



Transportation Trades Department, AFL-CIO

April 1, 2024

Mr. Karl Alexy
Associate Administrator for Railroad Safety & Chief Safety Officer
Federal Railroad Administration
1200 New Jersey Avenue SE
Washington DC, 20590

RE: Petition for Waiver of Compliance, Georgia Central Railway, L.P. and Heart of Georgia Railroad, Inc.
Docket No. FRA-2023-0066

Dear Mr. Alexy:

On behalf of the Transportation Trades Department, AFL-CIO (TTD), I am please to respond to the Federal Railroad Administration's (FRA) request for comment on Georgia Central Railway and Heart of Georgia Railroad's request for relief from certain regulatory requirements in order to test autonomous rail vehicle technology developed by Parallel Systems. TTD consists of 37 affiliated labor unions who represent workers across all modes of transportation, including the totality of rail labor.¹ The members represented by TTD-affiliated unions have long led the fight for safety improvements in the rail industry, and we therefore have a vested interest in this petition.

On August 10, 2023, Georgia Central Railway (GCR) and the Heart of Georgia Railroad (HOG) submitted a request to the FRA for approval of a test program for a "novel, self-propelled, zero-emission, battery-electric rail vehicle" manufactured by Parallel Systems. This type of automated technology presents unique safety and workforce challenges that the FRA must take into consideration when evaluating this petition. In light of these concerns, we request that *should* the FRA grant the waivers needed to carry out the testing, it impose the specific conditions we outline below. If the FRA determines it is unable to impose the requested conditions, we request that the FRA deny the petition. We also note that two of our affiliates, the Transportation Division of the International Association of Sheet Metal, Air, Rail, and Transportation Workers (SMART-TD), the Brotherhood of Locomotive Engineers (BLET), and the Transport Workers Union of America (TWU) have filed comments in this docket requesting that the FRA deny this petition.

¹ Attached is a complete list of TTD's affiliate unions.

In addition, we emphasize that the comments and remarks given by national labor organizations at the public hearing held on March 12, 2024, do not constitute an agreement to, support for, or endorsement of this technology.

Safety is of the Utmost Importance

As the FRA considers this petition, the safety of the rail workforce and the public must be its highest concern. The FRA must monitor and understand the ways in which this technology interacts with every facet of the existing rail system, including rail workers, traditional locomotives, rail cars, and grade crossings. This can only be accomplished through thorough testing guided by strict federal oversight.

The underlying statute at 49 U.S.C. § 20103(d) and associated federal regulations at 49 CFR part 211 make clear that the FRA can only grant the waivers if “such waiver or suspension is in the public interest and consistent with railroad safety.”² Furthermore, according to the FRA’s guidance document on waivers published in December 2022, “FRA has long interpreted this statutory standard as a standard focused on safety, including the safety of rail operations, the safety of those potentially affected by those operations (e.g., railroad employees, motor vehicle operators, pedestrians, and passengers), and the safety and well-being of the public at large (e.g., a request’s potential effect on communities through which a railroad operates or whether a particular waiver or approval is necessary to maintain certain levels of rail service in a geographic area).”³ Given that the petition proposes to test operating rail cars without traditional locomotives, the FRA must be certain that the procedures to test this technology are as safe, or safer, than traditional locomotives operated by human crews.

Human train crews handle numerous complex tasks with speed and accuracy which are not currently replicable by autonomous technology alone, and ultimately may never be. These duties include communication with other personnel, such as train masters or train dispatchers; addressing emergency situations when they arise, including communication with first responders; mechanical issues that require detection and inspection; and many others. The FRA must be sure that the introduction of this technology will not compromise safety in favor of technological advancement, as we have seen with the testing of autonomous vehicles on our roads.

Safety Concerns Present in Parallel Systems’ Testing Petition

There are many important, unanswered questions raised by the petition’s description of its testing plan that need to be resolved to determine whether the testing will meet “standards sufficient to assure safety.” At the outset, we strongly urge the FRA and Parallel Systems to adopt proximity sensors or other human-detection devices to avoid tragic incidents on the rails, in yards, and in ports. Rail labor has seen far too many of its members killed or maimed by technologies without proper safety protocols, precautions and redundancies. Indeed, similar technologies like remote control locomotives have been deployed across the network that have led to senseless deaths of yard personnel. This is why the technology being developed by Parallel Systems – and others in this space – *must* prioritize human safety above all else.

