LETTER AGREEMENT NO. 95-06-PGE

IBEW

PACIFIC GAS AND ELECTRIC COMPANY
INDUSTRIAL RELATIONS DEPARTMENT
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INTERNATIONAL BROTHERHOOD OF
ELECTRICAL WORKERS, AFL-CIO
LOCAL UNION 1245, I.B.E.W
P.O. BOX 4790
WALNUT CREEK, CALIFORNIA 94596
(510) 933-6060

RONALD L. BAILEY, MANAGER OR
DAVID J. BERGMAN, DIRECTOR AND CHIEF NEGOTIATOR

JACK MCNALLY, BUSINESS MANAGER

February 3, 1995

Local Union No. 1245
International Brotherhood of
Electrical Workers, AFL-CIO
P.O. Box 4790
Walnut Creek, CA 94598

Attention: Mr. Jack McNally, Business Manager

Gentlemen:

During meetings held for the purpose of developing reverse lines of progressions to be utilized in the application of Section 206.3 of the Physical Agreement, the parties noted that the recent update of Section 600.8, Exhibit VI-G, Division Water Department Job Definitions and Lines of Progression contained some incorrect placements in the "Next Lower" and "Same or Higher" designations. Many of these misplacements occurred as a result of the increase in the rate of pay for the Water Systems Repairperson in conjunction with the establishment of the Apprentice Water Systems Repairperson classification.

Company, therefore, proposes pursuant to Subsection 204.4(b) and 205.19 of the Physical Agreement to amend the May 1994 update of Section 600.8, Exhibit VI-G, Division Water Department Job Definitions and Lines of Progression, as follows:

Classifications should be corrected and appear in the order listed in the Job Definitions and Lines of Progression, as follows:

1. 0830 Water Systems Crew Leader

   Based upon the rate of pay, move 1036 Meteorological Instrumentperson from "Same or Higher" designation to "Next Lower."

2. 2070 Water Systems Repairperson

   Based upon the rate of pay, move 1905 Water Treatment Plant Operator from "Same or Higher" designation to "Next Lower."

3. 2069 Water Systems Repairperson (Helms)

   Remove "Next Lower" and "Same or Higher" designations and replace with "Note: Same line of progression as 2070 Water Systems Repairperson."

4. 2067 Apprentice Water Systems Repairperson

   Based upon the rate of pay, move 1037 Assistant Meteorological Instrumentperson from "Same or Higher" designation to "Next Lower."

5. 1905 Water Treatment Plant Operator

   Based upon the rate of pay, move 2069(2066) Water Systems Repairperson (Helms) & (Un.) and 2070(2068) Water Systems Repairperson & (Un.) from "Next Lower" designation to "Same or Higher." Add "None" to "Next Lower" designations.

6. 1898 Water System Operator

   No change

7. 1899 Utility Water system Operator (Spring Gap)

   Remove "Next Lower" and "Same or Higher" designations and replace with "Note: Same line of progression as 1898 Water System Operator."

8. 0418 Truck Driver - Water

   Remove 0464 Heavy Truck Driver - Water from the line of progression since it is an obsolete classification.

9. 0425 Light Truck Driver (Temporary Assignment Only)

   Based on rate of pay move 1898 Water System Operator and 1899 Utility Water System Operator from "Next Lower" to "Same or Higher" Classification

10. 0945 Utility Worker - Water

    No Change

11. 0247 Field Clerk - Water

Based upon the rate of pay move 0264 First Hydro Clerk, 2654 Senior Operating Clerk Steno-I, 2655 Senior Operating Clerk Typist-I, and 2789 Senior Operating Clerk I from the "Same or Higher" designation to "Next Lower."

The 0245 Routine Field Clerk (G.C.) and 0313 First Shop Clerk (G.C.) are lower paid classifications and, therefore, cannot be shown as "Same or Higher." Inasmuch as they are Title 300 classifications they cannot be listed as "Next lower" and therefore should be removed from the line of progression.

12. 1036 Meteorological Instrumentperson

Remove 2073 Utility Water Systems Repairperson from the line of progression since it is an obsolete classification.

13. 1037 Assistant Meteorological Instrumentperson

Remove 0464 Heavy Truck Driver from the line of progression since it is an obsolete classification.

If you are in accord with the foregoing and agree thereto, please so indicate in the space provided and return one executed copy of this letter to the Company.

Very truly yours,

PACIFIC GAS & ELECTRIC COMPANY

By: _____
Director and Chief Negotiator

The Union is in accord with the foregoing and agrees thereto as of the date hereof.

Feb 7, 1995 By: _____
Business Manager

PACIFIC GAS AND ELECTRIC COMPANY
AND
IBEW, LOCAL UNION NO. 1245

DIVISION WATER DEPARTMENTS

JOB DEFINITIONS AND LINES OF PROGRESSION

REVISED FEBRUARY 1995

REPLACES BOOK DATED MAY 1994

JOB DEFINITIONS AND LINES OF PROGRESSION

DIVISION WATER DEPARTMENTS

0830 WATER SYSTEMS CREW LEADER

An employee who is a working foreman in charge of a crew of two to five persons excluding the working foreman engaged in construction, maintenance, and repair of canals, tunnels, ditches, flumes, pipelines, services, reservoirs, dams, gates, roads, and other related facilities of the water systems; handles the cleaning of canals, ditches, and other bodies of water. May supervise a crew not to exceed ten employees, excluding the working foreman, performing unskilled work. Shall have the personal qualifications of leadership and supervisory ability, the qualifications of a Water Systems Repairperson, and be familiar with Company's construction and safety standards, accounting procedures, and other applicable rules and procedures.

Next Lower Classifications	Same or Higher Classifications
1036 Meteorological Instrumentperson	0830 Water Systems Crew Leader
1905 Water Treatment Plant Operator*	
2069 (2066) Water Systems Repairperson (Helms) & (Un.)	
2070 (2068) Water Systems Repairperson & (Un.)	

* Provided employee has been a Water Systems Repairperson and has successfully completed the Water Systems Repairperson Training Program.

2070 WATER SYSTEMS REPAIRPERSON

An employee who is engaged in the construction, maintenance, and repair of all types of Hydro water system structures and related facilities and equipment, including water collection and domestic water systems. Such employee drives trucks and operates mechanical equipment such as sno-cat, tractor-grader, backhoe, loaders, excavators and all equipment for general hauling, bulldozing, road maintenance, excavation and other similar work. If required, must possess a Commercial Class A Driver's License and if qualified, may be assigned duties associated with a Blasting License, Tunnel Safety License and/or Treatment Plant Operator License. Must make welds and do general leveling with surveyor's level, as required, have general working knowledge of carpentry and concrete practices, have a good working knowledge of safe rigging practices, be proficient in the use of all types of hand and power tools and in the operation of mechanized equipment associated with this work. Increased technology and work practices may require use of a computer, when qualified. May be assigned other work of similar nature as the occasion requires, including building maintenance of hydro facilities. The employee's background of experience and the successful completion of formal training must be such as to qualify him/her to perform this work with skill and efficiency.

[Cont'd]

2070 WATER SYSTEMS REPAIRPERSON [Cont'n.]

Next Lower Classifications	Same or Higher Classifications
1905 Water Treatment Plant Operator	0830 Water Systems Crew Leader
2067 Appr. Water Systems Repairperson	1036 Meteorological Instrumentperson
	2069 (2066) Water Systems Repairperson (Helms) & (Un.)
	2070 (2068) Water Systems Repairperson & (Un.)

2069 WATER SYSTEMS REPAIRPERSON (HELMS) (1)

A resident employee who is engaged in the construction, maintenance, and repair of all types of Hydro water system structures and related facilities and equipment, including water collection and domestic water systems. Such employee drives trucks and operates mechanical equipment such as sno-cat, tractor-grader, backhoe, loaders, excavators and all equipment for general hauling, bulldozing, road maintenance, excavation and other similar work. If required, must possess a Commercial Class A Driver's License and if qualified, may be assigned duties associated with a Blasting License, Tunnel Safety License and/or Treatment Plant Operator License. Must make welds and do general leveling with surveyor's level, as required, have general working knowledge of carpentry and concrete practices, have a good working knowledge of safe rigging practices, be proficient in the use of all types of hand and power tools, and in the operation of mechanized equipment associated with this work. Increased technology and work practices may require use of computer when qualified. May be assigned other work of similar nature as the occasion requires including building maintenance of hydro facilities. The employee's background and experience and the successful completion of formal training must be such as to qualify the employee to perform this work with skill and efficiency.

