National Transportation Safety Board
Office of Railroad, Pipeline and Hazardous Materials
Washington, DC 20594

RRD22FR013

OPERATIONS

Group Chair's Factual Report

February 7, 2023

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A. ACCIDENT

Location: El Paso, TX
Date: August 29, 2022
Time: 9:14 p.m. Mountain Daylight Time (local time)
Time: 3:14 a.m. Coordinated Universal Time (UTC)
Train: ISIEP-29, Union Pacific Railroad Employee Fatality

B. OPERATIONS GROUP

Group Chair	Michael Bachmeier National Transportation Safety Board / Operations
IIC	Richard Hipskind National Transportation Safety Board / Track
Party Coordinator	Jason Jenkins Union Pacific Railroad / General Director Safety
Party Coordinator	Christopher Martinez Federal Railroad Administration / IIC
Party Coordinator	Kamron Saunders Smart TD / Safety Task Force Investigator
Party Coordinator	Jim Maynard BLET / Safety Task Force Investigator
Group Member	Donald Gallegos Smart TD / Safety Task Force Investigator

C. SUMMARY

On August 29, 2022, about 9:14 p.m.[1] local time, the conductor of Union Pacific Railroad (UP) train, ISIEP-29, was killed when two cars of the train derailed while performing a westward reverse movement near UP's Alfalfa Yard in El Paso, Texas. The train consisted of two locomotives and 63 cars. The conductor was riding on the lead car of the train during a move from Main Track 1 through Control Point Rosedale onto the yard lead when it encountered a derailing device. The derailing device had been placed on the track to protect maintenance-of-way (MOW) employees installing a switch at the east end of Alfalfa Yard. The first two cars of the lead end of train derailed with the lead car landing on its side and then sliding into a

[1] All times used in this report are Mountain Daylight Time (MDT). However, some documents in the NTSB's public docket may reflect UP's Harriman Center time as Central Daylight Time (CDT).

residential property and severing a natural gas line. Conditions were dark, the temperature was 80°F with light wind at the time of the accident.

Parties to the investigation include UP, the Federal Railroad Administration, the Brotherhood of Locomotive Engineers and Trainmen Union, and the International Association of Sheet Metal, Air, Rail and Transportation Workers.

Figure 1: Accident Scene. (Drone image courtesy of UP)

D. ACCIDENT NARRATIVE

The crew of ISIEP 29 consisted of a locomotive engineer, conductor, and a brakeman. The assigned train consisted of two locomotives, 58 loads and 5 empties, 7480 tons, and was 3961 feet long. Train ISIEP 29 operates from Santa Teresa, New Mexico (NM) to El Paso, Texas (TX). The crew for the ISIEP 29 went on duty August 29, 2022, at 11:00 a.m. local time in El Paso and vanned to Santa Teresa.

According to the interviews, the brakeman and engineer told investigators that they waited a few hours for a van before finally taking a company vehicle, driven by the brakeman to Santa Teresa around 3:00 p.m. Once they arrived at Santa Teresa, they went to the yard office where the conductor went in to get the paperwork and their instructions.

The brakeman told investigators that they were instructed to pick up two units, both units were facing the same direction. The conductor called the coordinator and were told to turn one of the locomotives so that they would have one locomotive

facing each direction. The engineer and conductor turned the power and once they returned with the power, they put their train together. The train was air tested and the trains information entered into the Positive Train Control (PTC) system.

The crew departed Santa Theresa at 7:37 p.m. and had a rail car scheduled for pick-up at Dallas Street. The train arrived in Dallas Street at 8:06 pm. and were told by the dispatcher to high-ball the pick-up according to the brakeman's interview. The train arrived on Main Track #4 and waited further instructions from the dispatcher. During the movement from Santa Teresa back to Alfalfa, the brakeman was driving a vehicle and not present with the crew on the train.

Figure 2: Photo from the forward-facing video showing the train passing the MOW working on main track one (left side of picture) [See Video Image Factual Report in NTSB's docket]

Upon departing Dallas Street at around 8:31 p.m. for Alfalfa Yard, the dispatcher routed the train from main track two through a crossover at Rosedale control point onto main track one where they passed the maintenance-of-way (MOW) crew working on main track one and derail placed on track 191 (yard lead). The event recorder showed the train stopping on main one east of CP 820 Rosedale at 8:49 p.m.

