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Documentation of validation tests

HOLM Knut B. (ed), SVINSÅS Eirik, ELFVING Carl,
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Bjarne Haugstad
Director of Research

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8) ABSTRACT

This report contains documentation of the test results for Version 1.2 ß of the ammunition storage risk analysis tool AMRISK.

The AMRISK code is a result of a joint Norwegian-Swedish development of the originally Swiss code AMMORISK, which has been used in Norway since 1985. Version 1.1 ß was mainly a Windows-version of the old DOS-code. Version 1.2 has been extended with basic GIS functionality, and parts of the code have been re-structured.

A further development into Version 2.0 will be carried out in the near future. 2.0 includes improved physical models, and will be evaluated in a separate report.

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CONTENTS

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1 INTRODUCTION

The AMRISK code is a tool for calculating risk values for personnel in the vicinity of military or civilian ammunition storages. The calculations take into account the complete chain from a potential accident to hazards to exposed persons. The following steps must be evaluated or considered: probability of an accident, free field effects such as air blast, ground shock, heat and debris throw, the interaction with objects such as houses and cars, and finally the effect on human beings.

AMRISK is a result of a joint Norwegian-Swedish development of the originally Swiss code AMMORISK, which has been used in Norway since 1985. The code has been ported from DOS to Windows, it will communicate with GIS systems and also be updated with improved physical models. Care has been taken to make it easy to implement versions for different operating systems such as Linux at a later stage.

AMRISK Version 1.1 ß is mainly a Windows-version of the old DOS-code. An evaluation of Version 1.1β was performed to compare the calculated values with the old code, and to ensure that the contractual Windows-functionality was properly implemented (1).

AMRISK Version 1.2 ß includes the necessary functions for exchanging data with a standard Geographical Information System (GIS), such as generating the positions of objects from an imported map, and exporting global results (isorisk contours) to a GIS layer. In addition, a re-structuring of the code has been carried out to facilitate the implementation of improved physical models. Because of this, it has been necessary to once again perform a complete evaluation of the calculated values, to make sure nothing has changed.

AMRISK Version 2.0 ß represents the final stage of the development, and the end of the current contract. The evaluation of this version will be reported separately.

This report describes the systematic validation of version 1.2, with emphasis on the correctness of the calculated values. Regarding the interaction with GIS, a single test case is presented to demonstrate that the required functionality has been successfully implemented. We do not claim that all bugs have been removed, and further testing of the graphical functions will continue during the validation of the final product (Version 2.0). This is considered to be an efficient and acceptable way of proceeding, since 1.2 and 2.0 are identical "GIS-wise".

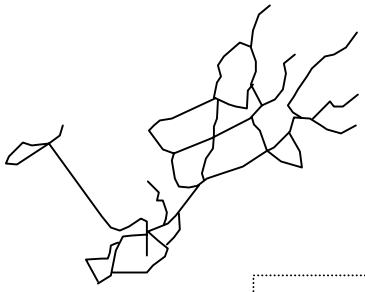
2 INTERACTION WITH GEOGRAPHICAL INFORMATION SYSTEMS (GIS)

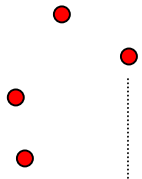
2.1 Geographical Information Systems

A "Geographical Information System" can be defined as a system of computer software, hardware and data (as well as operators) able to organize, manipulate and present information, which is tied to a geographical location. A more "down to earth" definition may be that a GIS represents an intelligent and interactive map with useful and accessible information connected to the different objects.

Figure 2.1 illustrates the idea. The geographical data are organised in different "layers" and tables of additional information or "attributes". New layers may be combined from sorting and searching the attributes, and layers may be combined for special visualizations. For example, a map showing unpaved roads with an average number of drunken teachers > 3 during snowfall periods could easily be created (if the data were available).

Layer 1: Map	**Layer 2: Public roads**	**Layer 3: Public buildings**
Raster data: Scanned map	Vector data: Lines	Vector data: Points





Church	
Position	(x, y)
Built	1736
Size	320 m^2
Condition	3

Status	
Roof	Poor
Walls	Good
Foundation	Good
Interior	-

Figure 2.1 Example of geographical information system (GIS)

Obviously, such a data collection will sum up to a large amount of interconnected information. The usual way of organising it is to store every layer of geographical objects (the "maps") in some kind of standard file. This file contains all the geometric information necessary to draw this layer on the screen (mainly a collection of point and lines with all the necessary coordinates, colours and so on) and pointers to each of these objects, which can be related to a database with all the additional information.

There are numerous file formats available for this purpose. Many of them are proprietary, i.e. internal formats for a commercial data programs. Others are open formats for data exchange. Trouble-free conversion between formats is a big challenge.

2.2 The SOSI format

SOSI is the official Norwegian standard file exchange format for digital geodata[1] as used and maintained by the Norwegian Mapping Authority (2). In order to facilitate consistent data exchange, the description of the data model is included as part of the data transfer, and the transfer format is based on a known underlying generic model.

Most suppliers of geographic information software in the Norwegian market have developed two-way conversion routines between SOSI and their proprietary internal structures.

A comprehensive description of SOSI is beyond the scope of this report. However, a simple example of a typical file is reproduced in Appendix A.

2.3 GIS functionality in AMRISK

The structure of AMRISK is very similar to a simple Geographical Information System, since we define the positions of storages and exposed objects with their coordinates, contents and other properties. A set of calculations is then performed to establish the different types of risk for people (collective and individual) related to the various exposed objects.

Commercial GIS systems are used for estate management within most defence forces. One could therefore easily imagine a full interface between AMRISK and these systems, i.e. that the necessary parameters and technical information which is defined in the menus of AMRISK could be exported to the estate GIS. Also, the technical information about the objects in the estate GIS could be imported into AMRISK.

However, it is difficult to foresee the need for such a full two-way functionality. The object information in the estate GIS is usually not detailed enough to be useful in the risk calculations, and most of the technical parameters in AMRISK will be superfluous in the day-to-day management of the facilities. As the number of analyses are limited, it is indeed feasible to use the simpler approach of keyboard input combined with point-and-click functionality on the digital maps, for determining position.

The really useful level of interaction between AMRISK and GIS is limited to the following:

- AMRISK should be able to export isorisk contours as a vector map layer to the estate GIS. This can be used to visualize danger zones, areas where house building is advisable and so

[1] SOSI: Systematic Organisation of Spatial Information or Samordnet Opplegg for Stedfestet Informasjon

on. Note that an isorisk contour around a cluster of storages or around an underground storage with a tunnel adit can be a complicated curve, it is not a circle.

- AMRISK should be able to import geographical information from a civil GIS, for (semi-) automatic generation of object coordinates.

This has been implemented in Version 1.2, as described in the next two sections.

2.4 Import of raster graphics

As stated above, AMRISK Version 1.2 has the capability of importing various graphic formats. This is described more closely in the User's Manual. An important yet simple case will usually be raster graphics format. Then the actions to be made are:

- A SOSI header file can be produced manually (i.e. in a text editor). In this header file the true coordinates of the raster map corners are written (in ASCII format). The name of the raster file is written in the SOSI header file, and the raster file will be displayed in the right scale on the screen.
- Alternatively the global coordinates of the local origo in the coordinate system can be entered in the "general" dialog-box (in AMRISK). The raster graphics file can be opened directly from the menu/toolbar option in the GIS window. For instance, the scale option on the GIS toolbar can be used to define origo and the position of x = 500m, y = 500m in the local coordinate system and in this way define the scale of the map.

2.5 Isorisk contours in AMRISK

Isorisk contour is a line drawn through points where the risk level for an exposed individual is constant, see figure 2.2.

A novel FORTRAN 95 routine has been written to calculate isorisk contours. For completeness the code is reproduced in Appendix B.

The principle of the algorithm is as follows:

- A rapidly converging method is first used for finding one single point, which meets the requested risk value.
- Thereafter, a small "step vector" is generated perpendicularly on the initial vector, which points from the storage to the first point. The length of the step vector depends on the quantity of explosives in the magazine. The step vector is then rotated by a converging process until the second point of requested risk value is found.

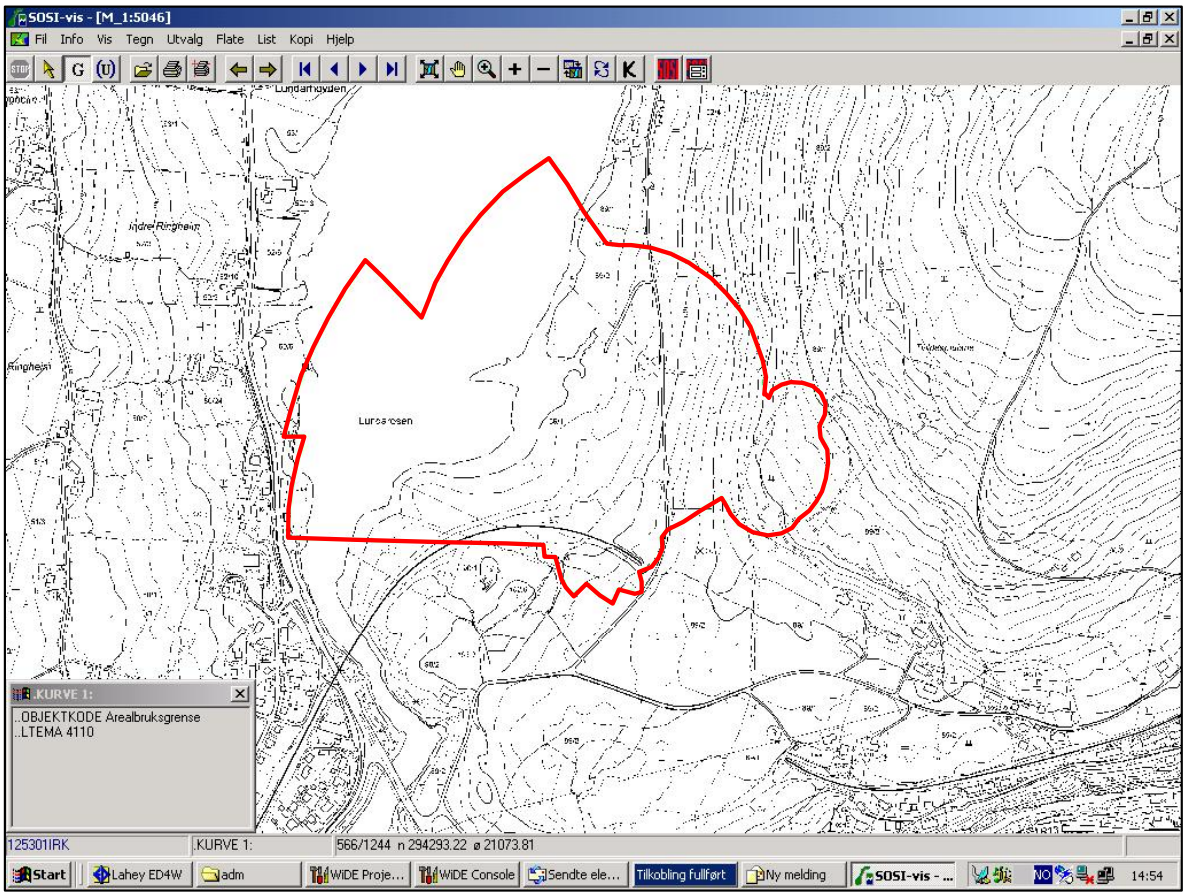


Figure 2.2 Isorisk contour

- The procedure is repeated with new step vectors until a closed polygon around the storage is achieved.
- The coordinates of the polygon can be stored in a SOSI file, which is generated by a separate menu (toolbar) option, see Appendix A.

2.6 Test results - GIS functionality

The implementation of a basic GIS functionality has been worked out over several months in 2002 and 2003. The main challenges have been to produce a readable SOSI format, and to develop and debug the FORTRAN code for isorisk calculation properly. Fortunately, when dealing with graphics processing, it will usually be very obvious whether there are errors or not - it can easily be tested and observed by the operator.

At this state the routines are regarded to be reliable to a satisfactory level. However as the program has been used, unwanted behaviour has been seen, and corrections have been made. One problem is still not solved; for some underground installations in special circumstances (low loading density) and some chosen isorisk values the program will fail to provide a zone. No error message will occur, just failure to produce results.

In conclusion, the GIS functionality in AMRISK 1.2 ß has been developed and debugged. It is now found to be functioning in a robust and useful way for future risk analyses.

3 RISK CALCULATIONS

In addition to the GIS functionality a re-structuring of the code has been carried out to facilitate the implementation of improved physical models. In the AMMORISK code several routines are involved in connecting the basic functions, which calculate basic values of pressure, debris density etc, up to the point where lethality is calculated for a single point. This was assumed to make the development of new code quite complicated. Therefore the new routine LeaPnt.F90 was developed to modernize this part of the code and make the transition to the 2.0 version smoother. All new functions except for the new event frequency module can now be put in by modifying just the single function routine, and link the extra functions.

To make sure that the altered code does not change the results it has been necessary to perform a new complete evaluation of the calculated values.

3.1 Outline of test scenarios for risk calculations

Eight different scenarios or example problems have been established in order to evaluate and compare the calculated values from the new version of the code with the old one. The scenarios are identical to those used in the previous validation of Version 1.1 ß. Based on extensive experience with risk calculations and first-hand knowledge of all the subroutines in AMRISK, the examples have been carefully chosen in order to invoke all parts of the code[2]. As before, they have been calculated partly at FLO/AMM in Norway (examples 1-2) and partly at FOI and FORTV in Sweden (examples 3-6). The scenarios are as follows:

[2] The examples have been set up in co-operation between new users of the code and the programmers, all of which are experienced within the field of ammunition storage and risk analyses. In this way, "impartiality" is ensured, but at the same time the examples could be adapted to test critical parts of the code.

Ex	Storage type	Exposed objects
1	Cluster of 7 surface storages	• Road • Forest
2	Cluster of 14 surface storages	• Gravel pit • Car breaker's yard • Domestic building • Dom. build. (staff) • Farm • Explosives workshop • Old people's home • Fishing ground • School • Road • Railway • Administration building • Lounge / canteen • Working space
3	Underground storage, one chamber and one exit tunnel	• Railway • Road • Domestic building • Civil leisure area • Forest
4	Underground storage, one chamber and two exit tunnels	• Railway • Road • Domestic building • Civil leisure area • Forest
5	Cluster: (i) Underground storage, one chamber and two exit tunnels, (ii) Underground storage, one chamber and one exit tunnel, (iii) Surface storage	• Railway • Road • Domestic building • Domestic building • Civil leisure area
6	Underground storage, one chamber and one exit tunnel. Barricade outside the tunnel orifice	• Railway • Road • Domestic building • Civil leisure area • Forest

Table 3.1 Test scenarios for risk calculations

As in version 1.1 old data files from AMRISK 1.0 may be imported into AMRISK 1.2 ß. Alternatively the data may be embedded directly into version 1.2. Both these methods are

utilized in the validation tests. The results calculated by AMRISK 1.2 ß are shown with the corresponding results from AMRISK 1.0 in Appendix C.

3.2 Observations

The results shows full agreement between the AMMORISK (1.0) results and the AMRISK 1.2 calculations except for the area unlimited objects. The cause of the deviations is the difference in integration method for the risk over an area. The 1.0 code calculates the radius of five lethality zones, and the consequences are taken as the sum of the product of the area and the lethality in this zones. This approach have two important weaknesses:

- It is slightly coarse because of the limited number of zones.
- In the case of overlapping zones for e.g. cratering effect and effects from the tunnel, the overlapping area will be calculated twice.

In the 1.2-version of the code the lethality is calculated at grid points. The grid is expanded stepwise out to the points where the lethality is insignificant. It has been checked graphically (by marking the calculation points on the screen) that the routine functions by intentions. The results are reasonable and show that the deviations in the old code are at the expected side.

The improved integration method was implemented in AMRISK 1.1. The significant differences between version 1.1 and 1.0 were due to this modification (1). The cases having the same discrepancies between 1.2 and 1.0 as between 1.1 and 1.0 are therefore not described here. Table 4.1 shows the calculation results for the cases with outcome from version 1.2 dissimilar to both 1.0 and 1.1.

