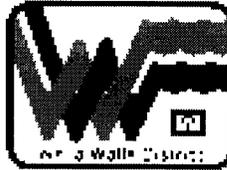


## Overview of the Power Plant Apprentices Program in the Walla Walla District, USACE



### Crafts available:

Electrical  
Mechanical  
Operations

### Training site:

McNary Lock and Dam  
Umatilla, Oregon  
(541)922-2224

**Points of Contact:** Terry Filson or Pete McGuckin

**Website:** [www.nww.usace.army.mil](http://www.nww.usace.army.mil)

### Overview of the program:

Our apprenticeship is a self-paced program that is based on a correspondence-course type of curriculum that is augmented by other methods of instruction. The program is divided into 8 phases. Each phase lasts approximately 4 months, and contains specific hydropower systems research and academic courses that must be completed during that phase. On-the-Job Training (OJT) comprises well over 50% of the program's training plan. There are individual progressive tests and a semi-formal OJT training evaluation on a regular basis, as well as an overall phase exam (containing written, practical and oral segments) at the end of each phase. Upon graduation, the apprentice will be placed in a journeyman position at one of the district's six hydro projects.

### Other Activities:

We make trips to other dams, power generating projects and distribution sites to help the apprentice build networks and to broaden their understanding of hydropower issues, electrical generation in general, and distribution interfaces. Other forms of instruction have been integrated into the program, including: CBT, hands-on lab training, partnering with Community Colleges, and contract instruction. And did we mention OJT??

### Schedule:

Monday through Friday, 0630 - 1700.

Once in phase 3, Operators are on a 12-hour rotating shift (6-6).

## As the years go by...



### Phase 1 (CoOp Summer #1)

Academic: The focus of the first phase is to expose the trainees to all the aspects of maintenance and operation of a hydro-electric power generating station. *Principles of HydroPower* and *HydroElectric Power Plant Operations* are 2 courses that are used to provide an in-depth overview of how systems in the hydroelectric power generation industry work. Also during this time, nearly all of the safety training requirements for our type of work setting is completed.



OJT: Trainees work in all shops (2 days per week) in the first year, not only for an indoctrination, but primarily to better understand the interaction between work centers.

### Phase 2 (CoOp Summer #2)

Academic: We continue to develop the "big picture" in phase 2. The *Principles of HydroPower* course is completed. Trainees begin to work on the basic correspondence course portion of the program, called TPCs. They also prepare and give presentations on hydro-power systems and visit nearby hydro-projects.

OJT: Continue shop rotation (2 days per week). Trainees select their craft at the end of this phase.

### Phases 3-5 (approx)

Academic: Now the apprentices start to focus on their selected craft. They continue the correspondence courses and some off-site training may be arranged. Study time (either academic study or systems research) is reduced to 1 day per week.

OJT: Establish the apprentice's craft assignment. Introduce the Qualification Card (OJT tracking) component of the program. Temporary assignments to other hydro-projects are possible in phase 5.

### Phases 6-8 (approx)

Academic: The apprentice completes the correspondence course in their selected craft area, studying one day per week. More off-site training is possible.

OJT: Apprentices complete their in-craft assignments and use of Qualification Cards. More independent work is assigned. The final upriver assignment may be made during last 6 months in the program.

### Graduate



**Group/Individual Development Plan  
PPTP Year ONE**

**Phase One**

|       | <b>Orientation</b>   | <b>Other ***</b>  | <b>TPC</b>  | <b>PhP's</b>             | <b>Presentations</b>   | <b>Shop Familiarization</b>  |
|-------|--|---|---|--------------------------|------------------------|--|
|       | Admin, check-in<br>Intros & Tours<br>GET/SOPs<br>Basic Safety *<br>HAZ COM<br>Clearance<br>Routines and Policies<br>Dam 101 ** | <i>CPR/First Aid</i><br><i>BBP</i><br><i>Electrical Safety</i><br><i>Asbestos Awareness</i><br><i>Fire Extinguishers</i><br><i>Hearing Conservation</i><br><i>Respiratory Protection</i><br><i>Elevated work platforms/sissors lift, etc</i><br><i>Fall Protection</i><br><i>Lead Awareness</i><br>Fork Lift<br>Materials Science<br>Math Review<br>Power Plant Physics | 101 Reading Blueprints<br>102 Reading Schematics<br>103 Using Math in the Plant | Vol. I<br>Chapt 1-12     | Systems<br>as assigned | JFF, MECH, OPS,<br>ELECT, GEN<br>2 DAYS/WEEK<br><br>Tool Checkout<br>Job/Equipment Locations<br>Shop Specific Equipment<br>Shop Specific Practices |
| weeks | 1-2  |   | self paced  | self paced<br>about 1/wk | 9-12                   | > 2  |

**PHASE 2**

|       | <b>Orientation</b> | <b>Other ***</b>  | <b>TPC</b>  | <b>PhP's</b>             | <b>Presentations</b>   | <b>Shop Familiarization</b>  |
|-------|--------------------|---|-------------|--------------------------|------------------------|--|
|       | na                 | <i>Rigging</i><br><i>Defensive Driving</i><br><i>Confined Space Fund.</i><br><i>Refreshers as assigned</i><br>Dam Safety<br>Trade Specific Fund. As ID'ed | 318 Rigging | Vol. II<br>Chapt 13-35   | Systems<br>as assigned | MECH, OPS,<br>ELECT, GEN<br>2 DAYS/WEEK<br><br>Job/Equipment Locations<br>Shop Specific Equipment<br>Shop Specific Practices |
| weeks | na                 |   | self paced  | self paced<br>about 2/wk | 9-12                   | all  |

**Notes**

- \* Basic Safety includes: Workplace Safety (Housekeeping, PPE, etc), Back Protection, JHAs, ERGO, Spill Prevention, Alarms, Injury Reporting, etc
- \*\* Completed & tested later in phase one
- \*\*\* Italicized *Topics* are required and are normally vendor supplied so the schedule varies by availability