HOLSTON 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
Wm. David White, Jr.
Kellie A. Krapf

U.S. ARMY MATERIEL COMMAND HISTORIC CONTEXT SERIES
REPORT OF INVESTIGATIONS
NUMBER 9B

GEO-MARINE, INC.

US Army Corps
of Engineers
Fort Worth District

DISCLAIMER NOTICE

THIS DOCUMENT IS BEST QUALITY AVAILABLE. THE COPY FURNISHED TO DTIC CONTAINED A SIGNIFICANT NUMBER OF PAGES WHICH DO NOT REPRODUCE LEGIBLY.

SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION
Unclassified

1b. RESTRICTIVE MARKINGS

2a. SECURITY CLASSIFICATION AUTHORITY

3. DISTRIBUTION/AVAILABILITY OF REPORT
Approved for public release

2b. DECLASSIFICATION/DOWNGRADING SCHEDULE

4. PERFORMING ORGANIZATION REPORT NUMBERS
U.S. Army Materiel Command Historic Context Series
Report of Investigations Number 9B

5. MONITORING ORGANIZATION REPORT NUMBER(S)

6a. NAME OF PERFORMING ORGANIZATION
Geo-Marine, Inc.

6b. OFFICE SYMBOL *(if applicable)*

7a. NAME OF MONITORING ORGANIZATION
US Army Corps of Engineers, Ft. Worth District

6c. ADDRESS *(City, State, and Zip Code)*
550 E. 15th Street / Plano, Texas / 75074

7b. ADDRESS *(City, State, Zip Code)*
PO Box 17300
Fort Worth, Texas 76102-0300

8a. NAME OF FUNDING/SPONSORING ORGANIZATION
US Army Corps of Engineers,
Fort Worth District

8b. OFFICE SYMBOL *(if applicable)*
CESWF-PL-RC

9. PROCUREMENT INSTRUMENT ID NUMBER
DACA63-D-0014, Delivery Order No. 89

8c. ADDRESS *(City, State, Zip Code)*
PO Box 17300
Fort Worth, Texas 76102-0300

10. SOURCE OF FUNDING NUMBERS

PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.

11. TITLE *(Include Security Classification)*
Holston 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

12. PERSONAL AUTHOR(S)
Wm. David White, Jr. and Kellie A. Krapf

13a. TYPE OF REPORT	13b. TIME COVERED	14. DATE OF REPORT *(Year, Month, Day)*	15. PAGE COUNT
Final Report	FROM May '95 to Nov. '95	November 1995	189 + Appendix

16. SUPPLEMENTARY NOTATION

17. COSATI CODES

FIELD	GROUP	SUB-GROUP
05	06	

18. SUBJECT TERMS *(Continue on reverse if necessary and identify by block number)*
Photographic documentation of World War II-era buildings, structures, and equipment at the Holston Army Ammunition Plant

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 Holston Army Ammunition Plant (HAAP), Kingsport, Tennessee. 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 State Historic Preservation Officers concerning the program to discontinue mainenance, or dispose, of particular GOCO properties.

The objective of the project was to photographically record World War II-vintage equipment and buildings. Numerous buildings, housing either the same or different stages of the ammunition manufacturing process, were of identical or similar architectural design. Similarly, within these buildings there were often several identical machines and pieces of equipment. Accordingly, photographs were not taken of each individual building, structure, and piece of equipment with identical or similar design; rather, an attempt was made to photograph archetypal buildings, structures, and pieces of equipment present at the plant. An attempt was made to exclude modern buildings and equipment. The photographic presentation that follows should not be perceived as a complete and chronological order of ammunition manufacturing. Photographs of ammunition buildings and equipment in this account are largely 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, shop, and manufacturing buildings.

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT
☐ UNCLASSIFIED/UNLIMITED ☒ SAME AS RPT. ☐ DTIC USERS

21. ABSTRACT SECURITY CLASSIFICATION
Unclassified

22a. NAME OF RESPONSIBLE INDIVIDUAL
Joseph Murphey

22b. TELEPHONE *(Include Area Code)*
817-334-2625

22c. OFFICE SYMBOL
CESWF-PL-RC

DD Form 1473, JUN 86 *Previous editions are obsolete*

SECURITY CLASSIFICATION OF THIS PAGE

HOLSTON 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

Wm. David White, Jr.
Kellie A. Krapf

Principal Investigator
Duane E. Peter

Prepared for

U.S. ARMY CORPS OF ENGINEERS
FORT WORTH DISTRICT

U.S. ARMY MATERIEL COMMAND HISTORIC CONTEXT SERIES
REPORT OF INVESTIGATIONS
NUMBER 9B

by

Geo-Marine, Inc.
550 East 15th Street
Plano, Texas 75074

November 1995

CONTRACT DATA

The preparation of this document was accomplished under Contract No. DACA63-93-D-0014, Delivery Order No. 89 (GMI project no. 1114-089), with the U.S. Army Corps of Engineers, Fort Worth District, Fort Worth, Texas 76102.

TABLE OF CONTENTS

LIST OF FIGURES

List of Figures
(con't)

List of Figures
(con't)

List of Figures
(con't)

List of Figures
(con't)

List of Figures
(con't)

I.

INTRODUCTION

This report presents a photographic recordation of archetypal buildings, structures, and equipment of the Holston Army Ammunition Plant (HAAP), Kingsport, Tennessee, originally constructed by the World War II-era Ordnance Department as a government-owned, contractor-operated (GOCO) industrial facility. The report is a continuation of a larger project that entailed completion of a national context for the World War II Ordnance Department's GOCO industrial facilities of 1939-1945 (Kane 1995), as well as detailed investigations into the history of several former World War II-era Ordnance Department GOCO industrial facilities (including present-day Badger, Holston, Indiana, Joliet, Kansas, Lake City, Radford, Ravenna, and Twin Cities army ammunition plants) along with photographic documentation of the same sample installations. The two primary goals of the larger project were: to investigate and document World War II and pre-World War II buildings, structures, and equipment now under the jurisdiction of Army Materiel Command (AMC) as part of a Legacy Resource demonstration program of assistance to small installations; and to complete the mitigation efforts stipulated in a 1993 Programmatic Agreement among the AMC, the Advisory Council on Historic Preservation, and multiple State Historic Preservation Officers concerning a program to cease maintenance, excess, and dispose of particular properties.

This documentation therefore represents partial fulfillment of the mitigation 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. Accordingly, 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."

This photographic documentation was completed under Delivery Order No. 89, Contract No. DACA63-93 D-0014, Task C.2. Geo-Marine, Inc. was contracted by the U.S. Army Corps of Engineers, Fort Worth District, to undertake this project in September of 1994. Mr. Duane E. Peter, Director of the Cultural Resources Division of Geo-Marine, Inc., acted as Principal Investigator for the project. Mr. Wm. David White, Jr. compiled and produced the report. Ms. Kellie Krapf completed the photographic field work for the project. The historical overview section was drawn from the detailed historical investigations of HAAP prepared by New South Associates.

In completion of this task, a brief history of the HAAP; photographs of various buildings, structures, and equipment; a photographic log; and a plan map of the facility with building numbers have been included.

II.

PHOTOGRAPHIC RECORDATION LOGISTICS AND METHODOLOGY

The objective of Task C.2 was to photographically record World War II-vintage buildings, structures, and equipment at Holston Army Ammunition Plant (HAAP) and thereby provide visual evidence of the integrity of the historic fabric of the facility. Numerous buildings, housing either the same or different stages of the ammunition manufacturing process, were of identical or similar architectural design. Similarly, within these buildings there were often several identical machines and pieces of equipment. Accordingly, photographs were not taken of each individual building, structure, and piece of equipment with identical or similar design; rather, an attempt was made to photograph *archetypal* buildings, structures, and pieces of equipment present at the plant. Also, 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 photographic presentation that follows should not be perceived as a complete and chronological order of ammunition manufacturing.

The photographs are presented in six sections corresponding to the six categories of buildings present at the facility. Within each section the photographs are arranged by the building number of the subject depicted. Building categories and numbers were determined and assigned by the facility. Photographs of ammunition buildings and equipment in this account are largely 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, shop, and manufacturing 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.

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 Holston Army Ammunition Plant (HAAP), known during World War II as the Holston Ordnance Works, is located in Hawkins and Sullivan counties, adjacent to Kingsport, Tennessee, about three miles south of the Virginia line. The HAAP is divided into two non-contiguous parts: Area A and Area B, also referred to as Plants A and B. Area A is located at the southern end of the city of Kingsport, on the south fork of the Holston River. Area B, four miles west of Area A, is located on the Holston River, just below the confluence of the north and south forks. Area B is the larger of the two and contains the 506 Area and the magazines.

The HAAP began in the early days of World War II as a government-owned, contractor-operated (GOCO) facility managed by the Tennessee Eastman Corporation. A month before Pearl Harbor, Tennessee Eastman had been approached by the National Defense Research Committee (NDRC) to begin work on a chemical process needed by the Ordnance Department. Shortly after 7 December 1941, when the country was at war, the NDRC and Ordnance Department requested that Tennessee Eastman build a pilot plant, also known as a "semi-works" facility, to discover the most efficient way to manufacture RDX, a powerful but unstable explosive, which was then mixed with TNT to create "Composition B," the most powerful explosive of World War II before the advent of the atom bomb.

The pilot plant was built in record time and was operational by February 1942. It quickly proved to be a success. In May of 1942, the decision was made to vastly expand the pilot plant and name the new facility "Holston Ordnance Works." In June, even before formal contracts were let, Tennessee Eastman began working on the line equipment, while Charles T. Main, Inc., and Fraser-Brace Engineering Company were brought in to design and construct the buildings. Construction of the Holston Ordnance Works went at full tilt during the summer and fall of 1942, even though there were numerous problems getting the requisite supplies during the early years of the war.

The facility was finally completed in early 1943 and the first line went into full production on 8 May 1943. The other lines were put into operation in rapid succession. By the end of 1943, when almost 6000 people were employed by the Holston Ordnance Works, the government requested a 100 percent increase in production. New facilities were added by early 1944. At the height of production, in 1944 and early 1945, Holston Ordnance Works had a staff of almost 7000 employees, and manufactured over 700 tons of Composition B every day, an amount that far exceeded their quota. During this period, it is believed that Holston was the largest and most productive explosives plant in the world.

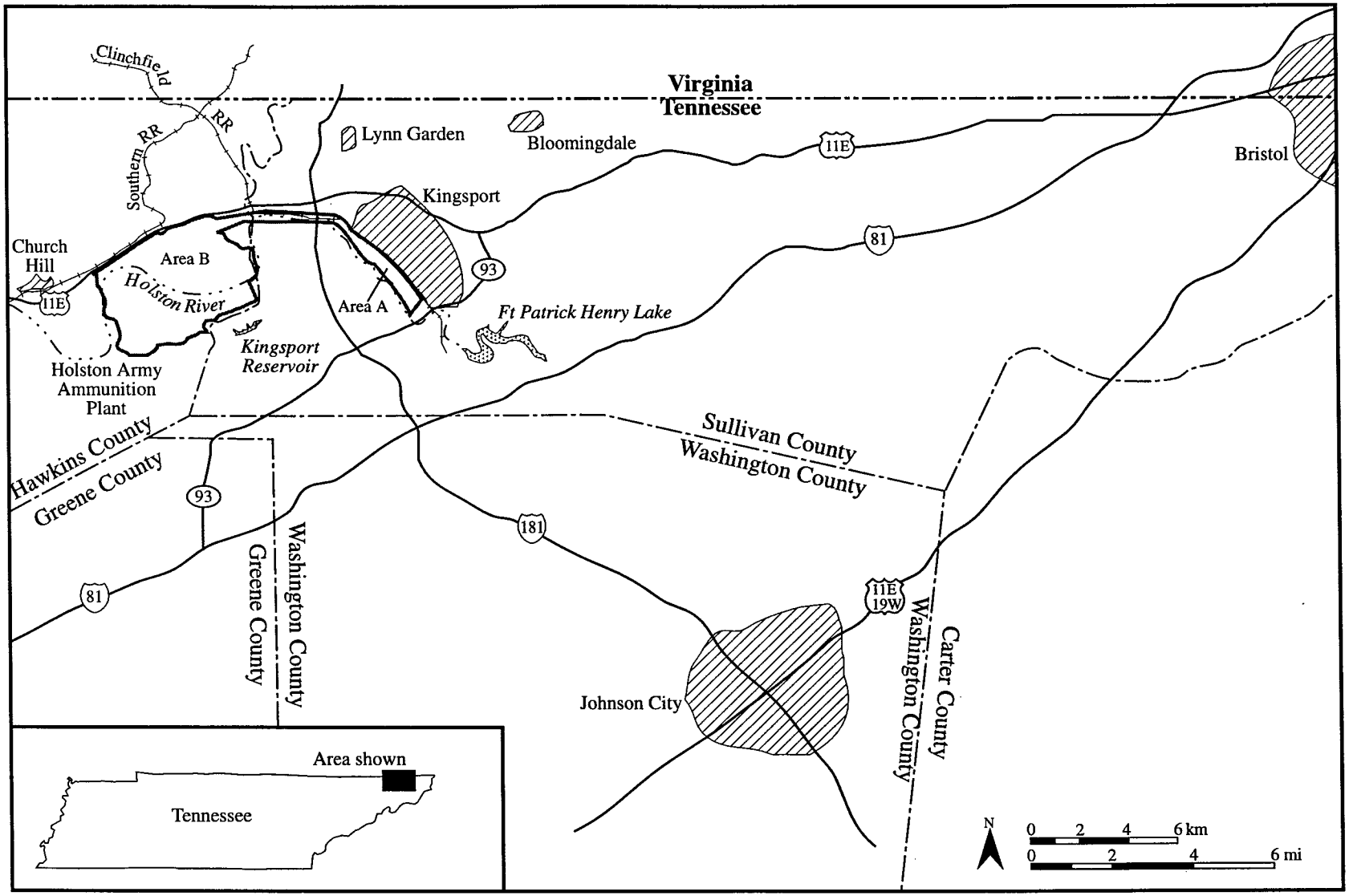


Figure 1. Regional location of the Holston Army Ammunition Plant.

Holston produced explosives at this level until July 1945 when the Ordnance Department informed the facility that the quota should no longer be exceeded. Production Line 9 was promptly closed. By August, in the wake of the atomic bombing of Hiroshima and Nagasaki, the facility was ordered to go on stand-by, which precipitated a rapid curtailment of production and personnel. By the end of 1945 and the beginning of 1946, Holston Ordnance Works was designated a "stand-by" facility and primarily used for storage of Composition B left over from the war.

The HAAP was removed from stand-by status and reactivated in April 1949 initially to rework surplus stock of Composition B. This activity involved the use of one manufacturing line. As the Korean War escalated, most of the facility was mobilized for new production. Eight manufacturing lines were rehabilitated during the years of 1951 to 1954, with production reaching a monthly peak in August 1953 of 15.2 million pounds of Composition B (MacDonald and Mack Partnership 1984:45). After hostilities on the Korean peninsula ceased, production at the HAAP was curtailed to a single production line that manufactured about 500,000 pounds of explosives from 1958 to 1961.

Although the Berlin and Cuban crises of the early 1960s led to an increase in production of explosives at the HAAP to some two million pounds per month, large-scale manufacture of explosives rivalling that of World War II did not resume until mid-1960s and the beginning of U.S. involvement in the Vietnam War. The U.S. government appropriated $40 million to modernize the HAAP and to rehabilitate Lines 9 and 10 which had not been used since World War II. All ten lines were in production by December 1968, manufacturing 33 million pounds of Composition B that month, nearly equal to the record World War II-era production. In early 1976, after the conclusion of the Vietnam War, production was reduced to about two million pounds per month (MacDonald and Mack Partnership 1984:48).

Even though Holston Ordnance Works was later resurrected as HAAP and produced explosives right through the Vietnam War, the days of its greatest achievements were the early 1940s when it led the world in the production of Composition B and contributed greatly to Allied victory in World War II.

IV.

PHOTOGRAPHIC DOCUMENTATION

ADMINISTRATIVE FACILITIES

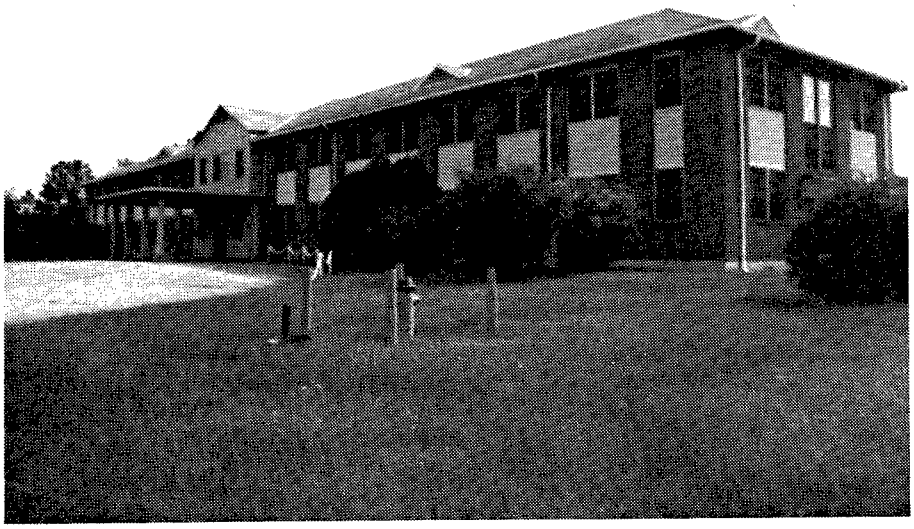


Figure 1. Building 1: General Instruction Building that originally served as the post headquarters and is presently used as office space by the Naval Reserve.

Figure 2. Building 2: Civilian Personnel Building currently used for administrative purposes.

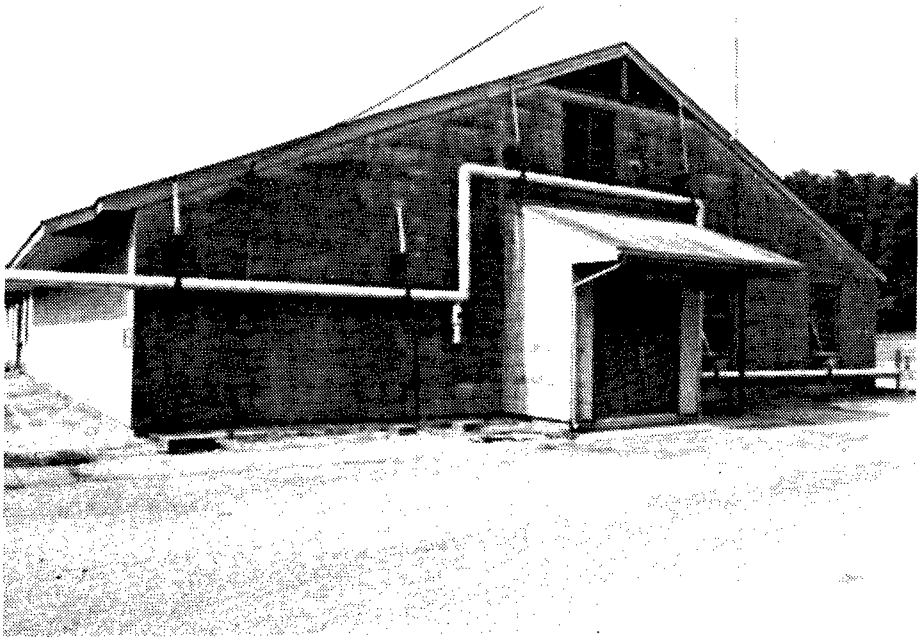


Figure 3. Building 12: General Instruction Building presently used for instruction and training.

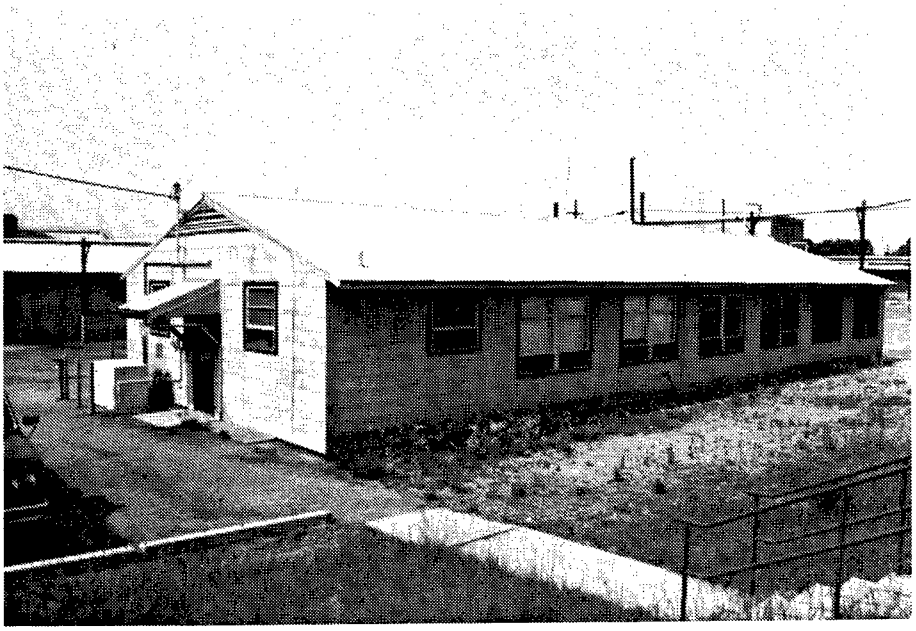


Figure 4. Building 109: General Purpose Building, Shop Office.

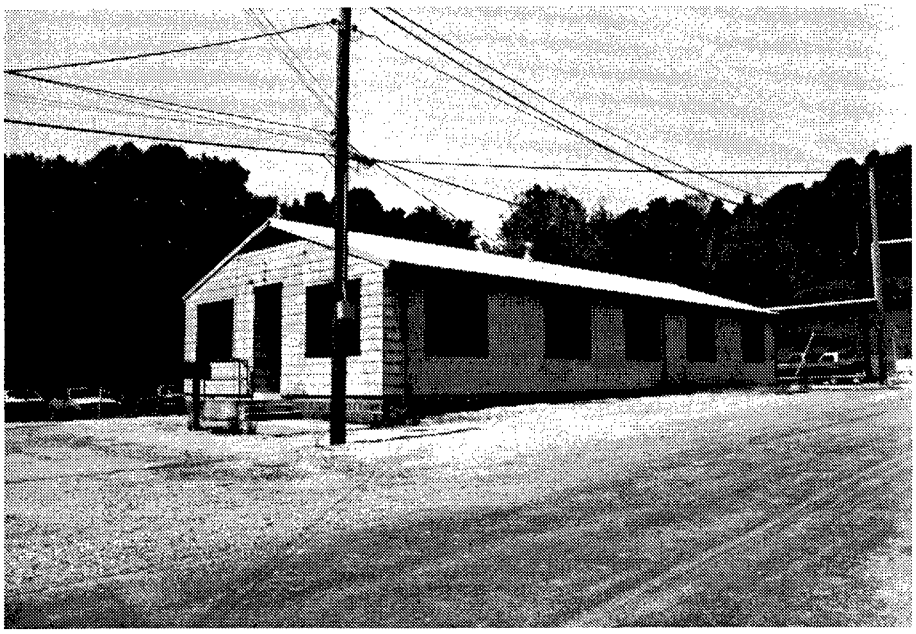


Figure 5. Building 328: General Purpose Building, Nitric Acid Area Office.

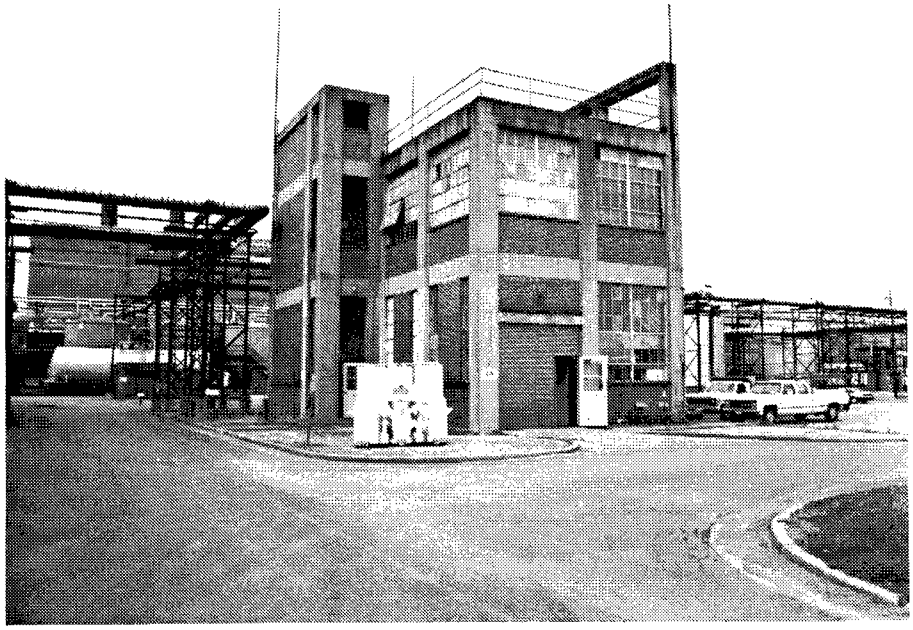


Figure 6. Building A4: Shop Offices, Canteen, and Storage Facility.

Figure 7. Building R1: General Purpose Office Building.

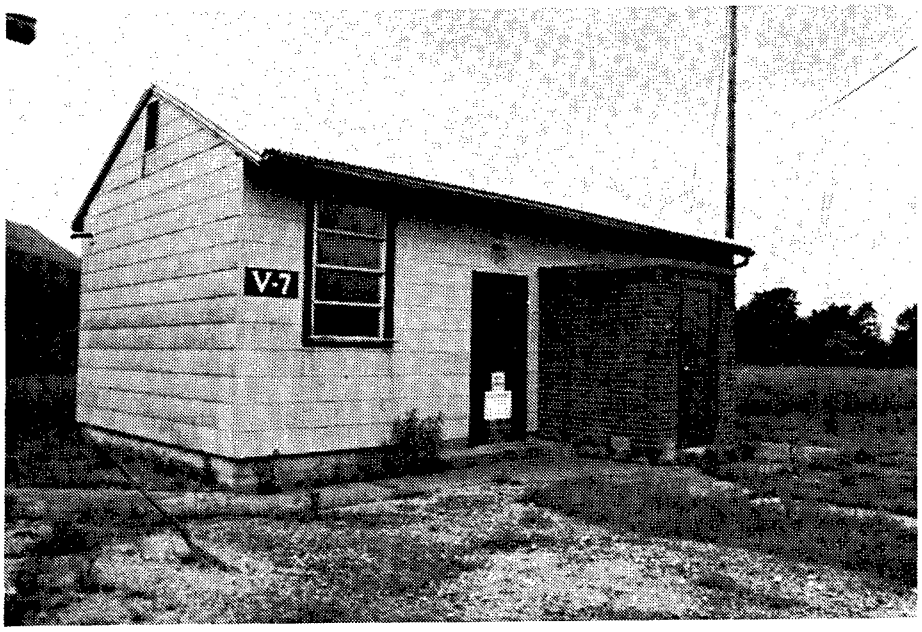


Figure 8. Building V7: General Purpose Office Building.

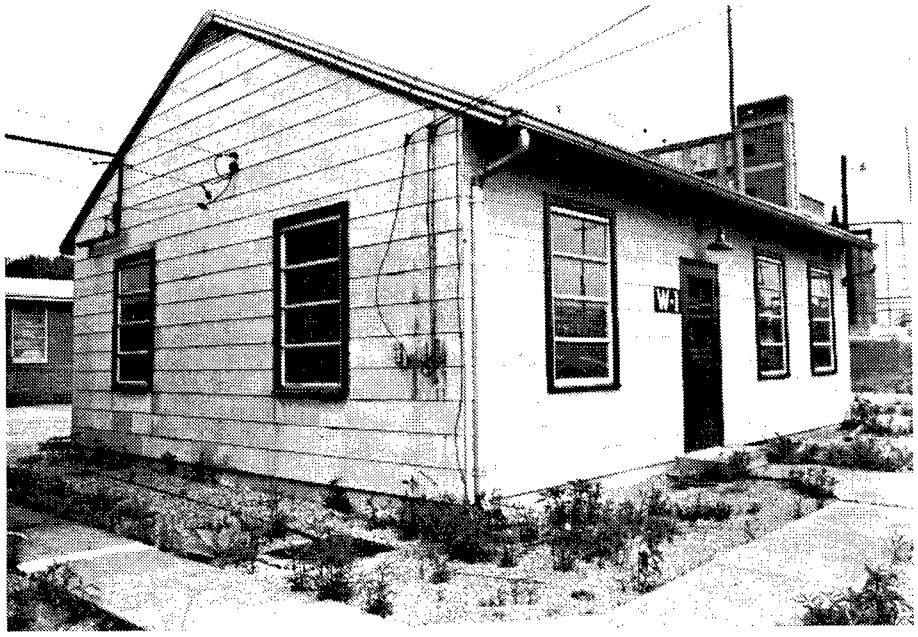


Figure 9. Building W1: General Purpose Office Building.

MANUFACTURING AND SUPPORT FACILITIES

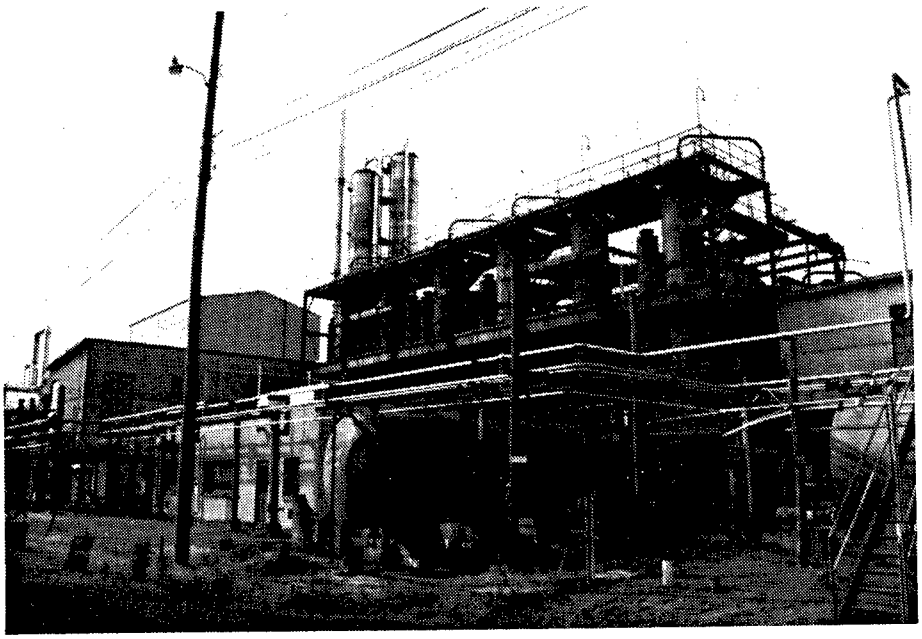


Figure 10. Building 302: Acid Manufacturing Plant, Ammonia Oxidation Building.

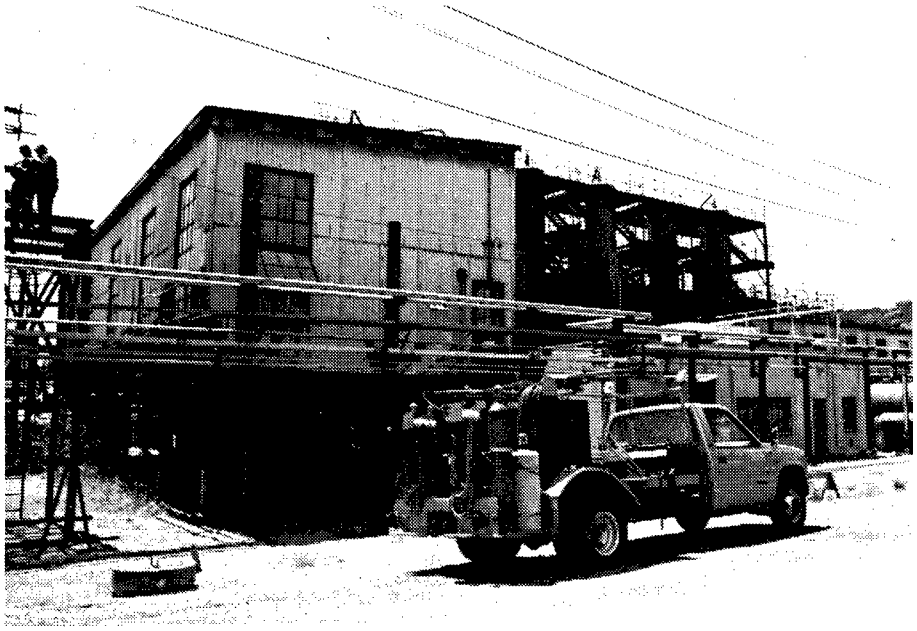


Figure 11. Building 302: Acid Manufacturing Plant, Ammonia Oxidation Building.

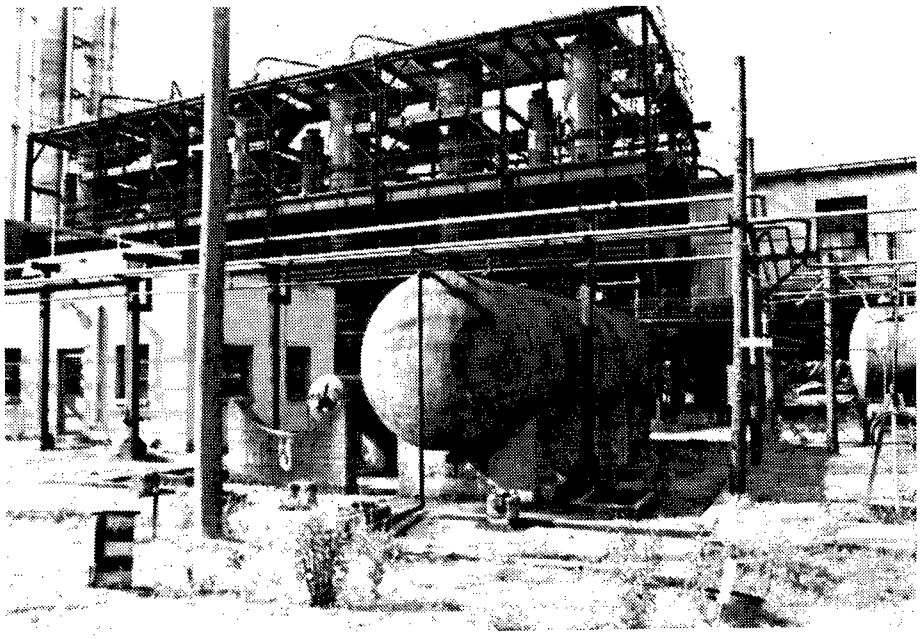


Figure 12. Building 302: Acid Manufacturing Plant, Ammonia Oxidation Building.

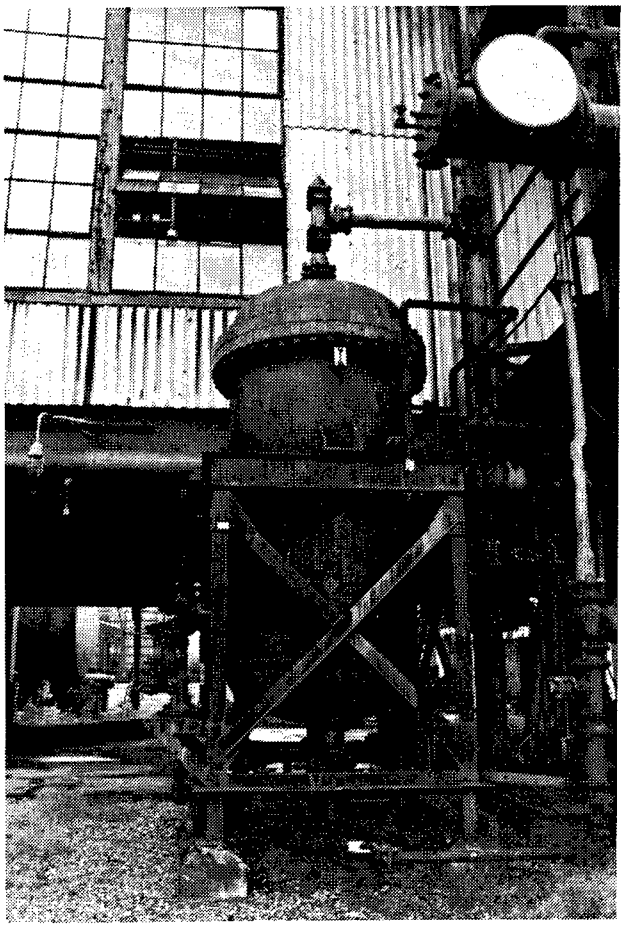


Figure 13. Building 302: Ammonia Vaporizer.

Figure 14. Building 302: View of the underside of Absorption Columns.

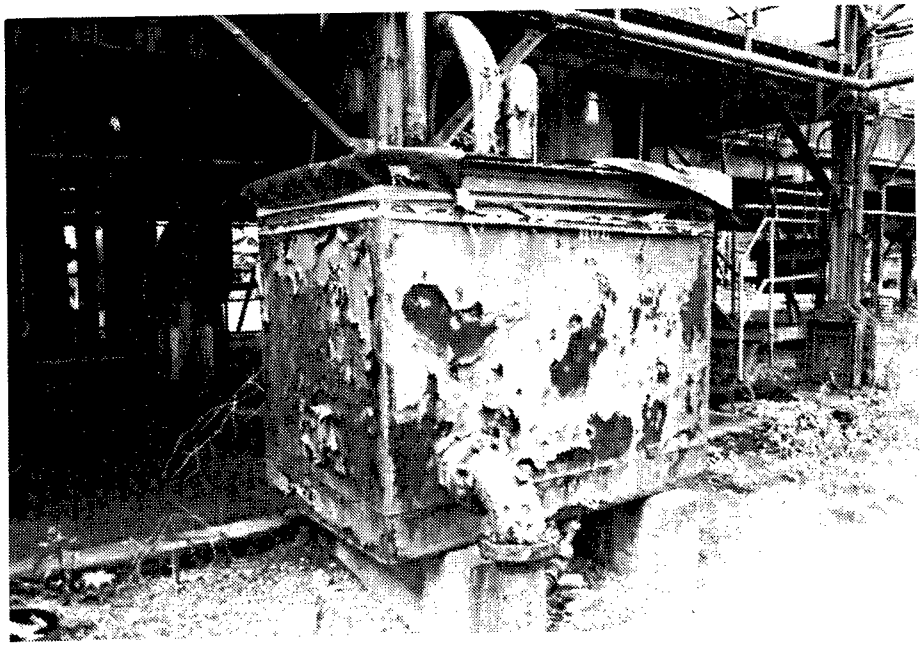


Figure 15. Building 302: Water Tank for Absorption Columns.

Figure 16. Building 302: Close-up of Absorption Columns.

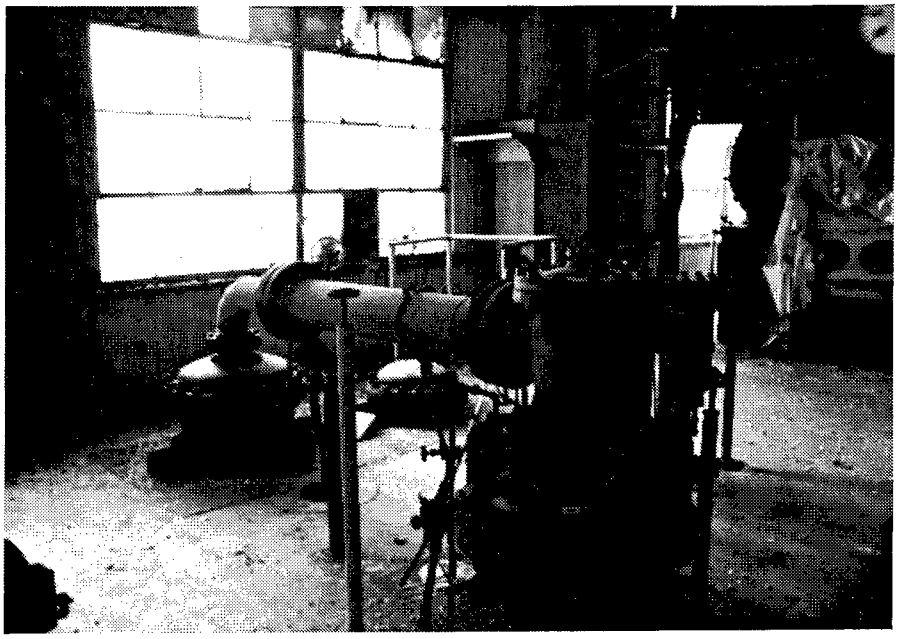


Figure 17. Building 302: Close-up of Convertor.

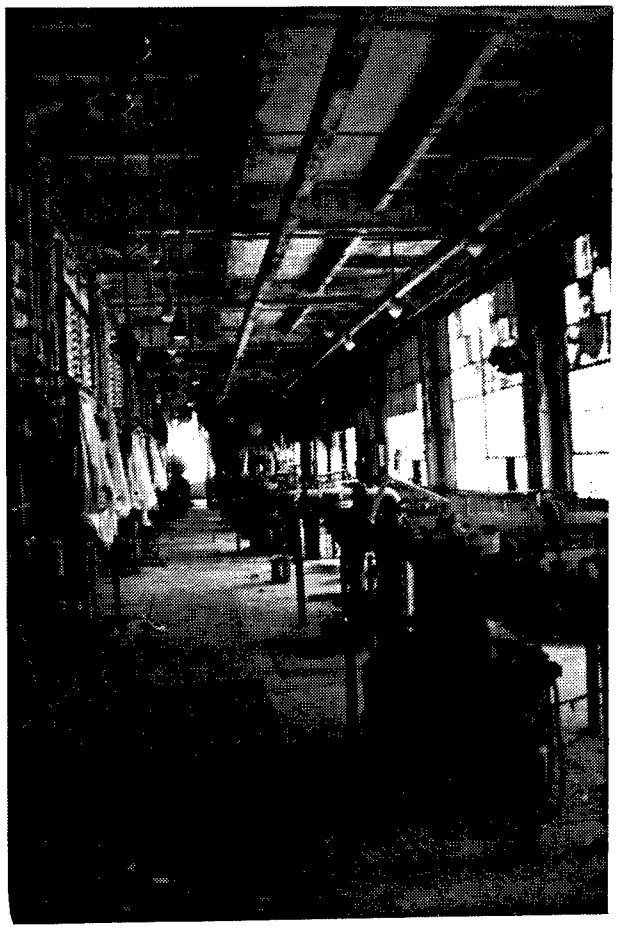


Figure 18. Building 302: Convertor Room.

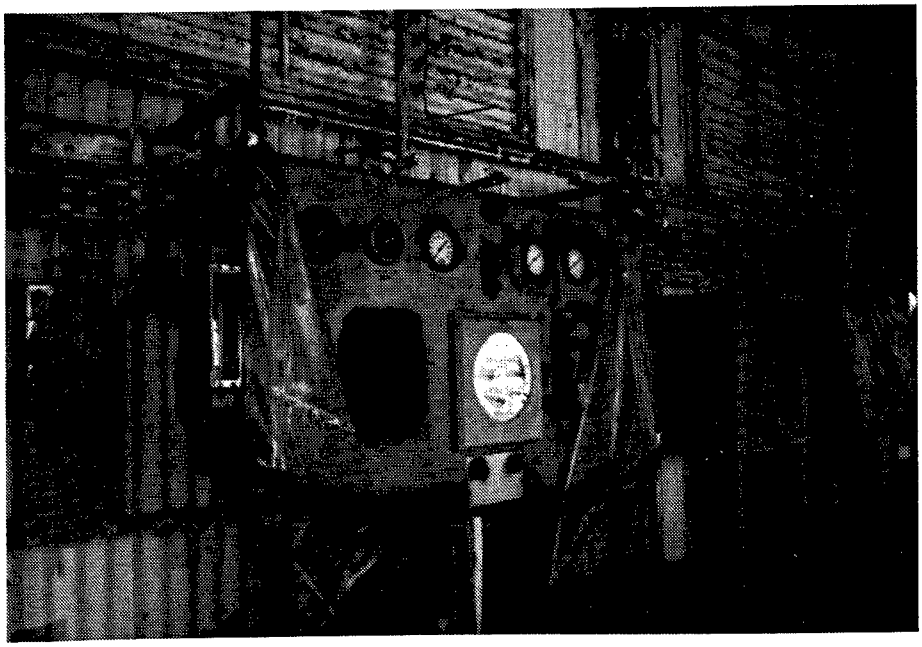


Figure 19. Building 302: Convertor Control Panel.

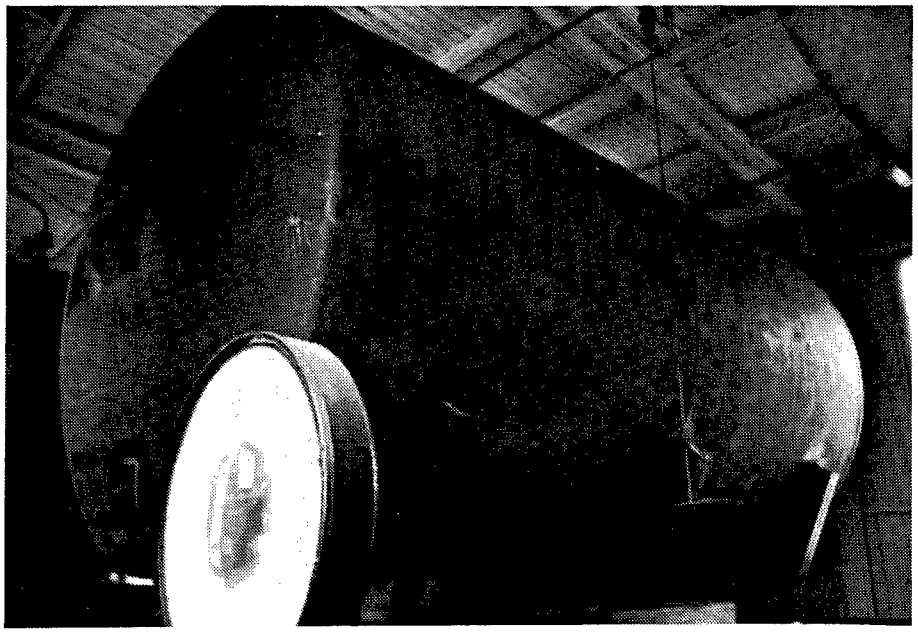


Figure 20. Building 302: Tank located in Tank Room on the second floor.

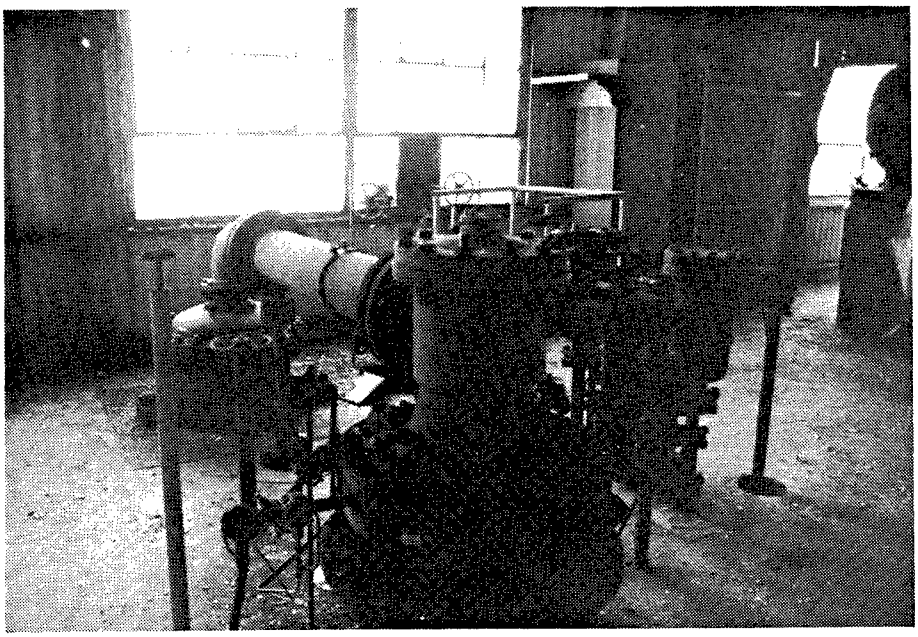


Figure 21. Building 302: Close-up of Convertor.

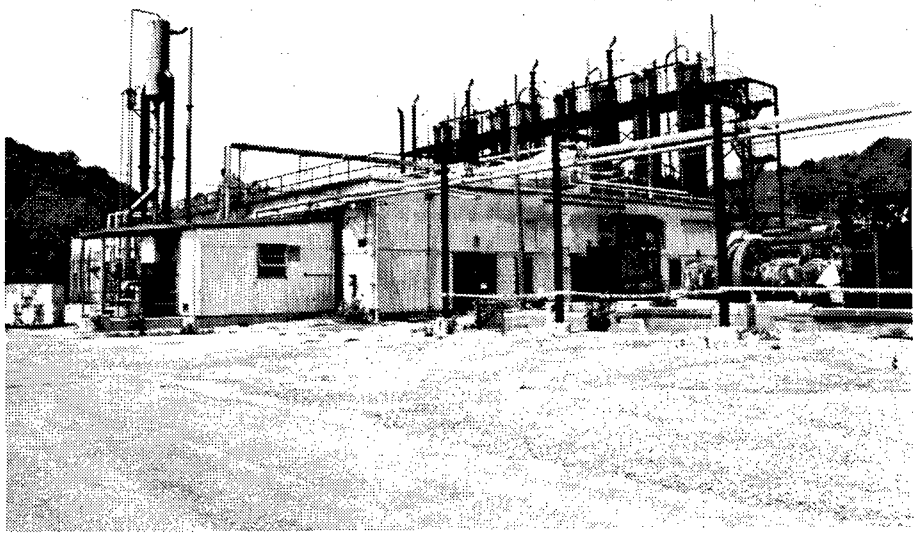


Figure 22. Building 302B: Ammonia Oxidation Plant, Pump House.

Figure 23. Building 303B: Magnesium Nitrate Dehydrating Pilot Plant, the original "Maggie Brutt."

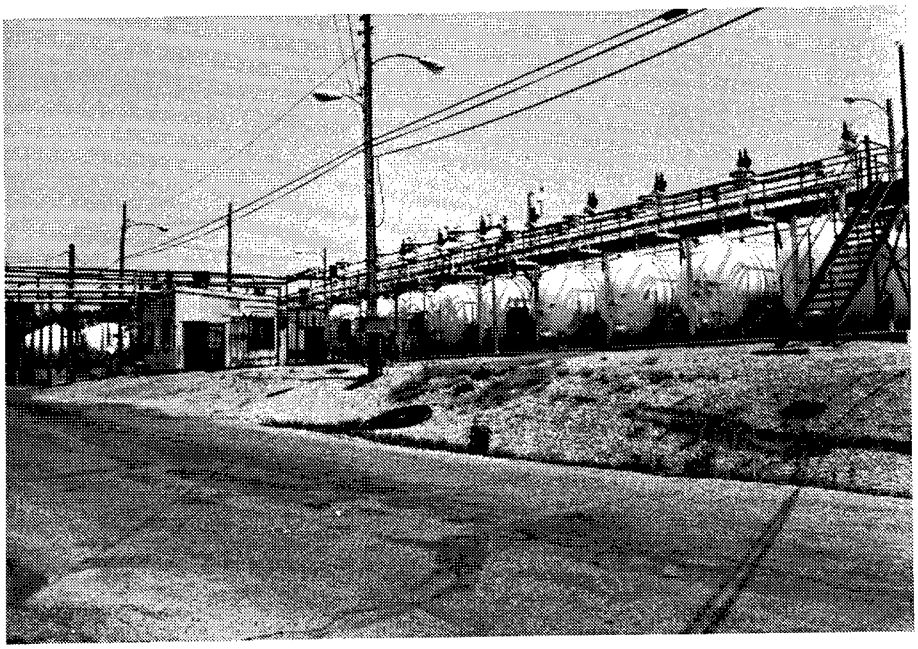


Figure 24. Building 312: Acid Manufacturing Plant, Ammonia Compressor House and Storage Tanks.

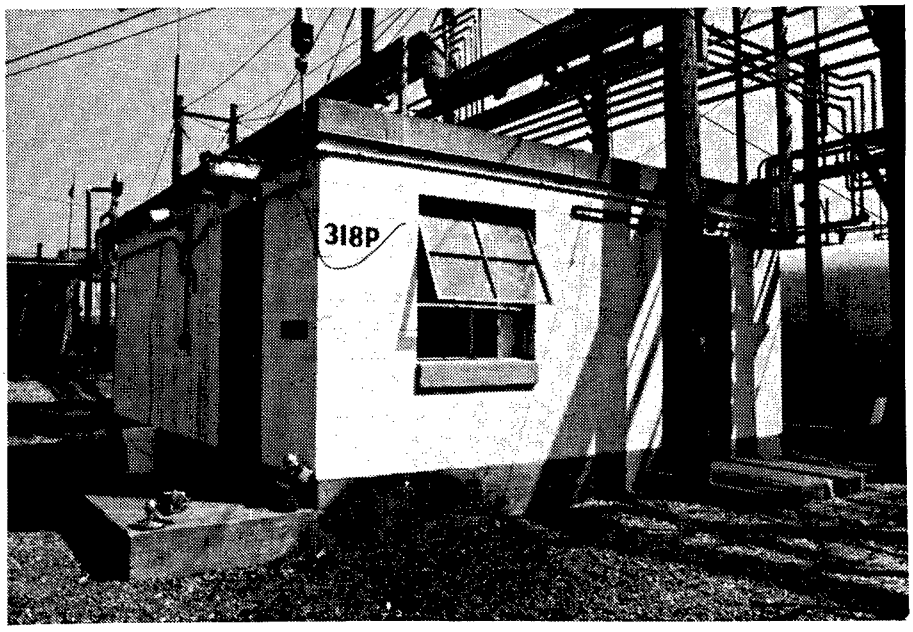


Figure 25. Building 318P: Ammonia Refrigeration Building.

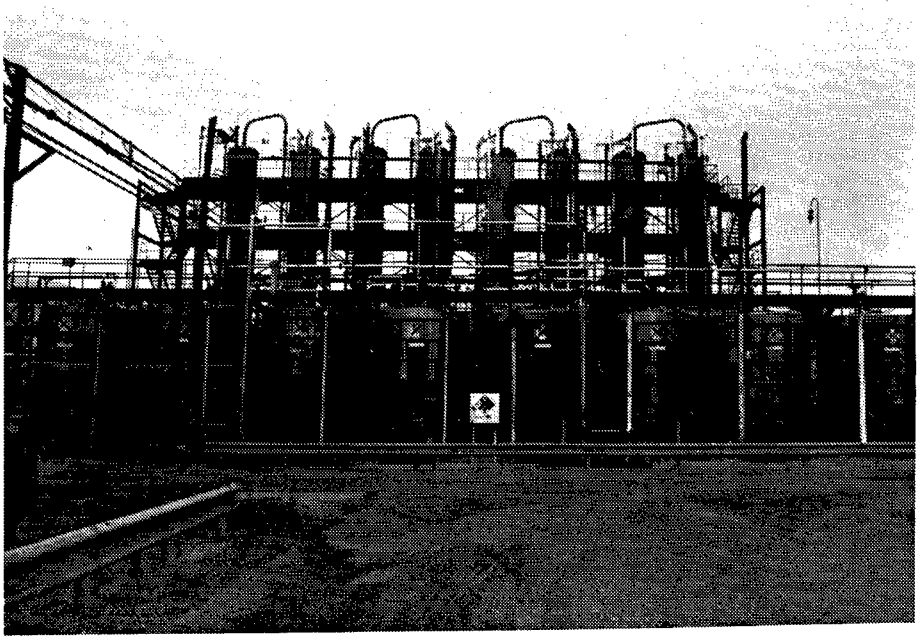


Figure 26. Building 330: Ammonia Nitrate Mixing Plant.

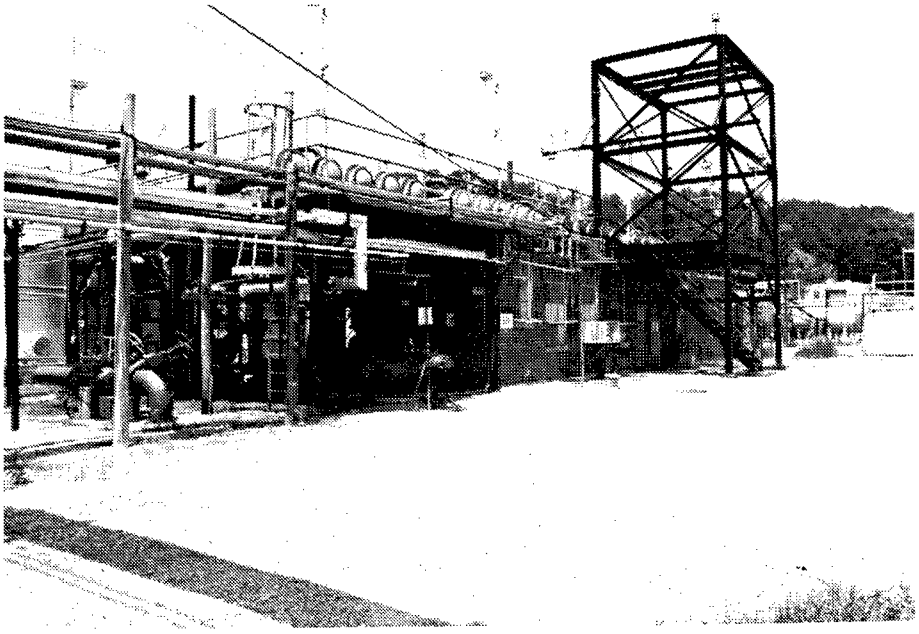


Figure 27. Building 330: Acid Manufacturing Plant, Ammonia Nitrate Mixing Building.

Figure 28. Air Compressor for the Ammonia Nitrate Mixing Plant.

Figure 29. Building 330: Another view of the Ammonia Nitrate Mixing Plant Air Compressor.

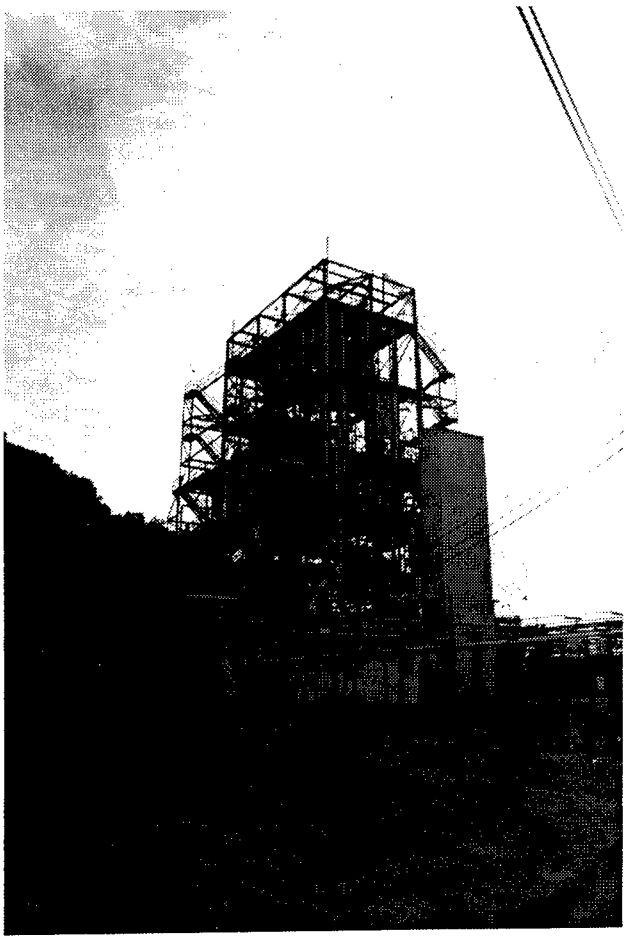


Figure 30. Building 334: Magnesium Nitrate Plant.

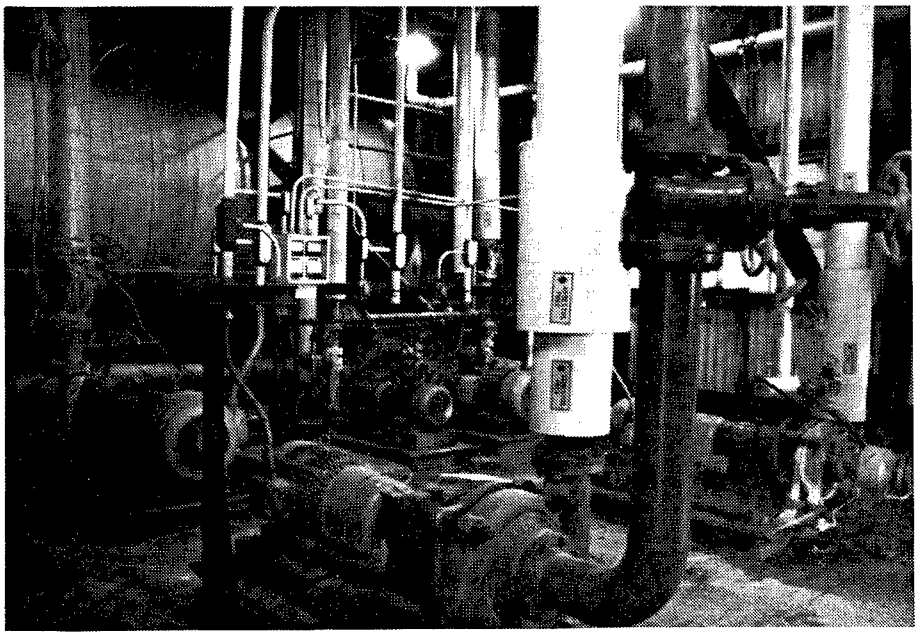


Figure 31. Building 334: Heater Room in basement of building.

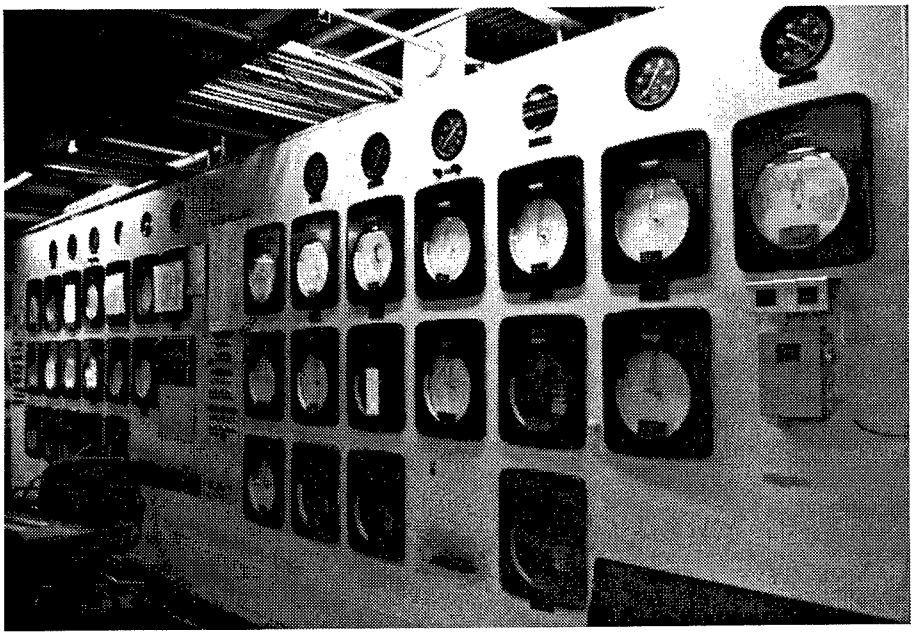


Figure 32. Building 335: Control Panel located in the Control House of the Magnesium Nitrate Plant.