In addition, when not engaged in any of the above work, the employee may also be required to assist other plant personnel in routine plant maintenance assignments. May also be assigned to a shift schedule, in accordance with the provisions of Section 202.17 of the Physical Agreement, due to irregular water or plant conditions.

(1) Same Line of Progression as 2070 Water Systems Repairperson.

2067 APPRENTICE WATER SYSTEMS REPAIRPERSON

An employee engaged in performing Water Systems Repairperson work as an assistant to or under the general direction of a Repairperson or other higher classified employee. In order to gain experience for advancement to Water System Repairperson, such employee may work alone or under indirect supervision on jobs for which the employee has been trained and instructed. The employee's educational and general qualifications must be such that the employee is considered capable of attaining journeyman status.

[Cont'd.]

2067 APPRENTICE WATER SYSTEMS REPAIRPERSON [Cont'n.]

Next Lower Classifications

0418 Truck Driver
0922 Utility Worker (Helms)
0945 Utility Worker
1037 Asst. Meteorological Instrumentperson
1898 Water System Operator
1899 Utility Water System Operator (Spring Gap)

Same or Higher Classifications

1905 Water Treatment Plant Oper.
2067 Appr. Water Systems Repairperson

Note: For the Apprentice Water Systems Repair*person* Training Program, see to LA 92-8 pages 12-41.

1905 WATER TREATMENT PLANT OPERATOR

An employee who operates one or more full treatment water plants. Such employee operates all equipment, including pumps, filters, and controls; runs all laboratory control tests, except bacteriological, collects bacteriological samples, maintains plant records, performs minor maintenance duties and keeps buildings, grounds and equipment in a clean and orderly manner. Is required to have a Waterworks Operator's Certificate, Grade II. Since this work may not require full time services, the employee may also be required to work as a Water Serviceman.

Next Lower Classifications

None

Same or Higher Classifications

0830 Water Systems Crew Leader
1905 Water Treatment Plant Operator
2069 (2066) Water Systems Repairperson (Helms) & (Un.) *
2070 (2068) Water Systems Repairperson & (Un.) *

*Applies only to employees who possess valid Waterworks Operator's Certificate, Grade II.

1898 WATER SYSTEM OPERATOR

An employee who cleans, patrols, maintains, makes minor repairs to and is responsible for the flow and level of water in canals, flumes, gates, tunnels, syphons, penstocks, gaging stations, canal alarms, spill channels, trash rakes, fish ladders, fish screens, dams, reservoirs and their appurtenant facilities and equipment. Inspects and operates such facilities as assigned. The employee shall maintain and install measuring devices and regulate diversions to customers. The employee is required to fly in a helicopter to perform the duties of the position. If qualified, may be assigned duties involving the need for any Commercial Driver's License. May also be required to operate and provide routine maintenance for water treatment systems [Cont'd.]

1898 WATER SYSTEM OPERATOR [Cont'n.]

(such as chlorination systems) and may be required to pass a Treatment Plant Operators' test for State certification to operate such water treatment systems. Residency may also be required. May also be required to operate and provide routine maintenance for weather stations.

In addition, when not engaged in any of the above work, the employee may also be required to assist other water personnel in routine maintenance assignments. May be required to work a schedule of workdays other than Monday through Friday or Tuesday through Saturday.

Next Lower Classifications	Same or Higher Classifications
0945 Utility Worker	0418 Truck Driver 0830 Water Systems Crew Leader 1898 Water System Operator 1899 Utility Water System Operator (Spring Gap) 1905 Water Treatment Plant Opr. 2067 Appr. Water Systems Repairperson 2069 (2066) Water Systems Repairperson (Helms) & (Un.) 2070 (2068) Water Systems Repairperson & (Un.)

1899 UTILITY WATER SYSTEM OPERATOR (SPRING GAP) *(1)*

An employee who performs the duties of a Water System Operator and in addition operates the Spring Gap Tram and patrols lines assigned.

(1) Same Line of Progression as 1898 Water System Operator.

0418 TRUCK DRIVER

An employee who drives a truck (other than a pickup truck) transporting persons, supplies, and equipment; loads and unloads the truck; performs necessary paper work in connection therewith; assists other employees in the performance of their work and may be assigned to operate material handling equipment.

Next Lower Classifications	Same or Higher Classifications
0945 Utility Worker 1898 Water System Operator 1899 Utility Water System Operator (Spring Gap)	0416 Truck Driver (Materials) 0417 Truck Driver (Electric) 0418 Truck Driver (Water) 0462 Heavy Truck Driver (Materials) 0463 Heavy Truck Driver (Electric)

[Cont'd...]

0418 TRUCK DRIVER [Cont'n.]

Next Lower Classification	Same or Higher Classifications
	0465 Heavy Truck Driver (Gas)
	0525 G.C. Fieldperson*
	0830 Water Systems Crew Leader
	1646 Miscellaneous Equipment Operator**
	1905 Water Treatment Plant Operator
	2067 Appr. Water Systems Repairperson
	2069 (2066) Water Systems Repairperson (Helms) & (Un.)
	2070 (2068) Water Systems Repairperson & (Un.)

* Applicable to employees who held the classification of 0415 Truck Driver (G.C.) on 12/31/90.

** Applicable to employee who held the classification of 0461 Heavy Truck Driver (G.C.) on 12/31/90.

0425 LIGHT TRUCK DRIVER (Temporary Assignment Only)

An employee who drives a station wagon or pickup truck transporting persons, supplies, and equipment; loads and unloads the truck; performs necessary paper work in connection therewith; assists employees in the performance of their work in the department to which such employee is assigned.

Next Lower Classifications	Same or Higher Classification
0945 Utility Worker	*1898 Water System Operator*
	1899 Utility Water Systems Operator (Spring Gap)

0945 UTILITY WORKER

An employee whose principal duties consist of semi-skilled work while assisting a higher classified employee; and in addition does such work as digging holes or ditches, clearing rights of way and handling tools and materials. When receiving the top rate of pay of such employee's classification, may be required to operate a boat on waterways for breaking ice. In addition, may be required to perform appropriate camp duties including the hauling of camp materials and garbage, janitor work, gardening and helping in the boardinghouse.

Beginner's Classification

0247 FIELD CLERK

An employee whose background and experience is such that the employee has a comprehensive knowledge of the operation and procedures of a general foreman's or foreman's office in the Water Department and who performs the clerical work and assists in the administrative work of such office. This work includes such duties as coordinating various functions to facilitate the completion of jobs; assigning jobs to crews; receiving and dispatching customers' complaints; preparing reports; processing time cards, work orders, and GMs for the crews or for accounting purposes; and maintaining office files and records. The employee's duties may require that the employees work in the office, in a camp, or in the field.

Next Lower Classifications

0264 First Hydro Clerk
0265 Routine Hydro Clerk
2654 Senior Operating Clerk-Steno I
2655 Senior Operating Clerk-Typist I
2662 Operating Clerk
2664 Operating Clerk-Steno
2667 Operating Clerk-Typist
2789 Senior Operating Clerk I

Same or Higher Classifications

0243 Senior Field Clerk (G.C.)
0246 First Field Clerk (G.C.)
0263 Senior Hydro Clerk
0310 Senior Shop Clerk (G.C.)
2645 Senior Operating Clerk-Steno II
2646 Senior Operating Clerk - Typist II
2723 Senior Operating Clerk II

1036 METEOROLOGICAL INSTRUMENTPERSON

An employee who, without direct supervision, is engaged in the installation, operation, and maintenance of equipment associated with the cloud seeding, precipitation, surface wind, temperature, and upper air sounding systems. Such employee routinely performs duties, such as installation and removal of silver iodide generator equipment and precipitation gauges; services and makes repairs to the equipment as required; adjusts and calibrates gauges and recorders; changes charts; and maintains records. During storm periods, operates the upper air sounding system, reducing data and submitting to the weather office. Is responsible for maintaining adequate supplies to operate the project and may be called on from time to time to perform special studies in the field, such as collecting snow replica slides.

In addition, may be required to perform other duties of a Water System Repairperson and be assigned to work on Company's water facilities in the hydro development in the area to which assigned.

