

Chequamegon Bay And Its Communities III  
A History Of The Barksdale Works  
The E.I. Du Pont De Nemours And Company  
1904-2004

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## Introduction

For 70 years, from its establishment in 1904 to its closing in 1974, the Barksdale Works of the E. I. Du Pont de Nemours Company was an important social and economic factor in the life of Washburn. The top level managers at the plant, who lived in company houses along East Third Street, constituted a social elite of sorts, while there were strong bonds of fellowship and mutual help among the cadre of permanent lower level managers and workers. The plant's contributions to the city's economy through employee salaries and wages and purchases of goods and services varied enormously, from fueling the boom of the two world wars to modest during the great depression. But the company was a good corporate citizen of Washburn, paying heavy taxes on its property in the city, on one occasion voluntarily paying double its assessment to help the city meet its financial obligations. The company also contributed \$35,000 in 1942 to the construction of a new elementary school and \$30,000 in 1949 for a new high school, and allowed the city free use of the Du Pont club building as an interim high school, from February 1947 to April 1951.

But whatever contribution the Barksdale Works might have made to the social ambiance and economic prosperity of Washburn, it came at a high price. The manufacture of explosives, despite elaborate safety precautions, is a dangerous business, with death or injury from explosions or toxic chemicals a constant menace (note 1). During the seven decades that the plant was in operation, many men suffered serious injury or debilitating illness from exposure to toxic chemicals. Tragically, thirty-six men were also killed in accidents, and it is to their memory that this history is dedicated.

## Dedication

This history of the Barksdale Works is dedicated to the memory of the thirty-six men who were killed in accidents during the seventy-four years the plant was in operation, thirty in explosions, three from fume inhalation, and three from other causes.

### January 1904

Halvor Gilbertson  
Nels Peterson

### July 16 1906

Ira L. Pierce  
William Wallace  
George Woodisse

### October 24 1907

Arnold Hutland  
Hans Wick  
Ole Wick

### September 16 1908

Gordon Weber

### August 21 1916

Henry Ebner  
David Michaud

### January 9 1917

Jack Boyle  
William Nelson

### August 2 1918

Andrew Borgen  
A. A. Johnson  
Edward Sector  
Walter Skowowski  
William Turner  
Melvin Youngren

### February 20 1925

George J. Murray

### August 23 1928

Anton Mager

### August 24 1928

Conrad Holman  
Albin Renstrom

### January 6 1934

Ben Page

### May 13 1940

Edmund Tourville

### October 15 1952

Henry W. Bomey  
Edward C. Cudmore  
Thomas C. Ferguson  
Emil W. Haviar  
George Hoerich  
Carl J. Moe  
Carlton E. Moe  
Leo A. Swanson

### June 15 1955

Stanley C. Berg  
Elmer Nelson  
Russell Nelson

## Ernest H. Holman

The first part of this history of the Du Pont Barksdale Works consists of Ernest H. Holman's "The Fifty Year History Of Barksdale Works 1904 To 1954," published in the in 28 parts in the *Washburn Times*, from August 19 1954 to March 3 1955 (note 2). Except for corrections and minor changes to make it more readable, Ernie's story of the Barksdale Works is presented here exactly as it was published in the *Times* and transcribed by Barbara A. Larson. The history is highly personalized with the names of many workers and managers, personal reminiscences, recollections of notable events and numerous descriptions of the machinery and processes for manufacturing the various kinds of explosives produced at the plant over the years woven into a fascinating story.

Ernie knew what he was talking about for he worked at the Barksdale Works, or "the plant," as it was generally known, for over 42 years. He was born in Washburn on March 22 1907, graduating from high school in 1925. He worked briefly at the Barksdale Works, then left to attend the University of Wisconsin for a year and a half. Returning to Washburn, he began work as a "lab boy," then advanced to operator and foreman in the various production areas of the plant. On one occasion he was sent to a Du Pont plant in New Jersey to observe the process for producing a new explosive that was to be manufactured at the Barksdale Works. He also served as the secretary of various worker and labor-management groups. He was active in lodge affairs, serving as an officer of the Knights of Pythias, and in the community, elected a ward supervisor and then mayor for one term. In addition to his articles about the Barksdale Works, he wrote a history of the Washburn schools that was published in two parts in the *Times* on July 26 and August 2 1956. He also edited "Yesteryear," a weekly historical column that appeared in the *Times* from January 20 1949 to January 18 1979. He retired in 1971 and died at his home in Washburn on December 27 1978. A eulogy was published in the *Washburn Bayfield County Times* on January 4 1979.

## *SO LONG, ERNIE!*

*News of the sudden death of Ernest Holman, which shocked and saddened the Chequamegon area last week, was doubtless received with similar sorrow in hundreds of homes of former residents scattered across the nation. As the editor of the popular YESTERYEAR page of The Times for many years, Ernie had become a welcome weekly visitor with many who never met him personally but felt they knew him well through his selection of items of local history and his occasional comments about them, which revealed his constant good humor and friendly attitude.*

*Another of Ernie's valuable contributions in the field of local history was his preparation of "The First 50 Years 1904-1954 of Barksdale Works, Wisconsin's Pioneer Explosives Plant, E. I. du Pont de Nemours & Co." which was published to mark the plant's golden jubilee.*

*Aside from these hobby achievements, Ernie was known to his countless friends as a Christian gentleman of high caliber. He was a devoted and affectionate husband and father, a conscientious workman, a loyal friend and neighbor and public-spirited citizen who was always willing and ready to devote time and effort to any worthy cause.*

*Ernie Holman will be long-remembered with affection and respect and The Times is proud to have been associated with him.*

## I. The Fifty Year History Of The Barksdale Works 1904-1954

Ernest H. Holman

In the year 1954, the Barksdale plant of the E. I. du Pont de Nemours and Company celebrated its 50th anniversary. Many rumors were passing around in Washburn, back in 1902 and 1903, that some sort of factory was to be built on the outskirts of the city and no one would ever think then that this new factory would some day out-live the sawmills and even be in existence five years, to say nothing of fifty years. There existed an air of mystery about the “scheme” as it was referred to then.

### The Early Years

A stranger arrived in town in 1902 and began buying up large and small parcels of land near Nash, a short distance from Washburn. Little, if anything, was known about him except that the *Washburn News and Itemizer* referred to him as “the mysterious man with the red top boots.” Approximately 1500 acres were purchased by this stranger who eventually turned out to be Mr. William G. Ramsay, Chief Engineer of the Atlantic and Eastern Manufacturing Company. Mr. Ramsay had been a Major in the Spanish-American War and became head of Du Pont’s Engineering Division when the Companies were consolidated. Major Ramsay died in 1916. Mr. D. M. Maxcy, local banker and dealer in real estate, assisted in the acquisition of the property. The Bayfield County records show that all of this property was acquired by William G. Ramsay and his wife, Caroline J., either from a real estate dealer or from private owners. Mr. Ramsay sold the land to the Atlantic Manufacturing Company in 1903. The property on the lake front was purchased from the Bay City Land Company by the Atlantic Manufacturing Company, in 1904; this is the site of the Barksdale Village. One of the property owners who just sold his acreage to Mr. Ramsay was Jacob Bjork, and it is interesting to note that Mr. Bjork suggested then that the area which is now Barksdale be called “Bjorkland.” This suggestion was never followed, however.

During the early period when the surveying, land clearing and actual construction began, the plant was referred as the Atlantic Manufacturing (A Dynamite) Company. Possibly only paper transactions took place because as it was later discovered, the Atlantic Manufacturing Company was part of the chemical concern, E. I. du Pont de Nemours and Company. The Eastern Dynamite Company which was in reality the Repauno Plant in New Jersey enters into the negotiations only so far as to the “purchase” of the land from the Atlantic Manufacturing Company, and they in turn, “sold” it to the Du Pont Company. Although every small community, such as Washburn, is interested in securing more industries to employ workers, the arrival of Mr. Ramsay and the subsequent purchase of so much land did not seem to excite the papers at that time. The rumors that a sheep ranch or “toothpick” and “match” factory was to be started near Nash were looked upon as another one of these places which the town could very well get along without.

The first item in the *Washburn News and Itemizer* of December 22, 1902, stated, “The big company which will undoubtedly begin operations near Nash next spring has recently added another 160 acres to its holdings in that vicinity. This makes in all about 1400 acres, the concern

has under its control.” Contrast this small item which the *News* carried in bold blacker type a little later concerning the possibility of a brick plant to start operations in Washburn. University of Wisconsin geologists had examined clay from this area and reported it “one of the finest clays and suitable for making building brick and tile.”

The addition of another sawmill under the ownership of Jacobs and McDonnell Company, was also announced, making it the fourth sawmill in operation in Washburn. The Hines Company, then the largest in the world, handled in round figures 500,000,000 board feet of lumber, one sixth of this amount being handled through the local Mill and Office. This Mill employed 1,000 men eight to nine months of the year. The Akeley and Sprague Mill, and the Thompson Company Mill also employed hundreds of men in addition to those employed at the Kenfield-Lamoreaux Box Factory, Grain Elevator and Coal Company Docks. “This city of 5,000 is considered to be an up and coming place in the State, one of the largest manufacturing points for lumber in Wisconsin. It is also noted throughout the State for its good soil and agricultural advantages. The harbor will accommodate the largest ships and it never had a dredge put in it.” The above quotation is from a Milwaukee paper of that period. They further stated that “Because of the well-stocked ladies apparel stores, women for miles around come here to buy their clothes, but the men still go to Ashland to shop.” It is little wonder then that the people and newspapers were a little apprehensive about a factory, which, so far, had really not committed itself; rumors that a plant was to be built had to be accepted as facts.

In February of 1903 the *News and Itemizer* no doubt heard more rumors because this article appeared telling of Washburn’s advantages: **“WILL BUILD BIG PLANT.”** “This is a most natural place for them to locate, as with cheap land, good pure water that can be used without dread of drinking typhoid germs, first-class schools and everything in the line of modern conveniences that can be secured anywhere. Washburn ought to become the home of at least two-thirds of the men employed there. Washburn welcomes the new plant within its borders and is glad to have them here. They will receive liberal treatment and be used right.” An announcement later came out to dispel all rumors when Mr. Ramsay informed the paper that “definite knowledge can be given that the Atlantic Dynamite Company, of Wilmington Delaware will erect the largest plant of its kind in the country. One of the dozen plants operated by this company, this is to be the largest.” “Only dynamite will be manufactured at this plant with the exception of boxes, and for that purpose a factory with a capacity of 50,000 boxes a month will be erected. Buildings will be built so that everything that goes into dynamite can and will be made here, including a large acid plant. Docks will be built on the water front and most of the product will be shipped by water.”

Even after this announcement there were some who shrugged their shoulders in disbelief and spoke unfavorably about the venture on the street corners and in the saloons. The editor of the *News & Itemizer* took these boys to task in a stinging editorial concerning their reaction to the announcement: “These individuals are victims of dyspepsia, nervous debility or other kindred troubles, which cause them to breathe an atmosphere through which permeates all kinds of misery and if such is the case, they merit sympathy rather than criticism. When news was received that the new plant was to be built here, instead of receiving it with a certain amount of credulity and enthusiasm, they express themselves as follows: ‘Oh, that’s hot air of the rankest kind.’—‘What do they want with such a factory here?’ and so on.” These same persons also



were referred to by the editor as “wits” and “wags” when they jokingly stated that they had heard rumors of other factories in our area and that a balloon factory was to locate in Cornucopia. When the first balloon was completed, the factory, its workers, and all the townspeople would go up in the air and soar beyond the clouds, locating in Mars, Jupiter or Saturn. “Cornucopia residents,” they said, “would be jubilant over this idea as they could then leave the land of stumps to a more rarified atmosphere where there are no county officials to interfere with the expansion of their town or ideas on progression.” The editor commented, “He hoped these ‘wits’ will hang onto some loose ropes and go with the balloon to their ethereal domains.”

In May 1903, the *News and Itemizer* stated “Dynamiters are here”—Surveyors have started work at Nash. It begins to look like the dynamite plant is a sure thing. About 100 men will be employed during construction. Local masons were being contacted for work on the chimney for the Power House, which will be 120-125 feet high.” The first two men to be employed were Mr. Glover, County Surveyor, and George Berge. These two men were put to work by Walter Page, Superintendent of Construction at the very start of the work. That the new plant was to be a good thing for Washburn, there was no doubt now. The company had written asking for quotations on prices of brick, lime, sand, hourly rate for masons and laborers, and number of hours constituting a day’s work.

Estimated cost of the electric Power Plant was \$40,000, all modern machinery to be used and will be operated by electric power. In August 1903, it was announced that the Bayfield County Telephone Company had installed a new line to the Atlantic Dynamite Company. This line was ready for use in September 1903. “Contract for the Power House construction was let to a Michigan firm of which George Irving of Washburn is Superintendent. The building will be 87 x 98 feet in size and will be built of brick and stone.” The above quotes or news items appeared in the *News and Itemizer* at various times from May to September, 1903.

Men were employed to clear the land which contained only second growth trees and stumps as this area had been logged by the Shores Lumber Company of Ashland, earlier. The logging camps had been left, after logging operations were completed. These camps, located northeast of the present Dope Dry Warehouses, were used to house the workers during the construction period. Judge A. M. Warden, Acting Coroner, and Sheriff Simpson were called to the location of the new dynamite plant to hold an inquest over a Mr. O. Anderson who died while clearing land. Incidentally, the late Judge A. M. Warden, well known citizen of Washburn for many years, is the father of Max Warden, now General Manager of the Remington Arms Company.

During the construction period, police duties were handled by William (Bill) Mitchell and Paul Paulson who were sworn in as deputies. Their duties were to protect the property and equipment. Paul tells of an incident that happened later when dynamite was being produced but as yet the fence around the grounds had not been put up. Many outside men came in to look for a job to dig the water line from the lake to the Power House and tank, etc. A group of about thirty men were discovered warming themselves around a fire which they had built very close to what was then No. 2 Dynamite Packing House. When Paul arrived there and informed them that the building was full of dynamite the men left in a hurry and Paul says he doesn’t think that they ever returned.

Equipment for removing stumps and moving dirt such as is used today was not available then and work was done by hand and horses. The stumps had to be removed by blasting with dynamite. It was while blasting stumps that the first serious accident happened. Because of the cold weather in January of 1904, the dynamite was frozen and had to be thawed out. The two employees who were doing this work were injured so seriously from the blast which resulted that they died later in spite of the efforts of Dr. T. R. Spears and Dr. Hicks who were called from Washburn to aid them. The men involved in this accident were Nels Peterson and Halvor Gilbertson.

Mr. W. B. Chamberlain who was then in charge of construction on the plant announced in March, 1904 that the Atlantic Manufacturing Company was "rapidly taking on the appearance of a finished affair." The *News* comment at the time stated that "This concern is of no little magnitude and the work is being very neatly done, without sparing pains or expense." Figures after completion totaled \$600,032.58 to be exact. Two hundred acres of the approximately 2,000 acres had been cleared by now and fifty-three (53) buildings had been constructed with twenty-seven (27) more still to be put up. The Power House with its 125 ft. high smokestack was the center of attraction.

The *News & Itemizer* of the week had a lengthy article describing the new plant, some of it as follows: "Electricity will furnish the power. The three boilers in the power house have mechanical stokers and supplied with water from a well 247 feet deep. Steam will be furnished for the two 125 H.P. engines and the third one, a 100 H.P. engine. All machinery is of the latest make. They have their own electric light plant and it will require 2,000 incandescent and 23 arc lights to supply the grounds and building. The Machine Shop is nearly completed and a 5 H.P. motor will furnish power there for the machines. "An 'Oil of Vitriol' Plant is also being constructed with 6 buildings for this one operation. Fifty-four buildings are located in a ravine for the manufacture of dynamite, the buildings being placed here as a safety measure. Because of the danger of explosions in the making of dynamite, precautions are taken by surrounding these buildings with earthworks. The electric plant has every safeguard known to modern electricians. The effectiveness of these precautions is very plainly demonstrated by the fact that in the many years of operation of many plants, there never has been an explosion in any operated by this Company. Thirty-five men are now employed and work has been held up due to severe winter weather. By Spring, 200 men will be employed here. Estimated that in eight months, the plant will begin to operate. The dynamite plant is surely a good thing for Washburn, in fact a much better thing than most of Washburn's citizens realize."

To celebrate the progress made at the plant, the construction department held a social event at the plant called a "Leap Year Party". The group left Hotel Washburn by carryall and arrived at the plant as fast as Cal Willey's horses could travel. A banquet and a dance was enjoyed by those present. The reception committee consisted of Mr. Chamberlain, Engineer, and Jack Dohme, first Power House Foreman. Roy Hull acted as m.c. who in turn called upon Messrs. Stevens, Oscar, Dohme, and Chamberlain, who responded with neatly worded toasts appropriate to the occasion. During the period of construction and early operation, the employees who made their homes in Washburn, boarded and roomed at the old logging camp on the grounds and went home only on weekends.

In September, 1904, M. H. Sprague of the Washburn Electric Light and Power Company proposed an electric carline to the new plant. Mr. Sprague stated that “The proposed car line would not pay anyone anything connected with the enterprise but would be a big thing for Washburn.” Also about this time, it was proposed by some Ashland citizens to run the Ashland street car line to Washburn “To afford the dynamite plant employees transportation from their homes, to the plant and back. It is thought that if the street car line gives good service, many of the 300 employees expected to work there, would reside in Ashland.”—Taken from the *Ashland Press*. Some agitation for the Omaha Railway Company to start train service also had begun, too, and many local citizens favored it over the other propositions.

Apparently not interested in street car travel or railways at that time was young Andy Johnson, first white boy born in Washburn. While all the discussions were taking place for speed and more power, Andy was calmly jogging along the road in a horse and wagon delivering the first equipment to the plant while a delivery boy for Olson Dray Line. Little did he think then that some day, he would give up the horse for that “Iron Monster” but after railroading and a short time in the Sheriff’s Office he eventually ended up at the plant. Andy stayed until pensioned January 1, 1948.

The Town of Washburn embraced, at this time, all of what is now the City of Washburn, present Towns of Barksdale, Washburn and quite a bit more. Washburn was then known as the largest “Unincorporated Town” in the United States. In April 1904, the City of Washburn had incorporated with Mr. W. H. Irish its first Mayor. The local paper stated that “There seems to be some hitch over the dynamite people not wanting to be included in the City.”

The local officials were very cooperative in trying to provide train service to the plant and the new Mayor Irish, M. H. Sprague, and Mr. I. L. Pierce, the first plant Superintendent, journeyed to St. Paul in October 1904, and closed final agreement with the Omaha Company to put on a work train. Mr. William G. Ramsay, Chief Engineer, was opposed to a work train during construction and favored the continued use of the old logging camps. He also did not like the idea of Mr. Pierce getting mixed up with Washburn citizens in the train “deal”. The first train, consisting of two coaches, began running in early November, 1904, and 75 workers used it the first day. The road bed on the plant had been put in readiness by contractor John Friberg, who later became Bayfield County Road Commissioner.

Reference has been made many times here to the Atlantic Manufacturing or Dynamite Company but in 1903 the plant was referred to as the “Barksdale Plant.” The name “Barksdale” was given it in honor of Mr. Hamilton M. Barksdale, who was head of the High Explosives Operating Department of the E. I. Du Pont de Nemours Powder Company. Mr. Barksdale, the son of an illustrious Virginia family, was a graduate of the University of Virginia, an engineer and executive of great ability. He became Vice-President of the Du Pont Company and was recognized by his contemporaries as the leading dynamite executive in America. He was held in high regard by his associates, who referred to him as “H.M.” Mr. Barksdale together with Mr. Harry G. Haskell, for whom the “Haskell Club” was named, originated the idea of research in the chemical field. This culminated in the establishment of Du Pont’s Eastern Experimental Laboratory. The name “Eastern” was given to the Laboratory for the Eastern Dynamite Company which operated the Repauno plant at Gibbstown, New Jersey.

It is not the intention to go into the past history of the E. I. Du Pont de Nemours Company, except only to show the relationship insofar as the Barksdale plant is concerned. The E. I. Du Pont de Nemours & Company was incorporated in Delaware on Oct. 23, 1899. The trend at the time was toward "bigness in the industrial operations of the country." Some of the smaller plants operating in the early nineteen hundreds were known as "Eastern Plants," "West Coast Plants," and "Torpedo Factories." No doubt the plant under the "Atlantic Dynamite Company" was also in that class. In 1902 the DuPont-Hazard interests bought out the Laflin and Rand interests and all of the smaller plants were eventually embraced under one central direction with the forming of the E. I. Du Pont de Nemours & Company.

The Barksdale Plant was one of the dozen or so plants operated by the Du Pont Company. The location of the plant in this particular area is primarily because of its nearness to the two large iron ranges, the Gogebic to the East and the Messabi to the Northwest. Also to supply dynamite to the copper mines of the Northern peninsula of Michigan, as well as other great metal mines and stone quarries of the West. It might be mentioned that not a barrel of cement was produced until dynamite made big scale rock blasting practicable. Little thought was given to this by the local press and townspeople where lumber was "King" and would never be replaced by anything else. Apparently little was known about the iron ranges at the time because no mention of them was ever made by the *News and Itemizer*. Our North Wisconsin advantages run mostly toward agriculture and ideal water transportation conditions. The red clay which was spoken of as being so wonderfully suited for bricks and tile, never quite reached the peak that was anticipated although bricks were made and sold a little later.

The plant was, by the Fall of 1904, taking the shape of a finished powder plant. The explosives buildings were built in Boyd's Creek ravine where the high banks afforded a natural earthen barricade on the one side which protected the area on the "Hill," as the "Safety Area" is referred to. Boyd's Creek which empties into Chequamegon Bay west of what is known as Wyman's crossing or farm had also been referred to as "Bloody River" and many a local fisherman hiked out there from town hoping for a nice catch of trout. We would imagine that the name "Bloody River" derived from the color of the water especially after a heavy rain which would wash down the high clay banks in the "Ravine." For transporting raw materials and finished products, narrow gauge tracks were installed throughout the plant. These roadbeds were built by Sol Wilkinson of Ashland who contracted the work.

