University of Idaho
Central Heating Plant
(General Maintenance Shops) (Agricultural Engineering Lab) (Art and Architecture Annex)
West side of Line Street, between University Avenue and Idaho Avenue
Moscow
Latah County
Idaho

HABS No.: ID - 122 - A

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN BUILDINGS SURVEY
COLUMBIA CASCADE SUPPORT OFFICE
National Park Service
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Seattle, Washington 98104-1060

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Historic American Buildings Survey

University of Idaho,
Central Heating Plant
(General Maintenance Shops) (Agricultural Engineering Lab) (Art and Architecture Annex) HABS No. : ID - 122-A

Location: West side of Line Street, between University Avenue and Idaho Avenue, University of Idaho, Moscow, Latah County, Idaho

Present Owner: University of Idaho

Present Occupant: University of Idaho

Present Use: Art and Architecture Annex

Significance:

This brick building, constructed in 1909, is one of the oldest buildings on the University of Idaho campus, built under the presidency of James MacLean, three years after the disastrous fire that destroyed the University's original Administration Building. Prior to the Administration Building fire of 1906, and afterwards, there were serious threats to dismember the University of Idaho. Many legislators wanted to move parts of the University--particularly the College of Agriculture and the School of Mines--to the southern part of the state. James MacLean believed it necessary to enhance the stature of the University in order to retain the entire University in Moscow, and he launched an impressive building campaign. The two most significant buildings constructed in the immediate aftermath of the fire were Morrill Hall and the new Administration Building. At the same time, MacLean contacted John C. Olmsted, of the famous Olmsted landscape architectural firm of New York, to design a campus landscaping plan, remnants of which are still visible around the Administration Building green. Although hardly as significant as the Administration Building, Morrill Hall, or the Olmsted landscape architectural plan, the Central Heating Plant, funded by direct state appropriation, was another significant part of the growth of the University in the immediate aftermath of the 1906 fire, a growth that strengthened the University and helped preserve it in tact at Moscow. As such, the building is one of the few remaining ties to that most critical period in the University's history--the MacLean presidency--when there was considerable question about whether or not the state university would survive in tact in the small northern Idaho town of Moscow.

Part I. Historical Information

A. Physical History

1. Date of Erection:

The Central Heating Plant was constructed in 1909. It underwent a major "visual" change in 1927 when the University constructed a new heating plant and the original Central Heating Plant was renovated into General Maintenance Shops. At that time, the three tall steam stacks, which had served as something of campus landmarks, were removed from the Central Heating Plant. A major alteration to the structure occurred in 1950-51 when a new facade and classroom space were added to the top, eastern end of the building as it was renovated to become the Agricultural Engineering Lab. [1]

2. Architect:

"This new building [Central Heating Plant] is being designed by Mr. Hutton, instructor in Mechanical Engineering," reported the *Argonaut* on May 19, 1909. Sol E. Hutton had a varied career. He received an engineering degree from Highland Park College in Des Moines, Iowa, in 1903 and was an instructor in electrical engineering at that college from 1902-03. In 1904-05 he was a professor of Applied Mathematics at Montana College in Deer Lodge; in 1905-06 he served with the consulting engineering firm of Sargent & Lundy out of Chicago; and in 1906-07 he was an assistant professor of mechanical engineering at the University of Kansas. He joined the University of Idaho faculty as an instructor of mechanical engineering in 1907, and is last listed on the university faculty rolls in the student yearbook for the year 1912, when he was a professor of electrical and mechanical engineering. [2]

He married Agatha Sonna, daughter of pioneering Idaho residents. (Agatha Sonna at one time might have worked for the University, probably as a secretary. The UI Regent's minutes for June 11, 1909 note that "Miss Sonna" resigned from the University.) In January 1914, Sol and Agatha Hutton purchased the Moscow newspaper, the *Star-Mirror.* In January 1917, Sol Hutton "who never really cared for newspaper work from the journalistic point of view" leased the paper to L.F. Parsons. In May 1918 the Huttons sold the paper to George Lamphere, who would retain control of the newspaper into the 1930s and become one of Moscow's most influential publishers. [3]