Next Lower Classifications

1037 Assistant Meteorological Instrumentperson
2069 (2066) Water Systems Repairperson (Helms) & (Un.)
2070 (2068) Water Systems Repairperson & (Un.)

Same or Higher Classification

0830 Water Systems Crew Leader
1036 Meteorological Instrumentperson

1037 ASSISTANT METEOROLOGICAL INSTRUMENTPERSON

An employee who is engaged in performing a Meteorological Instrumentperson's work as an assistant to or under the direction of a Meteorological Instrumentperson. Without direct supervision, in the field, operates, adjusts, cleans, zeros and checks meteorological instruments for proper operation and installs and calibrates rain gauges. In the shop, performs routine maintenance on these instruments without direct supervision.

Next Lower Classifications

0418 Truck Driver
0945 Utility Worker
1898 Water System Operator
1899 Utility Water System Operator (Spring Gap)

Same or Higher Classifications

0830 Water Systems Crew Leader
1036 Meteorological Instrumentperson
1905 Water Treatment Plant Operator
2067 Appr. Water Systems Repairperson
2069 (2066) Water Systems Repairperson (Helms) & (Un.)
2070 (2068) Water Systems Repairperson & (Un.)

- COPY -
R1-84-69-PGE

August 22, 1984

Local Union No. 1245
International Brotherhood of
Electrical Workers, AFL-CIO
P. O. Box 4790
Walnut Creek, California 94596

Attention: Mr. J. K. McNally, Business Manager

Gentlemen:

This is a revision of our letter agreement dated June 1, 1984 to incorporate additional information.

In an effort to meet current manpower needs at Helms Pumped Storage Facility, and in an attempt to uniformly apply the provisions to currently existing resident employees at the Helms Powerhouse, Company proposes to establish the following general conditions of employment for all employees working at the Helms Project.

Under this proposal, such agreement would reserve as a "generic" agreement whose general terms and conditions would apply to all physical bargaining unit employees employed at the Helms facility. Accordingly, the following will detail the requirements associated with employment at the Helms Project.

All employees assigned to the Helms Pumped Storage Project shall be paid the established Helms Powerhouse premium rate of 5 percent above each step of the respective classification's basic wage rate for the first year and 7.5 percent above the basic wage rate for such classification after one year in the classification of Helms. Accordingly, such individuals employed at the Helms facility shall be considered as resident employees. Such employees shall be required to have the knowledge and capability of performing normal and emergency operating functions at the Helms Project. Furthermore, such employees may be assigned to a shift schedule in accordance with the provisions of Section 202.17 of the Physical Agreement due to irregular water or plant conditions.

Pursuant to the provisions of Section 202.11 of the Physical Agreement, such employees at the Helms project may be required to work a schedule of ten consecutive workdays with four consecutive day off. Helms' classifications will also be required to reside at Company residences adjacent to Helms for the first two years in the job and pay the established Company housing rent. They will also be required to ride in a helicopter. Furthermore, the terms and conditions set forth in Company's letter to Union dated August 14, 1981 shall be in effect for all individuals employed at the Helms Powerhouse Project as follows:

1. Company Owned Housing (Helms)

The established rent is currently $50 per month and is subject to change by

bargaining between the parties. The residences will be equipped with telephones, and the current plans are to provide PT&T restricted one plus dialing lines for each residence. The residences will be equipped to receive TV broadcasts.

2. Emergency Transportation

Company will make every effort to provide the employees and their families with emergency transportation via helicopter. If winter weather conditions prohibit the use of helicopters, alternate transportation will be provided which will include emergency transportation and medical supplies. Weather permitting, there will be regularly scheduled trips to Helms throughout the year.

3. Additional Classifications (Helms)

It is anticipated that intermittent employees will be needed in the classifications of Cook, Cook's Utility Worker, and Housekeeper. It is intended that the members of employees' families will be considered for these classifications if they so desire and if they have the necessary qualifications.

4. Helms Project Rate

When it is necessary to utilize electric and hydro operating classifications at Helms, the appropriate rate of pay will be the highest System Operator rate established for the Hydro Generation Department.

During the course of further discussions on October 26, 1983, Company communicated that, due to the nature of this situation at the Helms Project, it was unable to specify the duration of the proposed operator positions. It was further discussed and agreed that at such time as the Helms project may not require operating personnel due to the projected full functioning of the automated systems which were designed for this facility, the parties shall meet, prior to any displacements, to discuss the procedure through which such displacements may be implemented. Company will continue to utilize the exiting Helms classifications in the same manner that was provided for in letter agreement R2-80-72-PGE dated July 28, 1981.

If you are in accord with the foregoing and agree thereto, please so indicate in the space provided below and return one executed copy of this letter to Company.

Yours very truly,
PACIFIC GAS AND ELECTRIC COMPANY
By /s/ I. W. Bonbright
Manager of Industrial Relations

The Union is in accord with the foregoing and it agrees thereto as of the date hereof.

LOCAL UNION NO. 1245, INTERNATIONAL
BROTHERHOOD OF ELECTRICAL WORKERS, AFL-CIO
Sept. 4, 1984 By /s/ Jack McNally
Business Manager

- COPY -

LA R1-91-70-PGE

May 14, 1991

Local Union No. 1245
International Brotherhood of
Electrical Workers, AFL-CIO
P.O. Box 4790
Walnut Creek, CA 94596

Attention: Mr. Jack McNally, Business Manager

Gentlemen:

In the implementation of Letter Agreement 91-21, the parties have met and agreed to the following:

1. No employee shall experience a reduction in pay as a result of the reclassification from Water Systems Repairman to Apprentice Water Systems Repairman. However, without delaying future progressive wage increases or progression to journeyman, employees will be responsible for completing all phases of the training program.

2. Employees reclassified from Water Systems Repairman to Apprentice Water Systems Repairman shall progress to Water Systems Repairman following six months at the top rate of pay of the Apprentice wage range and will not be classified as Unassigned.

3. The Water Systems Repairman Training Program will be utilized for training purposes until a formalized Apprentice training program is negotiated and in place.

Further, the parties recognize that until such time as a formal Apprentice Training Program is agreed upon, an interim procedure will be necessary in the filling of vacancies created by the Water Systems Repairmen.

1. Employees who are the successful bidders to Water Systems Repairman vacancies will be placed at the 1 year step of the Apprentice Water Systems Repairman classification. (This is the next higher step above the first step of the old Water Systems Repairman wage range.) Such employees shall progress to Water Systems Repairman following six months at the top rate of pay of the Apprentice wage range and will not be classified as Unassigned.

   Further, any employee who is placed in the Apprentice Water System Repairman classification, in accordance with the above provisions shall not be progressed to Unassigned, even if the training program is agreed upon during their training period.

2. Following the implementation of an Apprentice Training Program for the Water Systems Repairman, progression through the Apprentice Water Systems Repairman classification will be under the provisions of the Master Apprenticeship Agreement and such employees will progress to Unassigned journeyman.

If you are in accord with the foregoing and attachment and agree thereto, please so indicate in the space provided below and return one executed copy of this letter to the Company.

Yours very truly,

PACIFIC GAS AND ELECTRIC COMPANY

By /s/ David J. Bergman
Manager of Industrial Relations

The Union is in accord with the foregoing and it agrees thereto as of the date hereof.

LOCAL UNION NO. 1245, INTERNATIONAL
BROTHERHOOD OF ELECTRICAL WORKERS, AFL-CIO

May 28 ,1991

By /s/ Jack McNally
Business Manager

- COPY -

LA 92-8-PGE

January 22, 1992

International Brotherhood of
Electrical Workers, AFL-CIO
Local Union No. 1245
P.O. Box 4790
Walnut Creek, CA 94596

Attention: Jack McNally, Business Manager

Gentlemen:

Pursuant to Letter of Agreement R1-91-21-PGE, the Company has developed the attached proposed training program for the Apprentice Water Systems Repairmen.

If you are in accord with the foregoing and agree thereto, please so indicate in the space provided below and return one executed copy of this letter to the Company.

Yours very truly,

PACIFIC GAS AND ELECTRIC COMPANY

By /s/ David J. Bergman
Director & Chief Negotiator

The Union is in accord with the foregoing and it agrees thereto as of the date hereof.