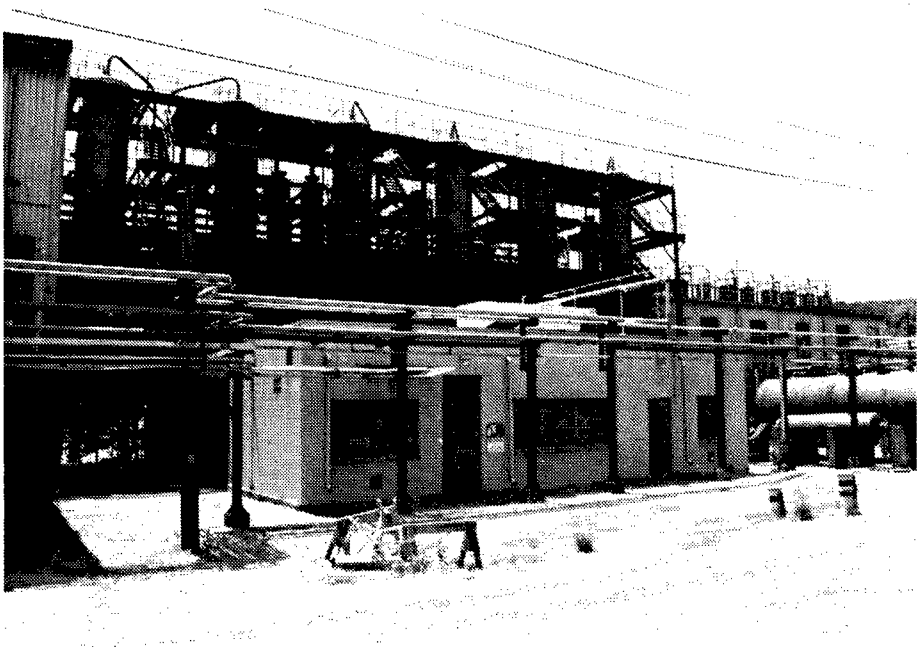


Figure 33. Building 330P: Ammonia Nitrate Pump House constructed of concrete block and fiberglass.

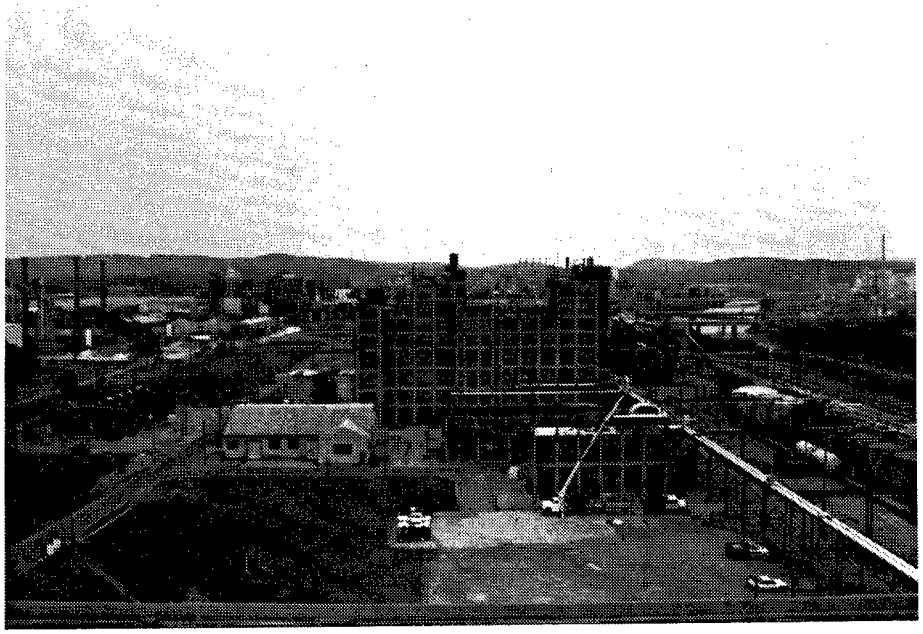


Figure 34. Overview of Area A.

Figure 35. Overhead Acid Pipeline.

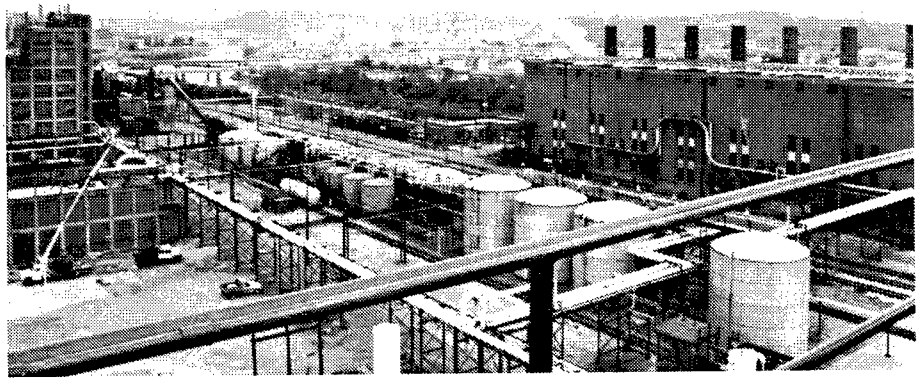


Figure 36. Overview of Area A.

Figure 37. Building A2: Acetic Acid Manufacturing Plant.

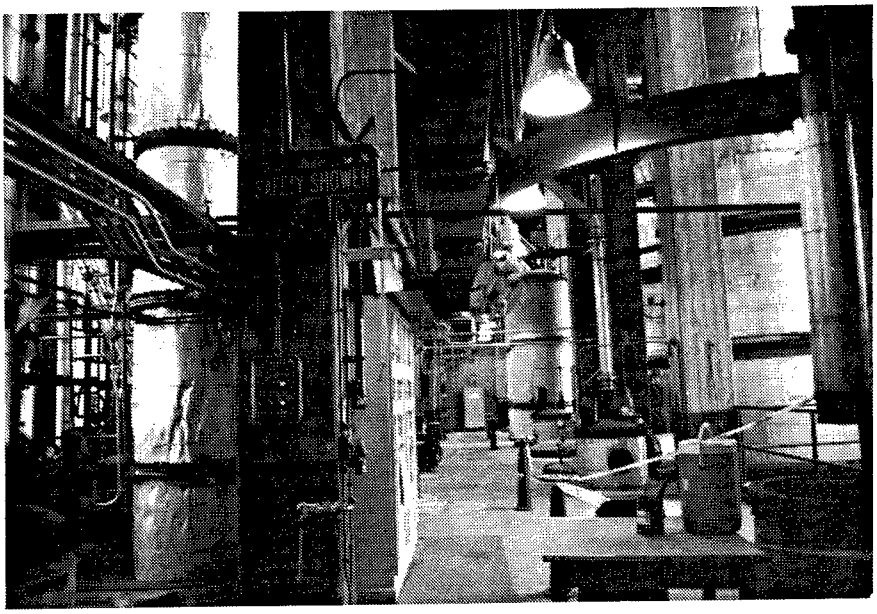


Figure 38. Building A2: Third floor of the Acetic Acid Manufacturing Plant showing Solvent Columns and Control Panel.

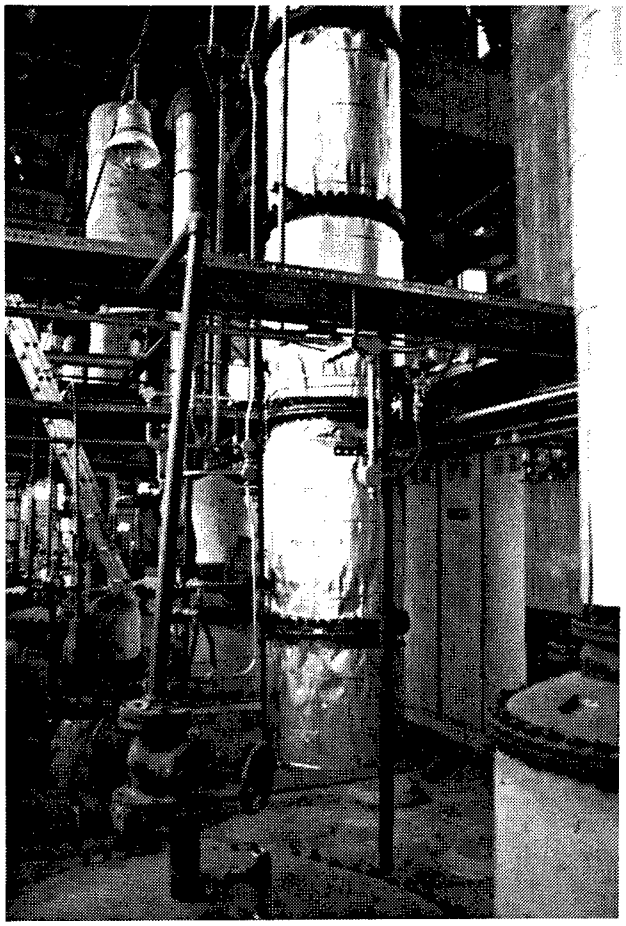


Figure 39. Building A2: Third floor of the Acetic Acid Manufacturing Plant showing Solvent Columns made of steel.

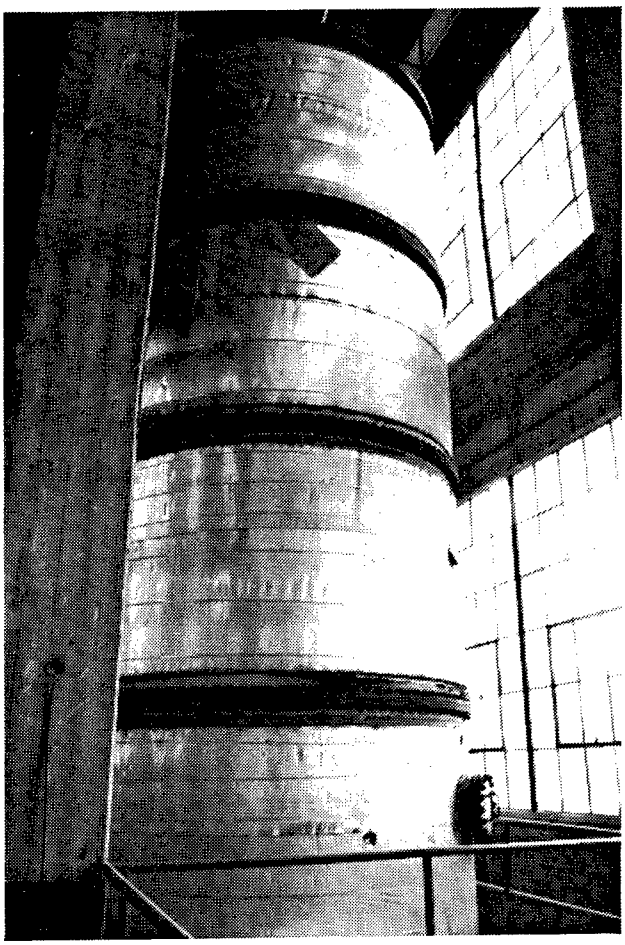


Figure 40. Building A2: Close-up of the lower portion of Solvent Column No. 3 located on the third floor.

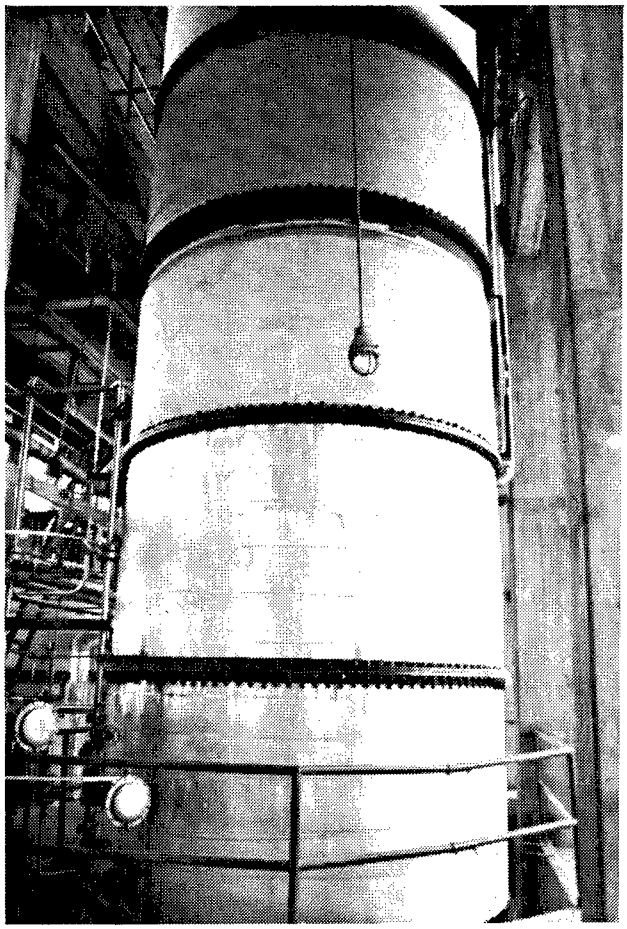


Figure 41. Building A2: Close-up of the upper portion of Solvent Column No. 3 located on the fourth floor.

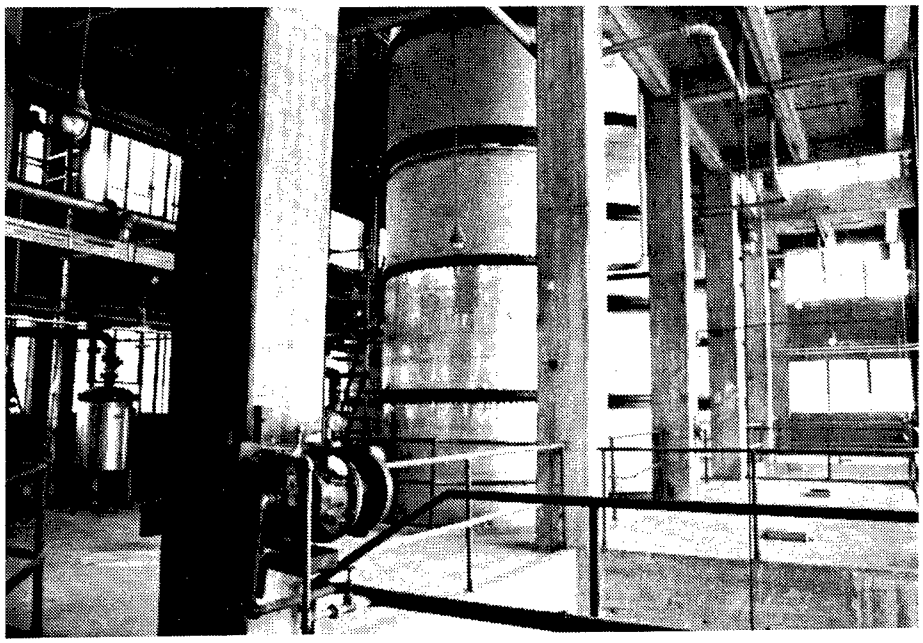


Figure 42. Building A2: View of the Solvent Columns located on the fifth floor.

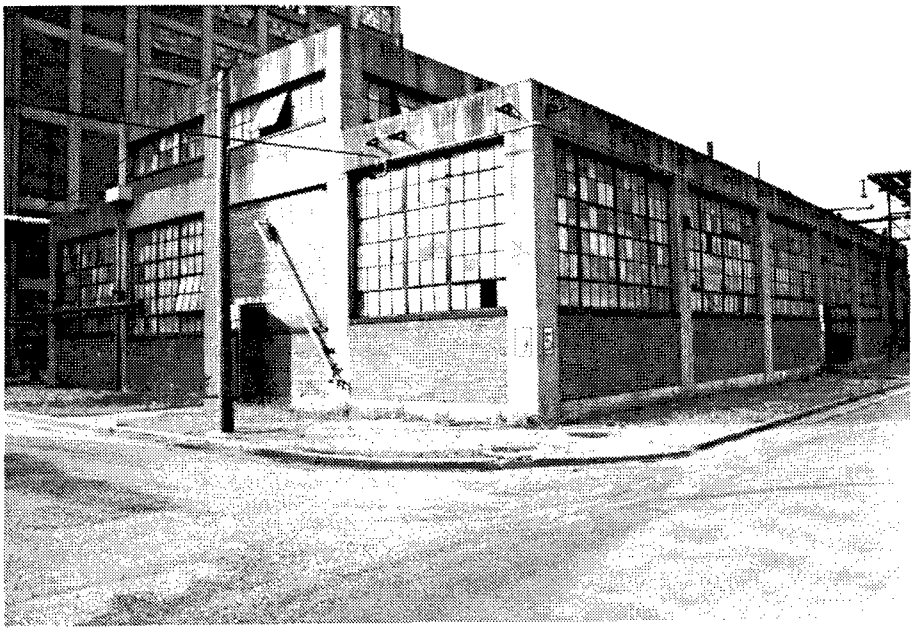


Figure 43. Building A5: Refrigeration Plant Building.

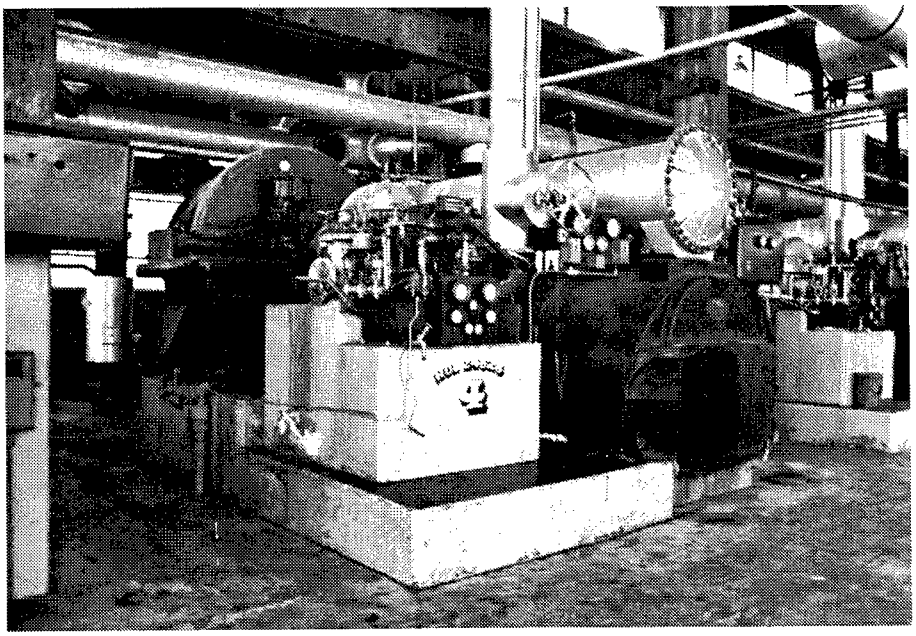


Figure 44. Building A5: Refrigeration Units with 500-ton Centrifugal Compressor (Model 17P) manufactured by the Carrier Corp., Syracuse, NY.

Figure 45. Building A5: Interior of Refrigeration Building.

Figure 46. Building A6: Anhydride Refining Building.

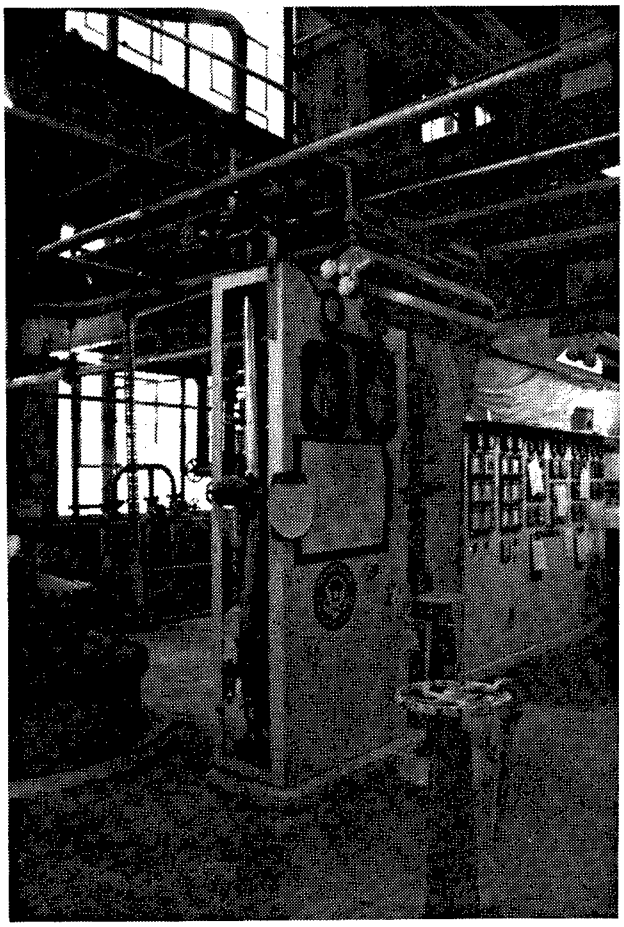


Figure 47. Building A6: Control Panel for Anhydride Stills.

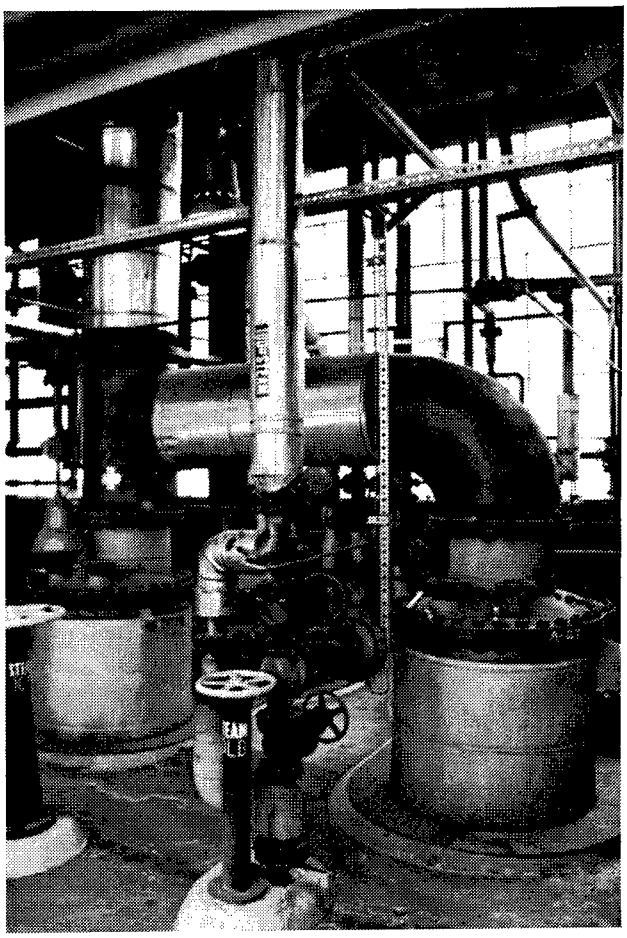


Figure 48. Building A6: Feed Heater of an Azeotrophic Still manufactured by the Brighton Copper Co. The still is located on the third floor.

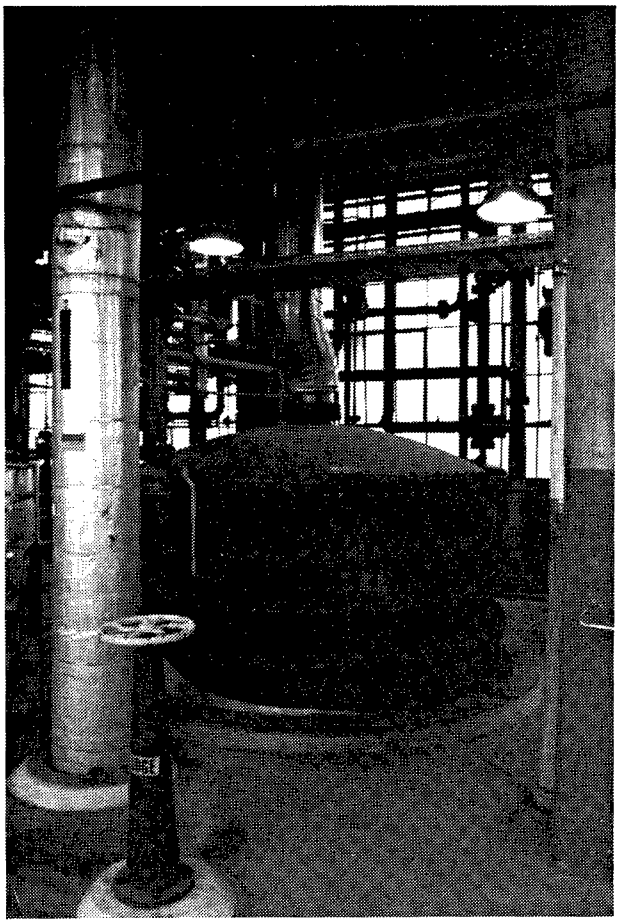


Figure 49. Building A6: Anhydride Still No. 1 located on the third floor.

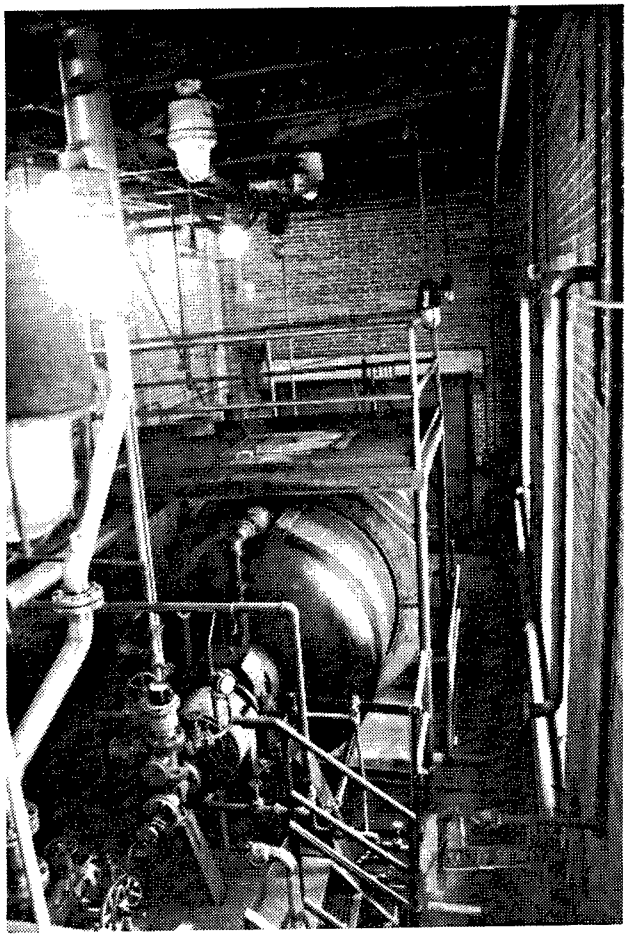


Figure 50. Building A6: An overhead view of the Ball Mill located on the first floor.

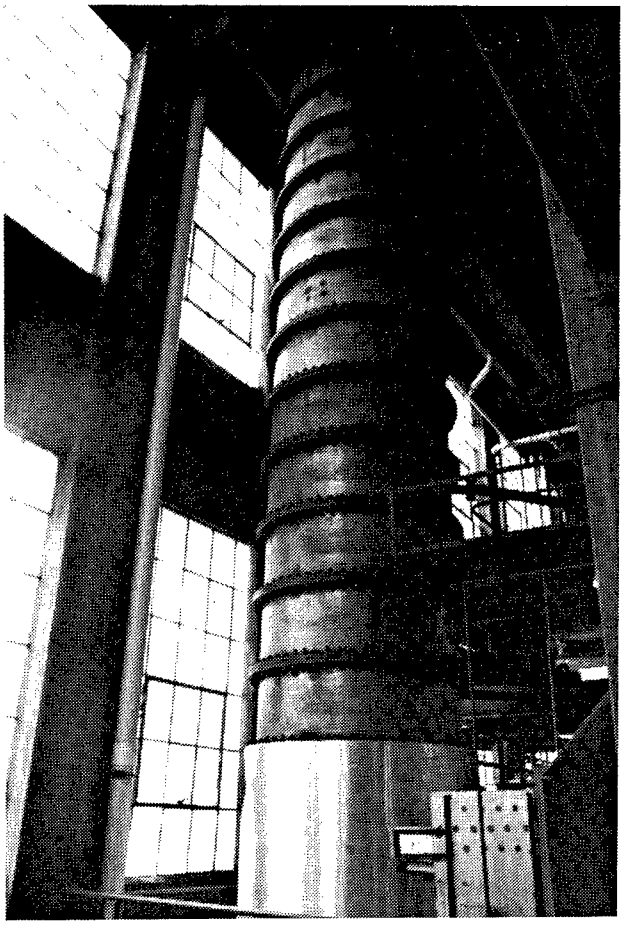


Figure 51. Building A6: Return Acid Column.

Figure 52. Building A6: Base Heater of an Azeotrophic Still manufactured by the Brighton Copper Co. The still is located on the third floor.

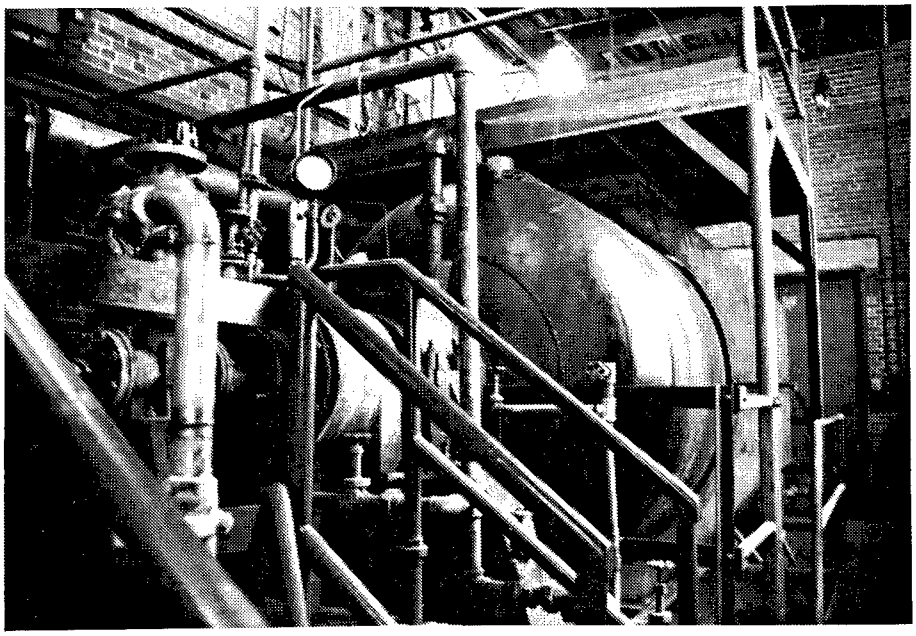


Figure 53. Building A6: Another view of the Ball Mill located on the first floor.

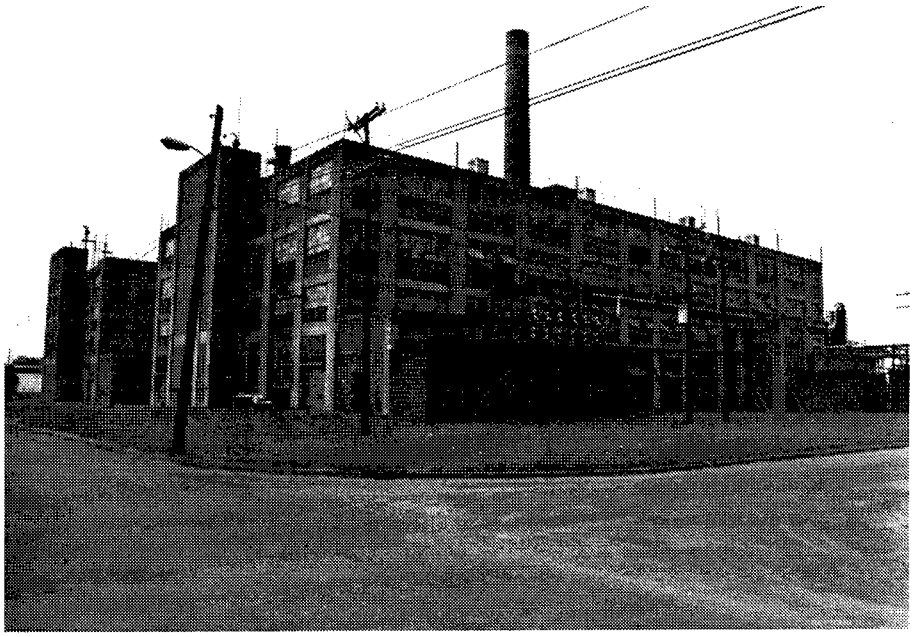


Figure 54. Building A7: Anhydride Making Building.

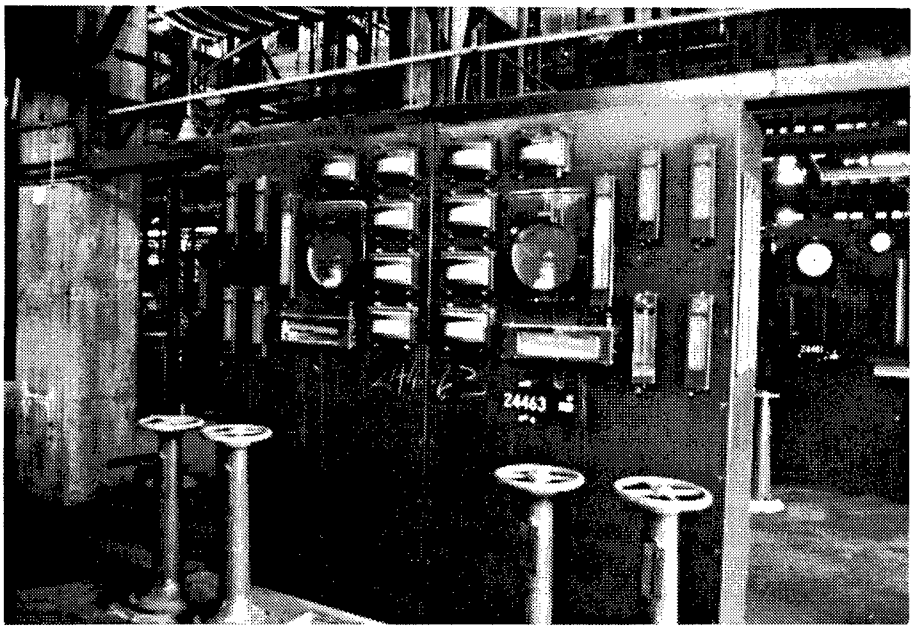


Figure 55. Building A7: Control Panel for Acetic Anhydride Furnaces.

Figure 56. Building A7: Acetic Anhydride Furnace.

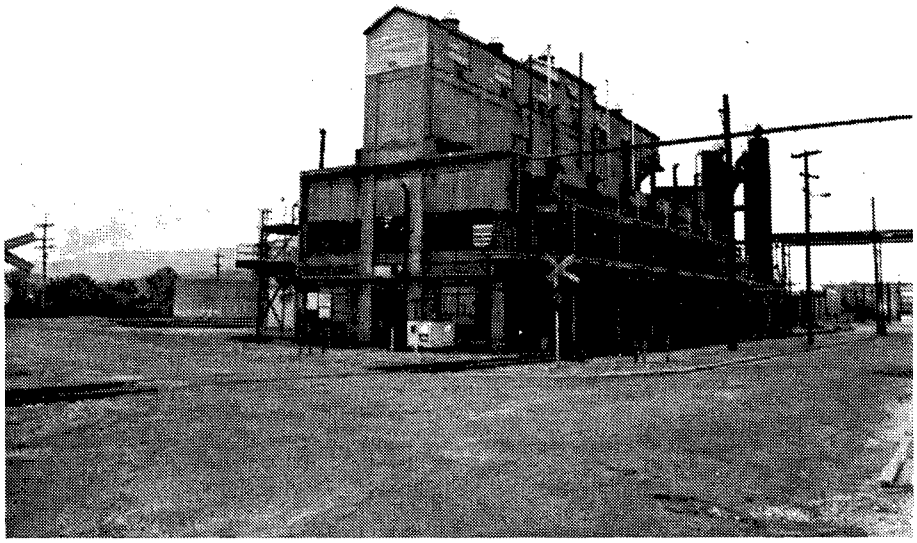


Figure 57. Building A10: Gas Generating Plant.

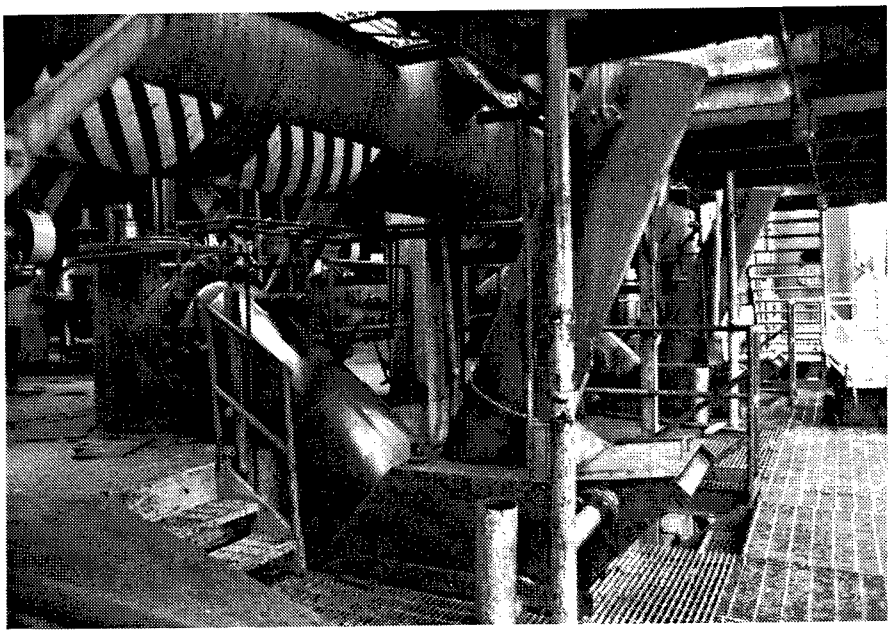


Figure 58. Building A10: An Off-take of a Gas Producing Tank located on the first floor.

Figure 59. Building A10: Gas Producing Tank No. 5 located in the basement.

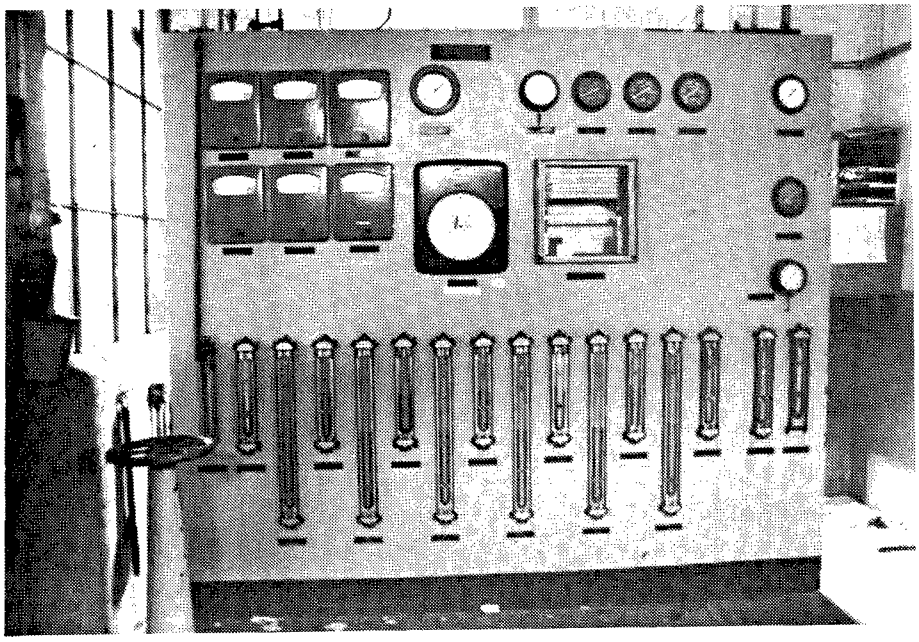


Figure 60. Building A10: Control Panel for the Gas Producing Tanks. This panel was manufactured by Semetsolvzy Engineering Corp., NY.

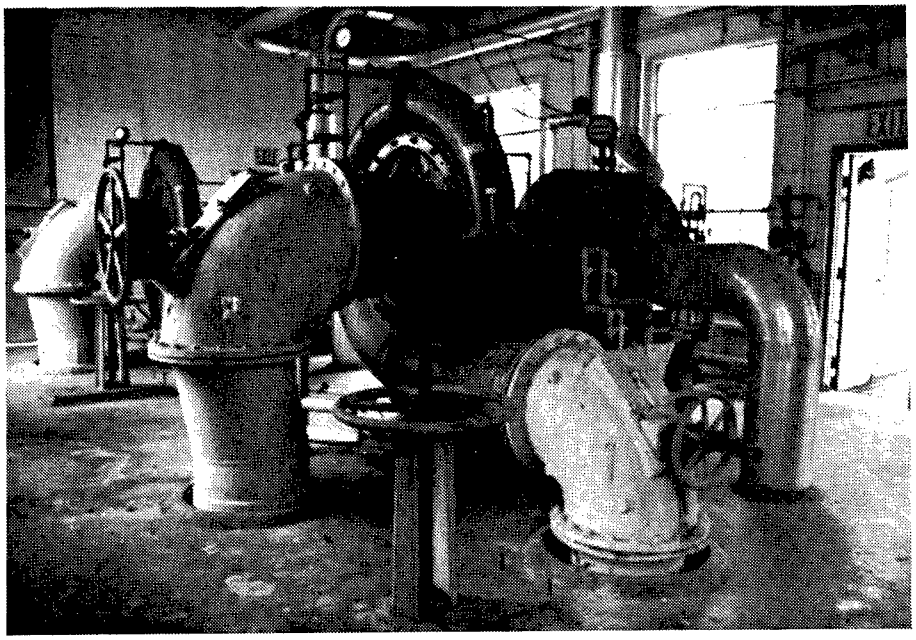


Figure 61. Building A10: Exhaustor for a Gas Producing Tank. Exhaustor was manufactured by Ingeroil-Rand Co.

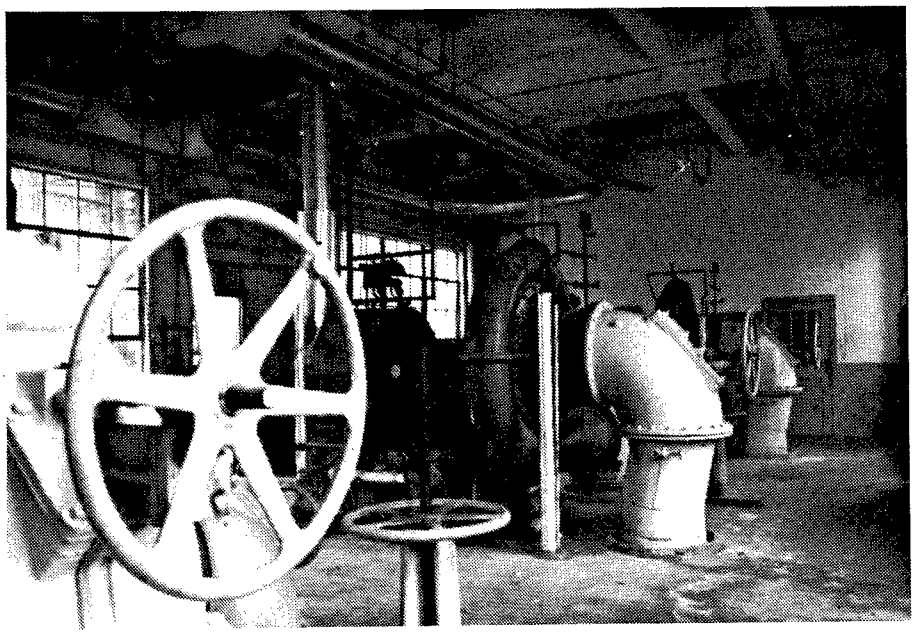


Figure 62. Building A10: A wider view of the Exhaust Room showing portions of three Gas Producing Tank Exhaustors.

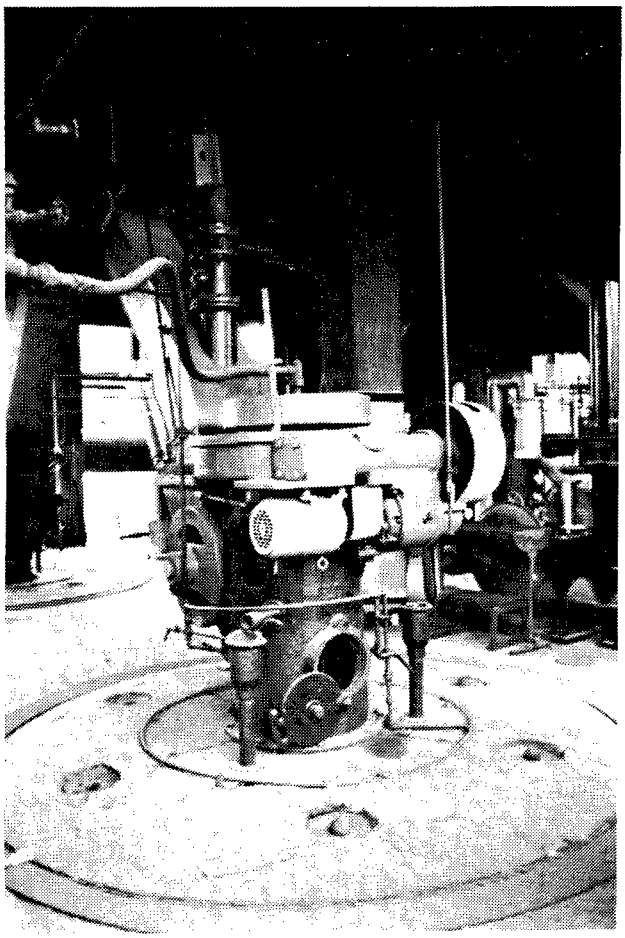


Figure 63. Building A10: Coal Feeder and Agitator manufactured by the Cooper-Bessemer Corp., Mt. Vernon, OH, and patented April 18, 1922.

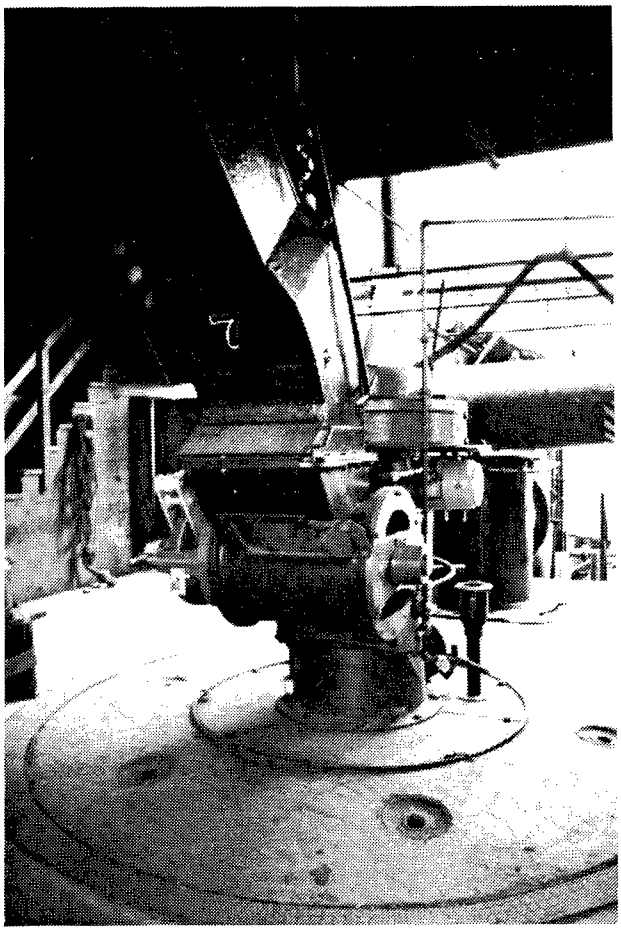


Figure 64. Building A10: Another view of a Coal Feeder and Agitator manufactured by the Cooper-Bessemer Corp., Mt. Vernon, OH.

Figure 65. Building A10: Exhaust Room Fan.

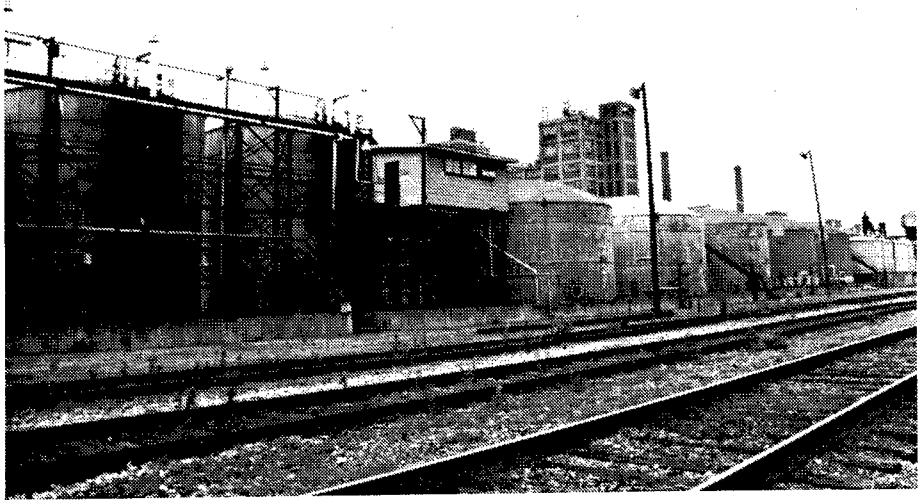


Figure 66. Building A27: Acid Storage Tank Farm for Area A.

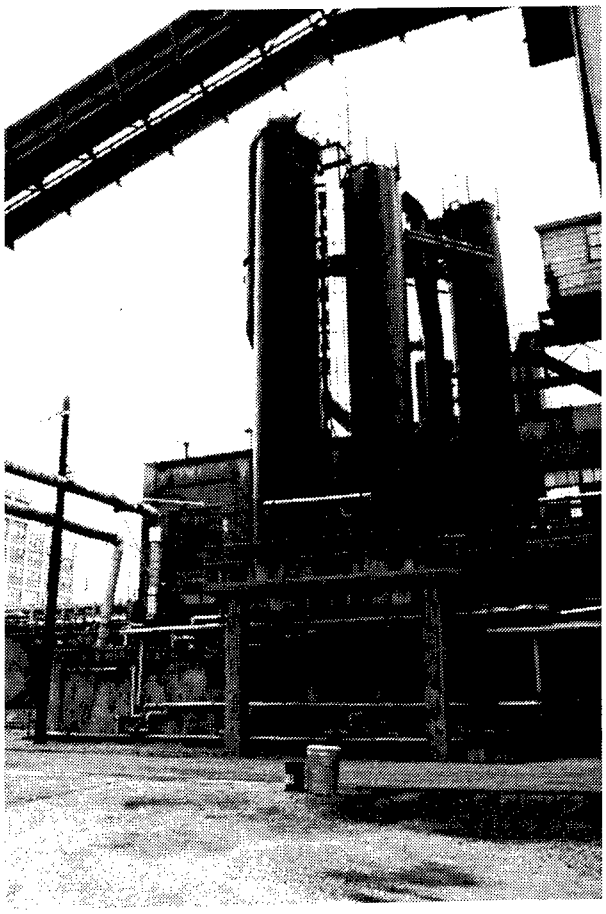


Figure 67. Building A10: View of the Gas Generating Plant Stacks located on the north side of the building.

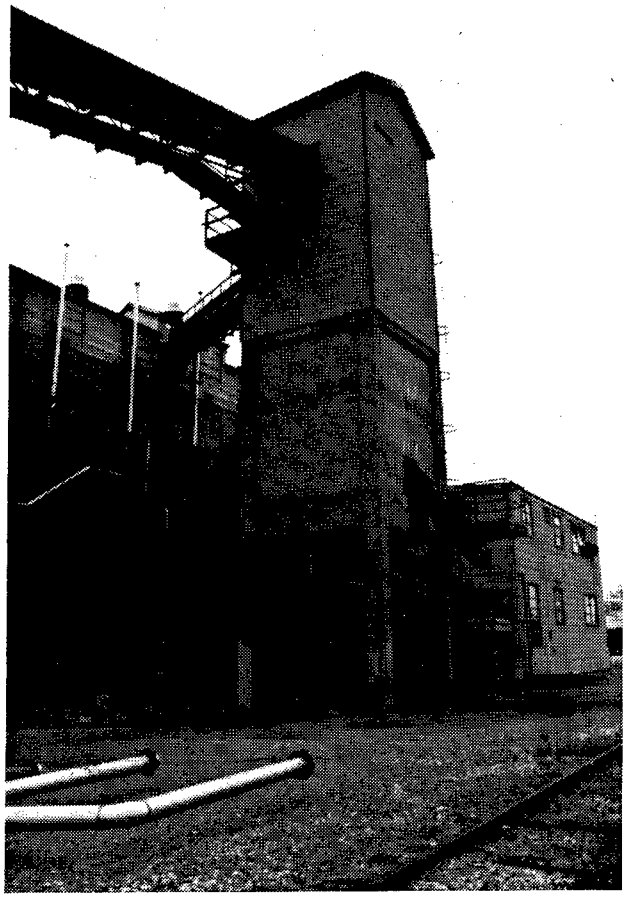


Figure 68. Building A10: Ash House attached to rear of Gas Generating Plant.

Figure 69. Building A20: Control Panel for Acetic Anhydride Furnaces.

Figure 70. Building A20: Anhydride Making Building.

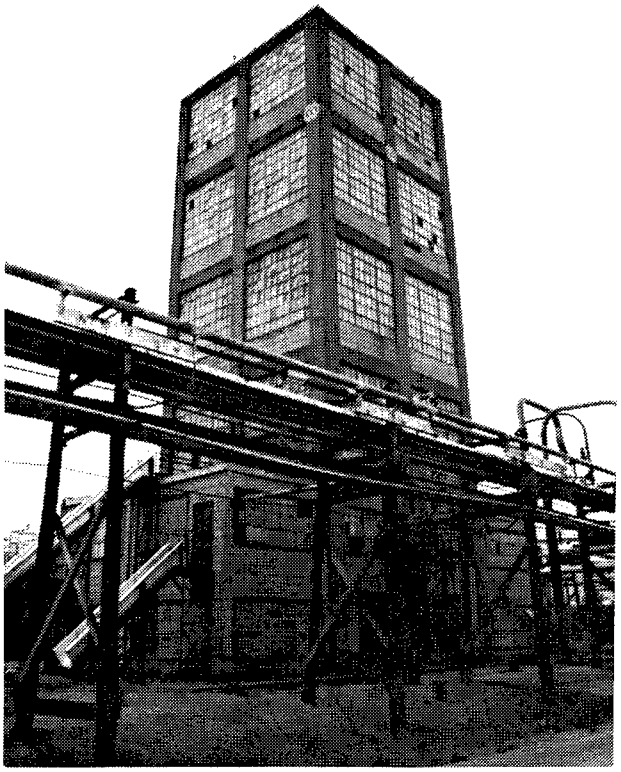


Figure 71. Building B5: Acid Manufacturing Plant, Primary Recovery and Sludge Treatment Building.

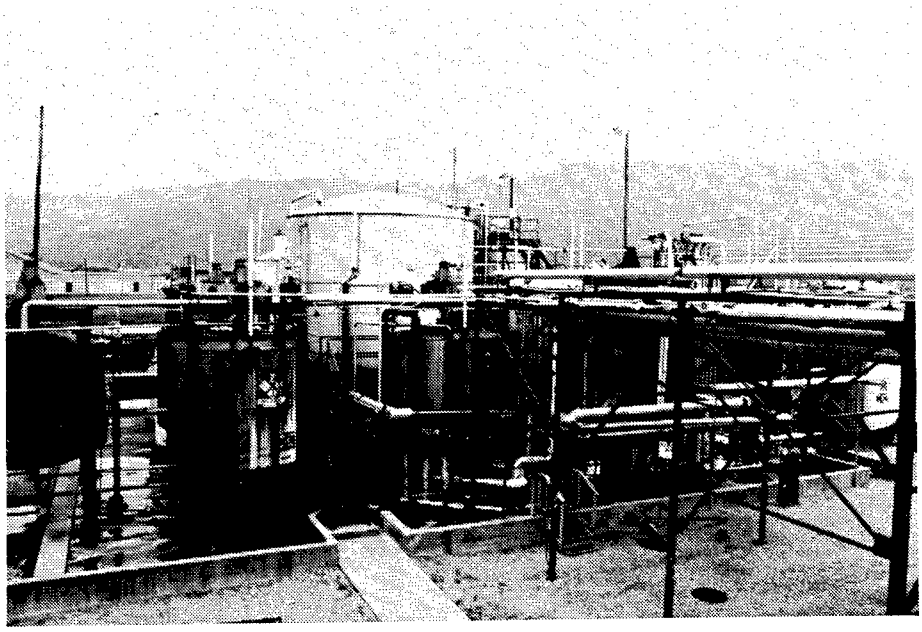


Figure 72. Building B3: Acetic Acid Tanks.

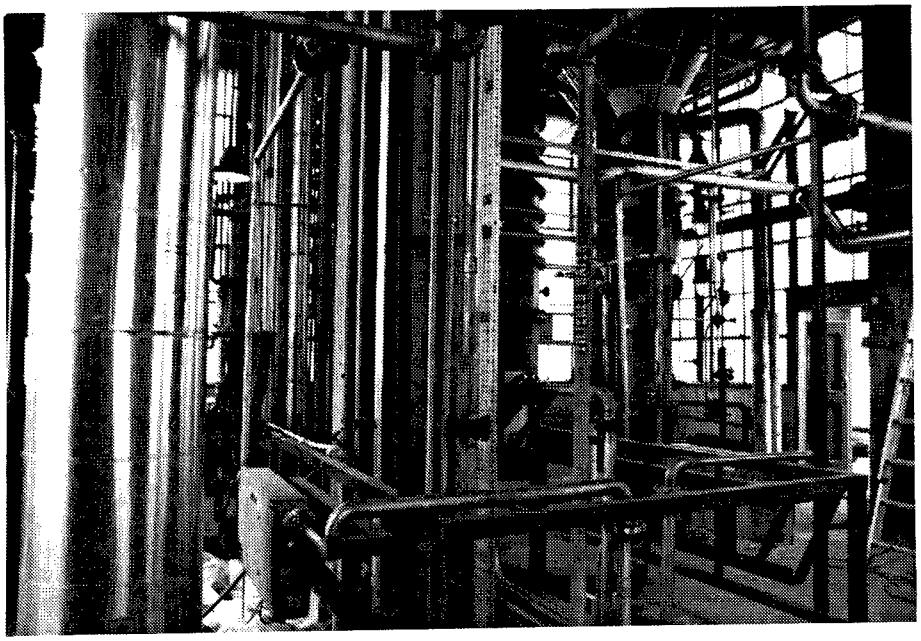


Figure 73. Building B3: Third floor Acetic Acid Columns.

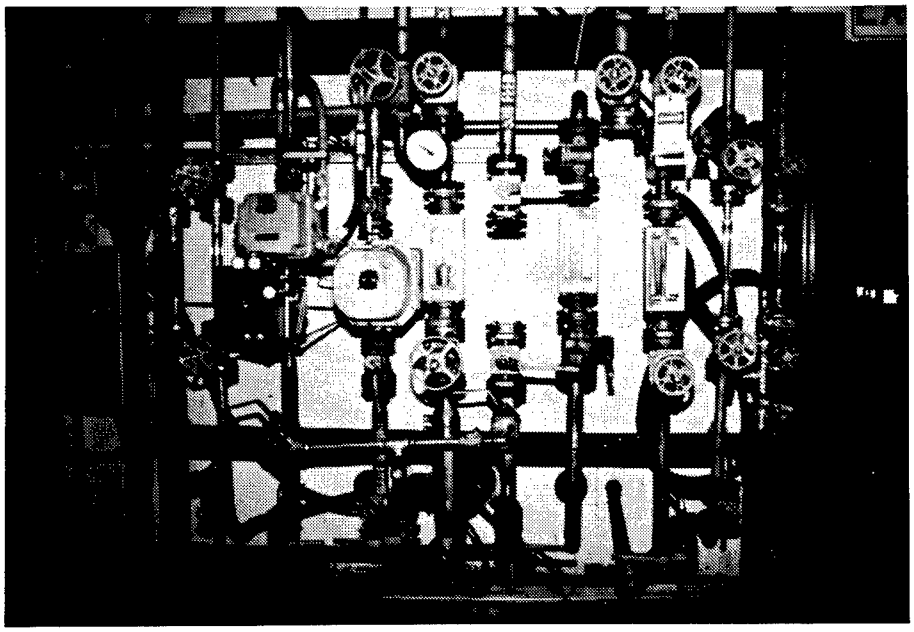


Figure 74. Building B3: Close-up of Rotometers.

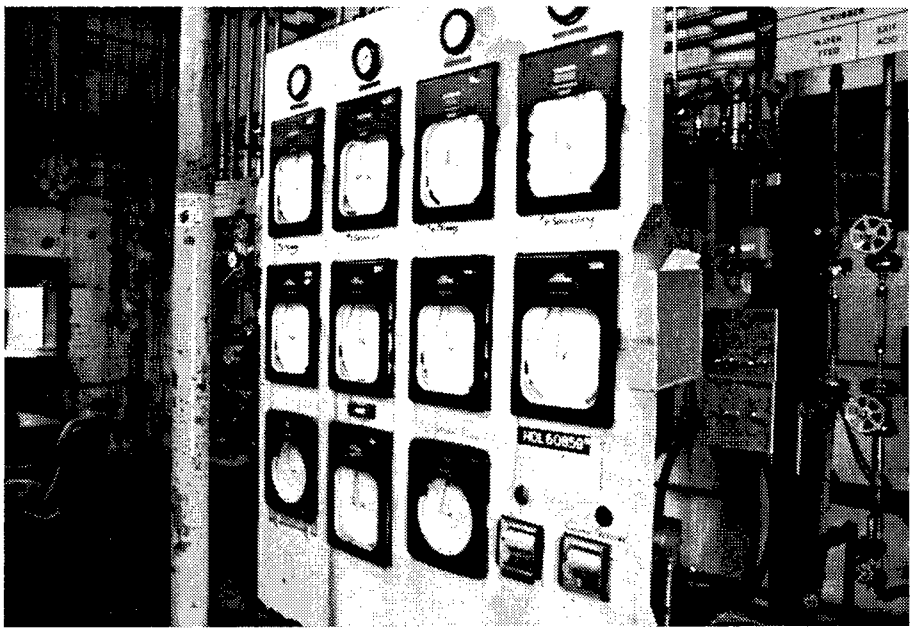


Figure 75. Building B3: Control Panel for Acetic Acid Still.

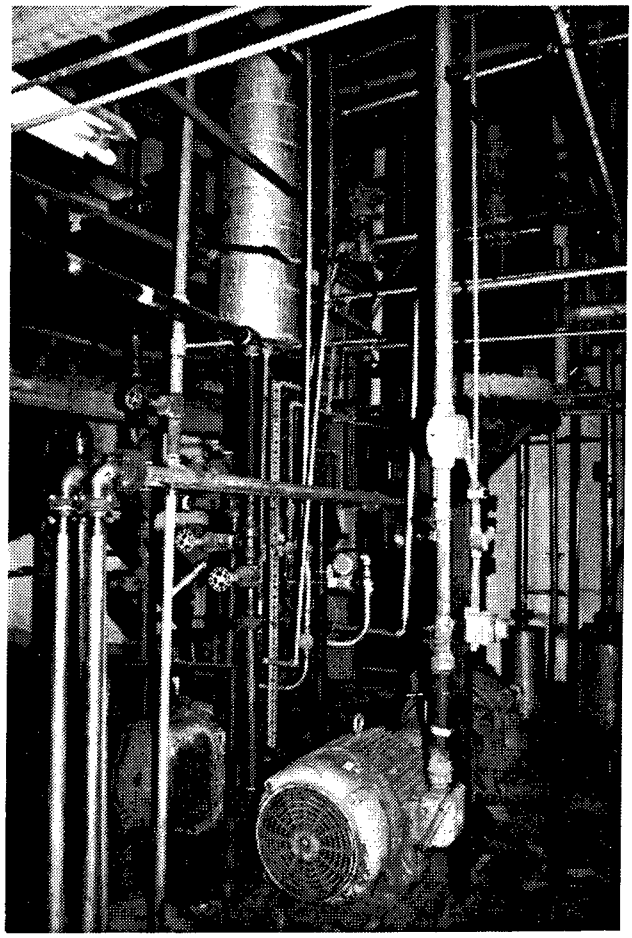


Figure 76. Building B3: Close-up of Acetic Acid Still in Primary Recovery and Sludge Treatment Building.

