UNIFORM CODE OF OPERATING RULES

NO. 7

UNIFORM CODE OF OPERATING RULES NO. 7

A. FOCUS

B. BLANK

1. CANADIAN PACIFIC PRESENTS.

AN IMPORTANT PART OF THE UNIFORM CODE OF OPERATING RULES IS DEVOTED TO THE PROTECTION OF THE REAR OF TRAINS, WHEN THEY MAY FOR ANY REASON, BE OVERTAKEN BY A FOLLOWING TRAIN. STOPS ON THE MAIN TRACK WILL ALSO USE UP TIME THAT MAY BE REQUIRED TO CLEAR OPPOSING SUPERIOR TRAINS. CANADIAN PACIFIC PRESENTS THE PROCEDURE THAT MUST BE FOLLOWED WHEN MANUAL PROTECTION IS PROVIDED BY CREWS.

2. U.C.O.R. NO. 7

THIS PRESENTATION WILL BE KNOWN AS U.C.O.R. NO. 7.

3. RULES 11, 15, 99 AND 100

IT INCLUDES RULES 11, 15, 99 AND 100.

4. DIAGRAM: SECOND AND FOURTH CLASS TRAIN

WHEN DEALING WITH RULE 99 ONE OR TWO BASIC PRINCIPLES RELATIVE TO TRAIN OPERATION MIGHT BE HELPFUL. INFERIOR TRAINS MUST KEEP OUT OF THE WAY OF SUPERIOR TRAINS, BUT WHEN FOR ANY REASON THEY FAIL TO DO SO, THEY MUST BE PROTECTED FROM THE DIRECTION IN WHICH THE SUPERIOR TRAIN IS TRAVELLING AS PRESCRIBED BY THE RULES. EACH OF THE

TRAINS IN THIS DIAGRAM IS AUTHORIZED BY TIME TABLE SCHEDULE, BUT THE TRAIN BEHIND IS SUPERIOR. THE TRAIN AHEAD MUST THEREFORE BE PROTECTED FROM THE REAR IF IT FAILS TO CLEAR THE MAIN TRACK AS REQUIRED.

5. DIAGRAM: FIRST CLASS AND EXTRA TRAIN

WHEN THE TRAIN DISPATCHER CREATES A TRAIN, THE RULES DO NOT REQUIRE HIM TO INFORM OTHER TRAINS RUNNING IN THE SAME DIRECTION, UNLESS HE MAKES THE TRAIN HE CREATES SUPERIOR TO THE OTHER TRAINS. ONLY ON RARE OCCASIONS IS THIS DONE. THE RESULT IS THAT ANY TRAIN, NO MATTER HOW IMPORTANT IT MAY SEEM, MUST ALWAYS WORK ON THE THEORY THAT ANOTHER TRAIN IS FOLLOWING. HERE AN EXTRA TRAIN HAS TAKEN THE SIDING TO LET A FIRST CLASS TRAIN PASS. WHEN THE REQUIRED INTERVAL HAS ELAPSED, THE EXTRA TRAIN WILL FOLLOW.

6. DIAGRAM: EXTRA TRAIN LEAVES SIDING

WE NOW HAVE A CASE WHERE AN EXTRA TRAIN WILL BE FOLLOWING A FIRST CLASS TRAIN. WHILE IT IS PERHAPS UNUSUAL FOR AN EXTRA TRAIN TO OVERTAKE A FIRST CLASS TRAIN, IT CAN HAPPEN, PARTICULARLY WHEN THE FIRST CLASS TRAIN IS LOSING TIME. IT FOLLOWS THAT ALL TRAINS MUST, UNLESS PROTECTED BY OTHER RULES, AFFORD THEMSELVES THE NECESSARY PROTECTION AGAINST ANY MOVEMENT THAT MAY BE APPROACHING FROM THE REAR.

IN OTHER CASES DUE TO A COMBINATION OF CIRCUMSTANCES, PROTECTION IS REQUIRED AGAINST A SUPERIOR TRAIN IN THE OPPOSING DIRECTION. RULE 99 SHOWS IN DETAIL HOW MANUAL PROTECTION IS PROVIDED.

7. FUSEE FROM FLAGGING KIT

FUSEES AND TORPEDOES ARE PROMINENTLY INVOLVED WHERE MANUAL FLAGGING PROTECTION PRESCRIBED IN THESE RULES IS CONCERNED. RULES SURROUNDING THE USE OF THESE SIGNALS ARE THEREFORE IMPORTANT.

8. RED FLAG, TORPEDOES AND FUSEES

RULE 99 PROVIDES FLAGMEN MUST EACH BE EQUIPPED FOR DAY TIME WITH A RED FLAG ON A STAFF, AT LEAST EIGHT TORPEDOES AND SEVEN RED FUSEES.

AND

9. WHITE LIGHT, SUPPLY OF MATCHES

FOR NIGHT TIME, AND WHEN WEATHER OR OTHER CONDITIONS OBSCURE DAY SIGNALS, A WHITE LIGHT, A SUPPLY OF MATCHES, AT LEAST EIGHT TORPEDOES AND SEVEN RED FUSEES.

10. TWISTING FUSEE CAP

THIS IS A RED FUSEE. ON THE SIDE OF EACH FUSEE ARE PRINTED INSTRUCTIONS IN THE MANNER OF LIGHTING, HOLDING, ETC. RULE 11 GOVERNS THEIR USE, AND WILL BE DEALT WITH ON THE

ASSUMPTION THAT OUR FLAGMAN IS FAMILIAR WITH THE INSTRUCTIONS.

11. RULE 11 PAGE IN BOOK

RULE 11 READS: "A TRAIN OR ENGINE APPROACHING A FUSEE BURNING RED ON OR NEAR ITS TRACK MUST STOP AND MAY THEN PROCEED AT RESTRICTED SPEED FOR 2000 YARDS, EXCEPT THAT IN ABS TERRITORY IT MUST STOP, AND MAY THEN PROCEED AT RESTRICTED SPEED TO THE NEXT SIGNAL.

12. DIAGRAM: TRAIN STOPPED AT FUSEE

HERE A TRAIN HAS STOPPED AT A RED FUSEE.

13. DIAGRAM: FUSEE TO 2000 YARDS

IT NOW PROCEEDS, THE POINT 2000 YARDS FROM THE FUSEE IS MARKED ON THIS DIAGRAM, AND THE TRAIN TRAVELS AT RESTRICTED SPEED UNTIL IT REACHES THIS POINT. IT WILL BE REMEMBERED RESTRICTED SPEED IS A SPEED THAT WILL PERMIT STOPPING WITHIN ONE HALF THE RANGE OF VISION.

14. DIAGRAM: RESTRICTED SPEED ABS

HERE ABS RULES GOVERN, AND THE EXCEPTION IN THE RULE TAKES OVER. RESTRICTED SPEED THEREFORE ONLY EXTENDS TO THE NEXT SIGNAL, WHICH IN THIS CASE IS SOME DISTANCE SHORT OF THE 2000 YARD POINT AS ILLUSTRATED ON THIS DIAGRAM.

15. QUESTION

IF THE NEXT SIGNAL WAS A GREATER DISTANCE THAN 2000 YARDS

FROM THE FUSEE, WOULD THE EXCEPTION IN RULE 11 STILL APPLY?

16. DIAGRAM: SIGNAL MORE THAN 2000 YARDS

YES, RESTRICTED SPEED ALWAYS GOVERNS TO THE NEXT SIGNAL IN ABS TERRITORY AS ILLUSTRATED HERE, NO MATTER HOW FAR FROM THE FUSEE THE SIGNAL IS LOCATED.

17. DIAGRAM: FUSEE BEYOND ADJACENT

RULE 11 CONTINUES: "A TRAIN OR ENGINE APPROACHING A FUSEE BURNING RED BEYOND THE NEAREST RAIL OF AN ADJACENT TRACK NEED NOT STOP, BUT MUST PROCEED AT RESTRICTED SPEED FOR 2000 YARDS: EXCEPT THAT IN ABS TERRITORY, IT WILL PROCEED AT RESTRICTED SPEED TO THE NEXT SIGNAL.