LOCAL UNION NO. 1245, INTERNATIONAL
BROTHERHOOD OF ELECTRICAL WORKERS, AFL-CIO

March 6, 1992

By /s/ Jack McNally
Business Manager

GUIDELINES FOR THE APPRENTICE WATER SYSTEMS REPAIRMAN PROGRAM

OBJECTIVE

The need for trained and fully qualified Water Systems Repairman (WSR) resulted in the development of this Apprenticeship Training Program. The goal is to train employees consistent with company standards, safety, and business goals through extensive On-the-Job and related Academic Training. This systematic acquisition of knowledge and skill offer the employee in training opportunities to attain self-confidence and satisfaction in his or her work, as well as provide the correct and safe methods of performing the company's business.

TRAINING

During the 36 months of the apprenticeship, you will be offered job training divided into six time periods which coincide with the wage steps of the classification. In order that uniform and safe work practices will be followed in the training period, the assignment of duties and work procedures shall follow the Academic & On-the-Job Training Schedules outlined in these guidelines. The amounts of time or units of work indicated in the Training Schedules are believed sufficient to permit you to develop proficiency in required duties and work procedures, but should not be considered inflexible dependent on the demonstrated ability of each individual. The Academic Schedule specifies the training periods in which you will receive academic or classroom training.

1. On-The-Job Training

   The on-the-job phase of the training program is designed to give you practical training that will develop your abilities and prepare you for journeyman responsibilities. This training will include instruction on the construction, operation and maintenance of the water collection and distribution facilities associated with the Hydro Department. This phase of your training will fully utilize the variety of work offered by the daily assignment of jobs in your area.

   The duties and amount of such training, as specified in the On-The-Job Training schedule, shall apply to the extent that such duties are performed by the journeymen where you are headquartered. In the event that such duties are not performed by journeymen where you are headquartered and therefore not available it shall be noted in your work record. However, progression through the training or to journeyman or higher classification shall not be deterred for this reason.

2. Related Academic Training

   As early as possible in the training period, you will be assigned related Academic Training. The courses are outlined in the WSR Academic Schedule and describe where such training is to take place. Certain topic are to be covered at your headquarters. Others such as Backhoe, Rigging, Welding and Valve training will be conducted by centralized training organizations in locations such as San Ramon, Santa Rita and Livermore, Calif. The academics are to be completed within the first 30 months of your apprenticeship.

GENERAL GUIDELINES

1. It is intended that the assignment of the On-The-Job Training hours are made for each Apprentice as early in each time period as practical.

2. Progressive work experience in all phases of WS responsibilities will be provided throughout the first five time periods (30 months) in accordance with the attached On-The-Job Training Schedule.

3. Job assignments for the last or sixth time period will be made for the purpose of rounding out the Apprentices experience.

4. Hours indicated within all phases of training exclude travel time. However, such hours do include time needed to plan jobs and prepare tools and equipment.

5. Except where otherwise specified, Apprentices shall be trained by assignment to work with qualified Journeymen.

6. The supervision of your training program is the primary responsibility of the Water Foreman. He or she will be aided, as may be necessary, by other qualified personnel. Thus, through association with more than one person, you will receive a wider range of view points and experience.

7. Periodic testing and interviews will be held for the purpose of evaluating your overall progress and determining your level within the program. Records of your progress will be kept and reviewed as part of your evaluation. If your academic progress becomes unsatisfactory, below the minimum level of 70 percent for any area, your supervisor will review your performance with you and recommended steps for improvement in accordance with the Master Apprenticeship Agreement Section "G". Notice shall also be given to Union's Business Representative.

8. The use of additional or remedial study is not provided for by this program. If you are having difficulty in any phase of your training, it will be to your advantage to utilize extra study for review and improvement. Outside courses can be used, on your own behalf, to supplement the program.

9. Apprentices may be assigned work without direct supervision only after:

   a) Instruction on the required duties, safe work practices and/or work procedures have been completed.

   b) Such work has been performed under direct supervision.

   c) The capability of performing such work safely has been demonstrated.

10. It shall be your responsibility to maintain your own records in collaboration with your Water Foreman and Training Coordinator. Upon completion, each periodic record shall be submitted to your Water Foreman for review.

11. Records shall be available at all times during the Apprenticeship for review by Water Foreman or higher levels of supervision, the employee, and Union Representatives.

12. In addition to and precedent to these guidelines, the provisions of the Master Apprenticeship Agreement are applicable.

-0 THRU 6 MONTH ACADEMIC SCHEDULE

COURSE*	LOCATION	HOURS
Handtools	Apprentices Headquarters	18 hrs study 1 hr test
Mathematics	Apprentices Headquarters	10 hrs study 1 hr test
Dump Truck	Apprentices Headquarters	8 hrs minimum 40 hrs maximum
Tractor, Low-Boy	Apprentices Headquarters	8 hrs minimum 40 hrs maximum
Welding Oxy / actyl	SGTC San Ramon	80 hours Classroom/Lab

-7 THRU 12 MONTH ACADEMIC SCHEDULE

COURSE*	LOCATION	HOURS
Portable Power Tools	Apprentices Headquarters	16 hrs study 1 hr test
Making Measurements	Apprentices Headquarters	12 hrs study 1 hr test
Basic Electricity	Apprentices Headquarters	20 hrs study 1 hr test
Backhoe	Santa Rita Livermore	100 hrs maximum
Boom Truck	Apprentices Headquarters	8 hrs minimum 40 hrs maximum
Sno Cat	Apprentices Headquarters	8 hrs minimum 40 hrs maximum
Forklift	Apprentices Headquarters	8 hours

-13 THRU 18 MONTH ACADEMIC SCHEDULE

COURSE*	LOCATION	HOURS
Reading Blue Prints	Apprentices Headquarters	16 hrs study 1 hr test
Basic Plumbing	Apprentices Headquarters	10 hrs study 1 hr test

Motorgrader	Apprentices Headquarters	8 hrs minimum 40 hrs maximum
Loader	Apprentices Headquarters	8 hrs minimum 40 hrs maximum
Excavator	Apprentices Headquarters	8 hrs minimum 40 hrs maximum

-19 THRU 24 MONTH ACADEMIC SCHEDULE

COURSE*	LOCATION	HOURS
Carpentry	Apprentices Headquarters	6 hrs study 1 hr test
Cat	Apprentices Headquarters	8 hrs minimum 40 hrs maximum
Rigging	SGTC San Ramon	120 hours
Loader	Apprentices Headquarters	8 hrs minimum 40 hrs maximum

-25 THRU 30 MONTH ACADEMIC SCHEDULE

COURSE*	LOCATION	HOURS
Surveying (Running Levels)	GC Yard Auburn	8 Hours
Construction Practices	Apprentices Headquarters	12 hrs study
Flumes	Apprentices Headquarters	12 hrs study
Valve Overhaul & Repair	SGTC San Ramon	64 hours
Rigging	SGTC San Ramon	60 hours

*Tests in any time period (six month intervals) may be taken in any order.

COURSE OBJECTIVES, OUTLINES AND/OR DESCRIPTIONS

ACADEMIC TRAINING

The training will begin with an orientation period consisting of a short introduction to various aspects of the company system, division organization, and facilities of the Hydro Department. This period will provide basic understanding of the Apprentice Water Systems Repairman Training Program, job duties, as well as other related areas including accounting procedures, safety, first aid, fire prevention, union contract, etc.

MATH REVIEW

General review of math including problems involving the use of fractions, decimals, ratios, areas and volumes, and geometry relating to construction practices in the Water Departments.

RIGGING

The fundamentals of rigging to include use of rope, slings, and calculations for determining weight of objects, size of blocks, advantage for using levers, and maintenance of equipment (from the Mechanical Maintenance Training Program, Steam Department, San Ramon).

WELDING

Welding principles including coverage of basic fundamentals, equipment both gas and electric arc, oxygen cutting, brazing, soldering, and layout, etc. (from the Mechanical Maintenance Training Program, Steam Dept., San Ramon).

EQUIPMENT OPERATION

Basic instruction and training in the operation of the various types of equipment utilized in the Hydro Departments. To include preoperative inspection and service requirements, operating procedures, company rules and regulations, use of complaint forms, records, etc., study material including manufacturers' instruction manuals, check sheets, etc. Instruction to be provided at the training facility at San Ramon and local headquarters as appropriate for the equipment utilized at each headquarters.

