THE APPALACHIA, VIRGINIA ICE PLANT

By: Lawrence J. Fleenor, Jr.

Big Stone Gap, Virginia
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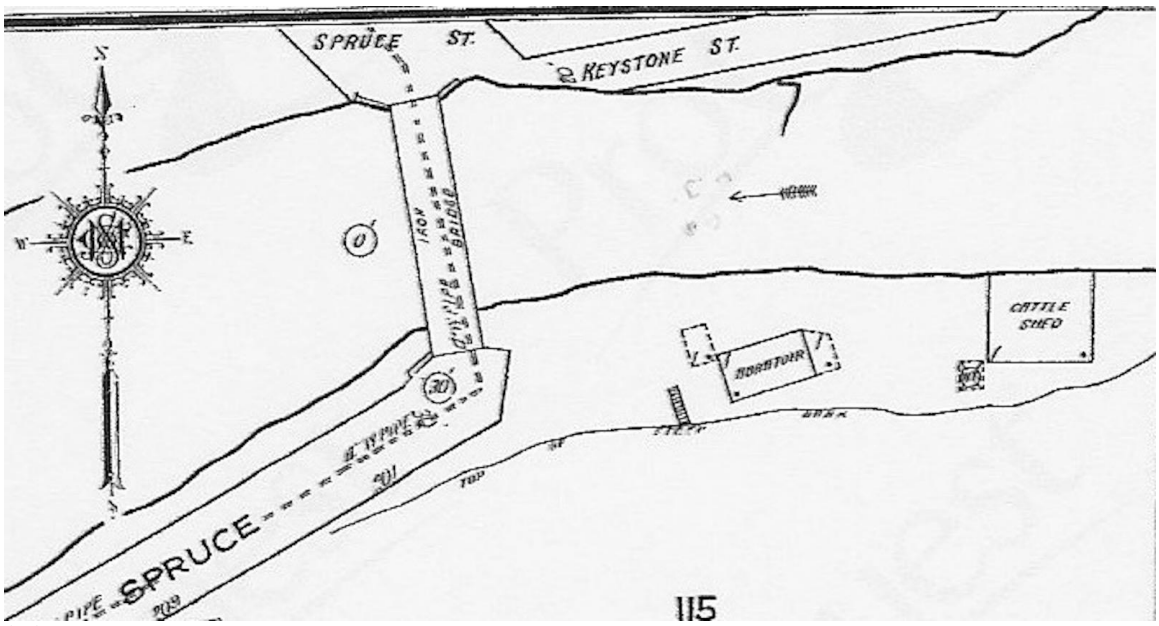
It is hard to imagine a time when ice was so highly prized that the health of the populace, and the food supply was dependent on it; when industry rose or fell on its availability; and its manufacture was fraught with major environmental consequences. A hundred years ago all these were real issues to millions of people.

In the northern states, and in Canada, ice was sawed from the surfaces of frozen lakes, packed in stacks covered with sawdust, and sold in the summer to people trying to cope with the summer heat. Shiploads were sent to the South, where people eagerly bought it up before it melted.

After the Civil War urbanization and industrialization concentrated people in centers far removed from the production of food. The technical means of carrying food from its sites of production to the new centers of population before that food succumbed to the heat and spoiled had to be improved upon. That was especially true in the coal camps of the Appalachian Mountains, which were typically far removed from the major sites agricultural production. Fruits and vegetables could be preserved and transported by canning. Meat could also be canned, but the resulting products was not as palatable. Salt remained the major way of preserving meat. People longed for a fresh pot roast rather than a slab of corned beef.

The new coal towns in Wise County, Virginia were typical. The coal industry started here in the 1890's. The "Looney Creek Mines" of Inman, Linden, and Laurel, and the commercial center to which they were attached – Appalachia – struggled to meet these needs. There were commissaries in Inman and in Linden. Employees were hard to get, and even harder to keep. Even as it is today, keeping the miner's wives happy was often the key. Sometimes the decision of which company coal town to work in was determined by the quality of the commissary. Fresh meat was highly prized. Along Looney Creek this need was met by an ongoing slaughtering operation conducted in "Slaughter Pen Hollow", now Linden Street. Meat could not be kept longer than three days without spoiling. The merchants and railroaders of the Town of Appalachia and the groceries they bought from did not have access to the meats of the Slaughter Pen Hollow operation. To supply the groceries of this town there was a slaughter pen located on the south bank of the Powell River just upstream from the original bridge at Spruce Street and Brown Street. Though that bridge was washed away in 1911, the concrete support is still standing above the present bridge.(1)

