

UNION PACIFIC RAILROAD
1400 Douglas Street Omaha, Nebraska 68179

February 10, 2026

Mr. Karl Alexy

Associate Administrator for Railroad Safety and Chief Safety Officer
Federal Railroad Administration, United States Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

Subject: Petition for Waiver from Requirements of Title 49 Code of Federal Regulation (CFR) §236.566
for Heritage Steam Locomotive Operation during the 2026 Heritage Excursion Tour

Dear Mr. Alexy,

Union Pacific respectfully submits this waiver request in support of operating its historic steam locomotive, Big Boy No. 4014, over portions of Norfolk Southern cab signal territory as part of the planned 2026 national heritage excursion commemorating the 250th anniversary of the United States. This special movement represents a rare, limited-duration excursion intended to honor the nation's railroading legacy and connect communities across several regions. Because Union Pacific has fully discontinued cab signal systems following the nationwide implementation of Positive Train Control (PTC), and because Big Boy no longer retains nor can accommodate cab signal equipment, UP seeks relief from applicable cab signal requirements solely for this one time historic tour. This request outlines Union Pacific's history and justification for relief.

History of Union Pacific's Heritage Fleet Steam Locomotive – Big Boy No. 4014

Union Pacific's Big Boy No. 4014 stands as one of the most iconic and ambitious engineering achievements of the American steam era. Originally delivered in 1941, the Big Boy class was designed to meet Union Pacific's need for a single locomotive capable of hauling extremely heavy freight over the challenging grades of the Wasatch Mountains while still maintaining mainline speeds—an essential requirement for the railroad's busy Overland Route. Built by the American Locomotive Company, these massive 4-8-8-4 articulated locomotives quickly earned legendary status for their power, speed, and reliability in some of the most demanding operating conditions in the country.

Big Boy No. 4014 spent its revenue career moving tonnage across the western United States until its final run in July 1959, after which it was officially retired in 1961 and placed on public display in California. For more than five decades, the locomotive remained a static exhibit, admired for its imposing scale and revered as one of only eight surviving Big Boys. That changed in 2013, when Union Pacific announced a historic plan to reacquire and restore No. 4014 to operating condition—a feat previously considered nearly impossible due to the locomotive's sheer size, mechanical complexity, and the substantial investment required. The engine was moved from Pomona, California to Union Pacific's Cheyenne, Wyoming facilities in 2014, where it underwent a comprehensive multi-year restoration.

In May 2019, Big Boy No. 4014 returned to steam for the first time in 60 years, completing a successful test run and then embarking on a national tour that drew unprecedented public attention. More than a million people lined the tracks to witness its rebirth, showcasing the enduring fascination with steam technology and the cultural significance of the Big Boy class. Today, No. 4014 operates as the largest functioning steam locomotive in the world and serves as a traveling ambassador for Union Pacific—

demonstrating the railroad's ongoing commitment to preserving history, inspiring innovation, and connecting new generations to the legacy of American railroading.

Conversion from Legacy Cab Signals to Positive Train Control

Union Pacific's Big Boy No. 4014 originally operated using legacy cab signal systems, but as federal safety mandates evolved, the railroad ultimately needed to bring the locomotive into Positive Train Control (PTC) compliance. Although early regulatory discussions considered exemptions for historic steam locomotives, Class I carriers like Union Pacific were ultimately expected to meet PTC requirements, prompting the need to modernize Big Boy for operation on today's network.

As part of Union Pacific's multi-year effort to modernize Big Boy No. 4014 for operation on today's PTC-equipped network, the locomotive's previous reliance on legacy cab signal functionality was effectively phased out. The PTC electronic equipment, including but not limited to the Train Management Computer (TMC), cellular modems, and the 220 MHz radio, were installed in the equipment locker, which formerly housed the cab signal equipment. With the installation of both the diesel-assisted PTC architecture in 2021 and the fully self-contained PTC system completed in 2024, Big Boy now operates using modern, digitally enforced signal and speed-control capabilities, replacing the functions historically provided by cab signals.

