Transit Rail Advisory Committee for Safety (TRACS) Working Group 11-01 Meeting

Tuesday and Wednesday, August 23 and 24, 2011

National Highway Institute,

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# Attendance

**TRACS Working Group 11-01 Members**

James M. Dougherty, Washington Metropolitan Area Transit Authority

Georgetta Gregory, Metropolitan Atlanta Rapid Transit Authority

Rick Inclima, Brotherhood of Maintenance of Way Employees Division of the International Brotherhood of Teamsters

Jackie Jeter, Amalgamated Transit Union

Cheryl Kennedy, MTA New York City Transit

Vijay Khawani, Los Angeles County Metropolitan Transportation Authority

Paul King, California Public Utilities Commission

Linda Kleinbaum, Metropolitan Transportation Authority (New York)

Alvin Pearson, Memphis Area Transit Authority

Ed Watt, Transit Workers Union of America

**Guest Presenters**

Demetra Collia, Bureau of Transportation Statistics

Linda Connell, National Aeronautics and Space Administration

Bruce Fine, Bruce Fine and Associates

Bill Keppen, Bruce Fine and Associates

Tom Newhart, Bruce Fine and Associates

Brian Reilly, National Aeronautics and Space Administration

**FTA Representatives**

Jerry Powers, Acting Director, Office of Safety and Security

Bruce Walker, Acting Designated Federal Officer

Levern McElveen, Senior Safety and Security Specialist

Richard Wong, Attorney Advisor

Holly Vandervort, Paralegal Specialist

Esther White, Transit Safety and Security Specialist

**Volpe Support Staff**

Jeffrey Bryan, Facilitator

Kevin McCoy, Note-taker

# Proceedings

## Welcome/Introductions

### Facility Safety Brief

The meeting began with a safety brief by Mr. Rick Inclima, of the Brotherhood of Maintenance of Way Employees Division of The International Brotherhood of Teamsters.

### Working Group Member Introductions

The participants in the working group briefly introduced themselves.

### *Jerry Powers*, Acting Director, Office of Safety and Security, FTA

Mr. Powers welcomed the participants on behalf of the Federal Transit Administration (FTA) Administrator. He indicated that the administrator continues to press the legislative branch to grant the FTA legislative authority over safety as part of the surface transportation reauthorization.

### *Jeffrey Bryan*, TRACS Facilitator

Mr. Bryan welcomed the participants and reviewed the agenda for the one and one-half day working group meeting. The agenda consisted primarily of group discussion, with the balance of the time filled by three presentations from project managers and consultants working on the pilot projects for the Federal Railroad Administration (FRA) confidential close call reporting system.

### *Bruce Walker*, Acting Designated Federal Officer, FTA

Mr. Walker briefly reviewed the timetable for the working group’s next steps following the meeting. He indicated that the goal would be to submit an interim report in early November, but that the date was flexible. The next working group meeting would likely be in mid-November, with one hour of that meeting being devoted to a full TRACS committee meeting via web conference.

### Opening Discussion

* Jackie Jeter asked if the goal of the working group was to develop standards for the entire rail transit industry, or to set parameters for individual agencies. She indicated that earlier phone conference discussions strayed too far from the big picture and spent too much time dealing with specific agencies.
  + Mr. Walker and others reminded Ms. Jeter that the FTA does not currently have regulatory authority to impose requirements, but that the goal is to develop standards that the industry could voluntarily adopt.
  + Mr. Bryan reviewed the tasking document from the FTA administrator for guidance on the goals of the working group. He indicated that a key task for the working group is to provide an overall Concept of Operation for a close call reporting system, and that the group could push for an FTA close call pilot program if they so choose and that they could recommend specific agencies.
* Rick Inclima stressed that the true value of a close call reporting system would be developing the ability to discover incidents that aren’t currently getting reported under existing systems.
* Ed Watt commented that at the end of the FRA Memorandum of Understanding (MOU) that established the close call reporting pilot program, there is a substantial section devoted to employee trust. He indicated his desire for the group to address trust at some point during the session.

## Current Reporting Requirements Discussion

Jeffrey Bryan moved the group to a discussion of the current reporting requirements for safety incidents and accidents in rail transit systems. In general, the group agreed that the rail transit industry currently has little standardization in safety reporting and oversight.