Ex	Exposed object	Parameter	Values – AMRISK Version		
			1.0	1.2	
				New file	Old file
3	Forest (AU)	OKZ	1.002	0.980	0.980
		OO	0.210	0.206	0.206
		OE	0.274	0.268	0.268
		Perc coll risk (x 10^{-5})	7.282	7.126	7.115
4	Forest (AU)	OKZ	0.803	0.776	0.776
		OO	0.169	0.163	0.163
		OE	0.193	0.187	0.187
		Perc coll risk (x 10^{-5})	5.141	4.963	4.959
6	Forest (AU)	OKZ	0.994	0.902	0.902
		OO	0.209	0.190	0.189
		OE	0.270	0.244	0.243
		Perc coll risk (x 10^{-5})	7.162	6.478	6.467

Table 3.2 Deviating results from AMRISK 1.2 compared to version 1.0 (values for chamber A)

The deviations are moderate, and all apply to forest as the exposed object. Therefore they can be explained by the improved integration method for area objects.

4 USER INTERFACE

The validation of all the basic functionality, such as menu system and output format, was done for version 1.1 and has not since been changed. However, several trivial, but previously unknown deficiencies have been found (as expected with a Beta-version) and rectified. This has been an ongoing process, and is not documented in any detail. For illustration, see Appendix D.

5 CONCLUSIONS

The purpose of this report is to document that AMRISK Version 1.2 ß is functioning as required by the contract of the Norwegian-Swedish development project. It serves as a formal background document for the approval by the project's Management Group.

Version 1.2 is identical to Version 1.1, with the addition of basic GIS functionality. Furthermore, some parts of the code have been restructured in order to facilitate the inclusion of updated physical models at a later stage (Version 2.0). Because of this, it has been necessary to perform a full set of validation calculations.

The basic GIS functionality (importing maps of various formats, calculating isorisk contours and exporting this in the SOSI format to a GIS system) is now found to be robust - i.e. possible irregularities may still occur, but is best revealed during further tests by the user community.

A large number of test calculations have been performed. The tested release of Version 1.2 yields results identical to those produced by the original AMMORISK code for all cases. Exceptions are minor deviations as described in chapter 3.2. These deviations were expected due to a new and improved method of integration. The calculated values from Version 1.2 must hence be regarded as improvements over AMMORISK.

AMRISK Version 1.2 ß still has some shortcomings with respect to the interactive help-files, and the User's manual still only exists as a preliminary draft version. This must be rectified according to the contract, but does not degrade the main conclusion of this document:

AMRISK 1.2 ß has been validated with respect to all important aspects which may influence the quality of the results or the vital functionality.

To ensure tracability, the code used for the calculations, AMRISK 1.2.ß dated 22.09.2003 (with all the relevant input files for the test calculations) has been "frozen" on a CD-ROM for future reference.

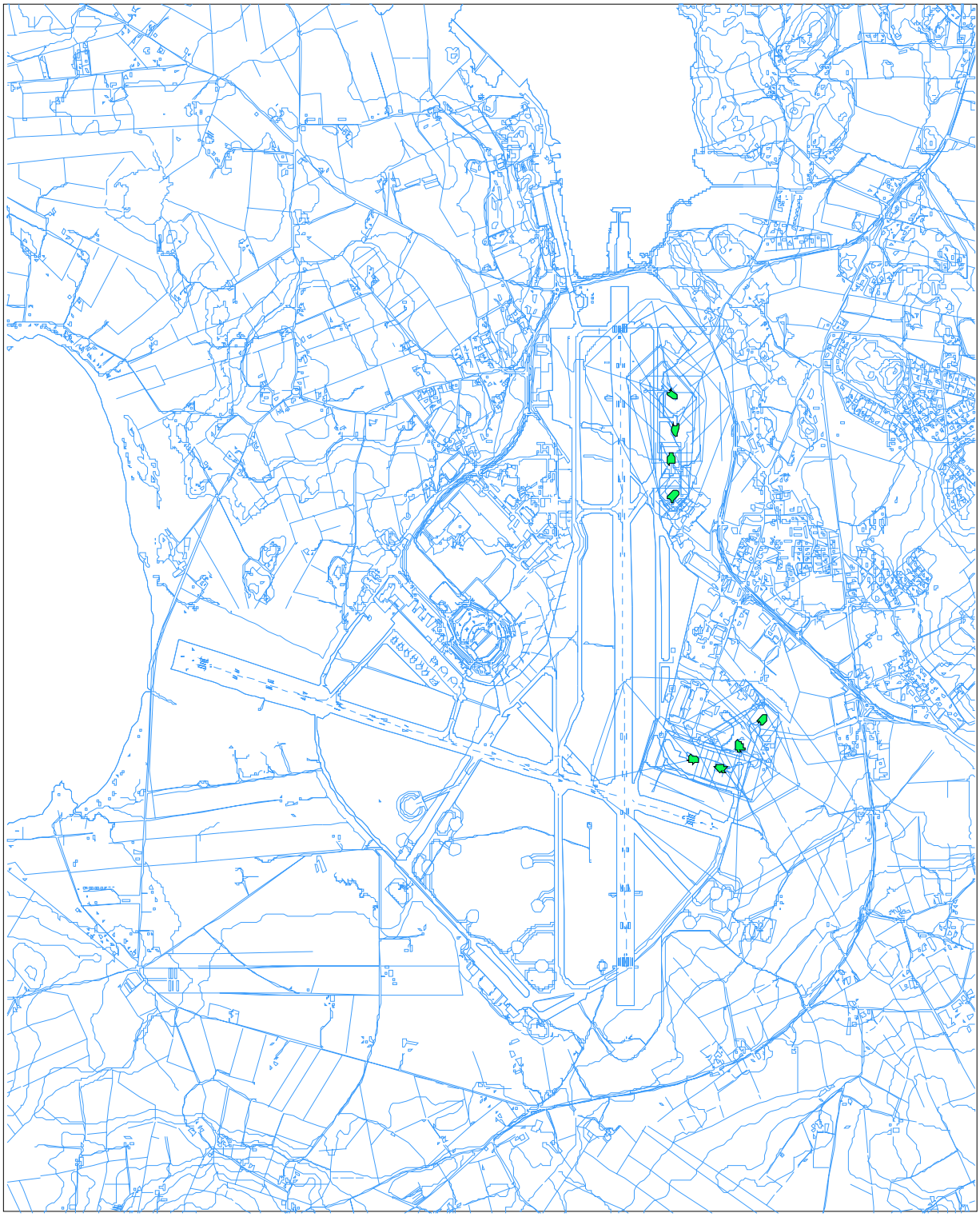
APPENDIX

A EXAMPLES OF GIS FILES - SOSI FORMAT

A.1 SOSI header file

```
.HODE
..TEGNSETT ND7
..TRANSPAR
...KOORDSYS 22
...ORIGO-N\ 0 0
...ENHET 1.0
..OMR]DE
...MIN-N\ 6533944 29698
...MAX-N\ 6538744 33805
..SOSI-VERSJON 2.2
..PRODUSENT 'Forsvarsbygg'
..EIER 'Statens kartverk'
.RASTER 1:
..BILDE
...BILDE-SYS 22
...BILDE-TYPE emf
! Kompresjon Packbits
...BILDE-FIL "112403.emf"
..PIXEL-ST\RR 3.175 3.175
..N\
6533944 29698
6538744 33805
.SLUTT
```

A.2 Raster graphics file



B FORTRAN SUBROUTINE FOR ISORISK CALCULATION

```
!     Last change:  HØ   11 Jun 2003    6:28 am

!- amrisk-----------------------------------------------------hfk-amk-C
!     SUBRUTINE ZonIpl     PROGRAM AMRISK                            C
!---------------------------------------------------------------------C
!                                                                     C
!     SUBRUTINE Calculating and Drawing ISO -ind risk conture         C
!     INPUT PARAMETERS:     - midx,midy,sca                           C
!     OUTPUT PARAMETERS:      - Iso risk conture                      C
!                                                                     C
!     CALLS:             - Mapdr()                                    C
!                        - Rofang()                                   C
!                          WINTERACTER CALLS for -                    C
!                            - "Pen" movement                         C
!                            - line type coice                        C
!                            - colour choice for sircle               C
!                            - single line plot                       C
!                                                                     C                                    C
!---------------------------------------------------------------------C
!                                                                     C
!     PROGRAMMING BY HFK-AMK    MARS  - 2001     HANS ØIOM            C
!                               FEB   - 2002                          C
!---------------------------------------------------------------------C
!
      SUBROUTINE ZonIpl(Irsk,indT,Otp,Dan,OptGis)
!
      IMPLICIT NONE
      INCLUDE '..\incl\commag.h'
      INCLUDE '..\incl\comchg.h'
!
      INTEGER i, j, k, l, img, icg, itu, iq(DMAG), iti, Iln, it2
      CHARACTER Otp*4, Dan*4
      REAL xtry, xtry2, ytry, ytry2, xen, yen, xppt, yppt, ang, dang,  &
           dist, ddis, dold, mrsk1, mrsk2, drsk, let, pi, Irsk, indT,  &
           La, Ld, Lg, SUMLAM, ROFANG, DSTANZ
      LOGICAL Cont, Cont2, flag, labzon(DMAG), OptGis
!
!-----Calculate 1. point in which ind risk equals chosen value---------C
!
      img = 1
      icg = 1
      itu = 1
      Iln = 0
      glmax = -1.E8
      glmay = -1.E8
      glmix = 1.E8
      glmiy = 1.E8

      IF (OptGis) OPEN (16,'ISORISK.SOS')
      pi = 2. *ASIN(1.)
      DO i = 1, MAXMAG
         labzon(i) = .FALSE.
         k = 0
         DO j = 1, MAXCHG(i)
            IF (LABIR(i,j)) k = j
         END DO
         k = MAX(1,k)
         LABIR(i,k) = .TRUE.
         iq(i) = k
         IF (CHARGN(i,k) < 0.005 ) labzon(i) = .TRUE.
      END DO

101   labzon(img) = .TRUE.

      IF (OptGis) THEN
          Iln = Iln + 1
          WRITE(16,'(A,I3,A)')'.KURVE ',Iln,':'
          WRITE(16,'(A)')'..OBJEKTKODE Arealbruksgrense'
          WRITE(16,'(A)')'..LTEMA 4110'
          WRITE(16,'(A)')'..NØ'
      ENDIF
```

```
      mrsk2 = 0.0

      IF (MTYP(img)(1:2) == 'UG') THEN
         yen = TUEXTY(img,itu)
         xen =  TUEXTX(img,itu)
         dist = 80.* CHARGN(img,icg)**(1./3.)*(2.E-7/Irsk)**.1
         ang = ROFANG(TUEX2X(img,itu), TUEX2Y(img,itu), xen+10., yen,  &
               xen, yen) + pi/2
      ELSE
         xen = CENTRX(img,1)
         yen = CENTRY(img,1)
         dist = 170.* CHARGN(img,icg)**(1./3.)*(2.E-7/Irsk)**.1
         ang = 0.0
      END IF

      Cont = .TRUE.
      ddis = dist/100.
      iti = 0

      DO WHILE (Cont)
         iti = iti + 1
         IF (iti > 200 ) GOTO 555
         xtry = xen + COS(ang)*dist
         ytry = yen + SIN(ang)*dist
         mrsk1 = 0.0
!
!-----Calculate risk in point
!
         DO i = 1, MAXMAG
           CALL LeaPtn(i,iq(i),1,Otp,Dan,xtry,ytry,0,La,Ld,Lg)
           mrsk1= mrsk1+ SUMLAM(La,Ld,Lg)* PROBAB(i,iq(i))* indT
         END DO
         drsk = ABS(Irsk - mrsk1)
         IF (mrsk2 < 0.0001*Irsk) mrsk2 = mrsk1
         IF (drsk < (Irsk/1000.)) Cont = .False.
!
!-----Modifying distance if risk is incorrect
!
         IF (mrsk1 < Irsk) THEN
            IF (mrsk2 < Irsk) THEN
               dist = dist - ddis
            ELSE
               ddis = ddis*drsk/MAX(mrsk2-mrsk1,1.E-20)
               dist = dist - ddis
            END IF
         ELSE
            IF (mrsk2 > Irsk) THEN
                dist = dist + ddis
            ELSE
               ddis = ddis*drsk/MAX(mrsk1-mrsk2,1.E-20)
               dist = dist + ddis
            END IF
         END IF
         IF (ddis < dist/9000.) Cont = .False.
         mrsk2 = mrsk1
      END DO

!
!-----Move to first pt
!
555   CALL IGrMoveTo(xtry,ytry)
      xen = xtry
      yen = ytry
      IF (OptGis) THEN
           WRITE(16,'(2I12)')INT(yen*100),INT(xen*100)
      ENDIF
      ytry2 = ytry
      ang = ang + pi/2.
!
!-----Go for circular movements to find the next points
!
      CALL IGrLineType ( 0 )
      CALL IGrColourN(35)
      ddis = MAX(2,MIN(dist/200.,20.))
      Cont = .TRUE.
      it2 = 0
      DO WHILE (Cont)
```

```
!
!-----Find ind risk in the point
!
         xppt = xtry
         yppt = ytry
         dang = pi /24.0
         mrsk2 = 0.0
         iti = 0
         it2 = it2 +1
         Cont2 = .TRUE.

         DO WHILE (Cont2)
           iti = iti +1

           IF (iti > 200) Then
              GOTO 777
           ENDIF

           xtry2 = xtry
           ytry2 = ytry

           IF (ang > 2.*pi) THEN
             ang = ang -2.*pi
           ELSEIF (ang < 0.0) THEN
             ang = ang + 2.*pi
           ENDIF

           xtry = xppt + ddis* COS(ang)
           ytry = yppt + ddis* SIN(ang)
           dold = DSTANZ(xtry, ytry,0.0, xtry2, ytry2,0.0)
           mrsk1 = 0.0
           DO i = 1, MAXMAG
              DO j = 1, MAXCHG(i)
                 IF (LABIR(i,j)) k = j
              END DO
              k = MIN(k,1)
              IF (CHARGN(i,k) > .001) THEN
                 CALL LeaPtn(i,k,1,Otp,Dan,xtry,ytry,0,La,Ld,Lg)
                 let = SUMLAM(La,Ld,Lg)* PROBAB(i,k)* indT
                 IF (labzon(i)) THEN
                   CONTINUE
                 ELSE
                   IF (let > Irsk/(2.*MAXMAG)) labzon(i) = .TRUE.
                 END IF
!
!---Mark all mags contributing to zone
!
                 mrsk1= mrsk1 + let
              ENDIF
           END DO
           drsk = ABS(Irsk - mrsk1)
           IF (drsk <(Irsk/1000.).OR.( dold <ddis/30.0)) Cont2= .FALSE.
!
!-----Correcting angel to try new risk calc
!
           IF (mrsk2 < 1.E-21) mrsk2 = mrsk1
           IF (mrsk1 < Irsk .AND. mrsk2 > Irsk ) THEN
              dang = dang* drsk/ (mrsk2 - mrsk1)
              ang = ang + dang
           ELSEIF (mrsk1 > Irsk .AND. mrsk2 < Irsk ) THEN
              dang = dang* drsk/ (mrsk1 - mrsk2)
              ang = ang - dang
           ELSEIF (mrsk1 < Irsk .AND. mrsk2 < Irsk ) THEN
             ang = ang + dang
           ELSEIF (mrsk1 > Irsk .AND. mrsk2 > Irsk ) THEN
              ang = ang - dang
           END IF
           mrsk2 = mrsk1
         ENDDO

777      CALL IGrLineTo(xtry,ytry)

         IF (OptGis) THEN
           WRITE(16,'(2I12)')INT(ytry*100),INT(xtry*100)
           IF (glmax < glx+xtry) glmax = glx+xtry
           IF (glmay < gly+ytry) glmay = gly+ytry
           IF (glmix > glx+xtry) glmix = glx+xtry
```

```
           IF (glmiy > gly+ytry) glmiy = gly+ytry
         ENDIF
         dist = DSTANZ(xen, yen,0.0, xtry, ytry,0.0)
         IF ((dist < 1.9*ddis).AND.(it2 > 10)) THEN
            Cont = .FALSE.
         ENDIF
         IF (it2 > 5000) THEN
            GOTO 888
         ENDIF
!
!-----Loop for calculating the complete circle is ending
!
      END DO
!
!-----Hit the end if lucky!
!
888   CALL IGrLineTo(xen,yen)

      IF (OptGis) THEN
           WRITE(16,'(2I12)') INT(yen*100),INT(xen*100)
      ENDIF
      DO i = 1, MAXMAG
         IF (labzon(i)) THEN
            CONTINUE
         ELSE
            img = i
            GOTO 101
         ENDIF
      END DO
      RETURN
      END
```

