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QUESTION 3:

A DATED COPY OF ALL PVC PLANT DOCUMENTS REGARDING (1) STANDARD PROCESS OPERATING AND MAINTENANCE (O&M) PROCEDURES, (2) EQUIPMENT TESTING AND INSTALLATION PROCEDURES, AND (3) TRAINING MANUALS (OR OTHER INSTRUCTIONS) THAT HAVE BEEN MADE AND/OR EMPLOYED AT THE PVC PLANT SINCE OCTOBER 21, 1976, AND WHICH RELATE TO PREVENTION OF RELIEF VALVE OR MANUAL VENT VALVE DISCHARGES OF VC.

Response(1):

The standard operating procedures are attached in Appendix I. The reference identification for each procedure is as listed.

REFERENCE
NUMBERPROCEDURE

I-2	Operating Manual for the Old Module. This manual was prepared by the vinyl operations engineer in early 1982, but was not dated at that time. This manual is an update of one issued March 16, 1979.
I-3	Operating Manual for 745 Reactors dated October 1981
I-4	Operating Procedure for the Refrigeration System on the RVCM Receivers dated August 1, 1976
I-5	Incinerator Training Manual dated June 21, 1978
I-6	Operating Procedure for the Deltech Instrument Air Dryer dated March 17, 1980
I-7	Operating Manual for the Batch Water Stripper dated June 19, 1981
I-8	Operating Manual for the AMS Emergency Kill System dated September 1, 1981
I-9	Operating Manual for the VCM Tank Farm dated June 3, 1983
I-10	Operating Procedures for the Initiator Injection Pot Replacement dated March 21, 1983

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Question 3: (Continued)

- I-11 Vinyl Winterization and Operations Program,
1983-1984
- I-12 Operating Manual for Emergency Cooling to
the Reactors dated February 23, 1984
- I-13 BME Addition System Operating Manual dated
May 15, 1984
- I-14 Revised Operating Procedure for the Emission
Recovery System dated July 25, 1984
- I-15 Operating Manual for the Pall Instrument Air
Dryer dated October 18, 1984
- I-16 Power Failure Procedure dated April 30, 1985

The maintenance procedures are attached in Appendix B and I. The reference identification for each procedure is as listed.

<u>REFERENCE NUMBER</u>	<u>PROCEDURE</u>
B-27	Rupture Disc/Relief Valve Practices Manual dated September 26, 1983
I-17	Checklist for Boiler Interlock & Instrument Test Log
I-18	Checklist for Emergency AMS Kill System
I-19	Checklist for Incinerator Interlock & Instrument Test Log
I-20	Checklist for Reactor Calibration
I-21	Standard Operating Procedure for Safety Disc Change and Testing dated August 20, 1983
I-22	Standard Operating Procedure for Propane Vaporizer Start-Up dated March 30, 1981

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Question 3: (Continued)Response (2):

The equipment testing and installation procedures are attached as separate documents. These documents are as follows:

LIST OF DOCUMENTS

Conoco Engineering Standards, Volume 1

Conoco Engineering Standards, Volume 2

Conoco Piping Specifications and Valve Catalog

Conoco Engineering Specifications

Conoco Standard Reference Material

These attached standards and specifications are updated versions of similiar documents which were used for engineering, installations and testing of equipment at the Aberdeen PVC plant. These documents are included to show that it is Conoco's and Vista's policy to use good engineering practice. Exceptions to the standards are allowed only following approval of the Engineering Department.

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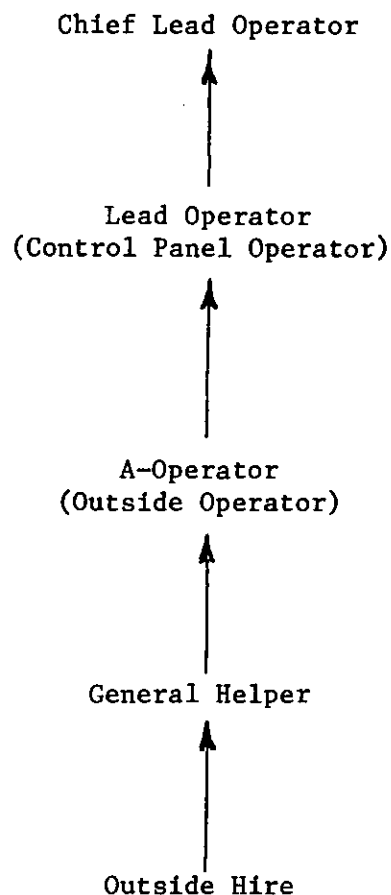
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Response (3):

The prevention of relief valve discharges is accomplished through the proper design, operation and maintenance of the systems in vinyl chloride service. Training manuals specific to the prevention of relief valve discharges are not used for this purpose. Rather, the operators must have an overall understanding of the total process in order to prevent discharges. This understanding is effected by the training program described below.

A new hire enters the plant in the General Helper classification. In this classification the employee may work in any of the production areas depending on overall manpower requirements. The Aberdeen plant consists of four major production areas which are polyvinyl chloride, dry blend, compound and plasticizer. The NESHAP for vinyl chloride covers only the operation of the polyvinyl chloride production area.

Normal progression in the polyvinyl chloride production area is illustrated below:



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Response (3):

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A General Helper working in the polyvinyl chloride production area does not perform operator functions until he starts his training to become an A-Operator. Prior to starting the training program the General Helper does such tasks as bagging PVC resin, cleaning dryers, changing dust collector socks, pumping pond resin and being a fire watch.