The group indicated that agencies must report specific incidents that meet the FTA thresholds to the State Safety Oversight (SSO) agency, but that these requirements are very limited. CFR659 requires that fatalities, mainline derailments, property damage in excess of $25,000, or accidents where more than two people were transported from the scene must be reported to SSO. The SSO is then required to investigate, but it is common for the SSO to delegate this responsibility to the transit agency. Georgetta Gregory noted that a few small systems that do not take federal funding are not subject to CFR659.

The group indicated that personal injuries are reported through standard Occupational Safety and Health Act (OSHA). The group discussed whether or not minor personal injuries should be included and it was the sense of the group that these incidents would be beyond the scope of a confidential close call reporting system because systems currently exist to require that injuries be reported.

Hazard Management was identified as another required aspect of CFR659 and Vijay Khawani noted that it enables individual agencies to establish a close call reporting system. Several working group participants indicated that their agencies have some type of close call reporting system in place, and in some cases they allow for anonymous or confidential reporting.

The working group members differentiated between hazard management and close call reporting. There was some debate over whether reporting of safety hazards should be included in a close call reporting system. Some members thought it could be valuable for some agencies where employees are currently fearful of retaliation from management for reporting safety concerns. However, it was the sense of the group that although hazard identification and elimination are important safety issues, hazard management does not fall under the scope of a close call reporting system and is already covered by existing FTA regulations.

**\*\*\* Ms. Gregory suggested that the TRACS committee consider forming a separate working group to investigate hazard management practices**

## Principles and Characteristics of a Close Call Reporting System

Jeffrey Bryan shifted the discussion to the essential principles and characteristics of a close call reporting system for rail transit safety. The principles and characteristics the working group discussed later formed the basis for the Concept of Operations.

1. **Voluntary Reporting**

All group members agreed that the system should be voluntary for employees. Employee trust in the system was identified as key for success. Jackie Jeter mentioned that some existing programs provide incentives to report, where an employee gets protection from disciplinary action if they report, but does not receive protection if they fail to report.

Vijay Khawani indicated that in his opinion, a close call reporting system should be mandatory for agencies (as it is for hazard management in CFR659). This point sparked some debate among group members, with some preferring to require all agencies to participate and others preferring to focus on starting a pilot program. In the end, all agreed that the program would need to start small, regardless of whether it became a requirement in the future. Linda Connell mentioned that in the aviation industry’s ASRS system, reports are made directly to a third-party (NASA) which analyses and publicly releases the data, thereby removing the need to mandate carrier participation.

1. **Confidential Reporting**

Jeffrey Bryan started discussion on this characteristic by pointing out the difference between anonymous and confidential reporting. He defined anonymous as a system where the person who reports is never identified. In contrast, in confidential reporting the person must identify themselves, but the collector of the data promises never to disclose their identity.

Rick Inclima and Cheryl Kennedy supported a confidential reporting system because an anonymous system would not provide the opportunity to follow up with the reporting employee. Georgetta Gregory agreed, citing the importance of providing feedback to the reporting employees on how the reports are used. Ed Watt suggested starting with an anonymous system and later switching to a confidential one.

Jackie Jeter expressed concern over what happens to data once it is collected in a confidential system. Linda Connell described the NASA ASRS process where all identifiable information is removed before anything is reported, and all original records are destroyed.

Bruce Walker stressed that it is difficult to decide to use anonymous or confidential data collection until the group has decided what data they need to collect. Regardless of which data collection system is used, it will be important to consider the data needs of all stakeholders, including FTA, which will need data to justify its support for any system.

The working group agreed that confidential data collection is ideal, but expressed concerns that identifiable information could be disclosed through legal discovery or through the Freedom of Information Act (FoIA).

1. **Third-Party Data Collection and Analysis**

Regardless of how data is protected, the group agreed that it should be done using a neutral third-party, to prevent conflicts of interest and encourage employee buy-in. Paul King asserted that centralizing data collection would also result in economies of scale, reducing costs. Georgetta Gregory supported this idea because it would create a larger data set from which to glean trends. Overall, the group agreed that using a third-party to collect, analyze, protect, and disseminate the data was essential for a successful system.