During World War I Sol Hutton was in Europe, apparently serving in the armed forces. In 1918 the *Star-Mirror* noted that "a letter descriptive of his experience in Idaho has been received recently from S.E. Hutton, who...was sent from France to Italy on special detached service." [4] His wife remained in Moscow and volunteered for the Red Cross during the war. Research turned up little about the Huttons following the war. The 1921 Moscow phone directory lists S.E. Hutton as having a "rural" Moscow address; the 1921-22 *Polk's Directory for Latah County* lists Sol E. and Agatha Hutton as living at 115 N. Van Buren Street in Moscow. The Hutton name does not appear in subsequent Moscow directories, and they are not listed in records of births, deaths, and marriages housed at the Latah County Historical Society, so apparently they moved from the community in the early 1920s. [5]

3. Original and Subsequent Owners, Occupants, Uses:

Constructed as the Central Heating Plant, this structure had a variety of uses over the years. One of the larger buildings on campus when constructed, the Central Heating Plant always served as a storage facility for the campus. The 1911 University inventory of buildings, for example, noted that it held storage items for the creamery, and the 1912 inventory noted that it served as a storage facility for the School of Mines. [6]

In 1927 the University constructed a new central heating plant. The reasons for this construction--and reasons why the original Central Heating Plant was no longer considered adequate--were given in a 1927 article in *The Idaho Engineer*:

> The latest project to be finished at the University of Idaho in connection with the building program is the Central Heating Plant located at the corner of Sixth and Line Streets. The question naturally arises as to why it was necessary to build a new plant instead of increasing the capacity of the old and thereby saving the cost of a new building, tunnels, and steam mains. Several factors influenced the change, but two stood out as the deciding ones, namely the hauling of coal (at an expense of from $3,000 to $4,000 per year) [the new plant was designed to allow railroad cars hauling coal to enter the facility directly], and the unsightly appearance of the old plant itself which would become more of an eyesore as other buildings were erected in its neighborhood.
>
> The old plant located in a central position with respect to the University buildings evidently had distinct advantages. However, the demand for heat had reached a point requiring its operation at maximum capacity throughout most of the year. In fact, during the colder weather all units were operated at maximum capacity with no spares to fall back on in case of breakdowns. The seriousness of this situation need not be dwelt upon. The immediate erection of a new gymnasium with its auditorium, swimming pool, and showers necessitated addition to the heating plant capacity at once. [7]

With the construction of the new central heating plant, the original Central Heating Plant became primarily used as General Maintenance Shops, and for a long time also housed labs for Mechanical Engineering. The 1932 campus inventory noted that the building housed a carpenter, machine, large machine, paint, and electric shops, and a plumbing storeroom, along with an engineering laboratory for mechanical engineering. These basic facilities, with some minor changes, remained in the building, as noted in inventories for the 1930s and 1940s. [8]

In the fall and winter of 1950-51, the building underwent its first and only major renovation. A new brick structure was added to the top of the eastern end of the building, and a new brick facade now faced Line Street. Following this renovation, the structure became the Agricultural Engineering Lab. The *Argonaut* noted of this renovation: "Maintenance shops in the old heating plant will be vacated soon. This space will in turn be utilized to house laboratory facilities now in the Metallurgy building, so that this old mill building can be renovated during the winter into a modern metallurgical laboratory for the School of Mines." Inventories in the 1950s and 1960s noted that the structure housed the forge shop, structure, concrete, and gas welding labs, tool room, classrooms, and physical plant storage. [9]

In the mid-1980s the structure became Art and Architecture Annex. The campus map in the University catalog for 1985-86 shows this building, but does not list a name, probably signifying that remodeling was under way. The 1986-87 catalog map lists the structure as Art and Architecture Annex.

4. Builder, Contractor, Suppliers:

Research uncovered no information on contractors for this building. News reports indicate that the Central Heating Plant was largely constructed in the summer of 1909. However, perhaps some work remained to be done following that major construction, for the UI Board of Regents Minutes for October 25, 1909 note, "The Executive Committee reported...that the bids on the central heating plant, in accordance with the revised plan, had been received, the lowest bidder being G.H. Southerland of Walla Walla, for $3065.00, and that no action had been taken on such bids." Subsequent minutes give no indication as to whether any work was undertaken, or, if so, what type of work.

5. Original Plans and Construction:

Our search for any original architectural drawings has been unsuccessful. However, photocopies of the following historic photographs of this structure are attached to this report:

- An aerial view, c. 1922.
- Two c. 1926.
- 1932 view taken from the southwest
- Seven 1950-51 views of the renovation/addition undertaken at that time
- Two 1953 views along Line Street (from the southeast) showing the building as renovated
- 1909 image of designer Sol E. Hutton, standing next to UI President James MacLean
- Originals of all photographs are available, in the locations noted on the photocopies, at the UI Special Collections.

