



Due Diligence Checklist #20

Russell Hill Subway Train Accident of August 11, 1995

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Note: This updated checklist contains updates to recommendations that were open as of the last update in Due Diligence Checklist #19, dated August 27, 2008. Disposition of the recommendations closed on that date may be referenced in previous Due Diligence Checklists.

August 7, 2009

TORONTO TRANSIT COMMISSION REPORT NO.

MEETING DATE: August 26, 2009

SUBJECT: RUSSELL HILL SUBWAY TRAIN ACCIDENT OF
AUGUST 11, 1995
DUE DILIGENCE CHECKLIST UPDATE

ACTION ITEM

RECOMMENDATION

It is recommended that the Commission:

- i) Receive for information the updated Due Diligence Checklist relating to the Russell Hill Subway Train Accident of August 11, 1995, which provides a status report on the progress toward closing the Coroner's Jury Recommendations and the TTC's Internal Team Recommendations.
- ii) Forward this report to the Chief Coroner of Ontario, the City of Toronto, and the Province of Ontario for information.

FUNDING

Already in place

BACKGROUND

Nineteen previous Due Diligence Checklist updates were submitted to the Commission at its meetings of April 2, 1996, May 28, 1996, July 9, 1996, December 10, 1996, March 4, 1997, December 16, 1997, June 17, 1998, December 2, 1998, September 1, 1999, December 8, 1999, September 5, 2000, August 29, 2001, August 28, 2002, August 27, 2003, September 22, 2004, August 31, 2005 August 30, 2006, September 19, 2007 and October 23, 2008.

The following definitions have been provided to staff to clarify their meaning within the Due Diligence Checklists:

Closed means that every aspect of the recommendation has been addressed and completed. There is documentation supporting the closure. For example: a signed-off written procedure is complete and currently

being followed, the equipment is purchased and in use, or a memo is on file detailing the reason the TTC has non-concurred. The person responsible has signed-off on the Due Diligence Sign-off Report.

Closed by TTC

means that every possible step has been taken by the TTC, and the completion of the recommendation rests with an outside agency. This applies only to Coroner's Jury Recommendations. The person responsible has signed-off on the Due Diligence Sign-Off Report.

Open

indicates that the implementation of the recommendation is underway.

The TTC has closed 234 of the 236 recommendations from both the Coroner's Jury Recommendations and the Internal Teams' Recommendations. The two open recommendations relate to the implementation of speed control, and are scheduled for completion in 2010. Their completion dates were revised since the last update on August 27, 2008. Delays are attributable to software changes, track access for testing and system debugging (hardware & software), based on operating experience. The following table provides a summary of the current status of recommendations.

| CATEGORY | August 27, 2008 | | August 4, 2009 | | TOTAL |
|---------------------|-----------------|------------|----------------|------------|------------|
| | OPEN | CLOSED | OPEN | CLOSED | |
| Training | 0 | 50 | 0 | 50 | 50 |
| Track | 0 | 31 | 0 | 31 | 31 |
| Transit Control | 0 | 39 | 0 | 39 | 39 |
| Vehicles | 0 | 32 | 0 | 32 | 32 |
| Signals Design | 1 | 31 | 1 | 31 | 32 |
| Signals Maintenance | 0 | 34 | 0 | 34 | 34 |
| Coroner's Jury | 1 | 17 | 1 | 17 | 18 |
| TOTAL | 2 | 234 | 2 | 234 | 236 |

The next updated Due Diligence Checklist, which is scheduled to be presented at the Commission Meeting in August 2010, will also be forwarded to the Office of the Chief Coroner of Ontario, to ensure that the Chief Coroner is apprised of our progress with respect to the resolution of all of the recommendations stemming from the Russell Hill Subway Train Accident.

The status of the recommendations are also summarized and reported in the TTC's monthly Chief General Manager's report. The TTC will continue to present publicly to the Commission each year in August, until closure of all recommendations, and will outline the status of all recommendations and any outstanding issues or deficiencies.

DISCUSSION

N/A

JUSTIFICATION

N/A

August 18, 2009

Dictation Numbers: 13.8.8

Attachments: Due Diligence Checklist #20

Russell Hill Subway Train Accident of August 11, 1995

Due Diligence Checklist #20

Russell Hill Subway Train Accident of August 11, 1995

Update re: Recommendations Open as of August 27, 2008

Revised August 18, 2009

| <i>Recommendation</i> | <i>Scheduled Completion Date</i> | <i>Actual Completion Date</i> | <i>Responsibility</i> | <i>Budget</i> | <i>Notes</i> |
|--|--|--|-----------------------|---------------|---|
| Coroner's Jury Recommendations 7(i, v) | | | | | |
| (7) We strongly recommend the TTC conduct a comprehensive review and re-examination of the existing signal system with comparison to other Transit Authorities in North America. Attention should be focused on a human factors analysis with particular attention to signal interpretation. Action must be taken on the following items where deemed appropriate to improve safety. | Report: S: Oct. 31/96 | Report Presentation (Internal): Nov.22/96 (Commission): Dec.10/96 | M. Reidak | | All of the recommendations below were addressed through the comprehensive Strategic Signal Plan which was presented to the Commission on December 10, 1996. |

Budget - Incorporated in existing Operating Budget unless otherwise noted (CP = Capital Program).