The current training program in the polyvinyl chloride area consists of on-the-job training, training by supervision and testing. It is the plants desire to have operators trained such that they are qualified to perform the duties of the next higher position. This is done to assure qualified personnel are available to provide coverage for vacations, sickness, National Guard Duty etc. When an employee is selected to train up, the first step is an orientation introduction conducted by the Operations Supervisor and the Shift Supervisor. In this session the functions of the position are discussed and the importance of knowing the unit and understanding the process is stressed. Safety and environmental responsibilities are also covered in this first meeting. The trainee then starts on-the-job training with a qualified operator. The trainee works alongside the qualified operator to observe and learn the routine duties and responsibilities required to satisfactorily perform the job. The on-the-job training is conducted for approximately 300 hours. During the on-the-job training period the progress of the trainee is monitored by the Chief Lead Operator and the Shift Supervisor. Also during the on-the-job training period the trainee is given a list of questions which he studies and must answer verbally and in writing to successfully complete the training. Copies of the current questions used for the A-Operator and Lead Operator positions are attached as reference I-23 and I-24, Appendix I. The employee must also demonstrate to the Shift Supervisor that he/she has learned all the duties of the new position. This is accomplished with the use of check lists. A copy of the current check list for the A-Operator position is attached as reference I-25, Appendix I. Upon approval by the Shift Supervisor and the Operations Supervisor the employee is then officially deemed to be qualified for the job and at this time is then allowed to perform the job on his/her own.

In case there is an open position which needs to be filled and the person selected is not completely trained, the training program described above is used to qualify the person for the new position. The normal progression of a General Helper is to A-Operator to Lead Operator and then to Chief Lead Operator.

The Shift Supervisors observe and train the personnel on their shifts on a continuing basis. The normal make up of a shift is the Shift Supervisor, Chief Lead Operator, three Lead Operators and four A-Operators. Since the number of operators on a shift is quite small, the Shift Supervisor personally checks their performance and corrects any problems if they should occur.

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Several possibilities exist during the training program. If the operator in training decides for some reason he does not want to continue the training for the next level, he can return to his previous position. If after the 300 hours of on-the-job training the Shift Supervisor and the Operations Supervisor consider the employee does not have the ability to master the new position, the employee returns to his/her previous position. If the Shift Supervisor and the Operations Supervisor consider the trainee is making progress and learning the new position but is not fully capable to handle the new job after the 300 hours of on-the-job training, more on-the-job training is continued until the person is fully trained to do the new position on his/her own.

If an employee who has qualified for a new position and is working the new job on his own, feels the job is too difficult for him to handle in a satisfactory fashion the employee may with the Company's consent bid down to a lower rated job.

Also the Company uses disciplinary action in cases of unsatisfactory employee performance. The disciplinary action may result in disqualification or termination if the employee's performance does not return to standard.

A training program consisting of on-the-job training and training by supervision has been in use in the polyvinyl chloride plant since the early 1970's. As a result of a plant expansion in 1982 four additional Lead Operators and four additional A-Operators were required to fill increased staffing requirements. The training consisted of classroom training, on-the-job training and training by supervision. Seven people started the training to be Lead Operators and two choose to remain A-Operators because the Lead Operator position was too difficult for them to master. Five people started the A-Operator training. One of these was terminated by the Company for violating plant rules before his training was complete. Since this large group was trained, three additional A-Operators and two Lead Operators have been trained with a similar program which now includes a written test.

When major modifications or new equipment are added to the process, operator training is conducted before the equipment is placed in service. The training includes classroom instructions in which the operating manual for the new system including drawings is covered in detail. Also field training on the new unit is conducted and a quiz is normally given at the conclusion of the training. Engineers then assist in the actual start up of the new equipment and provide the operators with on-the-job training.

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Response (3):

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In 1981 a new replacement batch water stripper system was installed in the plant. The handling of this project and the operator training are discussed below as a typical example of how projects are executed at the plant. The first step of the project was to prepare a process design for a batch water stripping system that would remove vinyl chloride from inprocess waste water to continue to meet the requirements of the NESHAP for vinyl chloride. The next step was to prepare the mechanical design for the system. Both the process design and the mechanical design were prepared in accordance with Conoco Engineering standards which are attached. After completion of the mechanical design, equipment was ordered and upon arrival the system was installed. Prior to completion of the installation an operating manual for the batch water stripping operation was prepared. Two hour training sessions were held with the vinyl operators and shift supervisors. A total of 34 people including operators, supervisors and engineers attended the training sessions. The first portion of the training session was classroom type in which the operating manual was discussed in detail. The next part of the training session was conducted in the field where the operation of the valves, equipment, and instruments was explained. A quiz was then given to each trainee. The training session was conducted by a Senior Process Engineer. The Senior Process Engineer and Process Engineers from the plant assisted in the actual start up of the system. A copy of the operating manual and the quiz are included as references I-7 and I-26, Appendix I.

Extensive changes to Plant operating procedures were made between 1974 and 1977 due to efforts to reduce VCM emissions and exposure. Operators and supervisors were provided training on the new procedures and new equipment installed to reduce VCM emissions. The operating manual for the vinyl production unit was updated in March of 1979 to include the new procedures and operation of new equipment. Training records from this time period were not required to be kept and are incomplete and therefore the actual amount of training completed can not be documented.

A review of the training records, which are incomplete, indicates there have been 127 classroom training sessions comprising 1271 manhours conducted at the plant during the period 1977 through 1984 pertaining to relief valve discharge prevention or reduction of vinyl chloride emissions. Topics covered include emergency procedures, power failures, VCM railcar unloading operation, reactor kill procedures, catalyst injection procedures, assuring reactor empty before the next charge, winterization, and proper handling and installation of rupture discs. Records of these training session are attached as in reference I-27, Appendix I.