

# The History of NLO

In the late 1940's, the Atomic Energy Commission (AEC) initiated a long-term plan to provide an integrated facility for converting uranium ore concentrates to uranium compounds and metal products. To meet the onset of a rapidly increasing fissionable material program, the date of January 1, 1953, was established as the construction completion target. Out of this need, the Feed Materials Production Center (FMPC) was born.

The AEC picked the Fernald area from a list of sixty-three sites under consideration throughout the United States. To select a contract operator, the commission surveyed more than 30 firms experienced in chemical and metallurgical processes.

## Contract Awarded

In May, 1951, the National Lead Company of Ohio (NLO), a subsidiary of the National Lead Company, entered into contract with the AEC as operator of the FMPC. The National Lead Company became NL Industries (NLI) in 1971, and NLO, Inc. became the name of the subsidiary in 1981.

The original commission also experienced changes in the last three decades. In January, 1975, the U.S. AEC was reorganized and titled the U.S. Energy Research and Development Administration. This was later changed (March 1, 1977) to the present agency - the U.S. Department of Energy.

## Construction

The George A. Fuller Company of New York City was awarded the construction contract and ground was broken in May, 1951. As construction of each process plant or area was completed, the processes were tested and the operations

started. Initial cost was \$113 million. The replacement cost today would be almost one billion.

## Mission of the FMPC

The primary mission was, and is still in effect today, to produce uranium metal fuel cores in support of reactor operations at Richland, Washington, Savannah River, South Carolina, and special governmental contracts. Operations include:

1. Production of required quantities of uranium trioxide (UO<sub>3</sub>), uranium tetrafluoride (UF<sub>4</sub>), derbies, ingots, rods and target elements.
2. Fabrication of a variety of target fuel elements and cores.
3. Delivery of the acceptable products to the reactor sites.
4. Recovery of uranium and/or thorium contents from scrap and residues, where economically feasible.
5. Maintenance of mandated rigid standards for health and safety, housekeeping, criticality, nuclear materials control, inventory management, residue management and environmental controls.

## Highlights

### SEQUENCE OF PLANT STARTUP

Facility	Date
Pilot Plant	October, 1951
Metals Fabrication Plant:	
Machining Area	July, 1952
Rolling Mill	August, 1952
Metals Production Plant	May, 1953
Green Salt Plant	October, 1953
Recovery Plant	November, 1953
Sampling Plant	December, 1953
Refinery	December, 1953
Hex Plant (UF <sub>6</sub> /UF <sub>4</sub> )	June, 1954
Special Products Plant	October, 1954

At the start of FMPC activities, a straight-line type of manufacturing organization was formed and divided into eight divisions:

Manufacturing	Technical
Engineering	Health & Safety
Finance	Industrial Relations
Procurement	Security

While the basic organization has not changed since 1959, there have been a number of internal functional changes, each of which resulted in greater efficiency and economy of operation. Names of some divisions have also changed.

In March 1968, the Advance Planning Department was established to coordinate planning activities for the entire site, with emphasis on intermediate and long-range planning. This year the department was reorganized into the Planning and Control Division to better respond to contemporary needs and demands.

Peak employment for FMPC was established in 1956, with over 2,900 people. Because federal funding in the nuclear energy industry dropped considerably in the mid-1960's and throughout the 1970's, our employment reached an all time low in 1979 at 536 employees. A steady growth since 1980 has increased our work force to more than 1,280 employees, including some 300 new workers in 1985.

Approximately 73% of our present employment has less than five years of service with the company. Approximately 20% has 25 or more years of service.

Peak production was reached in 1960, with over 10,000 MTU of cores delivered to the Richland and Savannah River Projects. The lowest total direct and indirect

*Continued Next Page*



**THE OLD AD. BUILDING** - Under construction in this July, 1951 photo, it was the first building on site, and the place where administrative work was done for the construction of the remainder of the facility. Called the "six-ten", six days a week, ten hours a day, it came to symbolize the urgency felt to get the plant operating. It was located on the north side of the property. (AEC Photo)