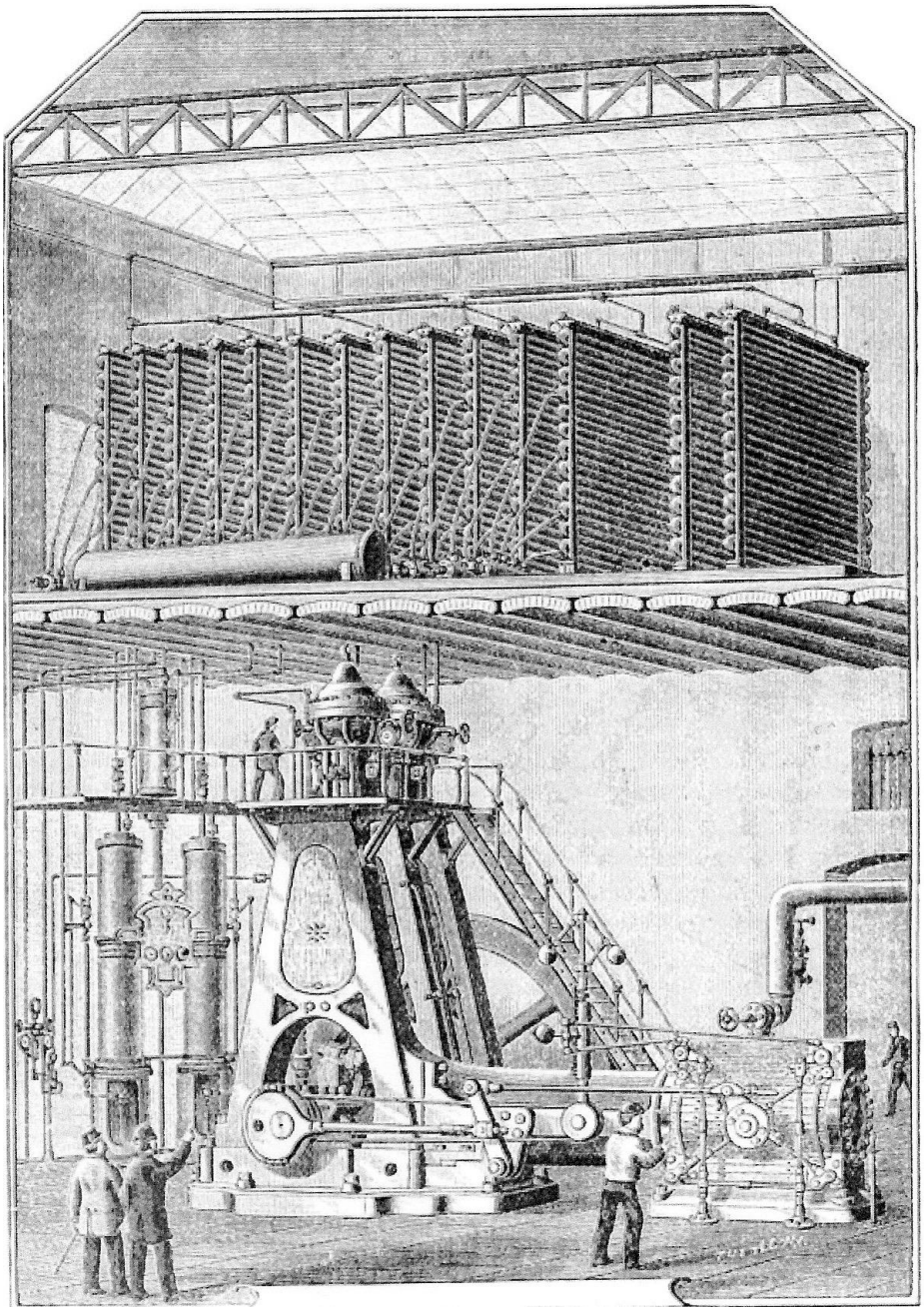


(12)

THE TOWN OF APPALACHIA'S SLAUGHTER PEN, LABELLED POLITELY AS AN 'ABATOIR', WITH ITS ASSOCIATED CATTLE PEN

ORIENTATION TO THE MODERN TOPOGRAPHY MAY TAKE A MOMENT, BUT NOTE THE BRIDGE AND SPRUCE STREET AT ITS SOUTHERN END. THE STREET AT THE NORTHERN END OF THE BRIDGE IS NOW POWELL ST., THE ABATOIR IS BENEATH THE FILL FOR CURRENT BROWN ST.

As a happy coincidence just as the coal industry was gearing up, a practical method of making artificial ice was developing. An article in the May 1891 "Scientific American" started off with, "The manufacture of ice now bids fair to become a regular industry in temperate as well as in tropical climates. …. It is only within the last ten years that the groping attempts of the early inventors have developed into processes sufficiently economical to make the artificial production of ice a commercial success."(2) The process was very similar to the modern one, except that the refrigerant was ammonia rather than a halogenated hydrocarbon like 'Freon'. There were three such compressors in early Appalachia, one at the Ice Plant on Callahan Ave., and two at the Southern Maid plant on Powell Street. One of these compressors cooled the milk storage room, and the second chilled the freezer room where the ice cream was kept.



AMMONIA COMPRESSOR FOR MAKING ICE (2)

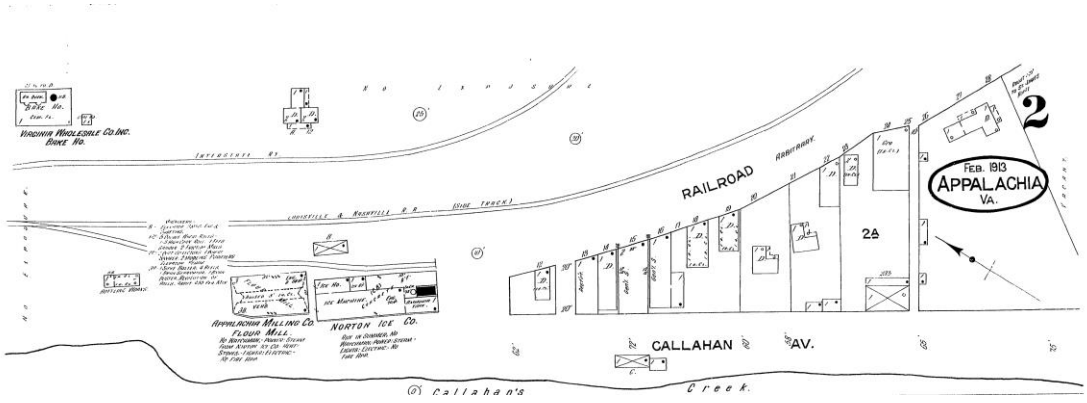
In the years about the turn of the 20th Century ice plants began to spring up in the coal towns of Pennsylvania. The coal towns in the Southern Appalachians, especially so in Wise Co., Virginia, were owned by these same Pennsylvanians. Before 1890 the Town of Big Stone Gap had been unimaginably hard to access from the rest of the world (Bristol). Places in the making, like Stonega and Roda, were so much further into nowhere that even hardened mountaineer women had problems living there. A house with running water, and a commissary with fresh, ice chilled meat went a long way to securing a labor supply to such places.