18. DIAGRAM: FUSEE ON ADJACENT TRACK AND 2000 YARDS

IT WILL BE SEEN THAT WHEN THE FUSEE IS BEYOND THE NEAREST RAIL OF AN ADJACENT TRACK, A STOP IS NOT NECESSARY, BUT RESTRICTED SPEED MUST BE APPLIED AS BEFORE. THE 2000 YARD POINT IS SHOWN AGAIN ON THIS DIAGRAM.

19. DIAGRAM: RESTRICTED SPEED TO NEXT SIGNAL

AND HERE ABS RULES PLACE RESTRICTED SPEED TO THE NEXT SIGNAL.

20. DIAGRAM: YELLOW FUSEE

THE YELLOW FUSEE, ILLUSTRATED HERE, ALSO HAS ITS PLACE IN THE PROTECTION PROCESS. THE RULE PROVIDES THAT "A TRAIN

OR ENGINE APPROACHING A FUSEE BURNING YELLOW ON OR NEAR ITS TRACK WILL PROCEED BUT AT RESTRICTED SPEED FOR 2000 YARDS: EXCEPT THAT IN ABS TERRITORY, IT WILL PROCEED AT RESTRICTED SPEED TO THE NEXT SIGNAL". IT WILL BE OBSERVED THAT SPEED REQUIREMENTS ARE THE SAME AS WHEN RED FUSEES ARE USED. THE DIFFERENCE IS THAT A STOP IS NEVER REQUIRED AT A YELLOW FUSEE.

21. DIAGRAM: HIGHWAY CROSSING

LAST PARAGRAPH OF RULE 11 STATES: FUSEES SHOULD NOT BE PLACED ON PUBLIC CROSSINGS AT GRADE, NOR WHERE THEY MAY COMMUNICATE FIRE. FUSEES ON PUBLIC CROSSINGS AT GRADE CAN BE INADVERTENTLY EXTINGUISHED BY HIGHWAY TRAFFIC, OR INTERFERED WITH BY PEDESTRIANS. GOOD JUDGMENT SHOULD BE USED WHERE FUSEES ARE LEFT BECAUSE OF THE POSSIBILITY OF COMMUNICATING FIRE.

22. CLOSEUP OF TORPEDOES

THIS IS A TORPEDO , ITS USE WILL BE DEALT WITH ON THE ASSUMPTION THAT THE FLAGMAN HAS RECEIVED INSTRUCTION FOR ITS HANDLING. TORPEDOES EXPLODE AND ARE USED TO ALERT CREWS OF CONDITIONS REQUIRING IMMEDIATE ATTENTION.

23. RULE 15 PAGE

RULE 15 DEALS WITH TORPEDOES. IT READS: THE EXPLOSION OF

ONE OR MORE TORPEDOES IN THE ABSENCE OF A MORE RESTRICTIVE SIGNAL, INDICATES PROCEED, BUT AT RESTRICTED SPEED FOR 2000 YARDS FROM THE POINT WHERE THE TORPEDOES WERE EXPLODED.

24. DIAGRAM: TORPEDOES 2000 YARDS

TORPEDOES ARE USUALLY USED IN CONJUNCTION WITH OTHER SIGNALS, BUT UNLESS THE OTHER SIGNALS SO INDICATE, A STOP IS NOT REQUIRED. RESTRICTED SPEED REQUIRED BY THE RULE COMMENCES AT THE POINT WHERE THE TORPEDOES WERE EXPLODED AND CONTINUES FOR A DISTANCE OF 2000 YARDS AS ILLUSTRATED IN THIS DIAGRAM.

25. QUESTION

IF THIS WERE ABS TERRITORY, WOULD THE DISTANCE RESTRICTED SPEED IS REQUIRED BE TO THE NEXT SIGNAL RATHER THAN FOR 2000 YARDS AS IS THE CASE WITH FUSEES?

26. DIAGRAM: TORPEDOES 1500 YARDS TO SIGNAL.

NO. THE LOCATION OF THE NEXT SIGNAL HAS NO BEARING ON THE DISTANCE RESTRICTED SPEED IS APPLIED WHEN TORPEDOES ARE EXPLODED. IT IS ALWAYS 2000 YARDS.

27. TRAINMAN PLACING TORPEDOES

RULE 15 CONTINUES: WHERE THE USE OF TORPEDOES IS REQUIRED, DUPLICATES SHOULD BE PLACED ON THE OPPOSITE RAIL TO EXPLODE SIMULTANEOUSLY. HERE TORPEDOES ARE SO PLACED.

28. SPEEDER EXPLODING TORPEDOES

RULE 15 ALSO PROVIDES THAT TORPEDOES EXPLODED BY OTHER THAN A TRAIN OR ENGINE MUST BE REPLACED IMMEDIATELY. ON THE LEFT A TRACK MOTOR HAS EXPLODED TORPEDOES. THE PICTURE ON THE RIGHT ILLUSTRATES THEM BEING REPLACED BY THE OPERATOR OF THE TRACK MOTOR IN COMPLIANCE WITH THE RULE.

29. DIAGRAM: WOMAN AND CHILD ON CROSSING

RULE 15 CONCLUDES: TORPEDOES MUST NOT BE PLACED NEAR STATIONS NOR ON PUBLIC CROSSINGS AT GRADE. THIS ILLUSTRATES WHAT IS INVOLVED IN THE EXPLOSION OF TORPEDOES WHEN PEDESTRIANS ARE IN THE VICINITY.

30. RULE 99 IN THREE PARTS

RULE 99 IS DIVIDED INTO THREE PARTS. PART ONE DEALS WITH PROTECTION PROCEDURES OUTSIDE ABS TERRITORY, PART TWO WITHIN ABS TERRITORY AND PART THREE DESCRIBES WHAT MUST BE DONE BOTH OUTSIDE AND WITHIN ABS TERRITORY. FIRST LET'S DEAL WITH PROTECTION PROCEDURES OUTSIDE ABS.

31. FIRST PARAGRAPH RULE 99

RULE 99 COMMENCES: WHEN A TRAIN IS MOVING UNDER CIRCUMSTANCES IN WHICH IT MAY BE OVERTAKEN BY ANOTHER TRAIN, LIGHTED FUSEES MUST BE DROPPED OFF AT PROPER INTERVALS AND SUCH OTHER ACTION TAKEN AS MAY BE NECESSARY TO ENSURE FULL PROTECTION.

32. THROWING OFF FUSEE FROM REAR OF NO. 1

HERE A PASSENGER TRAIN IS IN A POSITION WHERE IT MAY BE OVERTAKEN BY ANOTHER TRAIN, AND THE REAR TRAINMAN IS THROWING OFF A RED FUSEE IN COMPLIANCE WITH THE RULE.

33. FUSEE BURNING ON TRACK

SINCE A FUSEE BURNS FOR APPROXIMATELY TEN MINUTES, ADDITIONAL FUSEES MUST BE DROPPED OFF AT FROM FIVE TO EIGHT MINUTE INTERVALS. WATCH THE FUSEE AFTER THROWING IT OFF TO MAKE SURE IT STAYS LIGHTED.

34. FAST TRAIN APPROACHING

THE TRAIN FOLLOWING MAY BE TRAVELLING AT TRACK SPEED, WHICH COULD IN SOME CASES BE 80 MPH.

35. RED FUSEE AS SEEN FROM ENGINE

BUT REMEMBER RULE 11 STOPS A TRAIN APPROACHING A RED FUSEE, AND PUTS IT AT RESTRICTED SPEED FOR 2000 YARDS. PROCEEDING AT RESTRICTED SPEED FOR MORE THAN ONE MILE WILL TAKE TIME, TIME THAT WILL PERMIT THE PROTECTED TRAIN TO GET FURTHER AHEAD.

36. SECOND PARAGRAPH RULE 99

SECOND PARAGRAPH OF RULE 99 CONTINUES: WHEN A TRAIN STOPS "UNDER CIRCUMSTANCES IN WHICH IT MAY BE OVERTAKEN BY ANOTHER

TRAIN, A FLAGMAN MUST IMMEDIATELY GO BACK A SUFFICIENT DISTANCE TO ENSURE FULL PROTECTION.

37. UNDER CIRCUMSTANCES

ATTENTION IS DRAWN TO THE WORDS "UNDER CIRCUMSTANCES IN WHICH IT MAY BE OVERTAKEN BY ANOTHER TRAIN", IN BOTH FIRST AND SECOND PARAGRAPHS OF RULE 99. FIRST PARAGRAPH DEALS WITH PROTECTION OF MOVING TRAINS, THE SECOND PARAGRAPH WITH TRAINS THAT ARE STOPPED.