² 49 U.S.C. § 20103(d)

³ <https://railroads.dot.gov/sites/fra.dot.gov/files/2022-12/Guidance%20on%20Submitting%20Waiver%20Special%20Approval%20Other%20Requests%20for%20Approval%20to%20FRA%20%28Dec%202022%29%20final.pdf>

Notably, the petition does not provide all the procedures, safety protocols, and description of software that the GCR and HOG plan to use during their testing. Petitioners and Parallel Systems propose to adapt many of the testing procedures and protocols based on the results of each phase:

Results of testing performed during each phase will be used to evaluate the safety of the proceeding phase. Data and service history collected from the Program will be used to evaluate changes in the design of the System, its components, and the relevant operating procedures in support of further testing before any proposed use of the System outside of the Program (Page 5).⁴

It is impossible to determine “whether observance of standards sufficient to assure safety” exist, as required by § 49 C.F.R. 211.51(a)(3), based on the submitted petition alone. Additionally, the seven proposed phases reflect wildly different testing conditions.⁵ Phase one, for example, proposes to have an empty single vehicle operating in an isolated area of track with no grade crossings and under line of sight supervision at all times. Phase seven proposes to have platooning vehicles loaded with containers operating on the same track as mixed, human freight. These vehicles would go through numerous grade crossings and the vehicles would only be under remote supervision via video feed by the Vehicle Supervisor. Train dispatchers will also be reliant on the Vehicle Supervisor to provide the visibility they need to monitor the vehicle’s movements. This safety concern is heightened when the Vehicle Supervisor transitions to observing the vehicle via video link beginning in phase four of the proposed testing and continuing in phases six and seven. We cannot overstate how different each operating scenario is and why it is vital to know the detailed testing procedures, safety protocols, and software deployment **for each phase of testing before that phase begins.**

In the demonstration of the technology observed by several labor organizations in March 2024, a Vehicle Supervisor was continuously present in a truck adjacent to the vehicle providing a direct line of sight to the Test Operator. The testing vehicle was no more than a few hundred yards from the Test Operator at all times. Even under those conditions, it was clear that the Test Operator relied heavily on communications from the Vehicle Supervisor.

The petition proposes testing operations in the later phases of the testing program that are very different from the scenario the labor organizations observed in March. Given that the proposed mileage of operations between the two railroads is upwards of 160 miles, it appears from the petition that the Vehicle Supervisor in phase four could be upwards of 84 miles away from the vehicle. During phases six and seven, the Vehicle Supervisor could be upwards of 160 miles from the vehicle monitoring it via video link. It is also clear from the petition that the latency of the video link and how fast and reliably it can relay information to the Vehicle Supervisor is not fully known at this point, but instead will be tested beginning in phase three. It is concerning that this petition proposes in these phases to rely on a remote video feed instead of direct line of sight without first knowing the latency and reliability of the video link. These concerns are heightened by the fact that much of the proposed testing will be conducted in rural areas and communication will be dependent on the reliability of cellphone signals and Wi-Fi.

⁴ See also: “As noted above, the Program will be an iterative process. At the end of a given test phase, software revisions and updates to procedures may be implemented for the next and succeeding test phases” (Page 13).

⁵ See Figure 1, page C7 of the petition

Traditional train crews relay any observations of dangerous conditions on the track, in the adjacent right of way, or any visual problems with the rail cars or equipment to train dispatchers and act in real-time when a problem does arise. These observations are vital to the train dispatcher's ability to do their job and for the overall safe operation of trains and the rail system. The petition does not convey how it plans to replicate the ability of train crews to provide these observations and to act when problems arise. We are highly skeptical that a video feed, especially one of questionable quality that may have latency issues, can successfully replicate the functions of traditional train crews.