1. **Non-Punitive**

The working group agreed that the system must be non-punitive to get consistent participation. This is the primary incentive for employees to participate in the system. None of the participants seemed to think the system could work without the guarantee of immunity from disciplinary action for the reporting employees.

1. **Peer Review Teams at Local Agencies**

The group debated the pros and cons of the Peer Review Team (PRT) model used in some FRA pilot programs. In this model, the third-party data analysis team strips the reports of any information which could identify the reporting employee and sends the report to a PRT at the local/agency level. These teams consist of both management and labor representative who perform multiple-cause analysis and make recommendations for corrective action. Vijay Khawani recommended that the working group adopt this model because it allows for a cost-effective analysis of corrective action and involves local experts.

Paul King raised the issue that adopting this model could be costly. Bruce Walker responded that although they are expensive, getting local people involved is valuable, and that there may be viable ways to reduce the cost of the PRTs. Brian Riley indicated that the PRTs in the FRA pilot were large, with many senior staff members serving on them, thus increasing their cost.

Jackie Jeter asserted that when compared with grievance or arbitration expenses, this method (with immunity from discipline for employees who report close calls) is likely to be more cost-effective. Brian Reilly confirmed that there was a large reduction in disciplinary hearings at one of the FRA pilot sites. Rick Inclima expressed confidence that PRT costs could be managed if the memorandums of understanding (MOU) with individual agencies are carefully written to match available resources.

1. **Funding**

Vijay Khawani strongly encouraged the working group to include funding recommendations in its report. He pointed out that at the end of the day if agencies don’t have funding in place to pay for corrective action, the program will not succeed. Jackie Jeter was concerned that including funding recommendations would just shift the conversation to why no one can afford to fund this program. Mr. Khawani insisted that it is essential that the working group send a message to executive leadership at transit agencies that there will be a need to allocate funding to fix the problems identified by the close call reporting system.

Brian Reilly and Tom Newhart shared their experiences working on the FRA pilot programs and indicated that incidents and accidents reduced substantially at some sites. They indicated that the savings from reduced disciplinary hearings and a reduction in costly incidents and accidents make the program cost-efficient and could be used as an argument to devote funds to corrective action. Ed Watt supported the idea of shifting funding from disciplinary hearings and arbitration to identifying and fixing problems identified by the close call reporting system.

The group agreed to recommend that the FTA provide funding for the independent third-party data collector and analyzer. Georgetta Gregory and Vijay Khawani also indicated that FTA would need to help establish and maintain the program.

1. **Stakeholder Involvement and Empowerment**

Ed Watt and Rick Inclima identified employee and union participation as important factors, both for employee buy-in and because safety issues may fall under collective bargaining rights. Vijay Khawani supported this approach, particularly in the Peer Review Team (PRT).

Georgetta Gregory initially suggested that the SSO be involved in the PRTs to promote transparency. Paul King supported this idea because the SSO reps could learn from the process and perhaps provide meaningful input on occasion. This raised concerns over the security of personally identifiable data. James Doherty also indicated that because most SSOs use consultants for the majority of the work, including them in the PRT process would result in significantly higher consultant fees for the states. The issues was left unresolved, with some working group members indicating a preference for SSO involvement and others recommending that they be excluded.

## 

## Purpose, Definition, and Concept of Operations

Purpose Statement

Jeffery Bryan led a discussion on defining the purpose for a close call reporting system. Vijay Khawani suggested a broad goal of improving agency safety. Rick Inclima suggested that the purpose is to get access to better information. Paul King suggested adding the words “informed culture” and “just culture.” Mr. Bryan summarized the group’s input in the following draft purpose statement:

**“The purpose of a close call reporting system is to improve safety by understanding the core reasons for safety issues, before a more serious incident occurs and to create an opportunity to build an informed and just safety culture.”**

