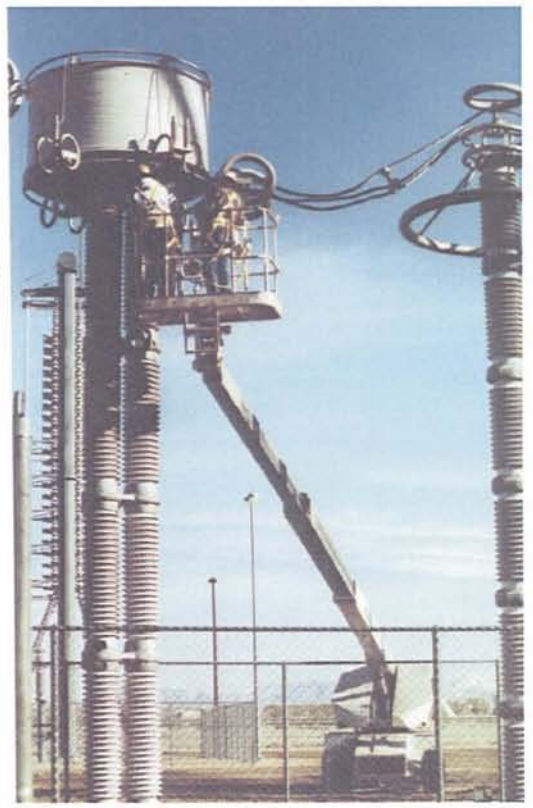
1995 — A Year of Increased Activities and Ratings

IPSC

Production Incentive Program — IPSC employees earned 64.62 percent of targeted goals for an award of 3.23 of their annual base wages this year, somewhat below last year because of forced outages and lost time accidents.

Operation Rating Increase — The recommendation by IPSC to increase the operational ratings on IGS Units 1 and 2 was accepted with an effective date of July 1. Rated capacity was increased from 840 Mega Watts (MW) gross (800 MW net) to a two load rating of 865 MW gross (820 MW net) and 855 MW gross (810 MW net) during the summer months of June, July, August, and September. This increased Station capacity by 40 MW net for eight months and 20 MW net during the four summer months, for a weighted average station increase of 33 MW.

IPSC Crew Quickly Restores Pole 2 to Service After Explosion at Converter Station — On January 15, at approximately 11:30 a.m., an explosion occurred at the Intermountain Converter Station DC Switchyard, taking Pole 2 off line.



"The explosion may have been caused by a blemish resembling a small dent in the grounded steel conduit shaft of the Direct Current (DC) transducer (a piece of equipment used to measure DC line current). This weakness eventually caused the transducer to fail which resulted in an explosion. In addition, the explosion pulled a 500 kilovolt (kV) line disconnect switch from its base and the transducer fell into a 500 kV arrester. Other equipment in close proximity to the transducer was also damaged from pieces of metal and porcelain insulators hurled by the explosion," said Travis Smith, Intermountain Converter Station Assistant Manager.

According to Converter Station management, it is not known whether the blemish was in the steel conduit when it was installed or as a result of normal usage over the past several years of operation.

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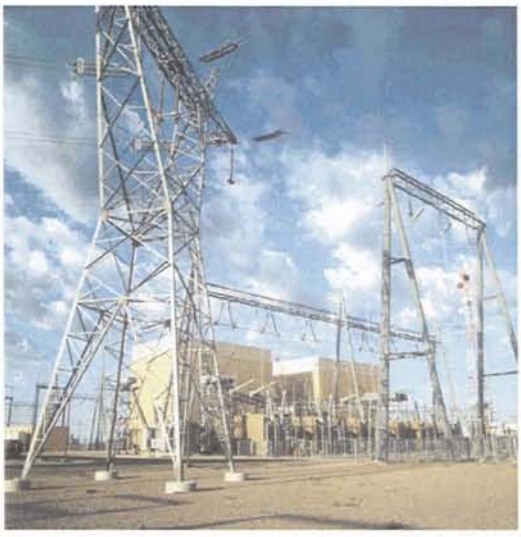
The Intermountain Power Service Corporation crews responded immediately to the incident. Their efforts were hampered by an oil fire that erupted in dangerously close proximity to the active Pole 1, creating additional electric shock hazards. The fire was brought under control within 30 minutes by IPSC's Fire Brigade.



Converter Station personnel were immediately on the scene to assess the damage, solving logistical problems, and planning reconstruction efforts. As a result of the skills and experience of the Converter Station maintenance, operations, and engineering personnel, the damaged sections of the Pole 2 electrical equipment were cleaned, reconstructed, and tested, enabling Pole 2 to be brought back on line by Friday, January 20.