38. TRAIN CAN BE OVERTAKEN

A NUMBER OF THINGS HAVE A BEARING ON THE CIRCUMSTANCES UNDER WHICH A TRAIN MAY BE OVERTAKEN. THESE ARE SOME OF THEM: WHEN A TRAIN IS MOVING IS THE TRAIN MAKING NORMAL SPEED? ARE TRAINS OVERDUE IN THE SAME DIRECTION THAT CAN TRAVEL AT GREATER SPEEDS? WHEN A TRAIN IS STANDING OR MOVING: ARE YARD LIMITS, STATION LIMITS, OR STATION PROTECTION SIGNALS INVOLVED? IS FORM "U" TRAIN ORDER, PROVIDING RELIEF FROM FLAG PROTECTION IN EFFECT? CONSIDERATION OF THESE THINGS WILL DETERMINE THE ACTION TAKEN, AND A DECISION MUST BE MADE PROMPTLY.

39. NO DOWN GRADE TOWARD TRAIN

FULL PROTECTION IS ALSO AFFECTED BY PHYSICAL CHARACTERISTICS OF THE PLACE WHERE STOP IS MADE. THE CHARACTERISTICS ARE

DIVIDED INTO THREE CATEGORIES. CATEGORY NO: 1 ONE, IN DAY-TIME, AS ILLUSTRATED HERE, IF THERE IS NO DOWN GRADE TOWARD TRAIN WITHIN ONE MILE OF ITS REAR AND THERE IS A CLEAR VIEW OF ITS REAR OF 2000 YARDS FROM AN APPROACHING TRAIN.

40. NO DOWN GRADE, CLEAR VIEW, FLAGMAN 1000 YARDS

THE FLAGMAN WILL GO OUT 1000 YARDS. IT IS EVIDENT THAT WITH NO DOWN GRADE WITHIN ONE MILE, AND A CLEAR VIEW OF ITS REAR OF 2000 YARDS, EVERYTHING IS IDEAL. THE FLAGMAN'S POSITION IS THEREFORE THE SHORTEST THE RULE WILL PERMIT.

41. DIAGRAM: AT LEAST 1500 YARDS

CATEGORY NO: 2 TWO AT OTHER TIMES AND PLACES IF THERE IS NO DOWN GRADE TOWARD TRAIN WITHIN ONE MILE OF ITS REAR, AT LEAST 1500 YARDS. THIS MEANS THAT IF CONDITIONS INTER-FERE WITH A CLEAR VIEW OF ITS REAR FROM AN APPROACHING TRAIN OF 2000 YARDS, AS CURVATURE DOES IN THIS CASE, THE FLAGMAN'S POSITION MUST BE AT LEAST 1500 YARDS FROM THE TRAIN, PROVID-ING THERE IS NO DOWN GRADE TOWARD TRAIN WITHIN ONE MILE OF ITS REAR.

42. DIAGRAM: DOWN GRADE 2000 YARDS

CATEGORY NO: 3 THREE IF THERE IS A DOWN GRADE TOWARD TRAIN WITHIN ONE MILE OF ITS REAR, THE DISTANCE IS AT LEAST 2000 YARDS. IN OTHER WORDS, NO MATTER HOW FAVOURABLE OTHER

CONDITIONS MIGHT BE, A DOWN GRADE AS ILLUSTRATED HERE REQUIRES THE FLAGMAN TO TAKE UP A POSITION AT LEAST 2000 YARDS FROM THE REAR OF HIS TRAIN.

43. FLAGMAN OUT THE REQUIRED DISTANCE: DIAGRAM

LET'S ASSUME THE DISTANCE THE FLAGMAN WILL GO OUT IN THIS CASE IS 2000 YARDS. RULE 99 CONTINUES: THE FLAGMAN MUST, AFTER GOING OUT A SUFFICIENT DISTANCE TO ENSURE FULL PROTECTION, TAKE UP A POSITION WHERE THERE WILL BE AN UNOBSTRUCTED VIEW OF HIM FROM AN APPROACHING TRAIN OF, IF POSSIBLE, 500 YARDS. THE DIAGRAM ILLUSTRATES THIS UNOBSTRUCTED VIEW IS POSSIBLE, AND THE POINT WHERE THE FLAGMAN IS STANDING WILL THEREFORE BE THE FLAGGING POSITION.

44. PORTION OF RULE 99 ON PAGE 48

BUT BEFORE TAKING UP THIS POSITION, IT IS IMPORTANT TO NOTE THE NEXT PORTION OF THE RULE WHICH READS: FIRST PLACING TORPEDOES NOT MORE THAN 100 NOR LESS THAN 50 YARDS APART TO CAUSE TWO EXPLOSIONS AT LEAST 200 YARDS BEYOND SUCH POSITION.

45. THIS IS WHAT FLAGMAN HAS DONE

SO NOW, IN COMPLIANCE WITH THE RULE, TORPEDOES ARE PLACED. THE FIRST SET WILL BE AT LEAST 200 YARDS BEYOND THE FLAGMAN'S POSITION AND THE SECOND SET NOT MORE THAN 100 NOR

LESS THAN 50 YARDS BEYOND THE FIRST SET.

46. SUMMARY OF WHAT HAS BEEN DONE

THIS SUMMERIZES WHAT HAS BEEN DONE. NOTICE THE FLAGMAN'S POSITION AT LEAST 2000 YARDS FROM THE REAR OF THE TRAIN. THIS POSITION IS ALSO ONE WHERE AN UNOBSTRUCTED VIEW FROM AN APPROACHING TRAIN OF 500 YARDS IS POSSIBLE. THE CLOSEST SET OF TORPEDOES IS AT LEAST 200 YARDS BEYOND THE FLAGMAN, AND THE TWO SETS NOT MORE THAN 100 NOR LESS THAN 50 YARDS APART TO CAUSE TWO EXPLOSIONS.

47. QUESTION

THE RULE PROVIDES THAT THE POSITION SELECTED BY THE FLAGMAN MUST PERMIT AN UNOBSTRUCTED VIEW FROM AN APPROACHING TRAIN OF, IF POSSIBLE, 500 YARDS. IN TERRITORY WHERE THIS CLEAR VIEW MAY NOT BE POSSIBLE, HOW SHOULD THE FLAGMAN BE GOVERNED?

48. FLAGMAN WITHOUT CLEAR VIEW

THIS ILLUSTRATION SHOWS THE FLAGMAN, HAVING REACHED THE 2000 YARD POSITION FROM THE REAR OF HIS TRAIN, DOES NOT HAVE THE NECESSARY CLEAR VIEW. HE MUST NOT RETRACE HIS STEPS OR HE WILL BE LESS THAN 2000 YARDS FROM HIS TRAIN, SO HE MUST GO OUT BEYOND THE REQUIRED DISTANCE.

49. RULE QUOTE: IF NECESSARY TO GO BEYOND

HE IS NOW GOVERNED BY THE RULE WHICH READS: IF NECESSARY

TO GO BEYOND THE REQUIRED DISTANCE, HE WILL LEAVE THE TORPEDOES AT THE REQUIRED DISTANCE AS AN INDICATION OF THE LOCATION OF HIS TRAIN.

50. PLACING TORPEDOES AT THE REQUIRED DISTANCE

SO BECAUSE HE WILL GO OUT FURTHER HE MUST PLACE TORPEDOES AT THE REQUIRED DISTANCE AS ILLUSTRATED HERE.

51. QUESTION

THE TORPEDOES PLACED AT THE REQUIRED DISTANCE DO NOT APPEAR TO BE PLACED AT LEAST 200 YARDS BEYOND IT, AS IS THE CASE WHEN THE FLAGGING DISTANCE IS SELECTED UNDER NORMAL CONDITIONS. WHY IS THIS?

