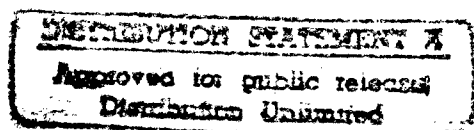

BADGER ARMY AMMUNITION PLANT

SUPPLEMENTAL PHOTOGRAPHIC DOCUMENTATION OF ARCHETYPAL BUILDINGS, STRUCTURES, AND EQUIPMENT FOR U.S. ARMY MATERIEL COMMAND NATIONAL HISTORIC CONTEXT FOR WORLD WAR II ORDNANCE FACILITIES

by
K. Diane Kimbrell
Kathleen E. Hiatt

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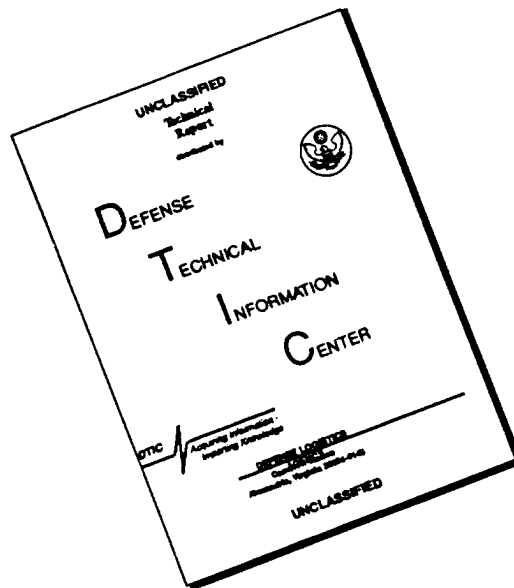
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19. ABSTRACT (Continue on reverse if necessary and identify by block number) This report presents a photographic record of the archetypal buildings, structures, and equipment of the World War II Ordnance Department's government-owned, contractor-operated (GOCO) industrial facility, the Badger Army Ammunition Plant, at Baraboo, Wisconsin. This photographic documentation was completed under partial fulfillment of an Army Materiel Command (AMC) Legacy Resource Program demonstration project for assistance to small installations and in fulfillment of the 1993 Programmatic Agreement among the AMC, the Advisory Council on Historic Preservation, and Multiple Historic State Historic Preservation Officers concerning the program to discontinue maintenance, or dispose, of particular GOCO properties. The objective of the project was to photographically record World War II-vintage equipment and buildings, some of which housed different stages of the ammunition manufacturing process and were of the same architectural design. Modern buildings and equipment are not included in this document. Efforts were made to arrange the photographs in the order of ammunition manufacture and facility processes; however, this presentation should not be perceived as a complete chronological sequence for ammunition manufacturing during World War II. The buildings photographed in this document are classified as under either "stand-by" or "layaway" status. The active buildings depicted in this volume are of an insensitive and/or "safe" nature and include Administration and Shop buildings.					
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U.S. ARMY CORPS OF ENGINEERS
FORT WORTH DISTRICT

U.S. ARMY MATERIEL COMMAND HISTORIC CONTEXT SERIES
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Geo-Marine, Inc.
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I.

INTRODUCTION

This report presents a photographic recordation of the archetypal buildings, structures, and equipment of the World War II Ordnance Department's government-owned, contractor-operated (GOCO) industrial facility, the Badger Army Ammunition Plant, Baraboo, Wisconsin. Geo-Marine, Inc. was contracted by the U.S. Army Corps of Engineers, Fort Worth District, to undertake this project in September of 1993. Duane E. Peter, Director of the Cultural Resources Division of Geo-Marine, Inc., acted as Principal Investigator for the project. Kathleen Hiatt completed the photographic field work for the project.

This photographic documentation was completed under Delivery Order No. 14, Contract No. DACA63-93 D-0014, Task C, in partial fulfillment of an Army Materiel Command (AMC) Legacy Resource Program demonstration project for assistance to small installations. This documentation also represents partial fulfillment of the requirements of the 1993 Programmatic Agreement among the AMC, the Advisory Council on Historic Preservation, and multiple State Historic Preservation Officers concerning the program to discontinue maintenance, or dispose, of particular government-owned properties. This work was conducted in compliance with the National Environmental Policy Act of 1969 (PL 90-190); the National Historic Preservation Act of 1966 (PL 96-515), as amended; the Archaeological and Historic Preservation Act of 1974 (PL 93-291, as amended); and Executive Order No. 11593, "Protection and Enhancement of the Cultural Environment."

In completion of this task, a map showing building numbers; a photographic log; the photographs of various buildings, structures, and equipment; and a brief history of the installation have been included for the Badger Army Ammunition Plant.

II.

PHOTOGRAPHIC RECORDATION LOGISTICS AND METHODOLOGY

The objective of Task C was to photographically record World War II-vintage buildings and equipment. Numerous buildings that housed different stages of the ammunition manufacturing process were of the same architectural design. Accordingly, the order of photographs that follows is based on differences in architectural design, rather than on the step-by-step process of ammunition manufacturing. Modern buildings and necessary equipment in ammunition processing are absent from this photographic account due to their vintage (i.e., replacement equipment, though similar in function and/or design, was not photographed). Ammunition manufacturing is divided into lines according to the type of ammunition being manufactured and by process stages. Additionally, there may be more than one line for the same ammunition type at the same stage. Accordingly, the architectural design of these buildings in different lines is similar, as is their equipment. Photographs of specific building types were not taken from a single line, rather the photographs were taken from any number of lines as directed by the sun angle and physical restrictions. In short, though efforts were made to arrange the photographs in order of ammunition and facility processes, the presentation should not be perceived as a complete and chronological order of ammunition manufacturing.

Equipment was commonly found stored in a different facility than where it was housed when it was in use. Thus, in some cases, equipment that is depicted may not be a part of the process indicated by the building it is in. This is another reason not to take this account as a step-by-step explanation of ammunition plant processes.

Photographs of ammunition buildings and equipment in this account are classified as under either "stand-by" or "lay-away" status. Depicted active buildings are of an insensitive and/or "safe" nature. Such buildings include administration and shop buildings.

Photographic angles were largely dependent upon the angle of the sun and spatial restrictions. Time constraints and work schedules of the escorts did not allow for return visits to buildings that may have been better depicted with a different sun angle. In many cases a preferred angle for photography was impossible due to overhead pipelines, power line poles, and other structures.

Indoor lighting was also a determining factor in photographic results of plant equipment. Electrical power had been shut off to the buildings on lay-away status. Unbarred windows and doors were opened and a camera flash was employed to compensate for poor lighting conditions. Indoor photography of equipment was also controlled by spatial restrictions. It was virtually impossible to photograph tanks spanning two

or more stories. In some instances, walls and other equipment obstructed photographic angles; therefore, photographs of some equipment were not possible.

The age of equipment was questionable. Each piece of equipment has a plant inventory number. An inventory list of the equipment details each piece by its inventory number. However, not every piece of equipment on this list has a manufacture or acquisition date. Increasing the uncertainty of the equipment's vintage was the illegibility, or absence, of the inventory tag. In addition, the equipment inventory list was not exhaustive. The list did not include "installed equipment;" furthermore, the installed equipment was not easily discernible. Equipment installed at the time of the building's construction in many cases has been replaced in recent times. The installed equipment does not have a certain "look" to it, and purchased equipment without an inventory tag may be mistaken as installed equipment. Photographs were taken of all equipment where the age was in question. Thus, the equipment that is found within this account is not definitely World War II equipment, unless a date is listed for that piece. However, the equipment included in this account is representative of the World War II era.

Pieces of equipment were found in various stages of disassembly. These pieces were not photographed unless they retained sufficient physical integrity to indicate their former function. In this account, such pieces are labeled as being in a state of partial disassembly.

Motors, tanks, and pumps are necessary in numerous plant processes. Due to the common function and design of such equipment, a single photograph was taken to represent any number of similar pieces of equipment. A representative unit was selected for its physical integrity and photographic accessibility.

III.

HISTORICAL OVERVIEW

The Badger Army Ammunition Plant is located on 10,565 acres of land in the Merrimac and Sumter townships of Sauk County, Wisconsin, on the west side of the Wisconsin River (Figure 1). The plant was originally planned to have only three lines that would manufacture smokeless powder; however, the plan was later modified. The modification included the addition of double-based smokeless powder and trinitrotoluene (TNT). The revision of the plant plan was due to the Ordnance Department's growing need to increase the number of multi-purpose plants. The diversity of products produced at plants, such as Badger Ordnance Works (its original name), helped to keep the supply of munitions balanced (Thomson and Mayo 1991:111).

The process of site selection was based on several criteria set up by the Ordnance Department. For instance, the site could not have been a coastal area (and in fact, it had to be at least 200 miles away from any U.S. border), for obvious reasons of national defense. The location also could not have been located near a large center of population for safety requirements; however, it had to be located in an area that could recruit a sufficient work force for construction and operation. Among other criteria considered were that the site had to have access to electricity, water, railroads, and highways to ensure a degree of self-sufficiency. Finally, a large tract of land had to be purchased due to the safety regulations that required adequate spacing between production lines and storage facilities (Thomson and Mayo 1991:108-109).

The contract for design, procurement of equipment, training of personnel, and operation was awarded to the Hercules Powder Company, dated January 1, 1942. The Architect-Engineer-Management service contract was awarded to the Mason and Hanger Company of New York, on January 27, 1942. Construction began in February of 1942 and was considered 98.5 percent complete by December 31, 1943; however, construction continued for the duration of World War II, until the plant was put on stand-by status in 1945. The production of oleum began on January 1, 1943, smokeless powder on January 18, 1943, nitrocellulose on March 22, 1943, solvents on January 18, 1943, and rocket powder in March of 1945 (United States Government Document n.d.:54).

The design plan of Badger Ordnance Works was subject to several revisions. The initial design of the plant's layout was based on a grid of self-contained production areas that were connected by a system of roads and rail lines. A diphenylamine plant and the necessary storage, administrative, and acid facilities were also planned (MacDonald and Mack 1984:16). However, during the construction phase, several changes were made to facilitate the changing ordnance demands. The first revision of the plan involved the addition of double-based powder facilities, five lines for the manufacture of TNT, and the necessary facilities to support these production lines. Later, the double-based powder facilities were eliminated from

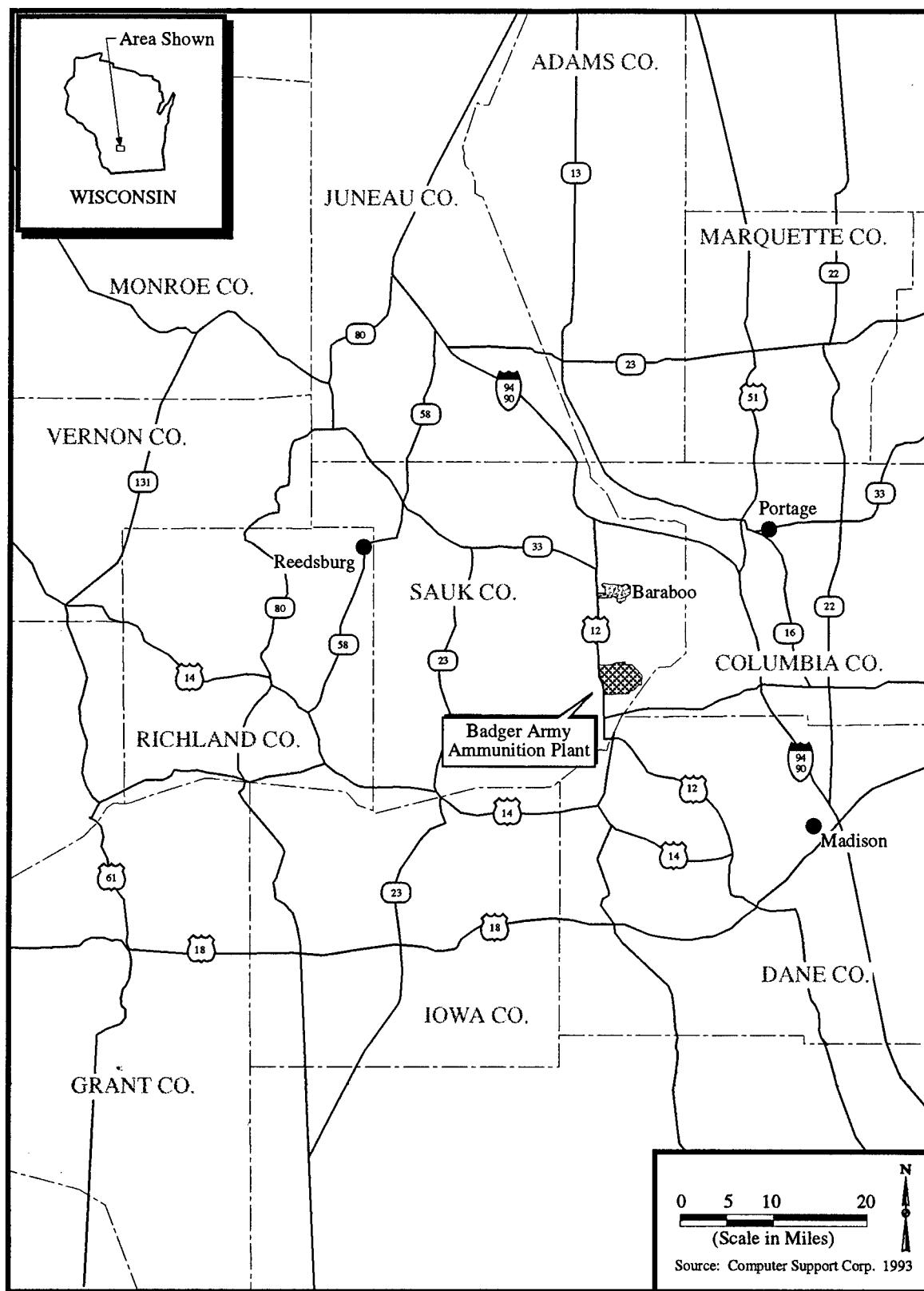


Figure 1. Regional Location of the Badger Army Ammunition Plant.

the plan as well as the diphenylamine plant. Later, the five TNT lines were also eliminated from the plant's plan.

Badger Ordnance Works was converted to primarily a smokeless powder facility, much like the Radford Ordnance Works. During the first part of 1944, construction for rocket powder production facilities was initiated to comply with the peak of the U.S. rocket program, at this point over 18 million pounds of rocket propellant were used each month (Thomson and Mayo 1991:138). The completion of the rocket powder facilities was not final until March 1945. The plant was put on stand-by status on September 7, 1945 (MacDonald and Mack 1984:28).

With the outbreak of the Korean War, and the U.S. involvement in it, the Corps of Engineers awarded a contract to The Fegles Construction Company of Minneapolis, Minnesota, to prepare the plant for production. The plant was reactivated for operation under contract by the Corps of Engineers, awarded to the Liberty Powder Defense Corporation in March of 1951. Production of rocket propellant was started by September 1951, and production of other munitions, such as single- and double-based propellants, was underway three months later (MacDonald and Mack 1984:28).

Expansion of the plant during the Korean War consisted of new facilities for the production of "Western Ball Powder," a type of smokeless powder that eliminated several steps of the standard smokeless powder production process. Approval for construction of the facilities was granted in March of 1954. The H.K. Ferguson Company of Cleveland, Ohio, was awarded the construction contract and completed the job in July of 1955. Production of ball powder, and single- and double-based powder continued at Badger Army Ammunition Plant until it was placed on stand-by status on March 1, 1958.

The plant was not reactivated until January 3, 1966, during the Vietnam War. It was operated under a contract awarded to the Olin Corporation. As in the Korean War, the plant was responsible for the manufacture of single- and double-based powder, as well as ball powder. The plant continued production until June of 1975, when it was placed on stand-by and modernization status by the government. The plant's staff was greatly reduced and operated on stand-by status by the operating contractor, Olin Corporation (MacDonald and Mack 1984:32).

IV.
PHOTOGRAPHIC DOCUMENTATION

ADMINISTRATIVE FACILITIES



Figure 1. Building 200: Main Office Building/Headquarters. For energy efficiency, every other window in this building was closed off when the building was re-sided in the 1960s.

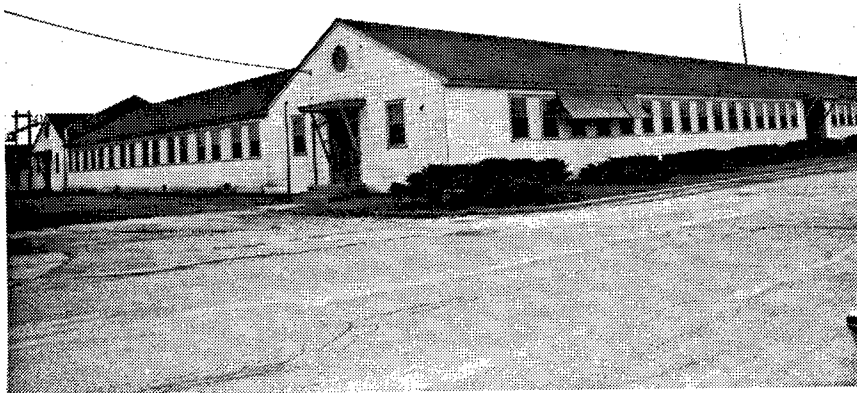


Figure 2. Building 214: General Purpose Administration Building.

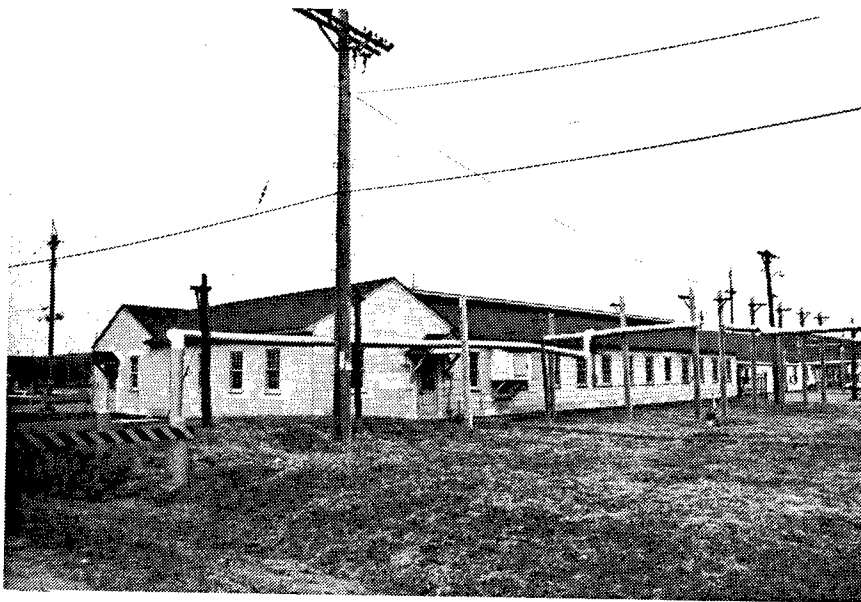


Figure 3. Building 229: Employment Building. Originally, activities within this building focused on Plant employee logistics.



Figure 4. Building 241-1: Office/Garage. This is the office wing. Note the gas pumps on the right side of the photograph.



Figure 5. Building 241-1: Office/Garage. The office (left side of the photo) has recently been insulated and re-sided.

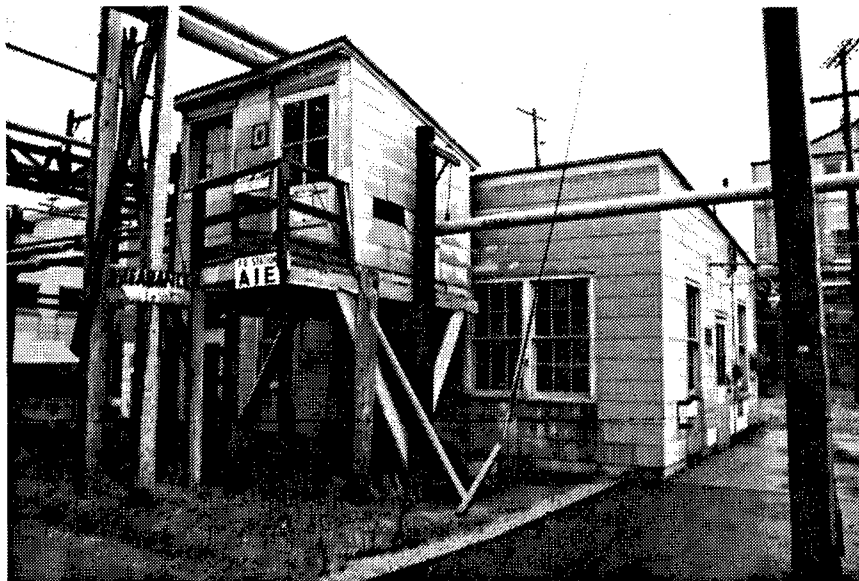


Figure 6. Building 718: Acid Line Office and associated Steam Pressure Reducing Station.



Figure 7. Building 4030: Nitrocellulose "D" Line Office.

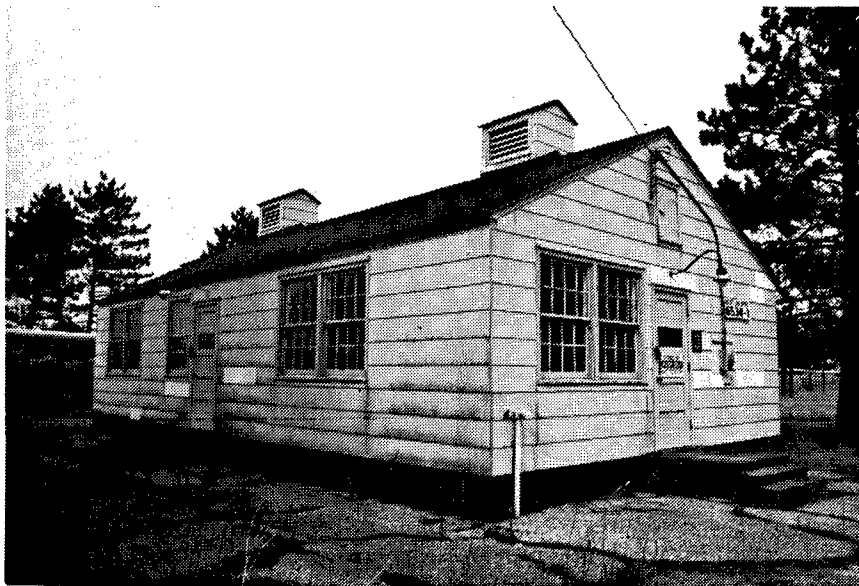


Figure 8. Building 6530-1: Rocket Line Office.



Figure 9. Building 6861-2: Rocket Line Office with wing extension.

MANUFACTURING AND SUPPORT FACILITIES



Figure 10. Building 21: Inert Gas Producer Buildings with the Compressor Building in the foreground and the Producer Building in the background.

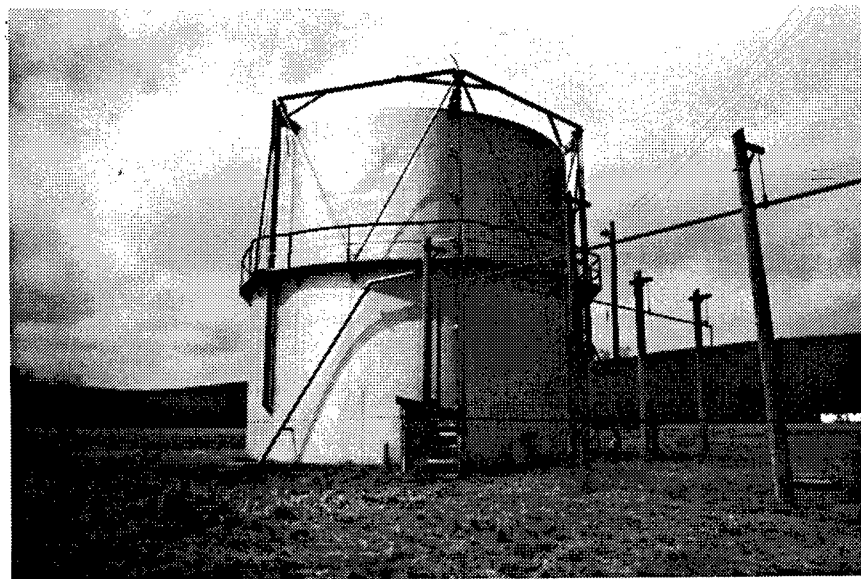


Figure 11. Building 421: Inert Gas Tank. The height of the tank was determined by its contents because it was constructed to rise and fall at its midpoint according to the gas pressure within it.

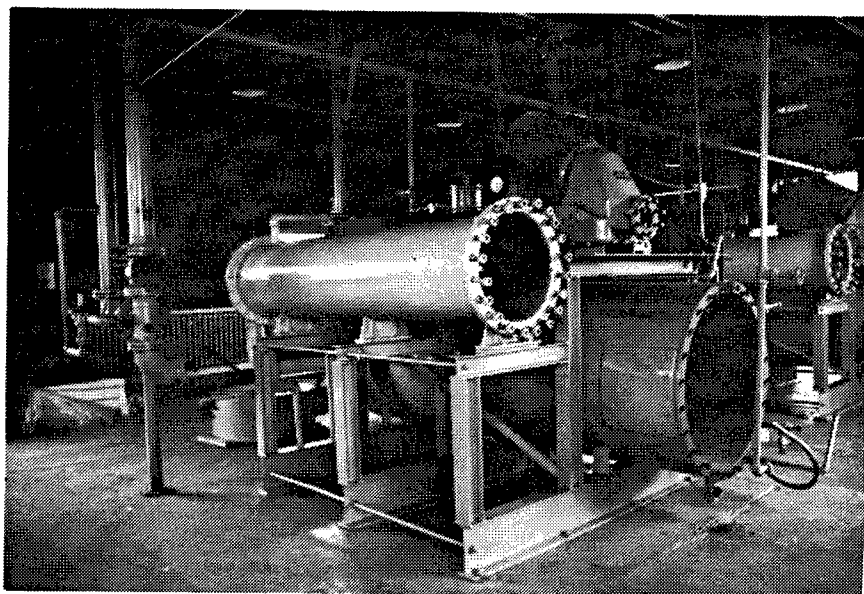


Figure 12. Building 421: Inert Gas Producer within the Producer Building.

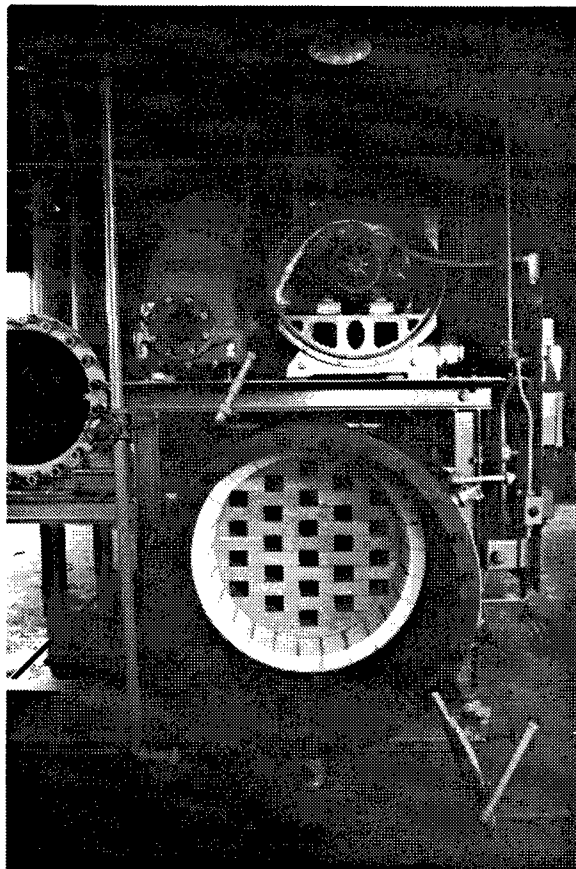


Figure 13. Building 421: Combustion Chamber within the Producer Building.

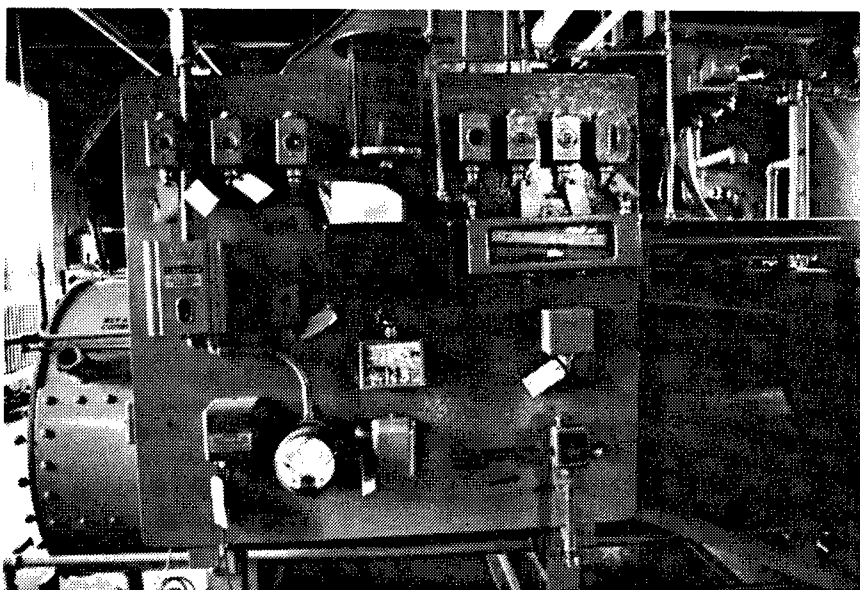


Figure 14. Building 421: Kemp control panel for the equipment within the Producer Building.

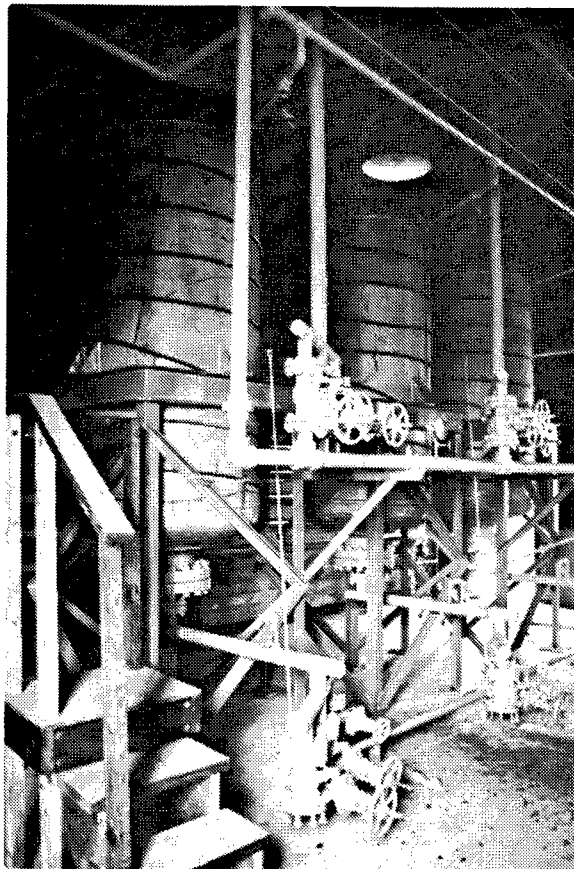


Figure 15. Building 421: Holding tank for gas to be compressed in the Compressor Building.



Figure 16. Building 421: Worthington high pressure gas compressor located in the Compressor Building.

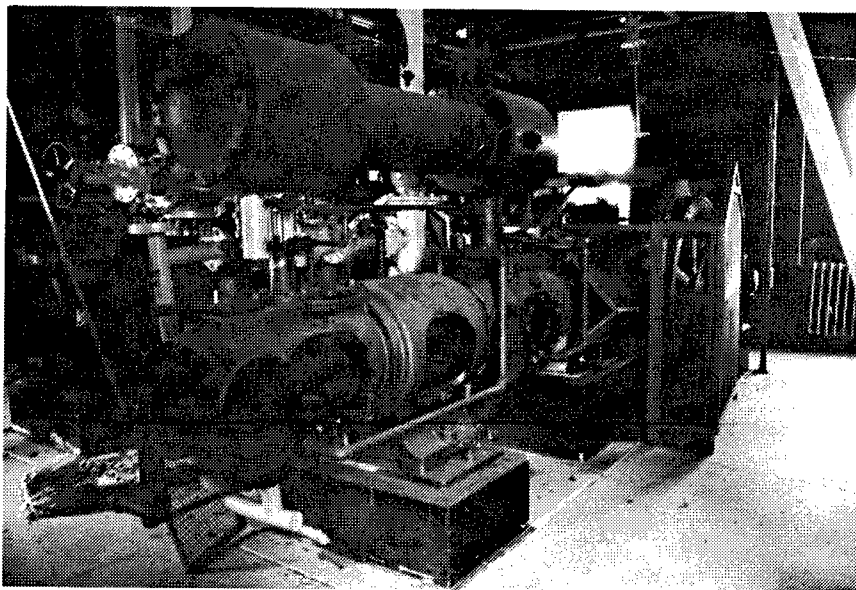


Figure 17. Building 523: Lead Burning House. Note the hoist system extending into the building.

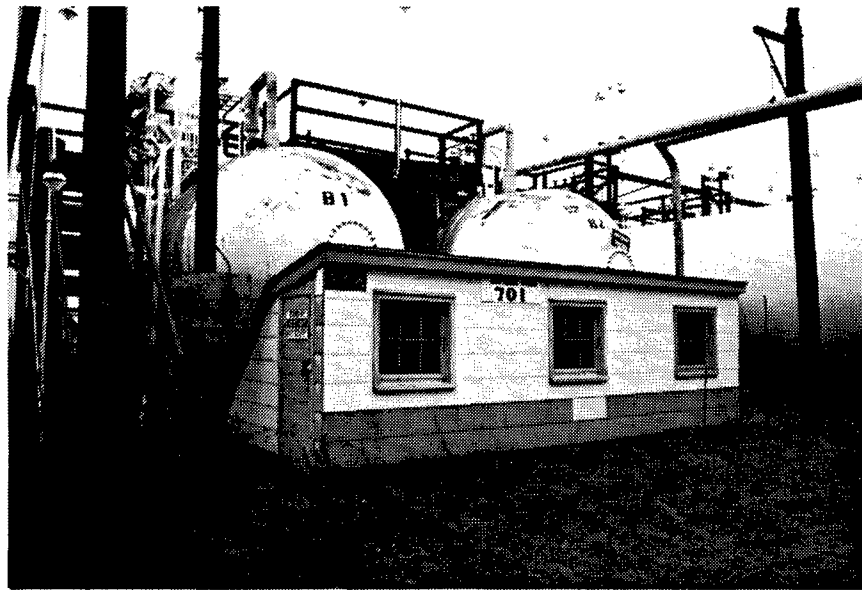


Figure 18. Building 701: Ammonia Storage Building and associated tanks. This building is located in the Acid Area of the Plant (which includes Buildings 700-768).



Figure 19. Building 701: Ammonia storage tanks.

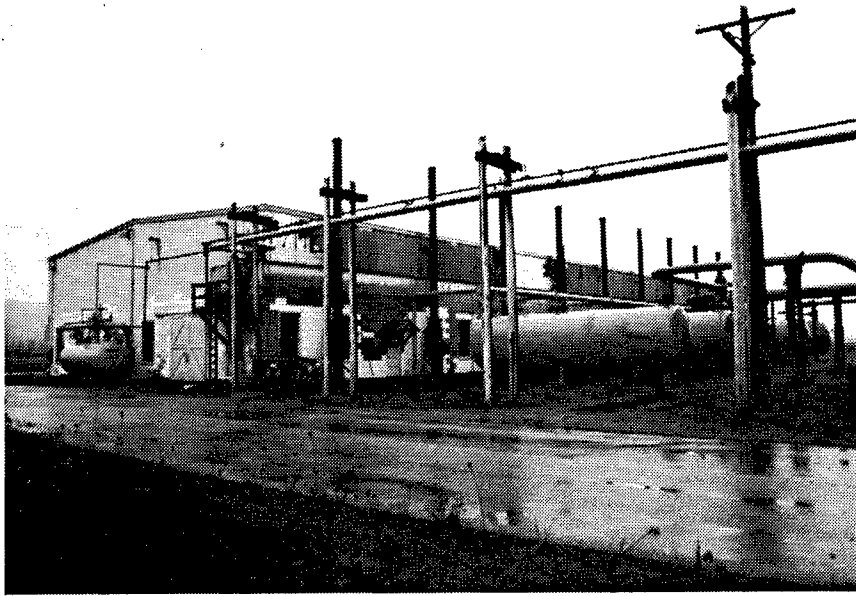


Figure 20. Building 700-1: Air compressor in the Air Compressor House.

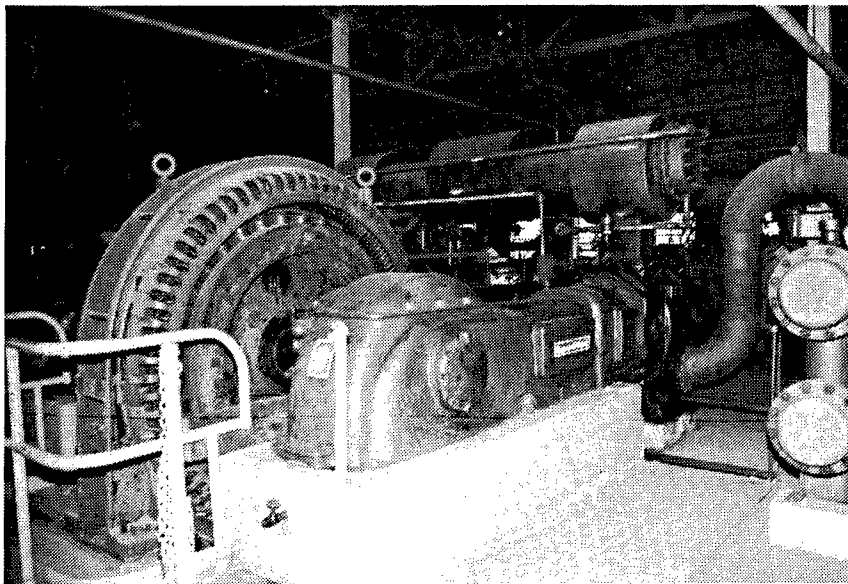


Figure 21. Building 700-1: Electric air compressor manufactured by Ingersoll-Rand Company.

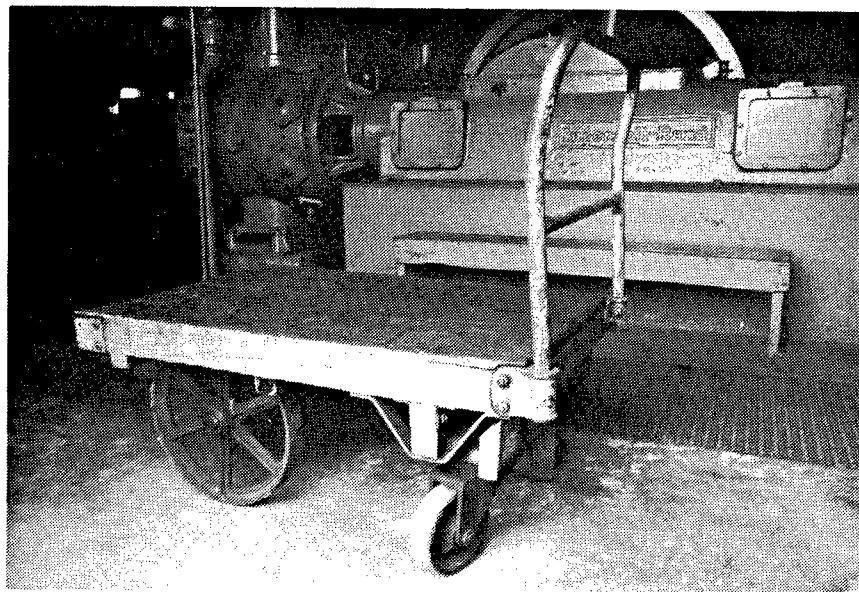


Figure 22. Building 700-1: Trolley.

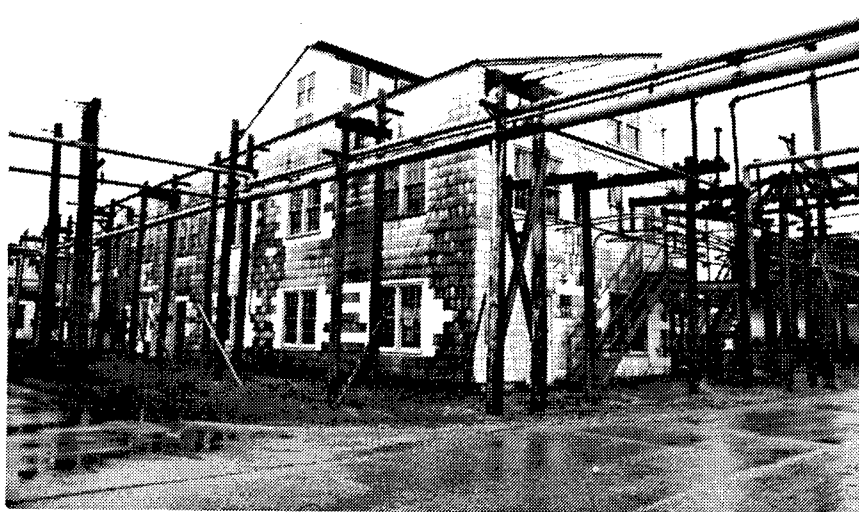


Figure 23. Building 702: Oxidation House.

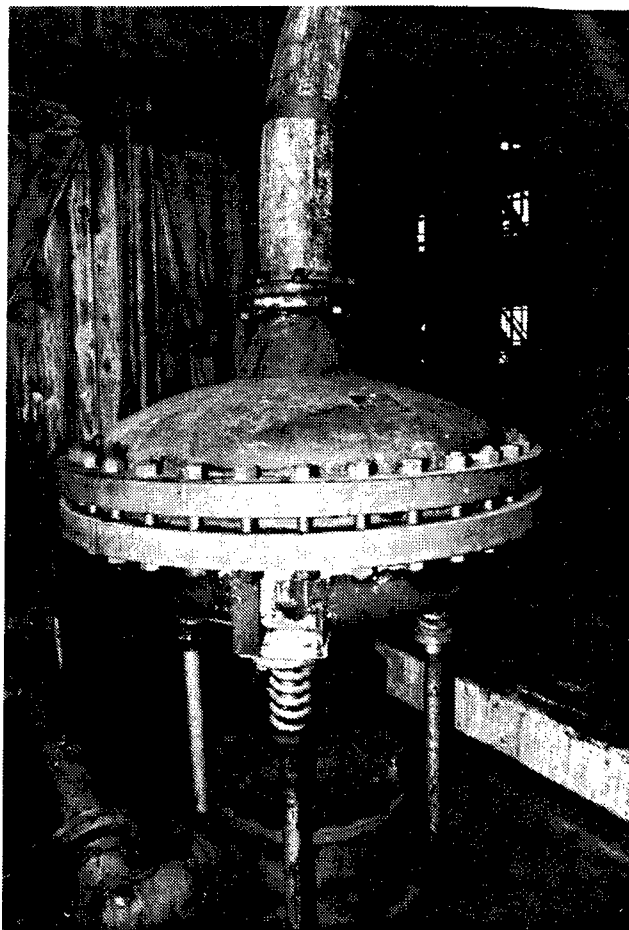


Figure 24. Building 702: Nitric acid reheater manufactured by Struther Wells of Warren, Pennsylvania, is located on the third floor of the Oxidation House.

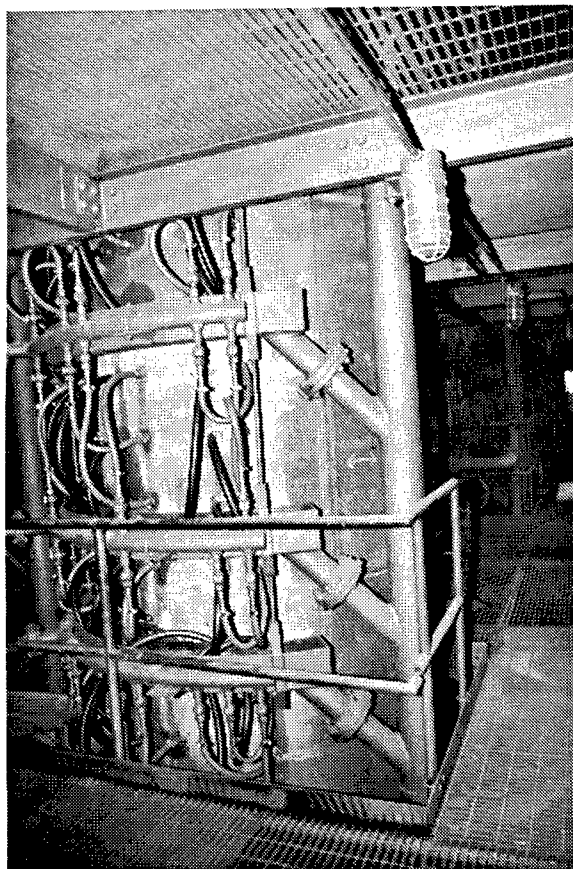


Figure 25. Building 702: Water cooling coils for nitric acid located on the third floor.

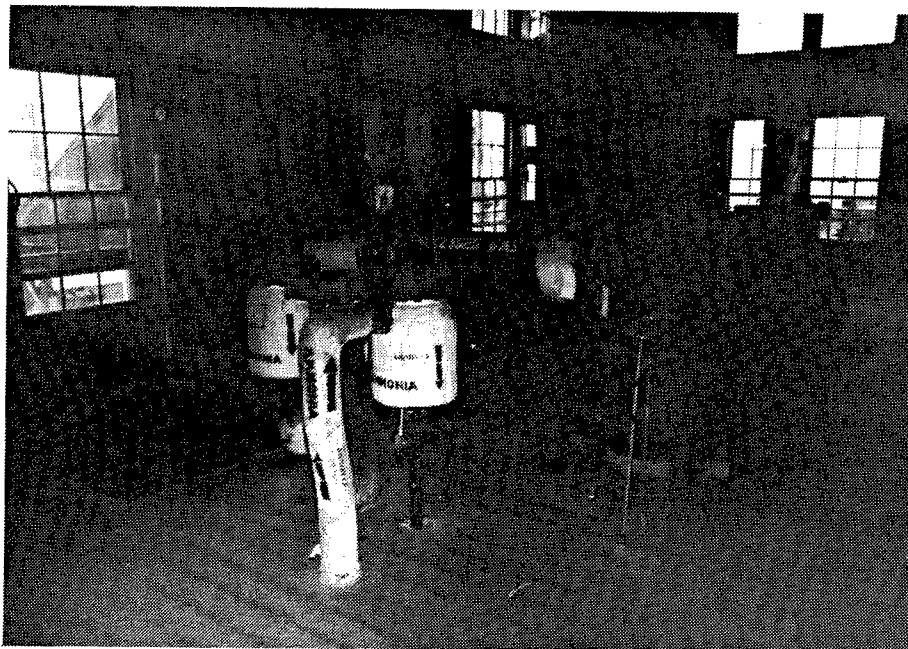


Figure 26. Building 702: Ammonia oxidation units located on the second floor.

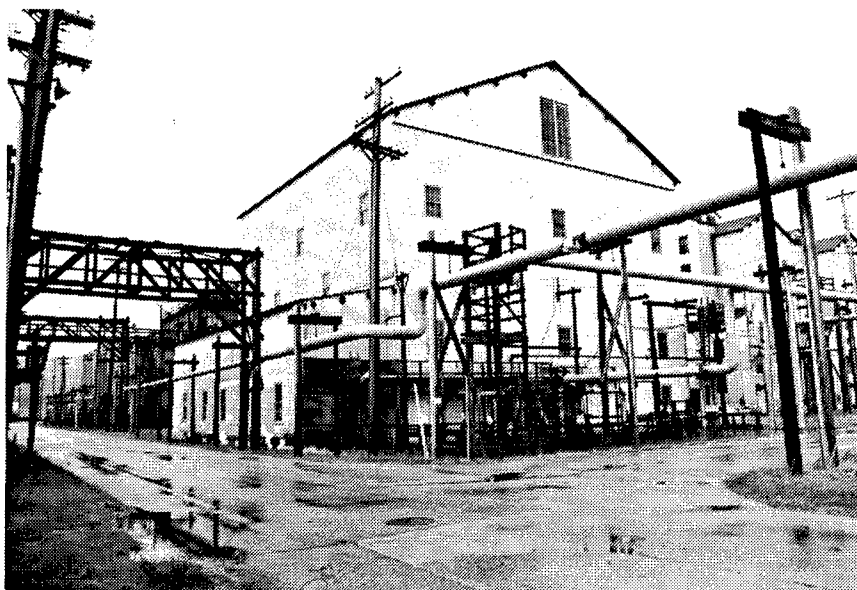


Figure 27. Building 704-1: Sulfuric Acid Concentrator.



Figure 28. Building 704-1: Cooling product tank for 92% sulfuric acid.



Figure 29. Building 704-1: Storage product tank for 92% sulfuric acid.

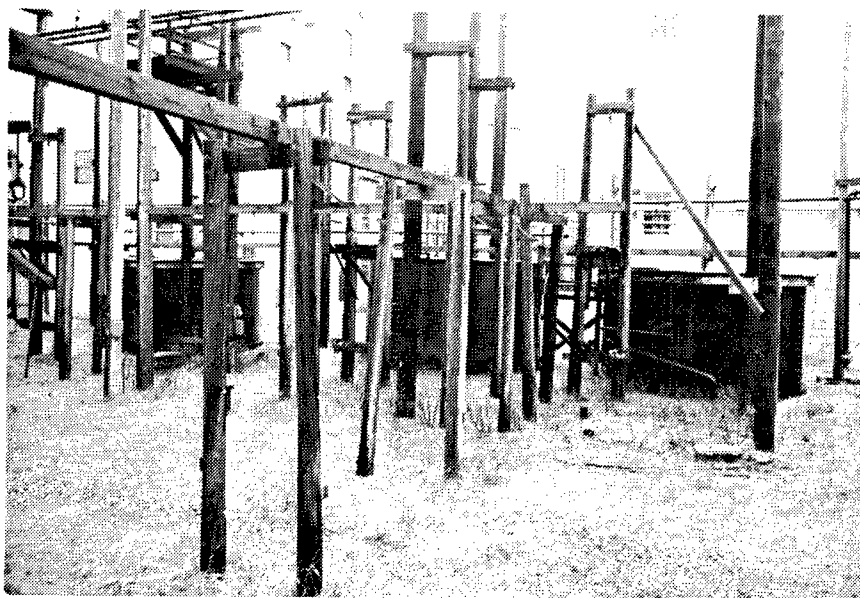


Figure 30. Building 704-1: Sulfuric acid "run down."

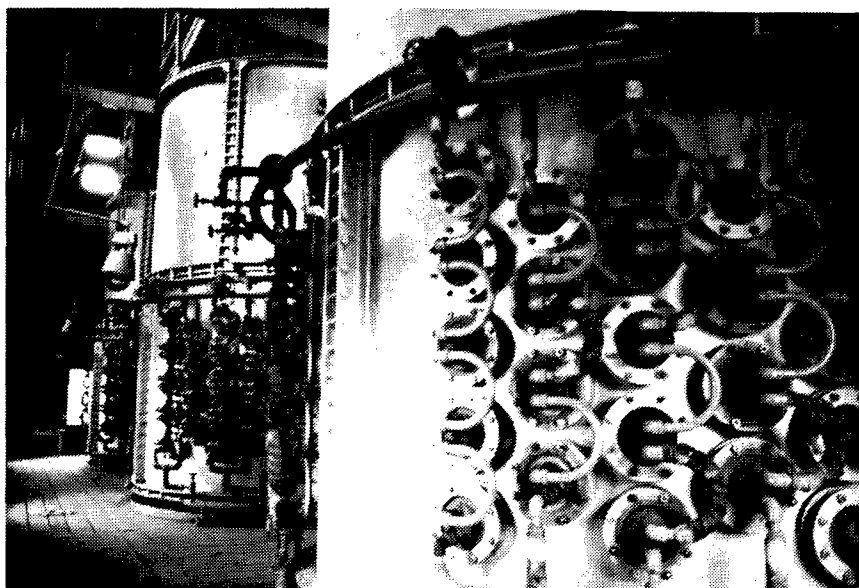


Figure 31. Building 704-1: Sulfuric acid concentrating unit which stands two floors high.

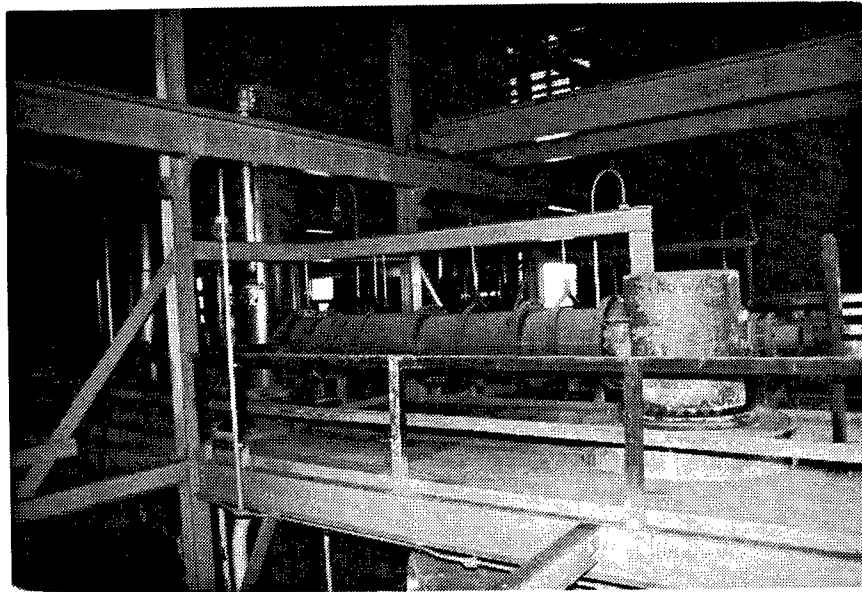


Figure 32. Building 704-1: Evaporator and barometric condenser located on the third floor, stemming from the sulfuric acid concentrating unit.

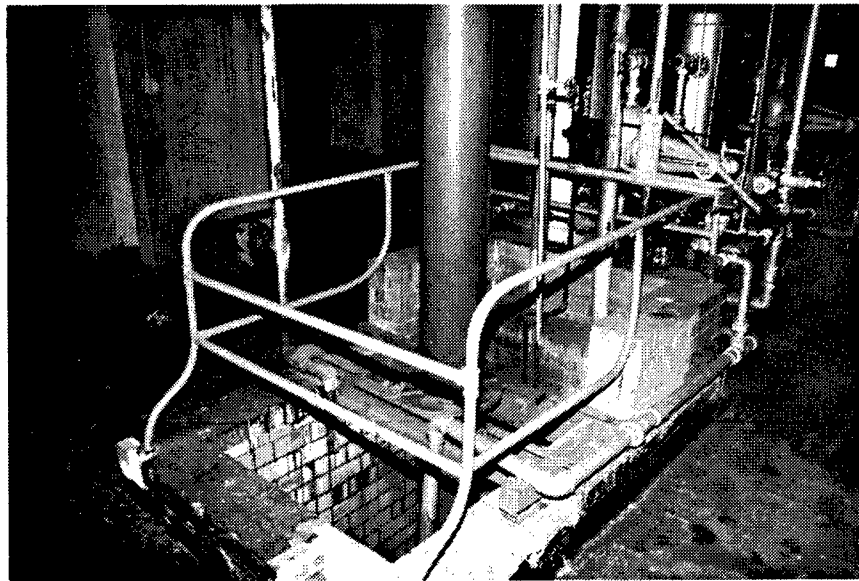


Figure 33. Building 704-1: "Sump" water basin for the water from the barometric condenser located on the third floor.

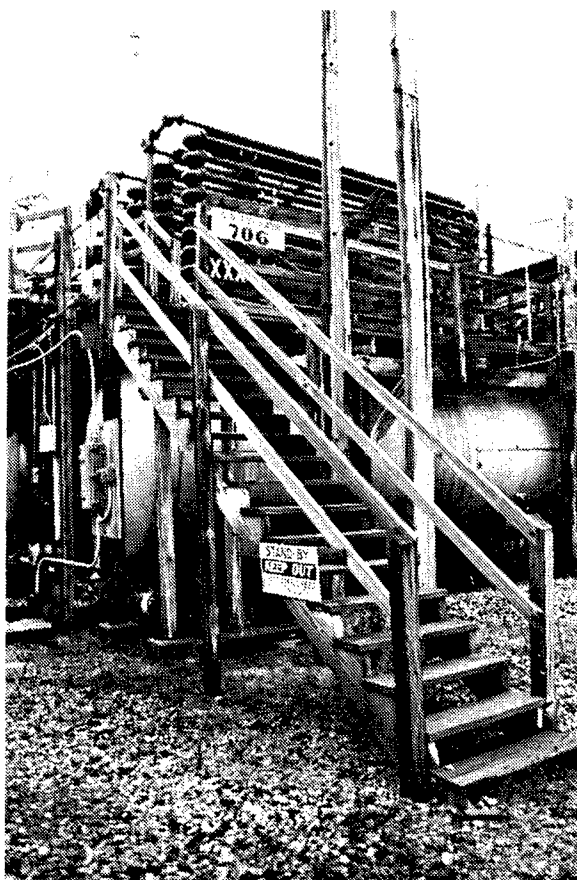


Figure 34. Building 706: Weak and Strong Nitric Acid Circulators. The cooling coils date to the Plant's construction; the supporting structure was possibly constructed at a later date.

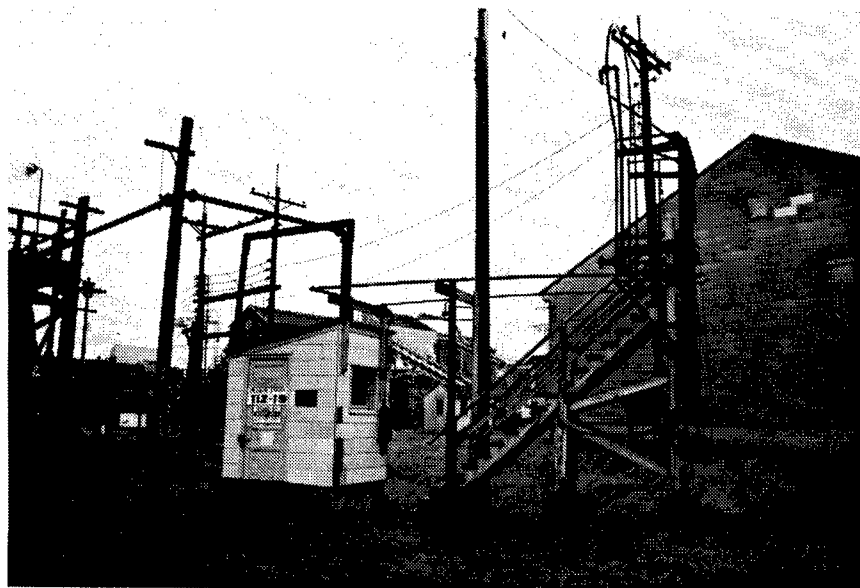


Figure 35. Building 712-19: Unloading Station in the Acid Area where materials transported by rail were received.



Figure 36. Building 713: Ammonia Compressor House.



Figure 37. Building 713: Ammonia compressor manufactured in 1942 by the Flick Company.



Figure 38. Building 728: Oleum Manufacturing Plant. The oleum produced here was used in the nitrating of cellulose.



Figure 39. Building 728: Absorption tower with a de-mister crowning the unit.

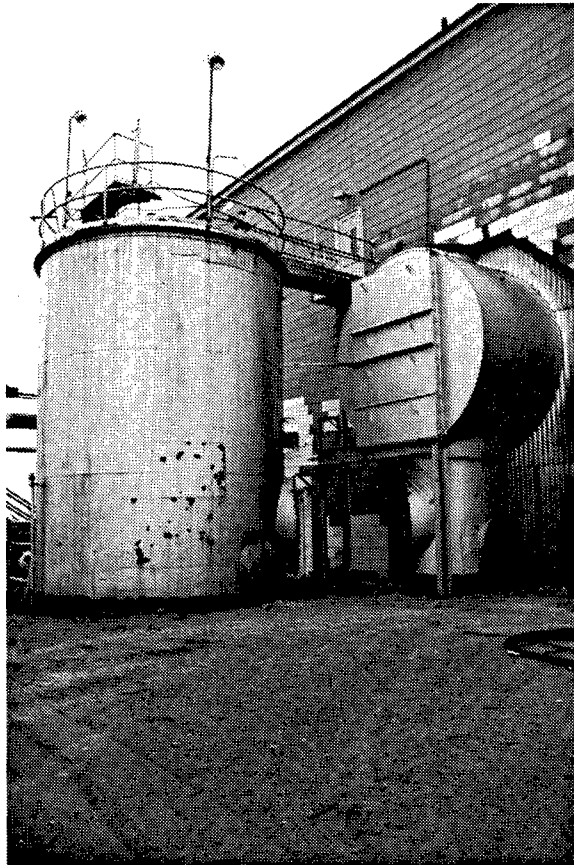


Figure 40. Building 728: Foster-Wheeler sulfur burner and boiler.

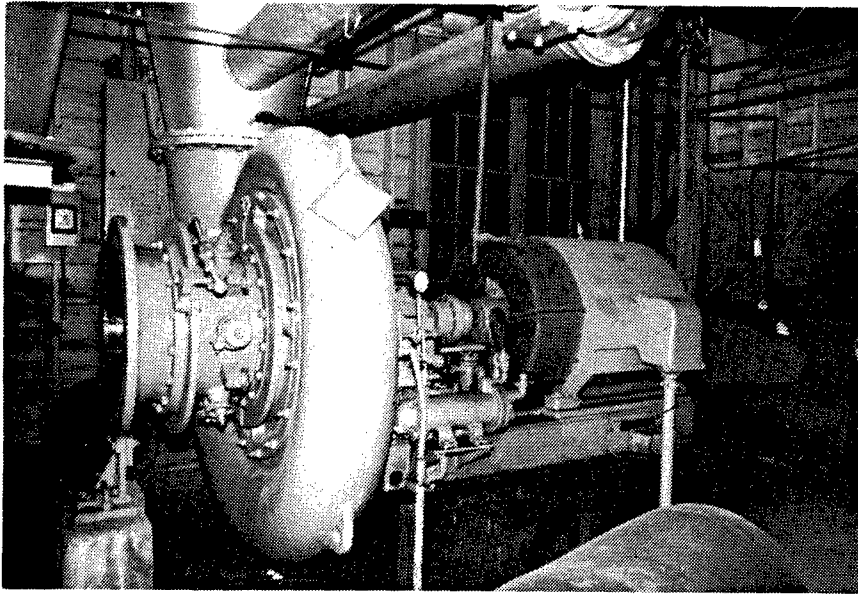


Figure 41. Building 728: Centrifugal blower with 16600 cfm, 300 HP, 2300 volt, and 3570 RPM motor manufactured in 1942 by Ingersoll-Rand Company.



Figure 42. Buildings 730 and 703: Nitric Acid Recovery (on the left) and the Nitric Acid Concentrator (on the right). These two structures are mirror images of one another.



Figure 43. Building 4012: Nitrating House where the cellulose (cotton or wood pulp) was mixed with nitric acid to make nitrocellulose.

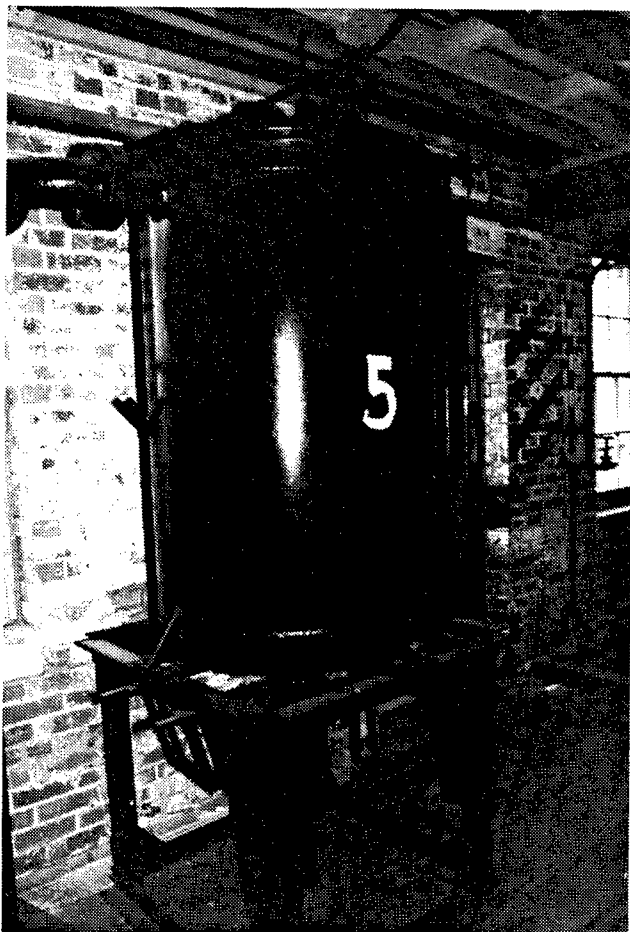


Figure 44. Building 4012: Acid measuring tank that emitted the correct amount of acid into the dipping pot located on the third floor.

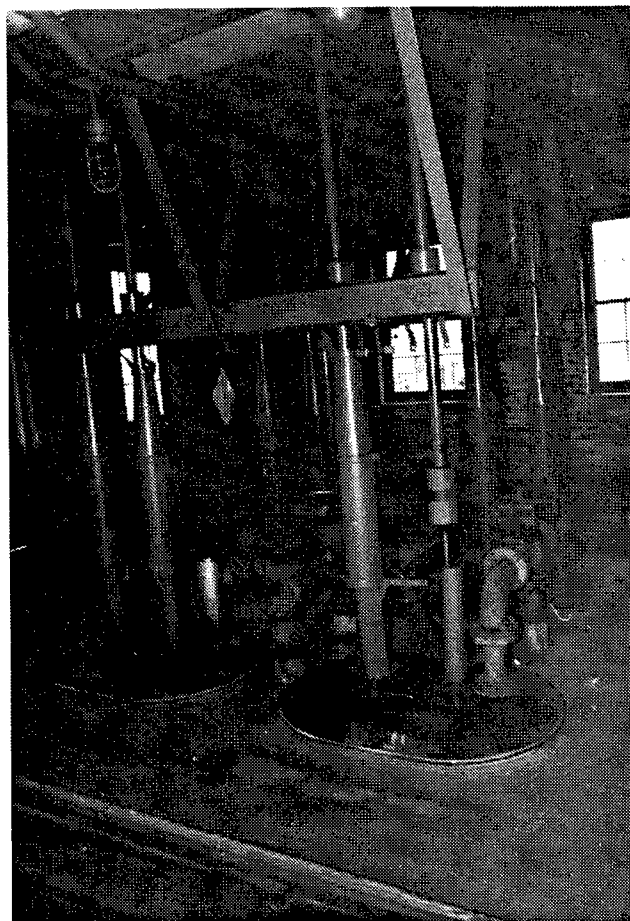


Figure 45. Building 4012: Chrome dipping pot with agitator located on the third floor where the cotton was mixed with the acid.

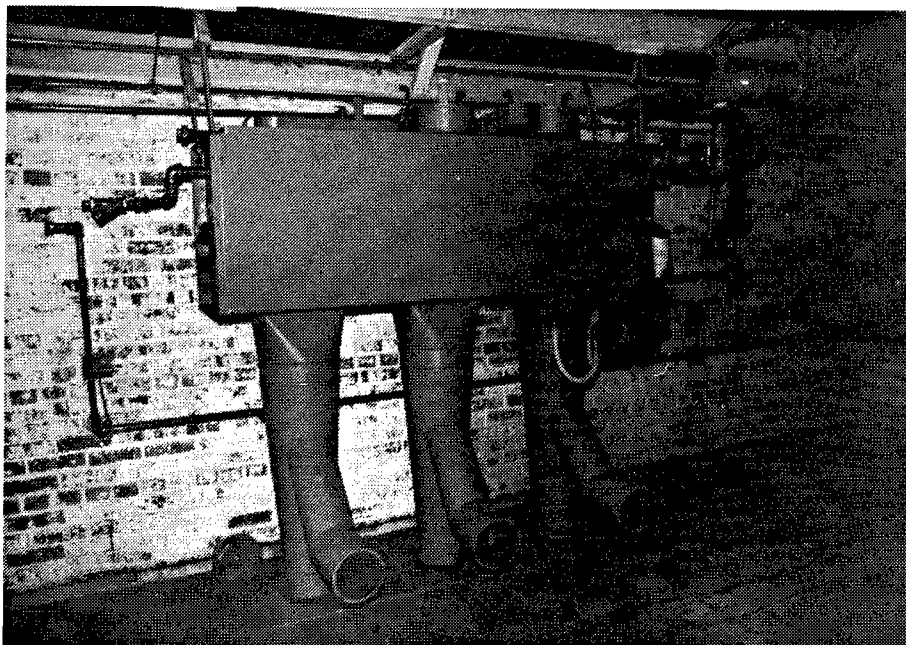


Figure 46. Building 4012: Heating unit manufactured by General Electric located on the fourth floor.



Figure 47. Building 4012: Wringer drive motor, dipping pot, and agitator gear drive located on the fourth floor.

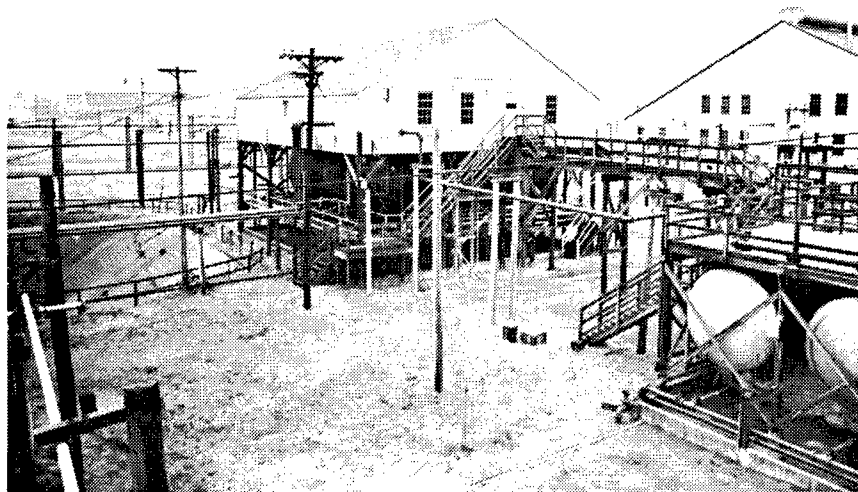


Figure 48. Building 4002: Acid Mix and Weigh House where nitric acid, spent nitric acid, and oleum were mixed for the cotton nitrating process.

