Biologics Standards Laboratory Building
National Institutes of Health, Bethesda, MD
Montgomery County
Approximate date of construction: 7/1960
Public access, with restrictions.

MIHP Inventory No. M: 35-9-0012

The Biologics Standards Laboratory Building (Building 29) was built in 1960 as the home of the Department of Biologics Standards. The building consists of a long flat-roofed rectangular block, five stories tall, to which is attached a one-story rear appendage. An enclosed bridge was later constructed to connect the second floor to Building 29A to the west. Exterior walls are clad in red face brick in a running bond pattern that is relieved only by limestone window sills and capstones at the parapet line. The symmetrical front façade stretches across 17 structural bays, each defined by a simply aluminum frame double hung sash unit. The main entry is located within a clean, simple limestone surround—this feature offers the only relief on the front façade.

The Biologics Standards Laboratory Building (Building 29) is nationally significant to the history of medicine and public health under Criterion A because within its research laboratories scientific investigators successfully applied biomedical research principles and techniques to conquer some of the most crippling infectious diseases that had for centuries scourged populations in this nation and elsewhere. Leading this public health crusade were stalwart civil servants and renowned research doctors. Some of the nation's illustrious scientists who worked in this building's laboratories, first for the US National Institutes of Health and later for the US Food and Drug Administration read like a who's who of twentieth century science: Margaret Pitman; Ruth Kirschstein; Harry Meyer, Jr.; and Paul Parkman. Because of Building 29's direct association with the important findings of these individuals, this building also qualifies for listing in the National Register also under Criterion B.

Maryland Historical Trust
Determination of Eligibility Form

Property Name: Biologics Standards Laboratory (Building 29) **Inventory Number:** M: 35-9-12

Address: 9000 Rockville Pike **Historic District:** ___ Yes X No

City: Bethesda **Zip Code:** 20854 **County:** Montgomery

USGS Quadrangle(s):

Property Owner: United States of America (National Institutes of Health) **Tax Account ID Number:**

Tax Map Parcel Number(s): **Tax Map Number:**

Project: Section 110 \ Comprehensive Master Plan **Agency:** NIH

Agency Prepared By: NIH

Preparer's Name: Phillip W. Neuberg **Date Prepared:** 12/01/2012

Documentation Is Presented In:

Preparer's Eligibility Recommendation: X **Eligibility Recommended** ___ **Eligibility Not Recommended**

Criteria: X A X B ___ C ___ D **Considerations:** ___ A ___ B ___ C ___ D ___ E ___ F ___ G

Complete if the property is a contributing or non-contributing resource to a NR district/property:

Name of the District/Property:

Inventory Number: **Eligible:** ___ Yes **Listed:** ___ Yes

Site Visit by MHT Staff: ___ Yes ___ No **Name:** **Date:**

Description of Property and Justification: ***(Please attach map and photo)***

The Biologics Standards Laboratory Building (Building 29) was built in 1960 as the home of the Department of Biologics Standards. The building consists of a long flat-roofed rectangular block, five stories tall, to which is attached a one-story rear appendage. An enclosed bridge was later constructed to connect the second floor to Building 29A to the west. Exterior walls are clad in red face brick in a running bond pattern that is relieved only by limestone window sills and capstones at the parapet line. The symmetrical front façade stretches across 17 structural bays, each defined by a simply aluminum frame double hung sash unit. The main entry is located within a clean, simple limestone surround—this feature offers the only relief on the front façade.

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MARYLAND HISTORICAL TRUST REVIEW

Eligibility Recommended: X **Eligibility Not Recommended:** ___

Criteria: X A X B ___ C ___ D **Considerations:** ___ A ___ B ___ C ___ D ___ E ___ F ___ G

MHT Comments:

Jonathan Sager — **Reviewer, Office of Preservation Services** — 1/15/13 **Date**

[signature] — **Reviewer, National Register Program** — 1/14/13 **Date**

201206797

The Biologics Standards Laboratory Building (also known as Building 29) located on the Bethesda campus National Institutes of Health has associations with both significant historical events and individuals as outlined below and as justified in the discussion that follows. The building, thus, is determined to be eligible for listing in the National Register of Historic Places under Criteria A and B at the National Level of Significance.
The relevant National Register criteria (see: http://www.nps.gov/nr/publications/bulletins/pdfs/nrb15.pdf) read as follows:

Criterion A. – Historical Association

Building 29 stands as testimony to the twentieth century's effort to protect the public health by regulating the quality, safety, purity, and potency of biological products that are crucial in the prevention or treatment of disease that affect every citizen. It has served to house the offices and laboratories that oversee the safety and efficacy of vaccines, blood derived therapeutics, and biotechnology derived biological products crucial to improving the health of the nation. It also housed the offices and laboratories that oversee the safety of the blood supply including the review of infectious disease diagnostics.

Criterion B. – Lives of Significant Individuals

The roster of scientists who worked in the labs of Building 29 includes many luminaries of twentieth century biologics research and discovery. They include, most notably among others, Margaret Pitman; Ruth Kirschstein; Harry Meyer, Jr.; and Paul Parkman.

See MIHP form for additional information.

MARYLAND HISTORICAL TRUST REVIEW

Eligibility Recommended: ___ **Eligibility Not Recommended:** ___

Criteria: ___ A ___ B ___ C ___ D **Considerations:** ___ A ___ B ___ C ___ D ___ E ___ F ___ G

MHT Comments:

_____ _____

Reviewer, Office of Preservation Services **Date**

_____ _____

Reviewer, National Register Program **Date**

NIH Historic Resources Inventory Form

MIHP Inventory No. M: 35-9-0012

1. Name

Historic Name: Biologics Standards Laboratory Building

Common Name and Building Number: NIH Bldg no. 29

2. Location

Street and Number: 9000 Rockville Pike

City, Town: Bethesda | Congressional District: 8

State: Maryland | County: Montgomery

3. Classification

Category Ownership	Status	Present use (Government)	
__ District	Y Public	YOccupied	Y Laboratory
Y Building(s)	__ Private	__ Unoccupied	__ Animal Research
__ Structure	__ Both	__ work in Progress	__ Hospital
__ Site	Accessible		__ Administrative
__ Object	Y Yes: Restricted		__ Support
__ Yes: Unrestricted		__ Other	
__ No			

4. Owner of Property

Name: United States of America (National Institutes of Health)

Street & Number: 9000 Rockville Pike | Telephone No.: 301-443-7154

City, Town: Bethesda | State and Zip Code: MD 20854

5. Location of Legal Description

Courthouse, Registry of Deeds, etc.: Montgomery County Courthouse | Liber # _____ Folio# _____