52. PLACING TORPEDOES AT THE REQUIRED DISTANCE (REPEAT)

BECAUSE THE RULE STIPULATES THESE TORPEDOES MUST BE PLACED AT THE REQUIRED DISTANCE, NOT BEYOND IT. IT WILL BE REMEMBERED THE TRAIN WILL NOT BE FLAGGED AT THIS POINT, AND THERE IS NO PRACTICAL REASON WHY TORPEDOES SHOULD BE 200 YARDS FROM IT. THEIR PURPOSE IS MERELY TO INDICATE THE LOCATION OF THE TRAIN BEING PROTECTED.

53. CLEAR VIEW OF 500 YARDS

HERE THE FLAGMAN HAS PROCEEDED AROUND THE CURVE WHERE AN UNOBSTRUCTED VIEW FROM AN APPROACHING TRAIN OF 500 YARDS CAN BE OBTAINED.

54. RULE QUOTE. AND MUST UNDER SUCH CONDITIONS

HE IS NOW GOVERNED BY THE RULE WHICH CONTINUES: "BUT MUST, UNDER SUCH CONDITIONS ALSO PLACE TORPEDOES AT THE POINT AT WHICH AN APPROACHING TRAIN IS FLAGGED!

55. THIS IS WHAT FLAGMAN HAS DONE

HERE THE SECOND SET OF TORPEDOES IS SO PLACED AND THE FLAGMAN HAS TAKEN UP HIS POSITION AT THE POINT AT WHICH THE APPROACHING TRAIN WILL BE FLAGGED. THIS PICTURE SUMMERIZES THE LOCATION OF TORPEDOES AND THE FLAGMAN IN RELATION TO THE TRAIN BEING PROTECTED.

56. QUESTION

IF AFTER GOING AROUND THE CURVE, AS HAS JUST BEEN ILLUSTRATED, THE FLAGMAN IS STILL NOT SATISFIED AN APPROACHING TRAIN CAN SEE HIM FOR 500 YARDS, WHAT SHOULD BE DONE?

57. CONTINUOUS CURVATURE

CONTINUOUS CURVATURE WILL COMPLICATE MATTERS, BUT THE RULE PERMITS SOME LEEWAY BECAUSE IT READS: A CLEAR VIEW OF, IF POSSIBLE, 500 YARDS. THIS IS INTERPRETED TO MEAN THAT IF AFTER PROCEEDING BEYOND THE REQUIRED DISTANCE, A 500 YARD CLEAR VIEW I NOT POSSIBLE, THE FLAGMAN WILL DO THE BEST HE CAN, BUT MAY HAVE TO SETTLE FOR SOMETHING LESS THAN THE PRESCRIBED 500 YARDS. THE EXTRA TORPEDOES AT THE REQUIRED DISTANCE PROVIDE ADDITIONAL INFORMATION THAT IS USED TO GOOD ADVANTAGE IN THESE CIRCUMSTANCES.

58. PAGE WITH THIRD PORTION OF RULE 99

THE THIRD PORTION OF RULE 99 PROVIDES FOR WHISTLING OUT A FLAGMAN, ALSO WHAT IS REQUIRED WHEN HE IS RECALLED. SINCE IT IS APPROPRIATE THAT RETURN OF THE FLAGMAN BE DEALT WITH NOW, LET'S BY-PASS THE SECOND PORTION FOR THE PRESENT.

59. OUTSIDE AND WITHIN ABS* FIRST PARAGRAPH

THE THIRD PART OF RULE 99 APPLIES BOTH OUTSIDE AND WITHIN ABS TERRITORY AND IT READS: WHEN A TRAIN STOPS UNDER CIRCUMSTANCES IN WHICH IT MAY BE OVERTAKEN BY ANOTHER TRAIN, THE ENGINEMAN WILL IMMEDIATELY SIGNAL THE FLAGMAN TO PROTECT THE REAR. WHEN READY TO PROCEED HE WILL RECALL THE FLAGMAN.

60. ENGINEMAN SOUNDING WHISTLE

THE SIGNAL WHICH CONVEYS TO THE FLAGMAN THAT THE REAR OF THE TRAIN REQUIRES PROTECTION IS DESCRIBED IN RULE 14C AS ONE LONG AND THREE SHORT BLASTS ON THE ENGINE WHISTLE. IT WOULD SOUND LIKE THIS...(ONE LONG THREE SHORT WHISTLES).

61. QUESTION

RULE 99 FOR OUTSIDE ABS TERRITORY REQUIRES IN THESE CIRCUMSTANCES THAT A FLAGMAN MUST IMMEDIATELY GO BACK A SUFFICIENT DISTANCE TO ENSURE FULL PROTECTION. WHY WOULD THE ENGINEMAN ALSO HAVE TO SIGNAL THE FLAGMAN TO PROTECT THE REAR?

62. ENGINE SOUNDING TWO LONG WHISTLES

IN THE MAJORITY OF CASES THE CREW ON THE ENGINE WILL BE AWARE OF THE REASON FOR STOPPING, BUT THE CREW ON THE REAR WILL NOT. MOMENTARY STOPS DO NOT NORMALLY REQUIRE PROTECTION OF A FLAGMAN. IN THE ILLUSTRATION SHOWN, THE STOP IS ONLY A MOMENTARY ONE AT A RED FUSEE, AND THE ENGINEMAN, IN COMPLIANCE WITH RULE 84, GIVES TWO LONG WHISTLE BLASTS INDICATING HE WILL PROCEED IMMEDIATELY. (TWO WHISTLES ADDED).

63. QUESTION

IN THE EVENT THE CONDUCTOR APPLIED THE AIR FROM THE CABOOSE, AND THE CREW ON THE ENGINE WAS NOT AWARE OF THE REASON THE AIR WENT INTO EMERGENCY, HOW SOON AFTER THE TRAIN STOPS WOULD THE ENGINEMAN WHISTLE OUT A FLAGMAN?

64. WHISTLING OUT FLAGMAN

THIS WOULD BE WHAT IS TERMED AN UNDESIRED EMERGENCY, AND THE ENGINEMAN WOULD IMMEDIATELY SIGNAL THE FLAGMAN TO PROTECT THE REAR, AS ILLUSTRATED HERE. THE SAME UNDESIRED EMERGENCY CAN RESULT FROM A DERAILMENT, A BROKEN TRAIN LINE OR OTHER CAUSES, AND THE ENGINEMAN IS NOT AWARE OF THE REASON FOR THE STOP.

65. QUESTION

IF THE ENGINEMAN SOUNDED WHISTLE SIGNAL 14C TO HAVE FLAGMAN

PROTECT REAR OF TRAIN, THEN, ALMOST IMMEDIATELY RECALLED HIM, COULD THE FLAGMAN RETURN TO HIS TRAIN OR WOULD HE CONTINUE TO WALK OUT THE FULL FLAGGING DISTANCE?

66. FLAGMAN PART WAY OUT

IT IS IMPORTANT TO REMEMBER THAT ONCE THE FLAGMAN COMMENCES HIS WALK TO THE REAR, EVEN THOUGH HE MAY BE RECALLED, HE MUST NEVER RETURN UNTIL HE HAS GONE THE REQUIRED DISTANCE, AND PLACE TORPEDOES AS HE WOULD NORMALLY DO.

67. QUESTION

DURING THE TIME A FLAGMAN IS WALKING BACK TO TAKE UP HIS POSITION OUTSIDE ABS TERRITORY, THERE ARE NO TORPEDOES IN PLACE TO ALERT THE CREW OF A FOLLOWING TRAIN, AND THIS TRAIN WILL BE MOVING IN THE OPPOSITE DIRECTION IN WHICH THE FLAGMAN IS WALKING. IS THIS NOT A DIFFICULT SITUATION FOR THE FLAGMAN?

68. FUSEES PREVIOUSLY DROPPED

NOT AS DIFFICULT AS IT SOUNDS, PROVIDED LIGHTED FUSEES HAVE BEEN DROPPED OFF FROM THE REAR OF THE TRAIN WHEN IT FIRST SLOWED DOWN, AS REQUIRED BY FIRST PARAGRAPH OF THE OUTSIDE ABS PORTION OF THE RULE. IN THE DIAGRAM SHOWN, RED FUSEES HAVE BEEN DROPPED OFF IN TWO PLACES. THESE FUSEES BURN FOR APPROXIMATELY TEN MINUTES. EACH REQUIRES

A STOP, THEN RESTRICTED SPEED. ALL THIS WILL TAKE TIME, SLOW THE TRAIN DOWN, AND PERMIT THE FLAGMAN TO STOP THE TRAIN UNDER REASONABLE CONDITIONS.