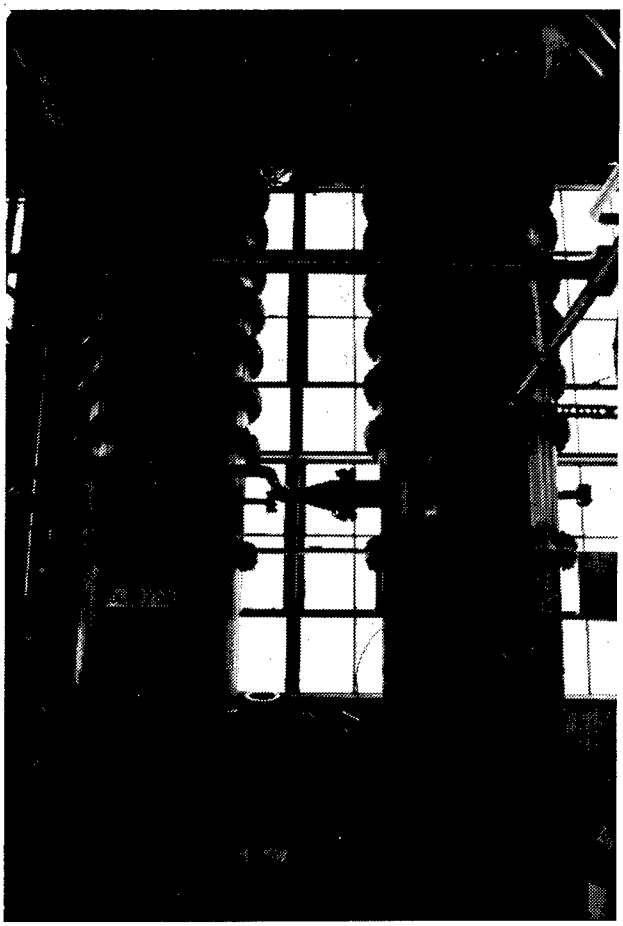


Figure 77. Building B3: Second floor Acetic Acid Columns.

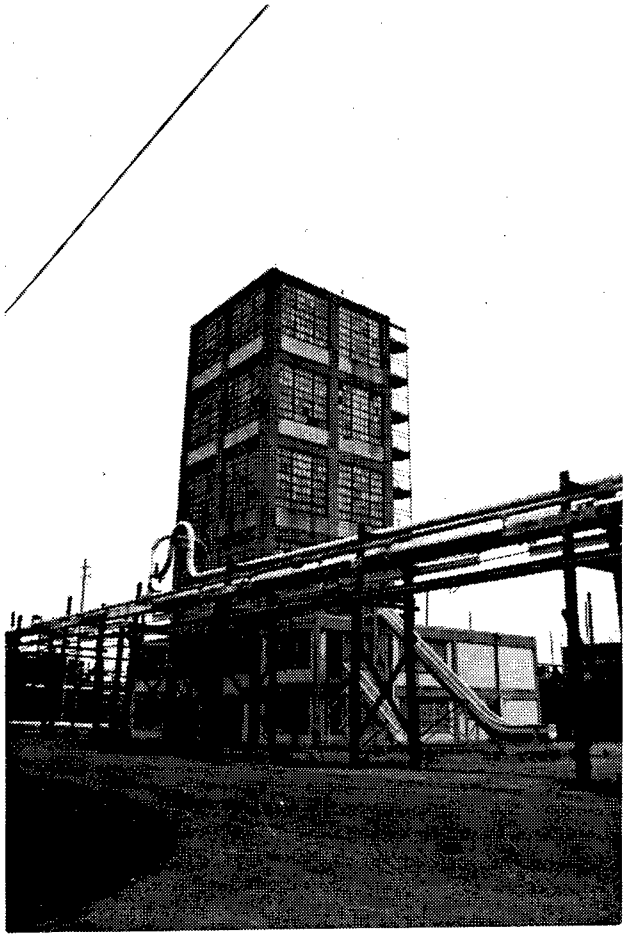


Figure 78. Building B9: Acid Manufacturing Plant, Primary Recovery and Sludge Treatment Building.

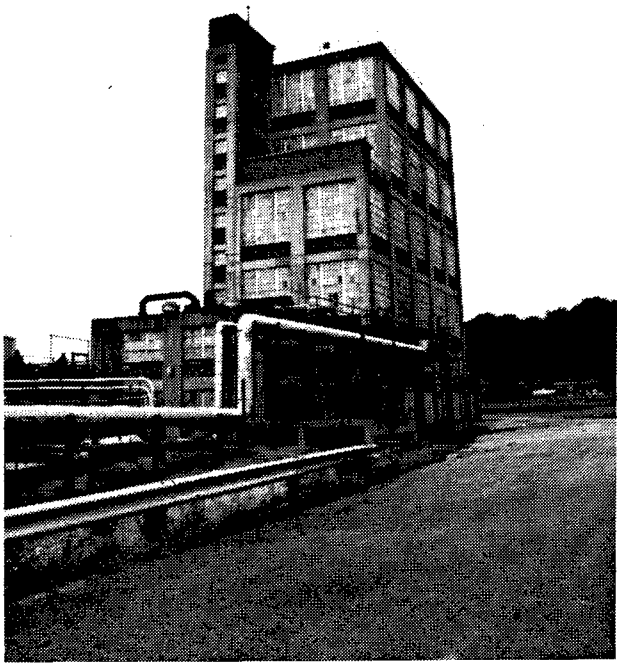


Figure 79. Building B11: Acid Manufacturing Plant, Primary Recovery and Sludge Treatment Building.

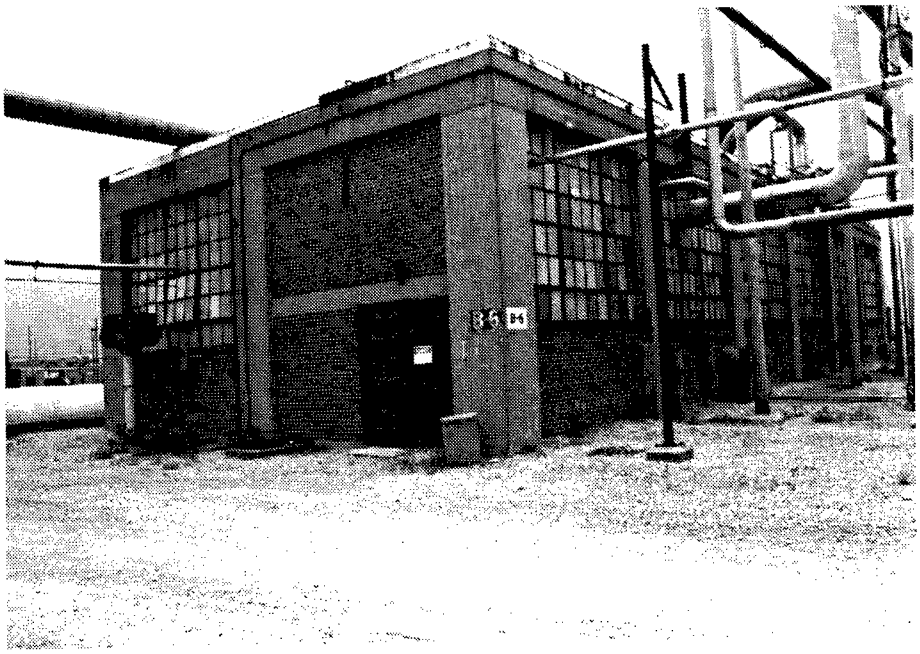


Figure 80. Building B6: Booster Pumping Station and Compressed Air Building.

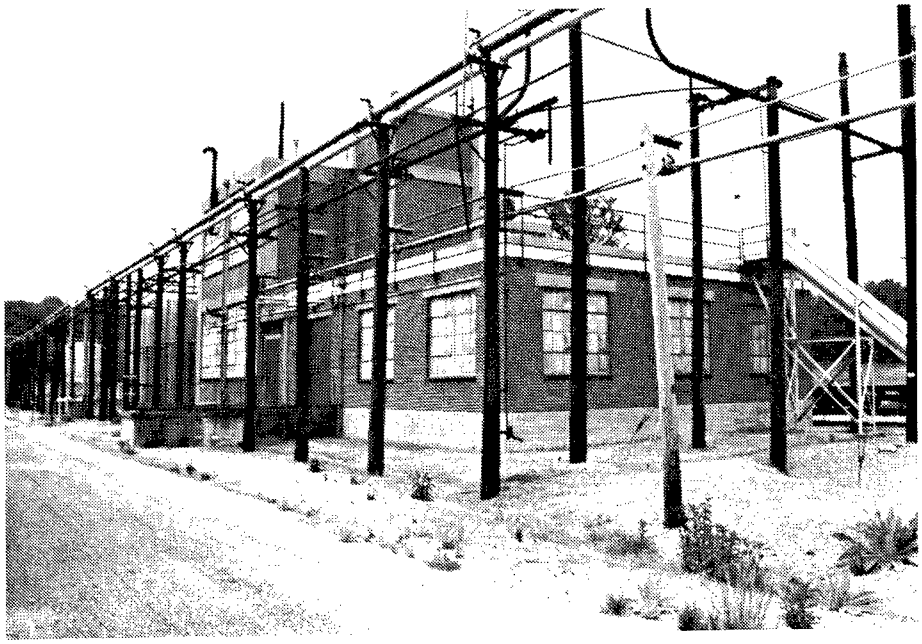


Figure 81. Building C1: Explosives Manufacturing Plant, Hexamine Solution Building.

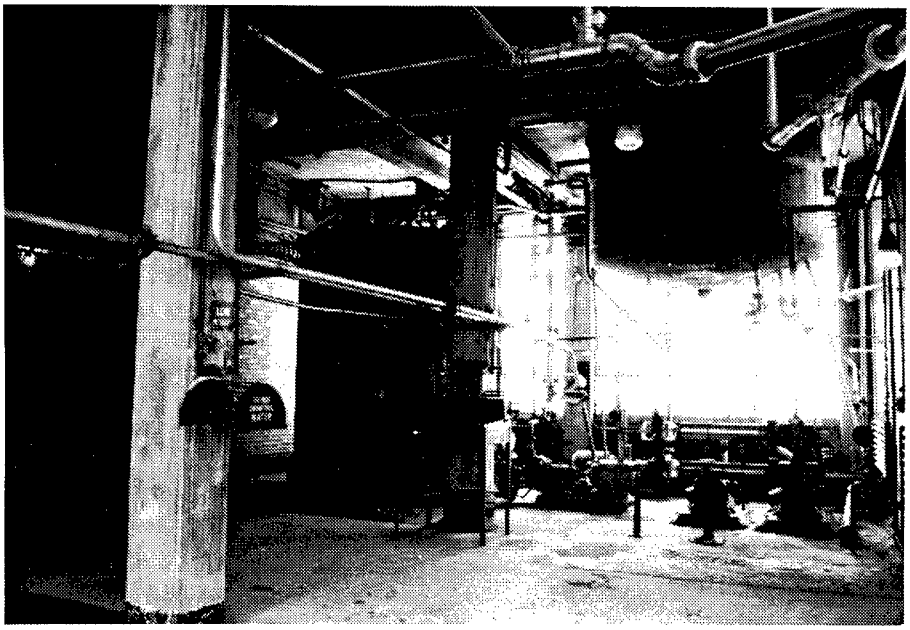


Figure 82. Building C1: Hexamine Solution Storage Tank and the lower portion of Hexamine Dissolver Tank.

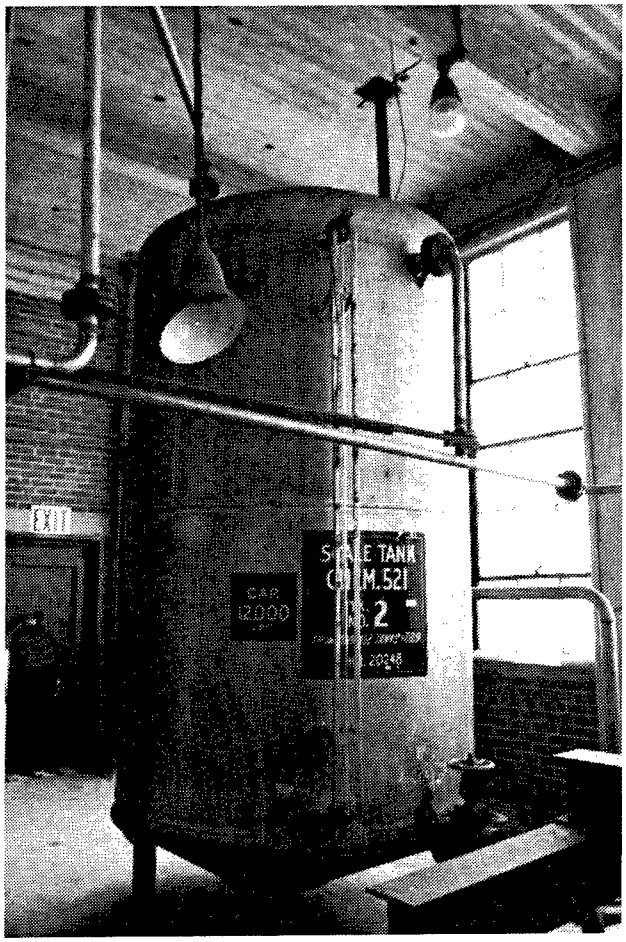


Figure 83. Building C1: Acetic Acid Tank No. 2.

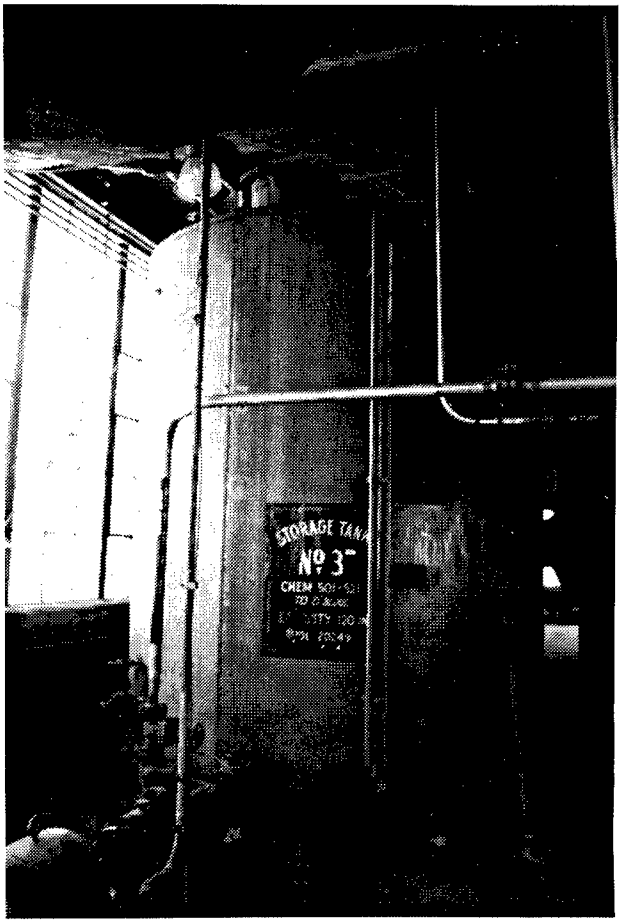


Figure 84. Building C1: Hexamine Solution Storage Tank.

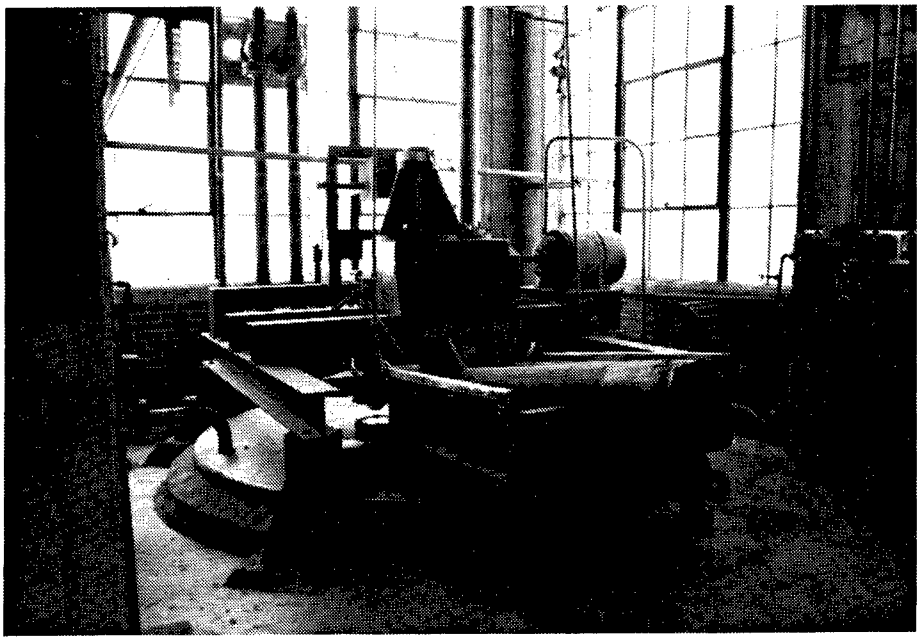


Figure 85. Building C1: Top of Hexamine Dissolver Tank.

Figure 86. Building C1: Interior of Hexamine Solution Storage Building.

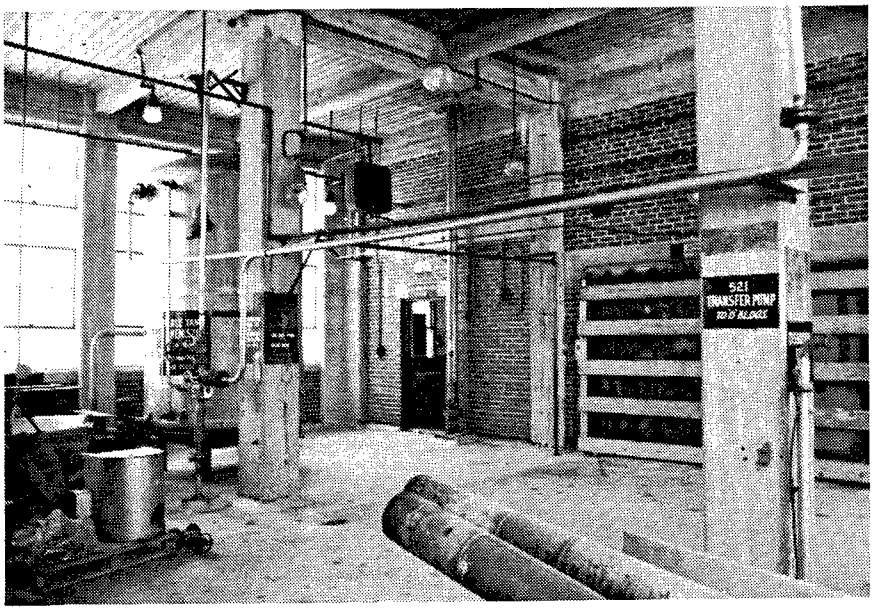


Figure 87. Building C1: Interior of Hexamine Solution Storage Building.

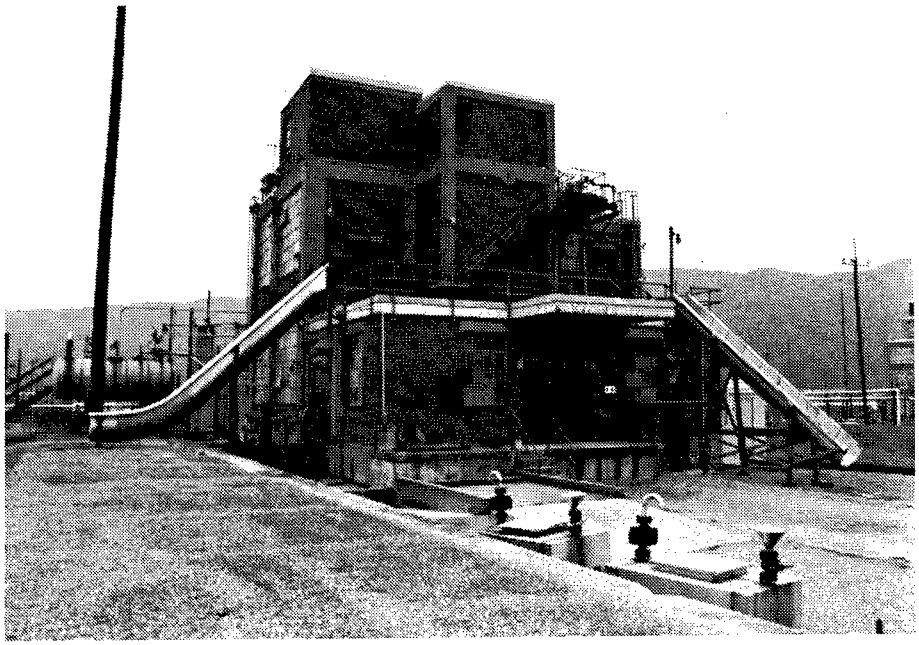


Figure 88. Building C6: Explosives Manufacturing Plant, Pilot Building.

Figure 89. Building D1: Explosives Manufacturing Plant, Nitration Building.

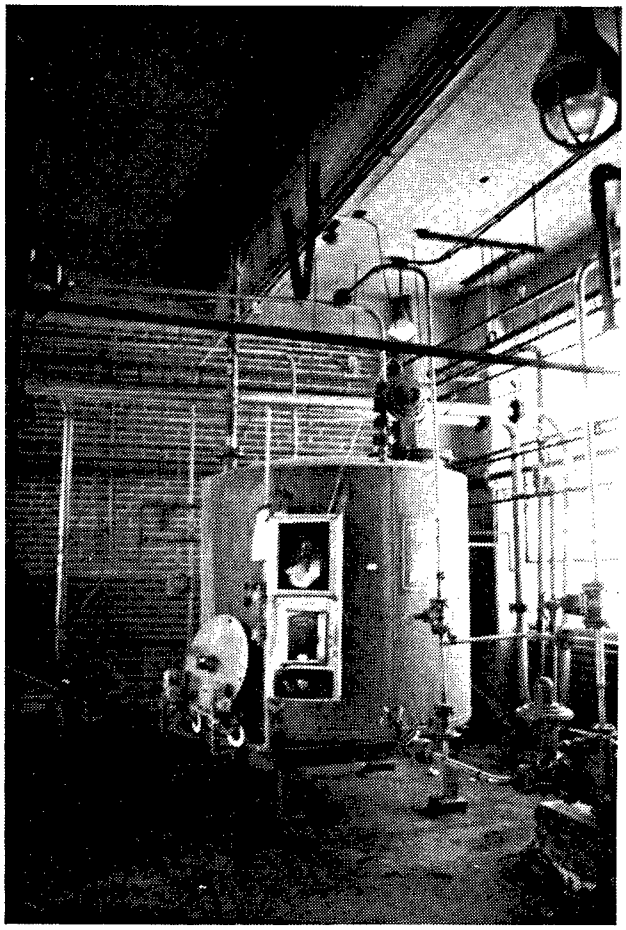


Figure 90. Building D1: Acid Feeder Tank.

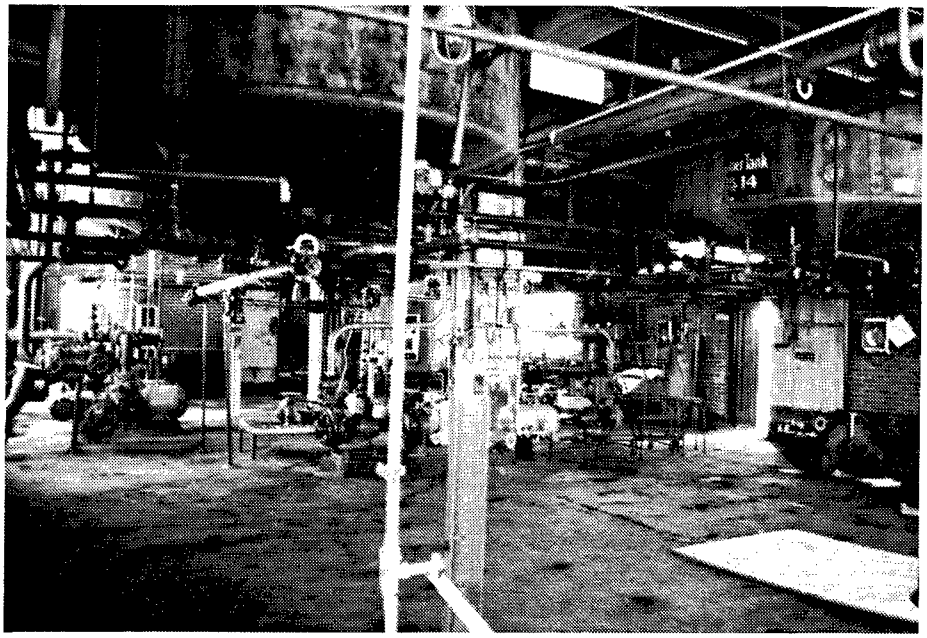


Figure 91. Building D1: Acid Feeder Tanks, Pumps, and Valves.

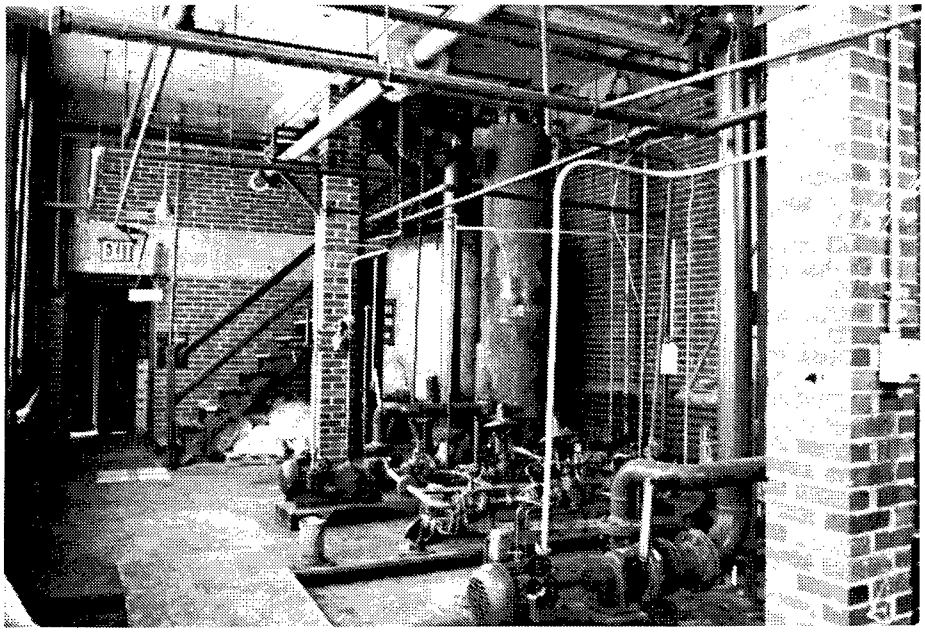


Figure 92. Building D1: Acid Pumps and Valves located in the penthouse of the building.

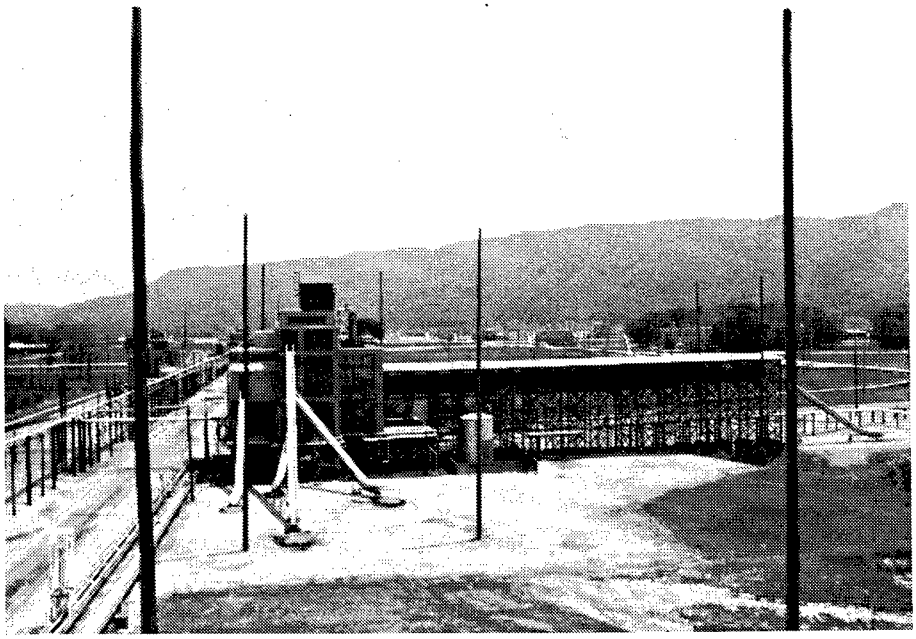


Figure 93. Building D2: Explosives Manufacturing Plant, Nitration Building and attached wooden Reactor Leg.

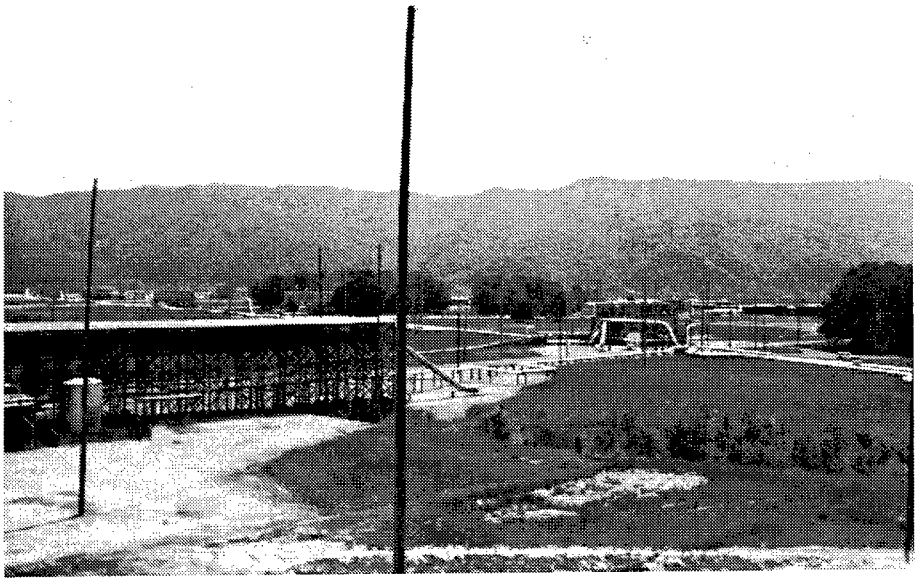


Figure 94. Building D2: Explosives Manufacturing Plant, Reactor Leg with Washing Building E2 in the background.

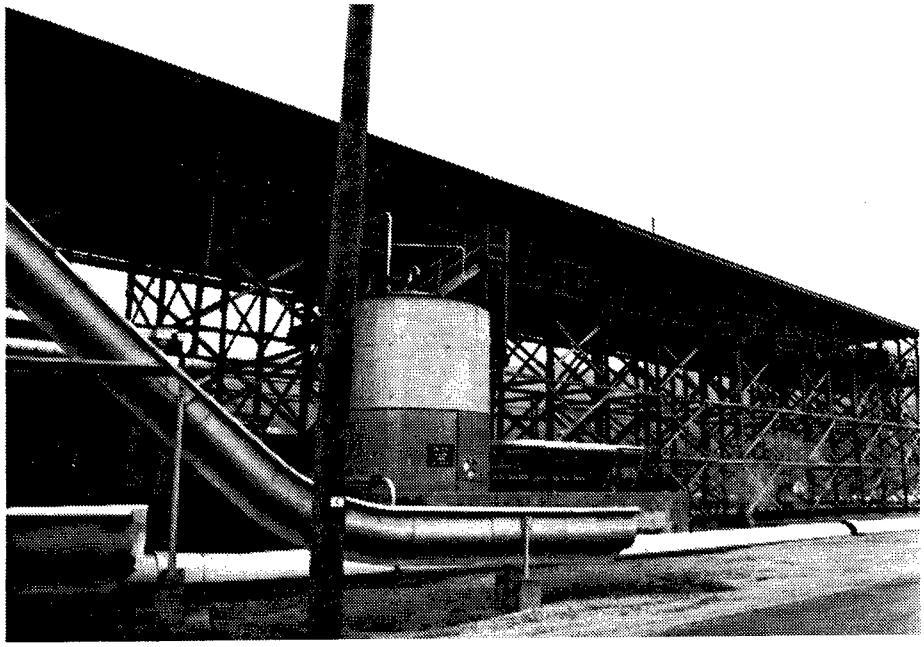


Figure 95. Building D6: Nitration Building Reactor Leg.

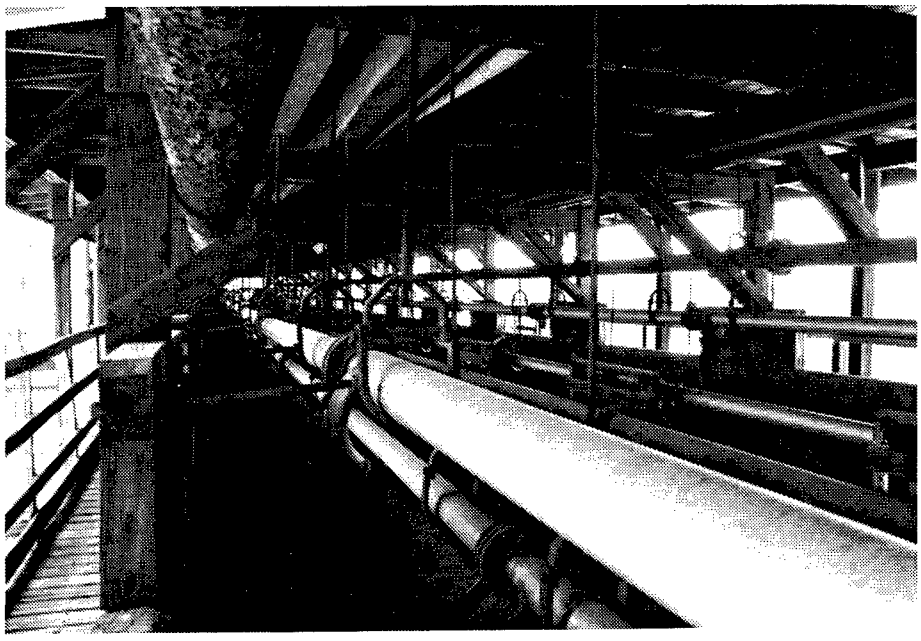


Figure 96. Building D2: Interior of wooden Reactor Leg.

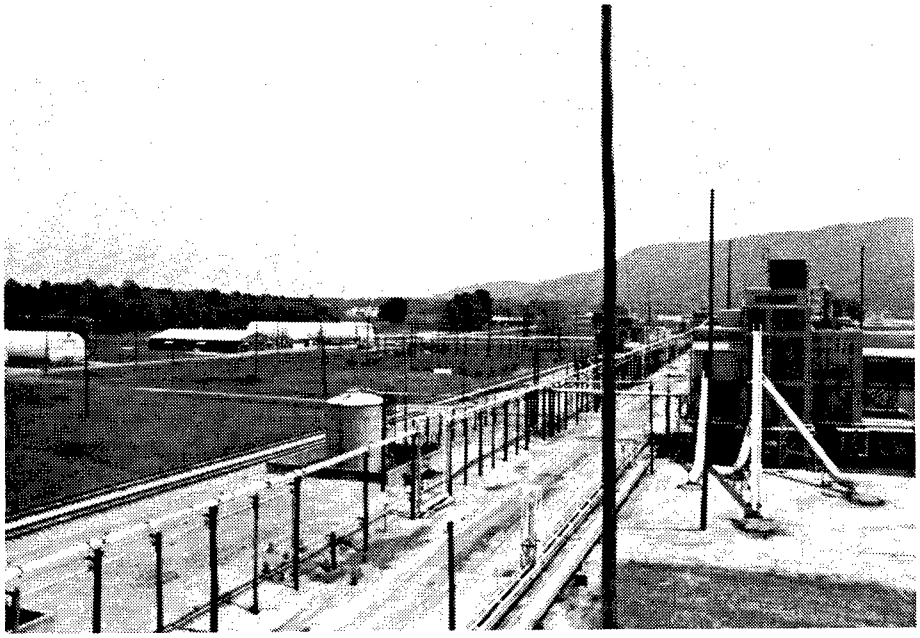


Figure 97. Building D2: Explosives Manufacturing Plant, Nitration Building with Railroad Lines and Overhead Pipes.

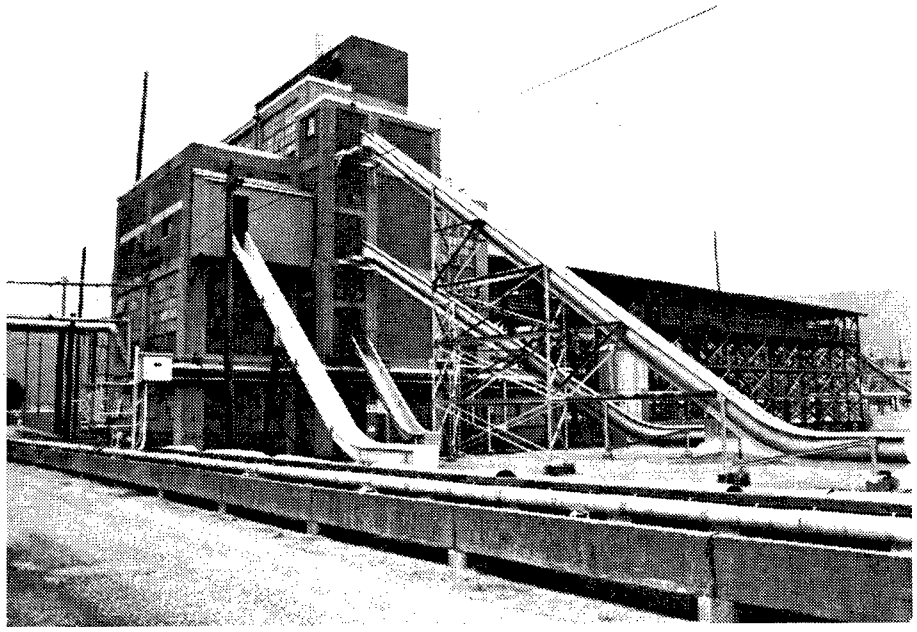


Figure 98. Building D3: Explosives Manufacturing Plant, Nitration Building.

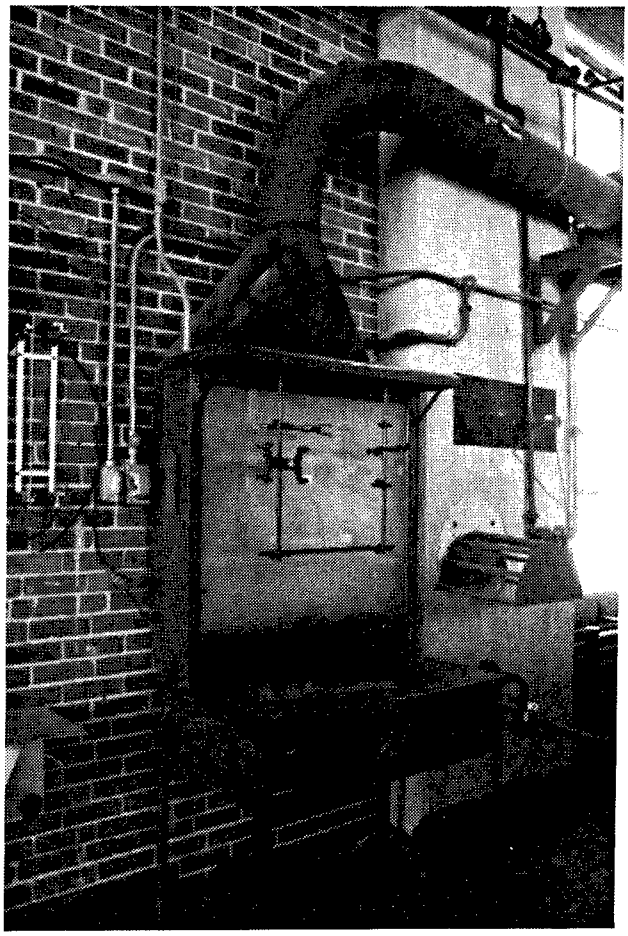


Figure 99. Building D2: Lab Bench for Sample Analysis.

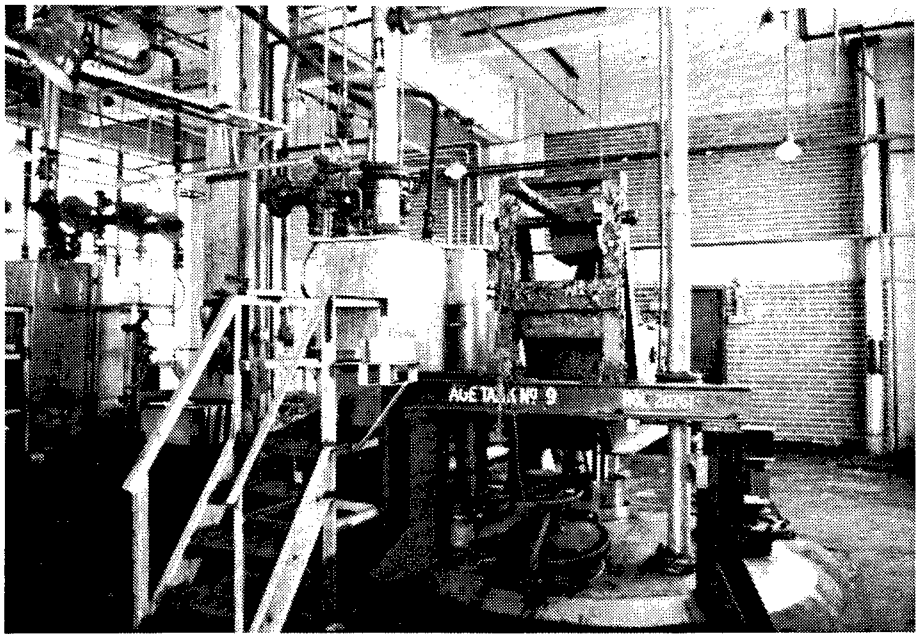


Figure 100. Building D2: Reactor Room and Age Tank No. 9.

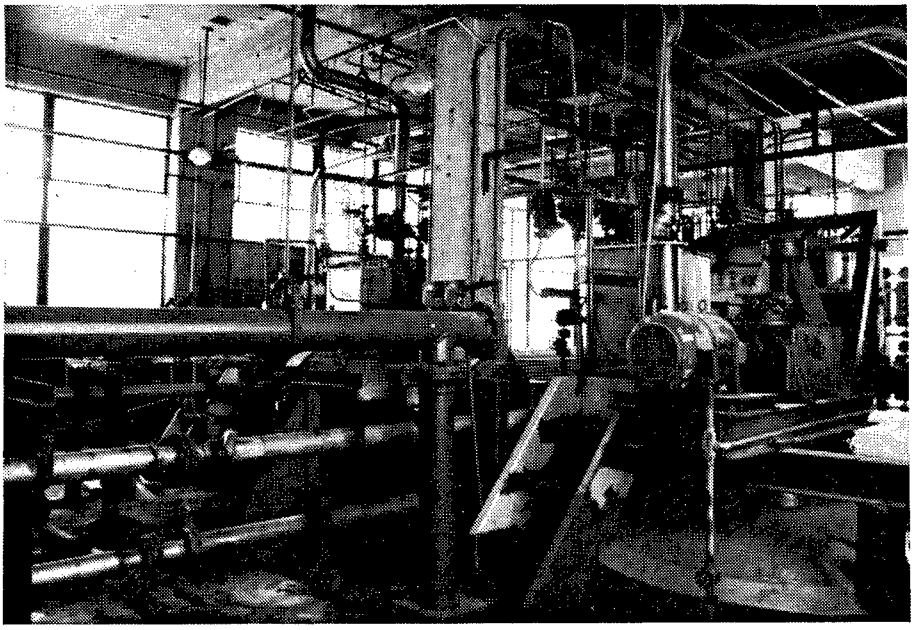


Figure 101. Building D2: Reactor Room and Age Tank No. 9.

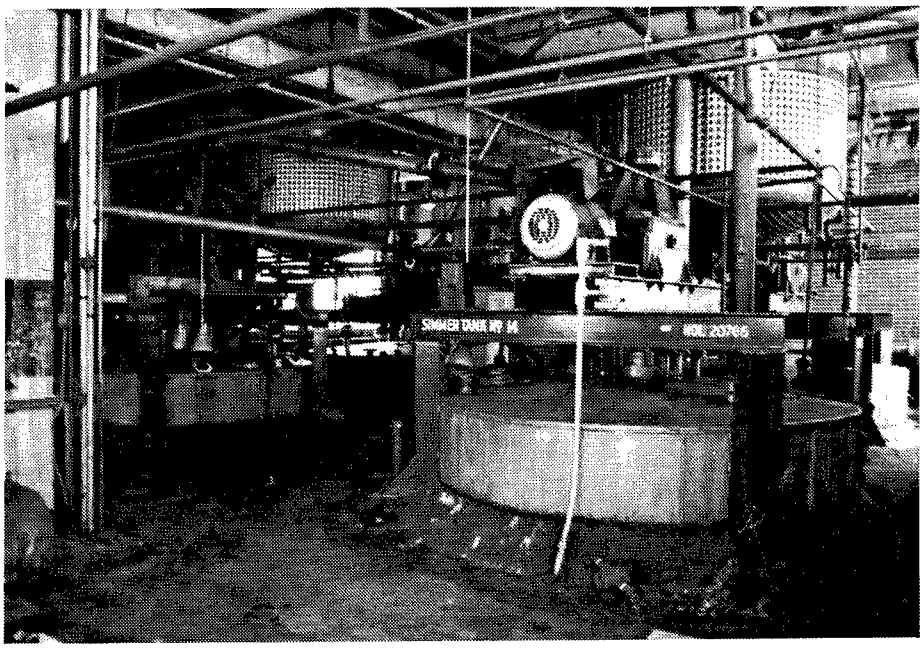


Figure 102. Building D2: Age and Simmer Tanks.

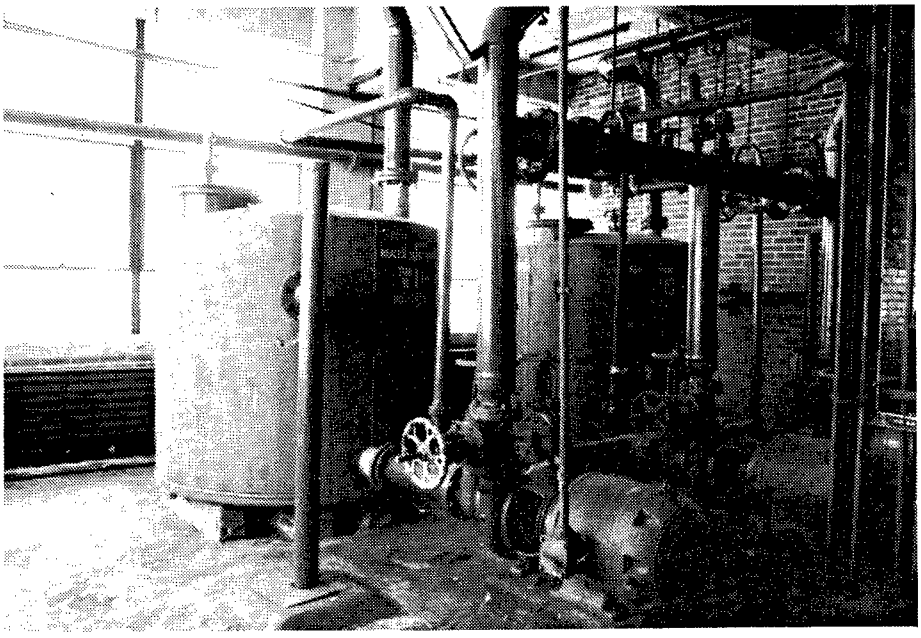


Figure 103. Building D2: Cooling Tanks for Reactor Leg.

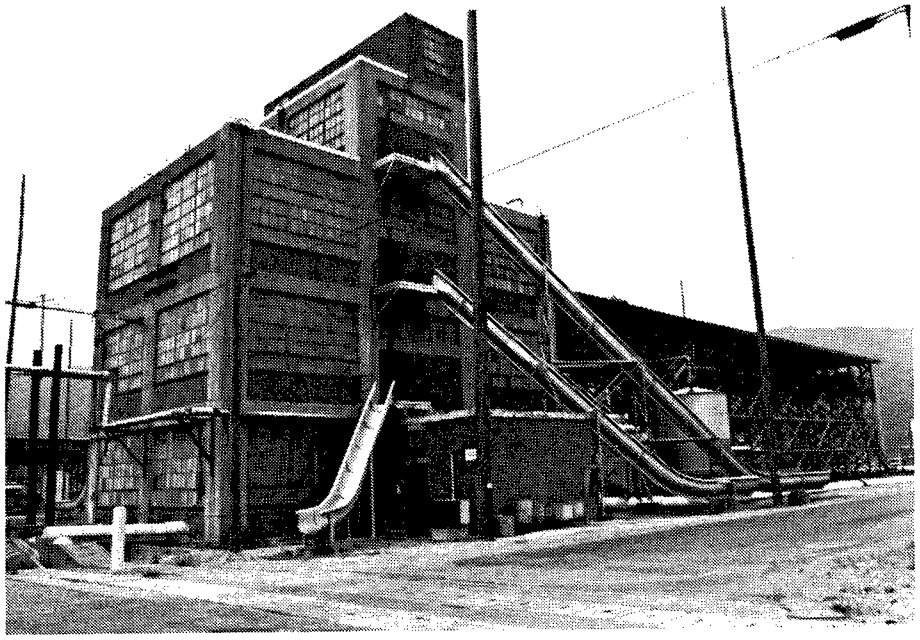


Figure 104. Building D6: Explosives Manufacturing Plant, Nitration Building.

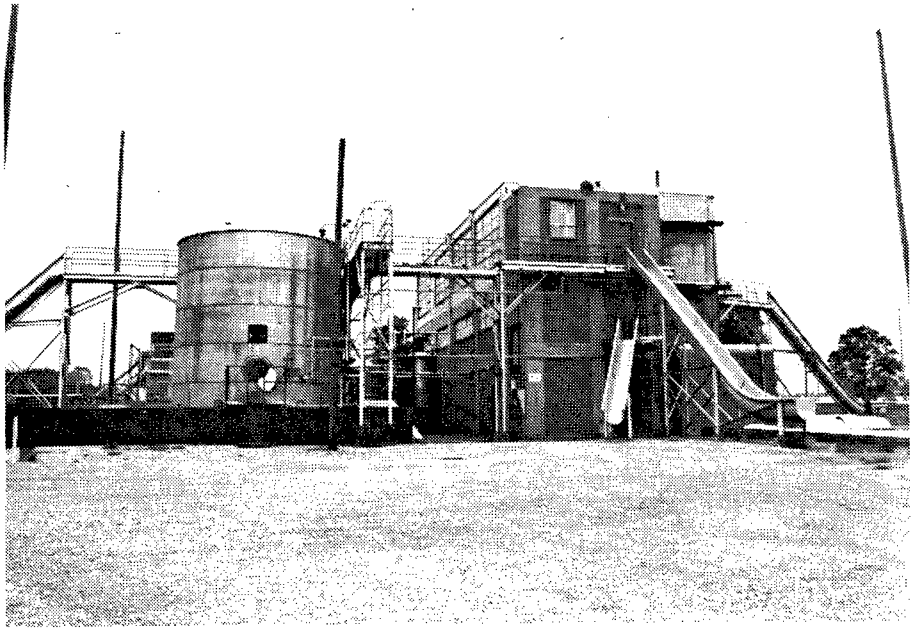


Figure 105. Building E1: Explosives Manufacturing Plant, Washing Building.

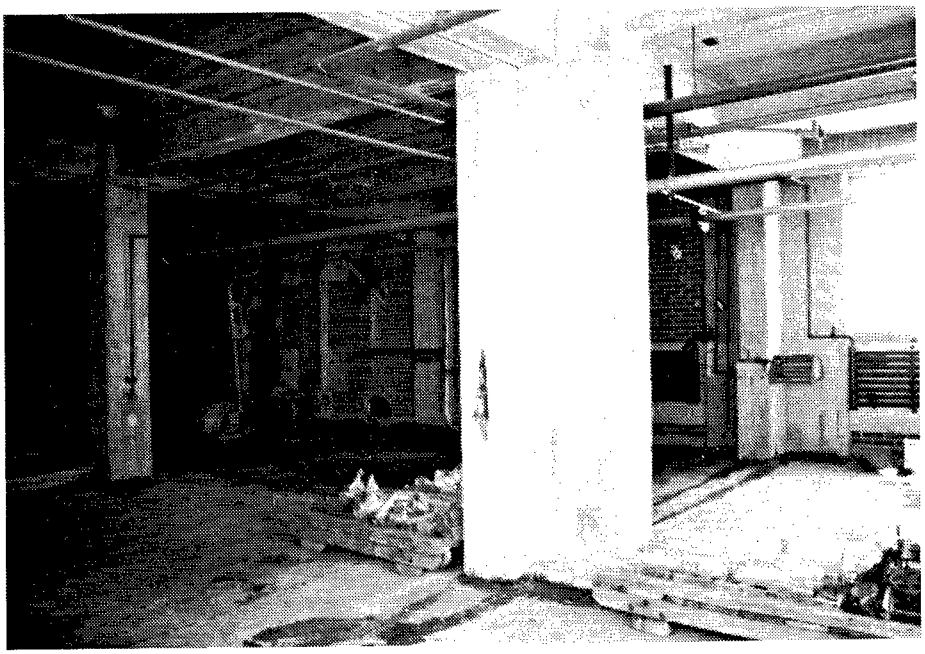


Figure 106. Building E2: Pumping Floor of Washing Building.

Figure 107. Building E2: Pumping Floor of Washing Building.

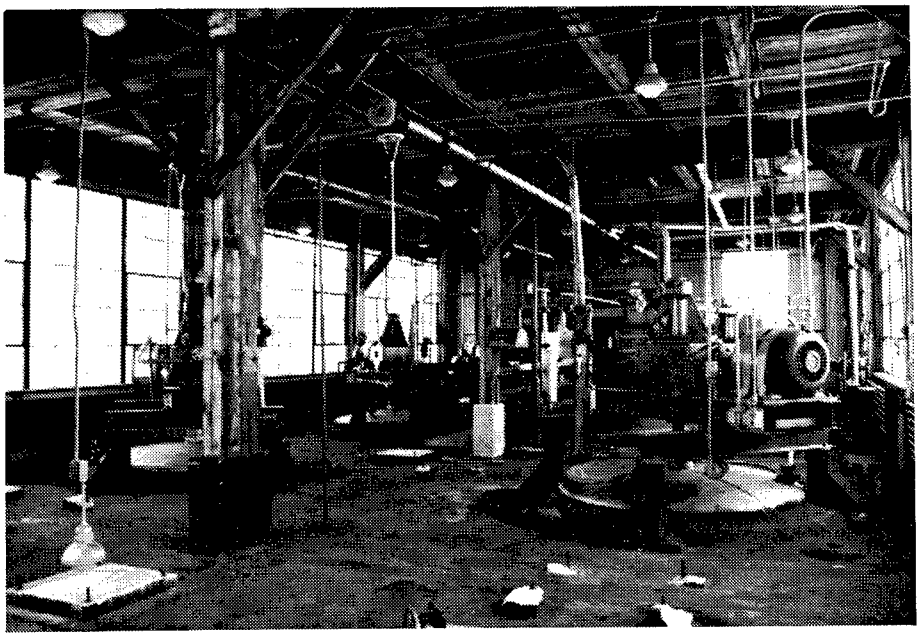


Figure 108. Building E2: Upper Wash Tank Room with upper portions of Wash Tanks.

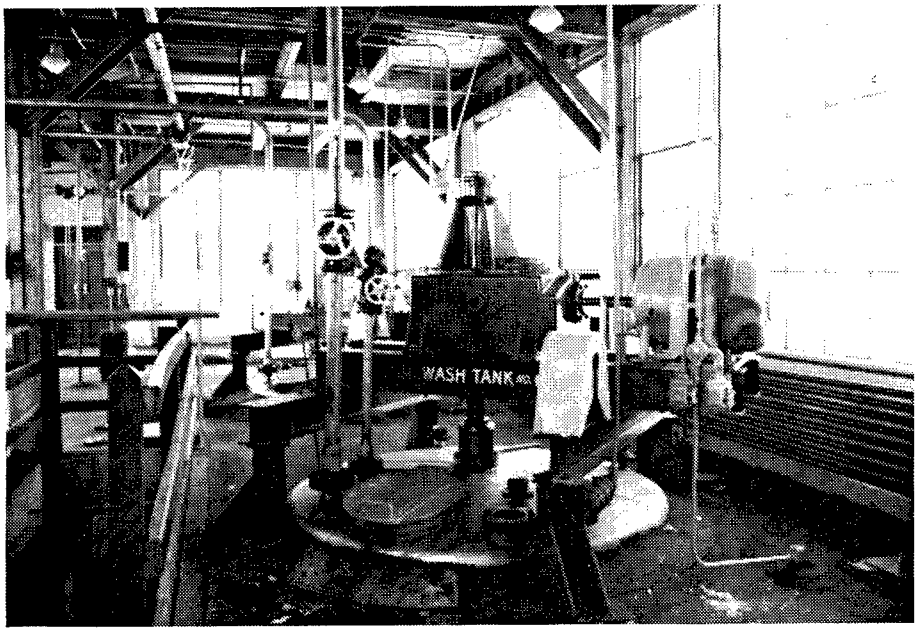


Figure 109. Building E2: Close-up of upper portion of a Wash Tank.

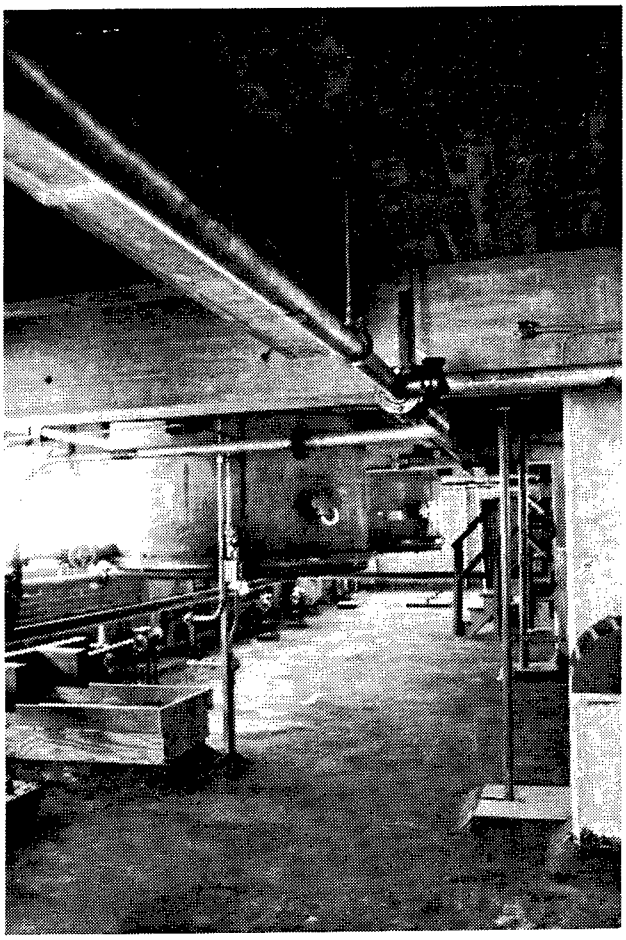


Figure 110. Building E2: Lower Wash Tank Room with lower portions of Wash Tanks.

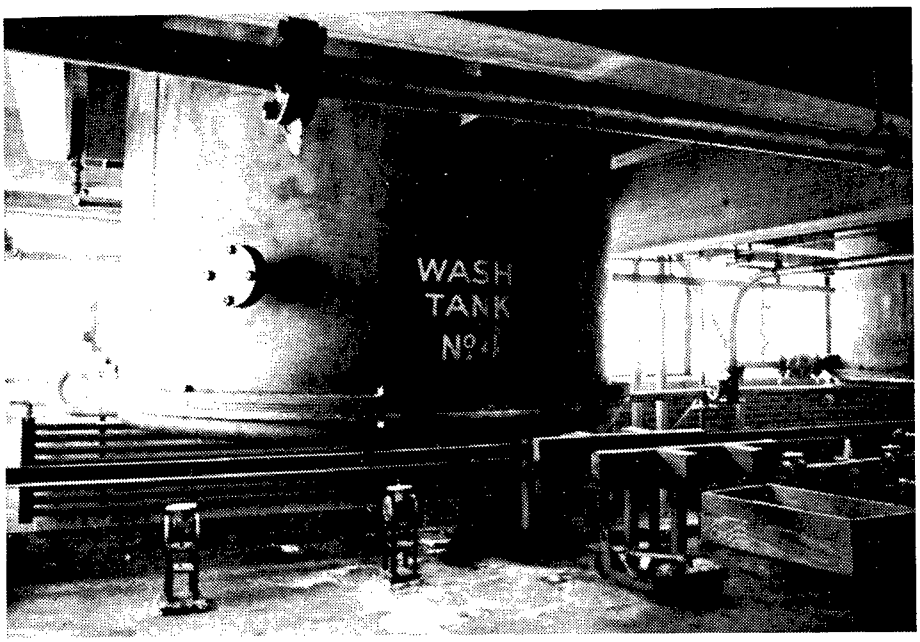


Figure 111. Building E2: Close-up of lower portion of Wash Tank No. 4.

Figure 112. Building E6: Explosives Manufacturing Plant, Washing Building.

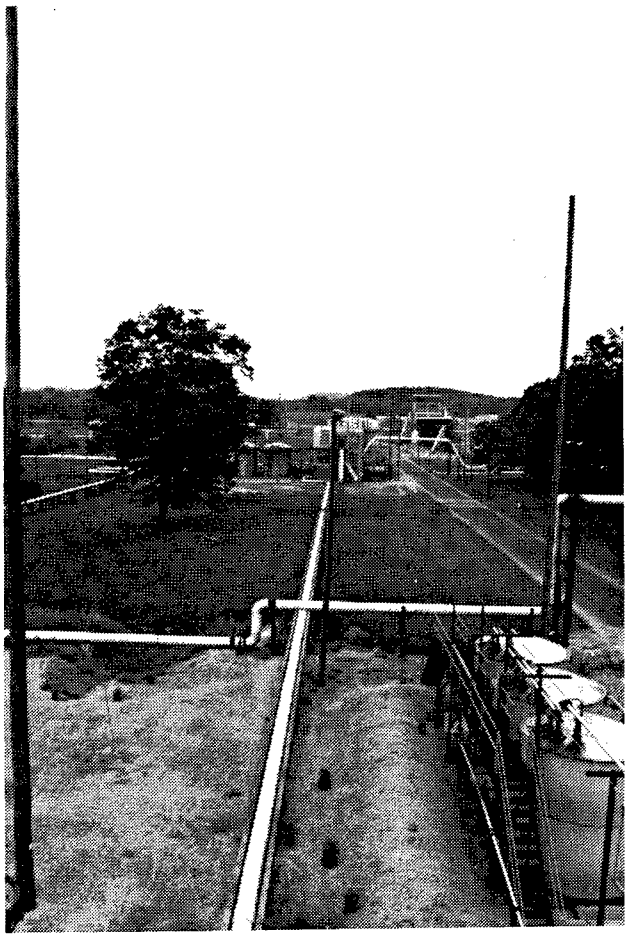


Figure 113. Building G2: View of Pipeline extending from Building E2 to Building G2. Building G2, a Purification Building, is in the background.

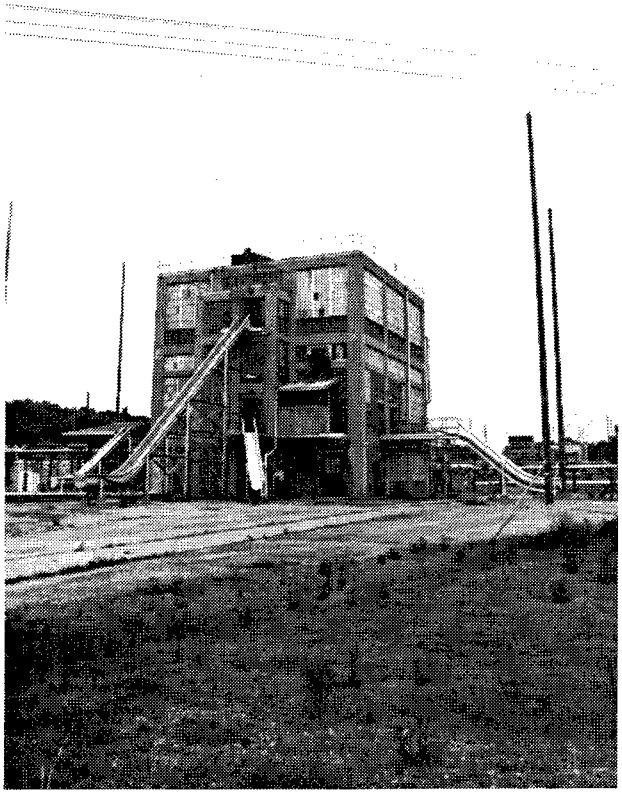


Figure 114. Building G1: Explosives Manufacturing Plant, Purification Building.

