# Here Comes the White Train!


On Monday, July 17th, 2006, a rolling piece of Amarillo and U. S. history found a home at the Amarillo Railroad Museum. Working with the U. S. Department of Energy (DOE), the Pantex Plant, and the BNSF Railway, various cars of the historic "white train" moved to the grounds of the Amarillo Railroad Museum (ARM) in northeast Amarillo for display and preservation. During the Cold War, these cars comprised a self-contained unit used to transport nuclear weapons, security forces, and associated supplies across the country. The train was retired from active service in the late 1980s and was stored at the Pantex plant. This is the rear of the train, travelling westbound shortly after leaving the Pantex site. The white Tyson processing plant water tower is visible at left center.


The train consists of three armored escort coaches, six power/buffer cars, and an armored "cargo" car, known as an SSR - Safe Secure Railcar, an ex-Amtrak baggage car, and an American Locomotive Company (ALCO) S-2 diesel locomotive. BNSF and Pantex personnel keep a sharp eye out from the rear platform of BNSF GP38-2 2243. Moving the train from the Pantex site to the ARM grounds required a 12.5-mile trip on the very busy BNSF transcontinental mainline.

Originally, the cars were painted white to protect weapons against the sun's heat. Later, the DOE painted the train in different color schemes (blue, green, and reddish-brown) to thwart possible attacks and unwanted protests. The last official train rolled out of Pantex in 1987. By the late 1970's and early 1980's most of the weapon and component movements were by semi-truck.

A bit earlier in the day, the BNSF diesel is seen on Pantex tracks picking up the


train for its journey to the ARM. Pantex planned to rip up some railroad tracks and ARM officials inquired about several cars that stood idle on the southwest corner of the 16,000-acre plant site. Museum officials hammered out a partnership with the Pantex Site Office, BWXT Pantex and BNSF to move the train from Pantex to the museum's tracks. About six months prior to purchasing the museum property, the BNSF removed what was considered a superfluous turnout (switch) leading onto the tracks at the museum's grounds. To successfully deliver the train, the BNSF unbolted the existing spur track serving companies near the museum, swung it to the north, and connected it to the museum's tracks. After the delivery was complete, they reversed the process, returning the tracks to their original configuration.


Once delivered, members of the museum used the ALCO diesel to sort the eleven cars to show off the historical configuration of the train, and to best place the equipment on the museum grounds. In this photo diesel 740-8 and the unconverted baggage car are positioned at the rear door of the museum building and are attracting a good crowd. The remainder of the train can be seen in the background Comparing time stamps on this and the proceeding photo, the move took around 3 ½ hours.

Alco S2 740-08 was one of two plant switchers at Pantex, the other being 740-07. This locomotive was built by the American Locomotive Co, (ALCO) in March 1943 and has a Builder's Number 70224. It was assigned Army road number 7103; part of a fleet of 37 locomotives delivered to the U.S. Army in August 1943 along with locomotives 7101 Road and 7102. The locomotive was completely rebuilt at Tooele Army Depot, Ogden, Utah around 1959. A few years after rebuilding, it was assigned to the Fort Wingate Army Depot, Gallup, New Mexico. Transfer of title to the U. S. Dept. of Energy's (DOE) Pantex Plant was ordered in December 1976. The Locomotive remained at Fort Wingate for several months, arriving at Pantex in August 1977, and was assigned and road number 740-8. The locomotive was placed in service soon after its arrival at the Pantex Plant. The Locomotive was completely rebuilt again in about 1983 at the Pantex shops as part of a Preventive Maintenance Program.

After Pantex and DOE stopped using rail to move equipment in and out of the Pantex Plant, the locomotive became excess property. In 2004, the BNSF Railway started making plans to remove mainline switches that serviced the Pantex Plant. At that time Pantex and DOE started to consider options of what to do with the rail equipment. In 2005 Pantex and DOE donated the locomotive and rail equipment to the Amarillo Railroad Museum, so they would not be land locked forever after BNSF remove the mainline switches. On July 17, 2006, locomotive 740-08 was moved from the Pantex plant to the Amarillo Railroad Museum and became property of Amarillo Railroad Museum.

This five-car set is representative of the way a transport of nuclear weapons would have taken place. A train would consist of a guard escort car, a power/ buffer car, the nuclear weapons transport cargo car(s), another power/buffer car, and another guard escort car. The difference would be the number of weapons cargo cars being transported. The train would be powered by locomotives of the railroad contracted to make the movement. Most moves were made over the Atchison, Topeka, and Santa Fe Railway. Some movements were made over the Chicago, Burlington, and Quincy subsidiaries Fort Worth and Denver Railroad from the Pantex plant to the Texas border at Texline, TX. At Sixela, New Mexico, just across the Texas border, the train would have proceeded north on the Colorado and Southern Railway.