Street & Number

City, Town: Rockville | State and Zip Code: MD 20852

6. Representation in Existing Historic Survey X Yes __No

2013 Comprehensive Master Plan

Title

8-3-2012

Date | X Federal __ State __ County __ Local

National Institutes of Health

Depository for Survey Records

9000 Rockville Pike, Bethesda, MD 20854

City, Town | State

7. Description

MIHP Inventory No. M: 35-9-0012

Condition

__ Excellent	__ Deteriorated	__ Unaltered	X Original Site
X Good	__ Ruins	X Altered	__ Moved
__ Fair	__ Unexposed		

Discuss Description

SEE CONTINUATION SHEETS

8. Significance

MIHP Inventory No. M: 35-9-0012

Period	Areas of Significance			
__Prehistoric	__Archeology-Prehistoric	__Community Planning	__Landscape Architecture	__Religion
__1400-1499	__Archeology-Historic	__Conservation	__Law	X Science
__1500-1599	__Agriculture	__Economics	__Literature	__Social/Humanit.
__1600-1699	__Architecture	__Education	__Military	__Theater
__1700-1799	__Art	__Engineering	__Music	__Transportation
__1800-1899	__Commerce	__Exploration/Settlement	__Philosophy	__Other
X 1900-1999	__Communications	__Industry	X Politics/Government	__Invention
__2000-				

Specific Dates	Architect:	Builder	Area
7/1960	General Service Administration	Unknown	89,949 gsf

Source: NIH Office of Research Facilities. Dates and Appropriations Master File. Report dated 11/24/1998, on file in the Chief Engineer's Office, Office of Research Facilities.

Applicable Criteria:	X A	X B	__C	__D			
Applicable Exception	__A	__B	__C	__D	__E	__F	__G
Level of Significance	X National		__State		__Local		

Discuss Significance

SEE CONTINUATION SHEETS

9. Major Bibliographical References

MIHP Inventory No. M: 35-9-0012

SEE CONTINUATION SHEETS

10. Geographical Data

Building 29 is located on the Bethesda Maryland Campus of the National Institutes of Health. For USGS coordinates please see the attached USGS map section.

11. Determination of Eligibility to be Included into the National Register

X **Eligible** _ _Not Eligible

Discuss Findings

SEE CONTINUATION SHEETS

12. Form Prepared by

Name/Title	**Phillip W. Neuberg, AIA / NIH Federal Historic Preservation Officer**		
Organization	**National Institutes of Health Office of Research Facilities**	Date	**December 2012**
Street & Number	**Division of Facilities Planning Building 13, Room 1325**	Telephone	**301-443-7154**
City or Town	**Bethesda** State	**Maryland**	

Approved by the NIH Federal Preservation Officer

Concurrence of State Preservation Officer

Building 29 was built in 1960 as the home of the Division of Biologics Standards Laboratory Building. Constructed on land that was once part of the greens for the original Woodmont Country Club (http://www.nlm.nih.gov/exhibition/wewereherefirst/woodmont_country_club.html), it remains today very much as it appeared when it first opened its doors in 1961. Set perpendicular to the West Service Road to the east and the gentle rise in topography, the construction of this building in 1961 represented the limits of the campus research facilities that today stretch for acres to the south and to the west.

The building is an exceptionally long rectangular block measuring 244'-4" long by 50'-0" wide and capped by a flat roof concealed behind low parapet walls. Stair towers project on the narrow (50'-0" wide) east and west elevations and a single story flat roofed block of 30 by 40 feet is appended to the relative center of the South side of the building as well as a small uncovered loading dock. The structure consists of five stories above grade, one story partially below grade or a basement, a utility sub-basement below that. Above the fifth floor, recessed from the main building block and providing access to the roof is a mechanical penthouse as well as a projecting stair tower and elevator penthouse at the west end.

Employing a structural concrete frame, which was to become a hallmark of NIH research laboratory building designs due to the greater stability of concrete framed structures than those of framed by use of structural steel, the exterior walls are clad in a single wythe red face brick laid in an monotonous running bond pattern that is relieved only by limestone window sills and capstones at the parapet line.

The primary elevation, or front of the building, is the North (broad) side, facing the NIH campus Building 10 (built 1953) across what was once a broad lawn but is now a sea of surface parking. The North elevation consists of 17 identical bays of five stories, each bay punctuated by a single polished aluminum framed window opening with a single glazed double hung operable sash unit. The only exception to this rigid, monotonous symmetry is the clean, simple, oversized limestone surround that frames the entrance, predictably located at the center bay on the first floor. Surface-mounted lettering across the top face of the surround announces, "Center for Biologics Evaluation and Research". On the right inside jamb of the surround is the cornerstone information: "UNITED STATES" (next line) "OF" (next line) "AMERICA" (next line) "DWIGHT D EISENHOWER" (next line) "PRESIDENT" (next line) "1958".

The East elevation is a solid brick wall from which there projects a brick enclosed stair tower that that, due to the slope of the land, services all five floors as well as the basement level. Due to the slope of the land, there are stepped retaining walls that project north and south from the East Stair Tower At the basement level this stair tower was accessed from the outside by a pair of doors over which projects a simple cantilevered, flat canopy with an aluminum fascia. Aligned above the doors on each of the five floors is an aluminum framed, double hung window which provides natural illumination to each of the corresponding landings.

The South Elevation consists of 17 bays, each having window openings matching those on the primary (North) elevation, except for the three central bays which have narrower windows due to the restrooms. The windows on this elevation are also single polished aluminum framed window opening with a single glazed double hung operable sash unit. The one-story projection, biased slightly to the east of center, was originally built as a canteen for the occupants (Englehardt, Sheet 3-9). The space now houses laboratories. There is a rear service entrance through this portion, with an adjacent loading dock covered by a cantilevered flat canopy.

The West Elevation is a solid brick wall from which projects a brick tower containing stairs and a freight elevator. This tower, containing the elevator and serving all floors including the roof, is wider and taller than the stair tower at the east end. At each floor, and slightly off-center in the elevation, there is an aluminum framed, double hung window. A second floor corridor was added later to connect to Building 29A to the west.

See attached photographs and photograph list.

SUMMARY STATEMENT OF SIGNIFICANCE

Built in 1960 for the National Institutes of Health, Building 29, originally called the Biologic Standards Laboratory Building, is nationally significant to the history of science under Criterion A because within its research laboratories scientific investigators successfully applied biomedical research principles and techniques to conquer some of the most crippling infectious diseases that had for centuries scourged populations in this nation and elsewhere. Leading this public health crusade were stalwart civil servants and renowned research doctors. Some of the nation's illustrious scientists who worked in this building's laboratories, first for the US National Institutes of Health and later for the US Food and Drug Administration read like a who's who of twentieth century science: Margaret Pitman; Ruth Kirschstein; Harry Meyer, Jr.; and Paul Parkman. Because of its direct association with the important findings of these individuals, this building also qualifies for listing in the National Register also under Criterion B.

"Reducing the number of deaths from infectious diseases is one of the great health triumphs of the 20th century. The discovery of antibiotics, development of vaccines, and improvements in sanitation profoundly alleviated the toll exacted by infectious diseases, and deaths from infectious diseases plummeted in developed nations over the course of the 20th century" (Davenport).

The research conducted in the Biologics Laboratory Building represents the NIH's important role in safeguarding the public's health through the research and standardization of vaccines and biologics used in research. The development and standardization of biologics has been a mandate of the NIH since its establishment in 1887, particularly since the passage of the 1902 Biologics Control Act. The Biologics laboratory Building serves as a monument to this critical function of the NIH on its current campus [the other laboratory buildings no longer exist] and of its central role in eliminating acute and infectious diseases. For example, Ruth Kirschstein, who spent her early scientific career working in the Biologics Laboratory Building, tested the safety of viral vaccines for polio, measles, and rubella. Margaret Pittman, considered an expert in the development and standardization of bacterial vaccines, worked on improved vaccines for pertussis, typhoid, and cholera, among others.