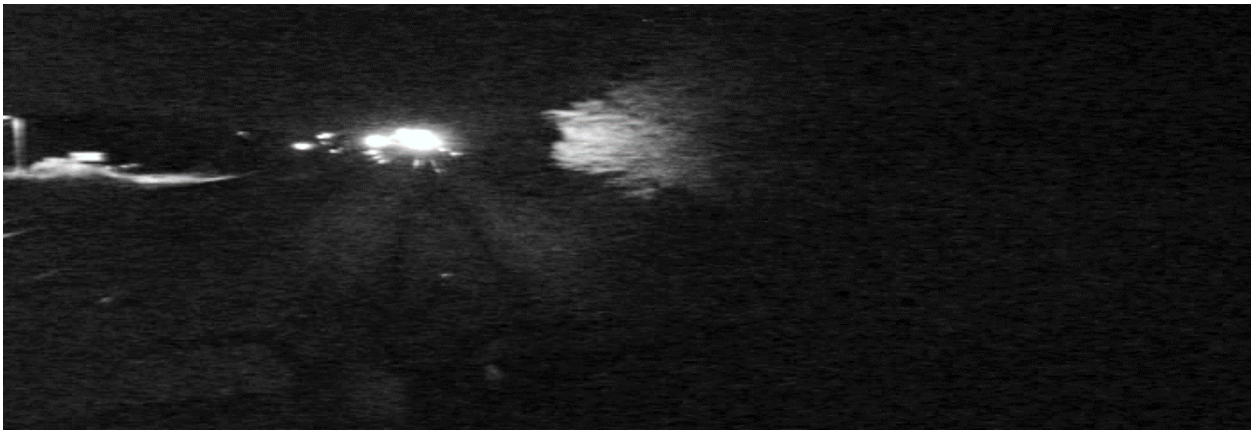

Figure 3: Photo from the forward-facing video showing the train passing the location of the derail which is located on the top left near the yard light with the locomotive headlight dimmed. [See Video Image Factual Report in NTSB's docket]

The second shift dispatcher's tour of duty had ended at 9:00 p.m., and the dispatchers completed their transfer (or turnover) whereupon the third shift dispatcher answered the ISIEP crew. The ISIEP asked the dispatcher for the signal at the east end of Alfalfa yard. The dispatcher asks them if the yard is ready for them, and the crew said they were ready for them. The dispatcher "lit up" (lined the signal), a restricting signal and reversed the switch for the train to proceed westward towards the yard lead and into the yard.

The engineer in his interview stated that after their train was in position on main track one, they stayed there for about 19—20 minutes waiting to receive a signal and instructions from the MTO to shove their train from main track one onto a non-signaled (non-controlled) yard lead track that would take them into the east end of the Alfalfa Yard where they would yard the 63 cars into three track. The engineer stated that the conductor called the MTO to let him know they had a restricting signal to enter the yard and asked for yarding instructions. After a few minutes the MTO got back to the ISIEP 29 and gave them yarding instructions and the ok to shove into the yard off of the main track.

The conductor was riding the rear car protecting their shove movement while giving instructions to the engineer via the hand-held portable radio. They started the shove movement at 9:09 p.m. according to the event recorder download. The conductor was engaged and giving car counts according to the engineer's interview. The last communication the engineer heard from the conductor was that the MOW is 20 cars away, can you start blowing the horn.

It was moments later that the train went into emergency and derailed when the rear car hit the derail, derailing two cars with the rear car derailing on its side. After the train stopped, the engineer called out to the conductor, but heard no response. The engineer also heard the brakeman calling for the conductor. The engineer then

got on the radio to tell the MTO that they had went into emergency and they could not reach the conductor via the radio.

The MTO told the engineer to contact the utility employee and as he called the utility, utility employee stated he was enroute. The brakeman and utility were the first employees on scene and found the conductor. Once the emergency responders arrived on-scene, they pronounced the conductor dead.

