

CHAPTER 5 - HYDROELECTRIC POWER PLANT TRAINEES

5-1. Purpose. This chapter establishes the procedures for the Corps of Engineers apprenticeship training program for hydropower trainees for advancement to journeyman status as power plant operators, mechanics, electricians, or electronic mechanics. Guidance for establishing training beyond the apprenticeship program is also included.

5-2. Rationale. Hydroelectric power plants are complex electrical and mechanical installations which need trained personnel for operation and maintenance. The trend towards automation and optimization further emphasizes the importance of a well trained staff to ensure continuity and reliability of power generation. Sufficient number of qualified personnel are not available from the industry to meet the Corps requirements and this necessitates a training program to develop trainees to perform well at journeyman level.

5-3. Selection of Trainees. The vacancies will be filled from any appropriate source, e.g., OPM register, merit promotion action, reassignments, change to lower grade, Veterans' Readjustment Act, Handicap authority, etc. Single-Agency Qualification Standard for Hydroelectric Power Plant Trainee (Army) has been issued by the U.S. Civil Service Commission. Physical requirements are included in the above standard. All candidates, including current Federal employees, must meet these standards. Human Resources will prepare a list of eligible candidates for selection by the MSC Commander or his/her designate.

5-4. Employment Provisions.

a. Trainee Agreement. Each trainee will enter into a written agreement with the local appointing authority. The agreement will specify, but not be limited to:

- (1) Local arrangements about tools and supplies.
- (2) Trainee's employment and training in an occupation, under standards adequate to produce a qualified skilled worker.
- (3) Conditions for advancement and retention, removal from the program, and performance in a full performance position.
- (4) Mobility during and after training for Division-wide placement.
- (5) Mandatory service for four years after graduating from the program, otherwise the trainee must reimburse Government expenses on pro-rate basis.

b. Probationary Period. The probationary period for a trainee is one year. However, unacceptable performance during the program period will be a cause to remove him from the training program under 5 USC 4303.

c. Pay During Training. Pay rates for trainee levels are established by the Department of Defense Wage Fixing Authority and are shown on current authorized wage schedules. Current Federal employees who enter the training program will have their pay set in accordance with the OPM regulations.

5-5. Training Responsibilities.

a. Headquarters, U.S. Army Corps of Engineers. The Headquarters (CECW-OM) shall be responsible for overview of the training program and keeping the ER current to meet the changing requirements. Any deviations from the program will require approval from CECW-OM.

b. Major Subordinate Command. The MSC Commander is responsible for the overall implementation and management of the program. At his/her discretion, the MSC Commander may delegate all or part of his/her duties to the district commanders as appropriate.

c. District. The District Commander, when so delegated, is responsible for the implementation of the training program. The Chief, Operations Division will see that the training is imparted as stipulated in this EP. He/she will also be an advisor to the District Commander on matters pertaining to the training program.

d. Training Board. A training board shall be established at the MSC or District level, as determined by the MSC Commander. The Board shall consist of a minimum of three members. The Chairman and each Board member shall be directly involved in, and knowledgeable of, operation and maintenance of Corps hydroelectric power plants. The Board shall be responsible for:

(1) Reviewing trainees' requests for reduction in training time and forwarding them to the MSC Commander or his delegatee for approval or denial.

(2) Reviewing and approving course instructions and on-the-job training for trainees granted a reduction in training time.

(3) Evaluating progress of classroom instructions and on-the-job performance of each trainee at the end of each training phase.

(4) Recommending to the MSC commander the hydroelectric power plants to be used as training sites.

(5) Other training related duties as assigned.

e. Training Facility.

(1) Training Coordinator. The Chief, Operations Division, in each district with hydropower training site(s) shall appoint a training coordinator at each training site. The training coordinator will be responsible for scheduling classroom and on-the-job training for all assigned trainees. He/she will also provide assistance and guidance to instructors, as needed, and be responsible for maintaining training records.