Definition of a Close Call

The working group discussed how to define a close call for the rail transit industry. Brian Reilly told the group that in the NASA C3RS they like to say “if there was no accident and no injury, but it had that potential, then it qualifies as a close call.” The group agreed that criminal acts should be excluded. Linda Connell reminded the group that the FRA excludes events that result in over $9,200 of damage. Paul King suggested incorporating minor personal injuries that might not otherwise be reported. Vijay Khawani and others disliked the idea of including personal injuries because all injuries are required to be reported. Rick Inclima suggested adding rail worker safety examples to the close call definition. Paul King recommended including operating rule non-compliance as a reporting option because it significantly increases the likelihood of an accident. He referenced a soon-to-be-released Transportation Research Board report on rail transit rule non-compliance (A-34), which will recommend a close call reporting system as one remedy for rule non-compliance. The group agreed on the following definition of a close call, including several examples of common safety incidents that would qualify as close calls:

**“A close call is a situation or circumstance that had the potential for more serious consequences, but did not result in an accident or injury. Close calls do not include situations that are observed in real time and reported to the RTA, or in situations involving drugs or alcohol, or involving criminal acts committed by the reporting employee.”**

**Close Call Examples:**

* Doors opening on the wrong side
* Split switch
* Signal run-through
* Doors opening short of stop
* Speeding
* Improper flagging
* Failing to blow the horn when passing caution lights
* Going through a grade crossing with broken gates without stopping
* Wrong track
* Out of limits
* Adjacent track issues
* Insufficient RWP
* Other RWP
* Energized Power

Concept of Operations

Jeffrey Bryan led the working group in a discussion to determine the group’s ideal reporting and operational structure for a close call reporting system. The group closely followed the BTS/FRA pilot program model.

Linda Kleinbaum suggested that the concept be based on the four principles of ASRS:

* Voluntary Participation
* Confidentiality Protection
* Non-Punitive
* Independence.

Alvin Pearson suggested including a phone reporting option, with the number posted in highly visible locations. Jackie Jeter suggested a paper form mailed directly to a third-party agency. Vijay Khawani suggested that the third-party agency should conduct interviews with each reporting employee, and that the working group adopt the PRT model for determining root cause and corrective action. The draft Concept of Operations below is summarized by the note taker from working group discussion.

* Establishment: Individual agencies and participating stakeholders sign a Memorandum of Understanding (MOU) with a third-party agency and FTA. An MOU includes specific details of program operations, including reporting mechanism(s) and timeframe, confidentiality protection procedures, composition of PRT, and funding of the third-party agency.
* Reporting: Employee can voluntarily report an incident following the procedures detailed in the MOU (e.g. phone call, paper form, electronic submission) which will be delivered directly to the designated third-party agency. Employees have an incentive to report because they will receive immunity from disciplinary action when they report qualifying incidents.
* Third-Party Agency: Third-party agency determines if the report meets the requirements of the program and conducts follow-up interview(s) to gain more information. Subject matter experts at third-party agency analyze all available information and send incident reports to a PRT for review with identifiable information removed. Reporting employee receives follow-up communication from the third-party agency and is indemnified from disciplinary action. The close call information is confidential and kept secure to the 3rd party organization but trend data can be released to other RTAs and FTA. The MOU will need to be structured carefully to allow for trend data to be released.)

Review: Local agency-based Peer Review Team (PRT) consisting of management, labor, and possibly government stakeholders reviews each report sent by third-party agency. PRT performs a root-cause analysis and either implements the agreed-to measures, or makes recommendations for corrective action to a higher-level management support team. Potentially provide a feedback loop to third-party agency for tracking of PRT response and so that the third-party agency may provide a response back to the employee who submitted the initial report.

* Corrective Action: Management support team evaluates corrective action recommendations (e.g. cost-benefit analysis) and determines agency response.

## Critical Success Factors

Jeffrey Bryan led the group in a discussion of the critical success factors for a rail transit industry close call reporting system. Members of the group proposed seven critical success factors:

1. Analysis of Return on Investment (ROI) when choosing how/if to implement corrective action
2. Interview or survey executives, supervisors, and employees to assess the current safety culture before instituting the system. This will provide a baseline from which to measure improvement.
3. Ensure the confidentiality of personally-identifiable data
4. Management and Labor partnership in system design and PRTs
5. All stakeholder’s data needs should be considered
6. Data collection and analysis by an independent third-party
7. Content area expertise of the data collectors and analysis teams
8. Dedicated funding, both from FTA to support a third-party agency and from the RTAs who participate in the program to implement corrective measures.