To mention all the men who had a part in the construction of the Barksdale Plant would be impossible but from time to time we hope to drop a name here and there along the line to give this a personal touch. The Du Pont Construction staff which gathered together for the purpose of building this plant, formed the nucleus of the present engineering department of the Du Pont Company. On June 14, 1905, the Construction Department turned the plant over to the Operating Department. The plant, a model of its kind, and which was now preparing to operate under Ira L. Pierce as its first Superintendent, was the first of the modern dynamite plants which the Du Pont interests erected at strategic locations throughout the U.S. after the formation of the consolidated E. I. Du Pont de Nemours Powder Company in 1902.

Many of the first buildings on the plant were built by the A. Donald & Company Contractors of Ashland, Wisconsin, with whom Frank Tomlinson was associated. Mr. Tomlinson, who is now 92 years of age, continued on as a local contractor until only recently when he retired. His son, William Tomlinson, used to deliver messages on a bicycle from Ashland to Barksdale for his dad. William heads the Tomlinson Company and at present is building Washburn's new gym. Buildings built by the A. Donald Company were the first O.V. Plant, all of the Nitroglycerin and Powder buildings, the first two brick Magazines near the Box Factory, in addition to the Machine & Blacksmith Shop, Carpenter and Lead Shops. The Store Office, Store Warehouse and Pulp Storehouse also were built by them. The sandstone used here came from nearby Houghton Quarries while a lot of the brick was shipped here from Menomonie, Wisconsin. Other buildings built at the very start were the Soda Dry House, Soda Store House and the Main Office. While the Office was being built, the Clerical Staff was housed in the present spare electric motor storage, the small building near the Carpenter Shop. The new Office was ready for occupancy in February, 1905. The first stenographer was Miss Cedar Noyes and later she was replaced by C. Leon Johnson, who remained here until 1915. He then left for Repauno as Chief Clerk. Mr. Johnson came back to Barksdale and at present writing is the Chief Clerk here. Jenny Anderson was also employed as a stenographer at this time. The buildings in the Village of Barksdale were built at the same time as the plant buildings with the exception of the two largest occupied by M. O. Thompson and Magnus Norgren. The Omaha depot which was built during the rush of business brought on by World War I has since been torn down.

All of the machinery in the Acid Area were steam driven. The powder buildings were heated by separate heating houses which housed hand fired steam boilers. The heater house men acted as powder-line watchmen. There were no regular watchmen on the plant otherwise, although the property was not fenced in until 1917. Some of the early heater house men were George Cookler, August Bluhm, Phil Newhardt, and Ole Warden. Apparently it was not felt necessary to employ watchmen because non-workers, women and even small boys made visits on the plant. Percy Williamson tells of bringing lunch out, when only a youngster, to his dad Jim and he stayed around watching his dad work in the Acid buildings.

Water supply was furnished by the several deep wells throughout the plant and at the present time the only well still useable is outside the Power House. Many times when the lake water becomes too "thick" to drink, water is drawn from this well and distributed about the plant in cans for employees. The powder buildings were not ventilated as they now are and headaches were the order of the day for any who entered the buildings. In the nineteen thirties, all powder buildings were equipped with modern ventilating systems. The men worked bare handed, wore their own clothes, but a special powder shoe or sneaker was worn by those in the explosives buildings. The powder was dipped in paraffin by hand in wire cages at the "Case & Dip House." Powder "buggies" did not have wheels but were carried from the building and to the push truck by means of 2 "carrying sticks." All the powder made here during the first year of operation was referred to as "Straight Dynamite."

The local men who eventually operated the powder line were, of course, all green hands at this type of work, since they had spent most of their lives in sawmills and lumber camps nearby. Men with experience at Repauno plant were brought in to start up the line. Mike (or Cal) Connelly and Jim Reilly were sent here from Repauno to nitrate the first charge of nitroglycerin.

The powder men were initiated before beginning work by going through the “Paddle Test.” The test was done by several men spreading their legs apart and the newcomer crawled through the “human arch,” and as he did he was slapped on the rear with a wooden paddle. There are no records available to show who passed or who did not. We can imagine that the only effect on the neophyte was that he found it a little easier to stand than sit for awhile at least. These same men later, with only two years of experience in powder making, smashed the world’s record for production by turning out 74,000 lbs. of finished dynamite.

In the first year of production, 1905, Barksdale produced 2,907,475 lbs. of dynamite, under the supervision of G. B. Lang, Powder Superintendent. The men who were on the job at the time the first powder was made at Barksdale in May, 1905 were Mike Aspel, William Arntsen, and Oscar Wegsteen, who assisted with the first charge of nitroglycerin on May 24, 1905; Bert Davis was in the Dope House; William “Bill” Mitchell was waiting for the powder at No.1 Hall and he punched the first sticks made here. Bill Mitchell later established an individual world record when he punched 54,000—1½ inch and 45,000—1¼ inch, each in one 8 hour day. The “Case and Dip House” employed quite a number of men at times but the earliest ones we have been able to find were Bob Tarbox, George Been, Art Anderson, Bill Urquhart, Hugh Ross, Charles Gierczic, George Staples from Repauno and Frank Komborski.

The hand packing house had such experts as Paul Paulson, Otto Pallage, Sig Anderson and Bill Burns. The Kimber House operators were Joe Johnson and Ed White, and the Figure Eight machine was handled by Charlie Anderson and Olaf Anderson. Bill Dayton and Paul Paulson ran No. 2 Hall Machine. The NG Neutralizer Operator was “Windy” Wallace and the line foreman, George Woodisse. Hi Hanson and Charles B. Olson were the Atlas-mix house operators. Shells were made and sent to the powder line by such able old-timers as Jared Welton, John Sampson, Frank Parke, and Homer Brisson. Frank Stone arrived from Repauno to start up Shell House earlier. Mike Cassidy was the repairman.

Before dynamite could be made, Sulphuric acid and Nitric Acid had to be manufactured. Buildings were completed and ready to operate. The operation of producing sulphuric acid differed somewhat from the process as it is today. “Iron pyrites,” an ore containing sulphur and about 40 per cent iron, was roasted in big burners to remove the sulphur gas which in turn was used to make the acid in a very complicated operation. Men from Repauno were sent here to start up all acid buildings. Some of these were Cal Havens, Nelson Jorgenson, David Carson, and Winn Allen. The iron residue, because of the small amount of iron it contained could not be used at the Ashland blast furnace. It was used as a filler on the narrow gauge track road beds and even spread over the roads. The dirt highway from Barksdale to Washburn was covered with ore and we wonder how the new cars in all the pastel colors would look if spattered with it as the old cars were in those days.

The iron pyrites came direct from Spain by ocean-going boats which transferred the cargo to lake vessels at the Newfoundland coast and from there to the Northwestern Fuel Company dock at Washburn. The first shipment of 2,861 tons arrived on the steamer “Fairmont” on October 21, 1904, transported by rail to Barksdale where it was placed in the pyrites store house. They had a little trouble with the first two loads at the docks on account of the import duty to be charged. Samples were taken and sent to Marquette, Michigan, by the Special Inspector. If the ore

contains less than 25 per cent Sulphur, it is classed as “iron ore” and liable to a 40c a ton duty. The first load was said to be worth \$14,000. Later on, when sulphur was available in its true form, boats were still used to ship it to the Washburn dock. The use of raw sulphur in place of iron pyrites also brought about changes in the “O.V.” Plant.

Joe Failing was the general acid foreman, and when the first fire was built in No. 1 Burner on April 29 1905, he had George Lee and Louis Duffy operating there. Others who were there or who followed shortly afterwards were Charlie “O.V.” Anderson, John Carlson, and Otto Anderson. These men continued to operate there until they received their pensions many years later. Sodium Nitrate, the basic compound needed for the manufacture of nitric acid, was also shipped to Washburn by boat. It came all the way from Chile, South America. The soda was shipped in burlap bags. The heavy bags were hoisted from the hold of the ship to the dock and trucked by hand into the box cars which in turn hauled it to the soda store house at the plant. The burlap bags, after being emptied, were washed to recover the soda remaining in the burlap and the bags were also dried, baled and returned for salvage. The sodium nitrate was dried and ground for use in dynamite manufacture in addition to the making of nitric acid.

The first nitric acid made was “Weak” acid and was used at the ammonia Neutralizer in the making of ammonia liquor. The ammonia neutralizer consisted of a brick-lined pit or hole in the ground covered only by planking. The acid was carried to the pit in large carboys by two men with “carrying sticks.” To protect themselves from acid fumes the men carrying the carboys used woolen nose rags for masks, dampened with water if the fumes were “bad.” The ammonia crystallizer where ammonium nitrate was grained was situated nearby. The one big difference between then and now is that in the early days, the ammonium nitrate had to be shoveled out of the kettles. The men who operated these buildings wore woolen clothing for protection as wool is not affected quite as much as cotton or other fabrics by acid. The appearance of some of the acid men, after the clothing had been worn in a building for some time, was something to behold. Because of their appearance they were called “Acid Rats” If the memories of some of our main sources of information are correct, the early acid area men were: Mr. Carson and Jens Jorgenson who came from Repauno to start up the nitric acid operation; Jim Monahan, Pete Fiones, Bob Anderson, and Julius Hustland who first worked there.

Dave McCarthy, Jim Murphy, and John Larson, were operators at the Soda-Dry House. Herman Kluge handled the long stick with the glass bottle tied on the end, which he dipped out samples of ammonia liquor from the pit to see if the mixture was neutral. Jim Williamson and Bob Urquhart “Choked” on the fumes at the “Pan” house or nitric acid concentrator. Watching over the kettles at the ammonia crystallizer, were John Erickson, John Cease, and Ernie Fahrig. The first acid recovery building duties were handled by Fred La Flamme. The soda bag refinery or “Bag Wash” was taken care of by “Laundryman” Joe Tracy. School boys worked in the “bag wash” during vacation time later. Oscar Bartness offers us this information as well as some on other building operators as he was Joe Tracy’s helper in the “bag wash.” Oscar saw a better future in the grocery business, or at least he thought so in 1907, as he quit the plant and took the position of delivery boy for Larson Brothers Grocery. He returned to the plant, however, and is still here. The Nitroglycerin Waste Acid Plant which was and is situated in the Acid Area was then run by Adolph Kinney.

The refuse from the Nitric Acid Plant where sodium nitrate was treated with sulphuric acid in hand-fired coal burning stills, was called "salt cake" or "nitre cake." No particular sale for this was found at first and it was used to fill up the small ravines in that area. Later, it was sold to companies who made fertilizer and the back-breaking job of breaking the rock-like substance up for shipment was done first by Joe Sirois and later by Ed DeMars and Ed Gagne. The dopes used in dynamite making consisted of pulp, starch, chalk, flour and meals which had to be dried before using and our first Dope Dry operator was Ole Westerlund, father of John Westerlund. Johnnie, you will recall, was the Barksdale Telephone system operator for many years.

The soda, ammonium nitrate and dopes were hauled to the powder dope house in barrels on flat cars pulled by mules. Some of the early drivers of these mules were Al Vienneau, Hans Johnson, George Ogren, Vic Bergquist, Joe Pallage, and Ben White. Transporting finished products to the magazines from the box packing house was also done by mule and horse drawn cars. Two of these drivers were Frank Bennett and Paul Martin, according to Paul Paulson, the man who worked for over forty (40) years on the powder line, who incidentally remembers that the name of one of the powder line mules was "Flo." The man who kept the eleven miles of track in good condition as Section Boss back in those days was the old Irishman Andy Ranahan, who refused to work on St. Patrick's Day but rather chose to walk around town with flowing green ribbons dangling on his coat lapel. Woe be unto any "Orange" men who got in his way. We remember also that Andy had a "special place to sit when attending a movie at the old show house, The Temple." He never missed a change of picture and if anyone took "his" seat before Andy arrived, the intruder was promptly told to go find another seat. One of his early "gandy-dancers" on the section crew was John Renstrom. A favorite expression remembered by some was when Andy would say in his real Irish brogue, "John, bring me an armful of ties."

Although the Power House was one of the first buildings erected, there were times when live steam was needed during its construction. The steam was supplied by a portable boiler outside the Power House. The first "fireman" of the portable boiler was Carl "Charle" Ekholm, who later worked for many years as a pipefitter and played fiddle on the side. According to the records, the foreman was Jack Dohme and he had such men as Bill Fenton, Joe Arseneau, Walter Wick, Carl Gasman, Charles Downey and Curley Eliason on his time sheet for the day. Carl Gasman insisted upon smoking a corn-cob pipe in the fire-room even though "No Smoking" signs had been posted prohibiting such things. Mighty hard to see where a little pipe smoking could do any damage when tons of coal were burning in the same building.

During the construction of the plant, the Construction Department which had been set up under Walter Page, Construction superintendent, and W. Chamberlain, Engineer, had many local men in charge of various jobs. Jack Ward had charge of labor along with Bill Fenton who later handled the "Bull Gang" as the labor crew was called. An early timesheet of 1906 owned by Doc Olsen shows that his father, Gilbert Olsen, Conrad Johnson, A. Hamilton, Eldore Wegsteen, father of Mose, George Ogren, Nick Eliason, George Moran, Hans Sievaag, and Henry Petterson were on the labor crew at that time. Wages were about \$1.75 for a ten hour day. John Nolander had charge of Construction carpenters assisted by Anton Wedal. The operating department carpenter shop had as its first foreman, John Bergquist, followed by Jacob Jackson. His assistant was Christ Albrechtson. Carl Kinney was perhaps the first carpenter hired at Barksdale. Along with George Lemer and Ole Hoel they received \$2.00 to \$2.50 per day for 10 hours. During



early war years and later the Carpenter Shop was referred to as the “Norway” house and Hagbhart Pedersen was in charge. You didn’t have to be a “herring Choker” to hold a job there but it did help. When you were receiving instructions, Norske was used as much as English. We sometimes wonder how Lauren Porter and Leo King could get things straight when the only thing about them resembling a Norwegian was the fact that they, too, chewed “snus.”

The paint department bought their paint by the barrel and it came in three colors. “Du Pont grey”, “Acid Red” and just plain “Black”. Fred Tanneberg saw to it that the proper paint was taken out of the right barrel for many years until Ole Larson took over. Ole, as the story goes, was a fellow who went about his work conscientiously and when on a particular job, he went there strictly to paint and “no monkey business.” Ole’s son, Arnold, proves to be a chip off the old block and since 1950, has the same job his father had. Betty Ann, daughter of Arnold, is a stenographer in the office—third generation.

The Machine Shop also handled the job of shoeing the horses and mules in addition to all the more particular jobs that came up. Harry Fahrig was the first foreman and after advancing to other positions in the Maintenance Department, eventually was transferred to the Joplin, Missouri Plant as Maintenance Department head there. During the winter time the shop was very cold. Harry wore wooden shoes to keep his feet warm. Harry Fahrig was quite a cut-up as a young man and Herman Hanson tells about the “blow-gun” Harry made out of a 1/4 inch brass pipe for shooting wads of putty at anyone who passed the machine shop. Finally hit Jadie Manning, conductor on the work train, and that was the end of the “blow-gun.”

The first apprentice on the plant was a husky young fellow by the name of Carl Christofferson, who worked for four years and then was considered a first-class mechanic. No books, no lessons to work with, only a verbal agreement with the Company that he could stay and learn the trade. Carl stayed until February 1, 1953, when he retired. Carl was the second Machine Shop foreman, having stepped up when Harry Fahrig moved on to a higher position. Carl tells about the busy days in 1918 when he had 80 men in the Shop and then in 1932 when business really was bad for a time, he handled all the work in the shop himself. The last of the early apprentices was J. Herman Hanson who received his training under Carl for two years before going to the Power House to learn about the machinery there. Mr. McSorley, Repair Engineer, while Herman Hanson was shop apprentice, told Herman to quit leaning on the lathe as he would develop warts on his elbows if he kept it up too long. One of the early machinists was Charlie Taberman, Martin Thompson’s father-in-law. The blacksmith, when the plant started, was Fred Christianson and his son Louis was his helper. Louis eventually became the blacksmith and held the job until pensioned in August of 1932. They say that Fred had quite a time putting shoes on the mean gray mule, but that he was the only man who could do it.

The first tinsmith and lead-burner was Andrew Young, who had been transferred here from Repauno. Mr. Young was the first Du Pont employee to receive a pension at Barksdale because of his company connected service at Repauno dating back to 1901. Chin Swanson tells about a son born to the Youngs in the Town of Barksdale where Mr. Young lived in 1907, when the Town of Barksdale was formed. He was the first child born in the new town and the parents named him “Barksdale” Young. In later years the Lead Shop has been handled by Art Nelson.

Art's ability was recognized throughout the Company and his services were required at other plants on many occasions. "Sparky" Nelson, no relation to Art Nelson, now is in charge.

The Pipe Shop, which was so ably handled by Al Garberg until his retirement in January, 1954, had as its first foreman Ed Moore and who later was followed by Amos Nelson. Al then gave up his job as tram horse driver and came to Barksdale as an apprentice pipefitter for two or three years. It was while working as an apprentice that Mr. Wiltbanks, Maintenance Superintendent told Al that he would have to move a little faster. Because, as the Boss, stated he had to sight over the top of his lead pencil to see if Al actually moved. Evidently the fact that Al had been walking behind one of those slow-gaited tram horses, naturally caused him to slow his own speed down so as not to end up ahead of the horse. Early pipefitters also included Louis Nelson and Albert Gren, a helper.

The Electric Shop duties were handled by Henry Oscar and ably assisted by Arty J. Anderson. In addition to changing light bulbs, the electricians also handled the Fire Chief's duties, the Electrician foreman being the chief. No doubt the experience gained on the brigade here stood Arty in good stead because after Mr. Posey retired as Fire Chief in Washburn, Arty took over and held that position for many years. He is proud of the fact that in all his years as chief, he never lost a man unless it might have been one who couldn't run fast enough to keep up with the hand-pulled hose cart and disgustedly went home. The plant fire fighting system dates back to when water was pumped from the bay in 1915. No doubt a bucket brigade would have been formed if needed before this. The Power House was equipped with a steam fire siren and fire alarm signals were installed on light poles throughout the plant. At the start of World War I, Ken MacDonald, retired fireman from Duluth, took over the duties as Fire Chief. "Old Mac" lived upstairs of the Man Office and he is supposed to have said, "This plant would be a lot better off if there were less Mechanics and more MacDonalds." The Electric Shop also had an apprentice, Elam Johnson, brother of Chief Clerk C. Leon Johnson, and another youngster, Guy Warden.

Before electric locomotives were used on the plant, gas locomotives did the work. They were numbered 1, 2 and 3 and later with the addition of electrics and more gas engines, the number eventually reached No. 10. Old No. 4 was used until the late twenties at which time it was discarded. This engine was not as fast and strong as No. 5, No. 6, No. 7 and No. 8 electrics and was nicknamed "Spark-Plug" after the slow moving horse in the "Barney Google" comic strip of that day. Christ Aune and Fred Tapely were early drivers or conductors on the first locomotive while the great log-roller George Glazier kept them in running order. The Storekeeper who must have been quite busy unloading freight was Louis Miller, father of the late Lawrence Miller.

The Company did not assemble their own dynamite boxes then as they do now. The boxes were shipped in completely made up from the Beck Box Company of Milwaukee. The present building housing the Box Factory was then used as a boarding house. All boxes were securely fastened together when filled with metal straps or bands. The present Box Factory was not equipped to assemble boxes until World War I. Some of the early men in charge there were Christ Albrechtson, John Upham, and Joe Johnson. Later Art Fossum, fresh from the sawmills took over and he controlled the flow of boxes on the long leather belt from on top of the high perch until May 1, 1941, a total of 21 years.

The first magazine keeper, counting the dynamite boxes at the two magazines was Albert Beausoliel. Other old timers such as Axel Axelberg, Jack Murphy and Jens Albrechtson also were magazine keepers later but in more recent years when you call there on the phone, the voice you hear is "Hallow, this is Mag and the Mag." Magnus Norgren has been there since 1917. The early magazines were the two brick buildings near the Box Factory, but about 1915 with the rush of business brought on by the European War, more magazines were erected in their present location. Oscar Palm did the brick and concrete work there. The manufacture of dynamite at Barksdale continued uneventfully from May 1905 until the following year. In June, 1905, the Company shipped its first dynamite; three carloads made up the first shipment.

The first classified major injury up to this time, after operations began resulted when Dolf Tatero and Anton Wedal were injured while measuring a belt on a "running" pulley. Tatero broke a leg and Wedal had two ribs broken. On July 16, 1906, despite the fact that this plant was the most modern and every precaution along safety lines had been made, a terrific explosion occurred at the No. 1 NG Neutralizer. This explosion resulted in the death of three men including the Superintendent, I. L. Pierce; George Woodisse, line foreman; and "Windy" Wallace, operator were the others. Mr. Pierce had worked here since January 21, 1905; Mr. Willis "Buck" Harrington replaced Mr. Pierce as Superintendent but served only temporarily until Mr. Charles A. Patterson arrived to take over. Pete Wishert actually was the Assistant Superintendent at the time.

The No. 2 NG Line was built in 1906 and gelatin dynamite also made its appearance at this time. Charles Hare was one of the first operators in the Neutralizer there. Mr. Hare had the distinction of operating the cleanest and the neatest NG Neutralizer in the Company. During a Manager's meeting here at one time Mr. Hare's Neutralizer was the show place of the plant and one of the highlights when all Managers went there to view it. Mr. Hare, father of Clarence Hare, served as postmaster of the Village of Barksdale until his death. His daughter Agnes now handles that position very nicely. Clarence Hare, who is now at the Louviers, Colorado plant, began at Barksdale as a laboratory boy in 1911. After the first explosion, there was no disruption in production as the No. 2 line was ready to operate. A second serious explosion occurred in September, 1907, in the No. 1 NG Store House and killed three men. They were Ole Wick, Hans Wick and Arnold Hutland. The two Wicks were not brothers although they may have been related.