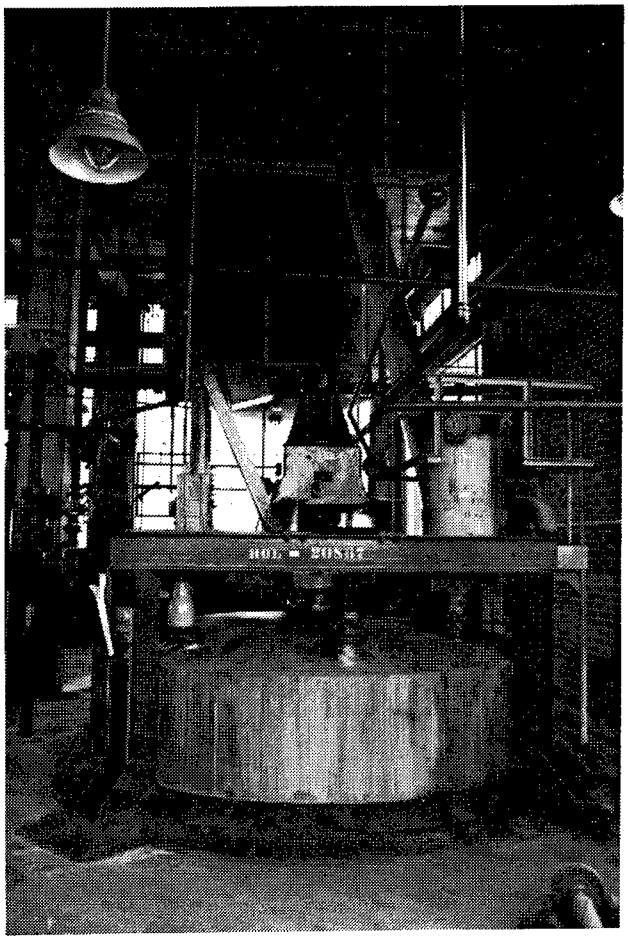


Figure 115. Building G2: Upper portion of a Dissolver Tank.

Figure 116. Building G2: View of Dissolver Floor in Purification Building.

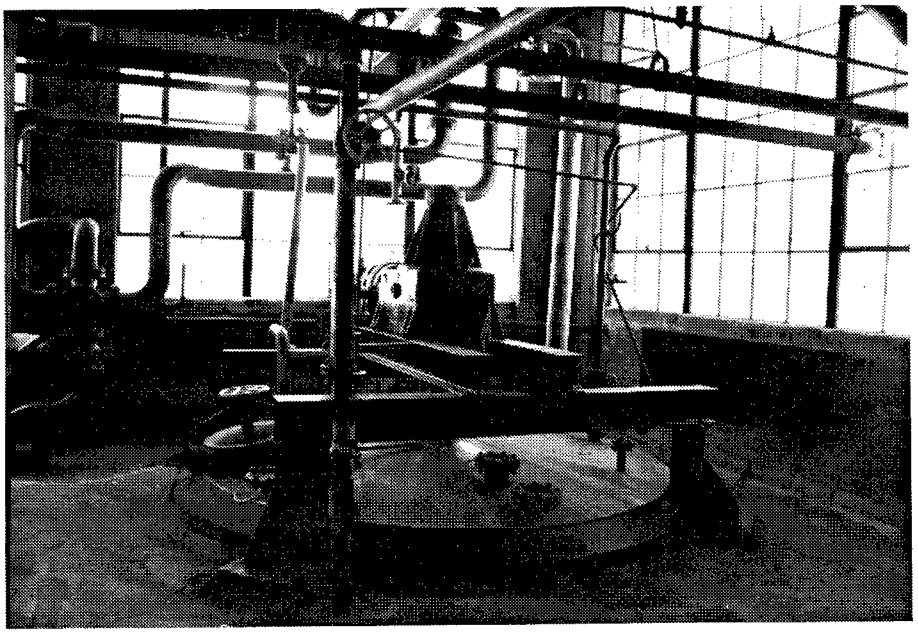


Figure 117. Building G2: Close-up of the upper portion of a Dissolver Tank.

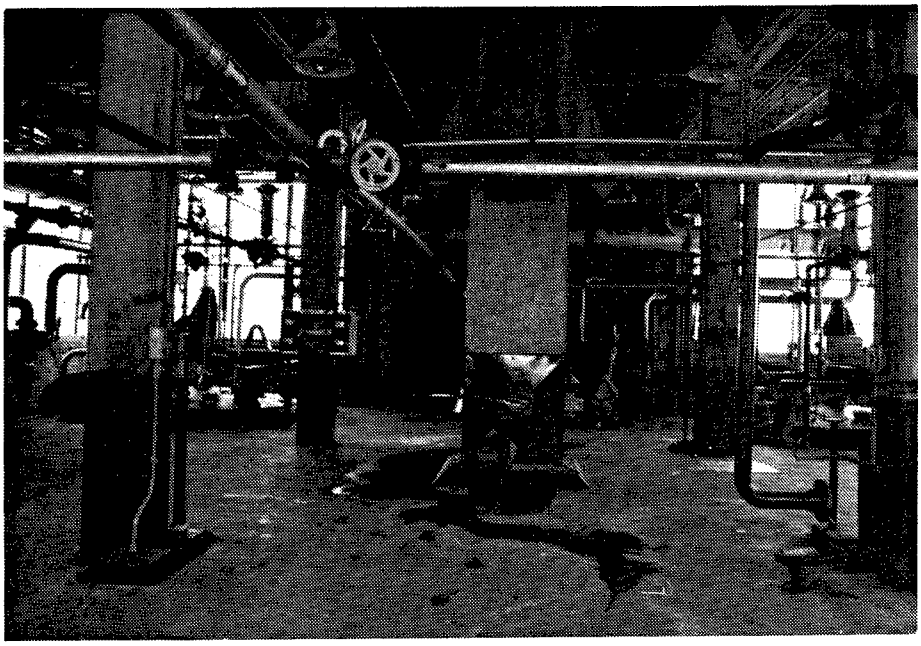


Figure 118. Building G2: Another view of Dissolver Floor.

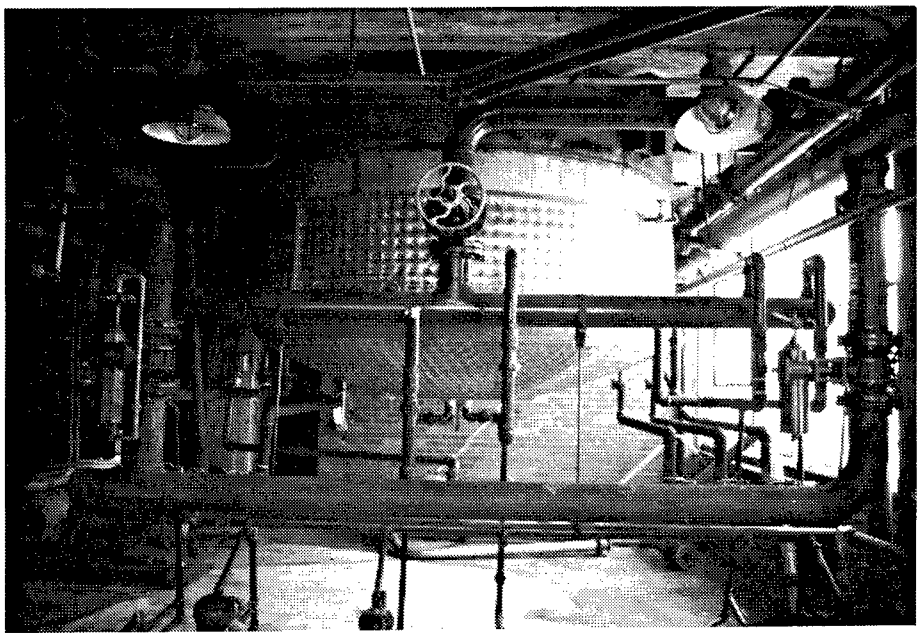


Figure 119. Building G2: Lower portion of a Purification Still.

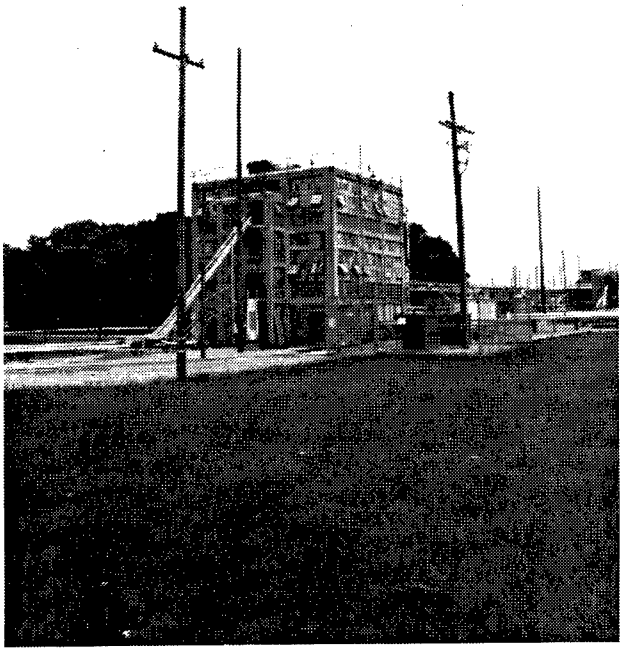


Figure 120. Building G3: Explosives Manufacturing Plant, Recrystallization and Coating Building.

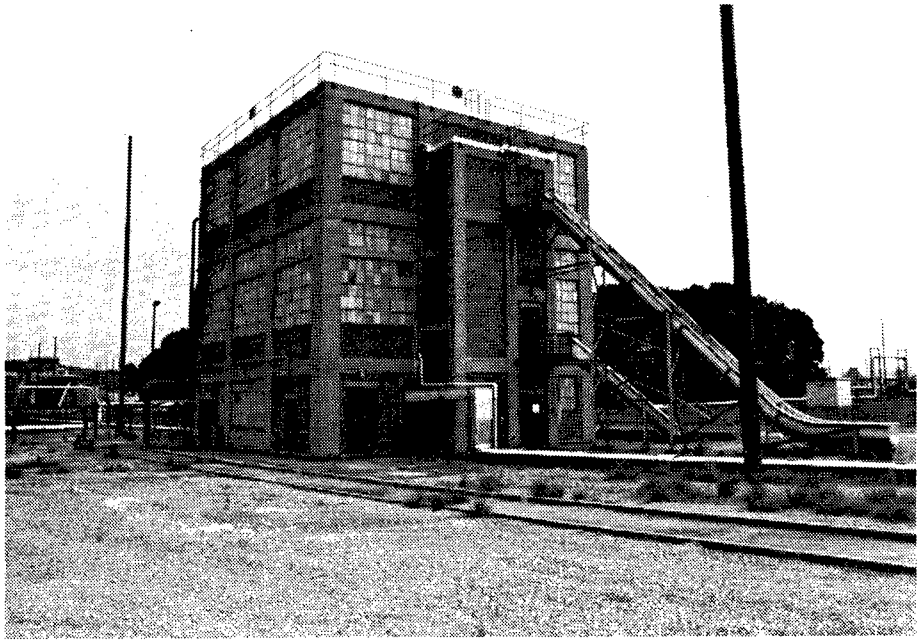


Figure 121. Building G2: Explosives Manufacturing Plant, Purification Building.

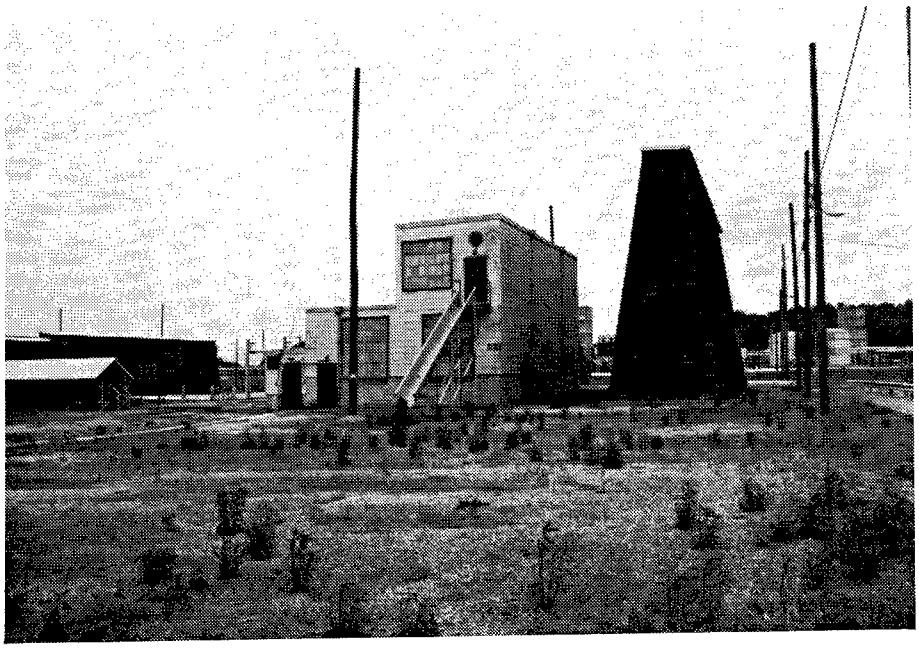


Figure 122. Building H1: Explosives Manufacturing Plant, Filtration and Weighing Building with double-riveted barricade.

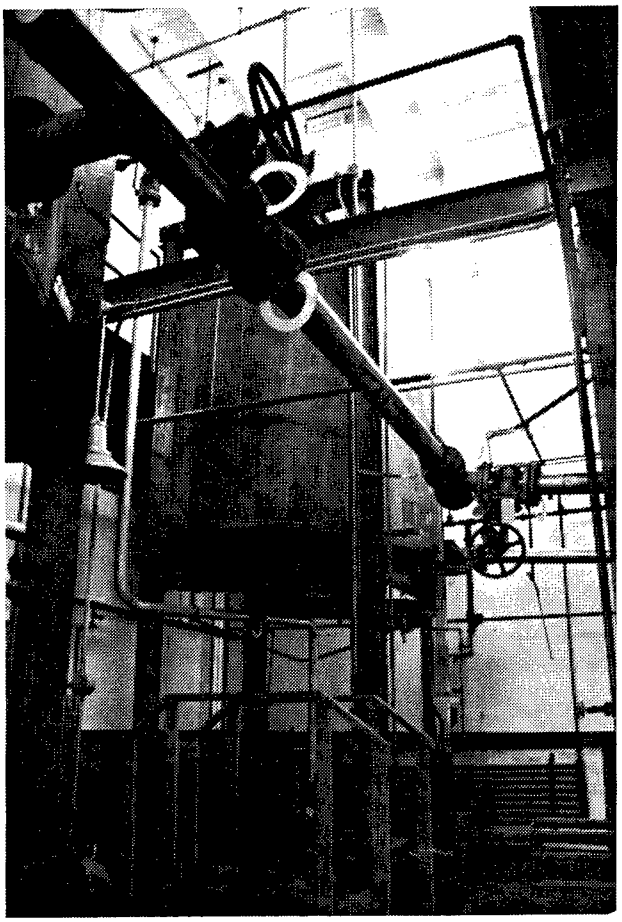


Figure 123. Building H2: Slurry Tank.

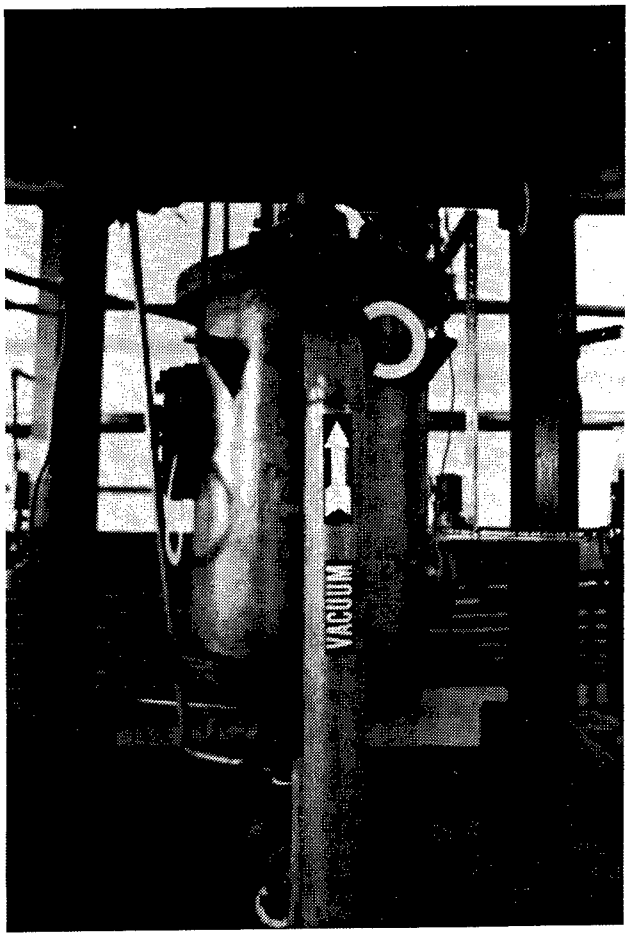


Figure 124. Building H2: Slurry Dewatering Vacuum Pump.

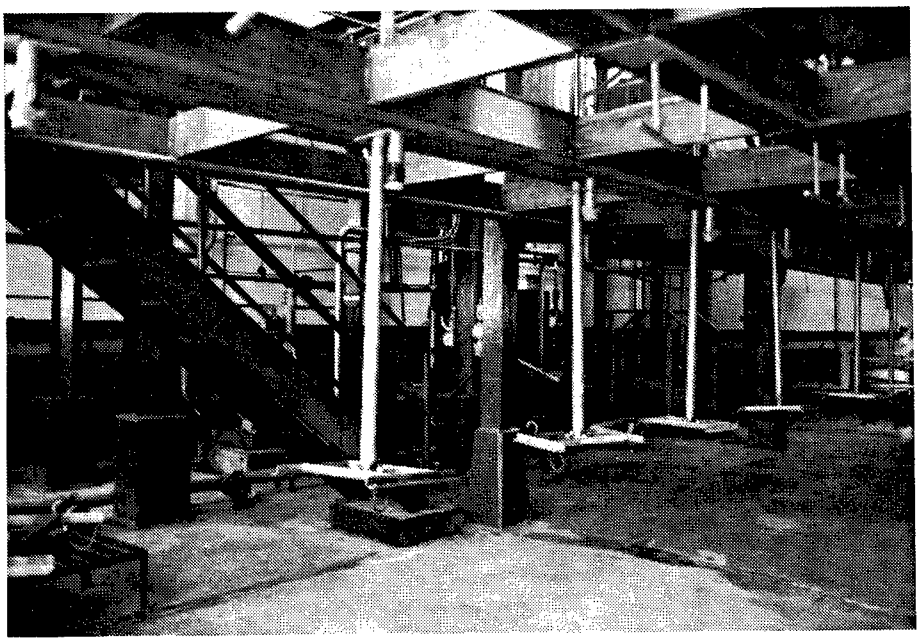


Figure 125. Building H2: Slurry Filtration, Dewatering, Weighing, and Nutche Loading Floor.

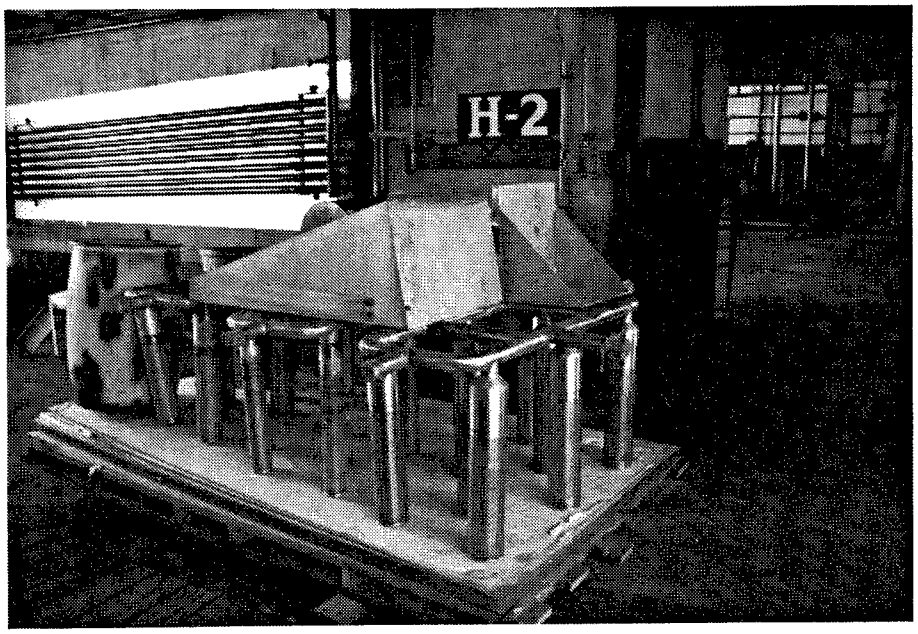


Figure 126. Building H2: Vacuum Probes used to dewater Slurry-loaded Nutches.

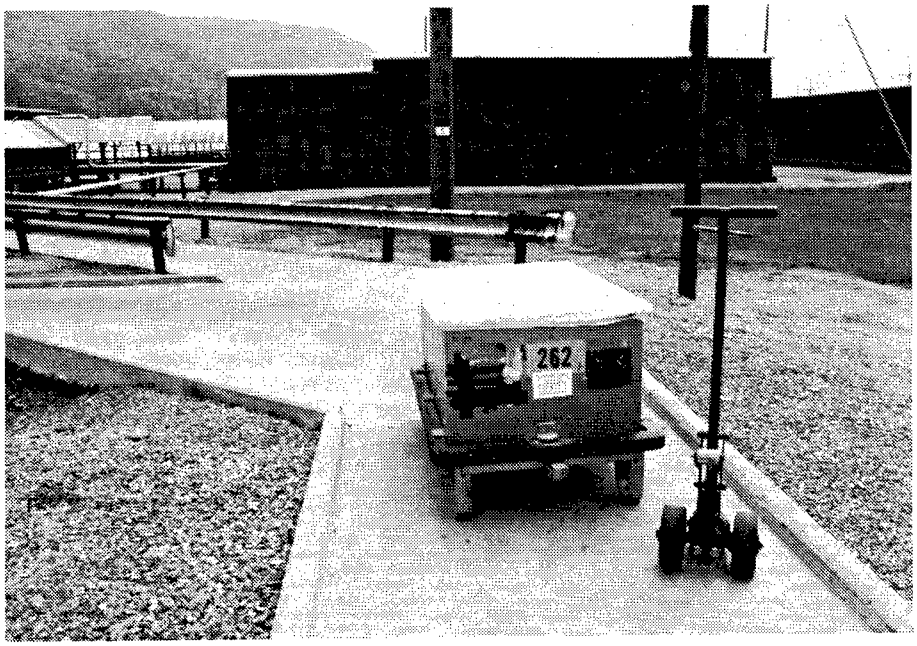


Figure 127. Building H2: Loaded Nutche with Haul Sled and Jack.

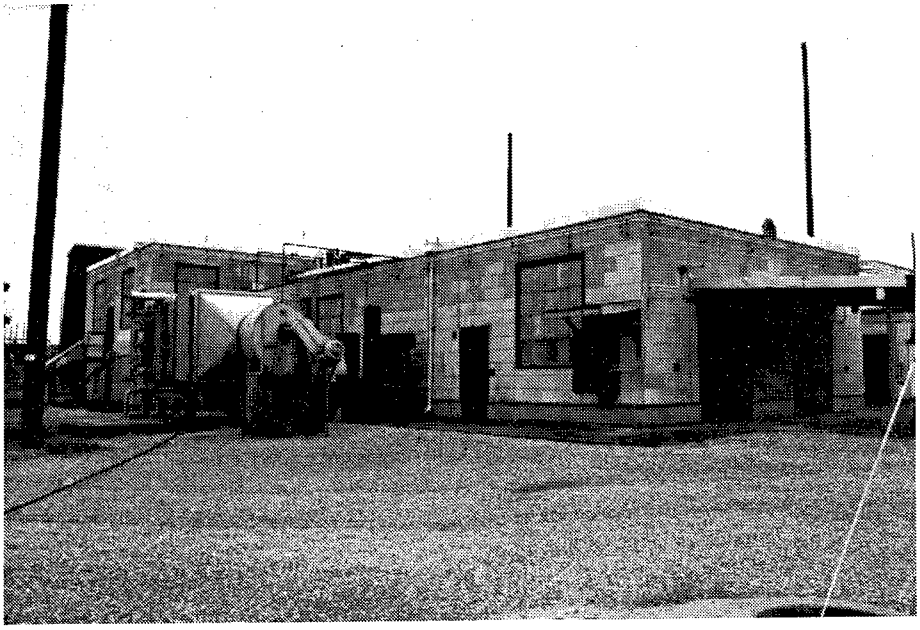


Figure 128. Building I3: Explosives Manufacturing Plant, Dry Coated Explosives Building.

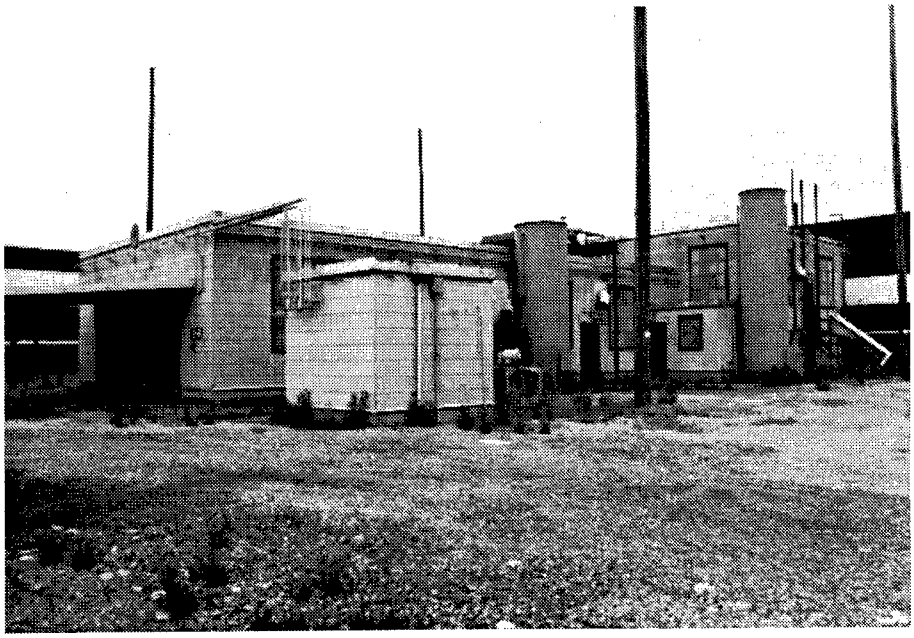


Figure 129. Building I4: Explosives Manufacturing Plant, "RDX" Lag Storage Building.

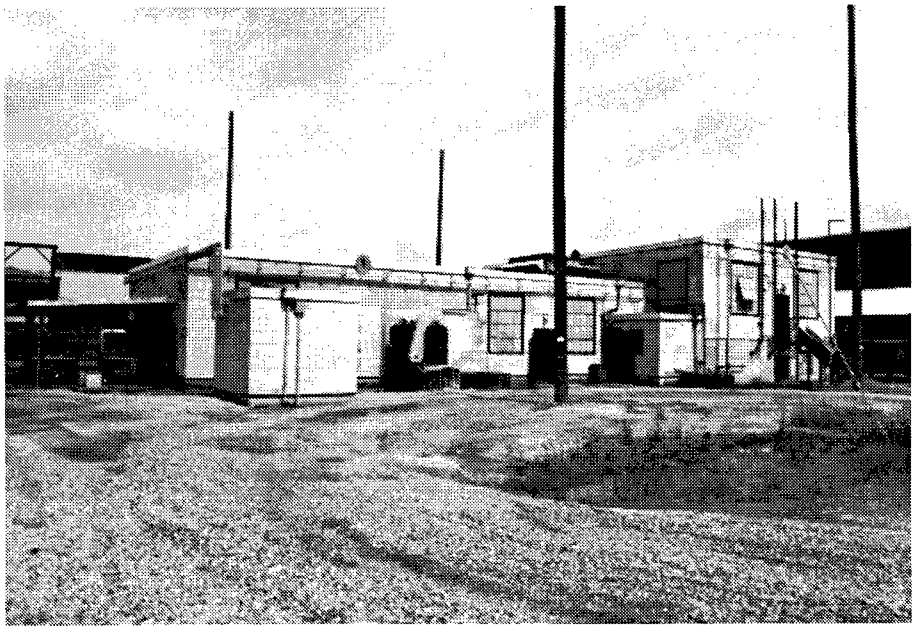


Figure 130. Building I6: Explosives Manufacturing Plant, "PBX" Drying Building.

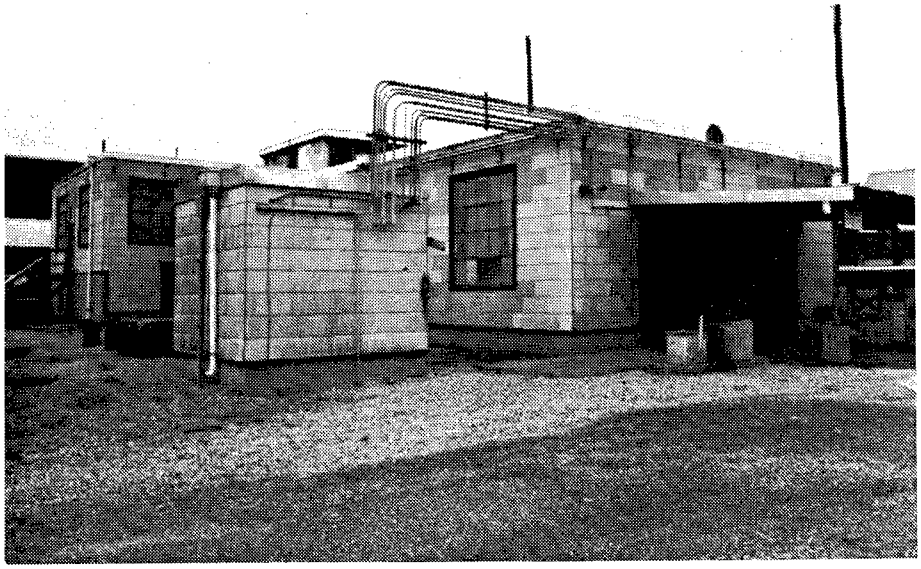


Figure 131. Building J3: Explosives Manufacturing Plant, Explosives Incorporation Building.

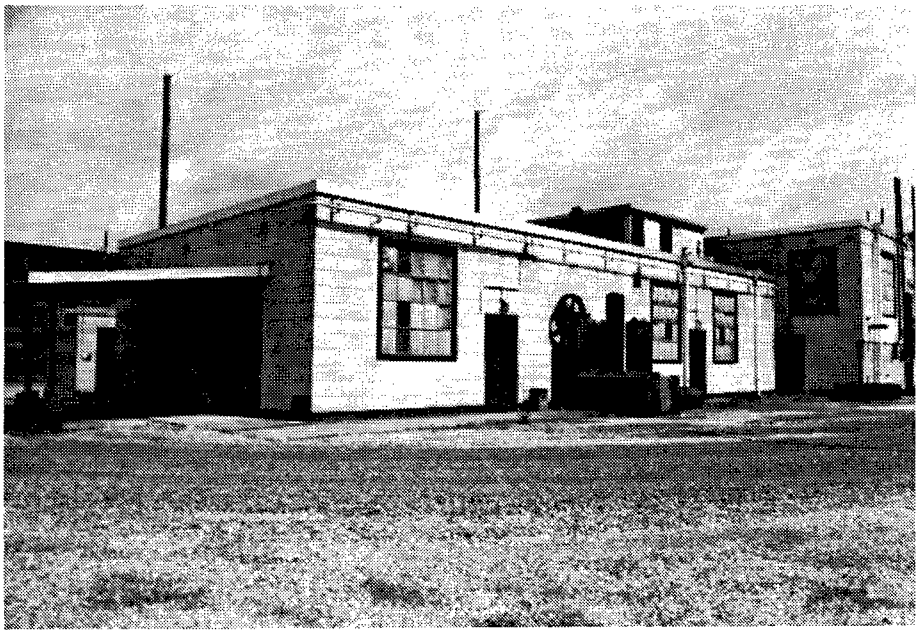


Figure 132. Building J6: Explosives Manufacturing Plant, Wet "HMX" Blending Building.

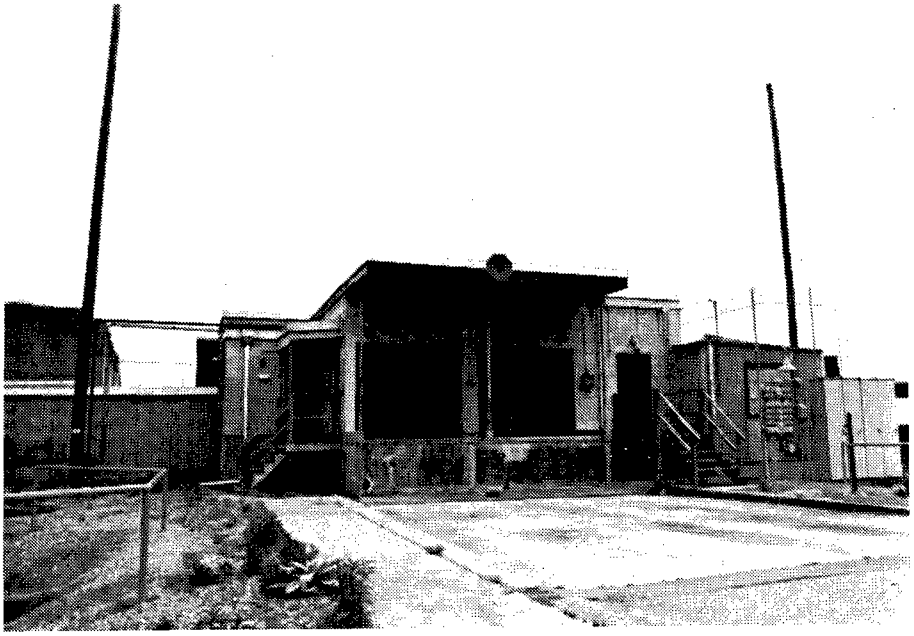


Figure 133. Building K1: Explosives Manufacturing Plant, TNT Opening Building.

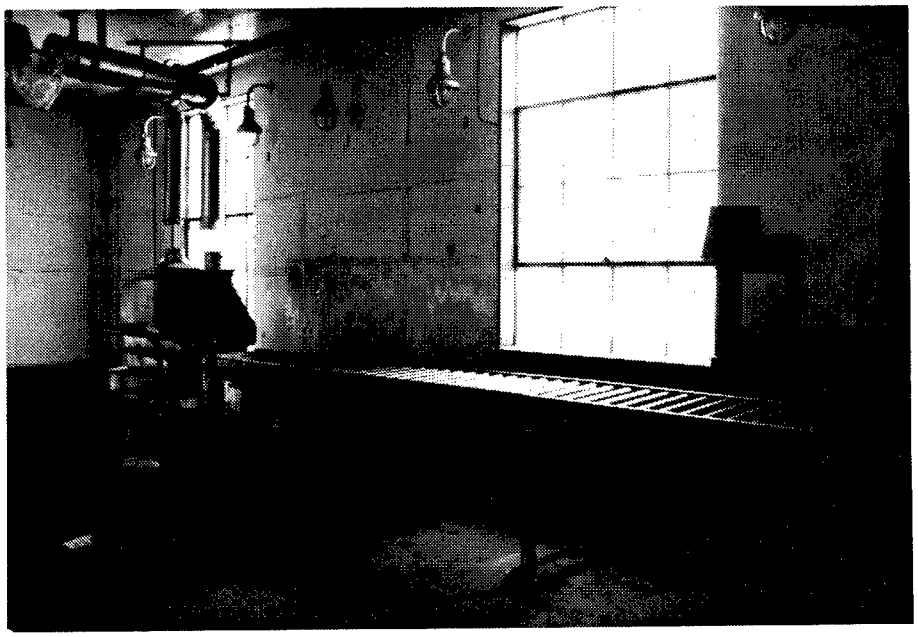


Figure 134. Building K9: TNT Conveyor Belt to TNT Melters.

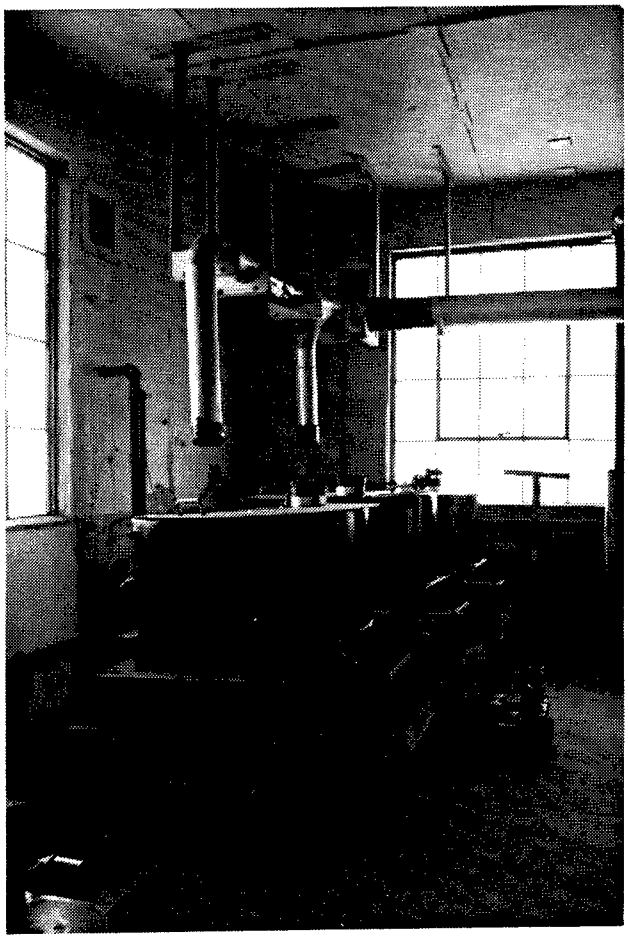


Figure 135. Building L2: TNT Melters.

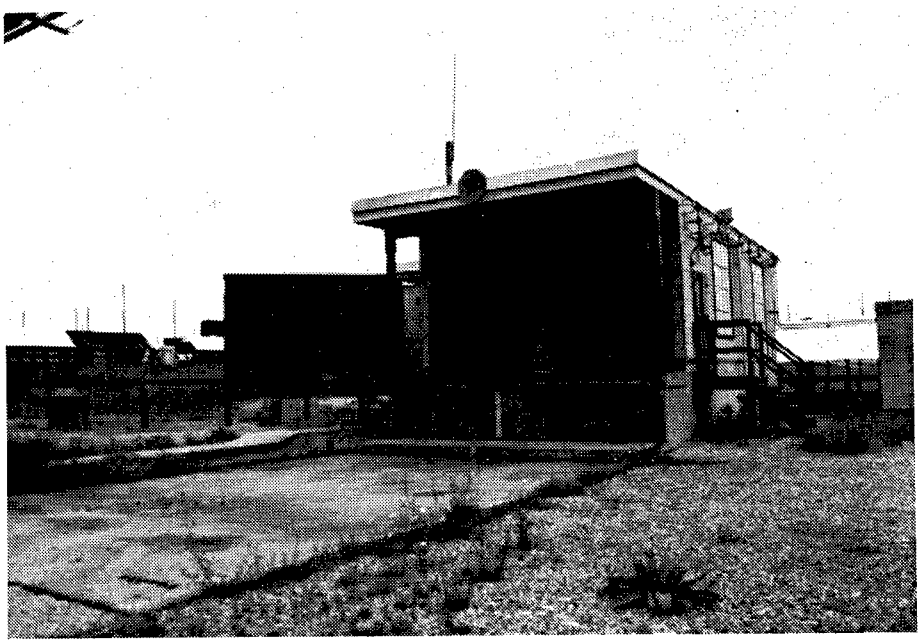


Figure 136. Building K10: Explosives Manufacturing Plant, TNT Opening Building.

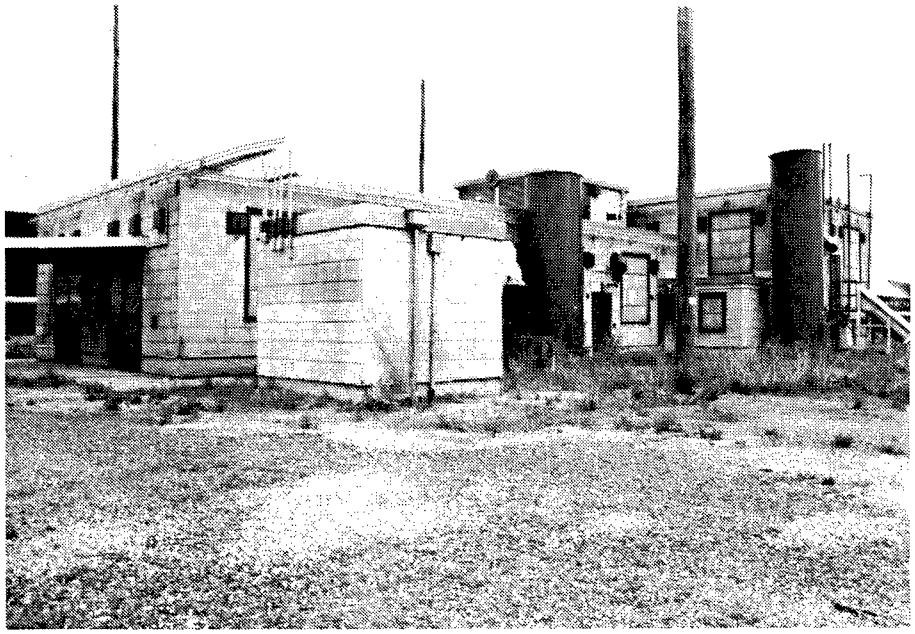


Figure 137. Building L2: Explosives Manufacturing Plant, Incorporation Building.

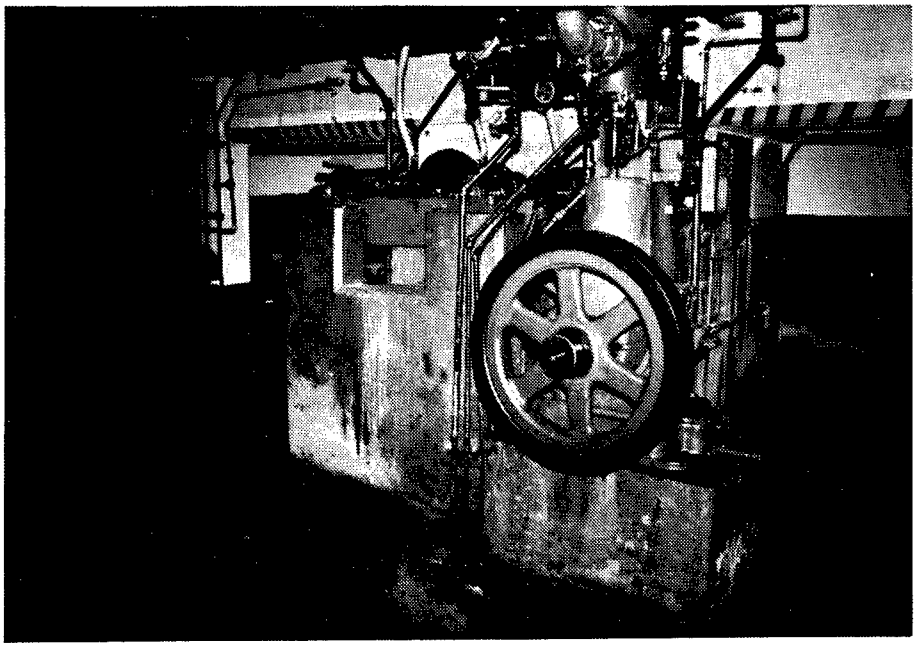


Figure 138. Building L2: Close-up of a Steam Engine manufactured by Troy Engine Co., Troy, PA. Two of these engines are located in the basement of the building.

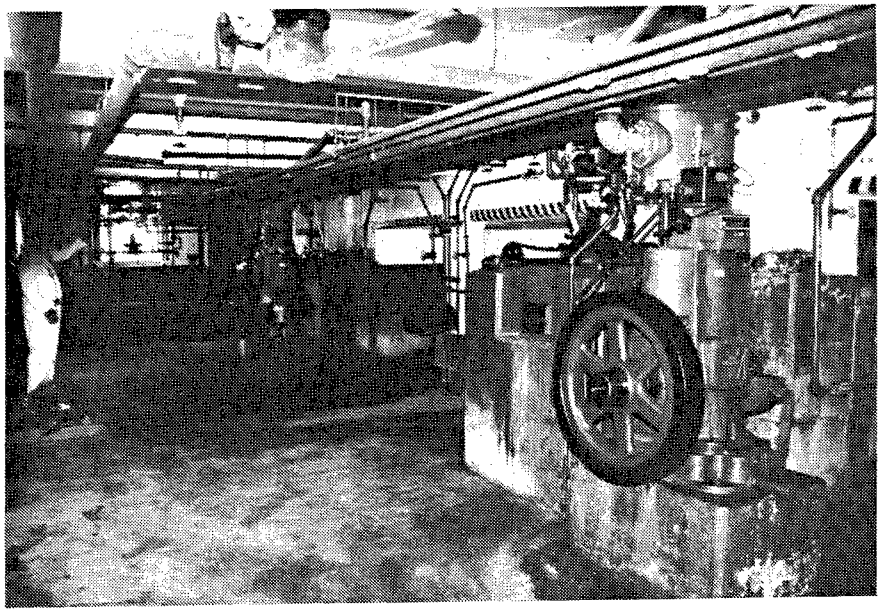


Figure 139. Building L2: The Engine Room located in the basement of the building.

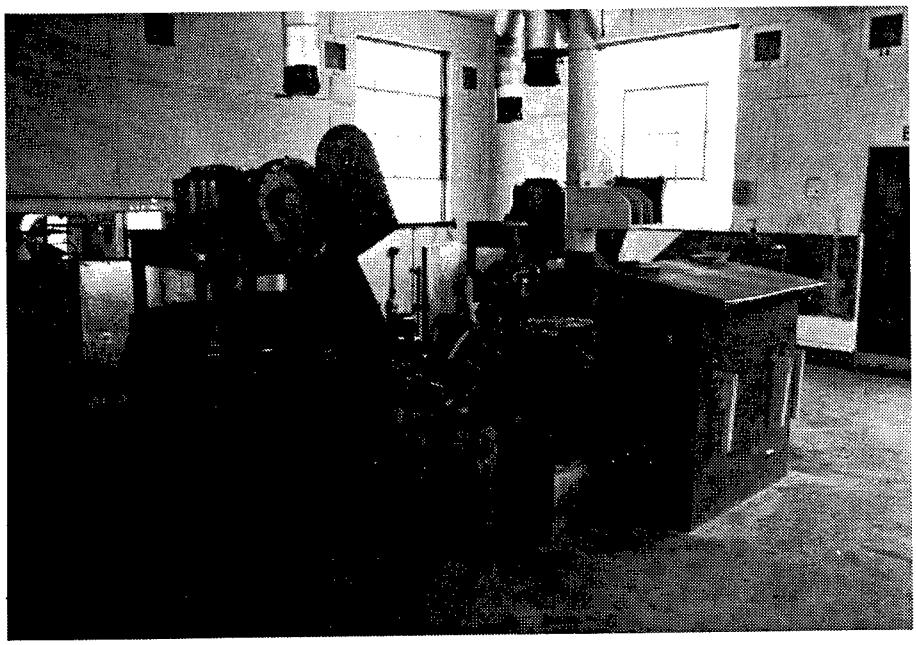


Figure 140. Building L2: Incorporation Kettle and Control Panel.

Figure 141. Building L2: Interior of Incorporation Building showing TNT Melters and Incorporation Kettles.

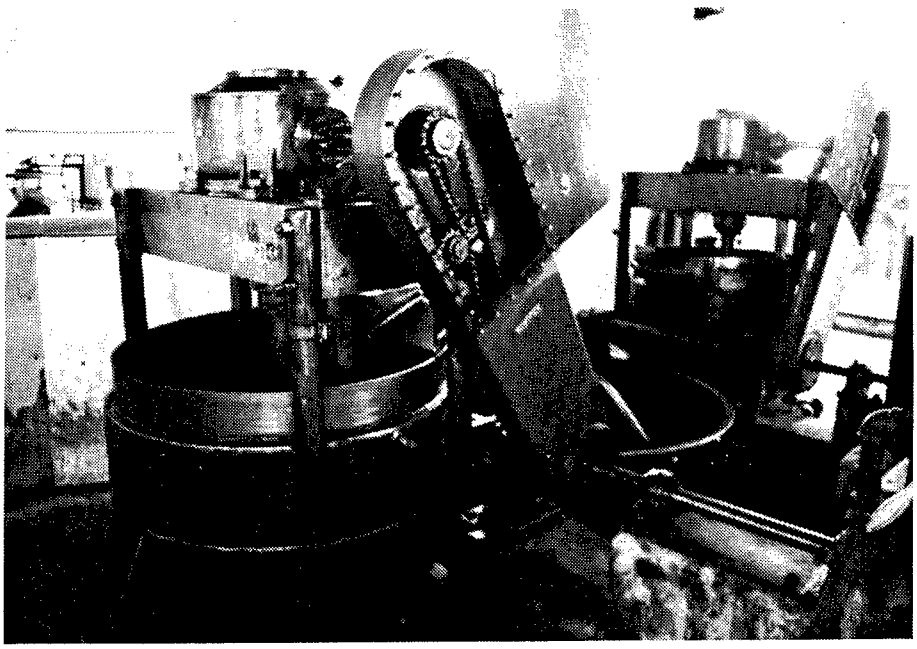


Figure 142. Building L2: Close-up of Incorporation Kettle.

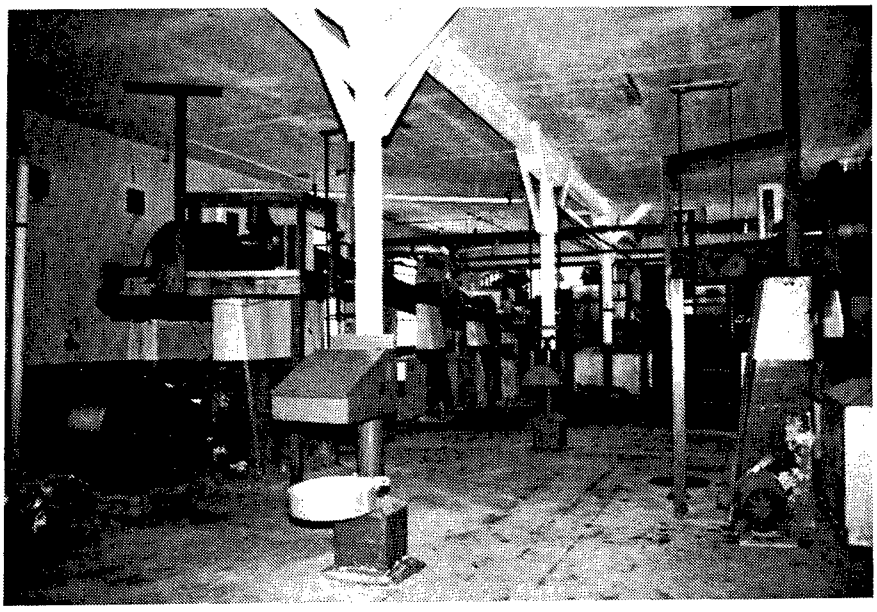


Figure 143. Building L2: Interior of Incorporation Building showing TNT Conveyor Belts.

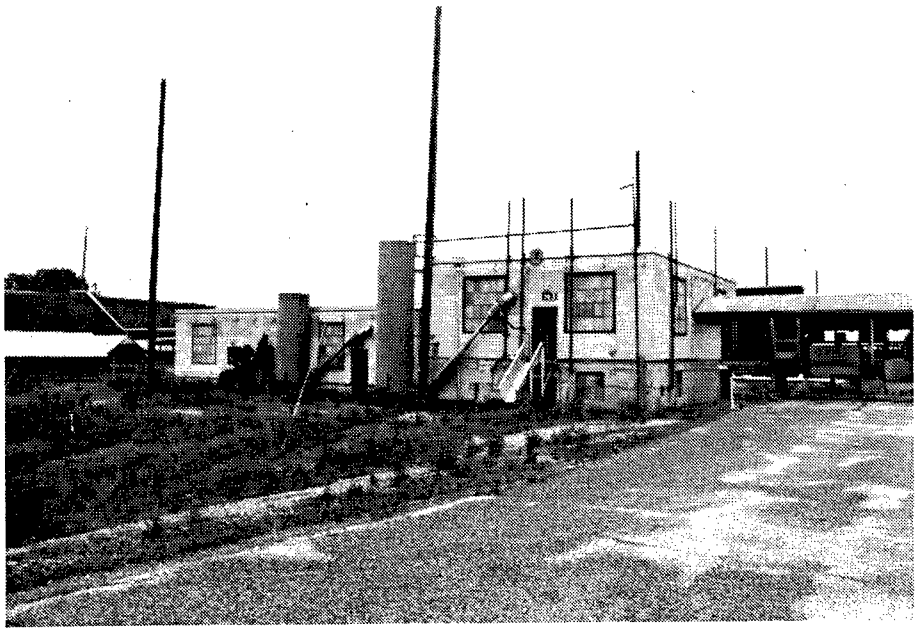


Figure 144. Building M3: Explosives Manufacturing Plant, Calcium Silicate Weighing Building.

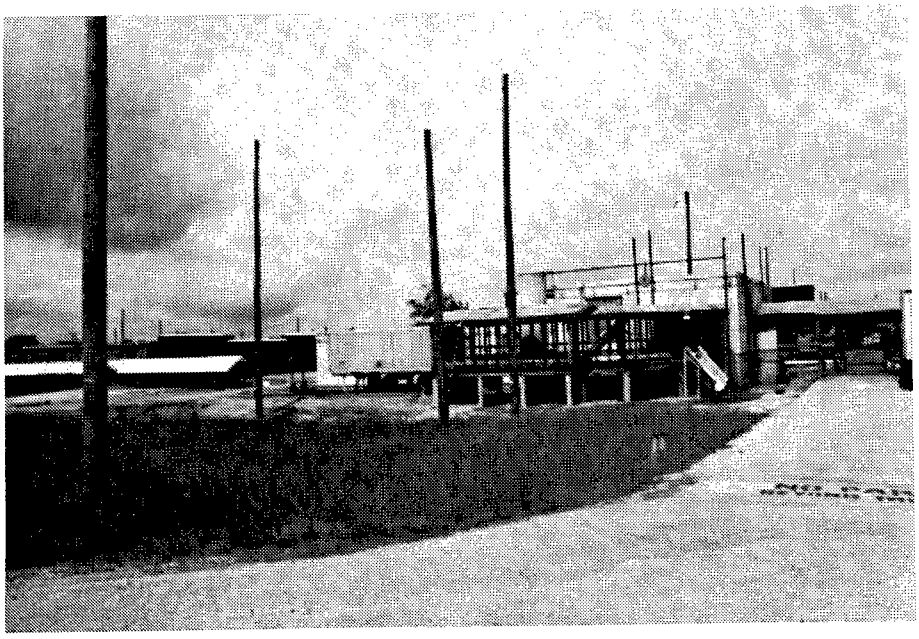


Figure 145. Building M5: Explosives Manufacturing Plant, C-4 Drying Building.

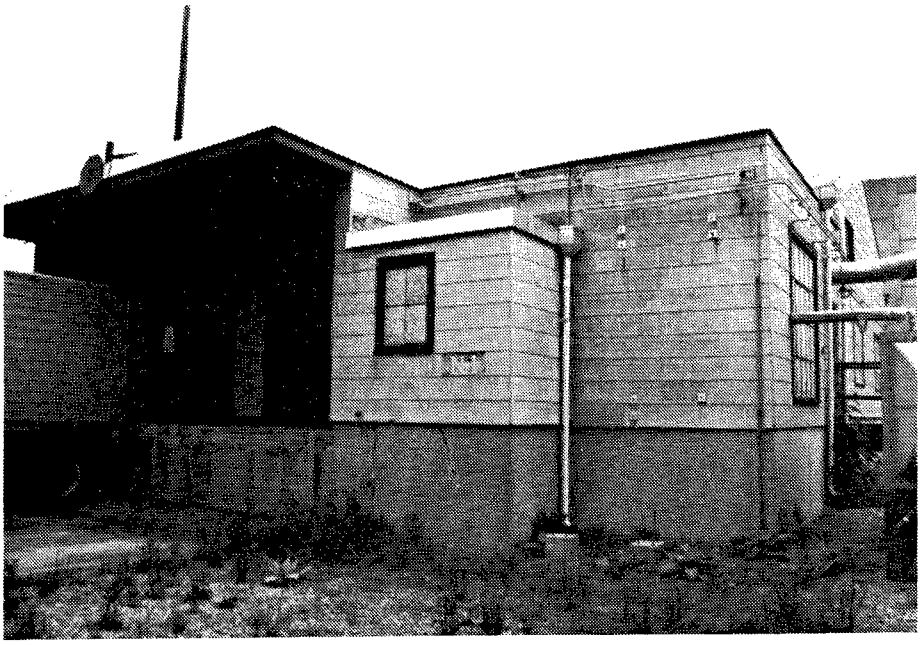


Figure 146. Building N1: Explosives Manufacturing Plant, Packaging Building.

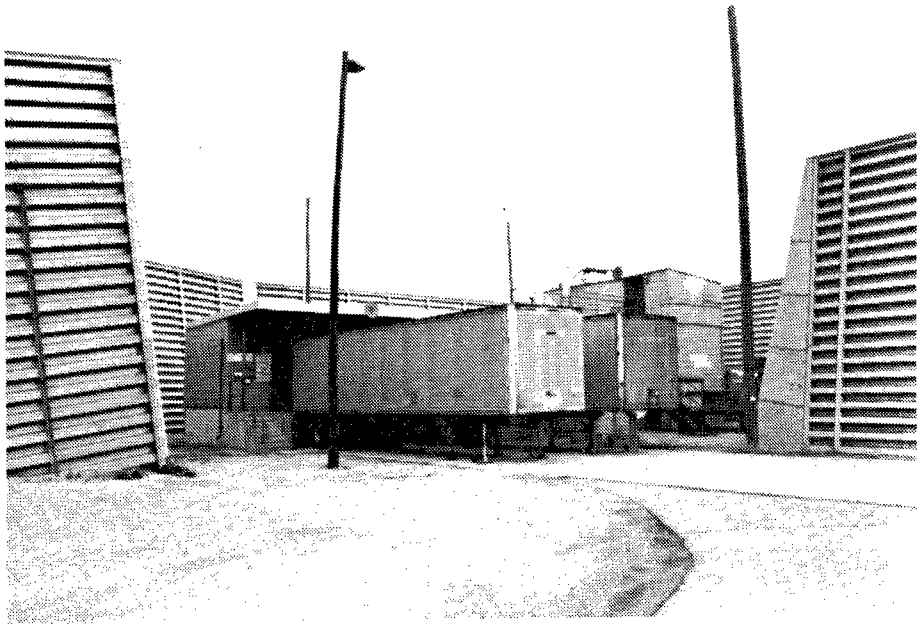


Figure 147. Building N2: Explosives Manufacturing Plant, Packaging Building.

Figure 148. Building N4: Explosives Manufacturing Plant, Packaging and Blending Building.

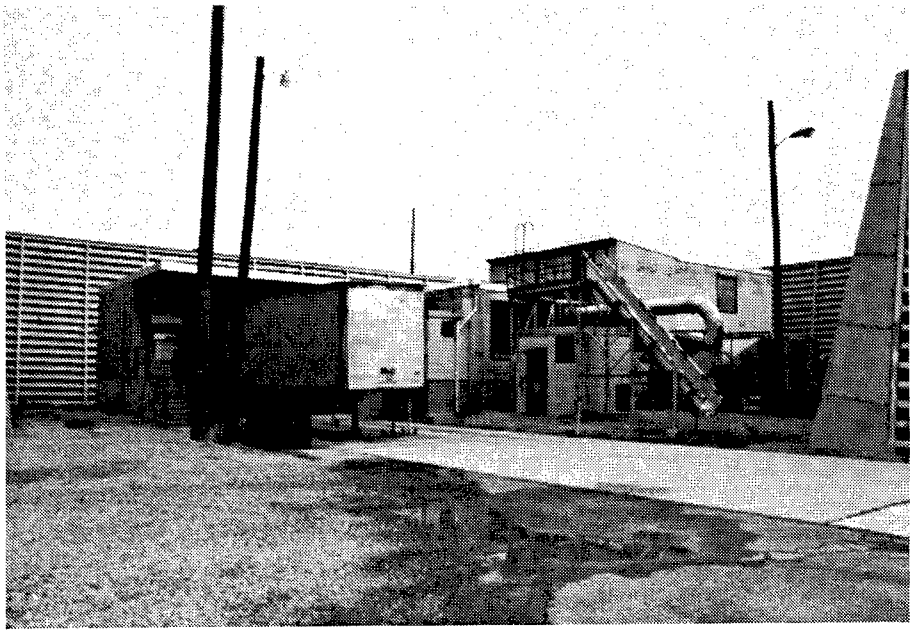


Figure 149. Building N6: Explosives Manufacturing Plant, Blending and Packaging Building.

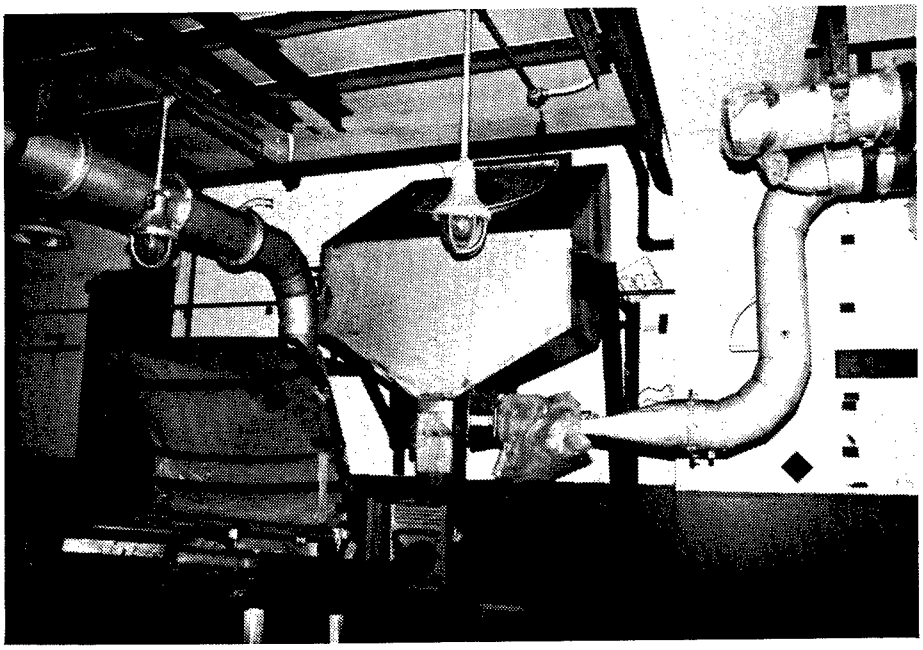


Figure 150. Building N9: TNT Hopper and Conveyor Belt.

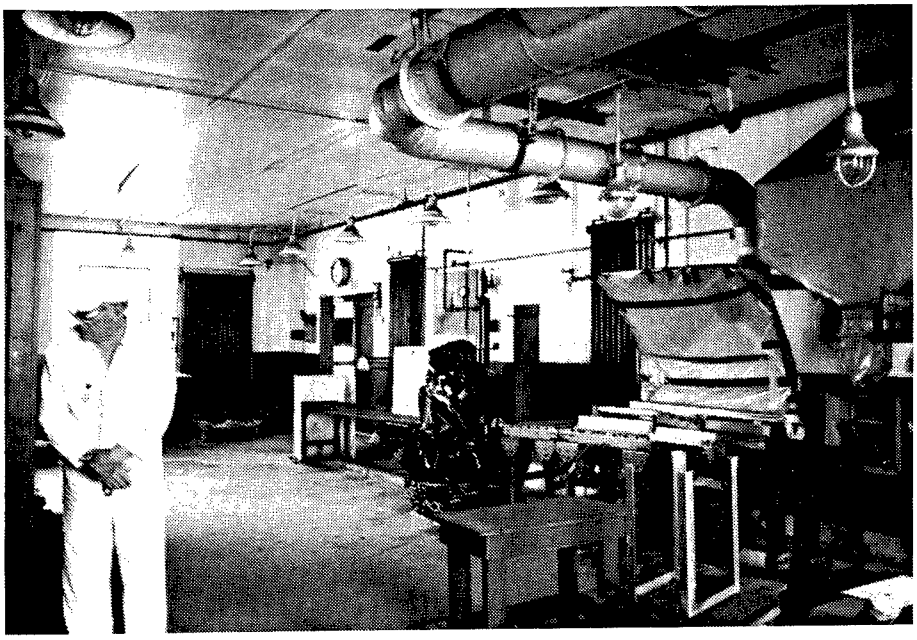


Figure 151. Building N9: TNT Packaging Room.