The Biologics Laboratory was designed by Ted Englehardt, AIA, in 1957. Englehardt (1898 -1980), a founding member and first president of the Potomac Valley AIA Chapter, is perhaps best known for designs for buildings on the University of Maryland College Park campus and Montgomery County fire stations in which he relied heavily on a traditional, colonial revival style. Unlike the aforementioned designs, Englehardt's design for the NIH Biologics Laboratory Building employs a chaste, practically detail-devoid aesthetic that clearly reflects an economy of both purpose and budget which was likely to have been a requirement of both the client (Public Buildings Service of GSA) as it sought to deliver for the best in contemporary research facilities on the expanding NIH campus and the users (NIH Biologics Group) as it focused its limited resources on receiving the most practical and efficient laboratories in which to research disease and create vaccines (Englehardt). Employing Englehardt as the design architect reflects upon the General Service Administration's trend to use private architects over the early trend for the Government to use in-house architectural designers. As described in GSA's *Growth, Efficiency, and Modernism: GSA Buildings of the 1950s, 60s, and 70s*, "one of the most important changes in Federal Policy during the early years of GSA was the inclusion of private architects and designers in Federal projects, a policy that produced few masterpieces of Modern architecture and an extensive collection of undistinguished buildings... Because the government itself was being viewed as a business, and the general climate of America was pro-business, it came as no surprise that GSA viewed private-sector architects in a positive light. GSA assumed the role of overseer and manager of architecture and engineering for public buildings, with private architects serving as designers, engineers and draftsmen" (Robinson, p. 36, thought in this quote credited to: Traceries, "*Built for the People of the United States of America: The History of the Public Service (Draft)*," completed for the U.S. General Services Customs and Patent Appeals, Washington, D.C., Administration, 1998, 3.15).

Construction began in June of 1958 and a month later it was predicted that the building would be completed by August 1959 (National Institutes of Health, 1958, p. 1). But as of December 1959 construction delays meant that occupancy was delayed

until July of 1960 (National Institutes of Health, 1959, p. 8 and NIH Office of Research Facilities, 1977). The delay did not dampen the attention to detail that NIH shed upon the historic event as evidenced by guest list which included the King and Queen of Thailand as well as the Secretary of Health Education and Welfare (National Institutes of Health, 1960, p. 1, 8).

The significance of the building thus derives from its association with the work of scientists such as Margaret Pittman (1901-1995). She is noted for having first identified the cause of whooping cough, which led to the development of an improved vaccine. She became the first woman to direct a laboratory at the NIH and was cholera consultant to the World Health Organization and a leader in the standardization of vaccines (The Guardians of the Millennium).

Ruth Kirschstein

Dr. Ruth Kirschstein, an iconic figure at the National Institutes of Health, spent a very important and formative part of her career working in Building 29. Kirschstein was born in 1926 in Brooklyn, NY. She received her B.A. from Long Island University and her M.D. from Tulane Medical School in New Orleans in 1951. She first came to the National Institutes of Health (NIH) campus in January 1956 as a resident in Clinical Pathology at the Warren G. Magnuson Clinical Center. After passing her board exams in 1957 she applied for a position studying the pathology of the polio virus in the Laboratory of Viral Products in the Division of Biologics Standards (DBS). From 1957 until 1972 she was a researcher in experimental pathology at DBS (now the Center for Biologics Evaluation and Research, Food and Drug Administration). Kirschstein was initially housed in Building 4 where she worked in the Laboratory of Pathology and Histochemistry at the National Institute of Arthritis and Metabolic Diseases.

In August 1960, the DBS moved into the newly-built Building 29 bringing together groups which had previously been housed in Buildings 4, 5, and 7. Although Kirschstein's first NIH publications were on cancer viruses, she quickly became deeply involved in work on assessing the safety and efficacy of polio vaccines. Polio epidemics during the 1940s and 1950s led to increased public fear of the disease which could cause paralysis and death. The first polio vaccine approved for general use was the Salk vaccine which used killed virus. In 1955, in what became known as the Cutter Incident, some lots of Salk polio vaccine produced by Cutter Laboratories in California contained live polio virus in what was supposed to be a killed-virus vaccine, leading to cases of polio. To ensure that such an error should not be repeated, the NIH laboratory in charge of overseeing vaccine licensing was reorganized into the DBS under the leadership of Dr. Roderick Murray. Kirschstein worked with Dr. Samuel Baron to develop new tests for assessing the safety and efficacy of the Salk killed-virus vaccine. In 1958 the NIH created a special committee to assess the attenuated live-virus vaccines then under development. There was great concern that the virus in these vaccines might not be weakened enough, causing the disease, or that the virus might become more virulent as it was grown during the process of vaccine production. Kirschstein and Baron were instrumental in developing new laboratory techniques to properly assess these vaccines, and their work led to the adoption of the Sabin strains as the safest of the attenuated live-virus polio vaccines. In 1962 the Sabin vaccine replaced the Salk vaccine for polio in the United States. Kirschstein and Baron's technique was used to test each batch of US polio vaccine, given to millions of children around the country. Researchers from around the world came to the NIH to learn this technique in order to test their own countries vaccine for safety. In part for her work on the polio vaccine, Kirschstein was promoted to the Chief of Laboratory Pathology in 1961. She then worked with other researchers at the DBS on the development of tests for the safety and efficacy of measles and rubella vaccines. The development and use of these vaccines during the 1960s led to a remarkable drop in cases of these common and sometimes fatal illnesses, first in the United States and then around the world as global vaccination initiatives got underway. In 1965 Kirschstein was enlisted by the World Health Organization as a member of their Expert Group on International Requirements for Biological Substances and became a consultant on the use of live polio virus vaccine. She became the Assistant Director of the DBS in 1972. In that same year the DBS was moved from the NIH to the Food and Drug Administration (FDA) where it was renamed the Bureau of Biologics. Kirschstein also moved to the FDA where she was appointed Deputy Associate Commissioner for Science.

In 1974, Kirschstein returned to the NIH as the first woman to direct a NIH institute. She became the Director of the

National Institute of General Medical Sciences (NIGMS) serving until 1993. NIGMS is responsible for providing extramural research and training programs outside of the NIH, and under Kirschstein's leadership the institute increased its support of research into cellular and medical genetics. Kirschstein was actively involved in campaigning to ensure the funding of the extramural research program. She was also was a strong advocate for research training, fostered programs to train pre-doctoral scientists, and sponsored programs to increase the participation of minorities in the sciences and medicine from the undergraduate to the postgraduate level.