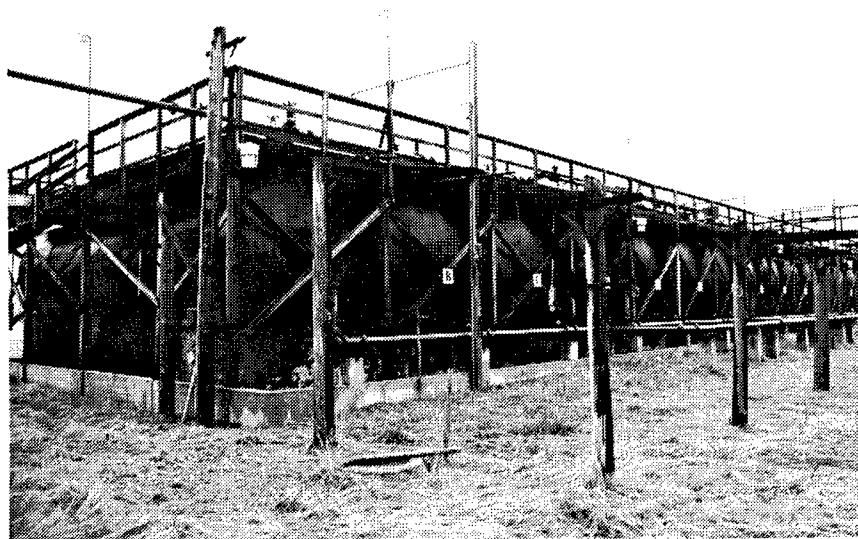


Figure 49. Building 4003: Spent Oleum and M.F. Acid Storage where the spent acid recovered by the nitric acid recovery system was stored until needed.

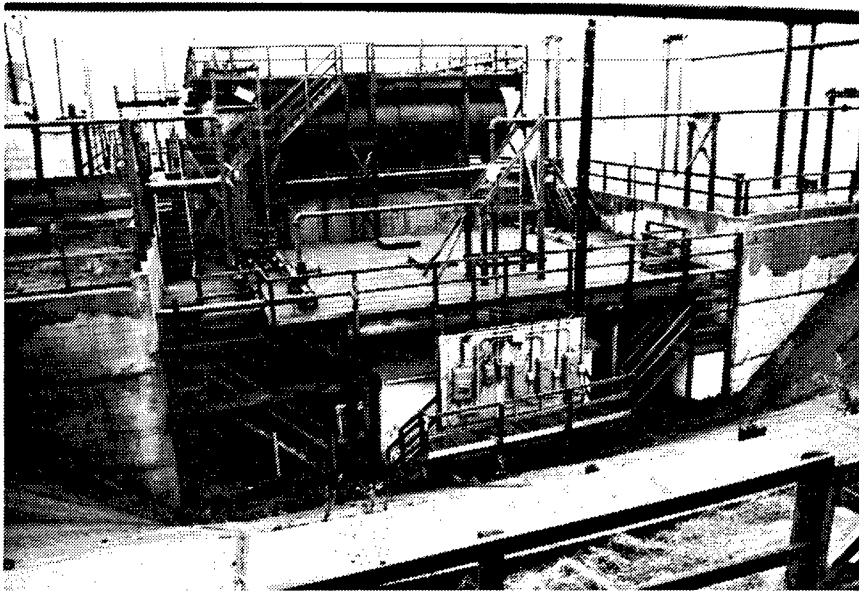


Figure 50. Building 4003: Pump House Area or "Rose Bowl".

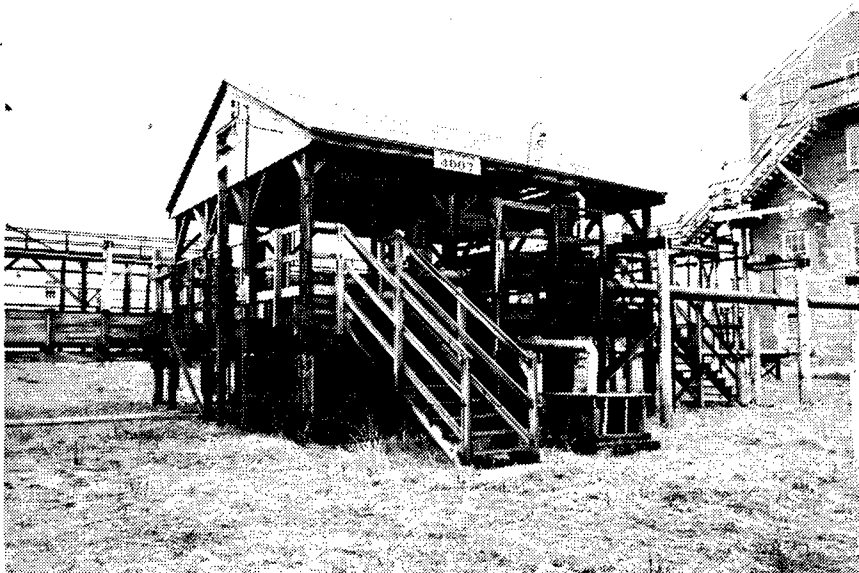


Figure 51. Building 4007: Acid Screening House where traces of nitrocellulose in the spent acid were extracted.



Figure 52. Building 4008: Acid Heat and Circulator House where the nitric acid mixture was agitated and warmed before being pumped into the Nitrating Building.

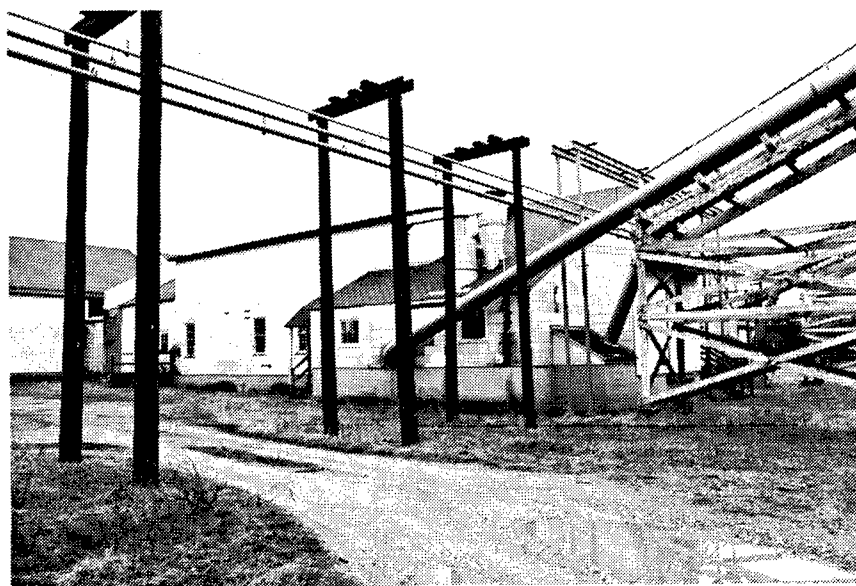


Figure 53. Building 4010: Cotton Dry House and Conveyor where bales of cotton, or sheets of wood pulp, were broken, dried, and sent to the Nitrating House via a covered conveyor system.

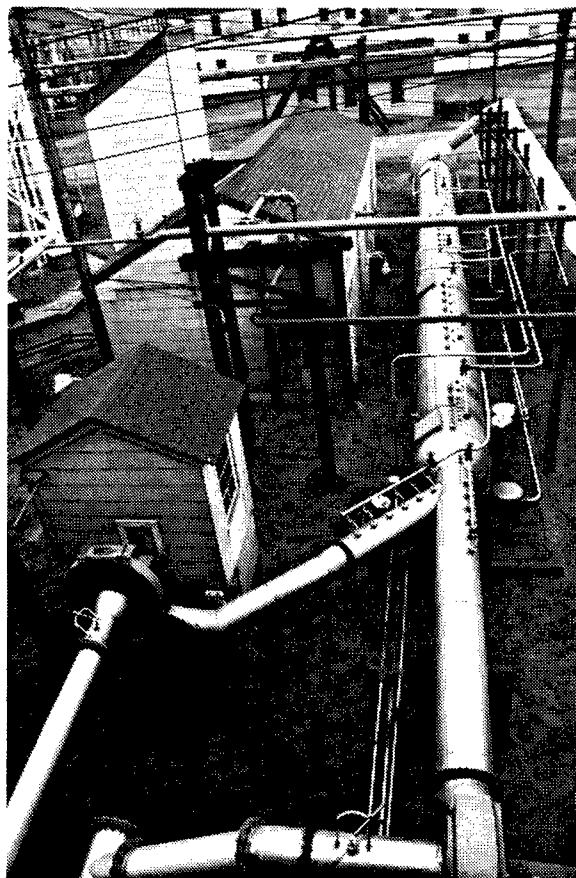


Figure 54. Building 4013: Fume Exhaust System and Stack, also known as the "piccalo" where nitric acid fumes were recovered, processed, and sent back to the Acid Farm area or to the Spent Oleum and M.F. Acid Storage.

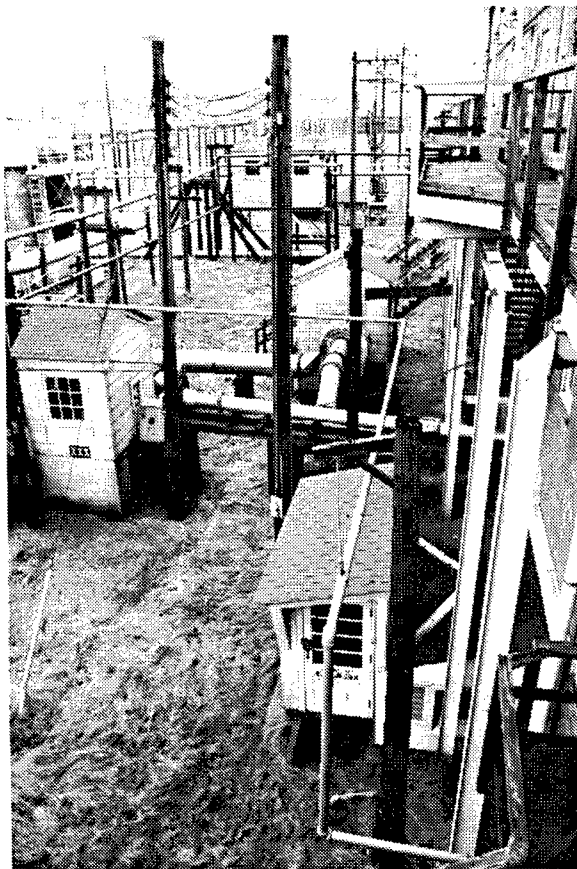


Figure 55. Building 4013: Processing buildings for the Fume Exhaust System and Stack.

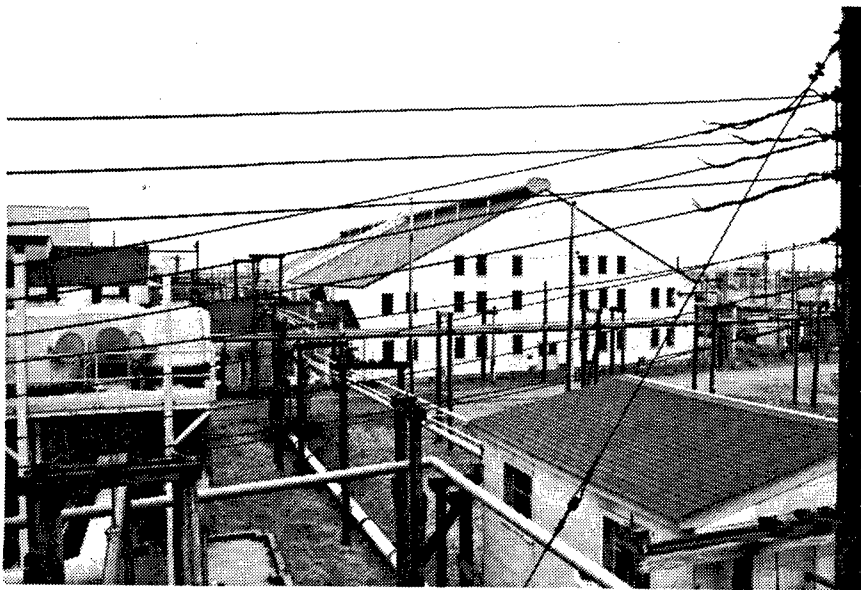


Figure 56. Building 4019: Boiling Tub House where undesirable by-products of the nitrating process were removed. A brick fire wall divides the building at its midpoint.

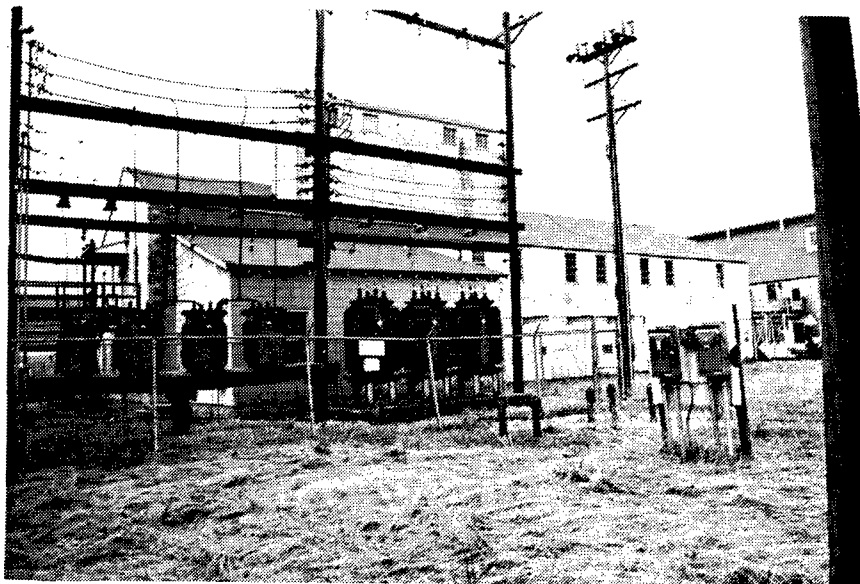


Figure 57. Building 4022: Beater House where the acid accompanying the nitrocellulose was neutralized. The frame walls and roof are supported by a concrete foundation and the tub floor is wooden.

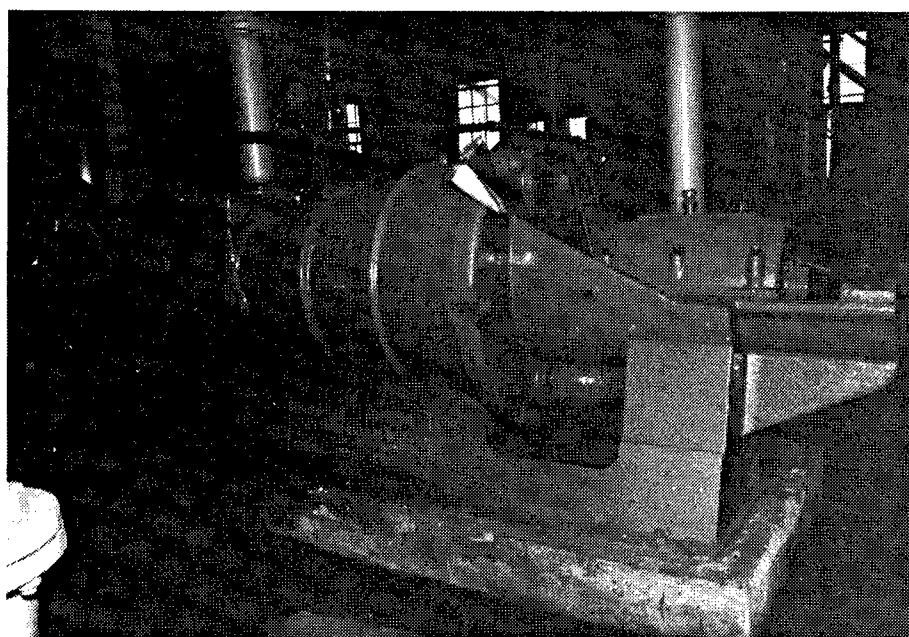


Figure 58. Building 4022: Miami #2 type Jordan beater (manufactured in 1942 by Shartle Brothers) driven by a 200 HP, 300 RPM, G.E. Synchronous motor.

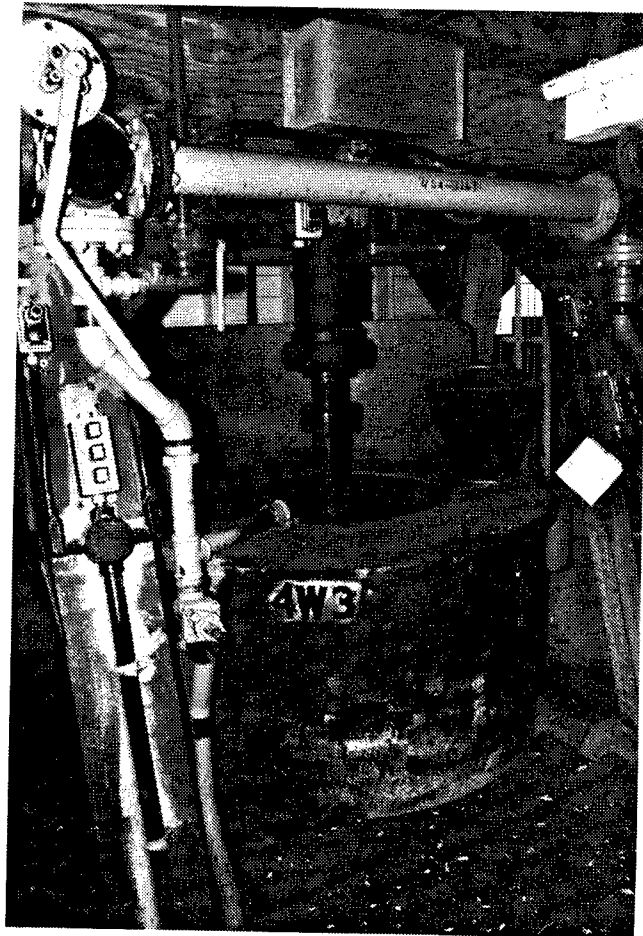


Figure 59. Building 4026: Gyro final wringer with 48-inch basket manufactured in 1942 by the Bird Company.

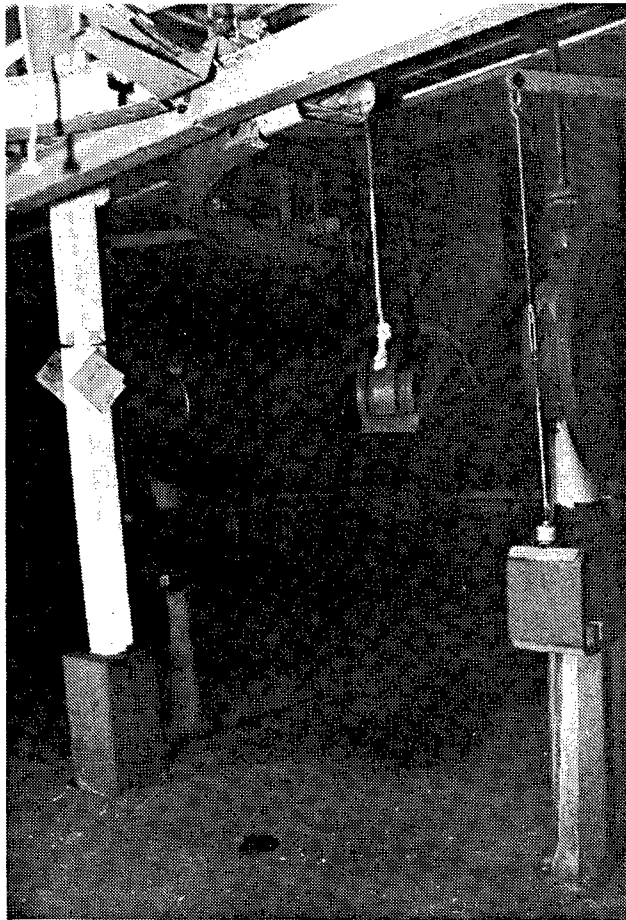


Figure 60. Building 4026: Kron scale and chute for nitrocellulose manufactured in 1942.

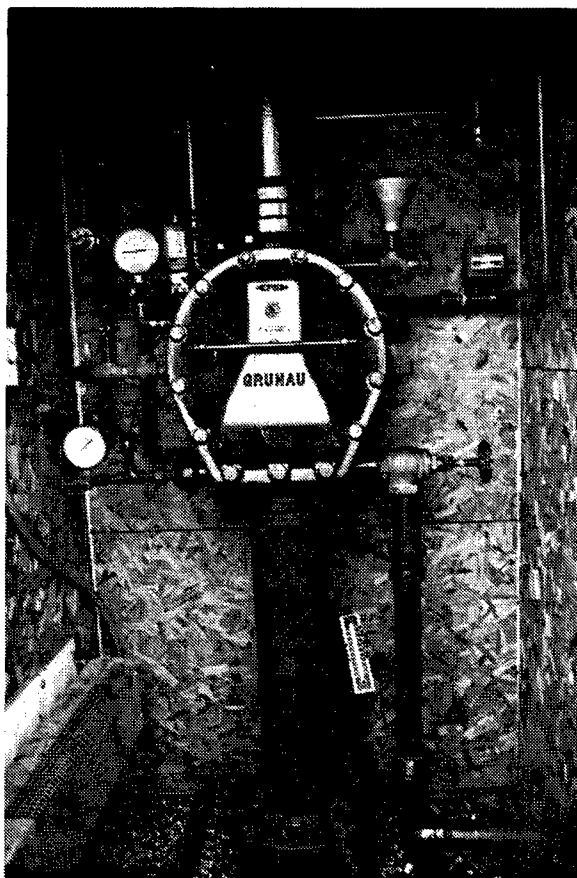


Figure 61. Building 4026: Sprinkler valve for fire suppression in Buildings 4043 and 4026.



Figure 62. Building 4035: Spent Acid Pump House where the spent acid from the Nitration House was pumped to the Spent Acid Screen House.



Figure 63. Building 4043 and Building 4026: Final Wringer Receiving House (foreground) and Wringer House (background).



Figure 64. Building 923-3: Telpher System connecting Wringer House and the Green Line.



Figure 65. Building 4500: Dehydration Press House that has five concrete walls dividing the interior into six bays.

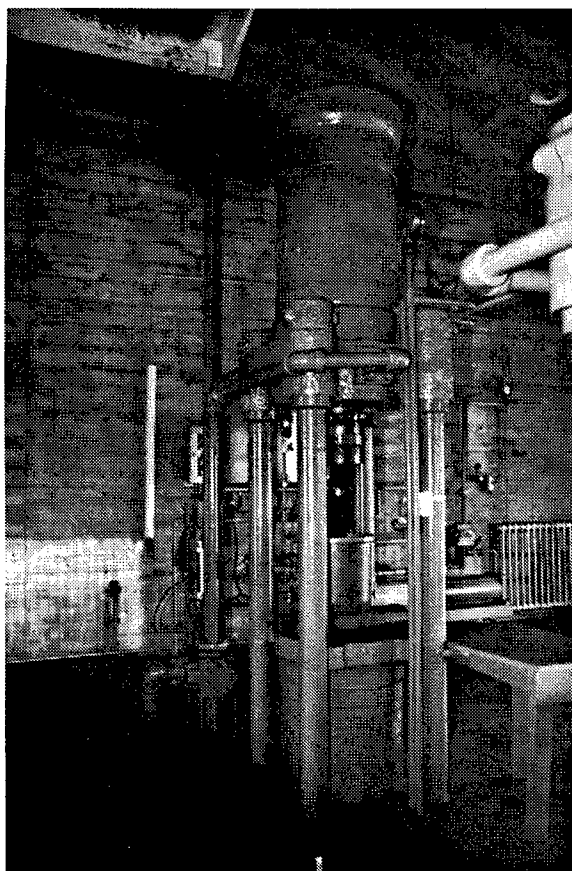


Figure 66. Building 4500: R.D. Wood Dehydration Vertical Press.

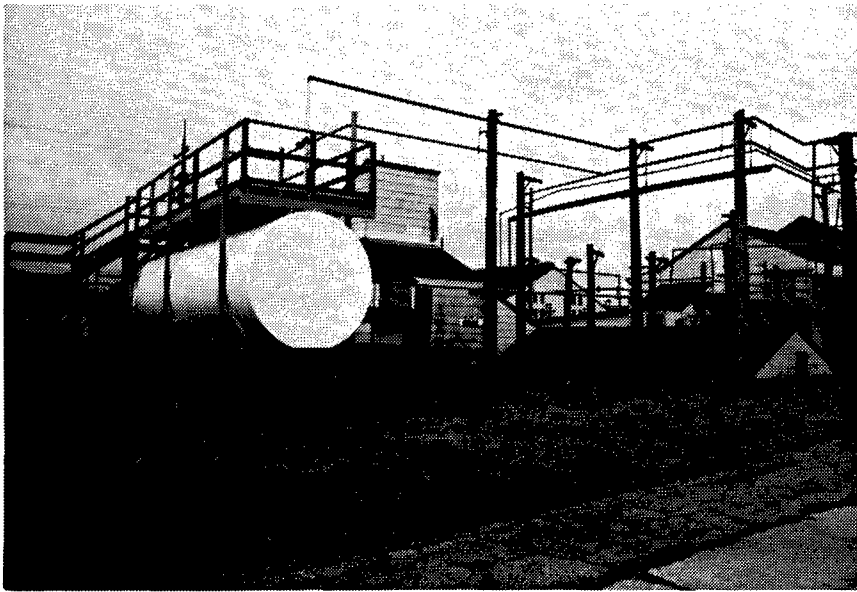


Figure 67. Building 4501: Alcohol Pump and Accumulator House.

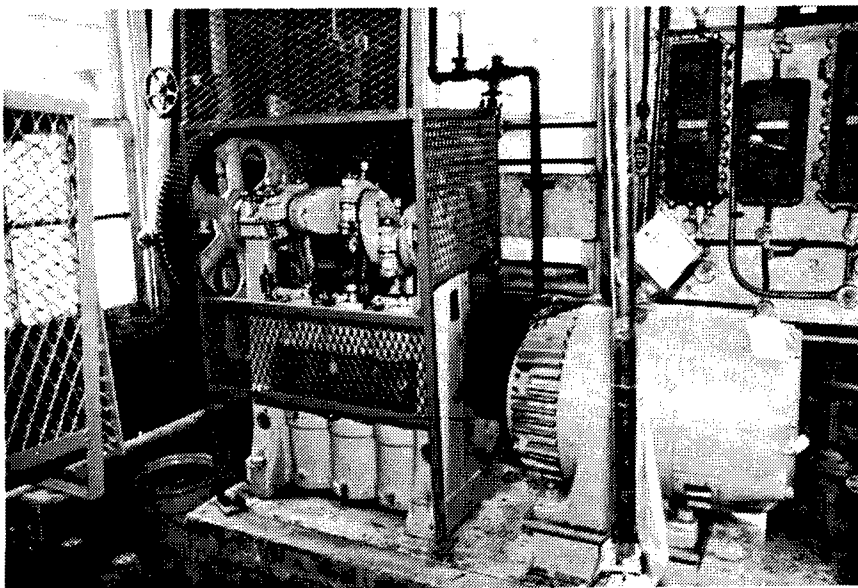


Figure 68. Building 4501: Three cylinder vertical hydraulic pump.

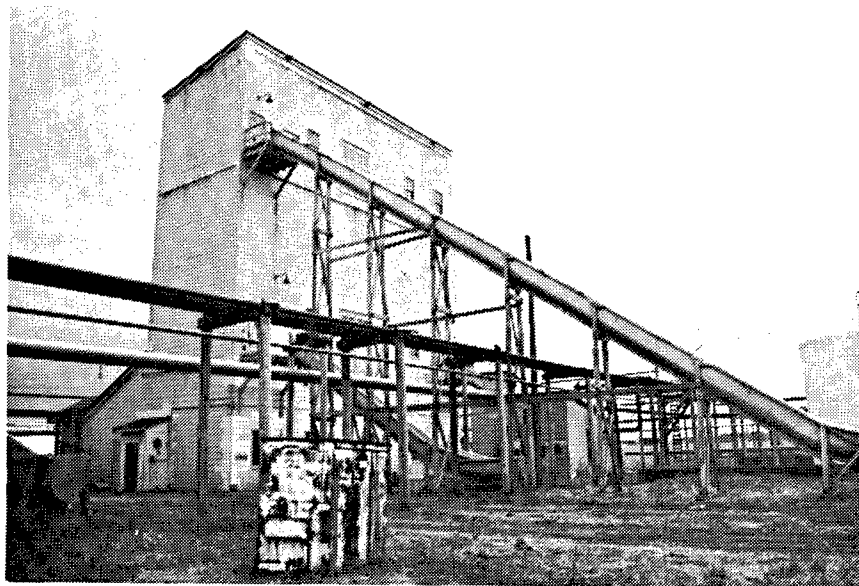


Figure 69. Building 5502: Ether Still House equipped with emergency slides that were to be used by employees in case of an explosion.

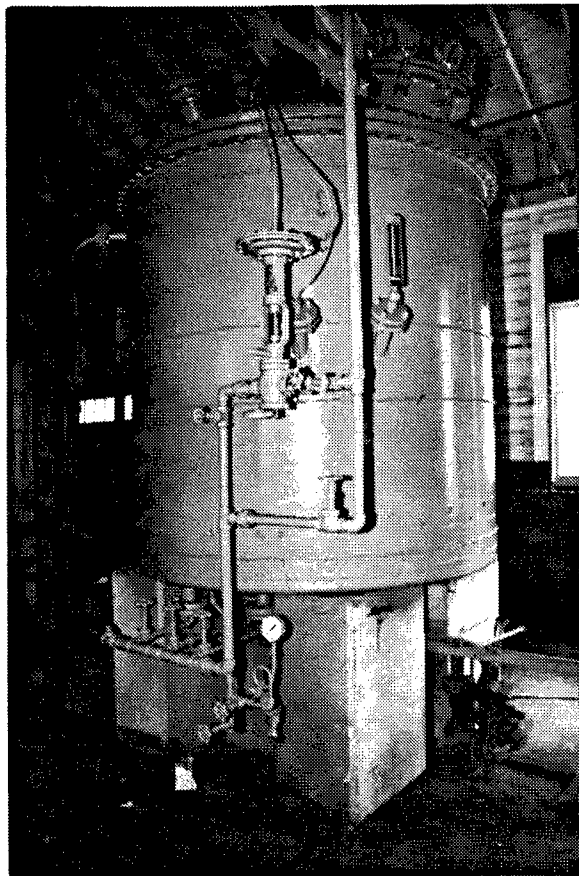


Figure 70. Building 5502: Lead-lined steel ether pots.

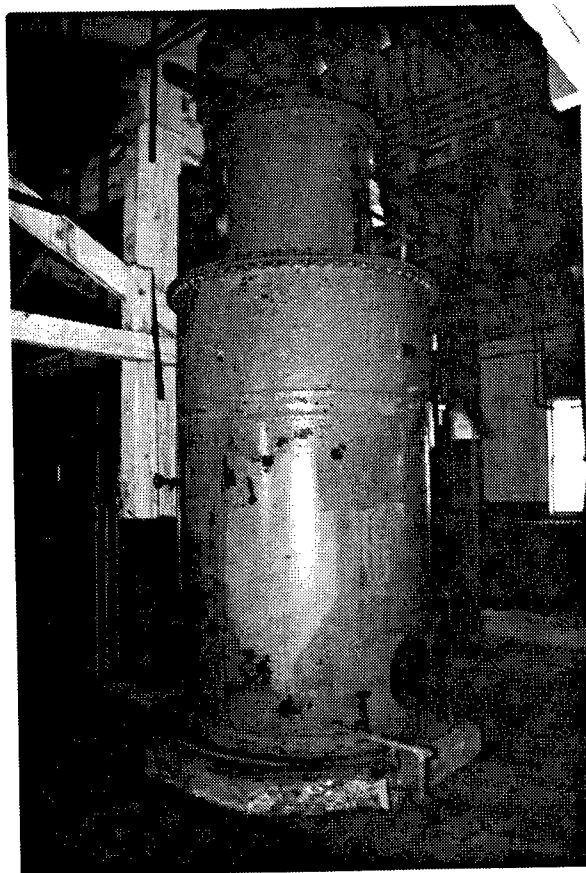


Figure 71. Building 5502: Tank.

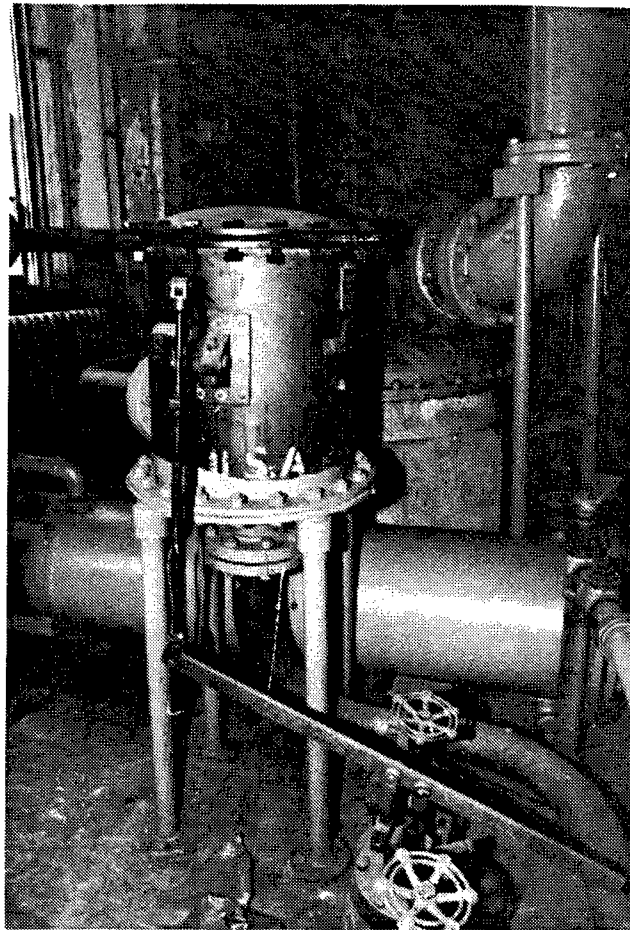


Figure 72. Building 5502: Alcohol Float Control.

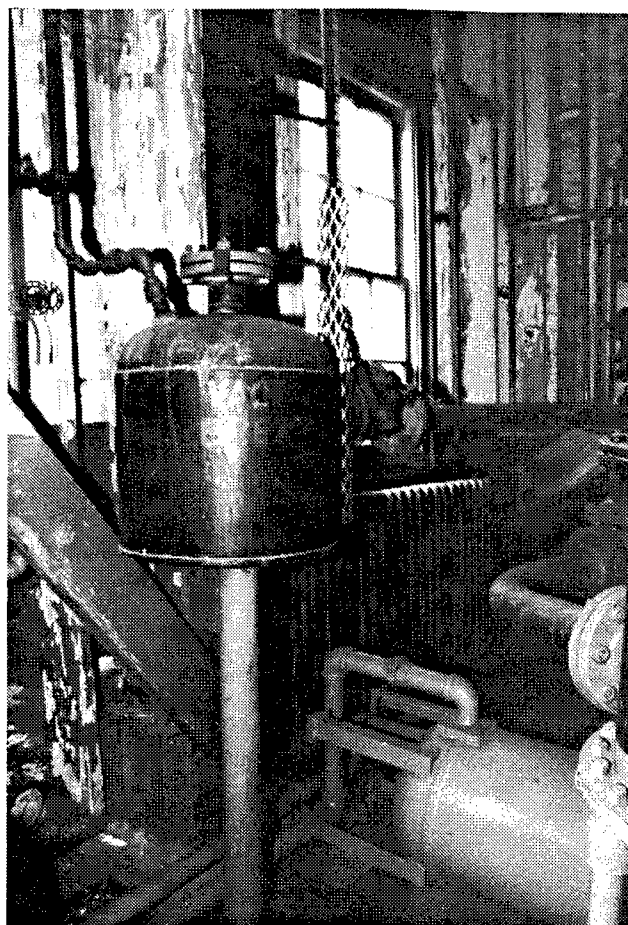


Figure 73. Building 5502: Vacuum breaker and ether pots manufactured by Badger and Sons.

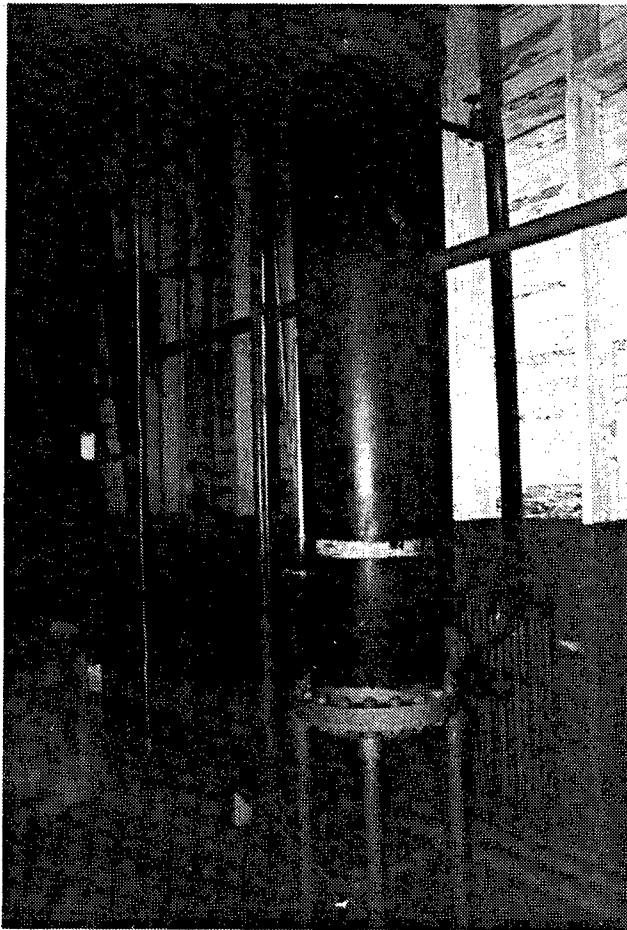


Figure 74. Building 5502: Alcohol after-cooler. The alcohol pre-cooler differs only in its larger diameter.

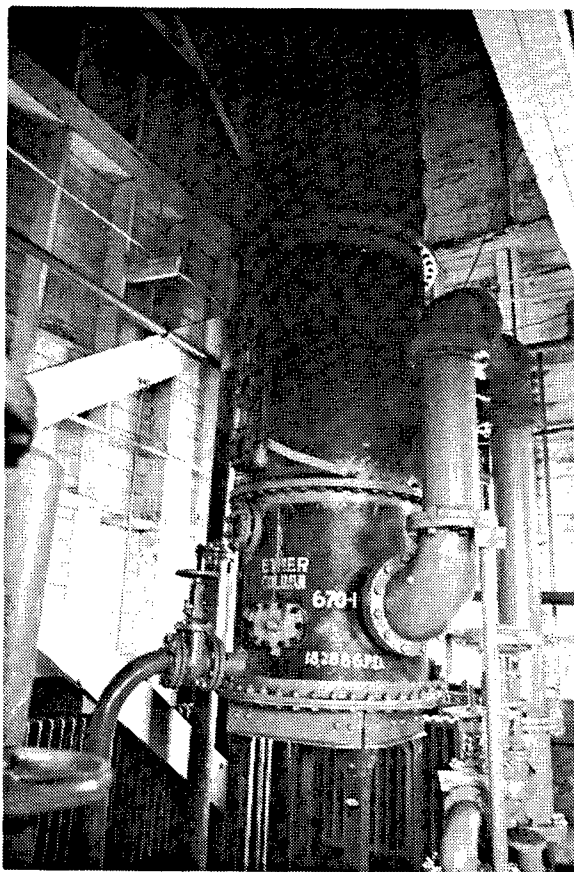


Figure 75. Building 5502-1: Ether Column.



Figure 76. Building 4506: Diphenylamine Mix House where ether, dibutylphthalate (a plasticizer), and diphenylamine (a stabilizer) were mixed with the nitrocellulose.

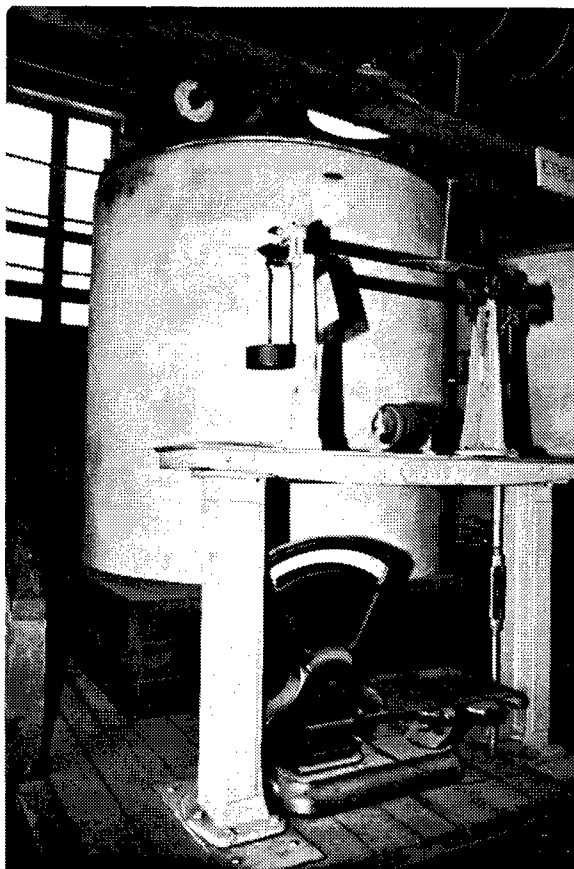


Figure 77. Building 4506: 1500-gallon mix tank with Howe scale and agitator.



Figure 78. Building 4508-2: This Mix House is divided into two halves by an open walkway. Concrete dividing walls divide the two halves into seven bays each.

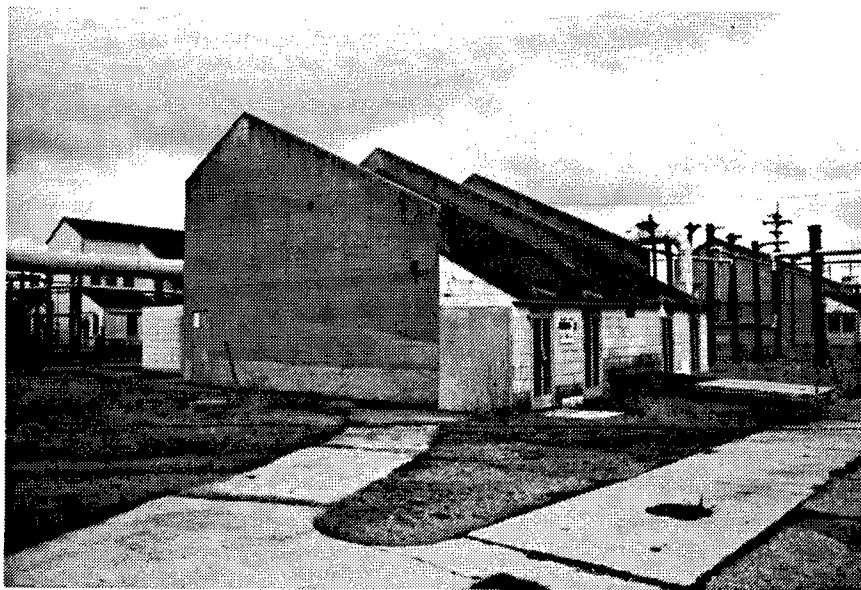


Figure 79. Building 4510-2: Block Press House that has reinforced concrete walls dividing the building into three areas.

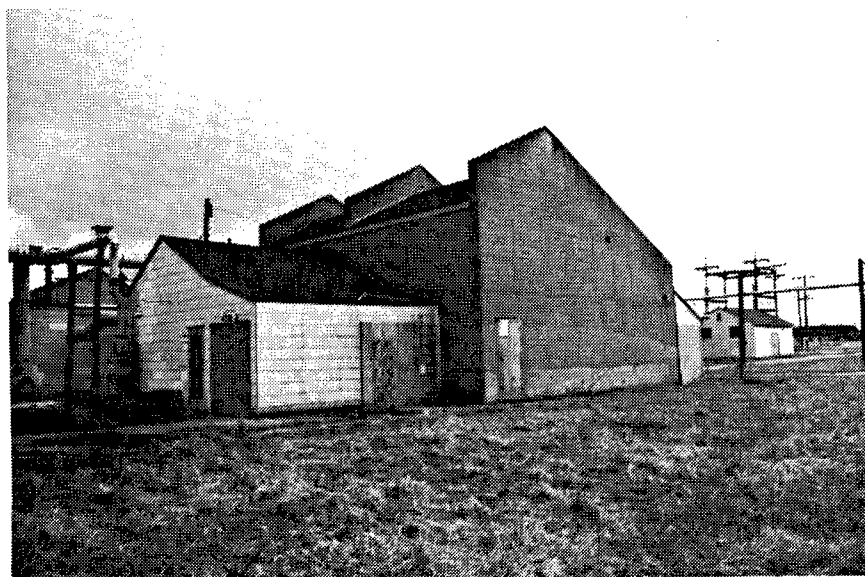


Figure 80. Building 4510-2: Second view of this Block Press House.

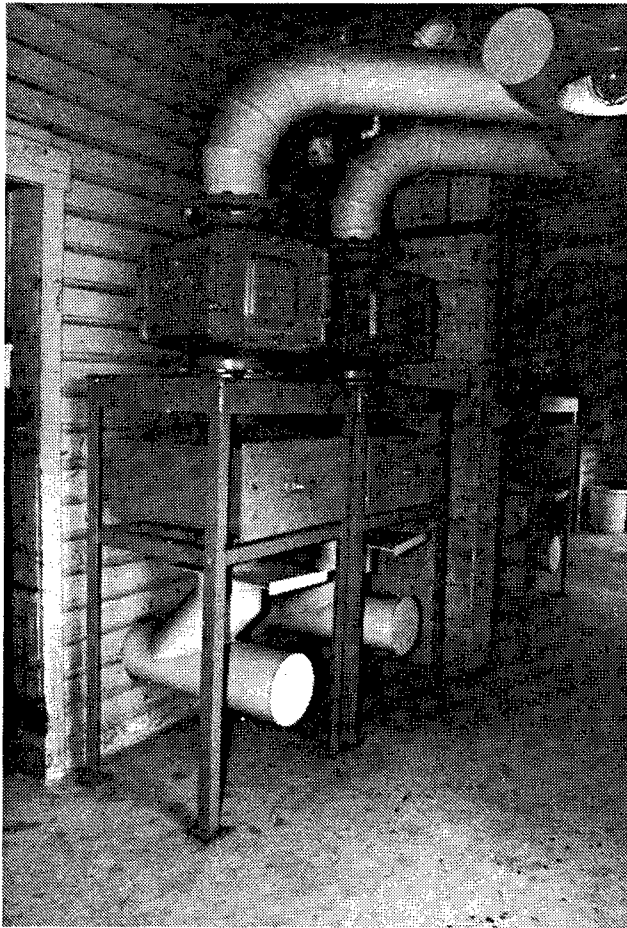


Figure 81. Building 4510-2: Flame Arrestor.



Figure 82. Building 4513-2: Vertical Press House where single-perforated cannon powder was manufactured. Note the reinforced end walls that extend above the roof.

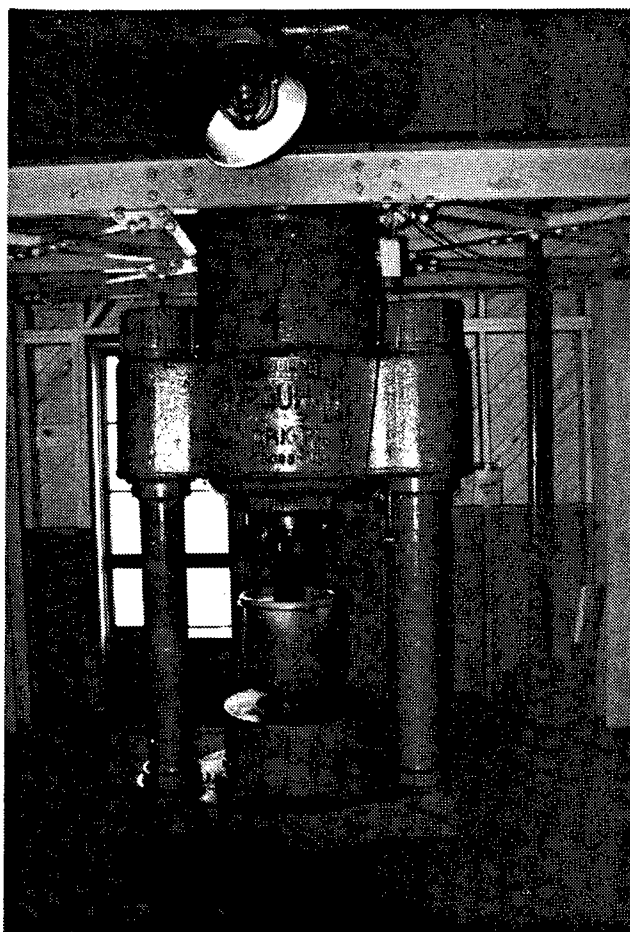


Figure 83. Building 4513-2: The Farquar vertical extrusion press that dyed manufactured single-perforated powder.

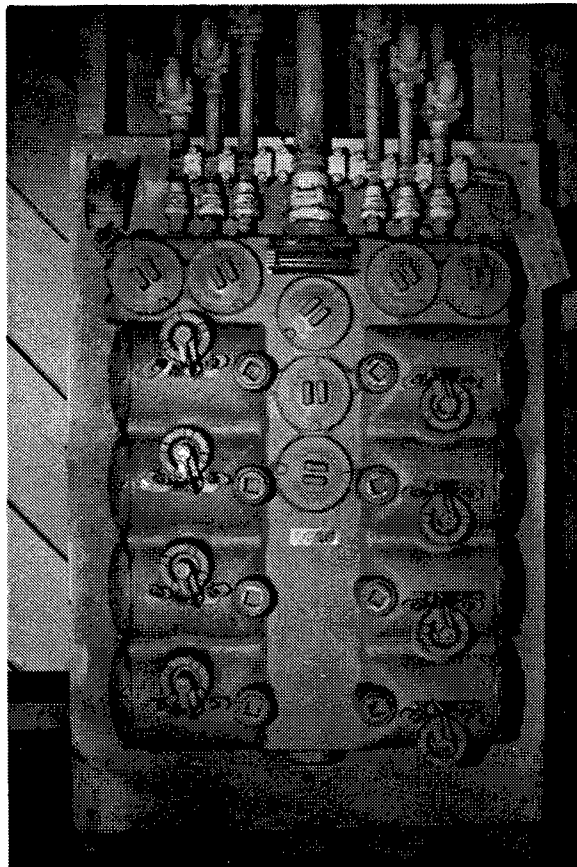


Figure 84. Building 4513-2: Explosion-proof light switch.

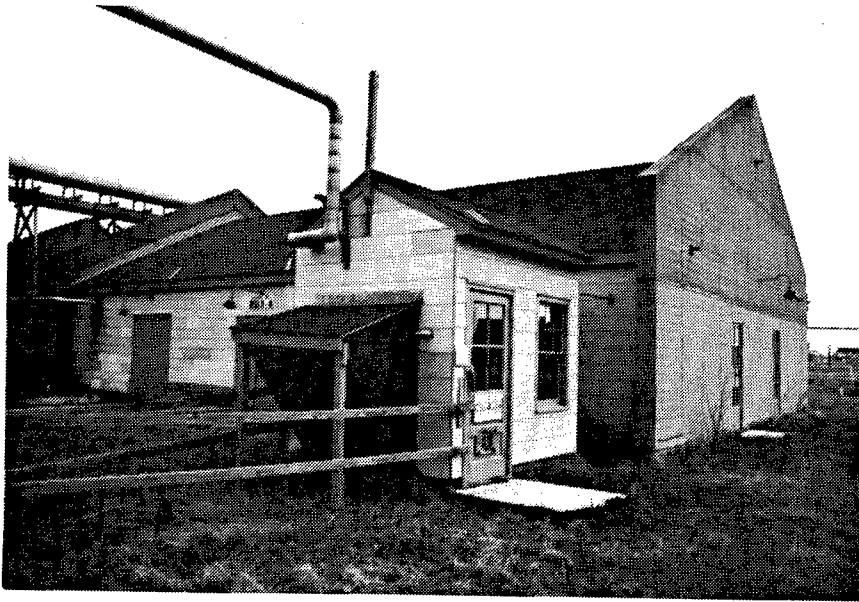


Figure 85. Building 2513-4: Horizontal Press House that had end-walls constructed of reinforced concrete extended above the roof.

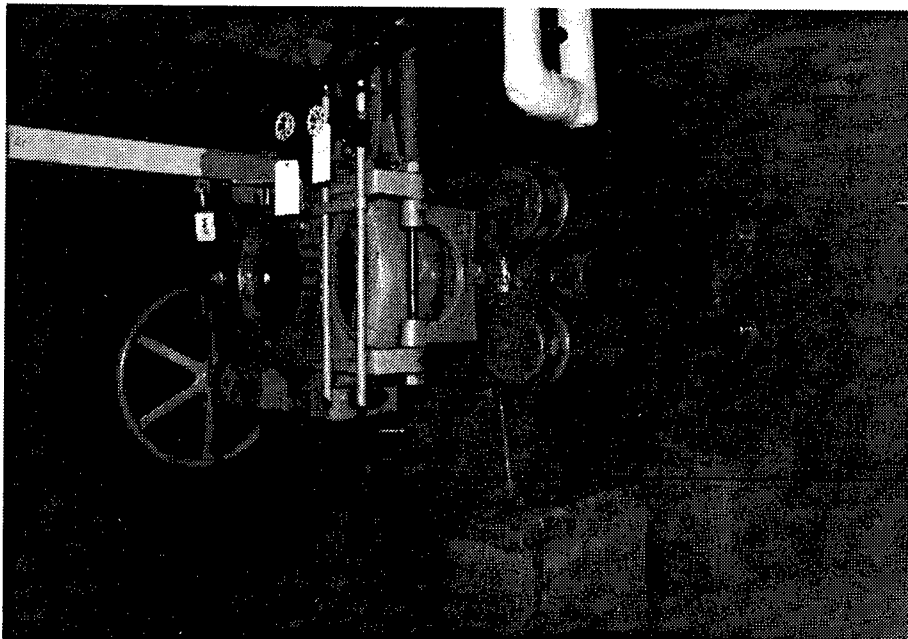


Figure 86. Building 2513-4: This Farquar horizontal press is similar to the Macaroni horizontal press except that it is equipped with extruding dies. Powder was extruded into 175-millimeter propellant.

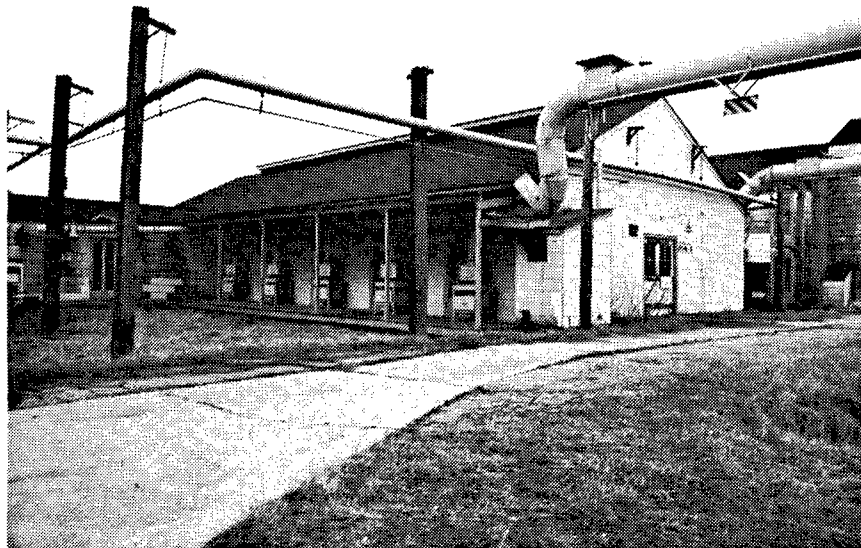


Figure 87. Building 4516-2: Cutting House.

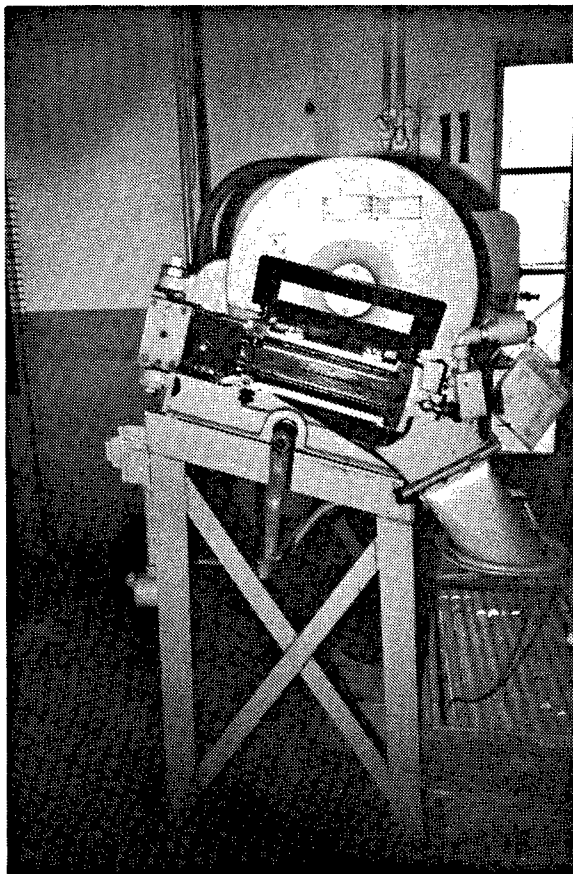


Figure 88. Building 4516-2: Cutting machine driven by 1.5 HP and 1140 RPM electric motor manufactured by McKiernan-Terry. This machine cuts strands of powder produced by the presses.

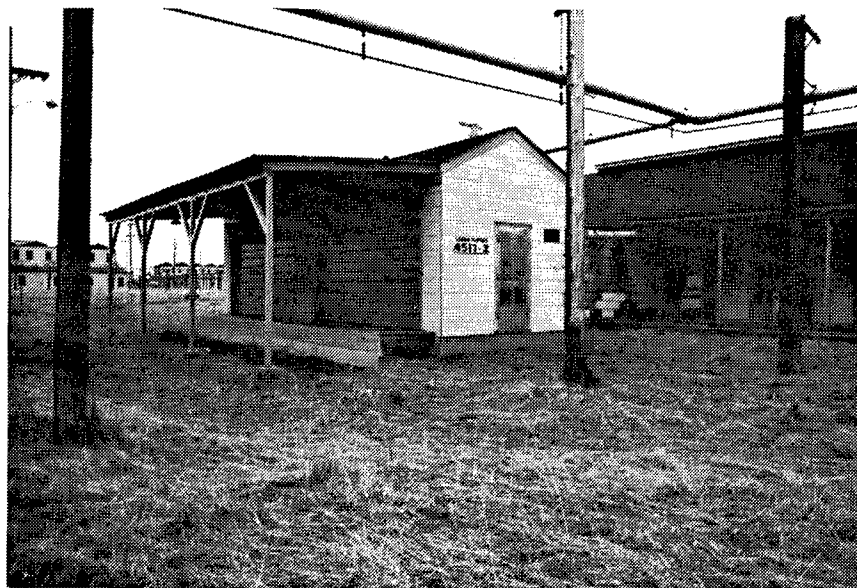


Figure 89. Building 4517-2: Loading Platform that served two Press and Cut Houses that are connected by a covered walkway.

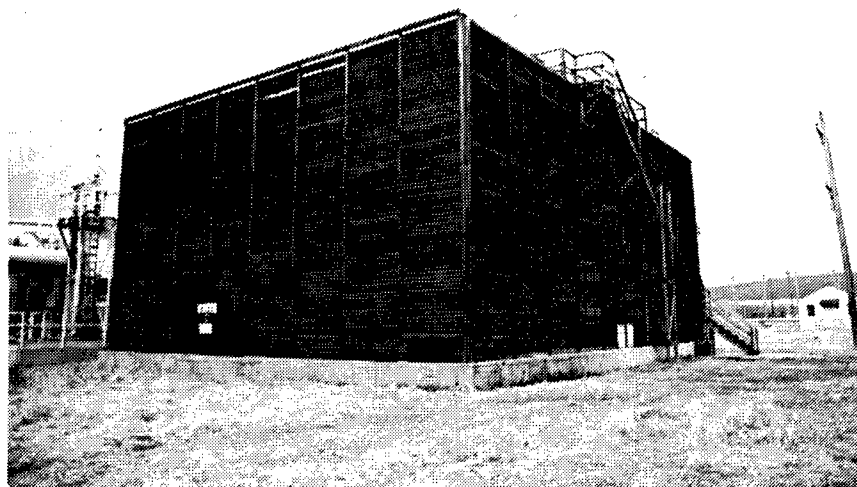


Figure 90. Building 2522: Solvent Recovery Cooling Tower.

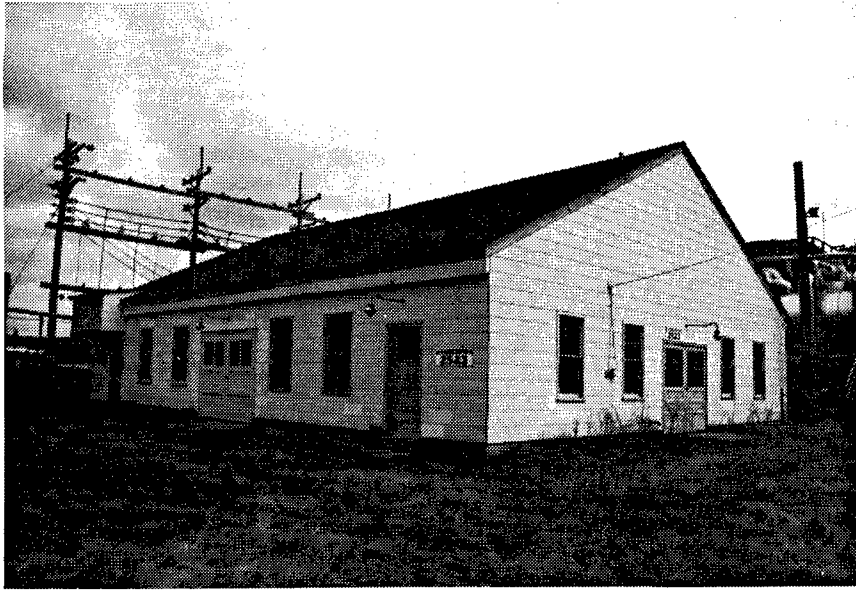


Figure 91. Building 2523: Solvent Recovery Cooling Tower Pump House.

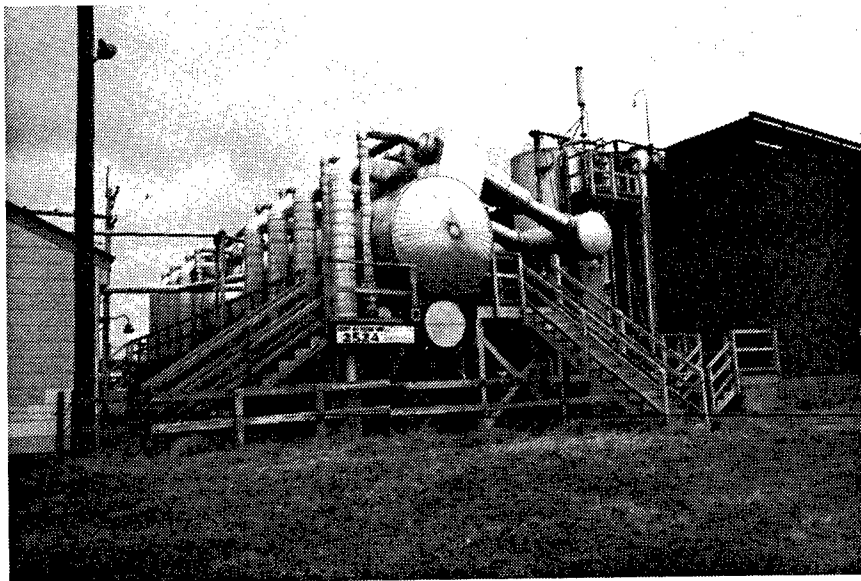


Figure 92. Building 2524: Steam Jet Refrigeration Unit.

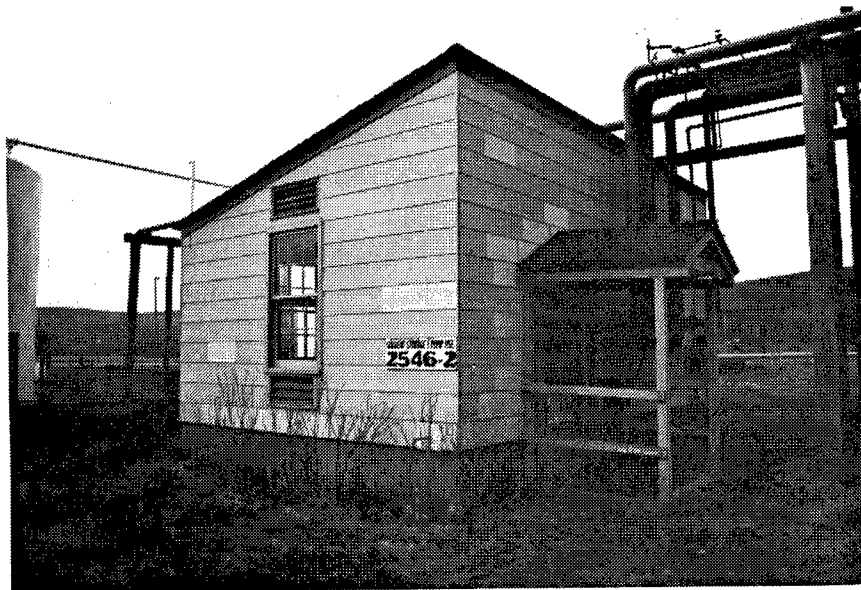


Figure 93. Building 2546-2: Solvent Storage and Pump House.

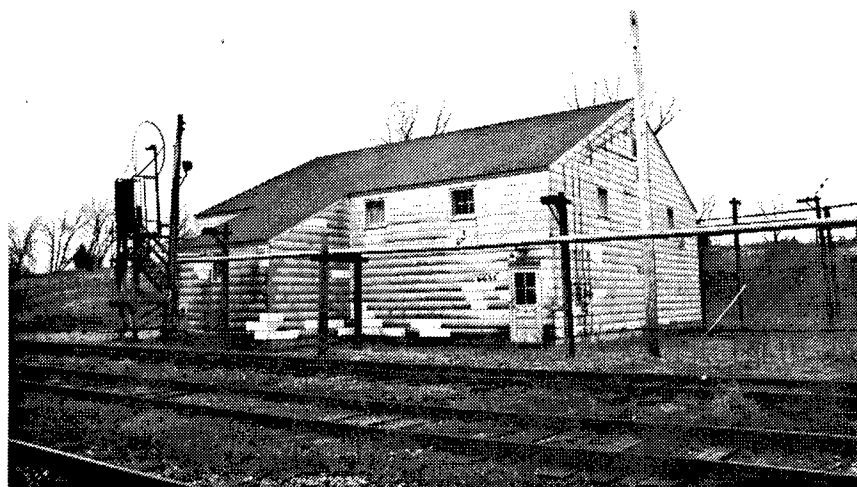


Figure 94. Building 6653: Glycerin Unloading and Pump House located on the Double-Based Smokeless Propellant Line.

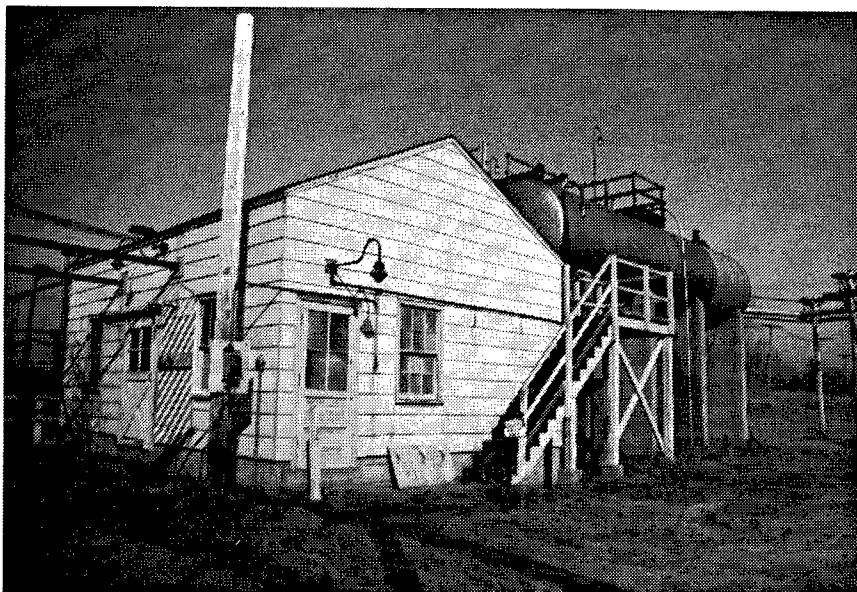


Figure 95. Building 6652: Mixed Acid Weigh House and Storage.

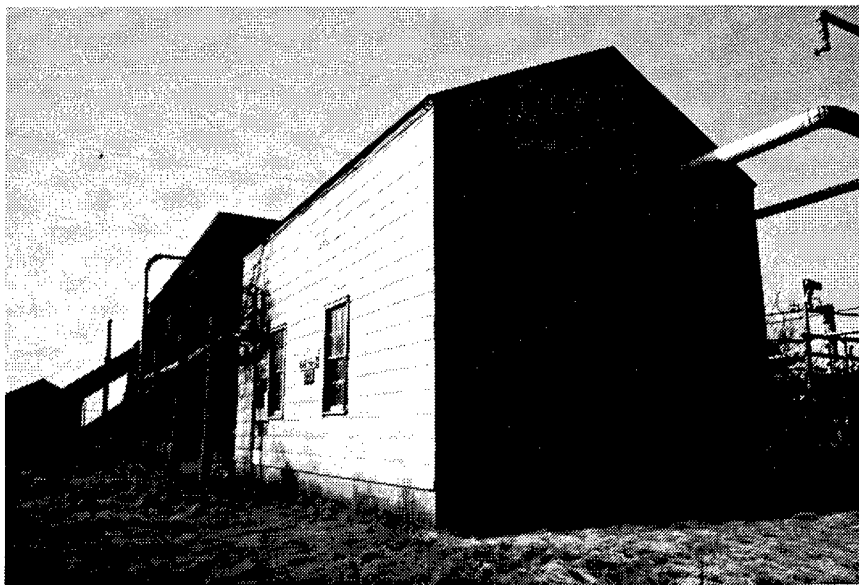


Figure 96. Building 6656-2: Glycerin Pump and Heater House for Building 6657.