C TEST RESULTS FROM AMRISK 1.2 ß

C.1 Risk values - cluster of surface storages (ex 1)

* Seven detached ammunition buildings
* Exposed objects
  - road (LR = linear road, NF = object not in forest)
  - forest (AU = area unlimited, FO = object in forest)
* Deviations between AMRISK 1.0 (AMMORISK) and AMRISK 1.2 are marked grey
* Symbols are defined in C.7

C.1.1 Collective risk by house 0001

Exposed object (Q=10 t, p=2.4x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Rp (x 10^{-5})**	**Perc coll risk (x 10^{-5})**	**Comment**
A: Road (LR)	AMRISK 1.0	-	0.574	0.072	0.075		18	
	AMRISK 1.2 ß 18 Dec	0.0001	0.574	0.072	0.075		18	Old file
B: Forest	AMRISK 1.0	0.0592	0.397	0.105	0.111		26.64	
	AMRISK 1.2 ß 18 Dec	0.0592	0.397	0.105	0.111		26.64	Old file
Risk	AMRISK 1.0					0.448		
	AMRISK 1.2 ß 18 Dec					0.448		Old file

C.1.2 Collective risk by house 0002

Exposed object (Q=10 t, p=2.4x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Rp (x 10^{-5})**	**Perc coll risk (x 10^{-5})**	**Comment**
A: Road (LR)	AMRISK 1.0	-	0.549	0.069	0.072		17.28	
	AMRISK 1.2 ß 18 Dec	0.0001	0.549	0.069	0.072		17.28	Old file

Exposed object (Q=10 t, p=2.4x10^{-5})		Lethality	OKZ	OO	OE	Rp (x 10^{-5})	Perc coll risk (x 10^{-5})	Comment
B: Forest	AMRISK 1.0	0.0591	0.396	0.104	0.111		26.64	
	AMRISK 1.2 ß 18 Dec	0.0591	0.397	0.104	0.111		26.64	Old file
Risk	AMRISK 1.0					0.439		
	AMRISK 1.2 ß 18 Dec					0.439		Old file

C.1.3 Collective risk by house 0003

Exposed object (Q=9 t, p=2.25x10^{-5})		Lethality	OKZ	OO	OE	Rp (x 10^{-5})	Perc coll risk (x 10^{-5})	Comment
A: Road (LR)	AMRISK 1.0	-	0.593	0.075	0.078		17.55	
	AMRISK 1.2 ß 18 Dec	0.0001	0.593	0.075	0.078		17.55	Old file
B: Forest	AMRISK 1.0	0.0556	0.373	0.098	0.104		23.40	
	AMRISK 1.2 ß 18 Dec	0.0556	0.373	0.098	0.104		23.40	Old file
Risk	AMRISK 1.0					0.409		
	AMRISK 1.2 ß 18 Dec					0.409		Old file

C.1.4 Collective risk by house 0004

Exposed object (Q=7 t, p=2.10x10^{-5})		Lethality	OKZ	OO	OE	Rp (x 10^{-5})	Perc coll risk (x 10^{-5})	Comment
A: Road (LR)	AMRISK 1.0	-	0.560	0.070	0.073		15.33	
	AMRISK 1.2 ß 18 Dec	0.0001	0.560	0.070	0.073		15.33	Old file
B: Forest	AMRISK 1.0	0.0498	0.334	0.088	0.093		19.53	
	AMRISK 1.2 ß 18 Dec	0.0498	0.334	0.088	0.093		19.53	Old file
Risk	AMRISK 1.0					0.348		
	AMRISK 1.2 ß 18 Dec					0.348		Old file

C.1.5 Collective risk by house 0005

Exposed object (Q=8 t, p=2.25x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Rp (x 10^{-5})**	**Perc coll risk (x 10^{-5})**	**Comment**
A: Road (LR)	AMRISK 1.0	-	0.719	0.091	0.095		21.375	
	AMRISK 1.2 ß 18 Dec	0.0001	0.719	0.091	0.095		21.375	Old file
B: Forest	AMRISK 1.0	0.0544	0.365	0.096	0.102		22.95	
	AMRISK 1.2 ß 18 Dec	0.0544	0.365	0.096	0.102		22.95	Old file
Risk	AMRISK 1.0					0.443		
	AMRISK 1.2 ß 18 Dec					0.443		Old file

C.1.6 Collective risk by house 0006

Exposed object (Q=6 t, p=2.0250x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Rp (x 10^{-5})**	**Perc coll risk (x 10^{-5})**	**Comment**
A: Road (LR)	AMRISK 1.0	-	0.700	0.088	0.091		18.4275	
	AMRISK 1.2 ß 18 Dec	0.0001	0.700	0.088	0.091		18.4275	Old file
B: Forest	AMRISK 1.0	0.0430	0.289	0.076	0.080		16.20	
	AMRISK 1.2 ß 18 Dec	0.0430	0.289	0.076	0.080		16.20	Old file
Risk	AMRISK 1.0					0.347		
	AMRISK 1.2 ß 18 Dec					0.347		Old file

C.1.7 Collective risk by house 0007

Exposed object (Q=16 t, p=2.925x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Rp (x 10^{-5})**	**Perc coll risk (x 10^{-5})**	**Comment**
A: Road (LR)	AMRISK 1.0	-	0.487	0.061	0.064		18.72	
	AMRISK 1.2 ß 18 Dec	0.0001	0.487	0.061	0.064		18.72	Old file
B: Forest	AMRISK 1.0	0.0767	0.515	0.136	0.145		19.53	
	AMRISK 1.2 ß 18 Dec	0.0767	0.515	0.136	0.145		19.53	Old file

Exposed object (Q=16 t, p=2.925x10^{-5})		Lethality	OKZ	OO	OE	Rp (x 10^{-5})	Perc coll risk (x 10^{-5})	Comment
Risk	AMRISK 1.0					0.614		
	AMRISK 1.2 ß 18 Dec					0.614		Old file

C.1.8 Individual risk

Exposed objects (Q=6-16 t, p=2.025-2.9 x10^{-5})		Tind	SDind	rimax	r max (x 10^{-5})	Comment
B: Forest	AMRISK 1.0	1.0	0.6458	0.2570	0.6120	
	AMRISK 1.2 ß 18 Dec	1.0	0.6458	0.2570	0.6120	Old file

C.2 Risk values – Cluster of surface storages (ex 2)

* 14 detached ammunition buildings
* Exposed objects
  - Gravel pit (AL = area limited)
  - Car breaker's yard (PF = point fixed)
  - Domestic building (PF)
  - Farm (PF)
  - Explosives workshop (PF)
  - Old people's home (PF)
  - Fishing ground (AL)
  - School (PF)
  - Road (LR = linear road, FO = object in forest)
  - Railway (LT = linear train, FO)
  - Administration building (PF, NF = object not in forest)
  - Lounge / canteen (PF)
  - Working space (AL, NF)
* Deviations between AMRISK 1.0 (AMMORISK) and AMRISK 1.2 are marked grey
* Symbols are defined in C.7

C.2.1 Collective risk by magazine 0008

Exposed object (Q=5 t, p=2.4x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
1: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
2: Car breaker's yard (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file

Exposed object (Q=5 t, p=2.4x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
3: Domestic building. (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.0024	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.0024	Old file
4: Farm (PF)	AMRISK 1.0	0.0003	0.001	0.001	0.001	0.0024	
	AMRISK 1.2 ß 18 Dec	0.0003	0.001	0.001	0.001	0.0024	Old file
5: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
6: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
7: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
8: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
9: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
10: Expl. workshop (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
11: Old people’s home (PF)	AMRISK 1.0	0	0.002	0.002	0.002	0.0048	
	AMRISK 1.2 ß 18 Dec	0	0.002	0.002	0.002	0.0048	Old file
12: Fishing ground (PF)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
13: Farm (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file

Exposed object (Q=5 t, p=2.4x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
14: School (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
15: Farm (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
16: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
17: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
18: Road (LR)	AMRISK 1.0	-	0.051	0.006	0.006	0.0144	
	AMRISK 1.2 ß 18 Dec	-	0.051	0.006	0.006	0.0144	Old file
19: Railway (LT)	AMRISK 1.0	-	0.006	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	0.006	0	0	0	Old file
20: Adm. building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
21: Adm. building (PF)	AMRISK 1.0	0.0002	0.003	0.001	0.001	0.0024	
	AMRISK 1.2 ß 18 Dec	0.0002	0.003	0.001	0.001	0.0024	Old file
22: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
23: Expl. workshop (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
24: Dom. build. (staff) (PF)	AMRISK 1.0	0.0016	0.006	0.006	0.006	0.0144	
	AMRISK 1.2 ß 18 Dec	0.0016	0.006	0.006	0.006	0.0144	Old file

Exposed object (Q=5 t, p=2.4x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
25: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
26: Lounge / canteen (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
27: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
28: Road to gravel pit (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	-	0	0	0	Old file
29: Working space (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
			R0	RE	R (x 10^{-5})	Rp (x 10^{-5})	
Risk	AMRISK 1.0		0.020	0.020	0.108	0.108	
	AMRISK 1.2 ß 18 Dec		0.020	0.020	0.108	0.108	Old file

C.2.2 Collective risk by magazine 0009

Exposed object (Q=8 t, p=5.705 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
1: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
2: Car breaker's yard (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
3: Domestic building. (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.005705	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.005705	Old file

Exposed object (Q=8 t, p=5.705 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
4: Farm (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.005705	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.005705	Old file
5: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
6: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
7: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
8: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
9: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
10: Expl. workshop (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
11: Old people’s home (PF)	AMRISK 1.0	0	0.003	0.002	0.002	0.01141	
	AMRISK 1.2 ß 18 Dec	0	0.003	0.002	0.002	0.01141	Old file
12: Fishing ground (PF)	AMRISK 1.0	-	0.003	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0.003	0	0	0	Old file
13: Farm (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
14: School (PF)	AMRISK 1.0	0	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0.001	0	0	0	Old file

Exposed object (Q=8 t, p=5.705 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
15: Farm (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
16: Domestic building (PF)	AMRISK 1.0	0.0002	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0	0	0	0	Old file
17: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
18: Road (LR)	AMRISK 1.0	-	0.012	0.002	0.002	0.0114	
	AMRISK 1.2 ß 18 Dec	-	0.012	0.002	0.002	0.0114	Old file
19: Railway (LT)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	0	0	0	0	Old file
20: Adm. building (PF)	AMRISK 1.0	0.0002	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0	0	0	Old file
21: Adm. building (PF)	AMRISK 1.0	0.0002	0.003	0.001	0.001	0.0057	
	AMRISK 1.2 ß 18 Dec	0.0002	0.003	0.001	0.001	0.0057	Old file
22: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
23: Expl. workshop (PF)	AMRISK 1.0	0.0002	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0	0	0	0	Old file
24: Dom. build. (staff) (PF)	AMRISK 1.0	0.0006	0.002	0.002	0.002	0.0114	
	AMRISK 1.2 ß 18 Dec	0.0006	0.002	0.002	0.002	0.0114	Old file
25: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file

Exposed object (Q=8 t, p=5.705 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
26: Lounge / canteen (PF)	AMRISK 1.0	0.0002	0.003	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0.003	0	0	0	Old file
27: Gravel pit (AL)	AMRISK 1.0	0.0003	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0003	0.001	0	0	0	Old file
28: Road to gravel pit (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	-	0	0	0	Old file
29: Working space (PF)	AMRISK 1.0	0.0010	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0010	0	0	0	0	Old file
			R0	RE	R (x 10^{-5})	Rp (x 10^{-5})	
Risk	AMRISK 1.0		0.012	0.012	0.067	0.067	
	AMRISK 1.2 ß 18 Dec		0.012	0.012	0.067	0.067	Old file

C.2.3 Collective risk by magazine 0010

Exposed object (Q=10 t, p=5.885x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
1: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
2: Car breaker's yard (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
3: Domestic building. (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.005885	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.005885	Old file
4: Farm (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.005885	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.005885	Old file
5: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	

Exposed object (Q=10 t, p=5.885x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
6: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
7: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
8: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
9: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
10: Expl. workshop (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
11: Old people's home (PF)	AMRISK 1.0	0	0.003	0.002	0.002	0.01177	
	AMRISK 1.2 ß 18 Dec	0	0.003	0.002	0.002	0.01177	Old file
12: Fishing ground (PF)	AMRISK 1.0	-	0.002	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0.002	0	0	0	Old file
13: Farm (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
14: School (PF)	AMRISK 1.0	0	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0.001	0	0	0	Old file
15: Farm (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
16: Domestic building (PF)	AMRISK 1.0	0.0003	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0003	0	0	0	0	Old file

Exposed object (Q=10 t, p=5.885x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
17: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
18: Road (LR)	AMRISK 1.0	-	0.014	0.002	0.002	0.01177	
	AMRISK 1.2 ß 18 Dec	-	0.014	0.002	0.002	0.01177	Old file
19: Railway (LT)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	0	0	0	0	Old file
20: Adm. building (PF)	AMRISK 1.0	0.0005	0.003	0.001	0.001	0.0058	
	AMRISK 1.2 ß 18 Dec	0.0005	0.003	0.001	0.001	0.0058	Old file
21: Adm. building (PF)	AMRISK 1.0	0.0003	0.004	0.001	0.001	0.0058	
	AMRISK 1.2 ß 18 Dec	0.0003	0.004	0.001	0.001	0.0058	Old file
22: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
23: Expl. workshop (PF)	AMRISK 1.0	0.0006	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0006	0	0	0	0	Old file
24: Dom. build. (staff) (PF)	AMRISK 1.0	0.0004	0.002	0.002	0.002	0.01177	
	AMRISK 1.2 ß 18 Dec	0.0004	0.002	0.002	0.002	0.01177	Old file
25: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
26: Lounge / canteen (PF)	AMRISK 1.0	0.0006	0.010	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0006	0.010	0	0	0	Old file
27: Gravel pit (AL)	AMRISK 1.0	0.0036	0.011	0.003	0.003	0.0176	
	AMRISK 1.2 ß 18 Dec	0.0036	0.011	0.003	0.003	0.0176	Old file

Exposed object (Q=10 t, p=5.885x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
28: Road to gravel pit (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	-	0	0	0	Old file
29: Working space (PF)	AMRISK 1.0	0.0106	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0106	0	0	0	0	Old file
			R0	RE	R (x 10^{-5})	Rp (x 10^{-5})	
Risk	AMRISK 1.0		0.015	0.015	0.091	0.091	
	AMRISK 1.2 ß 18 Dec		0.015	0.015	0.091	0.091	Old file

C.2.4 Collective risk by magazine 0011

Exposed object (Q=10 t, p=5.885 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
1: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
2: Car breaker's yard (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
3: Domestic building. (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
4: Farm (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
5: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
6: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file

Exposed object (Q=10 t, p=5.885 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
7: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
8: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
9: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
10: Expl. workshop (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
11: Old people's home (PF)	AMRISK 1.0	0	0.003	0.002	0.002	0.0117	
	AMRISK 1.2 ß 18 Dec	0	0.003	0.002	0.002	0.0117	Old file
12: Fishing ground (PF)	AMRISK 1.0	-	0.011	0.001	0.001	0.0058	
	AMRISK 1.2 ß 18 Dec	0	0.011	0.001	0.001	0.0058	Old file
13: Farm (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
14: School (PF)	AMRISK 1.0	0	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0.001	0	0	0	Old file
15: Farm (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
16: Domestic building (PF)	AMRISK 1.0	0.0002	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0	0	0	0	Old file
17: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
18: Road (LR)	AMRISK 1.0	-	0.003	0	0	0	

Exposed object (Q=10 t, p=5.885 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
	AMRISK 1.2 ß 18 Dec	-	0.003	0	0	0	Old file
19: Railway (LT)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	0	0	0	0	Old file
20: Adm. building (PF)	AMRISK 1.0	0.0005	0.002	0.001	0.001	0.0058	
	AMRISK 1.2 ß 18 Dec	0.0005	0.002	0.001	0.001	0.0058	Old file
21: Adm. building (PF)	AMRISK 1.0	0.0002	0.003	0.001	0.001	0.0058	
	AMRISK 1.2 ß 18 Dec	0.0002	0.003	0.001	0.001	0.0058	Old file
22: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
23: Expl. workshop (PF)	AMRISK 1.0	0.0006	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0006	0	0	0	0	Old file
24: Dom. build. (staff) (PF)	AMRISK 1.0	0.0003	0.001	0.001	0.001	0.0058	
	AMRISK 1.2 ß 18 Dec	0.0003	0.001	0.001	0.001	0.0058	Old file
25: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
26: Lounge / canteen (PF)	AMRISK 1.0	0.0005	0.008	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0005	0.008	0	0	0	Old file
27: Gravel pit (AL)	AMRISK 1.0	0.0009	0.003	0.001	0.001	0.0058	
	AMRISK 1.2 ß 18 Dec	0.0009	0.003	0.001	0.001	0.0058	Old file
28: Road to gravel pit (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	-	0	0	0	Old file
29: Working space (PF)	AMRISK 1.0	0.0071	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0068	0	0	0	0	Old file