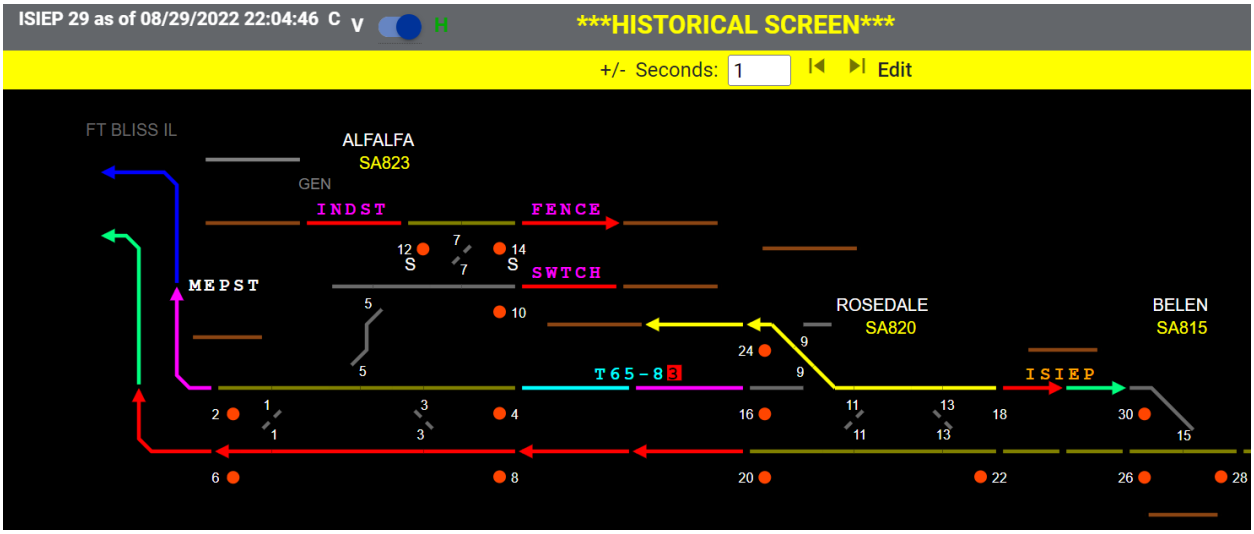

Figure 4: CAD log showing ISIEP lined up for a reverse move onto the yard lead track 191 at 9:04 p.m. local time.

E. RECORDED COMMUNICATION

Investigators received recordings of communication between the train crew and dispatchers and from the MTO and the Corridor Manager that documented the course of conversation about the accident train gaining permission to enter Alfalfa Yard.

Prior to receiving a signal at Rosedale, at 9:02 p.m. the conductor radioed the third shift to request a signal into the yard. Toward the end of their communication the dispatcher said to the conductor, "All right, copy that, they're ready for you there in the east end, over." The conductor answered the dispatcher by saying, "Yes, sir, that is correct. We're stopped on the east end ready for that signal." The dispatcher ended their communication by saying, "All right, copy that, here we go." The conductor then radioed the engineer and told him that they had a signal into the yard.

The MTO stated in his interview that once he observed the ISIEP lined into the yard on his display screen in the yard office that he called the Corridor Manager (CM) on the phone at to inquire about that move. The phone conversation was recorded,

and the transcript indicated that the call began at 9:04 p.m. The MTO said to the CM about getting "lights" into the yard, "They haven't given that back to me yet." To which the CM asked if something going on out there and the MTO replied, "Well, from what I understand, they got that (indiscernible) away [maintenance of way] out there." The CM said there was no tag out there but then recognized that it was in the yard. The CM then asked, "I mean, is it going to hurt if they give him a light in there? Is there going to be a block or something up there?" The MTO replied, "No, I mean, having the lights is not going to be a problem. Let me see who's working over there and see if I can call them and see if I have access to the lead yet or not. He's -- my understanding was that I don't have access to the lead yet. Alfalfa, stand by there, sir." The CM said to the MTO, "I got the dispatcher and I'm down there to stop them real quick there. So, figure that out." The MTO replied, "Adam something, isn't it? (Indiscernible). Okay, let me, let me (indiscernible), sir, and I'm going to call this guy to see what it looks like."

That phone call ended; however, at 9:06 p.m. the CM called the MTO and said, "Hey, that dispatcher talked to him, and they cleared him through an ISIEP. So –." To which the MTO answered by saying, "So, I -- he can make him move?" The CM replied, "That's what he said. He said he talked to him." The MTO asked, "To whoever is working over there? The CM answered, "yes." The MTO then stated, "Okay, all right. Yes, I just want to make sure because I just, I just think the (indiscernible) [MOW] they're not supposed to give it back till 9:30." In his interview, the MTO told investigators that he radioed (yard channel, not recorded) the ISIEP and gave them permission into the yard. MTO also said that he just sent a message to the superintendent and the superintendent said it wouldn't be back until 9:30; however, the MTO indicated that the CM said the second shift dispatcher said the foreman in the yard said they were ready for them.

A review of the event recorder data indicates that the train started to shove into the yard at 9:09 p.m. The train derailed at 9:14 p.m.

Investigators interviewed the foreman in charge of the MOW work on main track one to see if anybody called him to request permission into his work area or if he was ready for a train to use the yard lead. The foreman responded that he talked with the second shift dispatcher at about 5:30 p.m. but that nobody called or radioed to him about using the yard lead prior to the ISIEP using the yard lead (track 191).