2026 Heritage Excursion Tour

Union Pacific's planned 2026 Heritage Excursion Tour featuring Big Boy No. 4014 is intended to serve as a nationwide celebration of America's 250th anniversary by bringing the world's largest operating steam locomotive across regions it has never before visited. Union Pacific has already stated that Big Boy will "return to the rails in a big way in 2026" as part of the semiquincentennial, with leadership expressing the desire to run the locomotive coast to coast—a historic expansion beyond its traditional western operating territory.

The intent of the tour is to create a unifying, country-spanning tribute that mirrors the spirit of large national heritage events like the 1976 American Freedom Train. Union Pacific's CEO has confirmed discussions with Norfolk Southern to host Big Boy on eastern lines, enabling the locomotive to travel into regions where it has never operated in its 84-year history. The goal is to bring the locomotive to a broad cross-section of the country, offering millions of Americans a chance to engage with a living piece of railroad history.

At its core, the purpose of this nationwide journey is to honor the nation's 250 years of growth, innovation, and unity—values Big Boy itself symbolizes. As Union Pacific prepares to mark this milestone, the 2026 Heritage Excursion Tour is intended to showcase the engine as a moving ambassador of American engineering, heritage, and pride, traveling across multiple railroads and regions to unite communities in a once-in-a-generation celebration.

History of Union Pacific Cab Signal Discontinuation

For nearly a century, Union Pacific relied on locomotive cab signal systems, which were originally installed beginning in the early 20th century after federal regulators ordered Class I railroads to adopt the technology in 1922. These systems transmitted signal information through the rails and displayed it inside the cab, forming a critical safety layer on more than 2,000 miles of Union Pacific mainline territory between Chicago/Kansas City and Ogden.

The shift away from cab signals began with the Rail Safety Improvement Act of 2008, which mandated implementation of Positive Train Control (PTC) across high-traffic Class I routes. As PTC installation expanded, a federal waiver allowed Union Pacific to begin phasing out cab signal use in 2016, though

regulators still required cab signal-equipped locomotives to lead trains in case of PTC failures. By the end of 2019, PTC had been fully installed on all former Union Pacific cab signal lines.

With PTC reliability firmly demonstrated, regulators approved the full discontinuance of cab signals in mid-2022, marking the official end of Union Pacific's cab signal era. On December 21, 2022, Union Pacific shut down the last active cab signal systems, concluding nearly 100 years of service. Mechanical and Signal departments subsequently began physically decommissioning the equipment across the system and removing it from its locomotives, including the Big Boy No. 4014.

PTC's enhanced capabilities—including wireless communication, real-time speed enforcement, and advance visibility of work zones and restrictions—enabled Union Pacific not only to retire its aging cab signal technology but also to improve operational flexibility, allow foreign locomotives to lead on previously cab signal-restricted lines, and reduce maintenance costs system-wide.

Union Pacific's Big Boy No. 4014 Waiver Request

Union Pacific intends to operate Big Boy No. 4014 over portions of Norfolk Southern territory as part of the planned 2026 Heritage Excursion Tour. While Norfolk Southern territory still relies on cab signal systems for a portion of the route to be taken, Big Boy No. 4014 no longer retains the ability to display or respond to cab signal indications. As previously outlined, the cab signal equipment that once existed on the locomotive was removed during modernization efforts, and the space previously used to house that equipment has since been permanently occupied by PTC components installed to meet federal requirements. Reinstalling cab signal hardware would require a significant reconstruction effort, substantial engineering redesign, and removal or relocation of critical PTC systems. In practical terms, there is no remaining physical space to reinstall the equipment without compromising the integrity of the federally mandated PTC installation.