HAND TOOLS

Information and practice in using measuring tools, wrenches, pipe fitting, concrete, woodworking, hoisting and pulling tools. How to use, sharpen, and maintain.

PORTABLE POWER TOOLS

Instruction and safe practice using portable electric and air powered drills, hammers, saws, routers, planes, sanders, screwdrivers, wrenches, and grinders.

CARPENTRY

Basic information about lumber, selection, and safe use of tools, hardware, and general practices involving construction type of carpentry.

CONSTRUCTION PRACTICE

Instruction and training in the appropriate skills required in performing work in the Hydro Departments associated with piping, concrete, leveling, and print reading. Instruction for print reading to be provided at each respective headquarters utilizing appropriate drawings for the specific types of structures and facilities maintained in that area or system.

FLUMES

The application and instructions for construction, reconstruction, and maintenance of the various types of flumes utilizing for water conveyance.

BASIC ELECTRICITY

Instruction and training in the appropriate skills required in performing work in the Hydro Departments associated with building maintenance electrical work.

SURVEYING (LEVELING)

Instruction and training in the appropriate skills required in performing the running of levels. (Available at G.C. Yard in Auburn)

VALVE OVERHAUL/REPAIR

Instruction and training in the appropriate skills required in performing maintenance and overhaul of valves. (Available at San Ramon Training Center)

BASIC PLUMBING

Instruction and training in the appropriate skills required in performing work in the Hydro Departments associated with building maintenance plumbing work.

READING BLUE PRINTS

Instruction and training in the appropriate skills required in performing work requiring the use of working drawings.

MAKING MEASUREMENTS

Instruction and training in the appropriate skills required in performing all work requiring measurements.

HAND TOOLS

Introduction

The correct and safe use of hand tools and their care are essential skills for Water Department personnel. Upon completion of this unit, the student will be able to make accurate measurements, identify tools by their correct name, cite the specific purpose and use of each tool, describe their correct operation, and provide the care and maintenance required to keep tools in proper operating condition. The importance of good workmanship is stressed and good safety practices are emphasized to prevent or minimize injury and equipment damage.

Study Guide

The textbook to be used is Technical Publishing Company's USING HAND TOOLS. Read and study all of the lessons and answer the programmed exercises and self-check quizzes after each lesson.

Performance Objective

The objective of this unit is to provide the employee with information to help acquire a good working knowledge of the use and operation of each hand tool. The completion of this unit will require about eighteen (18) hours of study time and one (1) hour for the performance test.

Lesson 1: MEASURING TOOLS

Linear and angular measurement; Units of linear measurement; Rules and measuring tapes; Using rules and tapes; Calipers; Slide calipers; Vernier calipers; Micrometer caliper; Using the micrometer; Squares.

Lesson 2: WRENCHES AND SCREWDRIVERS

WRENCHES - Using wrenches; Open-end wrenches; Box-end wrenches; Combination wrenches; Socket wrenches; Socket handles; Socket-head wrenches; Adjustable wrenches; Torque wrenches; Using wrenches safely.

SCREWDRIVERS - Using screwdrivers; Standard screwdrivers; Cross-slot screwdrivers; Spiral ratchet screwdrivers; Offset screwdrivers; Driving a screw; Removing a screw; Restoring a screwdriver blade; Using screwdrivers safely.

Lesson 3: PIPE FITTING TOOLS

Pipe Wrenches - Using a pipe wrench; Pipe vises; Cutting pipe; Threading pipe; Reaming pipe; Tapping pipe; Cutting tubing and plastic pipe; Flaring metal tubing; Caring for pipe tools.

Lesson 4: PLUMBING TOOLS

Plumbing codes; Plumbing system; Joining copper pipe; Tube bending; Cutting cast-iron pipe; Joining cast-iron pipe; Assembling plastic pipe; Force-cup plungers; Augers; Line-clearing tools; Sewer tapes; Special wrenches; Measuring pipe.

Lesson 5: ELECTRICIAN'S TOOLS

The electrician; EMT bender; Correcting knocked-over stubs; Bending rigid conduit; Assembling rigid conduit; Knockout punches; Fish tapes; Pliers; Wire and cable strippers; Special screwdrivers; Test and safety equipment.

Lesson 6: WOODWORKING TOOLS

Handsaws; Crosscut saws; Ripsaws; Special purpose saws; Planes; Scrapers; Drills; Chisels; Levels; Plumb bobs; Hammers and nail sets.

Lesson 7: MASONRY, PLASTERING, AND GLAZING TOOLS

Concrete and mortar; Preparing mortar; Working with bricks and mortar; Tuckpointing; Working with concrete; Edging, jointing, and finishing; Repairing plasters; Repairing wallboard; Cutting glass; Installing glass; Safety on the job.

Lesson 8: SHEET METALWORKING TOOLS

Sheet metal; Sheet metal gages; Layout tools; Dividers; Punches; Rivets and riveting tools; metal cutting chisels; Using a chisel; Hammers; Metal cutting snips; Dressing, Notchers; Bench stakes; Forming tools; Hand seamer; Soldering sheet metal safety.

Lesson 9: METALWORKING TOOLS

Vises; Hacksaws; Using hacksaws; Files; File cuts; File specifications; Selecting a file; Using files; Taps; Tap sizes; using taps; Dies; Thread classes; Using dies; Reamers; Using Reamers.

Lesson 10: HOISTING AND PULLING TOOLS

Hoisting with rope; Knots; Wire rope; Slings; Sling angles; Sling hitches; Center of gravity; Sling spreader beams; Block and tackle; Chain fall; Chain load pullers; Machine part pullers; Jaw pullers; Slide hammer pullers; Choosing the proper puller.

MATH REVIEW

Introduction

A working knowledge of mathematics is an important part of the skills which an Apprentice Water Systems Repairman needs to do his job. Mathematical calculation are frequently used for most construction type jobs to determine required materials and in the assembly process involving use of measurements.

Safe rigging practices require the need to determine weights of objects, calculate the advantage of levels, determine size of pulling blocks and the number of lines needed to support a given load, and the sizes of slings to support the load.

The functions to be covered in this unit will provide all of the math needed by the Apprentice in his daily work.

Study Guide

The textbook to be used is Technical Publishing Company's USING MATHEMATICS IN THE PLANT. Read and study all of the lessons as indicated in the index and answer the programmed exercises and self-check quizzes after each lesson.

Performance Objective

The object of this unit is for use as a refresher study for use in solving problems involving fractions, decimals, ratios, geometry, areas and volumes as related to Hydro Department work. The completion of this unit will require about ten (10) hours of study time and one (1) hour for the performance test.

Lesson 1: WHOLE NUMBERS

Numbers and numerals; Decimal system; Positive and negative numbers; Addition; Carrying; Multiplication; Subtraction; Borrowing; Division.

Lesson 2: COMMON FRACTIONS

Definitions of a fraction; Value of a fraction; Improper fractions; Mixed number; Equivalent fractions; Reducing fractions; Common denominators; Lowest common denominator; Adding fractions; Subtracting fractions; Subtracting mixed numbers; Multiplying fractions; Canceling; Dividing fractions.

Lesson 3: DECIMAL FRACTIONS

Decimal form; Rounding off; Adding decimal fractions; Rounding off in addition; Subtracting decimal fractions; Rounding off in subtraction; Decimal fractions in shop; Multiplying decimal fractions; Rounding off in multiplication; Adding extra zeros; Dividing decimal fractions; Rounding off in division; Changing decimal fractions to common fractions.

Lesson 4: RATIOS AND PROPORTION

Comparing numbers; Ratios; Expressing ratios; Writing ratios; Units in ratios; proportion.

Lesson 5: POWERS AND ROOTS

Repeating multiplication and division; Exponential form; Multiplying in exponential form; Dividing in exponential form; Zero power; Fractions with exponents; Products with exponents; Powers of powers; Powers of sums and differences; Roots; Fractional exponent; Negative fractional exponents.

Lesson 6: CALCULATORS

What a calculator does; Inside a calculator; Internal logic; Basic functions; Special purpose calculators.

Lesson 7: GEOMETRY

Lines and curves; Circles; Angles; Measuring angles; Polygons; Triangles; Quadrilaterals; Constructions.