F. EMERGENCY RESPONSE

The first 911 call came in at 9:18 p.m., local time, from a residence who was advising that a railroad train derailed in his backyard and hit a gas line. The first emergency response vehicle was dispatched at 9:19 p.m. and arrived on-scene at 9:24 p.m. Subsequently, eight additional emergency response units were dispatched beginning at 9:27 p.m. to 9:46 p.m. and those units arrived between 9:33 p.m. to

9:52 p.m. An Incident Command was established locally in the neighborhood at 9:45 p.m. The scene was eventually released at 9:00 a.m. on August 31, 2022.

When El Paso police arrived on-scene, they assessed that the railroad employee was DOS (meaning dead on-scene). The employee was covered, and the coroner's office was notified.

At 9:48 p.m. a safe zone at a local church was established for evacuees. The evacuation was ended at 10:21 p.m. with only the residents of where the rail car was located prevented from returning to their home.

Texas Gas was notified at 9:37 p.m. and representatives of Texas Gas arrived on-scene at 10:26. Texas Gas technicians advised there was no leak once they assessed the gas line integrity. Texas Gas took precautionary measures to protect the gas line in light of the eventual removal of the rail car.

G. LOCATION OF ACCIDENT

The location of the accident was on the yard lead (track 191) which is a non-controlled track with all movements directed by the MTO. The two tracks adjacent to the yard lead to the south were main track one and main track two which were the most southern tracks from the yard lead. The two main line tracks are controlled tracks which are controlled by the UP Dispatcher in the UP Herriman Dispatch Center in Omaha, Nebraska.

H. METHOD OF OPERATION

The ISIEP 29 was operating under GCOR Rule 6.28, Movement on Other than Main Track when the accident occurred on the yard lead (track 191) at milepost 820.4.

I. DETAILS OF THE INVESTIGATION

1.0 Description of UP Valentine Subdivision

The Valentine Subdivision extends from milepost 610.7 in Alpine Siding to milepost 826.9 in El Paso (Piedras St.) in a timetable east-west direction. The subdivision consists of mostly single main track with multiple passing sidings. Maximum authorized timetable speed is 79 mph for passenger trains and 70 mph for freight trains. Freight trains exceeding 80 ton per operative brake must comply with speed restrictions. Centralized Track Control (CTC) is in effect for the entire

subdivision. Positive train control (PTC) is in effect between CP SA611 (MP 610.7) and CP SA827 (MP 826.9).

Figure 5: Map showing the Lordsburg and Valentine Subdivision along with Alfalfa Yard.

2.0 Description of Lordsburg Subdivision

The Lordsburg Subdivision extends from milepost 826.9 in El Paso (Piedras St.) to milepost 987.9 in a timetable east-west direction. The subdivision consists of mostly multiple main tracks with multiple passing sidings. Maximum authorized timetable speed is 79 mph for passenger trains and 70 mph for freight trains. CTC is in effect for the entire subdivision. PTC is in effect between CP SA827 (MP 826.9) and CP SP988 (MP 967.9).

3.0 UP Engineering Switch Installation Project

Prior to the ISIEP crew coming to work, UP's engineering personnel had made plans to install a switch located at the east end of the yard that connected to main track one. For this effort, they had planned to place main track one out-of-service from Rosedale to the east end of Alfalfa Receiving Yard, establish a Form B protection on both main tracks to control movement of trains passing by the work zone and also establish "inaccessible track" protection for the yard lead track (track 191) adjacent to main track one where men and equipment would be working. The EIC stated he placed the derail and a flag on the north rail of the yard lead near "dead end" street turn-around (easily accessible to the lead track).

The Form B became effective at 6:00 a.m. MDT on August 29, 2022, and would expire at 6:00 p.m. However, a delay occurred due to the need to make-up a train set to depart Alfalfa Yard prior to granting permission to begin the switch replacement project that lasted until about noon. Once the train had departed Alfalfa Yard, the maintenance crew began their work.

4.0 Mechanical Inspection

A mechanical inspection was performed by the FRA Motive Power and Equipment (MP&E) Inspector on both the freight cars that derailed, and no defective conditions were noted. The rear freight TILX 649372, derailed on its right side, and the second to the rear freight car TILX 649355, derailed upright.

Additionally, the two-unit conventional locomotive consist of UP train ISIEP-29, were inspected for compliance with Federal regulations, 49 CFR Parts 229, 231 and 232. No defective conditions were noted.

Figure 6: Lead Locomotive of the UP Train ISIEP-29

5.0 UP Locomotive Movement Timeline

On August 31, 2022, the investigative group conducted a review of the train movements leading up to and after the accident. Below is a synopsis of the movement.