The testing petition also notes the one physical interface between the testing area and another Class I railroad. Specifically, beginning in phase three of the testing program, operations will involve an at-grade crossing with a Norfolk Southern rail line. The petition goes on to state, "Occupancy of the crossing by the Vehicle will be governed by standard protocols between Norfolk Southern and HOG...Initial discussions have taken place between HOG and Norfolk Southern managers and will be finalized before Phase Three." Several of our affiliate unions represent workers who operate on this Norfolk Southern track and in the right of way who could be put at serious risk if a problem were to occur. Given the novelty of this system and the fact that there has never been interaction between an uncrewed vehicle and an active train, it is extremely alarming that the petition does not even have the finalized procedures between HOG and Norfolk Southern as part of its submission. In our view, this arrangement should have been finalized prior to the submission of this petition and it is unacceptable that this petition leaves this very important safety question unanswered.

One other area of significant concern is the operating of these vehicles through publicly owned or accessible highway-grade crossings. To our knowledge, Parallel Systems' vehicle has yet to operate through a publicly-owned crossing, only through private grade crossings at MxV's testing facility in Pueblo, Colorado. The petition makes clear that in phase two the vehicle will encounter at least seven grade crossings and at least 18 grade crossings in phase three. As the FRA is well aware, the majority of deaths and injuries on the railroad occur at highway-grade crossings. Specifically, 94% of all rail-related fatalities and injuries occur at railroad crossings or as a result of trespassing.⁶ Those collisions or incidents involve trains that are operated by human train crews and the crews do their best to avoid these situations. Undoubtedly, countless potential collisions at highway-grade crossings have been avoided because of the actions of locomotive engineers and train conductors.

Of additional concern is that in phases four, six, and seven, the petition does not propose to use flaggers to protect grade crossings unless required by the General Code of Operating Rules. Instead, the vehicle will rely on existing grade crossing protections with some additional warning signs. The proposed reliance on warning signs at these crossings ignores the long-standing problem of public disregard for existing grade crossing protections and signs warning vehicles and persons not to cross active railroad tracks.

Our highlighting of the above areas of safety concern are not meant to imply those are the only areas of concern for TTD and our affiliates in this petition. Instead, these should be taken as a reflection of the breadth of our concerns and the amount of unanswered questions that exist in the petition.

⁶<https://railroads.dot.gov/highway-rail-crossing-and-trespasser-programs/railroad-crossing-safety-trespass#:~:text=94%25%20of%20all%20rail%2Drelated,deaths%20and%20injuries%20are%20preventable.>

Transparency, Data Collection, and Public Input Must be a Priority

We strongly oppose the petition's proposed process for the multi-phase testing program that limits public comment to just the beginning of the testing process. While we appreciate that Parallel Systems plans to share safety data relevant to each phase with the FRA and request the FRA's written approval prior to moving on to the subsequent phase, the FRA must provide the public the opportunity to evaluate the testing procedures, safety protocols, software deployment, and data for each phase of the proposed testing program and provide public comment.

The ability for the public, including labor organizations, to comment after each phase is especially important given that the petition acknowledges this program will be an iterative process.⁷ The public deserves to know exactly how this technology performs at each phase of testing and share any concerns that may arise. Right now, the public does not know what the final procedures and protocols will be for each testing phase because the petition does not identify them since they are not finalized. The FRA should discontinue or pause testing if significant safety concerns are identified following the completion of each phase.

Public comment periods provide a meaningful due process that allows the public and stakeholders to weigh in on important issues and thus are a core tenet of the Administrative Procedure Act. This fact is why the FRA has public comment periods for regulatory changes, waiver petitions, and Positive Train Control safety plan amendments. Additionally, the length of the public comment period should not be abridged in acknowledgement of the practical and logistical impacts on rail workers and the need to allow these workers to personally have time to review and comment on issues that could affect them.

If the FRA requires that the public be afforded the opportunity to comment after each phase of testing before the next phase of testing begins as we are requesting the FRA do in these comments, then we believe that renders moot or at least requires modification of this petition's request to waive three safety regulations: 1) 49 C.F.R. Part 236.913 related to filing a Product Safety Plan for Processor-Based Signal and Train Control Systems, 2) 49 C.F.R. § 240.103 related to the FRA's approval of a written certification program for locomotive engineers, and 3) 49 C.F.R. § 242.103 related to the FRA's approval of a written certification program for train conductors.