In the early 1980s during the emerging AIDS epidemic, Kirschstein, in the face of political opposition, helped to mobilize NIH efforts to study the virus and develop and test drugs to combat this new public health threat. In 1983, Kirschstein played a pivotal role in establishing the US Department of Health and Human Services Coordinating Committee on Women's Health and served as its co-chair until 1994. She became Acting Associate Director of the newly established Office of Research on Women's Health in 1990. Kirschstein was Acting Director of the NIH twice—first in 1993 and then again from 2000 until 2002—and served as Deputy Director between these periods. From 2002 until 2009 she acted as Senior Advisor to the Director of the NIH. She died on October 6, 2009 at the NIH Clinical Center. Kirschstein's experiences in Building 29 provided her with the foundation for a tremendously successful and influential career as a scientific researcher and administrator.

Margaret Pittman

The bacteriologist Dr. Margaret Pittman was born near Prairie Grove, AK, in 1901, receiving her B.S. from Hendrix College in 1923 and her Ph.D. in bacteriology from the University of Chicago in 1928. From 1928 until 1934 she worked as an Assistant Scientist at the Rockefeller Institute for Medical Research (RIMR) in New York NY. She worked in the Acute Respiratory Group led by O. T. Avery and studied the role of Haemophilus influenza as an agent in human disease. Pittman developed the production of antisera to treat this bacterial infection in an era before the discovery first of sulphonamides and later of antibiotics. She lost her position at the RIMR due to budget cuts caused by the Depression and moved to the New York State Department of Health in Albany.

In 1936 Pittman was one of three bacteriologists hired by the National Institute of Health (NIH). She joined the Division of Biologics Control (later the Division of Biologic Standards or DBS), the agency at the NIH which licensed, set standards for, and monitored the production of vaccines, antitoxins, and other biological products. Pittman worked for this division through a series of reorganizations at the NIH until she retired in 1971. She then continued on as a 'guest worker' until just a few years before her death in 1994.

During her career Pitman developed several procedures to quantitatively test the potency of biologic compounds. She worked in Building 29 from 1960 when the Division of Biologic Standards moved into the new building. Pittman's first task at the NIH was to develop a test to determine the potency of commercial meningitis antisera. The procedures developed by Pittman and her colleague Dr. Sara Branham were used to set the standards for commercial products. However, antisera were quickly replaced by the new sulfonamides used to treat bacterial infections. During World War II the workers at the DBS were recruited to war work. It had been noted that wounded soldiers occasionally suffered pyrogenic (fever) reactions after being treated with intravenous blood or blood products. Pittman and her colleague Thomas Probey identified and studied bacterial contaminants in blood and blood products that could cause pyrogenic reactions. They then collaborated with manufacturers to change methods in order to produce pyrogen-free products and reduce the bacterial contamination of their products.

From 1943 until her retirement, Pittman worked to assess the efficacy of and establish national and international standards for the production of several vaccines including yellow fever, cholera, and typhoid. She is most well known for her work on the development of standards leading to safer and more effective vaccines for pertussis, the mortality rate from which was one of the five highest among common infectious diseases in the 1930s. Also known as "whooping cough," this highly contagious respiratory infection caused by Bordatella pertussis is potentially fatal in

young children. Although pertussis vaccine had been available since 1915, there were concerns about its efficacy. In 1944 Pittman developed a new assay to test the potency of the pertussis vaccine and by 1949 manufacturers were able to sell vaccine certified to be potent and sterile. She continued to work on developing safer and more potent versions of the vaccine throughout the rest of her career and she helped to set first national and later international standards for the production of the vaccine. Although she was considered a world-renowned expert in pertussis, her hypothesis that the antigen of pertussis was an exotoxin wasn't accepted by the scientific community until the late 1970s.

In 1958, Pittman became the first woman at the NIH promoted to the level of Chief when she became the Chief of the Laboratory of Bacterial Products. Pittman spent the majority of a distinguished career working on the creation and testing of biologics at the NIH; the last 11 years of that career were spent in Building 29.

Paul D. Parkman

Dr. Paul D. Parkman was born in Auburn, NY, on May 29, 1932. He attended St. Lawrence University for pre-medical training and the State University of New York College of Medicine at Syracuse, receiving his B.S. and M.D. degrees together in 1957. He was a resident under Dr. Julius Richmond, founding Father of the Head Start Program. After his internship he became part of the "doctor's draft" joining the Army as a Captain and being assigned to the Walter Reed Army Institute of Medical Research, Washington D.C. in 1960 where he received training as a virologist. While studying the efficacy of adenovirus vaccine in soldiers at Fort Dix, NJ, he and his colleagues at Walter Reed became interested in isolating the virus that caused rubella from soldiers ill with the disease. Parkman and his colleagues developed techniques to culture and isolate the virus that caused rubella. Following in the footsteps of Jonas Salk, they first attempted to create a killed virus vaccine but it was unsuccessful.

In 1963, Parkman joined the Division of Biologics Standards (DBS) in Building 29 at the National Institutes of Health (NIH) as Chief of the Section of General Virology because the study of rubella was not of interest to the Army at that time (Parkman, Paul, oral interview). At the DBS, Parkman worked with Dr. Harry Meyer on the problem of rubella. During the 1940s, it had been recognized that pregnant mothers who contracted rubella, particularly during the early stages of pregnancy, could give birth to children with congenital abnormalities including cataract, deafness, hearing defects, and intellectual disability. Rubella epidemics occurred regularly in the U.S. from the 1920s until 1969; the victims of the 1964 epidemic included 20,000 children affected by the virus in utero and born with congenital defects. In 1967 they developed the first easy-to-use test for rubella antibodies. In 1969, the first rubella vaccine (based on their weakened virus strains) was licensed for commercial production, ending large rubella epidemics in the U.S. It later became part of the combined Measles, Mumps and Rubella vaccine which essentially eradicated indigenous rubella in the U.S.

In 1972 Parkman moved with the Division of Biologics Standards when it was transferred from the NIH to the Food and Drug Administration. The division is now known as the Center for Biologics Evaluation and Research (CBER). Parkman retired as the head of the CBER in 1991. He considers his time in Building 29 the most productive part of his scientific career (Parkman, Paul, oral interview).

Harry M. Meyer, Jr.

Dr. Harry M. Meyer Jr. was a native of Palestine, TX, who attended Hendrix College in Arkansas, and the University of Arkansas School of Medicine. Meyer then studied viruses and worked on vaccination trials while he was an officer at the Walter Reed Army Medical Research Institute in Washington DC.

He was recruited to the Division of Biologics Standards (DBS) at the National Institutes of Health (NIH) in 1959 as the head of the Virus Research Section. He moved into the newly-built Building 29 in 1960. Beginning in 1961, Meyer was involved in clinical trials of the measles (rubella) vaccine in West Africa. He became Chief of the Laboratory of Viral Immunology in 1964. From 1964 until 1967, he worked with Paul Parkman, the discoverer of the rubella virus, on the

production of a vaccine. A global rubella epidemic which began in Europe in 1962 spread to the U.S. in 1964 causing an estimated 12.5 million cases and resulting in congenital defects in about 20,000 children whose mothers had been infected while pregnant. By 1966, Meyer and Parkman had successfully tested an experimental weakened virus rubella vaccine on children in Arkansas. They developed the first widely used test for rubella antibodies in 1967. In 1969, the first commercial vaccines—based on their weakened virus—were licensed for commercial use in the U.S., ending large rubella epidemics in this country.