The ice was frozen into 100 lb. blocks, which were placed on trucks under a blanket of sawdust, and a canvas tarp, and trucked to the commissaries. There it was cut into large flakes, and placed in a display case. The meat was piled on top. While the miners usually did not have them, the women of town often had 'ice boxes', or 'ice chests'. They were made of wood, and lined inside with galvanized tin. Sawdust, seaweed, or cork was used in the walls as insulation. There was a top compartment where ice was kept in 25 lb. chunks. The iceman would park by the house (in a back alley if there were one), take ice tongs and pull a 100 lb. block of ice out from under the cover. He would cut that block with an ice pick into 25 lb. quarters. He had a massive rubber half cape that he wore. He would grab the block of ice with tongs, and swing it onto his back over the cape, and then carry it into the home and place it in the icebox. Gangs of little boys would follow the ice truck around, hoping to get a sliver of ice that they could suck on for an hour or so on a hot summer's afternoon. The iceman had a regular route, which he kept twice a week. It was a quarter of a century before electric refrigerators began to replace the icebox. The icebox lasted longer in the large institutions, such as grocery store, hospitals, and commissaries, until the mid Twentieth Century.

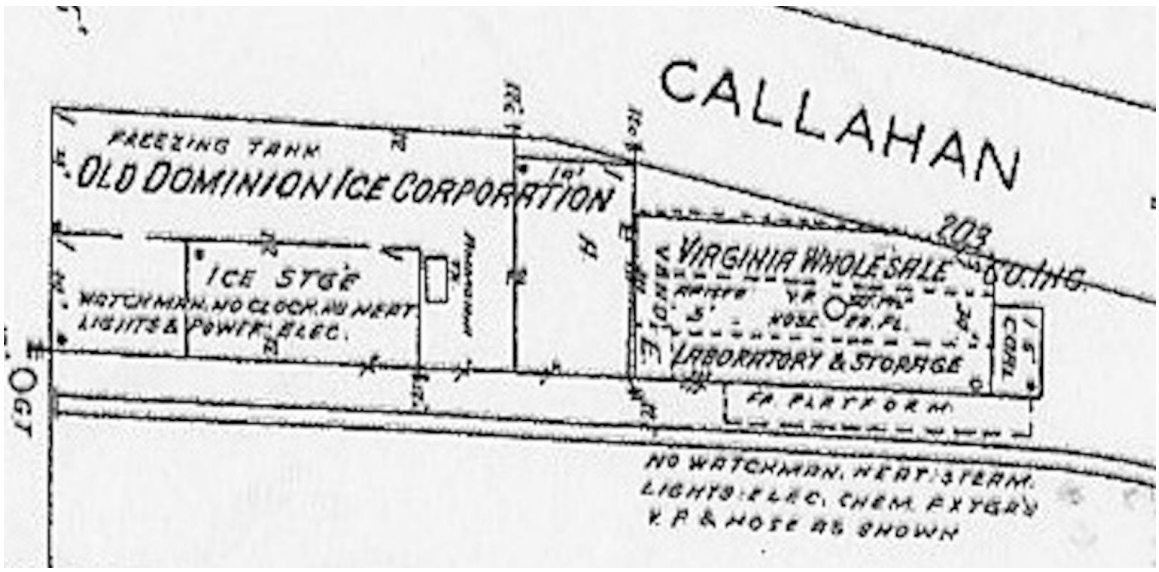
The early Twentieth Century saw three ice plants built in the general area of Wise County – in Jenkins, Kentucky; and in Norton, Virginia; and in Appalachia, Virginia. The one in Jenkins functioned in a different area from the other two, and is not part of our story.

The existing records of the beginnings of the ice plants in Norton and in Appalachia are confusing. The 1908 Annual Corporate Report of Virginia(9) lists the 'Norton – Appalachia Consolidated Ice Plant'. In October 28, 1916 a trade journal observed "The Norton Ice and Cold Storage Corporation has been incorporated with a capital stock of $100,000 with C. F. Blanton of East Stone Gap as president and E. J. Prescott of Big Stone Gap, Va. as secretary."(3) C. F. (Creed Fulton) Blanton was president of the First National Bank of Appalachia Virginia(4,5), which was a wholly owned subsidiary of the Virginia Coal and Iron Company, and its affiliated operational company, the Stonega Coke and Coal Company, and privately by some of the owners of these corporations. E. J. Prescott was VCI's Vice President of Operations.(5) To document that this ice plant in Appalachia is the same one that was named 'Norton', another reference in the same trade journal in 1922 observed that "The Norton Ice and Cold Storage Corporation of Appalachia, Va. is going to erect an ice plant."(6) C. F. Blanton was "one of Wise Co.'s prominent citizens and large property owner. He was the grandson of one of the region's most prominent pioneer families, that of Jessee Gilley.(7) He lived on the same hill as other officials of the VCI affiliated companies. The 1913 Sanburn map of Appalachia is the earliest existing documentation of physical presence of the Appalachia Ice Plant, which is labeled the "Norton Ice Company". Note that the facility is divided into two structures, the Ice Co. and the "Appalachian Milling Co. Flour Mill". The 1929 Sanborn Insurance map of Appalachia plots the accurate location and attributes of the "Ice Plant", but labels it the "Old Dominion Ice Corporation". Another version of

the Sanburn Map series has labeled the building the “Norton – Appalachia Ice and Beverage Plant”.(10)



1913



1929

Note that by 1929 the building to the north has been relabeled the ‘Virginia Wholesale Laboratory and Storage’. Both these usages probably relate to the Virginia Wholesale Bakery that was located across the street to the northeast, in what was commonly called ‘Gibbs’ Town’. The Virginia Wholesale was a wholly owned subsidiary of VCI.(5) At some point the combined two buildings became known to the people of the town as “the Ice Plant”.