The petition requests a waiver of these three safety regulations, citing the incompatibility of seeking pre-approval from the FRA for these elements and favoring a proposed approach of only seeking the FRA's approval to begin the next phase of testing:

The developmental nature of the Program combined with its limited scope and duration make certain provisions of Part 240, particularly those requiring significant lead time, incompatible with the Program. Revisions to the qualification program will be made throughout the Program, based on testing results which will make it impossible to meet certain lead time requirements under Part 240 without undue delay (Page 15).

⁷ See Page 10

If the FRA establishes time for the public to review and comment at the end of each phase before the next phase begins, that affords Parallel Systems and Petitioners time to submit any changes under 49 C.F.R. Part 236.913, 49 C.F.R. § 240.103, and 49 C.F.R. § 242.103 to the FRA for review and approval and also submit those plans to the public simultaneously for review and comment. Therefore, we do not believe these safety regulations should be fully waived and oppose the petition's request with respect to these three waivers.

Relatedly, it is concerning that several of TTD's affiliates who represent rail workers that maintain and repair locomotives were not consulted by Parallel Systems while other rail labor unions were given the opportunity to witness a demonstration of the technology. These crafts' perspectives on this technology could have provided valuable insights throughout this process, especially on whether the operation of the vehicles sufficiently replicate the safety and operational benefits that a traditional locomotive brings. While we appreciate that the petition offers that "(a)dditional outreach to representatives of these unions will be offered throughout the Program to provide updates on the progress of test activities at the conclusion of each phase" that is respectively not enough.

The tenets of the Administrative Procedure Act and the FRA's regulations around petitions for safety require that the public, including stakeholders, be given a chance to fully examine a petition like this one that seeks to temporarily waive safety regulations and comment on the petition and "whether observance of standards sufficient to assure safety" exist.

Workers and the public also deserve to know whether the technology Parallel Systems aims to test is safe, and as such, we urge the FRA to require that safety data collected through previous testing be made public. Our request is consistent with the requirement in § 49 C.F.R. 211.9(c) that "(e)ach petition pertaining to safety regulations must also contain relevant safety data." The petition directly links the data generated during the test to safety, "Performance data generated during these tests will be included in the safety review and other preparations as described in the Safety Plan..." (Page 5) and therefore that performance data is relevant safety data and should be made available to the public for review and comment.

This data should not be limited to crashes and derailments, but should expand to instances where the technology did not behave as predicted, including navigating potential hazards. We have made similar requests with regard to the development of [other autonomous vehicles](#), and Parallel Systems' technology should be no different. Indeed, the petition is quite clear that identifying and mitigating hazards before each phase is a key component of the safety plan that will be submitted to FRA for approval:

Before requesting FRA approval to begin any pilot phase, a group of relevant and experienced Railroad managers and technical experts from the Manufacturer will perform a formal written safety review covering all activities to be performed in the applicable testing phase. This process will be based on three key steps:

- Identification of hazards caused by any reasonably foreseeable conditions (e.g., grade crossing obstacles, track obstacles, trespassers, broken rails, or other track conditions) that could cause an accident/incident (as defined in 49 C.F.R. 225.5);
- Selection and implementation of controls to reduce the probability that an identified hazard could occur and/or to mitigate the impacts if the hazard did occur; and
- Verification that selected controls have been implemented. (Page C10)

In the event that the data is made available for review as we are requesting, we have concerns that the petitioners, Parallel Systems, or the FRA will redact much of the underlying data on the grounds that the information is proprietary. This concern is based on our experience with the public review of the Positive Train Control Safety Plans (PTCSP) and the associated Requests for Amendment (RFAs) where much of the underlying information was redacted on the grounds it was proprietary and the filing was rendered useless due to the redactions. The end result was that our affiliates, workers, and the public had no idea what the railroads were proposing to do on a critical piece of safety technology. We vigorously opposed the railroads and the FRA's redaction of that data in the PTCSP submissions and will do so again if that is attempted here.⁸