When the DBS was transferred to the FDA in 1972 becoming the Bureau of Biologics—later the Center for Biologics Evaluation and Research (CBER)—Meyer became the Director of the new bureau serving until his retirement in 1987. He died on August 19, 2001. He is most well-remembered for his role in the development of the measles and rubella vaccines produced while he was working in Building 29.

Organization

Year	Existing Organization
1887	Laboratory of Hygiene of the Marine Health Service (MHS)
1891	Laboratory of Hygiene renamed Hygienic Laboratory, still of the MHS
1902	Hygienic Laboratory of the Public Health and Marine Hospital Service (PH-MHS)
1930	Hygienic Laboratory renamed National Institute of Health
1937	Division of Biologics Control (DBC) formed within National Institute of Health (NIH)
1944	DBC renamed Laboratory of Biologics Control (LBC)
1948	LBC incorporated into National Microbiological Institute (NMI), NIH
1955	LBC becomes Division of Biologics Standards (DBS), an independent entity within NIH; NMI renamed the National Institute of Allergy and Infectious Diseases
1972	DBS transferred from NIH to FDA; becomes Bureau of Biologics (BoB)
1982	BoB merged with Bureau of Drugs to form National Center for Drugs and Biologics (NCDB)
1983	Biologics component of NCDB renamed Office of Biologics Research and Review (OBRR) within Center for Drugs and Biologics (CDB)
1988	CDB separated into two Centers; Center for Biologics Evaluation and Research (CBER) (formerly OBRR) and Center for Drug Evaluation and Research (CDER)

Directors of Biologics Regulation, 1887 to 2012

Joseph J. Kinyoun	1887-1899
Milton J. Rosenau	1899-1909
John F. Anderson	1909-1915
George W. McCoy	1915-1937
Walter T. Harrison	1937-1940
Milton V. Veldee	1940-1949
William G. Workman	1949-1955
Roderick Murray	1955-1972
Harry M. Meyer, Jr.	1972-1987
Paul D. Parkman	1987-1991
Gerald V. Quinnan, Jr. (Acting)	1991-1992
Kathryn C. Zoon	1992-2003
Jesse Goodman	2003-2009
Karen Midthun (Acting 2009-2010)	2009-

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The Biologics Standards Laboratory Building (also known as Building 29) located on the Bethesda campus National Institutes of Health has associations with both significant historical events and individuals as outlined below and as justified in the discussion that follows. The building, thus, is determined to be eligible for listing in the National Register of Historic Places under Criteria A and B at the National Level of Significance.
The relevant National Register criteria (see: http://www.nps.gov/nr/publications/bulletins/pdfs/nrb15.pdf) read as follows:

> *The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and*
>
> *(a) that are associated with events that have made a significant contribution to the broad patterns of our history; or*
>
> (b) *that are associated with the lives of persons significant in our past;*

The Biologics Standards Laboratory Building (Building 29) was conceived, designed, and constructed in response to the evolving requirement to address serious and widespread public health needs in this country.

Criterion A. – Historical Association

Building 29 stands as testimony to the twentieth century's effort to protect the public health by regulating the quality, safety, purity, and potency of biological products that are crucial in the prevention or treatment of disease that affect every citizen. It has served to house the offices and laboratories that oversee the safety and efficacy of vaccines, blood derived therapeutics, and biotechnology derived biological products crucial to improving the health of the nation. It also housed the offices and laboratories that oversee the safety of the blood supply including the review of infectious disease diagnostics.

Criterion B. – Lives of Significant Individuals

The roster of scientists who worked in the labs of Building 29 includes many luminaries of twentieth century biologics research and discovery. They include, most notably among others, Margaret Pitman; Ruth Kirschstein; Harry Meyer, Jr.; and Paul Parkman.

INTEGRITY:

The National Register defines seven aspects of integrity that have been considered in analyzing whether the Biologics Standards Laboratory Building (Building 29) conveys its historical significance or qualities that, in various combinations, define integrity. The retention of specific aspects of integrity is paramount for a property to convey its significance. Building 29 has the potential to meet all aspects of integrity, as discussed below:

Location	Location is the place where the historic property was constructed or the place where the historic event occurred *The Biologics Standards Laboratory Building is in its original location. The subsequent construction of adjoining buildings 29A and 29B in no way detracts from the authenticity of its setting.*
Design	Design is the combination of elements that create the form, plan, space, structure, and style of a property. *The architect's original exterior design and as well as the original rectilinear form of the building remains clearly evident, despite additions of Buildings 29A and 29B to the west.*
Setting	Setting is the physical environment of a historic property *The original setting has changed over 50 years as plantings such as trees and shrubs have matured, but have not negatively obscured or compromised the original design intent.*

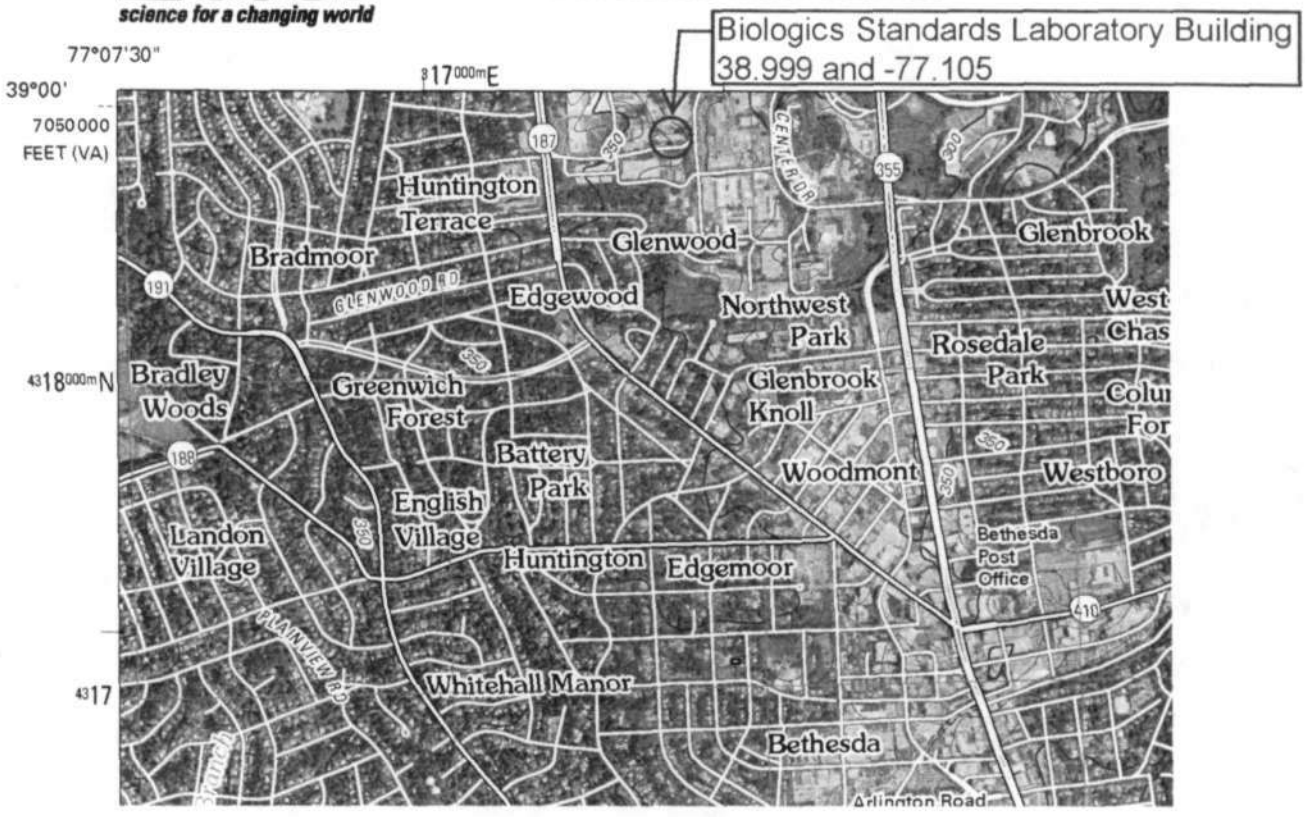
Materials	Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property *Primary character defining original exterior materials, red brick running bond walls, aluminum framed double hung window sash, limestone surround, and capstones all remain intact.*
Workmanship	Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory *The exterior workmanship today remains very similar to that shown in the photos taken shortly after the structure's completion.*
Feeling	Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. *The utilitarian, economical feeling of the building's design is still evident in the unchanged repetitive fenestration pattern, relieved only by the limestone entry surround and the projecting penthouses. Most of the primary elements of the building envelope (walls and windows) appear to be original.*
Association	Association is the direct link between an important historic event or person and a historic property. *To this day, more than 50 years after its opening, the building remains the primary laboratory center for biologics evaluation and research.*