Lesson 8: ALGEBRA

Need for algebra; Symbols; Expressions and equations; Order of operations; Parentheses; Numbers and variables; Equations; Algebraic laws; Writing equations; Solving equations.

Lesson 9: USING FORMULAS

A real problem; Solving the problem; Length, area and volume; Solving other problems.

Lesson 10: TRIGONOMETRY

Properties of triangles; Trig functions; Trig tables; Inverse trig functions; Using trig functions.

PORTABLE POWER TOOLS

Introduction

Portable power tools have made it possible to perform many tasks with ease that formerly were time-consuming and laborious.

Many portable power tools are made for the jobs a student or craftsman is expected to perform in their work. Some are electric and others are air-powered. Either type can perform the same type of work but the amount done varies with application.

Most portable electric power tools have universal motors that operate on 120 or 240 volts, AC of DC. The electric tools are designed specifically for intermittent work. pneumatic tools perform better than electrical tools on long, continuous operations.

This unit describes the more common power tools and employee may use. All students should know as much as possible about the different power tools, to know which tools are best for each application. This unit describes in detail both electrical and pneumatic tools. It explains how to operate them properly and stresses safety in handling each tool.

Study Guide

The textbook to be used is Technical Publishing Company's USING PORTABLE POWER TOOLS. Read and study all of the lessons and answer the programmed exercises and self-check quizzes after each lesson.

Performance Objective

The objective of this unit is to provide the employee with information to help acquire a good working knowledge of safe operation and application of portable power tools. The completion of this unit will require about sixteen (16) hours of study time and one (1) hour for the performance test.

Lesson 1: ELECTRIC DRILLS

Parts of electric drills; Light duty drills; Heavy duty drills; Accessories; Drill sizes; Drill bits; Preparing to drill; Using the electric drill; Electric drill maintenance; Drill safety..

Lesson 2: ELECTRIC HAMMERS

Types of hammers; Operating electric hammers; Bits and chisels; Core bits; Self-drilling anchors; Mechanical safety; Electrical safety; Environmental safety.

Lesson 3: PNEUMATIC DRILLS AND HAMMERS

Pneumatic Drills - Air power; Types of pneumatic drills; Sizes of pneumatic drills; Bits for pneumatic drills; Preparing to drill; Operating pneumatic drills.

Pneumatic Hammers - Types of pneumatic hammers; Chipping and scaling; Drilling; Riveting; Tampers; Needle scalers; Diggers; Lubrication and maintenance.

Lesson 4: SCREWDRIVERS, NUTRUNNERS AND WRENCHES

Screwdrivers and nutrunners; Clutch mechanisms; Power wrenches; Bits and sockets; Operating power screwdrivers and wrenches; Lubricators and moisture separators; Tool safety.

Lesson 5: LINEAL MOTION SAWS

Straight blade power saws; Saber saws; Saber saw blades; Plunge cutting; Straight cutting; Cutting metals; Saber saw techniques; Reciprocating saws; Reciprocating saw blades; Band saws.

Lesson 6: CIRCULAR SAWS

Circular saws; Using the circular saw; Circular saw blades; Special saw blades; Crosscutting; Ripping; Angular cutting; Plunge cutting; Notching and grooving; Cutoff wheels; Arbors and arbor adaptors; Circular saw accessories; Safety rules.

Lesson 7: ROUTERS AND PLANES

Routers - Router characteristics; Collect chucks; Bits; Using a router; Direction of feed; Grooves and dadoes; Rabbet cuts; Decorative trim; Circular cuts; Using templates; Hinge-butt mortising; Jointing.

Planes - Plane characteristics; Using a plane; Safety.

Lesson 8: ELECTRIC SANDERS

Belt sanders; Installing a sanding belt; Using the belt sander; Belt sander lubrication; Motor maintenance; Pad sanders; Loading the sander; Using the pad sander; Pad sander maintenance; Disk anders; Using the disk sander; Disk assembly; Disk sander maintenance; Safety.

Lesson 9: GRINGERS AND SHEARS

Grinders - Selecting a grinder; Grinding wheels; Mounting grinding wheels; Using a grinder; Grinder maintenance; Safety.

Shears - Selecting shears; Using shears and nibblers.

Lesson 10: TOOL SHARPENING

Reasons for sharpening; Whetstones; Using a bench grinder; Sharpening chisels; Sharpening drill bits; Sharpening screwdrivers; Sharpening pointed tools; Sharpening reamers; Sharpening taps and dies; Other sharpening tools.

CARPENTRY

Introduction

The carpenter and other crafts are closely related in many areas, and in some cases, overlap. It is common practice for some portion of your duties to be carpentry work. While the journeyman carpenter trade includes everything from rough construction through trim and finish work, your particular craft is usually concerned with construction-type carpentry only. This section, therefore, is limited to those carpentry operations that may be performed by your craft.

Study Guide

The text book to be used is Technical Publishing Company's INTRODUCTION TO CARPENTRY. Read and study all of the lessons provided and answer the programmed exercises and self-check quizzes after each lesson.

Performance Objective

The objective of this unit is to provide the employee with information to help acquire a good working knowledge of basic carpentry. The completion of this unit will require about six (6) hours of study time and one (1) hour for the performance test.

Lesson 1: LAYOUT AND HAND TOOLS

Introduction; Dressing for carpentry work; Safety accessories and equipment; Layout tools; Straightedge; Marking gage; T-Bevel and protractor; Framing square; Testing a framing square; Chalk box and line; Work-holding vices and clamps; Hand tools; Your toolbox.

Lesson 2: CARPENTER'S POWER TOOLS

Rules for power tool safety; Blades for circular saws; Correct use of a circular saw; The sabre saw; Reciprocating saw; The power drill; The power plane; The router; Belt sander; Finishing sander; Specialty tools for carpenters; Nailers and tackers; Power actuated fastening tools; The screw gun.

Lesson 3: LUMBER, WOOD PRODUCTS AND FASTENERS

Hardwood vs. softwood; Lumber sizes; Lumber grading; Lumber defects; Moisture content; Milling methods; Millwork; Plywood; Plywood grading; Working with plywood; Hardboard; Particleboard; Proper storage of lumber; Standard nails; Special nails; Wood screws.

Lesson 4: ESTIMATING CARPENTRY COSTS

Units for ordering materials; Reducing waster material; Using waste material; Bill of materials; Preparing a cost estimate; Overhead; Guides for cost estimating; Tips on organizing a task.

Lesson 5: PLANS, SPECIFICATIONS AND CODES

Architectural drawings; Presentation drawings; How to read drawings; Dimensions on drawing; Symbols used in drawings; Equipment schedules; A full set of plans; Specifications for construction; Building codes and zoning laws; Building permits; Making your own drawings.

EQUIPMENT TRAINING

Course Title: Backhoe/Loader Training

This course involves intensive hands-on and lecture in procedures and techniques required for safe, effective backhoe/loader operation. Meets Company/Union agreement; employee must satisfactorily complete this training in order to remain in classification. The trainee will encounter a number of job related modules that are practiced to enhance proficiency. A Written Exam and Proficiency Evaluation is given and a grade of 70 percent or better is required to satisfactorily pass.

Who Should Attend:

Apprentice Water System Repairman

Length of Course:

100 Hours maximum total hours: 80 Hour Initial Training
20 Hour Retest if the initial 80 hour course is failed.

3-Day training course is available, if employee has accumulated 200 or more hours of prior experience.

What is to be Accomplished:

Participants will be able to:

- Perform daily maintenance
- Perform effective loader operation, backfilling, leveling and 4 in 1 bucket operation
- Perform smooth, effective backhoe operation
- Demonstrate safe, efficient operational techniques

Instructors and Methods:

A 2:1 participant/instructor ratio. Training conducted at the Santa Rita Training Center. A combined classroom/field approach emphasizes hands-on experience. Instruction begins with basic control lever coordination exercises and advances daily through the more difficult situations encountered on-the-job. Each exercise is practiced until a measure of proficiency is obtained. A written examination is given at the completion of the classroom portion of training (day 2). Proficiency is given on the last day.

Course Title: Various

This training is to provide hand-on experience enabling employees to safety operate the various types of equipment utilized by the Hydro Generation Department. Also familiarizes them with proper daily maintenance procedures.