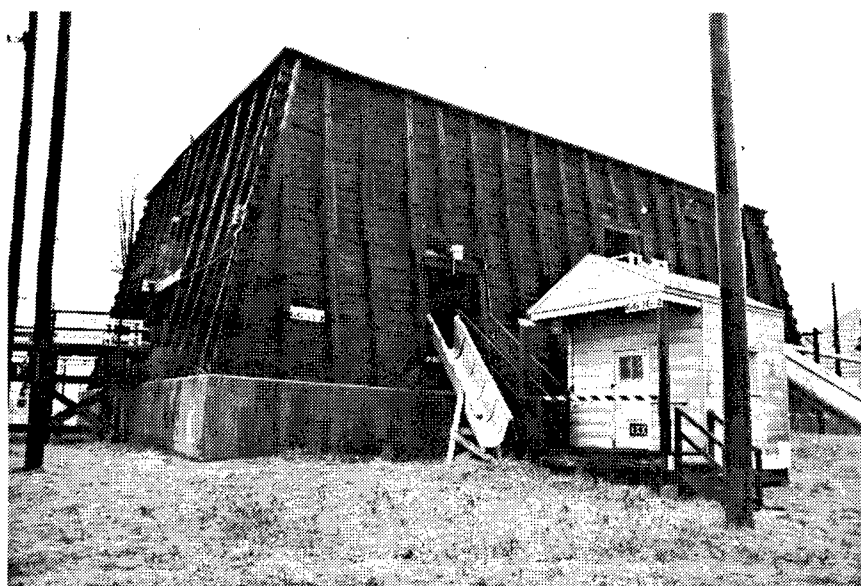


Figure 97. Building 6657-2: Nitroglycerin Nitrating and Separating House. The Soda Ash Storehouse is in the foreground.



Figure 98. Building 6657-2: Nitroglycerin nitrator tank.

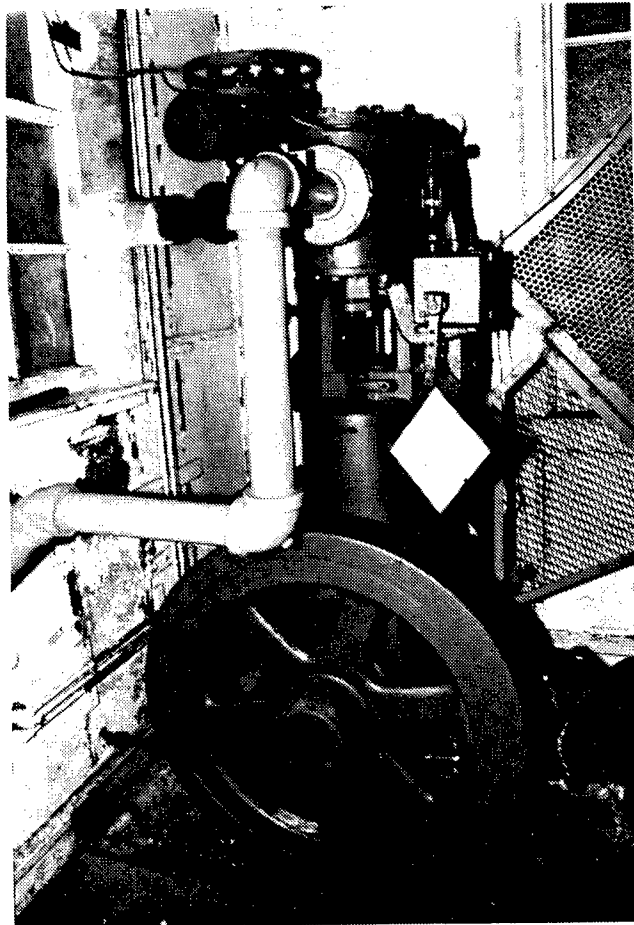


Figure 99. Building 6657-2: Reciprocating vertical throttling engine manufactured in 1942 by Troy-Ensborg.

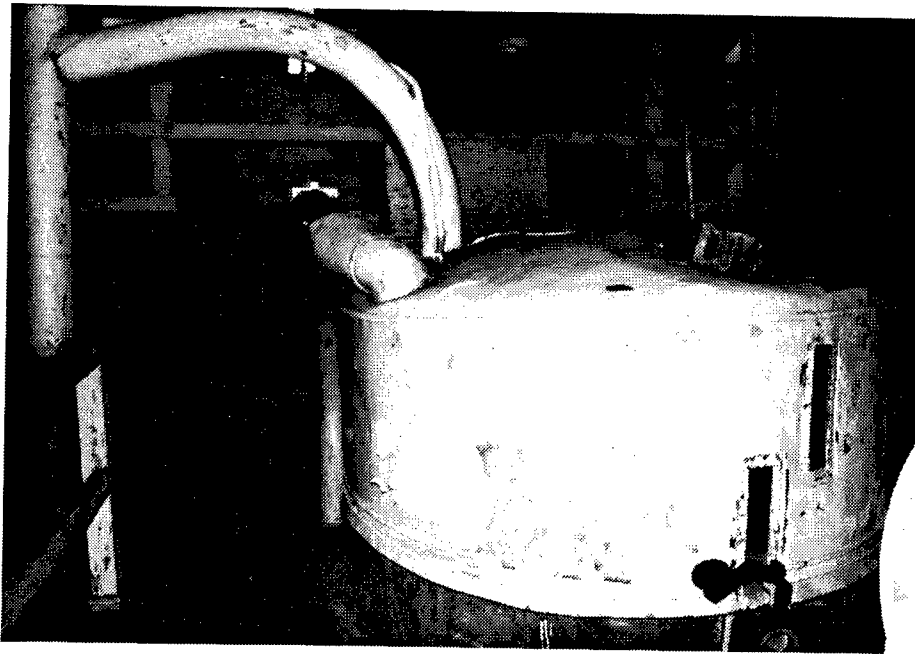


Figure 100. Building 6657-2: Vertical lead separating tank.

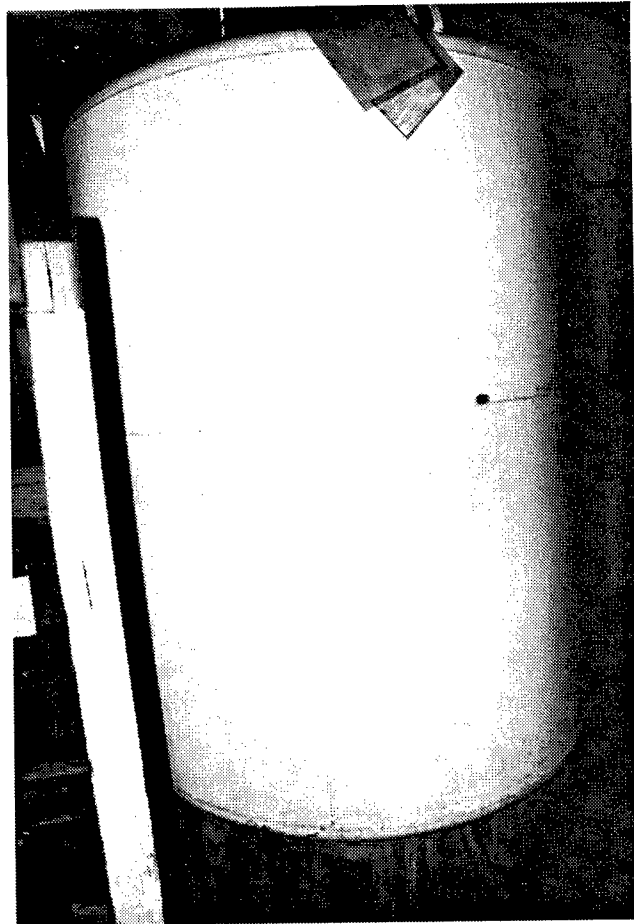


Figure 101. Building 6657-2: Vertical steel pre-wash tank manufactured by Felker Bros.

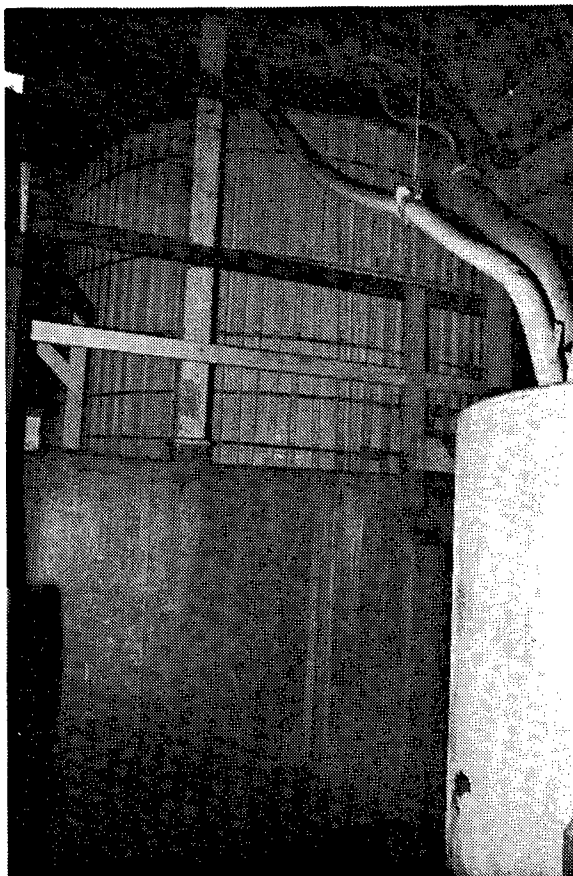


Figure 102. Building 6657-2: Lead drowning tank.

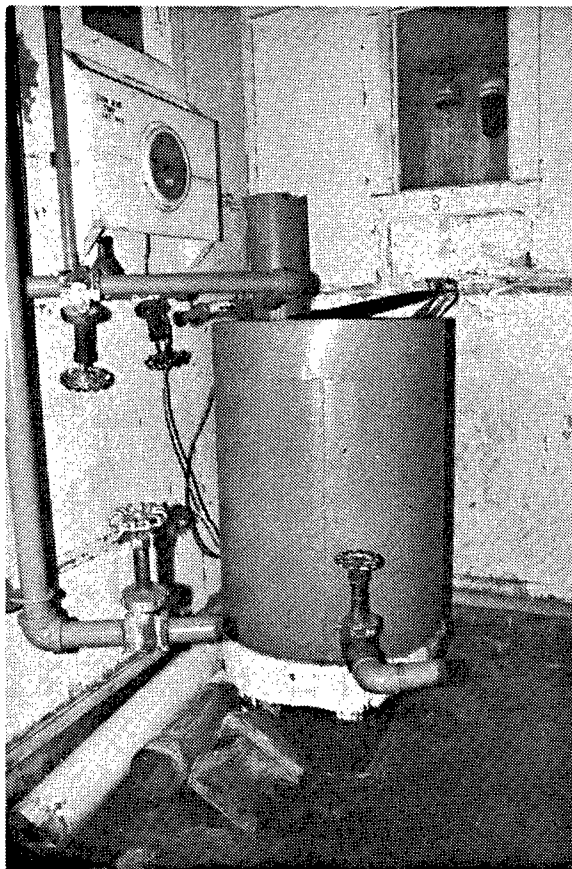


Figure 103. Building 6657-2: Steel air receiver tank and horizontal graver tank manufactured in 1942.

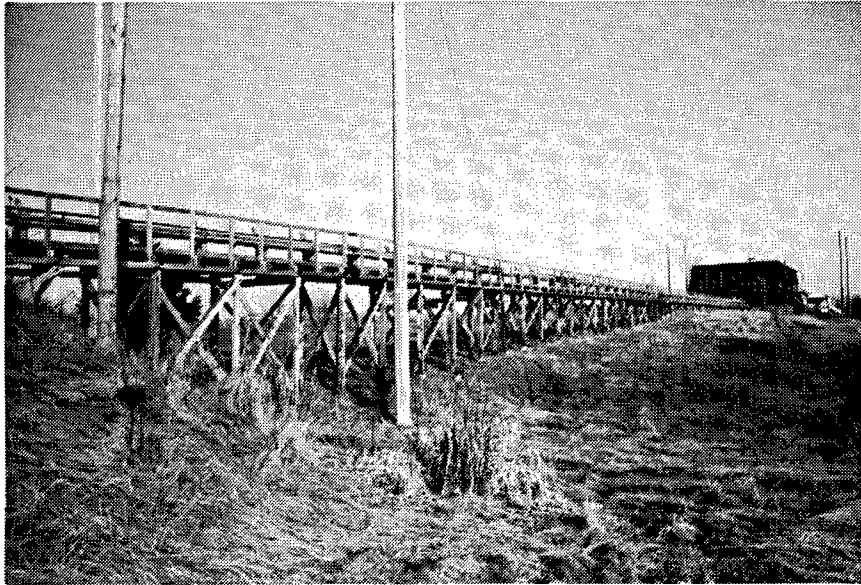


Figure 104. Building 6658: A Nitroglycerin Gutter and Trestle that connects Buildings 6657-2 and 6667-2.



Figure 105. Building 6658: Looking down the gutter from Building 6657-2 to Building 6667-2.



Figure 106. Building 6667-2: Nitroglycerin Neutralizing House.

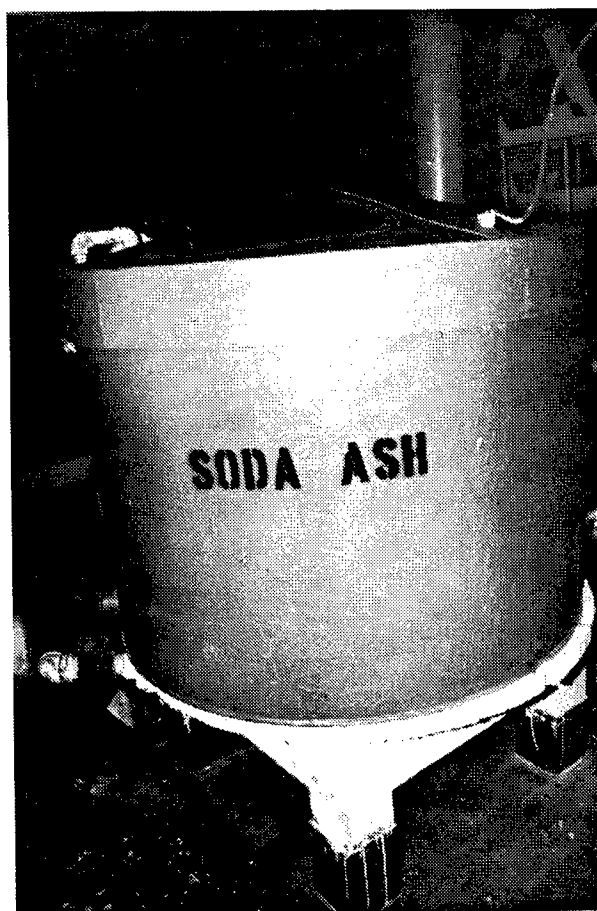


Figure 107. Building 6667-2: Steel vertical soda ash tank.

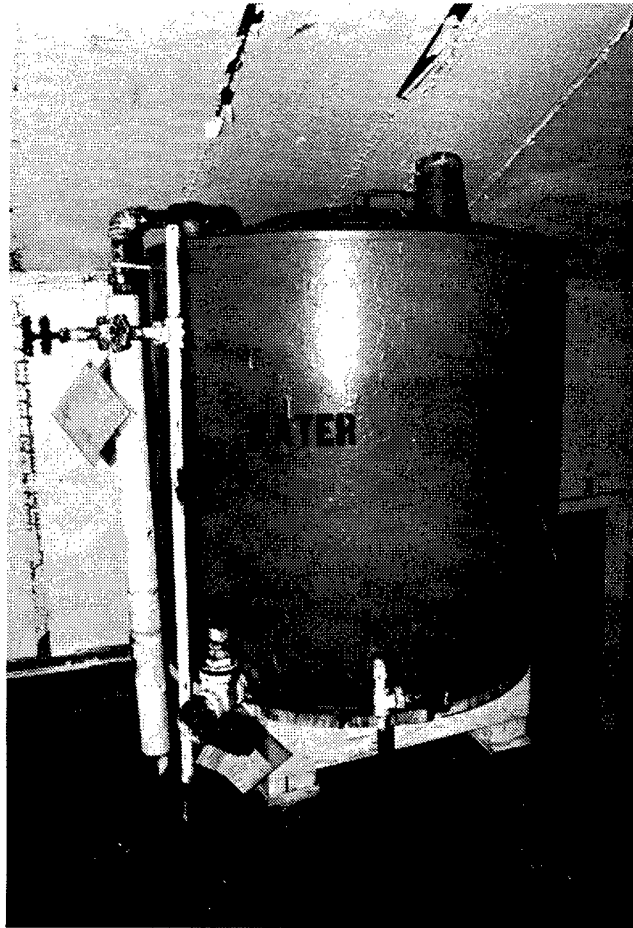


Figure 108. Building 6667-2: Steel open top tank.



Figure 109. Building 6667-2: Nitroglycerin Neutralizing tank.

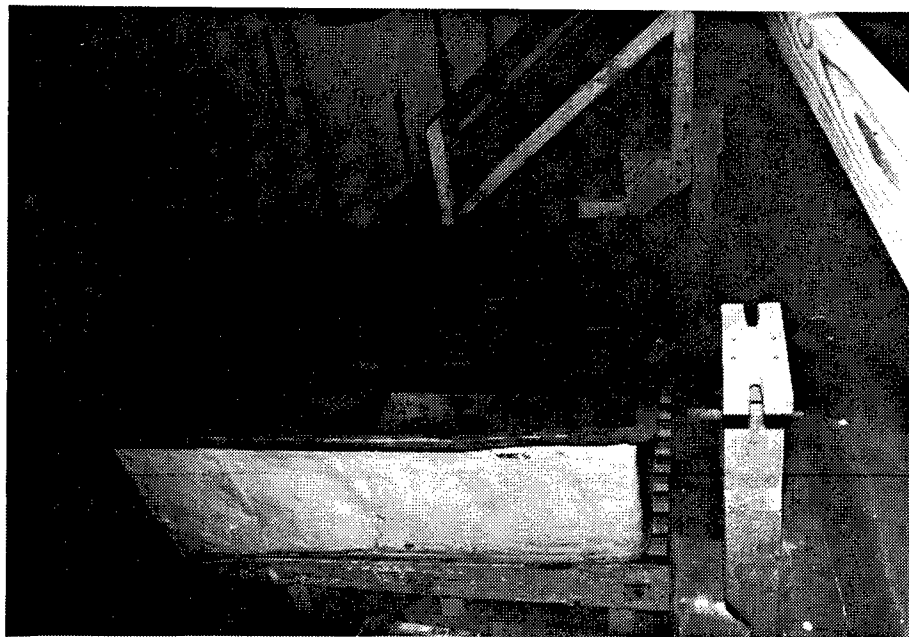


Figure 110. Building 6667-2: Catch tank with sloping bottom and baffles manufactured in 1942.



Figure 111. Building 6672-2: Nitroglycerin Storehouse.



Figure 112. Building 6675: Air Compressor House.

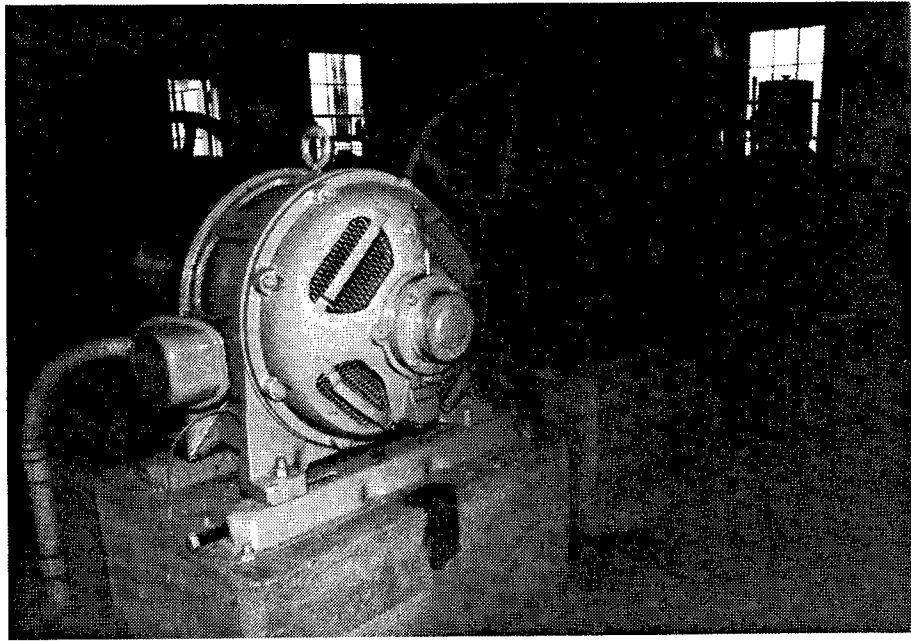


Figure 113. Building 6675: Chicago Pneumatic water cooled air compressor.



Figure 114. Building 6677: Nitroglycerin Transfer House.

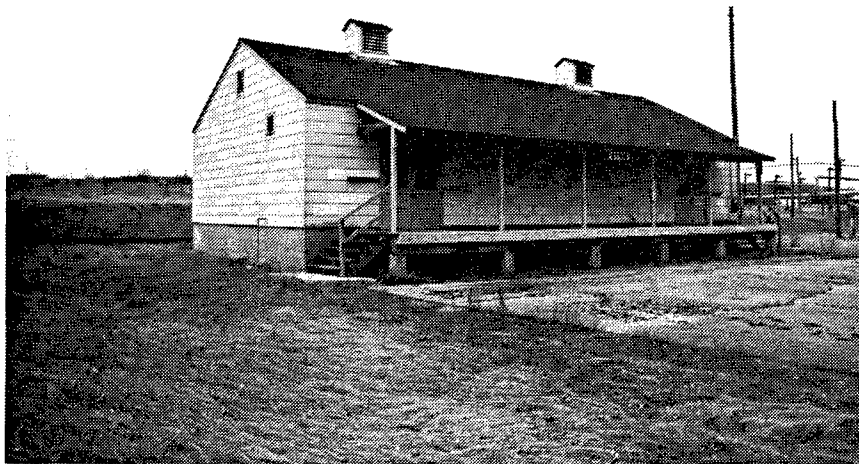


Figure 115. Building 6700: Nitrocellulose Rest House.



Figure 116. Building 6701: Nitrocellulose Blender House.



Figure 117. Building 6701, Catwalk: Motor-driven "Sweetie" Barrel where nitrocellulose was mixed.

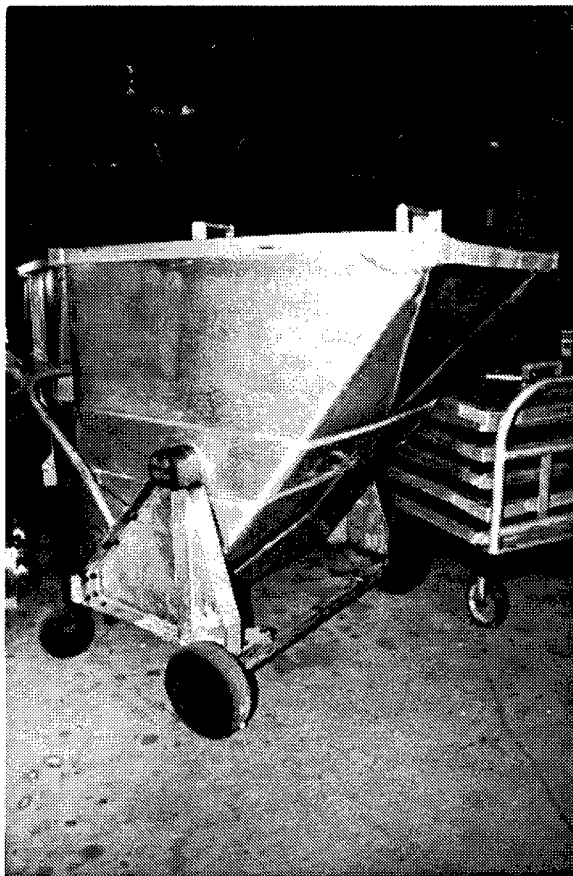


Figure 118. Building 6701: Buggy with crank to aide in tilting the buggy's barrel on the first level.

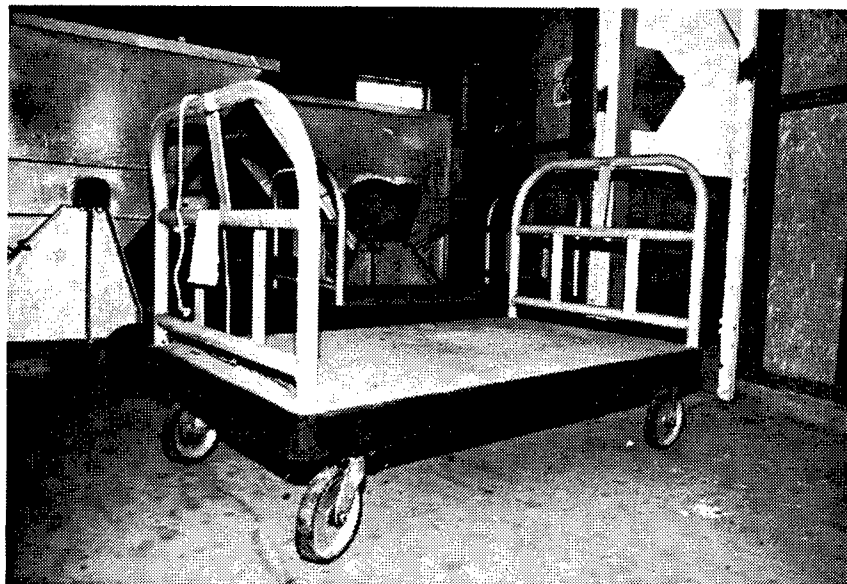


Figure 119. Building 6701: Powder bag buggy.

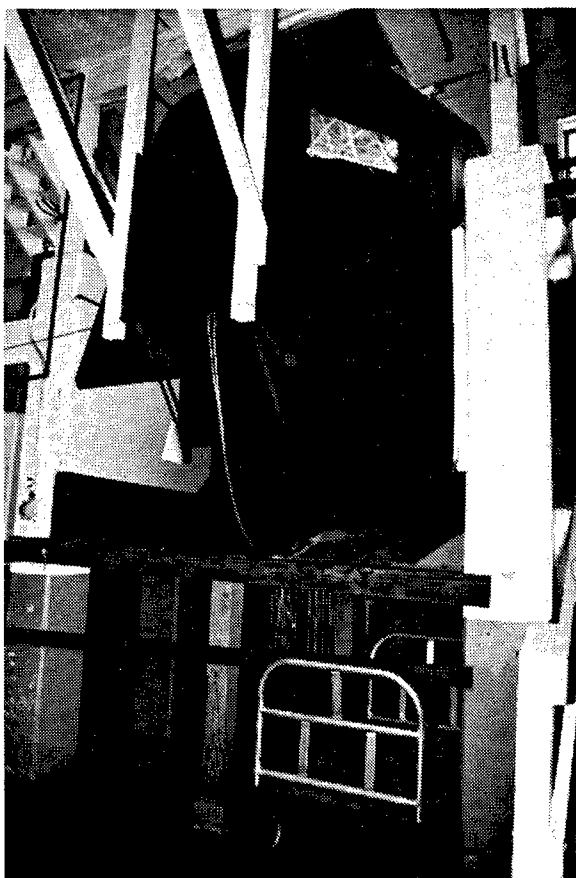


Figure 120. Building 6701: Hopper used to transfer nitrocellulose from the "Sweetie" barrel to awaiting receptacles.



Figure 121. Building 6702-4: Pre-Mix House behind a double riveted barricade. Exterior walls are shingled with cement asbestos and underneath composition shingles are rolled roofing. Interior walls and ceiling are coated with paraffin impregnated transite, and the floors covered with lead sheets.

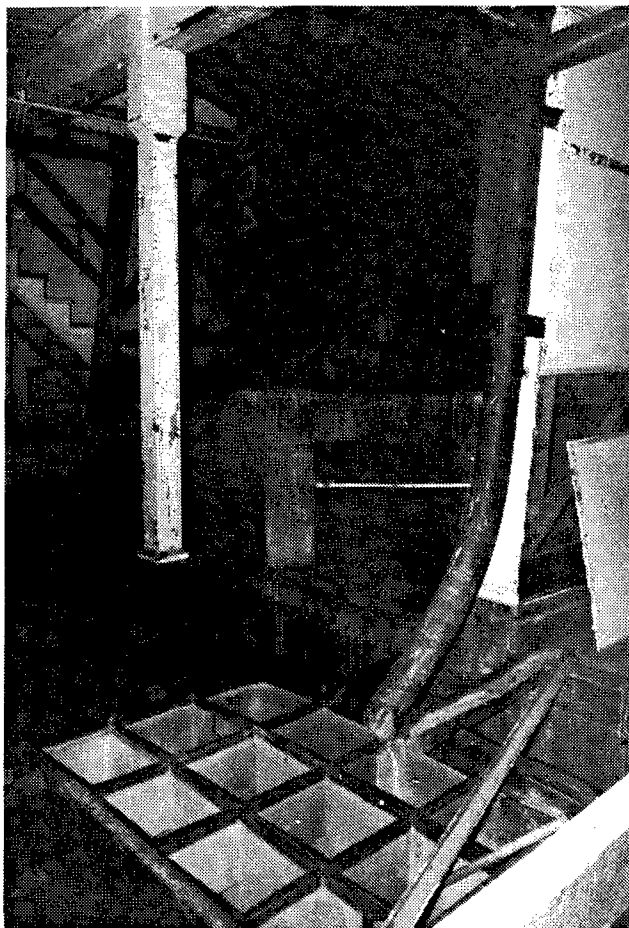


Figure 122. Building 6702-4: Tanks with catch basin for nitroglycerin.

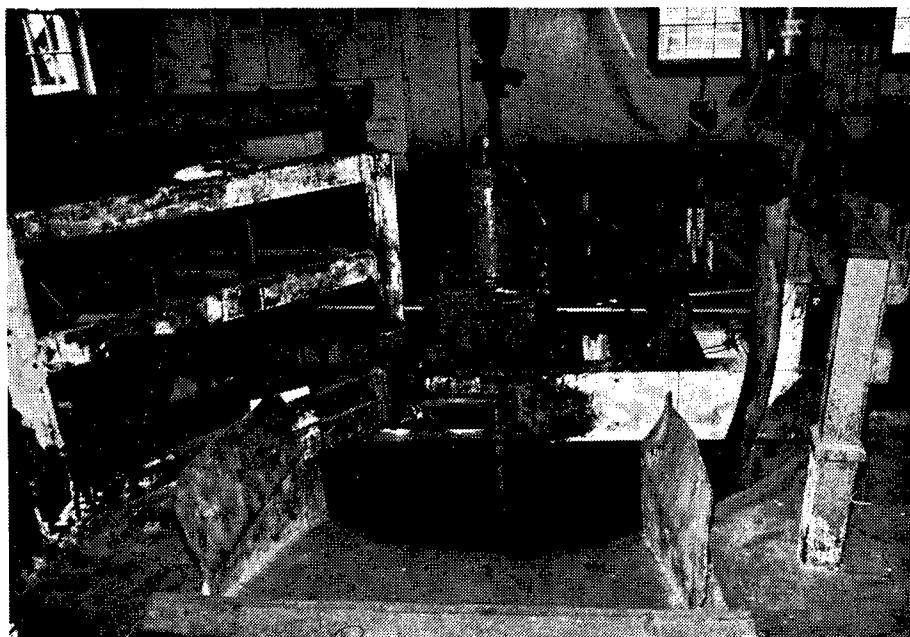


Figure 123. Building 6702-4: Mixer for the paste or slurry compound (nitrocellulose, nitroglycerin, and water).

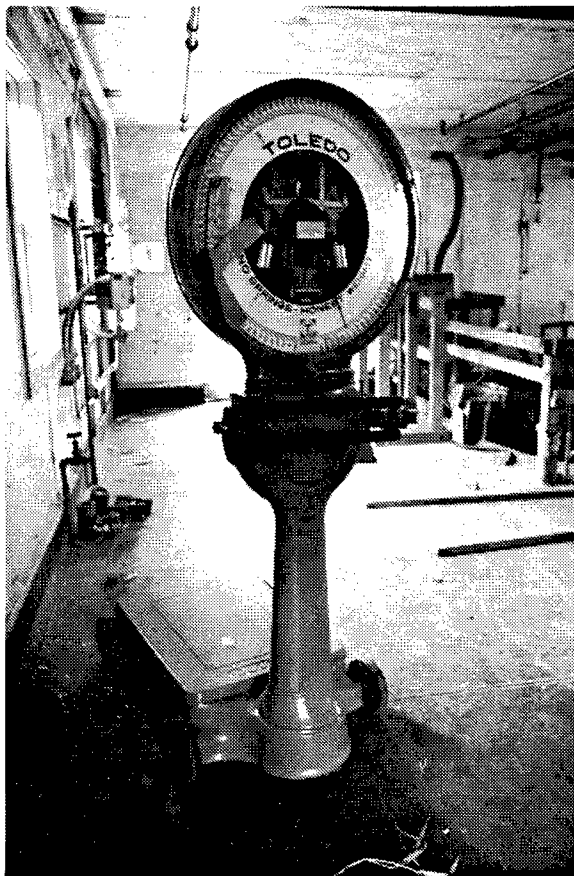


Figure 124. Building 6702-4: Toledo scale style #31-80FD with dial, platform, and a 500-pound capacity manufactured in 1953.

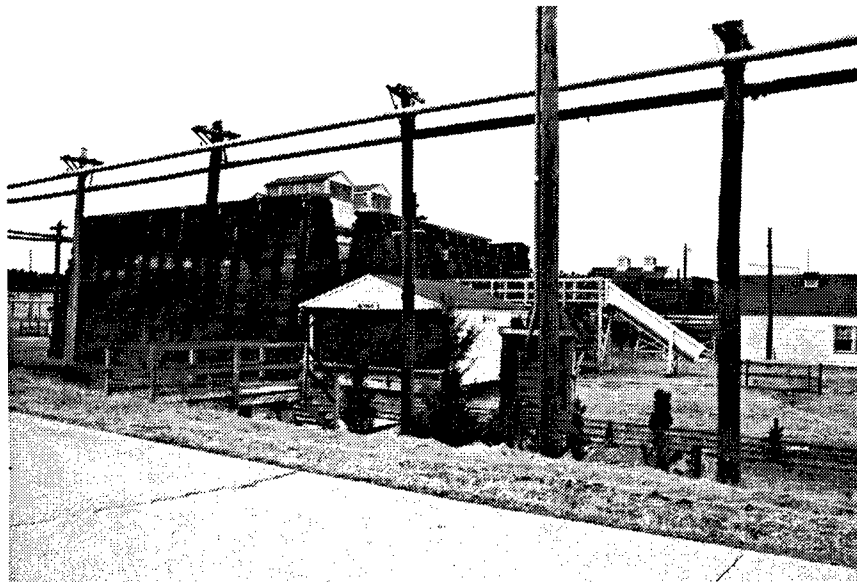


Figure 125. Building 6704-3: Final Mix House where the partially prepared slurry from the pre-mix operation was further mixed and the chemicals were added. The paste was then de-watered and weighed into bags.

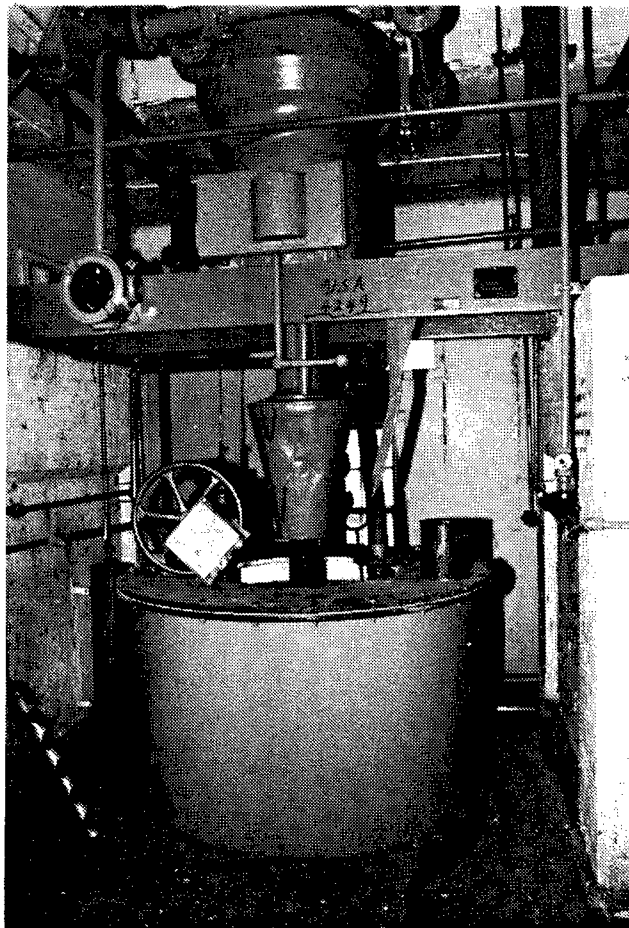


Figure 126. Building 6704-4: Centrifugal wringer driven by high pressure hydraulic motors.

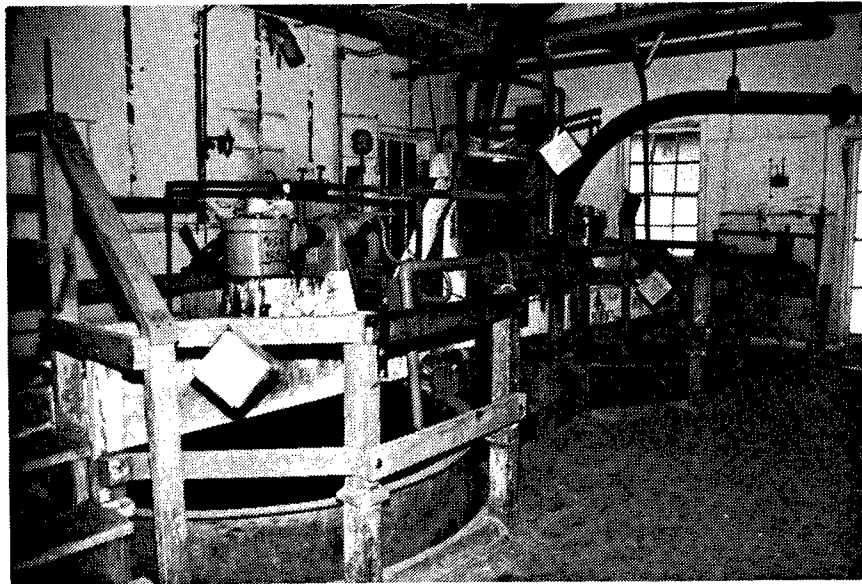


Figure 127. Building 6704-4: Open top "Everdur" mixing tanks with vertically driven "Centi-cone" agitators, powered by hydraulic motors.

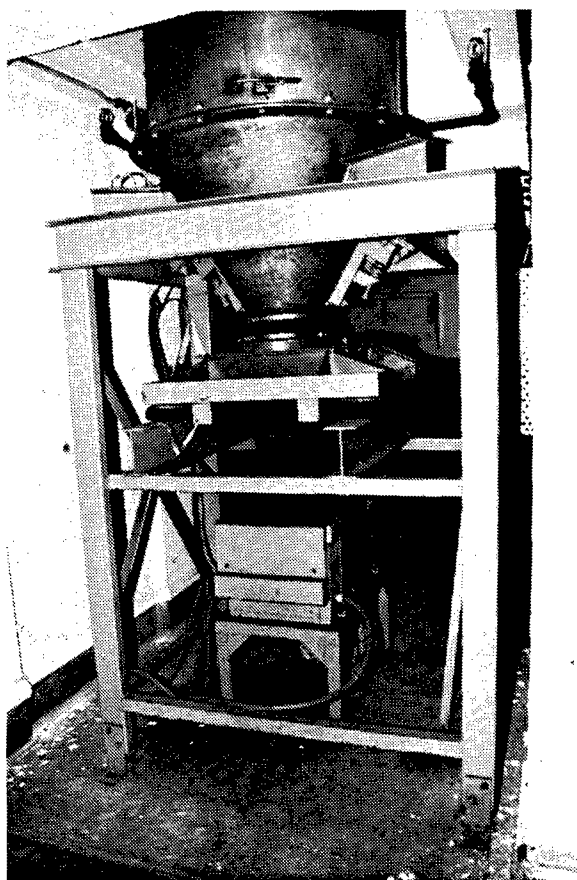


Figure 128. Building 6704-4: Hopper and scale where paste, dispensed by the hopper, was weighed in 50-pound increments and bagged.

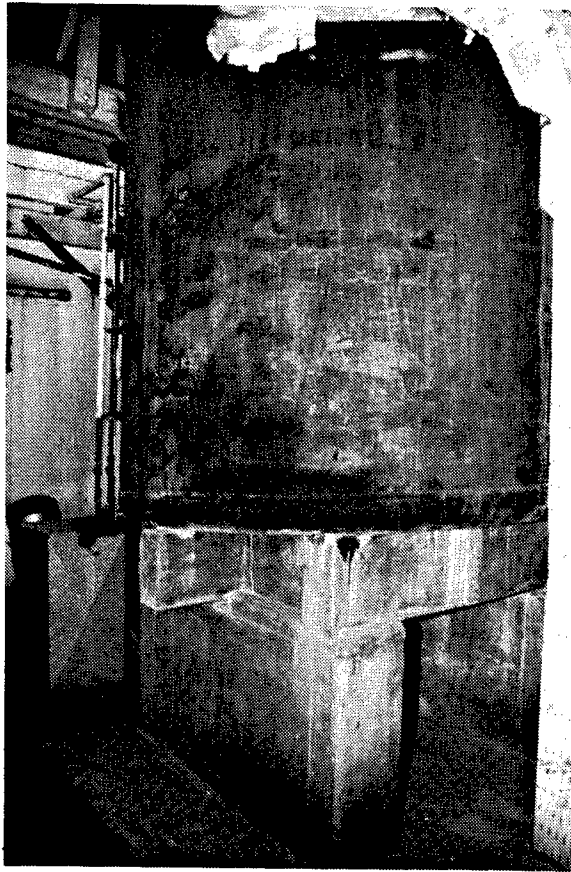


Figure 129. Building 6704-4: Tank on a lead-covered, cement stand.



Figure 130. Building 6706-2: Pump and Heater House.

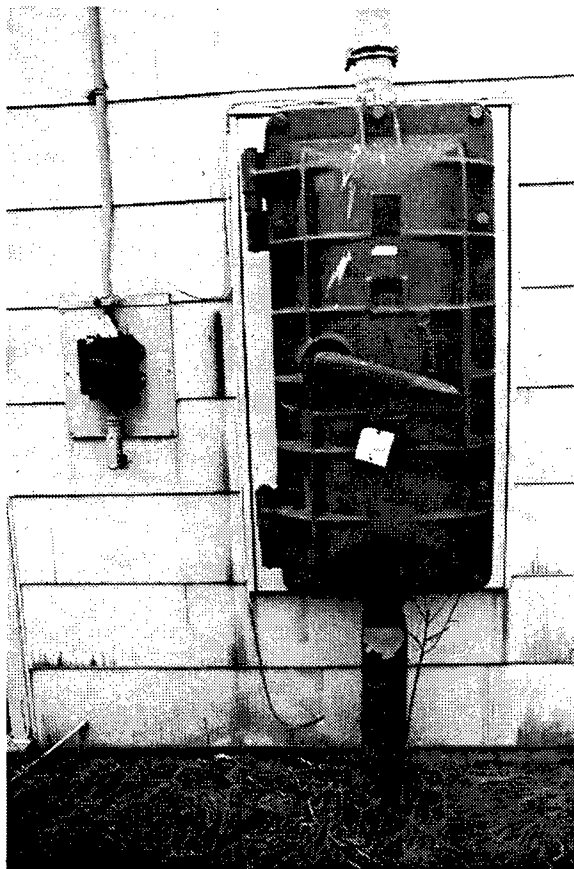


Figure 131. Building 6706-2: Explosion-proof light switch mounted on the east wall of the Pump and Heater House.

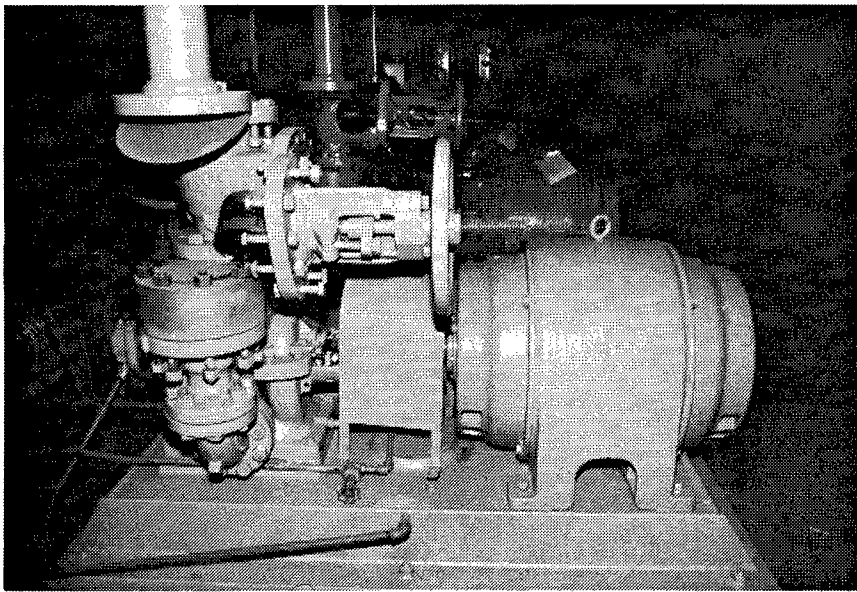


Figure 132. Building 6706-2: Hot water pumps.

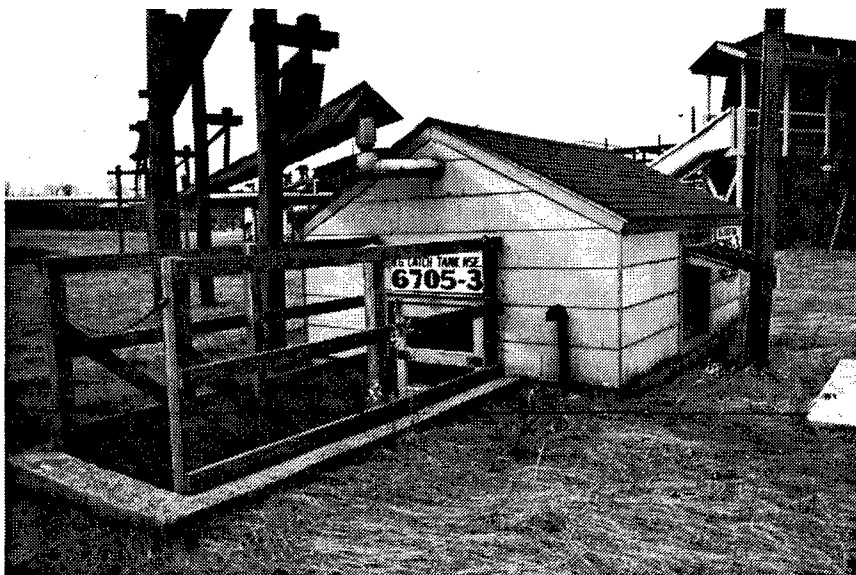


Figure 133. Building 6705-3: Nitroglycerin Catch Tank House.

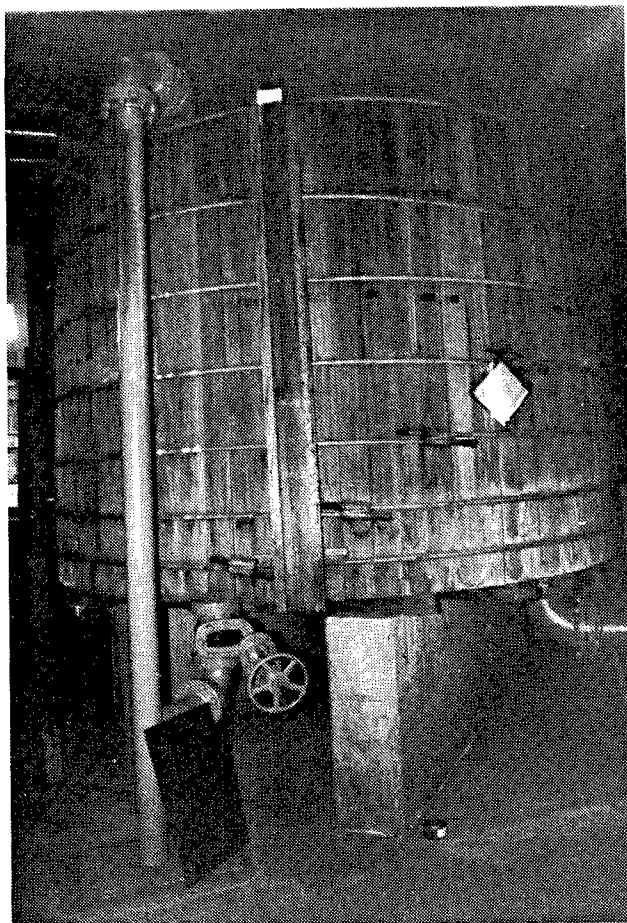


Figure 134. Building 6707-2: Wooden water storage tank located on the first floor.



Figure 135. Building 6709-24: Pre-dry House with barricade. The building is divided into four, sheet metal lined bays; two hot air ducts, each with 16 nozzles, are supported in two of the partitions; and each bay contains three-tiered wooden racks.



Figure 136. Building 6712 (foreground) and Building 6724 (background): Homogenizer House and Centralite Storage Building.



Figure 137. Building 6726-1: Paste Rest House.



Figure 138. Building 6731-3: Paste Breaker and Blender House with its barricade.

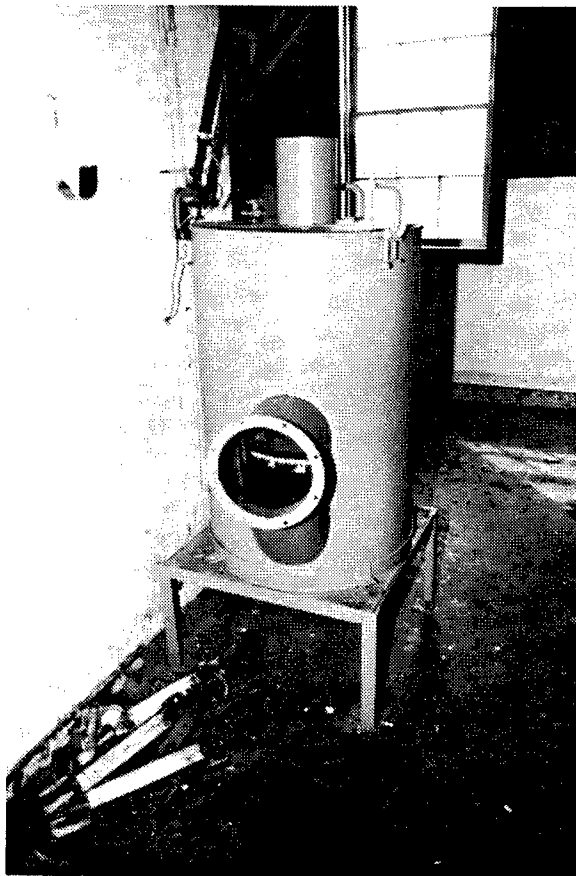


Figure 139. Building 6731-3: Chip collecting system located in this Paste Breaker and Blender House.

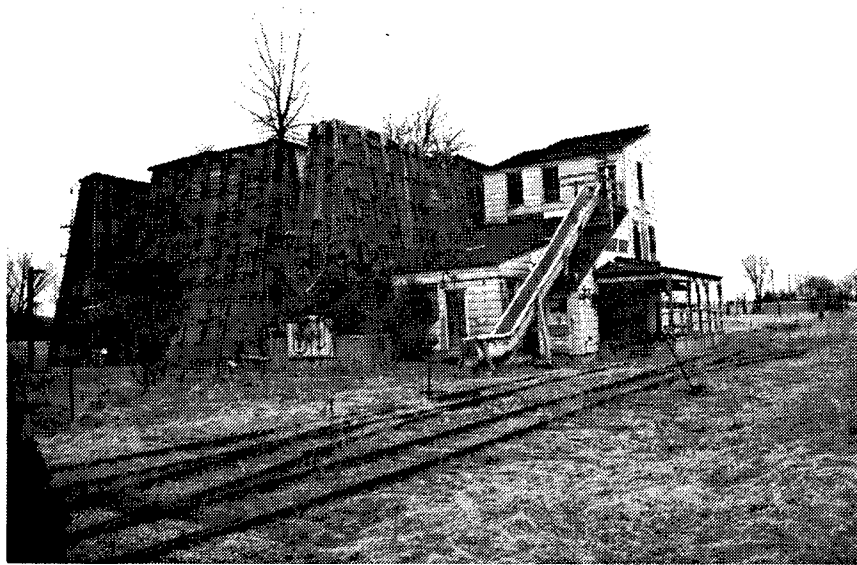


Figure 140. Building 6731-4: Barricaded Paste Breaker and Blender House. The main building area is separated by a double riveted barricade from the tram loading dock and the platform/elevator structure.



Figure 141. Building 6732: Diethylphthalate Lines.

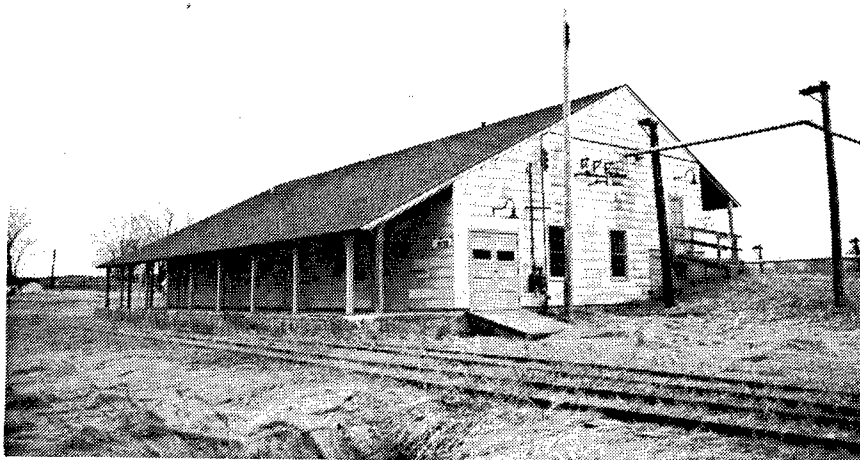


Figure 142. Building 6739: Bag Loading House.



Figure 143. Building 6803-1: Paste Rest House.

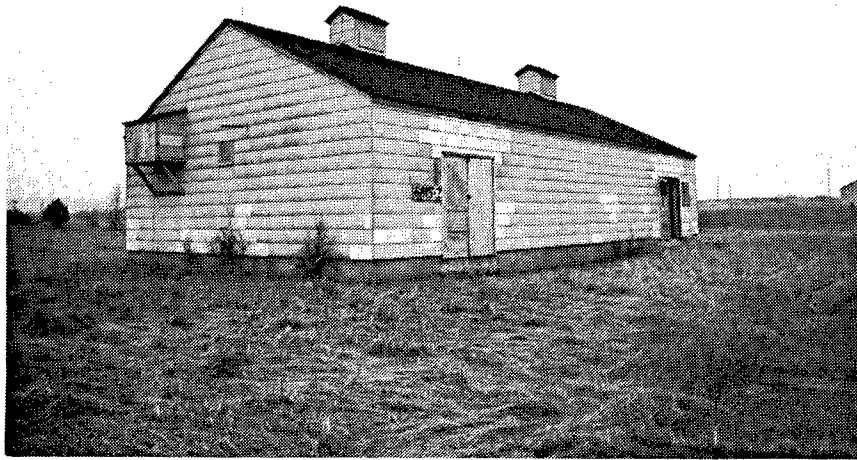


Figure 144. Building 6815: Rest House which was originally barricaded.



Figure 145. Building 6812-18: Rest and Heating House.



Figure 146. Building 6804-9: Rocket Grain Cart.

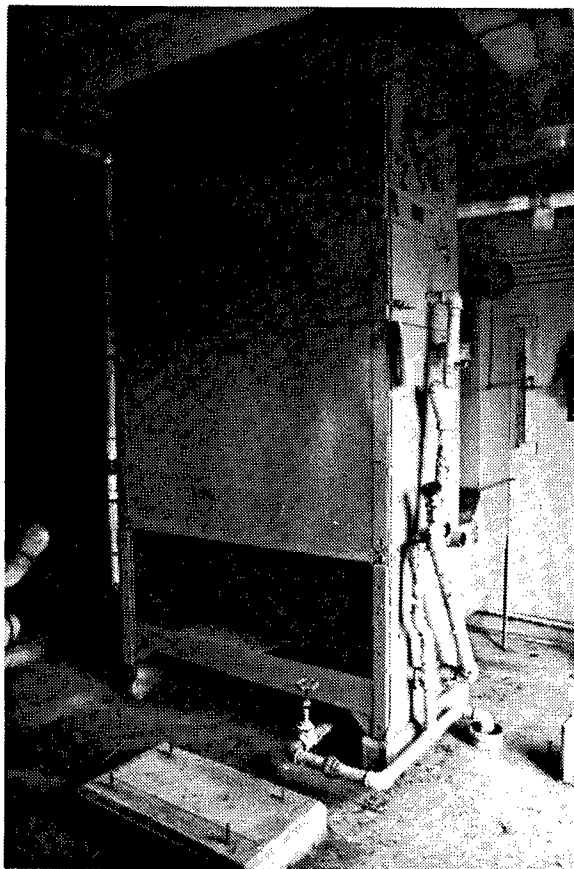


Figure 147. Building 6804-9: Air conditioner manufactured by Carrier Corporation in this Rest House.

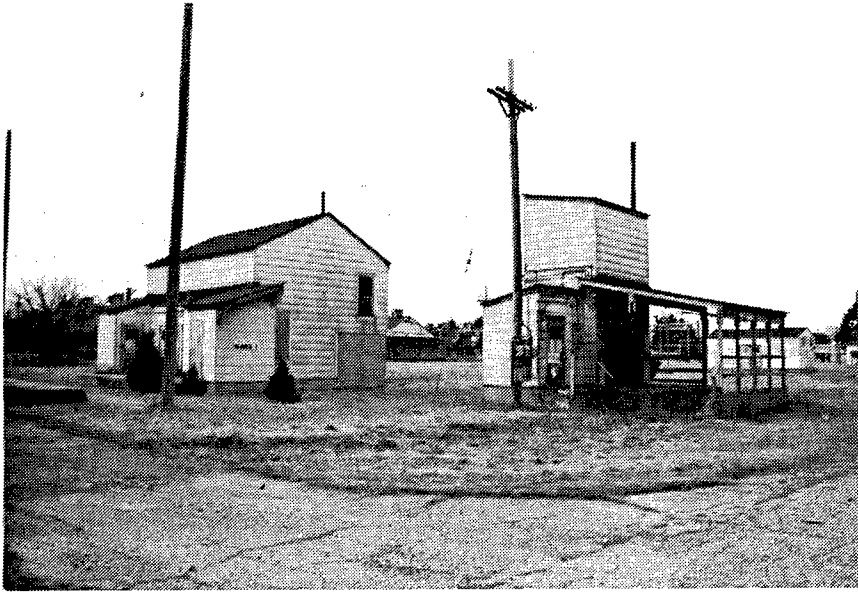


Figure 148. Building 6805-1: Paste Weigh House. The barricade has been torn down.



Figure 149. Building 6807-21: Roll House which is divided into bays and rooms. Catwalks on the roof allow for the inspection and cleaning of cupolas designed to remove heat, water vapor, and chemical fumes. In addition, a "deluge" sprinkler system with photo-electric cell detection system is installed.



Figure 150. Building 6808-5: Slitter and Carpet Roll House that is divided by function into four rooms: the sheet warming room, the slitting room, the carpet roll room, and the carpet roll dispatch room.

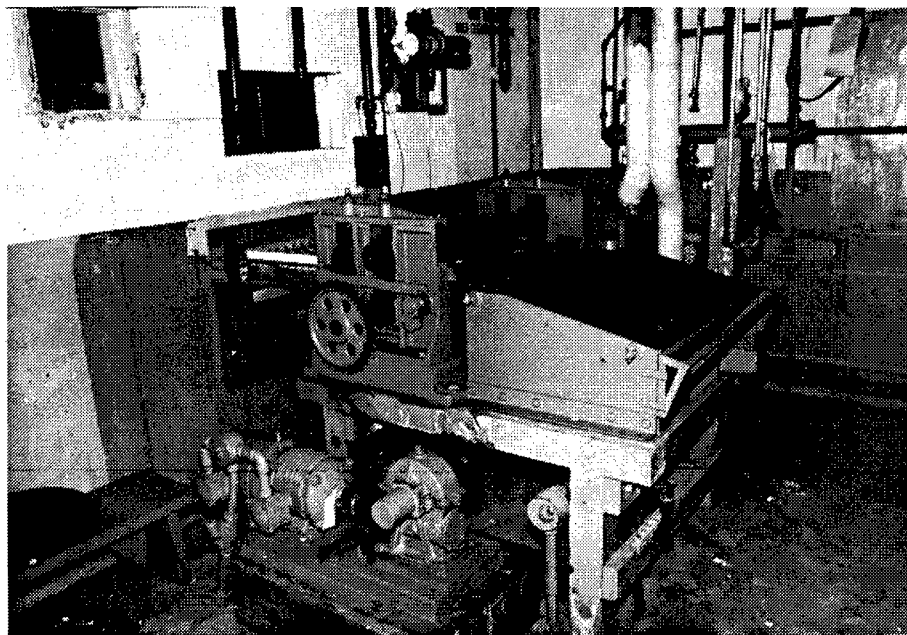


Figure 151. Building 6808-5: Slitting machine manufactured in 1944 by Bagley and Sewel Company. This model is a floor type, semi-automatic, with a warming tray.



Figure 152. Building 6810-09: Press House that has a reinforced concrete arch 36 feet long with an interior radius of 10 feet, and a minimum of 5 feet of earth covering the structure.

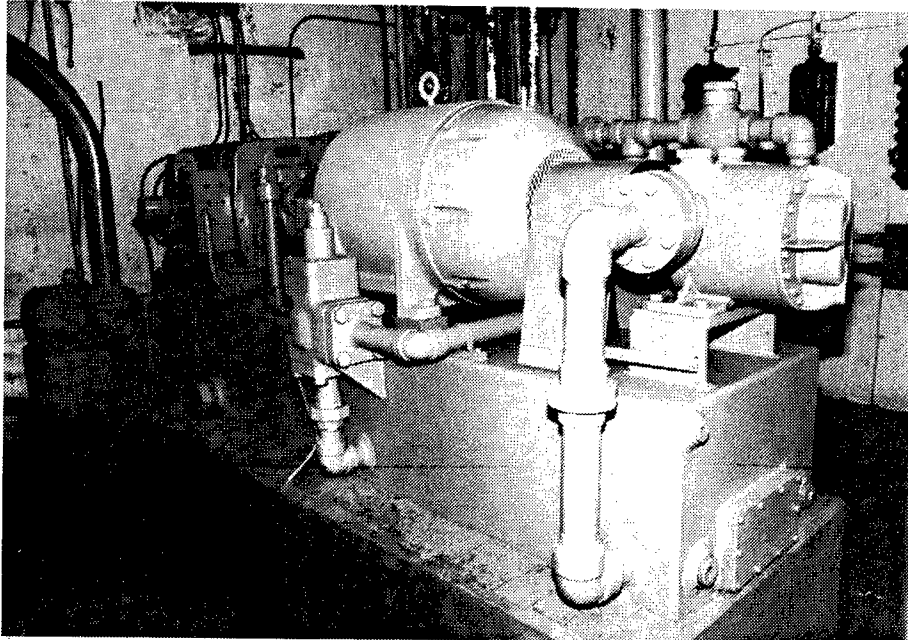


Figure 153. Building 6810-09: Thirty horsepower oil hydraulic pump to work extrusion press.

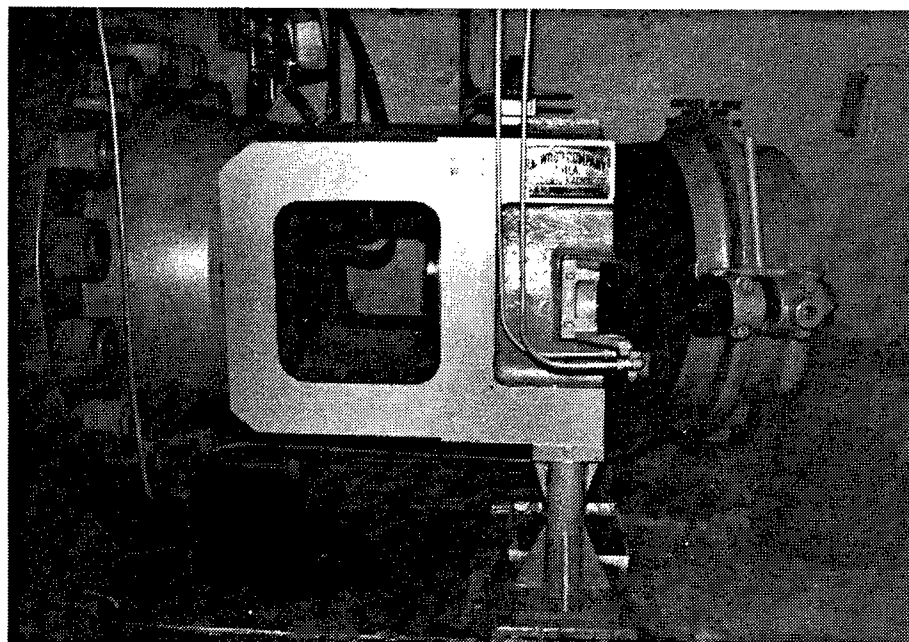


Figure 154. Building 6810-09: Farquar horizontal oil hydraulic extrusion press with extrusion dye and holder.

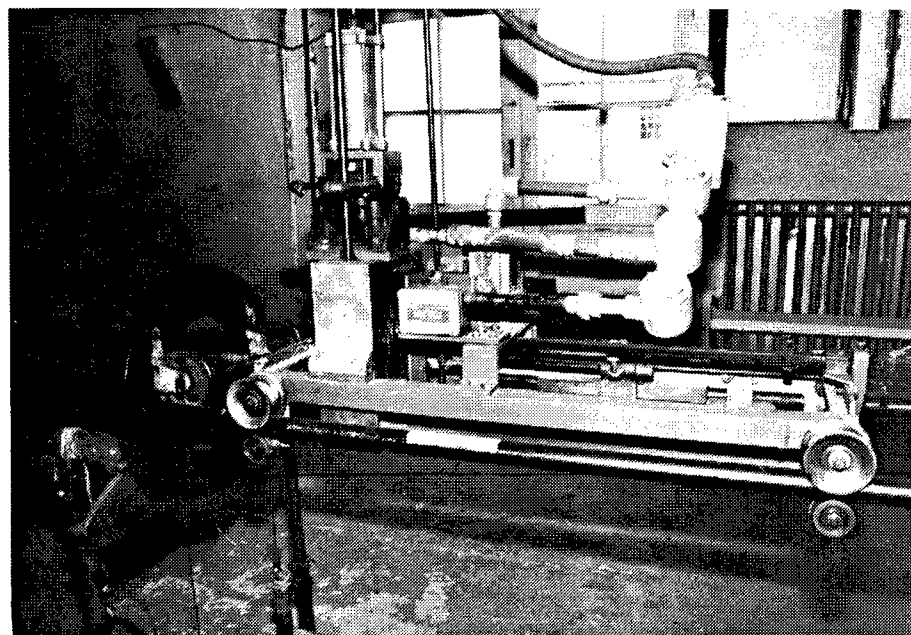


Figure 155. Building 6810-09: Flying cutter unit with air driven guillotine cutter and trip through.

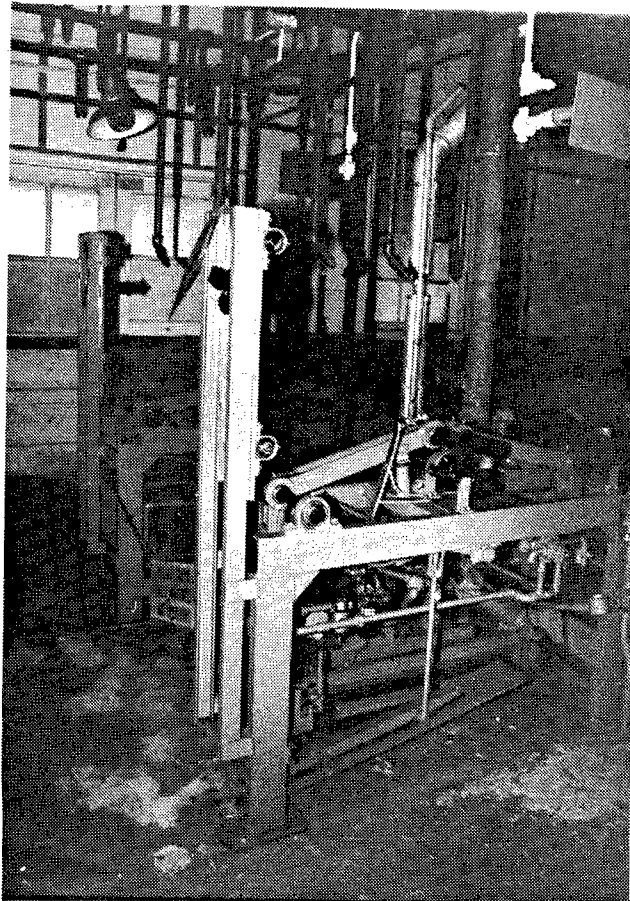


Figure 156. Building 6810-9: Carpet roll machine with an air driven motor.



Figure 157. Building 6810-09: Carpet Trolley.



Figure 158. Building 6812-11: Rest and Heating House, not barricaded.



Figure 159. Building 6814-2: Milling House where air operated, sliding doors separate several of the buildings and ten bays from one another.

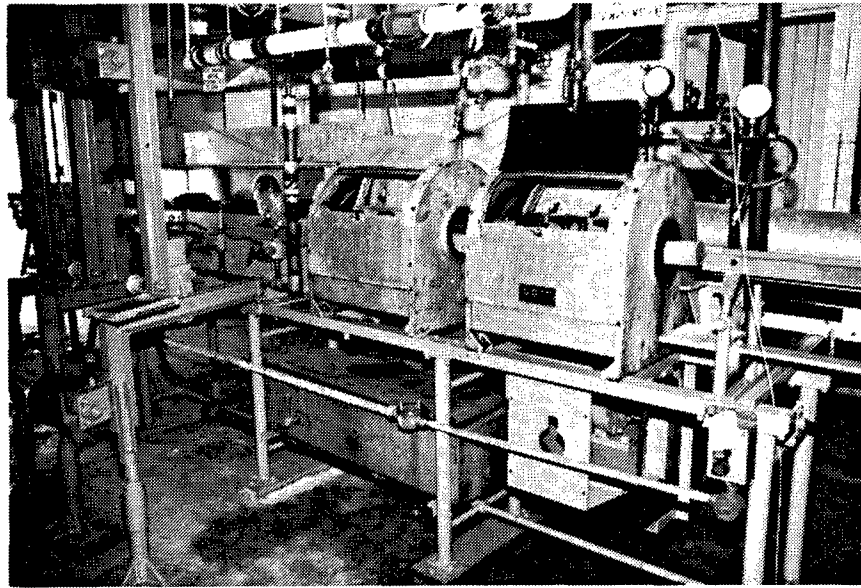


Figure 160. Building 6814-2: Air powered Pierce Grain spiral wrap machine with a capacity of 7.5 grains per minute.