Much more about the guard escort cars and the unconverted ambulance troop kitchen car in our collection is described below.

A bit fuzzy, but this is a pair of rare photos of a White Train movement at Provo, South Dakota as BN 2309 West. According to Chris Guenzler, who took the photos, seeing a White Train was a hit-and-miss proposition since the trains had no train list, weren't in COMPASS (the BN Information System), weren't on lineups, and weren't on board lineups.

Note the two BN business cars behind the locomotives. The length of the train is curious and since three guard escort coaches are visible, one wonders what exactly is going on. There are seven cargo cars at the front of the train, the rear is a bit harder to tell. Perhaps there was a rule about guard escort cars being assigned based on the number of cargo cars? *Both photos Chris Guenzler*


**Right.** The cargo car and power/buffer cars were built by the Thrall Car Mfg. Co. of Chicago, Illinois. Thrall started in 1917. By mid-century, under the leadership of Richard L. Duchossois, the company focused on building specialized freight cars. Our cars are simple steel flat cars built for the government which made modifications and built the superstructures. Thrall also built five similar flat cars in 1947 for Ringling Brothers Circus.

**Left.** The frames for the cars were one-piece castings produced by General Steel Castings Co., most likely at its Commonwealth Steel plant in Granite City, Illinois. Commonwealth Steel was a major supplier of large steel castings, used in products produced by General Steel's owners, such as one-piece locomotive beds 52 feet long weighing approximately 40,500 pounds and large cast steel underframes for railroad cars.


**Right.** The guard escort cars started life as USAX 89600-89688, built by the St. Louis Car Company in 1953 as Lot 1773. Only a few of the cars were converted to guard escort cars. A large number went to Amtrak in the early 1970s and became baggage or head-end power cars. Note that both the Thrall and this St, Louis Car Co. builders' plate have had portions ground off. The reason is unknown.

| Car Number | Description | Built | Rebuilt |
|---|---|---|---|
| TSSX G-32 | Escort Coach - red | 1953 | 08/79 |
| TSSX G-33 | Escort Coach - red | 1953 | 07/79 |
| TSSX G-34 | Escort Coach - green | 1953 | 07/79 |


TSSX G-33 from our collection in 2011 (**Top**), and in original white paint (**Left**) on 4/18/1982 near Birmingham, AL. The locomotive is BN 2342, a GP38-2. This would be ex-Frisco (St. Louis and San Francisco Railroad) track.
Bernie Feltman photo


Guard escort car G-32, ATMX 527, and ATMX 558 cargo cars. 9/1/1984. Kamela, OR. This is most likely a return move heading toward Boise ID, since the photographer included a caption that the cars are eastbound in a regular freight train of empty grain hoppers. Mike Woodruff col.

| Car Number | Description | Built | Rebuilt | Note |
|---|---|---|---|---|
| TSSX 519 | Cargo Car - red | 1/58 | 9/80 | Painted 11/84 |

TSSX 519 is the only low-sided nuclear weapons transport that still exists and is the showpiece of the museum's collection. Although it has a similar configuration to the power/buffer cars described below, the sides are clean, no ladders, vents or appliances. The car is heavily reinforced with lead sheathing under the steel side sheets. If you knock on the side of a power/buffer car you hear a dull thud. If you knock on the side of TSSX 519, there is no thud, it feels like knocking on a concrete slab.


The cars were loaded by removing the entire roof, placing and securing the weapons, and then lowering the roof back in place. After locking down the roof the car was ready to be taken to its destination.

| Car Number | Description | Built | Rebuilt | Notes |
|---|---|---|---|---|
| TSSX 520 | Power/Buffer Car - red | 09/57 | 01/81 | |
| **TSSX 527** | **Power/Buffer Car - green** | **10/57** | **08/80** | |
| TSSX 528 | Power/Buffer Car - blue | 10/57 | 08/80 | |
| TSSX 529 | Power/Buffer Car - red | 10/57 | 10/80 | Painted 01-85 |
| **TSSX 530** | **Power/Buffer Car – green** | **10/57** | **03/80** | |
| TSSX 531 | Power/Buffer Car - blue | 10/57 | 03/80 | Painted 10-84 |


We received six power/buffer cars from Pantex. Two of these are used to simulate the consist of a nuclear weapons movement; TSSX 527, pictured above and TSSX 530. For the time being the four remaining cars are being held for future use.

Power/buffer cars, as the name implies filled two functions. first to supply independent power to the guard escort coaches (living quarters, security and outside lights) and the cargo cars (outside lights). Secondly the car provided a buffer, in case of a mishap, between the guard escort car and the nuclear weapons cargo car. These cars carried gasoline-powered generators, which were removed before we received them. We use the large interiors for storage.