For future reference, it should be noted that the Clear Creek Water Company, another wholly owned subsidiary of VCI, in 1913 constructed a water intake on Ben’s Branch not far above its entrance into Powell River. This arrangement proved to be unsatisfactory, and the process of damning the head of Ben’s Branch near the top of Little Stone Mountain was begun, a process that was not completed until 1918. In the meantime, it was necessary to supplement the supply of water to the Clear Creek Co.’s water system from a deep well in Appalachia on the property of the Norton Ice Company.(5)

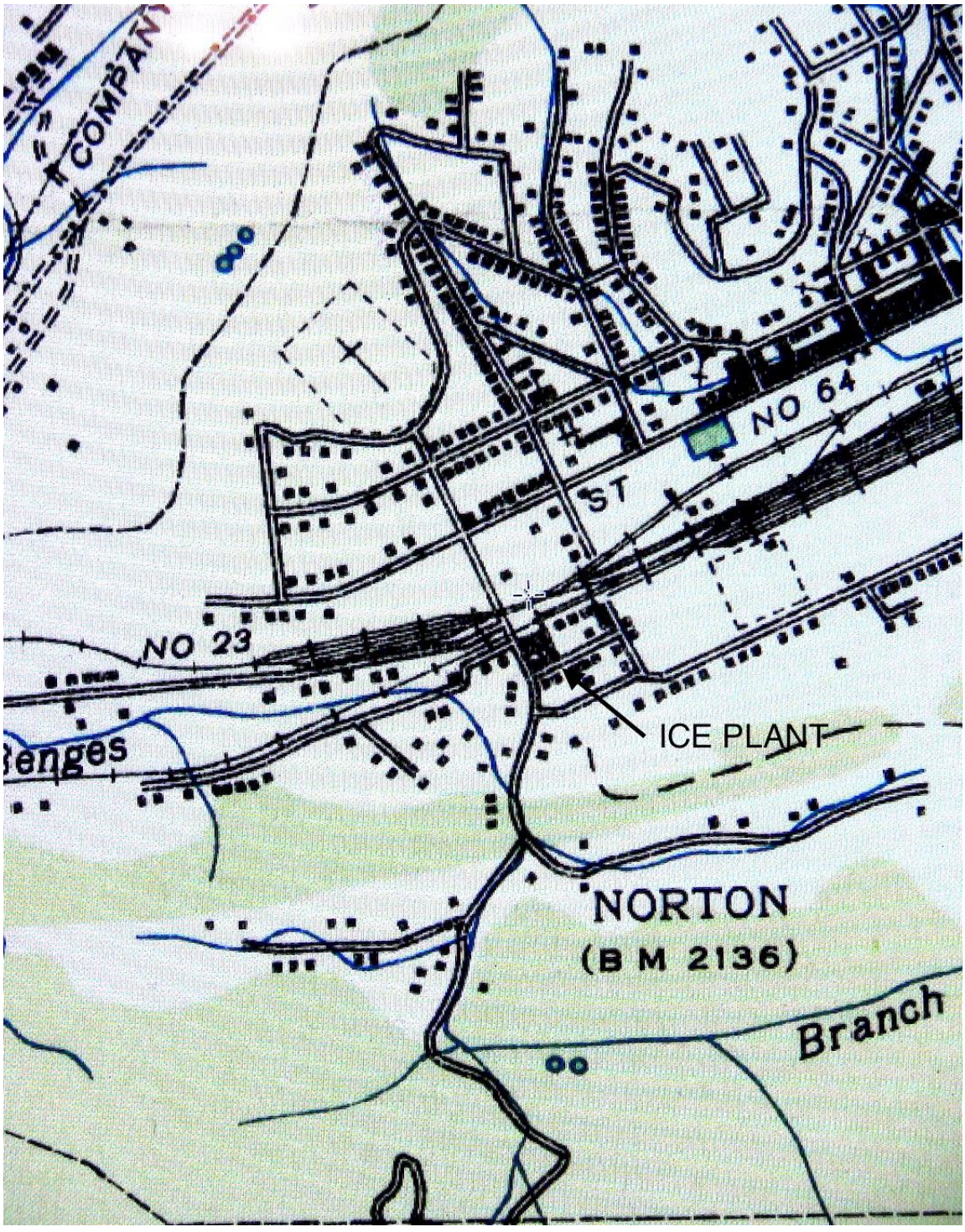
The ice plant that was actually located in Norton has an even more obscure past. Due to the present prominence of its descendant corporation, some considerable effort has been gone into to establish its heritage. The only documentation that seems to be without mystery is that on Feb. 7, 1923 "the T. M. Pepper Company changed its name to the Stone Mountain Bottling Company", and that this company owned all the buildings that had ever been associated with the ice plant in Norton. This corporation was far more interested in bottling soft drinks than in selling ice, and on August 3, 1948 the Stone Mountain Bottling Company officially became the Pepsi-Cola Bottling Company of Norton, Virginia.(8)

Local memory and the 1919 USGS topo map show the Norton Ice Plant to have been on SW 12th St., south of the railroad tracks approximately near the western end of the current parking lot of South West Insurance Bldg., or as it was known, "in the mouth of Ice Plant Hollow.(21, 22)