For the last 50 years, NIH has taken efforts to maintain the building's integrity and honor its significance in American history. The identity of the property is well preserved, appearing today much as it did upon opening, and its architectural integrity is fully intact. The building's ongoing status as the primary laboratory center for biologics evaluation and research honors past strong associations with significant events and persons. Accordingly, the Biologics Standards Laboratory Building is determined to be eligible for inclusion on the National Register.

MIHP Inventory No. M: 35-9-0012
Biologics Standards Laboratory Building
Bethesda, MD
Montgomery County
Washington West Quadrangle, DC-MD-VA 2011

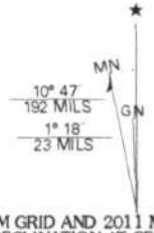
USGS
science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid: Universal Transverse Mercator, Zone 18S
10 000-foot ticks: Maryland Coordinate System of 1983,
Virginia Coordinate System of 1983 (north zone)

Imagery	NAIP, June 2009
Roads	©2006-2010 Tele Atlas
Names	GNIS, 2010
Hydrography	National Hydrography Dataset, 2009
Contours	National Elevation Dataset, 2008
Boundaries	Census, IBWC, IBC, USGS, 1972 - 2010



UTM GRID AND 2011 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

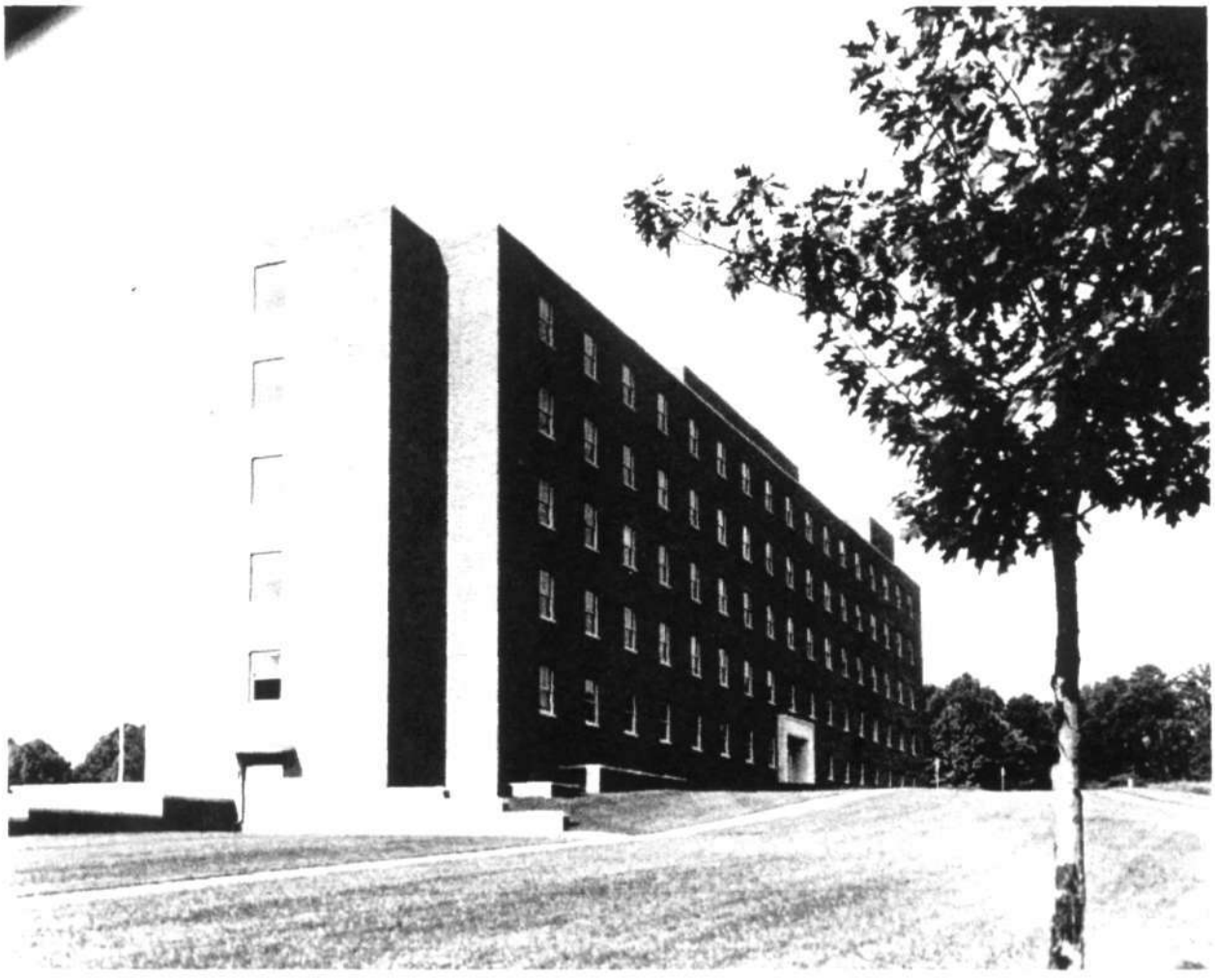
U.S. National Grid
100,000-m Square ID
UJ
Grid Zone Designation
18S

View of southwest corner of the Biologics Standards Laboratory Building (Building 29). Note connection to Building 29A (left).

Source: Office of NIH History, date unknown.