No other items of interest can be found during Mr. C. A. Patterson's stay as Superintendent which lasted about two years. No doubt many of the early "wrinkles" were ironed out and necessary adjustments made for improvement after two serious explosions in two years. Mr. F. T. Beers arrived in 1908 to take over the Superintendent's duties at Barksdale and his arrival began what turned to be a long stay. Mr. Beers was Superintendent through the normal years up to the time the plant began making TNT for the Allies in 1914 and on through the mad rush of World War I. He was replaced by Mr. R. T. Cann in the fall of 1923 as plant "Manager." It was during Mr. Beers' first year at Barksdale that the explosion at No. 2 NG Neutralizer occurred, killing the operator "Strawberry" Webber and causing injuries to Mr. Beers as he was leaving the building. The nitroglycerine buildings such as the Neutralizer and Store House were equipped with wood tubs but after the series of explosions there, the wood tubs were replaced by lead tubs. This is not in anyway an attempt to fix a cause for the accidents but merely trying to show that

the Company was ready to make any conceivable change or improvement in order to make this the safest plant possible.

A safety program had been started about 1912 or 1913 whereby a man trained in safety work was hired for the purpose of promoting programs which would educate the workers and cut down accidents. Safety lectures were printed in four or five foreign languages. Rotating safety Committees of three members made up mostly of foreman and working leaders. One of the first safety committees to make an inspection of the plant consisted of Harry Fahrig, Charles Hare, and George Lee. The personnel changed every three months. An enameled watch fob was presented to each member as a badge of his office. Many of these original fobs are still in the possession of old timers who served on those committees. Mr. John Upham was one of the first of these Safety Supervisors and it is believed that the foreman-group safety committee originated here at Barksdale.

They held safety rallies too and they were so entertaining and educational that these rallies have always been highlights in the Company's program. The first of these rallies was held in 1913 in Washburn. Lantern slides of common unsafe practices, lectures and motion pictures, musical numbers, and dancing usually constituted a very enjoyable evening for the employee and his family. In checking a picture taken about 1917, when the safety committee idea was going strong, Magnus Norgren and Cy McManus are the only remaining employees who served that far back. G. L. Knotts was safety Superintendent then. Safety records for the Company are available only back as far as 1912, although the prevention of personal injuries and Company's responsibility for the safety of its employees was recognized and accepted by the founder when the first powder plant was built in 1802.

A program had been set up by the Company to give awards for the best performance of various operations, departments and houses on a competitive basis between plants as well as on an inter-plant basis. A "Prize Court" was established consisting of Managers and Executives of the Du Pont Company. The "Prize Court," of which Mr. Beers was a member, studied the performance and decided who should receive the awards. The awards were of two classes. An "A Award" for plant competition yearly and "B Awards" for departmental competition for which cash prizes were awarded monthly. This plan not only made the work more interesting for the employees but it made for better housekeeping and safety performance. Barksdale received many of the "A Awards" for plant competition as awarded by the "Prize Court." The work of this "court," and the interest shown by the competitors, brought good results, at least as far as the Barksdale plant was concerned. No serious injuries or accidents happened during the period from 1908 until after the rush of production began for World War I material in 1916. Minor incidents and fires occurred but no lives were lost.

Many changes and improvements took place while Mr. Beers was Manager. Trinitrotoluene, the explosive which has made Barksdale famous the world over, had its beginning here around 1912 when it was to be used in dynamite. TNT, as it is commonly referred to, was little known before World War I, but had been made on an experimental scale as early as 1909 at Du Pont's Eastern Laboratory. Although women had been employed in the Clerical Department earlier, about 1912 women were hired for "picking shells" at the Shell House. The first ones employed were

Frances Dibbell, Mary Calahan, Blanche Lamoreaux, Myrtle Ramstead, Minnie Cousineau, Hilma Sampson, and Martha Pallage.

The first TNT plant was build under the supervision of Henry Chrisofferson, brother of Carl. Mr. Paul Kaiser became the first TNT Superintendent. Some of the first local men to help produce TNT on the new line were the Williamson brothers, George and Rob, "Toots" Kearns, Chester Kinney, Harold Moore, Lambert Bourgo, "Bricky" Bolin, Art Anderson, George Mager, Joe and Ted Durocher, "Klondike" Chesny, and Henry Charboneau. There may have been many others but these names were gotten from old timers and if their memories are a little shady, we are sorry. Our intentions are to mention as many names as accurately as possible. Others who came later and who were so closely related to Barksdale's TNT manufacture, of course, are Oscar E. Olsen and Charles Rogahn but more mention of later TNT workers may be seen as the plant was enlarged.

The need for housing some of the unmarried supervisors and chemists was noted by Mr. Beers back in 1909. He proposed and started a Club whose intent was to offset to some extent at least, the social disadvantages which the necessarily isolated locations of some of the Company's plants entailed. This Club, one of the first of its kind, owned and operated by the Company, had as its first quarters the second and third floors of the Washburn Bank building. Expenses were divided by the ten to thirteen members who belonged there. This Club was given the name "Haskell" after Mr. H. G. Haskell, who later became General Manager of all Du Pont's high explosives interests, and who worked with Mr. H. B. Barksdale on the organizing of the early Explosives Operating Department. The Company provided a lunch room at the plant for the Haskell Club boys and the staff where breakfast, lunch and supper, if necessary, were served for 25 cents each. Some of the supervisors lived upstairs of the plant office.

The Barksdale Benefit Association referred to as the B.B.A. was formed in July 1912 at the suggestion of Mr. Beers. This was then and still remains the only organization of its kind in the Company. It was first divided into three classes with dues differing for each class according to the benefits wanted. In describing this new organization at a meeting of the Company's Superintendents, Mr. Beers stated, "The advantages of such an organization are many. Besides providing means for sustaining life during time of sickness and keeping members out of the hands of loan sharks, it should aid in inducing employees to remain in the employ of the Company instead of migrating from one employment to another with consequent loss of wages." The first officers of the B.B.A. were Harry Fahrig, President; Charles "O. V." Anderson, Vice President; C. W. Hare, Secretary-Treasurer. This association still operates and is in very good financial condition. It has had its ups and downs since 1912 but managed to survive despite three wars, one epidemic and two depression periods. Many have held office in this organization but none perhaps as long as Jack Murphy. He was the Secretary-Treasurer from 1917 to April 1951, except for one year when Chester Wolf served. (Jack retired at the age of 65). The present officers are Earl Ross, President; Harvey Rowe, Vice President; Ernest Holman, Secretary-Treasurer; and Alvin N. Swanson and Lawrence Daigle on the Sick Committee.

Although we cannot attribute to Mr. Beers the fact that Washburn voted to go "Dry" in 1914, but no doubt the Company as a whole was glad to see it so. Old "John Barleycorn" might easily be

the cause of some absenteeism from work and because of the nature of the work, sober men with their minds on their jobs were very much in demand.

It was in April, 1915, that the digging started on the water line from the bay. The supply from the wells had become inadequate. This line was about three quarters of a mile long; the water tank 110 feet high with a total elevation of about 250 to 300 feet from lake to tank. About 200 additional men were employed to complete the water line project. Horses were hired too; Ole Westerlund hired out his single horse but the horse was soon laid off and on the "Horses" employment card a note was written "Do not hire any more single horses." The pay was 50 cents per day.

Still another early project that dates back before the World War I period was the attempt to utilize some of the idle acres by planting and harvesting crops. Mr. G. A. "Cy" Allan was the local farm Superintendent and Mr. Donley was the "Barn Boss." Cy turned sheep and goats loose on the land to be farmed east of the plant main office and north of the main road into the plant, from the Main Gate, to help clean up the grass, weeds, and small brush. Logs and stumps were blasted loose and piled for burning. Wheat, hay, oats, peas and potatoes were the products experimented with. The cost of breaking up the new land ran very high, and even though their yield was fair, they lost money on the venture in 1911, 1912, and 1913. It is possible that if the war had not intervened, in 1914, better results would have been obtained. Some thought was given to the possibilities of starting a dairy herd but this idea was apparently dropped with the coming of the war. The original farm residence and barn remained for many years. Carl R. Thoreson and family lived there in the early twenties and he took care of the hay cutting. The home later was used as a place where the office force ate their noon lunch, prepared by a hired cook. Mrs. William Mitchell later served lunch at her home in Barksdale to the staff. This practice was discontinued and a lunch room was set up in part of the Store Office. For many years, Mrs. Edna Peterson cooked and served the noon meal. In early 1950, lunch prepared by a hired cook was discontinued.

The fact that a good many deer roamed about the plant caused some consternation to the Manager, Mr. Beers, and to the Company. In general dynamite plants were opposed to protecting and propagating wild game as had been suggested by some sporting groups. This area makes a natural deer preserve, because it affords excellent shelter and food for the deer which in later years numbered as high as 300-400. The danger from stray bullets fired by poachers brought out a statement in Mr. Beer's report to Company officials, "The hunters in North Wisconsin use high powered rifles, and there is the danger of stray bullets from these hunters a couple of weeks before season opens and until after the snow gets so deep they cannot hunt. We keep special deputies out and pay them regular wages and also give them \$5.00 for each man they arrest. One year they arrested 5 or 6 and it had a pretty good effect, because last fall, there were none. I think the propagation of game on an explosives plant is a wrong idea!"

Perhaps what Mr. Beers did not know but can now be safely told was that some employees would shoot rabbits and partridge in the ravine back of the NG line, clean them up and Fred Christiansen would cook up a stew on the blacksmith forge. Those who could manage to get away from their jobs would enjoy this dinner on Sunday, especially at the Shop. Percy Williamson claims that he had some himself as a kid. Many years ago, during the time Mr.

M. C. Knake was the Manager and on up to the present time, deer have been trapped by the State Conservation Department to the extent that the number of deer at present number less than 50.

### World War I

With the outbreak of the war in Europe, the United States was called upon to help furnish high military explosives to the allies as the U.S. was predominately sympathetic to their cause. Du Pont naturally was asked by the U.S. Government to help furnish TNT and that meant an expansion of the Barksdale Plant and likewise the city of Washburn, the likes of which have never been seen or heard of. Barksdale became one of the largest plants to produce TNT during the World War I period. About 600 men were employed at the start of the expansion when three more TNT plants were being constructed. Ten units in all were eventually built and operated at Barksdale. This also meant expansion to the power plant, O.V. plant, and Acid Line.

While prior to this period the only women employees in the office had been Cedar Noyes, Jenny Anderson, stenographers, as early as 1906 and later Mabel Kinney (Cook), who began in 1909, there now were at least eight including: Mabel Holman Bergman, Adelaide Wussow, Tilda Moland, Gertrude Kane, Marie Larson, Sal Lindgren, and Nora Olson. Many girls were hired for kitchen work at the Barksdale barracks too. At the time of construction and operation the number of men employed here was close to 6000. Washburn was the headquarters for the company officials and the problem of furnishing housing for all additional men became a mammoth task.

Men were housed in every empty building and shack in town. Amos. M. Hanson and William A. Robinson reopened the "Norman House", later they opened a Hotel in the Meehan flat. Houses sprang up here and there on vacant lots to take care of men with families. Ashland was busy trying to get a work train started from there so that some of the overflow might find a place to stay there. The local editor of the *News & Itemizer*, thinking that Ashland was "butting in," stated that "Washburn was handling the situation nicely." Ashland, being a "wet" town at the time, did not help its cause any. Nevertheless, many employees lived in Ashland and rode bicycles to work. In the winter time, some even skated across the frozen bay. Later on one coach was put on from Ashland for those coming from there.

Almost everyone who wanted to work had a job. The Stearns Mill Company reported that only one or two men looked for work during this time. Everything was pretty lively along the streets of Washburn by July 1915, when workers walked to the plant train at 6:00 in the morning. The train numbered 12 coaches and they accommodated about 700 men. Things were happening fast, for in only a short time 14 coaches, the limit according to "Rules" of the Omaha Road, made up the train. "Rules" evidently were abandoned for by August, 1915, 18 coaches made up one train. Twenty coaches proved too many for the old "99" to pull and handle safely so an additional train was put on with Conductor Jadie Manning and Engineer Bert Harrington, taking one train with 9 coaches and Conductor Charles Wolfe taking a train with 11 coaches. Actual count on one single train found 1,181 men riding it. Eventually, two trains were run, one with 12 coaches and the other with 14. The railroads were very busy between Washburn, Barksdale and Ashland. The "Scoot" ran four trains to Ashland daily and three trips to Bayfield in addition to the work trains and switching done in the yard. Engines No. 11, 99, 189 and 205 were used on work trains

and in the yard, and were housed in the local “round house.” Ferry boats, “Mary Scott”, “Ellen D,” and the “Skater” were busy hauling people and small freight from Ashland to Washburn and Bayfield.

The need for more housing resulted in the erection of barracks at Barksdale later and over 2000 employees were housed and fed there. A building boom started in Washburn when homes were constructed by the Company for some of their officials. Houses were built in various parts of the east end of town including the large “Haskell Club,” which is now the Washburn hospital. The Plant Superintendent’s home and others in that block were built in 1916 by contractor Charles Bloss of Ashland. Eventually all the houses east of 3rd Avenue East were added. Many of these homes are owned now by private parties; the Company sold several only recently. Later, additional housing was provided on the far east end of town where Herb Westen has recently built. Between these and Ted Bryan’s, many houses were erected and rented to employees. Hagbart Pedersen, Jens Langerude, Lars Simonson, A. C. Rindy, Joe Cotty, Bill Dandeneau, Ted Bryan, and August Lindquist are some who are remembered as living in these houses. These houses were sold to Marshall Wells Company of Duluth after the war and moved there. The Loveland Company built homes in the northeast end of town naming the addition “Du Pont Park.” Joe Cotty and Chester Wolfe live in houses that were built at that location.

Washburn’s population included 2,000 children, 1,600 of whom were in school in 1915. The Garfield, Lincoln, Pioneer, and Walker Schools were filled. The Parochial School was also used and a temporary two room school was erected in the Lincoln School yard. This was referred to as the “Chicken Coop” and when removed later to the High School yard it was used as part of the High School for years. The building was eventually split in two parts. One part is used as a girl’s bath house at the Memorial Park, and the other half was used as a club house at Twin Lakes. Later it was converted to a cabin and is now owned by “Skrit” Olsen.

The employment office was moved to the Main Gate at the time the Omaha Depot was built. Phil Axelberg and Bill Hamilton were doing some of the signing up of men for employment. It was a case of either work or fight and if anyone quit work, he was informed that the Army needed him badly. This of course took place after the United States entered the War in 1917. Before this, August, 1915, the plant went on an 8 hour day. Some of the operations had worked 2 shifts. One shift of 10 hours and one of 14. 17 1/2 cents and hour for labor in early days, operators and experienced craftsmen received 27 1/2 cents and up. During war time, the wages increased up to 65 cents per hour on some of the higher paying jobs.

To keep out intruders, an 8 foot military fence was installed around the entire plant property and lighted. This fence was about 6 or 7 miles in length. Jack Murphy recalls that Helmer Moe was one who assisted in putting up the fence. There no doubt were many others, but he is the only one recalled by Jack. Helmer says that the others were from out-of-town. Six mounted police and 21 walking policemen made up the police department that kept out any who were not employed there. Individual pictures were taken of each employee and he wore this on a watch fob for identification along with his payroll number. Men were searched on the train before entering the plant property. No matches, guns, cameras, etc., were allowed in the grounds. The Chief of Police was Mr. Johnson, the Assistant Chief, Jim French. The others consisted of many Spanish-American War veterans and others. Harvey Irish was a Sergeant, Gideon Chauvin,



Washburn Chief of Police, resigned to take a police job here, as did Oliver Wescott. Others who will be remembered from this era were: Clarence Wright, Ole Holm, Rude Dahl, Pete Kjarvic, Harry Wieman, Paddy Wilson, Jack W. Moon, Andrew Nelson, Ed Gruber, Jack Simmons, Hjalmar Frostman, Earl Carrick, Harvey Hudson, and Raymond Hudson.

No specific cases have been handed down by old timers to our knowledge that would show that the policemen were called upon to handle anything other than the usual watchman's chores. There existed a strong Pro-German sentiment at the time and naturally all precautions against sabotage were taken. Rumors filled the air that German spies were plotting to blow up the plant as powder factories made shining targets. Searchlights were turned on during the night and they scanned the sky overhead. The Ashland Press told of "Aeroplanes or some other heavenly bodies being seen by local residents." The fact that Ashland was "Wet" and Washburn "Dry" caused some to say that "they must have been seeing things." The story went around that the plant was to be blown up by the enemy on March 1, 1916. When that day came, work went on as usual, nothing happened and only two or three employees quit their jobs because of the stories. As far off as Duluth, Minnesota, they were seeing things in the air meant for the destruction of the Barksdale Works, much the same as today when we read about "flying saucers," etc. Doc Olsen tells about how strange noises were deliberately made to scare heck out of the green-horns and it was funny to see two men trying to squeeze through a safety door at one time, squealing like young pigs.

The exaggerated tales about what was going to happen at the plant did not have any effect on the steady production of TNT and other war products. The Barksdale plant was the largest producer of TNT in the world. The ten units were running to full capacity. During the period from 1913 through 1918, 130,000,000 pounds of TNT were produced. The highest production period being in 1918. In addition, 90,000,000 pounds of commercial explosives were also manufactured during the War I period. To ease the raw material problem, a product closely resembling TNT called Trinitroxylyene or TNX was introduced, Xylene replacing toluene as the basic ingredient. According to Mr. Beers, five TNX units were built in the area east of the "North Gate." Only small amounts were actually made in trial runs. When the war ended TNX manufacture also stopped. One carload of TNX was shipped from Barksdale, according to Joe Johnson who made the boxes it was shipped in. Some of those who worked at this new operation were Andrew Mesmer, Henry Charboneau, Albert Meloche, and Russell Peck. Only one unusual incident resulted at the TNX plant that he recalled. A muffled explosion or "thud" was heard and upon inspection, found the nitrator had been pushed halfway through the brick wall and it stuck there. No one was injured, but Russell Peck got quite a scare there.

Another product made during the war was DNT or Trivilene. This was supposed to be a lubricating explosive which aided in shooting charges from guns. Later it was used in the manufacture of dyes and shipped to the Carrrolville Plant near Milwaukee. There were two Trivilene lines, one double and one single unit in operation. Helmer Moe, Charles Rogahn, Homer Posey, Leonard Hanson, Ernold Bernard, Les Lindblad, Andrew Arntsen, Alf Wedin, Carl Lindstrom, and Art Blexrude are some of those who worked there who will be remembered by local people. The workers in trivilene plants either lacked the proper type of gloves or didn't wear any because all who worked there developed hands that were orange-yellow in color. Their hair also turned a reddish color.

“Lydol,” a product then used in the manufacture of dynamite was made at this time, too. Only one unit was built and Fred Rhody had charge of it. Newell Leighton and Red Sykes also worked there. Barksdale was really a busy place. The operations ran three shifts making war products and many men from far and near came here to be employed. “Horse-play” was common and the new men were sent on strange errands for unheard of things. Doc Olson tells about sending a man after a bucket of “OV” (which is an acid) but returning without it, would say “He wouldn’t give me any but I’m sure he had some, I could tell by the look in his eye.”

Despite the fact that the operations were new and the men were unfamiliar with the work, few serious accidents occurred. The first accident of a major nature since 1908 resulted when the DNT nitrator exploded in 1916. David Michand and Henry Ebner, operators in the building, were killed. In 1918, the plant did not do so well from a safety standpoint. In an accident where a flat car, loaded with rock, was being pushed by a gas engine, two men were killed when the car jumped the track and tipped over. They were strangers to this area as far as can be learned. On August 2, 1918, a TNT fortifier blew up killing the operator, his helper and five laborers who were working outside of the building. Andrew Johnson, father of Joe Johnson, and Andrew Borgren, the only local men killed, were two of the laborers.

The TNT manufactured here was shipped in 100 pound boxes and banded with metal straps. In addition to this, TNT in a molten state was poured into “depth bombs” which held about 250 pounds of the explosive. These bombs were set below the surface of the water and exploded upon contact with a ship or submarine. TNT was also pressed into blocks and “Electro-plated” with copper for protection but later the blocks, uncoated, were packed in tin cans, called bombs. The TNT block operation was handled mostly by the physically handicapped employees as the work was light. During the rush of production the Laboratory had “sample boys” assisting the chemists and they were: Clarence Hare, John Johnson, Harry Markstead, Peach Joanis, Ralph Simoneau, Morris Wegsteen, Edgar Roy, Claude Sharon, Bill Felix, Dwight Benton, Julian Johnson, John Froncek, and later Odin Johnson. Art Hemingson was an early glass blower.

Many inspections were made at the plant by representatives of the Allies. Military officers from the armies of England, China, Italy and France made appearances here to look over the plant and especially the TNT department. It fell to Mr. Knake, then General Assistant Superintendent under Mr. Beers, to take these foreign military men around the plant. Because of the rush of work and large number of employees, Superintendent Beers had an Assistant Superintendent and a General Superintendent to aid him. TNT plants were in operation at other locations and as late as 1918, ten units were to be built near Racine, Wisconsin. Men from Barksdale were sent there to help in the construction, but the war ended and all work stopped there. Al Garberg, Henry Christofferson, Enok Ekholm, Amos Nelson, and George Potts were some that left from Barksdale for Racine.

The sudden end of World War I on November 11, 1918, also brought an end to the production of war materials. Government contracts closed and military explosives were no longer required. Men were discharged at Barksdale as fast as they were hired at the beginning of the war. The huge job of converting to or resuming peace-time producing took place immediately. The many buildings which were built for the rush of war materials were no longer needed and dynamite

again was the only product in demand. The dismantling of all the buildings in the TNX area, most of the TNT units and all but one O.V. unit was done by the Bremmer Company and Bosley Wrecking Company. Many local men aided in this work after terminating their employment with the Du Pont Company. A huge concrete coal-crusher hopper was built during the latter part of World War I and is located near the present O.V. plant. This project was never completed and the coal-crusher never used. It now stands, unfinished, as it was left on November 11, 1918, a "monument" to the "boom" that resulted from that war.