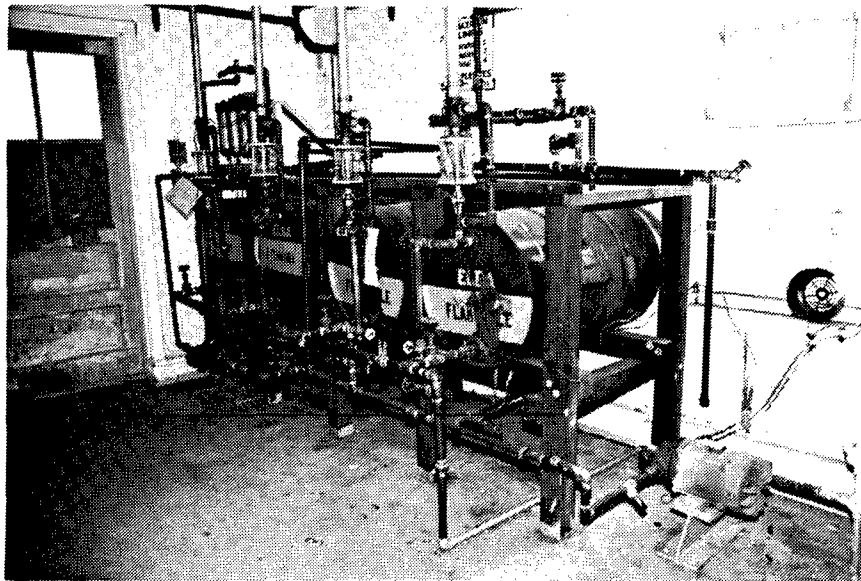


Figure 161. Building 6814-2: Pumps for solvents involved in spiral wrap process.

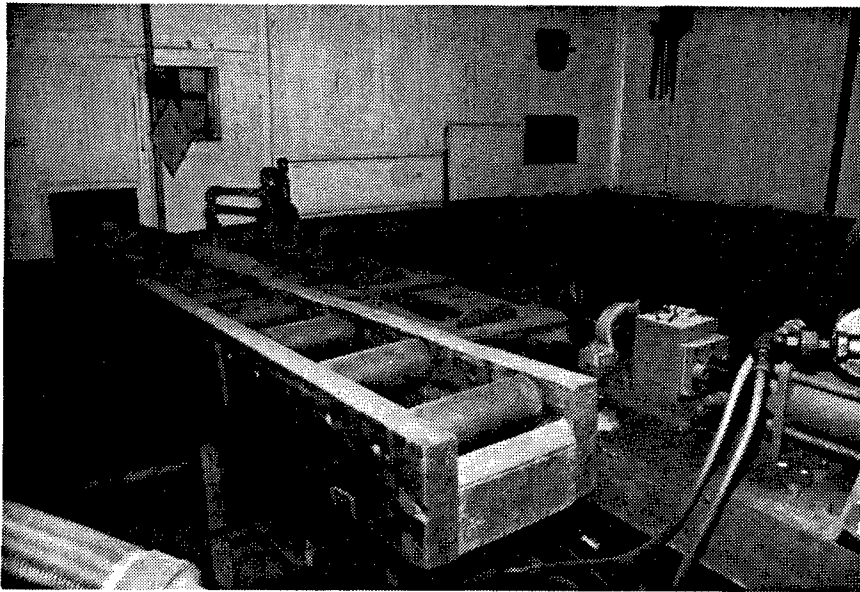


Figure 162. Building 6814-3: Overlap trimming machine.



Figure 163. Building 6816-1: Final Inspection House.



Figure 164. Building 6817-1: Packing House.



Figure 165. Building 6828-7: Final Rest House with covered walkway to loading dock.



Figure 166. Building 6850-1: Wax Purification and Dye Warming House.



Figure 167. Building 6868-2: Tannealing House that is composed of four processing bays and anterior rooms, all of which are lined with welding and sealed steel sheeting. This lining is to prevent nitroglycerin absorption.

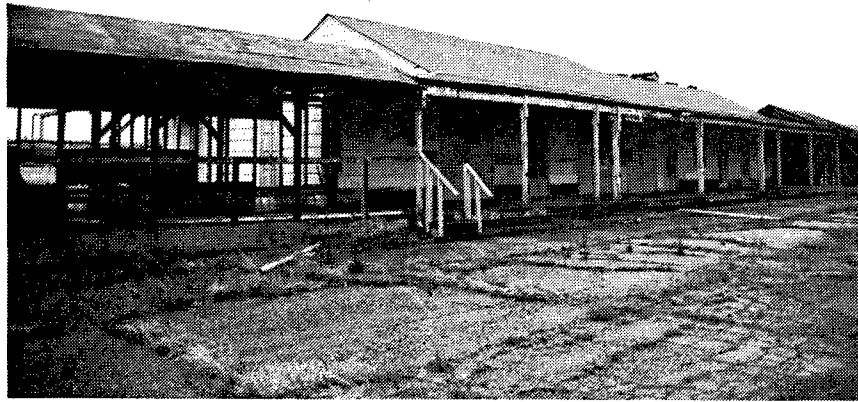


Figure 168. Building 6956-1: Rework Cutting House.



Figure 169. Building 6953-1: Rework Rest House.



Figure 170. Building 6955-1: Rework Heating House.



Figure 171. Building 6957-1: Rework Sorting and Weigh House.

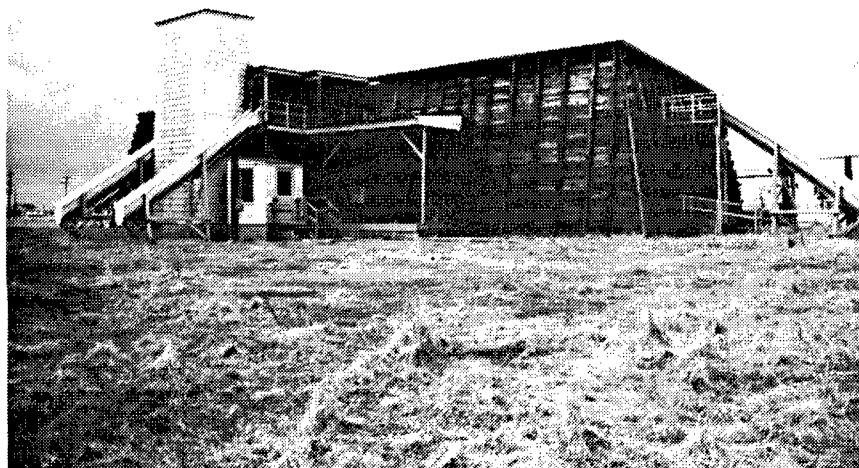


Figure 172. Building 1600-2: Solvent Recovery House where the solvents (ether and alcohol) were extracted from the powder. This building is located in the Final Processing Area for Single- and Double-based Smokeless Powder.

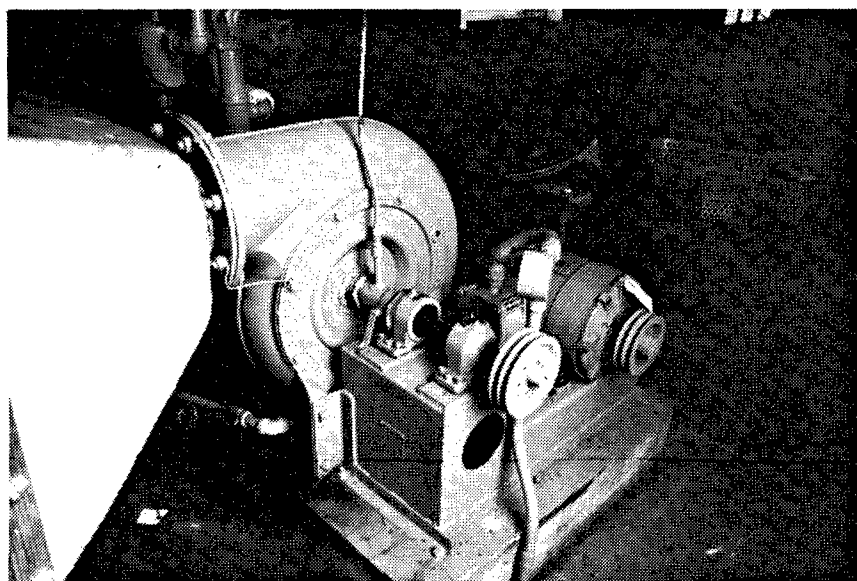


Figure 173. Building 1600-14: Blower.

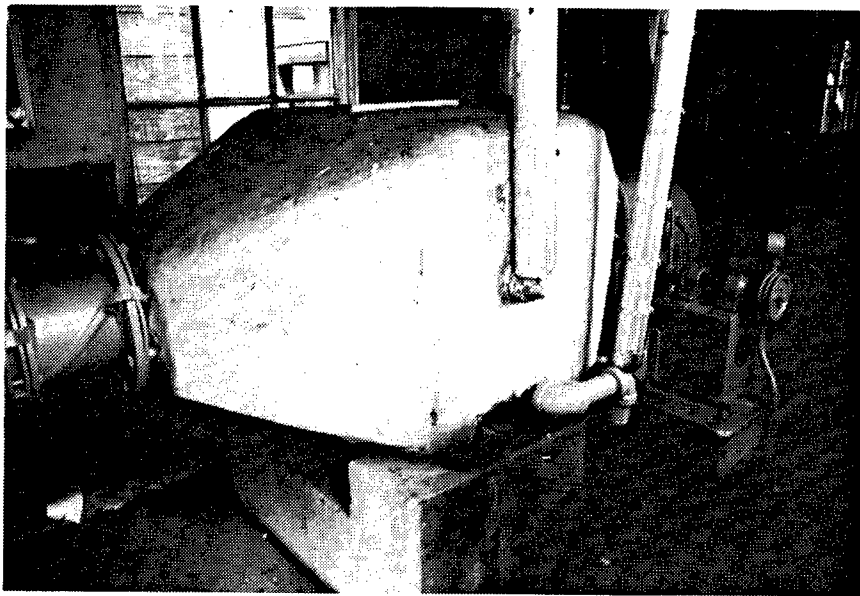


Figure 174. Building 1600-14: Heat exchanger.

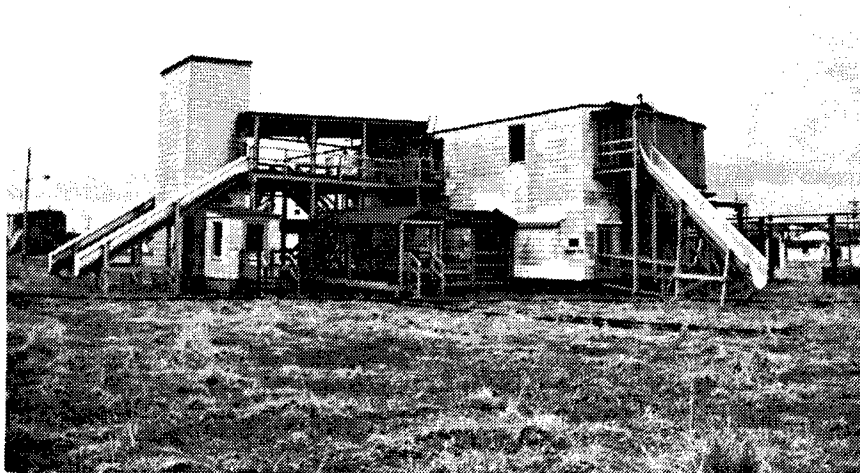


Figure 175. Building 1600-19: Solvent Recovery House.

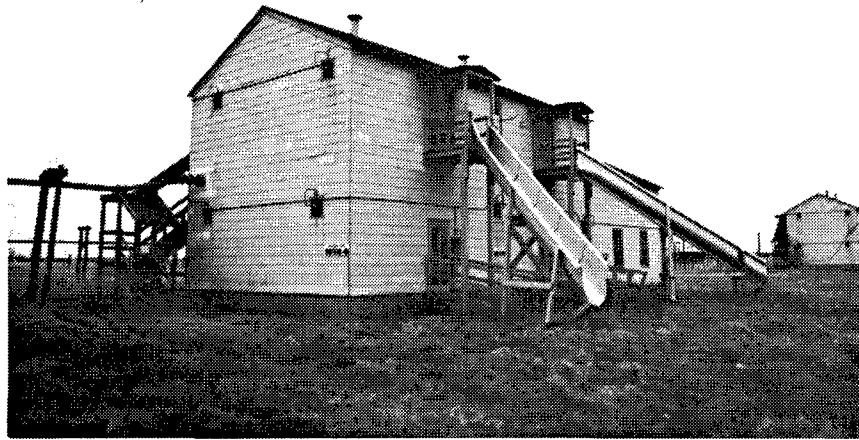


Figure 176. Building 1650-6: Water Dry House where the remaining solvent was removed from the powder. The water dry tank floor and loading dock are wooden.

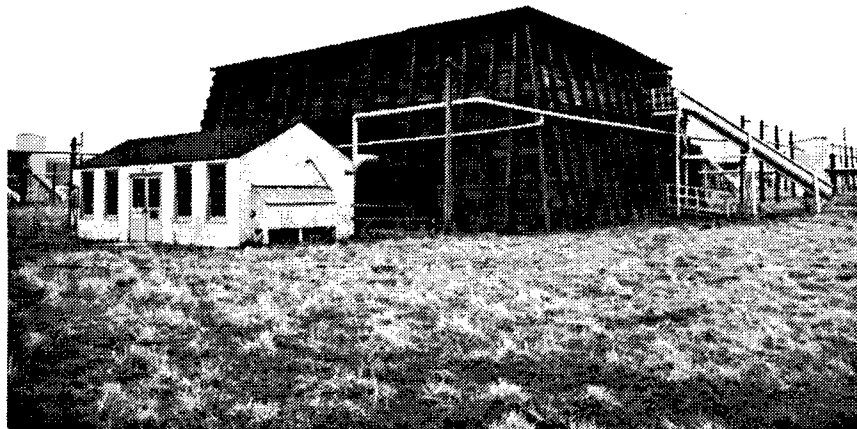


Figure 177. Building 1725-7: Air Dry House.

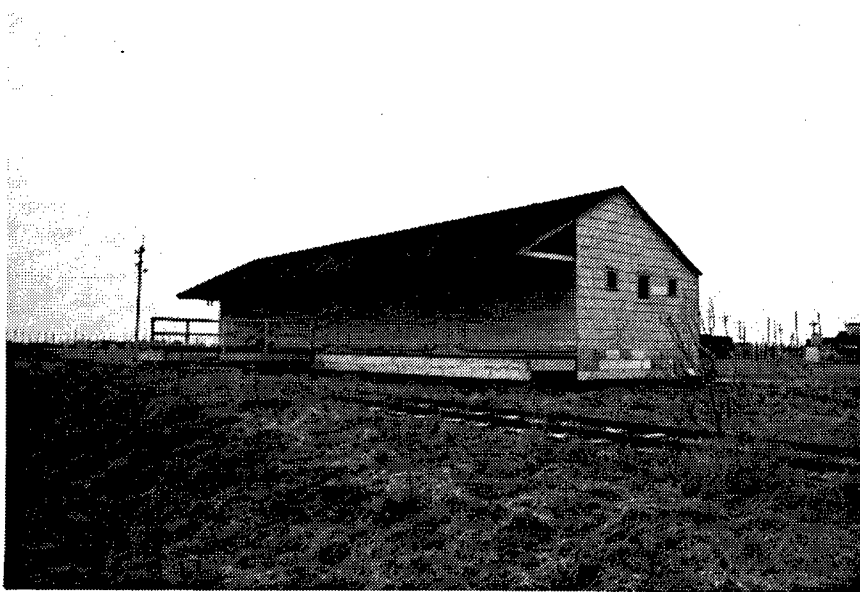


Figure 178. Building 1750-7: Rest House. The interior is lit by exterior lights directed at windows, thus decreasing the chance of fire ignition.



Figure 179. Building 1801: Preliminary Blending House. This building is located in the Final Processing Area for Single- and Double-based Smokeless Powder.

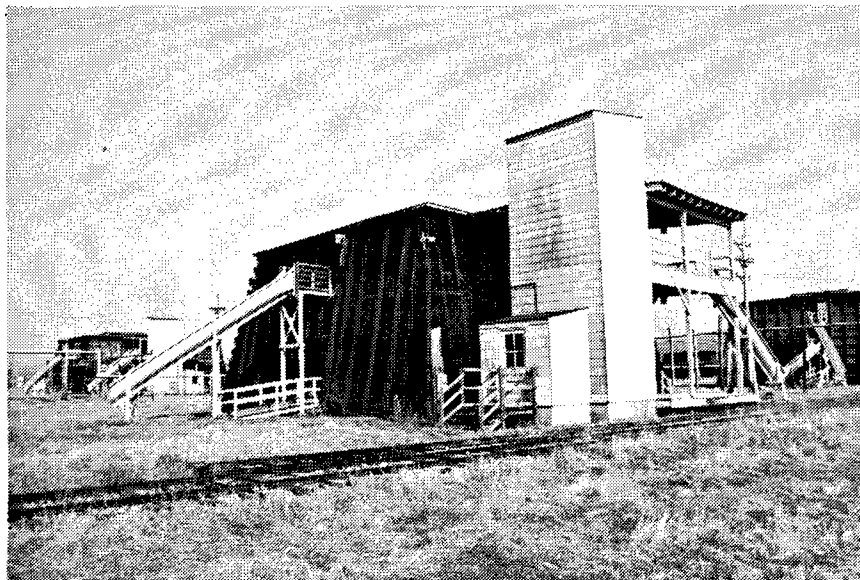


Figure 180. Building 1800-1: Glaze House.



Figure 181. Building 1800-1: Glazing barrel or "Sweetie" barrel.

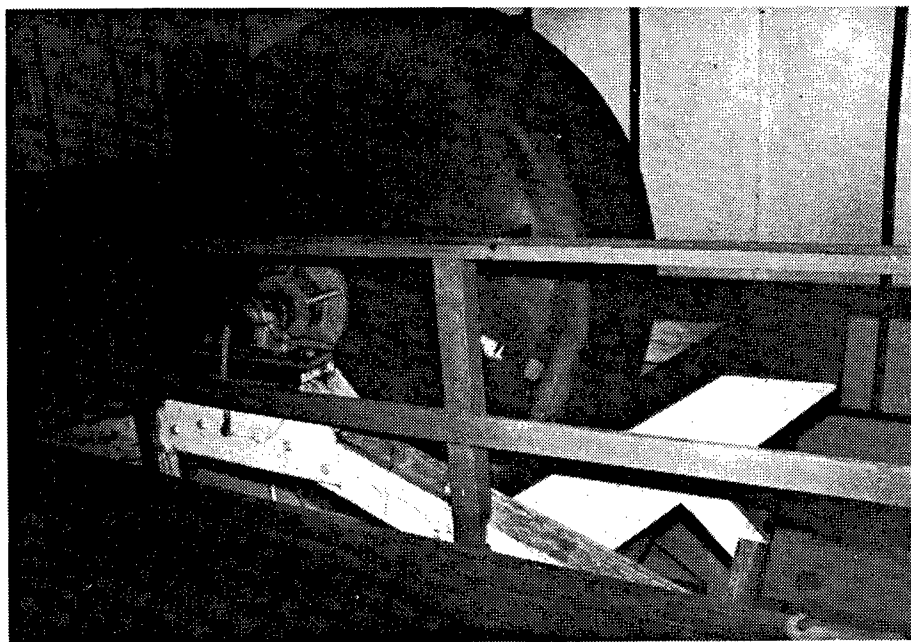


Figure 182. Buildings 1825: Copper blending barrel located on the second floor, measuring 7 feet and 6.5 inches in diameter, 5 feet and 3 inches long, with 1 foot and 4 inches charging port and sixteen baffles.



Figure 183. Building 1850: Screen House where impurities were sifted out of the nitrocellulose.



Figure 184. Building 1875-2: Can conveyor constructed of wooden rollers and frame located on the first floor.

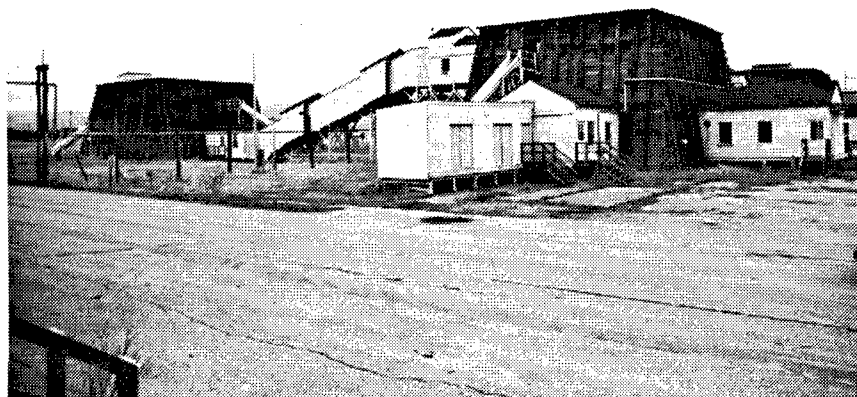


Figure 185. Building 1875-2 (foreground) and Building 1825 (background): Can Pack House and Final Blend House, respectively.

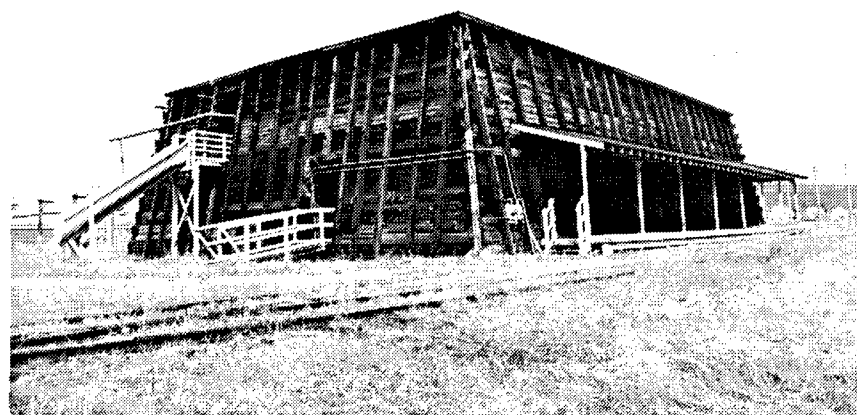


Figure 186. Building 1994: Dinitrotoluene Screen House located in the Final Processing Area for Single- and Double-based Smokeless Powder.



Figure 187. Building 1995: Powder Rework House.



Figure 188. Building 1996-6: Hydro-Jet House with wooden main floor and loading dock.

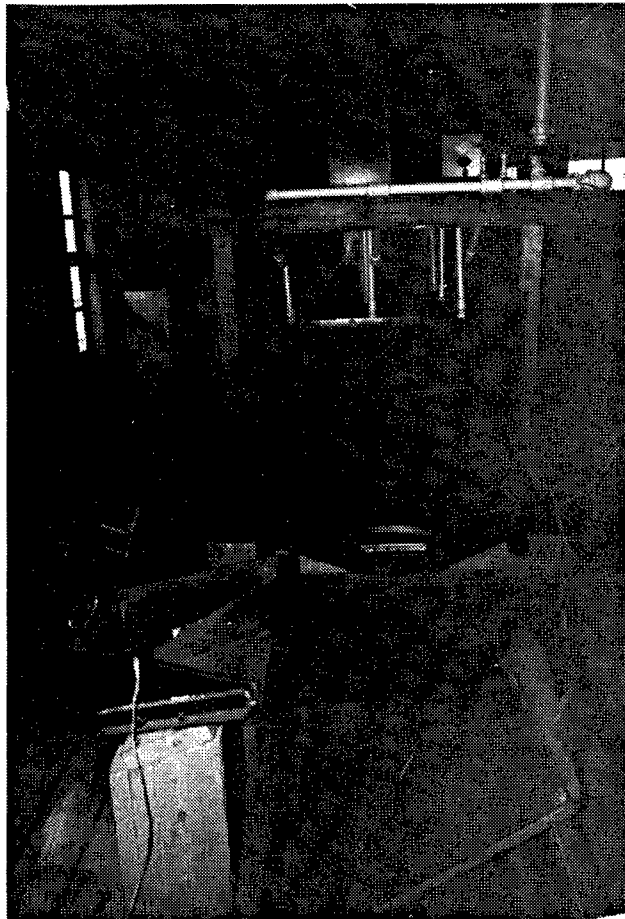


Figure 189. Building 1996-6: Shaker screen.



Figure 190. Building 9020: Boiling Tub Settling Pit measuring 48 feet and 4 inches by 12 feet and 10 inches with bottoms sloping east to west from 5 to 7 feet.



Figure 191. Building 9500-3: Hardening Weigh House.

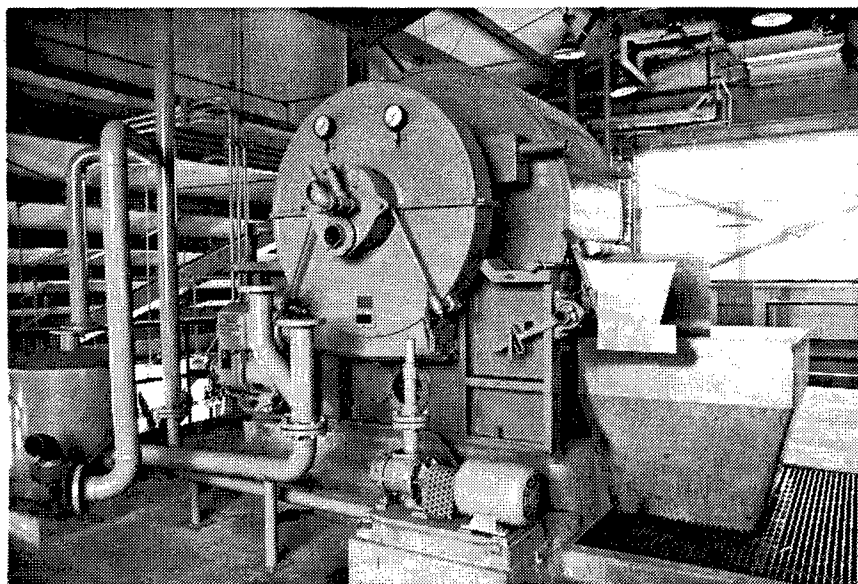


Figure 192. Building 9500-3: "Eimco" drum filter with washer unit for the acid and nitrocellulose process.

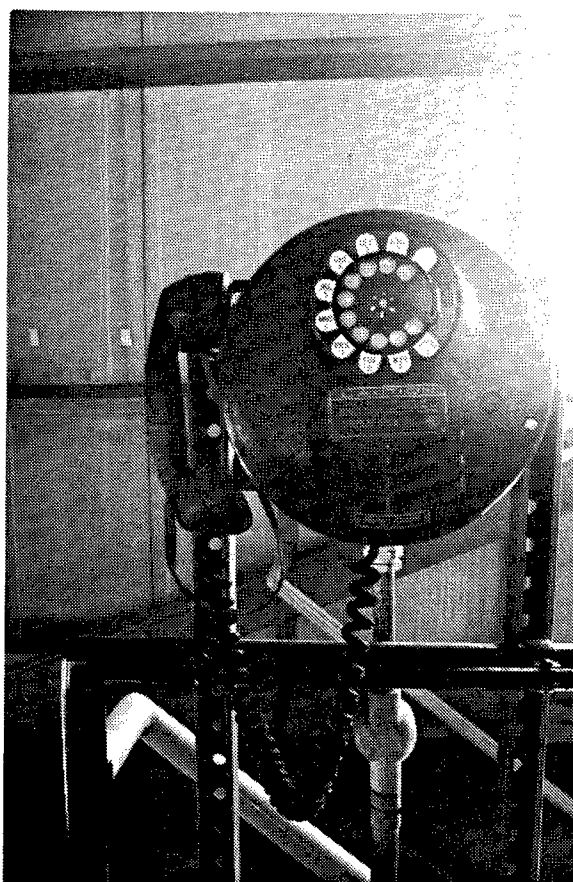


Figure 193. Building 9500-3: Interior view of the third floor showing an explosion-proof phone manufactured in 1955 by West Electric.

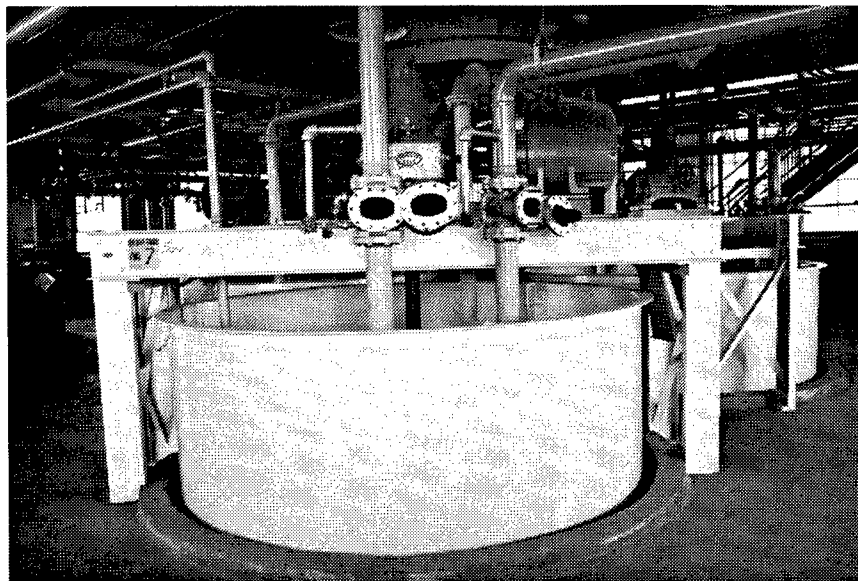


Figure 194. Building 9500-3: Cotton weigh tanks located on the second floor.

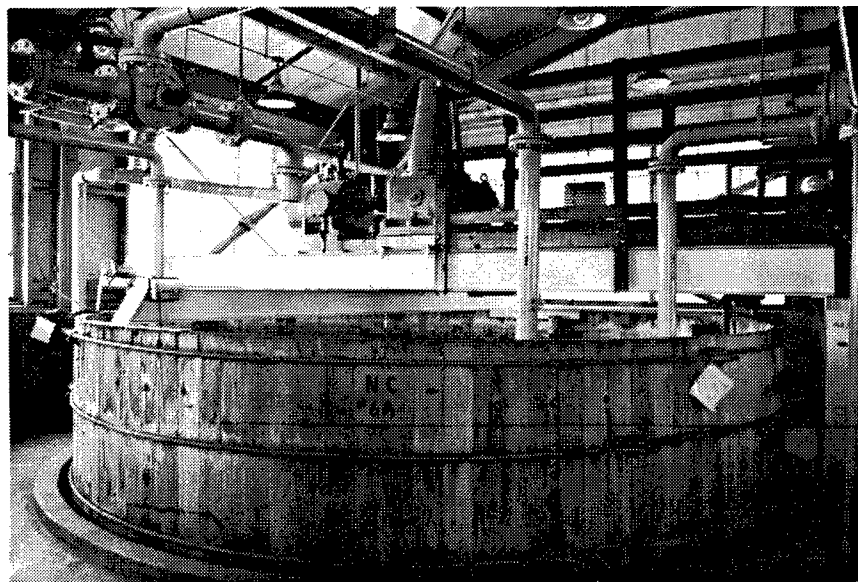


Figure 195. Building 9500-3: Wooden nitrocellulose tub located on the second floor.

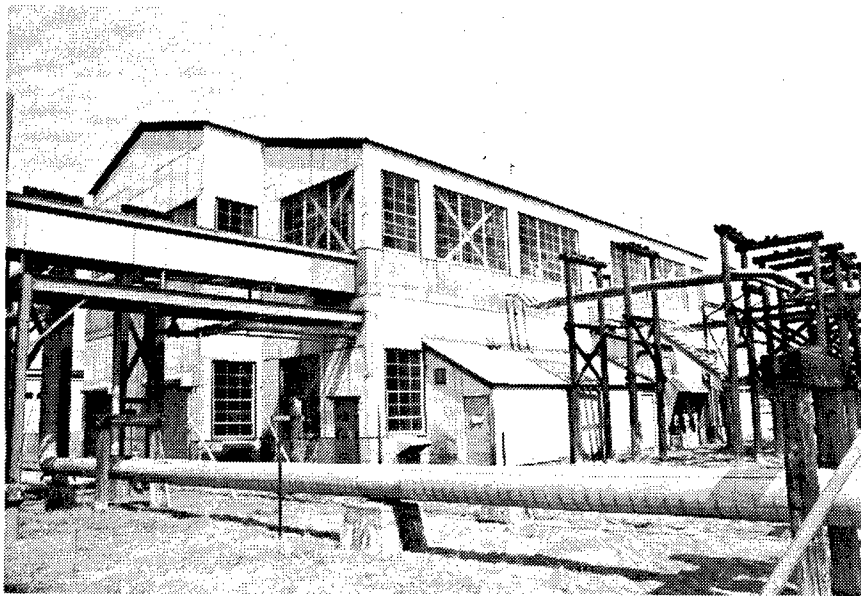


Figure 196. Building 9501-3: Hardening House.

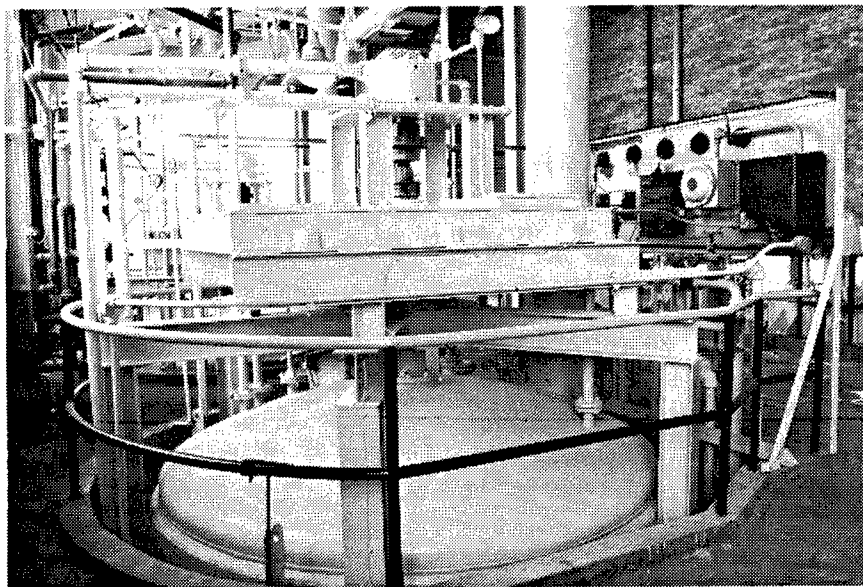


Figure 197. Building 9501-3: Hardening still tank with agitator on the second floor.

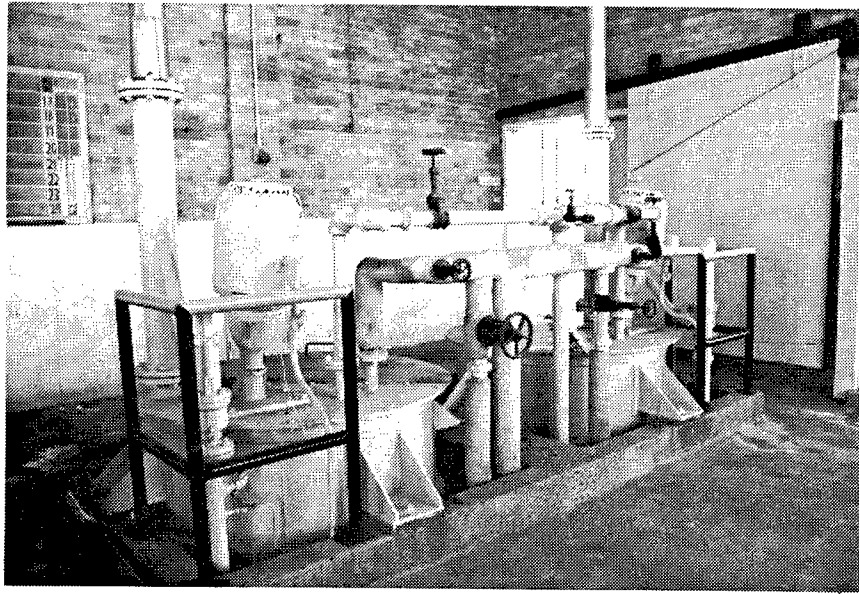


Figure 198. Building 9501-3: Interior view of the second floor showing a colloid and salt tank manufactured in 1954.

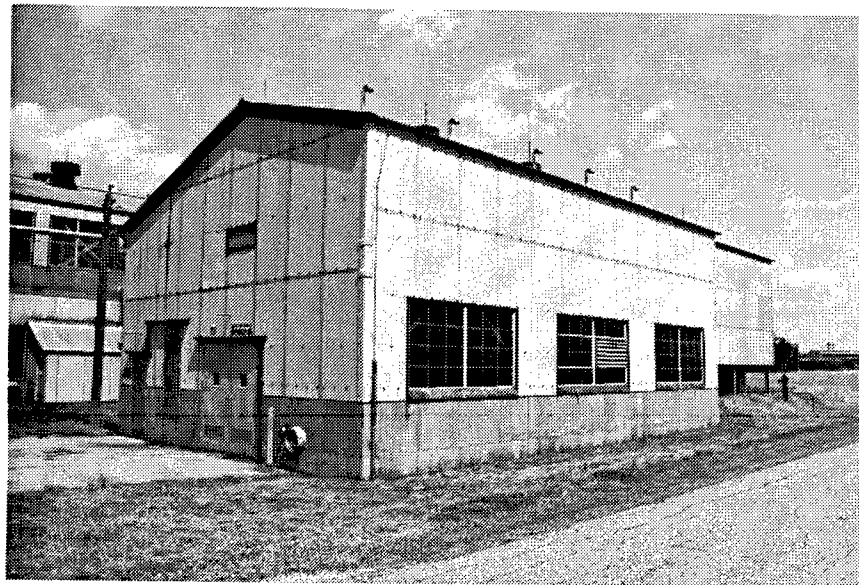


Figure 199. Building 9502-6: Solvent Recovery House.

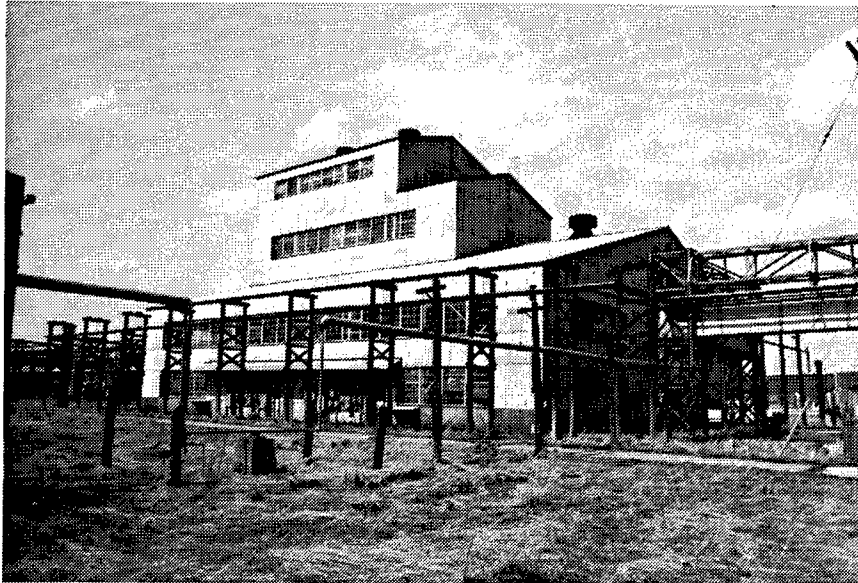


Figure 200. Building 9503: Wet Screen House.

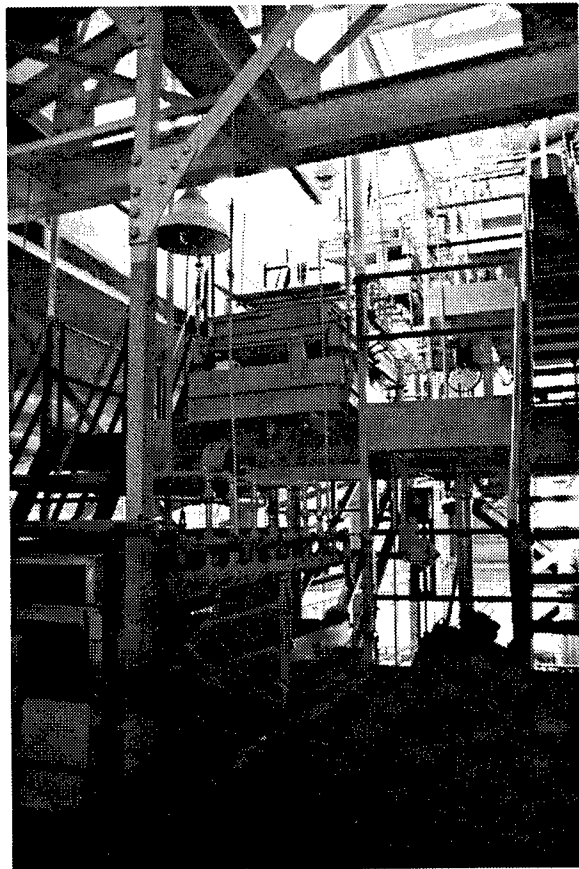


Figure 201. Building 9503: Seven tiers of shaker screens (gyro-centric), starting on the second level.

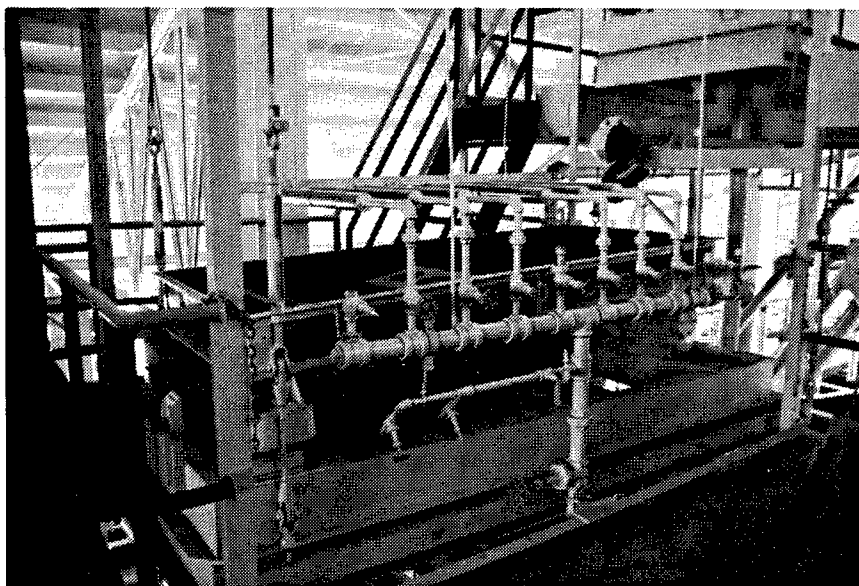


Figure 202. Building 9503: Close-up of shaker screen on the second level.

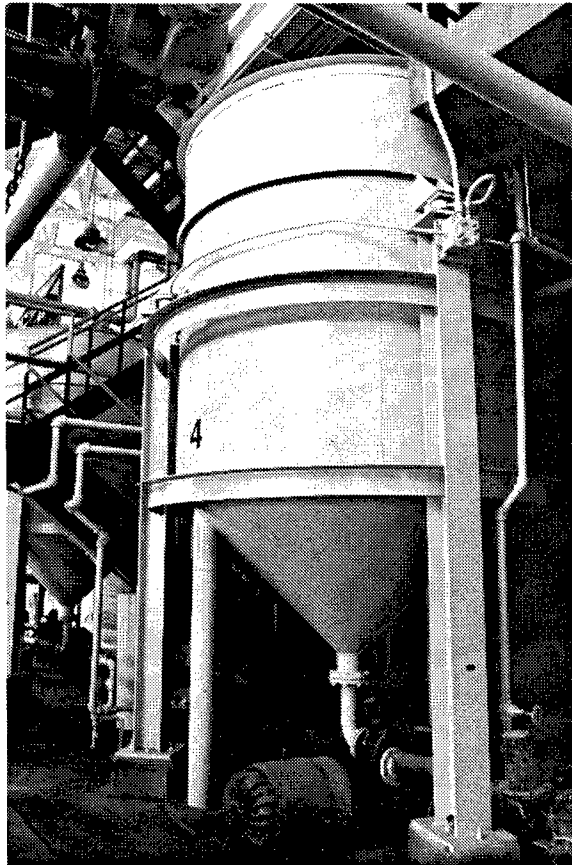


Figure 203. Building 9503: Interior view of the first level showing a Pycnometer, 4,500-gallon weigh tank manufactured by W. M. Brothers Boiler Company.



Figure 204. Building 9503: Concrete storage pits for different powder size granules located on the first floor.

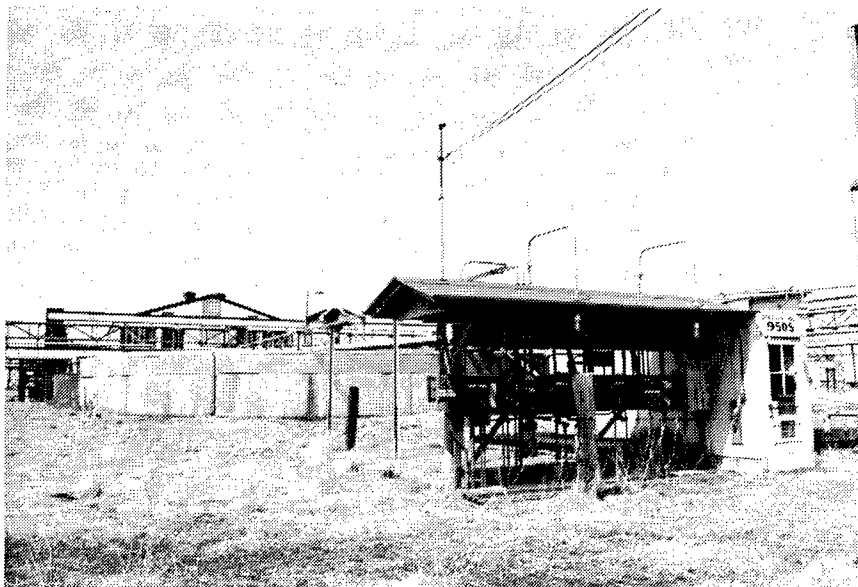


Figure 205. Building 9505: De-watering House.

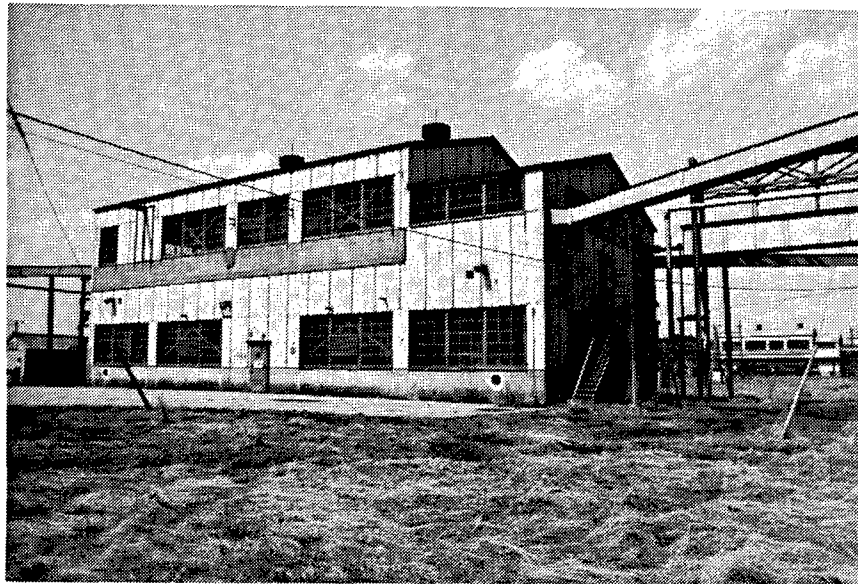


Figure 206. Building 9506-2: Coating House.

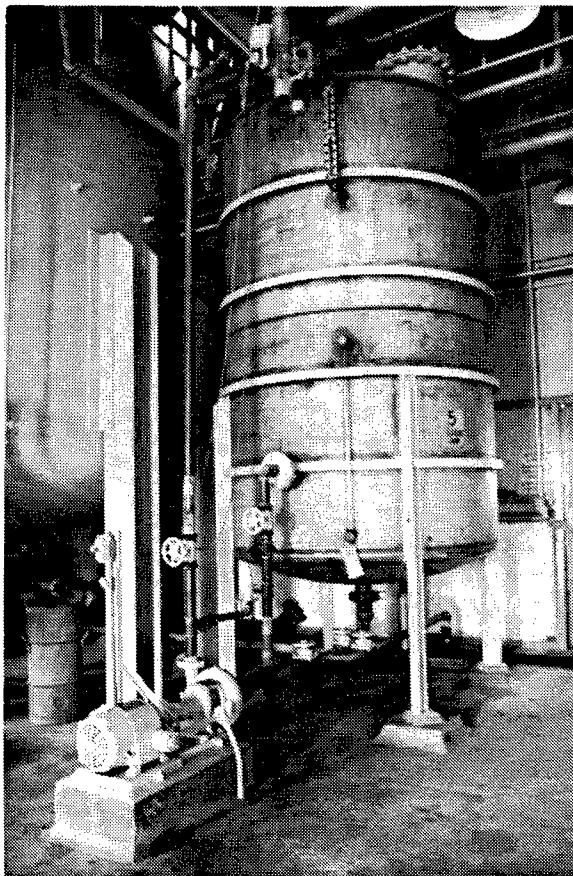


Figure 207. Building 9506-2: Vertical 2,450-gallon solvent receiver and storage tank (located on the first floor) manufactured by Milwaukee Boiler Company.

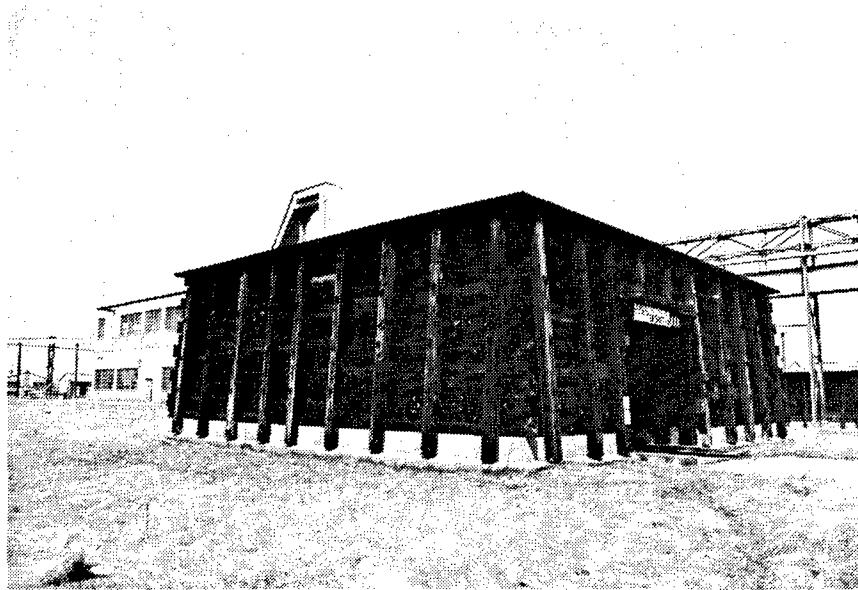


Figure 208. Building 9507-8: Nitroglycerin Coating House that is heated by steam.

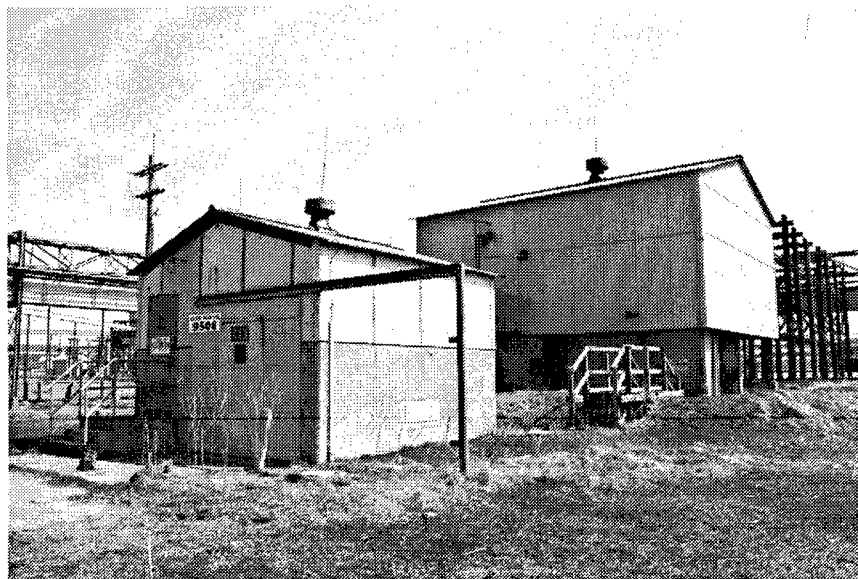


Figure 209. Building 9508: Solvent Weigh House.

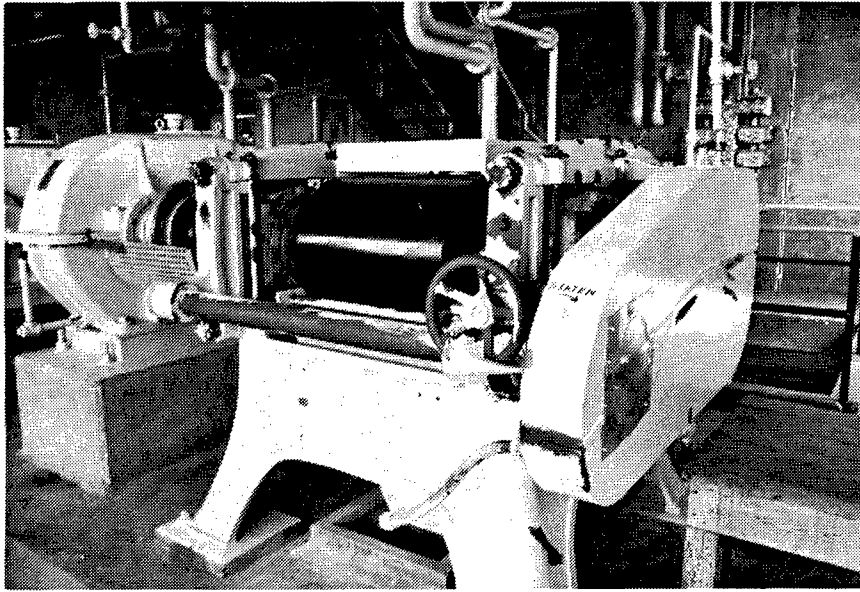


Figure 210. Building 9509-1: Powder roll machine.

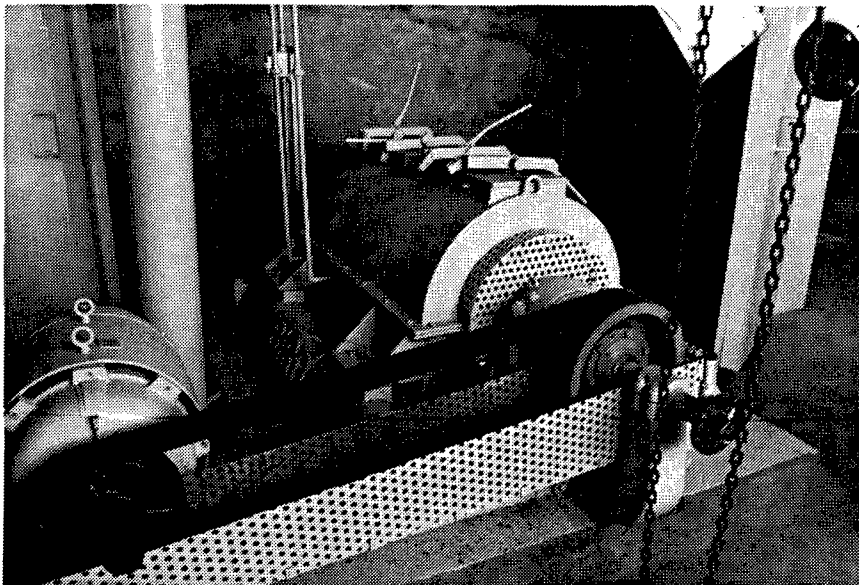


Figure 211. Building 9509-1: Centrifugal filter or de-waterer manufactured by the Bird Machine Company.

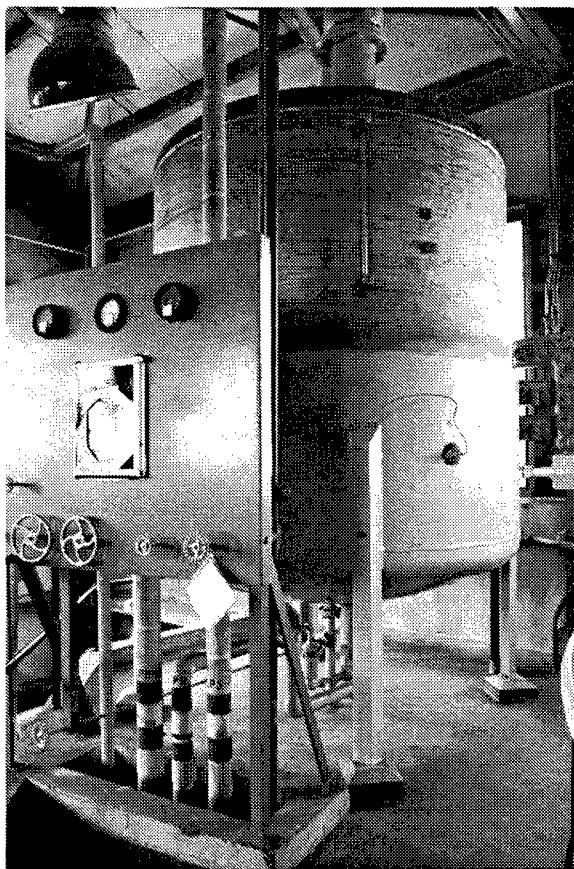


Figure 212. Building 9506-2: Solvent Still in the Coating House.

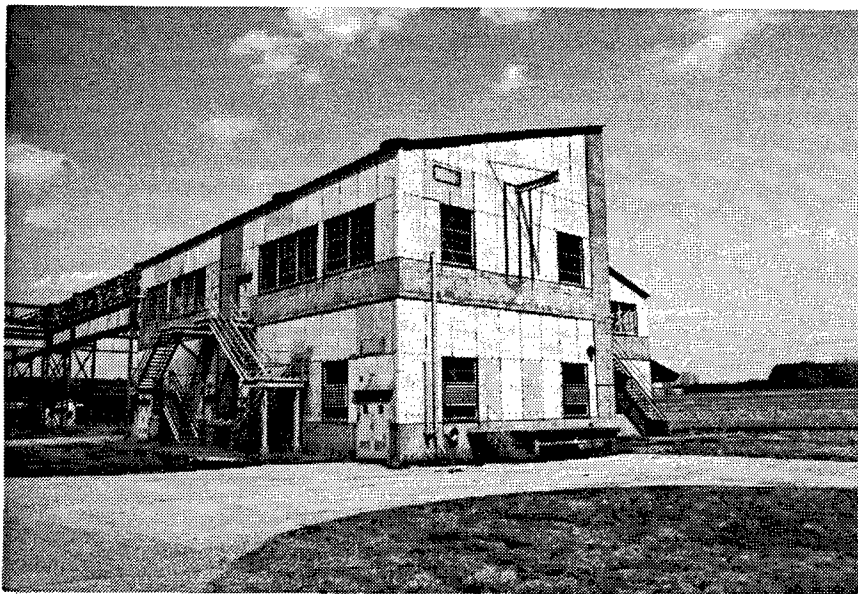


Figure 213. Building 9509-2: Roll and De-water House.

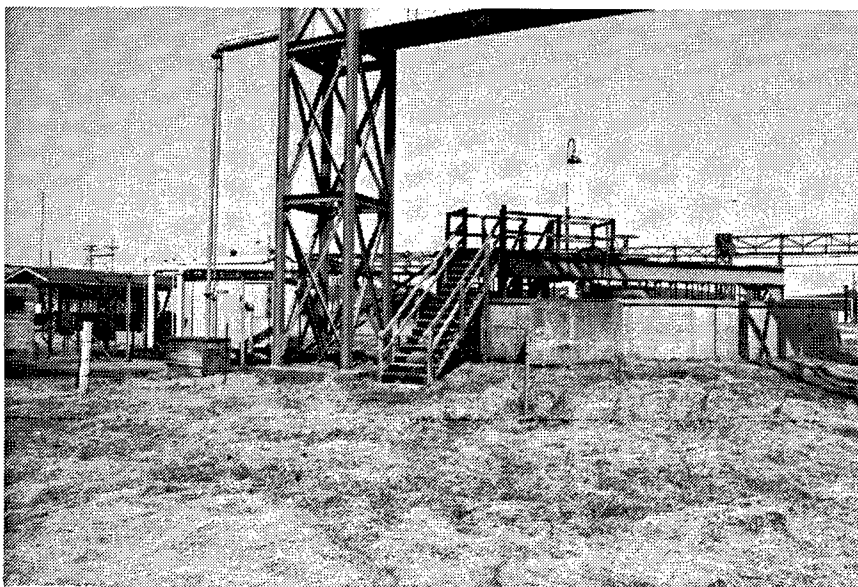


Figure 214. Building 9510: Clarifier.

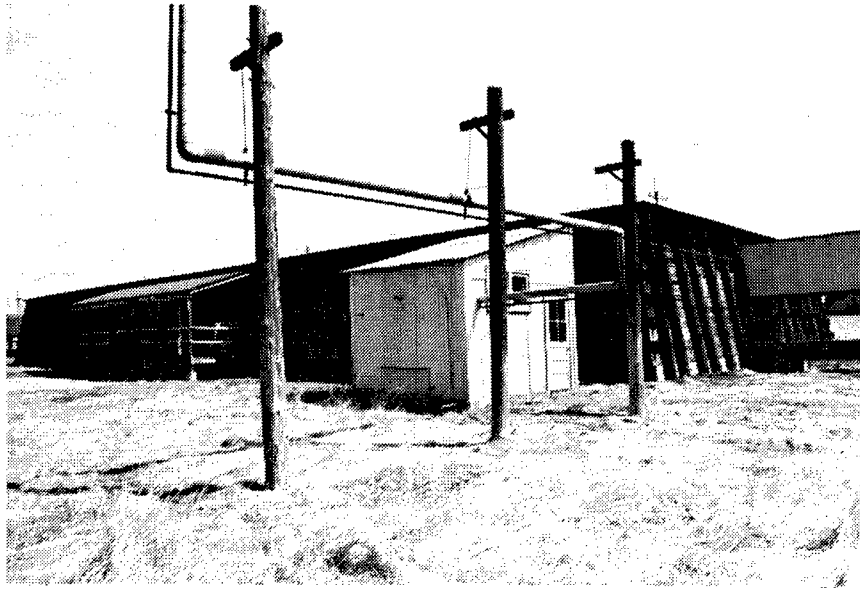


Figure 215. Building 9511: Wet Powder Rest House where the powder within its barricaded walls waited for further processing.

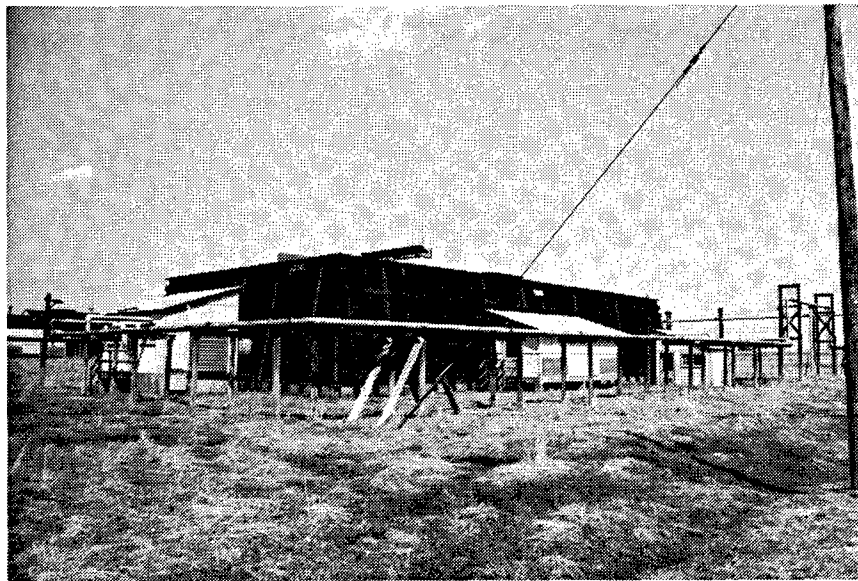


Figure 216. Building 9513-2: Tray Dry House.

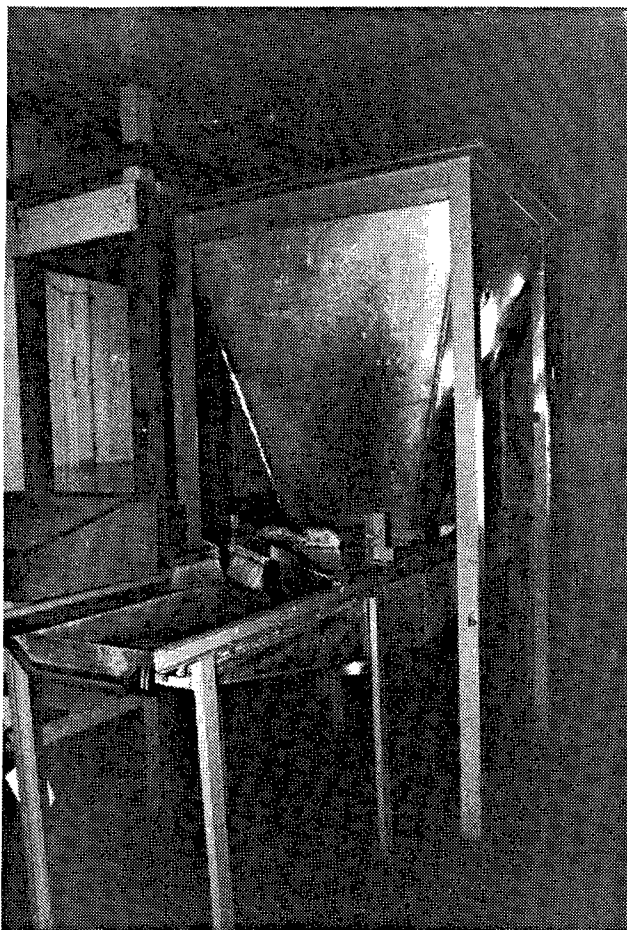


Figure 217. Building 9513-2: Tray loading unit that includes hopper and table, manufactured in 1955.

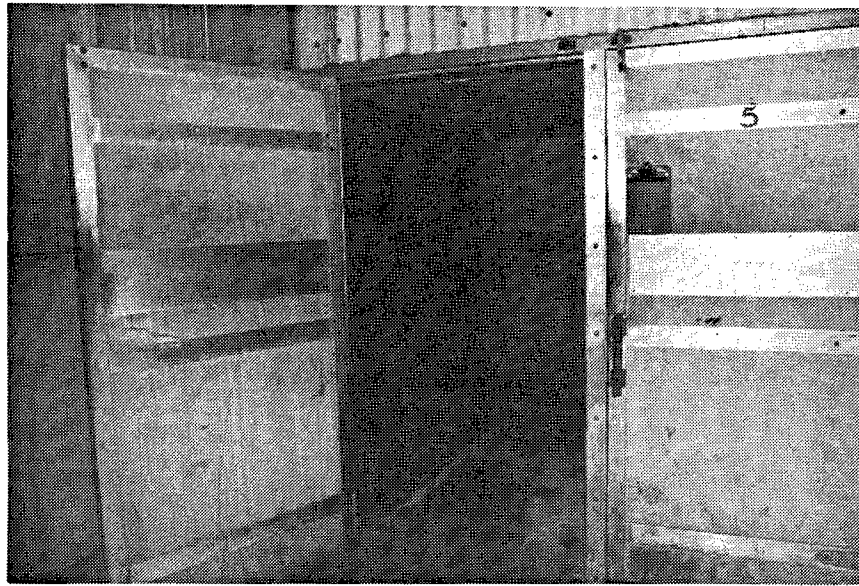


Figure 218. Building 9513-2: Proctor and Schwartz drying oven. Note the coils and blower.



Figure 219. Building 9525: Decant Pit.

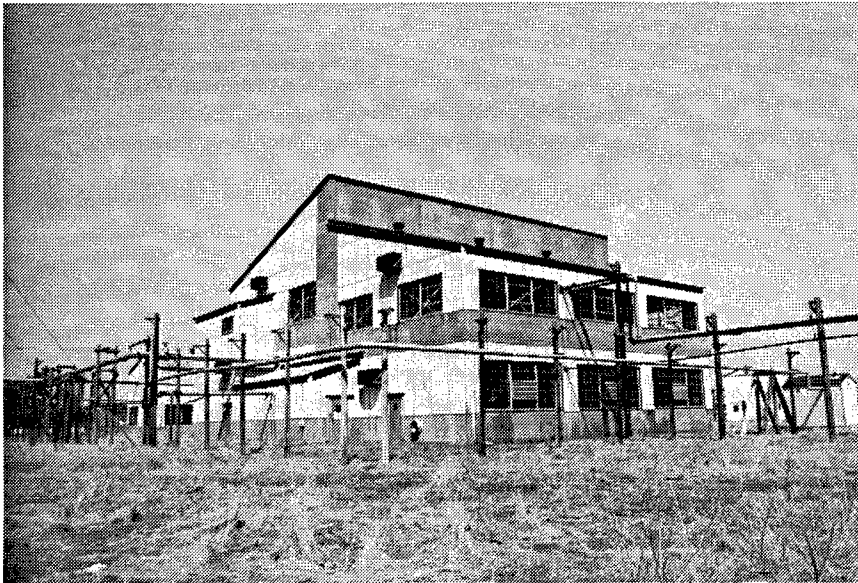


Figure 220. Building 9591 and Building 9592: Powder Grinding House (foreground) and Extracting House (background), respectively.