Exposed object (Q=10 t, p=5.885 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
			R0	RE	R (x 10^{-5})	Rp (x 10^{-5})	
Risk	AMRISK 1.0		0.011	0.011	0.062	0.062	
	AMRISK 1.2 ß 18 Dec		0.010	0.010	0.061	0.061	Old file

C.2.5 Collective risk by magazine 0012

Exposed object (Q=25 t, p=7.2050x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
1: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
2: Car breaker's yard (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
3: Domestic building. (PF)	AMRISK 1.0	0.0004	0.002	0.001	0.001	0.0072	
	AMRISK 1.2 ß 18 Dec	0.0004	0.002	0.001	0.001	0.0072	Old file
4: Farm (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.0072	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.0072	Old file
5: Domestic building (PF)	AMRISK 1.0	0.0002	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0	0	0	0	Old file
6: Domestic building (PF)	AMRISK 1.0	0.0002	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0	0	0	0	Old file
7: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
8: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0.001	0.001	0.0072	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0.001	0.001	0.0072	Old file

Exposed object (Q=25 t, p=7.2050x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
9: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0.001	0.001	0.0072	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0.001	0.001	0.0072	Old file
10: Expl. workshop (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
11: Old people's home (PF)	AMRISK 1.0	0.0001	0.004	0.004	0.004	0.0288	
	AMRISK 1.2 ß 18 Dec	0.0001	0.004	0.004	0.004	0.0288	Old file
12: Fishing ground (PF)	AMRISK 1.0	-	0.072	0.004	0.004	0.0288	
	AMRISK 1.2 ß 18 Dec	0.0036	0.071	0.004	0.004	0.0288	Old file
13: Farm (PF)	AMRISK 1.0	0.0002	0.002	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0.002	0	0	0	Old file
14: School (PF)	AMRISK 1.0	0.0001	0.001	0.001	0.001	0.0072	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0.001	0.001	0.0072	Old file
15: Farm (PF)	AMRISK 1.0	0.0005	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0005	0	0	0	0	Old file
16: Domestic building (PF)	AMRISK 1.0	0.0011	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0011	0.001	0	0	0	Old file
17: Domestic building (PF)	AMRISK 1.0	0.0005	0.001	0.001	0.001	0.0072	
	AMRISK 1.2 ß 18 Dec	0.0005	0.001	0.001	0.001	0.0072	Old file
18: Road (LR)	AMRISK 1.0	-	0.034	0.004	0.004	0.0288	
	AMRISK 1.2 ß 18 Dec	0	0.034	0.004	0.004	0.0288	Old file
19: Railway (LT)	AMRISK 1.0	-	0.004	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0015	0.004	0	0	0	Old file
20: Adm. building (PF)	AMRISK 1.0	0.0112	0.056	0.017	0.017	0.1224	

Exposed object (Q=8 t, p=5.705 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
4: Farm (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.005705	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.005705	Old file
5: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
6: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
7: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
8: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
9: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
10: Expl. workshop (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
11: Old people's home (PF)	AMRISK 1.0	0	0.003	0.002	0.002	0.01141	
	AMRISK 1.2 ß 18 Dec	0	0.003	0.002	0.002	0.01141	Old file
12: Fishing ground (PF)	AMRISK 1.0	-	0.003	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0.003	0	0	0	Old file
13: Farm (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
14: School (PF)	AMRISK 1.0	0	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0.001	0	0	0	Old file

Exposed object (Q=8 t, p=5.705 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
15: Farm (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
16: Domestic building (PF)	AMRISK 1.0	0.0002	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0	0	0	0	Old file
17: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
18: Road (LR)	AMRISK 1.0	-	0.012	0.002	0.002	0.0114	
	AMRISK 1.2 ß 18 Dec	-	0.012	0.002	0.002	0.0114	Old file
19: Railway (LT)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	0	0	0	0	Old file
20: Adm. building (PF)	AMRISK 1.0	0.0002	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0	0	0	Old file
21: Adm. building (PF)	AMRISK 1.0	0.0002	0.003	0.001	0.001	0.0057	
	AMRISK 1.2 ß 18 Dec	0.0002	0.003	0.001	0.001	0.0057	Old file
22: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
23: Expl. workshop (PF)	AMRISK 1.0	0.0002	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0	0	0	0	Old file
24: Dom. build. (staff) (PF)	AMRISK 1.0	0.0006	0.002	0.002	0.002	0.0114	
	AMRISK 1.2 ß 18 Dec	0.0006	0.002	0.002	0.002	0.0114	Old file
25: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file

Exposed object (Q=8 t, p=5.705 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
26: Lounge / canteen (PF)	AMRISK 1.0	0.0002	0.003	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0.003	0	0	0	Old file
27: Gravel pit (AL)	AMRISK 1.0	0.0003	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0003	0.001	0	0	0	Old file
28: Road to gravel pit (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	-	0	0	0	Old file
29: Working space (PF)	AMRISK 1.0	0.0010	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0010	0	0	0	0	Old file
			R0	RE	R (x 10^{-5})	Rp (x 10^{-5})	
Risk	AMRISK 1.0		0.012	0.012	0.067	0.067	
	AMRISK 1.2 ß 18 Dec		0.012	0.012	0.067	0.067	Old file

C.2.3 Collective risk by magazine 0010

Exposed object (Q=10 t, p=5.885x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
1: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
2: Car breaker's yard (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
3: Domestic building. (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.005885	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.005885	Old file
4: Farm (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.005885	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.005885	Old file
5: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	

Exposed object (Q=10 t, p=5.885x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
6: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
7: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
8: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
9: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
10: Expl. workshop (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
11: Old people’s home (PF)	AMRISK 1.0	0	0.003	0.002	0.002	0.01177	
	AMRISK 1.2 ß 18 Dec	0	0.003	0.002	0.002	0.01177	Old file
12: Fishing ground (PF)	AMRISK 1.0	-	0.002	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0.002	0	0	0	Old file
13: Farm (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
14: School (PF)	AMRISK 1.0	0	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0.001	0	0	0	Old file
15: Farm (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
16: Domestic building (PF)	AMRISK 1.0	0.0003	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0003	0	0	0	0	Old file

Exposed object (Q=10 t, p=5.885x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
17: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
18: Road (LR)	AMRISK 1.0	-	0.014	0.002	0.002	0.01177	
	AMRISK 1.2 ß 18 Dec	-	0.014	0.002	0.002	0.01177	Old file
19: Railway (LT)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	0	0	0	0	Old file
20: Adm. building (PF)	AMRISK 1.0	0.0005	0.003	0.001	0.001	0.0058	
	AMRISK 1.2 ß 18 Dec	0.0005	0.003	0.001	0.001	0.0058	Old file
21: Adm. building (PF)	AMRISK 1.0	0.0003	0.004	0.001	0.001	0.0058	
	AMRISK 1.2 ß 18 Dec	0.0003	0.004	0.001	0.001	0.0058	Old file
22: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
23: Expl. workshop (PF)	AMRISK 1.0	0.0006	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0006	0	0	0	0	Old file
24: Dom. build. (staff) (PF)	AMRISK 1.0	0.0004	0.002	0.002	0.002	0.01177	
	AMRISK 1.2 ß 18 Dec	0.0004	0.002	0.002	0.002	0.01177	Old file
25: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
26: Lounge / canteen (PF)	AMRISK 1.0	0.0006	0.010	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0006	0.010	0	0	0	Old file
27: Gravel pit (AL)	AMRISK 1.0	0.0036	0.011	0.003	0.003	0.0176	
	AMRISK 1.2 ß 18 Dec	0.0036	0.011	0.003	0.003	0.0176	Old file

Exposed object (Q=10 t, p=5.885x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
28: Road to gravel pit (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	-	0	0	0	Old file
29: Working space (PF)	AMRISK 1.0	0.0106	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0106	0	0	0	0	Old file
			R0	RE	R (x 10^{-5})	Rp (x 10^{-5})	
Risk	AMRISK 1.0		0.015	0.015	0.091	0.091	
	AMRISK 1.2 ß 18 Dec		0.015	0.015	0.091	0.091	Old file

C.2.4 Collective risk by magazine 0011

Exposed object (Q=10 t, p=5.885 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
1: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
2: Car breaker's yard (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
3: Domestic building. (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
4: Farm (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
5: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
6: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file

Exposed object (Q=10 t, p=5.885 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
7: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
8: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
9: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
10: Expl. workshop (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
11: Old people's home (PF)	AMRISK 1.0	0	0.003	0.002	0.002	0.0117	
	AMRISK 1.2 ß 18 Dec	0	0.003	0.002	0.002	0.0117	Old file
12: Fishing ground (PF)	AMRISK 1.0	-	0.011	0.001	0.001	0.0058	
	AMRISK 1.2 ß 18 Dec	0	0.011	0.001	0.001	0.0058	Old file
13: Farm (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
14: School (PF)	AMRISK 1.0	0	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0.001	0	0	0	Old file
15: Farm (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
16: Domestic building (PF)	AMRISK 1.0	0.0002	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0	0	0	0	Old file
17: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
18: Road (LR)	AMRISK 1.0	-	0.003	0	0	0	

Exposed object (Q=10 t, p=5.885 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
	AMRISK 1.2 ß 18 Dec	-	0.003	0	0	0	Old file
19: Railway (LT)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	0	0	0	0	Old file
20: Adm. building (PF)	AMRISK 1.0	0.0005	0.002	0.001	0.001	0.0058	
	AMRISK 1.2 ß 18 Dec	0.0005	0.002	0.001	0.001	0.0058	Old file
21: Adm. building (PF)	AMRISK 1.0	0.0002	0.003	0.001	0.001	0.0058	
	AMRISK 1.2 ß 18 Dec	0.0002	0.003	0.001	0.001	0.0058	Old file
22: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
23: Expl. workshop (PF)	AMRISK 1.0	0.0006	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0006	0	0	0	0	Old file
24: Dom. build. (staff) (PF)	AMRISK 1.0	0.0003	0.001	0.001	0.001	0.0058	
	AMRISK 1.2 ß 18 Dec	0.0003	0.001	0.001	0.001	0.0058	Old file
25: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
26: Lounge / canteen (PF)	AMRISK 1.0	0.0005	0.008	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0005	0.008	0	0	0	Old file
27: Gravel pit (AL)	AMRISK 1.0	0.0009	0.003	0.001	0.001	0.0058	
	AMRISK 1.2 ß 18 Dec	0.0009	0.003	0.001	0.001	0.0058	Old file
28: Road to gravel pit (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	-	0	0	0	Old file
29: Working space (PF)	AMRISK 1.0	0.0071	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0068	0	0	0	0	Old file

Exposed object (Q=10 t, p=5.885 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
			R0	RE	R (x 10^{-5})	Rp (x 10^{-5})	
Risk	AMRISK 1.0		0.011	0.011	0.062	0.062	
	AMRISK 1.2 ß 18 Dec		0.010	0.010	0.061	0.061	Old file

C.2.5 Collective risk by magazine 0012

Exposed object (Q=25 t, p=7.2050x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
1: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
2: Car breaker's yard (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
3: Domestic building. (PF)	AMRISK 1.0	0.0004	0.002	0.001	0.001	0.0072	
	AMRISK 1.2 ß 18 Dec	0.0004	0.002	0.001	0.001	0.0072	Old file
4: Farm (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.0072	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.0072	Old file
5: Domestic building (PF)	AMRISK 1.0	0.0002	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0	0	0	0	Old file
6: Domestic building (PF)	AMRISK 1.0	0.0002	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0	0	0	0	Old file
7: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
8: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0.001	0.001	0.0072	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0.001	0.001	0.0072	Old file

Exposed object (Q=25 t, p=7.2050x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
9: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0.001	0.001	0.0072	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0.001	0.001	0.0072	Old file
10: Expl. workshop (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
11: Old people's home (PF)	AMRISK 1.0	0.0001	0.004	0.004	0.004	0.0288	
	AMRISK 1.2 ß 18 Dec	0.0001	0.004	0.004	0.004	0.0288	Old file
12: Fishing ground (PF)	AMRISK 1.0	-	0.072	0.004	0.004	0.0288	
	AMRISK 1.2 ß 18 Dec	0.0036	0.071	0.004	0.004	0.0288	Old file
13: Farm (PF)	AMRISK 1.0	0.0002	0.002	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0.002	0	0	0	Old file
14: School (PF)	AMRISK 1.0	0.0001	0.001	0.001	0.001	0.0072	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0.001	0.001	0.0072	Old file
15: Farm (PF)	AMRISK 1.0	0.0005	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0005	0	0	0	0	Old file
16: Domestic building (PF)	AMRISK 1.0	0.0011	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0011	0.001	0	0	0	Old file
17: Domestic building (PF)	AMRISK 1.0	0.0005	0.001	0.001	0.001	0.0072	
	AMRISK 1.2 ß 18 Dec	0.0005	0.001	0.001	0.001	0.0072	Old file
18: Road (LR)	AMRISK 1.0	-	0.034	0.004	0.004	0.0288	
	AMRISK 1.2 ß 18 Dec	0	0.034	0.004	0.004	0.0288	Old file
19: Railway (LT)	AMRISK 1.0	-	0.004	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0015	0.004	0	0	0	Old file
20: Adm. building (PF)	AMRISK 1.0	0.0112	0.056	0.017	0.017	0.1224	

Exposed object (Q=25 t, p=7.2050x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
	AMRISK 1.2 ß 18 Dec	0.0112	0.056	0.017	0.017	0.1224	Old file
21: Adm. building (PF)	AMRISK 1.0	0.0004	0.006	0.002	0.002	0.0144	
	AMRISK 1.2 ß 18 Dec	0.0004	0.006	0.002	0.002	0.0144	Old file
22: Domestic building (PF)	AMRISK 1.0	0.0003	0.001	0.001	0.001	0.0072	
	AMRISK 1.2 ß 18 Dec	0.0003	0.001	0.001	0.001	0.0072	Old file
23: Expl. workshop (PF)	AMRISK 1.0	0.0084	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0083	0	0	0	0	Old file
24: Dom. build. (staff) (PF)	AMRISK 1.0	0.0005	0.002	0.002	0.002	0.0144	
	AMRISK 1.2 ß 18 Dec	0.0005	0.002	0.002	0.002	0.0144	Old file
25: Domestic building (PF)	AMRISK 1.0	0.0003	0.001	0.001	0.001	0.0072	
	AMRISK 1.2 ß 18 Dec	0.0003	0.001	0.001	0.001	0.0072	Old file
26: Lounge / canteen (PF)	AMRISK 1.0	0.0147	0.234	0.001	0.001	0.0072	
	AMRISK 1.2 ß 18 Dec	0.0146	0.233	0.001	0.001	0.0072	Old file
27: Gravel pit (AL)	AMRISK 1.0	0.0225	0.066	0.020	0.020	0.1441	
	AMRISK 1.2 ß 18 Dec	0.0223	0.066	0.020	0.020	0.1441	Old file
28: Road to gravel pit (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	-	0	0	0	Old file
29: Working space (PF)	AMRISK 1.0	0.1759	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.1745	0.001	0	0	0	Old file
			R0	RE	R (x 10^{-5})	Rp (x 10^{-5})	
Risk	AMRISK 1.0		0.063	0.064	0.452	0.459	
	AMRISK 1.2 ß 18 Dec		0.063	0.064	0.454	0.458	Old file

C.2.6 Collective risk by magazine 0013

Exposed object (Q=30 t, p=7.64x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
1: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
2: Car breaker's yard (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
3: Domestic building. (PF)	AMRISK 1.0	0.0004	0.002	0.001	0.001	0.0076	
	AMRISK 1.2 ß 18 Dec	0.0004	0.002	0.001	0.001	0.0076	Old file
4: Farm (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.0076	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.0076	Old file
5: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
6: Domestic building (PF)	AMRISK 1.0	0.0002	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0	0	0	0	Old file
7: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
8: Domestic building (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.0076	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.0076	Old file
9: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0.001	0.001	0.0076	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0.001	0.001	0.0076	Old file
10: Expl. workshop (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
11: Old people's home (PF)	AMRISK 1.0	0.0001	0.004	0.004	0.004	0.0305	
	AMRISK 1.2 ß 18 Dec	0.0001	0.004	0.004	0.004	0.0305	Old file

