

# Annual Report 2010

# Accident Investigation Board, Norway **Railway Department**

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#### Introduction

The Accident Investigation Board Norway (AIBN) is a multimodal organisation covering four transport modes, aviation, rail, road and marine. It was established in 1989 to investigate air accidents. In 2002 the AIBN's mandate was expanded to cover railway accidents, in 2005 road accident investigations were included, and in 2008 marine investigations were brought in to the organisation. The AIBN is an administrative agency under the Ministry of Transport and Communications (Samferdselsdepartementet).

Our investigations are entirely independent from the Norwegian Railway Authority (Statens jernbantilsyn), and are focused on safety improvement. The AIBN does not apportion blame or liability, nor do we enforce law or carry out prosecutions. The purpose of an AIBN investigation is to improve the safety of railways, and to prevent further accidents from occurring.

Rail accident investigation in Norway is subject to the Directive for the Accident Investigation Board Norway, laid down by the Ministry of Transport and Communications on 12 June 2002. The AIBN reports to the Ministry of Transport and Communications, but is an independent body as regards professional issues. The Directive states that the Ministry cannot instruct the agency in professional matters in those areas for which the AIBN is responsible.

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### Regulation

Railway accident investigation in Norway is regulated in detail by the Norwegian Act of June 3<sup>rd</sup> 2005, No.34, relating to notification, reporting and investigation of railway accidents and railway incidents, and regulations stipulated pursuant to the Act.

EUs safety directive for railway was adopted and made official March 1<sup>st</sup> 2006 as Regulation 2006-03-31 nr 378. *Regulation for official investigation of railway accidents and serious incidents etc.* ("The Railway Investigation regulation").

#### Accident Investigation Board Norway (AIBN) - Organisation

The AIBN organisation was kept unchanged during 2010. A specialist in QA systems was employed in 2010 as a member of the Staff department.

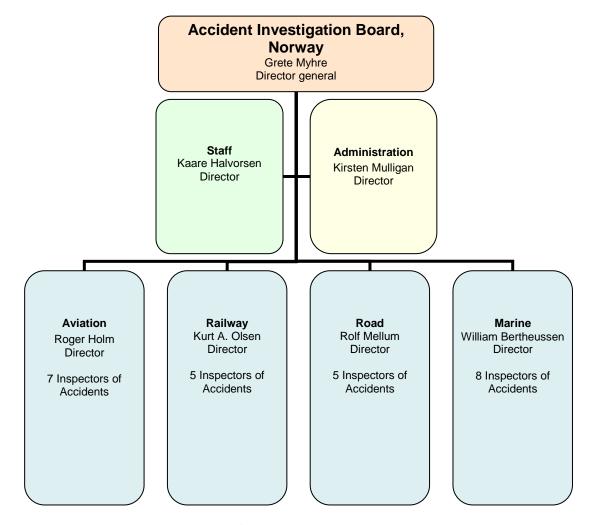
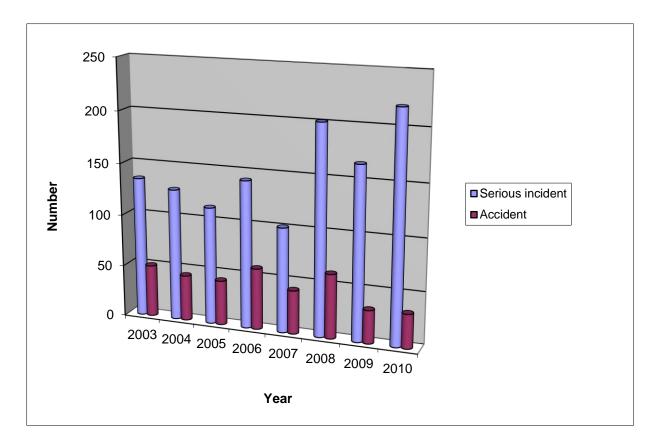


Figure 2: The AIBN organisation as of 31<sup>st</sup> December 2010.

#### Notifications of accidents and incidents - key numbers

On January 1<sup>st</sup> 2010, the Railway department was involved in 10 investigations.

The AIBN, Railway department received totally 252 notifications in 2010, compared to 198 notifications in 2009. In 2010 there has been an increase in the number of notifications received by the AINB for serious incidents, while the number of accidents is approximately the same as the previous year. The number of notification includes rail-, metro- and tram traffic (LTR). According to the Norwegian Railway Authority (responsible for official statistics), the total number of reported accidents and incidents is on the average level compared to the previous years.



11 accidents were registered with a total of 13 fatalities.