6. Alterations and Additions:

The major alterations to this structure have been noted above, and can be summarized as follows:

- In 1927 the three steam stacks were removed with the construction of the new central heating plant, dramatically changing the looks of this building and the landscape of the campus.

- In 1950-51 a new addition was added to the eastern end of the structure.

B. Historical Context

James MacLean became president of the University of Idaho in 1900, and virtually every year during his tenure, representatives in the state legislature made attempts to dismember parts of the University, moving significant facilities to the more populous southern part of the state. During his thirteen year tenure, MacLean weathered all the storms, and the University ended up in a much stronger position when he left than before he arrived, largely because of MacLean's aggressive building construction efforts.

In March 1906 the University's original Administration Building burned. Rather than retrenching, MacLean used this as an opportunity to greatly enhance the University campus. Utilizing insurance money from the fire, he supervised the construction of Morrill Hall. He persuaded the legislature to construct an even larger Administration Building to replace the destroyed one. He consulted the Olmsted landscape architecture firm to develop a campus beautification plan. And he persuaded the legislature in 1909 to allocate state funds for the construction of a Central Heating Plant. That 1909 legislature provided an appropriation of $100,000 to complete the Administration Building, and $10,000 to construct the Central Heating Plant, as well as smaller appropriations for constructing barns, acquiring land, and improving the Caldwall experiment station. This prompted the *Argonaut* to note, "A great volume of applause followed Dean [Jay Glover] Eldridge's reading of the telegram announcing the appropriations allowed....The University is this year receiving by far the largest appropriation that has ever been made by any session of the legislature since the founding of this institution. And this fact makes Idaho all the more jubilant after the rather gloomy days when segregation talk was uppermost." [10]

That same day's paper ran a glowing editorial about MacLean:

> And further, our faith in President MacLean is strengthened. When he first came to Idaho the institution never received an appropriation except for an occasional building. Under his administration the appreciation of the University throughout the state has gradually rallied and there has been a corresponding slacking of the purse strings until we can now look forward to adequate support for all departments. He has built us practically a new University and we believe has plans in mind for a still greater institution. [11]

The legislature provided funding for the Central Heating Plant following a recommendation from a committee of the House and Senate: "The installation of a central heating plant would save expense in fuel, janitor service and insurance, and we recommend that such a plant be installed." [12]

The Central Heating Plant, when constructed in 1909, heated most but not all of the buildings on campus. The School of Mines building and the dormitory (Ridenbaugh Hall) were not heated from the Central Heating Plant. An additional heating plant was located in the Engineering Building. [13]

The *Argonaut* described the new Central Heating Plant and its capabilities as originally constructed:

> The building occupied by the plant will cover about three thousand square feet of ground space, with additional room for five hundred tons of coal, and will be located about two hundred feet west of the Metallurgical building. In it will be placed two 125 horse power return tabular boilers

> seventy-two inches in diameter by sixteen feet long. They will have a one hundred foot steel stack. Space will be provided for the future installation of two more such boilers and another stack when needed. Worked to their full capacity, the boilers will evaporate about seventy-five hundred pounds of water per hour, which is equivalent to about 30,000 cubic feet of steam at 100 pounds pressure or about 120,000 pounds at ten pounds pressure. A duplex, end packed, plunger pattern, boiler feed pump will be used as will also a steel return tank. The steam will be supplied to the buildings at a high pressure and will be reduced from one hundred pounds per square inch to about two pounds per square inch by reducing valves located at the buildings, and will be returned to the boiler plant through another system of pipes. Both systems will be laid in a concrete or vitrified clay conduit filled with heat insulating material in order to reduce condensation to a minimum. [14]

Eventually, two additional boilers were added to the Central Heating Plant, as well as an additional two stacks. When the new central heating plant was constructed in 1927, the two original 125 horsepower boilers were sold to the Lewiston Normal School. The two larger boilers, added after original construction--one being 250 horsepower and the other 300 horsepower--were moved to the new University heating plant and installed there. The three stacks were removed, and the structure took on its new life as the General Maintenance Shops for the University. [15]

C. Endnotes

[1] *Argonaut*, 10 March 1909; 17 March 1909; 21 Apr. 1909; 19 May 1909; 12 Aug. 1927; 13 Sept. 1927; 30 Sept. 1927; 13 Dec. 1949; historic photos in Papers of the President's Office, UG 12, Box 80, File 2276, UI Special Collections.

