request

Brief descriptive title: Circuit additions -- reduced admin controls. NCR required (work has occurred)? [] Yes [] No. If Yes, NCR Number. TA-Bldg-(Room) and/or Project Affected. System/Component Affected.

Proposal: Reduced administrative controls when adding ML-4 electrical circuits in panels of existing buildings may be employed provided they do not exceed 230V, 50A, or 75 KVA per circuit. The required admin controls shall be: The grounding system must be sound. In lieu of the normal Level 2-driven "High Risk" administrative requirements in IBC-GEN, the following alternate methods are allowed: Design work shall be performed and checked by technically competent individuals and bear signatures of both. Permitting will consist of the PRID and/or work control processes. Inspection shall be done by a qualified electrical worker or P101-13 qualified inspector, and shall include a polarity check. Final acceptance and evidence of inspection shall be by way of the completed post-mod testing (PMT). Panel schedule shall be updated.

Justification/Compensatory Measures: All code technical requirements shall be met. ESM Chapter 16, IBC-GEN considers large electrical loads to be 75 kVA and above based on ESM Chapter 7 Section D5000 requirements for formal design when over 100A (~75 kVA). P101-13, Electrical Safety Program, P101-13 Class 1.2A uses 230V/125 kVA as a threshold in hazard control. Latest P101-13 draft is similar to D5000 by requiring formal design and inspection for new or modified branch circuit exceeding 100 amps; branch circuit of any size when the grounding system integrity of existing or proposed panelboard loads is unknown; new or modified feeder circuit, including installation of transformers or generators; or new or modified service; and any other work requiring an inspection as determined by the DAR or Facility Engineer at each respective FOD. NMAC 14.5.2 (Permits), para 10.K.1, notes that "installation with a calculated service capacity over 100 kVA single-phase or over 225 kVA three phase must be stamped by an electrical engineer." The implication is that work under those thresholds is lower risk.

Duration of Request: Start Date: End Date: [X] Lifetime

Requestor Tobin Oruch	Z Number 120812	Organization ES-DO	Signature On original	Date 7/16/15
USQD/USID required (Nucl. High/Mod Hazard)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If Yes, USQD/USID Number		
Design Authority Representative Larry Goen	Z Number 106351	Organization ES-DO	Signature On original	Date 7/16/15
LANL Owning Manager (FOD or Programmatic) Larry Goen	Z Number 106351	Organization ES-DO	Signature On original	Date 7/16/15

3.0 Safety Management Program Owner (SMPO) Representative (SMPOR/POC)

<input type="checkbox"/> Decline <input type="checkbox"/> Accept <input checked="" type="checkbox"/> Accept Labwide <input type="checkbox"/> with Modification:			
POC Tobin Oruch	Z Number 120812	Signature On original	Date 7/16/15

4.0 Additional Approval for P341 and APs; P342, ESM, Code, and Regulation Matters; and P343

<input checked="" type="checkbox"/> Accepted <input type="checkbox"/> Accepted with comments <input type="checkbox"/> Declined			
Comments:			
Safety or Security Management Program Owner Larry Goen	Z Number 106351	Signature On original	Date 7/16/15