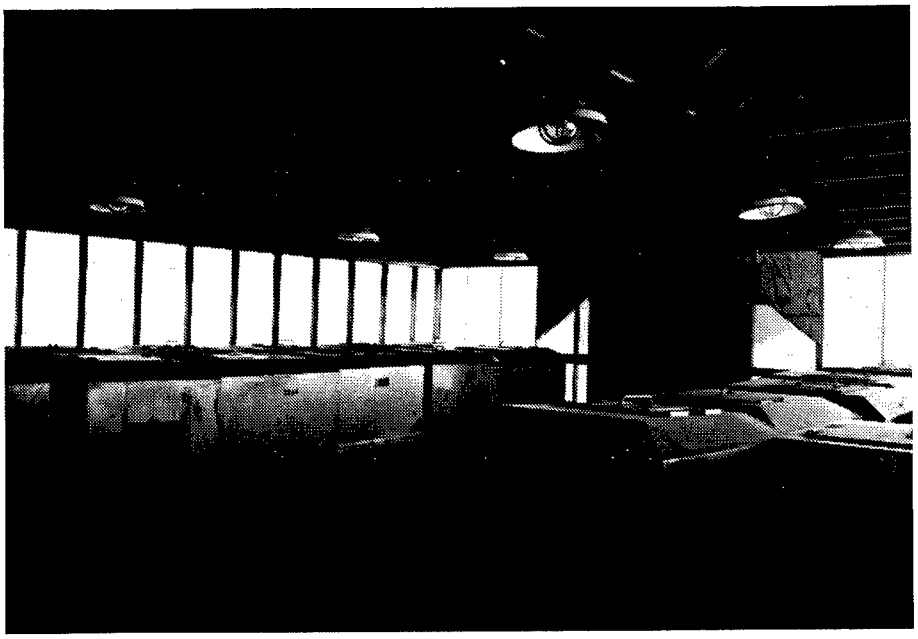


Figure 152. Building N9: TNT Tote Box Shed.

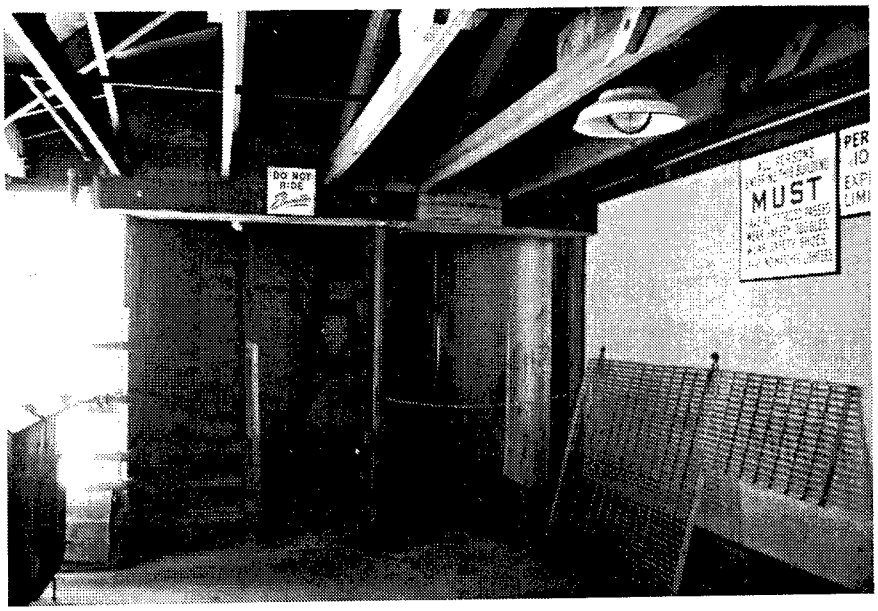


Figure 153. Building N9: TNT Tote Box Elevator.

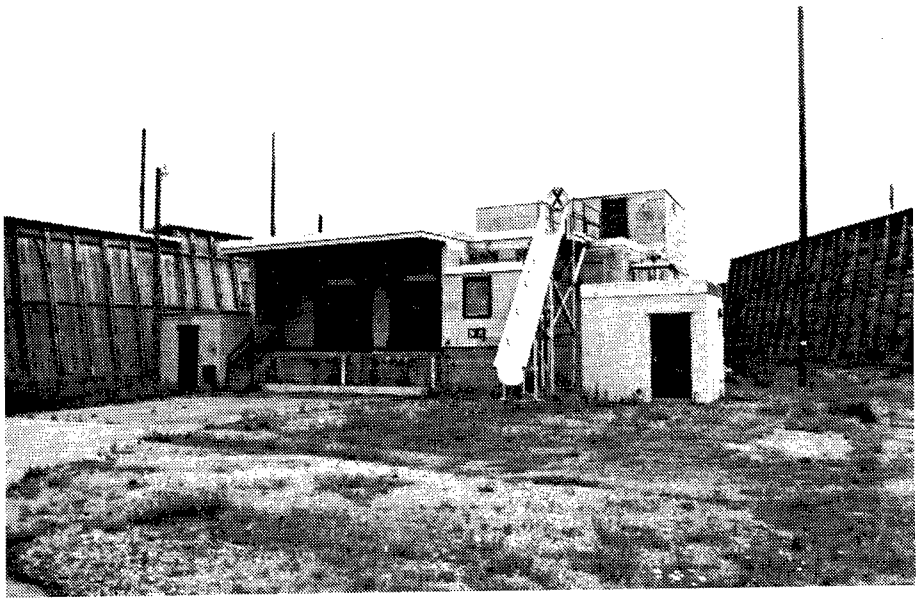


Figure 154. Building N8: Explosives Manufacturing Plant, Packaging Building.

Figure 155. Building N10: Explosives Manufacturing Plant, Packaging Building.

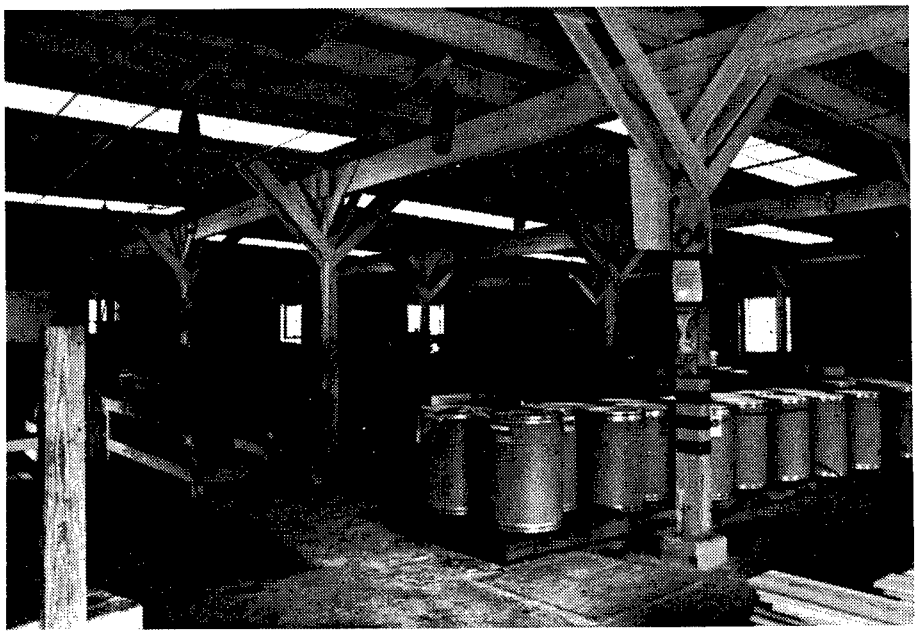


Figure 156. Building Y1: Box Construction and Reconditioning Building.

Figure 157. Building Y1: Box Construction and Reconditioning Building.

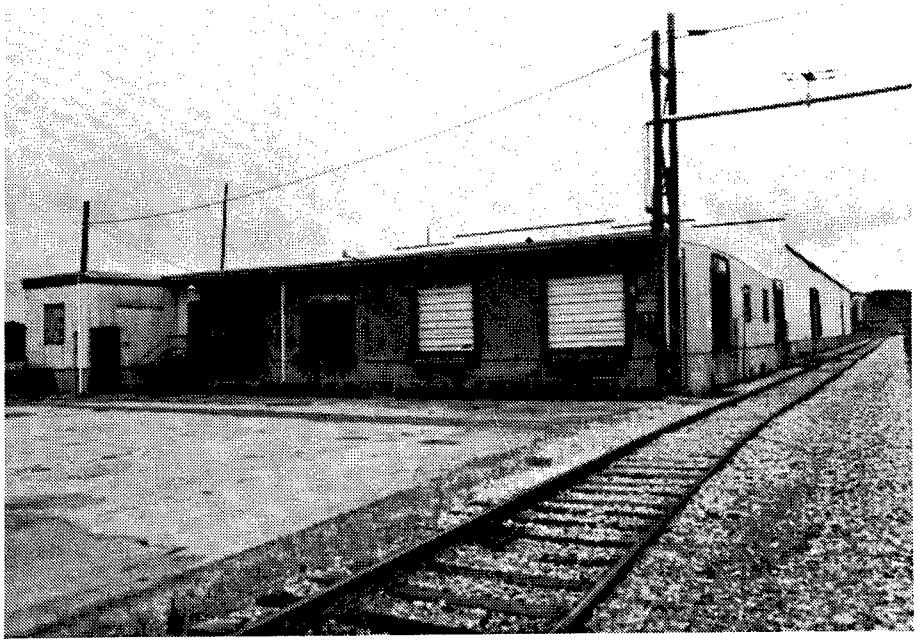


Figure 158. Building Y1: Explosives Manufacturing Plant, Box Construction and Reconditioning Building.

SUPPORT FACILITIES FOR MANUFACTURING

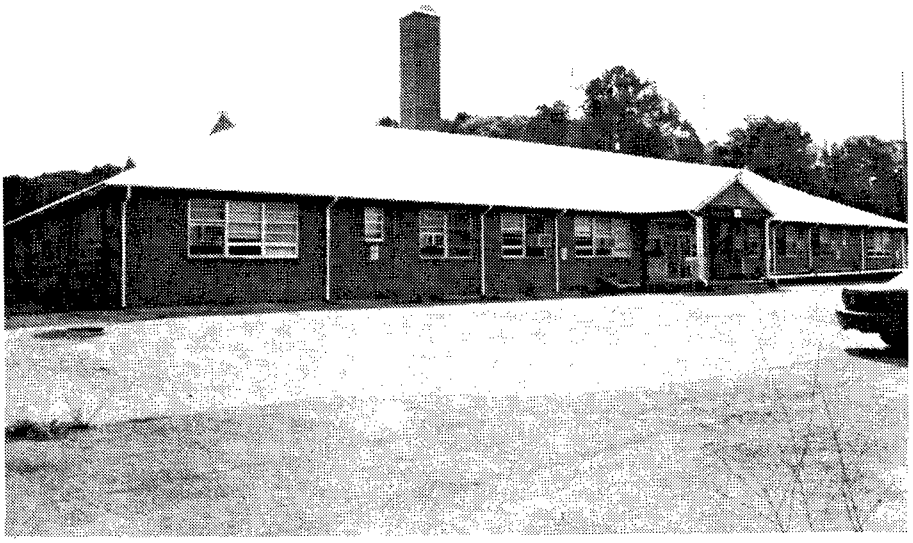


Figure 159. Building 8: Ammunition Quality Control Facility, Central Laboratory.

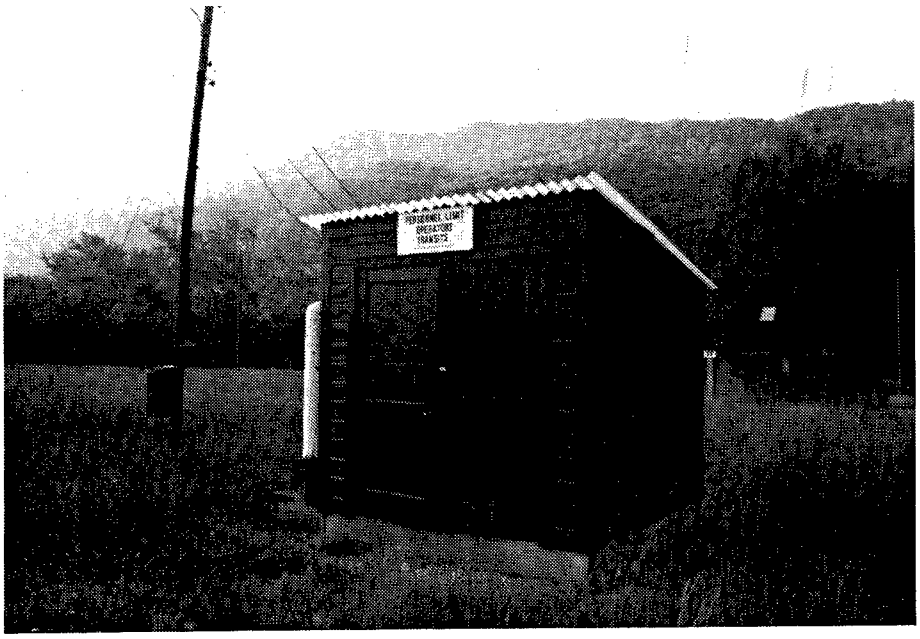


Figure 160. Building 24: Burning Ground Area Compressor House.

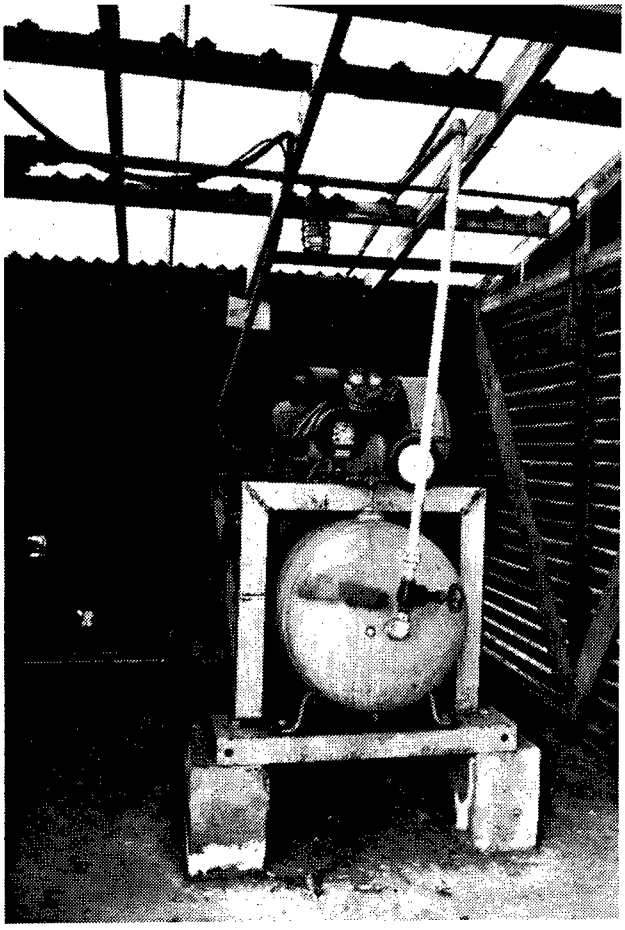


Figure 161. Building 24: Compressor.

Figure 162. Building 100: Maintenance Building, Machine and Metal Shop.

Figure 163. Building 100: Machining Building. Machining, welding, metal fabrication, and pipe fitting work is done in this building.

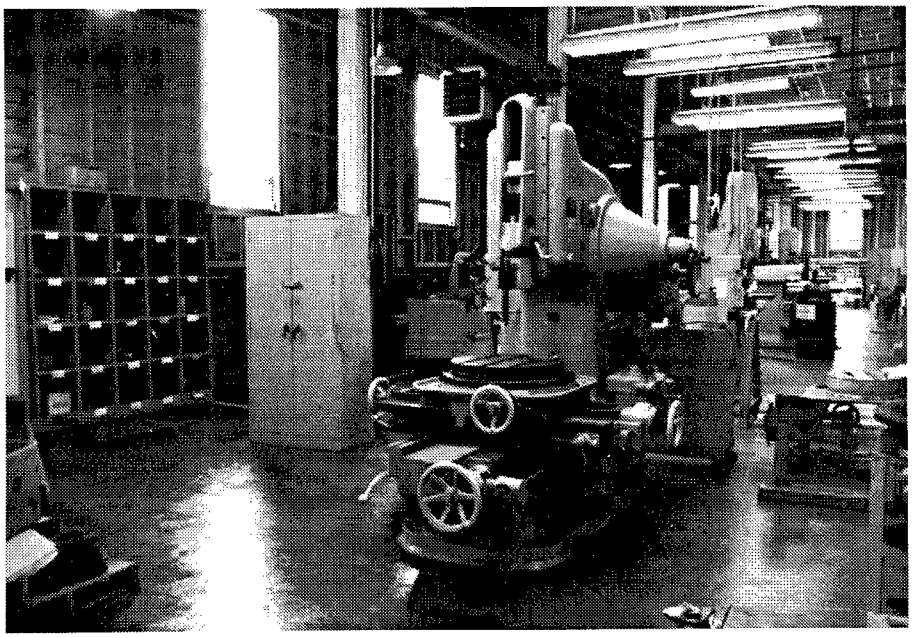


Figure 164. Building 100: Vertical Shaper/Metal Shaper, HOL 8617, manufactured by Morey Machinery Co., New York.

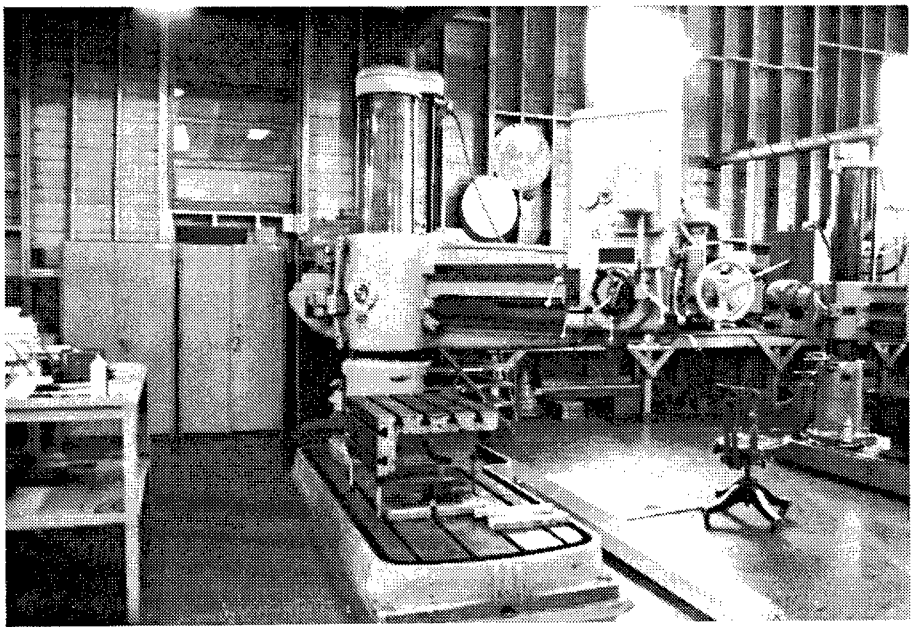


Figure 165. Building 100: Radial Drill Press, US DPT 2066, manufactured by Cincinnati Brickford Tool Co., Cincinnati, OH.

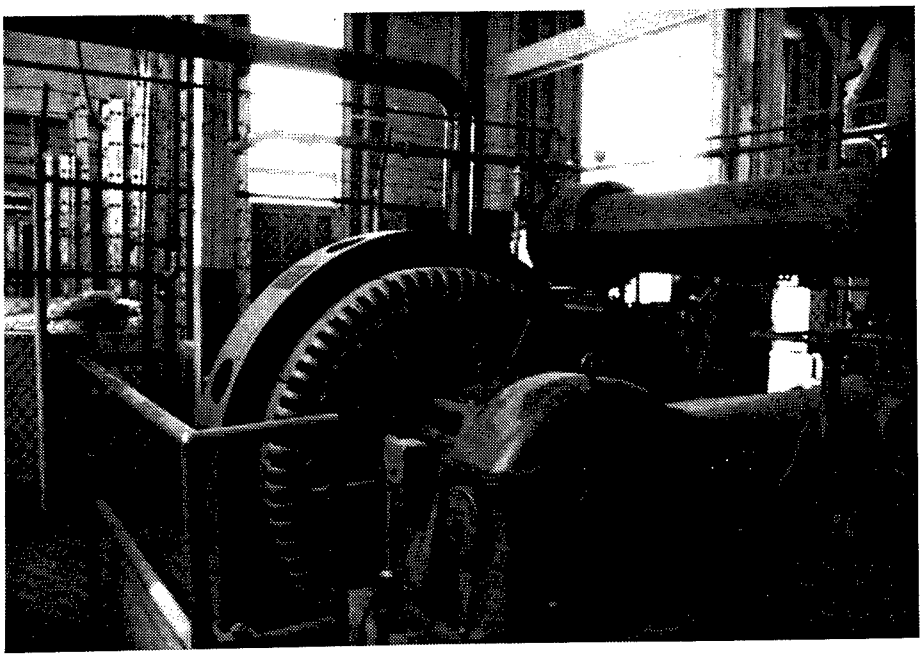


Figure 166. Building 100: Auxiliary Air Compressor manufactured by the Pennsylvania Company.

Figure 167. Building 100: View of Rafter Construction and Overhead Bridge Crane with 7.5 ton lift capacity manufactured by Chisholm-Moore Hoist Corp., Tonwanda, NY.

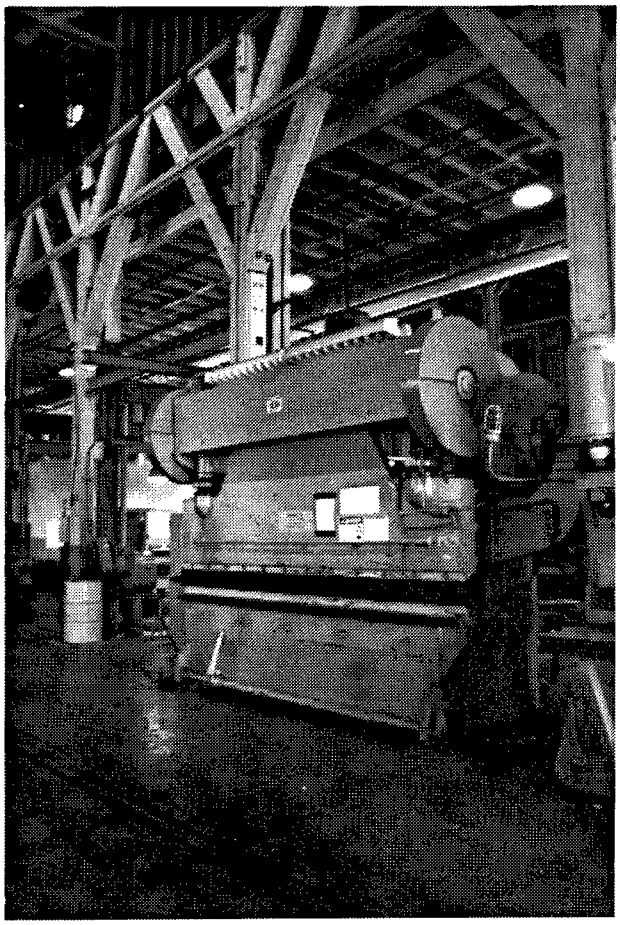


Figure 168. Building 100: Power Brake (serial #0287) manufactured by Dreis & Krump Mfg. Co., Chicago, IL. Tool forms and shapes metal.

Figure 169. Building 100: Pipe Bender manufactured by Logansport Machine, Inc., Logansport, IN.

Figure 170. Building 102: Maintenance Building, Instrument and Electric Shop.

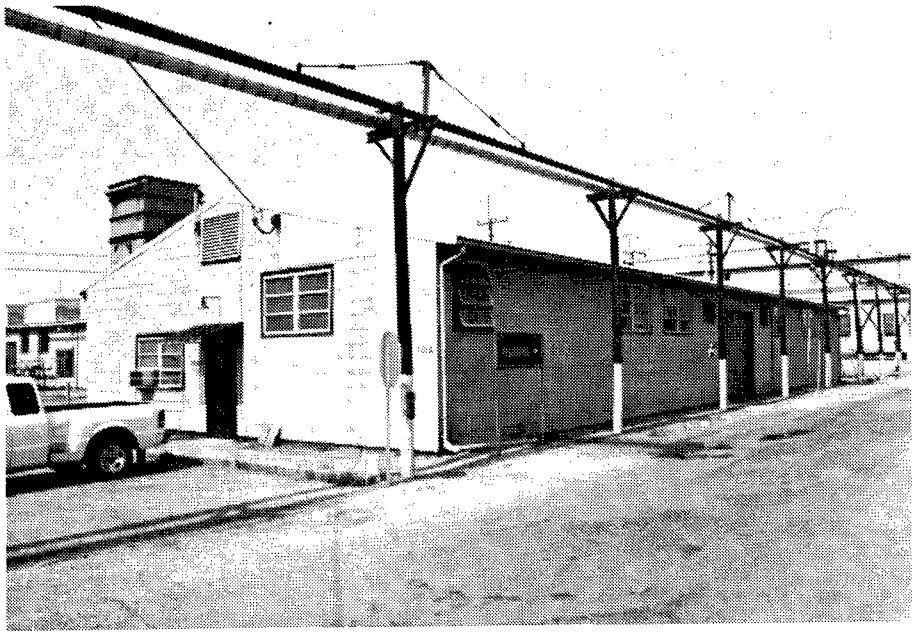


Figure 171. Building 104: Maintenance Building, Carpentry Shop.

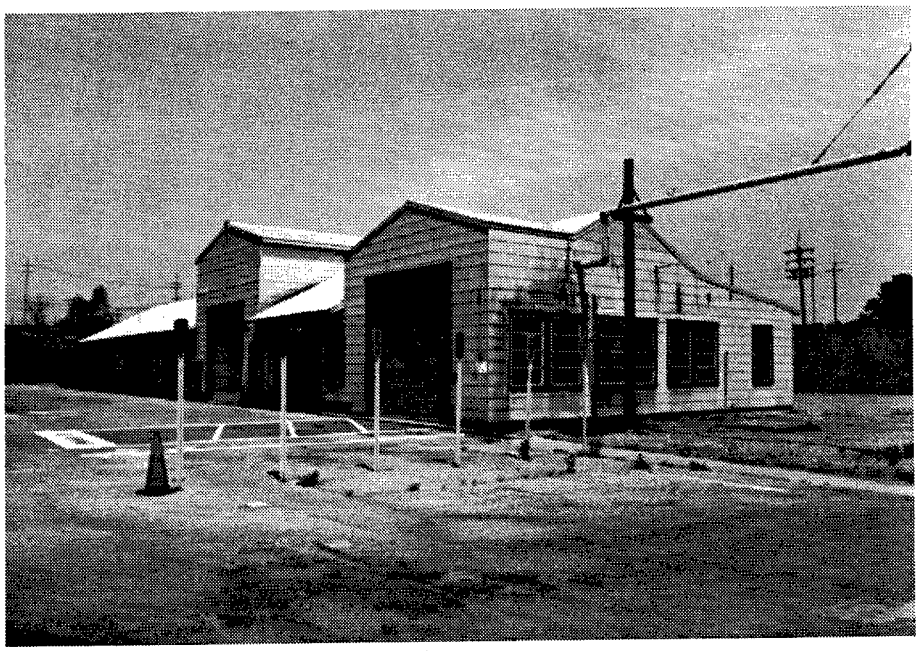


Figure 172. Building 105: Automobile Gas and Service Station.

Figure 173. Building 106: Laundry Facility.

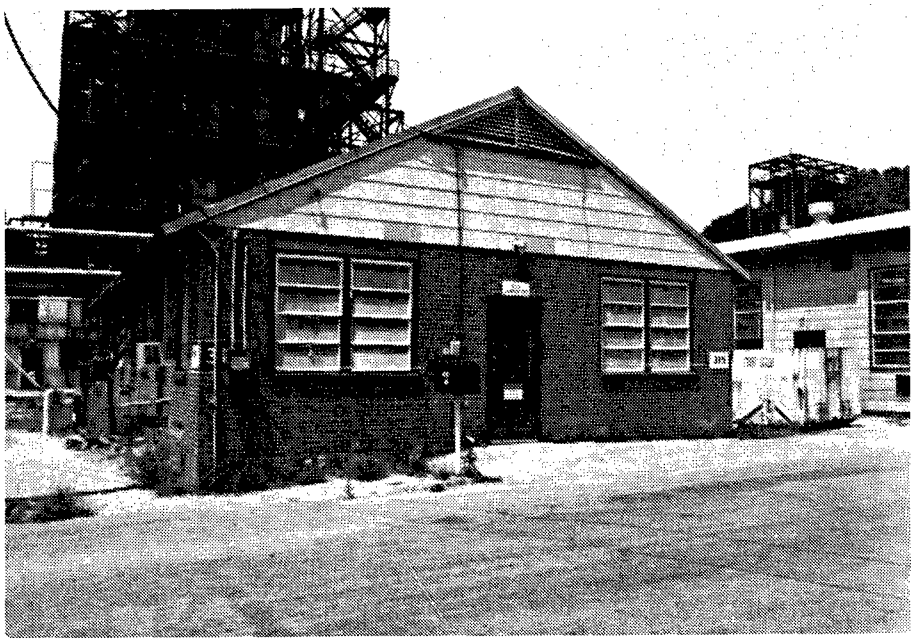


Figure 174. Building 315: Ammunition Quality Control Facility, Office and Acid Laboratory.

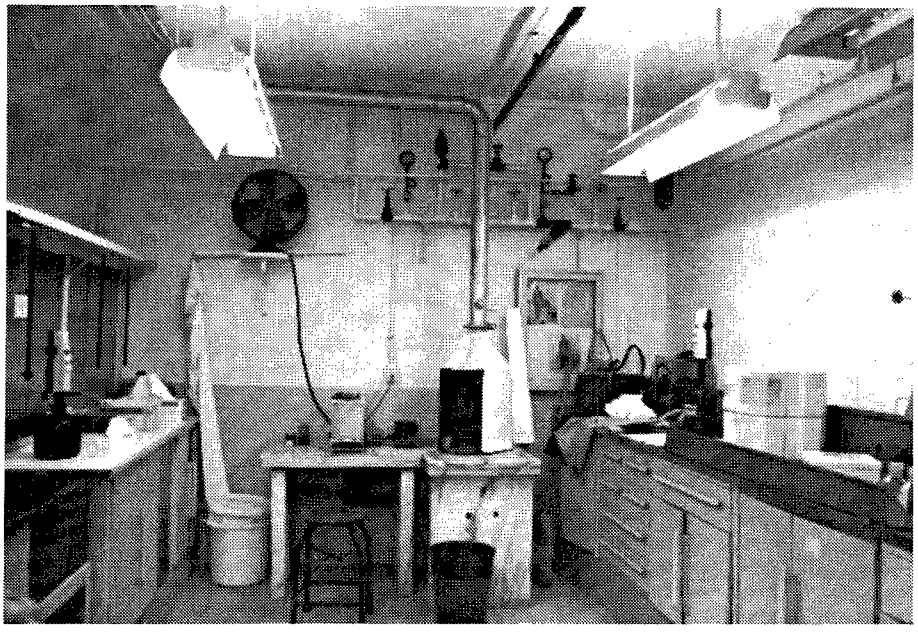


Figure 175. Building 315: Ammunition Quality Control Facility, Laboratory and Office.

Figure 176. Building 321: Maintenance Building, Repair Shop and Office.

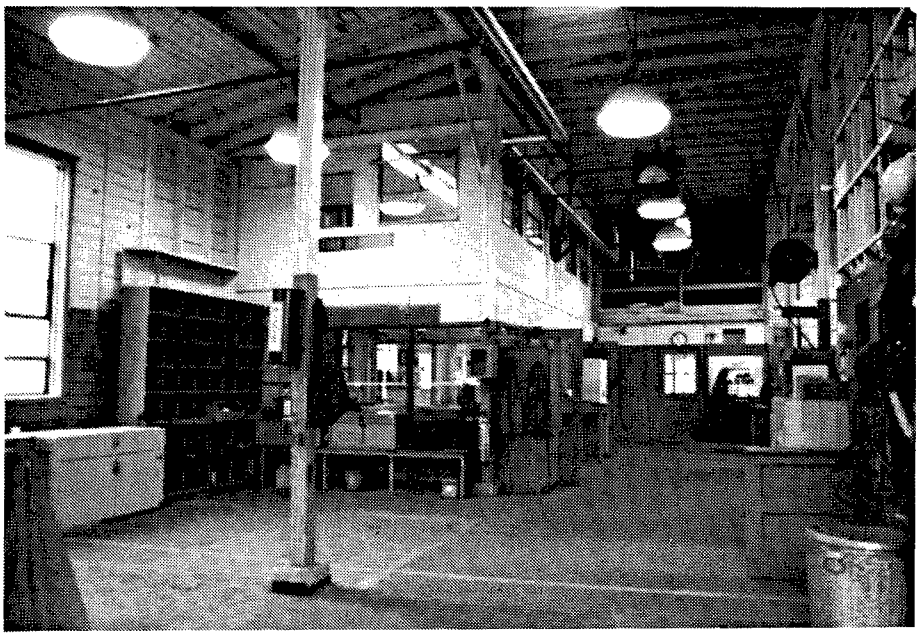


Figure 177. Building 321: Interior of Repair Shop and Office.

Figure 178. Building 556: Maintenance Building, Heavy Equipment Shop.

Figure 179. Building A1: Organic Acid Laboratory and Administration Building located in Area A.

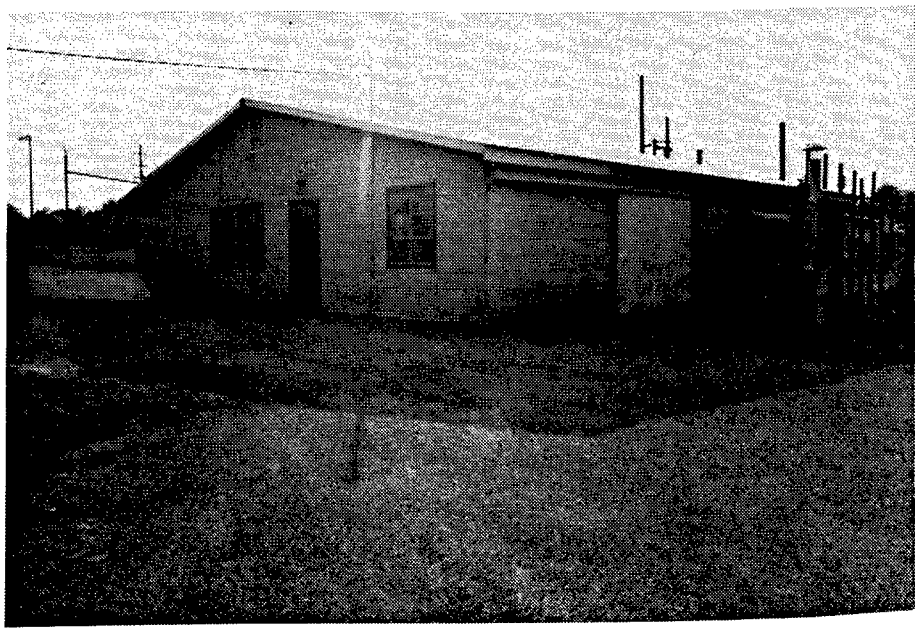


Figure 180. Building A505: Maintenance Building, Carpentry Shop.

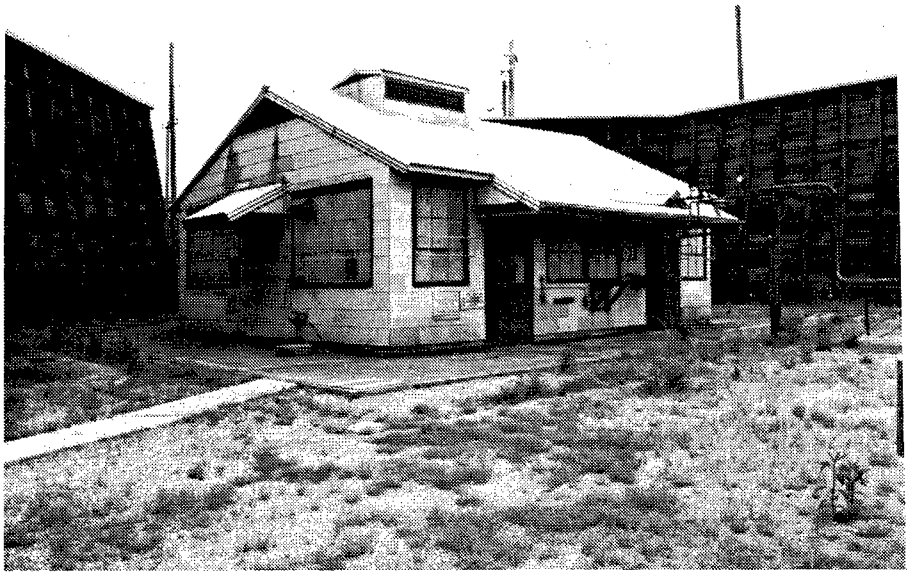


Figure 181. Building O1: Ammunition Quality Control Facility, Explosives Laboratory with double-riveted barricades.

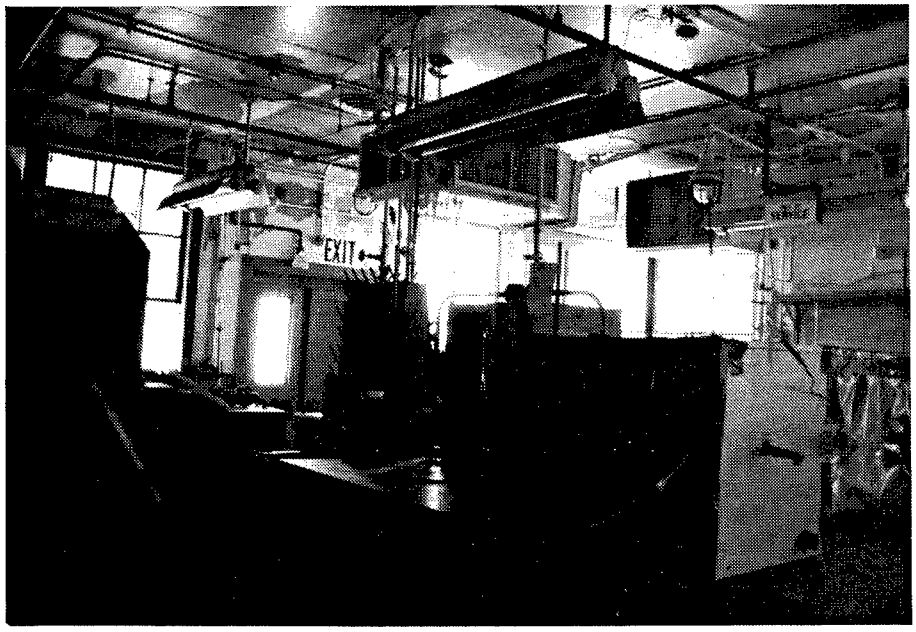


Figure 182. Building O1: Interior of Explosives Laboratory.

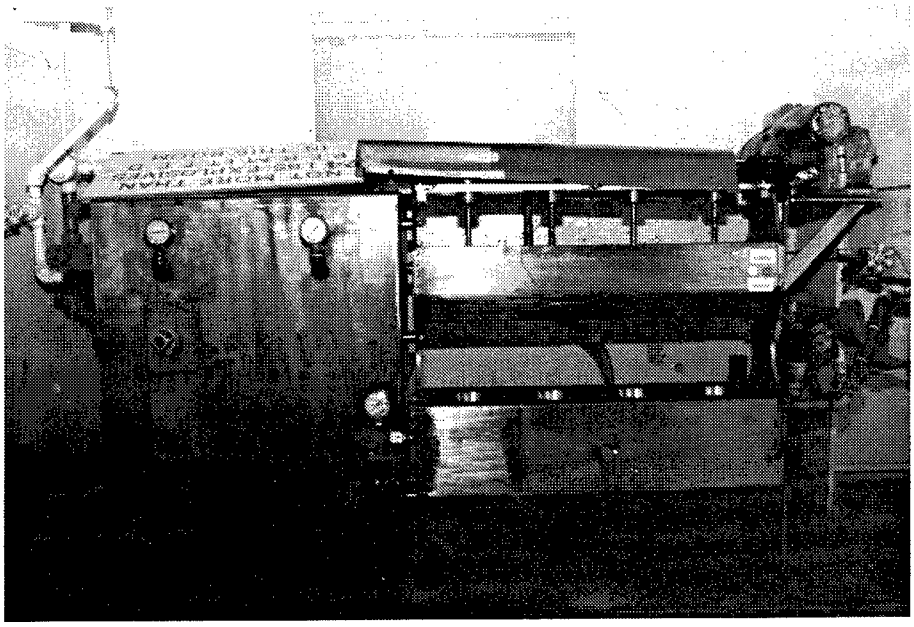


Figure 183. Building O1: Viscosity Testing Machine.

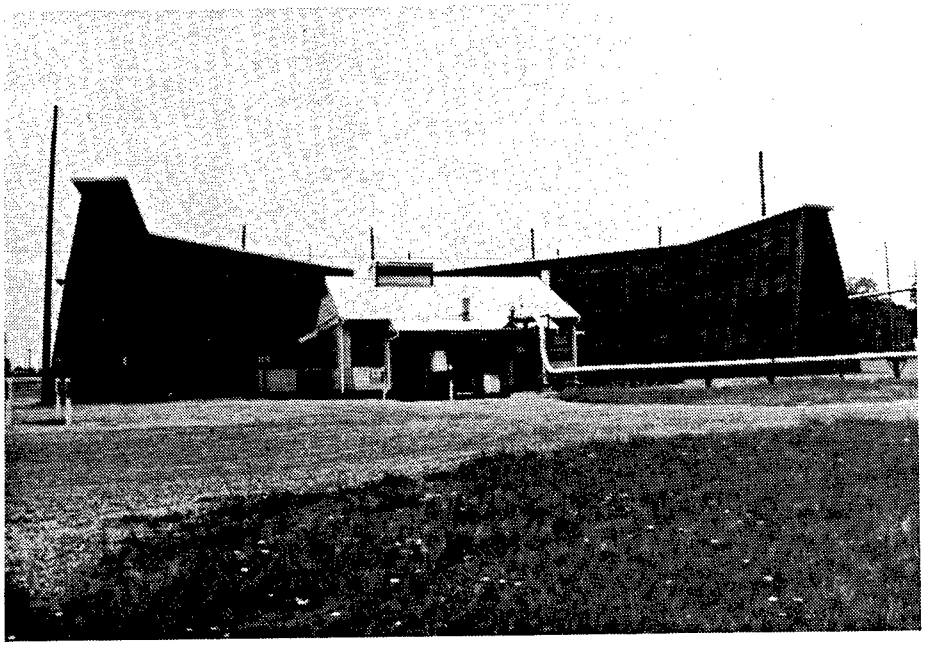


Figure 184. Building O3: Ammunition Quality Control Facility, Explosives Laboratory with double-riveted barricades.

Figure 185. Building U1: Ammunition Quality Control Facility, Laboratory and Change House. Note bricked-in transoms and door.

SHIPPING AND STORAGE FACILITIES

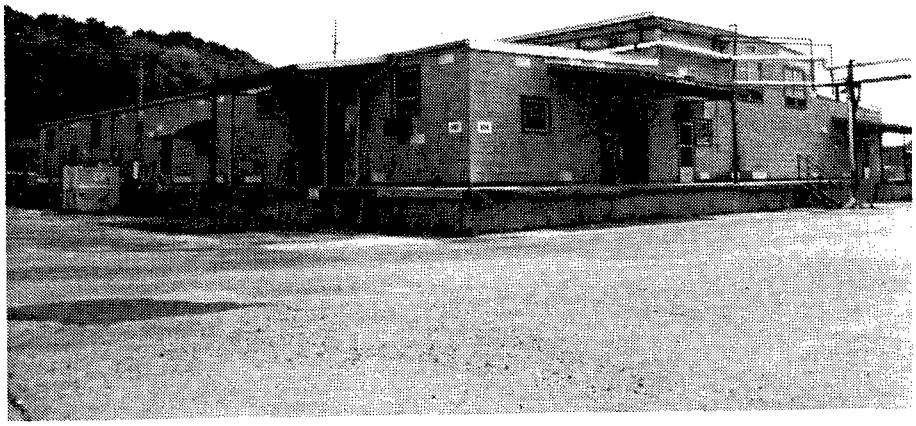


Figure 186. Building 101: General Purpose Warehouse.

Figure 187. Building 101: General Stores Warehouse Bins.

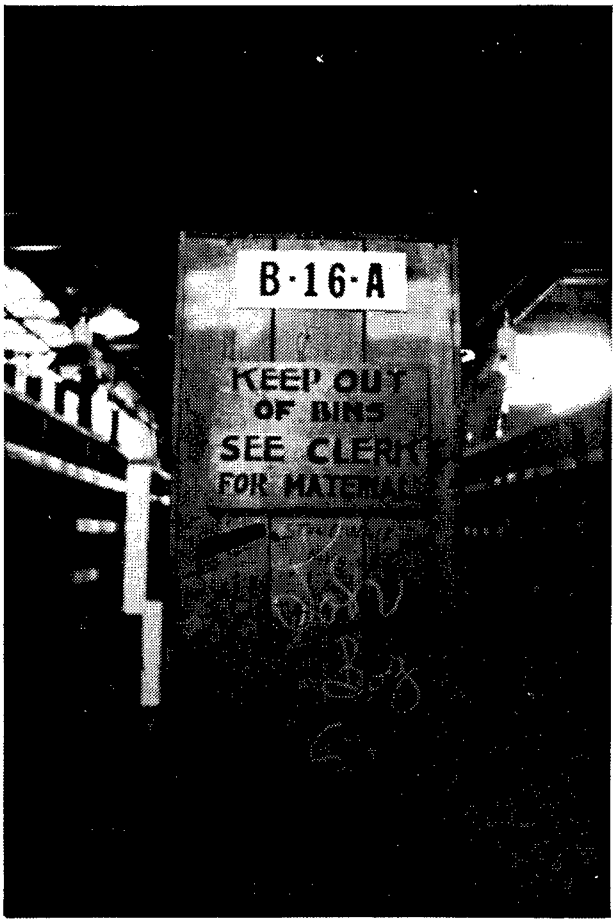


Figure 188. Building 101: Close-up of Bin inside General Stores Warehouse.

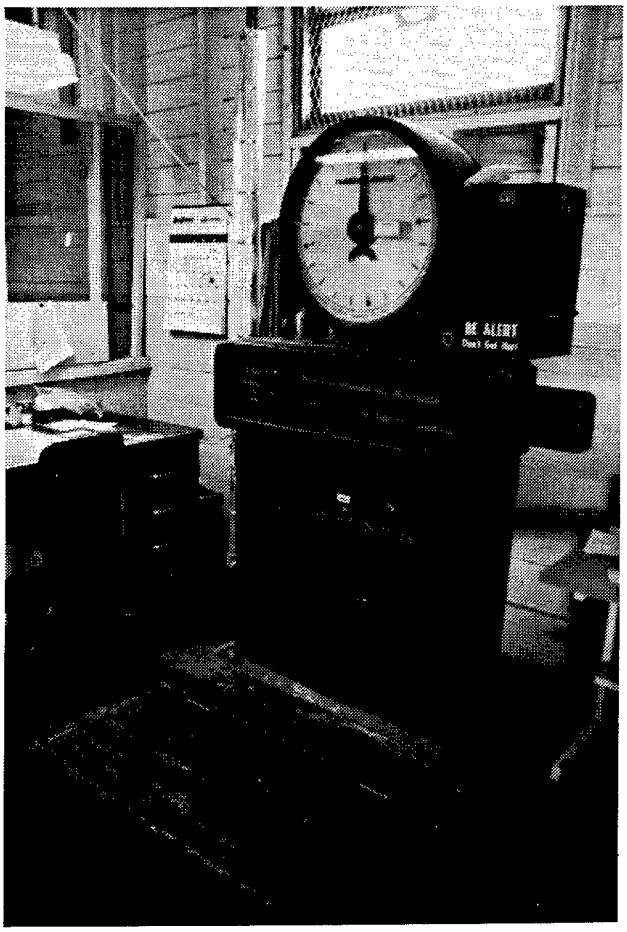


Figure 189. Building 101: Fairbanks-Morse Printomatic Truck Scale.

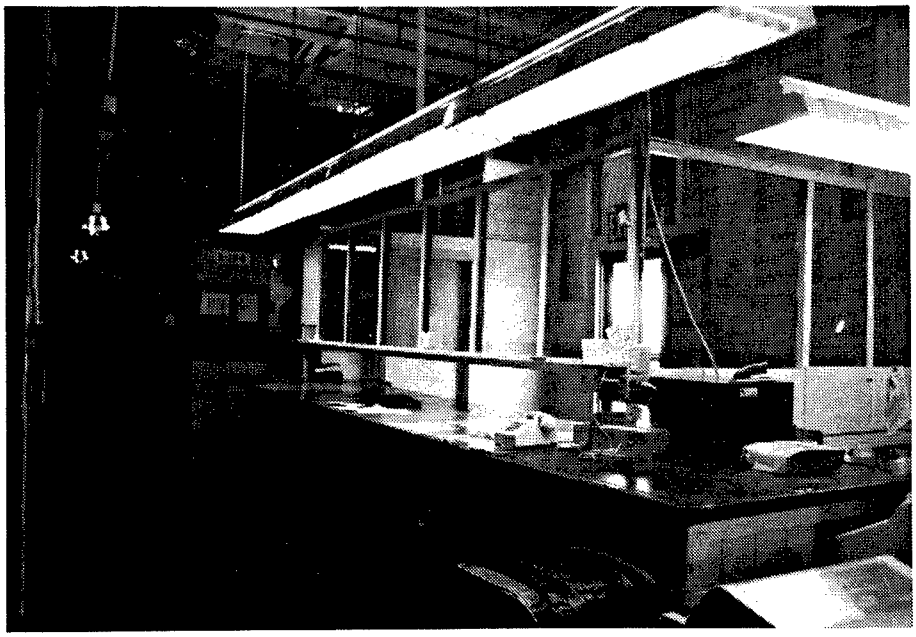


Figure 190. Building 101: Counter Area in General Stores Warehouse.

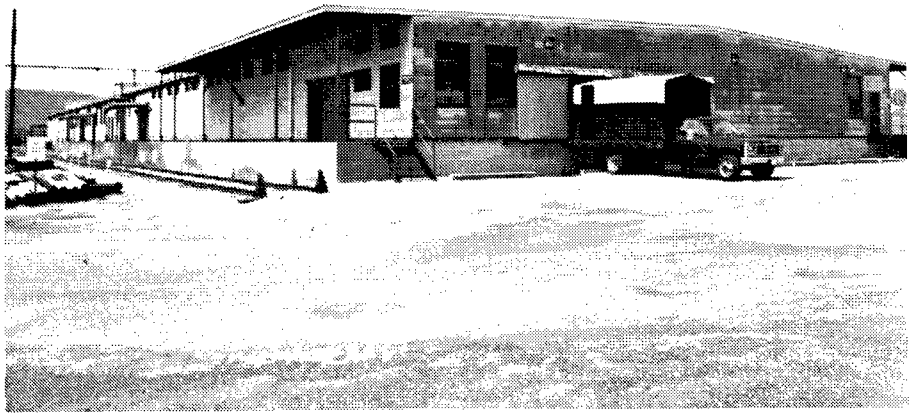


Figure 191. Building 103: Receiving and Storage Warehouse.

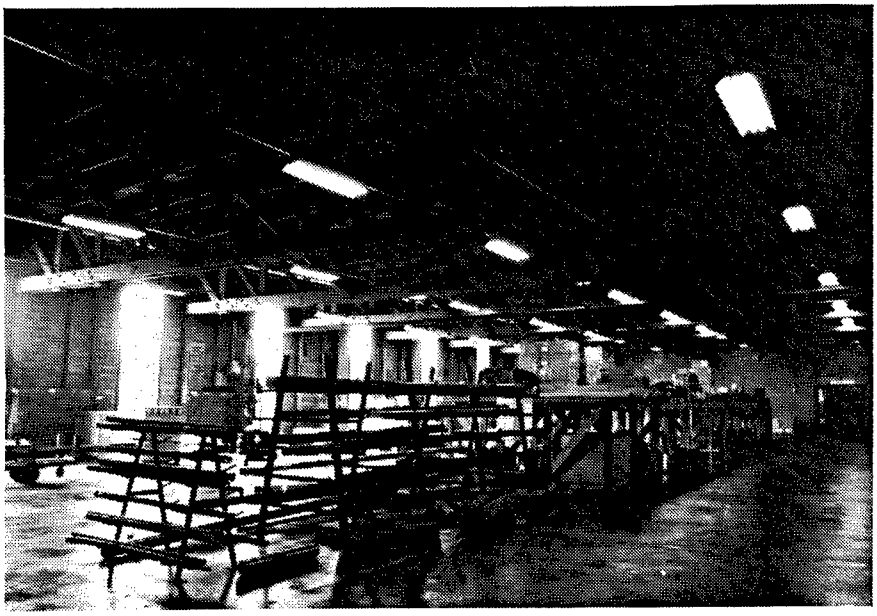


Figure 192. Building 103: Box Assembly Area.

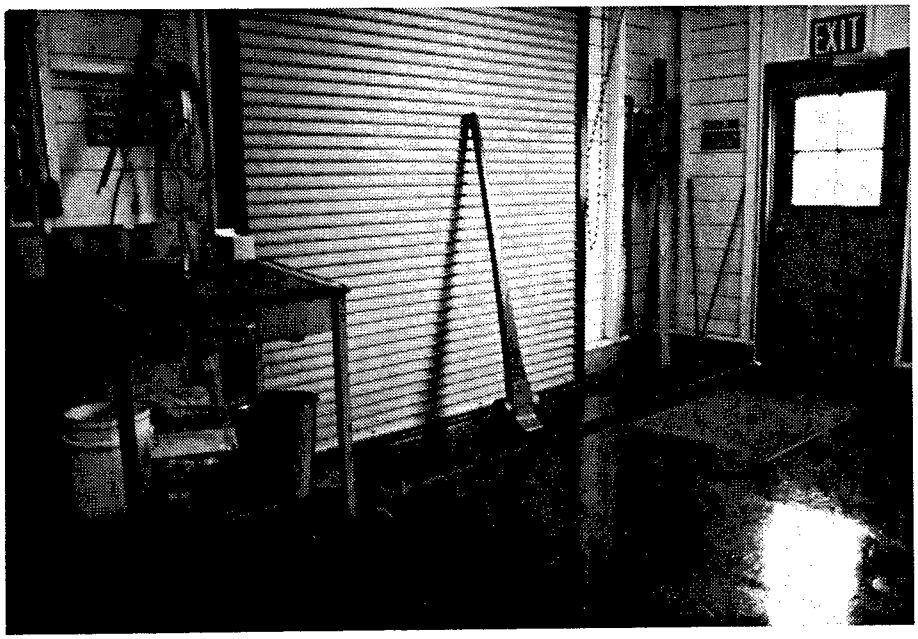


Figure 193. Building 103: Two Johnson Bars, or "Jawbreakers," used to dolly around boxes.

Figure 194. Building 103: Receiving Room.

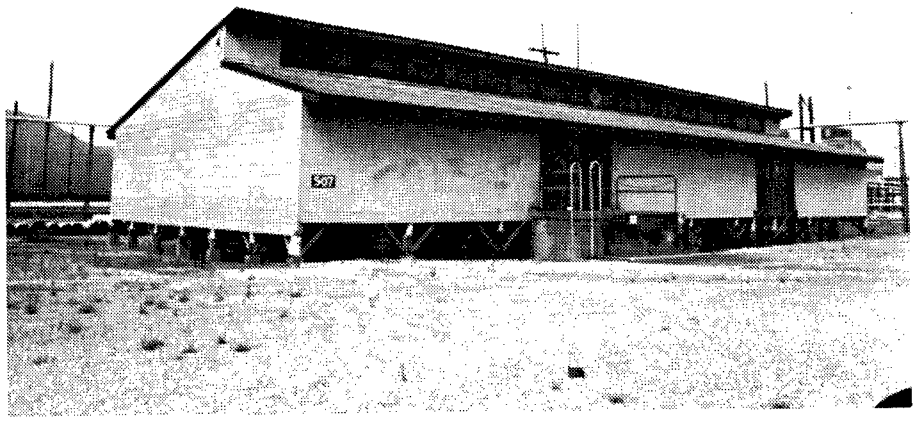


Figure 195. Building 507: General Purpose Warehouse and Storage Building.

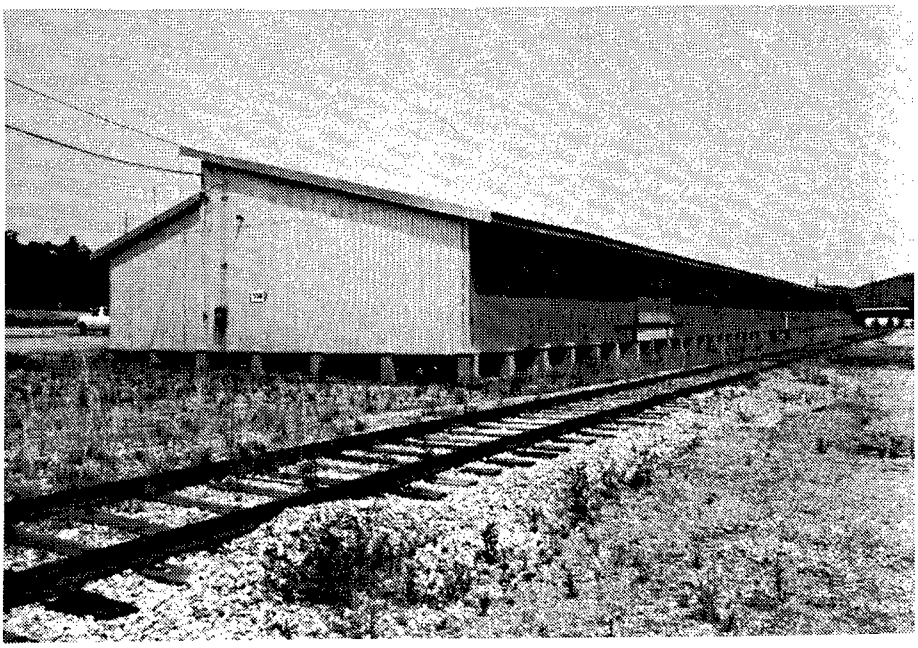


Figure 196. Building 558: Storage Warehouse, Heavy Equipment Parts and Shop.

Figure 197. Building A13: General Purpose Warehouse, Maintenance Shop.

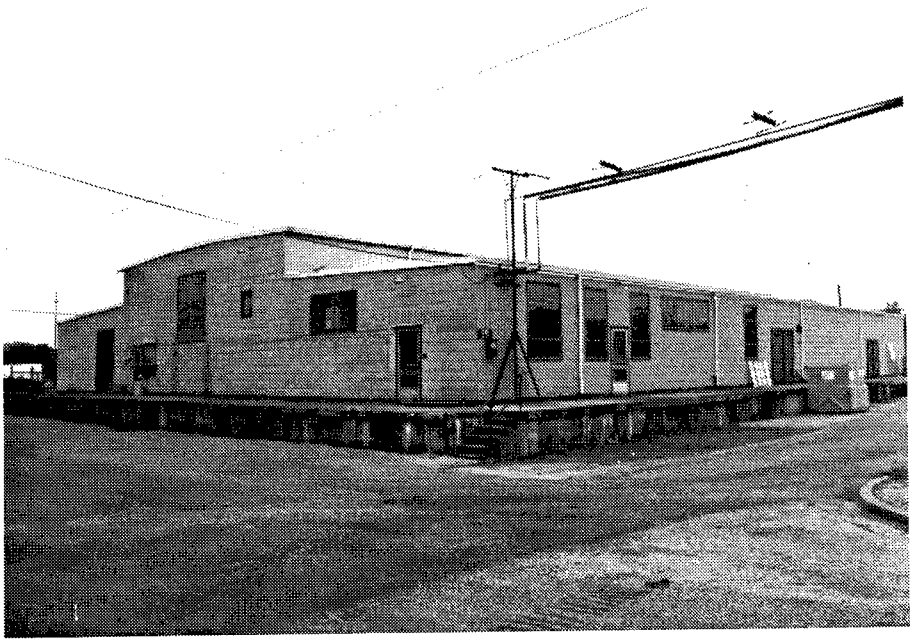


Figure 198. Building A15: General Purpose Warehouse.

Figure 199. Building CM21: High Explosives Magazine, Corbetta Type Ammunition Igloo.

Figure 200. Building CM64: High Explosives Magazine, Corbetta Type Ammunition Igloo.

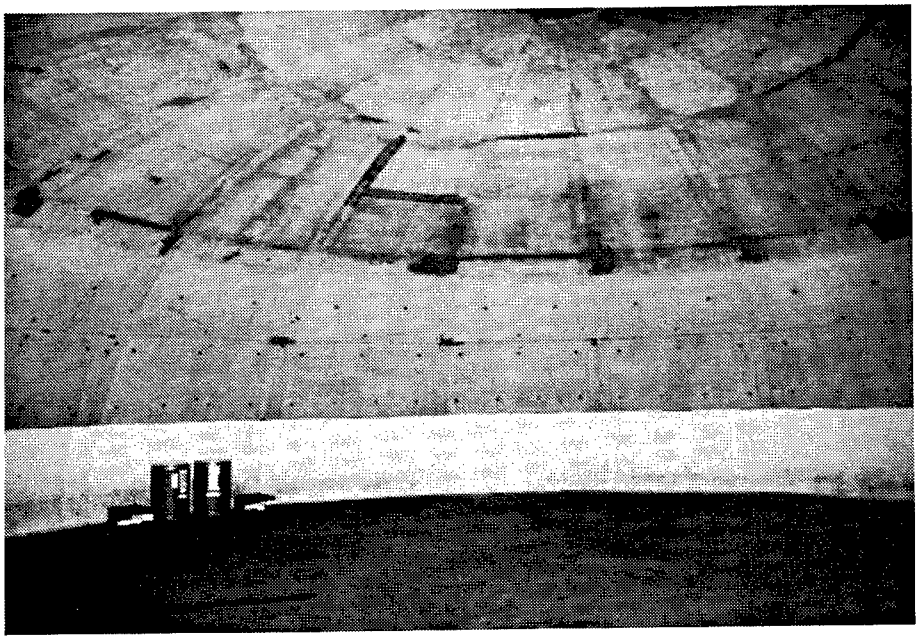


Figure 201. Building CM149: High Explosives Magazine, interior of Storage Igloo.

Figure 202. Building YM2: High Explosives Magazine, Richmond Type.

SUPPORT FACILITIES FOR EMPLOYEES

Figure 203. Building 4: Clinic with beds.