[2] *Gem of the Mountains*, 1909; 1910; 1912.

[3] Ben Plastino, "History of the *Moscow Star-Mirror*," typescript, n.d., UI Special Collections; Bert C. Cross, "Chronology of Newspapers in Moscow, Idaho," typescript, 1986, UI Special Collections; Homer David, *Moscow at the Turn of the Century*, (Moscow: Latah County Historical Society, 1979), p. 23; *Moscow Star-Mirror,* 20 Jan. 1914; 8 Jan. 1917; 9 May 1918.

[4] *Moscow Star-Mirror*, 23 Oct. 1918.

[5] *Polk's Latah County Directory, 1921-22; Moscow Telephone and Telegraph Company Directory,* 1921. Records of Births, Deaths, and Marriages, typescripts, numerous volumes, Latah County Historical Society.

[6] University of Idaho Inventory, UI Special Collections, 1911; 1912.

[7] F.W. Candee and Robert W. Olin, "New Central Heating Plant at University of Idaho," *The Idaho Engineer* 5:1 (December 1927): 16-17.

[8] University of Idaho Inventory, UI Special Collections, 1932; 1934; 1936; 1938; 1940; 1943; 1947-48.

[9] *Argonaut,* 13 Dec. 1949; University of Idaho Inventory, UI Special Collections, 1956; 1962; 1964.

[10] *Argonaut,* 10 March 1909.

[11] *Ibid;* editorial.

[12] Quoted in *Argonaut*, 17 March 1909.

[13] *Moscow Star-Mirror,* 16 Sept. 1909; *Argonaut*, 21 Apr. 1909; 19 May 1909.

[14] *Argonaut*, 19 May 1909.

[15] *Argonaut*, 12 Aug. 1927; 13 Sept. 1927; 30 Sept. 1927; 18 Oct. 1927.

Part II. Architectural Information

A. General Statement:

1. Architectural Character:

The architectural interest and merit of this building, which faces Line Street, and side street University Avenue, is its context and prominent exposure to the Ad Lawn. Its relationship on the upper level, to Line Street, in contrast with its lower level to the ground floor of UCC, makes it a significant architectural feature in its successful solution to an otherwise awkward topographical feature.

2. Condition of fabric:

The building's condition is that of very poor repair. Wood trims are rotted, brick is crumbling, concrete wall is damaged, and parapet caps and poor roof membrane exist with evident ponding.

B. Description of Exterior:

Overall Dimensions:

See reference plans.

Foundations:

Unknown. The brick coursing extends below grade.

Walls:

Red brick running bond with some very unique dentil work consisting of four course "brackets" which support a three course ledger with cement wash over the top. This is very unique to the buildings on this campus.

Porches, stoops, balconies, bulkheads:

Porches and stoops are poured in place concrete.

5. Chimneys:

Chimneys are limited to a brick unit which still remains from the original steam plant near the northwest corner of the building. It is constructed of brick with running bond and cement wash top.

Openings:

Doorways and doors:

For the most part, the doors to the exterior have been updated/replaced, however on the north face, 2nd level below street grade, there appears to be some original doors which are wood stile with wood slat panel and "x" brace filler below glazed panes.

Windows and shutters:

Windows are original wood, double hung units with clear glazing and no divided panes.

Roof:

Shape, covering:

Roof is internally drained, mineral surface cap sheet membrane in fair condition. However significant ponding exists, suggesting clogged drains or settled areas.

Cornice, eaves:

Cornices are a combination of cast concrete and wood facia elements.

Dormers, cupolas, towers:

It is apparent that two skylight/light wells have been added to the lower roof section consisting of wood framed curbs, wood siding, and translucent fiberglass panels with galvanized metal flashing and trim.

C. Description of Interior:

Floor plans:

See plans.

Stairways:

Interior stairways are wood framed with floor finish to match the balance of the floors which appears to be a very old "battleship vinyl" with metal stair nosings.

Flooring:

Flooring appears to be "battleship sheet vinyl" flooring over slatted wood subfloor. Color is a rust red/orange.