Exposed object (Q=30 t, p=7.64x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
12: Fishing ground (PF)	AMRISK 1.0	-	0.097	0.005	0.005	0.0382	
	AMRISK 1.2 ß 18 Dec	0.0049	0.097	0.005	0.005	0.0382	Old file
13: Farm (PF)	AMRISK 1.0	0.0003	0.001	0.001	0.001	0.0076	
	AMRISK 1.2 ß 18 Dec	0.0003	0.001	0.001	0.001	0.0076	Old file
14: School (PF)	AMRISK 1.0	0.0001	0.001	0.001	0.001	0.0076	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0.001	0.001	0.0076	Old file
15: Farm (PF)	AMRISK 1.0	0.0007	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0007	0.001	0	0	0	Old file
16: Domestic building (PF)	AMRISK 1.0	0.0013	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0013	0.001	0	0	0	Old file
17: Domestic building (PF)	AMRISK 1.0	0.0006	0.002	0.001	0.001	0.0076	
	AMRISK 1.2 ß 18 Dec	0.0006	0.002	0.001	0.001	0.0076	Old file
18: Road (LR)	AMRISK 1.0	-	0.016	0.002	0.002	0.0152	
	AMRISK 1.2 ß 18 Dec	0	0.016	0.002	0.002	0.0152	Old file
19: Railway (LT)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
20: Adm. building (PF)	AMRISK 1.0	0.0481	0.241	0.072	0.075	0.573	
	AMRISK 1.2 ß 18 Dec	0.0481	0.241	0.074	0.075	0.573	Old file
21: Adm. building (PF)	AMRISK 1.0	0.0003	0.005	0.001	0.001	0.0076	
	AMRISK 1.2 ß 18 Dec	0.0003	0.005	0.001	0.001	0.0076	Old file
22: Domestic building (PF)	AMRISK 1.0	0.0003	0.001	0.001	0.001	0.0076	
	AMRISK 1.2 ß 18 Dec	0.0003	0.001	0.001	0.001	0.0076	Old file

Exposed object (Q=30 t, p=7.64x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
23: Expl. workshop (PF)	AMRISK 1.0	0.0352	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0352	0	0	0	0	Old file
24: Dom. build. (staff) (PF)	AMRISK 1.0	0.0003	0.001	0.001	0.001	0.0076	
	AMRISK 1.2 ß 18 Dec	0.0003	0.001	0.001	0.001	0.0076	Old file
25: Domestic building (PF)	AMRISK 1.0	0.0003	0.001	0.001	0.001	0.0076	
	AMRISK 1.2 ß 18 Dec	0.0003	0.001	0.001	0.001	0.0076	Old file
26: Lounge / canteen (PF)	AMRISK 1.0	0.0581	0.929	0.004	0.004	0.0305	
	AMRISK 1.2 ß 18 Dec	0.0581	0.929	0.004	0.004	0.0305	Old file
27: Gravel pit (AL)	AMRISK 1.0	0.0274	0.081	0.024	0.025	0.191	
	AMRISK 1.2 ß 18 Dec	0.0274	0.081	0.025	0.025	0.191	Old file
28: Road to gravel pit (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	-	0	0	0	Old file
29: Working space (PF)	AMRISK 1.0	0.4243	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.4243	0.001	0	0	0	Old file
			R0	RE	R (x 10^{-5})	Rp (x 10^{-5})	
Risk	AMRISK 1.0		0.123	0.129	0.940	0.982	
	AMRISK 1.2 ß 18 Dec		0.126	0.129	0.965	0.982	Old file

C.2.7 Collective risk by magazine 0014

Exposed object (Q=8.2 t, p=5.723 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
1: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file

Exposed object (Q=8.2 t, p=5.723 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
2: Car breaker's yard (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
3: Domestic building. (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
4: Farm (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
5: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
6: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
7: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
8: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
9: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
10: Expl. workshop (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
11: Old people's home (PF)	AMRISK 1.0	0	0.001	0.001	0.001	0.0057	
	AMRISK 1.2 ß 18 Dec	0	0.001	0.001	0.001	0.0057	Old file
12: Fishing ground (PF)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
13: Farm (PF)	AMRISK 1.0	0.0001	0	0	0	0	

Exposed object (Q=8.2 t, p=5.723 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
14: School (PF)	AMRISK 1.0	0	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0.001	0	0	0	Old file
15: Farm (PF)	AMRISK 1.0	0.0002	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0	0	0	0	Old file
16: Domestic building (PF)	AMRISK 1.0	0.0003	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0003	0	0	0	0	Old file
17: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
18: Road (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	0	0	0	0	Old file
19: Railway (LT)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	0	0	0	0	Old file
20: Adm. building (PF)	AMRISK 1.0	0.0267	0.134	0.040	0.041	0.2341	
	AMRISK 1.2 ß 18 Dec	0.0267	0.134	0.040	0.041	0.2341	Old file
21: Adm. building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
22: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
23: Expl. workshop (PF)	AMRISK 1.0	0.0338	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0338	0	0	0	0	Old file
24: Dom. build. (staff) (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file

Exposed object (Q=8.2 t, p=5.723 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
25: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
26: Lounge / canteen (PF)	AMRISK 1.0	0.0340	0.543	0.002	0.002	0.0114	
	AMRISK 1.2 ß 18 Dec	0.0340	0.543	0.002	0.002	0.0114	Old file
27: Gravel pit (AL)	AMRISK 1.0	0.0027	0.008	0.002	0.002	0.0114	
	AMRISK 1.2 ß 18 Dec	0.0027	0.008	0.002	0.002	0.0114	Old file
28: Road to gravel pit (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	0	0	0	0	Old file
29: Working space (PF)	AMRISK 1.0	0.2869	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.2869	0.001	0	0	0	Old file
			R0	RE	R (x 10^{-5})	Rp (x 10^{-5})	
Risk	AMRISK 1.0		0.049	0.050	0.281	0.287	
	AMRISK 1.2 ß 18 Dec		0.050	0.050	0.285	0.287	Old file

C.2.8 Collective risk by magazine 0015

Exposed object (Q=2.5 t, p=1.7205 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
1: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
2: Car breaker's yard (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
3: Domestic building. (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file

Exposed object (Q=2.5 t, p=1.7205 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
4: Farm (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
5: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
6: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
7: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
8: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
9: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
10: Expl. workshop (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
11: Old people’s home (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
12: Fishing ground (PF)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
13: Farm (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
14: School (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
15: Farm (PF)	AMRISK 1.0	0	0	0	0	0	

Exposed object (Q=2.5 t, p=1.7205 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
16: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
17: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
18: Road (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	0	0	0	0	Old file
19: Railway (LT)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	0	0	0	0	Old file
20: Adm. building (PF)	AMRISK 1.0	0.0572	0.286	0.085	0.089	0.1531	
	AMRISK 1.2 ß 18 Dec	0.0572	0.286	0.088	0.089	0.1531	Old file
21: Adm. building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
22: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
23: Expl. workshop (PF)	AMRISK 1.0	0.3329	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.3329	0	0	0	0	Old file
24: Dom. build. (staff) (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
25: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
26: Lounge / canteen (PF)	AMRISK 1.0	0.0736	1,177	0.005	0.005	0.0086	
	AMRISK 1.2 ß 18 Dec	0.0736	1.177	0.005	0.005	0.0086	Old file

Exposed object (Q=2.5 t, p=1.7205 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
27: Gravel pit (AL)	AMRISK 1.0	0.0002	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0	0	0	Old file
28: Road to gravel pit (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	-	0	0	0	Old file
29: Working space (PF)	AMRISK 1.0	0.4167	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.4167	0.001	0	0	0	Old file
			R0	RE	R (x 10^{-5})	Rp (x 10^{-5})	
Risk	AMRISK 1.0		0.092	0.096	0.163	0.166	
	AMRISK 1.2 ß 18 Dec		0.095	0.096	0.159	0.166	Old file

C.2.9 Collective risk by magazine 0029

Exposed object (Q=9 t, p=5.7800 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
1: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
2: Car breaker's yard (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
3: Domestic building. (PF)	AMRISK 1.0	0.0004	0.002	0.001	0.002	0.0115	
	AMRISK 1.2 ß 18 Dec	0.0004	0.002	0.001	0.002	0.0115	Old file
4: Farm (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.0057	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.0057	Old file
5: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file

Exposed object (Q=9 t, p=5.7800 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
6: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
7: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
8: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
9: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
10: Expl. workshop (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
11: Old people's home (PF)	AMRISK 1.0	0	0.002	0.002	0.002	0.0115	
	AMRISK 1.2 ß 18 Dec	0	0.002	0.002	0.002	0.0115	Old file
12: Fishing ground (PF)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
13: Farm (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
14: School (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
15: Farm (PF)	AMRISK 1.0	0.0002	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0	0	0	0	Old file
16: Domestic building (PF)	AMRISK 1.0	0.0010	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0010	0.001	0	0	0	Old file
17: Domestic building (PF)	AMRISK 1.0	0.0002	0.001	0	0	0	

Exposed object (Q=9 t, p=5.7800 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0	0	0	Old file
18: Road (LR)	AMRISK 1.0	-	0.137	0.017	0.017	0.0982	
	AMRISK 1.2 ß 18 Dec	-	0.137	0.017	0.017	0.0982	Old file
19: Railway (LT)	AMRISK 1.0	0.0023	0.007	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0023	0.007	0	0	0	Old file
20: Adm. building (PF)	AMRISK 1.0	0.0005	0.002	0.001	0.001	0.0057	
	AMRISK 1.2 ß 18 Dec	0.0005	0.002	0.001	0.001	0.0057	Old file
21: Adm. building (PF)	AMRISK 1.0	0.0009	0.014	0.004	0.004	0.0231	
	AMRISK 1.2 ß 18 Dec	0.0009	0.014	0.004	0.004	0.0231	Old file
22: Domestic building (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.0057	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.0057	Old file
23: Expl. workshop (PF)	AMRISK 1.0	0.0004	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0004	0	0	0	0	Old file
24: Dom. build. (staff) (PF)	AMRISK 1.0	0.0005	0.002	0.002	0.002	0.0115	
	AMRISK 1.2 ß 18 Dec	0.0005	0.002	0.002	0.002	0.0115	Old file
25: Domestic building (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.0057	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.0057	Old file
26: Lounge / canteen (PF)	AMRISK 1.0	0.0005	0.009	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0005	0.009	0	0	0	Old file
27: Gravel pit (AL)	AMRISK 1.0	0.0253	0.075	0.022	0.023	0.1329	
	AMRISK 1.2 ß 18 Dec	0.0253	0.075	0.022	0.023	0.1329	Old file
28: Road to gravel pit (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	-	0	0	0	Old file

Exposed object (Q=9 t, p=5.7800 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
29: Working space (PF)	AMRISK 1.0	0.0104	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0104	0	0	0	0	Old file
			R0	RE	R (x 10^{-5})	Rp (x 10^{-5})	
Risk	AMRISK 1.0		0.054	0.055	0.317	0.319	
	AMRISK 1.2 ß 18 Dec		0.055	0.055	0.317	0.319	Old file

C.2.10 Collective risk by magazine 0030

Exposed object (Q=15 t, p=6.32 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
1: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
2: Car breaker's yard (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
3: Domestic building. (PF)	AMRISK 1.0	0.0004	0.002	0.001	0.001	0.0063	
	AMRISK 1.2 ß 18 Dec	0.0004	0.002	0.001	0.001	0.0063	Old file
4: Farm (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.0063	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.0063	Old file
5: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
6: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
7: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file

Exposed object (Q=15 t, p=6.32 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
8: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
9: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
10: Expl. workshop (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
11: Old people's home (PF)	AMRISK 1.0	0	0.003	0.003	0.003	0.0189	
	AMRISK 1.2 ß 18 Dec	0	0.003	0.003	0.003	0.0189	Old file
12: Fishing ground (PF)	AMRISK 1.0	-	0.003	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.003	0	0	0	Old file
13: Farm (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
14: School (PF)	AMRISK 1.0	0.0001	0.001	0.001	0.001	0.0063	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0.001	0.001	0.0063	Old file
15: Farm (PF)	AMRISK 1.0	0.0004	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0004	0	0	0	0	Old file
16: Domestic building (PF)	AMRISK 1.0	0.0015	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0015	0.001	0	0	0	Old file
17: Domestic building (PF)	AMRISK 1.0	0.0004	0.001	0.001	0.001	0.0063	
	AMRISK 1.2 ß 18 Dec	0.0004	0.001	0.001	0.001	0.0063	Old file
18: Road (LR)	AMRISK 1.0	-	0.055	0.007	0.007	0.0442	
	AMRISK 1.2 ß 18 Dec	0	0.055	0.007	0.007	0.0442	Old file
19: Railway (LT)	AMRISK 1.0	-	0.004	0	0	0	

Exposed object (Q=15 t, p=6.32 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
	AMRISK 1.2 ß 18 Dec	0.0014	0.004	0	0	0	Old file
20: Adm. building (PF)	AMRISK 1.0	0.0032	0.016	0.005	0.005	0.0316	
	AMRISK 1.2 ß 18 Dec	0.0032	0.016	0.005	0.005	0.0316	Old file
21: Adm. building (PF)	AMRISK 1.0	0.0005	0.008	0.002	0.002	0.0126	
	AMRISK 1.2 ß 18 Dec	0.0005	0.008	0.002	0.002	0.0126	Old file
22: Domestic building (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.0063	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.0063	Old file
23: Expl. workshop (PF)	AMRISK 1.0	0.0024	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0024	0	0	0	0	Old file
24: Dom. build. (staff) (PF)	AMRISK 1.0	0.0005	0.002	0.002	0.002	0.0126	
	AMRISK 1.2 ß 18 Dec	0.0005	0.002	0.002	0.002	0.0126	Old file
25: Domestic building (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.0063	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.0063	Old file
26: Lounge / canteen (PF)	AMRISK 1.0	0.0043	0.069	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0043	0.069	0	0	0	Old file
27: Gravel pit (AL)	AMRISK 1.0	0.0358	0.106	0.032	0.032	0.2022	
	AMRISK 1.2 ß 18 Dec	0.0358	0.106	0.032	0.032	0.2022	Old file
28: Road to gravel pit (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
29: Working space (PF)	AMRISK 1.0	0.0838	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0838	0	0	0	0	Old file
			R0	RE	R (x 10^{-5})	Rp (x 10^{-5})	

Exposed object (Q=15 t, p=6.32 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
Risk	AMRISK 1.0		0.058	0.059	0.368	0.374	
	AMRISK 1.2 ß 18 Dec		0.059	0.059	0.372	0.375	Old file

C.2.11 Collective risk by magazine 0031

Exposed object (Q=10.0 t, p=5.885 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
1: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
2: Car breaker's yard (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
3: Domestic building. (PF)	AMRISK 1.0	0.0008	0.003	0.003	0.003	0.0176	
	AMRISK 1.2 ß 18 Dec	0.0008	0.003	0.003	0.003	0.0176	Old file
4: Farm (PF)	AMRISK 1.0	0.0004	0.001	0.001	0.001	0.0058	
	AMRISK 1.2 ß 18 Dec	0.0004	0.001	0.001	0.001	0.0058	Old file
5: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
6: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
7: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
8: Domestic building (PF)	AMRISK 1.0	0.0002	0.001	0.001	0.001	0.0058	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0.001	0.001	0.0058	Old file
9: Domestic building (PF)	AMRISK 1.0	0.0001	0.001	0.001	0.001	0.0058	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0.001	0.001	0.0058	Old file

Exposed object (Q=10.0 t, p=5.885 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
10: Expl. workshop (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
11: Old people's home (PF)	AMRISK 1.0	0.0001	0.003	0.003	0.003	0.0176	
	AMRISK 1.2 ß 18 Dec	0.0001	0.003	0.003	0.003	0.0176	Old file
12: Fishing ground (PF)	AMRISK 1.0	-	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0.001	0	0	0	Old file
13: Farm (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
14: School (PF)	AMRISK 1.0	0	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0.001	0	0	0	Old file
15: Farm (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
16: Domestic building (PF)	AMRISK 1.0	0.0003	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0003	0	0	0	0	Old file
17: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
18: Road (LR)	AMRISK 1.0	-	0.172	0.022	0.022	0.1294	
	AMRISK 1.2 ß 18 Dec	0	0.172	0.022	0.022	0.1294	Old file
19: Railway (LT)	AMRISK 1.0	-	0.017	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0057	0.017	0	0	0	Old file
20: Adm. building (PF)	AMRISK 1.0	0.0003	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0003	0.001	0	0	0	Old file