69. REMAIN UNTIL RECALLED OR RELIEVED

RULE 99 CONTINUES: AFTER TAKING UP POSITION AT THE DISTANCE REQUIRED, FLAGMAN MUST REMAIN AT THAT POINT UNTIL RECALLED OR RELIEVED, AND THE SAFETY OF THE TRAIN WILL PERMIT. HERE THE FLAGMAN, HAVING FIRST PLACED TORPEDOES, WILL REMAIN IN THIS POSITION.

70. TRAIN APPROACHING TORPEDOES & FLAGMAN

THE RULE ALSO REQUIRES THAT THE FLAGMAN MUST ALWAYS ON THE APPROACH OF A TRAIN DISPLAY STOP SIGNALS. HERE THE FLAGMAN DISPLAYS HIS RED FLAG AS SOON AS THE TRAIN COMES INTO VIEW.

71. QUESTION

THE 200 YARD DISTANCE BETWEEN THE TORPEDOES AND WHERE THE FLAGMAN IS STANDING DOES NOT APPEAR TO LEAVE MUCH ROOM FOR LONG TRAINS ON FAST TRACK TO MAKE A NORMAL STOP AT THE FLAGMAN. IS IT PERMISSIBLE TO STRETCH THIS DISTANCE WHERE CONDITIONS SEEM TO WARRANT?

72. FLAGMAN STANDING MORE THAN 200 YARDS FROM TORPEDOES

YES. THE RULE READS: "AT LEAST 200 YARDS", WHICH PERMITS

THE FLAGMAN TO PLACE TORPEDOES AS ILLUSTRATED ON THE SCREEN. REMEMBER ALSO, THE FLAGMAN'S POSITION IS PRE-DETERMINED ON THE BASIS OF AN UNOBSTRUCTED VIEW OF HIM OF 500 YARDS FROM AN APPROACHING TRAIN. STOP SIGNALS DISPLAYED WHEN THE TRAIN FIRST COMES IN VIEW WILL BE ACTED UPON, AND PRELIMINARY ACTION TAKEN TO STOP THE TRAIN LONG BEFORE THE TORPEDOES ARE EXPLODED.

73. PLEASE CHANGE RECORD

NO COMMENT.

74. FLAGMAN RECALLED

RULE 99 CONTINUES: IF RECALLED BEFORE ANOTHER TRAIN ARRIVES, HE MUST LEAVE A FUSEE BURNING RED AT THE POINT FROM WHICH HE RETURNS. HERE THE FLAGMAN, AFTER PLACING A RED FUSEE, COMMENCES HIS RETURN WALK TO HIS TRAIN. IT WILL ALSO BE RECALLED THE TORPEDOES PLACED AS REQUIRED IN THIS RULE MUST NOT BE REMOVED.

75. QUESTION

HOW DOES AN ENGINEMAN RECALL A FLAGMAN?

76. PAGE CONTAINING RULE 14

BY SOUNDS ON THE ENGINE WHISTLE, DETAILS OF WHICH ARE GIVEN IN RULE 14. LET'S LOOK AT THE NOTE THAT INTRODUCES RULE 14. IT READS: "ENGINE WHISTLE SIGNALS MUST BE SOUNDED AS PRESCRIBED BY THIS RULE. THE SIGNALS ARE ILLUSTRATED BY "O" FOR SHORT SOUNDS, "A" FOR LONGER SOUNDS. EACH SOUND OF THE WHISTLE SHOULD BE DISTINCT, WITH INTENSITY AND DURATION PROPORTIONATE TO THE DISTANCE SIGNAL IS TO BE CONVEYED."

77. RULE 14, PAR. (d)

WHISTLE SIGNAL 14(d), FOUR LONGS, SINGLE OR TWO TRACKS, FLAGMAN MAY RETURN FROM WEST OR SOUTH. MORE THAN TWO TRACKS FLAGMAN FOR TRACK NO. 2 MAY RETURN.

78. DIAGRAM, FOUR LONG, DIFFERENT KINDS OF TRACKS

IN OTHER WORDS, IF IT IS DESIRED TO RECALL THE FLAGMAN IN SINGLE OR TWO TRACKS FROM THE WEST, OR IN SINGLE OR TWO TRACKS FROM THE SOUTH, OR IF IN MORE THAN TWO TRACK TERRITORY FLAGMAN FOR TRACK NO. 2 IS TO RETURN, FOUR LONG WHISTLES WOULD BE SOUNDED, AS FOLLOWS: (FOUR LONG WHISTLES)

79. RULE 14, PAR. (da)

WHISTLE SIGNAL 14 (da): FOUR LONGS AND A SHORT: MORE THAN TWO TRACKS, FLAGMAN FOR TRACK NO. 4 MAY RETURN.

80. DIAGRAM: 4 LONG 1 SHORT MORE THAN TWO TRACKS

IF IN MORE THAN TWO TRACK TERRITORY AND IT WAS NECESSARY TO RECALL THE FLAGMAN FROM TRACK NO. 4, FOUR LONGS AND 1 SHORT WHISTLE WOULD BE SOUNDED. (FOUR LONG, ONE SHORT WHISTLE)

81. RULE 14, PAR. (e)

WHISTLE SIGNAL 14(e), FIVE LONGS, SINGLE OR TWO TRACKS, FLAGMAN MAY RETURN FROM EAST OR NORTH. MORE THAN TWO TRACKS, FLAGMAN FOR TRACK NO. 1 MAY RETURN.

82. DIAGRAM, FIVE LONG, DIFFERENT KINDS OF TRACKS

IF FLAGMAN IN SINGLE OR TWO TRACKS WAS TO RETURN FROM THE EAST, OR IN SINGLE OR TWO TRACKS FROM THE NORTH, OR IF IN MORE THAN TWO TRACK TERRITORY FLAGMAN FOR TRACK NO. 1 WAS BEING RECALLED, FIVE LONG WHISTLES WOULD BE SOUNDED. (FIVE LONG WHISTLES)

83. RULE 14, PAR. (ea)

WHISTLE SIGNAL 14 (ea): FIVE LONGS AND ONE SHORT, MORE THAN TWO TRACKS, FLAGMAN FOR TRACK NO. 3 MAY RETURN.

84. DIAGRAM, MORE THAN TWO TRACKS, FIVE LONGS ONE SHORT

IF IN MORE THAN TWO TRACK TERRITORY, AND IT WAS DESIRED TO RECALL THE FLAGMAN FOR TRACK NO. 3, FIVE LONG AND ONE SHORT WHISTLES WOULD BE SOUNDED. (FIVE LONG ONE SHORT WHISTLES)

85. NOTE FOLLOWING PAR. (ea)

ATTENTION IS DRAWN TO THE NOTE FOLLOWING PARAGRAPH (ea), WHICH REMINDS US THAT: AT JUNCTIONS OR OTHER POINTS AT WHICH SIGNALS 14 (d), (da), (e) OR (ea) MAY APPLY TO FLAGMAN OF MORE THAN ONE TRAIN, CARE MUST BE EXERCISED TO ENSURE RETURN ONLY OF THE FLAGMAN FOR WHICH SIGNAL INTENDED.

86. NOTE FOLLOWING PAR. (ea), ARROW POINTING TO ASTERISK

THE ASTERISK INDICATED BY ARROW APPEARED AT THE CONCLUSION OF EACH PARAGRAPH. IT MEANS SIMPLY THAT THE WHISTLES IN THIS PORTION OF RULE 14 ARE THOSE PRESCRIBED BY RULE 99.

87. FUSEES BURNING RED AT REAR

RULE 99 CONTINUES: AND WHILE RETURNING TO HIS TRAIN A FUSEE BURNING RED MUST BE PLACED AT SUCH POINTS OR TIMES AS MAY BE NECESSARY TO ENSURE FULL PROTECTION. A FUSEE BURNING RED MUST BE LEFT AT THE POINT FROM WHICH THE TRAIN MOVES. HERE

THE FLAGMAN HAS COMPLIED WITH THE RULE, AND IS PLACING THE RED FUSEE AT THE POINT FROM WHICH THE TRAIN WILL MOVE.