From all this it is obvious that the ice plant in Appalachia was a member of the family of associated corporations centered around the Virginia Coal and Iron Company. What connection it had with the ice plant actually located in Norton would be conjectural, at best. However, the Keystone Coal and Iron Co. of Big Stone Gap Virginia likely was the common denominator. J. H. Dingee, a financier of Philidelphia, was Secretary of Keystone. George Burnham, Jr., another financier of Philidelphia, was its president. Dingee was also president of the Norton Land and Improvement Co., and owned the Dingee Coal Company of Banner, Virginia. The Norton Land and Improvement Corp. was heavily involved with the Interstate Railroad Co. of VCI in its development of its right-of-way through Norton, and in other nascent businesses in Norton, such as coke ovens. The author has no documentation that the Norton Land and Improvement Corp. had any interests in the Norton Ice Company, nor that Keystone did. However, Keystone played the same role in the founding of Appalachia as the Norton Land and Improvement Corp. played in Norton, and they were both owned by the same covey of Philidelphia capitalists.(13, 14, 15, 16, 17, 18)

There are no known records of the extent of the business of the Appalachia Ice Plant, but the author believes he knows most of the major customers. The Stonega Coke and Coal Company, the operations arm of Virginia Coal and Iron, owned nine commissaries which bought ice from the Appalachia Plant (they were one at Stonega, one at Osaka, two at Roda, one at Arno, one at Derby, one at Dunbar, one at Imboden, and one at Exeter. In addition they iced the commissaries of other companies at Pardee, Inman, Linden, Benham, Kentucky; and at Lynch Kentucky. VCI also kept large boarding houses at Stonega and Roda. The company hospital at Stonega, the private Appalachia General Hospital, and the hospitals at Lynch and Benham all were dependent on their ice from Appalachia.

The private supermarkets in Appalachia did not switch to electric refrigerators until about 1950. The author has a vivid memory of Lester's Supermarket buying a truckload of sea bass, and of having them laid out neatly on a



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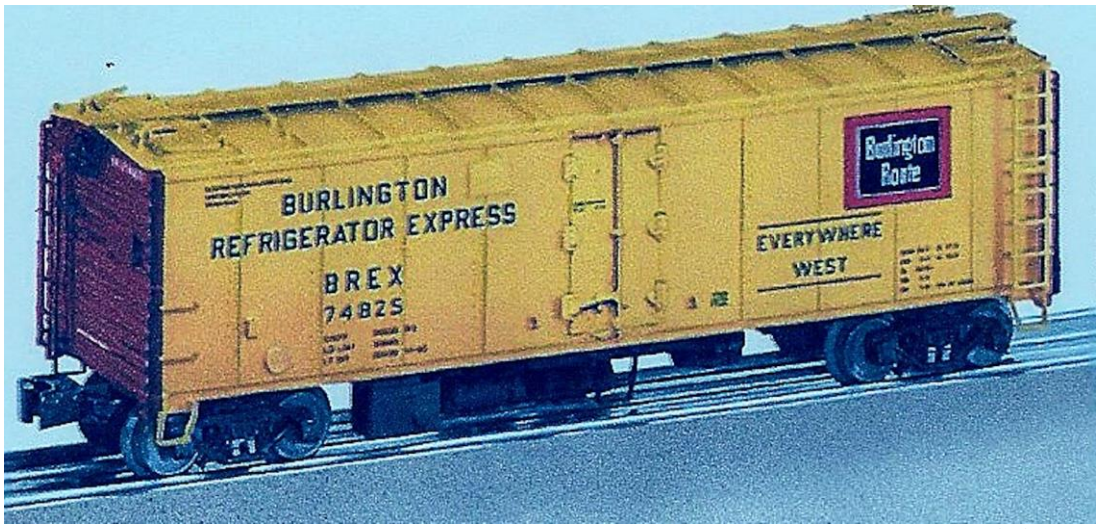
THE T. M. PEPPER BOTTLING PLANT IN 1919
THE FUTURE 'ICE PLANT'

bed of flaked ice in a display icebox. Lester's owned an ice shaving machine that reduced 100 lb. blocks to large slivers.

The railroad siding noted in the Sanborn maps that lay to the east of the Ice Plant, and which connected it to the L&N Railroad, might have provided another market for its ice. Even up until about 1950 'refrigerator cars' were common on the railroads. Despite the name, they had no refrigeration machinery. They were in reality just rolling iceboxes. They looked just like normal boxcars on the outside, except that each of the four corners of the roofs had square hatch doors that could be seen from ground level. Underneath these hatches were vertical channels for twenty-five pound ice blocks that could be stacked up on top of each other from the roof of the car. The interior was insulated like a home icebox. These cars were used in a desperate attempt to bring produce from the South to a food starved North. By today's standards, the produce would not have sold. In those days, it found a ready market. The stacks of ice blocks were replenished in transit. The author has no knowledge that replenishment of the ice occurred in Appalachia, but he does remember that lines of these refrigerator cars were often seen parked on the L&N siding nearest the river, and behind Main Street. He also remembers the Morley Brothers Produce Wholesale that was in the northern end of the Red Rock Bottling Co. building on East River Street. He knows that produce was delivered to this business via the railroad refrigerator cars. He remembers multiple stalks of over ripe bananas hanging from the business's ceiling, and of wondering how they could possibly be sold. That sidetrack behind the Ice Plant certainly provided the opportunity for that business to have at one time been involved in replenishing the railroad refrigerator cars. By the early 1950's these icebox cars had been replaced by gasoline driven refrigeration units mounted on the tops of insulated boxcars. Even these are distant memories, as all the refrigeration / produce business has been captured by the 'reefer truck', a product made possible by the Interstate Highway system.



