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VISTA

March 12, 1987

James Wu
Air Compliance Branch
United States Environmental Protection Agency
345 Courtland Street Northeast
Atlanta, GA 30365

Dear Mr. Wu:

On December 8, 1986, this facility requested a waiver of compliance to provide time for installation of equipment necessary to comply with 40 CFR 61.242-6 of the revised vinyl chloride standard. The request was sent to the Mississippi DNR. We understand that this request was forwarded to the EPA for approval. In a telephone conversation with you more information concerning the waiver of compliance was requested. We understand the information you require to be as follows:

1. Piping and Instrument Diagrams for the project.
2. The location of the valves.
3. The size of the valves.
4. The pressure rating of the valves.
5. An explanation of activities involved with the project to gain a better understanding of the timing.

Below are the details of the requested information.

1. Four Piping and Instrument Diagrams are attached.
2. The location of the valves is attached in table I.
3. The sizes of each valve is given on the specification sheet for the valve. All valve specification sheets are attached.
4. The flange pressure rating for each valve is given on the specification sheet for the valve.
5. The replacement of reactor manometers with pressure/vacuum gauges has been completed as this only involved small piping changes. The rest of the project constitutes a major project for the plant. Installation of 26 valves integral to the process in an operating plant must be done properly

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for safety, environmental and operational reasons. To help understand the timing, below is a brief description of the process involved in getting the valves installed on this project.

Definitive Process Design

This involves studying the impact of adding the additional valves in the process. This includes specifying the process conditions of the valve, the actuators, local and panel indication, how the valves operate in the process, valve indicator switches and other safety, environmental and operational concern. It also includes a review of the interlocks for the valve to prevent the valve from operating in an unsafe manner. The project is then reviewed by the engineering department and by the plant operations, safety, maintenance and mechanical engineering departments. The design is then revised and re-issued. This has been completed for this project.

Definitive Estimate

This involves understanding the process design and then going to the field and physically checking the location of equipment to be installed. Piping revisions, junction box locations, preliminary panel layouts, controller input and output racks etc. must be checked to get a good idea of the work required. Current pricing on major items will be obtained. With this information the estimate is then completed.

Obtaining Funding

Once a definitive estimate is completed, the plant will then be in a position to ask management to approve the required funding for the project. In order to receive funding, a letter is written which describes project and gives justification.

Mechanical Design and Procurement

Purchasing of equipment is done in two phases. The long lead time equipment is purchased first. However, before this equipment can be purchased, a preliminary mechanical and electrical design must be done to insure equipment ordered will be compatible with the definitive process design. Field dimensions are obtained and electrical instrumentation details are checked. The work done in the definitive estimate can be used as a starting place for this. The objective of this activity is to insure that the proper equipment is purchased. Enough design must be done to be certain that the right equipment is purchased. Mistakes in purchasing the long lead time items usually result in longer installation time and higher cost.

After long lead time items are purchased, the detailed mechanical design is started. This design includes detailed piping drawings with accurate dimensions, detailed electrical drawings, detailed

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panel layouts, and detailed design of reprogramming the plants' programmable controller. When this is complete, another in-plant review of detailed mechanical design takes place. Operations, safety, and engineering review the design to make sure it meets the objective of the project. Any problems are resolved.

After this design is revised, the second phase of purchasing can begin. This phase includes the purchase of bulk items such as piping, conduit, wire, pipe fittings, junction boxes, push buttons, etc.

Basis of Bids

Once the detailed mechanical design is complete, a Basis of Bids can be prepared. This includes a detailed job description, the detailed mechanical design, welding procedures, standards for construction, safety rules to be followed during construction and legal requirements. The Basis of Bids is issued to potential contractors. After their initial review a pre-bid meeting is held to answer question and cover the details of the design. The contractors then analyze the design in a detailed manner and submit bids. This project will include a mechanical and an electrical bid package. Once bids are received, the bids are reviewed by the project engineers and a contractor is selected. A legal contract is then prepared, reviewed by plant and contractor management and executed.

Construction

Once the contract is awarded and the materials are received, work can begin on items not requiring production outages. This work involves running conduit, wires, and pre-fabrication of piping. A detailed plan is prepared for installation of equipment during the production outage. This project will most likely be installed by taking individual reactors out of service to maximize efficiency in construction. This plan is reviewed carefully by operations, safety and engineering in order to minimize the potential for safety or environmental problems that could result from the equipment installation.

The plan is then implemented using plant safety and environmental guidelines during construction. The equipment is started-up with close observation of operations and engineering. The system is checked to make certain it functions correctly. A complete check of the programmable controller interlock system is required since this project will modify the interlock logic. A safety and environmental audit of the system will be conducted. Detailed operating procedures will be prepared and operators will be trained in the specifics of the new equipment. This will include why the project is installed, how it operates and other operating details.

If you have any questions on this submittal, please call me at
601-369-3634

Sincerely,



Veldon E. Messick
Chief Process Engineer

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