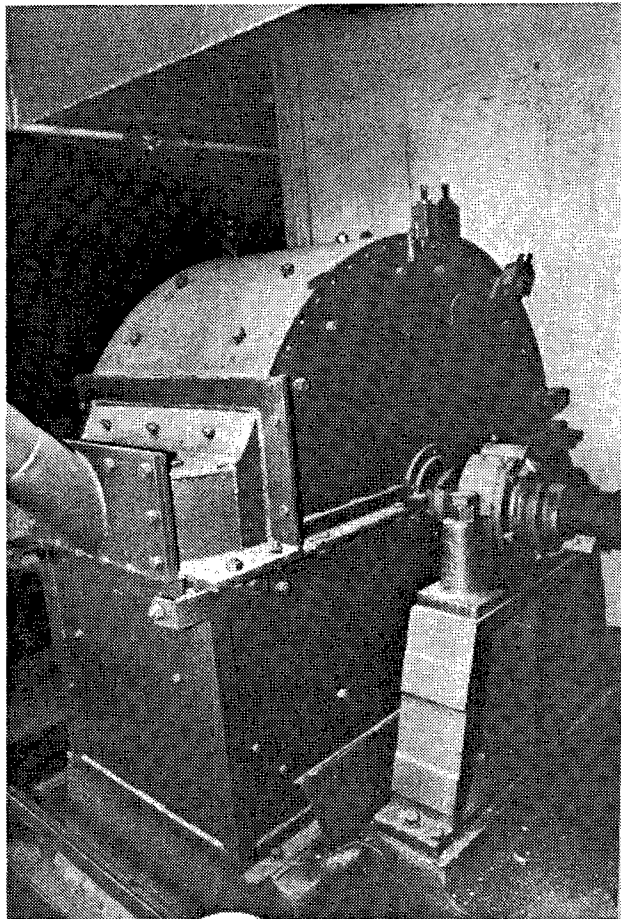


Figure 221. Building 9591, Catwalk: Powder grinding hammermill manufactured by Dixie Manufacturing.

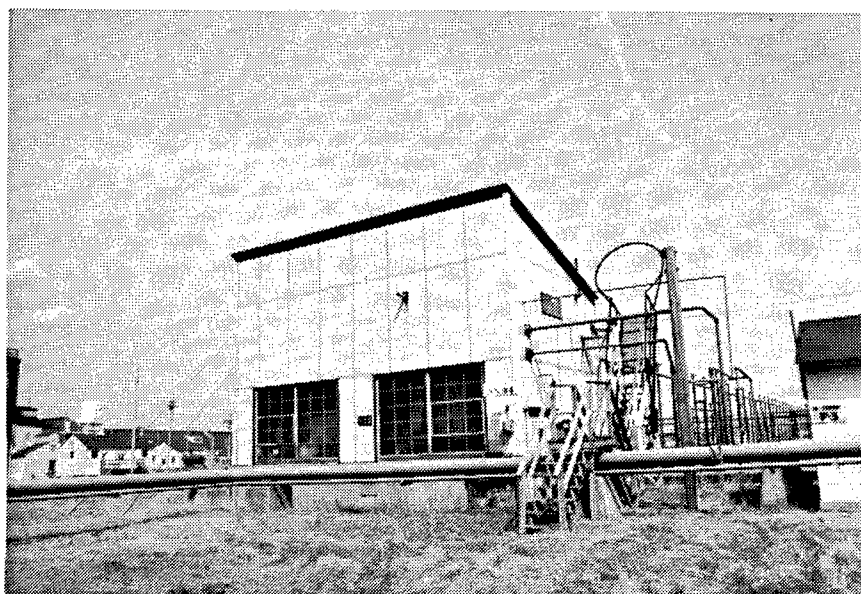


Figure 222. Building 9594: Solvent Receiving House.

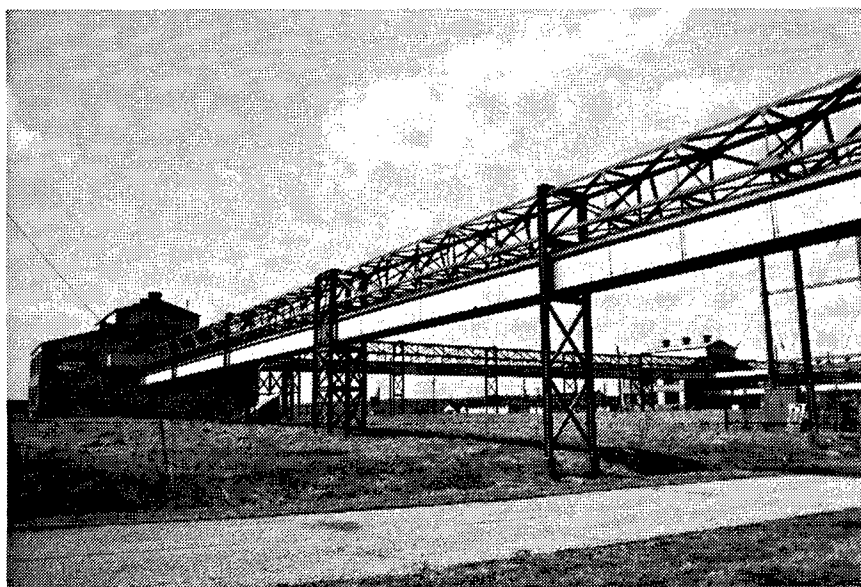


Figure 223. Building 942: Pipe Rack linking together buildings to operations of the Smokeless Ball Powder Line.

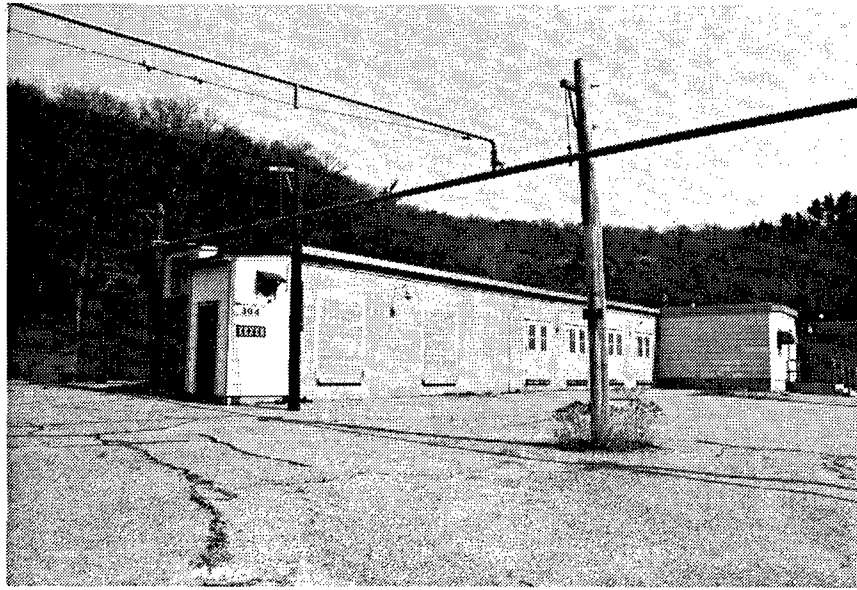


Figure 224. Building 304: Cannon Assembly House.

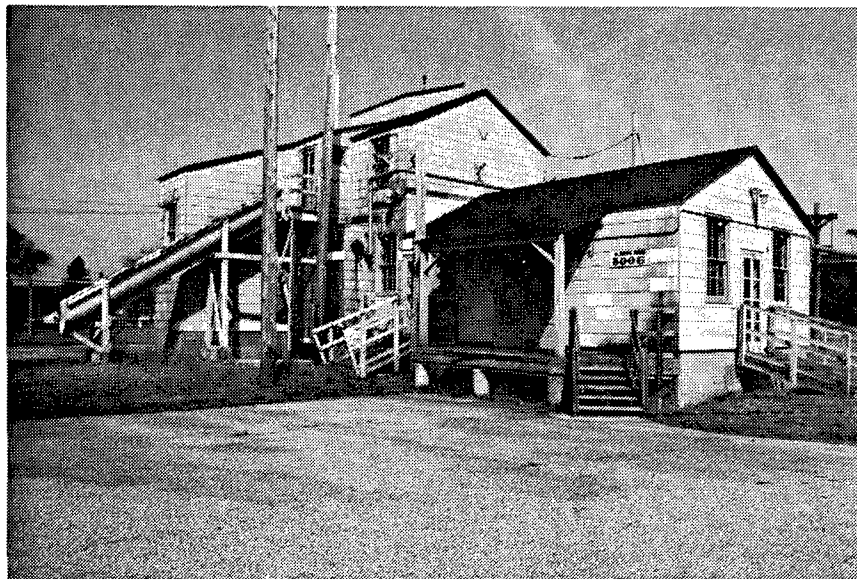


Figure 225. Building 8006: Blending House.

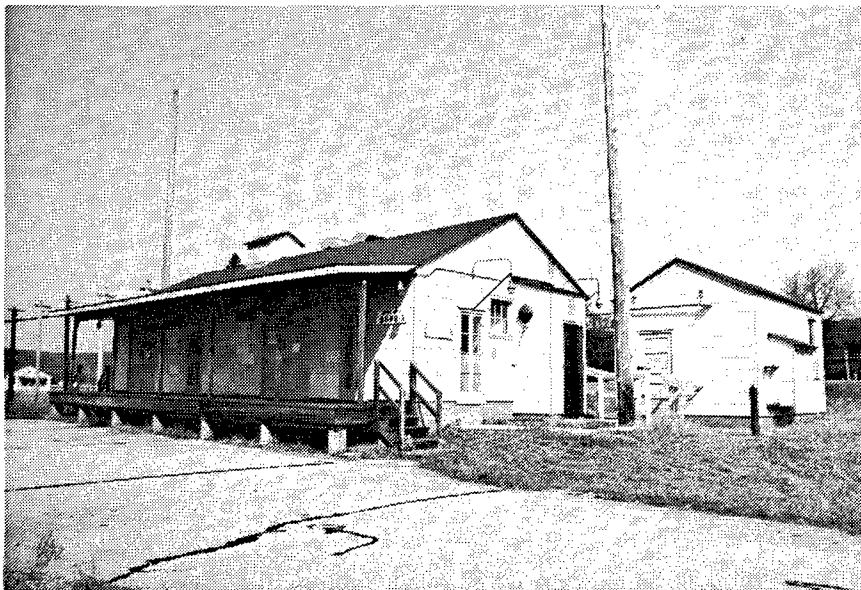


Figure 226. Building 8000-3: Drying House with Heater House.

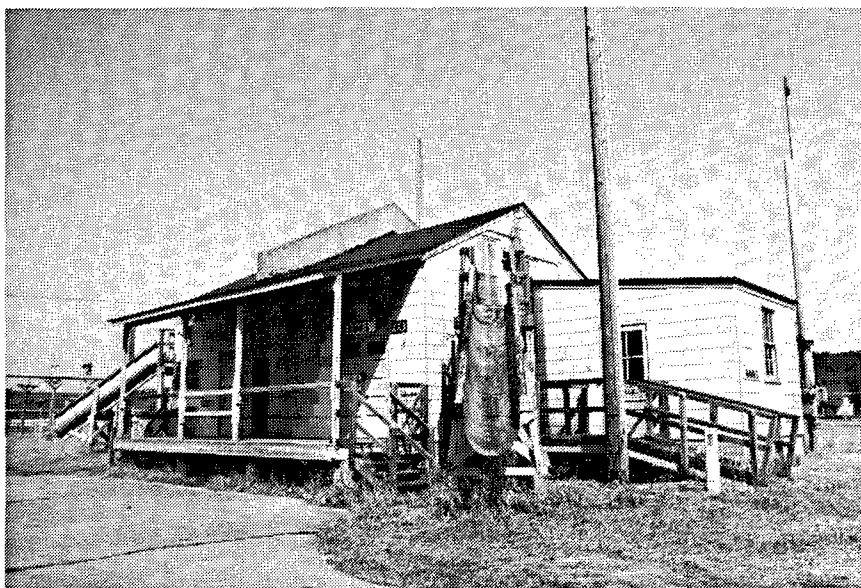


Figure 227. Building 8003: Dry Processing House.

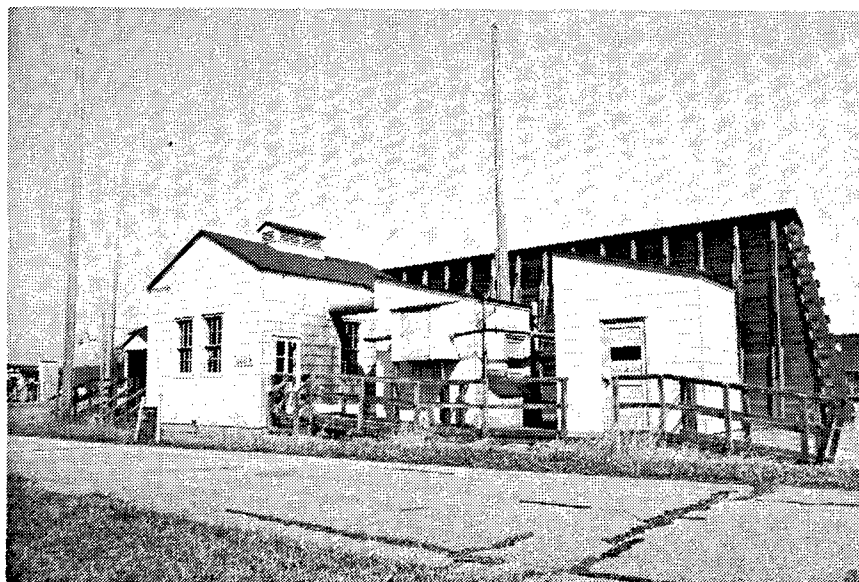


Figure 228. Building 8002: Dry Sample Process with a barricade on the far side of the building.

SUPPORT FACILITIES FOR MANUFACTURING



Figure 229. Building 224: Ballistic House and Range for small arms.



Figure 230. Building 524: Calibration Facility. It currently serves as the Metrology Laboratory.

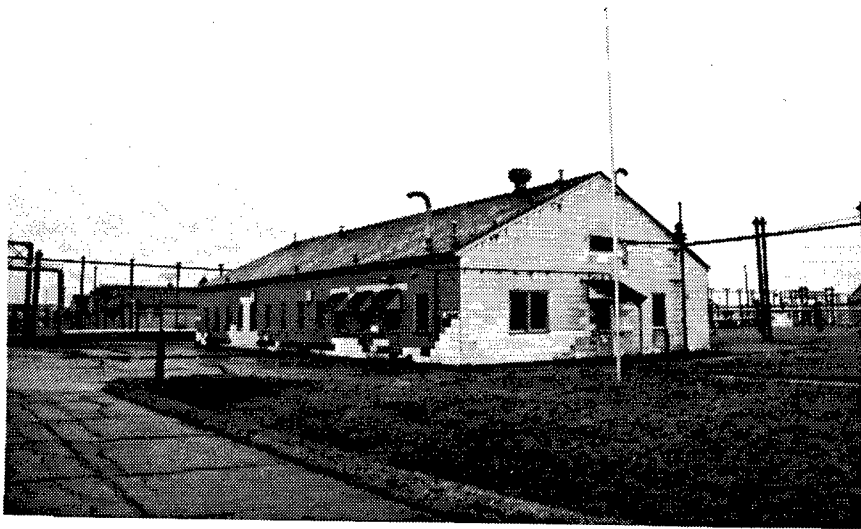


Figure 231. Building 4034: Nitrocellulose Laboratory.



Figure 232. Building 6873: Test House in the Ballistic Area.

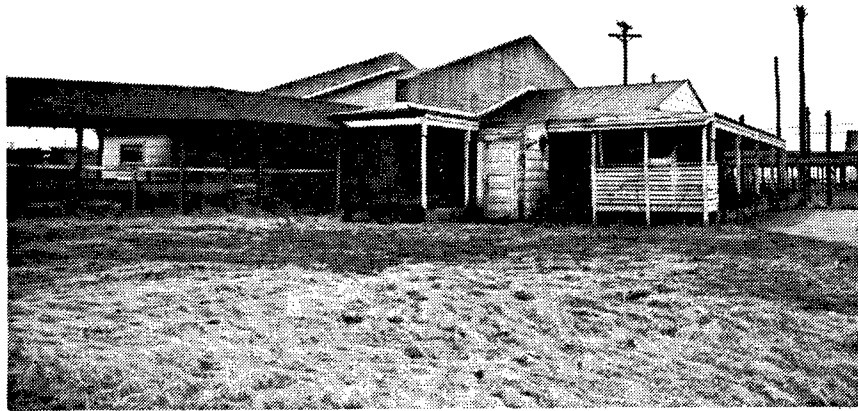


Figure 233. Building 6877: Loading House in the Ballistic Area.

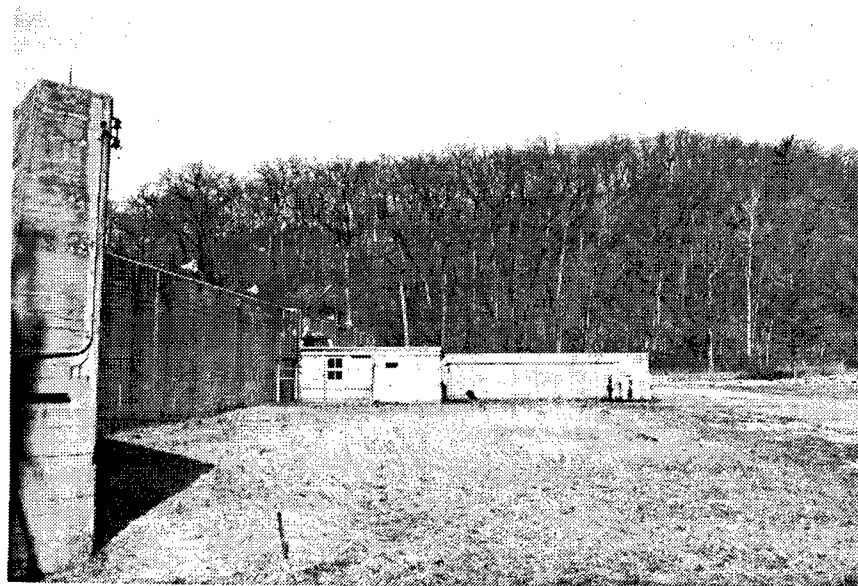


Figure 234. Building 303: Gun Range.

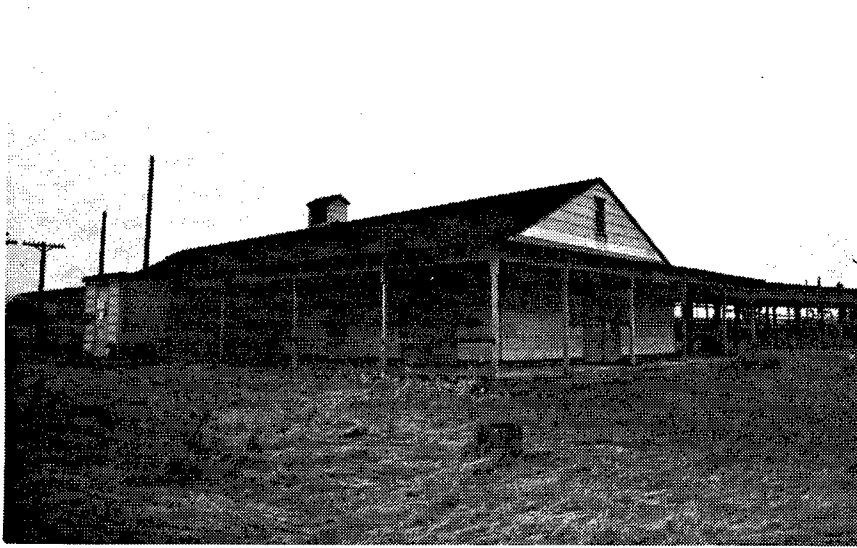


Figure 235. Building 6826-1: Supersonic Scanning House, or Fluoroscope House. Its three rooms consist of a lunch room, a scanning room, and a discharge room.



Figure 236. Building 6881: X-Ray House. This concrete building houses rooms for viewing, chemical supply and film storage, office and air conditioning, as well as a darkroom.

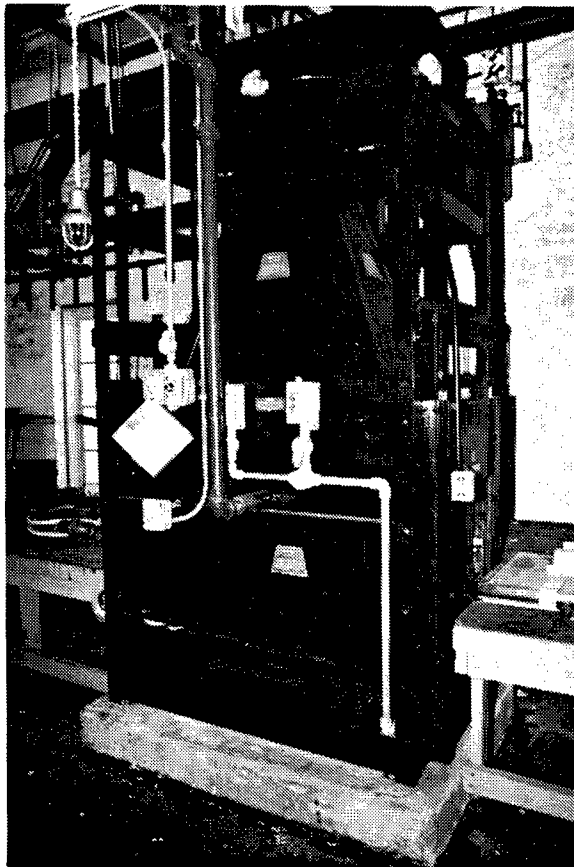


Figure 237. Building 6881: Close-up of Westinghouse housing with Andrex X-ray head and X-ray machine.

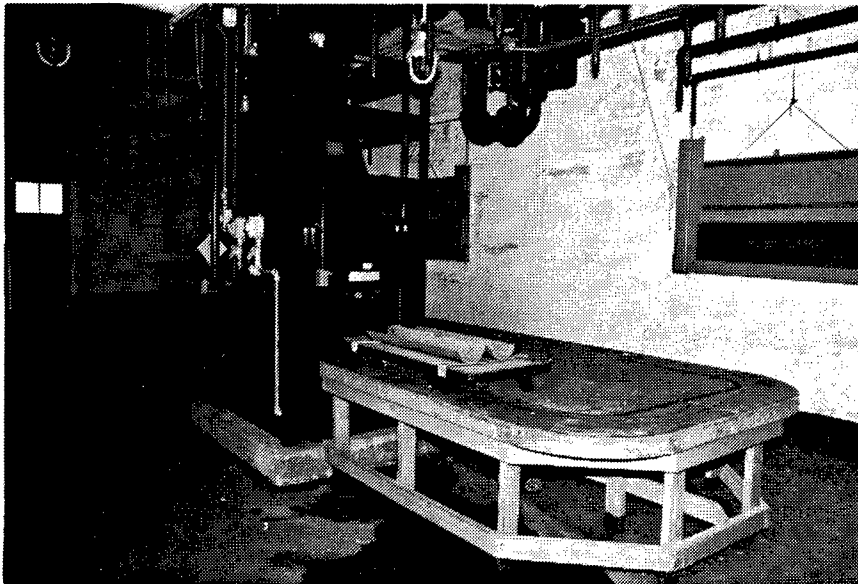


Figure 238. Building 6881: X-ray machine with propellant track and propellant car.

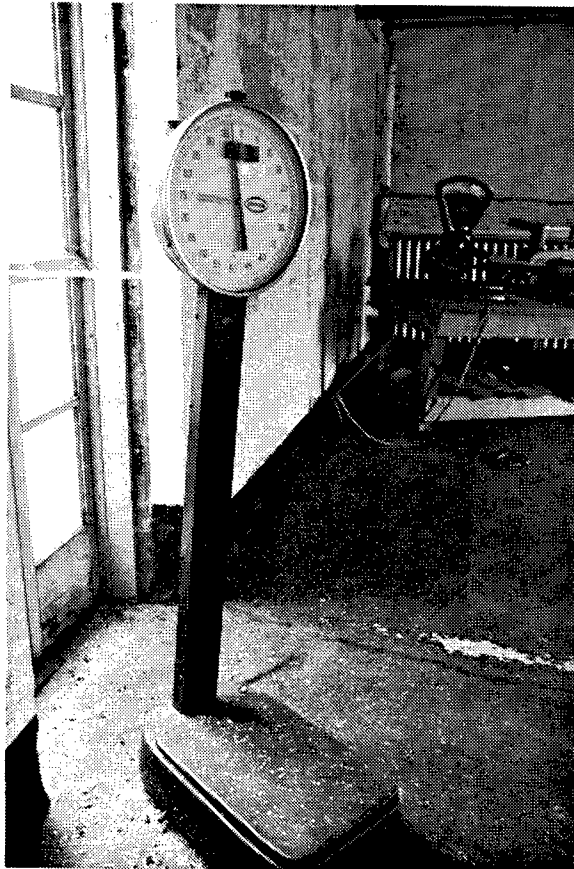


Figure 239. Building 6881: Chatillon Dial Platform scale with a 100-pound capacity.

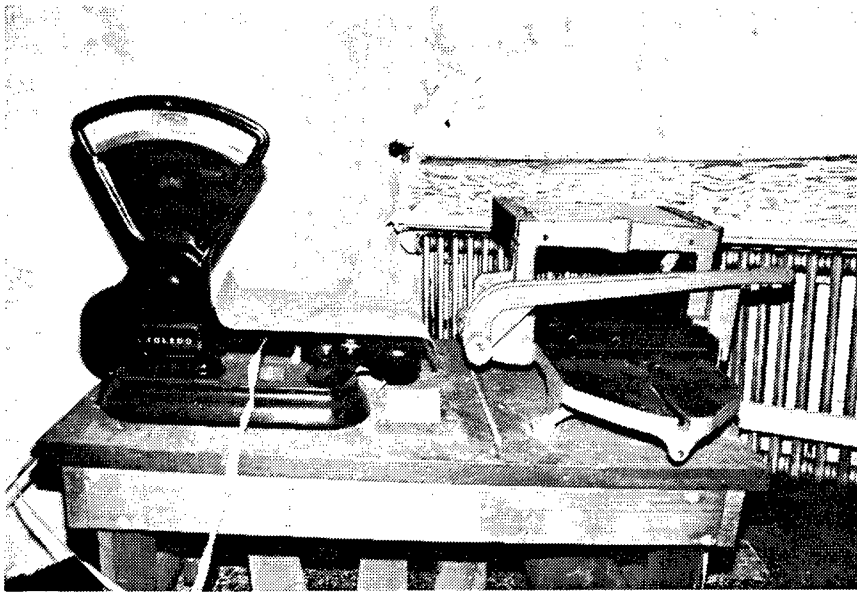


Figure 240. Building 6881: 1942 Toledo scale and a cutter for rocket grain by Challenge Machinery.

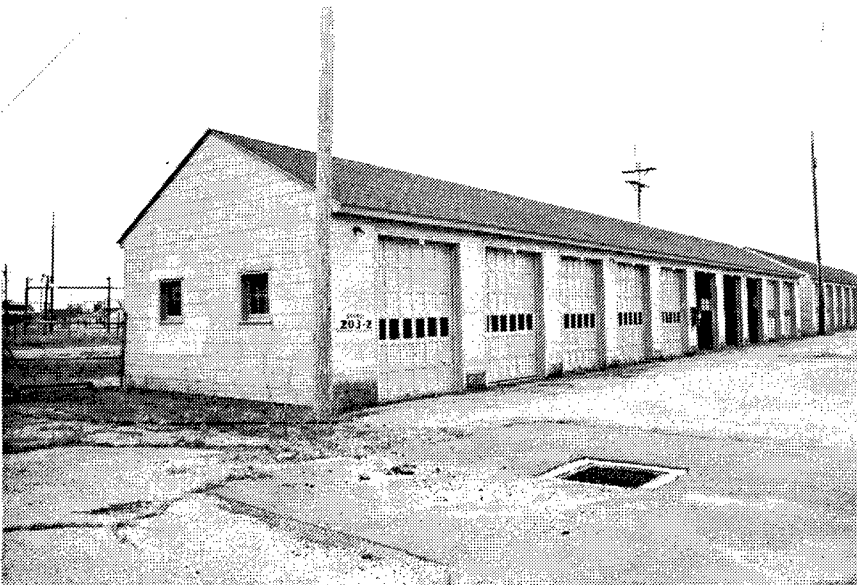


Figure 241. Building 203-2: Vehicle Storage/Garage for the administrators' government vehicles.

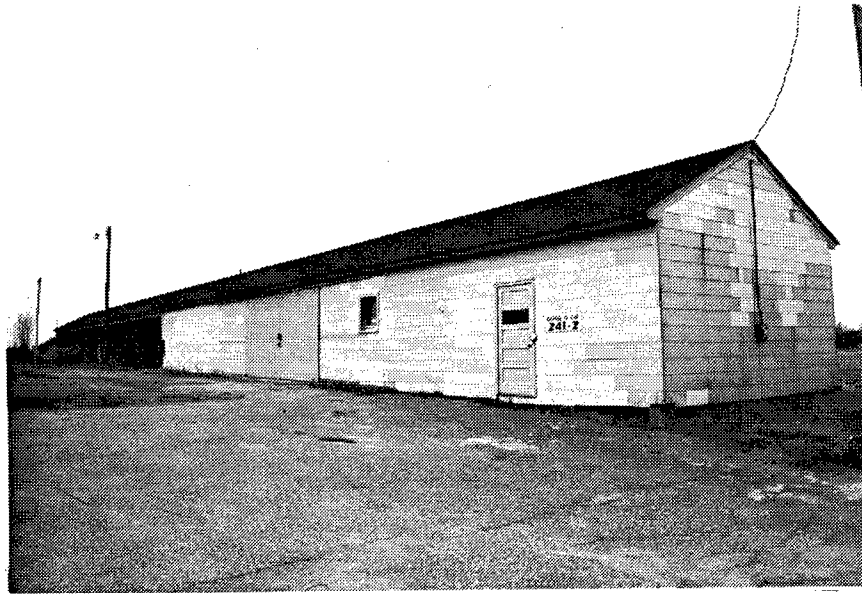


Figure 242. Building 241-2: Twelve-car Garage in the Shop Area.



Figure 243. Building 4562: Laundry Building. The wings of this building form a cross.

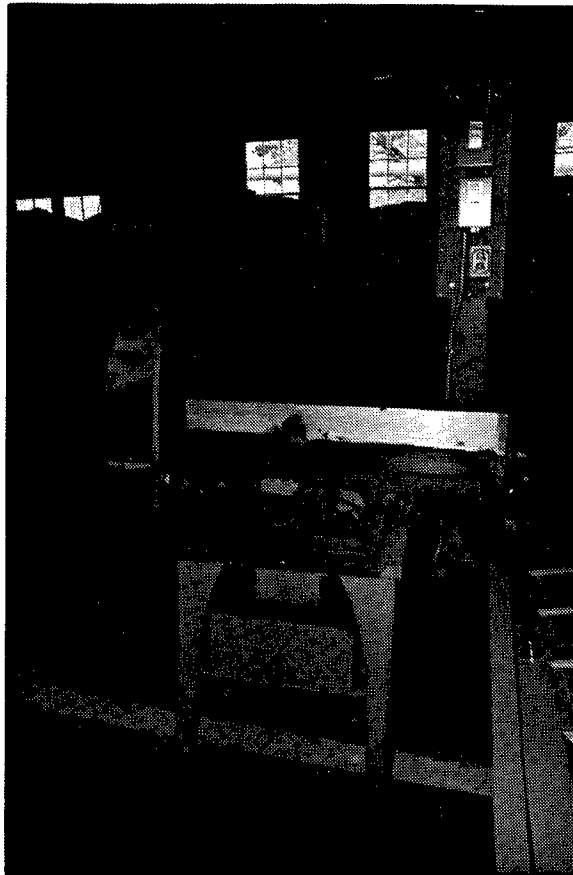


Figure 244. Building 6874-1: Jointer manufactured by Walker-Turner in the Rocket Area Shop.



Figure 245. Building 6736: Bag Turning House. Powder Bags are sent here to be prepared for re-use.



Figure 246. Building 4521: Hydraulic Station for the Double-based propellant area.

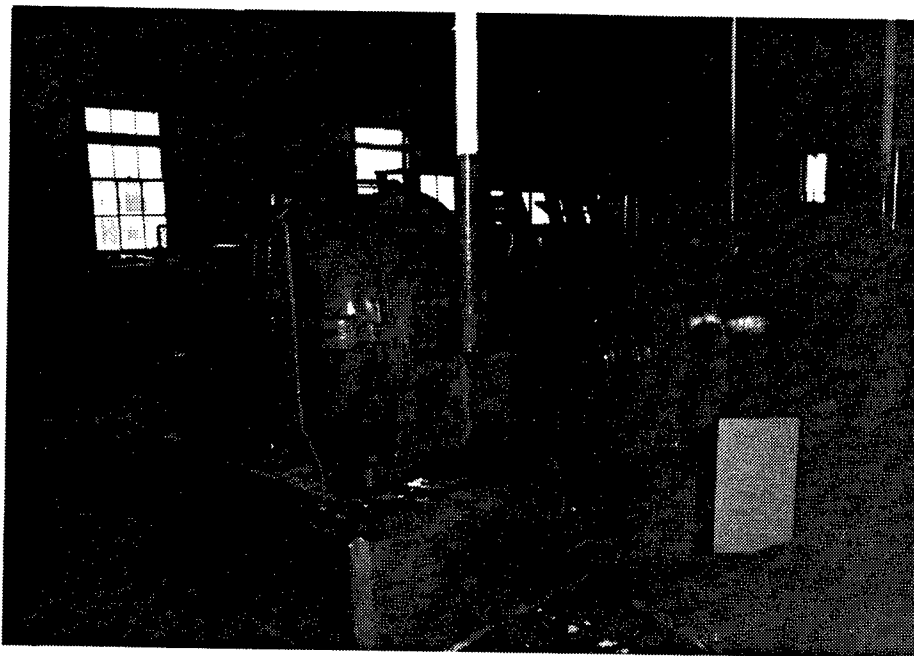


Figure 247. Building 4521: High pressure hydraulic pump at the Hydraulic Station.

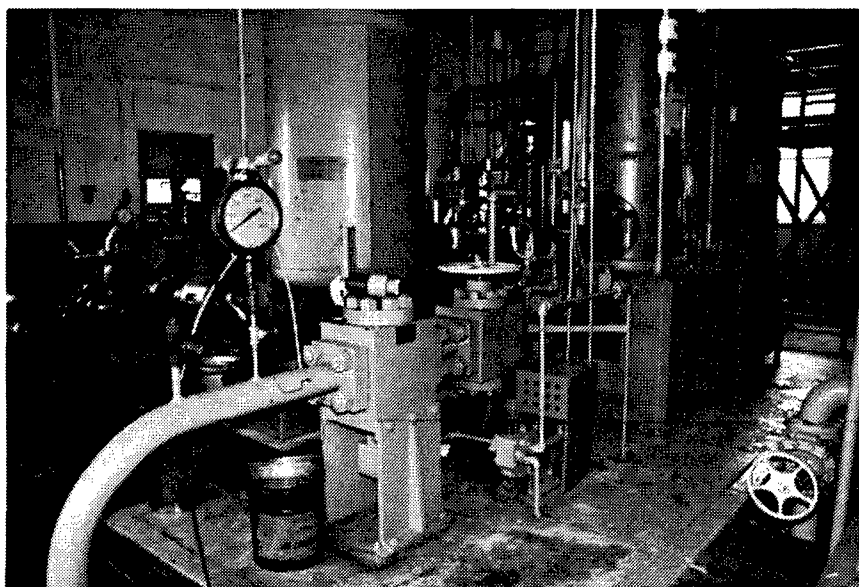


Figure 248. Building 4521: High pressure 600-gallon vertical accumulator tank at the Hydraulic Station.

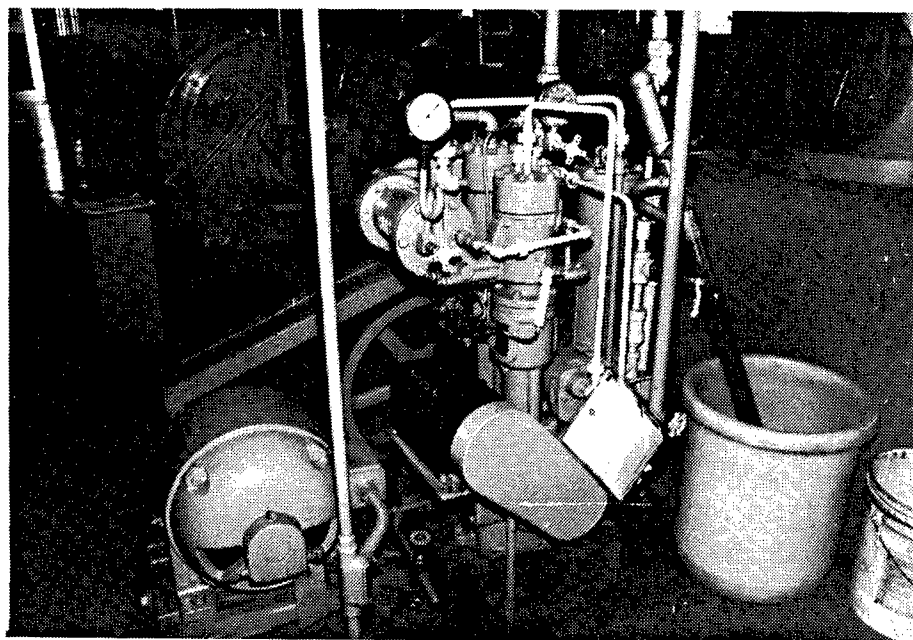


Figure 249. Building 4521: Stationary air compressor manufactured in 1942.



Figure 250. Building 4521: Low pressure 2,000-gallon vertical accumulator tank.



Figure 251. Building 4555: Activated Carbon Recovery and Duct System where fumes that were expelled during munitions processing were sent via the duct system for solvent recovery and disposal.

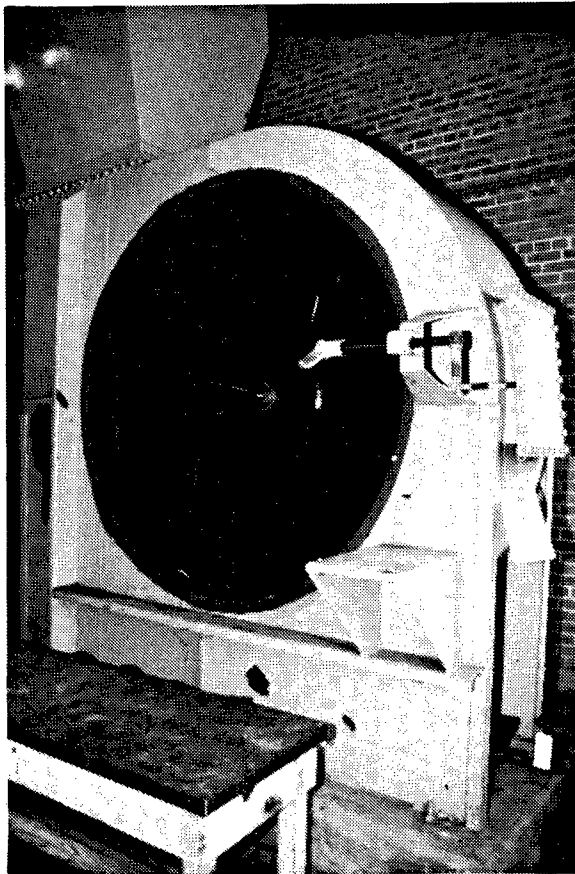


Figure 252. Building 4555: Blower manufactured in 1942 by the American Blower Company.

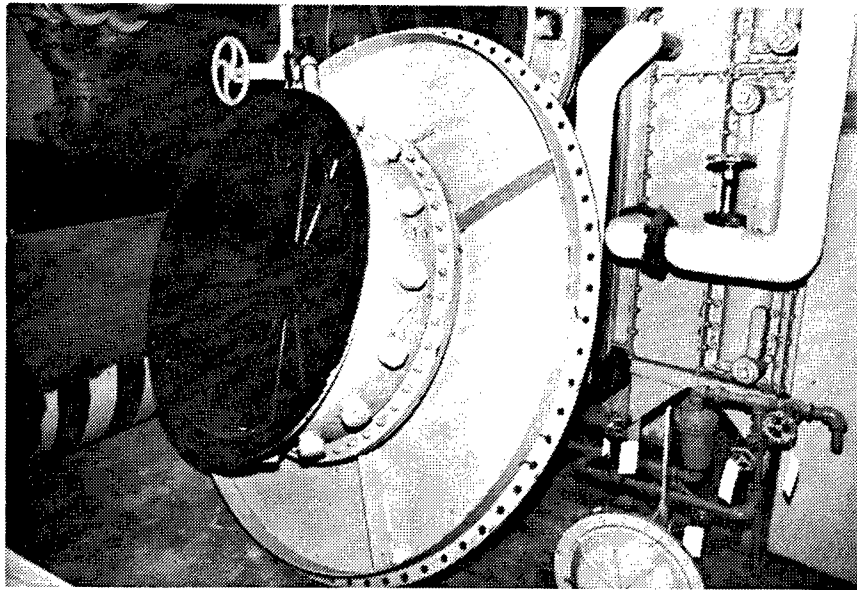


Figure 253. Building 4555: Unattached head of blower for the duct system.

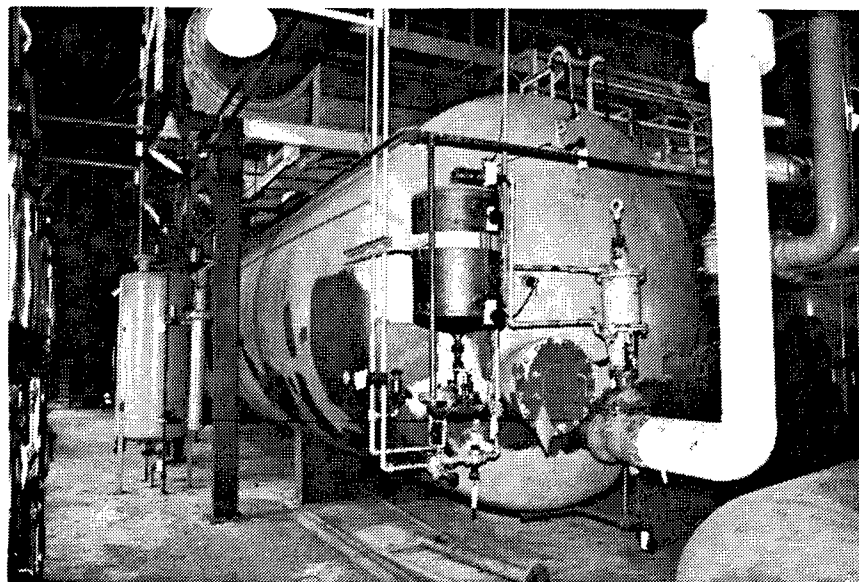


Figure 254. Building 4555: Horizontal steel absorber storage tank.

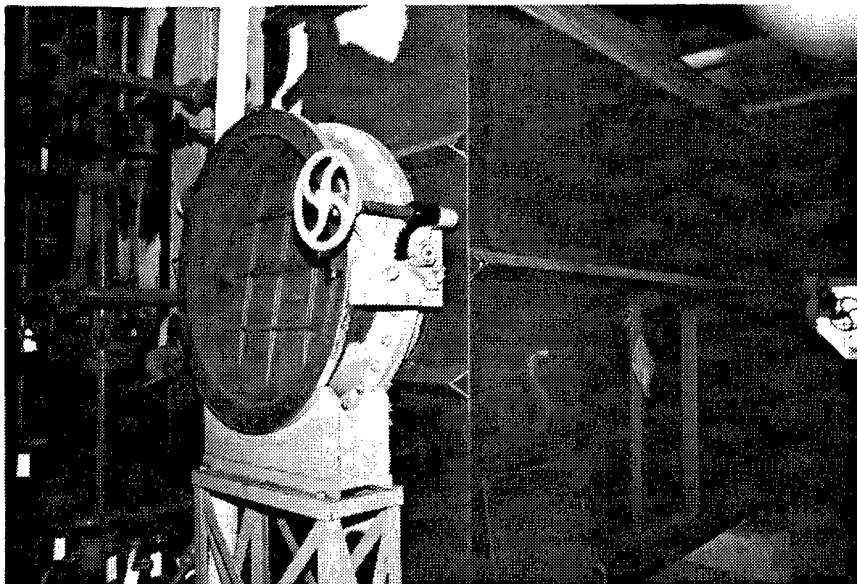


Figure 255. Building 4555: Filter unit for the air duct system.

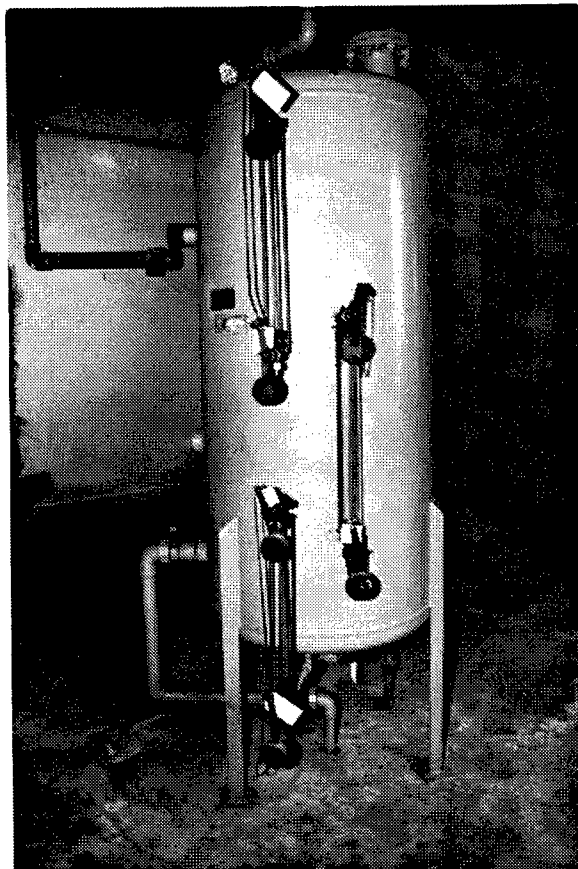


Figure 256. Building 4555: Tank for the air duct system.

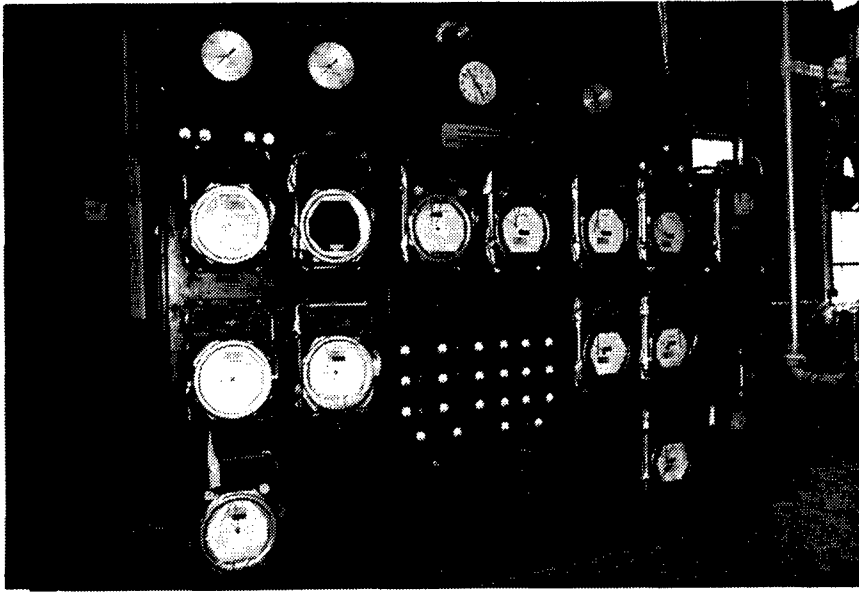


Figure 257. Building 4555: Masonite control panel with gauges for the air duct system.

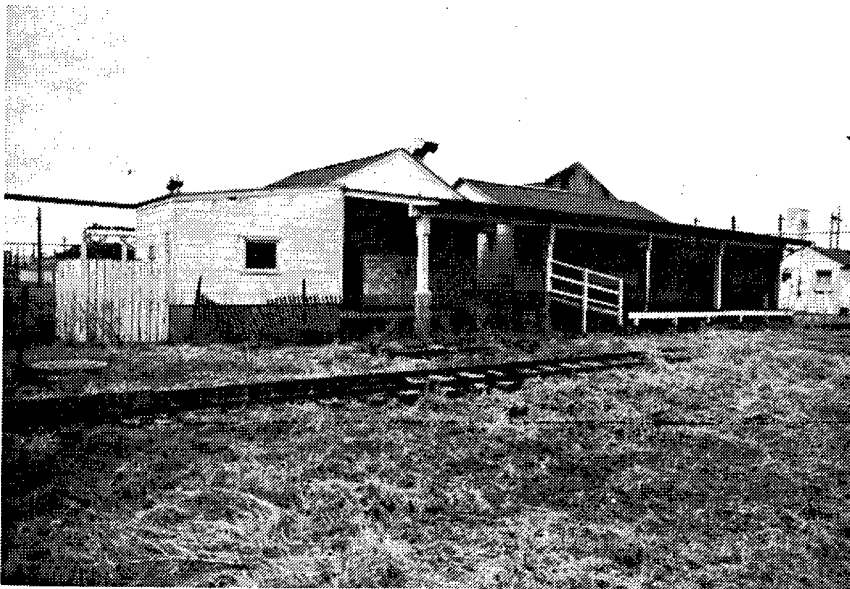


Figure 258. Building 3566-1: Caustic Screen Cleaning House where screens involved in ammunition production were washed.



Figure 259. Building 420-6: Waste Acid Disposal Plant.

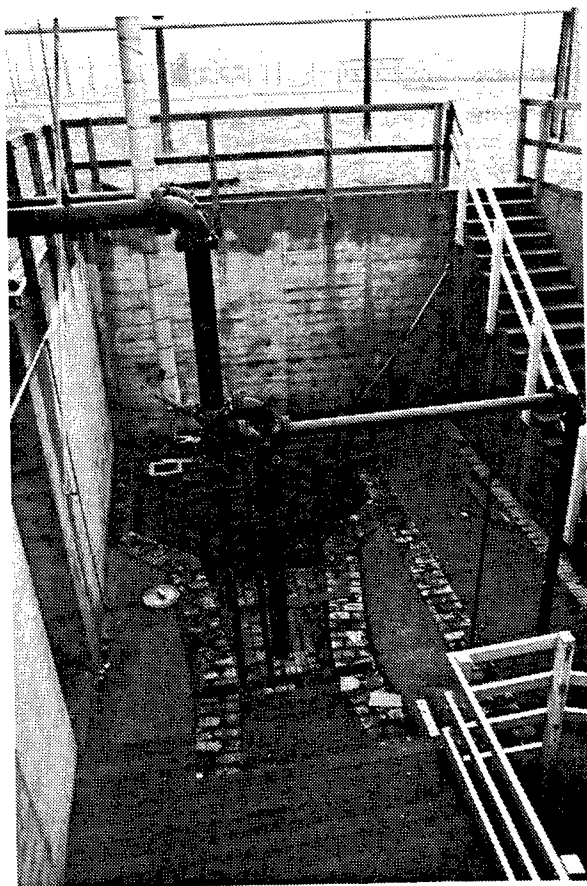


Figure 260. Building 420-6: Neutralizing Lime Pit for the Waste Acid Disposal Plant.

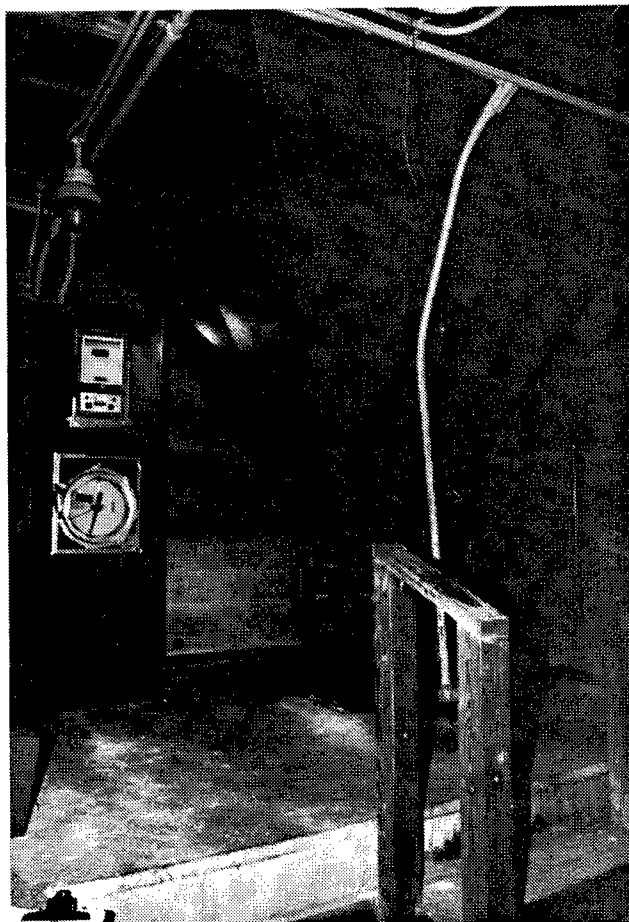


Figure 261. Building 420-5: Lime Feeder and measuring unit manufactured in 1942 by Roto Lock and associated gauge panel within the Waste Acid Disposal Plant.

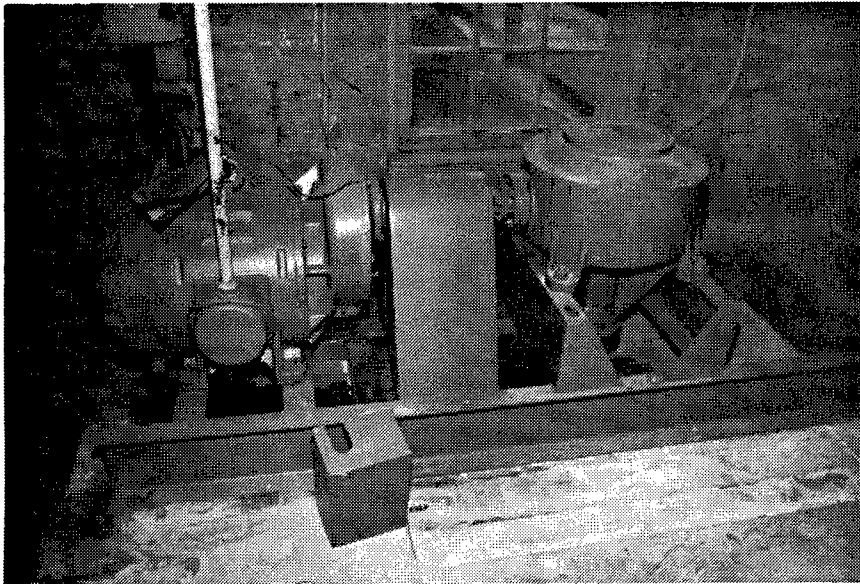


Figure 262. Building 420-5: The agitator drive and turbo-mixer of the Waste Acid Disposal Plant.

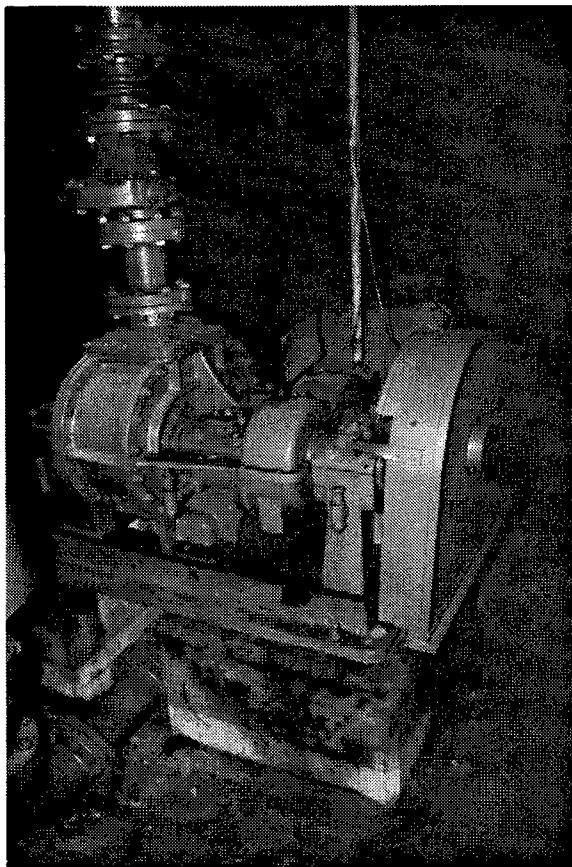


Figure 263. Building 420-5: Air blower unit manufactured in 1942 by Roots-Connecticut Blower Company.

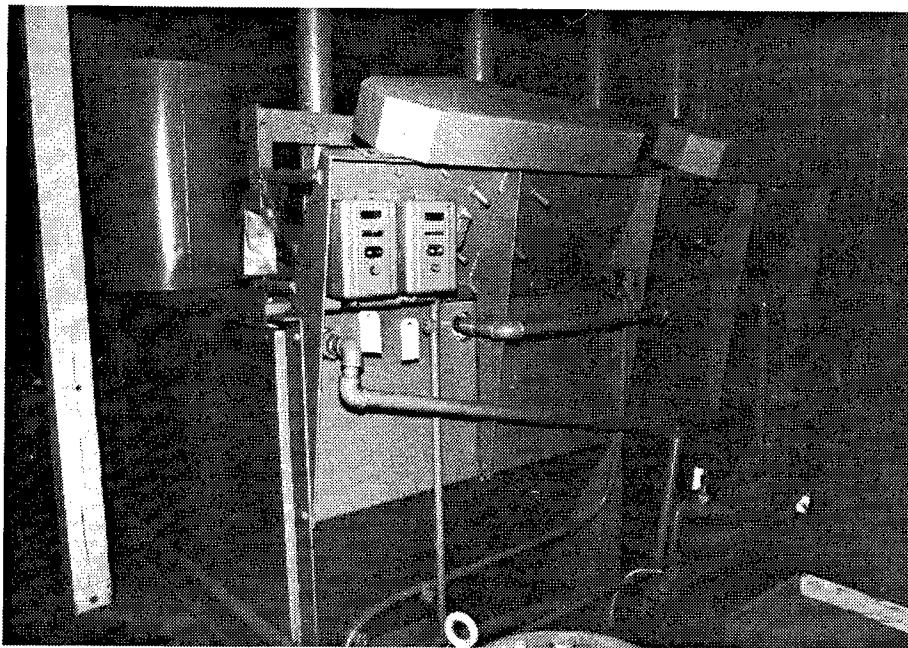


Figure 264. Building 420-6: Lime Slaker, Westinghouse agitator, and a motor gear reducer of the Waste Acid Disposal Plant.

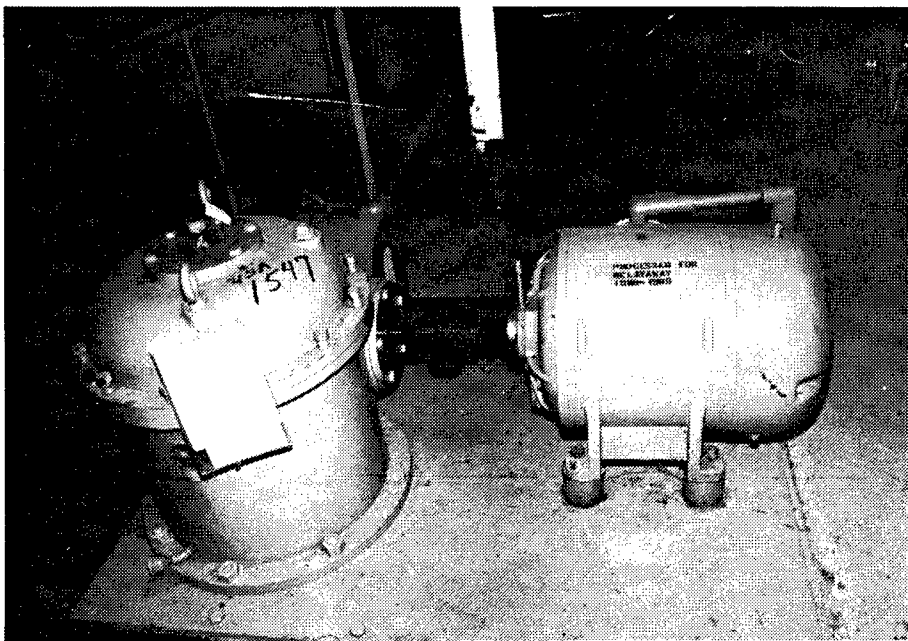


Figure 265. Building 420-6: Sump Pump and a 3 HP, 220/440 volt, 1140 RPM motor manufactured by the Chicago Pump Company.

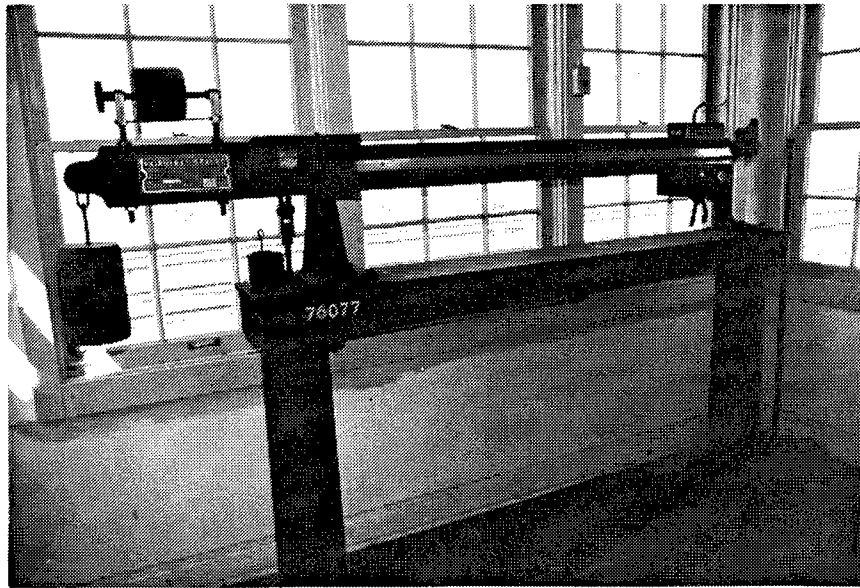


Figure 266. Building 919: Rail car scale in which the actual weighing mechanism can be accessed through the Scale House's basement.

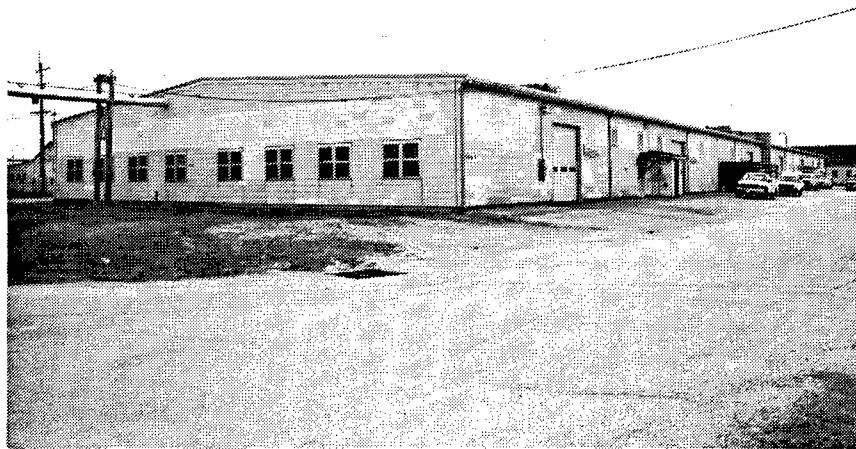


Figure 267. Building 500-1: Combined Shop where post-1950 equipment is housed along with machinery for metal and wood working.

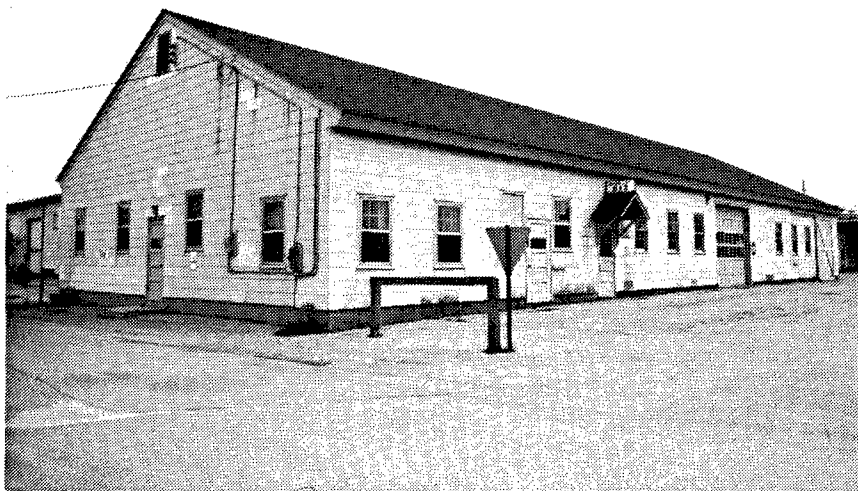


Figure 268. Building 512: General Purpose Maintenance Shop. This building now serves as the Rigger's Loft.



Figure 269. Building 518: Paint Shop.

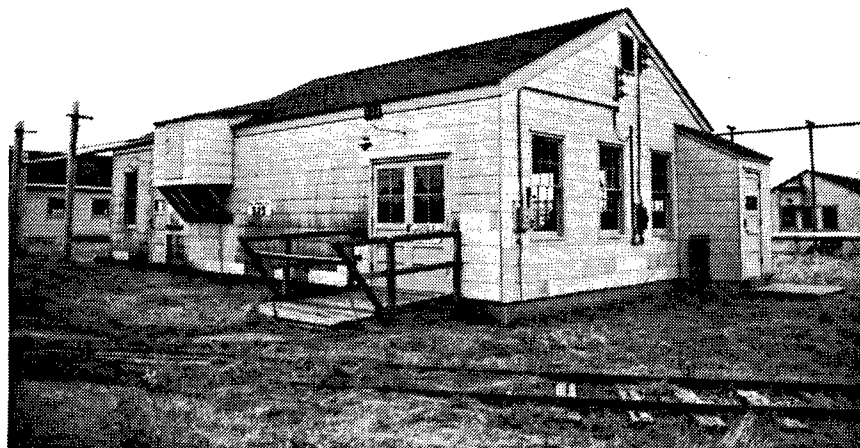


Figure 270. Building 525: Head Grinding Shop.



Figure 271. Building 501: Locomotive Shop.

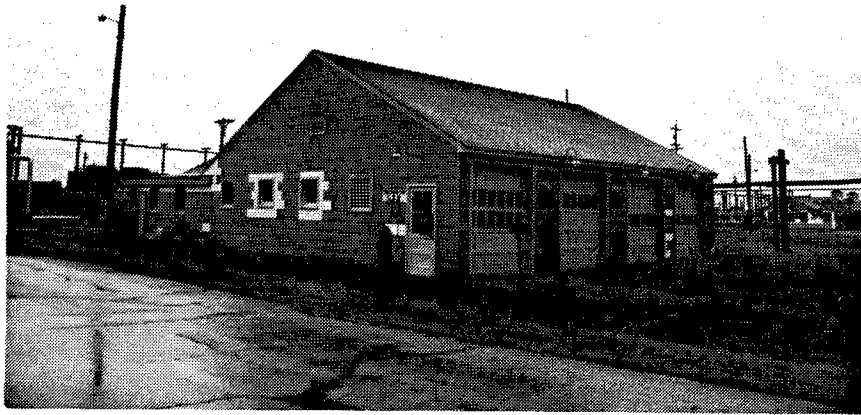


Figure 272. Building 522: Tram Repair Shop.

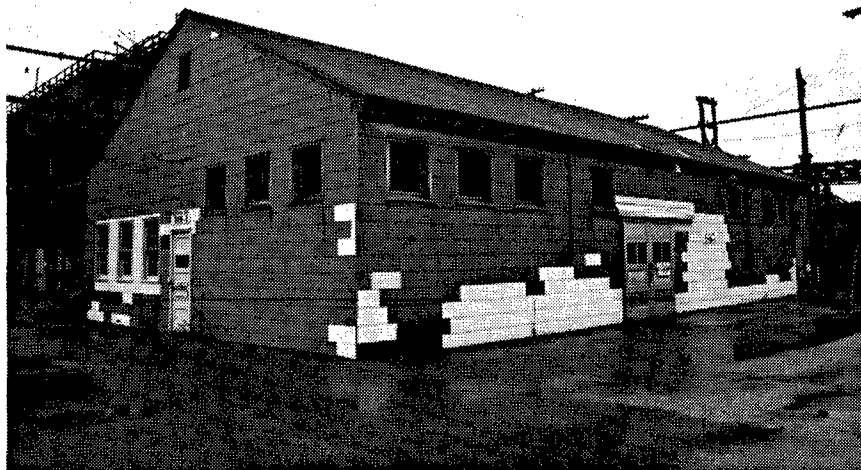


Figure 273. Building 719-1: Acid Area Shop.

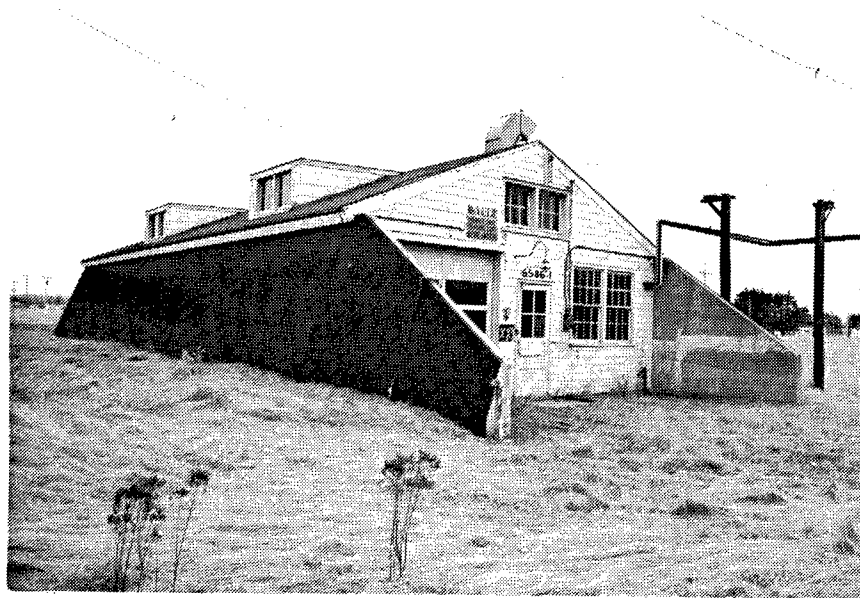


Figure 274. Building 6586-1: Tram Repair Shop.



Figure 275. Building 6738: Paste Area Shop.

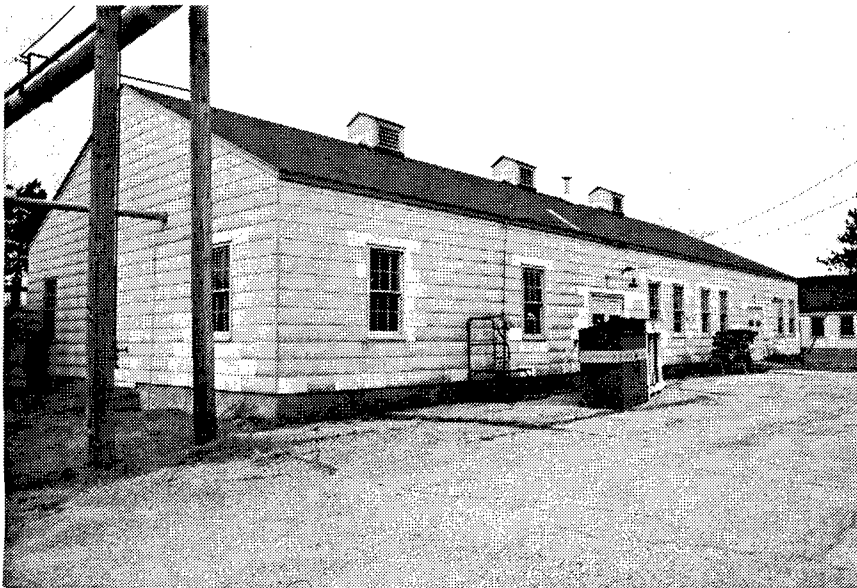


Figure 276. Building 6874-1: Rocket Area Shop.

