

UNITED STATES DEPARTMENT OF THE INTERIOR
 NATIONAL PARK SERVICE

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**NATIONAL REGISTER OF HISTORIC PLACES
 INVENTORY -- NOMINATION FORM**

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
 TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC **Arthur D. Little, Inc., Building**

AND/OR COMMON **Same**

2 LOCATION

STREET & NUMBER **30 Memorial Drive**

CITY, TOWN **Cambridge** VICINITY OF **8th** CONGRESSIONAL DISTRICT **8th**
 STATE **Massachusetts** CODE **25** COUNTY **Middlesex** CODE **017**

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE
<input type="checkbox"/> DISTRICT	<input type="checkbox"/> PUBLIC	<input checked="" type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE <input type="checkbox"/> MUSEUM
<input checked="" type="checkbox"/> BUILDING(S)	<input checked="" type="checkbox"/> PRIVATE	<input type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL <input type="checkbox"/> PARK
<input type="checkbox"/> STRUCTURE	<input type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input type="checkbox"/> EDUCATIONAL <input type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> SITE	PUBLIC ACQUISITION	ACCESSIBLE	<input type="checkbox"/> ENTERTAINMENT <input type="checkbox"/> RELIGIOUS
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input type="checkbox"/> YES: RESTRICTED	<input type="checkbox"/> GOVERNMENT <input checked="" type="checkbox"/> SCIENTIFIC
	<input type="checkbox"/> BEING CONSIDERED	<input checked="" type="checkbox"/> YES: UNRESTRICTED	<input checked="" type="checkbox"/> INDUSTRIAL <input type="checkbox"/> TRANSPORTATION
		<input type="checkbox"/> NO	<input type="checkbox"/> MILITARY <input type="checkbox"/> OTHER

4 OWNER OF PROPERTY

NAME **Massachusetts Institute of Technology, Dr. Jerome Wiesner, President**

STREET & NUMBER **77 Massachusetts Avenue**
 CITY, TOWN **Cambridge** VICINITY OF **Massachusetts 02139** STATE **Massachusetts**

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC. **Middlesex Registry of Deeds - Southern District**

STREET & NUMBER **3rd and Ottis Streets**

CITY, TOWN **Cambridge** STATE **Massachusetts**

6 REPRESENTATION IN EXISTING SURVEYS

TITLE **None**

DATE FEDERAL STATE COUNTY LOCAL

DEPOSITORY FOR SURVEY RECORDS

CITY, TOWN STATE

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input checked="" type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input checked="" type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input type="checkbox"/> GOOD	<input type="checkbox"/> RUINS	<input type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Arthur D. Little, Inc., traces its history to 1886 when Arthur Dehon Little and Roger B. Griffin formed a partnership to advise the paper making company industry on the former's sulfite process for making paper. The new consulting firm's first laboratory was located at 103 Milk Street in Boston. In 1900, when the firm became known as Walker and Little, it moved to No. 7 Exchange Place, also in Boston. By 1916 the name had become Arthur D. Little, Inc., and it had outgrown its Exchange Place facilities. In that year plans were drawn for a new building designed to meet the company's laboratory and administrative needs. On May 8, 1917, the cornerstone was laid for the Arthur D. Little Building on Memorial Drive near the Massachusetts Institute of Technology campus on the Cambridge side of the Charles River.

The Arthur D. Little Building is a three story masonry structure measuring approximately 100' X 40'. The architect and builder are unknown. In design the building is typical of the commercial architecture of the period. The structure is not noted in architectural surveys of important Cambridge architecture and it does not appear to be of architectural significance.

At the time of its construction the Arthur D. Little Building contained both laboratory facilities and administrative offices. As Arthur D. Little grew, it became necessary to erect new buildings. In the 1950's the company moved to new facilities in Acorn Park on the outskirts of Cambridge. The old headquarters were, however, retained. Today the Arthur D. Little Building on Memorial Drive functions as a laboratory as it did when originally constructed in 1917.