At the peak of the hectic days of that period, the company saw fit to furnish a club house for their employees to amuse themselves during their off-hours. In 1914, the Du Pont Company had purchased the building known as the Sheridan Block which then housed Dr. Hicks and his hospital. The building was remodeled, bowling alleys installed, lunch counters and lounging rooms were furnished. This became the first club house for the employees and was rightfully named the "F. T. Beers Club" after Superintendent F. T. Beers. Mr. Beers acted as "President ex-officio." Hi Hanson was the first President, and Charles Frost was the first Secretary. The Club first opened on October 29, 1915. Later the Haskell Club members moved from their old quarters upstairs in the bank building to the third floor of the F. T. Beers Club. W. H. Higbee managed the store and looked after the club rooms in the building. There were 500 members in 1916. During the rush on pay-days, the club was used as a pay-station for the Company employees.

Office and other departmental bowling teams were formed with many local bowlers taking an active part. The high scores during the first week of bowling were made by Ole Green, Sig Wedin, and Roy Calder, according to the *Washburn Times* of that day. The Club also sponsored a baseball team under the managership of Mr. Pratt. They played in the North Wisconsin State League and won their first game against Ashland 3-0. Dorgan pitched and L. Hanson caught. Homer Posey and Art Peterson played on this team but otherwise, the balance of the team were from out of town but Du Pont employees nevertheless. Chin Swanson and Johnnie Daley were the mascots. Later on, when employment was at its peak, a baseball team was formed by a group working on the police force. They were called the "Du Pont Cops" or "Stars" and made up mostly of all College athletes. "Smity" Smith was player Manager and "Turic" Ennis of Duluth, the catcher.

The F. T. Beers club burned down in 1917 and was replaced by the present Du Pont club. At the time of opening in 1918, the Club served as a Du Pont Y.M.C.A. At this the time, the Haskell Club members moved into their new home, the building which is now the Washburn Hospital. They lived there until the end of the war when the staff, who composed the membership, was also cut down. After World War I, the Haskell Club members occupied the duplex on East Third Street which was sold in 1946, and is now occupied by the Irving Van Stones. Many supervisors, chemists and department heads who worked at Barksdale lived there. A "History" of the Haskell Club and all who stayed there, would be interesting reading in itself. The Club eventually closed down when the lone supervisor of the "Benedicts," Frank Wuest, left the Barksdale plant and moved out in June 1946. The Haskell Club built during the latter part of the War was taken over by Dr. Albert A. Axley who converted it into a hospital, the first patients being admitted in 1922. Don Thoreson, son of Mr. and Mrs. Carl Thoreson, was the first boy born there.

At the time of the terrible influenza epidemic in 1918 there was no hospital in Washburn. The Garfield school was used as a hospital in order to isolate and care for those who needed help the most. To cut down on the spread of contagious disease, a "pest house" was set up at Barksdale and those suspected of being sick, were held there for close observation in isolation. The war brought out the need for more stringent rules concerning health problems. For the first time, signs reading "No Spitting on Floor" were placed in the train coaches. Inoculation against the many diseases were begun during the war period. In the early days at Barksdale, physical examinations were unheard of, the Company did not employ a part-time or full-time doctor. First aid for minor injuries was usually taken care of by the Chemists at the laboratory. All plants were supplied with Dr. W. G. Hudson's first aid handbook and first aid kits were placed in the many change houses on the plant. Sanitary drinking fountains first made their appearance at Barksdale in 1913. Physical examinations for employment started in 1914 but much consideration was given to the way in which these exams should be started so as to obtain the support of the workmen and not arouse antagonism. Even the subject of psychological tests was being investigated to see if any tests would be particularly applicable to the business of powder making. The first doctor to be employed on a part time basis was Dr. P. G. Frey, who started in 1916. Dr. Frey was succeeded by Dr. W. G. Lampson who served until 1919. During the epidemic and earlier, these two doctors worked together to try and check the spread of the "flu".

The Company Hospital was a converted baggage and mail coach purchased for \$800.00 in 1914. This was stationed on a railroad siding, west of the Soda store house. It was moved to other locations from time to time on the plant but eventually was removed from the plant in 1935. A small hospital had been set up in the employment office in the early nineteen twenties and the hospital car remained idle for many years. The purpose of the car was so that in case of serious injury the injured could be placed in the car and transported by rail to Ashland or Washburn hospitals. The records show that the car was used only once for this purpose, following an explosion at one of the TNT buildings. The coach when used in early days was the place where all the inoculations were given. During World War I, "shots" were given for almost everything much similar to Army regulations. Dr. Albert A. Axley followed Dr. Lampson as Company doctor in 191, and he later opened a hospital in the Haskell Club. This was still "horse and buggy" days but many will recall the famous "Snowmobile" which Dr. Axley had made from a Model T Ford. This museum piece had skis in front in place of wheels and caterpillar tracks for drive in the rear. It did not prove too successful but the good Doctor managed to get there even if he had to go on skis. In order that the employees themselves would have a better knowledge of how to care for an injured person, the Company offered courses in first aid through the facilities of the Bureau of Mines in 1924.

At the height of the first World War citizens were asked to contribute towards many kinds of War relief. The employees at Barksdale formed an organization called the "Du Pont Patriotic Association." Each member donated two hours wages per month as his dues. He received a small oval lapel pin made of brass with a red enamel field bearing the letters "D.P.A." to show that he belonged. The money collected was donated to some of the good causes at the time. After the war, this organization was dissolved but there remained some money in the treasury. With a part of this money, the Association acquired the land in the eastern end of Washburn on the Bay shore and made a park out of it. The park was established in memory of the men who served in

the armies of the United States and was named "Memorial Park." The plaque which is mounted on the large stone at the entrance to the Park proper was made by Carl Christofferson out of all the small "D.P.A." pins that were turned in after the Association dissolved. "Memorial Park" is an asset to the City and community and much credit is due to the farsightedness of those who had a part in developing a park where the public can enjoy the facilities at no cost. The first Barksdale Plant picnic was held there in August 1925 and since then, many enjoyable gatherings of various organizations have been held there. It was also at "Memorial Park" in July of 1952 that Barksdale celebrated the 150th Anniversary of the Du Pont Company.

The building that replaced the F .T. Beers Club after the fire was first operated as a Du Pont Y.M.C.A., as was earlier mentioned, but later the name was changed to the Du Pont Club of Barksdale. While operating as a Y.M.C.A., it was under the managership of Mr. J. C. Manville, who had as his athletic director Hobe Bondi, and later by Mr. Pickleseimer. The employees and their families were invited to enjoy the facilities which included two bowling alleys, pool and billiard tables, and a fully equipped gymnasium at that time. The gymnasium was a big improvement over the Opera House but with the changes in the game of basketball as it is played today, the gym is considered to be too small. Many of our local "greats" got their start in basketball in the "Y" gymnasium. The first basketball team to play there consisted of Hobe Bondi, Ray Brown, Leonard "Polar" Pailage, Con O'Sullivan, Engvald "Pinky" Scamfer, and Howard "Bum" Cyr. The team which is perhaps better remembered followed the next season and was composed of Ray Brown, manager, Alf Anderson, Lloyd Olson, George Axelberg, Joe Froncek, John Wick, Lawrence Kinney, and Pinky Scamfer.

To list all of the boys who made history by playing basketball at the Club would take up too much space, but the high spots would be the early combats between Einar Albrechtson's high school team of 1921 and 1922, and Phil Cushing's Boy Scouts. The Badger Club, the American Legion teams under Hoppy Geisert, the famous high school team "Crimson Tide" under Rudy Hanson, and the first organized Du Pont Club team under LeRoy Brackett played there. The 1932 Du Pont Club team was under Ernie Holman, who brought the famous Saperstein's Harlem Globe Trotters here. The other Club teams under Ed Pearson, Posey Plier, and Val Hanson whose team boasted Jim Reilly, Swarthmore College graduate who held the National Collegiate record in 1950 of most free-throws in one game,<sup>15</sup> and ranked third high in individual scoring. Many will remember the High School teams of 1934 and 1935 under Coach Dick Marshall, both of which went to the State Tournament.

While the Du Pont Club was used mostly for basketball purposes by the younger set, the older boys and employees at Barksdale enjoyed bowling as a pastime. Originally there were two alleys but later two more were added. While there have been many high scores rolled at the Club including "almost" perfect games by John Wick, Pinky Scamfer, and Paul Robinson, only one perfect game of 300 was rolled there and that by O. R. Hanson on October 16, 1928. The Club also offered movies at regular prices for many years, the movie projector duties being handled by August Rave as a sideline. Some will recall the first radio broadcasting party at the club. Doc Ward was the genius in charge. A special room was set up for the big receiver and the aerial on the roof resembling a bunch of clotheslines tied together. So far as we know, the reception amounted to some "squeals" and "scratches," but no music. Card parties, bingo games, dances, and old time "mixers" have been enjoyed by employees and club members of the community.

The Club has been used for many years by the high school for commencement and graduation exercises, band concerts, lyceum course classes, choir and glee club concerts, banquets, and the annual Junior Prom. In fact it has been since 1918, the city's community center. With the completion of the City's new modern gymnasium expected this year, the activities which were held at the Club will then take place there.

### The 1920s And 1930s

After World War I, there naturally was a big let-down. The plant and the community passed through a recession period. The low period resulted in the following. The number of men employed were few in comparison with the war period. The low period so far to date was probably reached when the plant operated only 12 hours per week. The plant was, nevertheless, soon to begin production on a new product. The Government had large stocks of "smokeless powder" left over after the war which was to be used now for land clearing purposes and sold to the farmers at cost. Construction of a plant to grind and dry the powder was started in 1922 and began operations in the fall of that year. The "Smokeless Line," as it was called, consisted of a "can opener" building as the powder was shipped here in zinc-lined wooden boxes and had to be opened in a separate building. A "grinder" building where the powder was ground in water, a screening house, four dry houses, and a store house. The first foreman in charge there was Fred Rhody, and Joe Johnson, Chester Wolfe, Tom Peterson, Nels Swanson, Henry Larson, and Art Day were some of the first workers there. Ernie Holman and Tuffy Lizette got their start there as Lab boys. Other Lab boys were Martin Anderson, who was the first, and Hannum Holman, who followed later. The Smokeless Line employed quite a number of men, working three shifts at times from 1922 to the spring of 1928 when the Government stocks were depleted. The dry powder was highly inflammable and every precaution was taken to avoid fire or an explosion. Nevertheless, in February 1925 an explosion occurred, fatally burning George Murray, brother of Jim Murray and severe burns to Carl Malcheski, brother of Ed Malcheski.

This plant was dismantled partially after shutting down but for many years one drier and the store house were used for other purposes. One of the driers was converted into a TNT block press house. The U.S. Army evidently needed them even in peace time. J. B. Castner, explosives expert, also did some experimental work there on pressing "Nitramon" into blocks. "Nitramon" was then, in 1930, something entirely new in the explosives field. Men who worked at the press house operation were Fred Cudmore, Les Lindblad, William Gilstead, Lawrence Miller, Ed Tourville, Art Score, and Ernie Flodeen. In the early twenties the job of Laboratory boy was again created due to rush of work in the Laboratory. Tim Manning, Donald Kinney, George Carlson, and Ernie Holman were Laboratory boys, followed later by Roger, Bob and Dan Knake. Leonard Krause also worked there for a time. Later on Laboratory Technicians were hired and the job of Laboratory boy was taken over by them, in addition to other chemists duties.

The smokeless powder was mixed with the ingredients and then sold as "Agritol." Richard Hanson, Government inspector, was stationed here during its manufacture. A powder called "Sodatol" was made on the Powder Line as was also "Pyrotol." While "Sodatol" and "Agritol" were packed in shells, "Pyrotol" was packed in tin cans, 50 lbs. to the can. No special buildings were erected for making these explosives, which were intended for sale at cost to farmers. The

“Atlas Mixing” house and “figure 8” machine were used the same as for the more common dynamites. The “figure 8” machine was replaced in 1927 by the “Tally Mixer No. 1.”

Two incidents which occurred in 1922 are well remembered by old timers even today. One brought fame to Barksdale and the other hours and days of anxiety and hard work. Barksdale established a splendid record of 1,059,415 no exposure hours, approximately 200 employees working 28 months or 851 calendar days without a major injury. This record was so outstanding that Irene Du Pont, then President of the Company, generously offered to recognize the completion of an unusual no-accident record by any plant, by personally contributing a suitable award. This was and is known as the “President’s Prize.” While the record does not compare with some records achieved later by other larger plants, it is gratifying to know that the Barksdale safety performance and record was tops especially during a period when a safety program was quite new, hazards not as well guarded against, and competing for safety awards between plants was a new idea. At any rate, Barksdale established the first over one million hours safety record in the Company. The employees at Barksdale at that time are to be congratulated for their splendid contribution towards safety. This record was made under the able supervision of Mr. F. T. Beers, plant Superintendent and Mr. Knotts as the Safety Supervisor.

In commenting on the fine record and the interest shown by the president of the Company as well as other high company officials, Mr. Beers issued a news release and we quote from the release as printed in the *Washburn Times* of June 22, 1922: “In the popular mind, working in a dynamite plant is not considered exactly synonymous with safety, but the record of Du Pont dynamite plants, and of the Barksdale Works in particular, show that this industry is as safe as any other which is not ordinarily thought of as dangerous in the least. Examination of the safety statistics of almost any industrial establishment, would tend to convince a reasonable person, working in one of these places, that he ought to pull out of there, and find himself a job in a nice, safe dynamite plant.” Sometime ago a safety flag was made with a picture of a jubilant, crowing rooster, and the name “Barksdale” printed across it in red letters. Each department had its own pennant and when one department added a month to its record, the safety flag, pennant and “Old Glory” were flying to the breeze on the flag pole, thus telling the world that another month without any injuries had passed. No doubt the Barksdale “rooster” crowed long and loud on that record day back in 1922.

The incident which caused so much trouble occurred in February, 1922, when the worst snow storm in this area’s history came with such fury that snow drifts ten to fifteen feet high completely isolated the plant from the outside world for several days. A. G. “Doc” Ward was Power Engineer at the time and his crew consisting of J. H. Hanson, George Welty, Jim Fisk, August Lindquist, Louis Malinoski, Eben Burdick, John Gozewski, Mike Oberts, and John Niemczyk stayed on at the Power House for 72 hours without any relief. The work train made it to the plant before the snow was too deep and brought out some food, smoking tobacco, snuff and cigarettes for the men on its last trip. Smoking was permitted for the time in the Power House. Joe Kasmarek, Hagbart Pedersen, Jens Langerude, and Carl Christofferson slept and ate in the Girl’s Rest Room near the Main office. Mrs. William Mitchell made soup and lunches at her home in the Barksdale Village, which were delivered by Fire Chief MacDonald, who made the trip on skis. Al Garberg, Al Swanson, and Henry Stuhlman made the trip from Washburn to

the plant in Berquist's Livery using two teams of horses on a single sleigh. They drained steam lines to some of the buildings in order to save on coal. Hagbart Pedersen and Jens Langerude made themselves skis and were able to go home on them. When the coal supply was getting low at the Power House, Bert Harrington, engineer on the "Scoot," which had been tied up at Bayfield, finally broke through assisted by another engine and moved cars of coal to the Power House. Joe Kasmarek tells of this trip as he and several workmen rode along on the engine as it plowed through the heavy snow. The plant did not operate for a week, as it took that long to clear the railroad tracks and highways. Facilities for removing snow in those days did not compare with the equipment of today.

Transportation to and from the plant was handled by the work train but shift men had to ride one of Victor Berquist's horse drawn carry-alls when reporting for work at midnight and they rode the returning work train on the following morning. The four o'clock shift men rode the train out as it made its trip out to pick up the regular eight to 4:30 shift but returned to Washburn on Berquist's carry-all at midnight (or after). When the weather was too cold to ride comfortably in the carry-all, the men would get out and run behind it to keep warm. Later, a more modern means of transportation was used when Oscar Plumpton hauled the shift workers in a 1920 model Chevrolet touring car. His "taxi station" was the garage behind the old "Bayview Hotel." During the latter part of the 1920s, men on shifts were transported in a G.M.C. truck equipped with a canvas covered truck box and benches. There were no windshield wipers nor heater. The smelly exhaust fumes mingled with the pipe and cigarette smoke to make the air you breathed as a passenger anything but pleasant. When the truck would get stuck in the mud or snow drifts, it was everyone out and help it along. George Mager was the first driver of the truck, followed by Ole Olson and "Sparky" Nelson. These men were regular Machine Shop workers and the truck driving was done as extra time. About this time, private owned cars began making their appearance on the plant, although the work train was still operating. When more and more cars were being used to drive to and from work, the number of train passengers decreased until about 1928, when it apparently did not pay to run a work train and it was taken off. The "Iron Monster" had finally given up to the horseless carriage after 24 years of operation.

In the fall of 1923, Mr. F. T. Beers was transferred to the Du Pont, Washington, Powder Plant, after 15 years of management at Barksdale. He had seen the plant grow from only 200-300 employees to its peak of employment in 1918 of almost 6,000 and finally back to a normal level of employment after war. It was during 1922 while Mr. Beers was Superintendent that two employees because of ill health and fifteen years of service accepted a pension from the Du Pont company and retired. William Fenton became Barksdale's first pensioner on February 1, 1922. Charles Taberman, youngest man to receive a pension, retired on March 1, 1922. Mr. Fenton has since died, but Mr. Taberman is up and around at the age of 88. Mr. R. T. Cann replaced Mr. Beers as manager. Mr. Cann was to stay for almost five years and during this period many of the post-war changes took place. Two serious accidents resulted and although Mr. Cann had nothing to do with the matter, both Washburn Banks closed in 1924. It was during this period that the "Smokeless" Line operated at its peak and eventually closed down. The high production period up to this time was made in 1927 when 27,151,550 pounds of dynamite was made. 4,000,000 pounds of "Sodatol" were made as was also about 6,000,000 pounds of "Pyrotol."



Washburn was enjoying much favorable publicity brought on by the election in 1924 of its "Boy Mayor," Paul Ungrodt. Nitrocellulose was being shipped by rail from Sparta, Wisconsin where it was being stored and transferred to boats at the Washburn dock and shipped by water to Deep Water Point, New Jersey. This was also excess Government war material purchased by the company. About this time too, great agitation for the St. Lawrence Waterway was stirred up on the local level when the first two ships of foreign registry, flying the Norwegian flag, brought nitrate of soda to the local dock. The start of our annual plant picnics began when on August 16, 1925, the first such picnic was enjoyed at Memorial Park in Washburn. On January 1, 1925, George Cooklar, Ole Westerlund and John Sampson retired on pension. Mr. Sampson is the only one of these living. In 1925 or 1926 William Marx dethroned Joe Madwayosh as champion log roller of the world at Bodin's Brownstone Bowl. In June 1928 the first shipment by water of a manufactured product from Barksdale was made when 7,000 cases of dynamite were shipped to Calcite, Michigan on a barge towed by a tug.

It was in 1927 or 1928 that Joe Kasmarek, remembering the snow storm of 1922, decided to make a "Rotary type" snow plow for the electric locomotive to clear snow off the narrow gauge track. It was used only once and then dismantled. Joe thought it was the real McCoy but others thought different. He tried a shovel type later, and that too failed. The second serious accident in this period occurred in August 24, 1928 when the Gelatin Punching House No. 1 exploded killing Conrad Holmen, father of Glen, and Albin Renstrom, brother of John. Only the day before this explosion, Anton Mager, died as a result of an overdose of fumes. We didn't know it then but this was to be the last explosion serious enough to take any lives until October 15 1952 when the "Nitramex" building explosion took eight lives, the most serious of all in Barksdale.

The new process of making Nitric Acid had been developed in 1920 at Du Pont's Eastern Laboratory, called the Ammonia Oxidation Process. In 1928 an A.O.P. plant was constructed at Barksdale. This eliminated the old Nitric stills, "Monkey-house," and "Nitre cake" as a by-product. The fact that this plant was to take nitrogen out of the "air" brought out some comments as to the damage which would result by doing that. So far we haven't been able to notice any difference in the Barksdale air as compared to any other. The new A.O.P. plant was built at a cost of \$425,000, and also to take care of the additional power required, additions to the power plant including the "Spray Pond" were added at the same time. First A.O.P. operators were Jack Beaulieu, Jack Lamoreaux, Ben Rude, and Earl Ross. On June 1, 1928, "Powder Line" Charlie Anderson retired. Mr. Anderson, now deceased, was one of the original powder men when the plant started.

E. V. Albrechtson announced in 1928 that beginning after the first of January 1929, physical examinations for those that desired them would again be given and he urged Department Heads to encourage the men in their departments to take these physical examinations. During the first days of the 1928 deer hunting season, a guard was posted about the fence line. They also patrolled the fence on the last two days of the season. Several hunters were in the vicinity but when informed by the guard that this was a high explosives plant, they left immediately without any comment. The above information was taken from the Barksdale Works Safety Committee meeting of December 11, 1928.

During Mr. Cann's reign, TNT was again being made on a small scale. The old "Number one" line had been retained after the war and was ready to operate on short notice. Barksdale can boast too, if it wants to, over the fact that at this time one of the family of Du Pont's worked here as an Acid Line Supervisor. Alfred Victor Du Pont, son of one of the elder Du Ponts, was known as "Duke" or "Dupey." He got along very well with the employees in the Acid Area and generally was looked upon as a "good egg." There was no particular reason why he should be anything else except that being one of "the" Du Pont's, we probably expected that he should be a "high hat." The recent newspaper articles concerning him, came as a surprise when we remember he thought nothing of driving to Chicago on a weekend for a haircut, which was only once a month.