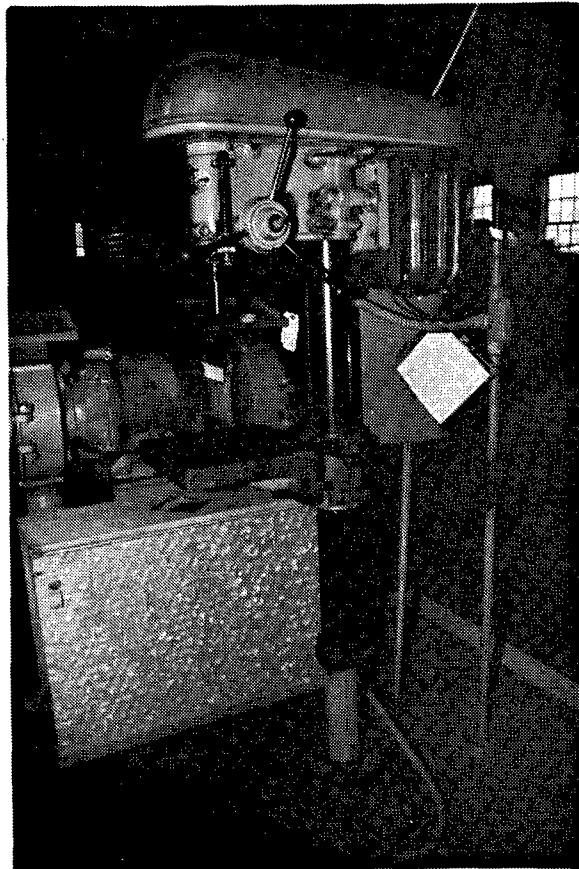


Figure 277. Building 6874-1: Drill press manufactured by Delta of Milwaukee, Wisconsin.

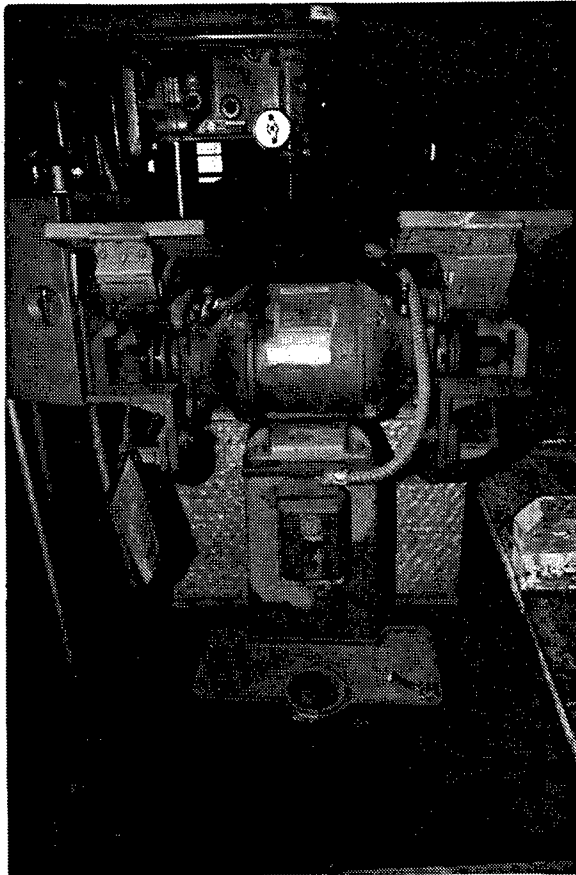


Figure 278. Building 6874-1: Grinder in the Rocket Area Shop.

SHIPPING AND STORAGE FACILITIES



Figure 279. Building 272: Vehicle Storehouse.



Figure 280. Building 305: Gun Storage and Repair.

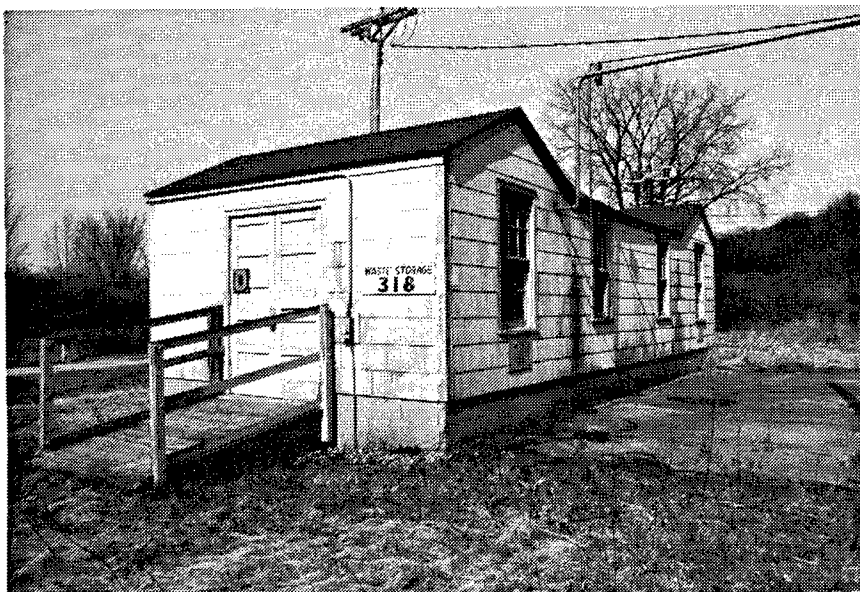


Figure 281. Building 318: Waste Storage Facility.

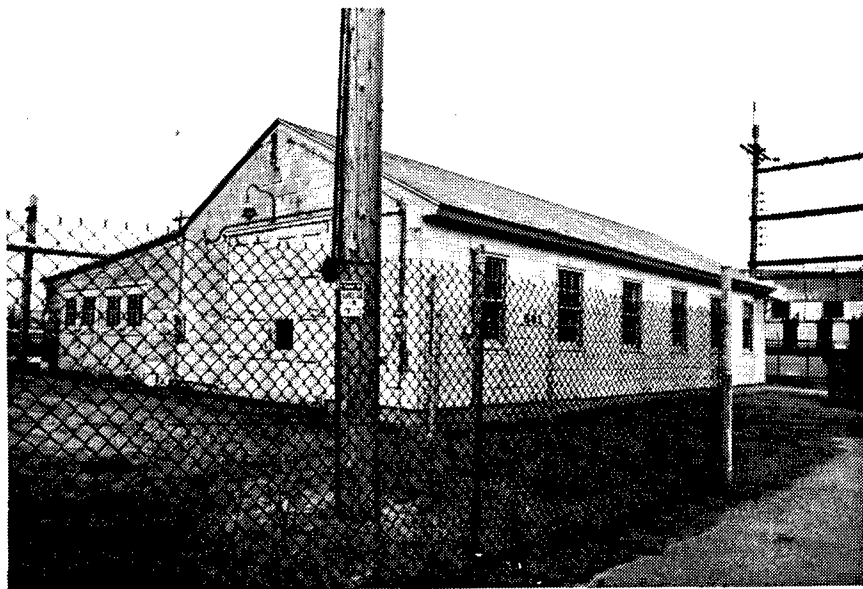


Figure 282. Building 503: Oil and Solvent Storage.

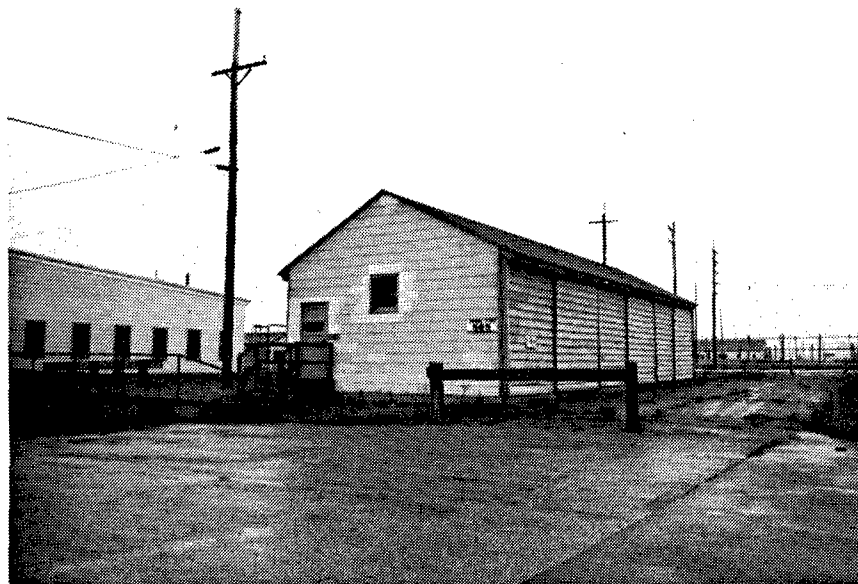


Figure 283. Building 505: Lumber Storage Building.



Figure 284. Building 506: Oil Storage for Refrigeration House. It is the only building with original siding.

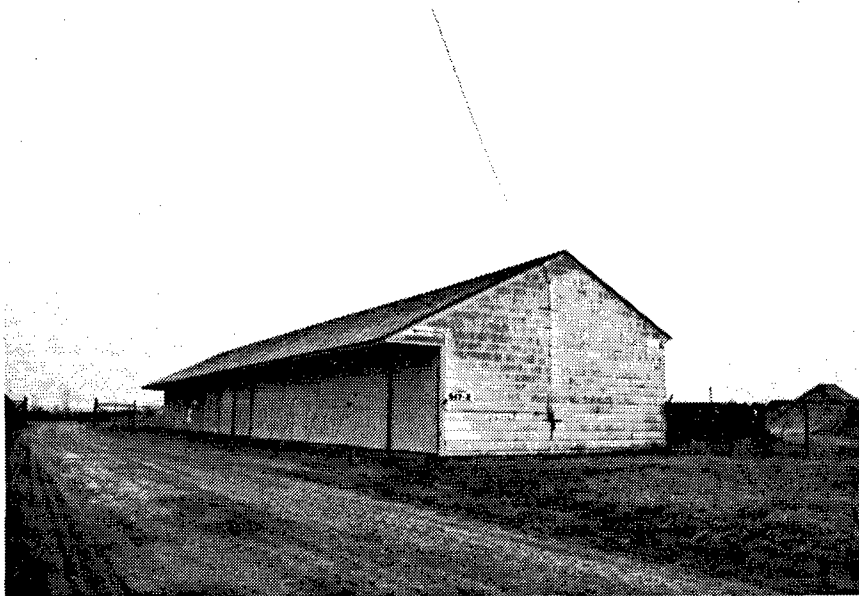


Figure 285. Building 517-2: General Storage Building.



Figure 286. Building 521: Gas Cylinder Storage Building.



Figure 287. Building 1885-3: Box Storage.

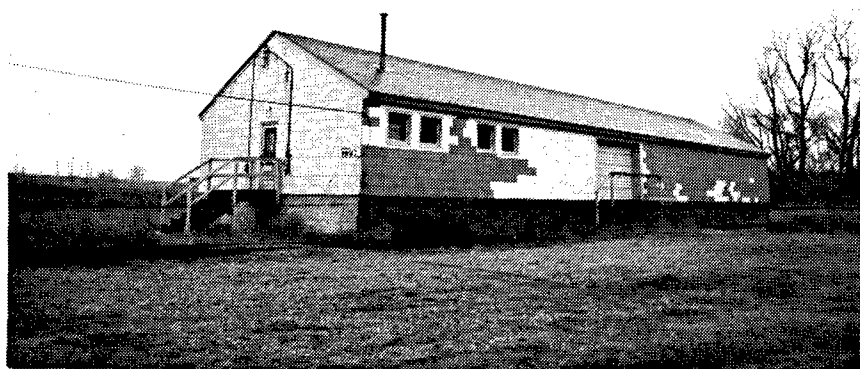


Figure 288. Building 1997: Dunnage Storage.

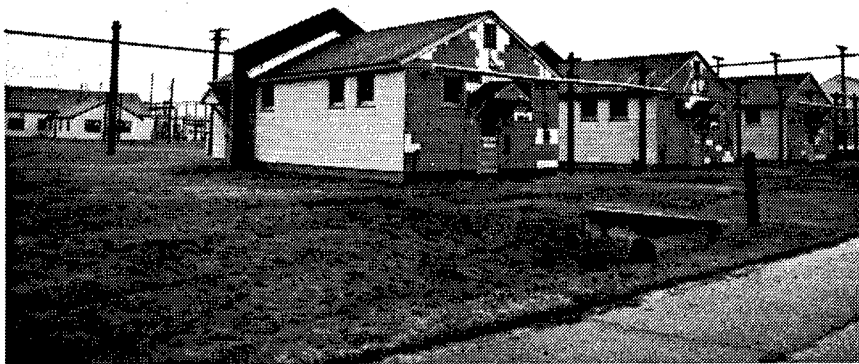


Figure 289. Building 4041: Laboratory Storage Facility.

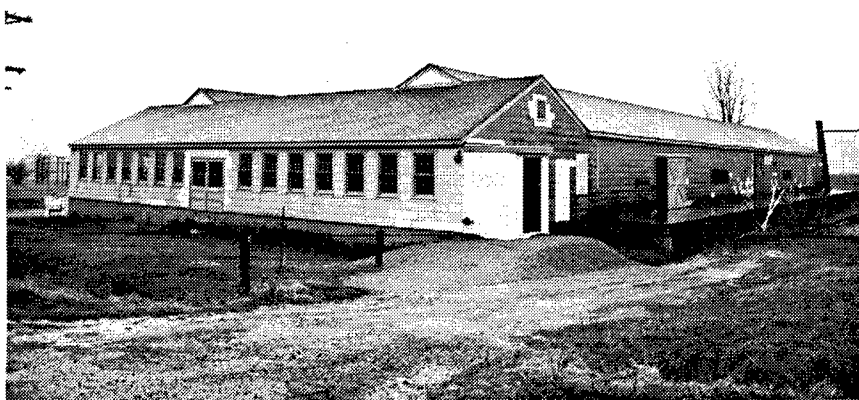


Figure 290. Building 6401: Box Storage.

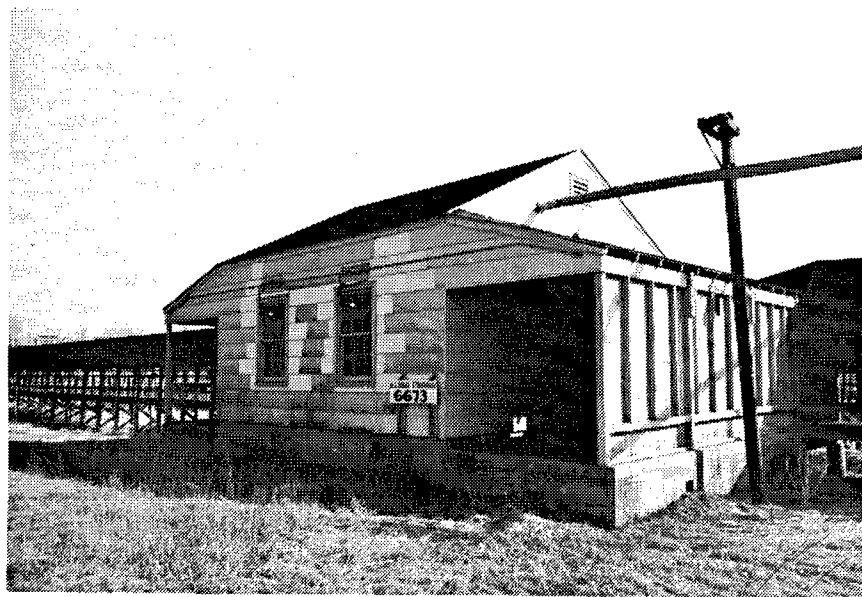


Figure 291. Building 6673: Nitroglycerin Buggy Storehouse.



Figure 292. Building 6738-1: Paste Area Shop Storage Building.

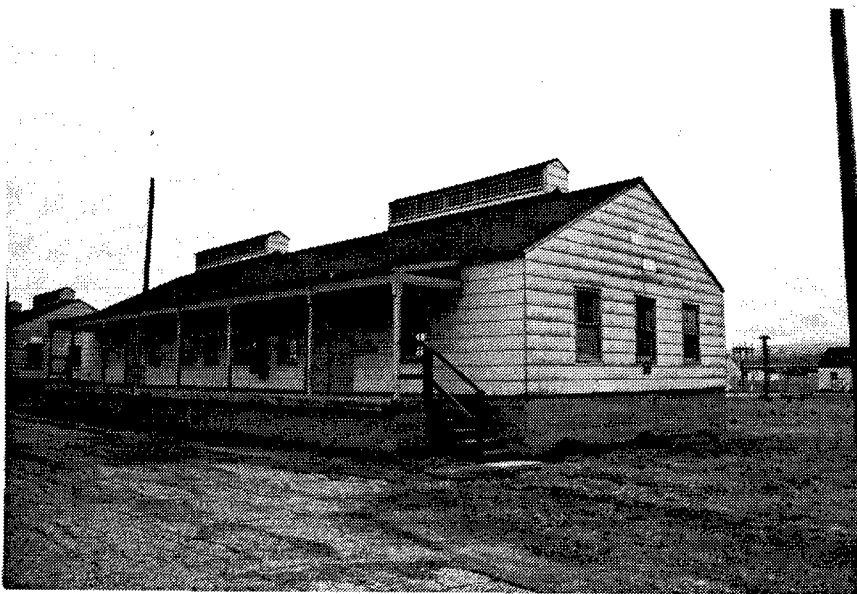


Figure 293. Building 6816-1: Box Storage.

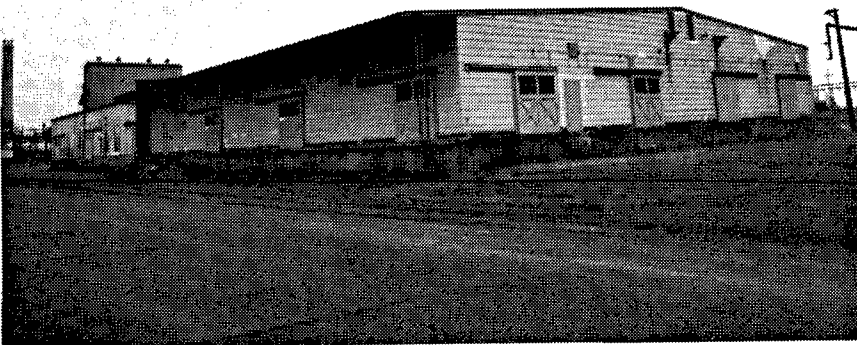


Figure 294. Building 6819: Box Factory and Shook Storage. A brick fire wall divides the building at its midpoint and it can be seen on the left side of the building.

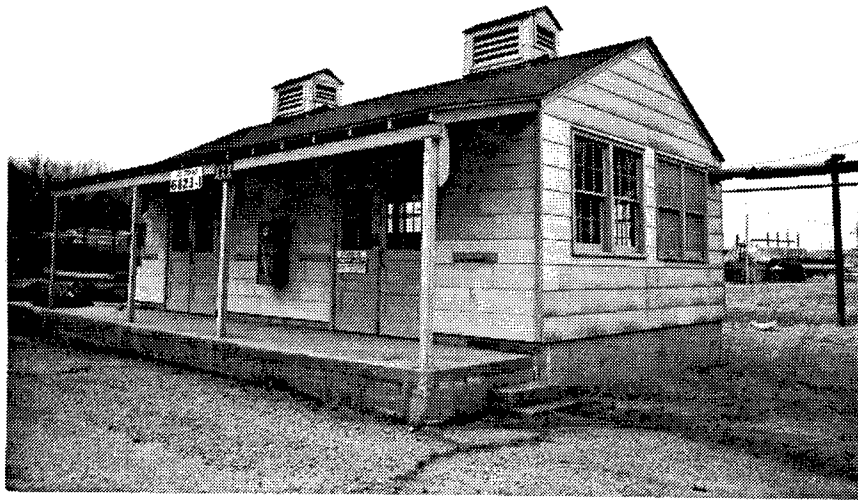


Figure 295. Building 6823-1: Oil Storage.

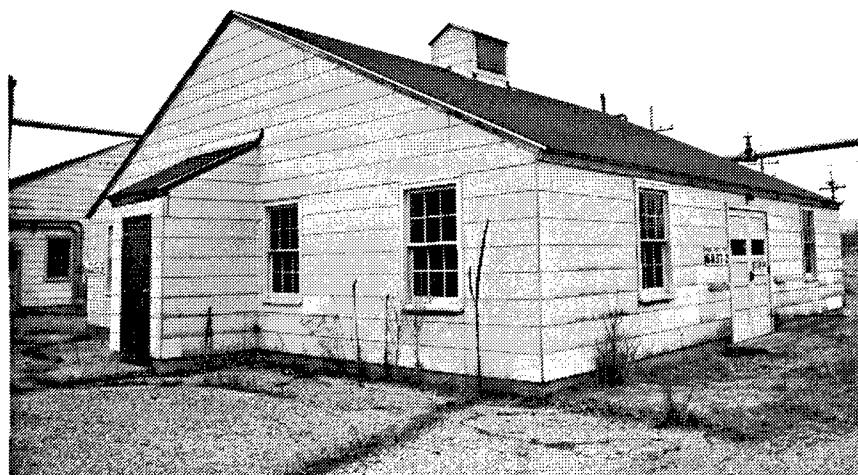


Figure 296. Building 6837-2: Spare Parts Storage.



Figure 297. Building 6863: Acetate Storage.

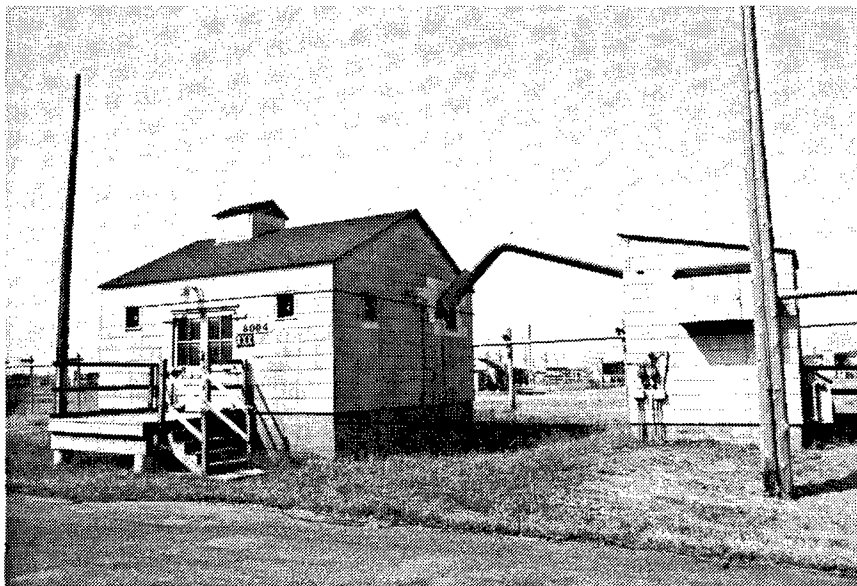


Figure 298. Building 8004: Nitroglycerin Storage with Heater House. The barricade no longer exists.

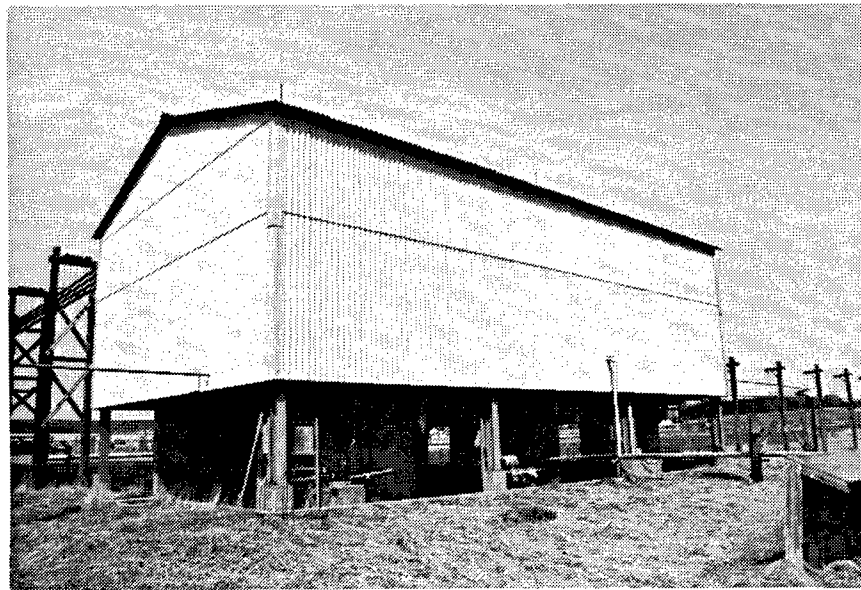


Figure 299. Building 9546: Raw Materials Storage.



Figure 300. Building 9590: Powder Storage Pit House.

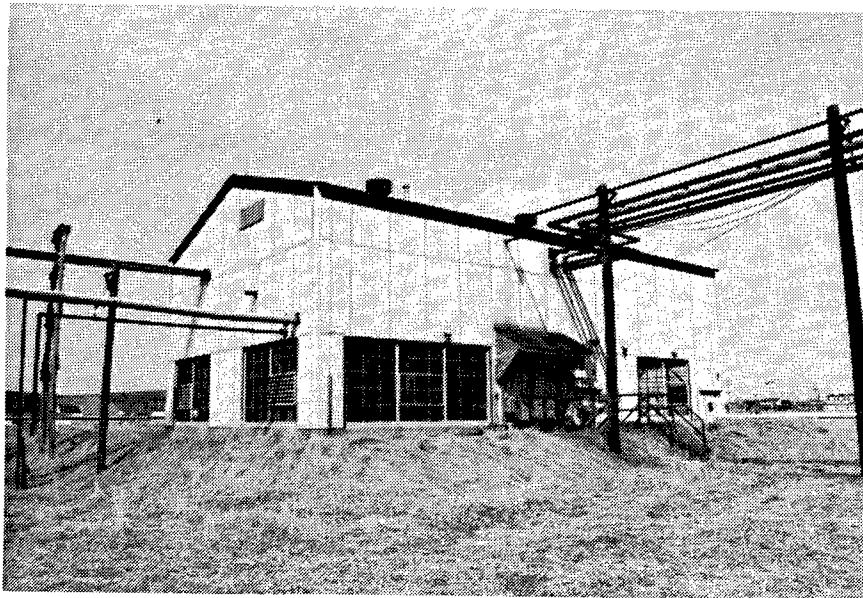


Figure 301. Building 9593: Solvent Storage House.

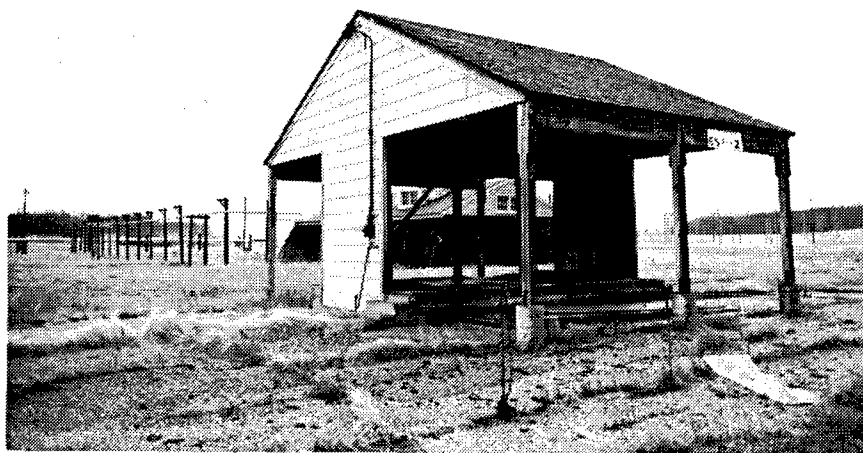


Figure 302. Building 6531-2: Materials that waited for employment were sent to Transfer Sheds such as this one.

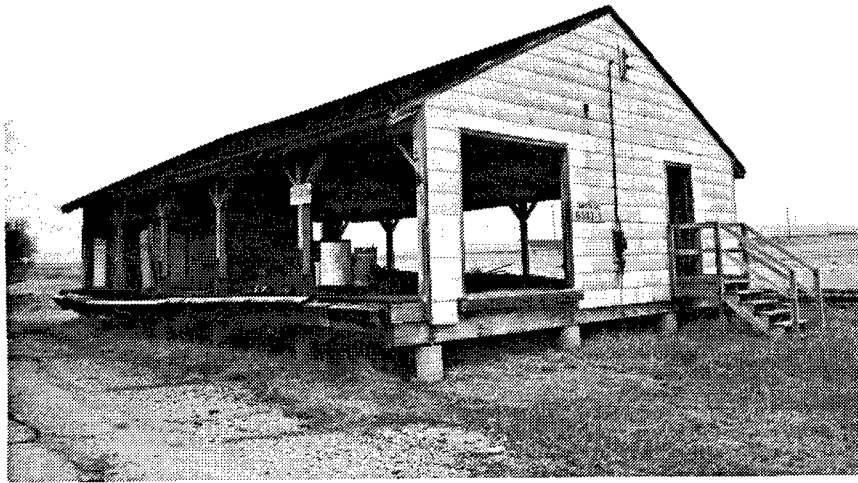


Figure 303. Building 6531-1: Another Transfer Shed type.



Figure 304. Building 215: General Purpose Maintenance Shed. This building has been converted into a Scale and Instrument Shop.

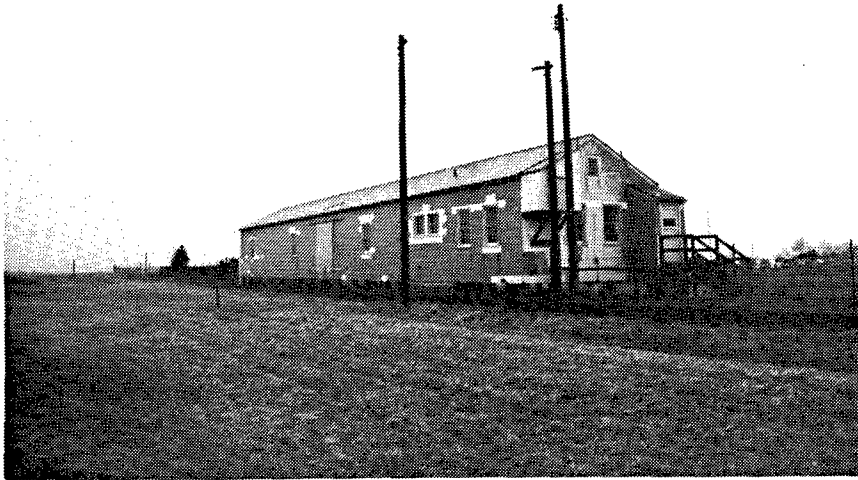


Figure 305. Building 240: Salvage Warehouse.



Figure 306. Building 271: General Warehouse.

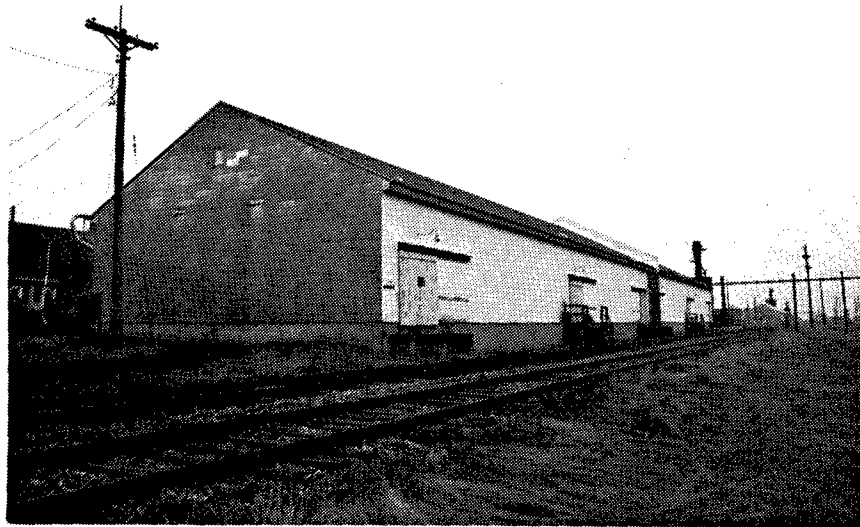


Figure 307. Building 4000: Cotton Linter Warehouse.

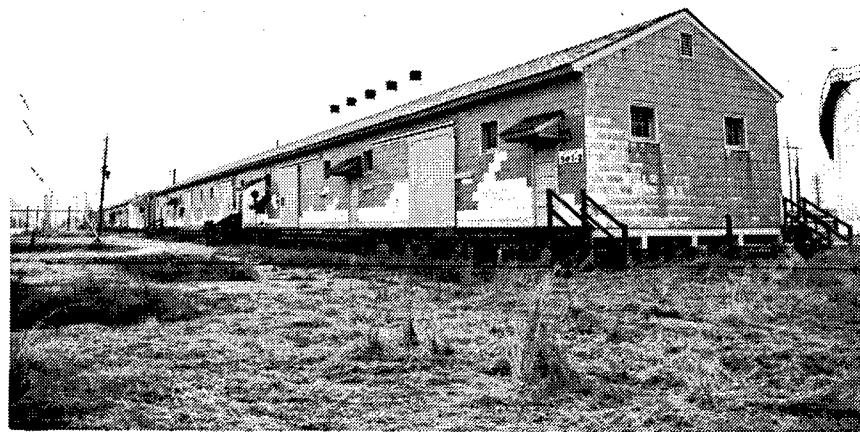


Figure 308. Building 5072: Ingredient Warehouse.



Figure 309. Building 6882-1: Final Rest House. Completed ammunition products waited in such structures until they could be transferred to a Magazine for more permanent storage.



Figure 310. Building 6804-8: Unbarricaded Rest House.

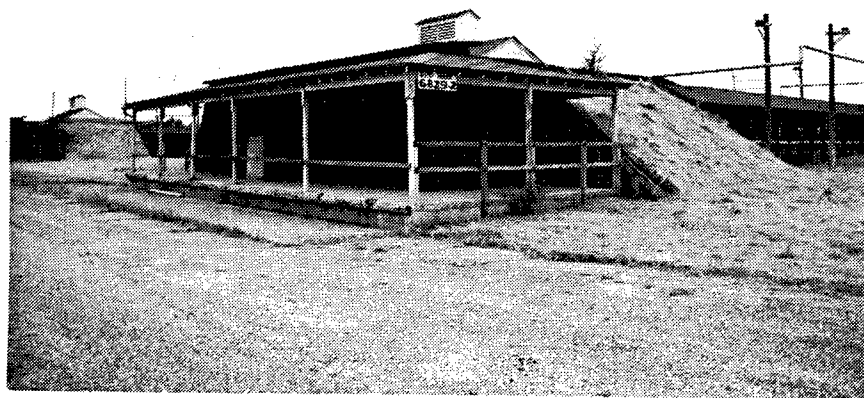


Figure 311. Building 6829-2: Rest House.



Figure 312. Building 6875: Constant Temperature Rest House. The heated building is outside the barricade to the left.

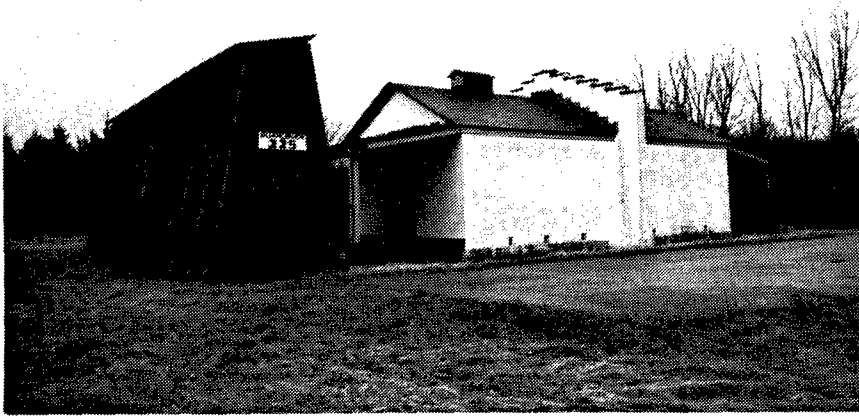


Figure 313. Building 225: Ballistic Magazine with barricade. There are numerous different types of magazines; their variations suited the ammunition products they stored.



Figure 314. Building 226: Powder Magazine for powder that had not been processed completely.

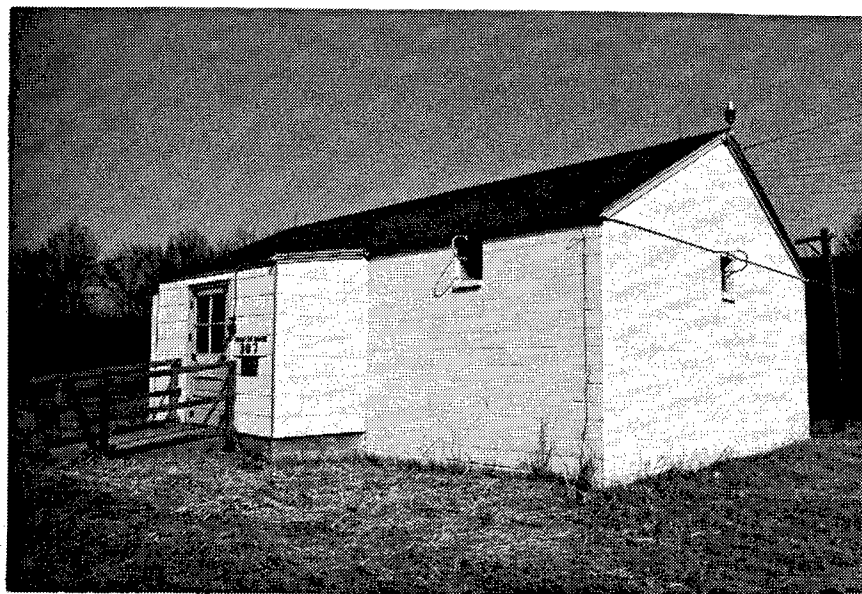


Figure 315. Building 307: Constant Temperature Magazine.

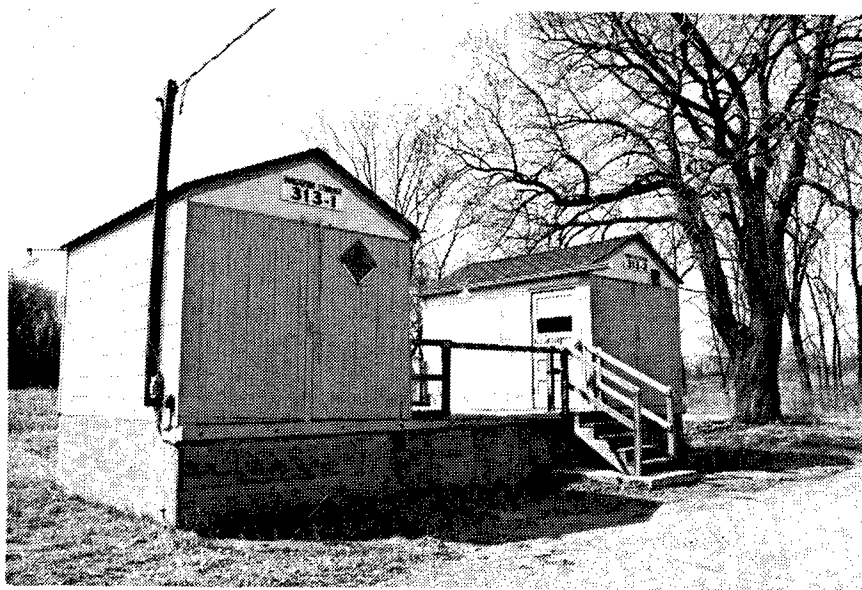


Figure 316. Building 313-1 and Building 313-2: Magazines.

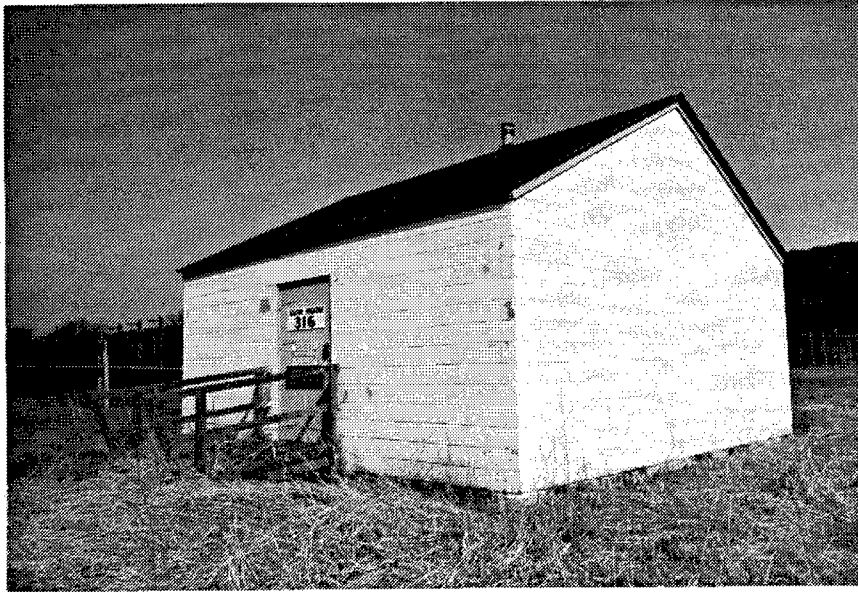


Figure 317. Building 316: Ignitor Magazine (formerly barricaded).

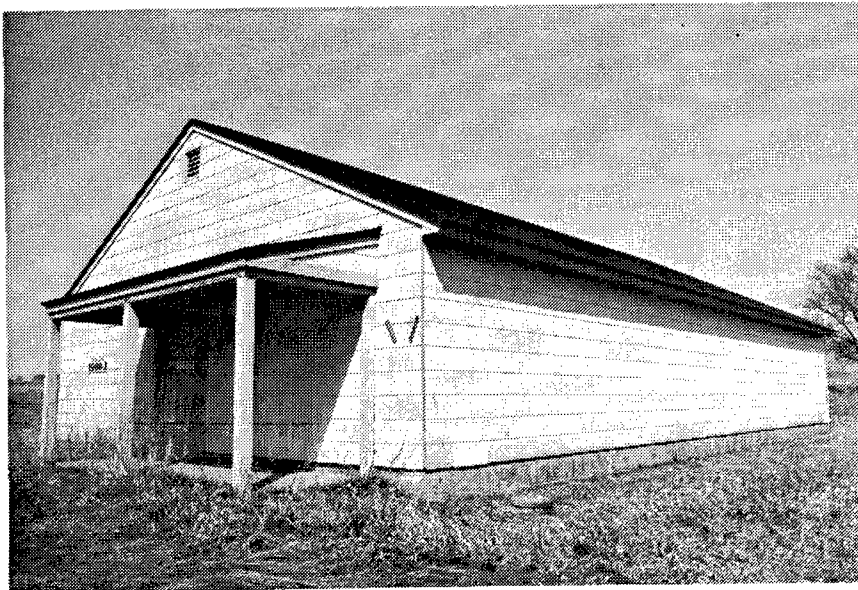


Figure 318. Building 1900-9: This Magazine type was originally barricaded, but the earthen barricades have since deteriorated and were torn down.

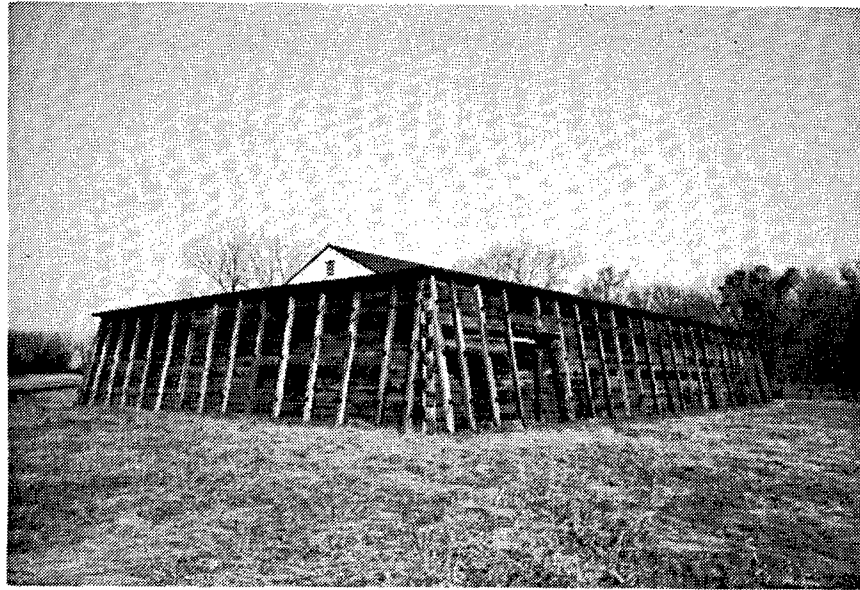


Figure 319. Building 1906-10: Barricaded Magazine. The barricades were designed to direct an explosion upward rather than outward. An outward explosion could trigger additional explosions in neighboring magazines.

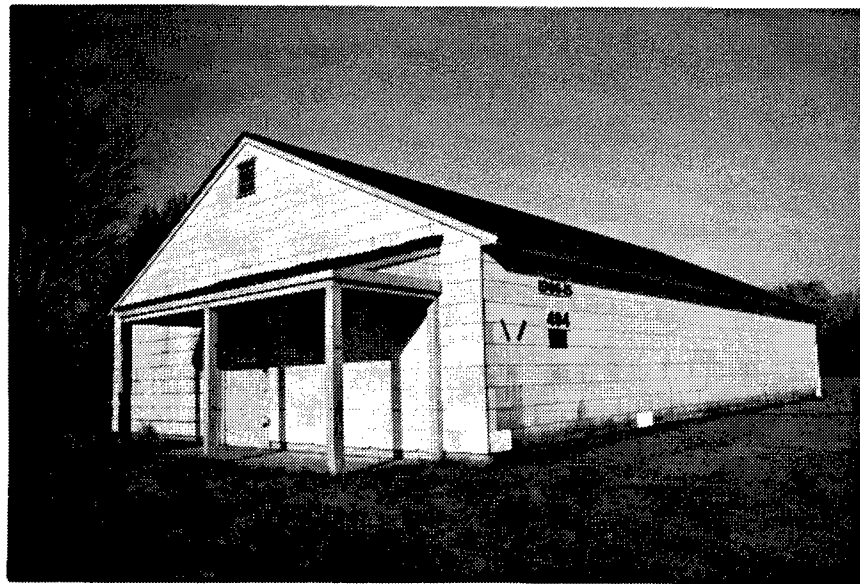


Figure 320. Building 1906-15: Magazine.



Figure 321. Building 6878: Black Powder Magazine.

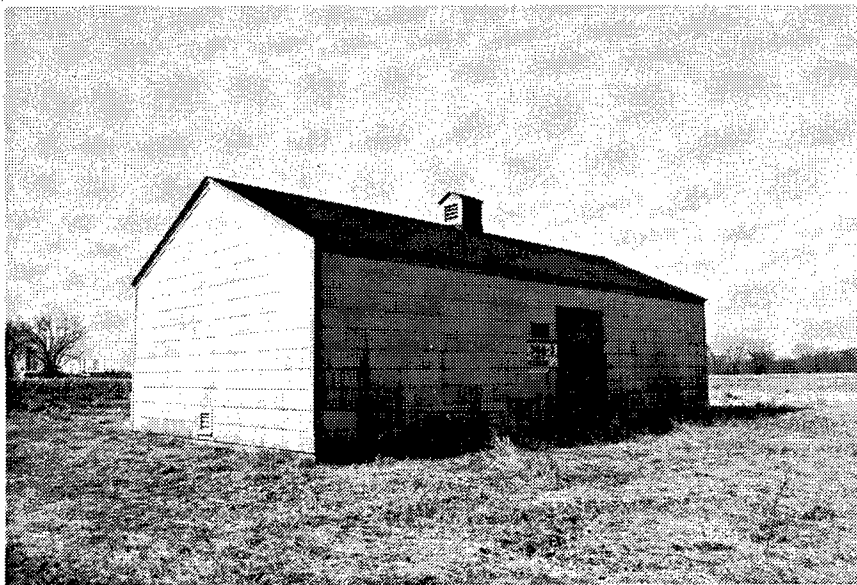


Figure 322. Building 308-3: The Cannon Powder Magazines were never barricaded as the distance between these magazines was sufficient for safety requirements.



Figure 323. Building 1932-3: Cannon Powder Magazine.



Figure 324. Building 9102-1: Magazine.



Figure 325. Building 6536: Trailer House.



Figure 326. Building 6529: Tractor House.

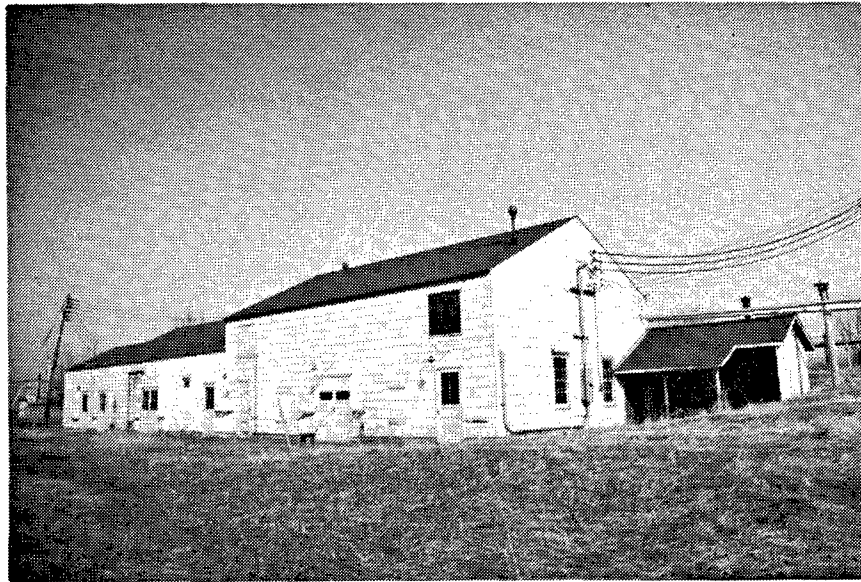


Figure 327. Building 6660: Refrigeration House.

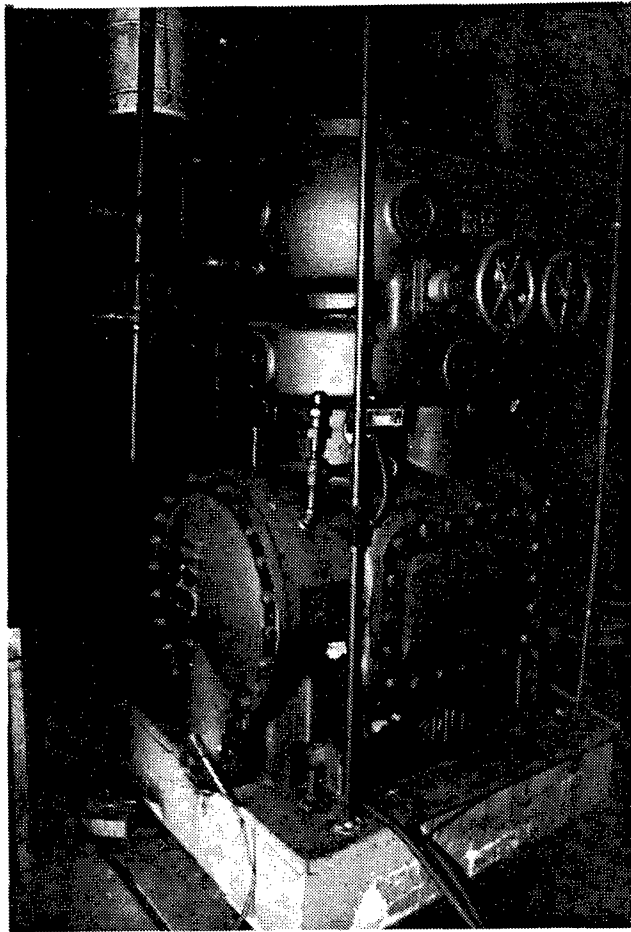


Figure 328. Building 6660: Flick ammonia compressor with a capacity of 52.5 tons.

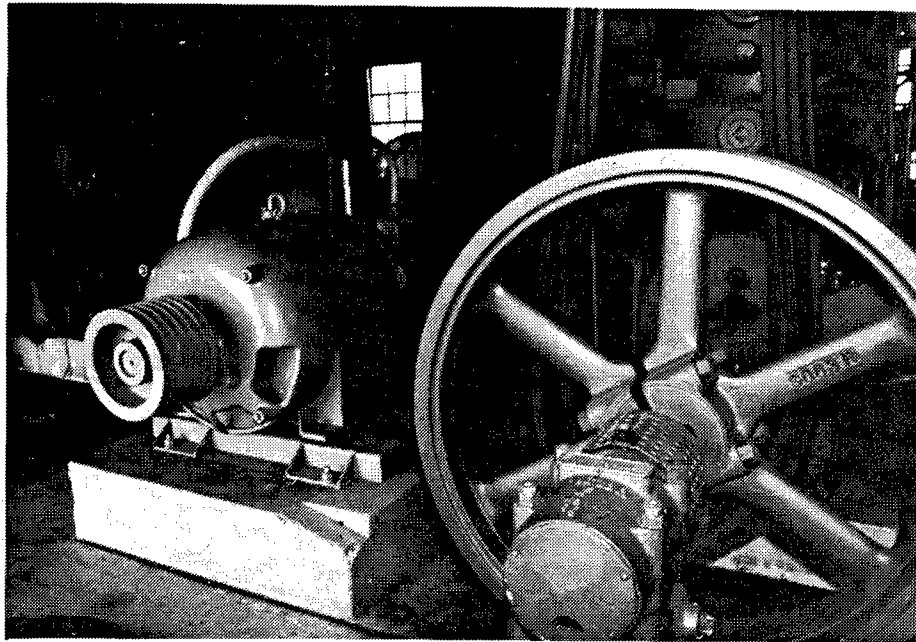


Figure 329. Building 6660: Motor for the Flick ammonia compressor.

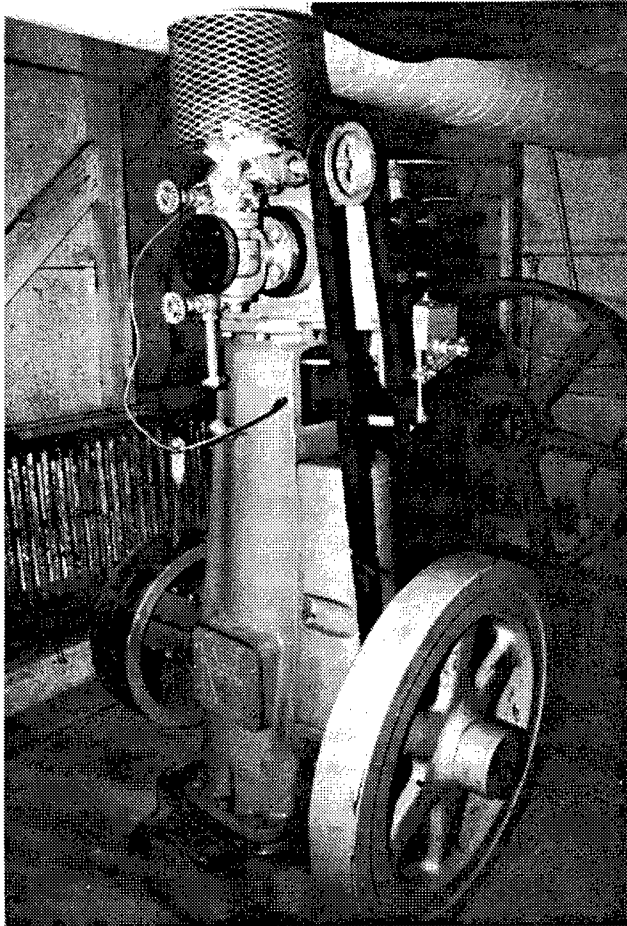


Figure 330. Building 6660: Troy-Ensbury throttling vertical reciprocating engine.

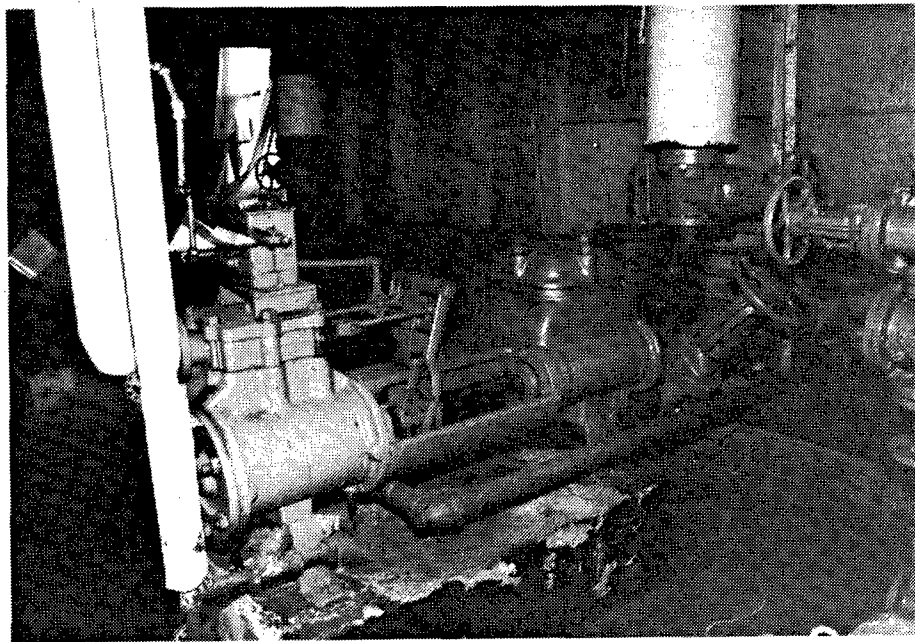


Figure 331. Building 6660: Worthington 150 gallons per minute capacity air and steam piston pump.

SUPPORT FACILITIES FOR EMPLOYEES



Figure 332. Building 273: General Instruction Building initially, it is now the Recreation Building. One wing has been demolished, turning the H-shape into a T-shape.



Figure 333. Building 6576: Recreation Building for employees.

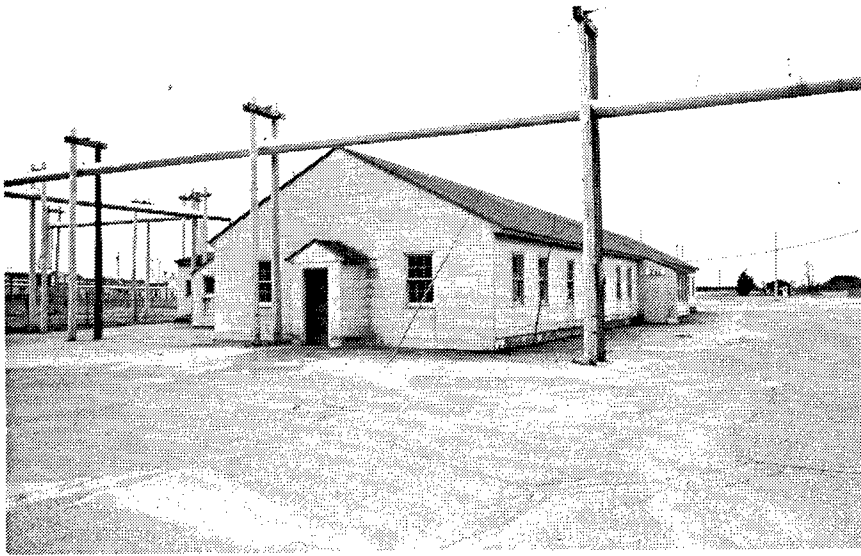


Figure 334. Building 234: Cafeteria.

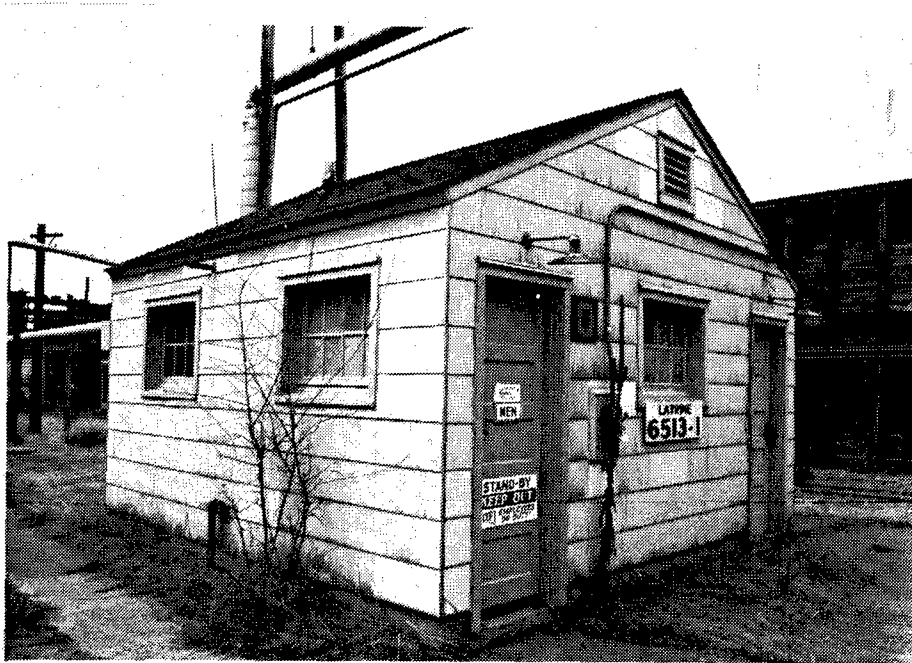


Figure 335. Building 6513-1: Latrine.

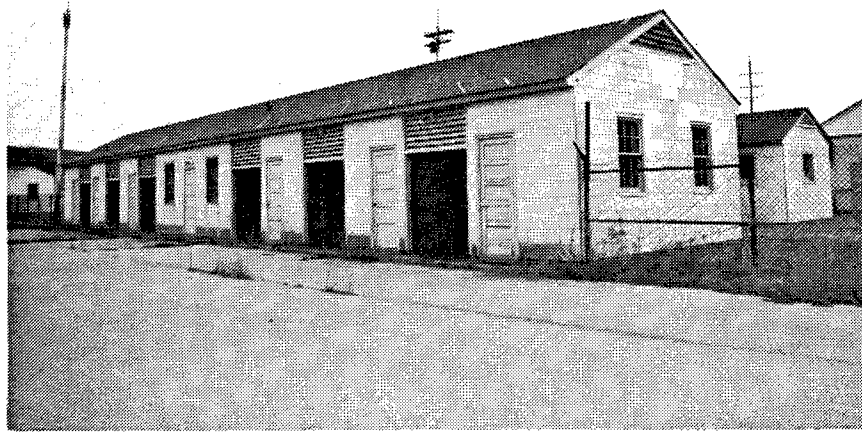


Figure 336. Building 204-3: Gate House/Clock Alley; an employee entrance and time card house.



Figure 337. Building 204-2: Back view of a Gate House/Clock Alley.



Figure 338. Building 270-2: After entering through the Gate/House Clock Alley, employees were searched for matches and cigarettes at this Inspection House.

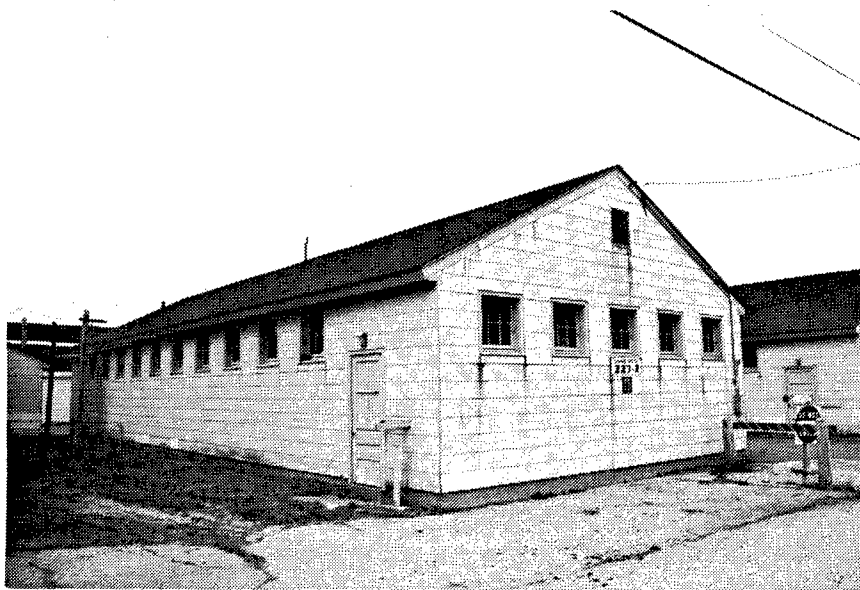


Figure 339. Building 227-2: Change House where employees changed from their street clothes into their work clothes.

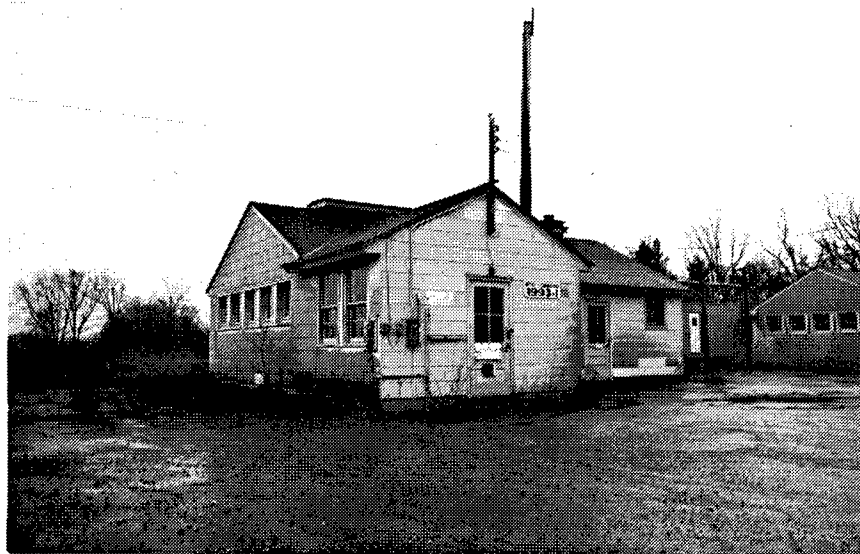


Figure 340. Building 1993-1: Office and Change House for the Magazine Area.

UTILITIES AND INFRASTRUCTURE

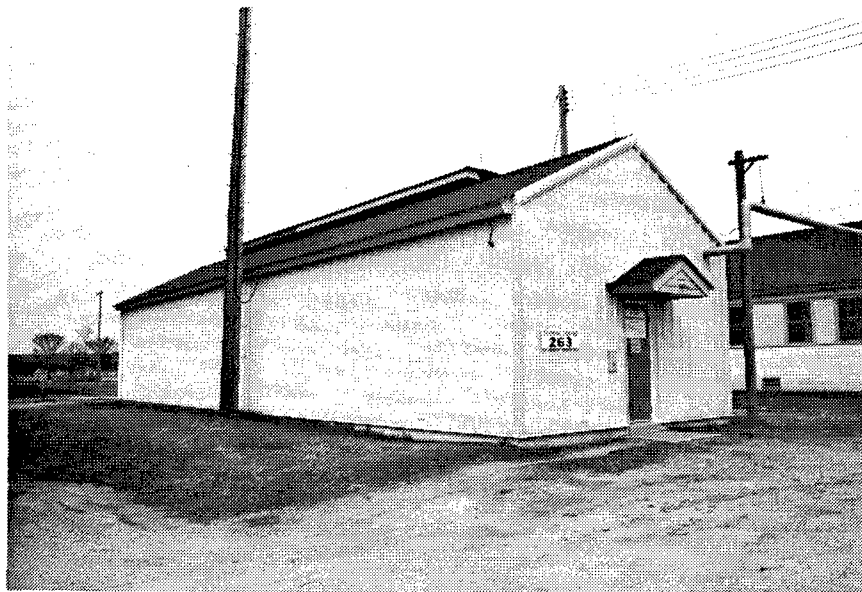


Figure 341. Building 263: Telephone Exchange Building.



Figure 342. Building 205: Hospital/Clinic with beds.



Figure 343. Building 204-B-1: Gate House/Sentry House at the northwestern gate, Highway 12.



Figure 344. Building 235: Guard House/Police Station.



Figure 345. Building 222: Fire Station #1 located in the Shop and Maintenance Area.



Figure 346. Building 531: Fire Station #2 is centrally located near Powerhouse #2.

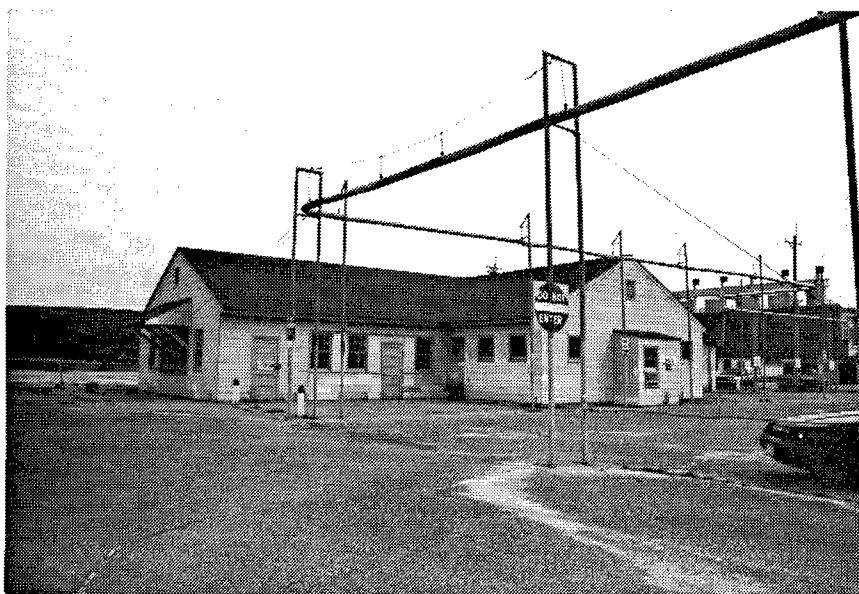


Figure 347. Building 264: Bus Station at the Plant entrance.



Figure 348. Building 6535: Bus Station within the Plant property that accommodated employees waiting for the Plant bus to shuttle them back to the Plant entrance.