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 1400-1499	<input type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input checked="" type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER
<input type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input type="checkbox"/> TRANSPORTATION
<input checked="" type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input type="checkbox"/> INVENTION		

SPECIFIC DATES 1917- BUILDER/ARCHITECT Unknown

STATEMENT OF SIGNIFICANCE

As the pursuit of science research in the United States grew and prospered during the last quarter of the 19th century and the first decades of this century, an institutional framework for the pursuit of science also evolved. Science in the United States organized in four major institutional directions: the universities, the Federal Government, institutes and foundations, and private industry. Within private industry two principal types of research institutions developed. The first were the great industrial laboratories associated with companies that were based on scientific discoveries and that required a high rate of technological innovation to maintain their market positions. The electrical, chemical, communications, and pharmaceutical industries fell into this class. A second type of industrial research institution was the commercial laboratory. These were private laboratories established by educated scientists and engineers to conduct research on a contract basis for clients in industry and government. They were not associated with a larger corporation, the government, or a university, but were profit oriented organizations in their own right. Arthur D. Little, Inc., of Cambridge, Massachusetts, was among the first and most influential of this type of industrial research institution. The company was the creation of Arthur Dehon Little and its rise to a position as the country's leading commercial laboratory was largely his accomplishment. According to a survey of the history of industrial research in the United States, "Arthur D. Little was a pioneer in the establishment of commercial laboratories and also a pioneer in arousing American industry to the importance of research and in vitalizing the teaching of chemical engineering."¹

The Founder

Arthur Dehon Little was born December 15, 1863, in Boston, Massachusetts. While still a child the family moved to Portland, Maine. Little grew up in Portland. His interest in chemistry was aroused when he paid ten cents to watch a chemical demonstration at a local fair. Although he was still in grammar school, he was so fascinated by the seeming magic of a chemical reaction that he built a laboratory at home and began a life long interest in chemistry. After completing high school Little studied first at the Berkeley School in New York City and then at the Massachusetts Institute of Technology. He graduated from MIT in 1884 with a degree in chemistry.

1. Research - A National Resource, 2, "Industrial Research," Report of the National Research Council to the National Resources Planning Board, (Washington, 1941), p.73.

9 MAJOR BIBLIOGRAPHICAL REFERENCES

1. "Arthur Dehon Little," Dictionary of American Biography, 21, (New York, 1944).
2. Avery A. Ashdown, "Arthur Dehon Little, Science, October 18, 1935.
3. William Haynes, editor, American Chemical Industry, The Chemical Companies, "Arthur D. Little, Inc.," (New York, 1949).
4. Research, A National Resource, 2, "Industrial Research," Report of the National Research Council to the National Resources Planning Board, (Washington, 1941).

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY one acre
UTM REFERENCES

A | 1 9 | 3 2 7 8 9 0 | 4 6 9 1 2 5 0
ZONE EASTING NORTHING

C | | | | | | | | | | | | | | | |
ZONE EASTING NORTHING

5. Earl P. Stevenson, Scatter Acorns That Oaks May Grow, Arthur D. Little, Inc., 1896-1955, (New York, 1953).

B | | | | | | | | | | | | | | | |
ZONE EASTING NORTHING

D | | | | | | | | | | | | | | | |
ZONE EASTING NORTHING

VERBAL BOUNDARY DESCRIPTION

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

NAME / TITLE

James Sheire, Historian

ORGANIZATION

National Park Service - Historic Sites Survey

DATE

June 1976

STREET & NUMBER

1100 L Street, NW.

TELEPHONE

523-5295

CITY OR TOWN

Washington

STATE

D.C.

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL XX

STATE

LOCAL

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

FEDERAL REPRESENTATIVE SIGNATURE

TITLE

DATE

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DATE

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

ATTEST:

DATE

KEEPER OF THE NATIONAL REGISTER

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After graduating Little went to work for a Rhode Island paper company. His job was the establishment and operation of the first sulfite process paper mill in the United States. He later started other such plants. By 1894, when with Roger B. Griffin he published The Chemistry of Paper Making, Little was recognized as the most knowledgeable man in the country on paper making technology.

In 1886 Little and Griffin formed a partnership as consulting engineers. The firm's first business came from the paper industry. Griffin died in a laboratory accident in 1893, and in 1900 Little formed a new partnership with William H. Walker. The company retained the name of Little and Walker until 1909, when it became known by its present name, Arthur D. Little, Inc. During these years Little greatly increased the range of the company's research interests. By 1909 Arthur D. Little, Inc., was the country's largest commercial laboratory engaged in industrial research.

Little remained head of the company until his death in 1935. His laboratory prospered under his leadership. Little's own scientific interest centered on the chemistry of cellulose and its application to a wide range of uses such as textiles, pulp and paper manufacturing, and cellulose products in general. In addition, Little became a recognized leader in national industrial research. He spoke widely on the need for industrial research and development and was among the first to recognize the economic importance of technological innovation. He also became interested in the general field of economic development. In 1916-17 he organized the National Resource Survey of Canada and he was among the first to point to the economic potential of the southern States.