In the fall of 1928, Mr. R. T. Cann was transferred to the Buffalo Plant and was succeeded by Mr. M. C. Knake. Mr. Knake had previously been stationed at Barksdale as Acid Superintendent and as Assistant Manager, so he was not a stranger to Barksdale or Washburn. Mr. Knake also had taken many Barksdale employees with him to Ramsay, Montana, where they started the plant there in 1914. Mention was made in the diary of Mr. Arthur La Motte on May 12, 1898, referring to Max C. Knake as follows: "Saw Mr. Knake, Sr., in Paulsboro (New Jersey), about Max coming as a laboratory boy." He said, "No, there is no future in that job." Max came later, May 16, and eventually became Manager of Barksdale Works, a pretty fair position to arrive at, starting on a job with "no future."

Business was good during the years 1928, 1929, and into 1930, when the general depression began to be felt here. Annual physical examinations were by now on the required list. Homer Brisson was the first Barksdale employee to attain 25 years of service and he received his pin on November 4, 1928. Mr. Brisson, who has since died, was considered Barksdale's first employee having started work there November 4, 1903. Another old-timer joined the gradually growing list of pensioners when, on March 16, 1929, Dave McCarthy retired. Dave is the fellow who had his own names for various parts of the Chevrolet car he used to drive, calling the tire valve stem, the "blow-peg," the fly-wheel became the "lying wheel," and the drive shaft was the "reach." Many good laughs were gotten at the expense of old Dave. Other old timers who retired were: Charles Gierczic, June 1, 1930; John Larson, March 1, 1932; Carl Kinney, November 1, 1930; Charles "O.V." Anderson, July 30, 1931; Homer Brisson, June 5, 1930; Phil Newhardt, October 1, 1931; James Williamson, October 1, 1931; Jacob Jackson, July 1, 1932; John Carlson, March 1, 1932; Joseph Bourgo, February 1, 1932; Ole Larson, February 1932; William Felix, June 1, 1932; Louis Christiansen, August 1, 1932; Albert Veno, August 1, 1932. Many of these mentioned had started at Barksdale in the early years and had long service records upon retirement. Some retired due to ill health. Of those mentioned above, only Charles Gierczic and Al Veno are still living as of our Fiftieth Anniversary, John Larson having died earlier this year.

The number of men employed in the early 1930's gradually decreased until by August of 1932, there were only 50 men employed and for a time, they were only working 6 hours a day. It was in 1933 that the low point in production of dynamite was reached, producing only 4,473,425 pounds. A break-down by departments shows Power 8 men, Maintenance 12 men, Service 7 employees, Acid 6, and Powder, 17. Carl Christofferson, who had a crew of 80 men during World War I, now did his own work, bossing by himself. Men who formerly had supervisory jobs were either working full or part time in their area. Harry Robinson was now a carpenter

with Hagbart Pedersen, for one example. The Acid supervisor and one chemist, who were Henry Howell and Alvin Johnson respectively, did the laboratory work and operated the electric locomotive when Acid cars had to be moved. These also were the days of the "alphabetical" agencies such as C.W.A., P.W.A. and N.R.A., etc. No one seemed to have any money, but they found ways of enjoying themselves. The "two-bit" dances at the Du Pont Club on Saturday nights were very popular. Sometimes you had the "two-bits" while on other Saturday nights you didn't. The country went wet again when beer was legalized in 1932, and that helped. "Blind Pigs" disappeared and "joints" were the thing of the past as soon as liquor followed on the market. There is no definite connection between legalized beer and whiskey and the history of Barksdale, but it is only mentioned here to show what was taking place throughout the nation at the time.

The Manager and Washburn were both proud of the fact that in 1932-33 and 34 Bob Knake, son of Max, was playing basketball on the University of Wisconsin team, the only Washburn boy to become a "letter" winner to our knowledge. Bob was feted at the banquet at the Du Pont Club in April, 1934, when over 150 men and women attended the affair. In 1934, Washburn held its Golden Jubilee Homecoming, while Harry L. Robinson was Mayor. Incidentally, only two present Du Pont employees have held that position, Harry L. Robinson and Ernest H. Holman.

Barksdale had a major injury in January, 1934, when Ben Page died as a result of nitrous fumes. Charles "Finny" Christiansen died from a heart attack on April 28, 1935, in his car after entering the Main Gate on his way to work. In 1934, business began to improve and from that time until the present day, there has hardly been any let-down. During this recovery period, the Barksdale Plant was to go through the World War II rush but never to reach the "boom" days of World War I. A nitric acid recovery built in 1930 and a sulphuric acid concentrator building later had been erected to take care of the expansion expected and to eliminate outdated processes, which had been there since the first TNT line was built. First N.A.C. operators were Bob Urquhart, Jack Beaulieu, Jack Lamoreaux, and Ed Joanis. First S.A.C. operators were Ben Rude, Bill Anderson, Herb Swanson, George Frechette, and E. Holman.

"To provide recreational facilities of a social nature for Barksdale employees" a Club house was built near the Village of Barksdale on the shores of Chequamegon Bay in 1936. This Club House was named in honor of Mr. M. C. Knake, Manager. Taking the letters "M.C.K." and adding the word "Beach," the Committee headed by Oscar E. Olsen came up with the name "MCK's Beach," pronounced "Mack's beach." The "Twenty-Year" Club which was organized has used the Club House as its meeting place. Mack's Beach Club was built by donated labor by employees, the Company furnishing the material. O. E. Olsen, Andy Johnson, and Harry Robinson were the prime-movers for this project. Lauren Porter built and supervised the making of the field stone fireplace. The B.B.A. has held many annual meetings there, departmental parties, safety rallies and "going away" parties, and family picnics have been held at Mack's Beach. The governing body of the Club is made up of the Chairman of the "Twenty-Year" Club, Du Pont Club, B.B.A., and Service Supervisor.

Dr. Albert A. Axley, Company doctor since 1919, died in 1935, and he was succeeded by Dr. A. C. Taylor. The Main Office had gone through a sort of rejuvenation and the result was a modern hospital setup for the employees to be examined and treated. Chest X-rays became part of the

health program and they are taken every two years. Because of the expansion in TNT production by 1939, a hospital attendant was employed, Bud Bodin being the first. All of the Company doctors had only been employed on a part time basis but when Dr. John H. Juhl replaced Dr. A. C. Taylor in 1941, he became the first full-time doctor.

In 1937, an apprenticeship course was offered to young men under 30 years of age and this was the first of such a program since before World War I. The first apprentices were: Robert B. Lindsey, Carpenter, who has completed his course, served as Carpenter foreman and who is at present Assistant general Maintenance foreman. Harold W. Carlson, electrician, completed his course and is now the Electric Shop foreman. Leonard Peterson and Harvey Rowe, both Machinists, completed their courses and are in the Machine Shop. William Lund, pipefitter, completed his course and is in the Pipe Shop. Charles Anderson started the course but did not remain as did Joseph Guski, who finished but did not return. Several young men began the course but because of being called for duty by the Armed Forces of the United States, they never completed their course. They were as follows: Milton Burdick and John Oie, Power and Instrument men; Brian Rude, Pipe Shop; and Jim Kile, Electric Shop. Phil. Lindsey, Glenn Holman, and George Schultz completed their courses after World War II as Electrician, Mechanic and Carpenter, respectively. Present apprentices are: Ed Ludack, Power; L. Art Cuty, Machinist; Elliott Peterson, Pipefitter; Melvin Moe, Pipefitter; Robert Smolen, Carpenter; Robert Carlson and Ray Ledin, General Mechanics; Arne Pirtola, Electrician; Leo Justice, Machine and Lead; and George "Red" Barr, Engineering Draftsman. George, you will recall is one of the survivors of the famous Jimmy Doolittle's Flyers who bombed Tokyo and survived the "death march." George was held prisoner of war by the Japs but was released when World War II came to an end. Phil Tetzner and Paul Eisenhower began courses but dropped out. The first apprentice instructor was Joseph Sinclair and many others followed as time went on namely: Dick Fahrig, Dan Knake, Don Pedersen, Ken Brown, Don Stitzer, Jim Sherman, Roger Steele, and, at present, Bard Quillman.

The year 1937 saw several changes for the workers' benefit. All powder buildings were "air conditioned" thereby eliminating fumes and headaches completely (?). A great advancement in Change House facilities took place especially on the Powder Line when a new modern Change House was erected. This Change House has facilities for all the powder men except the Box Factory and Shell House employees. Formerly, the Powder Area was dotted with small stuffy change houses, situated rather close to the powder buildings. Toilet facilities in many instances, and this was true of some of the other areas as well, were of the "Chic Sale" variety. They usually had accommodations for "two" just in case. Later, all Change Houses were completely equipped in that respect and only a few of the so called "Out houses" remain. A survey taken at the time of writing the 50 year history of Barksdale shows that there are only three "reminders" left of the "good old days," one, a single-holer in the TNT area; a two-holer at No. 9 Magazine; and the remains of one, which was intended for use by the NG line workers, who found the distance from the NG neutralizer to the change house too far. Bumps Johnson thinks that John Rodkewich made a trip there last in 1937. The company's disability wage plan became effective in June, 1937, and this offered full wages for a 13 week period following a two day waiting period. No. 2 Talley Mixing House was also erected in 1937 to replace the old "Atlas Mix" House, thus completely modernizing the mixing of dynamite at that time.

No. 1 TNT Line, which was the only commercial plant in operation during this period in the U.S. and had operated off and on from 1920 through 1931, began making TNT again for the United States Government in 1934 and it operated continuously from that time until the end of World War II in 1945. TNT "slabs" had also been made in the No. 1 Graining House and later in the old chloride refined TNT finishing house. Joe Cotty, Harry Newman, and Andy Chapman were workers on the first TNT "slabs." These slabs were made by melting TNT and pouring it into flat shallow pans resembling a cake pan. When the TNT cooled off or "froze" it could easily be removed from the pans.

To aid in maintaining harmony between management and labor, the Company established a Works Council in about 1935. The labor representatives on this council were elected by their fellow workers in each department. The department representatives and management's representatives would meet at specified times or at any time to help clear up any question involving employees' grievances, wage problems, if any, and in general all matters of interest to both parties. The passage of the Wagner Act, automatically dissolved any organizations such as the Works Council in 1937 as it was, under the law, considered a "Company dominated" union. The employees, feeling that an organization of this kind was useful, but set up so as to meet all labor laws pertaining to unions, elected to establish their own independent union in 1938. About 85 percent of the employees voted to have this organization act as their sole bargaining agent. It was called the Barksdale Workmen's Protective Association. Some of the first officers and representatives as we recall were: C.A. Nelson, Earl Ross, Stance Stefinske, Ed Laurion, Enok Ekholm, and Ernest Holman, secretary. The B.W.P.A., as it was referred to, existed for some time but about the start of the war it died out; apparently the need for any bargaining agent at Barksdale was not needed. With only a few individual cases, which have been handled quietly by the persons involved, no serious labor problems ever arose at this plant. A feeling of harmony and cooperation between labor and management is enjoyed more so at Barksdale possibly than at most plants of this size. Credit is due management as well as labor for this condition.

That management, even at the start of the plant, had a lot of respect for the class of labor here, we quote from a letter to Mr. H.G. Haskell from I. L. Pierce, plant Superintendent in 1905: "We have at Barksdale a number of intelligent men who are usually very steady and in a short time, probably four months, would be capable of taking charge of the different processes. Take it as a whole, I believe the general workmen at Barksdale are superior in habits and intelligence to the average." This was written in regard to local men being able to operate the new dynamite operations and the acid area processes. Time has not changed this feeling too much when you realize how the "know-how" of TNT manufacture was sought out by establishing a school of instruction and practical education Barksdale at the start of World War II. Mr. Knake singled out the late Oscar E. Olsen for praise after the end of World War II as follows: "Because of the high regard in which O. E. Olsen was held by all, Management saw fit to single him out after his untimely death, at the height of his career, to pay tribute to him for what he had contributed towards the development of the art of TNT manufacture. His broad experience in the practical phase of TNT manufacture had gained him the position as the outstanding man in the TNT industry. His advice and counsel was frequently in demand and he always pleasantly responded." This quote appeared in a news release following the winning of the war. Others too

have been called upon because of their ability and knowledge to assist at other plants from time to time but they would be too numerous to mention here.

In 1939, an additional TNT plant was built to step-up production for the pre-war defense program. Harry L. Robinson was the Construction Engineer on this job. Harry later made a record for speed in construction when he was called to Memphis, Tennessee and put up a TNT Tri-House in 38 hours. The new line had a capacity of 33,000 pounds per day and included all the improvements and developments during the interval since World War I. This plant later became the proving ground for still further improvements in the art of TNT manufacture. The new line began operation in 1940 and continued until August, when the war ended. The longest no-accident record of any powder department in the Company of 12 years was established in the year 1940. Bill Garwood was Powder Superintendent at the time. The Service Department boasted of 14 years without a major injury. Another highlight at this time was when Jared Welton received his pension in 1940 after having been with the Company for 35 years and eight months.

### World War II

In 1940 and 1941 the rush of production had started. The capacity of the No. 1 TNT line was boosted from 20,000 pounds to 60,000 pounds per day, the No. 2 line further increased to 100,000 pounds per day. An appeal by President F. D. Roosevelt for more and more production of war materials was heeded at Barksdale. All records were finally broken in output per unit. All production schedules demanded by Armed Forces were uniformly either met or broken. Dynamite made during World War II was also used in addition to TNT. Expansion of the MacArthur Locks at the Soo and the deepening of the St. Mary's River to increase tonnage of ore carriers by the deeper draft of vessels were some of the uses for dynamite.

Barksdale became the training ground for personnel for the rapidly increasing TNT plants throughout the country. Harry L. Robinson left for Kankakee to assist in the construction of TNT plants there. The training school was built and referred to as the "University of Barksdale." Mr. W. T. Cloud was the School Manager at the beginning. University and college graduates from all over the U.S. made up the group in school. Over 300 men from superintendents to operators from the United States and Canada were trained in the art of TNT manufacture. These people became the nucleus for the personnel needed in the many ordnance plants required to meet the demands for war explosives. The plant grew from 350 to 600 men and women in the rapidly expanding organization. Employees came from Washburn, Ashland, Bayfield, Drumond, Herbster, Iron River, Cornucopia, Hayward, and nearby farms.

A uniformed guard force was trained by Army personnel, sworn in as Auxiliary Military Police, and took the Army oath. Former Police Chief of Ashland, Clarence Overdahl, became Chief of guards. M. O. Thompson, Lyle Freeman, Herb Justice, and Chester Wroblewski were Sergeants assisting Chief Overdahl. Mainly new employees were hired to take positions on the force while in other cases, regular employees were transferred to this department for the duration. Some of those who served as guards and were considered regular employees were: Ted Smolen, Elmer Dagsgard, Herb Justice, M. O. Thompson, Joe Beaulieu, now deceased, Olaf Dagsgard, Levi Anderson, John Handberg, Ted Martinson, Clarence Carlson, Frank Brown, Sig Anderson, John

Wroblewski, Art Smith, Ed Laurion, Albert Cousineau, and John Gust Wickstrom, now deceased. The Guard Force was made up of 107 guards, a chief, four lieutenants and nine sergeants before the war ended. "How much sabotage this group prevented will never be known," said Mr. Knake. The guard force made a fine appearance in their khaki uniforms and was posted in guard houses and observation towers at strategic locations, where they could keep close watch on the property. The entire plant was patrolled day and night. There were rumors that a number of guards had seen a bear near No. 11 magazine, especially at night. Whether this was true or not, it must have made those who passed that point do so without any loitering, we are sure.

A large change house and office for the guard force was built near the Machine Shop with a wire fence enclosing a car parking lot adjoining it. No cars were allowed on the plant proper. Entrance was made through the North gate where the road to the guard house was also enclosed. Special care was taken to guard the Lake Pump House and Power House areas. A military fence enclosed the Power House and grounds. Pictures of each employee were taken and they wore these pictures on an identification card which was pinned to coat or cap where it was easily seen. Each department had an identifying color to distinguish it from any other. The picture cards would tell in which department you belonged. No one was allowed to roam in any other area but his own unless he had received written permission. In other words, a very close check was made on everyone. When the war ended, the Guard Force was cut back to the normal number of watchmen, who are at present Oscar Bartness, Ed "Speed" Laurion, Art Day, Carl Palm and John Handberg as relief occasionally. All the additional fences and guard stations, etc., have been removed. Instead of daily searches for matches and inspection of lunch pails, only periodical searches are made as is customary in peace time.

At the start of heavy production of TNT in 1940, Manager Knake saw fit to establish a monthly paper called the "Barksdale News." Previously, a mimeographed paper edited by George Waters was issued monthly and it contained safety articles, jokes and items of interest to all employees. The new paper was issued monthly as before but was set up at the plant and printed at the Ashland Press Office, a very nice appearing publication. The first edition came out at the end of July 1940 and was edited by Hobey Chase, his assistant editor was Eddie Anderson. Reporters from each department sent in contributions each month, some good, some bad and some mostly humorous, with everybody getting it in the neck but all in fun. The first reporters were: Joe Vizanko, Al Dervaes, Oscar Olsen, Theron Robinson, Frank Kenton, Leonard Peterson, and Ernest Holman. These reporters changed from time to time. In May, 1950 when the last issue was released and the announcement made just two months before its tenth anniversary, that there would no more "Barksdale News," the employees as a whole felt that we had lost one of the most cherished and revered of all Barksdale's institutions. Much of Barksdale's history was recorded in the "News" for the almost ten years that it existed. That the "News" was popular is without question. The wives and other members of the families awaited it as much as the employees did. It has been reported by Bob Lindsey, that when he was stationed on the Aleutian Islands during World War II, he found a copy of the "Barksdale News" there and Art Anderson found a copy in France.

The war years brought out many other changes from the peace time routine. Selective Service of men for the Armed Forces was gradually cutting into Barksdale's personnel. When the first

number was drawn from the large “fish bowl” to start off the nation’s drafting of young men for war, Jadie Manning, a former Washburn boy and brother of Mrs. Grace Manning Nordin, our plant nurse at this writing, was the first one called. Jadie entered the Army, served in the European Theatre of War and was killed in action there. Before the war ended, 153 employees were called for duty. Five of these made the supreme sacrifice: Robert McDonald, Lloyd R. Olson, John P. Swanson, and Henry Harvey. One other veteran, Dan Welty, died after he was given a medical discharge, from complications caused by malaria contracted while serving in the South Pacific. The men from Barksdale served in all branches of the service: 40 in the Navy; 97 in the Army; 4 in the Marine Corps and 12 in various branches of the Air Force, ranking from privates to Captains.

“On the plant accidents were kept down to a minimum during this period: New men, inexperienced, new processes added, placed a tremendous responsibility on the older employees but the group responded splendidly and through their efforts, injuries and accidents were kept down,” according to Manager Knake. A first-aid and Fire Brigade was organized and trained for any emergencies. Dr. J. H. Juhl was in charge of the First Aid group composed of Carl Christofferson, Bud Bodin, Tom McManus, Ray Joanis, Ernie Holman, Enok Ekholm, and Elmer Dagsgard. The Fire Brigade was organized under J. H. Hanson as Chief and his assistant Art Nelson. Those who comprised the brigade were: Lawrence Miller, Peter Johnson, George Mager, Harold Carlson, Dolph Swanson, Al Garberg, Bud Shaylor, Joe Kasmarek, “Bozo” Anderson, Peter Hanson, “Sparky” Nelson, Jack Beaulieu, Albin Carlson, and Ray Cudmore. The employees subscribed heavily to Defense and War Bonds, and money was collected to purchase cigarettes for boys in service overseas. “Blood typing” of all employees was started at this time in order to be ready for any emergency. This program is still being carried out with all new employees being typed as they are enrolled at the plant.

With the closing of all the grade schools in Washburn and the building of a modern school, the Du Pont Company donated \$30,000 towards the project and the school was named “The Du Pont School” at appropriate dedication ceremonies at the time, November 19, 1941. Manager Knake was called upon and received the honor of removing the first shovel full of dirt at the time this project was to begin. The terrific rain storm of August 30, 1941 caused the heaviest damage in the vicinity of the Dope House and Powder Area. The powder line was isolated from the magazine area and explosives had to be transferred through the safety area. The large fill at the TNT area withstood the flood waters which rose to within 18 feet of the top of the fill. Much damage was done locally when railroad bridges between Washburn and Bayfield washed out as did highway bridges on Boyd’s Creek and Fish creek. Estimated damage at Barksdale ran between \$12,000 and \$15,000.

In 1941, the company pension and retirement plan was revised so as to make it compulsory for employees to retire when reaching the age of 65. Because of this change a number of employees automatically were retired when they became 65 years of age. They were as follows: Eugene Newhouse, Albert Smolen, James B. Fisk, all of whom are deceased. Others were: Arthur H. Fossum, Martin Jacobson, Andrew P. Johnson, deceased, John Niemczyk, Mike Stapleton, and Albert E. Swanson. Jens Langerude was the only employee to retire in 1942 and there was none in 1943, but in 1944 the following retired: Louis Malinoski, John Wickstrom, and Edward Stauffer, all deceased. In addition, Frank Brown, Mike Oberts, Lars Simonson, and Robert



Urquhart also retired in 1944. Quite a number reached age 65 or retired because of ill health in 1945, namely Albert N. Anderson, deceased, and Eben Burdick, Peter Ness, Odeen Peterson, Matt Wahamaki, George S. Welty, and John Westerlund. Incidentally, with the retirement of John Westerlund, it made the second time that both a father and son had retired at Barksdale. John being the son of Ole Westerlund, who retired in 1925, and in the other case of this kind Charles Anderson in 1928 and son Sigurd, who retired in 1950.

By 1945, the production capacity of the new TNT line had been increased from a million pounds per month to almost 3,000,000 pounds of powder. Additions were built to the Acid Area and Power House to balance the TNT lines. A TNT "Block" line was added, having a capacity of 18,000 1/2 pound blocks per day. Subsequent improvements increased this to 40,000 blocks per day. On this line, bulk TNT was pressed into rectangular blocks by subjecting it to a pressure of 22,000 pounds. Early in 1944 it became necessary to employ women because of the loss to the Armed Services and general shortage of man power. There were 90 women in all employed here. The women worked in the Block line, TNT Wash House, chemists, clerks, stenographers, and towards the later part of the war, women worked in some of the dynamite buildings. Special facilities were provided for their comfort and safety. The work was rearranged to enable them to take part. The women did their work in a gratifying manner and proved themselves competent and willing "soldiers of production." The total production of explosives during World War II was considerably higher than during World War I; 208,000,000 pounds of TNT were produced now as compared to 130,000,000 for World War I; 102,000,000 pounds of commercial explosives were produced as compared to 90,000,000 pounds during World War I. In addition to the above figures, 18,000,000 pounds of TNT blocks were made here. All time records were broken in output per unit. The highest being produced in 1944: 44,223,566 pounds (2 units).