88. FOLLOWING TRAIN CLOSES UP

IF THE FOLLOWING TRAIN CLOSES UP WITHIN EIGHT TO TEN MINUTES AFTER THE PROTECTED TRAIN HAS LEFT, THE PICTURE SHOWS THE SIGNALS THE FOLLOWING TRAIN WILL ENCOUNTER. FIRST, TWO SETS OF TORPEDOES WILL BE EXPLODED PUTTING THE TRAIN AT RESTRICTED SPEED FOR 2000 YARDS. THE FIRST TWO FUSEES SHOWN MAY HAVE BURNED OUT BY THE TIME THE FOLLOWING TRAIN ARRIVES, BUT THE TWO PLACED LAST WILL LIKELY BE BURNING, IF THE TRAIN AHEAD HAS NOT PROCEEDED FURTHER THAN SHOWN HERE.

89. QUESTION

IF THE FLAGMAN WAS OUT 2000 YARDS WHEN RECALLED, HOW MANY FUSEES WOULD HE NEED TO PLACE WHILE RETURNING TO HIS TRAIN TO ENSURE FULL PROTECTION?

90. NUMBER OF FUSEES

VISIBILITY IN THE AREA WILL HAVE A BEARING ON HOW THIS QUESTION SHOULD BE ANSWERED. THE RED FUSEE AT THE POINT FROM WHICH THE FLAGMAN RETURNS, AND ONE AT THE POINT FROM WHICH THE TRAIN MOVES ARE MANDATORY IN ALL CASES. REMEMBER, A FUSEE BURNS FOR APPROXIMATELY TEN MINUTES AND AT LEAST ONE SHOULD BE BURNING AT ALL TIMES UNTIL THE FLAGMAN REACHES THE

REAR OF HIS TRAIN. THIS WOULD REQUIRE ONE FUSEE TO BE PLACED ABOUT EVERY EIGHT MINUTES AND IF THE FLAGMAN'S POSITION WAS AT LEAST 2000 YARDS FROM HIS TRAIN, A MINIMUM OF TWO FUSEES AS ILLUSTRATED BY NOS. 1 AND 2 ON THIS DIAGRAM WOULD ALSO BE REQUIRED.

91. TRAIN APPROACHING FLAGMAN

NOW LET'S RETURN TO A FLAGGING SITUATION AND BRING A TRAIN IN UNDER NORMAL CONDITIONS. THE TRAIN HAS EXPLODED TORPEDOES, WHISTLED ACKNOWLEDGEMENT OF THE FLAGMAN'S STOP SIGNALS, AND IS COMING TO A STOP. THE FLAGMAN WILL INFORM THE ENGINEMAN THE REASONS FOR THE PROTECTION, AND CAN THEN ACCOMPANY THE ENGINE OF THE FOLLOWING TRAIN AS IT CLOSES UP ON THE REAR OF THE PROTECTED TRAIN.

92. QUESTION

THE RULE PROVIDES FOR THE FLAGMAN TO REMAIN UNTIL RECALLED OR RELIEVED. THE FLAGMAN HAS NOT BEEN RECALLED. HOW CAN HE CONSIDER HIMSELF RELIEVED WHEN HE LEAVES BEFORE ANOTHER FLAGMAN TAKES HIS PLACE?

93. FLAGMAN CLIMBING ON ENGINE

IN THE CIRCUMSTANCES ILLUSTRATED, THE FOLLOWING TRAIN NOW HAS THE RESPONSIBILITY OF PROTECTING ITS OWN REAR. THE FLAGMAN BOARDING THE ENGINE FULFILLED HIS PART OF THE OPERATION WHEN

HE GOT THE NEXT TRAIN BEHIND STOPPED AND GAVE IT THE NECESSARY INFORMATION. HE HAS THEREFORE, IN THE ACCEPTED SENSE, BEEN RELIEVED, AND CERTAINLY THE SAFETY OF HIS TRAIN WOULD PERMIT THE FLAGMAN TO RIDE THE ENGINE OF THE FOLLOWING TRAIN AS IT CLOSES UP ON THE TRAIN AHEAD.

94. SNOW PLOW

THE RULE CONTINUES: WHEN CURVATURE, WEATHER OR OTHER CONDITIONS REQUIRE, OR WHEN SNOW PLOWS OR FLANGERS ARE RUNNING, EXTRA PRECAUTION MUST BE TAKEN.

95. STOP BETWEEN STATIONS

THE RULE ALSO PROVIDES THAT A TRAIN SHOULD NOT STOP BETWEEN STATIONS AT A PLACE WHERE THE VIEW FROM FOLLOWING TRAINS IS OBSTRUCTED IF IT CAN BE AVOIDED. THE FOLLOWING TRAIN IN THIS DIAGRAM WOULD HAVE A VERY RESTRICTED VIEW OF THE REAR OF THE TRAIN AHEAD.

96. TRAIN ON STRAIGHT TRACK

THE INTENT OF THE RULE IS THAT WHERE THE CREW HAS CONTROL OF THE SITUATION, THE STOP SHOULD BE MADE WHERE THE VIEW FROM THE REAR IS SIMILAR TO THAT ILLUSTRATED IN THIS DIAGRAM.

97. CONDUCTOR AND ENGINEMAN

RULE 99 ALSO PROVIDES CONDUCTORS AND ENGINEMEN ARE RESPONSIBLE FOR THE PROTECTION OF THEIR TRAINS. THIS IS A GENERAL

STATEMENT, AND PERHAPS CAN BEST BE CLARIFIED LIKE THIS: THE CONDUCTOR IS RESPONSIBLE TO SEE THAT PROPER ACTION IS TAKEN WHEN HIS TRAIN MAY BE OVERTAKEN BY A FOLLOWING TRAIN. THE ENGINEMAN MUST ACCEPT RESPONSIBILITY FOR PROPER ACTION WHEN NECESSARY TO PROVIDE FLAG PROTECTION AGAINST AN OPPOSING TRAIN, THIS DOES NOT HOWEVER EXCUSE OTHER MEMBERS OF THE CREW FROM ASSUMING THEIR RESPONSIBILITY UNDER THE RULES.

98. INSIDE ABS TERRITORY

UP TO THIS POINT WE HAVE DEALT WITH RULE 99 AS IT APPLIES WITHOUT THE HELP OF AUTOMATIC BLOCK SIGNAL RULES. WHERE ABS RULES ARE EFFECTIVE, IMPORTANT MODIFICATIONS ARE PROVIDED. LET'S DEAL WITH THE RULE AS IT APPLIES WITHIN ABS TERRITORY.

99. RULE 99 WITHIN ABS TERRITORY

IT READS: WHEN A TRAIN STOPS UNDER CIRCUMSTANCES IN WHICH IT MAY BE OVERTAKEN BY ANOTHER TRAIN, WITH THE PROTECTION OF AT LEAST TWO BLOCK SIGNALS TO THE REAR, PROTECTION AGAINST FOLLOWING TRAINS WILL HAVE BEEN AFFORDED WHEN FLAGMAN HAS TAKEN UP A POSITION ON THE GROUND AT A POINT FROM WHICH STOP SIGNALS CAN BE PLAINLY SEEN BY AN APPROACHING TRAIN FROM A DISTANCE OF AT LEAST 300 YARDS FROM THE TRAIN BEING PROTECTED. FIRST, IT SHOULD BE EMPHASISED THAT THIS PORTION OF THE RULE IS NOT EFFECTIVE UNLESS THE TRAIN HAS THE PROTECTION OF AT LEAST TWO

BLOCK SIGNALS TO ITS REAR.

100. THREE BLOCK SIGNALS AND TRAIN

THE MOST SIGNIFICANT DIFFERENCE IN PROTECTION PROCEDURES IN ABS TERRITORY AS COMPARED TO NON ABS IS THE ELIMINATION OF ALL DISTANCES EXCEPT THE 300 YARDS, AND THE FACT THAT THE USE OF TORPEDOES IS DISPENSED WITH. IN THE ILLUSTRATION SHOWN, THE STOP AND PROCEED SIGNAL BEHIND THE TRAIN PLACES A FOLLOWING MOVEMENT AT RESTRICTED SPEED. THIS SPEED IS ADDED PROTECTION PROVIDED BY ABS FACILITIES, AND MODIFIES IN IMPORTANT RESPECTS THE DISTANCE A FLAGMAN MUST BE FROM THE REAR OF HIS TRAIN TO ENSURE FULL PROTECTION.