Little also devoted considerable time and energy to the affairs of his alma mater, MIT. He was a life member of the school's corporation. As chairman of its committee on chemical engineering he prepared a report that reorganized the teaching of the discipline. His system of dividing chemical engineering according to unit operations was adopted by engineering schools throughout the United States. Upon his death Little willed his majority stock ownership in Arthur D. Little, Inc., to MIT under the stipulation that a trusteeship be formed which would allow the company to continue to function as an independent research and engineering consulting organization.

Arthur D. Little received many honors and awards, among them the Society of Chemical Industry's Perkin Medal. He belonged to numerous scientific and engineering societies and organizations. From 1912 to 1914 he served as president of the American Chemical Society and in 1919 he was elected president of the American Institute of Chemical Engineers. Little died August 1, 1935.

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The Company

When Arthur D. Little formed his commercial laboratory in 1886, science and industry were just beginning to join forces. The "American System" of manufacturing was well established, but the application of sciences such as chemistry and physics to industrial processes was in its infant stage. Little's work in developing the sulfite process for manufacturing paper was a pioneering demonstration of the value of chemistry to a specific industry. At one time or another the Little company was sought out by every sulfite pulp mill in the United States and on one occasion it was a consultant to more than 60 firms. In this work, as well as in his investigations of cellulose in general, Little helped prove that the educated scientist could make valuable contributions to the technological quality of industrial products.

As the company proved its worth to industry by increasing the quality of its products, the volume of its work increased. In the 1890's, for example, Little demonstrated that cellulose acetate could be used in producing nonflammable wire insulation and artificial silk. As the scope of the company's activities broadened in the early 1900's, specialists were added to the staff and departments were formed. The company's organizational structure in 1911 gives an indication of the growth in the range of the work it was performing for industry. Arthur D. Little's departments or divisions were: analytical, research, coal, lubrication, forest products, biology, textiles, and engineering. By 1918 the company had conducted 16,287 investigations. Most of these were analytical in nature, but some also involved entire processes, for example, production of alcohol from wood waste and the recovery of turpentine and rosin from pine stumps.

In the 1920's the company broadened its interests to include analysis of the inter-relationships between economic and technological developments and trends. In his speeches, which were published in 1928 under the title The Handwriting on the Wall, Little emphasized the economic importance of technological development. The handwriting on the wall was that only those companies that invested in research would survive in a modern economy. In 1927 Arthur D. Little, Inc., initiated the publication of the "Industrial Bulletin." The purpose of the monthly periodical was to inform businessmen in non-technical language about the latest technological developments that could potentially affect their companies. In addition, in the 1920's, the company conducted a survey of the natural resources of Canada for the Canadian Pacific Railway and also an investigation of the production of petroleum chemicals.

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After Little's death in 1935, the company continued along the paths he had pioneered. During World War II Arthur D. Little, Inc., worked on projects as varied as the design of a compression still for distilling water, flame throwers, incendiary bombs, protection against attack by flame, wound healing ointments, surface coatings, and food modifications.

After World War II the company continued its research and engineering activities and expanded its interests in new directions. Primary among these were the investigation and evaluation of overall technological aspects of various industrial situations. This work led the company into the broad area of systems research and analysis. Arthur D. Little, Inc., was among the first to recognize the importance of cybernetics and its application to systems analysis. The company became a leading consulting firm in this field. Today the company carries out consulting contracts for industry, State and Federal agencies, and many foreign governments, especially those in the developing countries. Its interests range from pure science research through engineering to the systematic planning of large economic developments in all their technological, social, and political aspects.

The significance of Arthur D. Little, Inc., in the history of science in the United States rests in the company's pioneering work in commercial science. Arthur D. Little early recognized the need for a type of industrial laboratory that fell between the activities of the large industrial laboratory and the pure science concerns of the universities. He saw that many branches of American industry did not require large laboratories but nevertheless would need the technological innovation that results from the application of sciences such as chemistry and physics, and the various engineering disciplines. Arthur D. Little, Inc., was formed to provide laboratory and engineering services to American industry. As the company grew, it expanded its activities to cover many fields in which highly trained expertise was required to deal with technological and socioeconomic matters. Conceptually, Arthur D. Little, Inc., was a forerunner of today's ubiquitous consulting firms and "think tanks."