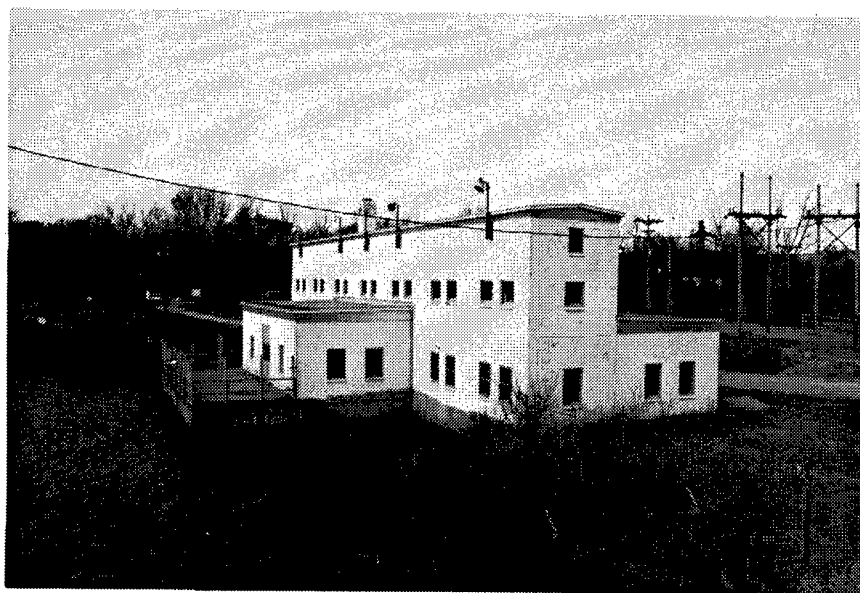


Figure 349. Building 408: River Pump House.



Figure 350. Building 408: Vertical turbine pump with 300 HP, 2200 volt, two-stage engine and 5,000 gallons per minute capacity, manufactured in 1942 by Ponoma.

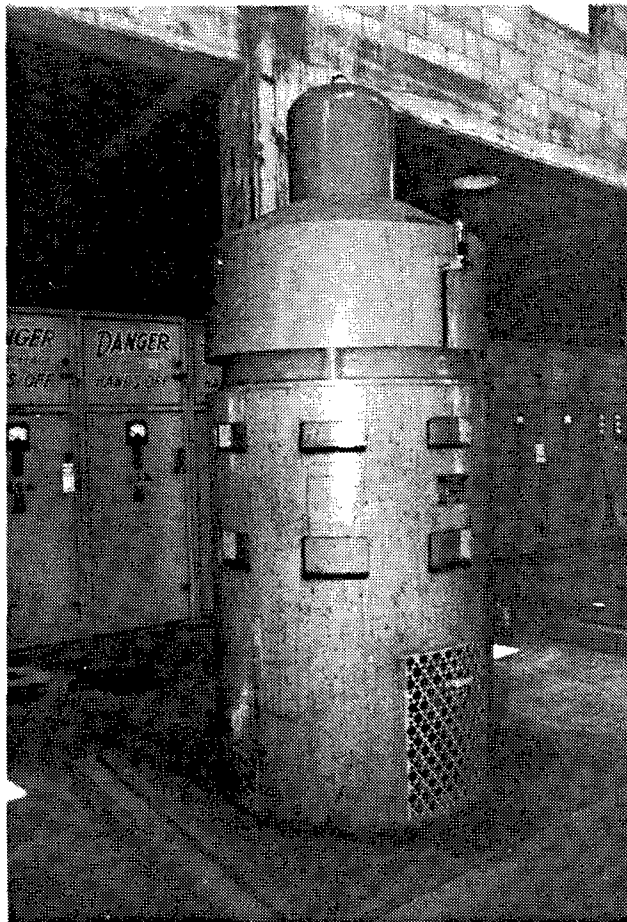


Figure 351. Building 408: Another vertical turbine pump with a 500 HP engine and 100,000 gallons per minute capacity, manufactured in 1942 by Ponomo.

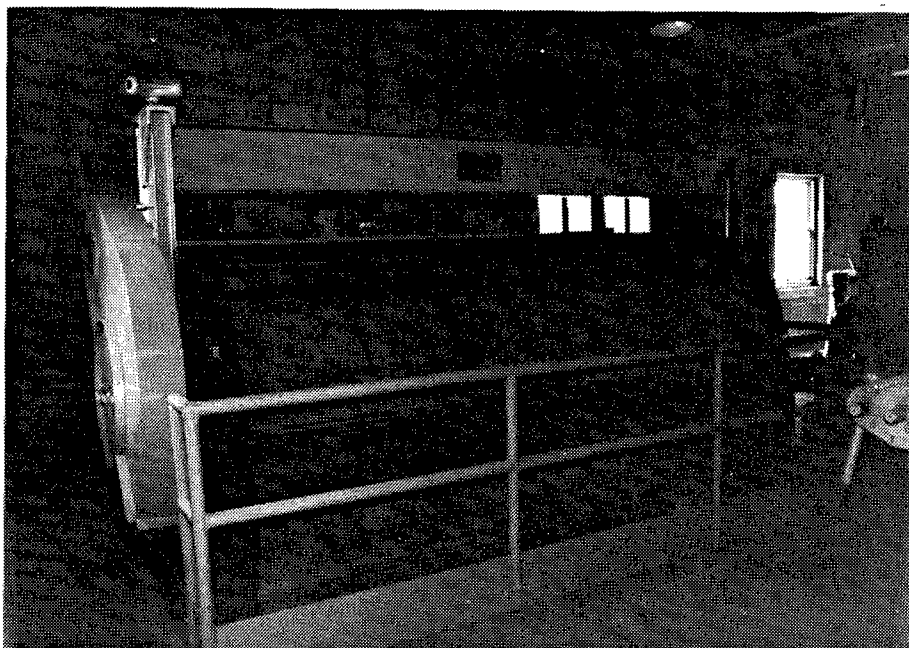


Figure 352. Building 408: Eight-ton traveling screen (hoist) by Indos-Engr Company.

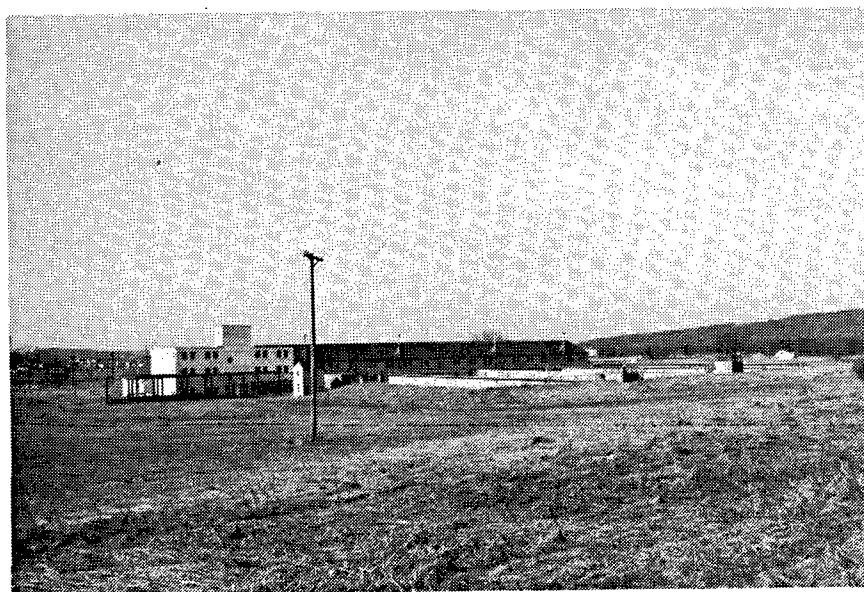


Figure 353. Building 409: North view of the Water Filtration Plant.

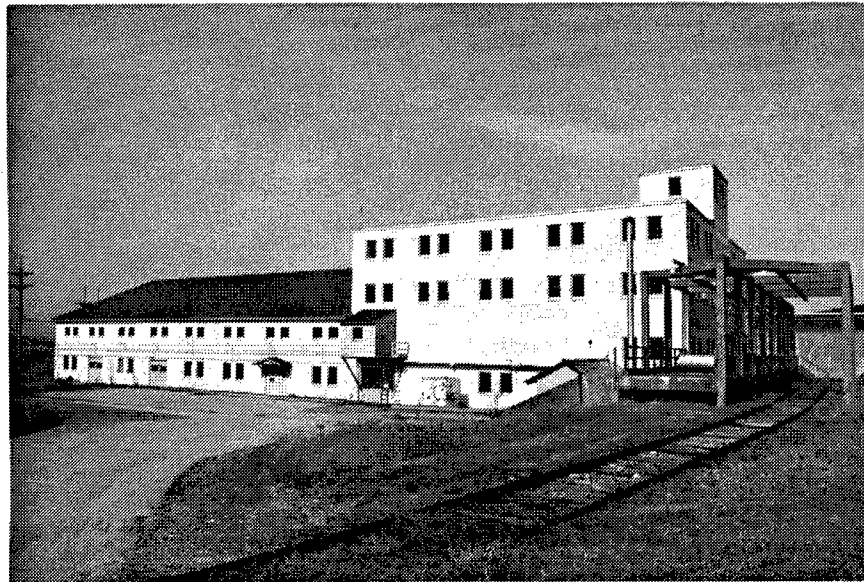


Figure 354. Building 409: East view of the Water Filtration Plant.

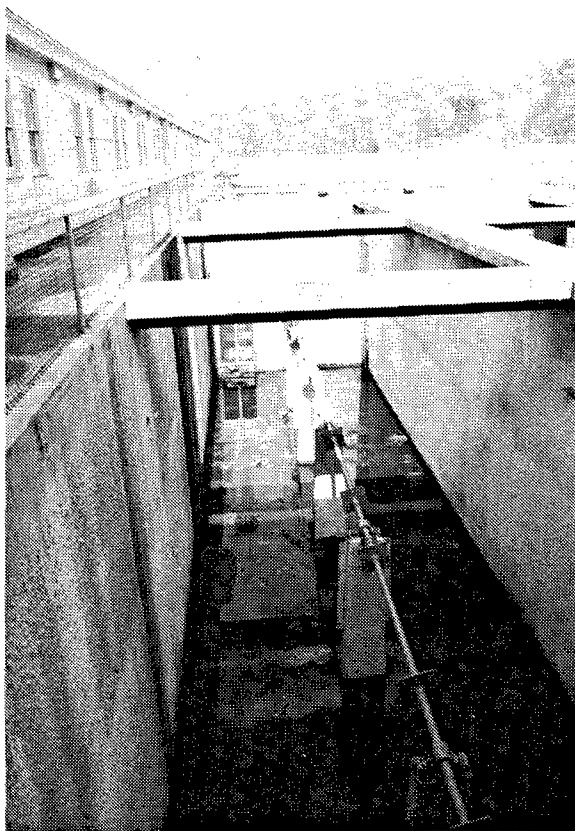


Figure 355. Building 409: One of the Flocculation Tanks on the north side of the building.

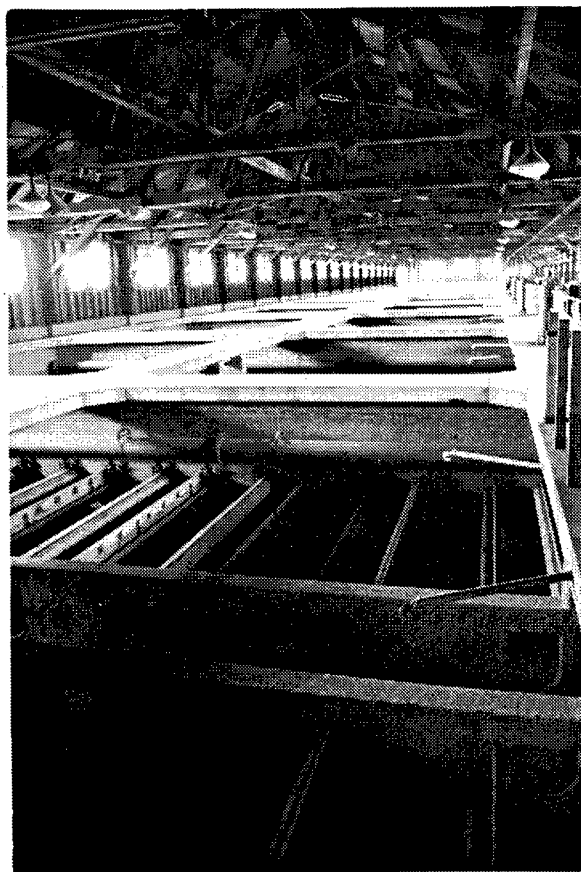


Figure 356. Building 409: The Filter Basin within the west wing of the Water Filtration Plant.

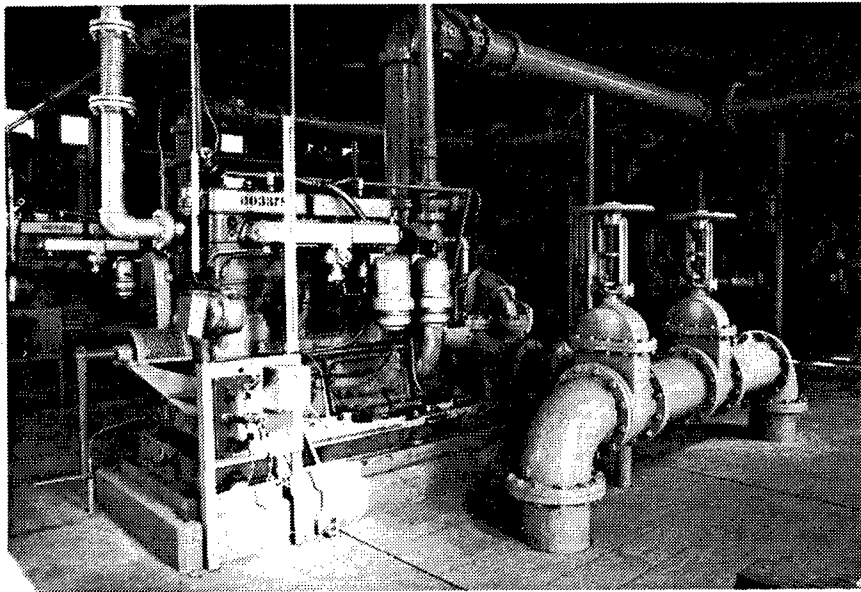


Figure 357. Building 409: Stationary gas-driven fire pump with 1500 gallons per minute capacity, manufactured by Dayton-Dowd.

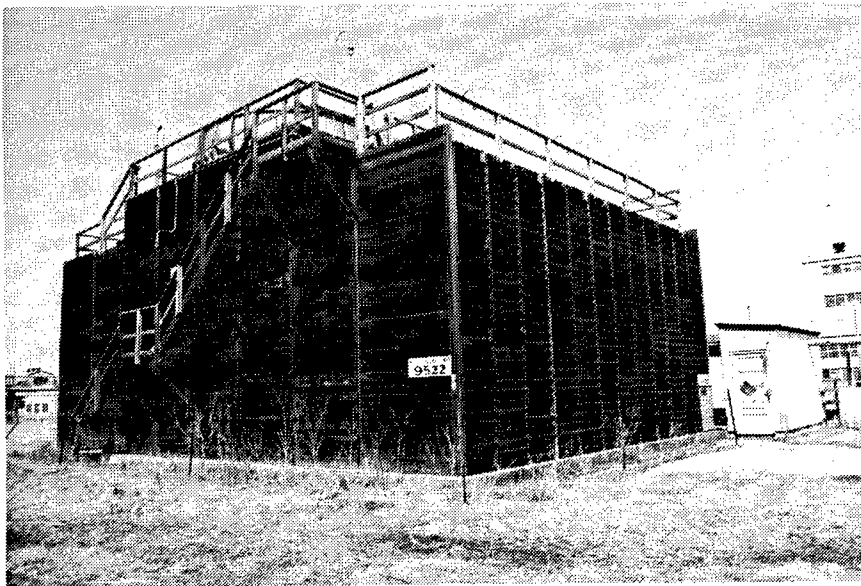


Figure 358. Building 9522: Water Cooling Tower.

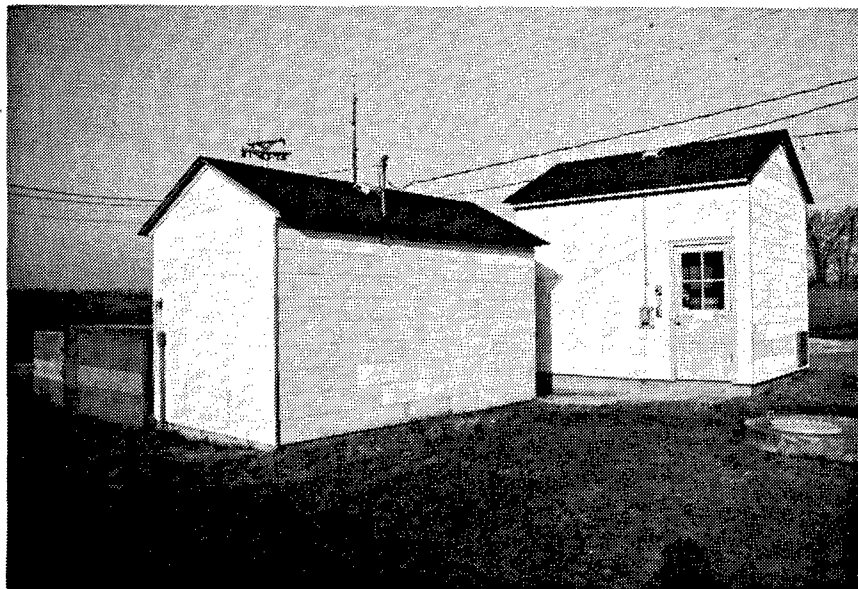


Figure 359. Building 424: Chlorine Building (left) and the Chlorine Storage Building (right).

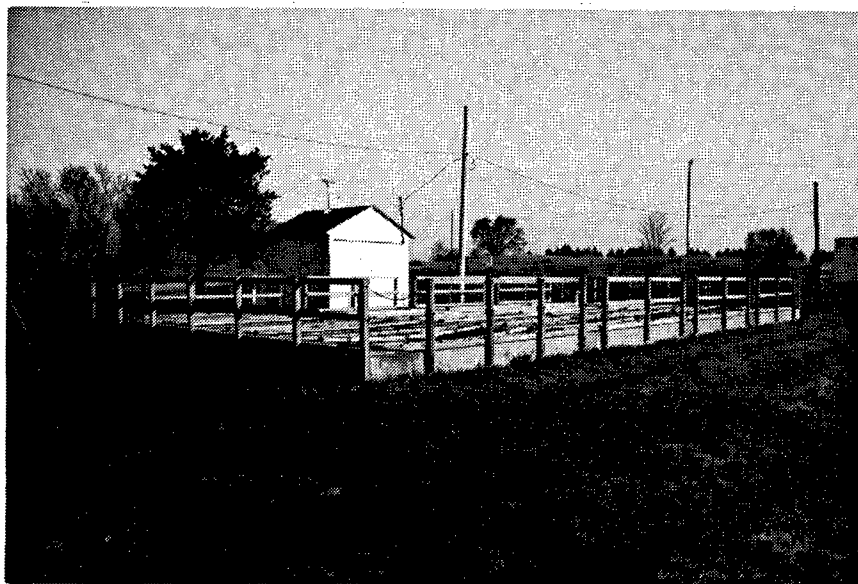


Figure 360. Building 424: Sludge Pumping Station.

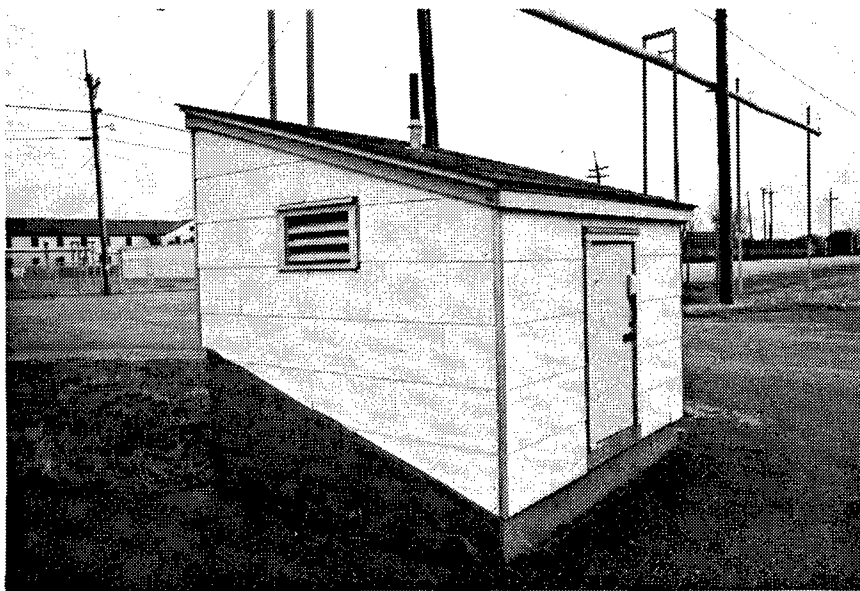


Figure 361. Building 906-1: Sewage Lift Station.



Figure 362. Building 281: Air Station.

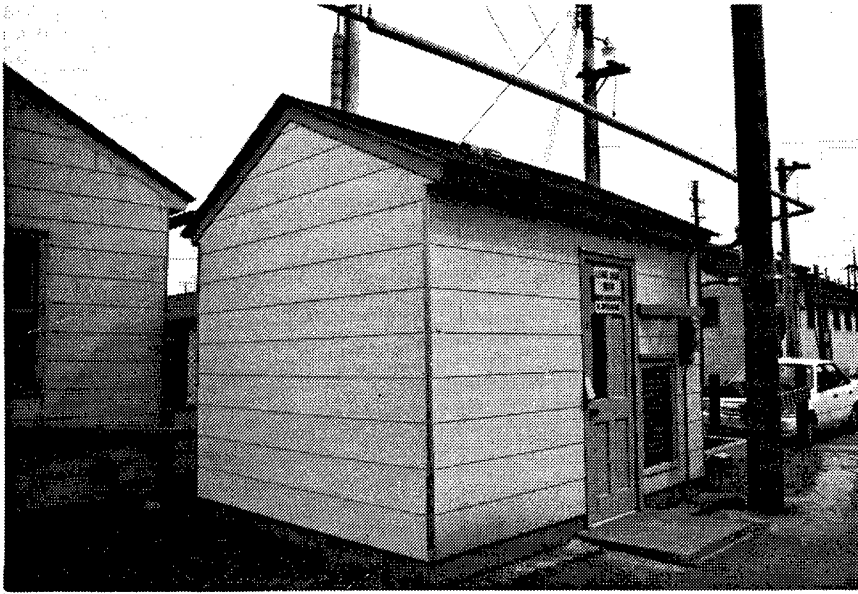


Figure 363. Building 276: Light Plant or Generator.

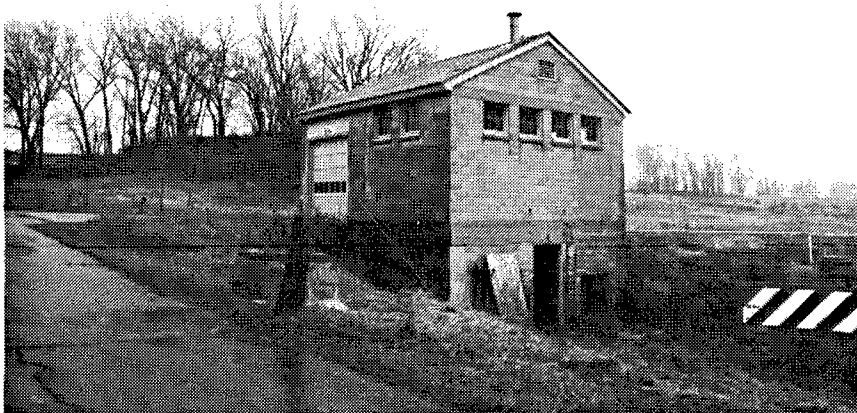


Figure 364. Building 228: Incinerator.

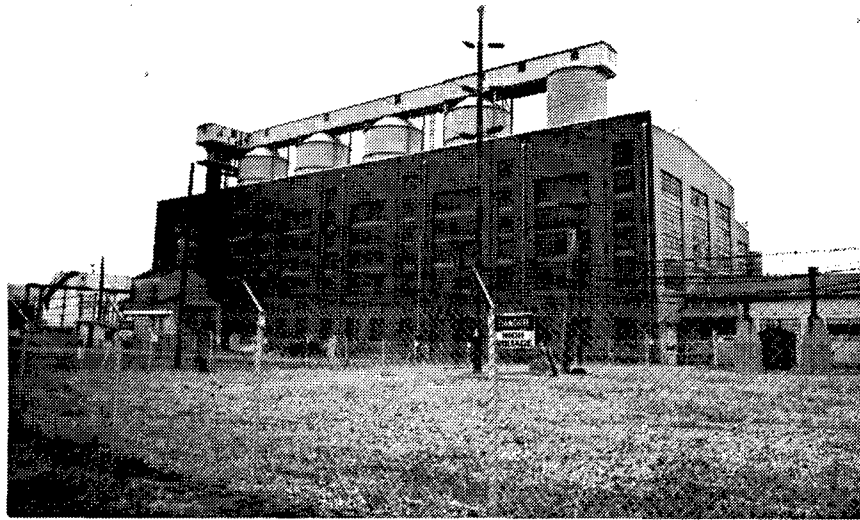


Figure 365. Building 400: Main Power Plant that was constructed in three levels. Five coal bunkers connected by a coal conveyor system can be seen on top of the structure. The coal elevator runs up the plant's left side.

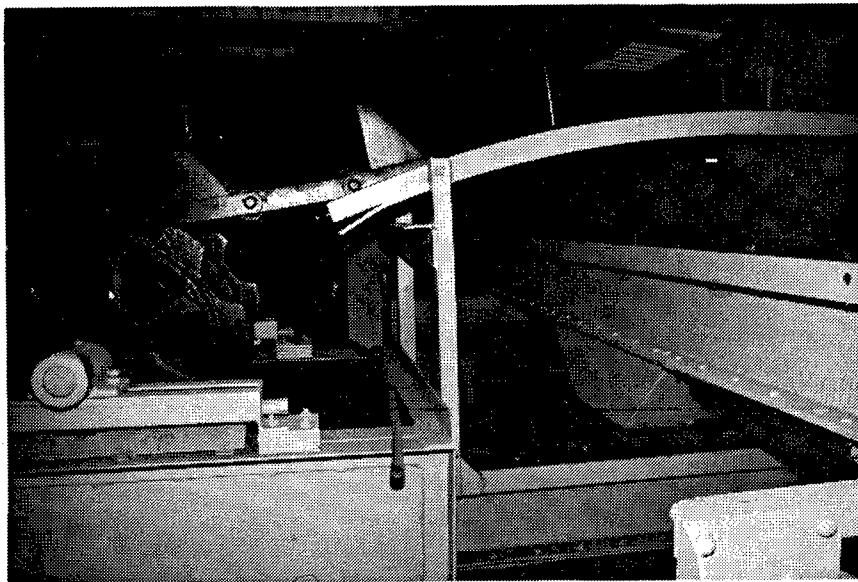


Figure 366. Building 400: View from inside the flight-type chain-driven conveyor manufactured by Beaumont Birch Company. A Westinghouse gear reducer is in the foreground.

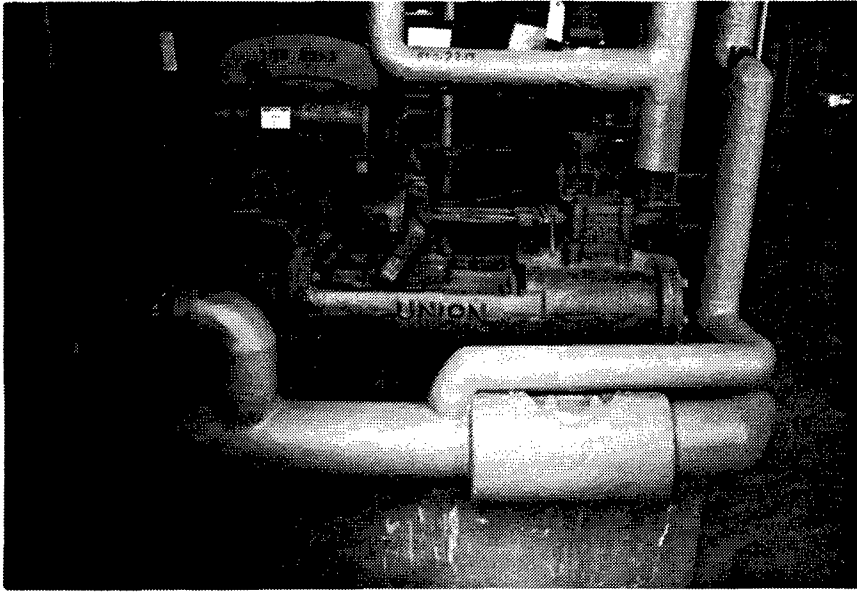


Figure 367. Building 400: Steam-driven oil piston pump located on the first level.

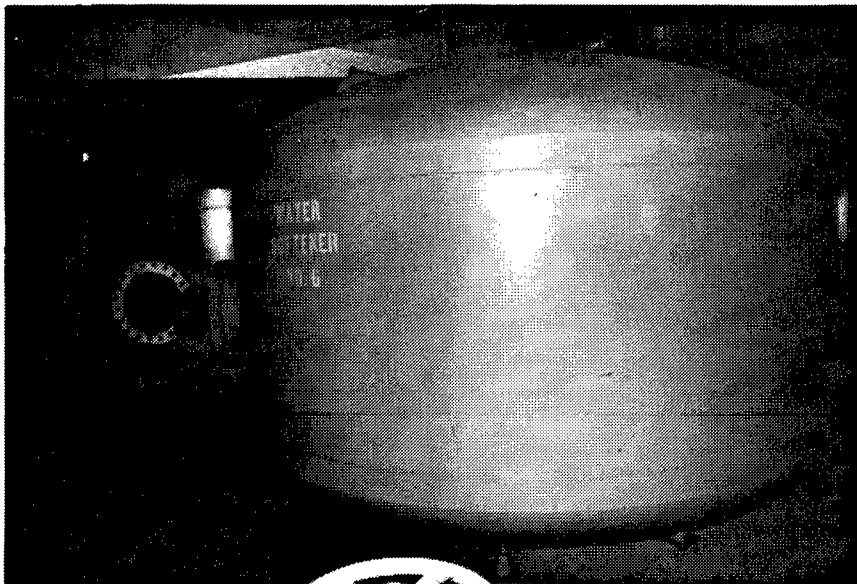


Figure 368. Building 400: Originally, this tank was a water filter tank; it was later used as a soft water tank located on the first level.

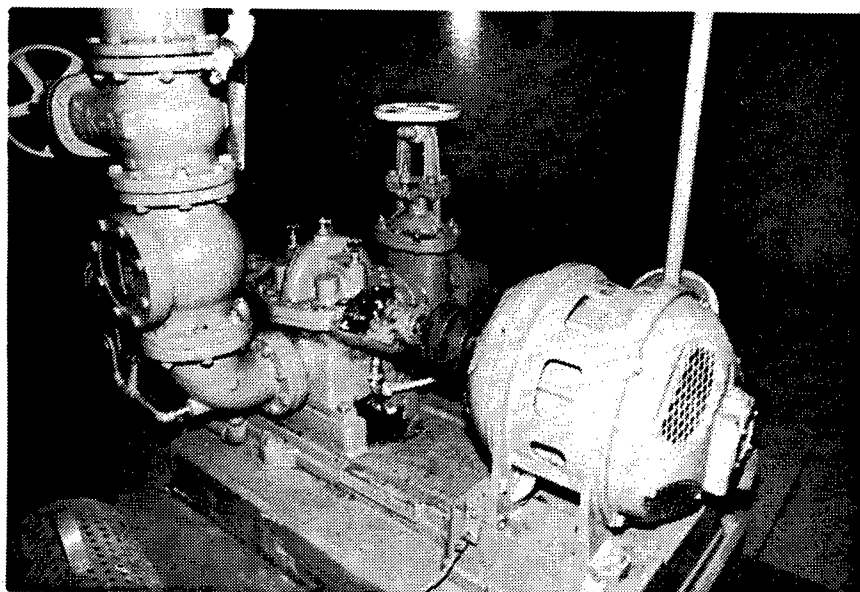


Figure 369. Building 400: Raw water pump manufactured in 1942 by Ingersoll-Rand and located on the first level. This electric pump is similar to the turbine-powered water pump also found in this building.

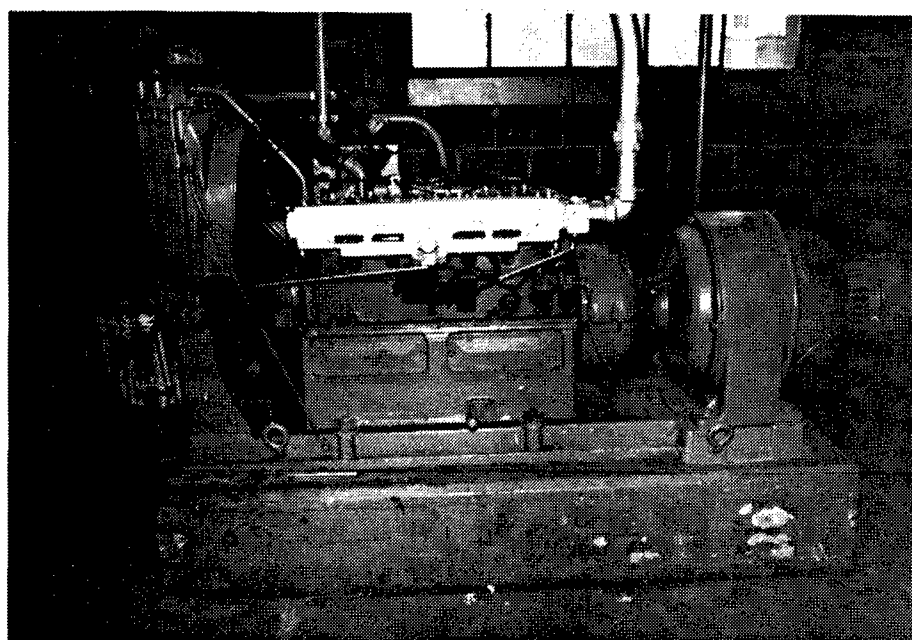


Figure 370. Building 400: Gas-driven "light plant" or generator located on the first level.

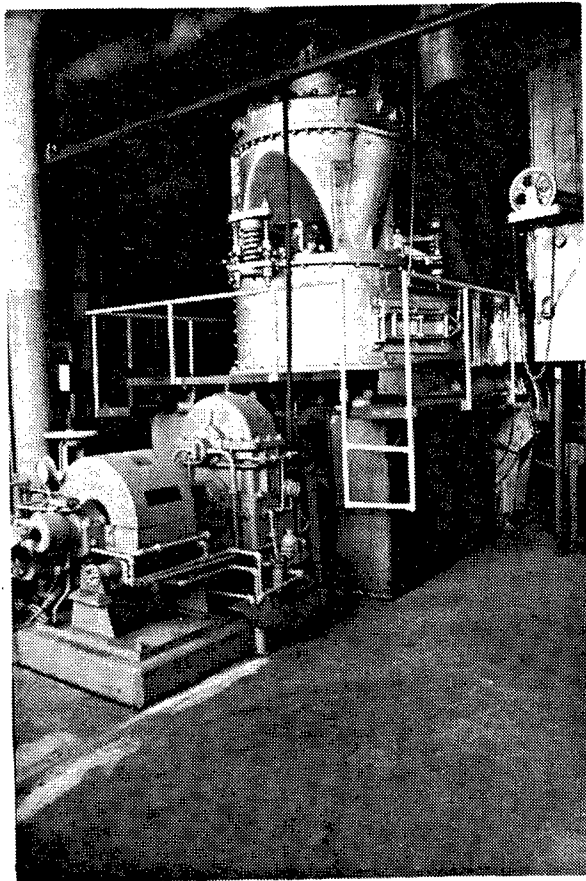


Figure 371. Building 400: Coal pulverizer on the first level.

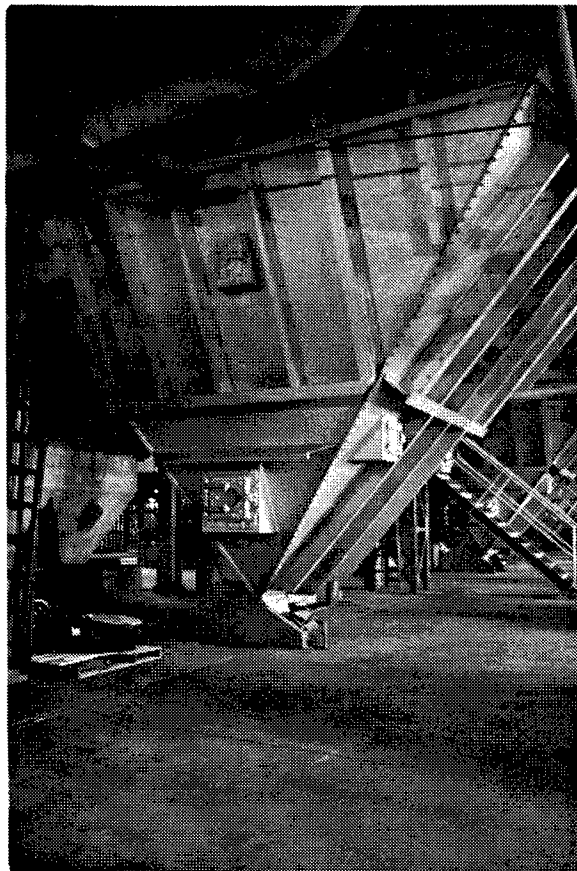


Figure 372. Building 400: This is an example of an ash hopper which funnels the ash into collection bins that were to be shipped out and disposed of. At the base of the hopper is the "clinker breaker" which pulverizes any remaining chunks of coal. Both are located on the first level.

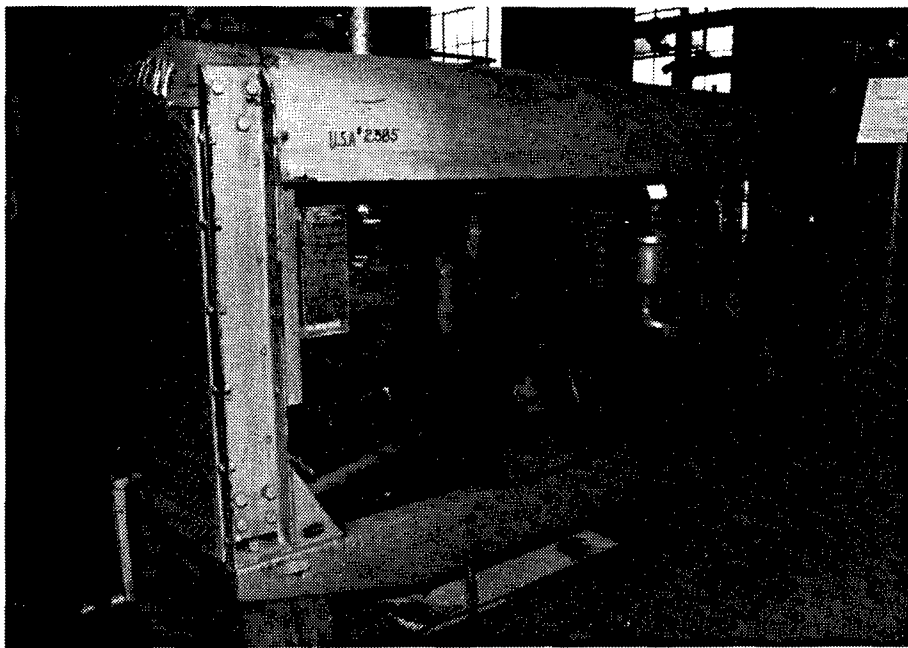


Figure 373. Building 400: Gas-driven air compressor located on the first level.

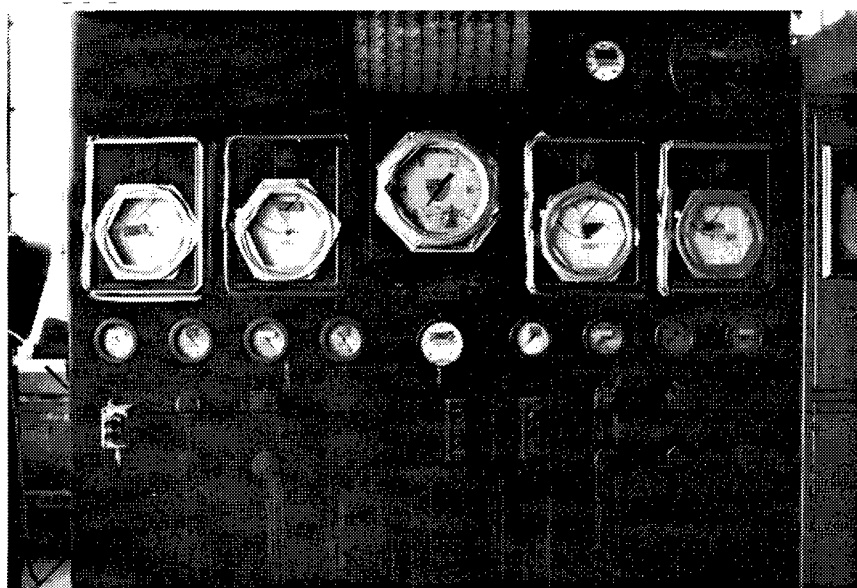


Figure 374. Building 400: Panel of a boiler's control gauges on the second level.

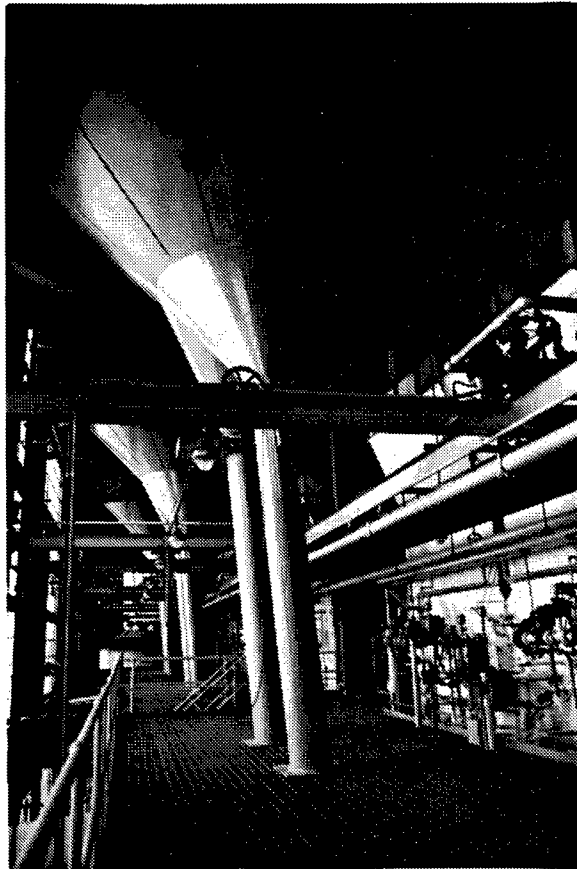


Figure 375. Building 400: Interior aspect of a coal bunker on the third floor of this building.

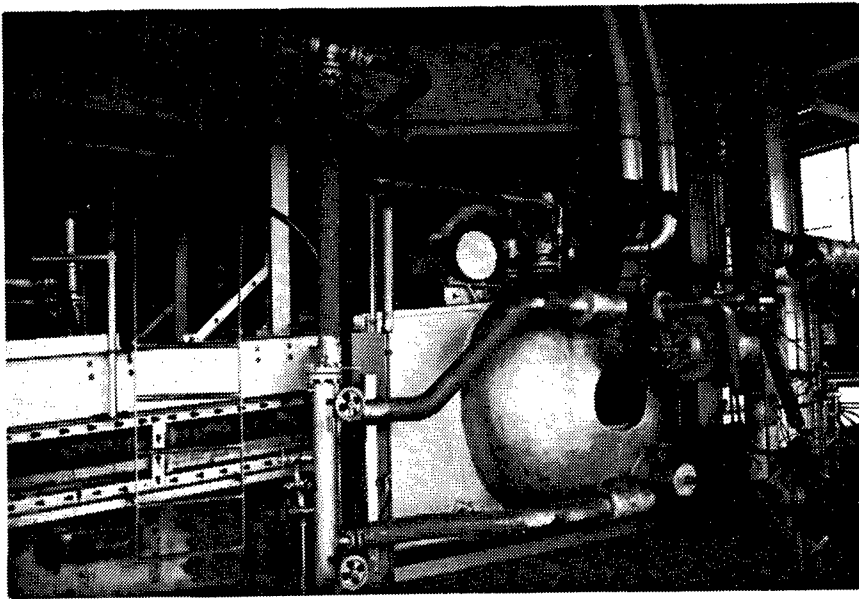


Figure 376. Building 400: Top of one of the plant's five boilers which is capped by a soot blower and located on the third level of this building.

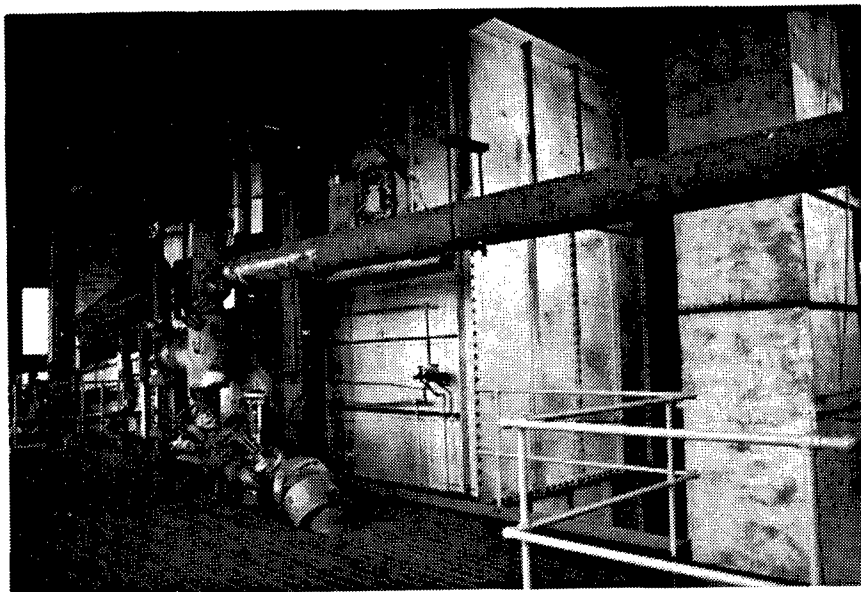


Figure 377. Building 400: Front view of the boiler on the third level. The boiler stands three levels high.

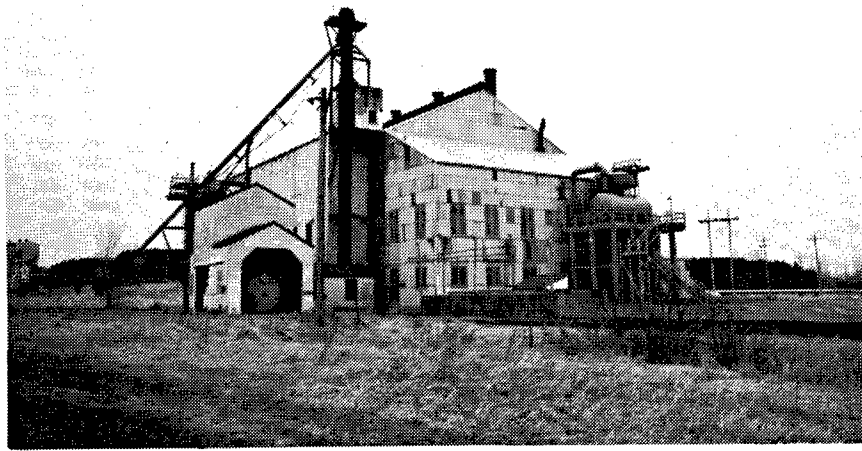


Figure 378. Building 6538: Powerhouse #2 which was never activated. The powerhouse was originally built in the 1930s or 1940s at the Balt Plant. In the 1950s, the structure and its equipment were disassembled, shipped, and reassembled at Badger.



Figure 379. Building 402: Coal Yard and elevator that facilitated extraction of coal from rail cars.

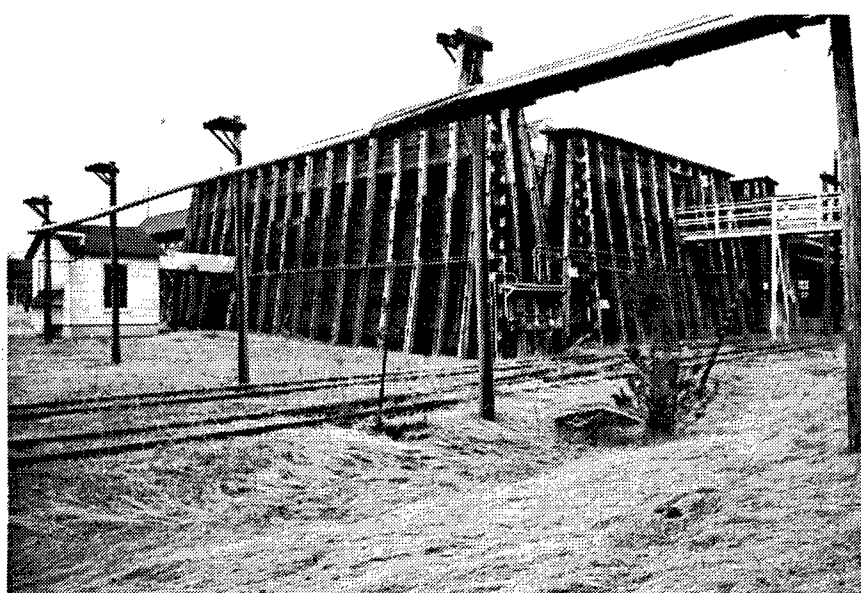


Figure 380. Building 6702-3: Heating House.

REFERENCES CITED

MacDonald and Mack Partnership

- 1984 *Historic Properties Report: Badger Army Ammunition Plant, Baraboo, Wisconsin*. Document prepared for the Historic American Buildings Survey/Historic American Engineering Record, National Park Service, and the U.S. Department of the Interior.

Thomson, H., and L. Mayo

- 1991 *United States Army in World War II. The Technical Services: The Ordnance Department: Procurement and Supply*. Center of Military History, United States Army. Washington, D.C.

United States Government

- n.d. *Ordnance War Administration History Series II. The Ordnance organization in World War II*. Study Number 11. Facilities. Monograph Number 1. GOCO Facilities Directory.

APPENDIX A

PHOTOGRAPHIC DATA SHEETS

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 1

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
1	200	Main Office Building/Headquarters, west front and south side. Every second window was sealed when the building was re-sided in the 1960's	NE	04/11/94	Hiatt
2	214	General Purpose Administration Building, west front and north side	SE	04/11/94	Hiatt
3	203-2	Vehicle Storage/Garage for the administrators' government vehicles, west front and north side	SE	04/11/94	Hiatt
4	234	Cafeteria, now used as Offices Service Building, west front and north side	SE	04/11/94	Hiatt
5	263	Telephone Exchange Building, east front and south side	NW	04/11/94	Hiatt
6	264	Bus Station at the plant entrance, south front and west side	NE	04/11/94	Hiatt
7	264	Second angle of the Bus station at the plants entrance, west and north side	SE	04/11/94	Hiatt
8	204-3	Gate House/Clock Alley, an employee entrance and time card house, west front and south side	NE	04/11/94	Hiatt
9	273	General Instruction Building, now used as the Recreation Building, one wing has been demolished turning the H-shaped building into a T-shape, south front and east side	NW	04/11/94	Hiatt
10		Void		04/11/94	Hiatt
11	235	Guard House/Police Station, west front and north side	SE	04/11/94	Hiatt
12	205	Hospital/Clinic with beds, north front and west side	SE	04/11/94	Hiatt
13	281	Air Station, west front and north side	SE	04/11/94	Hiatt
14	272	Vehicle Storage House, now used for Telephone Maintenance, east front and south side	NW	04/11/94	Hiatt
15	227-2	Change House, east and south side	NW	04/11/94	Hiatt
16	276	Light Plant or Generator, south front and west side	NE	04/11/94	Hiatt
17	271	General Warehouse, now used for patrol equipment storage, west front and north side	SE	04/11/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 1

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
18	229	Employment Building originally used for employee logistics, east back and south side	NW	04/11/94	Hiatt
19	215	General Purpose Maintenance Shed, now converted to the Scale and Instrument Shop, north front and west side	SE	04/11/94	Hiatt
20	241-2	Twelve Car Garage in the shop area, east front and north side	SW	04/11/94	Hiatt
21	518	Paint Shop, north front and west side	SE	04/11/94	Hiatt
22	512	General Purpose Maintenance Shop, this building now serves as the Riggers Loft, south front and west side	NE	04/11/94	Hiatt
23	524	Calibration Facility, currently used as the Metrology Laboratory, east front and south side	NW	04/11/94	Hiatt
24	523	Lead Burning House, south and west side. Note the hoist system extending into the building.	NE	04/11/94	Hiatt
25	500-1	Combined Shops where post-1950 equipment is housed along with machinery for metal and wood working, west front and north side	SE	04/11/94	Hiatt
26	520	Forge and Welding Shop, north front and west side	SE	04/11/94	Hiatt
27	6702-4	Pre-Mix House located behind a double-riveted barricade, east and south sides	NW	04/11/94	Hiatt
28	6702-4	Toledo scale (style #31-1801FD) with dial, platform, and a 500lb. capacity, manufactured in 1953. Located on the first floor of the Pre-Mix House.		04/11/94	Hiatt
29	6702-4	Toledo scale (style #31-1801FD) with dial, platform, and a 500lb. capacity, manufactured in 1953. Located on the first floor of the Pre-Mix House.		04/11/94	Hiatt
30	6702-4	Mixer for the paste or slurry compound (nitrocellulose and nitroglycerin and water). Located in the Pre-Mix House.		04/11/94	Hiatt
31	6702-4	Pre-Mix House, Second floor: Second angle of the Mixer for the paste or slurry compound. Note the brass piping		04/11/94	Hiatt
32	6702-4	Pre-Mix House, first floor: Tanks with catch basin for nitroglycerin		04/11/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 1

Exp.

No.	Building No(s).	Description	Dir.	Date	Recorder
33	6513-1	Latrine, east front and south side	NW	04/11/94	Hiatt
34	6702-3	Heating House, south front and west side	NE	04/11/94	Hiatt
35	6706-2	Explosion proof light switch located on the east wall of the Pump and Heater House		04/11/94	Hiatt
36	6706-2	Hot water pumps in the Pump and Heater House		04/11/94	Hiatt
37	6702-2	Second angle of the hot water pumps in the Pump and Heater House		04/11/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 2

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
0	6706-2	From Catwalk, Heating coils within a processing tank located in the Pump and Heater House		04/11/94	Hiatt
1	6706-2	Wooden water storage tank located on the first floor of the Pump and Heater House. Note floater		04/11/94	Hiatt
2	6706-2	Pump and Heater House, first floor: Process tanks, pre-mix tanks		04/11/94	Hiatt
3	6706-2	Pump and Heater House, north and east side	SW	04/11/94	Hiatt
4	6704-4	Final Mix House, first floor: Hopper and Scale where paste dispensed by the hopper was weighed in 50lb. increments and bagged		04/11/94	Hiatt
5	6704-4	Final Mix House, first floor: Second angle of hopper and scale where paste dispensed by the hopper was weighed in 50lb increments and bagged.		04/11/94	Hiatt
6	6704-4	Final Mix House, first floor: Tanks on a lead covered, cement stand		04/11/94	Hiatt
7	6704-4	Final Mix House, second floor: Centrifugal Wringer driven by high pressure hydraulic motors.		04/11/94	Hiatt
8	6704-4	Final Mix House, second floor: Open top "Everdur" mixing tanks with vertically driven "Centi-cone" agitators powered by hydraulic motors		04/11/94	Hiatt
9	6704-4	Final Mix House, east front and north side	SW	04/11/94	Hiatt
10	6704-3	Final Mix House, east and south side	NW	04/11/94	Hiatt
11	6705-3	Nitroglycerin Catch Tank House, south front and southeast side	N	04/11/94	Hiatt
12	6738	Paste Area Shop, north front and east side	SW	04/11/94	Hiatt
13	6738-1	Paste Area Shop Storage Building, north front and east side	SW	04/11/94	Hiatt
14	6732	Diethylphthalate Lines, east and north sides	SW	04/11/94	Hiatt
15	6712 & 6124	Homogenizer House (#6712-foreground) and Centralite Storage Building (#6124-background), north front and east side	SW	04/11/94	Hiatt

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PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 2

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
16	H30-L17	Steam Pressure Reducing Station, front and east sides		04/11/94	Hiatt
17	6701	Nitrocellulose Blender House, west front and south side	NE	04/11/94	Hiatt
18	6701	Nitrocellulose Blender House, first floor: Hopper used to transfer nitrocellulose from the Sweetie barrel to awaiting receptacles		04/11/94	Hiatt
19	6701	Nitrocellulose Blender House, first floor: Buggy with crank to aide in tilting the buggy barrel		04/11/94	Hiatt
20	6701	Nitrocellulose Blender House, first floor: Buggy with a crank to aide in tilting the buggy barrel		04/11/94	Hiatt
21	6701	Nitrocellulose Blender House, first floor: Second angle of buggy showing the Crank		04/11/94	Hiatt
22	6701	Nitrocellulose Blender House, first floor: Powder Bag Buggy		04/11/94	Hiatt
23	6701	Nitrocellulose Blender House, first floor: Powder Bag Buggy		04/11/94	Hiatt
24	6701	Nitrocellulose Blender House, view from catwalk: Motor-driven "sweetie" barrel where nitrocellulose was mixed		04/11/94	Hiatt
25	6700	Nitrocellulose Rest House, south front and west side	NE	04/11/94	Hiatt
26	6731-4	Paste Breaker and Blender House with barricade, south front and west side (the main building is separated from the tram loading dock and the platform elevator structure by a double riveted barricade)	NE	04/11/94	Hiatt
27	6731-3	Paste Breaker and Blender House with barricade		04/11/94	Hiatt
28	6731-3	Paste Breaker and Blender House: 1969 Chip Collecting System (now dismantled, originally located on second floor)		04/11/94	Hiatt
29	6709-24	Pre-Dry House with barricade, south front and east side. The building is divided into four, sheet metal lined bays.	NW	04/11/94	Hiatt
30	6709-23	Pre-Dry House with Heater House and without barricade, south front and east side	NW	04/11/94	Hiatt

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PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 2

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
31	6709-23	Pre-Dry House without barricade, and with another pre-dry house in background	N	04/11/94	Hiatt
32	6804-8	Rest House without barricade, north side and east front	SW	04/11/94	Hiatt
33	6804-9	Rest House with barricade, east and south sides	NW	04/11/94	Hiatt
34	6804-9	Rocket Grain Carts in the Rest House		04/11/94	Hiatt
35	6804-9	Rest House: Carrier Corporation Air Conditioner for controlling humidity (the fans are no longer present)		04/11/94	Hiatt
36	6804-9	Rest House: Different Angle of Carrier Corporation Air Conditioner for controlling humidity (the fans are no longer present)		04/11/94	Hiatt

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PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 3

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
1	6881	X-Ray House, north front and west side (this concrete bldg. contains rooms for: viewing; chemical supply and film storage; office and air conditioning; and a darkroom)	SE	04/11/94	Hiatt
2	6881	X-Ray House: Closeup of Westinghouse housing with Andrex X-ray head and X-ray machine.		04/11/94	Hiatt
3	6881	X-Ray House: Second angle of X-Ray machine with propellant track and propellant car		04/11/94	Hiatt
4	6881	X-Ray House: Chatillon Dial Platform Scale with a 100 lb. capacity		04/11/94	Hiatt
5	6881	X-Ray House: 1942 Toledo Scale and a Cutter for rocket grain by Challenge Machinery		04/11/94	Hiatt
6	6881	X-Ray House: Second angle of Cutter for rocket grain		04/11/94	Hiatt
7	6881	X-Ray House: Overview of X-ray room		04/11/94	Hiatt
8		Void		04/11/94	Hiatt
9		Void		04/11/94	Hiatt
10	6828-7	Final Rest House with a covered walkway leading to a loading dock, east front and north side	SW	04/11/94	Hiatt
11	6828-7	Final Rest House with a covered walkway leading to a loading dock, east front and north side	SW	04/11/94	Hiatt
12	6816-1	Final Inspection House, east front and north side	SW	04/11/94	Hiatt
13	6814-2	Milling House: Air powered, Pierce, grain spiral wrap machine with a capacity of 7.5 grains per minute		04/11/94	Hiatt
14	6814-2	Milling House: Second angle of Pierce, air powered, grain spiral wrap machine		04/11/94	Hiatt
15	6814-2	Milling House: an overview of the Pierce, air powered, grain spiral wrap machine		04/11/94	Hiatt
16	6814-2	Milling House: Pumps for solvents involved in the spiral wrap process		04/11/94	Hiatt
17	6814-2	Milling House, west front and north side. (air operated, sliding doors, separate several of the	SE	04/11/94	Hiatt

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PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 3

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
		buildings and 10 bays from one another)			
18	6814-3	Overlap trimming machine		04/11/94	Hiatt
19	6805-1	Paste Weigh House (the barricade has been torn down), south front and east side	NW	04/11/94	Hiatt
20	6868-2	Tannealing House, south front and west side (the building consists of four processing bays and anterior rooms all lined with welded and sealed steel sheeting to prevent nitroglycerin absorption)	NW	04/11/94	Hiatt
21	6807-21	Roll House, east and south sides. (the house is divided into bays and rooms. Catwalks are on the roof. A sprinkler system with photoelectric cell detection has been installed.)	NW	04/11/94	Hiatt
22	6530-1	Rocket Line Office, south front and west side	NE	04/11/94	Hiatt
23	6861-2	Rocket Line Office with wing extension, south front and west side	NE	04/11/94	Hiatt
24	6850-1	Wax Purification and Die Warming House, south front and west side	NE	04/11/94	Hiatt
25	6874-1	Rocket Area Shop: Drill press (#3679?), manufactured by Delta of Milwaukee, Wisconsin		04/11/94	Hiatt
26	6874-1	Second angle of Delta drill press in Rocket Area Shop.		04/11/94	Hiatt
27	6874-1	Grinder (#21106) in the Rocket Area Shop		04/11/94	Hiatt
28	6874-1	Rocket Area Shop: Jointer manufactured by Walker-Turner		04/11/94	Hiatt
29	6874-1	Rocket Area Shop: Yost (#2089) manufactured by/in? Meadville, Pennsylvania.		04/11/94	Hiatt
30	6874-1	Rocket Area Shop, south front and west side	NE	04/11/94	Hiatt
31	6823-1	Oil Storage Building, south front and east side	NW	04/11/94	Hiatt
32	H21-L22	Steam Pressure Reducing Station, west front and south side	NE	04/11/94	Hiatt
33	6808-5	Slitter and Carpet Roll House: 1944 Carpet Roll Machine manufactured by Barrel-Birmingham Company		04/11/94	Hiatt

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Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 3

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
34	6808-5	Slitter and Carpet Roll House: Second angle of carpet roll machine		04/11/94	Hiatt
35	6808-5	Third angle of carpet roll machine in Slitter and Carpet Roll House		04/11/94	Hiatt
36	6808-5	Slitter and Carpet Roll House: 1944, Bagley and Sewal Company, Slitting machine. This model is a floor type, semi-automatic, with a warming tray.		04/11/94	Hiatt
37	6808-5	Slitter and Carpet Roll House: Second angle of slitting machine.		04/11/94	Hiatt

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Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 4

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
1		Void		04/11/94	Hiatt
2	6808-5	Slitter and Carpet Roll House. (this house is divided by function into 4 rooms: the sheet warming room, the slitting room, the carpet roll room, and the carpet roll dispatch room).		04/11/94	Hiatt
3	6810-09	Press House: Carpet roll machine with air driven motor		04/11/94	Hiatt
4	6810-09	Press House: second angle carpet roll machine with air driven motor		04/11/94	Hiatt
5	6810-09	Press House: 30 hp Oil hydraulic pump to work the extrusion press		04/11/94	Hiatt
6	6810-09	Press House: second angle of 30 hp Oil hydraulic pump to run the extrusion press		04/11/94	Hiatt
7	6810-09	Press House: 1944 Horizontal Extrusion press by R.D. Wood Company		04/11/94	Hiatt
8	6810-09	Press House: second angle, 1944 Horizontal Oil hydraulic Extrusion press with extrusion die and holder manufactured by Farquar		04/11/94	Hiatt
9	6810-09	Press House: Plant fabricated, air operated, Flying Cutter		04/11/94	Hiatt
10	6810-09	Press House: second angle of the Flying Cutter unit with a air driven guillotine cutter and trip through		04/11/94	Hiatt
11	6810-09	Press House: Carpet Trolley		04/11/94	Hiatt
12	6810-09	Press House, east front and north side (with a reinforced concrete arch 36ft long with an interior radius of 10ft. and a minumun of 5ft of earth covering the structure).	SW	04/11/94	Hiatt
13	6586-1	Trolley engine in the Tram Repair Shop		04/11/94	Hiatt
14	6586-1	Tram Repair Shop: close-up of Trolley engine cockpit		04/11/94	Hiatt
15	6586-1	Tram Repair Shop: third angle of trolley engine		04/11/94	Hiatt
16	6586-1	Tram Repair Shop, west front and north side	SE	04/11/94	Hiatt

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PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 4

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
17	6586-1	Tram Repair Shop, west front and north side	SE	04/11/94	Hiatt
18	6531-1	Transfer Shed, east and south sides (a different building type)	NW	04/12/94	Hiatt
19	6726-1	Paste Rest House, west and south sides	NE	04/12/94	Hiatt
20	6736	Bag Turning House, south front and east side	NW	04/12/94	Hiatt
21	6739	Bag Loading House, south front and east side	NW	04/12/94	Hiatt
22	6864-2	Cementing House, north and west sides	SE	04/12/94	Hiatt
23	6837-2	Spare Parts Storage building, east and south sides	NW	04/12/94	Hiatt
24	6863	Acetate Storage building, east front and south side	NW	04/12/94	Hiatt
25	6816-1	Box Storage building, south front and east side	NW	04/12/94	Hiatt
26	6536	Trailer House, north front and east side	SW	04/12/94	Hiatt
27	6529	Tractor House, south front and east side	NW	04/12/94	Hiatt
28	6817-1	Packing House, south front and east side	NW	04/12/94	Hiatt
29	6829-2	Rest House, south front and east side	NW	04/12/94	Hiatt
30	6829-2	Wheeling Walk	NW	04/12/94	Hiatt
31	6815	Rest House (all barricades have been torn down), south front and west side	NE	04/12/94	Hiatt
32	6955-1	Rework Heating House, east front and south side	NW	04/12/94	Hiatt
33	6957-1	Rework Sorting and Weigh House, east front and south side	NW	04/12/94	Hiatt
34	6956-1	Rework Cutting House, east front and south side	NW	04/12/94	Hiatt
35	6953-1	Rework Rest House, west back and north side	SE	04/12/94	Hiatt
36	6803-1	Paste Rest House, east front and south side	NW	04/12/94	Hiatt
37	6812-11	Rest and Heating House without barricade, south front and east side	NW	04/12/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 5

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
1	6812-18	Rest and Heating House, east and south side	NW	04/12/94	Hiatt
2	6826-1	Supersonic Scanning House or Fluoroscope House with 3 rooms: a lunch room, a scanning room, and a discharge room, west and south sides	NE	04/12/94	Hiatt
3	6531-2	Transfer Shed for materials awaiting employment, east and south sides	NW	04/12/94	Hiatt
4	6531-2	Transfer Shed for materials awaiting employment, east and south sides	NW	04/12/94	Hiatt
5	6819	Box Factory and Shook Storage (A brick firewall divides the building at its midpoint and can be seen on the left), north front and west side	SE	04/12/94	Hiatt
6	906-1	Sewage Lift Station, north front and east side	SW	04/12/94	Hiatt
7	270-2	Inspection House where employees were searched, east back and south side	NW	04/12/94	Hiatt
8	204-2	Back view of Gate House/Clock Alley, east back and south side	NW	04/12/94	Hiatt
9	204-B-1	Gate House/Sentry House at the northwestern gate off of Highway 12, north front and east side	SW	04/12/94	Hiatt
10	224	Ballistic House and Range for small arms, east and south sides	NW	04/12/94	Hiatt
11		Void		04/12/94	Hiatt
12	6877	Loading House in the ballistics area, north and west sides	SE	04/12/94	Hiatt
13	225	Ballistic Magazine with barricade, south front and east side	NW	04/12/94	Hiatt
14	6873	Test House in the Ballistic Area, south front and east side	NW	04/12/94	Hiatt
15	6875	Constant Temperature Rest House (on the left outside the barricade), south front and east side	NW	04/12/94	Hiatt
16	6878	Black Powder Magazine, south front and east side	NW	04/12/94	Hiatt

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Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 5

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
17	521	Gas Cylinder Storage building, west and south sides	NE	04/12/94	Hiatt
18	503	Oil and Solvent Storage building, west and north sides	SE	04/12/94	Hiatt
19	241-1	Garage and Office (this is the office wing), note gas pumps to the right, east and north sides	SW	04/12/94	Hiatt
20	241-1	Second angle of Garage and Office (the office on the left has recently been insulated and re-sided), west and north sides	SE	04/12/94	Hiatt
21	517-2	General Storage building, north front and west side	SE	04/12/94	Hiatt
22	505	Lumber Storage building, south front and side	N	04/12/94	Hiatt
23	222	Fire Station #1 in the shop and maintenance area, north front and west side	SE	04/12/94	Hiatt
24	222	Fire Station #1 in the shop and maintenance area, north front and west side	SE	04/12/94	Hiatt
25	4034	Nitrocellulose Laboratory, north front and west side	SE	04/12/94	Hiatt
26	4041	Laboratory Storage Facility, east front and south side	NW	04/12/94	Hiatt
27	226	Powder Magazine for housing powder that had not been completely processed, east front and north side	SW	04/12/94	Hiatt
28	501	Locomotive Shop, south front and east side	NW	04/12/94	Hiatt
29	240	Salvage Warehouse, east and north sides	SW	04/12/94	Hiatt
30	6576	Recreation Building, east front and north side	SW	04/12/94	Hiatt
31	6576	Recreation Building for plant employees, east front and north side	SW	04/12/94	Hiatt
32	228	Incinerator, north front and west side	SE	04/12/94	Hiatt
33	228	Incinerator, north front and west side	SE	04/12/94	Hiatt
34	6535	Bus Station, west front and north side (located within the plant where employees waited for buses to take them to the plant entrance)	SE	04/12/94	Hiatt
35	1997	Dunnage Storage Building, east and south sides	NW	04/12/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 5

Exp.