(11)

ICE BOX RAILROAD CAR

NOTE THE TRAP DOORS IN THE CORNERS OF THE ROOF

There were a few houses that kept iceboxes until the ice plant quit operations about 1955. Picnic coolers were coming into use. Initially they were all Coca-Cola brand, all painted up in their corporate bright red colors. They were sheet steel, with cork insulation. One can still find them in antique shops. Icing these for a Saturday picnic became a problem. The last place in the Appalachia – Big Stone Gap area to sell small 12 lb. chunks of ice for coolers was a private residence that sat on the corner of Gilley Ave. and E. 5th Street. The man's back yard had a small shaded hill in it, into which he had built a small icehouse. He bought a single 100 lb. block of ice at a time from the Ice Plant and would sell you an eighth for a cooler for your picnic to High Knob Lake. When this source dried up, Joe Wolfe's Produce Stand, which was the major supplier of picnic supplies, had to buy an ice machine, which made small cubes, in order to protect his picnic business. Soon thereafter, the Appalachia Hotel bought an ice machine for its restaurant business (The Grill) and for its banquet hall (The Ball Room). If they had all they needed for their own purposes, they would sell ice to the public at ten cents a scoop. After that, the modern era with service stations having bagged ice for sale came into being.

One prominent feature of the operation of the ice plant was that the ammonia it used "would wear out" every couple of years, and had to be replaced. In the middle of the night the plant would dump all its old ammonia into the sewer, which straight piped into Callahan Creek fifty feet away. The town would wake up to find a massive fish kill that started at the Ice Plant sewer pipe. Thousands of fish would float belly up all the way to the southern end of town where the Powell River enters the Gap in Stone Mountain. It would take days for the dead fish to wash out of town toward Big Stone Gap.

The ice plant building went through a number of occupants after the plant had shut down. The author recalls a tire recapping plant, Murray's Garage, and Bower's & Marrs' Auto Parts. At the end there was a large truck repair garage in the upstairs portion. The building was built into a natural bank, and thus had ground level entry on two floors; to the railroad on the east side, and to trucks from a loading dock on the south side.

The morning of Christmas 1994 at 8:15 AM the Town of Appalachia was shattered by a massive explosion. The center of the explosion was the building that had once been the ice plant. The apartment building across the street to the south was largely destroyed. The shock wave of the explosion had been trapped between the hills that defined the town, and had bounced back and forth, missing some structures, and damaging others. The windows of Dave's Department Store had been shattered. This structure was almost half a mile away, and around a right angle turn from the axis of Callahan Creek. Fourteen people who had lived in the apartment complex to the south were homeless, and Galloway's trucking repair shop which occupied the upstairs portion of the Ice Plant was turned to a pile of rubbish. It is hard to understand how no one was killed.

Authorities from all over piled into town. The sequence of events that had led to the explosion was pieced together. Bullett Mine's entrance was a couple of miles away, on the other end of town. It was a slope mine which descended about 330 feet beneath the level of the river into the Dorchester seam of coal. The mine had mined out to the north, and was trying to go under Ison Rock Ridge to get to a known large block of coal under Derby. The seam had 'pinched out', or in other words, the layers of rock above and below the coal seam had come very close together. The mining machinery was designed to cut soft coal, and would not cut through the hard rock. Therefore, the engineers directed the mine towards the mouth of Callahan Creek in an attempt to go around the pinch out. They were dismayed to find that there was a previously unknown fissure, or crack, through the crust of the earth that ran from the surface to below the Dorchester seam. Indeed, the fissure was the reason that Callahan Creek was there in the first place. As the miners dug out the coal under the creek, the water from the creek poured down the crack in the earth's crust and into the mine. The company issued rain suits to its miners, and they continued their tunneling up the creek. The water pushed the gas out of the rocks and coal, and it came to the surface as far away as 3/4ths of a mile north of the ice plant and came out from under the steps of the Apostolic Church of God. The gas continued to vent as late as 1-11-95, when it was noted to still be burning at the surface.

Information was obtained somehow concerning that old water well that the Clear Creek Water Company had drilled inside the ice plant building about World War I. Recall that VCI was affiliated with the Ice Plant, the Clear Creek Water Co., and the company that owned Bullett Mine, Westmoreland Coal Co. It seems that there actually had been two wells drilled. The first well had hit methane and had been sealed off. A second one had been drilled, and no methane had been found. It was the second well that had exploded. It should be noted that in this geologic zone the aquifer is usually the coal seams, themselves, which are also home to the methane.

Robert Anderson was fire chief of the Town of Appalachia. Not only had he lead the initial response to the explosion and fire, but to his surprise it turned out that the law made the fire chief head of all the different government agencies that had responded to the disaster. He was also an employee of Westmoreland Coal Company. The company told him to continue his work managing the disaster, and they would also keep him on the payroll.