Figure 2: Key numbers, reported railway accidents and incidents.

|  | 01.07.02 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|--|----------|------|------|------|------|------|------|------|------|
| Serious railway<br>incidents                     | -        | -    | 127  | 113  | 142  | 101  | 201  | 166  | 219  |
| Railway<br>accidents                             | -        | -    | 44   | 43   | 59   | 42   | 62   | 32   | 33   |
| Total number<br>of cases                         | 144      | 197  | 181  | 156  | 201  | 143  | 272  | 198  | 252  |
| Closed after<br>the preliminary<br>investigation | -        | 184  | 173  | 156  | 190  | 144  | 266  | 187  | 236  |
| Published<br>reports                             | -        | 3    | 15   | 7    | 11   | 13   | 9    | 11   | 9    |

Table 1: Key numbers, reported railway accidents and incidents (not official statistics).

The Norwegian Railway Authority is the responsible body for the official national statistics regarding railway accidents and incidents.

#### **Other activities**

During 2010, several meetings have been arranged with the Norwegian Railway Authority, Infrastructure Manager (Jernbaneverket) and the operators, including metro and tram operators. The meetings have focused on closing safety recommendations, accident reporting and classification etc.

The AIBN, Railway department was very busy through most of the year 2010. The Oslo accident, 3 fatalities and 4 serious injuries, took place in March 2010. A project team of 6 staff was working on this investigation. The project team focused on safety culture in both the IM and operators organizations having to do more than 40 interviews with management and workers. A preliminary report with one safety recommendation was released about 30 days after the accident causing a lot of media attention. In 2009 AIBN, Railway department conducted a survey on the public opinion regarding investigations and exercise of our mandate. One of the outcomes of this survey was, among other things, how to handle media. This had been dealt with by the AIBN management, and proved to be very important when the Oslo accident happened.

The European Railway Agency (ERA) has established a European network for investigating bodies. The Accident Investigation Board Norway is participating. As a result of implementing the EUs safety directive, the Railway department is reporting its activities to ERA. A notification is sent for every initiated investigation, and final reports are also sent to ERA's public data base. Through this data base the AIBN Railway department has access to reports from other European investigating bodies.

Norway, Sweden, Denmark and Finland have formed a Nordic network of accident investigation boards (NRAI). The network organises two meetings per year, where the main

focus is to inform each other about ongoing investigations, ERA network and task force meetings and any other business common to the Nordic Region. ERA is represented in the NRAI meetings as of 2010.

#### **Reports / recommendations**

The Accident Investigation Board, Norway, Railway Section, published 9 reports in 2010. This gives approximately 2 reports pr. year for each Inspector of Accident. See appendix A for more details.

The Accident Investigation Board Norway, the Railway department, published 16 safety recommendations in 2009. According to the National Railway Authority 11 of these recommendations are still open as of January 1<sup>st</sup> 2011. An overview of the recommendations is given in appendix B.

#### Appendix A - Published reports 2009

| NR | IDENTIFICATION  | DATE       |
|----|---|------------|
| 1  | Report on serious incident at Stryken station, Gjøvikbanen, 12.1.2009.<br>Freight train 5512.                       | 4.3.2010   |
| 2  | Report on fire in Airport Express train at Nathionaltheatret station,<br>Hovedbanen, 7.6.2009.                      | 11.3.2010  |
| 3  | Report on accident at Viken level-crossing, Gjøvikbanen, 15.7.2009.<br>Passenger train 210.                         | 20.5.2010  |
| 4  | Report on serious incident at Strømmen station, Hovedbanen, 20.8.2009. Passenger train 1507.                        | 10.6.2010  |
| 5  | Report on derailment freight train 5828, Dalane station, Sørlandsbanen, 31.1.2010.                                  | 22.7.2010  |
| 6  | Report on derailment freight train 4957, Halden station, Østfoldbanen, 12.10.2009.                                  | 22.9.2010  |
| 7  | Report on serious incident, Metro train 502, Sinsen station, Oslo, 10.9.2009.                                       | 1.11.2010  |
| 8  | Report on sideswipe collision freight train 5741 and passenger train 2387, Koppang station, Rørosbanen, 17.12.2009. | 22.11.2010 |
| 9  | Report on overheating axle bearings freight train 8264, Hanaborg station, Hovedbanen, 22.12.2009.                   | 21.12.2010 |