**Left.** We know by the faded lettering that our car was once Amtrak 603. Photos of cars in the same number series exist. Amtrak 606 was built by the St. Louis Car Co. in 1953 as U.S. Army kitchen car 89606. It was one of 89 such cars built under Lot. 1773 (89600-89688). Fifty of these cars were transferred to Amtrak in 1973, where most of them became 1300- and 1350-series baggage cars. This car was assigned Amtrak number 8902, one of seven cars initially assigned numbers 8900-8906 for use as kitchen cars; but all these cars retained the last three digits of the Amy numbers and were used for storage at various locations. Therefore, our car was most likely originally numbered 89603.


**Left.** Amtrak 606 at Rensselaer, New York, 5/5/1976. Henry Frick photo.

**Below.** Amtrak 635 in service. Mira Loma, CA 1974. northeast.railfan.net


**Above.** Amtrak 686 (ex-USAX 89625) **Below.** Amtrak 1293 (ex-USAX 89661) both at Stamford, CT in 1976. Amtrak converted these ex-USAX cars into HEP (Head End Power) cars Both photos Christopher Palmieri Col.


**Left.** Another view of Amtrak 606 and another car probably of the same type. It is obvious that the cars are located on or near an Amtrak facility. They may be retired.
P.J. Vincent Collection.

**Right.** Army Medical Service Ambulance Kitchen Car USA 89601 was built in 1953 by the St. Louis Car Company. Construction was based on a World War II-era car design utilized by the Army Medical Service and the Army Transportation Corps. It was part of an order for kitchen and ambulance cars that were produced to replace cars shipped to Korea. The purpose of an ambulance kitchen car was to prepare meals on ambulance trains. Ambulance trains were used to move wounded soldiers from a port of entry to bases or other facilities throughout the continental United States. Kitchen facilities include a double oven coal-fired stove, ice boxes, food storage lockers, a hot water heater, three sinks, a pressurized water system and even a shower. This car was stored at Fort Lewis for over 20 years and was retired without ever entering service. Soon after the new ambulance trains were delivered to the Army, long distance air travel quickly supplanted ocean liners as the predominant transoceanic transportation.


Joe Mabel photograph. Also visit https://commons.wikimedia.org/wiki/File:Army_Medical_Service_ambulance_kitchen_car_01.jpg

## Cars Remaining at Pantex

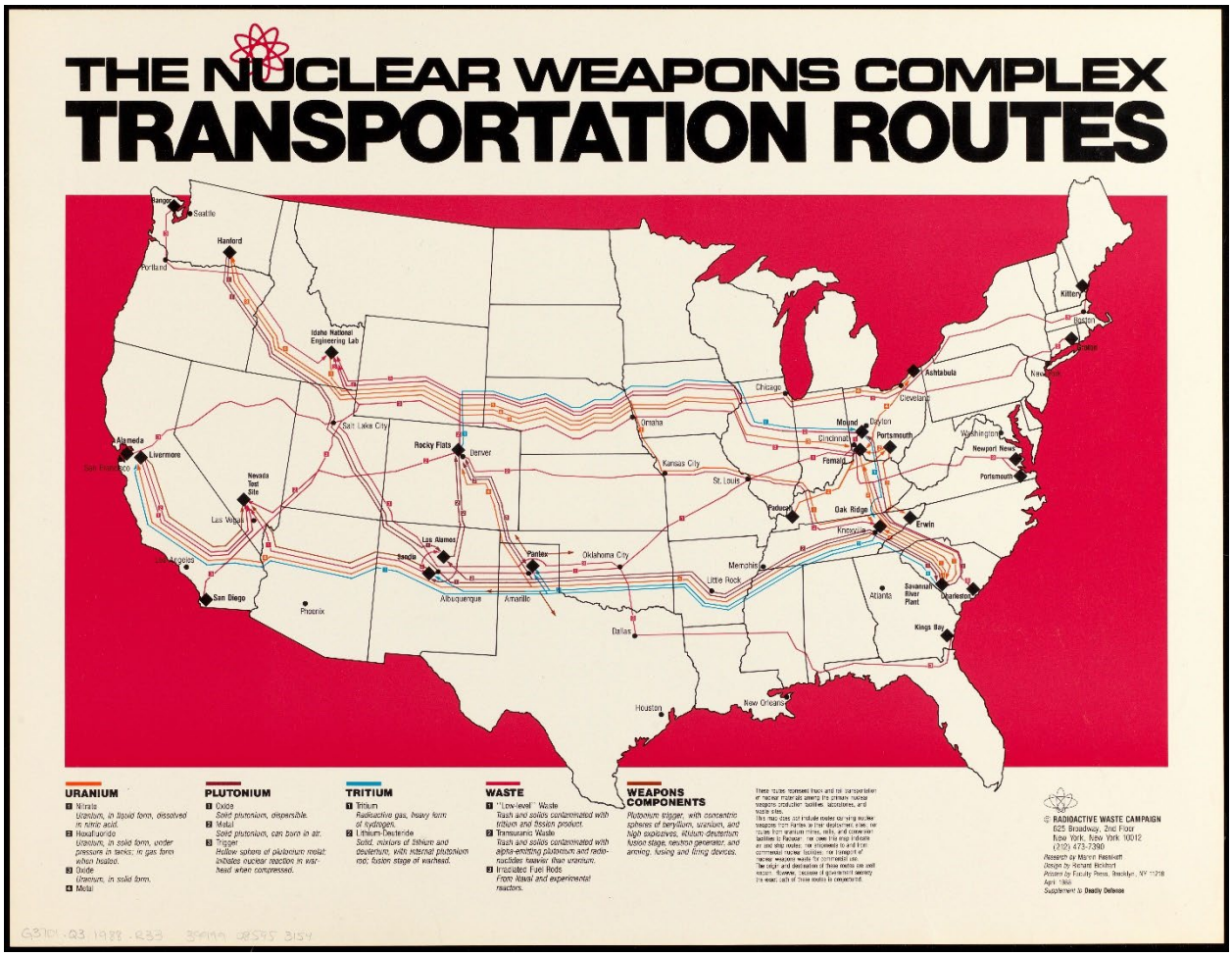
| Car number | Type | Built | Rebuilt | Current paint |
|---|---|---|---|---|
| G-23 | 80' Coach, former hospital car | ? | | Silver |
| TSSX G-30 | 40' Coach, former kitchen car | 07/54 | | White |
| TSSX G-35 | Escort Coach | 1953 | 07/79 | Blue |
| ATMX 602 | High-sided Cargo Car | 03/60 | | White |
| TSSX 520 | Power Buffer Car | 09/57 | 01/81 | Red |
| TSSX 554 | Cargo Car | 02/58 | | |