To assist the management in stimulating the need for maximum "Production with Safety," a Labor-Management Transportation Committee was formed. Their job was to aid the safety program, stimulate suggestions for improvement, and arrange for transportation such as "car pools" to conserve rubber and gasoline. The first members of this committee were: Joe Dallas, Chairman O. E. Olsen, Robert Williams, Stance Stefinske, Tom McManus, Al Garberg, C. A. Nelson, and Ernie Holman, secretary. This committee was broken down into various sub-committees. The personnel changed as replacements were made from time to time but this was the original committee when named in April, 1942. Others who served later were: Harold Carlson, C. M. Hare, C. L. Johnson, A. Mellot, E. E. Stewart, and John James. The conserving of water, tires, gas and scrap material was a very important part of the war effort. Andy Johnson and Jack Murphy eventually took care of all the salvage material and for a time, it was the rule that if it couldn't be used in a certain length of time, it was to be scrapped. Dick Hedreen was in charge of water conservation of the plant. The Barksdale plant received a flag for War Bond sales when 95% of the employees were subscribing. The "V" sign was conspicuous throughout the plant.

In recognition of exceptional performance, the Barksdale Works was awarded the Army-Navy "E" on October 31, 1942. A most impressive and colorful ceremony was held on December first in Dodd gymnasium at Ashland with about 1,300 employees, their families and invited guests in attendance. Cedric Adams, famed Minneapolis radio and newspaper man, acted as m.c. Congratulations from the Management in Wilmington, Delaware were delivered personally by

Mr. F. R. Wilson, director of production. Colonel C. K. Harding made the presentation speech and presented the Army-Navy "E" pennant to Manager Knake, who made the acceptance speech. The Navy was represented by Commander B. W. Hunter and he presented the Barksdale employee representative with Army-Navy lapel buttons as a token of similar presentations to all Barksdale employees. Those representing the employees were selected by the Labor-Management Committee and were as follows: Joe Cotty, A. S. Torkelson who gave the acceptance speech for the employees, Elmer Anderson, Joe DeMars, Rod Bourgo, Len Pallage, Myron Barry, Ernest Bellile, and Mrs. Sal Lindgren. The program was concluded by the entire audience singing America, led by Mr. John C. Chapple of Ashland, accompanied by the Ashland high school band.

The Barksdale Plant did not stop with the single Army-Navy "E" award, for it subsequently was awarded the first star award for excellence in July 1943; the second star, in February 1944; the third star, in October 1944; the fourth star, in May 1945; and a fifth star, in June 1945. Congratulations from far and near were received for the outstanding job being done at the Barksdale Plant. Lieutenant General Dwight D. Eisenhower, Commanding General of European Theatre of Operations, sent congratulations as did W. S. Carpenter, President of the Du Pont company; E. B. Yancey, General Manager; J. W. Kitts, Alabama Ordinance Works; Alex Wiley and Robert M. La Follette, United States Senators of Wisconsin; Governor Julius P. Heil of Wisconsin; P. J. Kimball, Manager Explosives Division; F. E. Jacquot; P. C. Kaiser; George Leith; Sam Baker, Director of Sales; L. C. Meyer; and F. T. Beers. Mr. M. C. Knake paid tribute to all employees later through the "Barksdale News," congratulating them on a fine job done during the war period. The wonderful spirit of the men and women of Barksdale, unfamiliar assignments accepted, responding to breakdowns, long hours, six day weeks, low absenteeism, many valuable suggestions turned in, and sharing of cars to save gas and rubber contributed to the war effort.

To further conserve gas and rubber, DeMars Chevrolet Company under Harvey DeMars took over the job of transporting employees to and from the plant in three large buses capable of carrying 40 passengers each. The drivers of these buses were Jack Joanis, Carl Brenholt, and Cy Kurschner; Hub Nichols and Web Beaulieu had also driven buses for DeMars earlier. At this time, the TNT workers were given rides from the parking lot to the TNT area in a converted narrow gauge box car pulled by one of the two new gas locomotives added to the plant's transportation department. This car resembled an old fashioned carry-all with a canvas top for protection against rain and snow. In 1943 the Company sponsored a monstrous Safety Rally at the Du Pont Club, which was no doubt the largest and most elaborate of its kind. Many employees took part to make it the outstanding event of the year.

On March 4, 1945, Selma B. Lindgren celebrated 25 years of service at the Barksdale Works. "Sal," as she is known by everyone here, has a record that no one else can claim, that of being the only woman to wear the 25 year pin. Sal continued to work until she retired at the age of 65 on March 31, 1954 with a record of 34 years of continued service at Barksdale. She was appropriately honored at a farewell dinner held at the Menard Hotel when all of the Clerical Department and invited guests were present and extended their best wishes.

Dr. John H. Juhl, who had trained the First-Aid group as an aid towards civilian defense, was commissioned in the U.S. Navy in 1943. His place was not filled immediately but soon after, Dr. A. X. Kamm of Ashland took over, Dr. Kamm, being the first plant doctor who was not from Washburn. Dr. Kamm was assisted by nurse, Emma Larson Pearson, who became the first actual full-time nurse at Barksdale. Dr. Kamm remained at Barksdale until 1947 when he unexpectedly died of a heart attack. It was during Dr. Kamm's period at Barksdale that shots for immunization of influenza were started.

In April 1947, Dr. Harold Guzzo arrived to take over the local hospital, which had been opened only recently after having been closed when Dr. Juhl left for the Navy. Dr. Tandy opened the hospital but remained only a short period. Dr. Guzzo began serving the plant on a half-day basis as was the custom before the war. During this time all blood typing was repeated and RH factor determined for every employee. A resuscitator, audiometer, and E.K.G. instrument were replaced by modern equipment. Blood counts are taken monthly on T.N.T. and "Nitramex" workers. A new diathermy machine has also been added. Emma Pearson left in February 1954 and was replaced by Mrs. Grace Manning Nordin.

On August 14, 1945, official announcement of the Jap surrender came through and a two day holiday was declared to allow employees to blow off steam. Parades, parties and general rejoicing in many other ways highlighted the evening on August 14th. Plans for shutting down the T.N.T. plants began immediately after official notice was received. The cancellation of contracts made personnel cutback imperative and it was with regret that many good workers, both men and women, would be affected. The outstanding feeling was of course that we had done our part in achieving our objectives. Mr. Knake expressed his deep appreciation to those who of necessity had to leave the employ of the company, for the part they had played and to those who remained, he expressed his happiness on being associated with them in carrying on into the post-war period.

Top men, according to the "Barksdale News," in some of the departments who were responsible for much of the record production here in addition to Manager M. C. Knake and Assistant Manager D. E. Montgomery were: Powder, Bill Garwood and C. M. Hare, who both served at one time or another during war period, and Walt Leutwiler, Magnus Norgren, "Bumps" Johnson, Lawrence Geisert, August Rave, Stance Stefinske, and Paul Paulson. Clerical Department, C. L. Johnson, Chief Clerk; Cy McManus, Senior Clerk; Ed McManus, Storekeeper; and Andy Johnson, Salvage Supervisor. Service Department, Hobey Chase, Ted Ogren, C. N. Overdahl, L. Freeman, Roland Nelson, J. H. Shaylor, M. O. Thompson, Ted Nohl, Drs. Juhl and Kamm, Herb Justice, and Art A. Anderson. Acid Department, A variety of Superintendents including Joe Dallas, Al Mellott, Al Stewart, and V. C. Quarles. Many supervisors and local men such as Jack Lamoreaux, Ben Rude, Jack Beaulieu, Jack Murphy, Earl Ross, and Joe Vizanko. The T.N.T. department, headed first by H. O. Richardson, also Frank Kenton, Al Stewart, and Jack Blackburn. Others who were leaders there were Oscar E. Olsen, whom Manager Knake had singled out for special recognition, Tom Peterson, "Doc" Olsen, Les Lindblad, Helmer Moe, Fred Rhody, Ernie Holman, Earl Pedersen, and Phil Lindgren. The Maintenance Department was captained throughout the war by Frank Wuest and assisted by J. H. Hanson, Tom McManus, Al Garberg, Carl Christofferson, Joe Kasmarek, Art Nelson, Hagbert Pedersen, Tim Burke, Vic Merila, E. Holman, and Albin Carlson.

Its wartime job done, the Barksdale Plant reverts now to its peacetime job, the production of commercial explosives to blast out coal, ores, rock, and speed the construction of dams, tunnels, highways, and harbors. For such jobs in a normal year the United States consumes almost a half million pounds of explosives.

### The Post-War Years

There was no production of T.N.T. from Sept. 1945 to June 1950. T.N.T. has found a new use in commercial explosives, being used now as a sensitizer in the manufacture of "Soda Amatol" and "Nitramex." New and more popular military explosives, such as the A Bomb, H Bomb, etc., have outmoded the old standby of World War I and World War II, when it was the principal military explosive. Normal production of dynamite continued after the war was over. In fact the 1946 operation had set a record for the production in its first peace-time year. Sales were the highest in the company's 145 year history. Talk of "taconite" ore, that is the iron ore formerly considered of little value, brought hopes of still more use for commercial explosives.

During the post-war period some highlights would have to include the first Foreman-Supervisor dinner party held at the Menard Hotel. On October 22, 1947, the elaborate affair got under way at about 6:00 p. m. Mr. D. E. Montgomery acted as MC and he called upon Mr. Knake for the introductory remarks. The guests for the evening were Mr. Tom R. Carlson, Production Manager, who had been Assistant Manager at Barksdale in 1940, and Mr. George H. Miller, Service Manager, who had been at Barksdale as Service Supervisor from 1922 to 1926. Both Mr. Carlson and Mr. Miller were called upon and responded with fine talks, lauding the spirit of the men at Barksdale and telling of some of the good times they had experienced while stationed there.

Out of a total of 96 pensioners and twenty-five year employees, 85 of them attended a banquet on November 19, 1947, Sal Lindgren being the only woman employee eligible to attend. These banquets are held annually and started when there were only a few pensioners and twenty-five year men. Four pensioners had died since the 1946 banquet, they were Jacob Jackson, Joe Bourgo, Carl Kinney, and Jerry Welton. Pensioners added were John Durkin, John Goski, Carl O. Johnson, Hagbert Pedersen, and Leo Roy (King) in 1946, and Allan Morris, Maintenance Department, and Peter Oie, O. V. Operator in 1947. It was about this time that a movement was started on the plant whereby each employee who so desires would contribute 25 cents toward a gift to the employee being pensioned. As the number of men varies from time to time, the collections too vary accordingly, but, so far, each employee who retired since this practice started has received a gift of at least \$20.00 in value. This is a mighty fine gesture on the part of the younger men and it is hoped that this will always continue. Those pensioners who have received such a gift from their fellow employees appreciate it more than words can express. Service records of 39 employees were checked and cures (corrections) in their plant service amounting to from a few months to several years were announced. This aided considerably and four employees thus attained 25 year pins because of it. From time to time, other employees have benefited by cures in their service records which was cut short due to lay-offs caused by lack of work.

On February 5, 1947, the Walker High school in Washburn burned to the ground. This old sandstone "Castle" was built in 1893 and many memories of the good old school days spent there are fresh in the minds of all who attended there. During the time that plans were being made for a new school, the Du Pont Club was used as a High School. Temporary partitions were put up in the upstairs auditorium and the lounging room to make class rooms. Many students entered as freshmen and graduated at the "Du Pont Club School." The Du Pont Club has really served the community "beyond the call of duty" and no doubt is appreciated by townspeople. When plans for a new High School were made and many futile attempts to raise the desired funds were encountered, it seemed for a time that the city was really up against it. Nevertheless, many loyal hearted citizens contributed generously and the School Building Committee worked hard to accomplish the almost impossible, and a new modern high school is the result. The Du Pont Company again responded splendidly as they did when a grade school was needed. The company, through Manager Knake, presented Mr. Robert Spears, President of the School Board, a check for \$35,000 toward the School project in 1949. Without this, the committee's job of raising funds would have been a very difficult task.

In January of 1947, George Ogren, brother of Ted, wrote a letter to the "Barksdale News" editor Sonny Nelson, and told of the many incidents, and mentioned names of early workers here. George, who started at Barksdale when it began operation, left in 1909 for Du Pont, Washington to help start up the dynamite plant there. He remembers Mr. Charles Hare, N. G. Neutralizer operator, who always wore a white celluloid collar and tie, and many others whom we failed to mention, such as Jimmy Cook, Harold Lium, and Chris Edmundsen as being real old timers here. He mentioned the big snow storm of that period when all powder workers had to shovel out the entire line. Some later jokingly remarked, because the snow was so deep, that when they got through, they found out that they had shoveled out the wrong "ravine." Also told about how lumber mill workers would go back to the mills when they started to operate in the Spring and leave the plant workers short handed but they would return in the winter time looking for a nice warm inside job.

Barksdale suffered one of its biggest catastrophes in its history in July, 1946 when a severe flood resulted from a 6-1/2" rain fall. The huge dirt fill across the upper end of the ravine in the TNT area was completely wiped out and the rushing water and debris swept away two small powder buildings. The south side of the Powder Area suffered the greatest damage when tracks and walkways were washed out. Small landslides covered tracks and building entrances. All bridges and service lines across Boyd's Creek were washed away. Thousands of dollars in damage resulted and the lower portion of the powder line affected never was used again. The buildings were eventually wrecked or burned down. Heavy damage was done at Bayfield at the same time and considerable damage to roads and bridges in both upper Ashland and Bayfield counties. Jack Diehl of the Design Division was flown from Phillips, Wisconsin to Washburn by Earl Johnson because he could come no further by train. Mr. Diehl came here to make some preliminary surveys in regards to the flood damage.

Employees were offered three weeks vacation under a new plan for those who had attained 15 years or more of continuous service. Employees also were now allowed to take a Company pension after 30 years of continuous service and had reached age 60. Joe Cotty, veteran Acid "rat" with 28 years of service, was the first to take advantage of it in 1946.

Because of lack of orders for dynamite during the steel strike, the plant was shut down temporarily in February of 1946. Veterans who had served in the Armed forces throughout the World were gradually returning to work at their old jobs. The boys were being asked many questions about their experiences. Many old timers were fast joining the 25 year club ranks about this time and some were joining the ranks of the retired. During 1948, we had Art Score, now deceased, Andy Chapman, now deceased, Tim Burke, sub-labor foreman, Carl Christianson, ex-Ammonia Crystallizer and Dope Dry expert; Andy Johnson, one of the earlier employees and later purchasing agent, Storekeeper, Maintenance Clerk and Salvage Supervisor. Before employment here Andy also did some railroading and was connected with the Sheriff's office. Other pensioners in 1948 were John Nelson, carpenter and millwright; Matt View, TNT House operator; and Chester Wolfe, former Smokeless, NG, Power House firemen and pipefitter.

The Du Pont Company announced in February 1948 that Crawford H. Greenwalt, age 45 years, replaced Walter S. Carpenter, Jr., as president of the Company, Mr. Carpenter being made Chairman of the Board of Directors. Barksdale at this same time was announcing to the world that it had just completed its first year without a major injury since 1941. In commemorating this event, a Safety Dinner was held for all employees and their wives at the Elk's Clubhouse in Ashland. Speeches by M. C. Knake and D. E. Montgomery, along with a local German Band, impromptu quartette numbers, and solos by Eddie and Fred Cudmore were enjoyed by the 468 persons who attended. Barksdale made "Better Living Magazine" in a picture story in August 1948 when John Alexander, Staff photographer paid a visit here and a fishing party was organized for a days outing on Lake Superior. Many fish were caught and a good time was had by all. The happiest man present was no doubt Lyman Nourse, Captain of a beautiful trolling yacht used on the trip, when the party was over and Bill Anderson stepped off his boat, Bill kept Lyman busy all day using nautical terms as only Bill can "misuse" them. "Mack's Beach" Club House was given a coat of paint by a volunteer group of employees in October, 1948.

One of the highlights of the year 1949 was, of course, the Safety Party celebrating two years without a major injury. Mr. Knake and Mr. Montgomery gave talks on safety and an interesting program of musical numbers and comedy numbers entertained the 372 people who were in attendance. This record was good enough to win for the second consecutive year the National Safety Council Award. Mr. M. C. Knake, who had been Manager at Barksdale since 1928, retired on August 1, 1949, a period of 21 years at Barksdale. This was the longest time anyone had served in that capacity and the first time a manager retired while at Barksdale. Mr. Knake was feted at the party at Mack's Beach Club by the entire plant personnel. Appropriate speeches and a presentation of farewell gifts were made. At this party the new manager to be, Mr. F. N. Hendon was introduced. Mr. Hendon took over on August 1, 1949, having arrived from the Repauno Plant where he held the position of Assistant Manager.

One of the highlights in Barksdale's history was shaping up into what was to be of great importance. Upon Mr. Hendon's arrival, he was greeted with a safety record of 803 days on a record of over two years worked safely. This already has passed the old record of two years established in 1922 and which was so highly publicized then. The Foreman-Supervisor dinner in 1949 was more or less a celebration for Barksdale's safety record. The Du Pont Company was ably represented by Mr. Harold Brayman, Director of Public Relations, who was the guest

speaker. About this same time a safety record of approximately 21,000,000 man hours without a lost-time injury to any employee had been achieved by Martinsville, Virginia Plant, nearly seven years without an injury, a new world's record. Of interest, too, then was the fact that Du Pont Company stockholders number 100,000.

At the Old Timers Dinner in November, 1949, 106 out of a possible 119 pensioners and twenty-five year men and guests, enjoyed their annual turkey dinner. New pensioners added in 1949 were Joseph Cotty, Acid and Labor Departments; Henry Frechette, old Nitric operator; Carl V. Johnson Powder and TNT man for years; Victor Merila, sub-labor foreman; Harry Newman, TNT Graining House expert and sportsmen's guide (not to mention weather prophet); and M. C.. Knake, Laboratory boy in 1898 and manager upon retirement. A Merry Christmas was enjoyed by all employees and their families in 1949 when 956 days had been worked safely. Our record was growing rapidly.

Mr. Hendon, in a news release, stated, "More than \$772,000 was put into this area during 1949 by the Barksdale Explosives Plant. Salaries, wages, and benefits earned in 1949 by 176 employees totaled more than \$700,000. The plant spent \$72,000 in the area for services, supplies, dealing directly with 124 local concerns and individuals. Barksdale being one of the 80 odd larger and smaller plants operated throughout the U. S. by Du Pont."

Improvements in "Nitramon" Manufacture and expansion in that field called for the building of a plant at Barksdale. Work was well under way revamping the old No. 2 Box Packing house in the latter part of February, 1950. "Soda Amatol", "Nitramon," and "Nitramex" were the three new products to be manufactured in this plant. "Amatol" is a blasting agent which in recent years has found wide acceptance throughout the United States and is presently finding utility on the iron ranges. This explosive uses TNT in a comparable manner to the Nitroglycerin in our present dynamites. For the most part it will be packaged in cans. The above information is from the Barksdale News of February 1950. Another project beginning at this time was the reconditioning of the one remaining TNT line. Work was to begin there productively in May or June. There has been no production of TNT from September 1945 up to this time. Actual start of TNT production being the early part of May, 1950. Elmer "Doc" Olsen, one of the pioneers left over from World War I days was put in charge of the TNT department along with Helmer Moe, who also spent most of his days working with TNT or acid. John Burlager was there for a time but is now back at the Box Factory; Cy Sirols, Sid Scott, Elmer Jacobson, Bill Rave, and John Rodkewich rounded out the old-timers crew making TNT for commercial use. The manufacturer of the free-running TNT powder, called pellets, began in 1951.

To start the "Nitramex" Plant, the Company sent Lawrence Geisert, Les Lindblad and Ernie Holman to Gibbstown, New Jersey, where they had an opportunity to see how the new "stuff" was made at the Repauno plant. Repauno had been making "Nitramon," "Nitramex," and Soda Amatol for some time. Due to transportation difficulties in the heavy populated area around the Repauno Plant, explosives such as "Nitramex" and dynamite were eventually to be for the most part discontinued there. The new plant at Potomac River, Virginia is now producing explosives for the Eastern seaboard area. When the "Nitramex" Plant started operations in June, 1950, Frank Fenton, a "Nitramex" supervisor from Repauno was transferred to Barksdale to take over. In addition to Spot, Les, and Ernie, who were shift foremen, the first operators at the start-up

were: Wally Moe, who later took over at the Shell House; Elmer Dagsgard, now a foreman there; and Ellsworth Embertson. Others have held operating jobs there too but they would be too numerous to mention. Henry Bomey and Herb Westen soon followed as operators when changes were made in the personnel. Bill Todd later replaced Frank Fenton.

About the time TNT and "Nitramex" were starting, the last issue of the "Barksdale News" came out. In May, 1950, just two months before its tenth anniversary, the news went to press for the last time. The loss of this publication, as mentioned earlier, was deeply felt by all employees and a source of news for the History of Barksdale went with it. During the period from May 1950 to October 15, 1952, Barksdale was gradually building up a safety-record to be well proud of. By May 13, 1950 the plant record was three years without a lost-time injury.

In 1951 the last remnants of World War I expansion were reduced to ashes, when the Company saw fit to burn the old antiquated buildings as they were no longer needed. The old Nitric Acid Recovery, the balance of those buildings on the chloride refined TNT line, and the remaining buildings on the original No. 1 TNT line were included. The "monument," as the coal crusher is referred to, still stands, however, and as long as it is not in anyone's way, it probably will remain there.