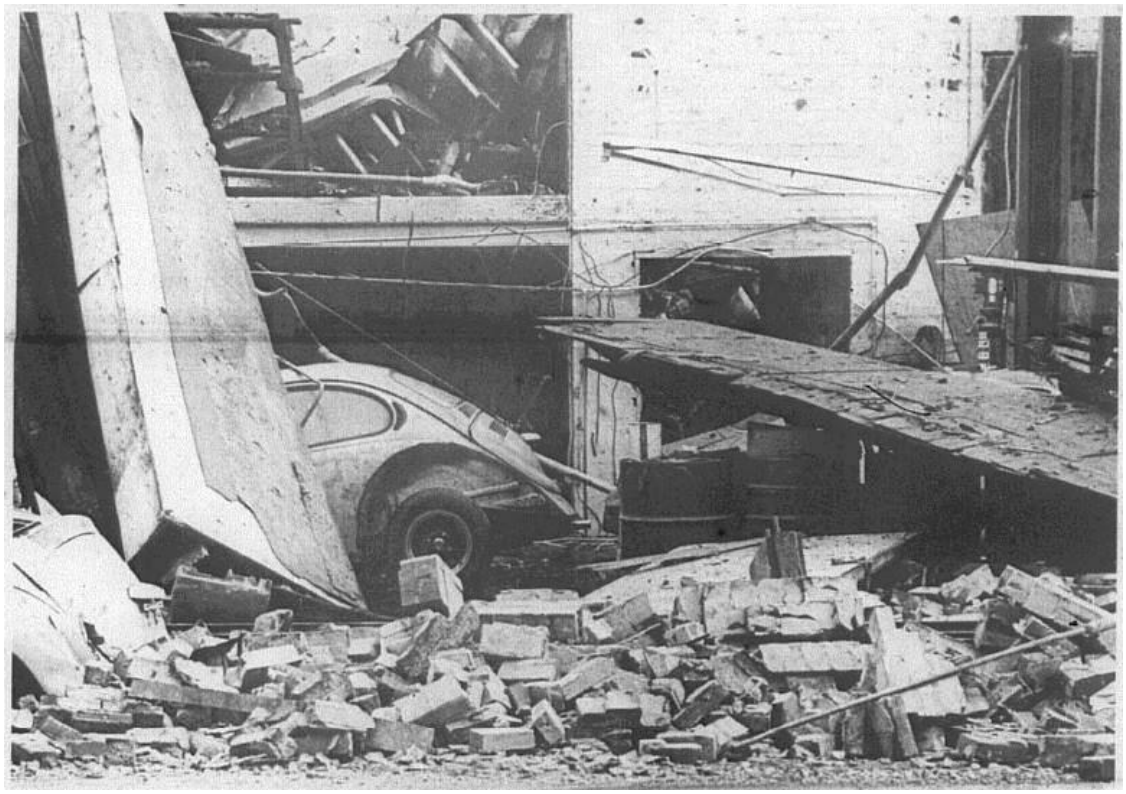
The efforts to control the gas leakage proved difficult. The main effort was to seal off the mine under Callahan Creek with concrete blocks, but the flow of water within the mine and originating in Callahan Creek some 330 feet above made this very difficult. Callahan Ave. was closed for two weeks. On Jan. 11th four of the seven displaced families were allowed to return. In the end however, the entire block to the south of the Ice Plant was leveled, and converted into a Miner's Memorial Park. The building adjoining the Ice Plant to its north, the Virginia Wholesale 'Laboratory', though still standing, had to be demolished. The rubble of the Ice Plant was scoped

up and a new Quonset style building constructed, and is still occupied. The street between the Ice Plant and the former apartment buildings has been closed to through traffic. Few people remember the ice plant, and even fewer are aware of the economic and social role it played in the community a hundred years ago.(19,20)

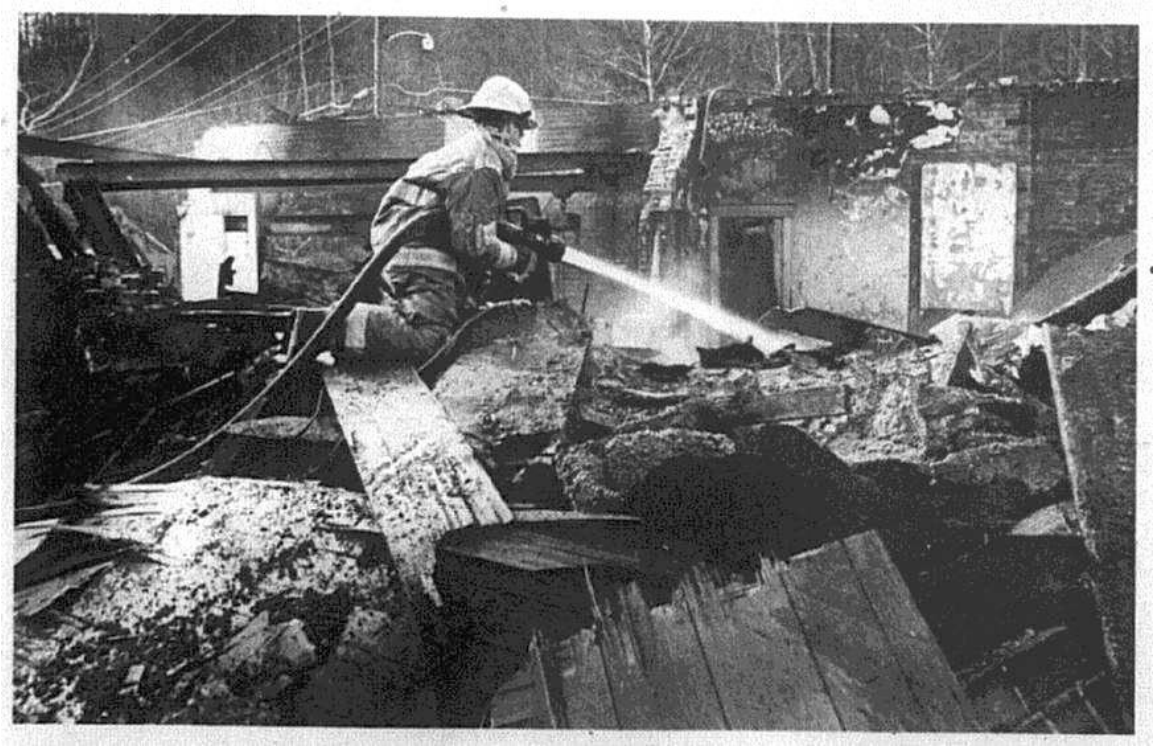
THE WRECKAGE OF THE ICE PLANT – THE BUILDING TO THE LEFT (NORTH) OF THE MAIN ICE PLANT BUILDING IS THE VIRGINIA WHOLESALE LABORATORY BUILDING