SIEP-29 Train Consist Data

2 Locomotives

- UP 7132 (C44ACM-98) Position 1
- UP 7653 (C45ACCTE-07) Position 2
- 58 Loads, 5 empties, 7480 Tons, 3961 length
- Operative Brake Count – 62
- Axle Count – 248

ISIEP-29 Timeline:

At around 8:31 p.m., train ISIEP, was at milepost 1298.156 (Dallas St. Yard), on the Lordsburg Subdivision shows departing Dallas St. Yard (Main Track 4) towards Alfalfa Yard.

After traveling approximately 7 miles, the engineer slows train to two MPH at or near MP 819.755 (CP Rosedale) around 8:45 p.m. The image recording footage

shows an employee exit the cab. The engineer then increases throttle to throttle notch 7 and speed increases to 18 MPH.

At approximately 8:47 p.m. the engineer begins slowing the train by reducing throttle, and transitions to dynamic brakes, and applying train brakes. At 8:49 p.m. the engineer stops the train at MP 818.93 approximately 4300 feet past the area of the employee leaving the cab (locomotive).

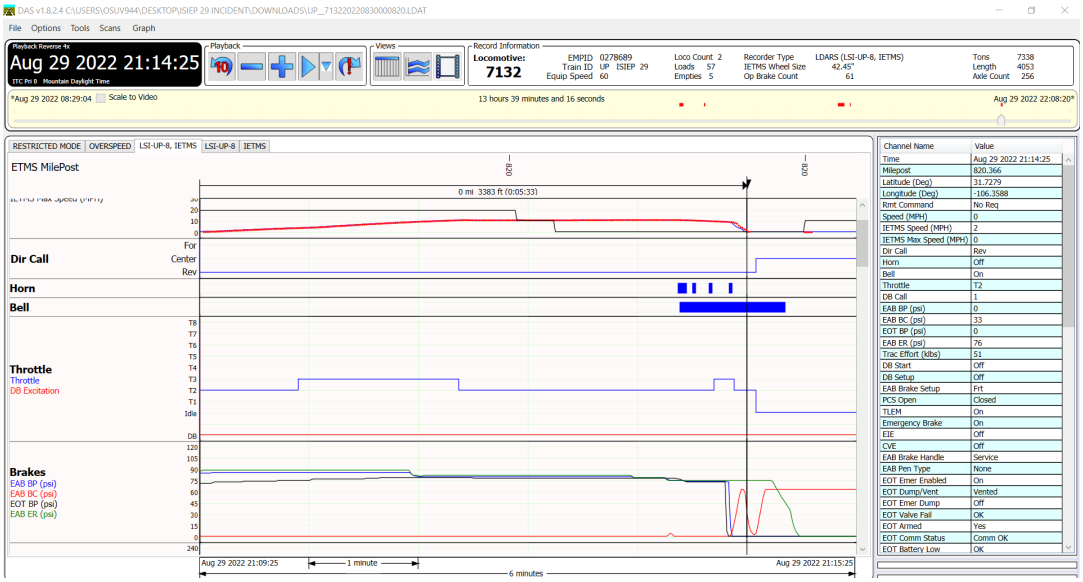

Figure 7: The UP 7132 remains stationary until: 9:08:42 (approximately 19 minutes, 12 seconds). The shoving move passes CP SA820 (Rosedale) towards the Alfalfa yard lead until the locomotive has an emergency brake application at 9:14 p.m. [See Locomotive Event Recorder factual report in NTSB Docket]

UP 7132 Data Table representing time and throttle settings shoving into the yard.

Time	MP	Speed	Throttle	EAD BP	EAB BC	EAP BP	EAB ER
21:08:52	818.938	0	Idle	70	72	61	79
21:09:41	819.707	1	T2	87	0	74	90
21:10:29	819.746	4	T4	80	0	78	90
21:11:25	819.854	9	T3	81	0	80	81
21:13:25	820.207	10	T2	80	0	79	80
21:13:43	820.263	10	T2	76	4	79	76
21:13:54	820.296	10	T2	75	0	74	76
21:14:09	820.327	9	T3	75	0	74	76
21:14:14	820.349	8	T3	74	0	7	76
21:14:15	820.352	8	T3	74	0	0	76
21:14:27	820.365	0	T2	0	8	0	76

6.0 ISIEP Train Crew Personnel Information

Engineer

The Engineer started with UP on October 3,1994, and has 27 years of experience working as an engineer for UP. The engineer's training records indicated that he completed his last re-certification on August 25, 2022, and last engineer certification general knowledge exam on May 13, 2022.

A review of the engineer's work history from 07/29/22 to 08/29/22 indicated that the engineer had worked a total of 9 times in the 30 days prior to the accident.