### Appendix B - Safety recommendations 2010

| Report         | Recommendation |   | 01.1   |
|----------------|----------------|---|--------|
| No.            | No.            | Text  | Status |
| <u>2010/01</u> | 2010/01        | The AIBN recommends that Statens jernbanetilsyn to        | Open   |
|                |                | order Jernbaneverket to review the rules and winter       |        |
|                |                | preparedness regarding routines for notifying the traffic |        |
|                |                | controller about tracks which has not been cleared for    |        |
| 2010/02        | 2010/02        | snow to be closed for crossing of trains.                 | Olasad |
| 2010/02        | 2010/02        | The AIBN recommends that Statens jernbanetilsyn           | Closed |
|                |                | informs the rail companies about the shortcomings in      |        |
|                |                | hazard identification so that they can make the necessary |        |
| 0040/00        | 0040/02        | amendments to their safety management systems             |        |
| 2010/02        | 2010/03        | The AIBN recommends Statens jernbanetilsyn to order       | Closed |
|                |                | the rail companies assessing whether improvements can     |        |
|                |                | be made to their guidelines for, and training in          |        |
|                |                | establishing emergency communication via GSM-R in         |        |
| 0040/00        | 0040404        | various situations.                                       |        |
| <u>2010/02</u> | 2010/04        | The AIBN recommends that Statens jernbanetilsyn           | Closed |
|                |                | orders Jernbaneverket to consider whether the             |        |
|                |                | positioning of manual fire alarm call points and signs    |        |
|                |                | should be improved at those stations that have dedicated  |        |
|                |                | fire alarm systems.                                       |        |
| <u>2010/02</u> | 2010/05        | The AIBN recommends that Statens jernbanetilsyn order     | Closed |
|                |                | the rail companies to consider whether to make regular    |        |
|                |                | briefings and inspection tours of stations that have      |        |
|                |                | separate fire alarm and evacuations procedures a          |        |
|                |                | mandatory part of the competence requirements for         |        |
|                |                | relevant personnel.                                       |        |
| 2010/03        | 2010/06        | The AIBN recommends that Samferdselsdepartementet         | Closed |
|                |                | order responsible authorities to go through and review    |        |
|                |                | the analysing tools used by the municipalities.           |        |
| <u>2010/04</u> | 2010/07        | The AIBN recommends that Statens jernbanetilsyn           | Open   |
|                |                | orders Jernbaneverket, in cooperation with the railway    |        |
|                |                | undertakings, to establish common training procedures     |        |
|                |                | how to handle traffic deviation.                          |        |
| <u>2010/04</u> | 2010/08        | The AIBN recommends that Statens jernbanetilsyn           | Open   |
|                |                | orders Jernbaneverket, in coopration with the railway     |        |
|                |                | undertakings, to establish a common system to verify      |        |
|                |                | that the communication is in accordance with rules and    |        |
|                |                | regulations.  |        |
| 2010/07        | 2010/09        | The AIBN recommends that Statens jernbanetilsyn order     | Open   |
|                |                | OTD to improve the control of wheel flange lubrication.   |        |
| 2010/07        | 2010/10        | The AIBN recommends that Statens jernbanetilsyn order     | Open   |
|                |                | OTD to evaluate if rail rinsing with high-pressured water |        |

|                |         | should be done more frequent than week 38-45.                |      |
|----------------|---------|--|------|
| 2010/07        | 2010/11 | The AIBN recommends that Statens jernbanetilsyn              | Open |
|                |         | orders OTD to strengthen the training of subway drivers      |      |
| 0040/07        | 0040/40 | related to driving and braking.                              | 0    |
| <u>2010/07</u> | 2010/12 | The AIBN recommends that Statens jernbanetilsyn              | Open |
|                |         | orders OTD to improve the internal routines for              |      |
| 0040/00        | 0040440 | information distribution within the whole company.           |      |
| 2010/08        | 2010/13 | The AIBN recommends that Statens jernbanetilsyn              | Open |
|                |         | orders Jernbaneverket to review the positioning of the       |      |
|                |         | signals at all stations in order to ensure that these are in |      |
|                |         | accordance with the technical regulations,                   |      |
|                |         | and that any non-conformity to be documented.                |      |
| <u>2010/08</u> | 2010/14 | The AIBN recommends that Statens jernbanetilsyn              | Open |
|                |         | orders Jerbaneverket to deal with the                        |      |
|                |         | barrier system, which should be upgraded so that it          |      |
|                |         | functions as a barrier against single-point of failure to    |      |
|                |         | avoid two trains ending up on the same track without         |      |
|                |         | permission.  |      |
| <u>2010/09</u> | 2010/15 | The AIBN recommends that Statens jernbanetilsyn              | Open |
|                |         | orders that the railway companies should consider            |      |
|                |         | expediting scrapping axle bearings of the older              |      |
|                |         | type that are still in use.                                  |      |
| 2010/09        | 2010/16 | The AIBN recommends that Statens jernbanetilsyn              | Open |
|                |         | orders Jernbaneverket and the railway undertakings           |      |
|                |         | should review the problems regarding damage to the           |      |
|                |         | wheels and bearings, and agree in their assessment of        |      |
|                |         | the potential for and frequency of damage so that any use    |      |
|                |         | of detectors along tracks or on trains can be assigned the   |      |
|                |         | correct priority in the safety management system.            |      |

The safety recommendations are translated from Norwegian language. The Norwegian text remains the official version of the safety recommendations. Should ambiguity arise between the two, the Norwegian text takes precedence.