S: = Scheduled
R: = Revised Scheduled Date

SR = Safety Report
RT = Review Teams

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Update re: Recommendations Open as of August 27, 2008

Revised August 18, 2009

| <i>Recommendation</i> | <i>Scheduled Completion Date</i> | <i>Actual Completion Date</i> | <i>Responsibility</i> | <i>Budget</i> | <i>Notes</i> |
|--|---|--------------------------------|-----------------------|--------------------------|---|
| 7 (i) the use of lunar white aspect in conjunction with red aspect. Red is to be seen as absolute. | Study:Oct 31/96 Work:Dec 31/98 R: Jan 1999 | Subsection Closed May 31/99 | M. Reidak | Study Budgeted in CP 2.4 | Flashing Red Signals completed May 31, 1999. |
| | S: Dec 31/2001 R: Dec 31/2003 R: Dec 31/2005 R: Mar 31/2002 R: Dec 31/2006 R: Dec 31/2007 R: July 2008 R: Dec 2008 R: June 2009 R: June 2010 | | K. Watling | | <p>Medium Term - A speed control system will eliminate all lunar white aspects. Scheduled for completion December 31, 2006. This will be done in accordance with the Strategic Signal Plan, which was presented on November 22, 1996.</p> <p>Update August 2005 – To be operational on Sheppard Line by 1st Quarter of 2006, and balance of subway by the end of 2007.</p> <p>Update August 2006 – To be operational on Sheppard Line by 1st Quarter of 2007, and balance of subway by mid 2008.</p> <p>Update August 2007 – To be operational on Sheppard Line by 2nd Quarter of 2008, and balance of subway in last Quarter 2008.</p> <p>Update August 2008 – To be operational on Sheppard Line by end of 2008, and balance of subway in 2nd Quarter 2009.</p> <p><u>Update August 2009</u> – Operational on the Sheppard Line. To be operational on the YUS and BD lines by 2nd quarter 2010. Delays are attributable to software changes, track access for testing and system debugging (hardware & software), based on operating experience.</p> |

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|----------------------------------|--|-------------------------------|-----------------------|---------------|---|
| 7 (v) progressive speed control. | Study - Oct. 31/96 Installation - S: Dec. 1/2001 R: Dec. 1/2003 R: Dec. 1/2005 R: Dec 31/2006 R: Dec 31/2007 R: July 2008 R: Dec 2008 R: June 2009 R: June 2010 | | K. Watling | CP 2.4 | A speed control system will be installed. Completion of installation is scheduled for December 31, 2006. Update August 2005 – To be operational on Sheppard Line by 1 st Quarter of 2006, and balance of subway by the end of 2007. Update August 2006 – To be operational on Sheppard Line by 1 st Quarter of 2007, and balance of subway by mid 2008. Update August 2007 – To be operational on Sheppard Line by 2 nd Quarter of 2008, and balance of subway in last Quarter 2008. Update August 2008 – To be operational on Sheppard Line by end of 2008, and balance of subway in 2nd Quarter 2009. <u>Update August 2009</u> – Operational on the Sheppard Line. To be operational on the YUS and BD lines by 2 nd quarter 2010. Delays are attributable to software changes, track access for testing and system debugging (hardware & software), based on operating experience. |

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Russell Hill Subway Train Accident of August 11, 1995

Update re: Recommendations Open as of August 27, 2008

Revised August 18, 2009

| <i>Recommendation</i> | <i>Scheduled Completion Date</i> | <i>Actual Completion Date</i> | <i>Responsibility</i> | <i>Budget</i> | <i>Notes</i> |
|---|--|-------------------------------|-----------------------|---------------|---|
| Signals Design Recommendation 16 | | | | | |
| (16) Analyze signal design in older section of subway where signals are located within stations and determine if modifications are feasible without affecting system design adversely. RT | S: Jun. 30/97 R: Dec. 31/01 R: Dec. 31/03 R: Dec. 31/05 R: Dec. 31/06 R: Dec. 31/07 R: July 2008 R: Dec. 2008 R: June 2009 R: June 2010 | | K. Watling | CP 2.4 | <p>This is not cost effective in the short term with the existing signal system. This will be addressed when a speed control system is installed. A decision has been made to proceed with a speed control system for completion December 2006.</p> <p>Update August 2005 – To be operational on Sheppard Line by 1st Quarter of 2006, and balance of subway by the end of 2007.</p> <p>Update August 2006 – To be operational on Sheppard Line by 1st Quarter of 2007, and balance of subway by July 2008.</p> <p>Update August 2007 – To be operational on Sheppard Line by 2nd Quarter of 2008, and balance of subway in last Quarter 2008.</p> <p>Update August 2008 – To be operational on Sheppard Line by end of 2008, and balance of subway in 2nd Quarter 2009.</p> <p><u>Update August 2009</u> – Operational on the Sheppard Line. To be operational on the YUS and BD lines by 2nd quarter 2010. Delays are attributable to software changes, track access for testing and system debugging (hardware & software), based on operating experience.</p> |

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Russell Hill Subway Train Accident Due Diligence Checklist SUMMARY

Recommendations Open as of August 27, 2008

| # | Category | Scheduled R: Revised | Responsibility | Summary of Recommendation | STATUS |
|---|------------|----------------------------------|----------------|---------------------------|---|
| 1 | Jury #7 | S: June 2009 R: June 2010 | K. Watling | 7 (i) & (v) Speed Control | Operational on the Sheppard Line. To be operational on the YUS and BD lines by 2nd quarter 2010. Delays are attributable to software changes, track access for testing and system debugging (hardware & software), based on operating experience. |
| 3 | Sig D. #16 | S: June 2009 R: June 2010 | K. Watling | Speed Control System | Operational on the Sheppard Line. To be operational on the YUS and BD lines by 2nd quarter 2010. Delays are attributable to software changes, track access for testing and system debugging (hardware & software), based on operating experience. |

August 18, 2009