Conductor

The conductor started with UP on February 7, 2011. The conductor's training records indicated that he completed his last re-certification on April 12, 2021, and last General Code of Operating Rules – Recurrent Exam was on November 14, 2019.

A review of the conductor's work history from 07/29/22 to 08/29/22 indicated that the conductor had worked a total of 18 times in the 30 days prior to the accident.

Brakeman

The brakeman started with UP on September 27, 2004. The brakeman's training records indicated that he completed his last re-certification on August 25, 2022, and last General Code of Operating Rules–Recurrent Exam was on June 23, 2022.

A review of the brakeman's work history from 07/29/22 to 08/29/22 indicated that the brakeman had worked a total of 14 times in the 30 days prior to the accident.

7.0 Interviews

The investigative team conducted two interviews on Monday, August 31st, 2022 (Track Foreman – Employee-In-Charge (EIC), 2nd shift Manager Terminal Operations (MTO), and five interviews on September 1, 2022 (Engineer, Brakeman, 2nd Shift Dispatcher, 3rd Shift Dispatcher, and Corridor Manager), at the Holiday Inn in El Paso, TX. The team also interviewed an additional employee on October 13, 2022 (1st Shit MTO), via Microsoft Teams Video conference call. Please refer to the docket for the full interview's transcripts.[2]

[2] The full interviews will located in the docket at this web address: NTSB Docket - Docket Management System

8.0 Toxicology Testing

Post-accident toxicology testing for the conductor were negative. The two crewmembers were FRA postaccident D&A tested, results were negative. No other UP employees were tested.

9.0 External Oversight

In June of 2020, as part of an agency restructuring, FRA transitioned eight regional leadership teams into nine Safety Management Teams to serve as the Office of Railroad Safety's main liaison with the senior leadership of the Nation's railroads. Each of the nine safety management teams are assigned to Class I railroads or a group of railroads and provides safety oversight of the respective railroad system(s).

The nine safety management teams are:

SMT-1: Amtrak, commuter, and excursion railroads operating in the eastern section of the Nation

SMT-2: Short Line East

SMT-3: Norfolk Southern

SMT-4: CP/CN/CCD

SMT-5: BNSF

SMT-6: UP/KCS

SMT-7: Commuter and excursion railroads operating in the western section of the Nation

SMT-8: Short line railroads operating in the western section of the Nation

SMT-9: CSX

The Safety Management Teams represent FRA with the railroads, and they communicate and coordinate with FRA's Staff Directors, Accident Analysis Branch, Audit Management Program, and other Safety Management Teams. To carry out its mission, FRA staff includes about 400 Federal safety inspectors and specialists, as well as approximately 200 state inspectors who are spread throughout the US. Safety inspectors focus primarily on five safety disciplines when conducting inspections for compliance and enforcement; those disciplines are:

- Hazardous Materials
- Motive Power and Equipment
- Operating Practices
- Signal and Train Control

•Track

10.0 Operational Testing/Internal Oversight

On November 25, 1974, the Federal Railroad Administration (FRA) provided notice of intent to move forward with the proposed rulemaking for Part 217-Railroad Operating Rules. Within Part 217, FRA codified internal oversight for railroad operations by establishing minimum requirements for railroads to conduct periodic tests and inspections to determine the extent of compliance with operating rules and timetable special instructions.

Title 49 Code of Federal Regulations (CFR) Section 217.9 requires that every railroad have a written program of operational tests and inspections in effect. Employees are tested on various aspects of their job to evaluate their ability to perform their jobs correctly and their knowledge of company rules and federal regulations. This testing not only evaluates the worker's skills and overall ability to perform a task safely and correctly, but it also reinforces compliance with rules.

A railroad's operational testing program on file with FRA must, at a minimum:

1. Provide for operational testing and inspection under the various operating conditions on the railroad, at various times, and at a variety of locations.

2. Address with particular emphasis those operating rules that cause or are likely to cause the most accidents or incidents, such as those accidents or incidents identified in the quarterly reviews, 6-month reviews, and annual summaries.

3. Require a minimum number of tests and inspections per year covering the requirements of 49 CFR Part 218, Subpart F.

4. Describe each type of operational test and inspection required, including the means and procedures used to carry them out.

5. State the purpose of each type of operational test and inspection.

6. State, according to operating divisions where applicable, the frequency with which each type of operational test and inspection is to be conducted.

7. Identify by name, job title, and division or system, the railroad manager who is responsible for ensuring that the program of operational tests and inspections is properly implemented.

8. Require a record of the date, time, place, and result of each operational test and inspection that was performed in accordance with the railroad's program.

9. Require a record that specifies the railroad manager that performed the operational test or observation and each employee tested.

