Amtrak's Texas Eagle #21 making its southbound stop at Union Station in Little Rock on August 3, 1993 at 9:45 a.m. The train was two and a half hours late because of its detour through Memphis and eastern Arkansas due to the 1993 midwest flooding. The large crowd waiting to board was bused to Little Rock from St. Louis. (Ken Ziegenhein photo)

In 1950, there were 43,272 locomotives in the United States, of which 30,344 were operated by steam, 856 by electricity, 36 by gasoline, and 12,025 were diesel-electric. Eleven units were of other types.

- AAR Quiz on Railroads, 1950, via Wayne Porter
Experimental U.P. steam-turbine engines west of Omaha, Nebraska in the spring of 1939.
(Gene Hull Collection)

THE BIG BLOWS

by: Gene Hull

The time was the spring of 1939. The place was a few miles west of Omaha, Nebraska, in the Union Pacific.

A pair of long-snouted, peculiar looking locomotives had a long string of heavy steel passenger cars stretched out behind. The locomotives bore builder's plates of the General Electric Company, and were numbered 1 and 2. They were the experimental steam turbine-electric locomotives developed by GE for the Union Pacific as a counter challenge...the diesel electric locomotive being developed by General Motors.

Steam turbine locomotives were not something new. Italian designer Signor Bellizzo built the very first such locomotive in 1907. Other nations experimented with this type of motive power. In 1910 the North British Locomotive Company added electric generators to the turbines, and used the current as the power agent. The two U.P. units were the first time the steam turbine-electric idea was tried in the United States.

Steam was generated in an oil-fired boiler at 1,500 pounds per square inch pressure. This steam was directed against finned rotors of two turbines, which were connected to two electric generators. Current from the generators was carried to six traction motors mounted on truck axles under the locomotive. The engines were designed to operate as a single unit with 2,500 horsepower, but they
could be run in tandem at 5,000 h.p.

They were delivered at Council Bluffs, Iowa on 3 April 1939. There was a lot of public display for advertising ballyhoo. The time came for the engines to prove what they could do in action. They were coupled in tandem and given a train of 12 standard passenger cars. They would operate from Chicago to San Francisco, using the Chicago & Northwestern track between Chicago and Council Bluffs.

Plans were made for publicity photos to be made on the main line cutoff near Lane. This line between South Omaha and Lane is a cutoff 14 miles long to eliminate a 20-mile loop to the south serving Papillion and two or three other towns. Because of some misunderstanding, the train didn't even slow down. The photographers jumped into their cars and chased the train several miles before they could get ahead and put out a flag.

Each locomotive weighed 530,000 pounds, and developed 75,000 pounds of tractive force. They were geared for a maximum speed of 125 m.p.h. Much of the exhaust was condensed into water and re-used, enabling the engines to run from 500 to 700 miles between water stops.

Mechanical troubles were a plaque for the experimental engines from the beginning. A combination of the high-pressure boiler, steam condensers and complicated control gadgets made them a white elephant deal. They were given trial runs over the Great Northern, Northern Pacific, and New York Central. The end came during World War II, and then came the mad rush to diesel-electric engines.

*C&O experimental steam-turbine-electric 4-8-0-4-8-4 No. 500; first of three by BLW in 1947. (Gene Hull collection)*

*ARKANSAS RAILROADER*
This didn't deter the Chesapeake & Ohio from pursuing the steam turbine idea. It did not seem right to use fuel oil engines when the C&O was surrounded with coal. What was needed was a coal-fired engine with full power at all speeds. The company also wanted an all-coach streamliner to run between Cincinnati and Washington. It would be THE CHESSIE.

Westinghouse Electric and Baldwin Locomotive Works designed two coal-fired steam turbine locomotives, which C&O gave numbers 500 and 502. They were 140 feet long and weighed 594 tons, the world's largest passenger locomotives. They had a 4-8-0 + 4-8-4 wheel arrangement. There were three axles on each main truck, and both trailing trucks powered the engine. Power was supplied by one 6,000 h.p. impulse turbine at 6,000 r.p.m., with a 6 to 1 gear ratio. Electric current was supplied by a double-armature DC generator. The exhaust from the turbine was the source of draft for the boiler.

Both engines were painted a brilliant red-orange, light gray, aluminum and blue. Number 500 went around the country on a publicity tour in 1947 and to the Chicago Railroad Fair the next year. The actual performance was not satisfactory and the engine was in the shop most of the time. The idea of the turbine and the train CHESSIE both were dropped. The engines were scrapped in 1950. The equipment for the train was sold to other railroads.