## Closing Discussion and Next Steps

Jeffry Bryan led the working group in a discussion of the next steps for the group. Linda Kleinbaum stated that determining data needs should be a high priority for the group. Levern McElveen stressed that the reporting system should have outcomes beyond data collection, including building trust and encouraging the employee to report again. The working group members agreed that building in some kind of prompt feedback to reporting employees is important. Bruce Fine reminded the group that the NASA system is not currently able to do that because they destroy all personally identifiable information.

Bruce Walker listed the next steps for the working group and the people responsible for those steps.

* Compile a library of documents presented or requested during the workgroup meeting (Bruce Walker)
* Schedule a teleconference during which more specific next steps will be determined (Jeffry Bryan)
* Look at examples of worker surveys and distribute to the group (Ed Watt)
* Review legal issues of confidentiality and possible disclosure under FOIA (Rich Wong)
* Schedule face-to-face meeting with FRA and FAA PRT members for an upcoming working group meeting (Jeffrey Bryan, Ed Watt, Rick Inclima, and Bruce Walker)
* The next workgroup meeting will be scheduled for later October or early November
  + This will include a one-hour full TRACS committee meeting via web conference.

# Presentations

## Presentation, *The* *What? Where? and Why?* *of Voluntary, Non-Punitive, and Confidential* *Safety Reporting,* Linda Connell, NASA

Linda Connell, the Program Director of NASA’s close call reporting system for both the Federal Aviation Administration (FAA) and the FRA pilot project with AMTRAK gave a presentation on the history of the FAA system and the more-recent AMTRAK system.

The FAA system - the Aviation Safety Reporting System (ASRS) – has been in operation since 1975 and has processed over one million reports without a breach of confidentiality. The ASRS program is based on four principles: 1) Voluntary Participation, 2) Confidentiality Protection, 3) Non-Punitive, 4) Independence. ASRS covers low-level, low-visibility events that are the precursors to serious incidents and fatalities. ASRS is a complement to the higher-level systems put in place by the FAA an NTSB. The purpose of the program is to get employees to trust the system enough to tell what is really going on.

The system operates on voluntary reporting of any employee working in the aviation industry. Reports are made directly to ASRS, which processes and codes the data, sometimes calling the reporting employee for clarification or elaboration. ASRS generates reports and alerts based on the data and then removes all identifiable information from the reports before entering into a publically-available database and destroying the originals.

The ASRS process has been adapted to the heavy rail industry for one of the FRA pilot projects. This program is called the NASA Confidential Close Call Reporting System (C3RS).

Questions and Answers

* Jackie Jeter asked if the FRA system has a way to feedback trends to locomotive manufacturers. Linda Connell indicated that they have not identified any such trends yet, but if they did they would publish a report in the public domain.

* Linda Kleinbaum asked if the high report rates in the SARS program have cause problems with the media confusing high reporting rates with poor safety. Linda Connell responded that it has not, and that she encourages the media to look at the data on accident and fatality rates, which have improved over the life of the program.

## Presentation, *Confidential Close Call Reporting for Rail and Other National Transportation Data Program*, Demetra Collia, BTS

Demetra Collia, Mathematical Statistician with the Bureau of Transportation Statistics (BTS) gave a presentation on the FRA Confidential Close Call Reporting System (C3RS) pilot programs that BTS is involved in.

Ms. Collia began by explaining the unique authority of BTS to protect statistical data. The congressional authority that established BTS in 1992 protects data that BTS collects from the Freedom of Information Act (FoIA) and legal discovery. Furthermore, the Confidential Information Protection and Statistical Efficiency Act (CIPSEA) provides a second avenue by which data can be secured. These two authorities are similar, but CIPSEA has no mechanism for legal challenge and prohibits the transfer of micro data to other federal agencies.

The BTS-led pilot differs from the NASA-led FRA pilot in that they retain the personally identifiable material in the micro data they collect. They never share this information and go to great lengths to protect it. However, BTS feels it is important to retain this level of detail for complex data analysis.

The BTS process is based on four key elements: 1) Voluntary Reporting, 2) Confidential Reporting, 3) Protection from Discipline, 4) Capturing Data on Previously Non-Reportable Events.