Wall and ceiling finish:

Walls are a combination of drywall and plaster painted off-white. Ceiling is a combination of plaster and drywall painted off-white to match the walls. It shall be noted that the interior face of the exterior walls have exposed, common brick. That is, the interior brick of the double wythe walls are exposed and in very poor repair. It should be noted that the same soldier course header details are utilized in the interior as well as the exterior. There is evidence of past interior, floor mounted stoves of an unknown fuel type due to the circular exhaust holes in the exterior walls which are now capped off and not utilized.

Openings:

Doorways and doors:

Many doors appear to be original stile and rail doors with updated hardware. They are currently all painted white to match the walls.

Windows:

Windows are double hung wood units with counterbalances that are painted dark brown on the interior and cream color on the exterior. There are two lift handles on the bottom of each operable unit with a conventional latch/lock mechanism on the upper face of the lower operable unit. Skylights to interior, as previously mentioned, are very effective in providing natural daylight to the second level below street level corridor and stairway area. The dimensional lumber continues through the framed openings which emit light into these spaces. Those framing members are painted white to match walls.

Decorative features and trim:

Woodwork is very conventional and includes 1x4 wood with a quarter round base shoe. No other ornamentation is noted except for standard 1x4 and 1x6 door casings and natural wood 2x6 stair wall cap rails.

Mechanical equipment:

Heating, air conditioning, ventilation:

Heat to the building is delivered by exposed steam radiators of a very old variety. There is no active building ventilation.

Lighting:

Lighting is not original but very old fluorescent type with a combination of plastic lenses and metal 2x2 egg crate lenses in very poor repair.

Plumbing:

Combination of original and repaired/updated fixtures.

Elevator:

There is no elevator.

D. Site:

General setting and orientation:

Structure faces west towards line street and the topography is very severe, sloping east away from Line Street which facilitates the daylight level which relates to the ground floor of the Communications building nearby. This level also relates to the second level of UCC to the west and relates to the UCC annex top floor level of two.

Historic landscape design:

No historically significant features.

Part III. Sources of Information

A. Architectural Drawings:

Our search for original architectural drawings was unsuccessful. However, Facilities Management, file 008-G, includes scaled, measured plans from safety upgrades in 1988.

B. Historic Views:

Historic photographs described above; photocopies are attached.

C. Interviews:

None.

D. Bibliography:

Argonaut (University of Idaho student newspaper; specific dates provided in endnotes).

Births, Deaths, and Marriages in Latah County. Various volumes; available at Latah County Historical Society, Moscow, Idaho.

Candee, F.W. and Robert W. Olin. "New Central Heating Plant at University of Idaho." *The Idaho Engineer.* 5:1 (Dec. 1927).

Cross, Bert C. "Chronology of Newspapers in Moscow, Idaho." Typescript, 1986. UI Special Collections.

David, Homer. *Moscow at the Turn of the Century.* Moscow: Latah County Historical Society. 1979.

Gem of the Mountains (University of Idaho student yearbook; specific dates provided in endnotes).

Gibbs, Rafe. *Beacon for Mountain and Plain: Story of the University of Idaho.* Moscow: University of Idaho. 1962.

Idaho Post. 30 January 1920 (obituary of Agatha Sonna Hutton's mother).

Moscow Star-Mirror (specific dates provided in endnotes).

Moscow Telephone and Telegraph Company Directory. 1921. Available at UI Special Collections.

Nielsen, Judith. "University of Idaho Campus Buildings." Typescript, 1995. UI Special Collections.

Papers of the President's Office. UG 12. UI Special Collections.

Petersen, Keith C. *This Crested Hill: An Illustrated History of the University of Idaho.* Moscow: University of Idaho Press. 1987.

Plastino, Ben. "History of the *Moscow Star-Mirror.*" Typescript, n.d. UI Special Collections.

Polk's Latah County Directory. 1921-22. Available at UI Special Collections.

Reese, Nels and Diana Armstrong. "The Olmsted Plan for the Campus." *Idaho the University.* Spring 1988.

University of Idaho Board of Regents Minutes. Available at UI Special Collections.

University of Idaho *Catalog.* Catalogs, available at UI Special Collections, are published annually and provide campus maps that give the varying names and uses of this building over time.

University of Idaho Inventory. These were done periodically for insurance purposes and are available at UI Special Collections. Specific dates of those consulted are provided in endnotes.