Exposed object (Q=10.0 t, p=5.885 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
21: Adm. building (PF)	AMRISK 1.0	0.0006	0.010	0.003	0.003	0.0176	
	AMRISK 1.2 ß 18 Dec	0.0006	0.010	0.003	0.003	0.0176	Old file
22: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
23: Expl. workshop (PF)	AMRISK 1.0	0.0003	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0003	0	0	0	0	Old file
24: Dom. build. (staff) (PF)	AMRISK 1.0	0.0017	0.007	0.007	0.007	0.0411	
	AMRISK 1.2 ß 18 Dec	0.0017	0.007	0.007	0.007	0.0411	Old file
25: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
26: Lounge / canteen (PF)	AMRISK 1.0	0.0003	0.004	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0003	0.004	0	0	0	Old file
27: Gravel pit (AL)	AMRISK 1.0	0.0029	0.008	0.003	0.003	0.0176	
	AMRISK 1.2 ß 18 Dec	0.0029	0.008	0.003	0.003	0.0176	Old file
28: Road to gravel pit (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	-	0	0	0	Old file
29: Working space (PF)	AMRISK 1.0	0.0023	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0023	0	0	0	0	Old file
			R0	RE	R (x 10^{-5})	Rp (x 10^{-5})	
Risk	AMRISK 1.0		0.044	0.045	0.261	0.263	
	AMRISK 1.2 ß 18 Dec		0.044	0.045	0.261	0.263	Old file

C.2.12 Collective risk by magazine 0033

Exposed object (Q=3.0 t, p=5.2700 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
1: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
2: Car breaker's yard (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
3: Domestic building. (PF)	AMRISK 1.0	0.002	0.001	0.001	0.001	0.0052	
	AMRISK 1.2 ß 18 Dec	0.002	0.001	0.001	0.001	0.0052	Old file
4: Farm (PF)	AMRISK 1.0	0.0002	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0	0	0	Old file
5: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
6: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
7: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
8: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
9: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
10: Expl. workshop (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
11: Old people's home (PF)	AMRISK 1.0	0	0.001	0.001	0.001	0.0052	
	AMRISK 1.2 ß 18 Dec	0	0.001	0.001	0.001	0.0052	Old file

Exposed object (Q=3.0 t, p=5.2700 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
12: Fishing ground (PF)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
13: Farm (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
14: School (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
15: Farm (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
16: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
17: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
18: Road (LR)	AMRISK 1.0	-	0.104	0.013	0.013	0.0685	
	AMRISK 1.2 ß 18 Dec	0	0.104	0.013	0.013	0.0685	Old file
19: Railway (LT)	AMRISK 1.0	-	0.004	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0014	0.004	0	0	0	Old file
20: Adm. building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
21: Adm. building (PF)	AMRISK 1.0	0.0004	0.006	0.002	0.002	0.0105	
	AMRISK 1.2 ß 18 Dec	0.0004	0.006	0.002	0.002	0.0105	Old file
22: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file

Exposed object (Q=3.0 t, p=5.2700 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
23: Expl. workshop (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
24: Dom. build. (staff) (PF)	AMRISK 1.0	0.0009	0.003	0.003	0.003	0.0158	
	AMRISK 1.2 ß 18 Dec	0.0009	0.003	0.003	0.003	0.0158	Old file
25: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
26: Lounge / canteen (PF)	AMRISK 1.0	0.0001	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0.001	0	0	0	Old file
27: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
28: Road to gravel pit (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	-	0	0	0	Old file
29: Working space (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
			R0	RE	R (x 10^{-5})	Rp (x 10^{-5})	
Risk	AMRISK 1.0		0.022	0.022	0.118	0.118	
	AMRISK 1.2 ß 18 Dec		0.022	0.022	0.118	0.118	Old file

C.2.13 Collective risk by magazine 0038

Exposed object (Q=2.5 t, p=1.7205 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
1: Gravel pit (AL)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
2: Car breaker's yard (PF)	AMRISK 1.0	0	0	0	0	0	

Exposed object (Q=2.5 t, p=1.7205 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
3: Domestic building. (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
4: Farm (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
5: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
6: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
7: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
8: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
9: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
10: Expl. workshop (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
11: Old people’s home (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
12: Fishing ground (PF)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
13: Farm (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file

Exposed object (Q=2.5 t, p=1.7205 x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
14: School (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
15: Farm (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
16: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
17: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
18: Road (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	0	0	0	0	Old file
19: Railway (LT)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	0	0	0	0	Old file
20: Adm. building (PF)	AMRISK 1.0	0.6991	3.495	1.040	1.728	2.973	
	AMRISK 1.2 ß 18 Dec	0.6991	3.495	1.040	1.728	2.973	Old file
21: Adm. building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
22: Domestic building (PF)	AMRISK 1.0	0.0001	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0001	0	0	0	0	Old file
23: Expl. workshop (PF)	AMRISK 1.0	1.0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	1.0	0	0	0	0	Old file
24: Dom. build. (staff) (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file

Exposed object (Q=2.5 t, p=1.7205 x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
25: Domestic building (PF)	AMRISK 1.0	0	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	0	0	0	0	0	Old file
26: Lounge / canteen (PF)	AMRISK 1.0	0.7121	11.394	0.048	0.080	0.1376	
	AMRISK 1.2 ß 18 Dec	0.7121	11.394	0.048	0.080	0.1376	Old file
27: Gravel pit (AL)	AMRISK 1.0	0.0002	0.001	0	0	0	
	AMRISK 1.2 ß 18 Dec	0.0002	0.001	0	0	0	Old file
28: Road to gravel pit (LR)	AMRISK 1.0	-	0	0	0	0	
	AMRISK 1.2 ß 18 Dec	-	-	0	0	0	Old file
29: Working space (PF)	AMRISK 1.0	0.6238	0.002	0.001	0.001	0.0017	
	AMRISK 1.2 ß 18 Dec	0.6238	0.002	0.001	0.001	0.0017	Old file
			R0	RE	R (x 10^{-5})	Rp (x 10^{-5})	
Risk	AMRISK 1.0		1.091	1.811	1.877	3.116	
	AMRISK 1.2 ß 18 Dec		1.091	1.811	1.877	3.116	Old file

C.2.14 Individual risk

Exposed objects (Q=2.5-30 t, p=1.7-7.6 x10^{-5})		**Tind**	**SDind**	**rimax**	**r max (x 10^{-5})**	**Comment**
1: Gravel pit (AL)	AMRISK 1.0	0.22	0.22	0.0268	0.1771	
	AMRISK 1.2 ß 18 Dec	0.22	0.22	******	0.1820	Old file
2: Car breaker's yard (PF)	AMRISK 1.0	0.9	0,2678	0.0002	0.0012	
	AMRISK 1.2 ß 18 Dec	0.9	0.2678	*****	0.0012	Old file
3: Domestic building. (PF) b4	AMRISK 1.0	0.9	0.9	0.0031	0.0187	
	AMRISK 1.2 ß 18 Dec	0.9	0.9	*****	0.0188	Old file

Exposed objects (Q=2.5-30 t, p=1.7-7.6 x10^{-5})		Tind	SDind	rimax	r max (x 10^{-5})	Comment
4: Farm (PF) g47	AMRISK 1.0	0.71	0.71	0.002	0.0124	
	AMRISK 1.2 ß 18 Dec	0.71	0.71	*****	0.0123	Old file
5: Domestic building (PF) b50	AMRISK 1.0	0.9	0.9	0.0021	0.0135	
	AMRISK 1.2 ß 18 Dec					Old file
6: Domestic building (PF) b51	AMRISK 1.0	0.9	0.9	0.0016	0.0096	
	AMRISK 1.2 ß 18 Dec	0.9	0.9	*****	0.0095	Old file
7: Domestic building (PF) b48	AMRISK 1.0	0.22	0.22	0.0015	0.0093	
	AMRISK 1.2 ß 18 Dec	0.22	0.22	*****	0.0094	Old file
8: Domestic building (PF) b10	AMRISK 1.0	0.9	0.9	0.0011	0.0069	
	AMRISK 1.2 ß 18 Dec	0.9	0.9	*****	0.0070	Old file
9: Domestic building (PF) b8	AMRISK 1.0	0.9	0.9	0.0011	0.0067	
	AMRISK 1.2 ß 18 Dec	0.9	0.9	*****	0.0067	Old file
10: Expl. workshop (PF)	AMRISK 1.0	0.9	0.2678	0.0002	0.0014	
	AMRISK 1.2 ß 18 Dec	0.9	0.2678	*****	0.0014	Old file
11: Old people’s home (PF)	AMRISK 1.0	1.0	1.0	0.0005	0.0031	
	AMRISK 1.2 ß 18 Dec	1.0	1.0	*****	0.0031	Old file
12: Fishing ground (PF)	AMRISK 1.0					
	AMRISK 1.2 ß 18 Dec					Old file
13: Farm (PF) g43	AMRISK 1.0	0.9	0.9	0.0010	0.0060	
	AMRISK 1.2 ß 18 Dec	0.9	0.9	*****	0.0059	Old file
14: School (PF) s46	AMRISK 1.0	0.9	0.9	0.0005	0.0032	
	AMRISK 1.2 ß 18 Dec	0.9	0.9	*****	0.0032	Old file

Exposed objects (Q=2.5-30 t, p=1.7-7.6 x10^{-5})		**Tind**	**SDind**	**rimax**	**r max (x 10^{-5})**	**Comment**
15: Farm (PF) g5	AMRISK 1.0	0.9	0.9	0.002	0.0121	
	AMRISK 1.2 ß 18 Dec	0.9	0.9	*****	0.0121	Old file
16: Domestic building (PF) b8	AMRISK 1.0	0.9	0.9	0.0011	0.0067	
	AMRISK 1.2 ß 18 Dec	0.9	0.9	*****	0.0067	Old file
17: Domestic building (PF) b12	AMRISK 1.0	0.9	0.9	0.0010	0.0062	
	AMRISK 1.2 ß 18 Dec	0.9	0.9	*****	0.0062	Old file
18: Road (LR)	AMRISK 1.0					
	AMRISK 1.2 ß 18 Dec					Old file
19: Railway (LT)	AMRISK 1.0					
	AMRISK 1.2 ß 18 Dec					Old file
20: Adm. building (PF) adm1	AMRISK 1.0	0.9	0.2678	0.2270	0.5182	
	AMRISK 1.2 ß 18 Dec	0.9	0.2678	*****	0.5182	Old file
21: Adm. building (PF) adm2	AMRISK 1.0	0.9	0.2678	0.0011	0.0068	
	AMRISK 1.2 ß 18 Dec	0.9	0.9	*****	0.0078	Old file
22: Domestic building (PF) b7	AMRISK 1.0	0.9	0.9	0.0009	0.0057	
	AMRISK 1.2 ß 18 Dec	0.9	0.9	*****	0.0057	Old file
23: Expl. workshop (PF)	AMRISK 1.0	0.27	0.27	0.3820	0.7679	
	AMRISK 1.2 ß 18 Dec	0.27	0.27	*****	0.7678	Old file
24: Dom. build. (staff) (PF) b52	AMRISK 1.0	1.0	1.0	0.0072	0.0423	
	AMRISK 1.2 ß 18 Dec	1.0	1.0	*****	0.0424	Old file
25: Domestic building (PF) b9	AMRISK 1.0	0.9	0.9	0.0009	0.0056	
	AMRISK 1.2 ß 18 Dec	0.9	0.9	*****	0.0056	Old file
26: Lounge / canteen (PF) b54	AMRISK 1.0	0.0140	0.0140	0.0126	0.0299	

Exposed objects (Q=2.5-30 t, p=1.7-7.6 x10^{-5})		**Tind**	**SDind**	**rimax**	**r max (x 10^{-5})**	**Comment**
	AMRISK 1.2 ß 18 Dec	0.0140	0.0140	*****	0.0299	Old file
27: Gravel pit (AL) g2	AMRISK 1.0	0.21	0.1356	0	0	
	AMRISK 1.2 ß 18 Dec	0.21	0.1356	*****	0	Old file
28: Road to gravel pit (LR)	AMRISK 1.0					
	AMRISK 1.2 ß 18 Dec					Old file
29: Working space (PF) p11	AMRISK 1.0	0.05	0.0231	0.0471	0.1994	
	AMRISK 1.2 ß 18 Dec	0.05	0.0231	******	0.1994	Old file

C.3 Risk values - Underground storage (ex 3)

* Underground storage –chamber A with one tunnel
* Exposed objects
  - Railway (LT = linear train, NF = object not in forest)
  - Road (LR = linear road, NF)
  - Domestic building (PF = point fixed)
  - Civil leisure area (AL = area limited)
  - Forest (AU = area unlimited, FO = object in forest)
* Deviations between AMRISK 1.0 (AMMORISK) and AMRISK 1.2 are marked grey
* Symbols are defined in C.7

C.3.1 Collective risk

Exposed object (Q=300 t, p=26.575x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
A: Railway (LT)	AMRISK 1.0	-	27.929	0.043	0.695	18.475	
	AMRISK 1.2 16 Sep 03	-	27.929	0.043	0.695	18.472	New file
	AMRISK 1.2 16 Sep 03	-	27.929	0.043	0.695	18.475	Old file
B: Road (LR)	AMRISK 1.0	-	3.929	0.878	1.116	29.663	
	AMRISK 1.2 16 Sep 03	0.0079	3.929	0.879	1.116	29.661	New file
	AMRISK 1.2 16 Sep 03	0.0079	3.929	0.878	1.115	29.635	Old file
C: Domestic building (PF)	AMRISK 1.0	0.0154	0.062	0.006	0.008	0.204	
	AMRISK 1.2 16 Sep 03	0.0154	0.062	0.006	0.008	0.204	New file
	AMRISK 1.2 16 Sep 03	0.0154	0.062	0.006	0.008	0.204	Old file
D: Domestic building (PF)	AMRISK 1.0	0.0007	0.003	0.000	0.000	0.010	
	AMRISK 1.2 16 Sep 03	0.0007	0.003	0.000	0.000	0.010	New file
	AMRISK 1.2 16 Sep 03	0.0007	0.003	0.000	0.000	0.010	Old file

Exposed object (Q=300 t, p=26.575x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
E: Domestic building (PF)	AMRISK 1.0	0.0168	0.067	0.046	0.053	1.417	
	AMRISK 1.2 16 Sep 03	0.0168	0.067	0.046	0.053	1.414	New file
	AMRISK 1.2 16 Sep 03	0.0168	0.067	0.046	0.053	1.416	Old file
F: Domestic building (PF)	AMRISK 1.0	0.0006	0.002	0.002	0.002	0.046	
	AMRISK 1.2 16 Sep 03	0.0005	0.002	0.001	0.002	0.046	New file
	AMRISK 1.2 16 Sep 03	0.0005	0.002	0.001	0.002	0.046	Old file
G: Civil leisure area (AL)	AMRISK 1.0	0.0039	0.546	0.053	0.063	1.672	
	AMRISK 1.2 16 Sep 03	0.0039	0.546	0.053	0.063	1.669	New file
	AMRISK 1.2 16 Sep 03	0.0039	0.546	0.053	0.063	1.671	Old file
H: Forest (AU)	AMRISK 1.0	-	1.002	0.210	0.274	7.282	
	AMRISK 1.2 16 Sep 03	0.4899	0.980	0.206	0.268	7.126	New file
	AMRISK 1.2 16 Sep 03	0.4899	0.980	0.206	0.268	7.115	Old file
				R0	RE	Rp	
	AMRISK 1.0			1.239	2.211	58.768	
	AMRISK 1.2 16 Sep 03			1.236	2.206	58.602	New file
	AMRISK 1.2 16 Sep 03			1.234	2.204	58.572	Old file

C.3.2 Individual risk

Exposed object (Q=300 t, p=26.575x10^{-5})		**Tind**	**Sdind**	**rimax**	**r max (x 10^{-5})**	**Comment**
C: Domestic building	AMRISK 1.0	0.121	0.121	0.0019	0.0496	
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0019	0.0496	New file
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0019	0.0496	Old file
D: Domestic building	AMRISK 1.0	0.121	0.121	0.0001	0.0023	
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0001	0.0023	New file
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0001	0.0023	Old file