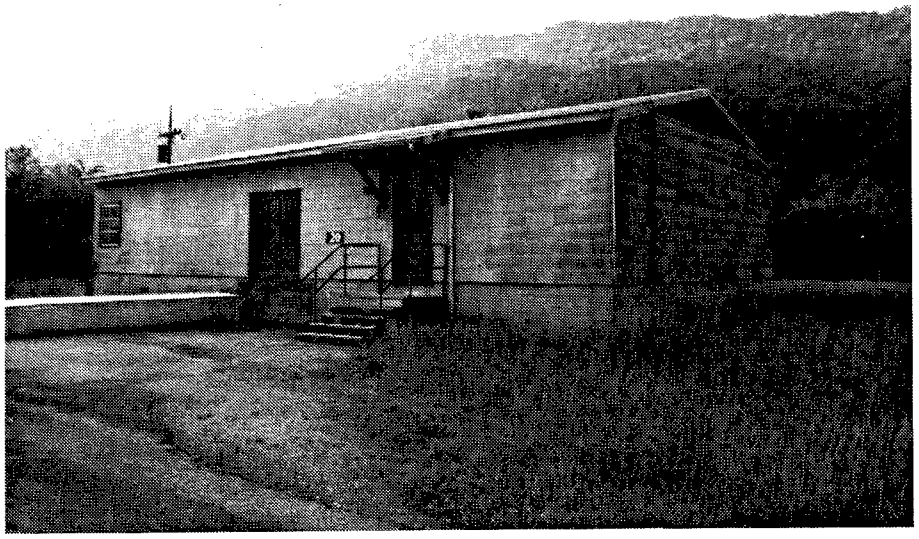


Figure 204. Building 20: Burning Ground Area Service Building and Change House.

Figure 205. Building 107: Change House. Note bricked-in transoms.

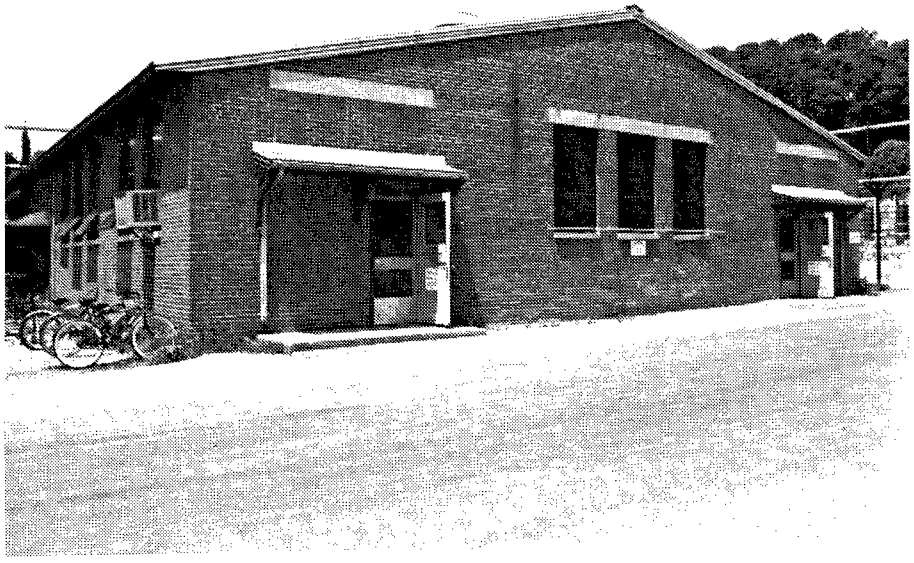


Figure 206. Building 322: Change House for the Nitric Acid Area. Note bricked-in transoms and door.

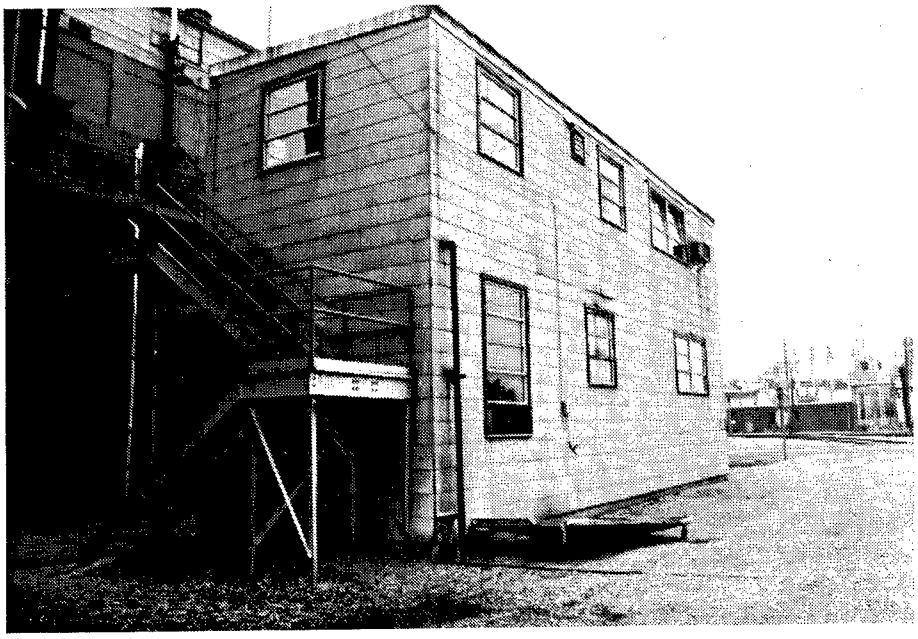


Figure 207. Building A21: Change House and Office.

Figure 208. Building F1: Change House. Note bricked-in transoms and door.

Figure 209. Building F3: Change House. Note bricked-in windows, transoms, and doors.

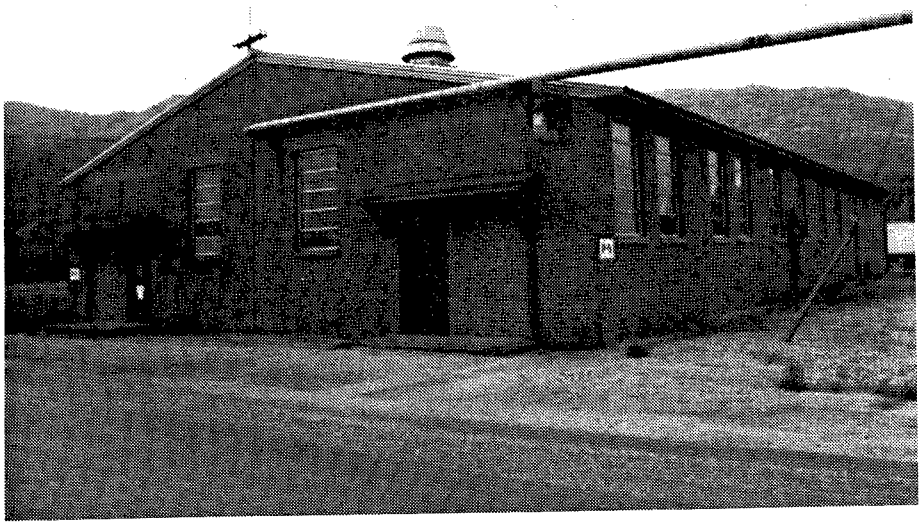


Figure 210. Building P5: Change House. Note bricked-in transoms and doors.

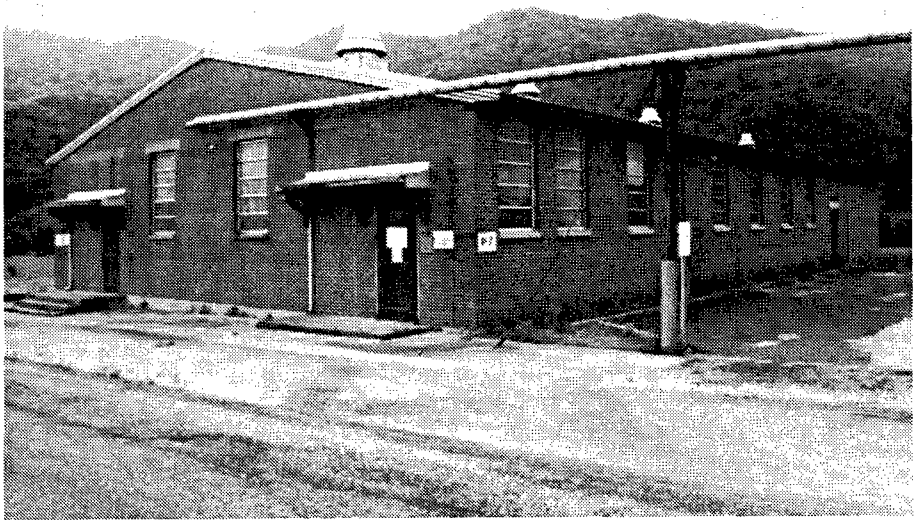


Figure 211. Building P7: Change House. Note bricked-in transoms and doors.

UTILITIES AND INFRASTRUCTURE

Figure 212. Building 6: Guard Headquarters, currently the Security and Safety Building.

Figure 213. Building 7: Fire and Ambulance Station.

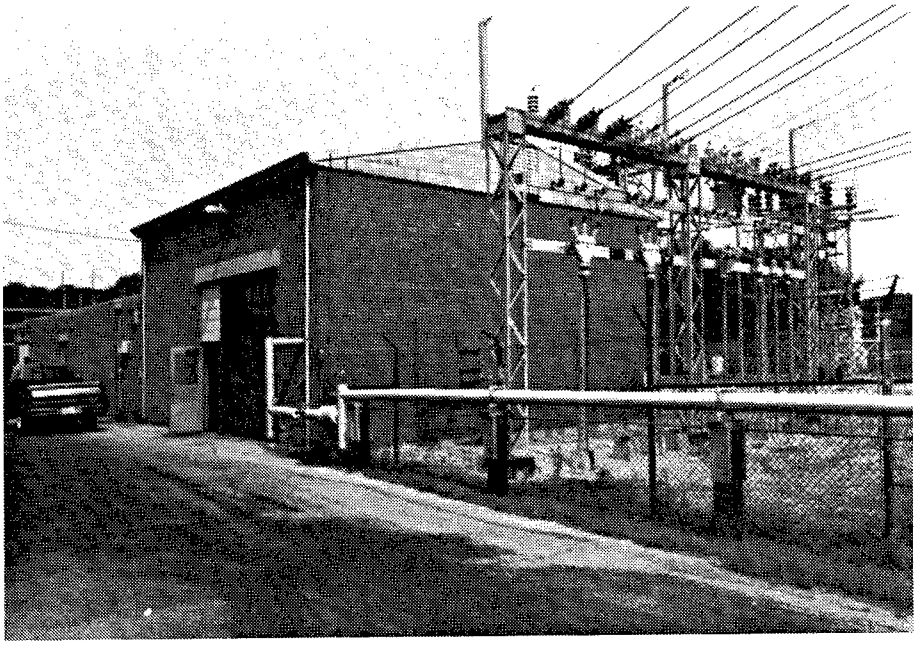


Figure 214. Building 9: Electrical Power Substation.

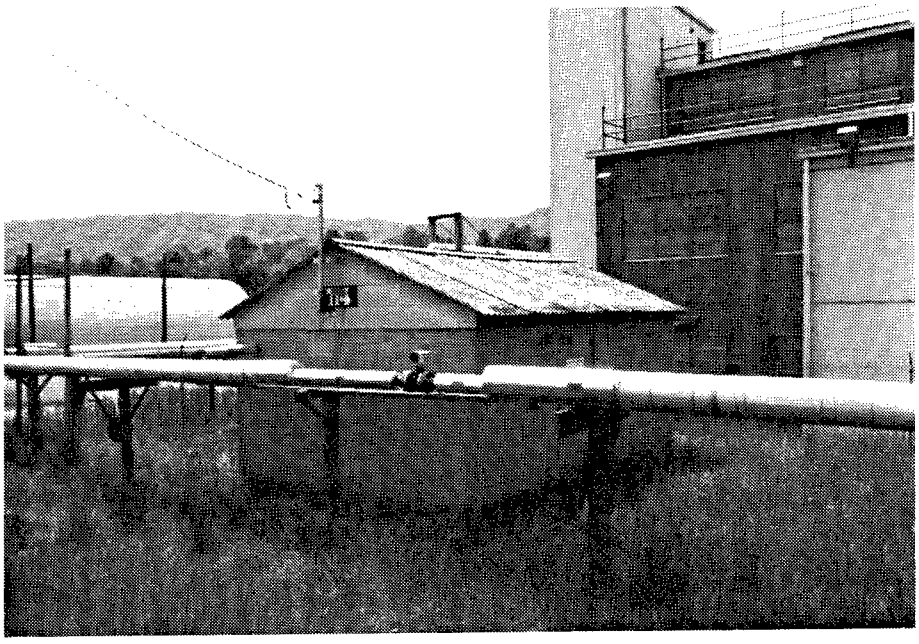


Figure 215. Building 114: Emergency Water Pumping Station.

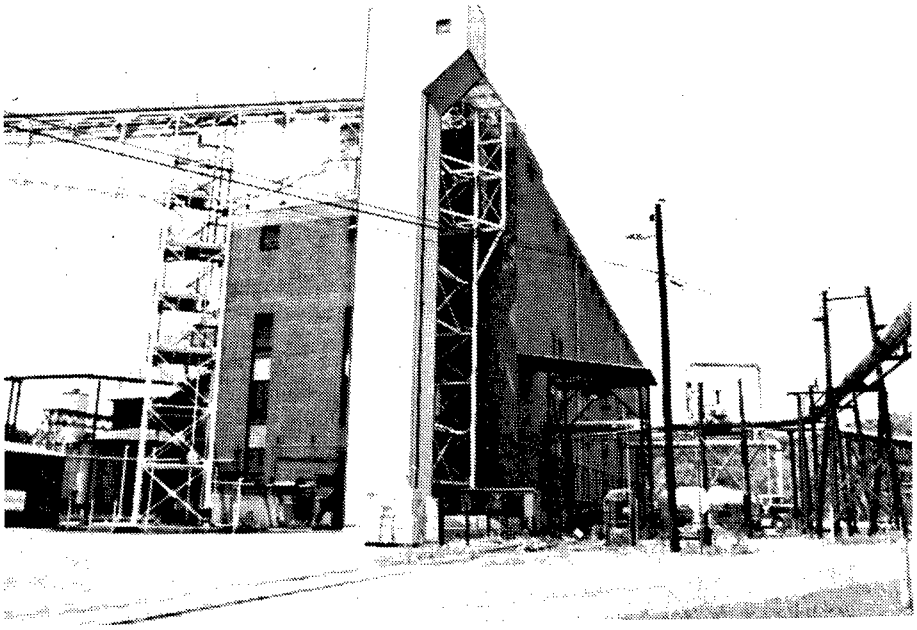


Figure 216. Building 200: Steam Power Plant.

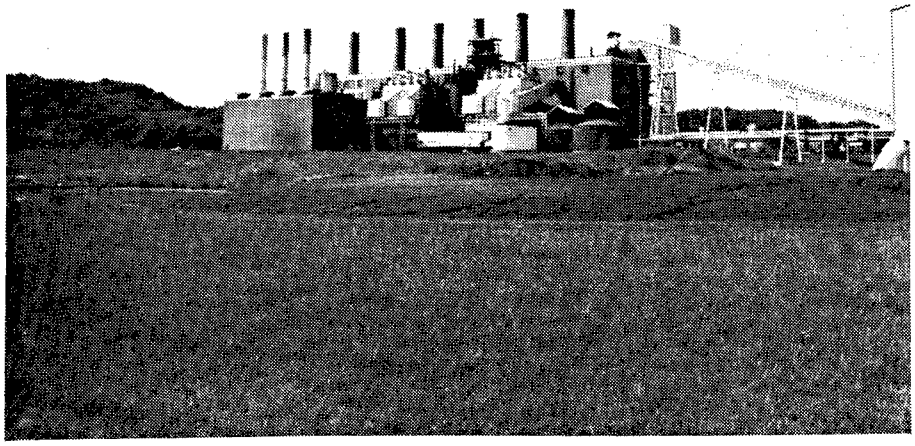


Figure 217. Building 200: Steam Power Plant, rear view.

Figure 218. Building 200: Boiler Room.

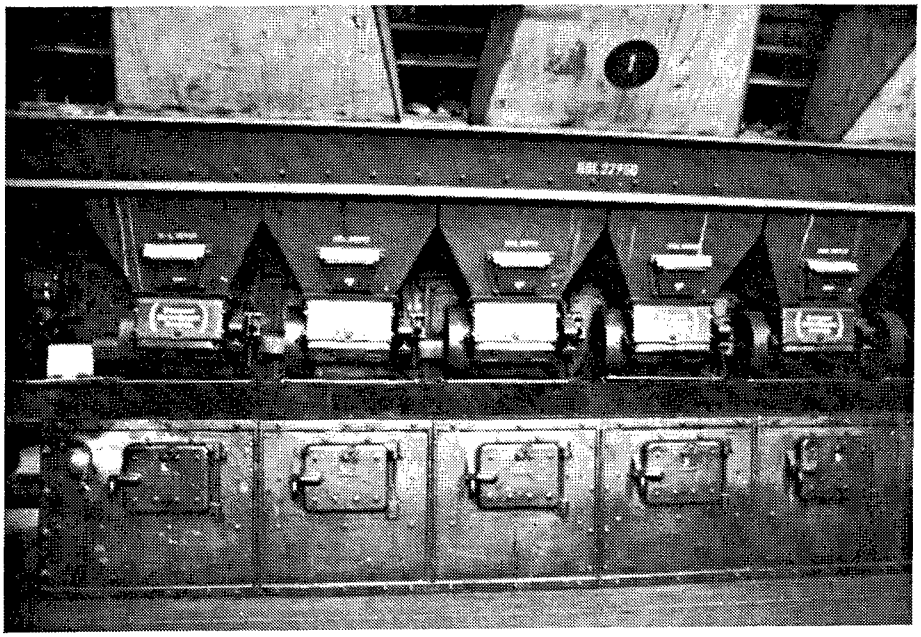


Figure 219. Building 200: Close-up of Detroit RotoGate Stoker No. 1.

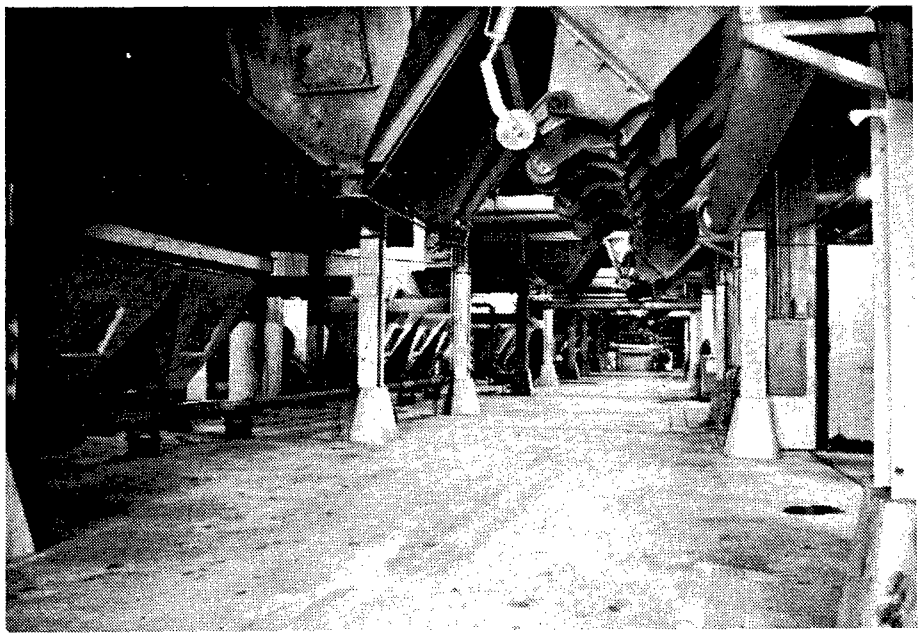


Figure 220. Building 200: Boiler Room.

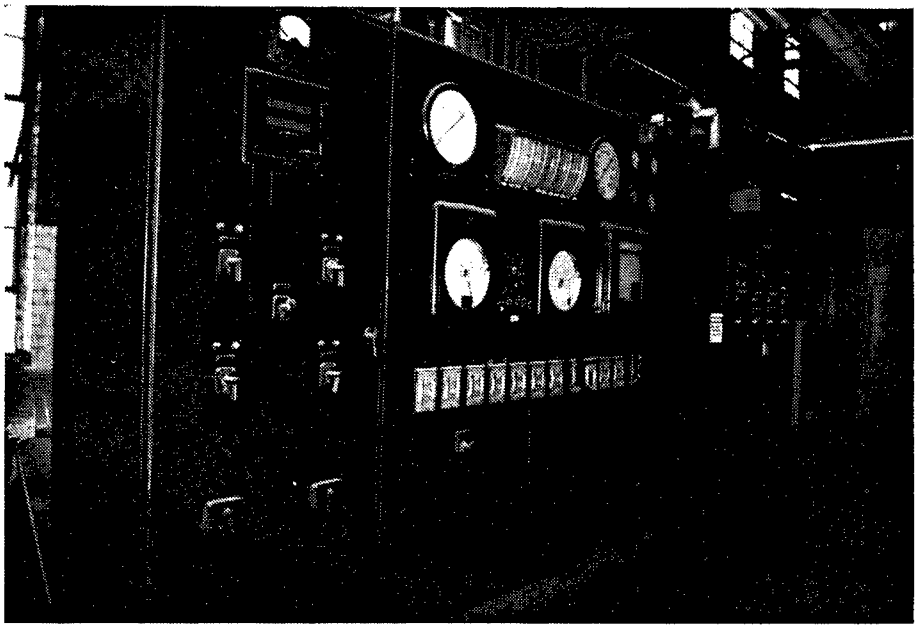


Figure 221. Building 200: Close-up of Control Panel for Pulverized Fuel Stokers.

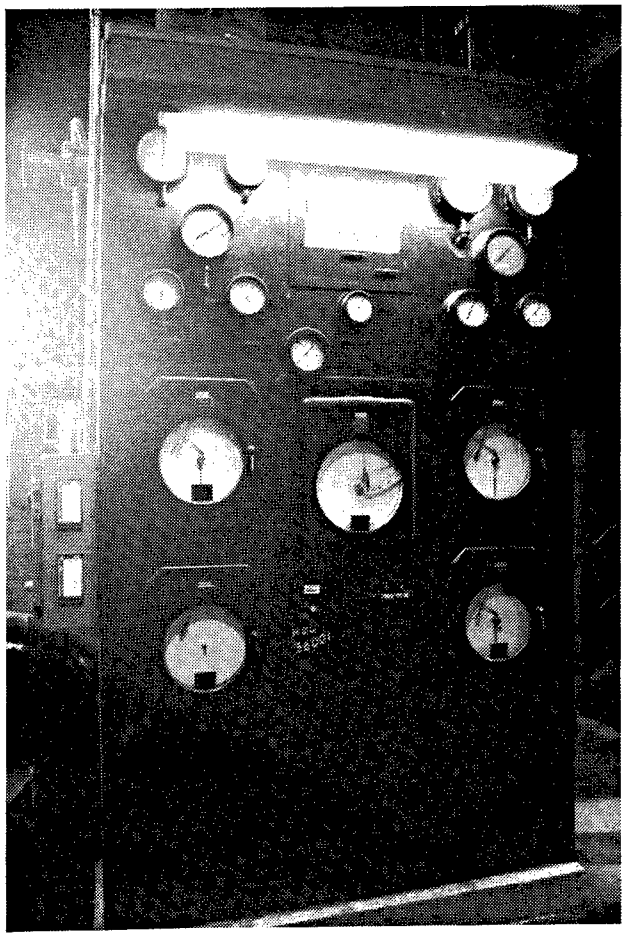


Figure 222. Building 200: Close-up of a Babcock & Wilcox Co. Sterling Boiler Control Panel.

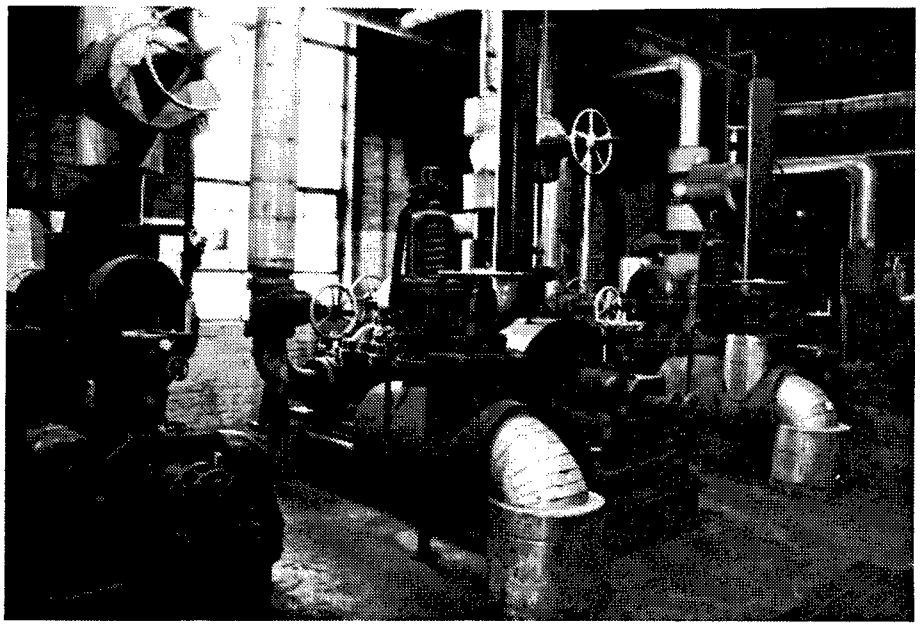


Figure 223. Building 200: Boiler Feed Water Pumps.

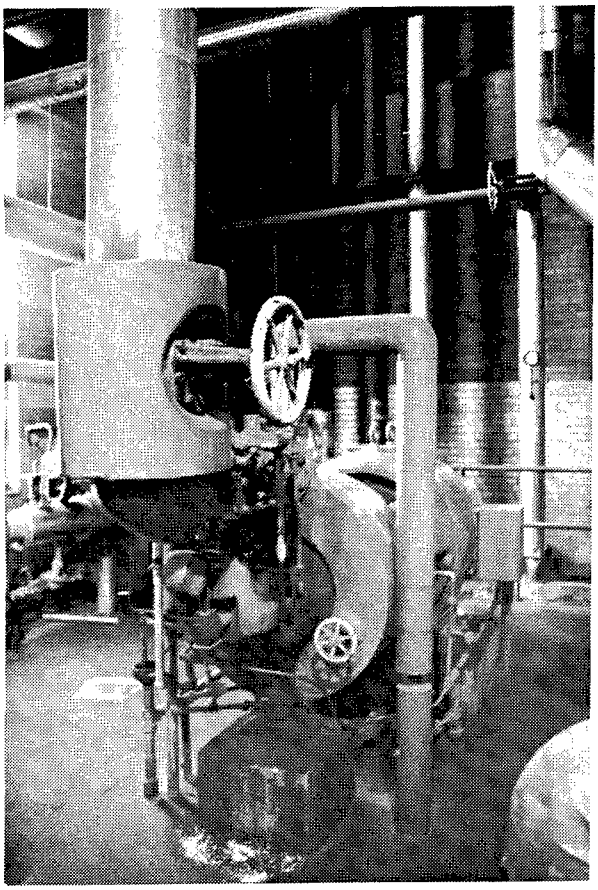


Figure 224. Building 200: Close-up of steam-powered Electricity Generator.

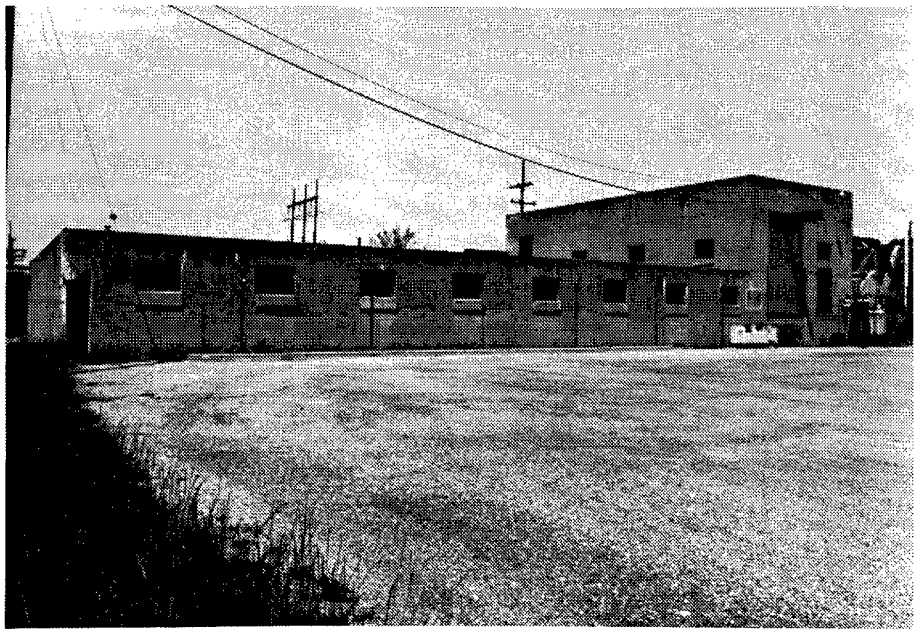


Figure 225. Building 201: Water Pump House.

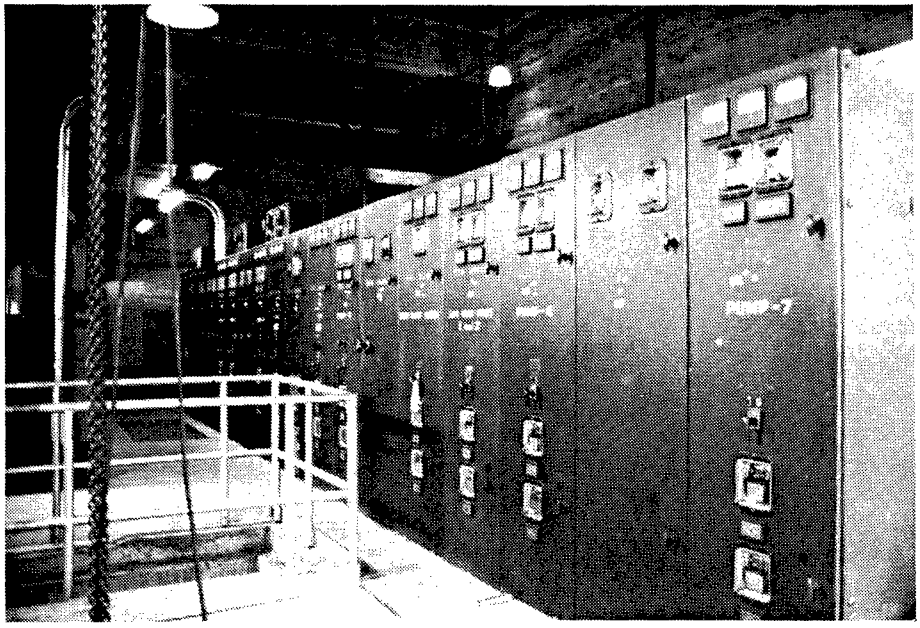


Figure 226. Building 201: Pump House Control Panel.

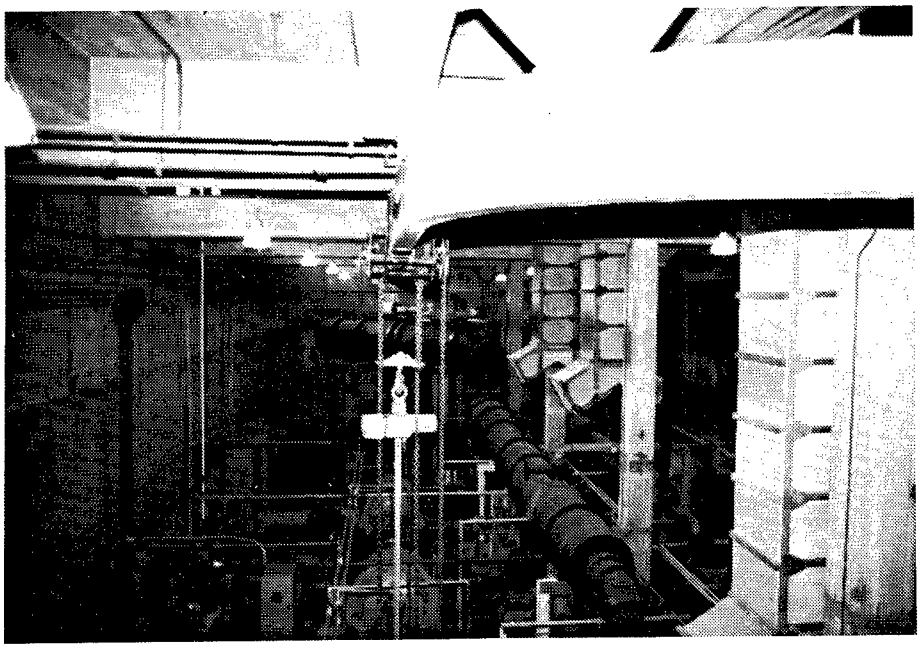


Figure 227. Building 201: Interior of Pump House.

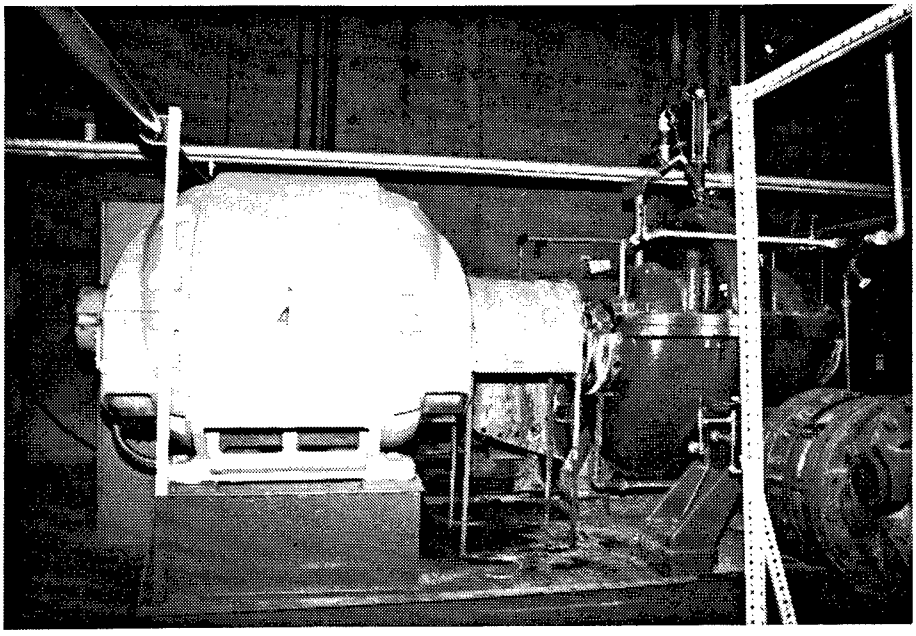


Figure 228. Building 201: Close-up of Water Pump No. 4.

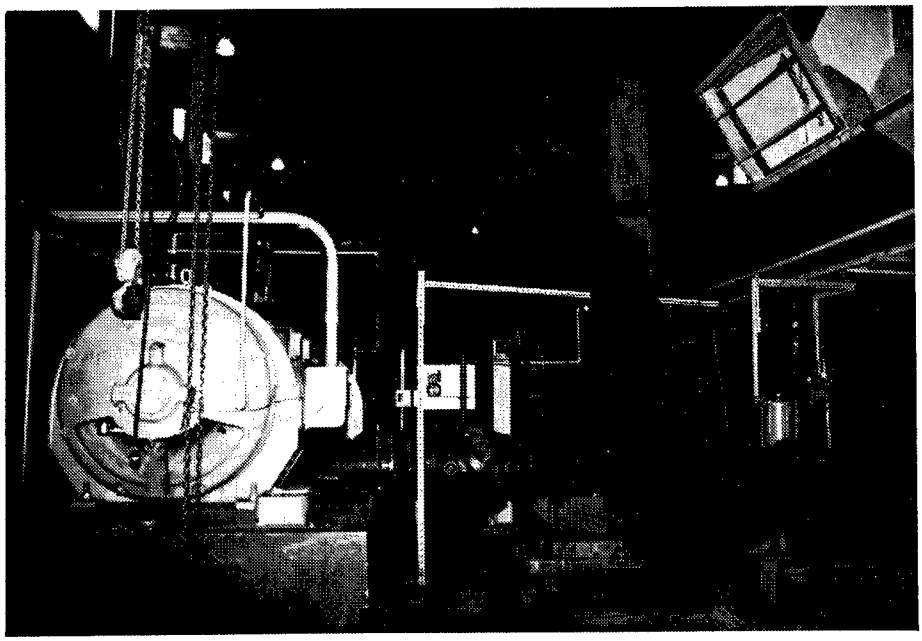


Figure 229. Building 201: Water Pump.

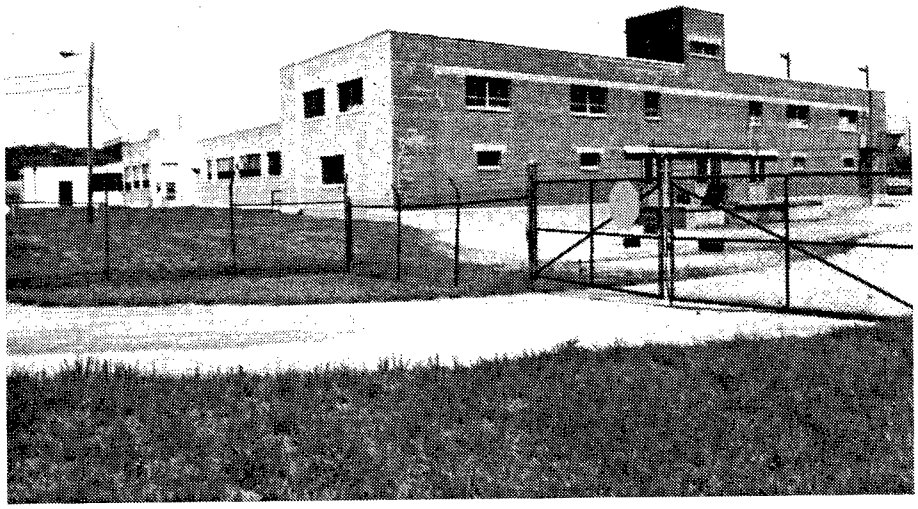


Figure 230. Building 203: Water Supply Building, Water Filtration Plant.

Figure 231. Building 209: Water Pump House.

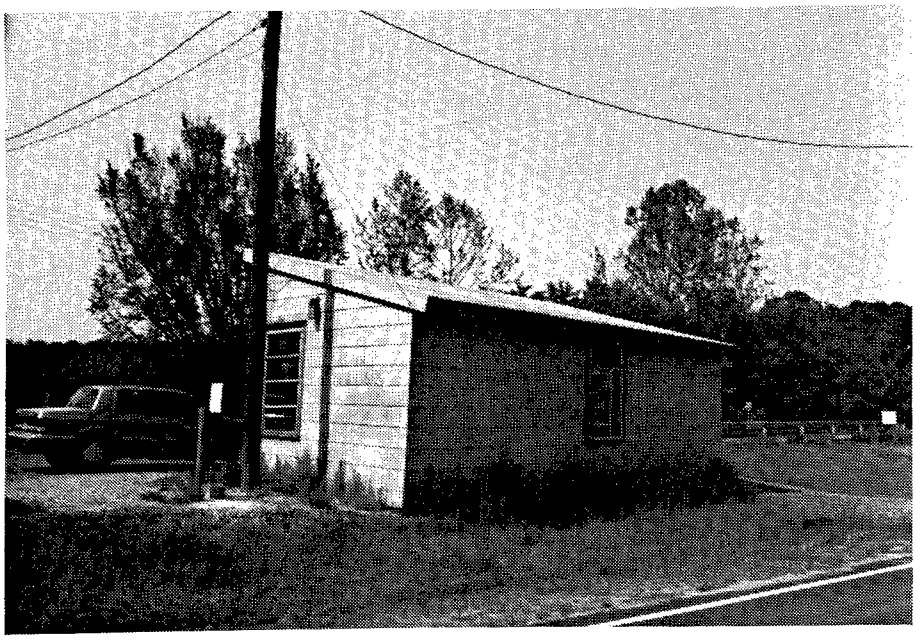


Figure 232. Building 400: Sentry Station, Rest Station Guard House.

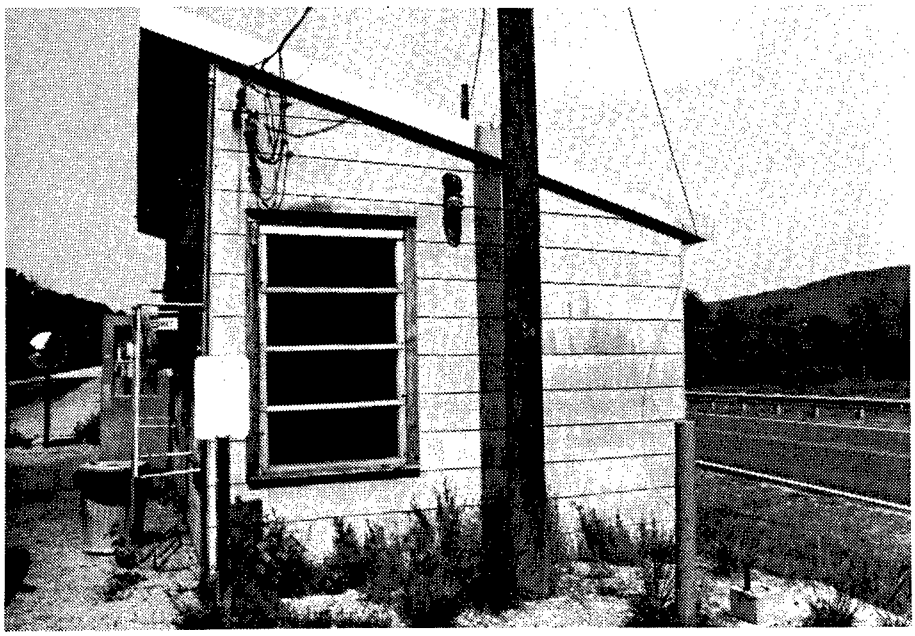


Figure 233. Building 400: Sentry Station, Rest Station Guard House.

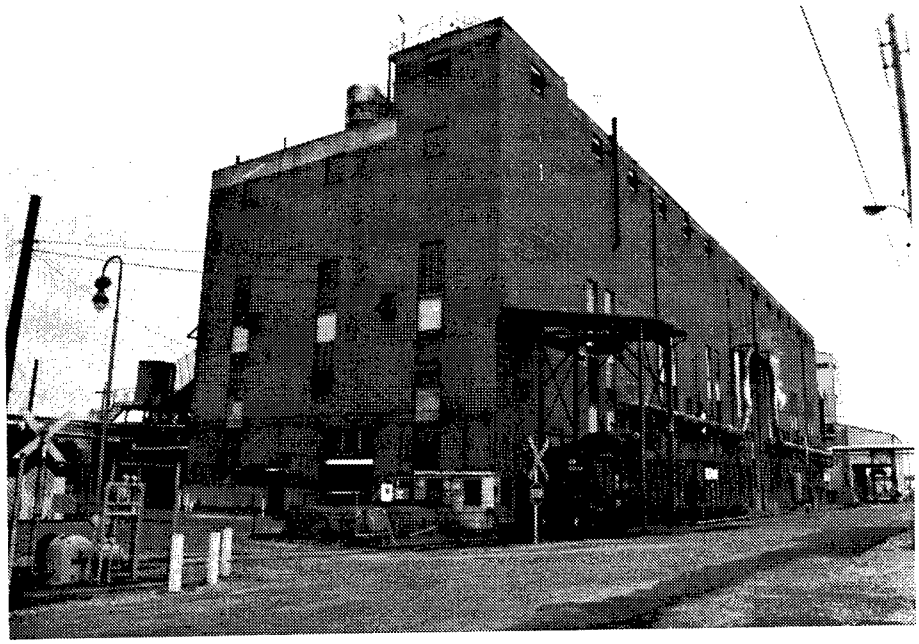


Figure 234. Building A8: Steam Power Plant for Area A.

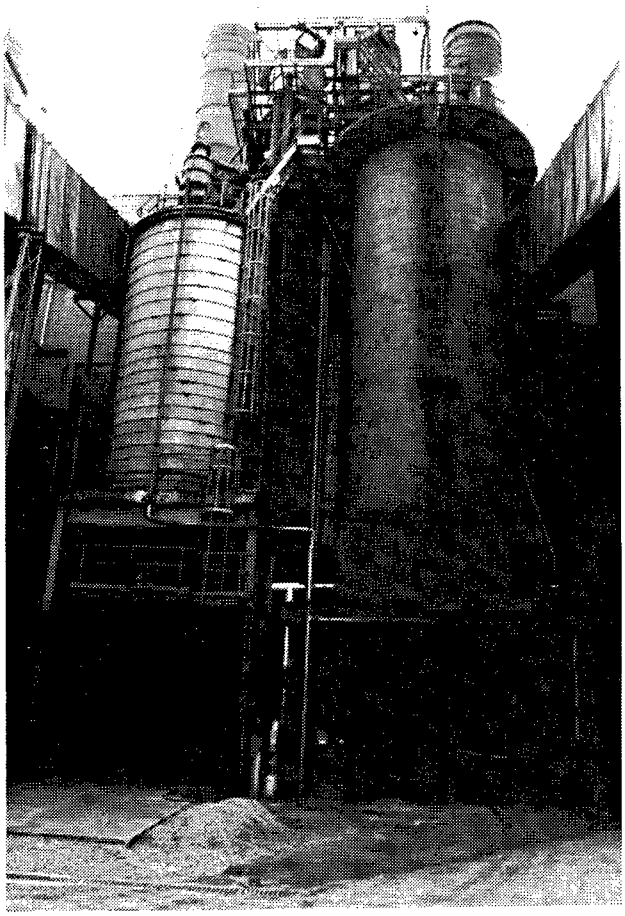


Figure 235. Building A8: Ash Storage Tank.

Figure 236. Building A8: Firite Stokers manufactured by the Hoffman Combustion Engineering Co., Detroit, MI.

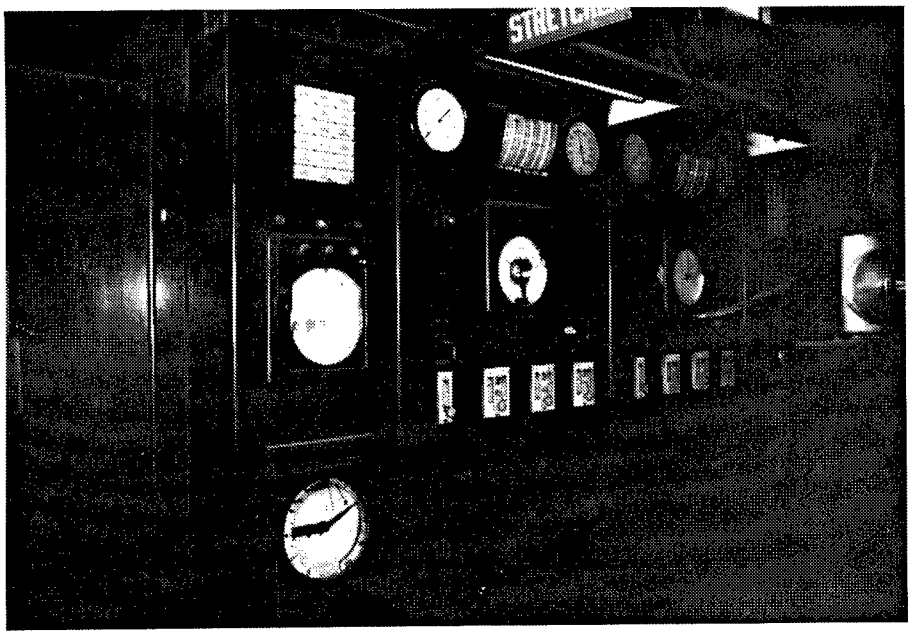


Figure 237. Building A8: Control Panel for Firite Stokers.

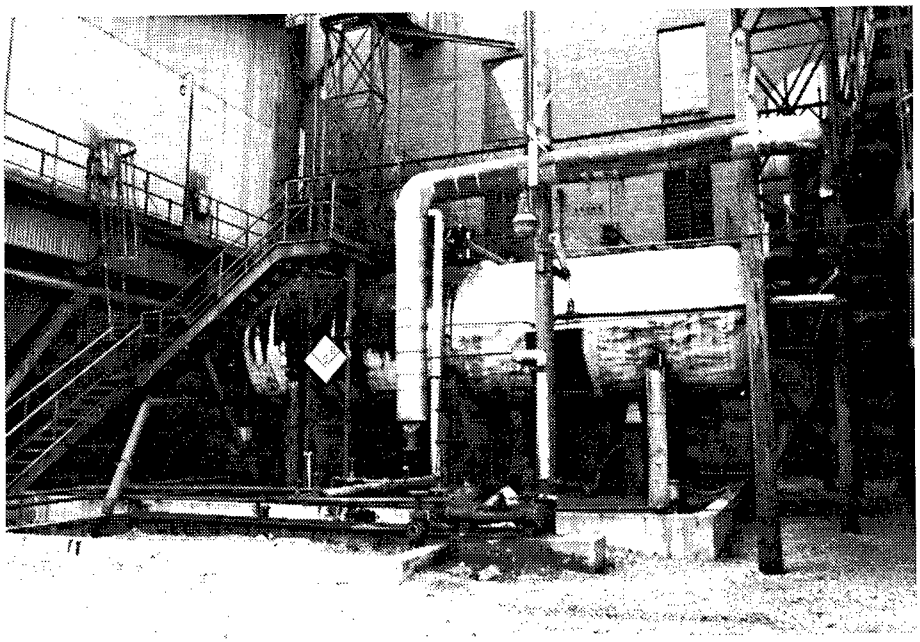


Figure 238. Building A8: Coal Tar Storage Tank.

Figure 239. Building A8: Control Panel for Firite Stokers.

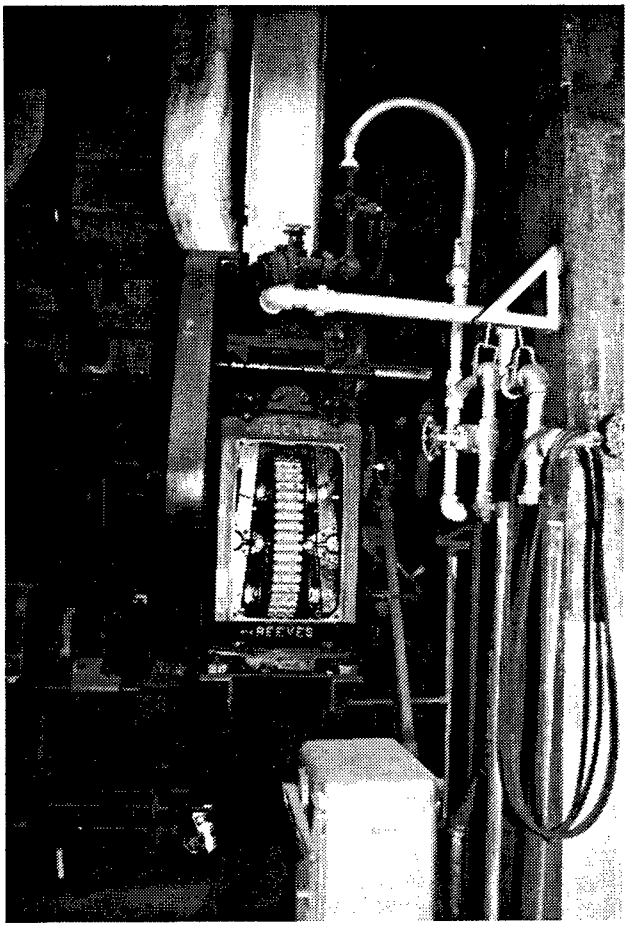


Figure 240. Building A8: Reeves Steam Turbine.

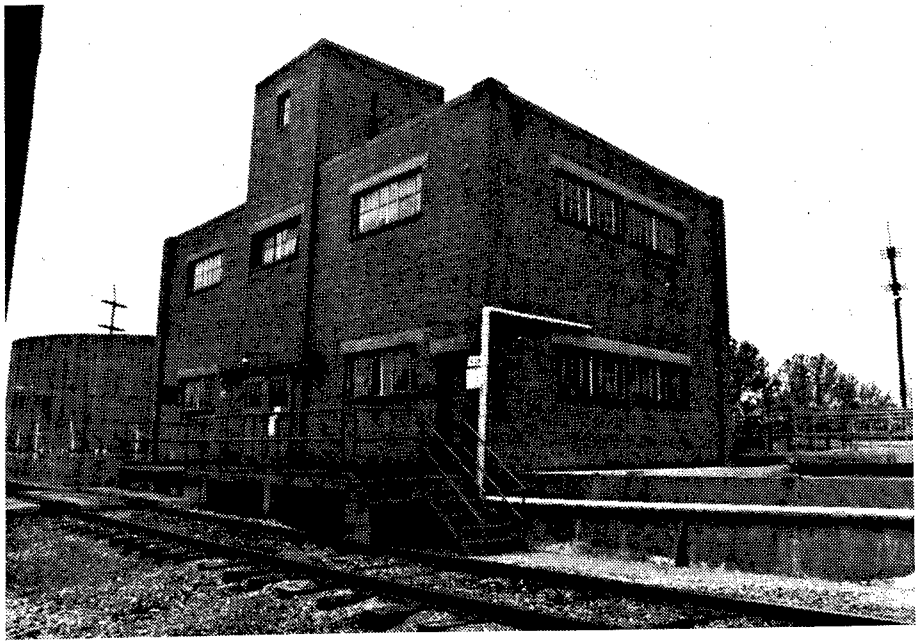


Figure 241. Building A9: Water Filtration Facility, Alum Building.

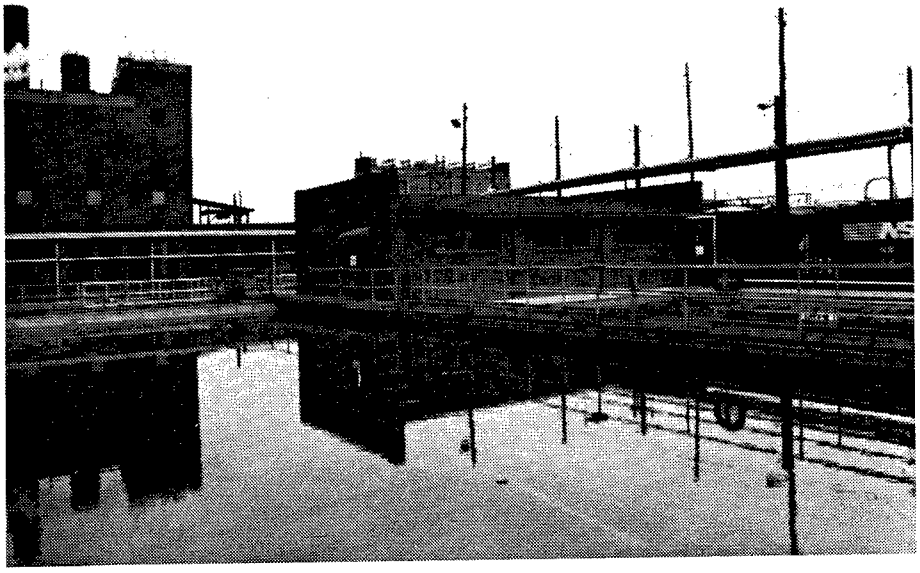


Figure 242. Building A9: Water Filtration Facility, Lime Building.

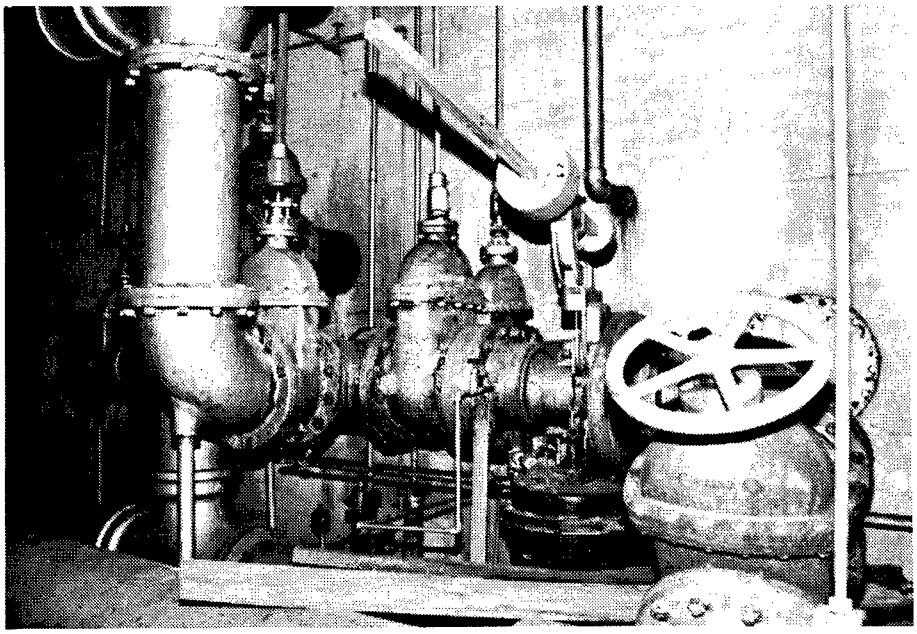


Figure 243. Building A9: Filler and Valve Room equipment, consisting of valves and counter weights, located in the basement of the Water and Sewage Section of the Water Filtration Facility.

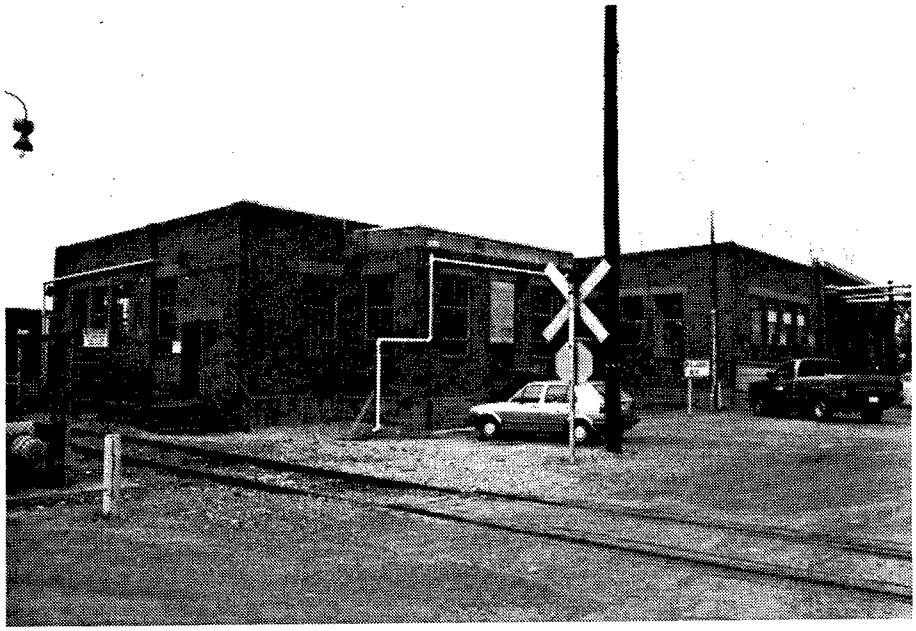


Figure 244. Building A9: Water Filtration Facility Office and Laboratory.

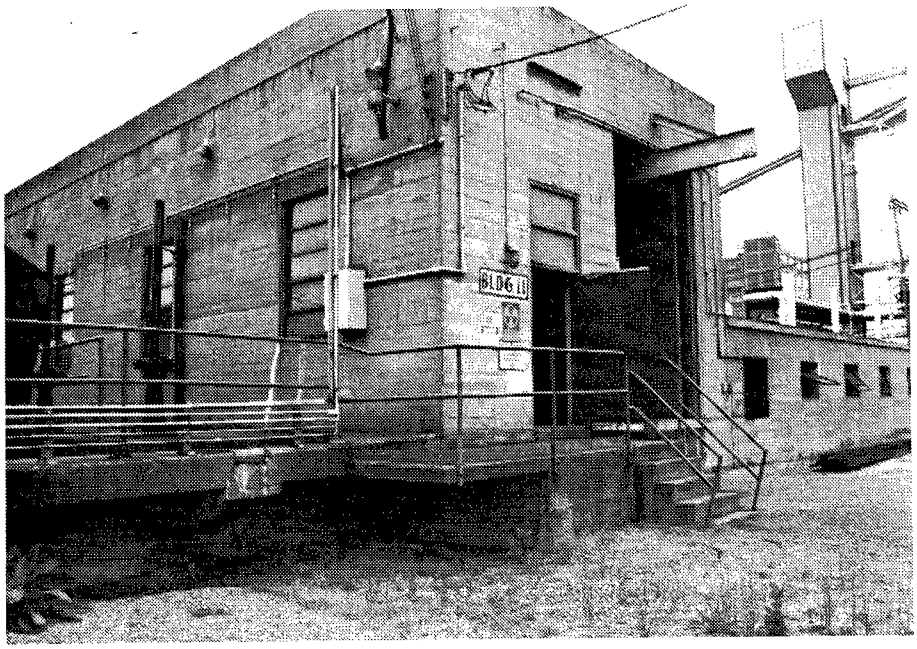


Figure 245. Building A11: Water Pump House.

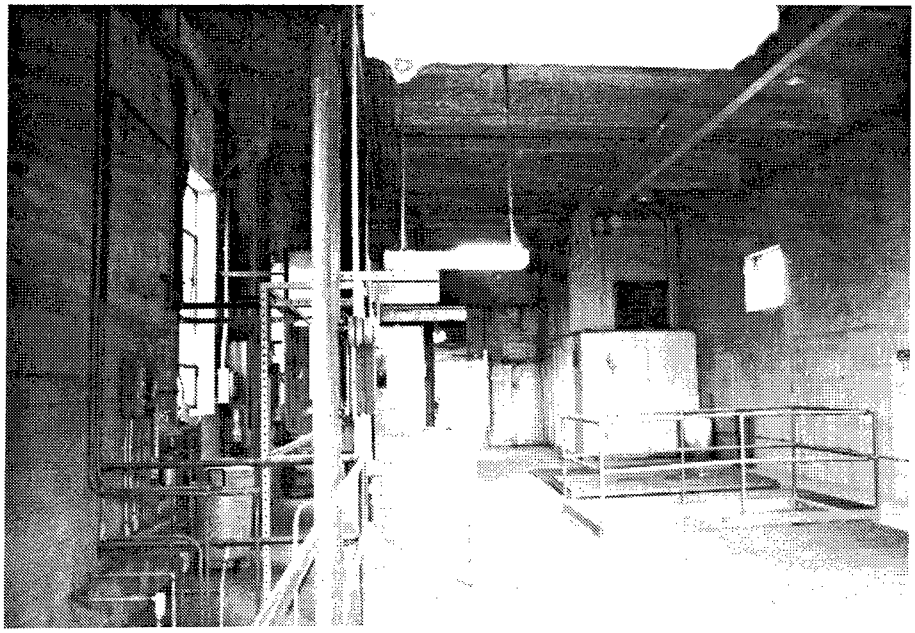


Figure 246. Building A11: Interior of Water Pump House.

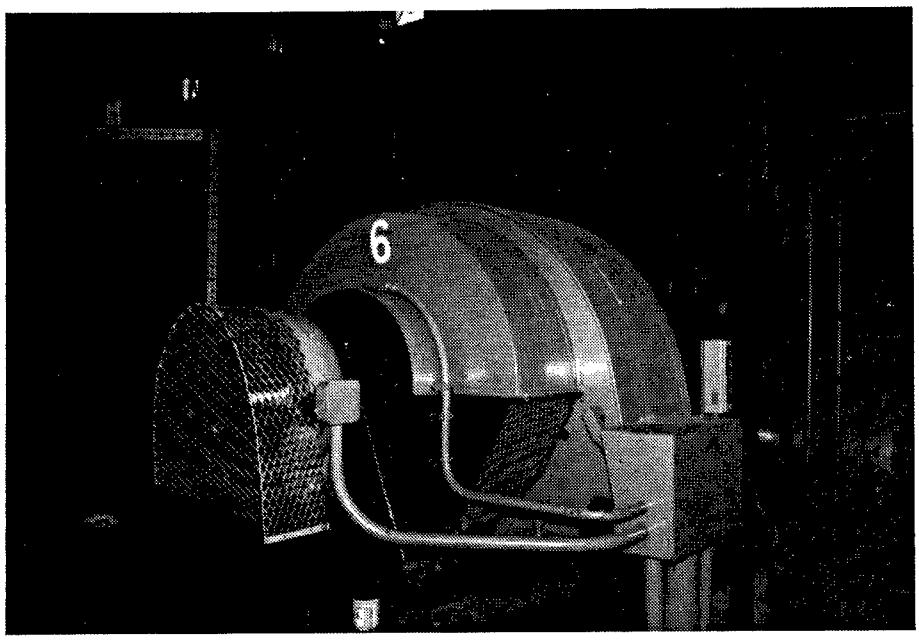


Figure 247. Building A11: Electric Head Pump manufactured by the Electric Machine Co., Minneapolis, MN.