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
36	1993-1	Office and Change House for the magazine area, west front and north side	SE	04/12/94	Hiatt
37	6882-1	Final Rest House, south front and west side (complete ammunition was stored here until it was transferred to a magazine for permanent storage)	NE	04/12/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 6

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
1	6401	Box Storage Building, east and south sides	NW	04/12/94	Hiatt
2	275	Warehouse, U-shaped, east and north sides	SW	04/12/94	Hiatt
3	522	Tram Repair Shop, east and north sides	SW	04/12/94	Hiatt
4	5072	Ingredient Warehouse, east front and north side	SW	04/12/94	Hiatt
5	719-1	Acid Area Shop, east and north sides	SW	04/12/94	Hiatt
6	713	Ammonia Compressor House, east front and south side	NW	04/12/94	Hiatt
7	701	Ammonia Storage Building and associated tanks located in the Acid Area, east front and south side	NW	04/12/94	Hiatt
8	701	Overview of Ammonia Storage Building and tanks in the Acid Area		04/12/94	Hiatt
9	701	Ammonia Storage Building: Hoffman temperature recorder, ammonia level indicator by inches		04/12/94	Hiatt
10	701	Heating coils in the Ammonia Storage Building		04/12/94	Hiatt
11	701	Heating Coils in the Ammonia Storage Building		04/12/94	Hiatt
12	713	Ammonia Compressor House: 1942 Ammonia Compressor by Frick Company		04/12/94	Hiatt
13	713	Ammonia Compressor House: second angle of 1942 Ammonia compressor by Frick Company		04/12/94	Hiatt
14	718	Acid Line Office and its associated Steam Pressure Reducing Station, west front and north side	SE	04/12/94	Hiatt
15	702	Oxidation House		04/12/94	Hiatt
16	702	Oxidation House, first floor: ammonia oxidation units		04/12/94	Hiatt
17	702	Oxidation House, first floor: second angle of ammonia oxidation units		04/12/94	Hiatt
18	702	Oxidation House, first floor: ammonia oxidation units		04/12/94	Hiatt
19	702	Oxidation House, first floor: second angle of ammonia oxidation units		04/12/94	Hiatt

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Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 6

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
20	702	Oxidation House, first floor: Cooling water return		04/12/94	Hiatt
21	702	Oxidation House, first floor: second angle of cooling water return		04/12/94	Hiatt
22	702	Oxidation House, first floor: Water softener		04/12/94	Hiatt
23	702	Oxidation House, second floor: Ammonia oxidation units		04/12/94	Hiatt
24	702	Oxidation House, second floor: Instrument panel		04/12/94	Hiatt
25	702	Oxidation House, second floor: Laboratory table		04/12/94	Hiatt
26	702	Oxidation House, third floor: Horizontal nitric acid tank and Howe scale with 100,000lb. capacity		04/12/94	Hiatt
27	702	Oxidation House: Nitric acid condensor		04/12/94	Hiatt
28	702	Oxidation House, third floor: Nitric Acid Reheater by Struther Wells of Warren, Pennsylvania		04/12/94	Hiatt
29	702	Oxidation House: Nitric coil		04/12/94	Hiatt
30	702	Oxidation House: Pre-oxidizer		04/12/94	Hiatt
31	702	Oxidation House, third floor: Water cooling coils for nitric acid		04/12/94	Hiatt
32	702	Oxidation House, third floor: Water cooling coils for nitric acid		04/12/94	Hiatt
33	700-1	Air Compressor House: Ingersol-Rand air compressor		04/12/94	Hiatt
34	700-1	Air Compressor House: XRD hot gas		04/12/94	Hiatt
35	700-1	Air Compressor House: XRD hot gas		04/12/94	Hiatt
36	700-1	Air Compressor House: Second angle, XRD hot gas		04/12/94	Hiatt

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Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 7

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
0	700-1	Air Compressor House: Electric air compressor by Ingersoll Rand Company		04/12/94	Hiatt
1	700-1	Air Compressor House: second angle of Ingersoll Rand electric air compressor		04/12/94	Hiatt
2	700-1	Air Compressor House: third angle of Ingersoll Rand electric air compressor		04/12/94	Hiatt
3	700-1	Air Compressor House: 1955 Emergency light plant, Onan gas engine (transferred from Bldg. 296)		04/12/94	Hiatt
4	700-1	Trolley in the Air Compressor House		04/12/94	Hiatt
5	706	Weak and Strong Nitric Acid Circulators - the cooling coils date to the plants construction, and the supporting structure was possibly constructed at a later date		04/12/94	Hiatt
6	730	Nitric acid condensor in the Nitric Acid Recovery House		04/12/94	Hiatt
7	730	Nitric acid condensor in the Nitric Acid Recovery House		04/12/94	Hiatt
8	730	Nitric Acid Recovery House: 1942 Nitric acid concentrator with a 28' vertical absorption tower		04/12/94	Hiatt
9	730	Nitric Acid Recovery House: second angle of Nitric acid concentrator unit		04/12/94	Hiatt
10	730	Nitric Acid Recovery House: Control panel for absorption tower		04/12/94	Hiatt
11	730	Nitric Acid Recovery House: Nitric acid concentrator unit		04/12/94	Hiatt
12	730	Nitric Acid Recovery House: Nitric acid condensor		04/12/94	Hiatt
13	4562	Laundry Building, north and east sides (the wings of this building form a cross)	SW	04/12/94	Hiatt
14	420-5	Waste Acid Disposal Plant, north front and west side	SE	04/12/94	Hiatt
15	704-1	Sulphuric Acid Concentrator, west and south sides	NE	04/12/94	Hiatt
16	420-5	Waste Acid Disposal Plant: 1942, Roto-Lock, Lime feeder and measuring unit and associated gauge panel		04/12/94	Hiatt

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Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 7

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
17	420-5	Waste Acid Disposal Plant: Panel Recorder: Brown (with compensator)		04/12/94	Hiatt
18	420-5	Waste Acid Disposal Plant: 1942 Agitator drive and turbo-mixer		04/12/94	Hiatt
19	420-5	Waste Acid Disposal Plant: Air blower unit by Roots-Connecticut Blower Company 1942		04/12/94	Hiatt
20	420-5	Waste Acid Disposal Plant: Second angle of air blower unit by Roots Connecticut Blower Company 1942		04/12/94	Hiatt
21	420-5	Cement tank located on the south side of the Waste Acid Disposal Plant		04/12/94	Hiatt
22	704-1	Cooling Product Tank for 92% sulphuric acid, located on the south side of Sulphuric Acid Concentrator		04/12/94	Hiatt
23	704-1	Storage product tank for 92% sulphuric acid, located on the west side of Sulphuric Acid Concentrator		04/12/94	Hiatt
24	730 & 703	Nitric Acid Recovery House (#730-left) and Nitric Acid Concentrator (#703-right), west and south sides	NE	04/12/94	Hiatt
25	730 & 703	Nitric Acid Recovery House (#730-left) and Nitric Acid Concentrator (#703-right), west and south sides	NE	04/12/94	Hiatt
26	704-1	Sulphuric Acid Concentrator: Sulphuric Acid Concentrating Unit (it stands 2 floors high)		04/12/94	Hiatt
27	704-1	Sulphuric Acid Concentrator: Second angle, Sulphuric Acid Concentrating Unit (it stands 2 floors high)		04/12/94	Hiatt
28	704-1	Sulphuric Acid Concentrator, third floor: Evaporator and barometric condensor stemming from the Sulfuric acid concentrating unit		04/12/94	Hiatt
29	704-1	Sulfuric Acid Concentrator, third floor: "Sump" water basin for water from the barometric condensor		04/12/94	Hiatt
30	704-1	Sulphuric Acid Concentrator: Sulphuric acid "run down"		04/12/94	Hiatt
31	704	Second building		04/12/94	Hiatt
32	728-2	Oleum Manufacturing Plant: Foster-Wheeler Sulfur burner and boiler		04/12/94	Hiatt

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Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 7

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
33	728-2	Oleum Manufacturing Plant: Foster-Wheeler Boiler and converter		04/12/94	Hiatt
34	728-2	Oleum Manufacturing Plant: 1942 Ingersol Rand Centrifugal Blower		04/12/94	Hiatt
35	728-2	Oleum Manufacturing Plant: Second angle of 1942 Ingersol Rand Centrifugal Blower		04/12/94	Hiatt
36	728-2	Control panel for Oleum Manufacturing Plant		04/12/94	Hiatt

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Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 8

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
1	728	Oleum Manufacturing Plant: Tank with measuring level by Leonard Construction Company 1942		04/12/94	Hiatt
2	728	Oleum Manufacturing Plant: 1942, Ingersol Rand, Centrifugal blower with a 16600 cfm, 300 hp, 2300 volt, 3570 rpm motor		04/12/94	Hiatt
3	728	Oleum Manufacturing Plant: second angle of 1942, Ingersol Rand, Centrifugal Blower		04/12/94	Hiatt
4	728	Absorption Tower with a 1971 demister crowning the unit, located on the west side of the Oleum Manufacturing Plant		04/12/94	Hiatt
5	728	Absorption Tower with a 1971 demister crowning the unit, located on the west side of the Oleum Manufacturing Plant		04/12/94	Hiatt
6	728	Oleum Manufacturing Plant, west and south sides	NE	04/12/94	Hiatt
7	728	Second angle of the Oleum Manufacturing Plant		04/12/94	Hiatt
8	6653	Glycerin Unloading and Pump House, west front and south side (located on the Double-Base Smokeless Propellant Line, which includes all 6000 series buildings)	NE	04/12/94	Hiatt
9	6675	Air Compressor House: 1942 Chicago Pneumatic water cooled air compressor		04/12/94	Hiatt
10	6675	Air Compressor house: 1942 Chicago Pneumatic, Water-cooled air compressor		04/12/94	Hiatt
11	6675	Air Compressor House, west and south sides	NE	04/12/94	Hiatt
12	6657-2	Nitroglycerin Nitrating and Separating House: Nitroglycerin Nitrator Tank		04/12/94	Hiatt
13	6657-2	Nitroglycerin Nitrating and Separating House: 1942 Troy-Ensborg, vertical throttling, Reciprocating engine		04/12/94	Hiatt
14	6657-2	Nitroglycerin Nitrating and Separating House: 1942 Vertical Lead separating tank		04/12/94	Hiatt
15	6657-2	Nitroglycerin Nitrating and Separating House: Felker Brothers, steel, Vertical prewash tank		04/12/94	Hiatt

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Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 8

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
16	6657-2	Nitroglycerin Nitrating and Separating House: Lead drowing tank		04/12/94	Hiatt
17	6657-2	Nitroglycerin Nitrating and Separating House: Steel air receiver tank and horizontal Graver Tank manufactured in 1942		04/12/94	Hiatt
18	6658	Looking down the nitroglycerin gutter from the Nitroglycerin Nitrating and Separating House (#6657-2) to the Soda Ash Storehouse (#6667-2)		04/12/94	Hiatt
19	6658	Looking down the nitroglycerin gutter from the Nitroglycerin Nitrating and Separating House (#6657-2) to the Soda Ash Storehouse (#6667-2)		04/12/94	Hiatt
20	6676-2	Soda Ash Storehouse, east front and south side	NW	04/12/94	Hiatt
21	6657-2	Nitroglycerin Nitrating and Separating House, the Soda Ash Storehouse (#6676-2) is in the foreground, south front and east side	NW	04/12/94	Hiatt
22	6672-2	Nitroglycerin Neutralizing House: Steel, vertical soda ash tank		04/12/94	Hiatt
23	6667-2	Nitroglycerin Neutralizing House: Steel open top tank		04/12/94	Hiatt
24	6667-2	Nitroglycerin Neutralizing House: Nitroglycerin neutralizing tank		04/12/94	Hiatt
25	6667-2	Nitroglycerin Neutralizing House: 1942 catch tank with a sloping bottom and baffles		04/12/94	Hiatt
26	6667-2	Nitroglycerin Neutralizing House, east and south side	NW	04/12/94	Hiatt
27	6672-2	Nitroglycerin Storehouse, north and east sides	SW	04/12/94	Hiatt
28	6677	Nitroglycerin Transfer House, north and east sides	SW	04/12/94	Hiatt
29	712-4	Modern Unloading Station, south and east sides	NW	04/12/94	Hiatt
30	712-19	Original Unloading Station, west and north side (located in the acid area for receiving materials to be transported by rail)	SE	04/13/94	Hiatt
31	4000	Cotton Linter Warehouse, note the firewall, west front and north side	SE	04/13/94	Hiatt

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Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 8

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
32	420-6	Waste Acid Disposal Plant: Plant "E" Lime Silo, west and south sides	NE	04/13/94	Hiatt
33	420-6	Waste Acid Disposal Plant: Lime Slaker and Westinghouse agitator and a gear reduction motor		04/13/94	Hiatt
34	420-6	Waste Acid Disposal Plant: Chicago Pump Company Sump pump with a 3 hp, 220/440 volt, 1140 rpm motor.		04/13/94	Hiatt
35	420-6	Waste Acid Disposal Plant: Second angle of Sump Pump by Chicago Pump Company		04/13/94	Hiatt

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Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 9

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
1	420-6	Waste Acid Disposal Plant: 1954 constant head tank with a tapering bottom		04/13/94	Hiatt
2	420-6	Waste Acid Disposal Plant: Neutralizing lime pit		04/13/94	Hiatt
3	420-6	Waste Acid Disposal Plant, east and south sides	NW	04/13/94	Hiatt
4	4003	Spent Oleum and M.F. Acid Storage, west and south sides	NE	04/13/94	Hiatt
5	4007	Acid Screening House, west front and north side	SE	04/13/94	Hiatt
6	4035	Spent Acid Pump House, west and south sides	NE	04/13/94	Hiatt
7	4012	Nitrating House where nitrocellulose was made, west and north sides	SE	04/13/94	Hiatt
8	4010	Cotton Dry House and Conveyor, east and south sides	NW	04/13/94	Hiatt
9	4010	Cotton Dry House: Proctor and Schwartz Bale braker with feed conveyor		04/13/94	Hiatt
10	4010	Cotton Dry House: Proctor and Schwartz cotton dryer		04/13/94	Hiatt
11	4010	Cotton Dry House: 1942 Buffalo Forge Company Blower		04/13/94	Hiatt
12	4010	Cotton Dry House: Conveyor(?)		04/13/94	Hiatt
13	4010	Cotton Dry House: Second angle of cotton dryer		04/13/94	Hiatt
14	4010	Cotton Dry House: Second angle of cotton dryer		04/13/94	Hiatt
15	4012	Nitrating House, second floor: Nitrating wringer with basket, curbs, immersion bowl, and motor by American Tool & Machine 1942		04/13/94	Hiatt
16	4012	Nitrating House, third floor: Chrome Dipping pot with agitator		04/13/94	Hiatt
17	4012	Nitrating House, third floor: Cyclone Dry pulp hopper by J.H. Day Company 1942		04/13/94	Hiatt
18	4012	Nitrating House, third floor: Acid Measuring tank		04/13/94	Hiatt
19	4012	Nitrating House, fourth floor: Wringer drive motor and dipping pot, agitator gear drive		04/13/94	Hiatt

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Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 9

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
20	4012	Nitrating House, fourth floor: General Electric heating unit for employee comfort		04/13/94	Hiatt
21	4019	Boiling Tub House, west front and north side (a brick firewall divides the building at its midpoint)	SE	04/13/94	Hiatt
22	4013	Fume exhaust system and stack (also known as the "Picallo")	E	04/13/94	Hiatt
23	4008	Acid Heat and Circulator House, west and north sides	SE	04/13/94	Hiatt
24	4013	Processing buildings for the fume Exhaust System and Stack, looking south	S	04/13/94	Hiatt
25	4002	Acid Mix and Weigh House, west and south sides (located on the 4000 line dedicated to the production of single base smokeless powder)	NE	04/13/94	Hiatt
26	4002	Acid Mix and Weigh House: 3000 lb. capacity scale by Soweigh Company 1942		04/13/94	Hiatt
27	4003	Pump House Area or "Rose Bowl"		04/13/94	Hiatt
28	4030	Nitrocellulose "D" Line Office		04/13/94	Hiatt
29	4022	Beater House, east and south sides (the frame walls and roof are supported by a concrete foundation and the tub floor is wooden)	NW	04/13/94	Hiatt
30	4022	Beater House: Miami #2 Jordan Beater by Shartle Brothers 1942		04/13/94	Hiatt
31	4022	Beater House: Miami #2 type Jordan Beater driven by a 200 hp, 300 rpm, General Electric synchronous motor. Manufactured in 1942 by Shartle Brothers.		04/13/94	Hiatt
32	4022	Beater House: Second angle of Miami #2 Jordan Beater by Shartle Brothers 1942		04/13/94	Hiatt
33	4022	Beater House: 1953 mixing tank		04/13/94	Hiatt
34	4043 & 4026	Final Wringer Receiving House (#4043-front) and Wringer House (#4026-background), west front and north side	SE	04/13/94	Hiatt
35	923-3	Telpher System connecting the Wringer House and the Green Line		04/13/94	Hiatt

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Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 9

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
36	4026	Wringer House: 1942 Kron Scale and Chute for nitrocellulose		04/13/94	Hiatt

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Project #: 1114-014 AMC Task C

Film: Kodak THAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 10

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
1	4026	Wringer House: 1942 Gyro final wringer with 48" basket by the Bird Company		04/13/94	Hiatt
2	4026	Wringer House: Kron Scale and Hopper		04/13/94	Hiatt
3	4026	Wringer House; Sprinkler valve for fire suppression in Buildings 4026 and 4043		04/13/94	Hiatt
4	9020	Boiling tub and settling pit, west and south side. (the settling pit measures 48'4" by 12'10", the bottom slopes east to west from 5 ft to 7 ft)	NE	04/13/94	Hiatt
5	4500	Dehydration Press House with 5 concrete walls dividing the house into 6 bays.		04/13/94	Hiatt
6	4500	Dehydration Press House: Vertical Dehydration press by R.D. Wood		04/13/94	Hiatt
7	4500	Dehydration Press House: Second angle of Vertical Dehydration Press by R.D. Wood		04/13/94	Hiatt
8	4506	Diphenylamine Mix House, west and south side	NE	04/13/94	Hiatt
9	4506	Diphenylamine Mix House: 1500 gal mix tank with Howe scale and agitator		04/13/94	Hiatt
10	4506	Diphenylamine Mix House: Vertical Mixing tank		04/13/94	Hiatt
11	4555	Activated Carbon Recovery and Duct System, west and south side	NE	04/13/94	Hiatt
12	4555	Blower for the air duct system by American Blower Company, 1942		04/13/94	Hiatt
13	4555	Unattached head of the blower for the duct system		04/13/94	Hiatt
14	4555	Horizontal steel absorber storage tank for the air duct system		04/13/94	Hiatt
15	4555	Tank for the air duct system		04/13/94	Hiatt
16	4555	Filter unit for the air duct system		04/13/94	Hiatt
17	4555	Second angle, filter unit for the air duct system		04/13/94	Hiatt
18	4555	Tank for the air duct system		04/13/94	Hiatt

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Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 10

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
19	4555	Masonite control panel with guages for the air duct system		04/13/94	Hiatt
20	4501	Alcohol Pump and Accumulator House		04/13/94	Hiatt
21	4501	Alcohol Pump and Accumulator House: 3 cylinder vertical hydraulic pump		04/13/94	Hiatt
22	4508-2	Mix House divided into two halves divided by open walkway (concrete walls divide each half into seven bays), north and west side	SE	04/13/94	Hiatt
23	4508-2	Mix House: Top loading, Macerator machine		04/13/94	Hiatt
24	4508-2	Mix House: Powder mixer by Read machinery		04/13/94	Hiatt
25	4510-2	Block Press House, west and south side	NE	04/13/94	Hiatt
26	4510-2	Block Press House: Vertical hydraulic blocking press by Farquar Company		04/13/94	Hiatt
27	4510-2	Block Press House: Horizontal Extrusion powder press		04/13/94	Hiatt
28	4510-2	Block Press House: Second angle of horizontal extrusion powder press		04/13/94	Hiatt
29	4510-2	Block Press House: Flame arrestor		04/13/94	Hiatt
30	4517-2	Loading platform connected to two Press and Cut Houses with covered walkways, north and west side	SE	04/13/94	Hiatt
31	4516-2	Cutting House, north and west side	SE	04/13/94	Hiatt
32	4513-2	Vertical Press House, west and south side	NE	04/13/94	Hiatt
33	4516-2	Cutting House: McKiernan-Terry cutting machine driven by a 1.5 hp and 1140 rpm electric motor. This machine cuts strands of powder produced by the presses		04/13/94	Hiatt
34	4516-2	Cutting House: second angle of the McKiernan-Terry cutting machine		04/13/94	Hiatt
35	4513-2	Vertical Press House: Vertical extrusion press that dyed manufactured single perforated powder		04/13/94	Hiatt
36	4513-2	Vertical Press House: second angle of the Vertical extrusion press that dyed manufactured single		04/13/94	Hiatt

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GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 10

Exp.

No. Building No(s). Description

Dir. Date

Recorder

perforated powder

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 11

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
1	4513-2	Explosion proof light switch		04/13/94	Hiatt
2	4510-2	Block Press House with reinforced concrete walls dividing the building into a pre-block process area and two other areas with machinery for macaroni and final block processes		04/13/94	Hiatt
3	4521	Hydraulic Station for the double base propellant area, east and south side	NW	04/13/94	Hiatt
4	4521	Hydraulic Station: high pressure Hydraulic pump		04/13/94	Hiatt
5	4521	Hydraulic Station: second angle of the high pressure hydraulic pump		04/13/94	Hiatt
6	4521	Hydraulic Station: 1952 masonite control panel		04/13/94	Hiatt
7	4521	Hydraulic Station: Close up of excess pressure guage/solenoid hp		04/13/94	Hiatt
8	4521	Hydraulic Station: Open top surge tank with sloped bottom by Kickham Boiler and Sheet Iron Works (1972)		04/13/94	Hiatt
9	4521	Hydraulic Station: 1942 Stationary air compressor		04/13/94	Hiatt
10	4521	Hydraulic Station: Second angle of 1942 Stationary air compressor		04/13/94	Hiatt
11	4521	Hydraulic Station: Low pressure, 2000 gal vertical accumulator tank		04/13/94	Hiatt
12	4521	Hydraulic Station: High pressure, 600 gal., vertical accumulator tank		04/13/94	Hiatt
13	4521	Hydraulic Station: second angle of high pressure, 600 gal., vertical accumulator tank		04/13/94	Hiatt
14	1600-19	Solvent Recovery House without barricade, east and north side	SW	04/13/94	Hiatt
15	1600-2	Solvent Recovery House with barricade, east and north side (located in the final processing area for single and double based smokeless powder)	SW	04/13/94	Hiatt
16	2523	Pump House for the Solvent recovery cooling tower, west and south side	NE	04/13/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 11

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
17	2524	Steam Jet Refrigeration Unit, west and south side	NE	04/13/94	Hiatt
18	2522	Solvent Recovery Cooling Tower, east and south side	NW	04/13/94	Hiatt
19	2523	Solvent Recovery Cooling Tower Pump House: Ingersol Rand Pump and motor		04/13/94	Hiatt
20	2523	Solvent Recovery Cooling Tower Pump House: Second angle of Ingersol Rand Pump and motor		04/13/94	Hiatt
21	525	Head Grinding Shop, west and north side	SE	04/13/94	Hiatt
22	1995	Powder Rework House, east and north side	SW	04/13/94	Hiatt
23	3566-1	Caustic Screen Cleaning House, east front and south side	NW	04/13/94	Hiatt
24	2513-4	Horizontal Press House (with end walls constructed of reinforced concrete extending above the roof), west and south side	NE	04/13/94	Hiatt
25	2513-4	Horizontal Press House: Farquar horizontal press equipped with extruding dies		04/13/94	Hiatt
26	2546-2	Solvent Storage and Pump House, east and south side	NW	04/13/94	Hiatt
27	5502	Ether Still House (equipped with emergency slides), west and north side	SE	04/13/94	Hiatt
28	5502	Ether Still House: Lead lined, steel ether pots		04/13/94	Hiatt
29	5502	Ether Still House: Tank		04/13/94	Hiatt
30	5502	Ether Still House: Alcohol product cooler		04/13/94	Hiatt
31	5502	Ether Still House: Alcohol column		04/13/94	Hiatt
32	5502	Ether Still House: Alcohol float control		04/13/94	Hiatt
33	5502	Ether Still House: Vacuum breaker and ether pots by Ed Badger and Sons		04/13/94	Hiatt
34	5502	Ether Still House: Alcohol after cooler (the alcohol pre-cooler differs only in its larger diameter)		04/13/94	Hiatt
35	5502	Ether Still House: Control panel: Rotometers pressure guages, recording instrument		04/13/94	Hiatt

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GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 11

Exp.

No.	Building No(s).	Description	Dir.	Date	Recorder
36	5502	Ether Still House: Guages		04/13/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 12

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
0	5502	Ether Still House: Ether column		04/13/94	Hiatt
1	402	Coal yard and elevator, east and south sides	NW	04/13/94	Hiatt
2	402	Coal yard and elevator, east and south sides	NW	04/13/94	Hiatt
3	421	Inert Gas Producer Buildings with the Compressor Building in the background and the Producer building in the foreground		04/13/94	Hiatt
4	421	Inert gas tank west of the Compressor and Producer Buildings	NW	04/13/94	Hiatt
5	421	Compressor Building: Holding tank for compressed gas		04/13/94	Hiatt
6	421	Compressor Building: Worthington High pressure gas compressor		04/13/94	Hiatt
7	421	Producer Building: Inert gas producer		04/13/94	Hiatt
8	421	Producer building: Combustion chamber		04/13/94	Hiatt
9	421	Producer building: Kemp panel		04/13/94	Hiatt
10	1600-14	Blower		04/13/94	Hiatt
11	1600-14	Heat exchanger		04/13/94	Hiatt
12	1650-6	Water Dry House, west and north sides	SE	04/13/94	Hiatt
13	1996-6	Hydro-Jet House: Shaker screen		04/13/94	Hiatt
14	1996-6	Hydro-Jet House: second angle, shaker screen		04/13/94	Hiatt
15	1996-6	Hydro-Jet House with wooden main floor and loading dock, west and south sides	NE	04/13/94	Hiatt
16	1650-6	Hot water bath in the Water Dry House		04/13/94	Hiatt
17	1801	Preliminary Blending House, east and south sides (located in the final processing area for Single and Double based smokeless powder)	NW	04/13/94	Hiatt
18	1850	Screen House, east and south sides	NW	04/13/94	Hiatt
19	1725-7	Air Dry House, west and south sides (located in the single and double based smokeless powder processing	NE	04/13/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 12

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
		area)			
20	1750-7	Rest House, east front and north side	SW	04/13/94	Hiatt
21	1875-2 & 1825	Can Pack House (#1875-2 - front) and the Final Blend House (#1825 - background), east and north sides	SW	04/13/94	Hiatt
22	1825	Final Blend House, second floor: Copper Blending barrel		04/13/94	Hiatt
23	1825	Final Blend House, third floor: Screen discharge into blending barrel		04/13/94	Hiatt
24	1825	Final Blend House: Hopper		04/13/94	Hiatt
25	1825	Final Blend House: Telepher between Final Blending and Can Pack Houses		04/13/94	Hiatt
26	1875-2	Can Pack House, first floor: Can conveyor constructed of wooden rollers and frame		04/13/94	Hiatt
27	1875-2	Overview of Can Pack House from catwalk		04/13/94	Hiatt
28	1875-2	Can Pack House: Can pack and hopper mouth		04/13/94	Hiatt
29	1885-3	Box Storage House, east front and south side	NW	04/13/94	Hiatt
30	400	Main Power Plant (Power House #1), west and south sides (the plant is constructed in 3 levels, 5 coal bunkers are connected by a coal conveyor system seen at the top of the structure)	NE	04/13/94	Hiatt
31	400	Main Power Plant, first floor: Coal pulverizer		04/13/94	Hiatt
32	400	Main Power Plant, first floor: second angle of coal pulverizer		04/13/94	Hiatt
33	400	Main Power Plant, first floor: Ash hopper and clinker breaker		04/13/94	Hiatt
34	400	Main Power Plant, first floor: Close up of ash hopper and clinker breaker		04/13/94	Hiatt
35	400	Main Power Plant, first floor: Gas driven air compressor		04/13/94	Hiatt
36	400	Main Power Plant, first floor: Second angle of Gas driven air compressor		04/13/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 13

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
1		Void		04/13/94	Hiatt
2		Void		04/13/94	Hiatt
3	400	Main Power Plant, first floor: Worthington electric air compressor		04/13/94	Hiatt
4	400	Main Power Plant, first floor: Steam driven oil piston pump		04/13/94	Hiatt
5	400	Main Power Plant, first floor: second angle of Steam driven oil piston pump		04/13/94	Hiatt
6	400	Main Power Plant, first floor: Water tank (originally a water filter tank, it was later used as a soft water tank)		04/13/94	Hiatt
7	400	Main Power Plant: Electric Raw water pump by Ingersol-Rand 1942, this pump is similar the turbine powered pump also found in this building.		04/13/94	Hiatt
8	400	Main Power Plant, first floor: second angle of electric Raw water pump by Ingersol Rand 1942		04/13/94	Hiatt
9	400	Main Power Plant, first floor: gasoline powered "light plant" or generator		04/13/94	Hiatt
10	400	Main Power Plant, first floor: Second angle of Gasoline powered generator or "light plant"		04/13/94	Hiatt
11	400	Main Power Plant, second floor: Panel monitoring Steam flow gauges		04/13/94	Hiatt
12	400	Main Power Plant, second floor: portion of Control panel for plant electricity		04/13/94	Hiatt
13	400	Main Power Plant, second floor: Control panel for coal		04/13/94	Hiatt
14	400	Main Power Plant, second floor: Control panel for boiler		04/13/94	Hiatt
15	400	Main Power Plant, third floor: Coal bunker (interior aspect)		04/13/94	Hiatt
16	400	Main Power Plant, third floor: top of a Boiler capped with a soot blower		04/13/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 13

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
17	400	Main Power Plant, third floor: front view of the boiler (note: the boiler stands three stories high)		04/13/94	Hiatt
18	400	Main Power Plant: Smoke stack on the roof		04/13/94	Hiatt
19	400	Main Power Plant: Flight type, chain driven conveyor by Beaumont Birch Company and a Westinghouse gear reducer.		04/13/94	Hiatt
20	400	Main Power Plant: Interior of a flight type, chain driven conveyor by Beaumont Birch Company. A Westinghouse gear reducer is in the foreground		04/13/94	Hiatt
21	400	Main Power Plant, third floor: Heat exchanger		04/13/94	Hiatt
22	6538	Power House #2, west and south sides (was never activated)	NE	04/13/94	Hiatt
23	6538	Power House #2, west and south sides (was never activated)	NE	04/13/94	Hiatt
24	424	Chlorine building (left) and the Chlorine storage building (right), east and north sides		04/14/94	Hiatt
25	424	Chlorine Building: Sludge pumping station, east back and south side	NW	04/14/94	Hiatt
26	1932-3	Cannon Powder Magazine, east and south sides	NW	04/14/94	Hiatt
27	1906-15	Magazine without barricade, east and north sides	SW	04/14/94	Hiatt
28	1906-10	Magazine with barricade, north and east sides	SW	04/14/94	Hiatt
29	6658	Nitroglycerin gutter and Trestle connects Buildings 6657-2 and 6667-2, east side	W	04/14/94	Hiatt
30	6656-2	Glycerine Pump and Heater House for Bldg. 6657, east and north sides	SW	04/14/94	Hiatt
31	6652	Mixed Acid Weigh House and Storage, east and south sides	NW	04/14/94	Hiatt
32	6660	Refrigeration House, east and south sides	NW	04/14/94	Hiatt
33	506	Oil Storage Building for the Refrigeration House (this is the only building with original siding) north and south sides		04/14/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 13

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
34	6600	Refrigeration House: Frick ammonia compressor with a 52.5 ton capacity		04/14/94	Hiatt
35	6600	Refrigeration House: second angle of Frick ammonia compressor with 52.5 ton capacity		04/14/94	Hiatt
36	6600	Refrigeration House: Motor for the Frick ammonia compressor		04/14/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 14

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
1	6600	Refrigeration House: Troy-Ensborg, throttling, vertical reciprocating engine		04/14/94	Hiatt
2	6600	Refrigeration House: second angle of Troy-Ensborg, throttling, vertical Reciprocating engine		04/14/94	Hiatt
3	6600	Refrigeration House: Worthington air and steam Piston pump with 150 gallons per minute capacity		04/14/94	Hiatt
4	6600	Refrigeration House: second angle of Worthington air and steam Piston pump with a capacity of 150 gallons per minute		04/14/94	Hiatt
5	6668-2	Outside Catch Tank and Slum House, north and east sides	SW	04/14/94	Hiatt
6	6673	Nitroglycerin Buggy Storehouse, west and south sides	NE	04/14/94	Hiatt
7	531	Fire Station #2, east front and south side (centrally located near Power House #2)	NW	04/14/94	Hiatt
8	1800-1	Glaze House, east and south sides		04/14/94	Hiatt
9	1800-1	Glaze House: Glazing barrel or "sweetie" barrel		04/14/94	Hiatt
10	316	Ignitor Magazine, east and south sides (formerly barricaded)	NW	04/14/94	Hiatt
11	307	Constant Temperature Magazine, east and south sides	NW	04/14/94	Hiatt
12	308-3	Cannon Powder Magazine, north and east sides	SW	04/14/94	Hiatt
13	305	Gun Storage and Repair, east and north sides	SW	04/14/94	Hiatt
14	318	Waste Storage Facility, east and north sides	SW	04/14/94	Hiatt
15	304	Cannon Assembly House, east and south sides	NW	04/14/94	Hiatt
16	303	Gun Range: Tunnel	N	04/14/94	Hiatt
17	303	Gun Range, east and south sides	NW	04/14/94	Hiatt
18	303	Gun Range, back side	W	04/14/94	Hiatt
19	409	North view of Water Filtration Plant, north and east sides	SW	04/14/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 14

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
20	409	East view of Water Filtration Plant, north and east sides	SW	04/14/94	Hiatt
21	409	Third angle of Water Filtration Plant, south and west sides	NE	04/14/94	Hiatt
22	409	Water Filtration Plant, first floor: Dayton Dowd stationary, gas driven, fire pump with 1500 gallons per minute capacity		04/14/94	Hiatt
23	409	Water Filtration Plant, first floor: second angle of Dayton Dowd stationay, gas driven, fire pump		04/14/94	Hiatt
24	409	Water Filtration Plant, first floor: water pump representative of both raw and filter type water pumps		04/14/94	Hiatt
25	409	Water Filtration Plant, first floor: second angle of water pump representative of both Raw and filter type water pumps		04/14/94	Hiatt
26	409	Water Filtration Plant, second floor, west wing: Filter basin		04/14/94	Hiatt
27	409	Water Filtration Plant: Flocculation basin (forefront) and sedimentation basin (background)	NW	04/14/94	Hiatt
28	409	Water Filtration Plant: Flocculation basin on north side of the plant	W	04/14/94	Hiatt
29	409	Water Filtration Plant, second floor: Valve control panel for filter basins		04/14/94	Hiatt
30	8006	Blending House, east and south sides	NW	04/14/94	Hiatt
31	8000-3	Drying House with Heater House, south front and east side	NW	04/14/94	Hiatt
32	8003	Dry Processing House, south front and east side	NW	04/14/94	Hiatt
33	8002	Dry Sample Process building with barricade on the north side, south front and east side	NW	04/14/94	Hiatt
34	8004	Nitroglycerin Storage with Heater House, north and east sides (the barricade no longer exists)	SW	04/14/94	Hiatt
35	1994	Dinitrotoulene (DNT) Screen House, east and south sides	NW	04/14/94	Hiatt

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Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 14

Exp.

No.	Building No(s).	Description	Dir.	Date	Recorder
36	919	Rail Car Scale in the Scale House		04/14/94	Hiatt
37	919	Rail car scale in the Scale House		04/14/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 15

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
1	313-1 & 313-2	Storage Magazines, north and east sides	SW	04/14/94	Hiatt
2	1900-9	Magazine (barricade had been dismantled), front and east sides		04/14/94	Hiatt
3	9102-1	Magazine, west and south sides	NE	04/14/94	Hiatt
4	9511	Wet Power Rest House with barricaded walls, west and south sides	NE	04/14/94	Hiatt
5	9511	Wet Power Rest House with barricaded walls, west and south sides	NE	04/14/94	Hiatt
6	9510	Clarifier, south side	N	04/14/94	Hiatt
7	9507-8	Nitroglycerin Coating House that is heated with steam from building 9506-2, east front and south side	NW	04/14/94	Hiatt
8	9508	Solvent Weigh House, south and west sides	NE	04/14/94	Hiatt
9	9522	Water Cooling Tower, south and east sides	NW	04/14/94	Hiatt
10	9505	De-watering House, east and south sides	NW	04/14/94	Hiatt
11	9525	De-watering House: Decant Pit, north front and east side	SW	04/14/94	Hiatt
12	408	River Pump House, east back and south side	NW	04/14/94	Hiatt
13	408	River Pump House, east back and south side	NW	04/14/94	Hiatt
14	408	River Pump House: Two stage, 300 hp, 2200 volt, vertical turbine pump with a capacity of 5000 gallons per minute by Pomona Pump 1942		04/14/94	Hiatt
15	408	River Pump House: Two stage, 500 hp, 2200 volt, vertical turbine pump with 10000 gallons per minute capacity by Pomona Pump 1942		04/14/94	Hiatt
16	408	River Pump House: 8 ton Traveling screen (hoist) by Indos Engineering Company		04/14/94	Hiatt
17	408	River Pump House: oil driven steam boiler by Crane Company 1960		04/14/94	Hiatt
18	9500-3	Hardening Weigh House, second floor: Cotton weigh tanks		04/14/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 15

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
19	9500-3	Hardening Weight House, second floor: Wooden Nitrocellulose tub		04/14/94	Hiatt
20	9500-3	Hardening Weigh House, third floor: "Eimco" drum filter with washer unit for the acid and nitrocellulose process		04/14/94	Hiatt
21	9500-3	Hardening and Weigh House: 1955 explosion proof phone by West Electric		04/14/94	Hiatt
22	9500-3	Hardening and Weigh House: 1955 explosion proof phone by West Electric		04/14/94	Hiatt
23	9500-3	Hardening Weigh House, west front and south side	NE	04/14/94	Hiatt
24	9502-6	Solvent Recovery House, west front and south side	NE	04/14/94	Hiatt
25	9501-3	Hardening House, west front and south side	NE	04/14/94	Hiatt
26	9501-3	Hardening House, second floor: Hardening still tank with agitator		04/14/94	Hiatt
27	9501-3	Hardening House, second floor: 1954 colloid and salt tank		04/14/94	Hiatt
28	942	Pipe rack linking buildings to operations of the smokeless ball powder line	W	04/14/94	Hiatt
29	9503	Wet Screen House, east and south side	NW	04/14/94	Hiatt
30	9503	Wet Screen House, first floor: Pycnometer, 4500 gallon weigh tank by W.M. Brothers Boiler Company		04/14/94	Hiatt
31	9503	Wet Screen House: 7 tiers of shaker screens (gyro-centric) starting on the second floor		04/14/94	Hiatt
32	9503	Wet Screen House, second floor: Close up of shaker screen		04/14/94	Hiatt
33	9503	Wet Screen House, first floor: Concrete storage pits for different powder size granules		04/14/94	Hiatt
34	9506-2	Coating House, east and south sides	NW	04/14/94	Hiatt
35	9506-2	Coating House, first floor: vertical, 2450 gallon, solvent receiving and storage tank by Milwaukee Boiler Company		04/14/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 15

Exp.

No.	Building No(s).	Description	Dir.	Date	Recorder
36	9506-2	Coating House: Solvent still		04/14/94	Hiatt
37	9509-2	Roll and De-water House, south and west sides	NE	04/14/94	Hiatt

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-014 AMC Task C

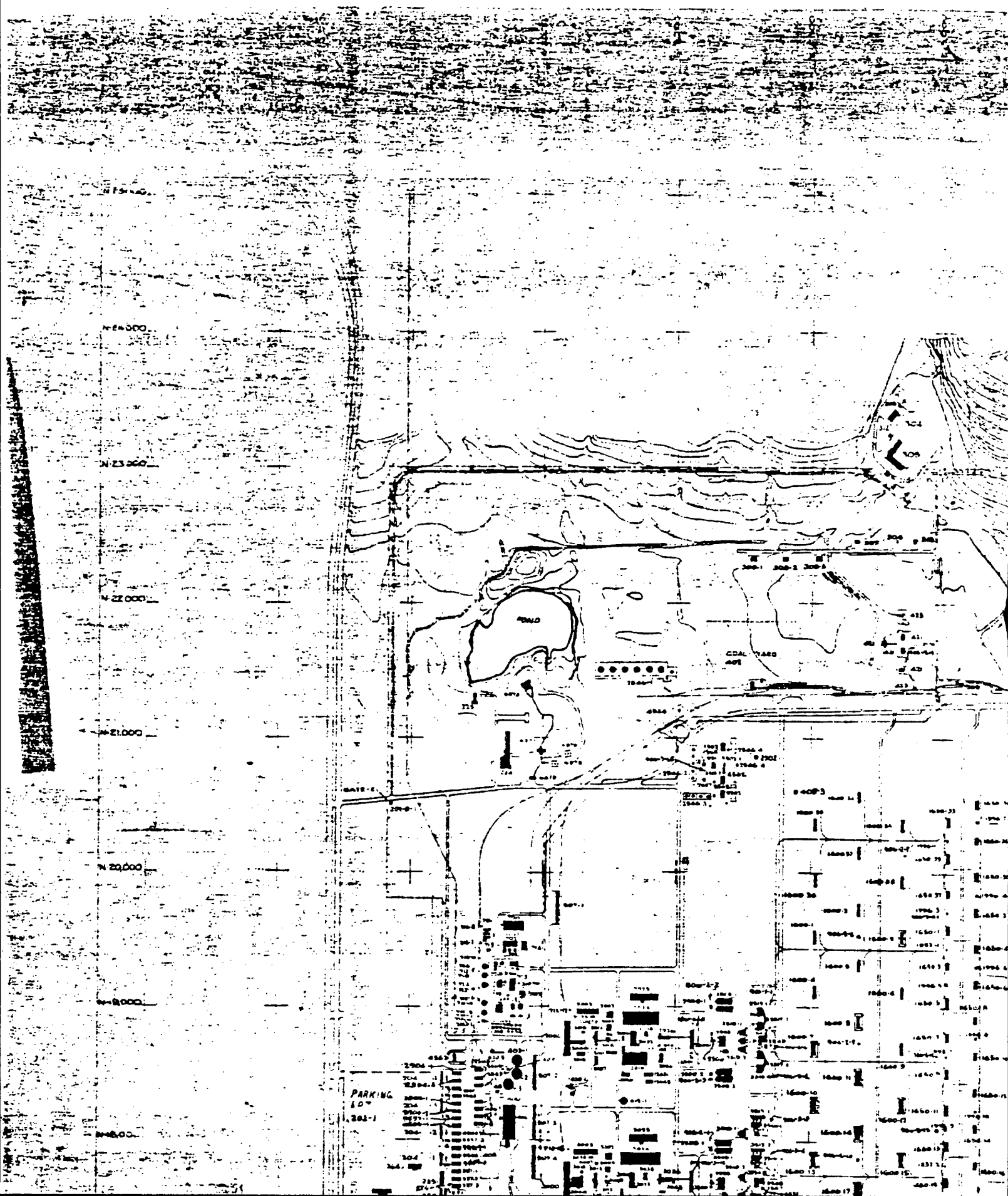
Film: Kodak TMAX black and white

Installation: Badger, Army Ammunition Plant

Roll Number: 16

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
0	9509-1	Powder roll machine		04/14/94	Hiatt
1	9509-1	Second angle, powder roll machine		04/14/94	Hiatt
2	9509-1	Centrifugal filter or de-waterer by Bird Machine Company		04/14/94	Hiatt
3	9513-2	Tray Dry House, south and west sides	NE	04/14/94	Hiatt
4	9513-2	Tray Dry House, south and west sides	NE	04/14/94	Hiatt
5	9513-2	Try Dry House: 1955 Tray loading unit that includes Hopper and Table		04/14/94	Hiatt
6	9513-2	Tray Dry House: second angle of 1955 tray loading unit with Hopper & Table		04/14/94	Hiatt
7	9513-2	Tray Dry House: Proctor and Schwartz drying oven, note the coils and blower		04/14/94	Hiatt
8	9590	Void		04/14/94	Hiatt
9	9591	Void		04/14/94	Hiatt
10	9591 & 9592	Powder Grinding House (#9591 - front) and Extraction House (#9592 - background), west back and south side	NE	04/14/94	Hiatt
11	9590	Powder Storage Pit House, west back and south side	NE	04/14/94	Hiatt
12	9591	Powder and Grinding House, from catwalk: Powder grinding hammermill by Dixie Manufacturing, 1954		04/14/94	Hiatt
13	9591	Powder Grinding House, first floor: Pneumatic syntron vibrating screen, inspection chute, powder feeding hopper		04/14/94	Hiatt
14	9591	Powder Grinding House, view from second floor: 200 hp, 440 volt, Powder Grinding Hammermill		04/14/94	Hiatt
15	9593	Solvent Storage House, south and east sides	NW	04/14/94	Hiatt
16	9546	Raw Material Storage, east front and south sides	NW	04/14/94	Hiatt
17	9594	Solvent Receiving House, south and west sides	NE	04/14/94	Hiatt

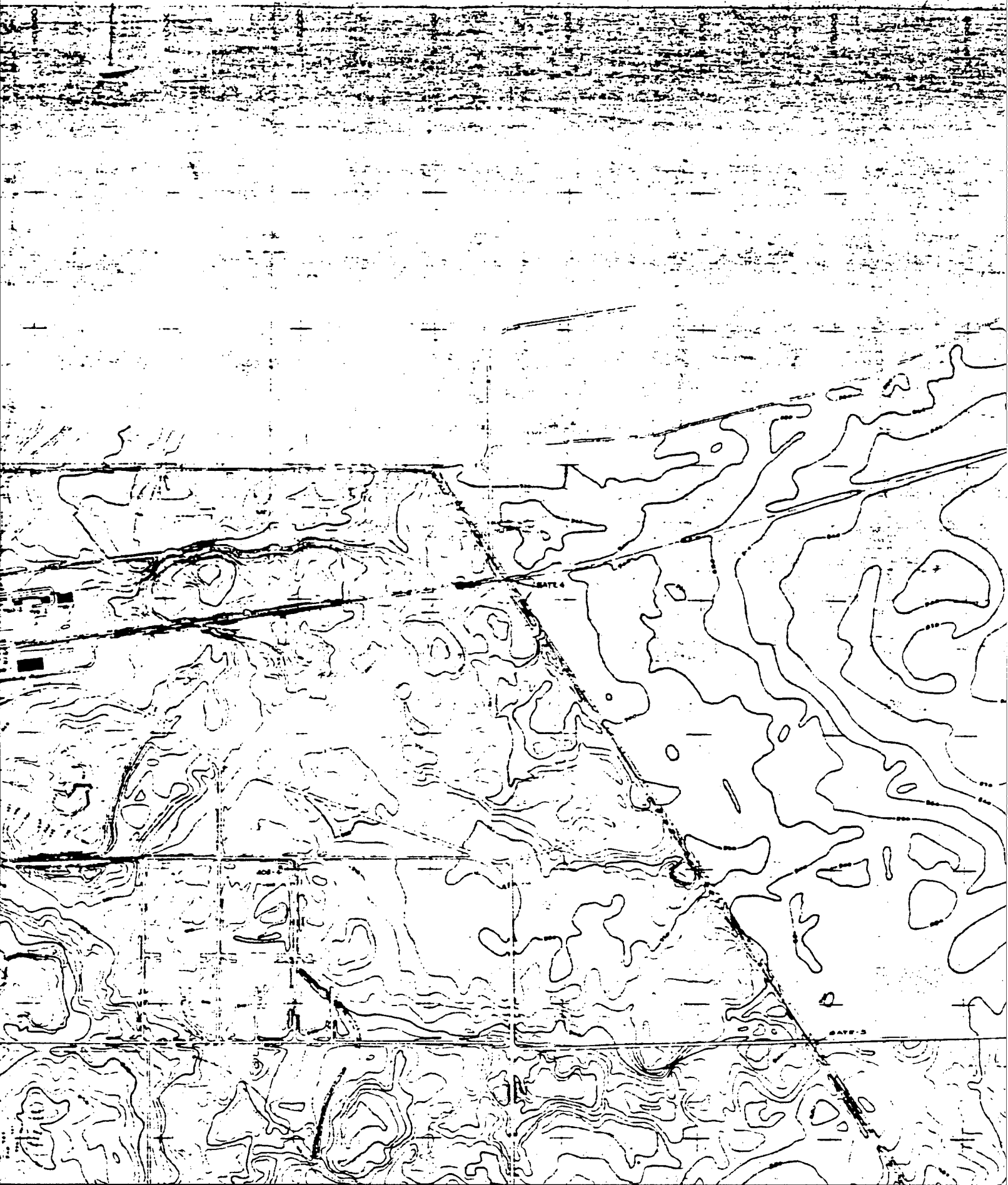
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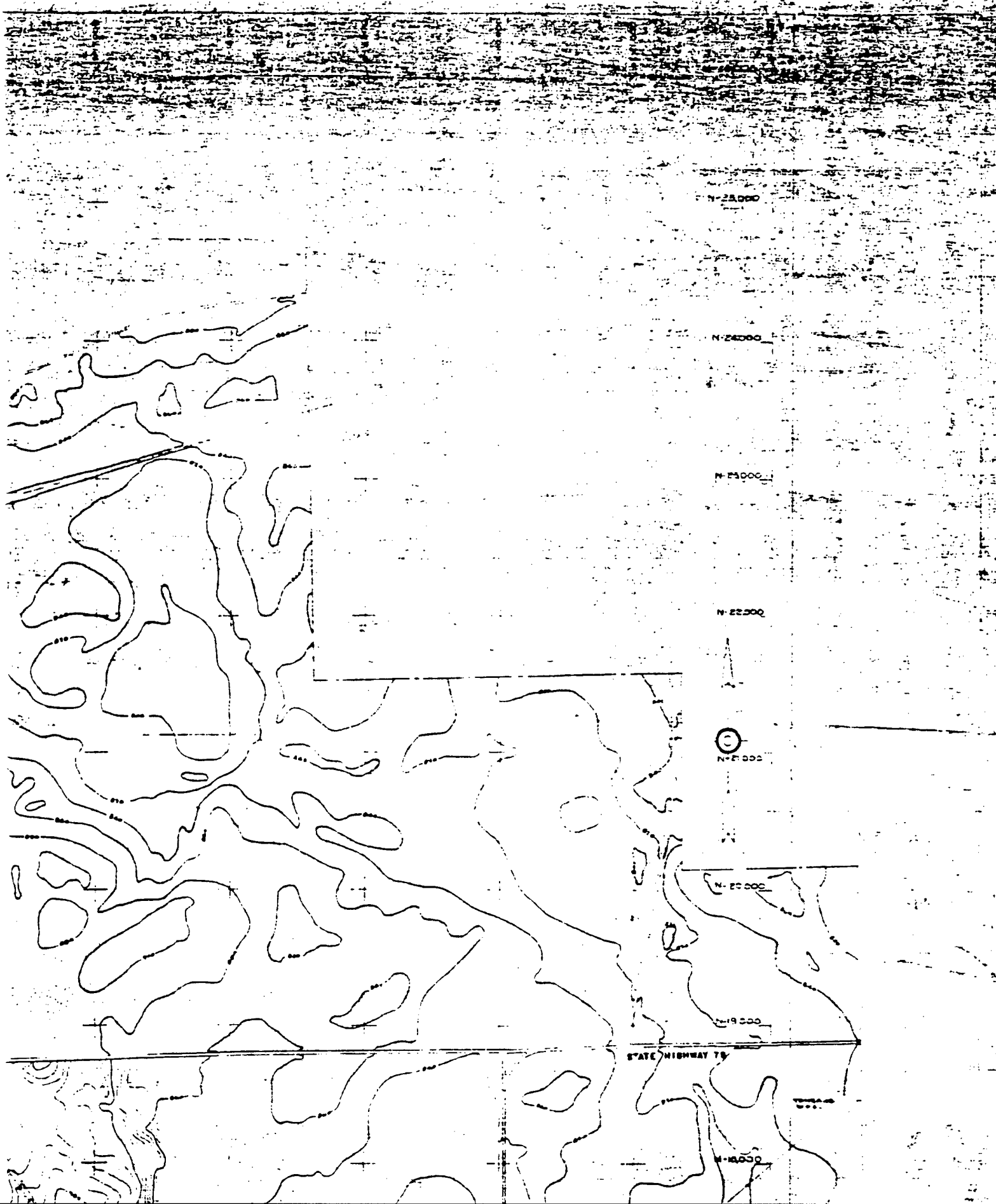
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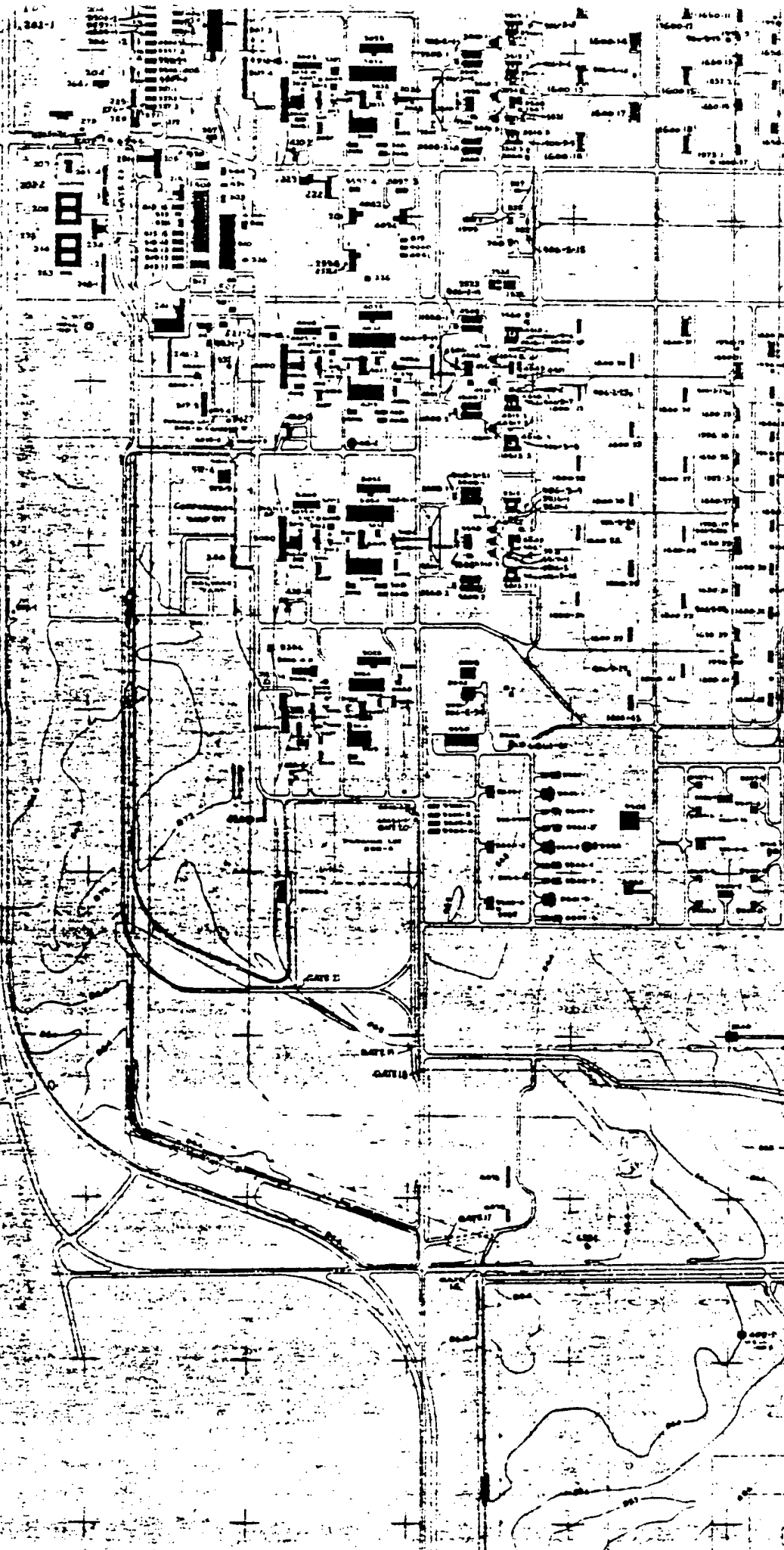


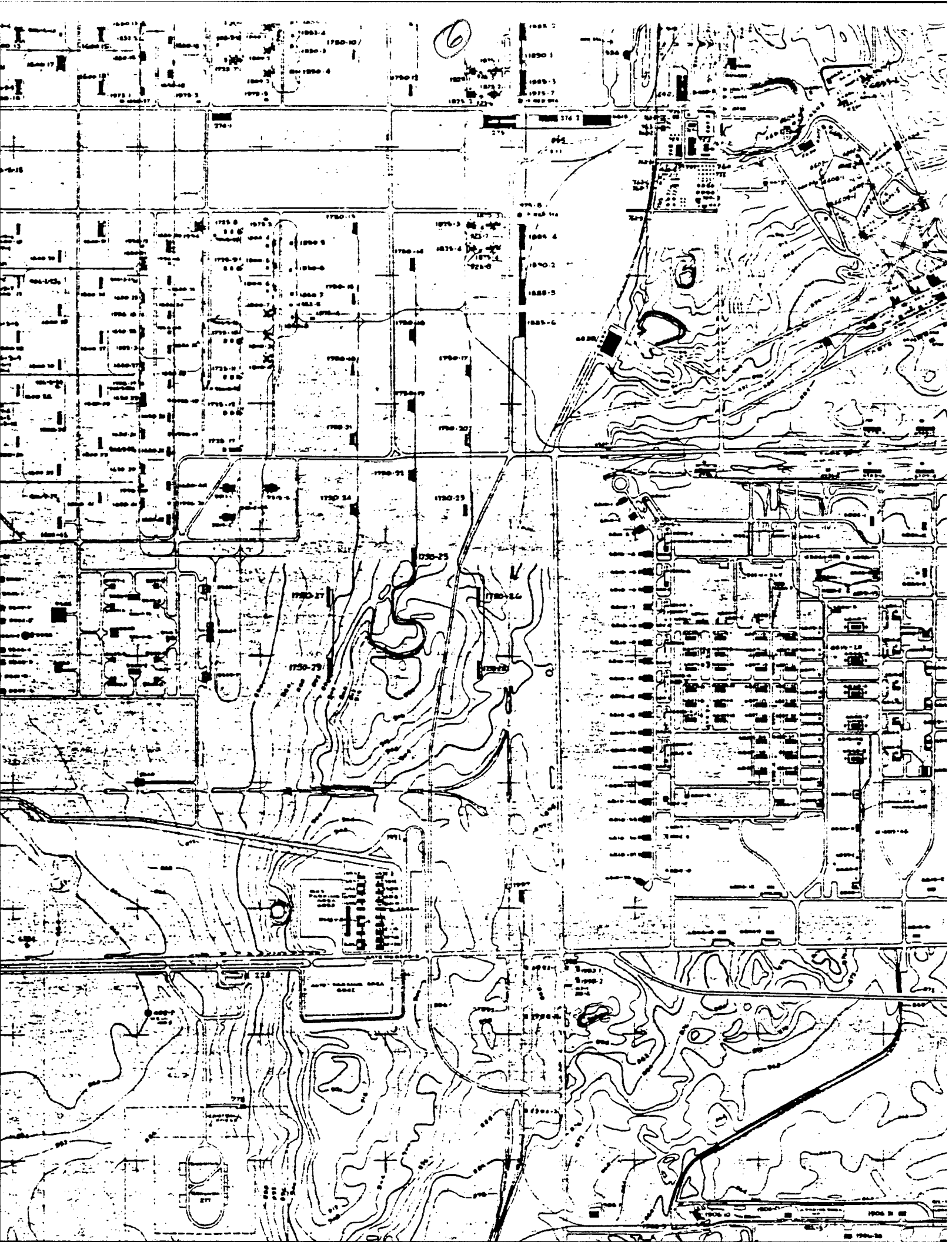
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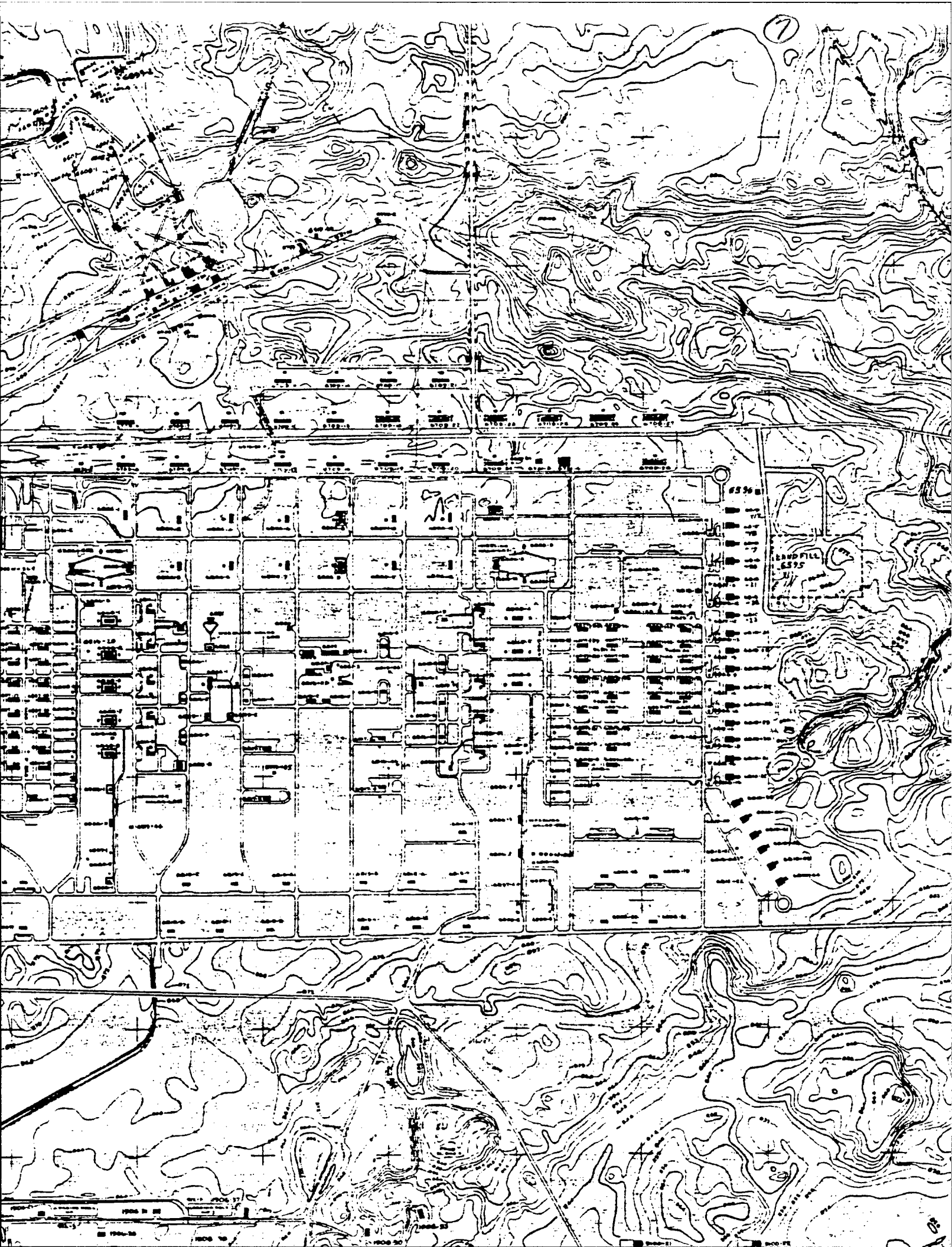


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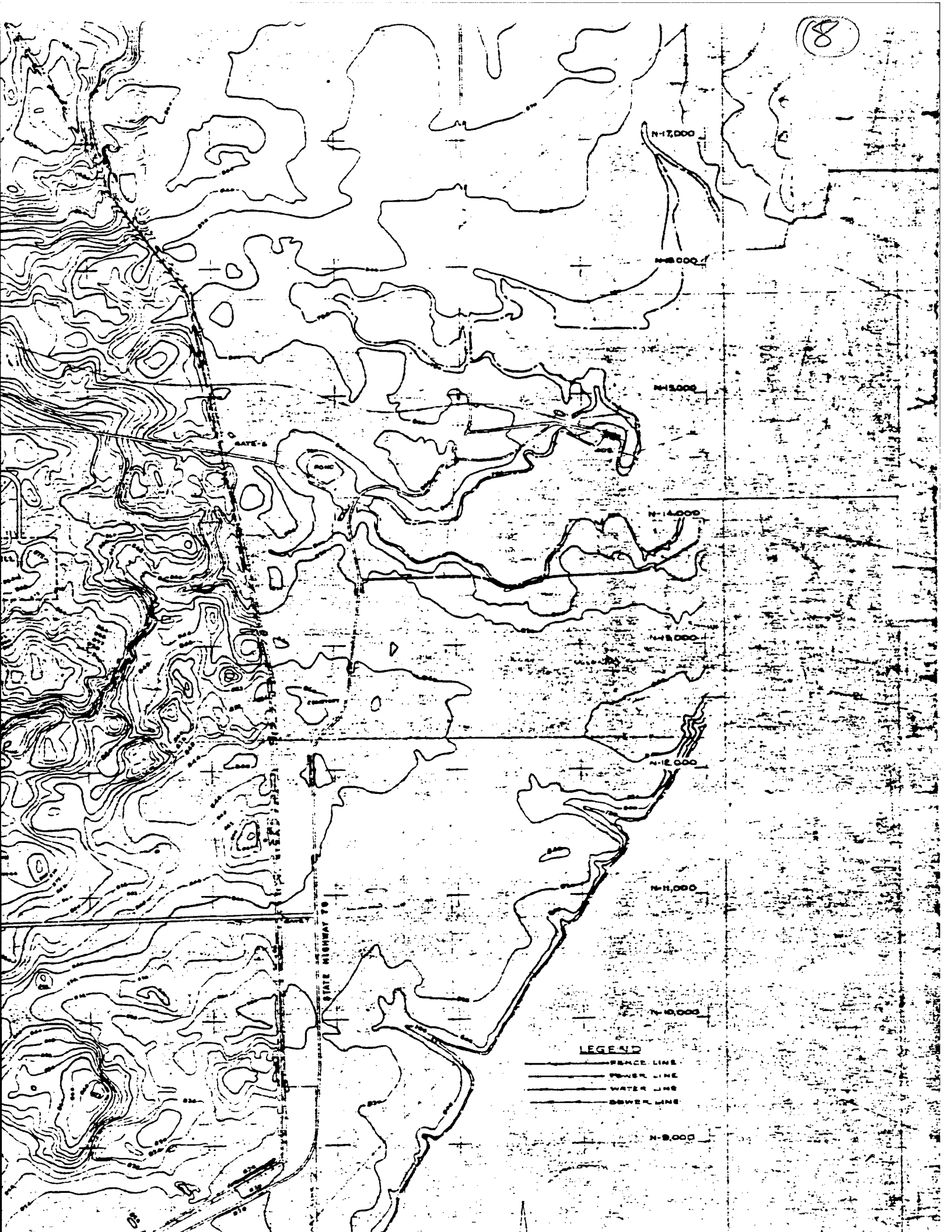
U.S. HIGHWAY 12

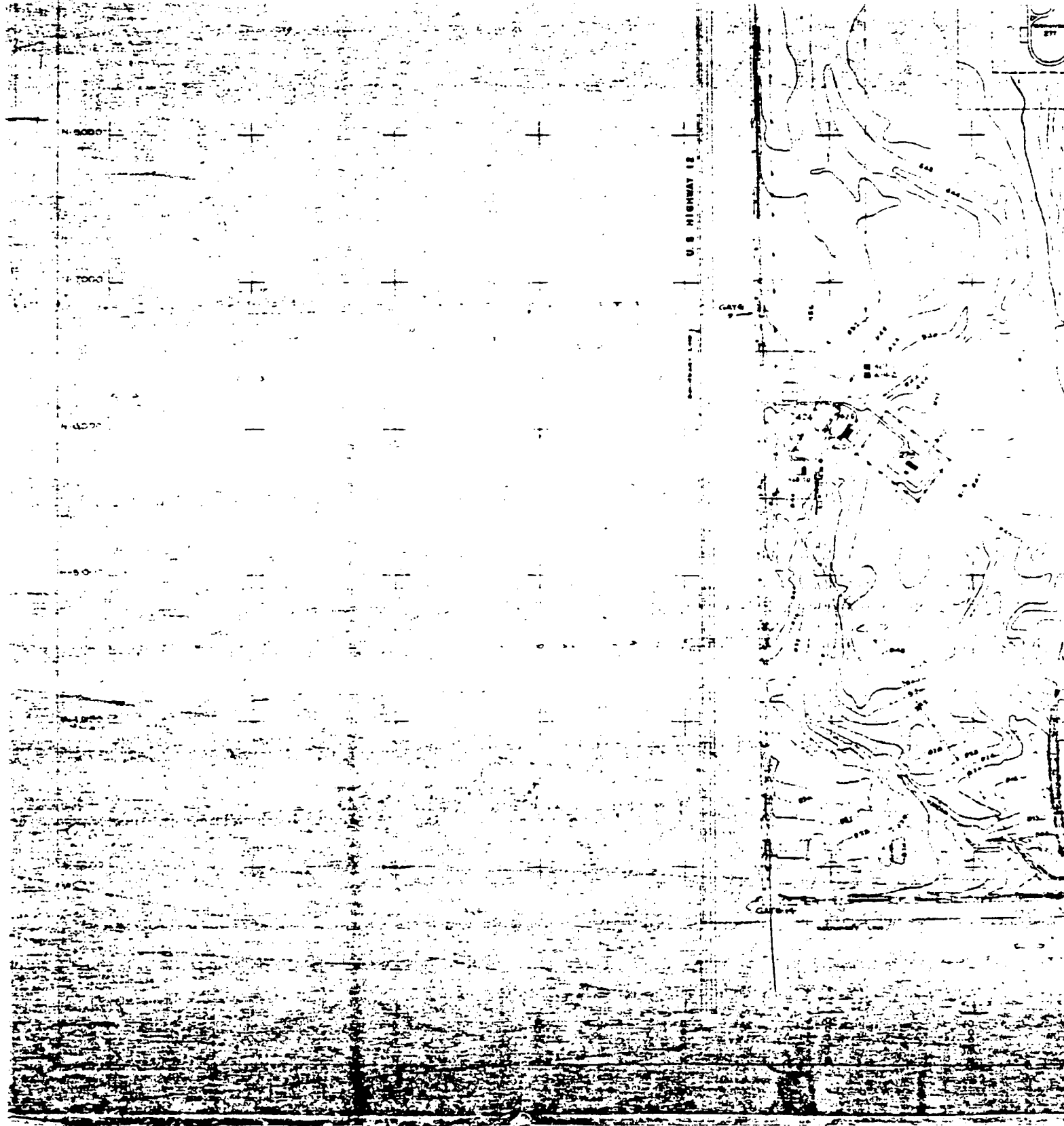






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