Includes but not limited to:

- Dump Truck
- Tractor/Lowboy Trailer
- Utility Crane (Boom) Truck

- Snow-cat
- Forklift
- Motorgrader
- Front Loader
- Excavator
- Crawler Tractor

Length of Course:

Minimum 8 hours. Instruction varies according to employee's ability and type of equipment. MAXIMUM 40 hours training expended.

What is to be Accomplished:

Participants will be able to:

- Perform daily inspection and maintenance
- Demonstrate safe and efficient operation

Instructors and their Methods:

Training is conducted at the employee's headquarters. Equipment utilized for training is to be supplied by the requesting headquarters.

A ratio of 1:1 participant/instructor is recommended. Facilities to show audio/video aids may be required. Safety rules, operating techniques and maintenance procedures will be reviewed. Written tests will be administered.

Hands on operation will be conducted at the headquarters; prefer to conduct on-the-job operation if practical.

BACKHOE/LOADER TRAINING - 80 HOUR

Week 1 Day 1 I. Classroom

- 8:00 - 9:00 A. Introduction
  1. Accommodations
  2. Timecards
  3. Meals
  4. Sheriff Rules
  5. Forms - Daily Report, Written Test, Proficiency Test, Letter
  6. Retesting
  7. Course Outline
  8. Housekeeping rules

II. Safety

- 9:00 - 10:00 A. Video "It Always Happens to the Other Guy"
  B. Video "Split Seconds to Live"
- 10:00 - 10:15 [BREAK]

- 10:15 - 10:30 C. General Safety Rules
  1. Seat Belts
  2. Securement of Hoe (parking)
  3. Before turning seat
  4. Maneuvering

III. Walk Around
- 10:30 - 10:45 A. View Trenching Area's

IV. Review Books
- 10:45 - 11:00 A. Tractor/Loader/Backhoe
  B. Gas DSBN Black Book
  C. Operator Manuals

V. Maintenance
- 11:00 - 12:00 A. Video - "Maintenance Procedures"
  B. PG&E Operator Maintenance Requirements
  C. Hands-On Review of Machines

- 12:00 - 12:30 [LUNCH]

VI. Check Points
- 12:30 - 1:15 A. Daily Check Done
  B. Grease Machines
  1. Loading Grease Guns
  2. Lube Points Reviewed

VII. Straight Trenching
- 1:15 - 2:30 A. Control Lever Familiarization

VIII. Coordination Exercises
- 2:30 - 4:00 A. Fan Exercise

DAY 2 I. Classroom
- 8:00 - 9:00 A. Review
  1. Maintenance Intervals
  2. Warm up - Shut down
  3. Safety Precautions: Set-Up, Parking, Roading, Loading on Trailer, Hills

- 9:00 - 10:00 B. Video - "Operating Tips"
  1. Loader Safety, Backfilling Technique
  2. Backhoe Components - Trenching Technique, Danger Zone, Tunneling, Elect., Hoisting
  3. Benching/Sloping

- 10:00 - 10:15 [BREAK]

II. Written Test

- 10:30 - 11:30 A. Grade and Review Tests

III. Daily Check Performed
- 11:30 - 12:00
- 12:00 - 12:30 [LUNCH]

IV. Trenching Exercises
- 12:30 - 4:30
  - A. Straight Trench
  - B. Coordination Exercises
    1. Fan
    2. Fish
    3. ∠

Day 3

I. Trenching Exercises
- 8:00 - 10:30
  - A. Straight Trench
  - B. Coordination Exercise
    1. ∠
- 10:00 - 10:15 [BREAK]

II. Straight Trench
- 10:15 - 3:00

III. Backfilling
- 3:00 - 4:30

Day 4

I. Lube Backhoe
- 8:00 - 8:30

II. Straight Trench
- 8:30 - 4:30
  - A. Obstacle Trench
  - B. Backfill

Day 5

I. Obstacle Trench
- 8:00 - 4:30
  - A. Wall Trench
  - B. Backfill

Week 2 Day 6

I. Lube Loader
- 8:00 - 8:30
  - A. Check Points

II. Cul-de-Sac
- 8:30 - 4:30
  - A. Dump Truck
  - B. Obstacle
  - C. Backfill

Day 7

III. Cul-de-Sac
- 8:00 - 4:30
  - A. Dump Truck
  - B. Obstacle
  - C. Backfill

Day 8

I. Lube Backhoe
- 8:00 - 8:30
  - A. Check Points

II. Branch Service
- 8:30 - 4:30
  - A. Dump Truck
  - B. Straight Trench
  - C. Tap Hole
  - D. Backfill

Day 9 I. Branch Service
- 8:00 - 4:30
  - A. Straddle Trench
  - B. Straight Trench
  - C. Hill Trench
  - D. Backfill

Day 10 I. Proficiency Test
- 8:00 - 4:30
  - A. Hill Trench
  - B. Straddle/Jump Trench
  - C. Backfill
  - D. Review

COURSE OUTLINE

I. Classroom (Day #1)

A. Introduction
1. Personal/School Background
2. Company/Union Agreement
3. Learning Ctr. Accommodations
4. Time Cards (travel time, mileage)
5. Emerg. phone numbers + Forms
6. Housekeeping Rules (ear plugs)

Course Contents [Flipchart]

B. Classroom (6 Hours)
1. Safety/Maintenance Videos
2. Safety Rules and Proced.
3. Walk-around
4. WRITTEN TEST
5. DRAW STRAWS (Proficiency Test)

– Grease Hoes + Practice

Safety [Video]

C. Video - "It Always Happens to the Other Guy"

D. General Safety Rules
1. Seat Belts
2. Securing of Hoe (parking)
3. Before Turning the Seat Around
4. Maneuvering (ANCHOR OUT)

B R E A K

E. Walk-Around Trenching Areas

F. Video - "Hazards of Hurry"

Procedure [DSBN Book]

G. Review Tractor/Loader/Backhoe Book

H. Review DSBN Backhoe Book
   1. Read pages 2 through 6 - Leaf through Loader Operation + Backhoe Operation

I. Mention Operator Manuals are available.

Review [Overheads]
DANGER AREA
VISIBILITY + STABILITY
CENTER OF GRAVITY
LOADER TECHNIQUES
CRANING
RUN-AWAY

L U N C H

Benching/ Sloping

J. Theory of a Cave-In
   1. Benching
   2. Sloping

K. Point-Out Sections

Grade Stakes/Commercial Drivers License Requirements

Maintenance [Video]

L. Video - "Maintenance Procedures"
   1. Discussion on Company policies
      a. Operator Responsibility
      b. BIT Program (Inspection Sheets)

WRITTEN TEST

DRAW STRAWS

GREASE HOES + PRACTICE

II. Hands-On (Day #2)
A. Fluid Checks
B. Straight Trenching
C. Practice Proficiency Test
D. Practice Jump/Straddle

III. Trenching Proficiency Test (Day #3)

BHTEST

NAME: _____ SS. # _____

HEADQUARTERS: _____ DATE: _____

SCORE: _____ %

BACKHOE/LOADER TEST QUESTIONS

Circle the letter next to the most correct answer:

1. Trenches 5' deep or deeper, spoil is to be placed at least:
   a. 4' from the edge of the trench
   b. 2' from the edge of the trench
   c. 3' from the edge of the trench
   d. 1' from the edge of the trench
2. Trenches less than 5' in depth, spoil is to be placed:
   a. 2' from the edge of the trench
   b. Nest to the edge of the trench
   c. 1' from the edge of the trench
   d. 18" from the edge of the trench
3. How often is a backhoe/loader to be greased?
   a. Monthly
   b. Every day
   c. At least every 50 hours
   d. Before operating
4. If U.G. electric is to be dug over and exact depth is not known, you are to:
   a. Not dig
   b. Notify the Electric Department
   c. Dig all but the last 12"
   d. Dig only the surface pavement - 12" maximum

5. The recommended warm-up period for a backhoe is:

   a. None needed

   b. 10 minutes

   c. 15 minutes

   d. 5 minutes

6. If you are performing maintenance or service with the loader bucket raised you should:

   a. Raise the loader no more than one foot off the ground.

   b. Block the wheels.

   c. Support the loader with a lift arm lock or a supporting beam.

   d. Lower the stabilizers.

7. Daily maintenance should always include:

   a. Checking the gauges.

   b. Fluid checks, including water, oil, and hydraulic fluid.

   c. Seating platform area cleaned.

   d. All of the above.