Quite a number of old timers received their pensions in 1950 and 1951 to add to the ever growing list. They are as follows in 1950: Siguard Anderson, powder dope house operator and watchman, now deceased; George W. Coulthurst, TNT man and truck driver; Albert R. Nelson, carpenter and father of Roland Nelson; Paul Paulson, one of the first men to be hired at Barksdale and who worked longer on the powder line than anyone else; James Pellizzi, former proprietor of Jim's Variety Store and Powder line Change House custodian; Edna Peterson, first woman to be pensioned at Barksdale and wife of Odeen Peterson also retired; and Fred W. Rhody, powder line and TNT foreman and lately of the Service Department. Those who retired in 1951 were: James Murray, powder line handy man, locomotive engineer, and shell house; James J. Murphy, transportation, salvage during War, and Secretary of the B.B.A; Edgar Peterson, Machine shop welder and scale repairman; and finally August F. Rave, powder repairman, and shell house foreman.

On March 1, 1952, Mr. F. N. Hendon, Manager for less than two years was transferred to the Birmingham, Alabama Plant and replaced by Mr. B. A. Semb, who arrived from the Pompton Lakes Works, where he had been Assistant manager. While Mr. Hendon was at Barksdale, he made many friends, and he himself became a lover of North Wisconsin's Great outdoors. He was an ardent fisherman and skier, both of which cannot be partaken greatly down South so it is no wonder then that when either summer or winter rolls around, Mr. Hendon returns for vacation trips with his family. The Safety record had now reached almost five years without an injury, a record everyone was doing his best to maintain. A fire at the Ammonia Crystallizer practically destroyed all but the kettles there, and in less than five days the carpenters, millwrights, pipefitters, and mechanics had the place in operation again. The maintenance department was highly praised by Manager Semb and special recognition was made by the Wilmington office for the speed and safety in rebuilding the Crystallizer.



In addition to reaching five years in the safety record on May 13, 1952, the Du Pont Company celebrated its one hundred and fiftieth anniversary and on July 18, 1952, the Barksdale Plant observed this occasion with a huge picnic at Memorial Park. The celebration was nation-wide in scope; a program originating in Wilmington, Delaware and at the site of the first powder plant on Brandywine Creek was received here by radio. Each Du Pont Plant was represented at the Wilmington celebration by two employees, and those representing Barksdale were George and Mager and Martin Thompson. The program at Memorial Park consisted of all employees and their families enjoying ice cream, sandwiches, and pop, many kinds of races for the children, band music by a local band, speeches, and a tour of the Barksdale Works. A Committee, headed by Bob Lindsey, Chairman, B. A. Semb and C. D. Pitts, had charge of the most elaborate picnic ever held at the park. Each employee received a souvenir program and other tokens in commemoration of the historical event.

After having completed over five years of safety work, on October 15, 1952, the "Nitramex" plant was completely destroyed by an explosion of unknown origin. Eight lives were lost including the following: Henry Bomey, acting foreman; Carlton Moe, operator; Carl Moe; Leo Swanson; Thomas Ferguson; Emil Haviar; George Hoerich; and Eddie Cudmore. All were "Nitramex" men except Hoerich and Cudmore, who were on transportation. All were local men except Haviar, who lived at Mason. This was the worst explosion in the history of Barksdale and it broke the Safety record established of over five years at the time. John Rodkewich, operator at "Nitramex" on the 12-8 shift, had gone to lunch and the explosion occurred while he was gone.

Immediate plans for rebuilding "Nitramex" were made and work started that same fall. The "S"-Primer operation which had begun there continued to operate during the construction of the new plant as it was located in the rear of the No. 1 Packing House. Soda Amatol, the powder used to pack "S"-Primers was shipped here from Repauno by rail. The new plant consisted of three buildings in addition to a new modern change house. Soda Amatol is now made in a separate building from the "Nitramex" and "Nitramon" powders. The line was ready to operate in less than a year, beginning in the Spring of 1953. Present Supervisor is Bill Hague who replaced Jim Reilly. The foremen are Spot Geisert, Les Lindblad, Ernie Holman, Elmer Dagsgard, and Herb Westen. Relief foreman are John Day and Ed Foltz. Operators vary from time to time but are made up of men who have service dating back to the start up of "Nitramex" in 1950.

With the start-up of the new "Nitramex" plant, new and improved methods of transportation have been put in use. Trucks and trailers are replacing electric locomotives and all narrow gauge transportation little by little. "Nitramex" dope, etc. is hauled by truck and trailer to approach buildings formerly only accessible by rail transportation. Apparently rail transportation will eventually discontinue at Barksdale. This is only natural when we stop to think of the work trains from Washburn to Barksdale in the early days as being absolutely essential for transportation, have for many years been replaced by privately owned automobiles. On June 18, 1954, a count was made at the end of a completed day of the cars leaving the plant and it was found that there were 142 cars. These cars carry all told around 350 or more workers each day.

In 1953 another Holiday with pay was added when Good Friday became a Company legal holiday for its employees. The revised pension plan, in May, 1954, allows a minimum of \$100.00 per month but calculated separately from the social security payments. This was

welcome news to pensioners as well as all employees. Those who were pensioned in 1952 and 1953 were: Lauren Porter, Carpenter and Millwright in 1952; Carl Christofferson, Machine Shop foreman and one of the early employees; and Thomas McManus, labor foreman whose service with the Company began in 1909 at Repauno and 1935 at Barksdale. Those pensioned in 1954 to date are: Al Garberg, Pipe Shop foreman; Sal Lindgren, Clerk and first woman employee to receive a 25 year pin; Frank Faulkner, transportation; Oscar Holman, carpenter; John Renstrom, Magazine worker; and Martin Thompson, both of whom retire on November 1st of this year.

Iron Mountain, Michigan  
January 12 1955  
Mr. Ernest Holman

Dear Sir:

I received your letter some time ago and also the book about Du Pont's 50 years and want to thank you very much. I enjoy reading the history in the Times as it is very interesting and because I was there also. After I finish with it I pass the paper on to former Washburn residents. You may keep the picture post card I sent and add it to your rouges gallery. I have another picture similar to that one taken at a later date that I may send to you. Also I used to have a picture taken in front of Mrs. Donelley's boarding house showing Mr. Pierce, Mr. Wishert, Walter Page, Jack Dohm, William Hadley, Frank Smith, a chemist by the name of Lang, and several others and if I can find it I'll send it to you.

In one of your articles you mentioned that they used to cook up a rabbit "Booyaw" in the blacksmith shop and that was quite true, but it was strictly a machine shop affair and on Sunday at that. Fred Christianson had nothing to do with them as he was something like Ole the painter who didn't like any monkey business around his forge. Let me assure you that those rabbit stews were tops and here is how they were made. You take about 2 dozen hind legs of rabbit, 4 partridges and cook them in a gravy and you have about one 12-quart water pail full. Then you add 3/4 pail of potatoes, carrots and onions and boy, you have a feed fit for the Gods. In fact I haven't had anything like it since and that happened 40 or more years ago.

Excuse me for rambling on like this but it brings back memories of things that will never happen to me again.

Yours truly,  
Mike Nelson

## II. The Barksdale Works 1904-2004

Lars E. Larson

The following account of the Barksdale Works from 1904 to 2004, based on excerpts from the author's book, *Chequamegon Bay And Its Communities II: Washburn The City To Be*, is intended to complement Ernie Holman's history.

### The Early Years

In the spring of 1902 reports circulated that a "mysterious man" (later identified as William G. Ramsay) was purchasing land midway between Ashland and Washburn. Then "civil engineers" arrived to plat the property and "a few moneyed men from the east and from Chicago were also visitors." They would only say that "a big manufacturing plant of some kind" was to be constructed. Speculation as to the type of plant it would be, from an iron works to a tannery, ran rampant in the area. Finally in February 1903 the *Times* "discovered" that "a dynamite plant to cost one million of dollars" was to be built on the property, and would employ "between 1500 and 2000 men." "The enterprise will become part of Washburn," the *Times* declared, "and will be one of the heavy taxpayers." It rebuked "greedy Ashland" for claiming the plant, but vouchsafed "that Ashland should pick up a few of the remaining crumbs." It was "logical" that the "workmen" would live in Washburn, and "This will mean a great many new houses and in all probability a boom for the place." Nothing further appeared regarding the "dynamite plant" until July, when articles of incorporation were filed with the Wisconsin secretary of state for the "Atlantic Manufacturing Company," for the purpose of manufacturing and selling explosives "of all classes."

While the five incorporators might have commanded a half a million dollars between them, they could not have had the expert skills needed to plan, construct and operate an explosives plant. In fact, the plant was built by the Eastern Dynamite Company, part of the newly formed E.I. Du Pont de Nemours Powder Company. Although the legend of the Du Pont Company tells of a prosperous and unbroken history beginning with first powder works built on Brandywine Creek in Delaware by Irénée Du Pont in July 1802, in fact in 1902 the company came very close to being sold. Three relatively young Du Pont cousins, against the better judgment of their elders, took over the company and through adroit and hard-headed financial management and maneuvering, and not a little skullduggery, formed the E.I. Du Pont de Nemours Powder Company, under which they consolidated and eventually absorbed numerous powder companies and associated businesses from across the country.

One of the first decisions of this new company was to construct plants located so that they could serve areas of the country that were too far from existing plants to be supplied profitably. The "dynamite plant" west of Washburn was the first one to be constructed. It was named the Barksdale Works after Hamilton M. Barksdale, head of the explosives operating department of the new company. The principal business of the plant was the manufacture of dynamite for the iron ore mines on the Iron Range in northern Minnesota and the Gogebic Range in Michigan's Upper Peninsula. The demand for iron ore depended on the demand for steel, which in turn depended on the level of manufacturing activity and the health of the general economy. So the

volume of orders for dynamite from the ore mines quickly changed as economic conditions changed for good or bad; demand also declined in the winter when mining activity was curtailed. The result was frequent changes in the size of the workforce at the Barksdale Works.

The *Times* reported that the completed plant would include 43 buildings with a railroad siding, would employ “175 to 200 men” and “cost \$500,000.” The paper confidently announced that “We can consider this as a Washburn enterprise as all the incorporators are located within the county and will carry on all their business through Washburn.” Construction began in July 1903 and by March 1904 twenty-six buildings had been completed. The *Times* reported that “The buildings where the explosives are finished and handled are down in the ravine” to minimize the effects of an explosion, but added that “those in charge of the work say that manufacture of this class of goods has been so perfected that there is but little danger in handling it.” Meanwhile, telephone service between Washburn and the plant was installed, putting “that institution . . . within speaking distance of the city.” A post office was also established at the plant that enabled the company to conduct its business there. This was a disappointment to Washburn’s leaders, who had expected that the company offices would be located in Washburn. This, along with the later detachment of the sections that included the plant property from the corporate limits of the new city of Washburn in May 1904, meant that Washburn’s “ownership” of this “institution” was limited to providing housing for officials and workers.

Construction work continued throughout 1905, the *Ashland Daily Press* reporting in September that “The buildings are apparently about half completed,” and that “A total of \$1,500,000 is to be spent in this great enterprise.” While this and other reports regarding the plant facilities stated that docks were to be built on the adjacent bay shore, they were never built. The plant received its raw materials through the dock terminals at Washburn and shipped its products by rail. In November the Omaha Railroad began train service to transport workers from Washburn to and from the plant. On Saturday, May 28 1905 the first batch of dynamite was produced, the *Times* reporting that “throughout the starting off of all the different branches of the institution there has not been a hitch.” By July the plant was “under full headway and was turning out large quantities of explosives.”

There was a general recognition that the production of explosives was an inescapably dangerous business and that despite elaborate precautions accidents would inevitably occur. This lurking threat of fires and explosions was recognized in the layout of the plant, with the wide dispersion of buildings and the “powder line” located in a ravine. Despite these precautions, an explosion on January 1904 killed two men. The first fire occurred in early August 1905 when the “dope house” was destroyed, and a second at the end of November in which the “ammonia house” was gutted. With a suggestion of foreboding, the *Times* in September reported under the heading, “A Foretaste of the Future,” on a huge explosion at a “powder works” in Fairchance, Pennsylvania, which destroyed the plant, caused “about thirty deaths” and resulted in damage in the surrounding area up to seven miles away. This was indeed a “foretaste,” for early in the morning of Monday, July 16 1906 a terrific explosion in the neutralizing house on the powder line killed three men, including the general superintendent, and damaged every building of the plant. Windows were broken in Ashland and Washburn, and the shock of the explosion was felt for miles around. A second explosion occurred later in the morning but the workers were forewarned and there were no casualties. It was anticipated that the plant would be back in production in about a month.

A brief item in the *Times* in December In 1909, noted that “close to three hundred men” were employed, and in March 1913 the *Times* reported that “between two and three hundred men” worked at the plant, while the *News* stated that “close to four hundred men” were employed. Four railroad coaches were required to transport workers to and from the plant, the only indication during these years that the Omaha Railroad provided special train service from Washburn to the plant. Employment fluctuated depending on the amount of business available to the plant and on general economic conditions, a cyclical pattern of employment that would persist throughout the entire life of the Barksdale Works. The plant continued to expand, a “nitric acid house,” “soda house,” and “packing house” being constructed. Also, “eight or ten new buildings” were constructed and additional men were hired for the production of a new type of dynamite called “triton.”

But while the explosives plant provided employment to many men from Washburn and infused money into its economy, it continued to extract a toll in injuries and death. In January 1907 an explosion in a building, known as the “dope house,” injured one man. But worse was to come. In October 1907 an explosion occurred in the same building that killed three men, seriously injuring five others. What little remained of the bodies of the three men was buried in a common casket. Then barely a year later, in September 1908, an enormous explosion of 25 hundred pounds of nitroglycerine killed one worker and seriously injured one of the plant executives. This time no remains of the victim were found. Thus, the toll from explosions at the plant in a little over five years, since construction began in 1903, stood at nine dead and seven injured, some severely so. It must have seemed to many people in Washburn that the hand of fate rested heavily on them, particularly when it was learned that two men from Washburn had been killed at the Du Pont plant in Tacoma, Washington. The Du Pont Company, no doubt stung by the continuing bad publicity from these fatal explosions at its plants and calculating that it would probably cost less to try to prevent these catastrophes than to pay for their consequences, established an elaborate safety program about 1912. A safety manager was hired, a joint management-worker safety committee was organized, “safety rallies” were held to educate workers and raise their consciousness about safety, and a system of safety awards set up with “safety first” adopted as a motto. As a result there were no more fatal accidents until 1916, and the frequency of non-fatal accidents declined.

To turn the immense wilderness area occupied by the Barksdale Works to a useful purpose, in 1911 about 200 acres were cleared and planted in lawn and farm crops, both beautifying the grounds and producing a profitable crop. A “scientific farmer” was hired to oversee the project, and a number of buildings were constructed, so that there was a regular farm operating along side the explosives plant.

### World War I

On April 6 1917, provoked by the depredations of the German submarine campaign against its ships on the high seas, the United States declared war on Germany. The involvement of the United States began in 1915, however, when the Allied powers, unable to sustain the demands of total war with their own resources, turned to the United States for supplies and munitions. As one of the largest manufactures of explosives in the United States, the Du Pont Company received a substantial share of the Allied munitions orders. The Barksdale Works immediately

began to expand its facilities and work force, a process that was accelerated when the United States entered the war in April 1917, adding its orders for explosives to those of the Allied powers. At the end of May 1917 the plant superintendent announced that employment at the plant would rise to 1,500 men during the summer. At the end of July more “triton units” were added to the six already in operation, with a commensurate expansion of other plant facilities. The *Times* expected that when the expansion was completed “upwards of two thousand men will be employed.” The frantic pace of operations at the plant was not without cost, however. In August 1918 an explosion killed six men, two of them from Washburn. Normally only two men worked in the building, but on this occasion four other men, who happened to be working near it, were also killed. Two explosions later in the fall of 1918, fortunately did not take any lives.

In the summer of 1915 the company remodeled the Sheridan building, on the northwest corner of Central Avenue and Bayfield Street, as a club house for its employees. The club, named the F.T. Beers Club in honor of the plant superintendent, was opened in October. It was equipped with lunch counters, bowling alleys, and lounge rooms. In April 1918 the building was totally destroyed by fire. The company then erected a new building on the site, to be managed by the Young Men’s Christian Association. The *Times* noted that “Every portion of the building is being erected with a view to beauty and convenience and nothing will be left undone to make it one of the finest buildings of the kind in Northern Wisconsin.” The building, known as the Du Pont Club, was opened on January 14 1919 with an elaborate dedication program, attended by an overflow crowd. A report in June 1919 listed numerous activities at the “Y,” including “social functions,” “paid” and “educational movie programs,” bowling, pool and billiards, gymnasium classes, “general athletic programs,” and “baths.” In 1909 a club for single members of management was organized, named the Haskell Club after a Du Pont Company executive. The upper two floors of the former Washburn Bank building were leased and refurbished as club rooms. Then in November 1917, the company constructed a building on the south side of Third Street, between Central Avenue and First Avenue East, for the Haskell Club. The new club hall contained “13 bedrooms, large living room, reading room, dining room and kitchen,” and was “a beauty,” according to the *Times* (later the Washburn hospital and now an apartment).

To help relieve the resulting housing shortage, created by the expansion of its work force, the Du Pont Company erected barracks for about 2,000 men at Barksdale, along with a recreation building managed by the Young Men’s Christian Association. In Washburn, in the spring of 1916, the company erected a “manager’s row” of four houses on the north side of Third Street, between Second and Third Avenues East, with the plant manager’s house at the east end of the block. Then in May 1918 other houses, both bungalows and duplexes, were built along the south side of Third Street, between Central Avenue and First Avenue East, and between Third Avenue East and Fourth Avenue East (not opened). The company’s largest project was the construction, in 1918, of 100 houses for its workers on a tract at the east end of the city, between Fifth Avenue East and Superior Avenue, and Bayfield Street and Fourth Street.

### The 1920s And 1930s

Fighting ended unexpectedly with an armistice on November 11 1918. Almost immediately the company reduced the workforce at the Barksdale Works, which had increased to several thousand during the war. How far employment at the plant declined is not known, but the level

was certainly only a fraction of what it had been during the war as the plant returned to producing explosives for its traditional markets. As if to confirm that the era of expansion was over at the Barksdale Works, the company sold the houses it had constructed in the east end of Washburn to the Marshall-Wells Company of Duluth. They were disassembled and transported by rail to Morley Heights, in Duluth, a new subdivision established for that company's workers. Despite the drastic post-war downsizing, the Du Pont plant remained an important component of Washburn's economy. The principal peacetime business of the plant remained that of supplying explosives to the iron ore mines in Minnesota and Michigan, which provided almost all of the ore to the iron and steel industry; a secondary business was producing explosives for land clearing in the cutover of Wisconsin and Michigan. The abrupt and deep cuts in operations and employment at the plant during the immediate post-war years, while principally due to the end of government war business, also reflected a steep decline in iron ore output, from 75.3 million tons in 1917, when the nation was re-arming, to 67.6 million tons in 1920 and to 29.5 million tons in 1921, during the brief postwar recession.

The size of the workforce after the post-Armistice "downsizing" is not known but was probably not more than 150 men, with the plant apparently operating on a reduced schedule. Things improved in early April 1920 when "Upwards of two hundred additional men" were hired to dismantle buildings no longer used and "for re-arranging equipment and materials." Later that month an additional 100 men were hired for the production department, the *Times* reporting that "upwards of five hundred men" were employed at the plant. The following July the company that had the contract to dismantle the wartime buildings hired 100 men, while 200 more men were hired "for work on construction and operation" at the plant. But by the end of the year the plant force was reduced to 175 men due to a falling off in the demand for explosives because of the short recession that struck in the fall of 1920. By July of the following year, however, additional men had been hired and the plant was operating on a six day schedule, due to a general pickup in business and the transfer to the Barksdale Works of the business of a plant in Missouri that had been closed.

In the spring and summer of 1922 facilities were constructed and additional men were hired for the reprocessing of some 2,750,000 pounds of war surplus smokeless powder into an explosive called "dumprite," which was used for the agricultural land clearing that was being carried out in the cutover region. In August 1923 the plant began the manufacture of "sodatol" from reprocessed war surplus trinitrotoluene, or TNT, while in February 1925 the facilities for producing "triton," closed at the end of the war, were reopened to fill new orders. The *Times* reported that "about sixty-five men" were to be employed for this the triton operation, "giving the Barksdale plant a payroll of upwards of 300 men." In January 1926 and again a year later, large orders for "pyrotol," another explosive made from reprocessed war surplus explosives, were received, requiring an expansion of the work force during the winter months when it was normally reduced in size. "Sodatol" and "pyrotol" were also used for land clearing.

Meanwhile, iron mining operations began to recover in 1922, ore output soon exceeding pre-war levels and almost matching wartime levels, resulting in substantial orders for explosives from the plant. In February 1928 construction of an ammonia oxidation plant for manufacturing nitric acid began, which required employing a large work force. At the end of October the *Times* reported that "nearly three hundred and fifty men" were employed at the plant with a monthly

payroll “totaling more than \$20,000.” Prosperity for the plant continued in 1929, additional orders for the military explosive “triton” having been received. Indeed, toward the end of August the *Times* reported that the “crew at this time is the largest in the history of the plant, except during the war period,” and that the “Increased monthly payrolls are beginning to be felt by the business houses of the city and business generally is reported to be good.”

During most of the 1920s the work train from Washburn to the plant continued to transport the regular day shift crews. The evening shift was also transported to the plant on the train, while the midnight shift rode a horse-drawn “carry-all” to the plant, which then took the evening shift crew back to Washburn, while the midnight shift men were taken back to Washburn by the work train that brought the day crew to the plant. Later the crews of the evening and midnight shifts were transported in a large truck, the men sitting on benches in its canvas covered, unheated box. Toward the end of the decade private automobiles were increasingly used for transportation to the plant and in 1928 the work train was discontinued.