(2) Senior Craft-person. The senior craft-person to whom the trainee is assigned for on-the-job training will be responsible to over-see the trainee's work assignments. The senior will make every effort to ensure that the trainee receives the best possible training, and will guide, monitor and evaluate the trainee's work and progress on a daily basis. The senior will also provide to the training coordinator a formal evaluation of the trainee at the completion of trainee's rotational assignment with the senior's crew.

(3) Instructors. The instructors, or project personnel acting in this capacity, will be responsible for providing classroom instructions to the trainees. They should have the demonstrated capability to teach the class and have been at least a senior level craft-person. The instructors are responsible for keeping the training coordinator apprised of the trainee's performance, and for keeping trainees informed of their progress in the classroom.

(4) Trainees. The trainees are responsible for meeting and maintaining standards of Federal employment in their class-room and on-the-job performance and personal work conduct. They are responsible for learning the study material and be able to do the work required in the trade without hazard to themselves or other workers.

5-6. Training Sites. The MSC Commander will select the hydroelectric power projects to be used as training sites. They should be chosen from the larger and more complex projects in the MSC. If feasible, trainees should be transferred between projects while in the training program to broaden their experience.

5-7. Program Details. The training program will consist of a combination of academic, plant equipment study, and on-the-job training. The academic training will be imparted by enrolling in a correspondence school for academic subjects and class room (or equivalent) instructions for plant equipment. On-the-job training will be achieved by orderly progression through practical assignments closely related to correspondence school subjects and plant equipment instructions.

a. Training Period. A four-year training and development program will be required for all entrants who do not have previous hands on experience, and academic or vocational education beyond the entry level requirements.

b. Reduced Training Period. Reductions in time required to complete the training program may be granted by the MSC Commander for the prior experience or training, provided that the trainee applies for such reduction before completing the first year of the standard program. The trainee will be responsible for providing the satisfactory proof of experience or training he or she cites as creditable for a reduction in training time. Acceptable proof will be academic transcripts and course descriptions from accredited vocational schools, colleges or community colleges, and statements from former supervisors outlining previous work experiences, level of responsibility, and performance appraisal. Only one reduction will be granted. If the MSC Commander grants a trainee a reduction in time of the training period, the training coordinator shall prepare a training schedule which will insure that the trainee has an opportunity to develop the same skills and knowledge by the end of the reduced training period as a full four year program trainee would have. This training schedule must be approved by the training board. Trainees granted a reduction in training time will have their progress evaluated in the same manner as a full 4-year term trainee.

c. Craft Selection. The first one year of the training program will be identical for all crafts. Specialization will begin in the second year. Each trainee will be asked to express a preference for the craft specialty desired. Depending on the needs of power plants and trainee's aptitude and talents, the training board will assign a craft specialty, subject to the approval by the MSC commander, to each trainee before the beginning of the specialization phase. The training board will document the basis on which assignment was based.

d. Deviation from the Standard Program. Any deviation from the standard four year program as stated herein, or material changes in classroom subjects, shall be submitted to

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HQUSACE, ATTN.: CECW-OM for approval. No such changes shall be incorporated without prior approval of HQUSACE.

5-8. Training Program Schedule.

a. General. The first year of the training program consists of approximately 60% on-the-job training at a Corps hydroelectric power project, and 40% training in trade theory and closely related academic subjects. The next three years of the program consists of approximately 80% on-the-job training at a Corps hydroelectric power plant, and 20% training in trade theory and closely related academic subjects.

b. Academic Instructions. Craft persons are required to know the basic physical principles of the equipment they use. They are also required to read and understand reasonably complex written instructions, and be able to write legible, meaningful reports. Instructions in academic subjects should preferably be provided by professional teachers. This could be accomplished through a local school system if it is located nearby and is easily accessible. If professional classroom training is not practical because of geographic distance, then correspondence courses (Appendix G) or other delivery methods covering the same general subjects should be provided to the trainees.