Other departments at the plant were also involved in the quick restoration of Pole 2 to service. Operation's Fuel Equipment Operators and the Maintenance Department's Laborers did an outstanding job in hauling ground fill and removing oil soaked soil from the scene which was processed in accordance with environmental regulations. The Maintenance Department further assisted by providing a 90-ton capacity crane and operator to move equipment as well as Painters to help patch broken porcelain insulators. Technical Services provided expertise in the evaluation and testing of the DC structures affected. Also, Support Services was involved with the risk management evaluation and purchase of replacement parts.

S. Gale Chapman, Plant Manager said, "All of our people worked exceptionally well with the remediation of the oil spill, cleanup, and rapid reconstruction in quickly bringing Pole 2 back on line. Their united efforts helped us recover from a major event in an expeditious manner." Damage was estimated at $364,000.

Generator Stator Epoxy Repairs — The Unit 1 Generator failed the pressure/vacuum test during the spring outage. Three leaks were repaired using the same method implemented on the Unit 2 Generator.

Combustion Reheat Disposal System — The project to convert Unit 1 to a wet stack was completed in April 1995. The wet stack operation improved plant heat rate, lowered operation and maintenance costs, and improved scrubber module availability with minimal negative impacts.

Engineering Drawing System — Many methods of archiving, accessing, modifying, updating, printing, and distributing drawings were investigated. Ultimately, an electronic system utilizing both raster and vector technology was approved. This system allowed quick access, critical quality improvement capability, and greater productivity in dealing with drawing update concerns.

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The master drawings had resided continuously at DWP headquarters in Los Angeles. They accepted the assignment to scan the approximate 160,000 drawings onto compact disc for transfer to the Intermountain Power Generating Station. A scanner was purchased and the job was completed in approximately six months. After receiving the 75+ compact discs, each containing over 600 million bytes of data, IPSC coordinated the establishment of a network based drawing system where the drawings were renamed, sorted, and fed into directories named after the drawings themselves. This allowed anyone to locate any drawing needed simply by following the drawing name path from any approved terminal throughout the station.

Another vital aspect of the drawing system is the internal update and quality control system. With the procedures now in place, a drawing could be updated by the responsible engineer, verified, and re-entered into the master database within a matter of days. Halting the continual degradation, providing quick general access to vital information, and ensuring expedited update for drawing corrections made this a valuable system for all departments involved with the design, operation, and maintenance of Intermountain Power Generating Station.

Programmable Logic Controller — IPSC continued to study several PLC manufacturers, including Modicon, to determine if their products could replace the Modicon 584 products on site. The design criteria included cost, software conversion, communication to Modbus, training requirements, and ease of installation.

Following a 12-month evaluation, a decision was made to go with the new Square D/Modicon Quantum product line. IPSC was able to negotiate a favorable five-year price contract and meet all of the design criteria.

Rotary Plow Feeder Redesign — In 1995 Engineering completed a study to investigate redesign of the coal handling rotary plows. The purpose of the study was to analyze viable methods of reducing the maintenance costs associated with the hydraulic equipment and controls on the plows. The study showed that eliminating the hydraulics in favor of electronic controls would result in higher plow reliability and lower maintenance costs.

Plant Closure Study — At the request of the Operating Agent, Engineering studied and prepared a report on the necessary tasks and costs associated with the possible decommissioning of the station. Several options were explored from total and permanent shutdown to a temporary one-year shutdown. The study included detailed lists on the decommissioning steps and costs for every major plant system and equipment.

The results of the study were forwarded to the Operating Agent for their use. After careful consideration of the study and considering the options then available, the Operating Agent determined that the possibility of closing the plant for a short- or long-term time period was not a workable course of action.

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Governor's Award — IPSC was recognized by the Governor's Council on Worksite Health and Fitness for its efforts to establish a workplace program that emphasizes the need to work with health care and fitness to reduce the seriousness of workplace injuries.

Number of Employees — By the end of the year, the number of employees was 569.

LADWP

Operating Agent Representative — As a result of the retirement of Mr. Bruce E. Blowey from the Los Angeles Department of Water and Power, Mr. Charles L. DeVore was appointed as the Operating Agent Representative.

IPA

IPA Has New Partner in Crandall Canyon Project — Nevada Electric Investment Company, a wholly-owned subsidiary of Nevada Power Company sold its 50 percent interest in the Crandall Canyon Project (CCP) to Andalex Resources, Inc. The deal was completed on January 12. The main asset of CCP is the Crandall Canyon Mine, also known as the Genwal Mine.

The Intermountain Power Agency (IPA) had owned the other 50 percent interest in CCP since July 1991. Andalex has been a supplier of long-term coal for IPA. Under the 1994 renegotiated terms of that coal supply agreement, Andalex made special provisions for IPA's use of their Wildcat coal loading facility, benefitting both IPA and CCP. Andalex has substantial experience and expertise in the coal industry in Utah.

Financing — June 30, the current weighted average borrowing cost was 7.35 percent.

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