American Locomotive Company and General Electric built a turbine-electric engine, with the turbines propelled by high-temperature gases, the first such engine in America. This was in 1948. It was numbered 101 and made demonstration runs on the Pennsylvania and Nickel Plate. The Union Pacific bought it and painted it yellow at the Omaha shops. The engine had controls at both ends, was 83 feet long, and delivered 4,500 h.p. at 6,000 r.p.m. It was given number 50.

The engine went to California with 4,780 tons of freight and two private cars. It performed very well on the grades of Sherman Hill and the Washatch Range of the Rockies. In 1952 ten more units began service between Ogden, Utah and Omaha. Soon the employees were calling them "big blows." The U.P. had quite a few overhead coal chutes, which were favorite roosting places for pigeons. The tremendous heat from the turbine exhaust instantly cooked flocks of the birds, until they learned to recognize the peculiar, steady whooshing sound of the engines. The pigeons then would fly out of a chute in swarms when a turbine engine still was several car lengths away to escape the "bird cooker."

Surprisingly, the gas turbines worked very well in warm climates, and even better in cold weather. Their maintenance cost was less than for regular steam locomotives. In 1954 an additional 15 units were ordered. The regular fuel tanks held 7,200 gallons, and larger tenders were added to hold another 24,000 gallons. The extra weight increased tractive adhesion. Controls were modified so the engines could be double headed with one crew. Another 15 engines were ordered in 1958 to replace the famous "Big Boys."
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NEXT MEETING/PROGRAM

The next meeting of the Arkansas Railroad Club will be held on SUNDAY, FEBRUARY 12 at the usual place, the Twin City Bank on Main Street in North Little Rock, 3rd floor. This month's program will be given by GENE HULL. It'll be a showing of 109 slides - a little of this and that that Gene has taken over the past 40 years. Gene says the show should last an hour or so.

The March meeting will be given by yours truly, Ken Ziegenbein, and will consist of more homemade super-8 movies, some sound, of railroad stuff taken in the 1970s and 80s.
EARLY NEWSLETTER - Due to my being in Florida in early January, this issue of the Railroader went to the presses January 5 to be mailed about January 23. I'll put in a separate sheet of club news updates at the last minute, if need be. From now on, the deadlines for ALL newsletters will be the meeting dates (generally the second Sundays of the month). It will go to the printer the day after the meetings.

NEW TREASURER - As of January 1, WALTER WALKER is our club's new treasurer, replacing 25-year veteran Dick Byrd. Walter and Tom Shook will be able to sign the regular account, while Ken Ziegenbein and Walter can sign the newsletter account. (I've been filling in for Dick the past year or so while he was traveling and moving to Colorado and have been writing checks for things in the club other than newsletter-related, like Show & Sale, etc. However. FROM NOW ON, ALL NON-NEWSLETTER TRANSACTIONS WILL BE HANDLED BY WALTER OR TOM. Call either of them, don't call me. (WHEW!!!) The newsletter account is now only dedicated to the newsletter...period.

WELCOME NEW MEMBERS - The following have joined the Arkansas Railroad Club during the past couple of months:

JOHN HALEY, 606 Audubon St, Hot Springs AR 71913-6059. John is a WWII veteran of the 752-RR Operating Battalion. He began work with the MoPac in 1926 in its Maintenance-of-Way department, was laid off during the Depression (1933-36), became switchman with MoPac in 1936, moved to the Cotton Belt in Pine Bluff as a switchman in 1941, retired from the Cotton Belt in 1974 after serving 25 years as Assistant Superintendent, Trainmaster at several different divisions along the Cotton Belt from East St. Louis to Commerce, Texas. Mr. Haley was 65 when he retired in 1974.

FINAL TRIBUTE - Elsewhere in this newsletter, you will find a two-page report by member Barton Jennings regarding the final run of NS steam on December 3, 1994. It is printed exactly as received and is well worth your time.

WANTED/FOR SALE-TRADE

The following is for those who want to find certain railroad-related items, information, or want to sell or trade such items with other railfans. Only personal inquiries, NO COMMERCIAL BUSINESS, please. We reserve the right to refuse listings if deemed inappropriate. The Arkansas Railroad Club is not responsible for misleading ads.

WANTED - Tall globe Cotton Belt lanterns. DARREL CASON, 501-541-3747 days, 501-536-1229 after 5 p.m.

FOR SALE - Two Missouri Pacific Railroad lanterns - no charcoal pan, they have been electrified. If anyone is interested, make an offer. KENNETH WHEATLY, 135 Central Ave, Hot Springs Nat Park AR 71901.

WANTED - Pictures, plans and track layouts for Little Rock's Union Station circa 1940s. I am going to try to reproduce this station on my O-Gauge layout. CHARLES V. STEVENS, 2207 STOUT, SPRINGDALE AR 72762.

