

National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, CA 94035-1000



C³RS Alert Message Memo

The Confidential Close Call Reporting System (C³RS) is a partnership between the National Aeronautics and Space Administration (NASA) and the Federal Railroad Administration (FRA), in conjunction with participating railroad carriers and labor organizations. The program is designed to improve railroad safety by collecting and analyzing reports which describe unsafe conditions and events in the railroad industry. Employees are encouraged to report safety issues or "close calls" voluntarily and confidentially.

When C³RS receives a report(s) describing a hazardous situation - for example, a railroad system problem, a confusing procedure, or any other circumstance that might compromise safe operations - it will issue an Alert Message. Alert Messages have a single purpose: to relay safety information to individuals in a position of authority so that they can evaluate the safety information and take corrective action as needed. C³RS has no direct operational authority of its own. It acts through, and with, the cooperation of others. Alert Messages are classified as Alert Bulletins or For Your Information Notices and may be included in ad hoc C³RS Safety Teleconferences.

Alert Bulletins – Alert Bulletins (ABs) are utilized for significant or time-critical safety Issues.

For Your Information Notices – For less critical topics, For Your Information (FYI) Notices are issued.

Safety Teleconferences – C³RS will conduct Safety Teleconferences on an ad hoc basis between C³RS and others within the railroad community. These teleconferences alert appropriate personnel to safety issues identified in some selected C³RS Alert Messages by engaging in dialogue about the event(s) presented.

All Alert Messages are issued using de-identified information provided in the reports.

Sincerely,

A handwritten signature in cursive script that reads "B. Hooey".

Dr. Becky L. Hooey, Director
NASA Confidential Close Call Reporting System
NASA Aviation Safety Reporting System
Email: Becky.L.Hooey@nasa.gov
Phone: 408.541.2854

About C³RS Reports & Alert Messages

C³RS Report Records

The C³RS Expert Analysts provide the analysis for each report record in the C³RS Database. Information in a C³RS report record includes two types of information – fixed and text.

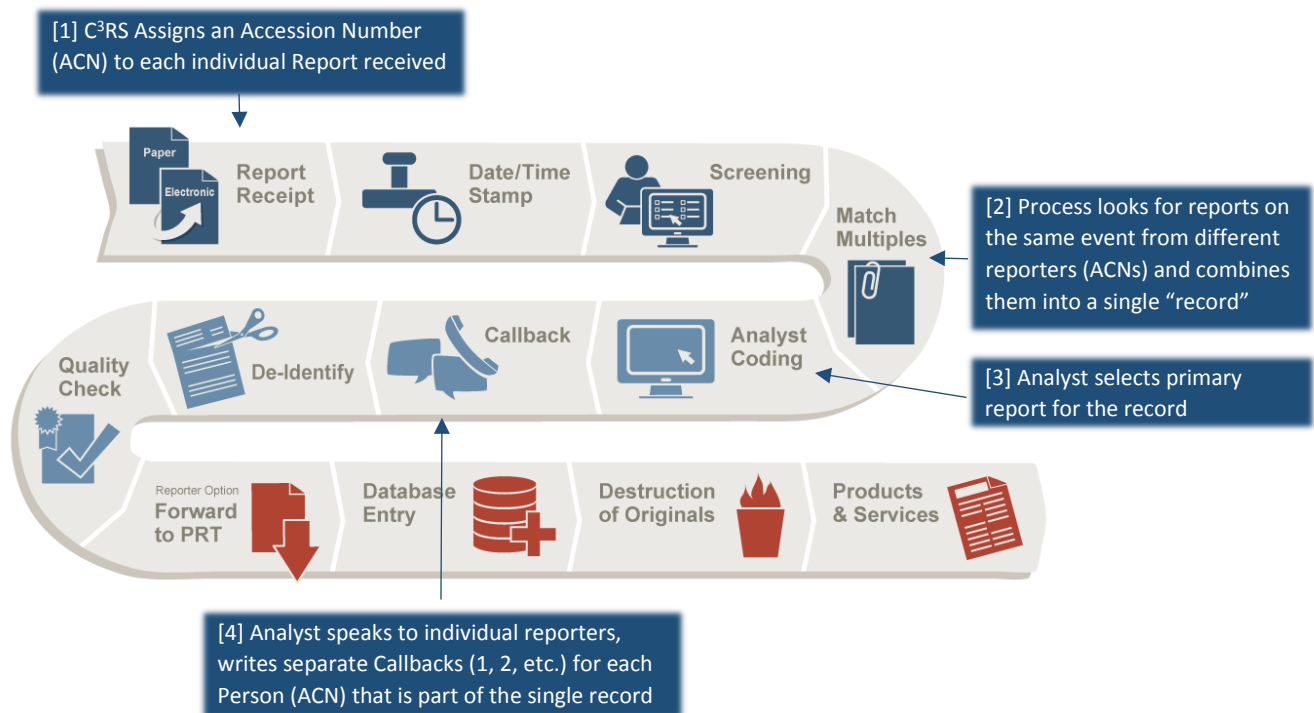
- **Fixed** fields contain information such as Types of Track Authority, Method of Operations, Speed Restrictions, etc.
- **Text** fields include the reporter's Narrative, Callback and Expert Analyst Synopsis.