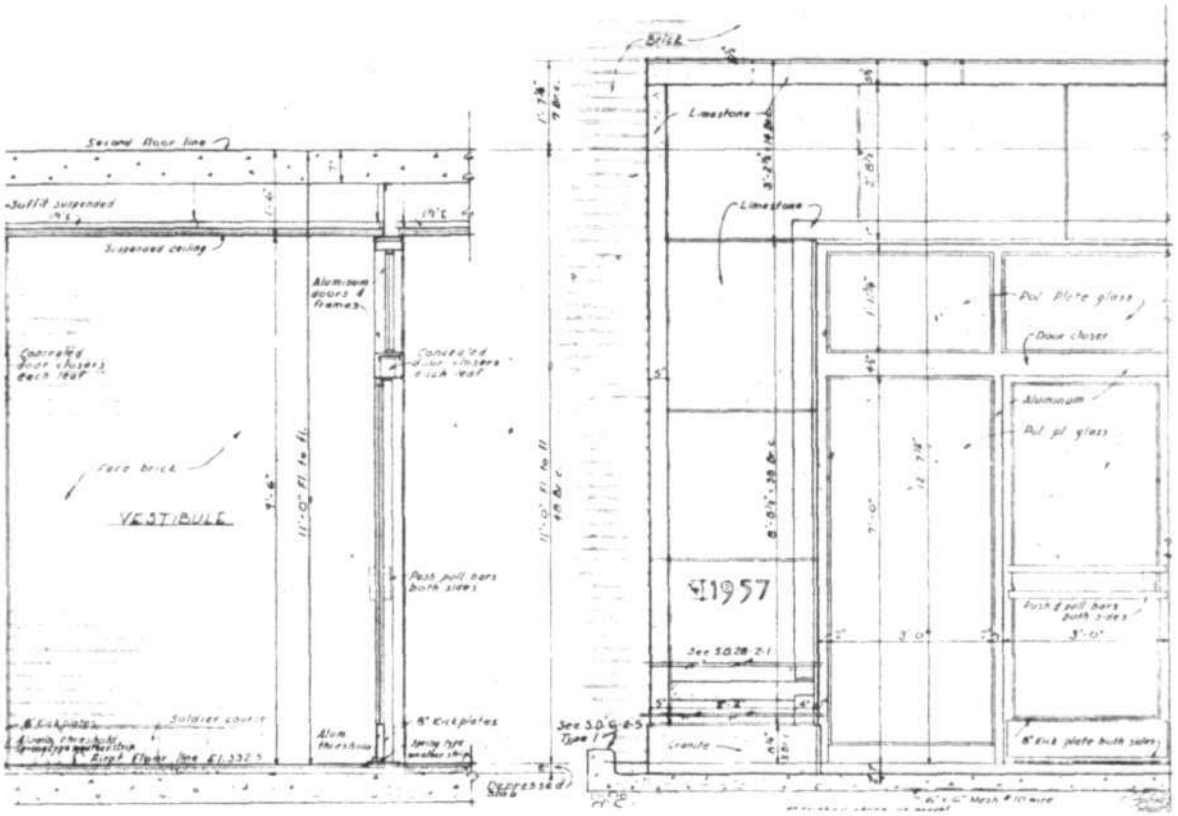
Dedication Ceremony for Building 29, held on June 30, 1960. View of podium showing King and Queen of Thailand, Surgeon General Leroy Burney, and Dr. Roderick Murray.

Source: National Library of Medicine Photographic Collections.



Oblique view of the northeast corner of Building 29, ca. 1965.

Source: National Library of Medicine Photographic Collections.



Excerpt of design drawing for Building 29 recessed entry.

Source: Englehardt, Ted, architect. 1957. "Biologics Standards Laboratory Building, NIH, Bethesda, MD." Architectural drawings dated 9/12/1957. Original design furnished to NIH through the Public Buildings Service of the General Services Administration. Original blueprints on file in the NIH, Office of Research Facilities Plan Room.

Dr. Ruth Kirschstein

Source: Office of NIH History, Photograph taken in 1957.

Photo Log
Biologics Standards Laboratory Building
Montgomery County, MD

MIHP Inventory No. M: 35-9-0012

Number	Description	Photographer	Photo Date	Filename
1	Main (north) elevation.	David A. Derenick	11/9/2012	M; 35-9-0012_2012-11-09_01.tif
2	Oblique view of northeast corner.	David A. Derenick	11/9/2012	M; 35-9-0012_2012-11-09_02.tif
3	East elevation.	David A. Derenick	11/9/2012	M; 35-9-0012_2012-11-09_03.tif
4	Oblique view of southwest corner.	David A. Derenick	11/9/2012	M; 35-9-0012_2012-11-09_04.tif
5	Oblique view of northwest corner.	David A. Derenick	11/9/2012	M; 35-9-0012_2012-11-09_05.tif
6	Detail of brick and window opening with sill, on north elevation.	David A. Derenick	11/29/2012	M; 35-9-0012_2012-11-29_01.tif
7	Entry with limestone surround.	David A. Derenick	11/29/2012	M; 35-9-0012_2012-11-29_02.tif
8	Detail of limestone cornerstone.	David A. Derenick	11/29/2012	M; 35-9-0012_2012-11-29_03.tif
9	View inside lobby looking south.	David A. Derenick	11/29/2012	M; 35-9-0012_2012-11-29_04.tif
10	Looking east in interior first floor east corridor.	David A. Derenick	11/29/2012	M; 35-9-0012_2012-11-29_05.tif
11	Rooftop view looking east. Building 50 is on the left in the distance.	Andrew Armetta	7/31/2012	M; 35-9-0012_2012-07-31_01.tif

Prints made on 12/7/2012 using: Fujifilm "Fujicolor Crystal Archive"

#1 of 11

MIHP # M:35-9-0012
BIOLOGICS STANDARDS LABORATORY BUILDING
MONTGOMERY COUNTY, MD
PHOTOGRAPHER: DAVID A. DERENICK
11/9/2012
ELECTRONIC FILE AT MD SHPO
DESCRIPTION:
MAIN (NORTH) ELEVATION

DSC_X362corrected.jpg
37399


29

MIHP # M:35-9-0012 # 2 of 11
BIOLOGICS STANDARDS LABORATORY BUILDING
MONTGOMERY COUNTY, MD
PHOTOGRAPHER: DAVID A. DERENICK
11/9/2012
ELECTRONIC FILE AT MD SHPO
DESCRIPTION:
OBLIQUE VIEW OF NORTHEAST CORNER

DSC_0238corrected.jpg
37399


LANE
NARROWS
29

MIHP# M:35-9-0012

#3 of 11

BIOLOGICS STANDARDS LABORATORY BUILDING
MONTGOMERY COUNTY, MD
PHOTOGRAPHER: DAVID A. DERENICK
11/9/2012
ELECTRONIC FILE AT MD SHPO
DESCRIPTION:
EAST ELEVATION

DSC_0379Corrected.jpg
37399

#4 of 11

MIHP # M: 35-9-0012
BIOLOGICS STANDARDS LABORATORY BUILDING
MONTGOMERY COUNTY, MD
PHOTOGRAPHER: DAVID A. DERENICK
11/9/2012
ELECTRONIC FILE AT MD SHPO
DESCRIPTION:
OBLIQUE VIEW OF SOUTHWEST CORNER.