10. Mandate a review of operational testing results and require adjustments to the program of operational tests accordingly.

11. Mandate a quarterly review when regulations require.

12. Mandate a 6-month review when regulations require.

As a result of the aforementioned requirements, UP conducts tests and observations of its employees in accordance with federal regulations to determine their level of compliance with railroad operating rules. NTSB investigators reviewed UP's efficiency testing program and requested specific data regarding efficiency tests for the crew of ISIEP 29.

The UP program contains specific information for testing officers to be used when setting up and conducting tests. Federal regulations require that each test be described in the program including the means and methods used to conduct the tests. UP has established a program of operational testing which contains the required information by regulation which is needed to maintain consistency among its testing officers. A review of the efficiency testing results for the revealed the following:

During calendar year 2022, the conductor was operationally tested 117 times, of which 7 times were for compliance with shoving movements and 4 times for movement on other than main track. The conductor was found to comply with all his tests during the 117 operational tests with 0 failures noted.

During calendar year 2022, the engineer was operationally tested 129 times, of which 9 times were for compliance with shoving movements and 4 times for movement on other than main track. The engineer was found to comply with all his tests during the 129 operational tests with 0 failures noted.

During calendar year 2022, the brakeman was operationally tested 153 times, of which 17 times were for compliance with shoving movements and 4 times for movement on other than main track. The brakeman was found to comply with all his tests during the 153 operational tests with 0 failures noted.

11.0 Applicable Rules

6.5: Shoving Movements

Providing Protection Prior to Initiating Shoving Movement
Equipment must not be shoved until it is visually determined that:

- Portion of track to be used is clear of equipment or conflicting movements.
- The track will remain clear to the location where movement will be stopped.
- Switches and derails are properly lined.

Engineer and employee protecting the movement must complete a job briefing concerning how protection will be provided.

When not using hand signals, radio job briefing must include:

- Who will protect the shove.
- How the shove will be protected.
- Distance and direction to be shoved (Distance specified must be acknowledged when it is more than four cars.)

MOVEMENT MUST STOP WITHIN HALF THE DISTANCE SPECIFIED UNLESS ADDITIONAL INSTRUCTIONS ARE RECEIVED.

Employee must be in a position to provide visual protection of the equipment being shoved. Participating crew members must not engage in unrelated tasks while making a shoving movement.

Shoving movements over road crossings must be made in accordance with Rule 6.32.1 (Providing Warning Over Crossings).

Employees may be relieved from providing visual protection when:

- Superintendent Bulletin specifies tracks that will be protected with shove lights or monitored cameras.
- Making back up movements in accordance with Rule 6.6 (Back up Movements).
- A track has been pulled and cars or equipment of less length will be immediately shoved back into the track and it is visually determined the track has remained clear to the location where movement will be stopped.

Speeds When Shoving
When cars are shoved on a main track or controlled siding in the direction authorized, movement must not exceed:

- 20 MPH for freight trains.
- 30 MPH for passenger trains.
- Maximum timetable speed for snow service unless the employee in charge authorizes a higher speed.

Rule Updated Date

May 10, 2022

6.28: Movement on Other than Main Track

Except when moving on a main track or on a track where a block system is in effect, trains or engines must move at a speed that allows them to stop within half the range of vision short of:

- Train.
- Engine.
- Railroad car.
- Men or equipment fouling the track.
- Stop signal.
  or
- Derail or switch lined improperly.

Application:

Train and/or engine speed must allow for movement to stop short of the obstructions listed consistent with good train handling.

Rule Updated Date

April 1, 2015

System Special Instructions

Effective Date: April 1, 2015

1.46: Duties of Yardmasters

The yardmaster is responsible for and shall directly supervise yard crews, clerks, and all other employees working in the yard. The yardmaster must see that they work in a safe, efficient, and economical manner, according to the rules, regulations, and instructions of the railroad. Yardmasters must ensure the prompt and regular movement of cars, especially the proper makeup of trains and their movement into and out of the yard.

At locations where yardmasters are on duty, employees in train, engine, and yard service must comply with the yardmaster's instructions. At locations where no yardmaster is on duty, these employees will work according to the instructions of designated employees.

Rule Updated Date

April 7, 2010

The term yardmaster, a contract employee, used in this rule should be considered synonymous with the term or title Manager Terminal Operations (MTO), a non-contract employee. UP's definition of a yardmaster's "Duties and Responsibilities" [1.46: Duties of Yardmasters] can be found in the General Code of Operating Rules or GCOR. Both job titles, whether a yardmaster or MTO, are responsible, governed by, and subject to compliance with GCOR rules.