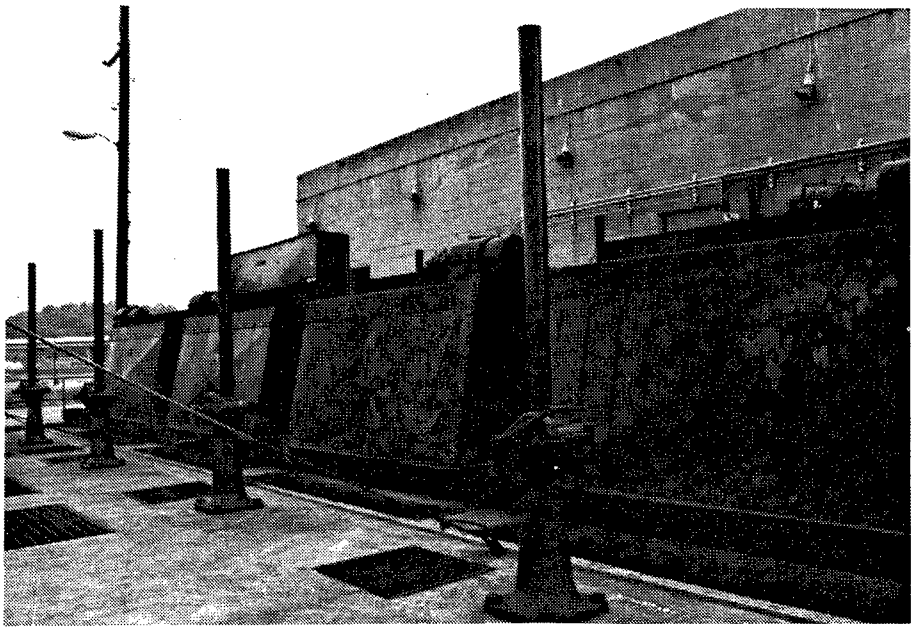


Figure 248. Building A11: Water Pump House Filter Screens manufactured by Linkbelt, Co.

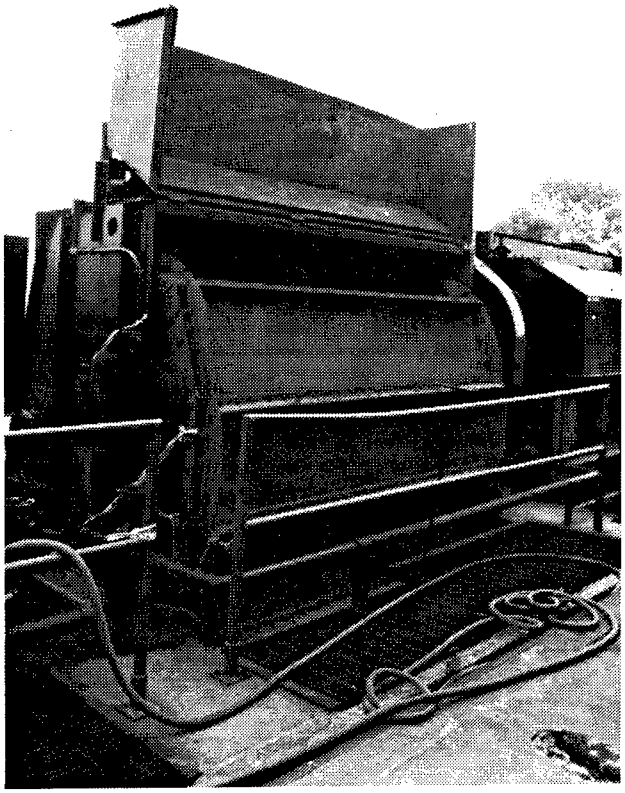


Figure 249. Building A11: Close-up of a Water Pump House Filter Screen.

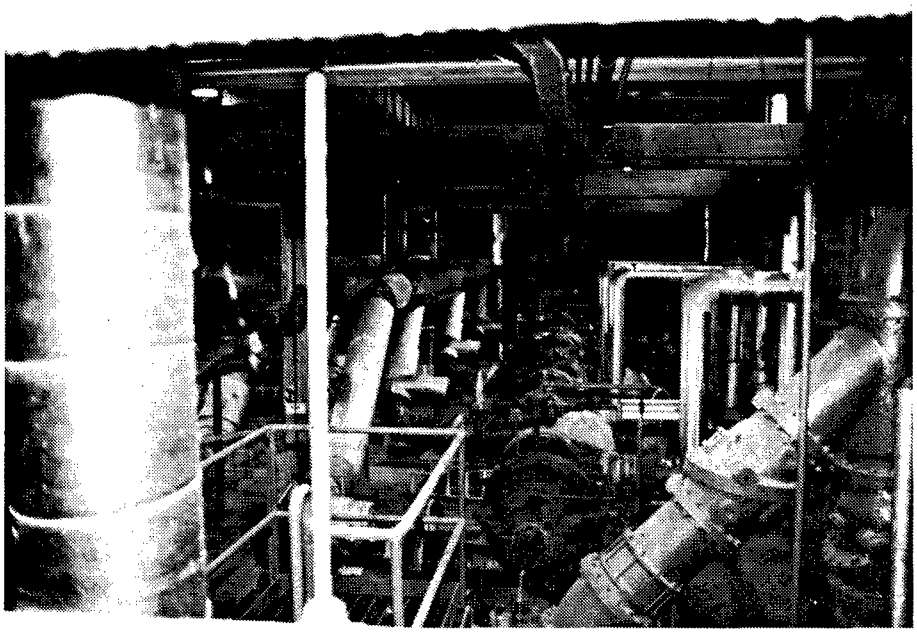


Figure 250. Building A11: Basement of the Pump House.

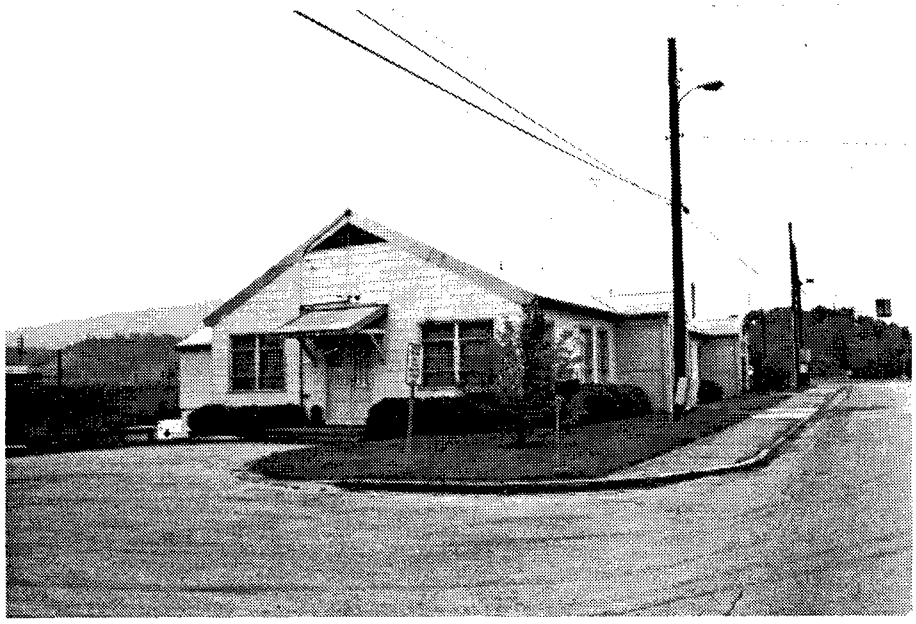


Figure 251. Building A18: Guard House and First Aid for Area A.

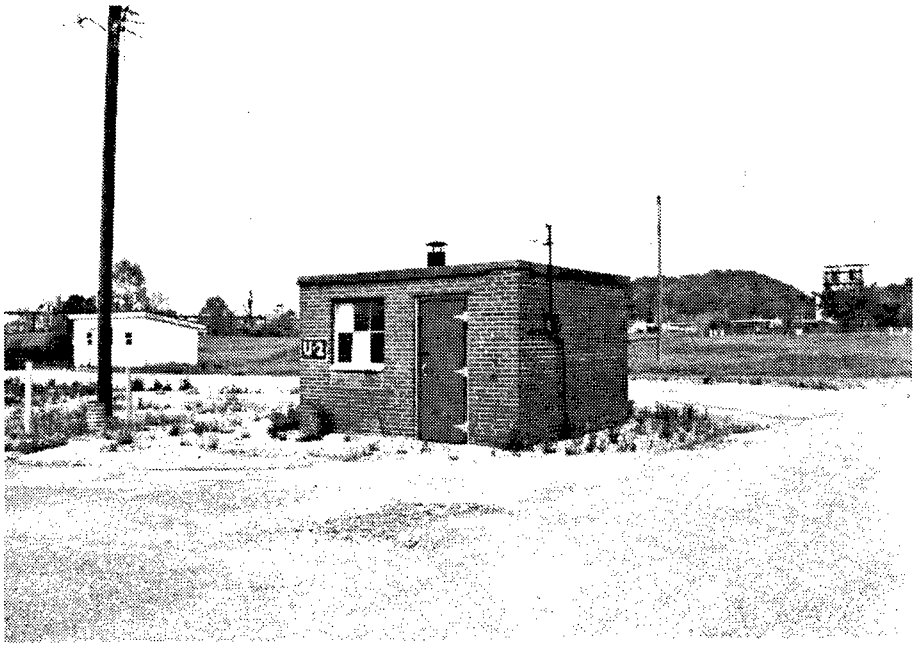


Figure 252. Building U2: Oil Storage Building.

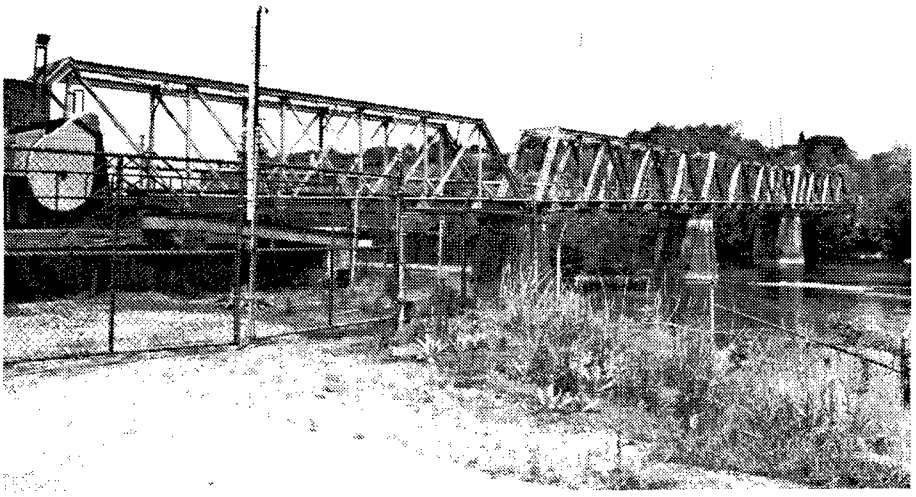


Figure 253. Railroad bridge, located behind Building 201, shown crossing the Holston River.

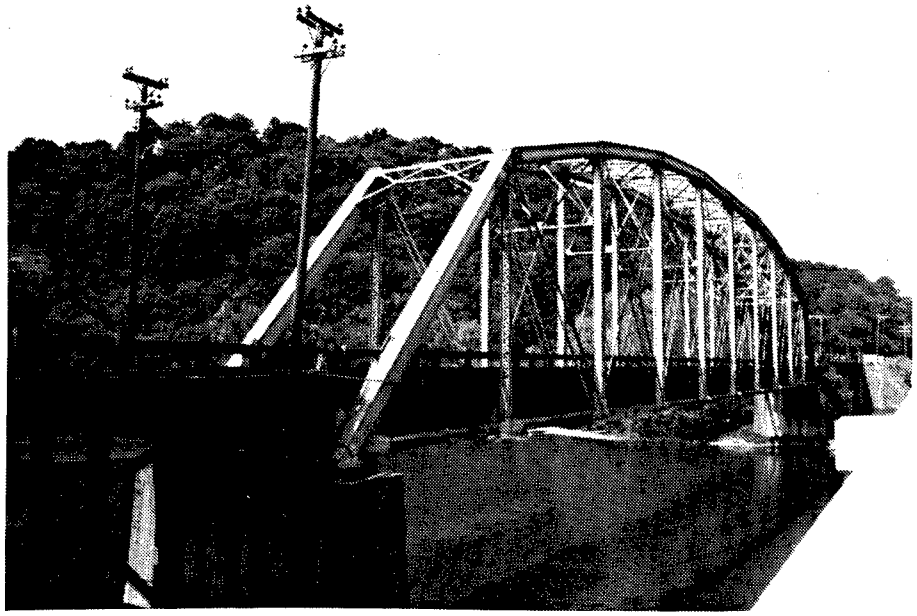


Figure 254. Railroad bridge, shown crossing the Holston River, into Magazine Area.

Figure 255. Vehicle bridge, shown crossing the Holston River, into Magazine Area.

Figure 256. Covered and elevated walkway, or TNT Catwalk, connecting Line "L" and "N" buildings.

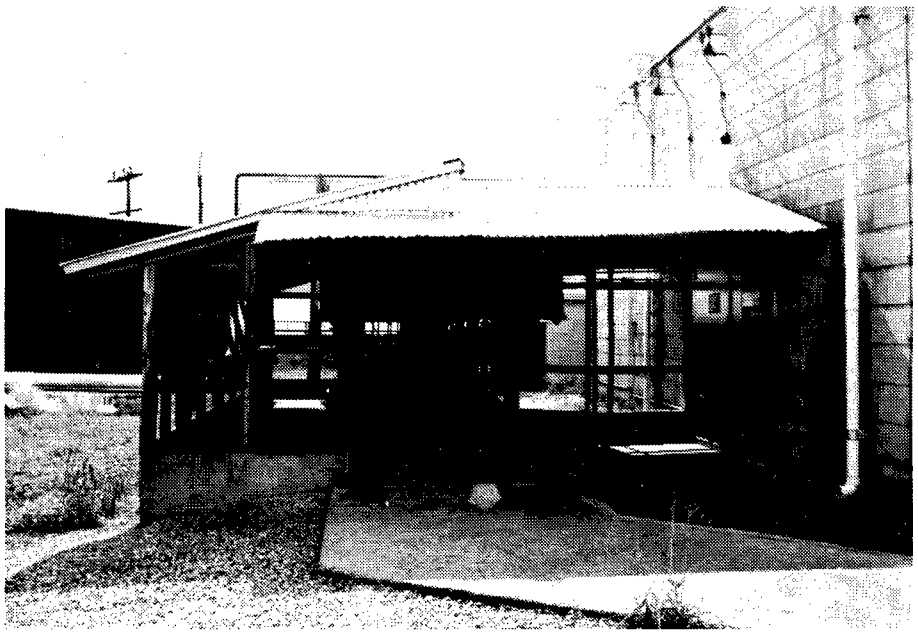


Figure 257. TNT Catwalk and TNT Holding Area.

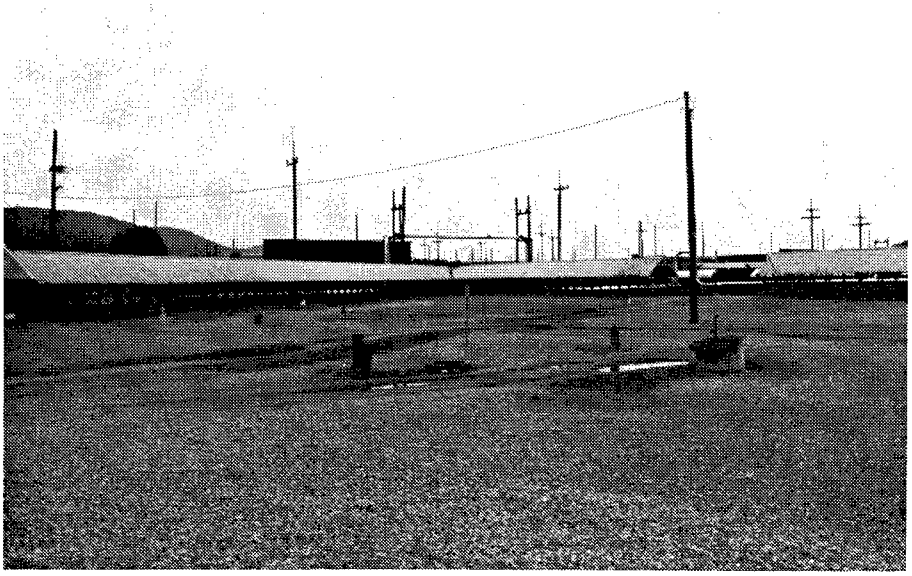


Figure 258. TNT Catwalk connecting Buildings I3 and J3.

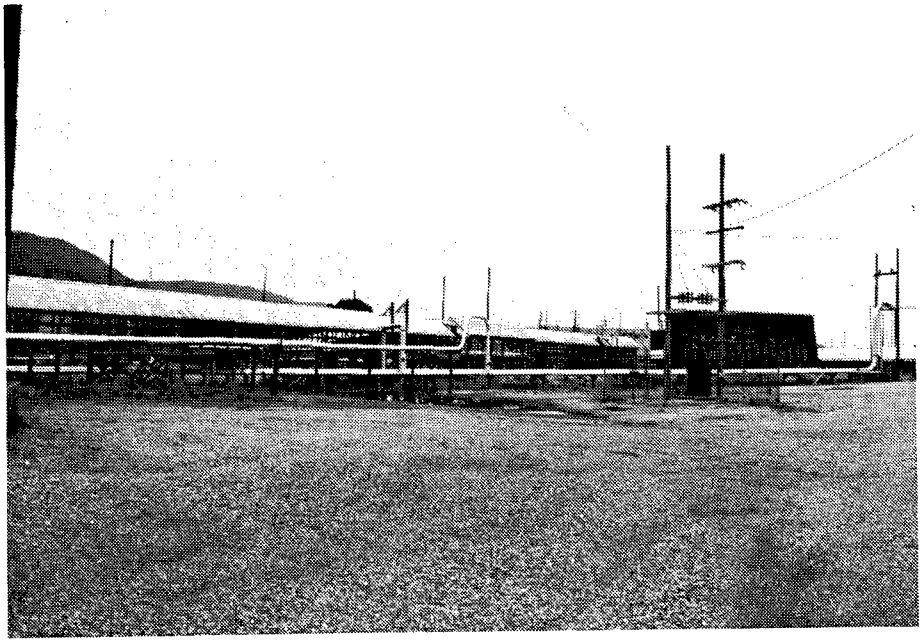


Figure 259. Covered and elevated TNT Catwalk behind Building J3.

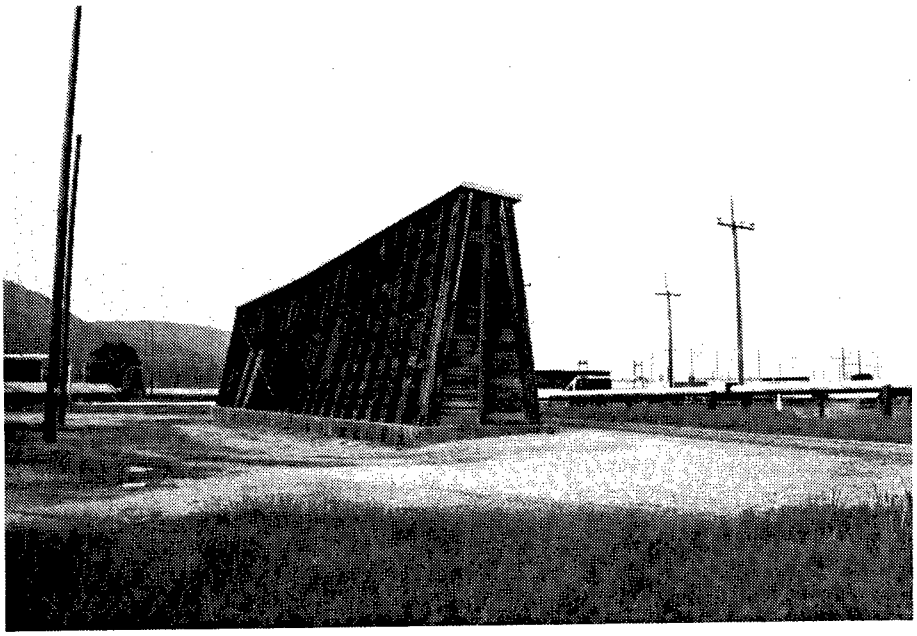


Figure 260. Double-riveted barricade.

Figure 261. Railroad tracks and overhead pipes.

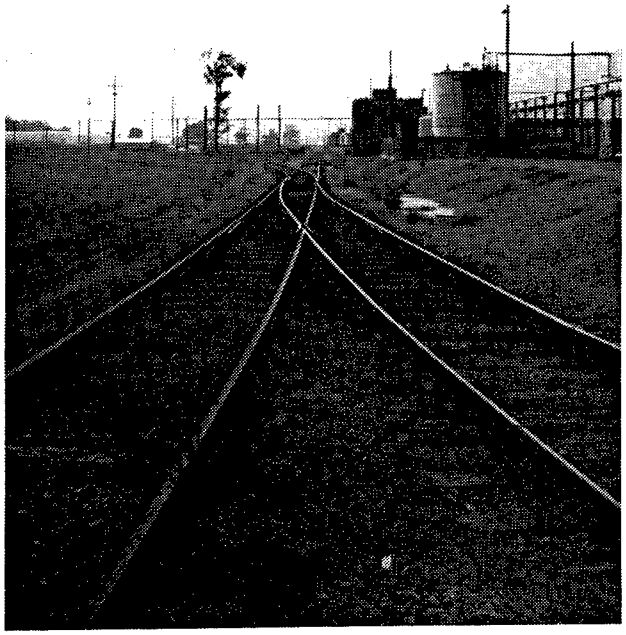


Figure 262. Railroad tracks.

REFERENCES CITED

Kane, K. L.
1995 *Historic Context for the World War II Ordnance Department's Government-Owned Contractor-Operated (GOCO) Industrial Facilities, 1939-1945.* Geo-Marine, Inc., Plano, Texas. Report submitted to the U.S. Army Corps of Engineers, Fort Worth District.

MacDonald and Mack Partnership
1984 *Historic Properties Report: Holston Army Ammunition Plant, Kingsport, Tennessee.* Submitted to Building Technology Incorporated, Silver Spring, Maryland, and the Historic American Building Survey/Historic American Engineering Record, National Park Service, U.S. Department of the Interior.

APPENDIX A

PHOTOGRAPHIC DATA SHEETS

GEO-MARINE INC.

PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 1

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
2	1	General Instruction Building. Presently used as Naval Reserve Permit Building.	NE	05/08/95	Krapf
3	1	General Instruction Building. Presently used as Naval Reserve Permit Building.	NE	05/08/95	Krapf
4	4	Clinic with beds	SW	05/08/95	Krapf
5	4	Clinic with beds	SW	05/08/95	Krapf
6	2	Civilian Personell Building; currently used for administrative purposes.	NE	05/08/95	Krapf
7	12	General Instruction Building; presently used for instruction and training.	SW	05/08/95	Krapf
8	12	General Instruction Building; presently used for instruction and training.	SW	05/08/95	Krapf
9	6	Guard Headquarters; currently the Security and Safety Building	S	05/08/95	Krapf
10	8	Ammunition Quality Control Facility and Central Laboratory	SE	05/08/95	Krapf
11	7	Fire and Ambulance Station	NW	05/08/95	Krapf
12	9	Electrical Power Substation	NW	05/08/95	Krapf
13	9	Electrical Power Substation	NW	05/08/95	Krapf
14	107	Change House	NE	05/08/95	Krapf
15	107	Change House	NE	05/08/95	Krapf
16	109	General Purposes; Shop Office	NW	05/08/95	Krapf
17	104	Maintenance Building, Carpentry Shop	NW	05/08/95	Krapf
18	101	General Purpose Warehouse	NE	05/08/95	Krapf
19	103	Receiving and Storage Warehouse	SW	05/08/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 1

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
20	103	Receiving and Storage Warehouse	SW	05/08/95	Krapf
21	100	Maintenance Building, Machine and Metal Shop	SE	05/08/95	Krapf
22	100	Machining, Welding, Metal Fabrication, and Pipe fitting are done in this building.		05/08/95	Krapf
23	100	Vertical Shaper-Metal Shaper, HOL 8617, Morey Machinery Co. New York		05/08/95	Krapf
24	100	Closeup of Vertical Shaper-Metal Shaper; "BUILT FOR FRASER & BRACE ENG. CO, 3/1943", Order #6736, Serial #M-143-VS 12		05/08/95	Krapf
25	100	Radial Drill Press US DTP 2066; Manufactured by Cincinati Brickford Tool Co., Cincinati OH		05/08/95	Krapf
26	100	Overhead Bridge Crane with a 7.5 ton lift capacity manufactured by Chishomn-Moore Hoist Corp., Tonwanda, NY		05/08/95	Krapf
27	100	Power Brake to form and shape metal; serial #0287, manufactured by the Dreis and Krump Mfg. Co., Chicago		05/08/95	Krapf
28	100	Pipe Bender, manufactured by Logansport Machine, Inc., Logansport, IN (model #6035, serial #83217)		05/08/95	Krapf
29	100	Auxillary Air Compressor manufactured by the Pennsylvania Company		05/08/95	Krapf
30	102	Maintenance Building, Instrument and Electric Shop	SE	05/08/95	Krapf
31	105	Automobile Service and Gas Station	NW	05/08/95	Krapf
32	106	Laundry Facility	NE	05/08/95	Krapf
33	114	Emergency Water Pumping Station	SE	05/08/95	Krapf
34	203	Water Supply Building, Water Filtration Plant	NW	05/08/95	Krapf
35	200	Steam Power Plant	SW	05/08/95	Krapf
36	200	Steam Power Plant	SW	05/08/95	Krapf

GEO-MARINE INC.

PHOTOGRAPHIC DATA SHEET

Project #: 1114-089

Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant

Roll Number: 1

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
37	315	Ammo Quality Control Facility, Office, and Acid Laboratory	NW	05/08/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 2

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
1	315	Ammo Quality Control Facility, Office, and Acid Laboratory	NW	05/08/95	Krapf
2	321	Maintenance Building, Repair Shop, and Office	NW	05/08/95	Krapf
3	322	Change House for the Nitric Acid Area	NW	05/08/95	Krapf
4	330	Tanks on the north side of the Acid Manufacturing Plant and Ammonia Nitrate Mixing Plant	NW	05/08/95	Krapf
5	330	Tanks on the north side of the Acid Manufacturing Plant and Ammonia Nitrate Mixing Plant	NW	05/08/95	Krapf
6	330P	Ammonia Nitrate Pump House	SW	05/08/95	Krapf
7	302	Acid Manufacturing Plant, Ammonia Oxidation Plant	SW	05/08/95	Krapf
8	328	Administrative General Purpose Building, Nitric Acid Area Office	NW	05/08/95	Krapf
9	302B	Ammonia Oxidation Plant Pump House	NW	05/08/95	Krapf
10	312	Acid Manufacturing Plant, Ammonia Compressor House	NE	05/08/95	Krapf
11	312	Acid Manufacturing Plant, Ammonia Compressor House	NE	05/08/95	Krapf
12	201	Water Pump House	NE	05/08/95	Krapf
13		Railroad Bride over Holston River behing Building 201	NE	05/08/95	Krapf
14	556	Maintenance Building, Heavy Equipment Shop	NE	05/08/95	Krapf
15	556	Maintenance Building, Heavy Equipment Shop	NE	05/08/95	Krapf
16	558	Storage Warehouse, Heavy Equipment Parts and Shop	NE	05/08/95	Krapf
17	209	Water Pump House	S	05/08/95	Krapf
18	209	Water Pump House	S	05/08/95	Krapf
19	CM21	High Explosives Magazine, Ammunition Igloo	SW	05/08/95	Krapf
20	CM21	High Explosives Magazine, Ammunition Igloo	SW	05/08/95	Krapf

GEO-MARINE INC.

PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 2

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
21	CM64	High Explosives Magazine, Ammunition Igloo	SW	05/08/95	Krapf
22	400	Sentry Station, Rest Station Guard House	NW	05/08/95	Krapf
23	400	Sentry Station, Rest Station Guard House	NE	05/08/95	Krapf
24		Old Railroad Bridge over Holston River	NW	05/08/95	Krapf
25		Old Road that leads into Magazine Area	SW	05/08/95	Krapf
26	200	Steam Power Plant, rear view	NW	05/08/95	Krapf
27		VOID		05/08/95	Krapf
28	318P	Ammonia Refrigeration Building	NW	05/08/95	Krapf
29	A1	Organic Acid Laboratory and Administration Building located in Area A	NE	05/09/95	Krapf
30	A505	Maintenance Building, Carpentry Shop	SE	05/09/95	Krapf
31	A13	General Purpose Warehouse, Maintenance Shop	SW	05/09/95	Krapf
32	A5	Refrigeration Plant Building	SW	05/09/95	Krapf
33	A5	Interior Refrigeration Units; HOL 246 25-4, 500 ton unit, Carrier Centrifugal Compressor Model 17P, size 64, serial #756, Carrier Corp., Syracuse NY		05/09/95	Krapf
34	A5	Interior Refrigeration Units; HOL 246 25-4, 500 ton unit, Carrier Centrifugal Compressor Model 17P, size 64, serial #756, Carrier Corp., Syracuse NY		05/09/95	Krapf
35	A5	Interor of the Refrigeration Building		05/09/95	Krapf
36	A4	Shop Offices, Canteen and Storage	NW	05/09/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 3

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
1	A6	Anhydride Refining Building	NW	05/09/95	Krapf
2	A7	Anhydride Refining Building	SW	05/09/95	Krapf
3	A6	Base Heater of an Azeotrophic Still on the third floor. Manufactured by Brighton Copper Co., 1942 (TENN #A-85, HOL# 24899, operating pressure = 100)		05/09/95	Krapf
4	A6	Feed Heater of an Azeotrophic Still on the third floor. Manufactured by Brighton Copper Co.		05/09/95	Krapf
5	A6	The NO. #1 Anhydride Still on the thrid floor.		05/09/95	Krapf
6	A6	Control Panel for Anhydride Stills		05/09/95	Krapf
7	A6	Control Panel for Anhydride Stills		05/09/95	Krapf
8	A6	Return Acid Column		05/09/95	Krapf
9	A6	An overhead view of the Ball Mill on the first floor		05/09/95	Krapf
10	A6	Another view of the Ball Mill		05/09/95	Krapf
11	A7	Acetic Anhydride Furnace		05/09/95	Krapf
12	A7	Acetic Anhydride Furnace		05/09/95	Krapf
13	A7	Control Panel for Acetic Anhydride Furnaces		05/09/95	Krapf
14	A7	Control Panel for Acetic Anhydride Furnaces		05/09/95	Krapf
15	A20	Control Panel for Acetic Anhydride Furnaces		05/09/95	Krapf
16	A20	Control Panel for Acetic Anhydride Furnaces		05/09/95	Krapf
17	A20	Anhydride making Building	NW	05/09/95	Krapf
18	A10	Gas Generating Plant	NW	05/09/95	Krapf
19	A10	Gas Generating Plant	NW	05/09/95	Krapf
20	A10	Gas Producing Tank #5 located in the basement		05/09/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 3

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
21	A10	Gas Producing Tank #5 located in the basement		05/09/95	Krapf
22	A10	Gas Producing Tank #5 located in the basement		05/09/95	Krapf
23	A10	Gas Producing Tank #5 located in the basement		05/09/95	Krapf
24	A10	An off take on a Gas Producing Tank located on the first floor		05/09/95	Krapf
25	A10	An off take on a Gas Producing Tank located on the first floor		05/09/95	Krapf
26	A10	A Coal Feeder and Agitator (order #9182, patented 4/18/1922) manufactured by the Cooper Bessemer Corp., Mt. Vernon OH		05/09/95	Krapf
27	A10	A Coal Feeder and Agitator (order #9182, patented 4/18/1922) manufactured by the Cooper Bessemer Corp., Mt. Vernon OH		05/09/95	Krapf
28	A10	A Coal Feeder and Agitator (order #9182, patented 4/18/1922) manufactured by the Cooper Bessemer Corp., Mt. Vernon OH		05/09/95	Krapf
29	A10	Control Panel for a Gas Producing Tank manufactured by Semetsolvzy Engineering Corp., NY		05/09/95	Krapf
30	A10	Control Panel for a Gas Producing Tank manufactured by Semetsolvzy Engineering Corp., NY		05/09/95	Krapf
31	A10	Exhaustor for Gas Producing Tank manufactured by Ingeroil-Rand Co.		05/09/95	Krapf
32	A10	Exhaustor for Gas Producing Tank manufactured by Ingeroil-Rand Co.		05/09/95	Krapf
33	A10	Exhaust Room with Exhaustors		05/09/95	Krapf
34	A10	Exhaust Room with Exhaustors		05/09/95	Krapf
35	A10	Exhaust Room fan		05/09/95	Krapf
36	A10	Exhaust Room fan		05/09/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 4

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
1	A21	Change House and Office	SE	05/09/95	Krapf
2	A10	View of the Gas Generating Plant Stacks		05/09/95	Krapf
3	A10	Ash House attached to the rear of Building 10	SE	05/09/95	Krapf
4	A10	Ash House attached to the rear of Building 10	SE	05/09/95	Krapf
5	A9	The Alum Section of the Water Filtration Facility	SW	05/09/95	Krapf
6	A9	The Lime Section of the Water Filtration Facility	NE	05/09/95	Krapf
7	A9	The Lime Section of the Water Filtration Facility	NE	05/09/95	Krapf
8	A9	Filler/Valve Room equipment, consisting of valves and counter weights, located in the basement of the Water and Sewage Section of the Water Filtration Facility		05/09/95	Krapf
9	A9	Filler/Valve Room equipment, consisting of valves and counter weights, located in the basement of the Water and Sewage Section of the Water Filtration Facility		05/09/95	Krapf
10	A9	Water Filtration Facility Office and Laboratory	SW	05/09/95	Krapf
11	A8	Steam Power Plant for Area A	NE	05/09/95	Krapf
12	A8	Coal/Tar Storage Tank attached to the rear of the building	NWN	05/09/95	Krapf
13	A8	Coal/Tar Storage Tank attached to the rear of the building	NW	05/09/95	Krapf
14	A8	Ash Storage Tank attached to the rear of the building	NW	05/09/95	Krapf
15	A8	Ash Storage Tank attached to the rear of the building	NW	05/09/95	Krapf
16	A11	Water Pump House	NE	05/09/95	Krapf
17	A11	Interior of first floor		05/09/95	Krapf
18	A11	Linkbelt Co. Filter Screens for the Pumphouse which filters large material from water pumped from the Holsten River. The screens are located on the west side of the building.		05/09/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 4

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
19	A11	Close-up of the filter screens that are attached to the building		05/09/95	Krapf
20	A11	1000 hp Electric Head Pump located in the basement; manufactured by Electric Machine Co., Minneapolis, MN		05/09/95	Krapf
21	A11	1000 hp Electric Head Pump located in the basement; manufactured by Electric Machine Co., Minneapolis, MN		05/09/95	Krapf
22	A11	Interior overview of the Basement of the Pump House		05/09/95	Krapf
23	A11	Interior overview of the Basement of the Pump House		05/09/95	Krapf
24	A11	Interior overview of the Basement of the Pump House		05/09/95	Krapf
25	A8	Firite Stoker on the third floor; manufactured by the Hoffman Combustion Engineering Co., Detroit (serial #31-6)		05/09/95	Krapf
26	A8	Firite Stoker on the third floor; manufactured by the Hoffman Combustion Engineering Co., Detroit (serial #31-6)		05/09/95	Krapf
27	A8	Control Panel for Firite Stokers; located on the third floor		05/09/95	Krapf
28	A8	Control Panel for Firite Stokers; located on the third floor		05/09/95	Krapf
29	A8	Control Panel for Firite Stokers; located on the third floor		05/09/95	Krapf
30	A8	Reeves Steam Turbine located on the thrid floor		05/09/95	Krapf
31	A8	Reeves Steam Turbine located on the thrid floor		05/09/95	Krapf
32	A2	Acetic Acid Manufacturing Plant	SE	05/09/95	Krapf
33	A15	General Purpose Warehouse	NW	05/09/95	Krapf
34	A15	General Purpose Warehouse	NW	05/09/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089

Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant

Roll Number: 4

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
35	A2	Third Floor interior; Acetic Acid and Solvents Steel Columns		05/09/95	Krapf
36	A2	Third Floor interior; Acetic Acid and Solvents Steel Columns		05/09/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 5

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
2	A2	Interior of the Acetic Acud Manufacturing Plant showing Solvent Columns made of steel on the third floor		05/09/95	Krapf
3	A2	Interior of the Acetic Acud Manufacturing Plant showing Solvent Columns made of steel on the third floor		05/09/95	Krapf
4	A2	Close-up of the lower portion of Solvent Column #3 on the third floor		05/09/95	Krapf
5	A2	Close-up of the lower portion of Solvent Column #3 on the third floor		05/09/95	Krapf
6	A2	Close-up of the upper portion of Solvent Column #3 on the fourth floor		05/09/95	Krapf
7	A2	Close-up of the upper portion of Solvent Column #3 on the fourth floor		05/09/95	Krapf
8	A2	Overview of the Solvent Columns on the fifth floor		05/09/95	Krapf
9	A2	Overview of the Solvent Columns on the fifth floor		05/09/95	Krapf
10	A2	Overview of Area A		05/09/95	Krapf
11	A2	Overview of Area A		05/09/95	Krapf
12	A2	Overview of Area A		05/09/95	Krapf
13	A27	Acid Storage Tank Farm for Area A	SE	05/09/95	Krapf
14	A18	Guard House and First Aid for Area A	NW	05/09/95	Krapf
15	C6	Explosives Manufacturing Pilot Plant	SE	05/09/95	Krapf
16	C6	Explosives Manufacturing Pilot Plant	SE	05/09/95	Krapf
17	C1	Explosives Manufacturing Hexamine Solution Building	NW	05/09/95	Krapf
18	D1	Explosives Manufacturing Nitration Building	SE	05/09/95	Krapf
19	D3	Explosives Manufacturing Nitration Building	SE	05/09/95	Krapf
20	D6	Explosives Manufacturing Nitration Building	SE	05/09/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 5

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
21	E6	Explosives Manufacturing Washing Building	NW	05/09/95	Krapf
22	E1	Explosives Manufacturing Washing Building	NE	05/09/95	Krapf
23	E1	Explosives Manufacturing Washing Building	NE	05/09/95	Krapf
24	G1	Explosives Manufacturing, Purification Building	NW	05/09/95	Krapf
25	G2	Explosives Manufacturing, Purification Building	NE	05/09/95	Krapf
26	G3	Explosives Manufacturing Recrystalization and Coating Building	NW	05/09/95	Krapf
27		Overhead Acid Pipeline	NE	05/09/95	Krapf
28		Overhead Acid Pipeline	NE	05/09/95	Krapf
29	B5	Acid Manufacturing Primary Recovery and Sludge Treatment Building	SE	05/09/95	Krapf
30	B6	Booster Pumping Station and Compressed Air Building	SE	05/09/95	Krapf
31	B6	Booster Pumping Station and Compressed Air Building	SE	05/09/95	Krapf
32	U2	Oil Storage Building	SW	05/09/95	Krapf
33	U1	Change House, Laboratory, and Ammo Quality Control Building	NW	05/09/95	Krapf
34	W1	Administrative General Purpose Office Building	NW	05/09/95	Krapf
35	B11	Acid Manufacturing Primary Recovery and Sludge Treatment Building	SW	05/09/95	Krapf
36	B11	Acid Manufacturing Primary Recovery and Sludge Treatment Building	SW	05/09/95	Krapf
37	B9	Acid Manufacturing Primary Recovery and Sludge Treatment Building	NE	05/09/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 6

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
3	M3	Explosives Manufacturing Plant, Calcium Silicate Weighing Building	SW	05/10/95	Krapf
4		Covered and Elevated Walkway or TNT Catwalk connecting "L" and "N" building	S	05/10/95	Krapf
5	L2	TNT Melters		05/10/95	Krapf
6	L2	TNT Melters		05/10/95	Krapf
7	L2	Incorporation Kettle and Control Panel		05/10/95	Krapf
8	L2	Close-up of Incorporation Kettle		05/10/95	Krapf
9	L2	Close-up of Incorporation Kettle		05/10/95	Krapf
10	L2	Interior of Incorporation Buildings showing TNT Melters and Incorporation Kettles.		05/10/95	Krapf
11	L2	Steam Engine manufactured by the Troy Engine Co., Troy, PA (#E-9352). Two of these engines are located in the basement of the building.		05/10/95	Krapf
12	L2	Steam Engine manufactured by the Troy Engine Co., Troy, PA (#E-9352). Two of these engines are located in the basement of the building.		05/10/95	Krapf
13	L2	Overview of the Engine Room in the Basement		05/10/95	Krapf
14	L2	Overview of the Engine Room in the Basement		05/10/95	Krapf
15	L2	Interior of the Incorporation Building showing Conveyor Belts		05/10/95	Krapf
16	L2	Explosives Manufacturing Plant, Incorporation Building	NW	05/10/95	Krapf
17	N9	Hopper and Conveyor Belt		05/10/95	Krapf
18	N9	Hopper and Conveyor Belt		05/10/95	Krapf
19	N9	Overview of Packaging Room		05/10/95	Krapf
20	N9	Overview of Packaging Room		05/10/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089

Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant

Roll Number: 6

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
21	N9	Tote Box Shed		05/10/95	Krapf
22	N9	Tote Box Elevator		05/10/95	Krapf
23	N9	Tote Box Elevator		05/10/95	Krapf
24	K9	Conveyor Belt to TNT Melters		05/10/95	Krapf
25	K9	Conveyor Belt to TNT Melters		05/10/95	Krapf
26		TNT Catwalk and Holding Area attached to Building K9		05/10/95	Krapf
27		TNT Catwalk and Holding Area attached to Building K9		05/10/95	Krapf
28	Y1	Box Construction and Reconditioning Building		05/10/95	Krapf
29	Y1	Box Construction and Reconditioning Building		05/10/95	Krapf
30	Y1	Box Construction and Reconditioning Building		05/10/95	Krapf
31	CM149	High Explosives Magazine, interior of Storage Igloo		05/10/95	Krapf
32	CM149	High Explosives Magazine, interior of Storage Igloo		05/10/95	Krapf
33	C1	Hexamine Solution Storage Building		05/10/95	Krapf
34	C1	Hexamine Solution Storage Building		05/10/95	Krapf
35	C1	Hexamine Solution Storage Tank		05/10/95	Krapf
36	C1	Hexamine Solution Storage Tank and bottom of Hexamine Dissolver Tank		05/10/95	Krapf
37	C1	Hexamine Solution Storage Tank and bottom of Hexamine Dissolver Tank		05/10/95	Krapf

GEO-MARINE INC.

PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 7

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
2	C1	Acetic Acid Tank		05/10/95	Krapf
3	C1	Acetic Acid Tank		05/10/95	Krapf
4	C1	Top of Hexamine Dissolver Tank		05/10/95	Krapf
5	C1	Top of Hexamine Dissolver Tank		05/10/95	Krapf
6	C1	Interior of Hexamine Solution Building		05/10/95	Krapf
7	C1	Interior of Hexamine Solution Building		05/10/95	Krapf
8	D2	Acid Feeder Tank		05/10/95	Krapf
9	D2	Acid Feeder Tank		05/10/95	Krapf
10	D2	Acid Feeder Tanks, Pumps, and Valves		05/10/95	Krapf
11	D2	Acid Feeder Tanks, Pumps, and Valves		05/10/95	Krapf
12	D2	Acid Pumps and Valves located in the penthouse of the building		05/10/95	Krapf
13	D2	Explosives Manufacturing Plant, Nitration Building and attached wooden Reactor Leg	E	05/10/95	Krapf
14	D2	Reactor Leg with Washing Building E2 in the background	SE	05/10/95	Krapf
15	D2	Nitration Building with overhead pipes and railroad lines	NE	05/10/95	Krapf
16	D2	Reactor Room and AGE Tank No. 9		05/10/95	Krapf
17	D2	Reactor Room and AGE Tank No. 9		05/10/95	Krapf
18	D2	Reactor Room and AGE Tank No. 9		05/10/95	Krapf
19	D2	Interior of wooden Reactor Leg		05/10/95	Krapf
20	D2	Interior of wooden Reactor Leg		05/10/95	Krapf
21	D2	Lab Bench for sample analysis		05/10/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 7

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
22	D2	Lab Bench for sample analysis		05/10/95	Krapf
23	D2	AGE and Simmer Tanks		05/10/95	Krapf
24	D2	AGE and Simmer Tanks		05/10/95	Krapf
25	D2	Cooling Tanks for Reactor Leg		05/10/95	Krapf
26	D2	Cooling Tanks for Reactor Leg		05/10/95	Krapf
27	E2	Pumping Floor of Washing Room		05/10/95	Krapf
28	E2	Pumping Floor of Washing Room		05/10/95	Krapf
29	E2	Lower Wash Tank Room with lower portions of Wash Tank		05/10/95	Krapf
30	E2	Lower Wash Tank Room with lower portions of Wash Tank		05/10/95	Krapf
31	E2	Upper Wash Tank Room with upper portions of Wash Tank		05/10/95	Krapf
32	E2	Upper Wash Tank Room with upper portions of Wash Tank		05/10/95	Krapf
33	E2	Close-up of upper portion of a Wash Tank		05/10/95	Krapf
34	E2	Close-up of upper portion of a Wash Tank		05/10/95	Krapf
35	E2	Close-up of lower poriton of Wash Tank No. 4		05/10/95	Krapf
36	E2	Close-up of lower poriton of Wash Tank No. 4		05/10/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 8

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
2	G2	View of Pipeline from Building E2 to Building G2, a Purification Building in the background		05/10/95	Krapf
3	G2	Close-up of the upper portion of a Dissolver Tank		05/10/95	Krapf
4	G2	Overview of Dissolver Floor in the Purification Building		05/10/95	Krapf
5	G2	Another view of the Dissolver Floor in the Purification Building		05/10/95	Krapf
6	G2	Upper portion of a Dissolver Tank		05/10/95	Krapf
7	G2	Lower portion of a Purification Still		05/10/95	Krapf
8	01	Interior of Explosives Laboratory		05/10/95	Krapf
9	01	Interior of Explosives Laboratory		05/10/95	Krapf
10	01	Viscosity Testing Machine		05/10/95	Krapf
11	01	Viscosity Testing Machine		05/10/95	Krapf
12	H2	Slurry Dewatering, Filtration, and Nutche Loading Floor		05/10/95	Krapf
13	H2	Slurry Dewatering, Filtration, and Nutche Loading Floor		05/10/95	Krapf
14	H2	Slurry Tank		05/10/95	Krapf
15	H2	Slurry Tank		05/10/95	Krapf
16	H2	Slurry Dewatering Vacuum Pump		05/10/95	Krapf
17	H2	Slurry Dewatering Vacuum Pump		05/10/95	Krapf
18	H2	Vacuum Probes used to Dewater slurry-loaded Nutches		05/10/95	Krapf
19	H2	Vacuum Probes used to Dewater slurry-loaded Nutches		05/10/95	Krapf
20	H2	Loaded Nutche with Haul Sled and Jack		05/10/95	Krapf
21	F3	Change House. Note bricked-in windows, transoms, and doors	NE	05/10/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 8

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
22	H1	Explosives Manufacturing Plant. Filtration and Weighing Building with double riveted barricade	SW	05/10/95	Krapf
23	01	Ammunition Quality Control Facility, Explosives Laboratory with double riveted barricades	NE	05/10/95	Krapf
24	I3	Explosives Manufacturing Plant, Dry Coated Explosives Building.	NE	05/10/95	Krapf
25		Covered Walkway, or TNT Catwalk, connecting Buildings I3 and J3	SW	05/10/95	Krapf
26	J3	Explosives Manufacturing Plant, Explosives Incorportion Building	NE	05/10/95	Krapf
27		Covered and elevated walkway, or TNT catwalk, behind Building J3	SW	05/10/95	Krapf
28	03	Ammunition Quality Control Facility, Explosives Laboratory with double-riveted barricades	N	05/10/95	Krapf
29	YM2	High Explosives Magazine, Richmond Type		05/10/95	Krapf
30	YM2	High Explosives Magazine, Richmond Type		05/10/95	Krapf
31	302	Acid Manufacturing Plant, Ammonia Oxidation Building.	SW	05/10/95	Krapf
32	302	Acid Manufacturing Plant, Ammonia Oxidation Building.	SW	05/10/95	Krapf
33	302	Close-up of Converter		05/10/95	Krapf
34	302	Convertor Room		05/10/95	Krapf
35	302	Convertor Room		05/10/95	Krapf
36	302	Nitric Acid Collection Tank		05/10/95	Krapf
37	302	Ammonia Vaporizor		05/10/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 9

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
2	302	Ammonia Vaporizor	N	05/10/95	Krapf
3	330	Ammonia Nitrate Mixing Plant	S	05/10/95	Krapf
4	334	Magnesium Nitrate Plant		05/10/95	Krapf
5	335	Control House for Magnesium Nitrate Plant, Control Panel		05/10/95	Krapf
6	335	Control House for Magnesium Nitrate Plant, Control Panel		05/10/95	Krapf
7	334	Heater Room in basement		05/10/95	Krapf
8	330	Ammonia Nitrate Mixing Plant		05/10/95	Krapf
9	330	Ammonia Nitrate Mixing Plant		05/10/95	Krapf
10	315	Ammunition Quality Control Facility Laboratory and Office		05/10/95	Krapf
11	315	Ammunition Quality Control Facility Laboratory and Office		05/10/95	Krapf
12	303B	Magnesium Nitrate Plant Pilot Plant (first Maggie Brutt)		05/10/95	Krapf
13	302	Acid Manufacturing Plant, Ammonia Oxidation Building		05/10/95	Krapf
14	302	View beneath Absorption Column	E	05/10/95	Krapf
15	302	Water Tank for Absorption Column		05/10/95	Krapf
16	302	Close-up of Absorption Column		05/10/95	Krapf
17	302	Close-up of Convertor		05/10/95	Krapf
18	302	Close-up of Convertor		05/10/95	Krapf
19	302	Convertor Room		05/10/95	Krapf
20	302	Convertor Room		05/10/95	Krapf
21	302	Convertor Control Panel		05/10/95	Krapf
22	302	Tank located in Tank Room on second floor		05/10/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 9

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
23	302	Tank located in Tank Room on second floor		05/10/95	Krapf
24	300	Ammonia Nitrate Mixing Plant, Air Compressor		05/10/95	Krapf
25	300	Ammonia Nitrate Mixing Plant, Air Compressor		05/10/95	Krapf
26	321	Maintenance Building, Repair Shop and Office		05/10/95	Krapf
27	321	Maintenance Building, Repair Shop and Office		05/11/95	Krapf
28	Y1	Explosives Manufacturing Plant, Box Construction and Reconditioning Building	SW	05/11/95	Krapf
29	P5	Change House, note bricked-in transoms and doors	SE	05/11/95	Krapf
30	P7	Change House, note bricked-in transoms and doors	SE	05/11/95	Krapf
31	V7	Administrative General Purpose Office Building	SW	05/11/95	Krapf
32	M5	Explosives Manufacturing Plant, C-4 Drying Building	SW	05/11/95	Krapf
33	N6	Explosives Manufacturing Plant, Blending and Packaging Building	NW	05/11/95	Krapf
34	J6	Explosives Manufacturing Plant, Wet "HMX" Blending Building	NW	05/11/95	Krapf
35	I6	Explosives Manufacturing Plant, "PBX's" Drying Building	NW	05/11/95	Krapf
36	K10	Explosives Manufacturing Plant, TNT Opening Building	NW	05/11/95	Krapf
37	I4	Explosives Manufacturing Plant, "RDX" Lag Storage	NW	05/11/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089 Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant Roll Number: 10

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
2	200	Close-up of a Babcock and Wilcox Co. Sterling Boiler Control Panel		05/11/95	Krapf
3	200	Close-up of a Babcock and Wilcox Co. Sterling Boiler Control Panel		05/11/95	Krapf
4	200	Close-up of Detroit Roto Gate Stoker No. 1		05/11/95	Krapf
5	200	Close-up of Detroit Roto Gate Stoker No. 1		05/11/95	Krapf
6	200	Boiler Feed Water Pumps		05/11/95	Krapf
7	200	Close-up of steam-powered Electricity Generator		05/11/95	Krapf
8	200	Close-up of Control Panel for Pulverized Fuel Stokers		05/11/95	Krapf
9	200	Close-up of Control Panel for Pulverized Fuel Stokers		05/11/95	Krapf
10	200	Boiler Room		05/11/95	Krapf
11	200	Boiler Room		05/11/95	Krapf
12	200	Boiler Room		05/11/95	Krapf
13	201	Pump House Control Panel		05/11/95	Krapf
14	201	Interior of Pump House		05/11/95	Krapf
15	201	Close-up of Water Pump No. 4		05/11/95	Krapf
16	201	Water Pump		05/11/95	Krapf
17	B3	Close-up of Acetic Acid Still in Primary Recovery and Sludge Treatment Building		05/11/95	Krapf
18	B3	Close-up of Roto Meters		05/11/95	Krapf
19	B3	Control Panel for Acetic Acid Still		05/11/95	Krapf
20	B3	Acetic Acid Tanks		05/11/95	Krapf
21	B3	Acetic Acid Columns on second floor		05/11/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

Project #: 1114-089

Film: Kodak TMAX 400 Black and White

Installation: Holston, Army Ammunition Plant

Roll Number: 10

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
22	B3	Acetic Acid Columns on second floor		05/11/95	Krapf
23	B3	Acetic Acid Columns on third floor		05/11/95	Krapf
24	101	General Stores Warehouse Bins		05/11/95	Krapf
25	101	Close-up of Bin inside General Stores Warehouse		05/11/95	Krapf
26	101	Counter Area in General Stores Warehouse		05/11/95	Krapf
27	101	Fairbanks-Morse Printomatic Truck Scale		05/11/95	Krapf
28	101	Fairbanks-Morse Printomatic Truck Scale		05/11/95	Krapf
29	103	Box Assembly Area		05/11/95	Krapf
30	103	Two Johnson Bars, or "Jaw breakers", used to dolly around boxes		05/11/95	Krapf
31	103	Receiving Room		05/11/95	Krapf
32	20	Burning Ground Area Service Building and Change House	SE	05/11/95	Krapf
33	24	Burning Ground Area Compressor House	SE	05/11/95	Krapf
34	24	Compressor		05/11/95	Krapf
35		Double Rivited Barricade	SW	05/11/95	Krapf
36		Railroad Tracks	E	05/11/95	Krapf
37	R1	Administrative General Purpose Office Building	NE	05/11/95	Krapf

GEO-MARINE INC.
PHOTOGRAPHIC DATA SHEET

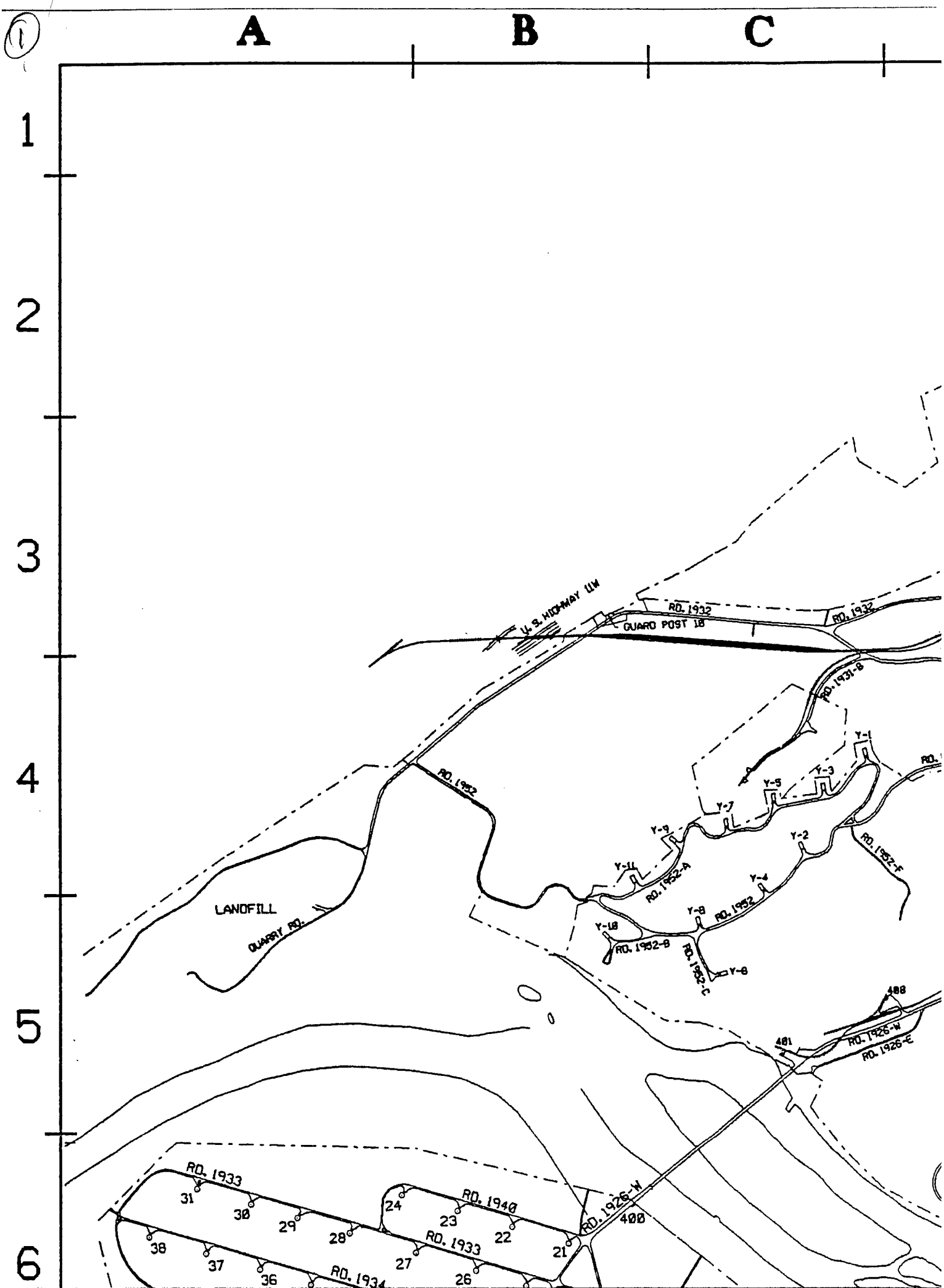
Project #: 1114-089

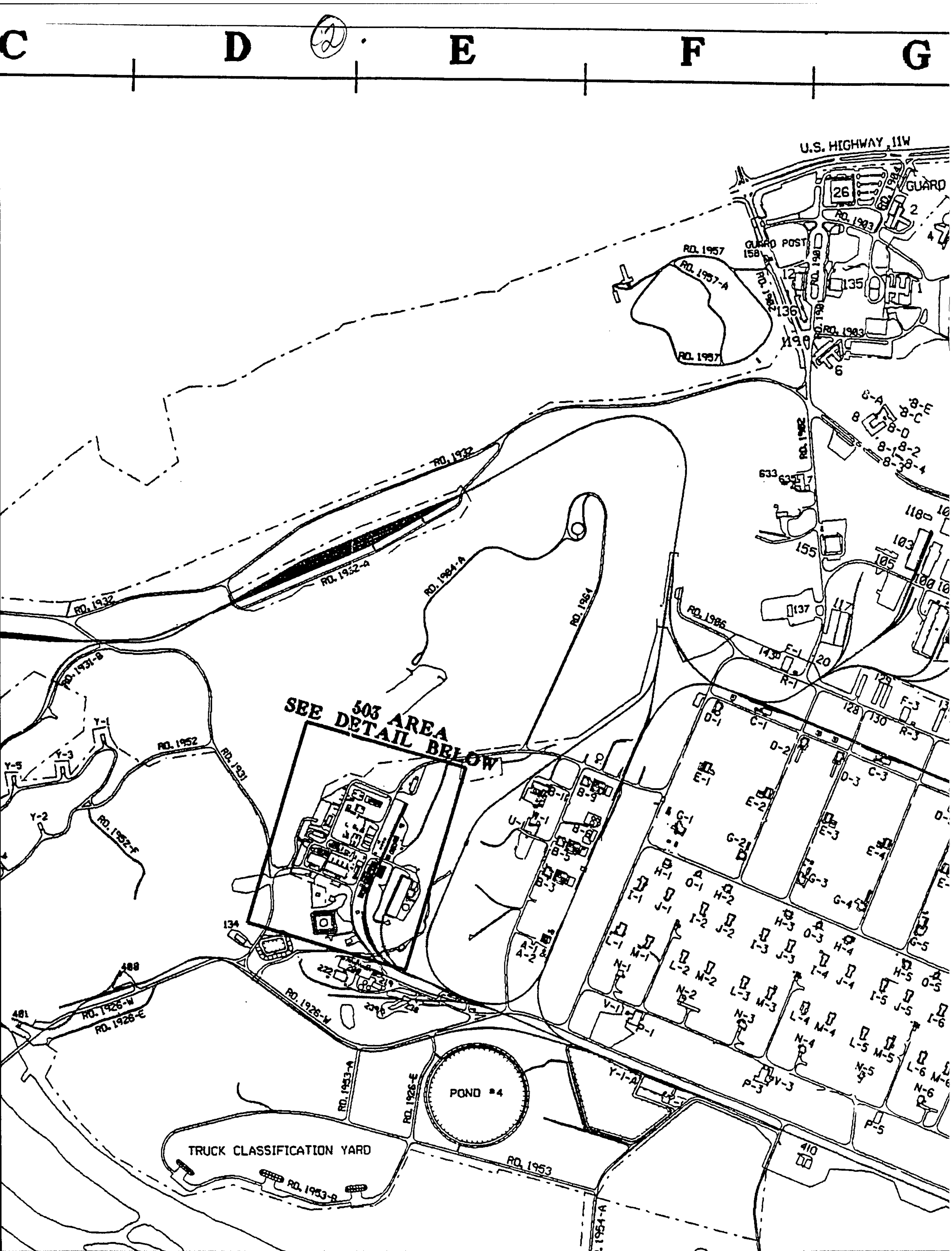
Film: Kodak TMAX 400 Black and White

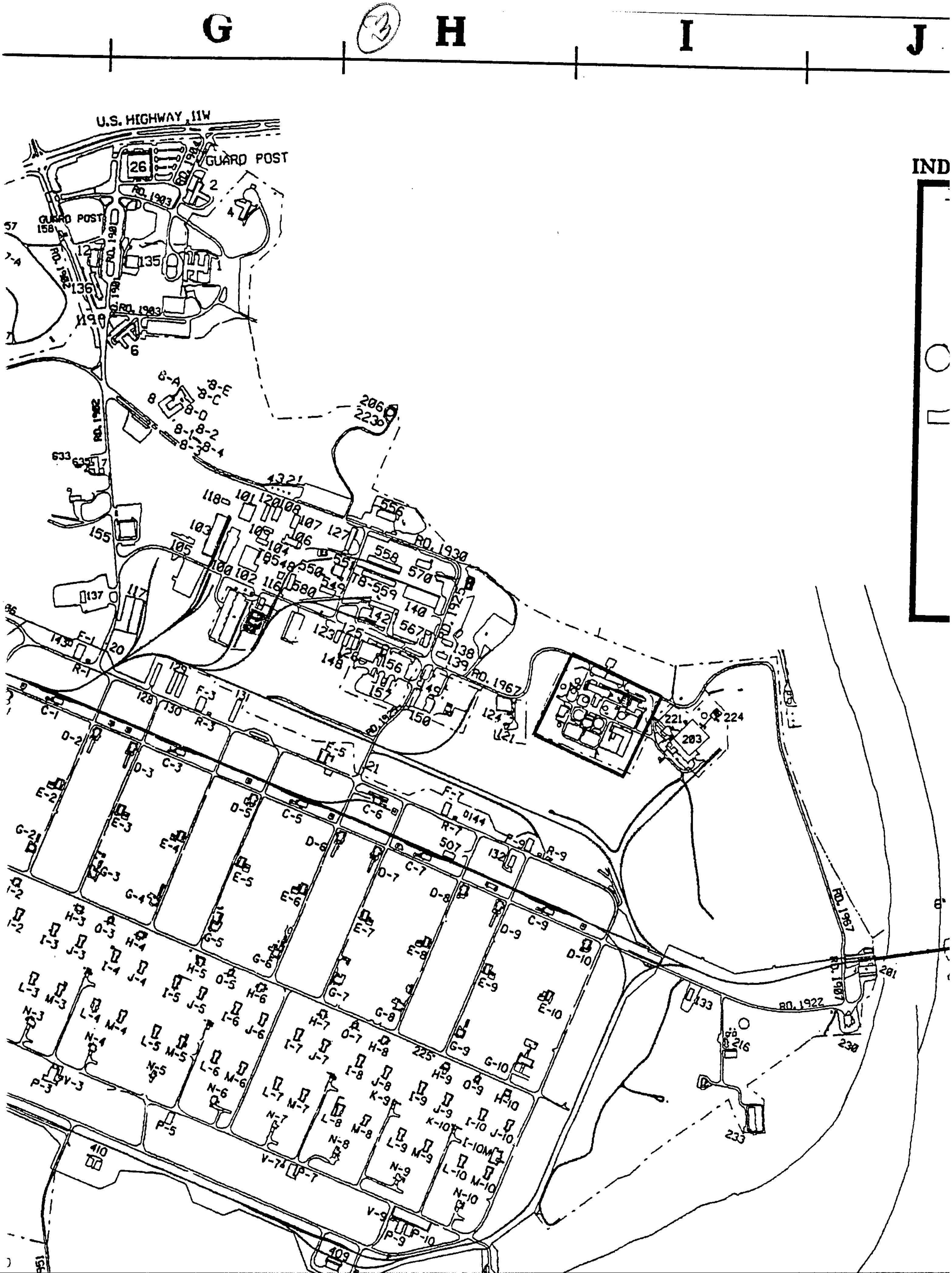
Installation: Holston, Army Ammunition Plant

Roll Number: 11

Exp. No.	Building No(s).	Description	Dir.	Date	Recorder
0	M1	Change House	NE	05/12/95	Krapf
1		Railroad Tracks and overhead pipes	E	05/12/95	Krapf
2	D6	Nitration Building Reactor Leg	SE	05/12/95	Krapf
3	N10	Explosives Manufacturing Plant, Packaging Building	NW	05/12/95	Krapf
4	N8	Explosives Manufacturing Plant, Packaging Building	NW	05/12/95	Krapf
5	N4	Explosives Manufacturing Plant, Packaging and Blending Building	NW	05/12/95	Krapf
6	N2	Explosives Manufacturing Plant, Packaging Building	NW	05/12/95	Krapf
7	N1	Explosives Manufacturing Plant, Packaging Building	NW	05/12/95	Krapf
8	K1	Explosives Manufacturing Plant, TNT Opening Building	NE	05/12/95	Krapf
9	507	General Purpose Storage Building		05/12/95	Krapf

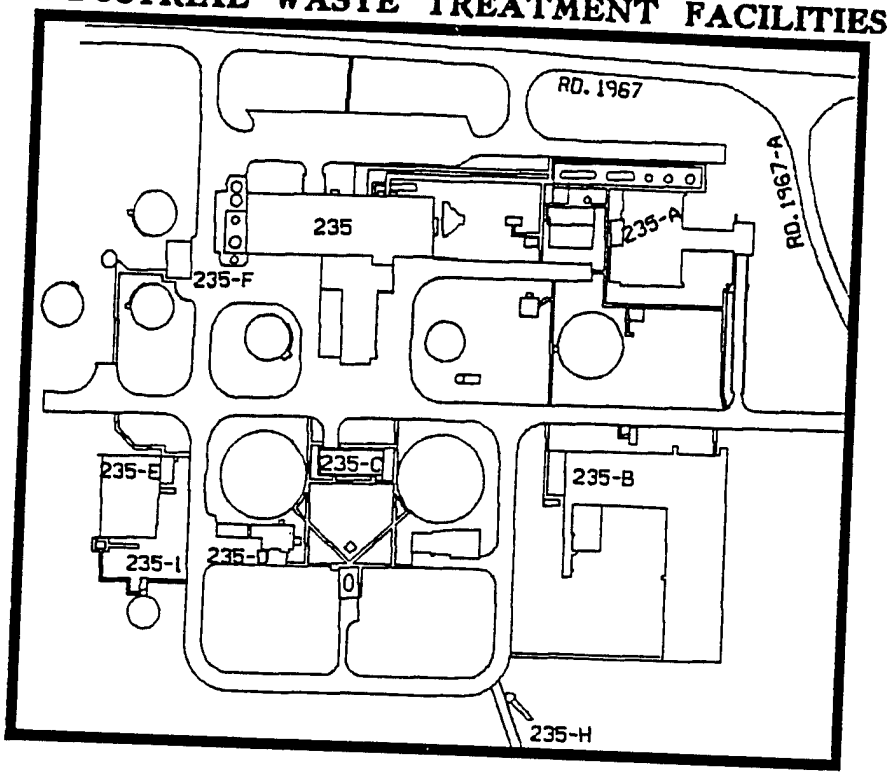

A
B
C
1
2
3
4
5
6
U.S. HIGHWAY 1W
GUARD POST 18
RD. 1932
RD. 1931-B
RD. 1952
LANDFILL
QUARRY RD.
Y-1
Y-2
Y-3
Y-4
Y-5
Y-6
Y-7
Y-8
Y-9
Y-10
Y-11
RD. 1952-A
RD. 1952-B
RD. 1952-C
RD. 1952-E
RD. 1952-F
488
481
RD. 1926-W
RD. 1926-E
RD. 1933
RD. 1940
RD. 1934
400
21
22
23
24
26
27
28
29
30
31
36
37
38


C
D
E
F
G
U.S. HIGHWAY 11W
GUARD
GUARD POST
RD. 1957
RD. 1957-A
RD. 1983
RD. 1982
RD. 1932
RD. 1932-A
RD. 1984-A
RD. 1984
RD. 1986
RD. 1931-B
RD. 1952
RD. 1931
RD. 1952-F
SEE DETAIL BELOW
503 AREA
RD. 1926-W
RD. 1926-E
RD. 1953-A
RD. 1953
RD. 1953-B
RD. 1954-A
POND #4
TRUCK CLASSIFICATION YARD


G
H
I
J
IND
U.S. HIGHWAY 11W
GUARD POST
GUARD POST
RD. 1903
RD. 1983
RD. 1982
RD. 1930
RD. 1967
RD. 1922
RD. 1987
26
2
4
1
6
12
135
136
158
8
8-A
8-C
8-D
8-E
8-1
8-2
8-3
8-4
206
223
633
155
103
105
100
101
102
104
106
107
108
116
117
118
120
127
137
143
548
550
551
556
558
559
567
570
580
140
142
125
123
148
156
157
149
150
138
139
124
121
203
221
224
128
129
130
131
132
144
507
21
20
E-1
R-1
C-1
D-2
E-2
G-2
C-3
D-3
E-3
F-3
R-3
G-3
E-4
G-4
D-5
C-5
E-5
F-5
G-5
C-6
D-6
E-6
G-6
F-7
R-7
C-7
D-7
E-7
G-7
F-9
R-9
D-8
E-8
G-8
D-9
C-9
E-9
G-9
D-10
E-10
G-10
H-3
I-3
J-3
O-3
H-4
I-4
J-4
H-5
I-5
J-5
O-5
H-6
I-6
J-6
H-7
I-7
J-7
O-7
H-8
I-8
J-8
K-8
H-9
I-9
J-9
O-9
H-10
I-10
J-10
K-10
L-3
M-3
N-3
L-4
M-4
N-4
L-5
M-5
N-5
L-6
M-6
N-6
L-7
M-7
N-7
L-8
M-8
N-8
L-9
M-9
N-9
L-10
M-10
N-10
I-10M
P-3
V-3
P-5
V-7
P-7
V-9
P-9
P-10
225
233
216
230
201
410
409

(4)

INDUSTRIAL WASTE TREATMENT FACILITIES



RAIL
TO I

6" ACID LIN

FLEETWOOD RD.