Exposed object (Q=300 t, p=26.575x10^{-5})		Tind	Sdind	rimax	r max (x 10^{-5})	Comment
E: Domestic building	AMRISK 1.0	0.9	0.9	0.0152	0.4028	
	AMRISK 1.2 16 Sep 03	0.9	0.9	0.0152	0.4028	New file
	AMRISK 1.2 16 Sep 03	0.9	0.9	0.0152	0.4028	Old file
F: Domestic building	AMRISK 1.0	0.9	0.9	0.0005	0.0132	
	AMRISK 1.2 16 Sep 03	0.9	0.9	0.0005	0.0132	New file
	AMRISK 1.2 16 Sep 03	0.9	0.9	0.0005	0.0132	Old file
G: Civil leisure area	AMRISK 1.0	0.121	0.121	0.0005	0.0124	
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0005	0.0124	New file
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0005	0.0124	Old file

C.3.3 Airblast in tunnel

(Q=300 t, p=26.575x10^{-5})		p2/p1	t2/t1	p (bar)	t (ms)	Comment
Chamber exit	AMRISK 1.0			42.34	8315.0	
	AMRISK 1.2 16 Sep 03			42.34	8315.0	New file
	AMRISK 1.2 16 Sep 03			42.34	8315.0	Old file
1: Friction (TE)	AMRISK 1.0	0.877	1.119	37.12	9301.2	
	AMRISK 1.2 16 Sep 03	0.877	1.119	37.12	9301.2	New file
	AMRISK 1.2 16 Sep 03	0.877	1.119	37.12	9301.2	Old file
Tunnel exit	AMRISK 1.0			37.12	9301.2	
	AMRISK 1.2 16 Sep 03			37.12	9301.2	New file
	AMRISK 1.2 16 Sep 03			37.12	9301.2	Old file

C.4 Risk values - Underground storage (ex 4)

* Underground storage – chamber A with two tunnels
* Exposed objects
  - Railway (LT = linear train, NF = object not in forest)
  - Road (LR = linear road, NF)
  - Domestic building (PF = point fixed, NF)
  - Civil leisure area/yta (AL = area limited, NF)
  - Forest (AU = area unlimited, FO = object in forest)
* Deviations between AMRISK 1.0 (AMMORISK) and AMRISK 1.2 are marked grey
* Symbols are defined in C.7

C.4.1 Collective risk

Exposed object (Q=300 t, p=26.575x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
A: Railway (LT)	AMRISK 1.0	-	23.910	0.020	0.327	8.677	
	AMRISK 1.2 16 Sep 03	-	23.911	0.020	0.327	8.678	New file
	AMRISK 1.2 16 Sep 03	-	23.911	0.020	0.327	8.678	Old file
B: Road (LR)	AMRISK 1.0	-	1.729	0.387	0.437	11.617	
	AMRISK 1.2 16 Sep 03	0.0035	1.730	0.387	0.437	11.610	New file
	AMRISK 1.2 16 Sep 03	0.0035	1.730	0.387	0.437	11.604	Old file
C: Domestic building (PF)	AMRISK 1.0	0.0074	0.030	0.003	0.003	0.090	
	AMRISK 1.2 16 Sep 03	0.0074	0.030	0.003	0.003	0.090	New file
	AMRISK 1.2 16 Sep 03	0.0074	0.030	0.003	0.003	0.090	Old file
D: Domestic building (PF)	AMRISK 1.0	0.0005	0.002	0.000	0.000	0.006	
	AMRISK 1.2 16 Sep 03	0.0005	0.002	0.000	0.000	0.006	New file
	AMRISK 1.2 16 Sep 03	0.0005	0.002	0.000	0.000	0.006	Old file

Exposed object (Q=300 t, p=26.575x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
E: Domestic building (PF)	AMRISK 1.0	0.0081	0.032	0.022	0.024	0.630	
	AMRISK 1.2 16 Sep 03	0.0081	0.032	0.022	0.024	0.629	New file
	AMRISK 1.2 16 Sep 03	0.0081	0.032	0.022	0.024	0.630	Old file
F: Domestic building (PF)	AMRISK 1.0	0.0004	0.002	0.001	0.001	0.030	
	AMRISK 1.2 16 Sep 03	0.0004	0.002	0.001	0.001	0.030	New file
	AMRISK 1.2 16 Sep 03	0.0004	0.002	0.001	0.001	0.030	Old file
G: Civil leisure area (AL)	AMRISK 1.0	0.0010	0.144	0.014	0.015	0.405	
	AMRISK 1.2 16 Sep 03	0.0010	0.144	0.014	0.015	0.404	New file
	AMRISK 1.2 16 Sep 03	0.0010	0.144	0.014	0.015	0.404	Old file
H: Forest	AMRISK 1.0	-	0.803	0.169	0.193	5.141	
	AMRISK 1.2 16 Sep 03	0.3878	0.776	0.163	0.187	4.963	New file
	AMRISK 1.2 16 Sep 03	0.3878	0.776	0.163	0.187	4.959	Old file
				R0	RE	Rp	
	AMRISK 1.0			0.616	1.001	26.596	
	AMRISK 1.2 16 Sep 03			0.611	0.994	26.411	New file
	AMRISK 1.2 16 Sep 03			0.610	0.993	26.400	Old file

C.4.2 Individual risk

Exposed object (Q=300 t, p=26.575x10^{-5})		Tind	SDind	rimax	r max (x 10^{-5})	Comment
C: Domestic building	AMRISK 1.0	0.121	0.121	0.0009	0.0239	
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0009	0.0239	New file
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0009	0.0239	Old file
D: Domestic building	AMRISK 1.0	0.121	0.121	0.0001	0.0016	
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0001	0.0015	New file
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0001	0.0015	Old file

Exposed object (Q=300 t, p=26.575x10^{-5})		Tind	SDind	rimax	r max (x 10^{-5})	Comment
E: Domestic building	AMRISK 1.0	0.9	0.9	0.0073	0.1935	
	AMRISK 1.2 16 Sep 03	0.9	0.9	0.0073	0.1932	New file
	AMRISK 1.2 16 Sep 03	0.9	0.9	0.0073	0.1932	Old file
F: Domestic building	AMRISK 1.0	0.9	0.9	0.0003	0.0092	
	AMRISK 1.2 16 Sep 03	0.9	0.9	0.0003	0.0087	New file
	AMRISK 1.2 16 Sep 03	0.9	0.9	0.0003	0.0087	Old file
G: Civil leisure area	AMRISK 1.0	0.121	0.121	0.0001	0.0033	
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0001	0.0029	New file
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0001	0.0029	Old file

C.4.3 Airblast in tunnel (tunnels TA1 and TA2)

(Q=300 t, p=26.575x10^{-5})		p2/p1	t2/t1	p (bar)	t (ms)	Comment
Chamber exit	AMRISK 1.0			42.34	8315.0	
	AMRISK 1.2 16 Sep 03			42.34	8315.0	New file
	AMRISK 1.2 16 Sep 03			42.34	8315.0	Old file
1: Friction (TE)	AMRISK 1.0	1.000	1.000	42.34	8315.0	
	AMRISK 1.2 16 Sep 03	1.000	1.000	42.34	8315.0	New file
	AMRISK 1.2 16 Sep 03	1.000	1.000	42.34	8315.0	Old file
2: Junction 1 (J1)	AMRISK 1.0	0.707	0.700	29.94	5820.5	
	AMRISK 1.2 16 Sep 03	0.707	0.700	29.94	5820.5	New file
	AMRISK 1.2 16 Sep 03	0.707	0.700	29.94	5820.5	Old file
3: Friction (TE)	AMRISK 1.0	0.798	1.168	23.90	6796.6	
	AMRISK 1.2 16 Sep 03	0.798	1.168	23.90	6796.6	New file
	AMRISK 1.2 16 Sep 03	0.798	1.168	23.90	6796.6	Old file

(Q=300 t, p=26.575x10^{-5})		**p2/p1**	**t2/t1**	**p (bar)**	**t (ms)**	**Comment**
Tunnel exit	AMRISK 1.0			23.90	6796.6	
	AMRISK 1.2 16 Sep 03			23.90	6796.6	New file
	AMRISK 1.2 16 Sep 03			23.90	6796.6	Old file

C.5 Risk values - surface / underground (ex 5)

* Underground storage - chamber A with two tunnels
* Underground storage – chamber F with one tunnel (8 tunnel elements)
* Surface storage - magazine 1
* Exposed objects
    - Railway (LT = linear train, NF = object not in forest))
    - Road (LR = linear road, FO = object in forest)
    - Domestic building (PF = point fixed, FO)
    - Domestic building (PF=point fix, NF, presence factor daytime = 0)
    - Civil leisure area (AL = area limited, NF)
* Deviations between AMRISK 1.0 (AMMORISK) and AMRISK 1.2 are marked grey
* Symbols are defined in C.7

C.5.1 Collective risk

Exposed object (Chamber A, Q=300 t, p=26.575x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
A: Railway (LT)	AMRISK 1.0	-	23.910	0.020	0.327	8.677	
	AMRISK 1.2 16 Sep 03	-	23.911	0.020	0.327	8.678	New file
	AMRISK 1.2 16 Sep 03	-	23.911	0.020	0.327	8.678	Old file
B: Road (LR, RO)	AMRISK 1.0	-	1.806	0.404	0.442	11.758	
	AMRISK 1.2 16 Sep 03	0.0036	1.806	0.404	0.443	11.765	New file
	AMRISK 1.2 16 Sep 03	0.0036	1.806	0.404	0.442	11.758	Old file
C: Domestic building	AMRISK 1.0	0.0074	0.030	0.003	0.003	0.089	
(PF, FO)	AMRISK 1.2 16 Sep 03	0.0074	0.030	0.003	0.003	0.089	New file
	AMRISK 1.2 16 Sep 03	0.0074	0.030	0.003	0.003	0.089	Old file

Exposed object (Chamber A, Q=300 t, p=26.575x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
D: Domestic building (PF)	AMRISK 1.0	0.0005	0.002	0.000	0.000	0.005	
Presence factor (day) = 0	AMRISK 1.2 16 Sep 03	0.0005	0.002	0.000	0.000	0.005	New file
	AMRISK 1.2 16 Sep 03	0.0005	0.002	0.000	0.000	0.005	Old file
E: Domestic building	AMRISK 1.0	0.0081	0.032	0.022	0.023	0.620	
(PF, FO)	AMRISK 1.2 16 Sep 03	0.0081	0.032	0.022	0.023	0.619	New file
	AMRISK 1.2 16 Sep 03	0.0081	0.032	0.022	0.023	0.620	Old file
F: Domestic building (PF)	AMRISK 1.0	0.0004	0.002	0.001	0.001	0.027	
Presence factor (day) = 0	AMRISK 1.2 16 Sep 03	0.0004	0.002	0.001	0.001	0.027	New file
	AMRISK 1.2 16 Sep 03	0.0004	0.002	0.001	0.001	0.027	Old file
G: Civil leisure area (AL)	AMRISK 1.0	0.0010	0.144	0.014	0.015	0.397	
	AMRISK 1.2 16 Sep 03	0.0010	0.144	0.014	0.015	0.397	New file
	AMRISK 1.2 16 Sep 03	0.0010	0.144	0.014	0.015	0.397	Old file
				R0	RE	Rp	
	AMRISK 1.0			0.464	0.812	21.573	
	AMRISK 1.2 16 Sep 03			0.465	0.812	21.580	New file
	AMRISK 1.2 16 Sep 03			0.464	0.812	21.574	Old file

Exposed object (Chamber F, Q=50 t, p=4.51x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
A: Railway (LT)	AMRISK 1.0	-	10.452	0.006	0.027	0.121	
	AMRISK 1.2 16 Sep 03	-	10.450	0.006	0.027	0.121	New file
	AMRISK 1.2 16 Sep 03	-	10.450	0.006	0.027	0.121	Old file
B: Road (LR, FO)	AMRISK 1.0	-	0.468	0.105	0.107	0.482	
	AMRISK 1.2 16 Sep 03	0.0009	0.467	0.104	0.107	0.481	New file
	AMRISK 1.2 16 Sep 03	0.0009	0.467	0.104	0.107	0.481	Old file

Exposed object (Chamber F, Q=50 t, p=4.51x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
C: Domestic building	AMRISK 1.0	0.000	0.000	0.000	0.000	0.000	
(PF, FO)	AMRISK 1.2 16 Sep 03	0.000	0.000	0.000	0.000	0.000	New file
	AMRISK 1.2 16 Sep 03	0.000	0.000	0.000	0.000	0.000	Old file
D: Domestic building (PF)	AMRISK 1.0	0.000	0.000	0.000	0.000	0.000	
Presence factor (day) = 0	AMRISK 1.2 16 Sep 03	0.000	0.000	0.000	0.000	0.000	New file
	AMRISK 1.2 16 Sep 03	0.000	0.000	0.000	0.000	0.000	Old file
E: Domestic building (PF)	AMRISK 1.0	0.000	0.000	0.000	0.000	0.000	
	AMRISK 1.2 16 Sep 03	0.000	0.000	0.000	0.000	0.000	New file
	AMRISK 1.2 16 Sep 03	0.000	0.000	0.000	0.000	0.000	Old file
F: Domestic building (PF)	AMRISK 1.0	0.000	0.000	0.000	0.000	0.000	
Presence factor (day) = 0	AMRISK 1.2 16 Sep 03	0.000	0.000	0.000	0.000	0.000	New file
	AMRISK 1.2 16 Sep 03	0.000	0.000	0.000	0.000	0.000	Old file
G: Civil leisure area (AL)	AMRISK 1.0	0.000	0.000	0.000	0.000	0.000	
	AMRISK 1.2 16 Sep 03	0.000	0.005	0.000	0.000	0.002	New file
	AMRISK 1.2 16 Sep 03	0.000	0.005	0.000	0.001	0.002	Old file
				R0	RE	Rp	
	AMRISK 1.0			0.111	0.134	0.603	
	AMRISK 1.2 16 Sep 03			0.111	0.134	0.605	New file
	AMRISK 1.2 16 Sep 03			0.111	0.134	0.605	Old file

Exposed object (Magazine 1, Q=40 t, p=5.025x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
A: Railway (LT)	AMRISK 1.0	-	0.923	0.001	0.001	0.006	
	AMRISK 1.2 16 Sep 03	2.0981	0.923	0.001	0.001	0.006	New file
	AMRISK 1.2 16 Sep 03	2.0981	0.923	0.001	0.001	0.006	Old file

Exposed object (Magazine 1, Q=40 t, p=5.025x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
B: Road (LR, FO)	AMRISK 1.0	-	0.719	0.161	0.166	0.836	
	AMRISK 1.2 16 Sep 03	0.0014	0.719	0.161	0.167	0.837	New file
	AMRISK 1.2 16 Sep 03	0.0014	0.719	0.161	0.166	0.836	Old file
C: Domestic building (PF)	AMRISK 1.0	0.0001	0.000	0.000	0.000	0.000	
(PF, FO)	AMRISK 1.2 16 Sep 03	0.0001	0.000	0.000	0.000	0.000	New file
	AMRISK 1.2 16 Sep 03	0.0001	0.000	0.000	0.000	0.000	Old file
D: Domestic building (PF)	AMRISK 1.0	0.0012	0.005	0.000	0.000	0.002	
Presence factor (day) = 0	AMRISK 1.2 16 Sep 03	0.0012	0.005	0.000	0.000	0.002	New file
	AMRISK 1.2 16 Sep 03	0.0012	0.005	0.000	0.000	0.002	Old file
E: Domestic building	AMRISK 1.0	0.0001	0.000	0.000	0.000	0.001	
(PF, FO)	AMRISK 1.2 16 Sep 03	0.0001	0.000	0.000	0.000	0.001	New file
	AMRISK 1.2 16 Sep 03	0.0001	0.000	0.000	0.000	0.001	Old file
F: Domestic building (PF)	AMRISK 1.0	0.0027	0.011	0.007	0.007	0.035	
Presence factor (day) = 0	AMRISK 1.2 16 Sep 03	0.0027	0.011	0.007	0.007	0.035	New file
	AMRISK 1.2 16 Sep 03	0.0027	0.011	0.007	0.007	0.035	Old file
G: Civil leisure area (AL)	AMRISK 1.0	0.0027	0.379	0.037	0.038	0.190	
	AMRISK 1.2 16 Sep 03	0.0027	0.379	0.037	0.038	0.190	New file
	AMRISK 1.2 16 Sep 03	0.0027	0.379	0.037	0.038	0.190	Old file
				R0	RE	Rp	
	AMRISK 1.0			0.206	0.213	1.071	
	AMRISK 1.2 16 Sep 03			0.206	0.213	1.071	New file
	AMRISK 1.2 16 Sep 03			0.206	0.213	1.071	Old file