Multiple Reports

One of the great strengths of C³RS is the ability to combine information from multiple reports on the same event that provides each person's unique perspective, experience, background and knowledge. In a hypothetical example, a train arrives at a station with one or more of the cars off the platform and one of the crew opens the door. Reports may be received from the Engineer, the Conductor, and the Assistant Conductor; all who have been involved in or observed the event. In this example, C³RS could have three reports that describe the same incident. All reports are combined into a single database record. Each person who reported is coded in the report record by reference number (PERSON 1, 2, etc.). Every report to C³RS receives a unique Accession Number (ACN). Each person's narrative is entered as NARRATIVE 1, 2, etc. The C³RS Expert Analysts may perform a telephone Callback to clarify or confirm information. A summary of the Callback is written by the analysts and included in the CALLBACK 1, 2, etc. section of the report record.

Alert Messages (Alert Bulletin & FYI Notices)

The ACN number presented on the Alert Message is the primary ACN in the single or multiple report record. Each Alert Message includes a front-page introduction and relevant report records. See the graphic below for a summary of the matching and C³RS report record processing steps.



ALERT BULLETIN

AB 2023:4/1-3

10/25/2023

29709, 28024, 28447, 29540

TO: FRA-RRS

INFO: FRA-RCC, PRT, AAR, APTA, ARASA, ASLRRR, ATDA, BLET, BMWED, BRS, IAMAW, IBB, IBEW, IBT, NRC, NTSB, NYA, SLSI, SMART, TCU, TWU, VOLPE

FROM: Dr. Becky L. Hooley, Director
NASA Confidential Close Call Reporting System (C³RS)

SUBJ: Train Approach Warning Provided by Watchmen/Lookout

We recently received C³RS reports describing a safety concern that may involve your area of operational responsibility. We do not have sufficient details to assess either the factual accuracy or possible gravity of the report. It is our policy to relay the reported information to the appropriate authority for evaluation and any necessary follow-up.

Summary: C³RS is issuing Alert Bulletin 2023:4/1-3 to inform the rail industry of recent close call events that were voluntarily reported involving the application of CFR §214.329 (Train approach warning provided by watchmen/lookouts). In the following reports, rail employees reported procedural or operational deviations that could lead to serious incidents and the possibility of injury. We feel you should be aware of the following de-identified reports:

(ACN 29709) A Maintenance of Way Foreman reported unsafe working conditions when utilizing a Watchman rather than Foul Time to conduct scheduled maintenance at an interlocking.