CHIPPENDALE RD.

BRADBURY RD.

BURKE DR.

6" ACID LINE

8" ACID LINE

6" ACID LINE

8" ACID LINE

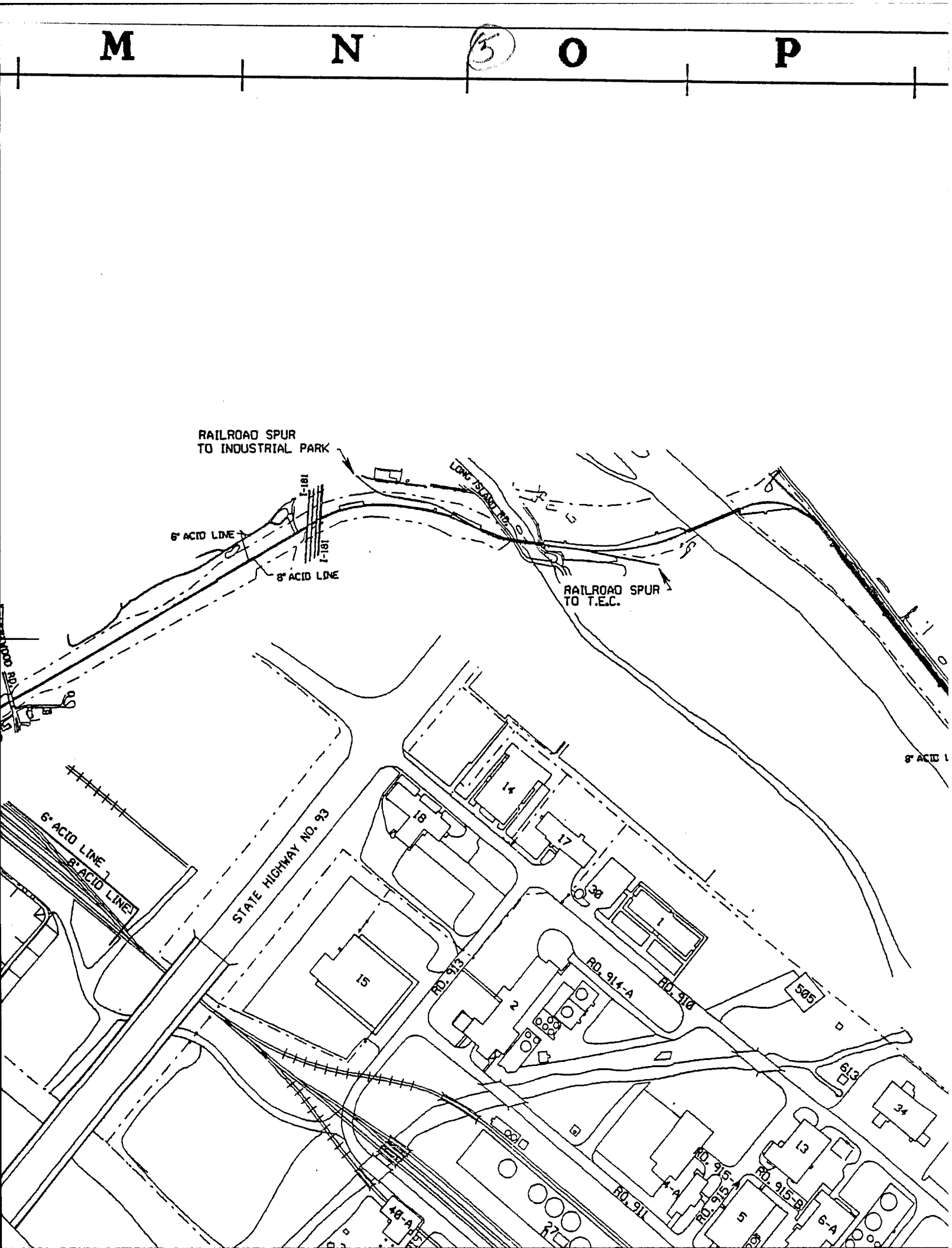
35A

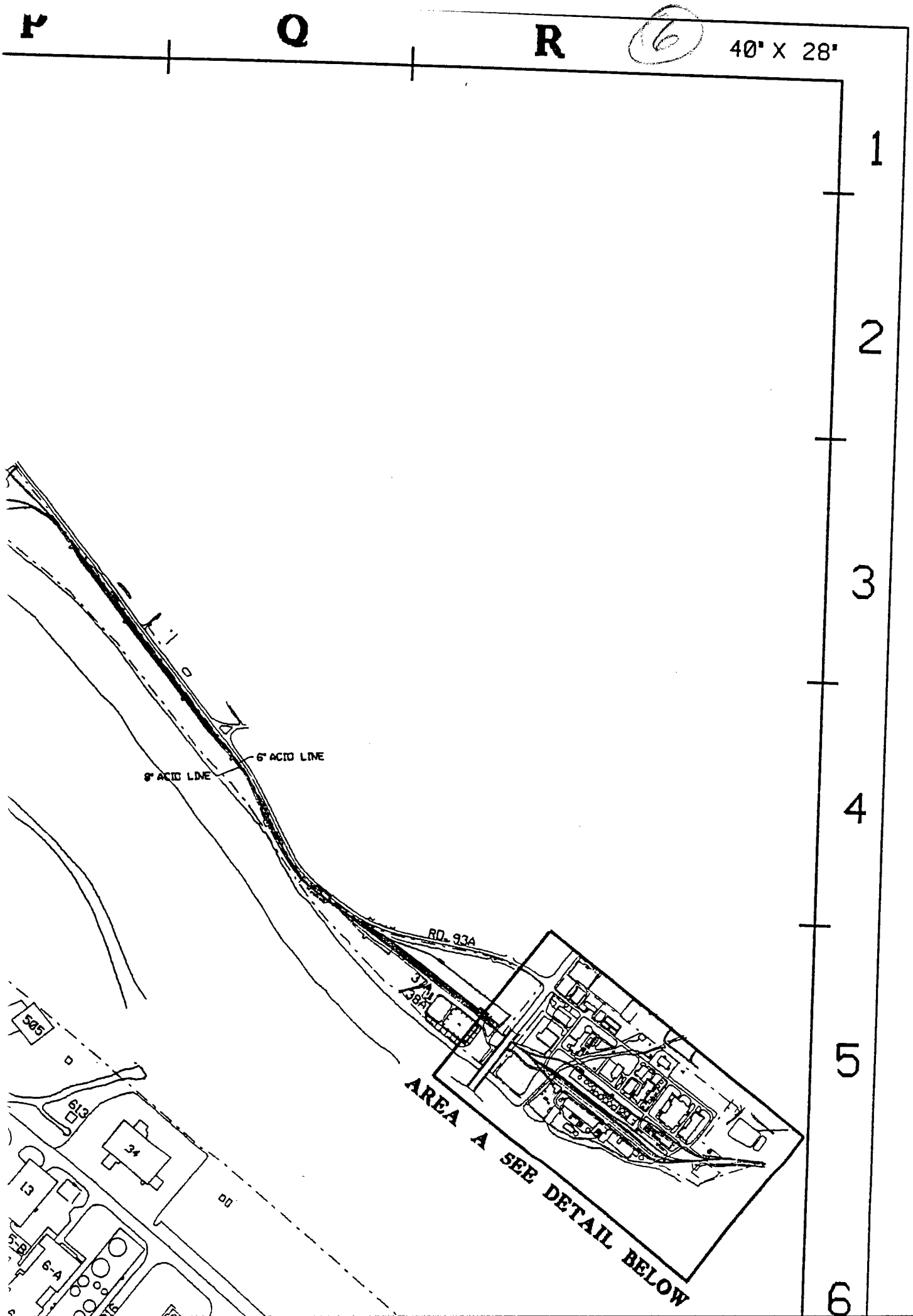
RD. 1967

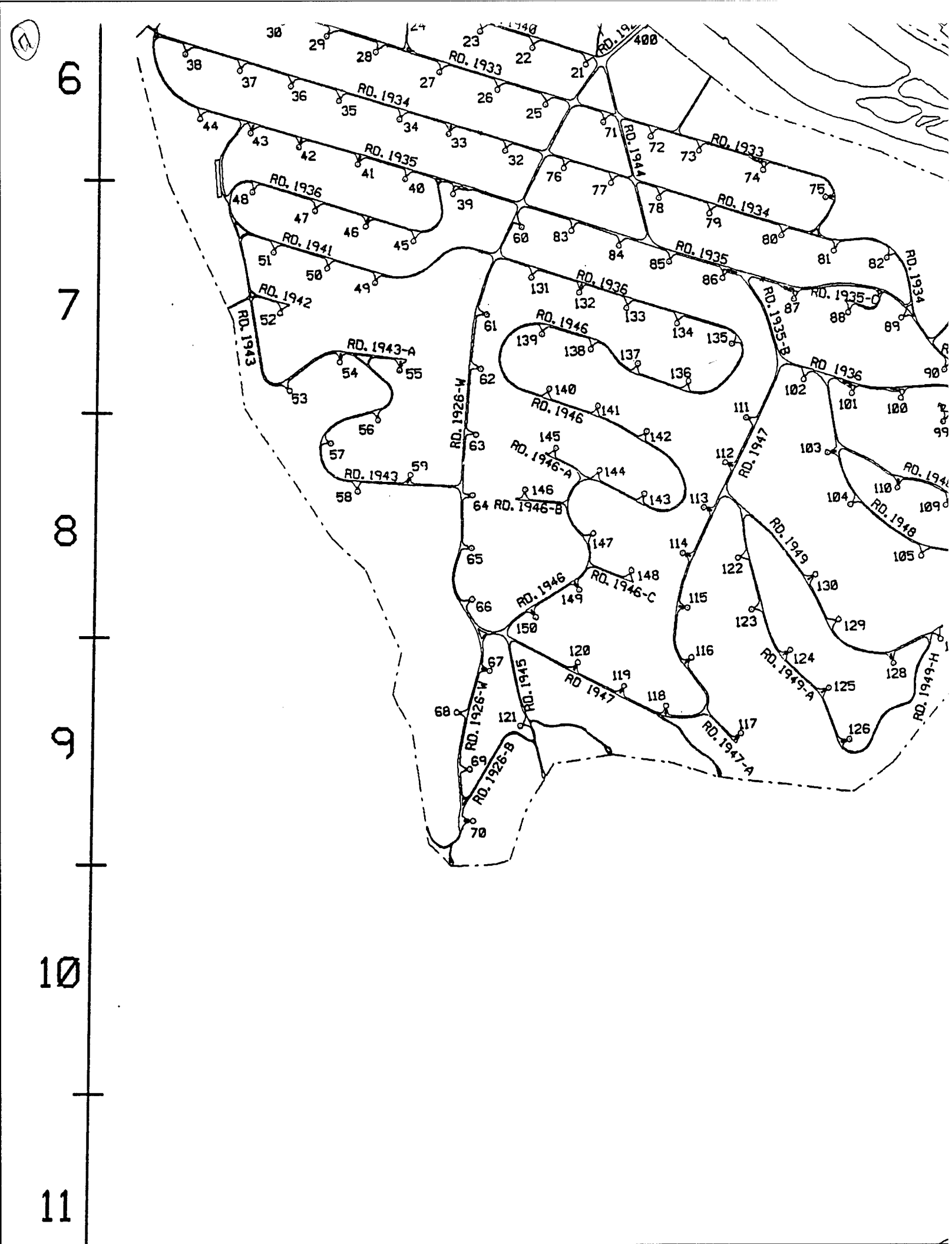
RD. 1922

281

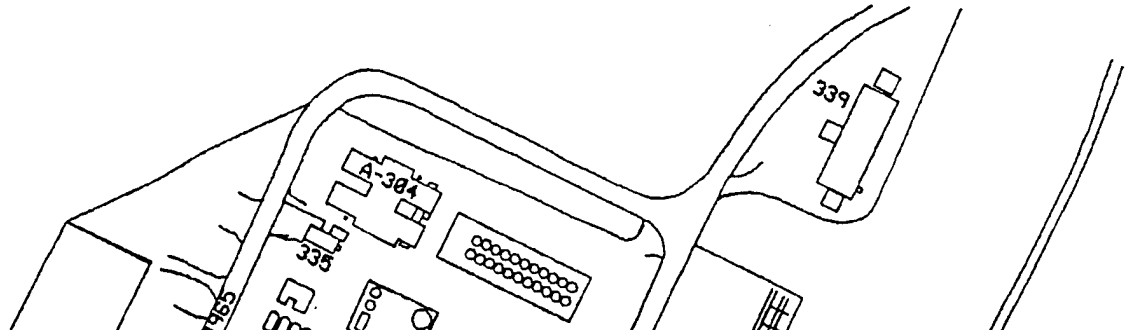
238

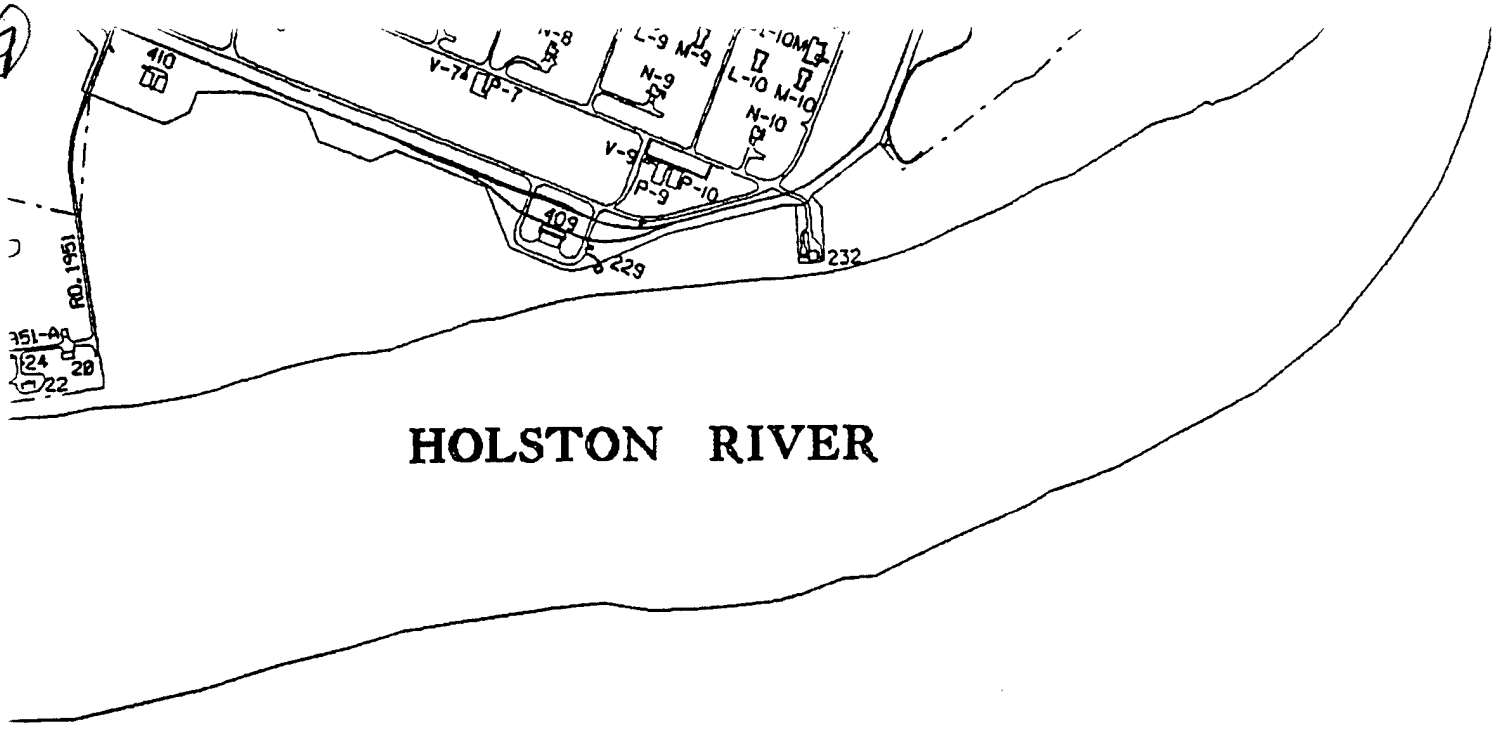

M
N
O
P
RAILROAD SPUR
TO INDUSTRIAL PARK
I-181
I-181
6" ACID LINE
8" ACID LINE
LONG ISLAND RD.
RAILROAD SPUR
TO T.E.C.
6" ACID LINE
8" ACID LINE
STATE HIGHWAY NO. 93
RD. 913
RD. 914-A
RD. 910
RD. 911
RD. 915
RD. 915-B
14
18
17
38
1
15
2
505
613
34
13
4-A
5
6-A
40-A
27


P
Q
R
6
40' X 28'
1
2
3
4
5
6
6" ACID LINE
8" ACID LINE
RD. 93A
37A
38A
505
61-3
34
13
6-A
AREA A SEE DETAIL BELOW


6
7
8
9
10
11
RD. 1933
RD. 1934
RD. 1935
RD. 1936
RD. 1941
RD. 1942
RD. 1943
RD. 1943-A
RD. 1926-W
RD. 1946
RD. 1946-A
RD. 1946-B
RD. 1946-C
RD. 1944
RD. 1935-B
RD. 1935-C
RD. 1947
RD. 1949
RD. 1948
RD. 1945
RD. 1926-B
RD. 1947-A
RD. 1949-A
RD. 1949-H
400

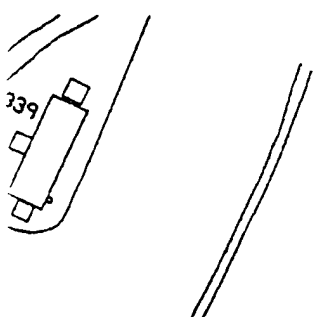

TRUCK CLASSIFICATION YARD
RD. 1953
RD. 1953-B
RD. 1954-A
RD. 1951
RD. 1951-A
410
209
27
152
24
22
20
75
80
81
82
RD. 1934
92
RD. 1937
RD. 1951
RD. 1939
RD. 1935-C
87
88
89
91
96
95
RD. 1935-B
RD. 1935
RD. 1938
RD. 1938-A
94
RD 1936
102
101
100
90
93
99
98
97
RD. 1936
103
RD. 1948-A
110
104
109
108
RD. 1948
106
105
RD. 1949
130
107
129
127
124
128
RD. 1949-H
RD. 1949-A
125
126


339
A-304
335
365

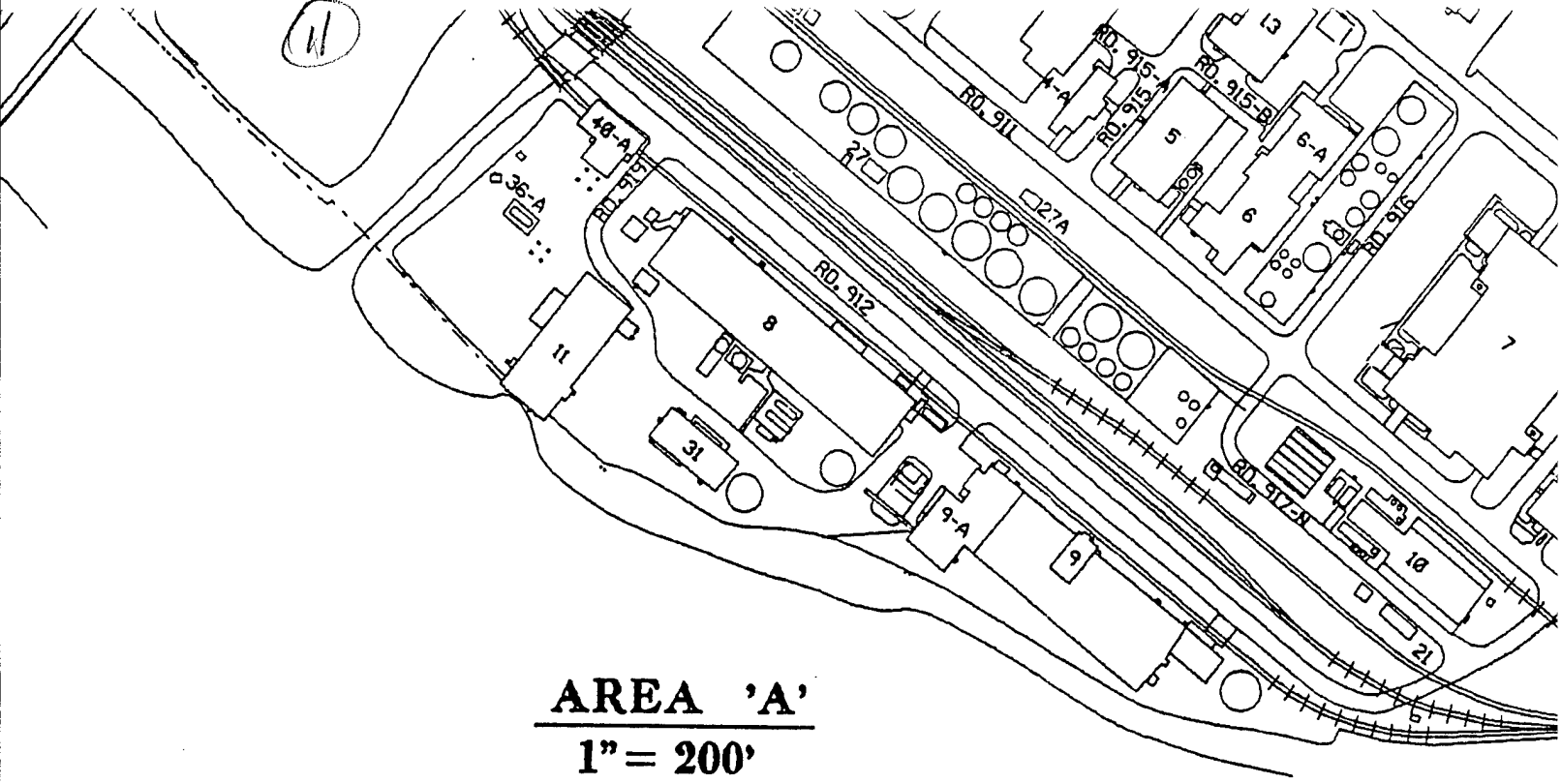


AREA 'A'

1	LAB AND ADMINISTRATION (O-5)	12	TRAINING (F-2)
2	ACETIC ACID CONCENTRATION (O-5)	20	STORAGE BUILDING (
4	SHOPS, OFFICES, CANTEEN & STORAGE (P-6)	21	CLEANING PLATFORM
5	REFRIGERATION (P-6)	22	FLASHING EQUIPMEN
6	ANHYDRIDE REFINING (P-6)	24	COMPRESSOR HOUSE
7	ANHYDRIDE MAKING (O-7)	26	ADMINISTRATION (G-
8	STEAM PLANT (O-7)	100	MACHINE & METAL S
9	FILTER PLANT (O-7)	101	GENERAL STORES (G
10	GAS PRODUCERS (O-7)	102	INSTRUMENT & ELE(
11	PUMP HOUSE (N-7)	103	STORAGE WAREHOUS(
12	SUBSTATION ELECTRIC POWER (O-8)	104	CARPENTER SHOP (G
13	STORAGE COAL TAR (P-6)	105	SERVICE STATION ((
14	CHANGE HOUSE (O-4)	106	LAUNDRY (G-3)
15	GENERAL STORES (N-4)	107	CHANGE HOUSE (G-3
17	FIRE HALL (O-5)	108	CHANGE HOUSE (G-3
18	FIRST AID PERMIT-ARC (N-4)	109	GENERAL SHOP OFF(
20	ANHYDRIDE MAKING (O-7)	114	EMERGENCY WATER
21	CHANGE HOUSE & OFFICE (O-7)	116	AUTO PAINT SHOP ((
22	TANK FARM & PUMP HOUSE (O-7)	117	STORAGE WAREHOUS(
27	TANK FARM - ACID STORAGE (O-6)	118	PAINT & LUBRICANT
28	SCALE PIT & BEAM HOUSE - LEASED (O-4)	119	PAPER SUPPLIES ST
29	SEWER SYSTEM LIFT STATION (O-7)	120	STORAGE BUILDING-
30	GUARD HOUSE (O-5)	121	DECON OVEN (H-4)
31	CHANGE HOUSE & SHOP UTILITIES (O-7)	122	STORAGE BUILDING
33	PUMP STATION WASTE TREATMENT (O-5)	123	STORAGE BUILDING
34	MAINTENANCE SHOP, ORGANIC ACIDS (P-6)	124	CONTROL HOUSE-DE(
35	SPILL EQUALIZATION BASIN (L-5)	125	STORAGE BUILDING
36	PUMP STATION (N-7)	126	STORAGE BUILDING
37	PUMP STATION (O-5)	127	S&M OFFICE AND S
38	CHEMICAL FEED BLDG. (O-5)	128	STORAGE BUILDING
39	INDUSTRIAL WASTE LIFT STATION (O-7)	129	STORAGE BUILDING



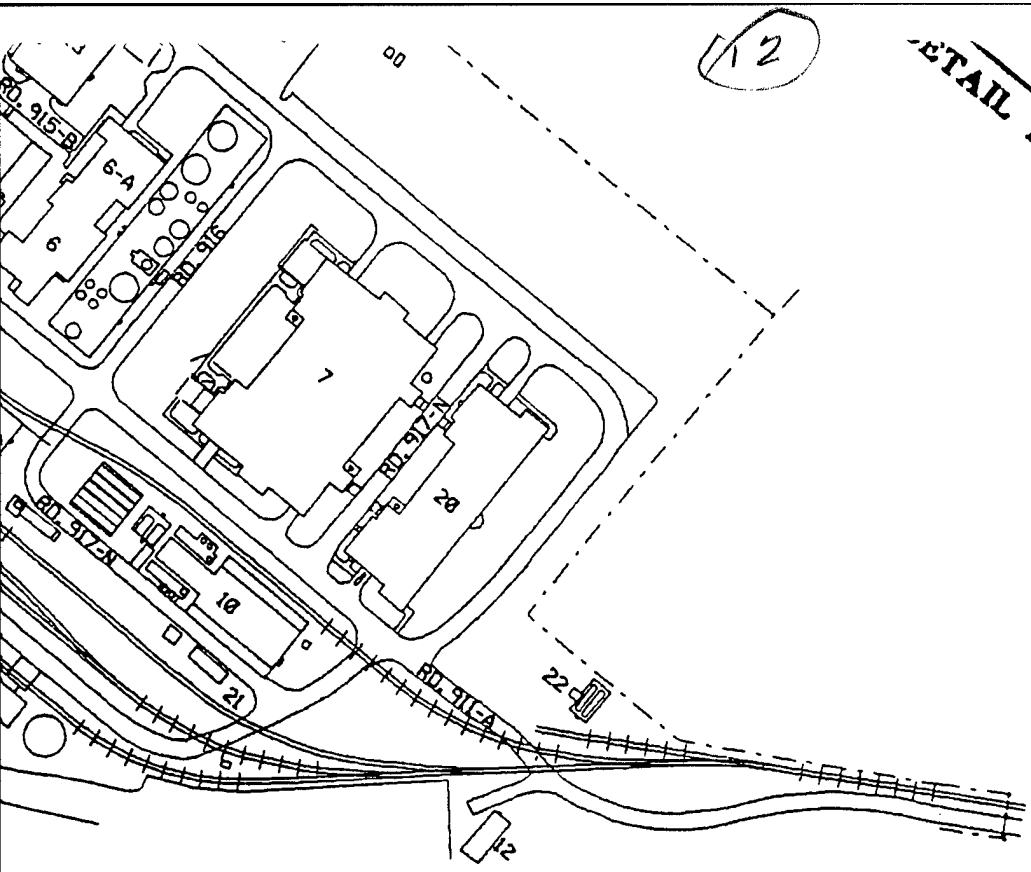
12	TRAINING (F-2)	157	SHOP-CAUSTIC-DECONTAMINATION (H-4)	334	MAGNESIUM NITRATE F
20	STORAGE BUILDING (BG) (F-6)	158	BADGING & VISITOR CONTROL (F-2)	335	CONTROL HOUSE FOR :
21	CLEANING PLATFORM (BG) (F-6)	200	STEAM PLANT (E-5)	336	PUMP REPAIR SHOP (D-
22	FLASHING EQUIPMENT (BG) (F-6)	201	PUMP HOUSE (J-5)	337	OXIDATION PLANT (E-1:
24	COMPRESSOR HOUSE (BG) (F-6)	203	FILTER PLANT (I-4)	337A	AOP PLATINUM VAULT
26	ADMINISTRATION (G-1)	205	RESERVOIR-FILTER WATER (F-3)	337B	ELECTRIC ROOM (E-12)
00	MACHINE & METAL SHOP (G-3)	206	RESERVOIR-DRINK WATER (H-3)	337C	GENERATOR HOUSE FOR
01	GENERAL STORES (G-3)	208	RESERVOIR-RIVER WATER (E-4)	337D	COOLING TOWERS (E-13
02	INSTRUMENT & ELECTRIC SHOP (G-3)	209	PUMP HOUSE (F-7)	338	CONTROL HOUSE FOR 3
03	STORAGE WAREHOUSE AND RECEIVING (G-3)	216	SEWER TREATMENT PLANT (I-5)	339	MAINTENANCE SHOP AR
04	CARPENTER SHOP (G-3)	217	SEWER PUMP STATION (E-5)	340	PUMP STATION FOR HO
05	SERVICE STATION (G-3)	218	SEWER PUMP STATION (H-6)	341	PUMP STATION 503/50
06	LAUNDRY (G-3)	219	CHANGE HOUSE & SHOP (E-5)	342	SODA ASH STORAGE (E-
07	CHANGE HOUSE (G-3)	220	BATTERY CHARGING STATION (G-5)	343	MATERIALS TESTING L/
08	CHANGE HOUSE (G-3)	221	FILTER PLANT (I-4)	400	GUARD STATION (B-6)
09	GENERAL SHOP OFFICE (G-3)	222	STEAM PLANT (E-5)	401	LOADING DOCK (C-5)
14	EMERGENCY WATER PUMP STATION (G-3)	223	RESERVOIR-DRINKING WATER (H-3)	408	LOADING DOCK WITH RA
16	AUTO PAINT SHOP (G-3)	224	CHEMICAL FEED BUILDING (I-4)	409	LOADING DOCK WITH RA
17	STORAGE WAREHOUSE (G-3)	225	BATTERY CHARGING STATION (H-5)	507	STORAGE BUILDING (H-4
18	PAINT & LUBRICANT STORAGE (G-3)	226	BATTERY CHARGING STATION (H-5)	548	SHOP STORAGE BUILDIN
19	PAPER SUPPLIES STORAGE (G-2)	227	FUEL OIL UNLOAD & STORAGE (D-5)	549	H.S.A.A.P. SAFETY (G-3)
20	STORAGE BUILDING-QUONSET (G-3)	228	LANDFILL SERVICE BLDG. (A-5)	550	PIPEFITTER STORAGE (I
21	DECON OVEN (H-4)	229	BATTERY CHARGING STATION (H-6)	551	FIELD MAINTENANCE SH
22	STORAGE BUILDING QUONSET (G-3)	230	REFUSE INCINERATOR (J-5)	556	HEAVY EQUIPMENT SHOP
23	STORAGE BUILDING QUONSET (H-3)	231	COMPRESSED AIR BUILDING (E-5)	558	STORAGE WAREHOUSE (H
24	CONTROL HOUSE-DECON OVEN (H-4)	232	INDUSTRIAL WASTE PUMP STA. 1 (H-7)	559	STORAGE WAREHOUSE (H
25	STORAGE BUILDING QUONSET (H-4)	233	INDUSTRIAL WASTE SETTLING BASIN (I-6)	567	PAINT SHOP (H-4)
26	STORAGE BUILDING QUONSET (H-4)	234	INDUSTRIAL WASTE PUMP STA.II (I-6)	570	EQUIPMENT STORAGE S&
27	S&M OFFICE AND STORAGE - QUONSET (H-3)	235	CENTRAL PLANT WASTE TREATMENT (I-4)	580	ROADS & GROUNDS BUIL
28	STORAGE BUILDING QUONSET (G-4)	235-A	ANOXIC FILTER (L-3)	599	RADIO RELAY STATION (
29	STORAGE BUILDING QUONSET (G-4)	235-B	AERATION BASIN (L-3)	633	FIRE SERVICE BUILDING
30	STORAGE BUILDING QUONSET (G-4)	235-C	FINAL CLARIFIER SCREEN PUMP (L-3)	634	HSAAP QUALITY ASSURA



AREA 'A'

1" = 200'

334	MAGNESIUM NITRATE PLANT (E-11)	E-1	ACID FILTRATION (F-4)	J-1	INCORPORATION
335	CONTROL HOUSE FOR 334 (E-11)	E-2	RDX WASHING (F-4)	J-2	INCORPORATION
336	PUMP REPAIR SHOP (D-12)	E-3	RDX WASHING (G-4)	J-3	DRY PRESS EXI
337	OXIDATION PLANT (E-12)	E-4	HMX CONTINUOUS WASHING (G-4)	J-4	LAG STORAGE (
337A	AOP PLATINUM VAULT (E-12)	E-5	HMX WASHING (G-5)	J-5	LAG STORAGE (
337B	ELECTRIC ROOM (E-12)	E-6	HMX WASHING (G-5)	J-6	BLEND-WET HM
337C	GENERATOR HOUSE FOR 337 (E-12)	E-7	RDX WASHING (H-5)	J-7	INCORPORATION
337D	COOLING TOWERS (E-13)	E-8	RDX WASHING (H-5)	J-8	INCORPORATION
338	CONTROL HOUSE FOR 300 TPD AOP (E-12)	E-9	RDX WASHING (H-5)	J-9	INCORPORATION
339	MAINTENANCE SHOP AREA B ACIDS (F-10)	E-10	RDX WASHING (I-5)	J-10	INCORPORATION
340	PUMP STATION FOR HOLDING POND (E-5)	F-1	CHANGE HOUSE (F-4)	K-1	TNT UNLOADING
341	PUMP STATION 503/504 SOLUTION (F-12)	F-3	CHANGE HOUSE (G-4)	K-3	TNT OPENING (
342	SODA ASH STORAGE (E-13)	F-5	CHANGE HOUSE & OFFICE (H-4)	K-5	PACKAGING WET
343	MATERIALS TESTING LAB (C.O.E.) (E-4)	F-7	CHANGE HOUSE (H-4)	K-7	TNT OPENING (
400	GUARD STATION (B-6)	F-9	CHANGE HOUSE (H-4)	K-9	TNT OPENING (
401	LOADING DOCK (C-5)	G-1	RECRYSTALLIZATION (F-4)	K-10	TNT OPENING (
408	LOADING DOCK WITH RAIL SIDING (C-5)	G-2	PURIFICATION (F-4)	L-1	INCORPORATION
409	LOADING DOCK WITH RAIL SIDING (H-6)	G-3	RECRYSTALLIZATION & COATING (G-5)	L-2	INCORPORATION
507	STORAGE BUILDING (H-4)	G-4	RECRYSTALLIZATION & COATING (G-5)	L-3	LAG STORAGE (
548	SHOP STORAGE BUILDING (G-3)	G-5	RECRYSTALLIZATION & COATING (G-5)	L-4	INCORPORATION
549	H.S.A.A.P. SAFETY (G-3)	G-6	RECRYSTALLIZATION & COATING (G-5)	L-5	DRYING DES (G-
550	PIPEFITTER STORAGE (H-3)	G-7	RECRYSTALLIZATION (H-5)	L-6	BLENDING
551	FIELD MAINTENANCE SHOP (H-3)	G-8	RECRYSTALLIZATION (H-5)	L-7	INCORPORATION
556	HEAVY EQUIPMENT SHOP (H-3)	G-9	RECRYSTALLIZATION (H-5)	L-8	INCORPORATION
558	STORAGE WAREHOUSE (H-3)	G-10	RECRYSTALLIZATION (H-5)	L-9	INCORPORATION
559	STORAGE WAREHOUSE (H-3)	G-10A	RECRYSTALLIZATION (H-5)	L-10	INCORPORATION
567	PAINT SHOP (H-4)	H-1	FILTER & WEIGHING (F-4)	M-1	INCORPORATION
570	EQUIPMENT STORAGE S&M (H-3)	H-2	FILTER & WEIGHING (F-5)	M-2	INCORPORATION
580	ROADS & GROUNDS BUILDING (G-3)	H-3	RDX FILTER & WEIGHING (F-5)	M-3	INCORPORATION
599	RADIO RELAY STATION (G-2)	H-4	RDX FILTER & WEIGHING (G-5)	M-4	INCORPORATION
633	FIRE SERVICE BUILDING (C-12)	H-5	HMX SCREEN, FILTER, WEIGH (G-5)	M-5	DRYING (G-5)
634	HSAAP QUALITY ASSURANCE OFFICE (H-3)	H-6	FILTER & GRINDING HMX (G-5)	M-6	DRYING PBX'S ((



J-1	INCORPORATION (F-5)	O-1	ANALYTICAL LAB (F-5)
J-2	INCORPORATION (F-5)	Ø-3	ANALYTICAL LAB (G-5)
J-3	DRY PRESS EXPLOSIVES (G-5)	O-5	ANALYTICAL LAB (G-5)
J-4	LAG STORAGE (G-5)	O-7	ANALYTICAL LAB (H-5)
J-5	LAG STORAGE (G-5)	O-9	ANALYTICAL LAB (H-5)
J-6	BLEND-WET HMX (G-5)	P-1	CHANGE HOUSE (F-5)
J-7	INCORPORATION (H-5)	P-3	CHANGE HOUSE (F-5)
J-8	INCORPORATION (H-5)	P-5	CHANGE HOUSE (G-6)
J-9	INCORPORATION (H-5)	P-7	CHANGE HOUSE (G-6)
J-10	INCORPORATION (H-5)	P-9	CHANGE HOUSE (H-6)
K-1	TNT UNLOADING (F-5)	P-10	CHANGE HOUSE (H-6)
K-3	TNT OPENING (G-5)	R-1	OFFICE (G-4)
K-5	PACKAGING WET EXPLOSIVES (G-5)	R-3	OFFICE (G-4)
K-7	TNT OPENING (H-5)	R-7	OFFICE (H-4)
K-9	TNT OPENING (H-6)	R-9	OFFICE (F-5)
K-10	TNT OPENING (H-6)	T-1	TF SOD. NITRATE STORAGE (F-4)
L-1	INCORPORATION (F-5)	T-2	FERTILIZER BLDG. (F-4)
(G-5) L-2	INCORPORATION (F-5)	U-1	CHANGE HOUSE, SHOP & LAB (E-4)
(G-5) L-3	LAG STORAGE (F-5)	U-2	OIL STORAGE BLDG. (E-4)
(G-5) L-4	INCORPORATION (G-5)	V-1	OFFICE (F-5)
(G-5) L-5	DRYING DES (G-5)	V-3	OFFICE (F-5)
L-6	BLENDING	V-7	OFFICE (G-6)
L-7	INCORPORATION (G-5)	V-9	OFFICE (H-6)
L-8	INCORPORATION (H-6)	W-1	OFFICE (E-4)
L-9	INCORPORATION (H-6)	Y-1	BOX RECONDITION (F-5)
L-10	INCORPORATION (H-6)	Y-1A	BOX STORAGE (F-5)
M-1	INCORPORATION (F-5)		
M-2	INCORPORATION (F-5)		
M-3	INCORPORATION (F-5)		
M-4	INCORPORATION (G-5)		
M-5	DRYING (G-5)		
M-6	DRYING PBX'S (G-5)		

6
7
8
9
10
11

5 CST 1992

11

12

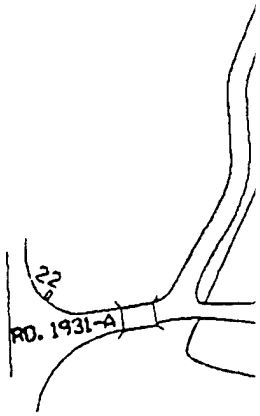
13

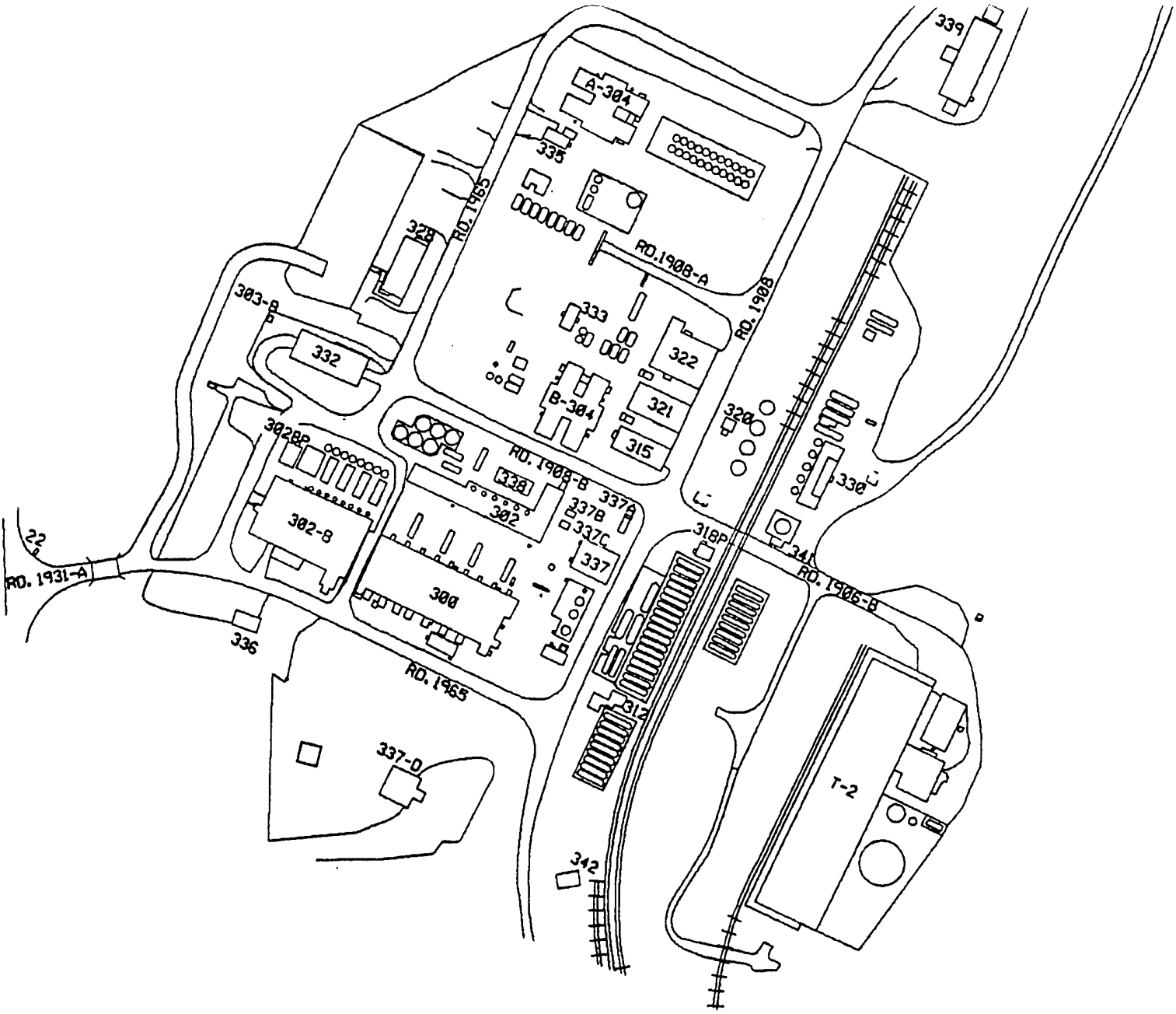
200 0 200 400

1 IN. = 200 FT.

1000 0 1000 2000

1 IN. = 1000 FT.

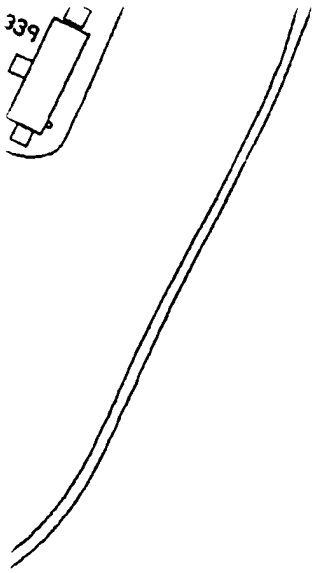




503 AREA

1" = 200'

14



33	PUMP STATION WASTE TREATMENT (O-5)
34	MAINTENANCE SHOP, ORGANIC ACIDS (P-6)
35	SPILL EQUALIZATION BASIN (L-5)
36	PUMP STATION (N-7)
37	PUMP STATION (Q-5)
38	CHEMICAL FEED BLDG. (Q-5)
39	INDUSTRIAL WASTE LIFT STATION (Q-7)
40	COAL CRUSHER HOUSE
505	CARPENTER SHOP (P-5)
613	PAINT STORAGE (P-6)

AREA 'B'

1	NAVAL RESERVE PERMIT (G-2)
2	ADMINISTRATION (G-2)
4	MEDICAL (G-2)
4-A	GARAGE (G-2)
6	SECURITY AND SAFETY (G-2)
7	FIRE HALL (G-3)
8	LABORATORY (G-3)
8-A	LABORATORY ANNEX (G-3)
8-C	SERVICE MAGIZINE (G-3)
8-D	SOLVENT STORAGE (G-3)
8-E	SENSITIVITY TEST SITE (G-3)
8-1	SERVICE BUILDING NO.1 (G-3)
8-2	SERVICE BUILDING NO.2 (G-3)
8-3	SERVICE BUILDING NO.3 (G-3)
8-4	SERVICE BUILDING NO.4 (G-3)
9	SUBSTATION ELECTRICAL POWER (F-3)

123	STORAGE BUILDING (
124	CONTROL HOUSE-DEC
125	STORAGE BUILDING (
126	STORAGE BUILDING (
127	S&M OFFICE AND ST
128	STORAGE BUILDING (
129	STORAGE BUILDING (
130	STORAGE BUILDING (
131	STORAGE BUILDING (
132	STORAGE BUILDING (
133	STORAGE BUILDING (
134	STORAGE BUILDING (
135	RECREATION BUILDIN(
136	SYSTEM AND COMPUT
137	UTILITIES STORAGE (
138	S & M STORAGE (H-4
139	STORAGE S&M LINE (
140	WAREHOUSE-EXPLOSIV
141	WAREHOUSE (G-3)
142	RAIL ROAD SHOP (H-3
143	OFFICE-FIRE TRAININ
144	OFFICE BUILDING (H-
145	RAILROAD TOOL STOR
148	HERBICIDE-INSECTICI
149	SOLVENT STORAGE (H
150	LACQUER PREPARATIO
151	CENTRAL HEXAMINE F
152	WASTE EXPLOSIVES D
153	STORAGE SHED (G-3)
154	WEIGHT STATION (E-5
155	PRODUCTION OFFICE (
156	SHOP & OFFICE EXPL

124	CONTROL HOUSE-DECON OVEN (H-4)	232	INDUSTRIAL WASTE PUMP STA. 1 (H-7)	559	STORAGE WAREH
125	STORAGE BUILDING QUONSET (H-4)	233	INDUSTRIAL WASTE SETTLING BASIN (I-6)	567	PAINT SHOP (H-
126	STORAGE BUILDING QUONSET (H-4)	234	INDUSTRIAL WASTE PUMP STA.II (I-6)	570	EQUIPMENT STOR
127	S&M OFFICE AND STORAGE - QUONSET (H-3)	235	CENTRAL PLANT WASTE TREATMENT (I-4)	580	ROADS & GROUN
128	STORAGE BUILDING QUONSET (G-4)	235-A	ANOXIC FILTER (L-3)	599	RADIO RELAY ST
129	STORAGE BUILDING QUONSET (G-4)	235-B	AERATION BASIN (L-3)	633	FIRE SERVICE B
130	STORAGE BUILDING QUONSET (G-4)	235-C	FINAL CLARIFIER SCREEN PUMP (L-3)	634	HSAAP QUALITY
131	STORAGE BUILDING QUONSET (G-4)	235-D	WASTE SLUDGE PUMP (K-3)	635	FIRE SERVICE B
132	STORAGE BUILDING QUONSET (H-4)	235-E	AEROBIC DIGESTER (K-3)	11	RICHMOND TYPE
133	STORAGE BUILDING QUONSET (I-5)	235-F	SLUDGE TRANSFER PUMP (K-3)	130	CORBETTA TYPE
134	STORAGE BUILDING QUONSET (D-5)	235-G	TANK DRAIN PUMP STATION (L-3)	A-1	AMMONIA RECOVE
135	RECREATION BUILDING (G-2)	235-H	SANITARY SEWER PUMP STATION (L-4)	B-3	PRIMARY RECOVE
136	SYSTEM AND COMPUTER SERVICES (G-2)	236	INDUSTRIAL WASTE LIFT STATION (H-3)	B-5	PRIMARY RECOVE
137	UTILITIES STORAGE (F-3)	237	INDUSTRIAL WASTE LIFT STATION (F-6)	B-6	COMPRESSED AIR
138	S & M STORAGE (H-4)	238	TRACK HOPPER BUILDING	B-7P	PUMP STATION (F
139	STORAGE S&M LINE CREW (H-4)	239	COAL CRUSHER HOUSE	B-9	PRIMARY RECOVE
140	WAREHOUSE-EXPLOSIVES DEPT. (H-3)	300	AIR COMPRESSOR BUILDING (D-12)	B-11	PRIMARY RECOVE
141	WAREHOUSE (G-3)	301	AMMONIA STORAGE TANK FARM (E-12)	C-1	HEXAMINE SOLUT
142	RAIL ROAD SHOP (H-3)	302	AMMONIA OXIDATION PLANT (E-12)	C-3	LACQ. PREP. & 5
143	OFFICE-FIRE TRAINING BUILDING (F-4)	302B	AMMONIA OXIDATION PLANT (D-12)	C-5	HEXAMINE SOLUT
144	OFFICE BUILDING (H-4)	302BP	PUMP HOUSE - AOP (D-12)	C-6	PILOT PLANT (H-
145	RAILROAD TOOL STORAGE (E-4)	303B	MAGNESIUM NITRATE (E-11)	C-7	LACQ. PREP. & 5
148	HERBICIDE-INSECTICIDE BUILDING (H-4)	304	MAGNESIUM NITRATE (E-11)	C-9	HEXAMINE SOLUT
149	SOLVENT STORAGE (H-4)	312	AMMONIA COMPRESSOR BUILDING (E-13)	D-1	RDX NITRATION (
150	LACQUER PREPARATION (H-4)	312A	AMMONIA COMPRESSOR BUILDING (E-13)	D-2	RDX NITRATION (
151	CENTRAL HEXAMINE FACILITY (G-4)	315	OFFICE & LAB-NITRIC ACID AREA (E-12)	D-3	RDX NITRATION (
152	WASTE EXPLOSIVES DEWATER (F-7)	318	AMMONIA REFRIGERATION (E-12)	D-5	BATCH HMX NITR
153	STORAGE SHED (G-3)	320	NITRIC ACID TANK FARM (F-11)	D-6	BATCH HMX NITR
154	WEIGHT STATION (E-5)	321	REPAIR SHOP & OFFICE (E-12)	D-7	CONTINUOUS HMX
155	PRODUCTION OFFICE (G-3)	322	CHANGE HOUSE-NITRIC ACID AREA (E-11)	D-8	RDX NITRATION (
156	SHOP & OFFICE EXPLOSIVE MAINT. (H-4)	328	ACID AREA OFFICE (D-11)	D-9	RDX NITRATION (
		330	AMMONIA NITRATE (F-12)	D-10	RDX NITRATION (
		330P1	AMMONIUM NITRATE PUMP HOUSE (F-12)		
		330P2	AMMONIUM NITRATE PUMP HOUSE (F-12)		
		332	STORAGE BUILDING-QUONSET (D-11)		
		333	CONTROL HOUSE FOR 304 (E-11)		

559	STORAGE WAREHOUSE (H-3)	G-10A	RECRYSTALLIZATION (H-5)	L-10	INCORPORATI(
567	PAINT SHOP (H-4)	H-1	FILTER & WEIGHING (F-4)	M-1	INCORPORATI(
570	EQUIPMENT STORAGE S&M (H-3)	H-2	FILTER & WEIGHING (F-5)	M-2	INCORPORATI(
580	ROADS & GROUNDS BUILDING (G-3)	H-3	RDX FILTER & WEIGHING (F-5)	M-3	INCORPORATI(
599	RADIO RELAY STATION (G-2)	H-4	RDX FILTER & WEIGHING (G-5)	M-4	INCORPORATI(
533	FIRE SERVICE BUILDING (C-12)	H-5	HMX SCREEN, FILTER, WEIGH (G-5)	M-5	DRYING (G-5)
534	HSAAP QUALITY ASSURANCE OFFICE (H-3)	H-6	FILTER & GRINDING HMX (G-5)	M-6	DRYING PBX'S
535	FIRE SERVICE BUILDING (F-3)	H-7	HMX SCREEN, FILTER, WEIGH (H-5)	M-7	INCORPORATI(
11	RICHMOND TYPE MAGIZINES (Y-1 THROUGH Y-11) (C-4)	H-8	FILTER & WEIGHING (H-5)	M-8	INCORPORATI(
530	CORBETTA TYPE MAGAZINES (X-21 THROUGH 150) (B-7)	H-9	FILTER & WEIGHING (H-5)	M-9	INCORPORATI(
A-1	AMMONIA RECOVERY (E-5)	H-10	FILTER & WEIGHING (H-5)	M-10	INCORPORATI(
-3	PRIMARY RECOVERY-SLUDGE TREATMENT (E-5)	I-1	DRYING	N-1	PALLETIZING
-5	PRIMARY RECOVERY-SLUDGE TREATMENT (E-4)	I-2	LAG STORAGE (F-5)	N-2	PACKAGING BI
-6	COMPRESSED AIR & BOOSTER PUMP STATION (F-4)	I-3	DRY PRESS EXPLOSIVES (F-5)	N-3	PACKAGING BI
7P	PUMP STATION (F-4)	I-4	LAG STORAGE (G-5)	N-4	BLEND & PAC
-9	PRIMARY RECOVERY-SLUDGE TREATMENT (F-4)	I-5	DRYING (G-5)	N-5	PACKAGING BI
-11	PRIMARY RECOVERY-SLUDGE TREATMENT (E-4)	I-6	DRYING PBX'S (G-5)	N-6	BLEND & PAC
-1	HEXAMINE SOLUTION (I-5)	I-7	INCORPORATION (G-5)	N-7	BLENDING (G-
-3	LACQ. PREP. & 503/4 STG. (G-4)	I-8	INCORPORATION (H-5)	N-8	PACKAGING BI
-5	HEXAMINE SOLUTION (I-5)	I-9	INCORPORATION (H-5)	N-9	PACKAGING BI
-6	PILOT PLANT (H-4)	I-10	INCORPORATION (H-6)	N-10	PACKAGING BI
-7	LACQ. PREP. & 503/4 STG. (H-4)				
-9	HEXAMINE SOLUTION (I-5)				
-1	RDX NITRATION (F-4)				
-2	RDX NITRATION (G-4)				
-3	RDX NITRATION (G-4)				
-5	BATCH HMX NITRATION (G-4)				
-6	BATCH HMX NITRATION (H-4)				
-7	CONTINUOUS HMX NITRATION (H-4)				
-8	RDX NITRATION (H-5)				
-9	RDX NITRATION (H-5)				
10	RDX NITRATION (I-6)				

DRAWN	T.B.E.	10-4-92					H
CHECKED							
APPROVED	RAC	11/24/92					
							SHEE
SCALE: 1"=1000'-0"			REVISION				1 O

17

L-9	INCORPORATION (H-6)	Y-1	BOX RECONDITION (F-5)
L-10	INCORPORATION (H-6)	Y-1A	BOX STORAGE (F-5)
M-1	INCORPORATION (F-5)		
M-2	INCORPORATION (F-5)		
M-3	INCORPORATION (F-5)		
M-4	INCORPORATION (G-5)		
M-5	DRYING (G-5)		
M-6	DRYING PBX'S (G-5)		
M-7	INCORPORATION (G-5)		
M-8	INCORPORATION (H-6)		
M-9	INCORPORATION (H-6)		
M-10	INCORPORATION (H-6)		
N-1	PALLETIZING & LOADING (F-5)		
N-2	PACKAGING BLDG. (F-5)		
N-3	PACKAGING BLDG. (F-5)		
N-4	BLEND & PACKAGING (G-5)		
N-5	PACKAGING BLDG. (G-5)		
N-6	BLEND & PACKAGING (G-6)		
N-7	BLENDING (G-6)		
N-8	PACKAGING BLDG. (H-6)		
N-9	PACKAGING BLDG. (H-6)		
N-10	PACKAGING BLDG. (H-6)		

11

12

13

HOLSTON ARMY AMMUNITION PLANT

HOLSTON DEFENSE CORPORATION

KINGSPORT, TENNESSEE

BUILDING LOCATION PLAN

AREA A & B

REVISION	SHEET NO.		JOB	BLDG	DRAWING NUMBER
	1 OF 1				7651- 212 / 1226.03 (11)

18