C.5.2 Individual risk

Exposed object (Chamber A, F and magazine 1)		**Tind**	**SDind**	**rimax**	**r max (x 10^{-5})**	**Comment**
C: Domestic building	AMRISK 1.0	0.121	0.121	0.0009	0.0240	
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0009	0.0240	New file
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0009	0.0240	Old file
D: Domestic building	AMRISK 1.0	0.121	0.0945	0.0002	0.0018	
	AMRISK 1.2 16 Sep 03	0.121	0.0944	0.0002	0.0018	New file
	AMRISK 1.2 16 Sep 03	0.121	0.0944	0.0002	0.0018	Old file
E: Domestic building	AMRISK 1.0	0.9	0.9	0.0074	0.1940	
	AMRISK 1.2 16 Sep 03	0.9	0.9	0.0074	0.1940	New file
	AMRISK 1.2 16 Sep 03	0.9	0.9	0.0074	0.1940	Old file
F: Domestic building	AMRISK 1.0	0.9	0.7025	0.0022	0.0168	
	AMRISK 1.2 16 Sep 03	0.9	0.7020	0.0022	0.0168	New file
	AMRISK 1.2 16 Sep 03	0.9	0.7020	0.0022	0.0168	Old file
G: Civil leisure area	AMRISK 1.0	0.121	0.121	0.0004	0.0049	
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0005	0.0049	New file
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0005	0.0049	Old file

C.5.3 Airblast in tunnel 1 and 2

(Chamber A, Q=300 t, p=26.575x10^{-5})		**p2/p1**	**t2/t1**	**p (bar)**	**t (ms)**	**Comment**
Chamber exit	AMRISK 1.0			42.34	8315.0	
	AMRISK 1.2 16 Sep 03			42.34	8315.0	New file
	AMRISK 1.2 16 Sep 03			42.34	8315.0	Old file
1: Friction (TE)	AMRISK 1.0	1.000	1.000	42.34	8315.0	
	AMRISK 1.2 16 Sep 03	1.000	1.000	42.34	8315.0	New file
	AMRISK 1.2 16 Sep 03	1.000	1.000	42.34	8315.0	Old file

(Chamber A, Q=300 t, p=26.575x10^{-5})		**p2/p1**	**t2/t1**	**p (bar)**	**t (ms)**	**Comment**
2: Junction 1 (J1)	AMRISK 1.0	0.707	0.700	29.94	5820.5	
	AMRISK 1.2 16 Sep 03	0.707	0.700	29.94	5820.5	New file
	AMRISK 1.2 16 Sep 03	0.707	0.700	29.94	5820.5	Old file
3: Friction (TE)	AMRISK 1.0	0.798	1.168	23.90	6796.6	
	AMRISK 1.2 16 Sep 03	0.798	1.168	23.90	6796.6	New file
	AMRISK 1.2 16 Sep 03	0.798	1.168	23.90	6796.6	Old file
Tunnel exit	AMRISK 1.0			23.90	6796.6	
	AMRISK 1.2 16 Sep 03			23.90	6796.6	New file
	AMRISK 1.2 16 Sep 03			23.90	6796.6	Old file

(Chamber F, Q=50 t, p=4.51x10^{-5})		**p2/p1**	**t2/t1**	**p (bar)**	**t (ms)**	**Comment**
Chamber exit	AMRISK 1.0			60.08	4026.8	
	AMRISK 1.2 16 Sep 03			60.08	4026.8	New file
	AMRISK 1.2 16 Sep 03			60.08	4026.8	Old file
1: Friction (TE)	AMRISK 1.0	0.959	1.056	57.64	4253.8	
	AMRISK 1.2 16 Sep 03	0.959	1.056	57.64	4253.8	New file
	AMRISK 1.2 16 Sep 03	0.959	1.056	57.64	4253.8	Old file
2: Junction 3 (J3)	AMRISK 1.0	0.800	0.700	46.11	2977.7	
	AMRISK 1.2 16 Sep 03	0.800	0.700	46.11	2977.7	New file
	AMRISK 1.2 16 Sep 03	0.800	0.700	46.11	2977.7	Old file
3: Friction (TE)	AMRISK 1.0	0.959	1.052	44.21	3131.7	
	AMRISK 1.2 16 Sep 03	0.959	1.052	44.21	3131.7	New file
	AMRISK 1.2 16 Sep 03	0.959	1.052	44.21	3131.7	Old file
4: Expansion (EP)	AMRISK 1.0	0.586	0.585	25.90	1831.7	
	AMRISK 1.2 16 Sep 03	0.586	0.585	25.90	1831.7	New file

(Chamber F, Q=50 t, p=4.51x10^{-5})		p2/p1	t2/t1	p (bar)	t (ms)	Comment
	AMRISK 1.2 16 Sep 03	0.586	0.585	25.90	1831.7	Old file
5:Junction 4 (J4)	AMRISK 1.0	0.750	0.700	19.43	1282.2	
	AMRISK 1.2 16 Sep 03	0.750	0.700	19.43	1282.2	New file
	AMRISK 1.2 16 Sep 03	0.750	0.700	19.43	1282.2	Old file
6: Friction (TE)	AMRISK 1.0	1.000	1.001	19.43	1283.2	
	AMRISK 1.2 16 Sep 03	1.000	1.001	19.43	1283.2	New file
	AMRISK 1.2 16 Sep 03	1.000	1.001	19.43	1283.2	Old file
7: Constriction (CS)	AMRISK 1.0	2.250	1.000	43.71	1283.2	
	AMRISK 1.2 16 Sep 03	2.250	1.000	43.71	1283.2	New file
	AMRISK 1.2 16 Sep 03	2.250	1.000	43.71	1283.2	Old file
8: Friction (TE)	AMRISK 1.0	0.959	1.049	41.90	1346.3	
	AMRISK 1.2 16 Sep 03	0.959	1.049	41.90	1346.3	New file
	AMRISK 1.2 16 Sep 03	0.959	1.049	41.90	1346.3	Old file
Tunnel exit	AMRISK 1.0			41.90	1346.3	
	AMRISK 1.2 16 Sep 03			41.90	1346.3	New file
	AMRISK 1.2 16 Sep 03			41.90	1346.3	Old file

C.6 Risk values - underground w/ barricade (ex 6)

* Underground storage - chamber A with one tunnel and a barricade outside the mouth
* Exposed object
  - Railway (LT = linear train, NF = object not in forest)
  - Road (LR = linear road, NF)
  - Domestic building (PF = point fixed, NF)
  - Civil leisure area (AL = area limited, NF)
  - Forest (AU = area unlimited, FO = object in forest)
* Deviations between AMRISK 1.0 (AMMORISK) and AMRISK 1.2 are marked grey
* Symbols are defined in C.7

C.6.1 Collective risk

Exposed object (Q=300 t, p=26.575x10^{-5})		**Lethality**	**OKZ**	**OO**	**OE**	**Perc coll risk (x 10^{-5})**	**Comment**
A: Railway (LT)	AMRISK 1.0	-	27.928	0.043	0.695	18.474	
	AMRISK 1.2 16 Sep 03	-	27.929	0.043	0.695	18.474	New file
	AMRISK 1.2 16 Sep 03	-	27.929	0.043	0.695	18.474	Old file
B: Road (LR)	AMRISK 1.0	-	3.757	0.840	1.058	28.118	
	AMRISK 1.2 16 Sep 03	0.0075	3.757	0.841	1.055	28.035	New file
	AMRISK 1.2 16 Sep 03	0.0075	3.757	0.840	1.054	28.006	Old file
C: Domestic building (PF)	AMRISK 1.0	0.0120	0.048	0.005	0.006	0.158	
	AMRISK 1.2 16 Sep 03	0.0120	0.048	0.005	0.006	0.157	New file
	AMRISK 1.2 16 Sep 03	0.0120	0.048	0.005	0.006	0.158	Old file
D: Domestic building (PF)	AMRISK 1.0	0.0007	0.003	0.000	0.000	0.010	
	AMRISK 1.2 16 Sep 03	0.0007	0.003	0.000	0.000	0.010	New file
	AMRISK 1.2 16 Sep 03	0.0007	0.003	0.000	0.000	0.010	Old file

Exposed object (Q=300 t, p=26.575x10^{-5})		Lethality	OKZ	OO	OE	Perc coll risk (x 10^{-5})	Comment
E: Domestic building (PF)	AMRISK 1.0	0.0131	0.052	0.036	0.041	1.096	
	AMRISK 1.2 16 Sep 03	0.0131	0.052	0.036	0.041	1.092	New file
	AMRISK 1.2 16 Sep 03	0.0131	0.052	0.036	0.041	1.094	Old file
F: Domestic building (PF)	AMRISK 1.0	0.0006	0.002	0.002	0.002	0.046	
	AMRISK 1.2 16 Sep 03	0.0006	0.002	0.001	0.002	0.046	New file
	AMRISK 1.2 16 Sep 03	0.0006	0.002	0.002	0.002	0.046	Old file
G: Civil leisure area (AL)	AMRISK 1.0	0.0039	0.546	0.053	0.062	1.660	
	AMRISK 1.2 16 Sep 03	0.0039	0.546	0.053	0.062	1.655	New file
	AMRISK 1.2 16 Sep 03	0.0039	0.546	0.053	0.062	1.656	Old file
H: Forest	AMRISK 1.0	-	0.994	0.209	0.270	7.162	
	AMRISK 1.2 16 Sep 03	0.4510	0.902	0.190	0.244	6.478	New file
	AMRISK 1.2 16 Sep 03	0.4510	0.902	0.189	0.243	6.467	Old file
				R0	RE	Rp	
	AMRISK 1.0			1.187	2.135	56.725	
	AMRISK 1.2 16 Sep 03			1.169	2.105	55.947	New file
	AMRISK 1.2 16 Sep 03			1.168	2.104	55.910	Old file

C.6.2 Individual risk

Exposed object (Q=300 t, p=26.575x10^{-5})		Tind	SDind	rimax	r max (x 10^{-5})	Comment
C: Domestic building	AMRISK 1.0	0.121	0.121	0.0015	0.0386	
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0015	0.0386	New file
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0015	0.0386	Old file
D: Domestic building	AMRISK 1.0	0.121	0.121	0.0001	0.0023	
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0001	0.0023	New file
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0001	0.0023	Old file

Exposed object (Q=300 t, p=26.575x10^{-5})		Tind	SDind	rimax	r max (x 10^{-5})	Comment
E: Domestic building	AMRISK 1.0	0.9	0.9	0.0118	0.3138	
	AMRISK 1.2 16 Sep 03	0.9	0.9	0.0118	0.3138	New file
	AMRISK 1.2 16 Sep 03	0.9	0.9	0.0118	0.3138	Old file
F: Domestic building	AMRISK 1.0	0.9	0.9	0.0005	0.0132	
	AMRISK 1.2 16 Sep 03	0.9	0.9	0.0005	0.0132	New file
	AMRISK 1.2 16 Sep 03	0.9	0.9	0.0005	0.0132	Old file
G: Civil leisure area	AMRISK 1.0	0.121	0.121	0.0005	0.0124	
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0005	0.0124	New file
	AMRISK 1.2 16 Sep 03	0.121	0.121	0.0005	0.0124	Old file

C.6.3 Airblast in tunnel

(Q=300 t, p=26.575x10^{-5})		p2/p1	t2/t1	p (bar)	t (ms)	Comment
Chamber exit	AMRISK 1.0			42.34	8315.0	
	AMRISK 1.2 16 Sep 03			42.34	8315.0	New file
	AMRISK 1.2 16 Sep 03			42.34	8315.0	Old file
1: Friction (TE)	AMRISK 1.0	0.877	1.119	37.12	9301.2	
	AMRISK 1.2 16 Sep 03	0.877	1.119	37.12	9301.2	New file
	AMRISK 1.2 16 Sep 03	0.877	1.119	37.12	9301.2	Old file
Tunnel exit	AMRISK 1.0			37.12	9301.2	
	AMRISK 1.2 16 Sep 03			37.12	9301.2	New file
	AMRISK 1.2 16 Sep 03			37.12	9301.2	Old file

C.7 Symbols and definitions

Lethality	=	Probability of lethal damage on a person from explosion effects
OE	=	Expected number of fatalities at exposed object, including aversion factor
OKZ	=	Expected number of fatalities at exposed object, exposure distribution not considered
OO	=	Expected number of fatalities at exposed object
p (bar)	=	Blast pressure at tunnel mouth
p	=	Event probability, probability of an explosive accident
p2/p1	=	Blast pressure decay in tunnel
Perc coll risk	=	Perceived collective risk, expected number of lost persons, including aversion factor and event probability
Q (tons)	=	Net explosive quantity
R	=	Expected number of fatalities at all exposed object, including event probability
RE	=	Expected number of fatalities at all exposed object, including aversion factor
rimax	=	Individual probability of lethal damage after an explosion
rmax	=	Individual probability of lethal damage including event probability
RO	=	Expected number of fatalities at all exposed objects
Rp	=	Expected number of fatalities in all exposed objects, including aversion factor and event probability
Sdind	=	Average presence factor
t (ms)	=	Blast wave duration at tunnel mouth
t2/t1	=	Increase of blast wave duration in tunnel
Tind	=	Maximum individual presence factor

D EXAMPLE – DEBUG PROCEDURE

Nr	Meny/fält	Kommentar/beskrivning fel	Aksjon pr 4.juni
1/03	GIS	Möjlighet att kunna centrera grafisk bild.	Lagt til mer ”rom rundt”
2/03	GIS/isorisk	Varför obj type CR och TR i meny isorisk parameter ?	Bl a trafikklinje, beholdes?
3/03	GIS	När man varierar skalor, från t ex 1:5000 till 1:20000 så försvinner möjlighet till ”full” skärmbild.	Endret/rettet
4/03	Input/object data	Vid inmatning av shape AU så försvinner inte ”kopians” shape.	Rettet
5/03	Input/object data	Vid inmatning av shape AU så bör koordinattabell rensas på värden.	Rettet
6/03	Input/PES data	Vid inmatning av uppgifter om UG så bör fältet ”height” vara nedtonat.	Beholdes, brukes to chamber crossection
7/03	Input/PES data	Gäller fältet ”earth cover” även för UG (tjocklek på jordskikt ovanpå bergtäckning)	Ja
8/03	Input/PES data	Felmeddelande uppkommer i ”tunnel elements” när man skriver i fältet ”elem length. Det verkar som om felet endast när man först försöker att mata in i fältet "elem length". Lägger man i uppgifter om cross section före elem length så verkar det att gå bra.	Rettet
9/03	Input/PES	Vid inmatning av fler än två tunnelement verkar det som om kopian som senare ska redigeras alltid läggs direkt efter det första tunnelementet vilket medför problem vid inmatning av många element. Knapen ”new tue” verkar endast att kopiera det första elementet istället för det elementet som väljs, vanligtvis det sist inmatade.	Rettet
10/03	Input/PES	Vid inmatning i ”tunnels” så kan tabellen glida till vänster vid flitig musanvändning.	Rettet
11/03	Calculated values	Verkar som om värden i menyn ”calculated values” inte kontinuerligt uppdateras utan att man bör växla mellan olika delvärden för att vara säker på att avsett värde visas.	Meny hang ikke med Rettet
12/03	Calculated values	Med hur många siffrors noggrannhet sker beräkningar i AMRISK ? (avvikelse mellan AMRISK 1.0 och 1.2 för EX1BERG, Domestic building C. Avvikelsen kan bero på avrundning av värden ?)	32 –bits tall, men over-driv ikke nøyaktighet
13/03	Calculated values	För EX1BERG (new file) redovisas värden på individual risk för LT och LR på skärm, dock inte vid utskrift.	
14/03	Input/PES	Går inte att mata in avstånd i ”barricades in front of tunnel opening” för vinklarna 5gL till 30gR.	Rettet
15/03	Export files	Ofullständig utskrift av input print.	
16/03	Export files	Ofullständig utskrift av manager report.	Rettet

References

(1) Martinussen S (red) (2003): AMRISK versjon 1.1ß - Dokumentasjon av valideringsresultater, FFI/RAPPORT-2003/01840, Forsvarets forskningsinstitutt

(2) http://www.statkart.no/standard/sosi/html/welcome.htm.