(ACN 28024) A Signal Maintainer was instructed to clear a switch near an unprotected adjacent track when a train approached the location at Maximum Authorized Speed, resulting in the train being placed into emergency.

(ACN 28447) A Signalman and Crew did not have Foul Time on a track segment where they were working on the track with a Watchman, resulting in a near miss with a train on the adjacent track.

(ACN 29540) A Maintenance of Way Foreman and multiple Electricians were not provided the required time to clear the track by Watchmen prior to a train approaching.

To properly assess the usefulness of our alert message service, we would appreciate it if you would take the time to give us your feedback on the value of the information that we have provided. Please contact Becky Hooley at (408) 541-2854 or email at Becky.L.Hooley@nasa.gov



Confidential Close Call Reporting System
P.O. Box 177 | Moffett Field, CA | 94035-0177



ACN 29709

DATE / TIME

Date of Occurrence	2023-09
Local Time Of Day	0601 - 1200

ENVIRONMENT

Weather	Clear
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TRAIN / EQUIPMENT A

Operation Type	Passenger / Commuter
Train / Equipment Location	Main Track
Train / Equipment Location	Interlocking
Methods Of Operation	Centralized Traffic Control
Train Activity at Time of Event	Enroute

PERSON 1

Accession Number	29709
Function	Foreman

EVENTS

Anomaly	Encounter - Train / Equipment
Anomaly	Procedural Deviation - Engineering Standards / Instructions
Anomaly	Procedural Deviation - Company / Organizational Policy
Anomaly	Safety Concern
Detected by Person	Maintenance of Way
General Result	Near Collision

NARRATIVE 1

Myself and my men were doing routine maintenance on the Main Track in an Interlocking with two Watchmen, one east and one west. The view west was limited due to a curve, which is also elevated track with nowhere to clear as a Predetermined Position of Safety. The west Watchman was as far west as possible but restricted any further due to the track design. [The] speed limit was X MPH with an increase to Y MPH near us. We had a couple trains pass, and it seemed like enough time to clear within 15 seconds. I calculated incorrectly, and we only had about 12 seconds in the clear. I am not Physical Characteristics or Book of Rules qualified. I'm Roadway Worker in Charge trained, and the Physical Characteristics maps that are given to us do not have the proper signal designations in them; therefore, I am apprehensive to get Foul Time because I can't confirm or deny if I'm given the wrong Foul Time limits. At the same time, I do not work this area that often, once every couple of years, making it hard to remember where the dangerous areas are.

CALLBACK 1

The reporter, a Maintenance of Way Foreman, stated that there is substantial pressure from Supervision to perform scheduled maintenance without adequate protection. The reporter explained that there are certain locations where working under a Watchman is safe to do and faster than having to get Foul Time; however, there are also locations where working under a Watchman is simply not safe. The reporter suggested that in the future, if the conditions do not appear safe enough to work under Watchman protection, the reporter will wait until Foul Time is available rather than risk safety for the sake of expediting maintenance.

SYNOPSIS

A Maintenance of Way Foreman reported unsafe working conditions when utilizing a Watchman rather than Foul Time to conduct scheduled maintenance at an interlocking.

ACN 28024

DATE / TIME

Date of Occurrence	2023-03
Local Time Of Day	1801 - 2400

ENVIRONMENT

Weather	Wind
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TRAIN / EQUIPMENT A

Operation Type	Passenger / Commuter
Train / Equipment Location	Main Track
Train / Equipment Location	Adjacent To Track
Train / Equipment Location	Interlocking
Methods Of Operation	Centralized Traffic Control
Train Activity at Time of Event	Enroute

PERSON 1

Accession Number	28024
Function	Signal And Train Control
Function	Signal Maintainer

EVENTS

Anomaly	Braking Event - Emergency / Penalty Brake Application
Anomaly	Encounter - Train / Equipment
Anomaly	Procedural Deviation - Engineering Standards / Instructions
Anomaly	Safety Concern
Detected by Person	Signal and Train Control
General Result	Initiated Emergency Brakes
General Result	Stopped Train / Equipment