Six cars from the nuclear transport operations remain at the Pantex plant for the Depart of Energy's intended historical preservation pln. Although 'land-locked' since the BNSF connection to the plant was removed, if in the future a plan can be developed to move some or all of these historic cars to the museum's grounds, we'd be overjoyed. Of specific interest are the one-of-a-kind cargo cars (ATMX 602 and TSSX 554). Adding these two cars to our five-car replication of a typical transport movement would be spectacular.

Seeing our cars' deteriorating condition and comparing them to the cars in original white paint, drives home the significance and necessity of preserving these cars as soon as possible for future generations. Restoration of these cars is first on our priority list for the 'prototype' collection.

USAX G-30 (TSSX G-30) in service at Pantex. Date unknown.


Violent and dangerous protests of nuclear weapons transport by rail lead to the use of truck transport. Despite never having an accident when railroads transported nuclear weapons. The question is: Are highly visible, slow moving white trains or unmarked trucks travelling at interstate speeds safer?




An interesting map illustrating the extent of the nuclear transport system in April 1986. Amarillo was a nexus of the system, sending out loads and receiving empties from all over the United States. Although there has been both valid and spurious concerns about the transport of nuclear weapons, there are no reported accidents for any rail movement. In fact, the phrase 'bomb train' has been expropriated in many 'news' reports to report train derailments that have nothing at all to do with bombs nuclear or otherwise. For example:

https://www.nationofchange.org/2020/12/24/another-bomb-train-accident-highlights-regulatory-failures/

https://www.nrdc.org/onearth/bomb-train-derailment-sparked-resistance-columbia-river-gorge


The future? Rail transport and the nuclear industry are still intertwined. IDOX -030001 was not built to transport nuclear weapons, but rather provide power and escort services for transporting nuclear waste. Seems like the old power buffer cars, and guard escort coaches combined into a package. The slate-blue Rail Escort Vehicle, or REV, a collaboration between the Navy and the U.S. Department of Energy, departed its assembly site at Vigor Industrial in Portland, Oregon for a testing location at the Transportation Technology Center, Inc. in Pueblo, Colorado, where it will undergo a final slate of tests. When it enters service as soon as 2024, REV will get hooked up to DoE's new Atlas railcar (**Left**), built to hold hundreds of tons of spent nuclear fuel. For the Navy, the trains will carry spent fuel rods from shipyards and propulsion facilities on the East and West Coasts to the Naval Reactors Facility in Idaho Falls, Idaho, for inspection and temporary storage before final disposal in dry casks underground.

https://www.wearethemighty.com/featured/check-out-the-navys-powerful-nuclear-security-train-car/

**Below**. Conceptualization of what a nuclear waste transport train will look like.