

**EXHIBIT A-1**

**Vacuum Vessel Engineering Note  
(per Fermilab ES&H Manual Chapter 5033)**

Prepared by \_\_\_\_\_ Date \_\_\_\_\_ Div/Sec \_\_\_\_\_  
Reviewed by \_\_\_\_\_ Date \_\_\_\_\_ Div/Sec \_\_\_\_\_  
Div/Sec Head \_\_\_\_\_ Date \_\_\_\_\_ Div/Sec \_\_\_\_\_

1. Identification and Verification of Compliance

Fill in the Fermilab Engineering Conformance Label information below:

This vessel conforms to Fermilab ES&H Manual Chapter 5033

Vessel Title \_\_\_\_\_  
Vessel Number \_\_\_\_\_  
Vessel Drawing Number \_\_\_\_\_  
Internal MAWP \_\_\_\_\_  
External MAWP \_\_\_\_\_  
Working Temperature Range \_\_\_\_\_ °F \_\_\_\_\_ °F  
Design/Manufacturer \_\_\_\_\_  
Date of Manufacture \_\_\_\_\_  
Acceptance Date \_\_\_\_\_

Director's signature (or designee) if vessel is for manned area and requires an exception to the provisions of this chapter.

\_\_\_\_\_

**Amendment No.** \_\_\_\_\_ **Reviewed by:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Laboratory location code \_\_\_\_\_  
Laboratory property number \_\_\_\_\_  
Purpose of vessel \_\_\_\_\_

List all pertinent drawings  
Drawing No.

Location of Original

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2. Design Verification

Provide design calculations in the Note Appendix.

3. System Venting Verification

Can this vessel be pressurized either internally or externally?  Yes  No  
If "Yes", to what pressure? \_\_\_\_\_

List all reliefs and settings. Provide a schematic of the relief system components and appropriate calculations or test results to prove that the vessel will not be subjected to pressures greater than 110% beyond the maximum allowable internal or external pressure.

Manufacturer	Relief	Pressure Setting	Flow Rate	Size

4. Operating Procedure Section

Is an operating procedure necessary for the safe operation of this vessel?  
 Yes  No (If "Yes", it must be appended)

Is a testing procedure necessary for the safe acceptance testing (acceptance testing) of this vessel?  
 Yes  No  
If "Yes", the written procedure must be approved by the division head prior to testing and supplied with this Engineering Note.

5. Welding Information

Is the vessel code-stamped?  Yes  No  
If "No," append WPS, PQR, and WPQ.

6. Exceptional, Existing, Used and Non-Manned Area Vessels

Is this vessel or any part thereof in the above categories?  Yes  No  
If "Yes" follow the Engineering Note requirements for documentation and append to note.