Safety continued to be a key concern of the plant management, and company safety records were achieved through the work of a safety engineer, with the cooperation of the workers. On April 30 1921, the plant completed one year without a major accident, “the best record of any plant of the Du Pont Company in the United States,” and the following August the plant won an inter-plant no-accident competition with a perfect score. A special safety flag was designed showing “a jubilant, crowing rooster, and the name ‘Barksdale’ printed across it in red letters,” which was flown from the flagpole at the main gate. In January 1922 the powder department, perhaps the most dangerous among the several extremely hazardous operations at the plant, completed two years without a lost time accident, an achievement duly celebrated by a big banquet at the Du Pont Club. And in February 1923 the plant once again won an inter-plant competition for accident prevention. Unfortunately, despite the diligence of management and workers, the plant’s outstanding safety record was shattered by a series of tragic accidents. In February 1925 a fire and explosion severely burned two men, one of whom later died; the following July eleven workers were injured in a “terrific blast,” and in August 1928 one man died from inhaling nitric acid fumes and two more were killed in an explosion. There were also several fires and explosions that did not injure or kill anyone.

As in the past the Du Pont Company treated its employees comparatively well. In 1920 the wages of workers were increased on two occasions, in 1925 arrangements were made for employees to purchase cheap life insurance by payroll deduction, and in 1929 annual physical exams at company expense became mandatory for all employees. And early in the decade the company began to sponsor annual employee picnics at Memorial Park, which, since practically everyone in Washburn was connected in some way to a Barksdale Works employee, were really community events, a highlight of the summer season for Washburn. The picnics were usually held on a Saturday in late summer, beginning at noon, with a picnic dinner served out of the park kitchen, followed by a brief address by the plant superintendent, then by a “program of sports and games of all kinds for the men, women and children,” and a “big dance” or “mixer” in the evening at the Du Pont Club. After the golf course was constructed, a golf tournament was also part of the program.



The Du Pont Company's generally favorable reputation regarding the health and welfare of its employees did not keep it out of trouble with the tax authorities, however. In January 1927 the State Tax Commission brought suit against the company to collect unpaid Bayfield County taxes on the excess income earned during and after the war. The suit was quickly settled at a compromise figure of one-half million dollars, a part of which was distributed among the towns and villages, and the cities of Washburn and Bayfield, according to a complex formula based on 1926 school enrollments. Washburn's share, paid in March 1927, was \$5,629, a welcome addition to the city's always over-extended financial resources. In August 1927 the city enjoyed another and unexpected financial bonanza, when the company was required to pay a personal property tax of about \$2,500 on a large amount of nitro-cellulose that was briefly stored on the commercial dock in 1927.

During the 1920s the Barksdale Works continued to be an important, if inconstant contributor to Washburn's economy. Changes in the demand for explosives from the Gogebic and Iron Range mines, reflecting changes in the demand for iron ore and steel, resulted in fluctuating levels of employment at the plant. The company policy of "spreading the work" by reducing the length of the work week and work day, and by scheduling maintenance and construction projects to provide work during slack times, somewhat mitigated the impact of these changes in demand. While hourly work force employment in the fall of 1929 was the largest since the war years, in December 1930 the *Times* reported that "the regular crew of the plant . . . has been working on a four day schedule for several months." The following January the work week was extended to five days, with 175 men employed, but by August 1932 only 50 men were employed on a reduced schedule. By July 1933 the employment situation had improved with about 115 men working but with reduced hours. By October 1933 hourly employment had again risen to 197 men, working four eight hour days, then to 219 men in April 1934 and 250 men in June 1935, some hired for temporary construction work. In March 1938 only about 190 men were on the hourly payroll, the plant manager stating that "Prospects are somewhat discouraging for a seasonal increase this spring."

Throughout the 1930s the Du Pont Company, rather than taking advantage of the depressed conditions to reduce wages, periodically increased them: two increases in 1933, raising the hourly wage for unskilled labor to 42 cents, with further increases in 1934, 1936 and 1937, raising the wage for unskilled labor to 58 cents an hour. The company also began to provide sickness and injury insurance for its employees, paying 20% of the premium. In 1935 a Works Council with representatives from the workers and management was established to help maintain "harmony" between the labor and management, but was dissolved when it was defined as a "company union" under the 1935 Wagner Labor Relations Act. The hourly workers then organized the Barksdale Workmen's Protective Association as a bargaining unit under the provisions of the Wagner Act, some 80% of the work force joining it. But the absence of serious issues for conflict between management and labor and with good will and flexibility on both sides to resolve grievances, the association was not needed so it gradually died out. The company also improved working conditions for the men, building modern washroom and restroom facilities, and installing air conditioning in the buildings to draw off fumes and heat. It also contributed to the construction of an employee club house on its lake shore property, named "MC's Beach," referred to as "Max Beach," in honor of M.C. Knake, the plant manager.

The Barksdale Works was located on about 1,000 acres of land enclosed by a high fence, topped by barbed wire. This proved no barrier to deer, large numbers of which jumped over the fence. Safe from wolves, dogs, and hunters, the deer herd became so large that many starved to death in the winter from lack of food. Without the threat of predators and fed by the workers, the deer became quite tame, grazing in the fields, loitering on the roads and railroad tracks, even entering buildings, posing a safety hazard. Finally in 1936 the state conservation department agreed to cull the herd by trapping and relocating some of the deer. During the next few years hundreds of deer were removed from the plant enclosure and released at distant points throughout the county.

## World War II

World War II began in Europe on September 1 1939 with the German assault on Poland. The “defense preparedness program” undertaken by the federal government in response to German aggression resulted in an increase in orders for TNT, to which were added the orders from Allied powers. By mid-September 1939 the TNT production line was working at full capacity with about 280 men on the payroll, while in March a new TNT unit began operation with total employment at 455 men, increasing to 475 by April 1941. From June 1 1940 to October 30 1941, the Barksdale Works was awarded contracts amounting to more than two and a quarter million dollars for TNT, dynamite, and ammonium nitrate.

The United States entered the war against Germany and Japan after the Japanese attack on Pearl Harbor on December 7 1941, accelerating the mobilization of its enormous production capacity. There were no articles regarding employment and production in the *Times* during the war, but postwar accounts state that 208 million pounds of TNT and 102 million pounds of commercial explosives were produced, compared to 130 million pounds and 90 million pounds, respectively, during World War I. Eighteen million pounds of TNT blocks were also produced during World War II. Peak employment during the war was about 600 men and women, compared to about 6,000 during World War I, so the substantially larger output during the second war was achieved with about one-tenth the number employed during the first war.

The plant management formed several labor-management committees to expedite operations, including a transportation committee and a production drive committee. A monthly plant newsletter, the “Barksdale News,” was also published from July 1940 to May 1950. Included in each issue were articles about safety, information on personnel actions, personal notes, anecdotes, plus jokes and cartoons. To transport workers to the plant from Washburn, where all but a small part of the workforce lived, the DeMars Chevrolet Company operated three passenger buses, which made 14 trips a day. A ticket for 42 one-way rides cost \$5.00. Before the war the Barksdale Works was one of two plants in the nation producing TNT. To provide a nucleus of trained people—supervisors, chemists, and operators—for new plants being constructed to produce TNT for the war, a training school was established at the plant. The training was conducted by regular employees involved in TNT production, the course lasting from seven to nine weeks. Altogether about 300 men from plants in the United States and Canada were trained at this “Barksdale University.”

A guard force was established in 1940 to protect the plant against sabotage and other attempts to disrupt production. During the war the force consisted of 107 guards, a chief, four lieutenants,

and nine sergeants. The guards were trained by the army, swore oaths as auxiliary military policemen, and wore khaki military-style uniforms. Guard towers were erected at intervals along the eight-foot fence that surrounded the plant, while the fence line was regularly patrolled. There were no incidents of attempted sabotage or penetration into the plant grounds, although guards occasionally had “close encounters” with the local wildlife. While the possibility of sabotage by enemy agents at a plant located in the northern wilderness in the middle of the nation was remote, the elaborate security impressed on employees the great importance of the plant to the war effort, helping to mobilize them to that end, while securing the support of the population in the surrounding area.

In October 1942 the Barksdale Works was awarded the Army-Navy E for its “fine record in the production of war equipment.” The award was presented at a “most impressive and colorful ceremony” held at the Ashland High School gymnasium on December 1st, attended by 1,300 employees and their families. A radio personality from Minneapolis acted as the master of ceremonies. Following an address by a representative from the Du Pont Company’s headquarters in Wilmington, Delaware, an army officer presented the “E” pennant to the plant manager, who made an acceptance speech. The program concluded with the singing of “America” by the audience. The plant received the award again in July 1943, February 1944, October 1944, and May 1945, each additional award signified by a white star on the “E” pennant that was flown from the flagstaff at the main gate of the plant. The production achievements for which the Barksdale Works received the five Army-Navy “E” awards were the result of the hard work of the men and women of the plant work force.

The surrender of Japan, announced by President Harry S. Truman at 6:00PM on Tuesday, August 14th, “set off a riotous nationwide celebration and Washburn was no exception to the national rule,” observed the *Times*. The bells of Christ Lutheran Church, St. Louis Catholic Church, and Walker School were rung; the city fire siren was sounded; and people honked automobile horns and beat on pots and pans, “creating a city-wide din.” Festivities in the local taverns continued far into the night with every one “jammed with merry-makers, including many who had never been seen in them before but who apparently felt that VJ night was an exception.” The celebration continued through Wednesday, officially VJ Day, with the stores and the Du Pont plant closed, but died out on Thursday. At the Barksdale Works the government contracts were cancelled, the facilities producing military explosives were shut down, a 40 hour work week was resumed, and the work force was immediately reduced to about 200 men. The plant returned to peacetime operations producing commercial explosives for its main customers, the iron ore mines in Michigan and Minnesota.

### The Post War Years

The 150th anniversary of the founding of the E. I. Du Pont de Nemours Company was observed on July 18 1952 with a community celebration at Memorial Park, attended by an estimated 2,000 people. B. A. Semb, recently arrived manager of the Barksdale Works, delivered a welcoming address, praising the Du Pont Company, declaring that it had “contributed importantly to the soundness of our American economic system, to raising the standard of living, and to preserving the country in time of war. That is the real reason for this celebration, and I think it is a good one.” After the opening ceremonies, presided over by Ernest H. Holman, the main ceremonies

on Brandywine Creek, near Wilmington, Delaware, the location of the company's first powder mill, were broadcast over loudspeakers. Beginning at 3:00PM, there were athletic contests, games, contests, and boat and pony rides, while buses took people on a tour of the Barksdale Works. Music was provided by a Scandinavian-German band. The day's program culminated with a family picnic supper.

Two month later, on October 15th, the worst explosion that had ever occurred at the Barksdale Works took place, breaking a five year accident free record. At 2:15 in the morning, 5,000 pounds of soda amatol exploded, completely destroying the large building in which the explosive was produced and packed, and killing eight men, including six men who worked in the building, and two men on the railroad crew, who happened to be in the building at the time. One man was returning to the building from lunch when the explosion occurred, narrowly escaping the fate of his fellow workers. Six of the men were World War II veterans and one a veteran of World War I. The explosion ignited a raging fire that the firemen had great difficulty bringing under control. Only one plate glass window was broken in Washburn by the explosion, but many businesses in Ashland suffered window damage. People in Washburn and Ashland were at first confused about the reason for the blast, but the dreaded sounding of the plant whistle confirmed the worst. Many people drove to the plant, waiting outside of the front gate for word about relatives employed in the plant. Work on re-building the facilities, destroyed by the explosion, started immediately, and by the middle of April 1953 the plant was back in full production. Plant manager Semb expressed his appreciation to employees for giving "unselfishly and unstintingly" of their time and effort to the reconstruction program and to the people of the local community for their support and cooperation.

On August 14 1954, the 50th anniversary of the Barksdale Works was celebrated with another community picnic at Memorial Park. The day's program was opened at 1:00PM by Ernest H. Holman, master of ceremonies. Plant manager Semb delivered an address, lauding the employees of the plant whose "Many accomplishments are too numerous to mention," and the policies of the "sincere, democratic, liberal and far-seeing" owners and executives of the Du Pont Company. Afternoon activities included remarks by "old timers," the usual athletic contests, bus tours of the Barksdale Works, and music by a Scandinavian-German band. The feature event of the afternoon was a fashion show, during which women employed at the plant and the wives of employees modeled 1904 and 1954 bathing suits.

At the end of 1954, Semb reported that business at the Barksdale Works had continued at a high level during the year, producing explosives for commercial use. Employment during the year averaged 291 people. Unfortunately, the record of no major injuries since the explosion in October 1952 was broken when in the late afternoon of June 15 1955, 3,000 pounds of powder in the primer mixing house exploded, killing three men. In his annual review for 1955 Semb reported that the cause of this "unfortunate disaster" had been determined and that the "most modern and safe buildings and equipment" were being installed. He noted that 1955 "was the best in the peacetime history" of the Barksdale Works, with "record production, employment and payrolls." Average employment for the year was 336 people, with \$1,750,000 paid in wages and benefits and \$225,000 spent in the local area for goods and services.

In his annual report for 1956 Semb noted that the Barksdale Works was “enjoying one of the best business years in its history” due to increased winter mining and expanded taconite ore operations. Employment averaged 372 during the year. Wages and salaries were increased, employee benefits were liberalized, and a severance pay plan instituted. From 1957 to 1961 average employment at the Barksdale Works declined from 372 to 200, with small increases during summers due to the employment of teachers and college students. Wages and salaries were increased and employee benefits liberalized, while long service employees were granted three or four week paid vacations. In November 1962 the production of nitroglycerin dynamite, an important product at the Barksdale Works since it was established in 1904, ended because of the closing of many underground mines and the use of safer explosives. Dynamite was replaced in open pit mining on the Mesabi Range by a water gel explosive that was delivered directly to the bore holes of an excavation site by special pump trucks. The production of this explosive in large quantities at the Barksdale Works offset the end of dynamite production.

Business activity at the plant in 1963 and 1964 continued at a high level due to the expanded taconite ore mining and the production of the blasting agents that replaced dynamite. Average employment for both years was about 200 people, with slight increases in the summer. In 1965 the production capacity for TNT was doubled due to increased civilian and military demand for the explosive, creating employment for about 300 people. Also in 1965 a metal cladding operation began on leased property in the Chequamegon National Forest. Controlled explosions were used to bond a copper core between two thin layers of copper-nickel alloy into a “sandwich” of laminated metal used in the production of coins. Semb noted in January 1966 that “We are optimistic about the future—both immediate and long term—and I’m looking forward to good prospects for Du Pont in this area. All of our experience, both historical and recent, indicates that the company will continue to keep its facilities here up to date.”

In December 1966 Semb retired and was replaced by John G. Blackburn as plant manager. In his annual report, in February 1968, Blackburn noted that the plant was producing different types of explosives to meet the needs of the mining, construction, and quarrying industries. Metal cladding operations continued and a government contract for the manufacture of TNT had been awarded. Employment was approximately 350 persons in December 1967. During the summer of 1967, 26 college students and teachers were employed, one of whom was “an American Indian.”

#### The Barksdale Works Closes

On August 6 1970 Thomas E. Rafferty, who had replaced Blackburn as plant manager, announced that the operation of all TNT and acid production facilities would end in March 1971 because of decreasing customer demands and increasing competition from other types of lower cost explosives. These alternate explosives could not be manufactured at the Barksdale Works plant because it was located too far from major markets to be competitive and had become obsolete, belying former manager Semb’s assurance that “the company will continue to keep its facilities here up to date.” About 20 men were to be retained for the time being for the production of explosives used in the manufacture of synthetic diamonds and in the metal cladding operations. In April 1975 it was announced that all explosive manufacturing would cease during the summer and that the seven remaining employees would be terminated. All buildings were to be burned or torn down.

The announcement of the shutdown of the major part of operations at the Barksdale Works with a 90 percent reduction in the work force came as a severe shock to the people of the area. The immediate reaction of people in Washburn, where many of the current and retired employees lived, was typified by a comment by the local druggist, who in the midst of building a new store had particular reason to be discouraged: "It is undoubtedly a genuine blow to Washburn, but we must take a positive attitude and conquer it. The effect will not be as severe as we feared." And a Barksdale Works employee quipped, "I guess we'll have to plant more potatoes and get more venison," expressing the self-reliance with which the people of the community had in the past survived the loss of the lumber mills, the railroads, the coal and grain docks, and other industries. The mayors of Washburn and Ashland, and the chairmen of the Ashland and Bayfield County Boards issued statements regretting the Du Pont Company's decision, but as one of them noted, "I am confident that the always faithful and dedicated people of our area will again rise to the occasion and overcome this setback."

At a hastily convened meeting in Ashland, on August 17th, various schemes were proposed from a government takeover of the plant, to converting the property to an Ashland-Washburn-Bayfield "industrial complex." One speaker declared that "we could entice new industries to come that would do for us at least 15 times what Du Pont has been doing. The closing of the plant could be a boom for the area. This could develop into a big industrial complex." Despite the enthusiasm of local leaders in the bay communities, the plan to convert the plant property into a large industrial complex failed as did a proposal by a large realty firm to develop the land for condominiums and recreational vehicle sites.

### A Legacy Of Pollution

The operation over many years of the complex chemical processes involved in the manufacture of explosives left a legacy of surface water, ground water and soil pollution at the Barksdale Works site (note 3). The production of TNT, or trinitrotoluene, resulted in the creation of a waste product known as red water. This toxic liquid was discharged into Boyd Creek, which runs through the plant and empties into the bay. In 1968 the company was given until October 1 1970 by the state to abate this pollution. Local pressure was applied by a demonstration by faculty and students from Northland College, held outside the plant in October 1969, to call attention to the continuing discharge of this red water into the bay. The company considered different methods of abating the pollution, but finally solved the problem by stopping the production of TNT. The potential cost of pollution abatement methods may have been a factor in the decision to close the plant, although it was never cited by company officials as a reason.

A second pollution problem—groundwater (drinking water) pollution—was not so easily solved. In 1981, in response to citizen concerns about pollution, the state Department of Natural Resources conducted a limited investigation of the Barksdale Works site, but took no further action. In June 1997 the DNR sampled three residential drinking water wells and found them contaminated with dinitrotoluene, an intermediate product in the production of TNT. Beginning in 1998 the DNR and the Du Pont Company sampled and monitored residential wells adjacent to the Barksdale Works site. The DNR concluded that the level of contamination found in these wells did not constitute a threat to human health. But due to the continuing concern among the

residents of the Town of Barksdale, it was decided to supply drinking water to houses in the town by a pipe line from Washburn. On January 2004 the Washburn city Council approved agreements with the Du Pont Company to supply water to the Town of Barksdale via a pipeline from Washburn, to be constructed by the company. The project began on July 28 2004 and was completed in mid-November. By mid-December the installation of laterals from the pipeline to residences was almost complete and Washburn began billing the Du Pont Company for water that same month.

In 1968 the Barksdale Works site of 1,698 acres was sold to the C. G. Bretting Manufacturing Corporation and is used primarily for recreational activities. Investigation and cleanup of polluted areas on the site, by the Du Pont Company, continue.

## Notes

### 1. Definitions

amatol—an explosive made from a mixture of TNT and ammonium nitrate, typically used as a military explosive  
dynamite—an explosive consisting of nitroglycerin dispersed in an absorbent material (called dope) such as sawdust—usually packed in sticks about eight inches long, wrapped in waterproof paper—a hazardous explosive  
nitroglycerin—a highly sensitive liquid explosive, used in the manufacture of dynamite and other explosives—very hazardous  
nitramex and nitramon—stable explosives composed of ammonium nitrate and dinitrotoluene or trinitrotoluene  
oil of vitriol—sulfuric acid, used in the production of TNT  
taconite ore—a low content iron ore concentrated by processing into pellets with about 65% iron—produced in the Mesabi Iron Range in Minnesota  
trinitrotoluene or TNT—a stable explosive widely used for military and commercial purposes

2. Holman's articles (revised and abridged) were reprinted in a booklet entitled, "The First 50 Years Of The Barksdale Works," distributed to employees on the fiftieth anniversary of the plant in 1954. Other histories of the Barksdale Works include: "The Story Of The Barksdale Works." in Catheryn R. Johnson, *Washburn Memories*, 1983; "The Du Pont Plant At Barksdale." in A. H. Woiaak, *Small Town U.S.A II: Washburn, Wisconsin*, 1996; and M. C. Knake, "Barksdale Works' Great War Record Outlined." *Washburn Times*, December 6 1945. For a popular history of the Du Pont Company, see: *Du Pont, The Autobiography Of An American Enterprise*. Wilmington, DE: E. I. Du Pont De Nemours & Company, 1952.

#### Barksdale Works Managers

I. L. Pierce	1904-1906
W. F. Harrington	1906 (Acting)
C. A. Patterson	1906-1908
F. T. Beers	1908-1923
R. T. Cann	1923-1928
M. C. Knake	1928-1949
F. N. Hendon	1949-1952
B. A. Semb	1952-1966
J. G. Blackburn	1967-
E. Smedley	to
T. E. Rafferty	
J. Sadonis	-1975



3. For information regarding pollution abatement at the Barksdale Works site, see the following sources:

Current Conditions Report For The Former DuPont Barksdale Works, Barksdale Wisconsin. Corporate Remediation Group, 325 W. Main Street, Suite 1202, Louisville, KY 40202. May 31 2007. An excellent source of information about the history, products, and manufacturing processes at the Barksdale Works.

Du Pont Barksdale Works Site.  
Program History 1998-2004.  
(Du Pont Company web site)

A History Of The Du Pont/Barksdale Site.  
Wisconsin Department of Natural Resources.  
September 2001.

Health Information For Hazardous Waste Sites.  
Former Du Pont Barksdale Works, Bayfield County, Wisconsin.  
State of Wisconsin, Department of Health & Family Services, Division of Public Health.  
November 2002.

Public Health Assessment.  
Former Du Pont Barksdale Works.  
Town of Barksdale, Bayfield County, Wisconsin.  
Wisconsin Department of Health and Family Services, Under Cooperative Agreement with the Agency for Toxic Substances and Disease Registry.  
November 14 2002.