METHANE FIRE AROUND THE WATER WELL WITHIN THE ICE PLANT BUILDING

REMAINS OF A VW ‘BEETLE’ PARKED IN FRONT OF THE APARTMENT BUILDING



THE APARTMENT BUILDING



CONTINUED EFFORTS TO QUENCH THE METHANE FIRE WITHIN THE REMAINS OF THE ICE PLANT BUIDING

(ALL THE ABOVE PHOTOS ARE FROM 'THE POST"

THE SITE TODAY – THE QUANSET HUT AND THE METAL BUILDING BEHIND IT ARE ON THE LOCATION OF THE ICE PLANT – THE WOODED AREA TO THE RIGHT IS THE SITE OF THE BUSINESSES AND APARTMENTS THAT WERE DESTROYED

THE MINOR'S MEMORIAL PARK TO THE LEFT IS THE SITE OF THE DESTROYED BUSINESSES AND APARTMENTS – THE QUANSET HUT IS THE SITE OF THE ICE PLANT – ORIGINALLY BOGGS AVE. RAN BETWEEN THE TWO AS IT EXITED ONTO CALLAHAN AVE. – AT THE TIME OF ITS OPERATION THERE WAS A RAILROAD SIDE TRACT LAYING BETWEEN THE CURRENT TRACT AND THE ICE PLANT THAT SERVED BOTH IT AND THE VIRGINIA WHOLESALE RESEARCH BUILDING

THE ENTIRE SITE OF THE EXPLOSION TODAY, WITH THE SITE OF THE VIRGINIA WHOLESALE LABORATORY HIDDEN TO THE REAR OF THE QUANSET HUT, WHICH IS LOCATED WHERE THE ICE PLANT STOOD

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3 – "The National Provisioner – Ice and Refrigeration" vol. 64 pg. 32 Oct. 28, 1916 https://books.google.com/books?id=LrsDBoUeAUgC&pg=RA15-PA32&lpg=RA15-PA32&dq=Norton+Ice+and+Cold+Storage+Corporation&source=bl&ots=ucEuwce4Yd&sig=ACfU3U05P5u9ozlKtpwVom0y50cxDs_1wA&hl=en&sa=X&ved=2ahUKEwjv_vWOwvPgAhUOhOAKHekJBUoQ6AEwAnoECAcQAQ#v=onepage&q=Norton%20Ice%20and%20Cold%20Storage%20Corporation&f=false

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5 – Prescott, E. J. – The Story of the Virginia Coal and Iron Company pg. 130

6 – "The National Provisioner – Ice and Refrigeration" May 6, 1922 pg. 36 https://books.google.com/books?id=4f8fAQAAMAAJ&pg=RA16-PA36&lpg=RA16-PA36&dq=ice+plant+appalachia+virginia&source=bl&ots=4MLChAOi1h&sig=ACfU3U2Ylm15Ms1Jm1Ca-34c--Vx0W7hdA&hl=en&sa=X&ved=2ahUKEwienJLHvfPgAhXvdd8KHbuJBIMQ6AEwC3oECAEQAQ#v=onepage&q=ice%20plant%20appalachia%20virginia&f=false

7 – Johnson, Charles A. – Wise County Virginia pg. 238

8 - http://www.tazewell-orange.com/pepsinort.html

9 - https://books.google.com/books?id=d8RAAQAAMAAJ&pg=PA1041&lpg=PA1041&dq=Old+Dominion+Ice+Corporation+Appalachia&source=bl&ots=Q7SI4Ho2ZW&sig=ACfU3U0S55f2q6kCgg_vlYRR4lS5BRWkOA&hl=en&sa=X&ved=2ahUKEwik4sG_4PzgAhURDq0KHTh9BrkQ6AEwBXoECAcQAQ#v=onepage&q=Old%20Dominion%20Ice%20Corporation%20Appalachia&f=false

10 – The Sanborn Company maintained plats of the town and all its buildings, along with other material of interest to insurance companies, such as the type of material

used in their construction, and whether or not there was a night watchman. These maps are part of the collections at the Library of Virginia in Richmond.

11 – a photo of a Lionel model railroad ice car; from Google Images

12 – Sanborn Map Co. map of Appalachia, Virginia March 1922

13 – Keystone Coal and Iron Co. plat #2 of the Town of Appalachia – Wise Co. Clerk's Office

14 – Annual Report of 1912 of the Virginia State Corporation Commission pg. 69

15 – George Burnham, Jr. of Philadelphia – Find A Grave
https://www.findagrave.com/memorial/147173690/george-burnham

16 – J. H. Dingee in 1889 listed as Treasurer of the Associate Committee of Women of the Pennsylvania Museum of Industrial Art
https://books.google.com/books?id=fpuiAAAAMAAJ&pg=PA25&lpg=PA25&dq=J.+H.+Dingee+Associate+Committee+of+Women+of+the+Pennsylvania+Museum+of+Industrial+Art&source=bl&ots=ULruioJM6L&sig=ACfU3U3j3_zKrJagTAFCWRzRQhTFozvwQA&hl=en&sa=X&ved=2ahUKEwi8-9Hu9YnhAhXrkOAKHdPFB0IQ6AEwAHoECAkQAQ#v=onepage&q=J.%20H.%20Dingee%20Associate%20Committee%20of%20Women%20of%20the%20Pennsylvania%20Museum%20of%20Industrial%20Art&f=false

17 – J. H. Dingee involved in a corporation with home offices in Pulaski, Norfllk, and Norton, Virginia – from the Commonwealth of Virginia's State Corporation Report of 1905
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18 – J. H. Dingee biography on Google
http://files.usgwarchives.net/pa/philadelphia/bios/history/dingee-jh.txt

19 – "The Post" 12-28-94 and 1-4-95

20 – Robert Anderson – multiple discussions with the author

21 – Dr. William Kanto MD, to the author

22 – 1919 USGS Norton topographic map