101. QUESTION

DOES THIS RULE MEAN THAT THE FLAGMAN MUST ALWAYS BE AT LEAST 300 YARDS FROM THE TRAIN HE IS PROTECTING?

102. DIAGRAM OF FLAGMAN NEXT TO CABOOSE

NO. THE INTENT OF THE RULE IS THAT A FLAGMAN'S STOP SIGNALS MUST BE SEEN FROM THE FOLLOWING TRAIN WHEN THE DISTANCE BETWEEN THE FOLLOWING TRAIN AND THE TRAIN BEING PROTECTED IS AT LEAST 300 YARDS. THIS DIAGRAM ILLUSTRATES THE REQUIREMENTS, AND THE FLAGMAN CAN PROVIDE ADEQUATE PROTECTION FROM THE POSITION SHOWN.

103. DIAGRAM OF FLAGMAN OUT 150 YARDS

IN THIS CASE BECAUSE OF CURVATURE A CLEAR VIEW OF 300 YARDS IS NOT POSSIBLE, SO THE FLAGMAN WALKS BACK. WHEN HE REACHES A POINT WHERE THE DISTANCE FROM THE REAR OF HIS TRAIN, PLUS THE DISTANCE HIS STOP SIGNALS CAN BE SEEN FROM THE APPROACHING TRAIN TOTALS 300 YARDS, HE MAY TAKE UP HIS POSITION. THIS ILLUSTRATES HOW DISTANCES MAY BE COMBINED TO MEET RULE REQUIREMENTS.

104. QUESTION

WHERE THE REAR OF THE PROTECTED TRAIN IS NOT FAR BEYOND A SIGNAL, THE FLAGMAN'S POSITION COULD BE IN TERRITORY WHERE A FOLLOWING TRAIN CAN BE MOVING AT MEDIUM SPEED. WHERE TORPEDOES ARE NOT USED, HOW CAN THESE SHORT DISTANCES ENSURE FULL PROTECTION?

105. FLAGMAN OUT 150 YARDS, SIGNALS ADDED

TO CLARIFY THIS POINT, ANOTHER SIGNAL HAS BEEN ADDED TO THE DIAGRAM. THE FOLLOWING TRAIN IN THE ILLUSTRATION SHOWN WOULD ENTER THE BLOCK IT IS NOW MOVING THROUGH ON THE AUTHORITY OF AN APPROACH SIGNAL.

106. RULE 285 AND REQUIREMENTS.

IT IS THEREFORE GOVERNED BY RULE 285 WHICH READS: "PROCEED, PREPARING TO STOP AT NEXT SIGNAL. TRAINS EXCEEDING MEDIUM

SPEED MUST AT ONCE REDUCE TO THAT SPEED. REDUCTION TO MEDIUM SPEED MUST COMMENCE BEFORE PASSING SIGNAL".

107. REPEAT DIAGRAM FLAGMAN OUT 150 YARDS, SIGNALS ADDED

IT WILL BE SEEN THAT APART FROM THE SPEED PRESCRIBED, IT IS MOST IMPORTANT THAT IT STOP AT THE NEXT SIGNAL, WHICH IN THIS CASE IS A SHORT DISTANCE BEHIND THE TRAIN BEING PROTECTED. AFTER THIS STOP IT MAY PROCEED AT RESTRICTED SPEED, AND THE RULES RECOGNIZE RESTRICTED SPEED ADEQUATE TO PROTECT MANY MAIN TRACK SITUATIONS. THE RULE THEREFORE ENSURES THE NECESSARY PROTECTION. EVEN THOUGH POOR VISIBILITY MAY OBSCURE THE FLAGMAN AND HIS STOP SIGNALS, ABS RULES WILL STILL PROTECT THE TRAIN.

108. QUESTION

THEN NO MATTER HOW POOR VISIBILITY IS, THE RULE WOULD NEVER REQUIRE A FLAGMAN TO GO OUT FARTHER THAN 300 YARDS. IS THIS CORRECT?

109. DIAGRAM: FLAGMAN OUT 300 YARDS

YES IT IS. NO MATTER HOW SHARP THE CURVATURE NOR HOW SEVERE THE STORM WHEN THE FOLLOWING TRAIN STOPS AT THE FLAGMAN SHOWN HERE, IT WILL BE AWARE OF THE OBSTRUCTION WHEN IT IS 300 YARDS FROM IT. THIS IS THE GREATEST DISTANCE DEMANDED BY THE RULE.

110. SECOND PARAGRAPH WITHIN ABS

THE SECOND PARAGRAPH OF THIS PORTION OF RULE 99 READS: WHEN NECESSARY TO PROTECT AGAINST TRAINS MOVING IN THE OPPOSITE DIRECTION, FLAG PROTECTION PRESCRIBED FOR OUTSIDE ABS TERRITORY MUST BE PROVIDED, EXCEPT THAT ON SINGLE TRACK WHERE THERE ARE AT LEAST TWO BLOCK SIGNALS TO THE FRONT GOVERNING OPPOSING TRAINS, PROTECTION WILL HAVE BEEN AFFORDED A STANDING TRAIN WHEN FLAGMAN HAS TAKEN UP A POSITION ON THE GROUND AT A POINT FROM WHICH STOP SIGNALS CAN BE PLAINLY SEEN BY AN APPROACHING TRAIN FROM A DISTANCE OF AT LEAST 300 YARDS FROM THE TRAIN BEING PROTECTED.

FIRST PARAGRAPH OF THIS PORTION OF RULE 99 CONCERNS ITSELF WITH PROTECTION AGAINST TRAINS APPROACHING FROM THE REAR. THIS PARAGRAPH ONLY PRESCRIBES PROTECTION AGAINST TRAINS MOVING IN THE OPPOSITE DIRECTION.

111. LOCATION OF SIGNALS SINGLE TRACK

THE RULE RECOGNIZES A DIFFERENT SET OF CIRCUMSTANCES SURROUND OPPOSING MOVEMENTS BECAUSE IT REQUIRES PROTECTION AS PRESCRIBED FOR OUTSIDE ABS TERRITORY IN ALL CASES WITH ONE EXCEPTION. THAT EXCEPTION STIPULATES TWO THINGS: FIRST, THAT THE PROTECTED TRAIN MUST BE IN SINGLE TRACK WHERE THERE ARE

AT LEAST TWO BLOCK SIGNALS TO THE FRONT GOVERNING OPPOSING TRAINS, AS SIGNALS 1 AND 2 DO IN THE ILLUSTRATION ON THE SCREEN, AND SECOND, THAT THE PROTECTED TRAIN CAN ONLY APPLY MODIFIED PROTECTION WHEN IT IS STANDING.

112. TWO TRACKS WITH OPPOSING MOVEMENT

IN EFFECT, WHAT THE RULE IS GUARDING AGAINST IS ANY MODIFICATION IN ABS TERRITORY WHERE A FLAGMAN DOES NOT HAVE AT LEAST TWO BLOCK SIGNALS TO ASSIST HIM GETTING THE OPPOSING TRAIN STOPPED. IN TWO TRACK SITUATIONS SIGNALS ONLY GOVERN TRAINS MOVING WITH THE CURRENT OF TRAFFIC. IN THE ILLUSTRATION SHOWN, THE TRAIN AT THE BOTTOM IS GOVERNED BY SIGNALS BUT THE TRAIN ABOVE IS MOVING AGAINST THE CURRENT OF TRAFFIC WHERE THERE ARE NO SIGNALS TO GOVERN. IN THESE CIRCUMSTANCES IF THE TRAIN BELOW FOR ANY REASON HAD TO GET THE OPPOSING TRAIN STOPPED, A FULL FLAG FOR OUTSIDE ABS TERRITORY WOULD BE REQUIRED.

113. QUESTION

IF FORM R TRAIN ORDER RULES, HAVING TO DO WITH MOVEMENTS AGAINST THE CURRENT OF TRAFFIC, ARE FOLLOWED, HOW COULD TWO TRAINS FIND THEMSELVES IN THE POSITIONS SHOWN IN THE PREVIOUS ILLUSTRATION?