Because of this, Union Pacific is requesting relief from 49 CFR §236.566 [Locomotive of each train operating in train stop, train control or cab signal territory; equipped] where a Positive Train Control (PTC) system would be utilized solely in lieu of PTC with a cab signal system overlay in Norfolk Southern territory. While in Norfolk Southern cab signal territory, Union Pacific will operate per Norfolk Southern's operating procedures, instructions, and rules. The intent is to allow the excursion train to safely traverse Norfolk Southern cab signal territory without the need to reinstall obsolete systems, relying instead on Norfolk Southern's established operating procedures, instructions, and rules. This approach minimizes unnecessary burden, avoids technically infeasible modifications to the locomotive, and maintains the safety and regulatory compliance framework already available in Norfolk Southern daily operations.

The following information is submitted in accordance with the provisions contained in 49 CFR §211.7, §211.55, and §235.10:

(1) Corporate Name of Each Applicant:

Union Pacific Railroad.

(2) Manner in which Applicant is Involved:

Union Pacific is the owning and maintaining railroad of the locomotive consist.

(3) Location of Project:

Location is not applicable as this waiver is specific to the locomotive consist.

(4) Tracks Involved:

Tracks are not applicable as this waiver is specific to the locomotive consist.

(5) Description of Proposed Relief Sought:

Relief from 49 CFR §236.566 [Locomotive of each train operating in train stop, train control, or cab signal territory; equipped] is requested to permit operation of the 2026 Heritage Excursion Tour train within Norfolk Southern cab signal territory.

(6) Justification for Relief from the Requirements:

Union Pacific is requesting relief from the requirement to install cab signal equipment on Big Boy No. 4014 for its planned historic excursion tour over Norfolk Southern territory. Because Union Pacific removed all cab signal hardware system-wide following the transition to PTC, the locomotive no longer has cab signal capability, and the space once used for that equipment is now permanently occupied by federally mandated PTC components. Reinstalling cab signals solely for this tour would require significant reconstruction and is not technically practical.

This tour aligns with America 250's mission to celebrate and commemorate the 250th anniversary of the signing of the Declaration of Independence, marking America's Semiquincentennial. It aims to inspire our fellow Americans to reflect on our past, strengthen our love of country, and renew our commitment to the ideals of democracy through programs that educate, engage, and unite us as a nation. America250 will foster shared experiences that spark imagination, showcase the rich tapestry of our American stories, inspire service in our communities, honor the enduring strength, and celebrate the resilience of the United States of America.

This tour represents a unique and rare opportunity to deliver substantial educational and community benefit as planned through multiple scheduled stops along the tour. Approval of this petition will permit Union Pacific and Norfolk Southern to support the 2026 Heritage Excursion Tour.

(7) Approximate Dates of Beginning and Completion of Project:

Union Pacific requests relief for the limited duration of operations associated with the planned 2026 Heritage Excursion Train Tour, presently anticipated to occur between May 25 and July 29, 2026.

(8) Changes in Operating Practices:

Union Pacific will comply with all Norfolk Southern requirements as outlined in operating procedures, instructions, and rules.

(9) Effect on Safety of Operations:

This waiver provides an equivalent or better level of safety as compared to the status quo for operations on this tour as Big Boy No. 4014 is fully equipped with PTC, PTC provides real-time enforcement of speed limits, movement authorities, and work-zone protections, delivering safety capabilities that significantly exceed those of traditional cab signal technology. Additionally, Norfolk Southern maintains established and validated operating procedures, instructions, and rules. Big Boy will operate in full compliance with these requirements, together with any supplemental or special instructions that Norfolk Southern prescribes for the movement.

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(10) Conformance with FRA Rules and Regulations:

Aside from any relief provided by a waiver in response to this petition, all operations will be conducted in accordance with existing FRA rules and regulations.

For the foregoing reasons, this waiver is in the public interest and is consistent with railroad safety. Please do not hesitate to contact me with any questions or concerns.

Sincerely,



Arash Shahabi

Director Operating Technologies

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