

AUTOMATED SAFETY ASSESSMENT PROTOCOL - EXPLOSIVES TOOL

1. General

1.1. The Automated Safety Assessment Protocol – Explosives (ASAP-X) is a Microsoft Excel spreadsheet designed to assist DoD/NATO Component personnel in assessing hazards associated with ESQD consequences. This spreadsheet is designed for use by Microsoft Excel 2003 and previous versions of Microsoft Excel. It consists of three separate worksheets, the first is the name/version_control/date/instruction page, the second is the input page, and the third is the output page.

1.2. The ASAP-X input/output worksheet descriptions:

1.2.1. The second ASAP-X worksheet is used only for input. The ASAP-X input worksheet is used for assessing all potential explosive site (PES) related explosives safety consequences (with the exception of intentional detonation, hardened aircraft shelters, an underground PES, and explosive ordnance disposal (EOD) proficiency ranges). The user must fill out the appropriate yellow colored spreadsheet cells on this page. All other cells are locked and the user cannot make any changes/modifications to those cells.

1.2.2. The third ASAP-X worksheet provides output for all work done in ASAP-X. The user has no input and can make no changes/modifications to this page.

1.3. This version of ASAP-X is based on the Allied Ammunition Storage and Transport Publication 1 (AASTP-1), Manual of NATO Safety Principles for the Storage of Military Ammunition and Explosives, September 2009.

1.4. If an intermagazine distance (IMD) related deviation exists, users are reminded the PES Hazard Division (HD) net explosives weights (NEQs) are the total of all the NEQs at all the PES locations involved in the deviation. An IMD related deviation between two such locations could actually cause additional locations to have IMD related deviations. When addressing IMD related deviations, it is important to accurately identify the explosives hazards and assess all associated risks.

1.5. ASAP-X does not invoke mixing rules. The separate HD NEQs are included to allow users to input different HDs as would be for siting purposes. This allows ASAP-X to calculate the maximum distances for each individual HD quantity and use it for output purposes. If the PES has mixed storage, then the user must input the total quantity in accordance with the AASTP-1 and enter this quantity in the HD 1.1 NEQ input box.

2. ASAP-X Instructions

2.1. When the ASAP-X spreadsheet is opened, the name/version_control/date/instruction cover page appears. This allows the user to read these instructions for ASAP-X use. They will be located just to the right of the Version Control area.

2.2 The user must first next click on the Input Page Worksheet tab.

2.2.1. The name of the PES and a short description of the PES must be entered first.

2.2.2. The NEQs (in kilograms) must next be entered. The user must remember that ASAP-X does not apply mixing rules. If mixed storage is at this PES, then the user must input the total quantity in accordance with the AASTP-1 and enter this number in the HD 1.1 NEQ box.

2.2.3. The question, “Is the PES an open pad, earth-covered magazine (ECM), or Other?”, to the right of the HD NEQs must next be answered. It has a drop down list associated with it to limit the answer to one ASAP-X will understand. It will determine if any other questions need to be answered on the screen. If another question does appear, it will have a drop down list to limit the answers in ASAP-X. These answers will provide information to ASAP-X to determine the results calculated on the output page. .

2.2.4. The next area for input is the Exposed Site (ES) data. This includes the ES Name, Distance the ES is from the PES, the number of personnel located at the ES, the building cost of the ES, and if the PES is an ECM, the orientation of the ES to the PES will be the last column. If the PES is an ECM, the orientation column will have a drop down list to limit the answers in ASAP-X. The distances in ASAP-X must be entered in meters. ASAP-X allows for up to 85 separate ESs. The input boxes will appear as necessary for the user.

2.2.5. If the distance between the ES and PES is not known, ASAP-X includes a GPS coordinate calculator to determine the distance between the ES and PES. This calculator requires the GPS coordinates in Degrees, Minutes, Seconds, and Direction for both longitude and latitude. ASAP-X will calculate the correct distance in meters. If a number is entered in the “Dist from PES” column, ASAP-X will use this distance for calculations even if GPS coordinates are entered.

2.3. When all the input is entered in ASAP-X, the user must then open the output worksheet. On this worksheet is a sectioned drawing depicting seven distinct zones. These zones represent, from the innermost to the outermost, explosives blast criteria. Each of these zones will have a distance associated to it depending on the HD and NEQ entered.

2.4. To the right of the sectioned drawing on the output worksheet is a list of each ES and the appropriate output data for that individual ES in terms of distance, zone, personnel, fatalities expected, building cost, and building damage loss.

2.5. Under the section drawing on the output worksheet is a compiled list by zone and for the entire evaluation area.