In the spirit of compromise, we request that the FRA consider adopting guidance allowing for confidential undertakings modeled on the system that the Surface Transportation Board (STB) successfully utilizes. The public, including labor organizations, need to be able to review all safety information to provide the FRA with accurate comments, and a confidential undertaking system would allow for this while also protecting legitimate confidential business information and safeguarding data security. One of our affiliates, the Brotherhood of Railroad Signalmen, utilized this model successfully in regard to BNSF's Virtual Block docket where they signed a non-disclosure agreement to be able to view confidential data from BNSF and filed comments on that data that were redacted to protect BNSF's legitimate interests.⁹ We see no reason why that model couldn't be adapted here and thus request that FRA do this at a minimum, if it doesn't require that all the data be made public without redactions.

The Data Provided by Parallel Systems Should not be Considered Universal

The petition is clear that that this proposed testing program will facilitate future testing by Parallel Systems as part of the development of their technology:

Data and service history collected from the Program will be used to evaluate changes in the design of the System, its components, and the relevant operating procedures in support of further testing before any proposed use of the System outside of the Program. (Page 5)

The testing data collected by Parallel Systems cannot be considered representative of all locations and testing conditions. The testing conditions in Georgia will not be the same as conditions in the Midwest, for example. Therefore, should another railroad wish to test this technology, the FRA must require that railroad go through the same process as GCR and HOG, including submitting a formal petition for any waivers that must be granted by the FRA in order for the testing to proceed and giving the public and stakeholders time to comment on that petition. This should be the case each time the technology will be tested in a new location, under different conditions, scenarios, or operating design domains to ensure the technology is able to perform safely in each of these new circumstances.

In the future, following sufficient testing of this technology in a wide variety of scenarios, the FRA should work to develop final regulations governing its use rather than relying on a system of waivers. Until regulations fully account for developing technologies, waivers should be granted sparingly and should be viewed as extraordinary measures. Regulations exist for a reason, and a patchwork system of waivers degrades safety for rail workers and the public, especially when utilized to facilitate the adoption of developing technologies. Regulations should evolve in tandem with technological progress, ensuring that safety standards remain robust and resilient.

⁸<https://ttd.org/policy/fra-must-not-accept-harmful-and-unnecessary-redactions-from-railroads-on-critical-safety-information/>

⁹ <https://www.regulations.gov/comment/FRA-2010-0056-0612>

The FRA Must Consider the Far-Reaching Impacts of Automated Rail Technology

While the testing of this new technology would be initially limited to two rail properties in Georgia, we have to consider that this type of automation could one day interact with the broader rail network, may ultimately be widely deployed, and could interact with other elements of our transportation system, including ports. We strongly encourage the FRA to carefully consider the potential long-term impacts of this type of automated technology, and to broaden its lens beyond the specific parameters of this request as it evaluates this petition. For example, Parallel Systems includes graphics on its website illustrating a modular, automated shipping terminal working in conjunction with the technology it aims to test through this petition. We strongly oppose the automation of intra-port vehicle traffic, cargo handling, and other port operations as it could have the immediate impact of eliminating jobs at ports and harbors.

Conclusion

No one understands the realities of rail operations on the ground as well as frontline workers. Rail workers are no strangers to technological change and want to ensure that technology helps workers rather than hinders them. Whether it be the deployment of new technologies, the crafting of new work rules, or the promulgation of new regulations, the meaningful inclusion of rail workers in these conversations and consideration of workers' input is the only way to maintain and promote safety now and in the future. In moving forward, we emphasize the importance of a comprehensive and inclusive approach to technological integration, prioritizing the safety and well-being of both the rail workforce and the public. TTD and our affiliated unions stand ready to collaborate with the FRA to ensure that safety remains paramount in the ever-evolving landscape of rail technology.

We appreciate the opportunity to comment on this petition and look forward to working with the FRA in the future.

Sincerely,

A handwritten signature in black ink, appearing to read 'Greg Regan', with a stylized flourish at the end.

Greg Regan
President