114. TWO TRACKS: FORM H

THE TRAIN BELOW COULD BE A WORK EXTRA HOLDING FORM R TRAIN ORDER, AS WELL AS EXAMPLE 7 OF FORM H WORK ORDERS, AND NOT BE ABLE TO CLEAR THE TRAIN RUNNING AGAINST THE CURRENT OF TRAFFIC BECAUSE OF MECHANICAL FAILURE.

115. BOTH OUTSIDE AND WITHIN ABS TERRITORY

THE PORTION OF THE RULE THAT APPLIED BOTH OUTSIDE AND WITHIN ABS TERRITORY WAS COVERED IN DETAIL WHEN PROTECTION FOR OUTSIDE ABS TERRITORY WAS DEALT WITH. LET'S BRIEFLY REVIEW THIS PORTION AS A REMINDER THAT THE REQUIREMENTS ALSO APPLY WITHIN ABS.

116. ENGINEMAN WHISTLING FLAGMAN OUT

FIRST, THE ENGINEMAN SIGNALS THE FLAGMAN TO PROTECT THE REAR, AND WHEN READY TO PROCEED HE RECALLS THE FLAGMAN.

117. FLAGMAN OUT 300 YARDS

SECOND, AFTER FLAGMAN HAS TAKEN UP HIS POSITION, HE MUST REMAIN AT THAT POINT UNTIL RECALLED OR RELIEVED, OR THE SAFETY OF THE TRAIN WILL PERMIT. FLAGMAN MUST ALWAYS ON THE APPROACH OF A TRAIN DISPLAY STOP SIGNALS.

118. FUSEES AT POINT OF RETURN AND REAR OF TRAIN

THIRD, IF RECALLED FLAGMAN MUST LEAVE A FUSEE BURNING RED AT THE POINT FROM WHICH HE RETURNS, ALSO AT THE POINT FROM WHICH

THE TRAIN MOVES. THESE TWO FUSEES ARE MANDATORY NO MATTER HOW FAR OUT THE FLAGMAN GOES, BUT THE FLAGMAN MUST ALSO WHILE RETURNING TO HIS TRAIN PLACE A FUSEE BURNING RED AT SUCH POINTS OR TIMES AS MAY BE NECESSARY TO ENSURE FULL PROTECTION.

119. QUESTION

WITHIN ABS TERRITORY WHERE THE FLAGMAN'S POSITION WILL NEVER BE MORE THAN 300 YARDS FROM HIS TRAIN, WOULD FUSEES IN ADDITION TO THE TWO THAT ARE MANDATORY BE REQUIRED?

120. REPEAT FUSEE AT POINT OF RETURN AND REAR OF TRAIN.

FUSEES PLACED AS ILLUSTRATED SHOULD ENSURE FULL PROTECTION IN ALL NORMAL CASES.

121. QUESTION

WHERE CONDITIONS ARE SUCH THAT THE FLAGMAN'S POSITION IS STANDING AT THE REAR OF THE TRAIN, HOW MANY FUSEES WOULD BE REQUIRED?

122. DIAGRAM: TRAINMAN PLACING TORPEDOES AT REAR OF TRAIN

IN THE ILLUSTRATION SHOWN, THE POINT FROM WHICH THE FLAGMAN WILL RETURN IS ESSENTIALLY THE SAME AS THE POINT FROM WHICH THE TRAIN WILL MOVE. IN THESE CIRCUMSTANCES, ONE RED FUSEE WILL FULFILL THE INTENT OF THE RULE.

123. SNOW PLOW

FOURTH, EXTRA PRECAUTION MUST BE TAKEN WHEN CURVATURE, WEATHER

OR OTHER CONDITIONS REQUIRE, AND WHEN SNOW PLOWS OR FLANGERS ARE INVOLVED.

124. TRAIN STOPPED WITH REAR IMMEDIATELY AROUND A CURVE

FIFTH, AVOID STOPS AT PLACES WHERE THE VIEW FROM A FOLLOWING TRAIN IS OBSCURED.

125. CONDUCTOR AND ENGINEMAN

SIXTH, WE ARE REMINDED THAT CONDUCTORS AND ENGINEMEN ARE RESPONSIBLE FOR THE PROTECTION OF THEIR TRAINS.

126. WRITTEN INSTRUCTIONS

OCCASIONALLY FLAGMEN ARE REQUIRED TO HOLD TRAINS, OR INFORM THEM OF SPECIFIC MOVEMENTS OF TRAINS BEING PROTECTED. WHEN THESE THINGS ARE SO, RULE 100 GOVERNS.

127. RULE 100

IT READS: WHEN PROVIDING PROTECTION REQUIRED BY RULE 99 AND IT IS NECESSARY TO HOLD TRAINS OR ADVISE THEM OF SPECIFIC MOVEMENTS OF THE TRAIN BEING PROTECTED, FLAGMAN SHOULD WHEN PRACTICABLE, BE FURNISHED WITH WRITTEN FLAGGING INSTRUCTIONS TO BE SHOWN TO THE ENGINEMAN OF TRAINS AFFECTED.

128. 948 PASSES EXTRA EAST

TO ILLUSTRATE WE WILL ASSUME EXTRA 8750 EAST DOES NOT HAVE SUFFICIENT TIME TO GO TO Z FOR NO. 947. WHILE IT IS STANDING IN THE SIDING AT Y THE DECISION IS MADE TO STOP NO. 948 AND

SEND A FLAGMAN WITH WRITTEN INSTRUCTIONS OVER TO Z TO HOLD NO. 947.

129. WRITTEN INSTRUCTIONS

THE INSTRUCTIONS CARRIED BY THE FLAGMAN ARE ADDRESSED TO THE ENGINEMAN OF NO. 947 AND THEY READ: THE FLAGMAN WHO WILL HAND YOU THIS MESSAGE IS SENT TO HOLD YOU AT Z. WE WILL FOLLOW NO. 948 FROM Y TO Z. STAY AT Z UNTIL WE ARRIVE, AND IT'S SIGNED BY CONDUCTOR JONES, EXTRA 8750 EAST.

130. EXTRA 8750 EAST IN SIDING AT Y

MEANWHILE, AS SOON AS THE TWENTY MINUTE INTERVAL HAS EXPIRED, EXTRA 8750 EAST WILL FOLLOW NO. 948 OVER TO Z ON THE STRENGTH OF THE MESSAGE GIVEN TO THE FLAGMAN TO HOLD NO. 947.

131. QUESTION

IS THIS NOT AN UNUSUAL KIND OF OPERATION?

132. EXTRA EAST APPROACHING Z

IT IS NOT A RECOMMENDED WAY OF ADVANCING A TRAIN, AND MUST BE RESERVED FOR CASES WHERE SERIOUS AND UNUSUAL DELAYS WOULD OTHERWISE RESULT, OR IN THE CASE OF EMERGENCY.

133. QUESTION

TO WHAT EXTENT DOES A FLAGMAN SUPERCEDE CLEARING RULES?

134. FLAGMAN SPEAKING TO ENGINEMAN

WHEN USED TO MOVE AGAINST AN OPPOSING TRAIN, A FLAGMAN SUPER-

CEDES ALL AUTHORITY OF THE TRAIN BEING HELD. IT MUST WAIT UNTIL THE TRAIN FOLLOWING THE FLAGMAN HAS ARRIVED. A TRAIN MUST NOT USE A FLAGMAN TO TAKE IT AWAY FROM A POINT WHERE A TRAIN ORDER MEET HAS BEEN ESTABLISHED UNTIL THE TRAIN DISPATCHER'S PERMISSION IS OBTAINED. AS A MATTER OF FACT, THE TRAIN DISPATCHER SHOULD, IF PRACTICABLE, BE CONTACTED IN ALL CASES.

THIS IS ONLY ONE ILLUSTRATION OF THE CONTEMPLATED USE OF RULE 100. THERE WILL BE TIMES WHEN THE LOCATION OF THE TRAIN BEING PROTECTED WILL REQUIRE THE TRAIN BEING STOPPED TO USE AN UNUSUAL ROUTE. THE TRAIN BEING STOPPED MAY BE REQUIRED TO HOLD BACK UNTIL CERTAIN MOVES ARE MADE BY THE PROTECTED TRAIN. THESE ALSO ARE CASES WHERE WRITTEN INSTRUCTIONS WOULD BE USED.

135. <u>THE END</u>

NO COMMENT.