The process begins with employee input which is only collect via mail. Each report is followed up with an interview performed over the phone from inside a secure data room with a content expert. The reports must be postmarked within 3 days to qualify for protection from discipline, and the reporter receives a receipt once the interview is complete. The interview and report are written up as an incident report and forwarded to a PRT housed at the railroad agency. The PRT performs a multiple cause analysis and makes recommendations for corrective action. The PRT teams consist of representatives from labor, railroad carriers, and FRA. The pilot programs have processed over 2,500 cases in the four years since inception.

Ms. Collia suggested that the group first determine what level of detail the program will need before making decisions about data protection. The mode of data entry and level of protection will have significant implication for the infrastructure needed to support the program.

Ms. Collia later presented examples of the interview form BTS uses and a synthetic incident report used for training purposes. The interview process follows a list of over 80 questions ranging from demographic information to work schedule, vehicle information, and personal questions. The incident report is a detailed synthesis of the accounts of all employees interviewed about the incident. The report presents the facts as they were told by the interviewees as well as a shorter interpretation of events by the analyst.

Questions and Answers

* Jeffrey Bryan asked why BTS retains all of the micro data once, even after the interviews are complete. Ms. Collia responded that in order to achieve the level of detailed analysis they desired, a unique identifier had to be retained for each report.
  + Linda Kleinbaum and several other working group members expressed concern that retaining the personally identifiable information could result in a breach of confidentiality if legal interpretations and laws changed in the future.

* Levern McElveen expressed concern that there was too much analyst involvement and not enough reliance on direct reporting by the employees who were present during the incident. Mr. McElveen was also concerned that the BTS did not provide effective direct feedback to reporting employees on how their input was used.

* + Demetra Collia responded that the analysts involved in the interviews are experts in the rail industry that are able to ask the right questions of reporting employees to get at the true causes of incidents.

## 

## Presentation, *Confidential Close Call Reporting*, Bruce Fine, Bill Keppen, Tom Newhart, Bruce Fine and Associates

Bruce Fine and Associates gave a presentation on their experience working on the BTS/FRA C3RS pilot projects. Bill Keppen began by stressing the potential of confidential close call reporting to enable the identification of systematic safety issues and lead to dramatic safety improvements. Mr. Keppen indicated that they have been consistently surprised that the issues the C3RS system has identified often contradict traditional perceptions of what causes safety problem.

Bruce Fine and Associates considers the structured interview portion of the BTS process to be the most important element. These in-depth interviews performed by content area experts lead to critical information that allow analysts to get to the causes of an incident that are typically not contained in the written report.

Bill Keppen presented six elements that Bruce Fine and Associates consider essential for program success: 1) Decision maker and employee buy-in, 2) A detailed program agreement, 3) Effective data collection and processing tools, 4) corrective actions implementation and tracking, 5) The capability to conduct trend analyses, 6) A data distribution protocol that addresses the needs of all stakeholder parties. Mr. Keppen recommended that the working group focus on defining their mission and determining what their data needs are, all of which should be incorporated into the MOUs that individual agencies sign.

Bruce Fine and Associates indicated that biggest indicators of this program’s success are: 1) incident reports for specific issues stop once corrective action is implemented, 2) 85% of incidents reported have been associated with systematic causes (as opposed to simple human error).

Questions and Answers

* Alvin Pearson asked if they found that operator fatigue was a significant cause of safety incidents. Tom Newhart replied that they were surprised to find that operator fatigue was a much less significant problem then they expected.

* Rick Inclima asked if the participating rail carriers saw a reduction in labor relations costs. Tom Newhart replied that they don’t have access to the cost figures, but that there was a significant reduction in injuries and disciplinary hearings at the Union Pacific pilot site, which is likely to have reduced costs.
* Georgetta Gregory asked what the incentives are to get the rail carriers to change. Bruce Fine replied that the key factor is shifting the way first-line supervisors are evaluated from one of reward for effective discipline, to a reduction in safety incidents. Jeffrey Bryan suggested that the group should arrange to hear from members of the PRTs currently operating in the aviation and rail industries, to get their perspective.