

**AMMONIA REFRIGERATION
PROCESS SAFETY /
RISK MANAGEMENT PROGRAM**

ENGINEERING REVIEW CHECKLIST

MCF Number: _____ **Description:** _____

Question	Answer	Comments
1. Has the design been checked to assure compliance with ANSI / ASHRAE 15 (latest edition)?	Yes / No / NA	
2. Has the design been checked to assure compliance with ANSI/IIAR-2 (latest edition)?	Yes / No / NA	
3. Has the design been checked to assure compliance with the International Mechanical Code (latest edition)?	Yes / No / NA	
4. Has the design been checked to assure compliance with the Facility Refrigeration System Design Standards.	Yes / No / NA	
5. If the modification involves pressure relief valves, have you compared the modification with applicable code requirements and has a revised Relief Vent Calculation been performed?	Yes / No / NA	
6. Are there any aspects of the design that will prevent component specific Standard Operating Procedures from being developed per the Process Safety Information Policy?	Yes / No / NA	
7. Are provisions made for appropriate maintenance procedures per the manufacturer's recommendations and the guidelines in IIAR Bulletin #110?	Yes / No / NA	
8. Does the modification require that the onsite inventory of ammonia be increased or decreased? (If yes, list any additional safeguards or controls needed and assure a revised Ammonia Inventory Calculation been performed.)	Yes / No / NA	
9. Does the modification require that ammonia be stored at or the system operated at higher temperatures and pressures or at lower temperatures and pressures, than the current configuration?	Yes / No / NA	

Question	Answer	Comments
10. Does the modification bypass any existing control interlock or safety feature? If so, describe in the comments column what compensating features have been provided to preserve the same level of protection.	Yes / No / NA	
11. Does the change involve the alteration of a pressure vessel? And if so, is the code certification preserved?	Yes / No / NA	
12. Does the proposal introduce a source of ignition (including hot surfaces, flame mechanical sparks, static electricity, electrical arcing, etc.)?	Yes / No / NA	
13. Will the gas detection systems, fire protection systems, diking or drainage need to be changed to accommodate the change?	Yes / No / NA	
14. Is electrical power and other services (e.g., cooling water) adequate to meet the demands of the modified plant?	Yes / No / NA	

Preliminary Design Review by: _____ **Date:** _____

Follow-up items (these items should be transferred to the Management of Change Form and added to the deficiency log.