8. The key to safe, efficient backhoe operation is:

   a. Solid stability, beginning with proper positioning of the stabilizers.

   b. Operating the engine rpms at maximum to maintain hydraulic pressure.

   c. Operating one lever at a time.

   d. Reading the operators manual.

9. When you are loading a truck, load from the trucks:

   a. Low side

   b. Rear

   c. High side

   d. Is not important

10. When digging on a slope, whenever possible, place the spoil on the:

    a. Downhill side

    b. Uphill side

    c. In two piles, one on each side.

    d. As far from the trench as possible.

11. To level your machine while trenching across a steep slope, you may need to:

    a. Pile some blocks under the downhill stabilizer.

    b. Face uphill and do your digging from an extreme swing position.

    c. Use the loader bucket to cut a level surface for positioning.

    d. Curl your loader bucket down so that it can dig-in for more stability.

12. When lifting a load with the backhoe, position the tractor:

    a. To lift it from the side opposite the spot where you plan to place it.

    b. To lift it from the side closest to the spot where you plan to place it.

    c. To crane with the boom locked in the transport position.

    d. To lift it from the back of the unit not the side.

13. If you are roading your backhoe/loader and traffic begins to backup behind you:

    a. Slow down to let traffic go around you.

    b. Wave for them to pass when its clear.

    c. Pull over to a safe, level area and let the traffic pass.

    d. Don't worry about it, you have as much right to the road as they do.

14. Don't start extended loader operation until you:

    a. Have put the backhoe stabilizers in the down position.

    b. Secured the backhoe in the transport position.

    c. Locked both brake pedals together.

    d. None of the above.

15. When moving a load, keep the loader bucket:

    a. As high as possible for best visibility.

    b. Three foot off of the ground.

    c. As low as possible for maximum visibility and stability.

    d. Curled all the way back.

If you believe that the statement is more True than False, draw a circle around the T; if you believe the statement is more False than True, draw a circle around the F.

16. T F It is the operator's responsibility to do a thorough inspection of his/her equipment at the start of each day.

17. T F It is advisable to have your warning flashers on when roading.

18. T F In most cases it is necessary for the operator to crawl under the backhoe/loader to reach several grease fittings.

19. T F To check the fluid level in a power shuttle transmission, you are to leave the motor running, place the shuttle in neutral and the transmission in 4th gear.

20. T F If the air filter warning light comes on during operation, stop operation and call for a garageman and do not continue till the filter has been replaced.

21. T F When loading a dump truck with a backhoe, it is permissible to swing the digging bucket over the cab of the truck.

22. T F Seat belts are to be warn whenever the operator is facing in the driving position.

23. T F It is acceptable for an experienced operator to drag the backhoe teeth over a underground facility.

24. T F When roading, or when loading and unloading from a trailer you are to lock both brake pedals together.

25. T F Always place the gear shift lever and forward and reverse shuttle in neutral before turning the seat around to perform backhoe operation.

Daily Report for Backhoe Training

Name: _____ Date: _____

Type of Work Done:

- Classroom _____ hrs.

- Digging Trenches - ☐ Straight ☐ Obstacle ☐ Branch ☐ Tunnel Curb ☐ Cul-De-Sac ☐ Wall _____ hrs.

- Coordination Exercises - ☐ S ☐ Fan ☐ Fish ☐ 4 in 1 ☐ Push/Pull _____ hrs.

Digging Tapholes _____ hrs.

Jumping Trenches ☐ Jump ☐ Straddle _____ hrs.

Backfilling _____ hrs.

Loading Dump Trucks _____ hrs.

Operating on Hills ☐ Trench ☐ Backfill ☐ Drive up/down _____ hrs.

Setting Steel Plates _____ hrs.

Maintenance on Equipment _____ hrs.

Reviewing Daily Work _____ hrs.

Total Hours in Classroom: _____ hrs.

Total Hours on Job Site: _____ hrs.

Type of Equipment: _____

Instructors Name: _____

Remarks: _____

_____

_____

_____

_____

_____

GOOD [10, 9, 8]; FAIR [7, 6, 5]; POOR [4, 3, 2]

Backhoe Proficiency Evaluation

Date: _____

Name: _____ Classification: _____

Region: _____ Div.: _____ Dept.: _____

OPERATIONS	STANDARDS			
A. Safe Equipment Operation	Below	Meets	Exceeds	Score
1. Smoothly operated	5	7	9	
2. Loader control	5	6	9	
3. Proper speed	5	6	9	
4. Hand and verbal instruction	2	3	6	
			(33 pts)	_____
B. Proper Operating Procedures	Below	Meets	Exceeds	
1. Proper trench/taphole config.	5	7	9	
2. Maneuvering ability	5	7	9	
3. Backfilling	5	6	9	
4. Jumping/straddling trench	2	3	6	
			(33 pts)	_____
C. Productivity 1. Accomplish in allotted time Note: 24 Meets	Minus 1 pt. for every min. over No lower than 9 pts. or 15 mins. over	Refer to Test #___ Allotted time:_____ (24 std.)	Plus 2 pts. for every 5 mins. under. Not to exceed 33 pts. Time: _____	_____
D. Maintenance				
1. Maintenance performed	0	1/2	1/2	
2. Vehicle inspected	0	1/2	1/2	
			(1 pt)	_____

Total Score: _____

Passing score is 70 out of a possible 100 pts.

TRAINEE: _____

INSTRUCTOR: _____

Course Title: Various

This training is to provide hands-on experience enabling employees to safety operate the various types of equipment utilized by the Hydro Generation Department. Also familiarizes them with proper daily maintenance procedures.

Includes but not limited to:

- Dump Truck
- Tractor/Lowboy Trailer
- Utility Crane (Boom) Truck
- Snow-cat
- Forklift
- Motorgrader
- Front Loader
- Excavator
- Crawler Tractor

Length of Course:

Minimum 8 hours. Instruction varies according to employee's ability and type of equipment. Maximum 40 hours training expended.

What is to be Accomplished:

Participant will be able to:

- Perform daily inspection and maintenance
- Demonstrate safe and efficient operation

Instructors and their Methods:

Training is conducted at the employee's headquarters. Equipment utilized for training is to be supplied by the requesting headquarters.

A ratio of 1:1 participant/instructor is recommended. Facilities to show audio/video aids may be required. Safety rules, operating techniques and maintenance procedures will be reviewed. Written tests will be administered.

Hands on operation will be conducted at the headquarters; prefer to conduct on-the-job operation if practical.

Introduction

The purpose of this training is to familiarize you with the Dump Truck.

Proper application of this training course will result in increased efficiency and safe operation of the equipment.

We will discuss the various job site operations that should be continually considered and maintained during the source of the day's construction activities.

Outline/Schedule

		Instruction Time
I.	Introduction	5 minutes
II.	Subject Matter (Classroom)	1 hour, 30 minutes
	A. General Information B. To load the dump body C. To empty the dump body D. Lubrication of the dump body E. Daily inspection	
III.	Quiz	15 minutes
IV.	Field Exercise	6 hours
V.	Summary	10 minutes
	Total:	8 Hours

BOOM TRUCK

Introduction

The purpose of this training course is to familiarize you with the Boom Truck.

Proper application of this training course will result in increased operating efficiency and safe operation of the Boom Truck.

We will discuss the various job-site operations that should be continually considered and maintained during the course of the training session.

Outline/Schedule

		Instruction Time
I.	Introduction	5 minutes
II.	Subject Matter (Classroom)	1 hour, 30 minutes

A. General Information
B. Start Up
C. Safety Precautions for Start Up
D. Operation of the Boom
E. Safety Precautions for Boom Operations
F. Winch Operations
G. Safety Precautions for Winch Operations
H. Securing the Boom for Travel
I. Safety Precautions for Travel
J. Maintenance
K. Trouble Shooting in the Field
L. Daily and Monthly Inspection

III.	Quiz	15 minutes
IV.	Field Exercise	6 hours
V.	Summary	10 minutes
	Total:	8 Hours

The purpose of this training course is to familiarize you with our Company equipment and to help you prepare yourself for job advancement.

Proper application of this training course is designed for the purpose of upgrading the skills of operators in order that they may increase operating efficiency and work safely at all times.

We will discuss the various job site operations that should be continuously considered and maintained during the course of the day's activities.