

the electric power sold in the Columbia basin, an area about three times the size of TVA. Much of the economy of the Pacific Northwest depends on BPA's efficient and dependable operation.

Presently BPA has about 2,700 employees. For many years its hourly employees have been organized in craft unions that bargain collectively through the Columbia Power Trades Council.

It is vital that BPA have the best qualified personnel available, and the right man in the right job. BPA's top officials must be able to deal effectively and fairly with the executives of many private companies with which it does business. An error in judgment by a single BPA substation operator can result in loss of life or interruption of electric service to a major industry or geographic area.

In the case of an aluminum plant, a service outage of even short duration causes pot lines to "freeze" and results in damage which takes weeks to repair. Interruption of service to a city is a minor disaster; traffic signals and elevators and home appliances stop working, causing confusion, freight, and economic hardship to citizens—for example, food spoilage in refrigerators and damage to electric motors. Furthermore, transmission system damage as high as \$500,000 has resulted from a single operating error.

From a management standpoint, BPA therefore is unusual. Its management problems, and methods of solving them, are much more akin to those of large public- and investor-owned electric utilities. BPA has found that many utilities, public and investor owned, have used and are using psychological testing along with other types of tests, as aids in selecting key employees. Among utilities utilizing such testing are: Duquesne Light & Power, Connecticut Valley Electric Exchange, Ontario (Canada) Hydroelectric, Chelan County (Wash.) Public Utility District, Northern Indiana Public Service Co., Philadelphia Electric, and Washington Public Power Supply System. Attached is an article from *Electrical World* (Mar. 22, 1965) which discusses use of psychological testing by the electric utility industry.

After BPA concluded that psychological testing would be a valuable adjunct to the testing provided by the Civil Service Commission, we employed two professional consulting firms—Aptitude Testing for Industry, of Los Angeles, and Psychological Service of Pittsburgh. Both organizations are highly reputable, as attested by the list of their clients, including Aluminum Co. of America, Jones & Laughlin Steel Corp, Mellon National Bank & Trust Co., Westinghouse Electric Corp., Western Hydraulics, Ltd. (Borg-Warner subsidiary), and the Garrett Corp.

BPA has employed these independent consultants primarily to evaluate present employees who are being considered for filling vacancies or for special training opportunities. Positions involved include trainee power dispatcher, senior power dispatcher, head—system operations section, substation operations superintendent, chief substation operator, and certain key managerial positions. For entry-type craft applicants and prospective management trainees, BPA uses such tests as the Kuder preference record—vocational, manual dexterity tests, and the Civil Service Commission's general aptitude test.

Thus far, BPA has employed the 2 independent consultants to test a total of 105 employees for 29 positions. BPA has adopted criteria guidelines, copy attached, for the consultant and BPA staff personnel for the administration of tests. For each position in the testing program, BPA provides a job definition and qualifications statement. The consultant selected to conduct the testing for the position then determines the appropriate tests to make up the "test battery," including interest, ability, and personality tests. Aptitude Testing for Industry has told BPA that it has included the following tests in its test battery:

- Watson-Glaser Critical Thinking Appraisal.
- Allport-Vernon-Lindsey Study of Values.
- Multiphasic Personality Inventory.
- Guilford-Zimmerman Temperament Survey.
- Kuder Preference Record.
- Management Aptitude Inventory.
- Supervisory Practices Test.

The tests that are being used are limited in distribution by the publisher and are under the control of the contractors.

No person in BPA ever sees the individual answers to test questions. When the tests are completed, they are sealed and sent to the consulting firm, which retains and does not return them. The completed tests are evaluated by qualified psychologists who are members of the American Psychological Association. A private "feedback" interview by a qualified representative of the testing firm