DSC_0370corrected.jpg
37399

MIHP # M:35-9-0012 #5 of 11

BIOLOGICS STANDARDS LABORATORY BUILDING

MONTGOMERY COUNTY, MD

PHOTOGRAPHER: DAVID A. DERENICK

11/9/2012

ELECTRONIC FILE AT MD SHPO

DESCRIPTION:

OBLIQUE VIEW OF NORTHWEST CORNER

DSC_0367corrected.JPG
37399

MIHP # M:35-9-0012

#6 of 11

BIOLOGICS STANDARDS LABORATORY BUILDING

MONTGOMERY COUNTY, MD

PHOTOGRAPHER: DAVID A. DERENICK

11/29/2012

ELECTRONIC FILE AT MD SHPO

DESCRIPTION:

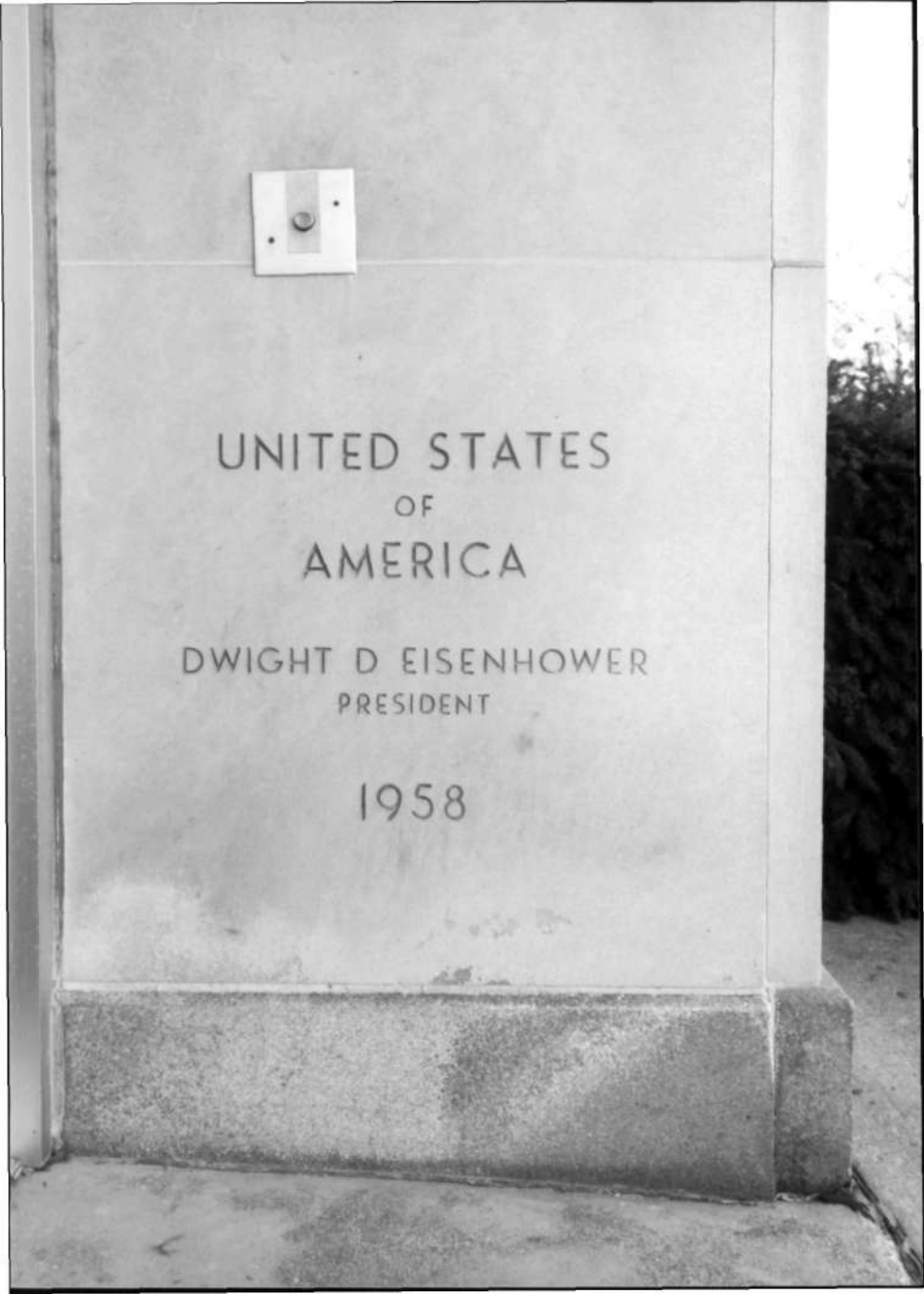
DETAIL OF BRICK AND WINDOW OPENING WITH SILL, ON NORTH ELEVATION

DSC_0360corrected.JPG
37399


Center for Biologics
Evaluation and Research
ATTENTION

MIHP # M: 35-9-0012 #7 of 11
BIOLOGICS STANDARDS LABORATORY BUILDING
MONTGOMERY COUNTY, MD
PHOTOGRAPHER: DAVID A. DERENICK
11/29/2012
ELECTRONIC FILE AT MD SHPO
DESCRIPTION:
ENTRY WITH LIMESTONE SURROUND.

DSC_0361corrected.jpg
37399


UNITED STATES
OF
AMERICA
DWIGHT D EISENHOWER
PRESIDENT
1958

#8 of 11

MIHP # M:35-9-0012
BIOLOGICS STANDARDS LABORATORY BUILDING
MONTGOMERY COUNTY, MD
PHOTOGRAPHER: DAVID A. DERENICK
11/29/2012
ELECTRONIC FILE AT MD SHPO
DESCRIPTION:
DETAIL OF LIMESTONE CORNERSTONE

DSC_0377corrected.jpg
37399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PIV
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MIHP # M:35-9-0012

#9 of 11

BIOLOGICS STANDARDS LABORATORY BUILDING

MONTGOMERY COUNTY, MD

PHOTOGRAPHER: DAVID A. DERENICK

11/29/2012

ELECTRONIC FILE AT MD SHPO

DESCRIPTION:

VIEW INSIDE LOBBY LOOKING SOUTH.

#10 of 11

MIHP # M:35-9-0012
BIOLOGICS STANDARDS LABORATORY BUILDING
MONTGOMERY COUNTY, MD
PHOTOGRAPHER: DAVID A. DERENICK
11/29/2012
ELECTRONIC FILE AT MD SHPO
DESCRIPTION:

LOOKING EAST IN INTERIOR FIRST FLOOR EAST CORRIDOR.

DSC_0362corrected.jpg
57359

#11 of 11

MIHP # M:35-9-0012
BIOLOGICS STANDARDS LABORATORY BUILDING
MONTGOMERY COUNTY, MD
PHOTOGRAPHER: ANDREW ARMETTA
7/31/2012
ELECTRONIC FILE AT MDSHPO
DESCRIPTION:
ROOFTOP VIEW LOOKING EAST. BUILDING 50 IS ON THE LEFT IN THE DISTANCE.

RooftopLookInsNorth.jpg
37399