WANTED - Rock Island data, slides, photos, etc for computer database being put together
by the Rock Island Technical Society in Kansas City. They want mainly pre-1965 data. If you have any information and want to be listed in this database, contact them at 8746 North Troost, Kansas City MO 64155, in care of David J. Engle.

**ARKANSAS RAIL NEWS**

**PROPOSED ABANDONMENT** - (DeWitt) - Apparently, Southern Pacific (Cotton Belt) has asked to abandon its branch from Stuttgart to DeWitt and Gillett and the citizens of DeWitt recently held a meeting trying to prevent this abandonment. Cormier Rice Milling Co. said it shipped 194 cars from DeWitt in 1993 and plans to ship over 400 cars in 1995 if the railroad is not taken up. Representatives of state and federal governments also attended the meeting. A statement was read: "More recently, abandonment applications have been filed for line segments on which the railroads have incurred only marginal losses. The level and intensity of the opposition in many of these cases has increased significantly. Some applications have been denied, accordingly." *(DeWitt Era-Enterprise, DeWitt, December 22, 1994)*

**LAND DONATED TO CITY** - (North Little Rock) - Union Pacific on December 15 donated 1 1/2 acres of land to the city of North Little Rock to be used as a park. The land is south of UP's rail yard in the Argenta area. *(Arkansas Democrat-Gazette, December 15)*

**GENERAL RAIL NEWS**

**NEW RAIL TO 4-CORNERS?** - (Durango, Colorado) - A new railroad may be built between the transcontinental line at Gallup and Farmington to the Four Corners region of the southwest, including extending the line all the way to Durango. Southwest Colorado's coal and agricultural products enhances the line being built. The Indian tribes (Ute and Navajo Nations), as well as the four states and federal government held a meeting December 9 and said this new rail line would definitely be feasible. Dick Byrd, who now lives in Durango, says the line would be standard gauge. *(Four Corners Business Journal, December 1994 via Dick Byrd)*

**BIDDING WAR CONTINUES** - The Union Pacific and Burlington Northern are both still hoping to obtain Santa Fe, who in December finally decided to talk to Santa Fe after first refusing to do so. The UP bid was up to $3.16 billion. *(The Dispatcher, Central Oklahoma Chapter NRHS, January 1995)*

**AMTRAK NEWS**

Nothing new to report in this earlier than usual newsletter.

**EXCURSIONS/SHOWS/EVENTS OF OTHER CLUBS**

Nothing to report this month.
This copy of the "Derail" will be a little long, folks, but I feel that it is not a waste of effort. Yesterday, Sarah and myself, along with riders from all around the country, spent a long day riding behind Norfolk & Western class J 611 from Birmingham, Alabama to Chattanooga, Tennessee and back. The day started out cloudy and cool and it ended in a typical southern winter rain. The scenery was great and Santa himself showed up on board the train. However, last night at 11:48, Norfolk Southern's once great steam excursion program came to a sudden and perplexing end.

First, a report on that last trip.

After the last of three freights during the past hour pulled by and cleared our way, 611 left Birmingham at 8:06am local time with 20+ cars full of riders. We took the normal route around Norris Yard making a quick crew change there from our city crew to an over-the-road one. The trip ran smoothly with all of the vestibules and open baggage doors filled with regular riders and those few locals who were completely unaware of the events of that day.

After a quick stop to fix some sticking brakes and to pick up more passengers at Atalia, we charged up the valley between Birmingham and Chattanooga. The uninformed kept returning to the open parts of the train asking when they could get a picture of 611, not really understanding that the line is almost perfectly straight for the vast majority of the 145 mile run. The loyal amongst us just hung out getting our last feel for the sights and sounds of big steam in the southeast.

Arrival at Chattanooga's Choo Choo hotel was an hour late at 2:00pm Chattanooga time. However, awaiting us was a surprise as the Tennessee Valley Railroad Museum (TVRM) had made a decision earlier in the week to run a connecting train using TVRM 610 and an RSD1 with seven of their cars. Thus, instead of wandering the stores of Chattanooga for five hours, 160 of us climbed on board the TVRM train for lunch and a ride to the museum.

After a posed shot of 610 and 611 side by side (not exactly a matched set with the big 4-8-4 and the little military 2-8-0) we were off. A note, 610 is actually a newer steam engine than 611 by two years and is nearly eight years newer than the assisting diesel locomotive. It is also the last steam engine on the line for US service by Baldwin. Anyway, some nice back alley running by 610 took us to TVRM and then a quick trip to the Grand Junction office of TVRM.