NARRATIVE 1

Myself and [another] Signal Maintainer were troubleshooting Switch X at [the] Interlocking on Track X with Foul Time on Track Y and Track Z. While working on Switch X, [the] Local Dispatcher ran a train on Track X. Signal Maintainers were not made aware of a train running at Maximum Authorized Speed (MAS) on [the] adjacent track. Train A came over [the] hump without [the] top light on, giving Signal Maintainers less than 15 seconds to clear up. [The] train went into emergency, stopping at [the] Station but still adjacent to Switch X. Signal Maintainers believe this could have been avoided with a third person as a Watchman due to the high-speed crossovers within [the] Interlocking.

CALLBACK 1

The reporter, a Signal Maintainer, stated that there were two Signal Maintainers involved in the incident. The reporter explained that there was an exorbitant amount of train traffic at the time of the incident, and that may have contributed to the issue of not being given more Track Authority on all three tracks as needed. The Local Dispatcher informed the Signal Maintainers that there was not enough time in between trains to give the Track Authority necessary to do the required switch inspection. The reporter further explained that the physical location of the reporter and the reporter's partner was approximately four feet from the only track that the Local Dispatcher would not grant Track Authority on. The reporter also explained that the other Signal Maintainer was instructed to be a Lookout for oncoming traffic for just this reason; however, the other Signal Maintainer got distracted and did not alert the reporter of the train coming towards them at Maximum

Authorized Speed. The reporter noted that the near miss was close enough that the train was placed into emergency in an attempt to let the Signal Maintainers clear the area in time. The reporter stated that in the future, if necessary protection cannot be authorized on all tracks needed; the reporter will not complete the inspections until they can be adequately protected.

SYNOPSIS

A Signal Maintainer was instructed to clear a switch near an unprotected adjacent track when a train approached the location at Maximum Authorized Speed, resulting in the train being placed into emergency.

ACN 28447

DATE / TIME

Date of Occurrence	2023-04
Local Time Of Day	0601 - 1200

ENVIRONMENT

Weather	Clear
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TRAIN / EQUIPMENT A

Operation Type	Passenger / Commuter
Train / Equipment Location	Main Track
Train / Equipment Location	Adjacent To Track
Methods Of Operation	Automatic Block Signals
Train Activity at Time of Event	Enroute

PERSON 1

Accession Number	28447
Function	Signalman

EVENTS

Anomaly	Encounter - Train / Equipment
Anomaly	Procedural Deviation - Engineering Standards / Instructions
Detected by Person	Signal and Train Control
General Result	Near Collision

NARRATIVE 1

We were doing repairs to track wire on Track X at Station X. This location has a horrible bend when looking west, with a view of around 600-800 feet with shrubs obstructing [the] view of an approaching train. Facing east, the location has a clear line-of-sight, with no obstructions. Just south of Track X, there is plenty of space on the right of way to clear for the approaching train. I called [the] Local Dispatcher requesting ten minutes of Foul Time to complete the repair. I asked the other employee with me if he had time, and he responded, saying that the Local Dispatcher would call him back. It was almost half an hour before we got the call back from [the] Local Dispatcher, asking if we still needed the time. The other employee responded yes, and [the] Local Dispatcher said they would call him back again. We had other locations that still needed to be looked at for the day.