Sunset Area Timetable No. 5 – Valentine Subdivision

SI-06 RCL OPERATIONS

Remote Control Areas:
From MP 814.0 to MP 826.9 "Piedras Street,"
MP 1298.5 on Lordsburg Subdivision.

Remote Control Zones:
Alfalfa Yard - Contact Alfalfa Yardmaster on channel 020-020 for zone status information:

Zone 1:
Begins east of the fouling point of the 12 switch eastward on track 191 to the Rosedale grade crossing.

Zone 1A:
Begins at the east end of the Alfalfa Tank Yard Lead from but not including the #23 switch on the 29 lead, continuing eastward on track 18 to the fouling point of the switch to track 191.

Zone 2:
Begins at the 32 switch on the Tank Yard Lead, extending westward to the pot signal at CP SA823.

Zone 3:
Begins at the fouling point west of the 16 switch on the west lead extending westward to the pot signal at CP SA823.

See SI-14 for instructions concerning RCL foul time and Superintendent Bulletins for detailed RCL operation information.

Chief Engineer Instruction Bulletin

Effective May 2, 2016
Includes Updates as of May 10, 2022[3]

136.4.2: Inaccessible Track[4]

Inaccessible track is a method of establishing working limits on non-controlled tracks by making the track physically inaccessible to trains, engines, railroad cars and on-track equipment. Non-controlled track consists of:

In areas where Remote Control Operations may be in effect, working limits may not be established by making the track inaccessible until the Employee-In-Charge:

Inaccessible track can also be used to establish working limits on adjacent non-controlled tracks when it is necessary to foul adjacent tracks.

The EIC or lone worker establishes working limits using inaccessible track by one or more of the following methods:

Yard tracks.
Industrial leads.
Non-controlled sidings.

1. Contacts the yardmaster or control operator to determine if Remote Control Operators are working in the area and, if so, how many.
   AND
2. Conducts a job briefing with each Remote-Control Operator to discuss method and location of inaccessible track.

- Line a switch or derail to prevent access to the working limits. Tag the switch or derail and lock, spike, and/or clamp it securely. You must use a personal lock so train service employees cannot unlock it.
- Ask the dispatcher / control operator to line a remotely controlled switch to prevent access to the working limits.
- The dispatcher / control operator must:

[3] This is UP's Inaccessible Track rule that was in effect prior to the accident date, August 29, 2022. However, this specific rule was later revised after the incident.
[4] This is UP's Inaccessible Track rule that was in effect prior to the accident date, August 29, 2022. However, this specific rule was later revised after the incident.

- Apply a locking or blocking device to the control of the switch.
- Notify the roadway worker that protection has been established.
- Not remove the locking or blocking device until the roadway worker who requested the protection gives permission to do so.

- Follow Rule 7.13 (supplement) to protect roadway workers in bowl tracks and other non-controlled tracks with remotely controlled switches.
- Place a flagman to hold all trains and equipment clear of the working limits.
- Place portable derail(s) with red flag(s).
  - EICs must utilize locking out, spiking and / or clamping, and tagging a switch as the first means of making a
  - track inaccessible to reduce the number of derails placed.
  - Derails and red flags must be placed 150 feet in advance, if possible, from the working limits to prevent
  - movement into the limits.
  - Lock, or otherwise effectively secure the derail so that it cannot be removed.
  - Attach a tag to the derail.
  - Complete Switch and Derail Awareness Checklist.
- Use derails (with red flags), switches lined against or discontinuity in the rail to protect against the possibility of standing cars rolling into your working limits. However, protection against standing cars is not required for the operation of snow blowers and weed spray trucks if ground personnel are not involved.

Application:
When locking a switch or derail a MW or personal lock may be used.

Rule Updated Date
April 1, 2020

System Special Instructions
Effective Date: April 1, 2020

Submitted by:

Michael Bachmeier
Operations Group Chairman

J. PARTIES TO THE INVESTIGATION – ACKNOWLEDGEMENT SIGNATURES

The undersigned designated *Party to the Investigation* representatives attest that the information contained in this factual report for NTSB's accident investigation RRD22FR013 of the Union Pacific Railroad Company derailment on the Alfalfa Yard lead resulting in an employee fatality in El Paso, Texas is a factually accurate representation of the information collected during the investigation, to the extent of their best knowledge and contribution in this investigation.

_____ Date _____
Chris Martinez, FRA

/s/ Jason Jenkins Date 4/12/2023
Jason Jenkins, UP

/s/ Jim Maynard Date 4/17/2023
Jim Maynard, BLET

/s/ Don Gallegos Date 4/12/2023
Don Gallegos, SMART