



Conduct of Engineering Request for Variance or Alternate Method

Assigned by SMPO or SMPOR: Alternate Method Variance

Tracking number **VAR-2011-019.1**

1.0 Affected Document(s)

<input type="checkbox"/> Engineering Processes (e.g., P 341) <input checked="" type="checkbox"/> Engineering Standards (e.g., P 342) <input type="checkbox"/> Engineering Training & Qualification (e.g., P 343)	Subordinate (Functional Series) document if applicable (ESM Chapter, Master Spec, AP, etc.): Document Title/Number: ESM Chapter 17, "Pressure Safety" Revision: 3
If against P documents themselves, revision: _____	

Section/Para

10.0 "Pressure System Deficiency Disposition Requirements for Existing Pressure Systems"

Specific Requirement(s) as Written in the Document(s)

ESM Chapter 17 "Pressure Safety", 10.0 "Pressure System Deficiency Disposition Requirements for Existing Pressure Systems"

"E. For the risk category examples in the table above, perform the following corrective actions (graded by FS category). Along with the corrective actions identified below, grace periods are provided which define the time frame during which the corrective action is to be implemented. Longer grace periods may be granted by the CPSO on a case-by-case basis using the variance process."

References "Table 10-1 Deficiency Risk Level Bins"

"F. The tables below provide standard/default dispositions for Risk Level 2 and 3 deficiencies. Alternatively, for these deficiency bins and where explicitly authorized below, a risk-based engineering evaluation may be performed in accordance with Appendix E to establish the required corrective action. These evaluations must be performed by a qualified design engineer (see Section 3.0.A) and approved by a qualified pressure safety officer (see Section 3.0.C)."

References tables labeled "Risk Level 1 – High", "Risk Level 2 – Moderate", and "Risk Level 3 – Low"

2.0 Request

Brief descriptive title: Deactivation of Pressure System Allowed as Alternative Method to Close Deficiencies	
NCR required (work has occurred)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If Yes, NCR Number:
TA-Bldg-(Room) and/or Project Affected N/A	System/Component Affected N/A
<p>Proposal</p> <p>Allow permanent deactivation and/or disassembly of an uncertified pressure system to satisfy Section 10.0 paragraphs E and F for all risk levels and fluid services. This approach would be an acceptable basis for resolving pressure system deficiencies identified in legacy systems.</p>	
<p>Justification/Compensatory Measures</p> <p>Permanently deactivating and/or disassembling a pressure system renders the pressure system safe, and no longer a</p>	

personnel hazard. Consequently, no further actions are required to resolve pressure safety deficiencies addressed by ESM Chapter 17, Section 10. However, if the system is to be reactivated in the future, any pressure safety issue must be resolved prior to return to service.

ESM Chapter 17 "Pressure Safety", 10.0 "Pressure System Deficiency Disposition Requirements for Existing Pressure Systems", paragraph H, allows an Alternate Method to address system deficiencies.

"H. Alternate Method/Variance Approval

1. Approval of an alternate method or variance can occur under the following circumstances:
 - a. To permit continued operation prior to correction of deficiencies
 - b. To permit a long-term operation with a condition that deviates from this document.
2. Approval is requested per ESM Chapter 1 Section Z10. System Owner must submit a Conduct of Engineering Request for Variance or Alternate Method, LANL Form 2137, ideally using the ES Division Engineering Service Request System available from ES-Div homepage.
3. The alternate method or variance (with duration, if applicable) must be approved by the CPSO and the Site Chief Engineer.
4. Approval of an alternate method must be based on establishing a level of worker safety consistent with the requirements of 10 CFR 851."

Section 9.F provides requirements for deactivating or disassembling a certified system.

9.0 "Pressure System Certification Process"

"F. Deactivating a Pressure System

1. The responsible System Owner safes the particular pressure system which includes:
 - a. Removing hazardous materials from the system.
 - b. Reducing system pressure to ambient
 - c. Disconnecting the system from all pressure sources.
2. The PSO reviews the system and if the deactivation is acceptable updates the certification tracking database with date of deactivation.
3. The PSO submits note into pressure system documentation package that system is not active, and maintains package in IRM document control repository.
4. The PSO annotates the Pressure System Certification Status Form with the date the system became inactive and places the "Inactive" sticker on the system identification tag.
5. PSO informs the CPSO that the pressure has been deactivated, and inactivates the related components in CMMS ("PassPort").
6. CPSO or delegate updates certification tracking database showing the system as inactive.
7. If system is to be disassembled perform the following:
 - a. Notify IRM that documentation may be archived.
 - b. The database tracking system entries must be archived.
 - c. The identification tag must be returned to the PSO."

Paragraph 9.F was written for systems which have already achieved certification. The following steps shall be followed for systems that will be deactivated prior to certification:

Note: In the context of this alternate method, it is understood that the system is being deactivated as an interim step prior to disassembly and removal. Based on this intent, the deficiencies being tracked in PFITS can be closed. However, if the intent is to deactivate with the intention of return to service at a later date, the PFITS issues must remain open and actions must be completed prior to return to service.

1. If the system is being deactivated (removed from service) with the intent of disassembling in the future, the responsible System Owner safes the pressure system as follows:
 - a. Removing hazardous materials from the system.
 - b. Reducing system pressure to ambient
 - c. Disconnecting the system from all pressure sources.
 - d. Place an "inactive" sticker on the identification tag

- e. Close the PFITS issues, indicating that the system has been deactivated with the intent of disassembling in the future (If there is an expectation that the system may be re-activated in the future, the PFITS issues must remain open and the action due date can be extended based on having placed the system in a safe configuration).
2. If the system is to be disassembled, perform the following (If the system is re-assembled in the future, it will be subject to the provisions for certification of a new system):
- Close the PFITS issues associated with the pressure system.
 - The pressure safety database tracking system entries must be archived by the CPSO in accordance with LANL policy.
 - The identification tag must be returned to the PSO.

Pressure system tag numbers are not to be reused.

Duration of Request:	Start Date: 02/02/2011	End Date:	<input checked="" type="checkbox"/> Lifetime
Requestor Ari Ben Swartz, ES-DE	Z Number 235211	Organization ES-DE	Signature Signature On File Date 2/2/11
USQD/USID required (Nucl. High/Mod Hazard)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If Yes, USQD/USID Number	
Design Authority Representative <i>Daniel Steinberg</i>	Z Number 219039	Organization ES-DO	Signature On File Date 2/2/11
LANL Owning Manager (FOD or Programmatic) <i>Daniel Steinberg</i>	Z Number 219039	Organization ES-DO	Signature On File Date 2/2/11

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

Decline Accept Accept Labwide with Modification:

POC Ari Ben Swartz, ES-DE	Z Number 235211	Signature On File	Date 2/2/11
------------------------------	--------------------	-------------------	----------------

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

Accepted Accepted with comments Declined

Comments:

Site Chief Engineer or Conduct of Engineering Office Director Daniel L. Steinberg, ES-DO	Z Number 219039	Signature On File	Date 2/2/11
---	--------------------	-------------------	----------------