We waited until we had an eastbound on Track X pass us prior to using a Watchman as our form of protection. I told the other Inspector that I would be going on the rails to start performing the repair, [and] for me on Track X and Track Y. We, unfortunately, didn't have another man to set up an advance Watchman for the blind curve. The other employee suggested to go north of all the rails to provide Watchman duties, but unfortunately, the view to spot trains wasn't much better than the south, as it now also starts to obstruct views of the trains approaching from the east. Thus, we both agreed to stay south of the rails, as it provided the best protection for both of us. Prior to me heading towards the track, the other Inspector was watching the Timetable to see all scheduled trains that were approaching and departing Station Y. As he was performing the Watchman duties, he was also monitoring [the] Timetable on his phone and didn't see an eastbound coming on the adjacent Track Y. When he finally warned me of the approaching train, it was a few hundred feet away from where we were working on the adjacent tracks. We then swiftly cleared south of the tracks to clear for the train. The train sounded its whistle. There wasn't enough warning time (it was less than 15 seconds) to clear prior to the train approaching the working limits safely. It was much too close for my comfort. The corrective actions that could have prevented this close call [were] the Watchman not being on

his phone, viewing the Timetable to see if there were any approaching trains. Having a third Signaller present to setup an advanced Watchman. If [the] Local Dispatcher would call us back and confirm/deny the request for Foul Time, especially since there was more than ten minutes between trains on Track X throughout the duration of the afternoon, or using better judgement and advising to complete the repair at a later time with more people to provide an advance Watchman, or at a better time for the Local Dispatchers.

SYNOPSIS

A Signaller and Crew did not have Foul Time on a track segment where they were working on the track with a Watchman, resulting in a near miss with a train on the adjacent track.

ACN 29540

DATE / TIME

Date of Occurrence	2023-08
Local Time Of Day	0601 - 1200

ENVIRONMENT

Weather	Clear
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TRAIN / EQUIPMENT A

Operation Type	Passenger / Commuter
Train / Equipment Location	Main Track
Train / Equipment Location	Adjacent To Track
Train Activity at Time of Event	Enroute

PERSON 1

Accession Number	29540
Function	Electrician

PERSON 2

Accession Number	29538
Function	Electrician

PERSON 3

Accession Number	29539
Function	Electrician

PERSON 4

Accession Number	29541
Function	Foreman
Function	Maintenance Of Way

EVENTS

Anomaly	Encounter - Train / Equipment
Anomaly	Procedural Deviation - Engineering Standards / Instructions
Detected by Person	Maintenance of Way
Transportation Result	Returned To Compliance

NARRATIVE 1

All employees had their personal protective equipment. The Flagman had the required Flagman [equipment], and a Job [Safety] Briefing was filled out and discussed prior to entering the tracks. We were testing electrified rail cables on the Territory [near] the Overpass. We were setting up four Flagmen around the curve by the overpass. As we started to set up the Flagmen, a train approached us on Track X. The Flagmen blew the horns, and all employees cleared up. We were cleared for about ten seconds before the train passed us. We did not have the minimum of 15 seconds in the clear. After the train passed, we adjusted the Flagmen's positions to give ourselves more than enough time to clear and continued our work. No injuries reported. Future corrective action will be to get Foul Time while setting up Flagmen positions.

NARRATIVE 2

We were testing cables on the Territory close to the Station by a sharp curve. We were at the Overpass. A train came up on Track X, [and] we had approximately ten seconds in the clear. You are supposed to have 15 seconds. Repositioning Flagmen probably would've prevented this situation.

NARRATIVE 3

While testing cables on the Overpass, a train approached, and we had roughly only ten seconds of clearance time.

NARRATIVE 4

[While] setting up advanced Flagmen, a train came around a curve. One Flagman was fouling and didn't have 15 seconds to clear.

CALLBACK 4

The reporter, a Maintenance of Way Foreman, stated flag protection was being established with advanced Flagmen. The Flagman was crossing the track to get a better vantage point to work from because there was a bridge nearby. The reporter shared that the train was not put into emergency, but the Flagman was not in the clear for 15 seconds as dictated by rule. The reporter attributed the location, between a curve and an overpass, trying to set up the Flagmen, and other activities going on all at once were contributing factors. The reporter indicated in the future, Foul Time will be requested to set up the Flagmen.

SYNOPSIS

A Maintenance of Way Foreman and multiple Electricians were not provided the required time to clear the track by Watchmen prior to a train approaching.