c. Plant Equipment Study. The plant equipment study is designed to provide a trainee with the theory and operation of the hydroelectric plant equipment. Appendix G lists the topics for formal instructions. The theory portion of the instructions may be obtained through correspondence school courses subject to the approval of the training board. However, a qualified trade theory instructor must be provided to the trainees to insure that the trainees are receiving the best quality instructions and counseling.

d. On-the-Job Training. This portion of training is critical. Work habits, methods, and techniques developed in this phase of training can make the trainee an efficient and effective craft person. The training coordinator, in consultation with power plant superintendent, will prepare an on-the-job schedule for each trainee. The trainee should work on as many jobs as practicable, keeping in mind the desirability of completing a task from start to finish. Also, the trainee will be assigned to work with craft persons who have a special capability for the assigned task.

5-9. Training Evaluation. Each trainee's progress will be evaluated periodically and at the end of each phase as described below.

a. Periodic Evaluation. Each trainee's academic and on-the-job progress will be continually monitored by the instructors and craft seniors. The purpose of the evaluation is to assess the trainee's progress and the effectiveness of the instructional process. These evaluations are necessary so that any incipient problems can be exposed at the earliest possible time. The training coordinator should also consider evaluations from the trainee's instructors, crafts seniors and correspondence school.

b. Phase Evaluation. At the end of each training phase (approximately six months), every trainee will be evaluated by the training board. The evaluation will have a written portion, an oral portion and a demonstration of practical skills, and will cover both academic and on-the-job portions of the program. These evaluations will be used as a part of the procedure to assess a trainee's progress for determining fitness to remain in the program, and as an input to the trainee's

performance appraisal. The minimum requirement for passing a phase evaluation is a score of 70% overall and 70% on each correspondence school instruction unit or classroom course. Upon satisfactory completion of the phase evaluation and other performance requirements, the trainee will be advanced to the next training phase.

5-10. Failure to Maintain Satisfactory Progress. Each trainee is responsible for maintaining satisfactory progress in academic studies and on-the-job training. The evaluations will determine the trainee's progress. Non-satisfactory evaluations will be handled as below:

a. Failing Periodic Evaluations. If the results of a periodic evaluation are unsatisfactory, the appropriate supervisor will discuss the results with the trainee, determine reasons for unacceptable progress, counsel the trainee on improvements needed, provide an appropriate improvement period as prescribed by the Office of Personnel Management (OPM) regulations, provide the trainee with appropriate assistance, and give the trainee a make-up performance test at the end of improvement period. If the trainee's performance is unsatisfactory in two consecutive makeup evaluations, a recommendation shall be made to the training board to remove that trainee from the training program. The training coordinator or appropriate supervisor shall ensure that any trainee who is having a problem with satisfactory performance is placed with at least one other craft person before beginning of the remedial period leading to probable removal from the training program.

b. Failing Phase Evaluations. If the result of a phase (6-month) evaluation is unsatisfactory, the training board will inform the appropriate supervisor. The supervisor will notify the trainee in writing of unsatisfactory performance, inform the trainee of the specific deficiencies, what the trainee must do to overcome the deficiencies, provide an appropriate improvement period, and provide the trainee with appropriate assistance. At the end of the improvement period, the training board will re-administer the phase evaluation. Failure at two consecutive phase evaluations or three non-consecutive phase evaluations any time during the training period shall require removal of the trainee from the training program in accordance with the OPM regulations.

5-11. Training Accomplishments. After successful completion of four years of training, as prescribed in this EP, a trainee will be eligible to advance to journeyman status and should have the academic knowledge and practical skills for his respective trade as described in Appendix H.

5-12. Training Records. Complete training and performance evaluation records will be maintained for each trainee. A set of obsolete forms are enclosed in Appendix I to illustrate the types of records needed for each phase of the program.

5-13. Certificate of Completion. Each trainee who successfully completes the training program will be presented with a Certificate of Training on DA Form 87, included as Appendix J.

5-14. Training at the Journeyman Level. {FUTURE}