After a short stop, we headed to East Chattanooga where 610 joined 4501 and 630 on the turntable tracks for a chance to photograph three veterans of NS steam trips. Although 4501 and 630
weren't under steam, their lights were turned on and the look was classic. Also, the rain and low clouds made the effort fitting. However, to quote new NRHS president Gregory Molloy, we were shooting F2 at a fortnight (if you don't know, look it up yourselves). Return to the Choo Choo was behind twin RSD1's 8669 and 8677, both low on fuel and just hoping to make the trip. Look, it was the last trip of the year for TVRM and they did an amazing job of planning and putting on this trip in less than a week's time.

After arrival back at the hotel, we sat on the wye for forty-five minutes while the wet shoppers boarded the train and then 611 pulled it out to meet us at the food terminal beside CT Tower. This extra move was made because NS officials were nervous about having us walking around the yard area in the dark during a heavy rain. Although some riders were upset about the move, it made good sense and gave a few of us a chance to catch a nap.

Leaving Chattanooga, the tired crowd was much quieter because of a number sleeping and a growing mood of depression. A light rain fell as we left the nighttime darkness of Chattanooga, and unlike much of the day, the combine and vestibules were almost empty. While the trip up was full of laughter and talk of olden days, the southbound trip was obviously more somber, fitting the weather and proper mood of a last run. Slowly, crowds of dedicated railfans gathered in several of the open cars to just listen to the train in total darkness. While local riders and the sponsoring Heart of Dixie Chapter kept trying to get the lights on, we were able to keep the solemn darkness going thanks to car master Sid Bailey who spent his last riding mileage hold up in his private car at the rear of the train. There too, a small cluster of dedicated riders had gathered, making it obvious to the NS headquarters people that they were not really welcomed on board this particular evening.

A few delays caused by freight 334 with a broken hose (a comment: Do freight trains ever get charged with delaying a passenger train or is it only the other way around these days?), dropping off the riders who boarded at Attalia, and again changing crews at Norris Yard, kept the trip from ending on-time. As we slowly pulled into Birmingham, the right-of-way was still lined with people getting their last look at history. Chasers, pacers, and just about everyone else in the region had been out all day and a little something like rain at midnight wasn't about to stop them now.

We pulled past the wye at 27th Street and waited while a four-unit KCS freight hammered by us. Somehow, change is constant. As soon as we got our signal, we backed into the former station site and ended 28 years of Southern steam history at 11:48pm, Central Standard Time. Too tired and depressed to stick around as 611 returned to the shops where she will be prepared for display at Roanoke, Sarah and I left Birmingham. Thus ended 13 seasons of Southern steam excursion riding for Sarah and myself. We had ridden behind the restored 611 that very first Labor Day weekend back in 1982 and had now spent a cold and wet day hanging out behind her in 1994 during her last moments of this present career. May the next generation be so fortunate.
The Arkansas Railroad Club is a non-profit organization that meets on the second Sunday of the month. This month we will meet on Sunday, FEBRUARY 12, at the Twin City Bank Building on Main Street in North Little Rock. We are a chapter of the National Railway Historical Society. Programs are presented.

The **ARKANSAS RAILROADER** is the monthly publication of the Arkansas Railroad Club and is generally mailed in time to be received before the monthly meetings. In order to receive this publication, you must be a member of the Club. Current dues are $15/year for Arkansas residents and also $15/year for out-of-state. The **RAILROADER** is mailed to all members automatically. Family memberships are $20, but only one newsletter sent.

If you would like to join, send your check made out to the "Arkansas Railroad Club" to: ATTN:Treasurer, ARKANSAS RAILROAD CLUB, P.O. Box 9151, North Little Rock AR 72119. You may also join the National Railway Historical Society through our Club by paying $14/year more.

Editor of the **ARKANSAS RAILROADER** is Ken Ziegenbein. Everything having to do with the **ARKANSAS RAILROADER** should be sent to the address below, ATTN:Editor. Please let me know if your address changes. Members of the club receive the **ARKANSAS RAILROADER** automatically. Family memberships are $20, but only one newsletter sent.

Arkansas Railroad Club mail should also be sent to the address below.

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**JOIN THE ARKANSAS RAILROAD CLUB**

Dues are $15/year per individual or $20/year for family membership (only one newsletter will be sent to a family unless each member pays the individual $15 fee). Dues are always due JANUARY 1ST of each year and apply to the calendar year. You may also join the National Historical Railway Society through our club by paying $14/year more (total payment for both club membership and NRHS membership would be $29 per year).

Membership entitles you to receive the **ARKANSAS RAILROADER** for the term of your membership. It is published monthly.

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**WELCOME ABOARD!!!**