SASPAM-SA/WS-2024 – ###

This is a Template for SASPAM-SA/OP Extended Abstract Preparation

A. Author[1], B. Author[2] and C. Author[1]

[1] Affiliation A, Address, Country
(E-mail: firstauthor@aaaa.bb)

[2] Affiliation A, Address, Country
(E-mail: secondauthor@cccc.dd)

ABSTRACT

Microsoft Word is used on Mac to prepare this template for Extended Abstract, in a paper size of A4. Please convert it into pdf and submit it to SASPAM_WS_SMR_SAFETY@irsn.fr with copy to ahmed.bentaib@irsn.fr and Fulvio.mascari@enea.it ". **ABSTRACT** is no more than 400 words. This is an example of **ABSTRACT** writing with a fictional achievement. Small Modular Reactors (SMR) are one of the key options for the near-term deployment of new nuclear reactors. Currently in Europe there is a growing interest towards the deployment of SMRs, and several activities are underway in many countries preparing for possible licensing needs. In particular, Integral Pressurized Water Reactor (iPWR) are ready to be licensed as new builds because they start from the well-proven and established large Light Water Reactor (LWR) technology, incorporate their operational plant experience/feedback, and include moderate evolutionary design modifications to increase the inherent safety of the plant. However, despite the reinforcement of the first three levels of the Defence-in-Depth (DiD), e.g. with the adoption of passive safety systems, a sound demonstration of iPWR ability to address Severe Accidents (SA) should be carried out (DiD levels 4-5). The main objectives of the project will be to transfer and adapt such knowledge and know-how to iPWR, in view of the European SA and Emergency Planning Zone (EPZ) analyses. The main elements considered are: (i) the identification of plausible SA scenarios for iPWRs with the related conditions in the vessel and in the containment, (ii) the study of the applicability of the existing experimental databases to iPWR and identify new experimental needs, (iii) the assessment of the capability of internationally recognized European and Non-European computational tools (largely used in Europe) to describe the behaviour of the most promising iPWR designs during SA scenarios, and (iv) the prediction of the resulting radiological impact on- and off-site, taking into account special SA mitigation/management strategies. The expected outcomes of the project will help speeding up the licensing of iPWRs in Europe, as well as the siting processes of these reactors in light of their possible use near densely populated areas.

KEYWORDS: SMR, iPWR, DBA, Severe accident, IVMR, Containment integrity, (Up to 6 keywords)

1. INTRODUCTION

This document provides a template for authors to format their Extended Abstract (Paper) for the SASPAM-SA Open Workshop 2024.

It is recommended no less than 4 pages in the sheet size of A4 (ISO216) (210×297 mm, 8.3×11.7 inches), including tables, figures and references. The preferred pdf file size of each paper is less than 4 MB.

The text margins are to be set so that the text body is within the dimensions of 12.7 mm (0.5-inch) margins for left and right, and 25.4 mm (1.0-inch) margins for top and bottom except for the first page where 12.7 mm (0.5-inch) margin for top.

2. BODY TEXT

The body text is basically in double-column alignment and may contain headings, subheadings, tables, figures, pictures, diagrams, formulae and other

relevant information.

Section headings are in **BOLD CAPITAL 11-point Arial font**. A number with a dot is inserted for each heading, in increasing order to the end of the Paper. Include a tab space of 10 mm from the left margin to the heading itself.

Leave 1-line margin before the section heading title and a half line margin at the beginning of each paragraph; this template is adjusted so that the paragraph and heading spacing is correctly given. It is encouraged to use page breaks to force heading title to appear on the same page as the text of that section.

Body text should be in 11-point Times New Roman font. Leave 0.2 lines before each paragraph.

When certain words are emphasized, they can be highlighted by showing **bolded**, *italicized*, or underlined, or by changing the font type and/or size, provided these changes are confined local to draw attention of readers.

Tables and Figures (diagrams and photographs) can be included anywhere in the manuscript but after **1. INTRODUCTION** section. Figures and Tables should be numbered consecutively throughout the manuscript from 1 onwards. All figures, tables and their captions are to be centered within a column or within a page by spanning two columns. Please use section breaks to make a one-column part in a page between two double-column part. Leave one line between the body text, Figure/Table and the caption. Ensure then Figure/Table image does not appear on a different page being separated from the caption. Ensure also that Figures/Tables are within the printable area of the page, especially after conversing the file into pdf.

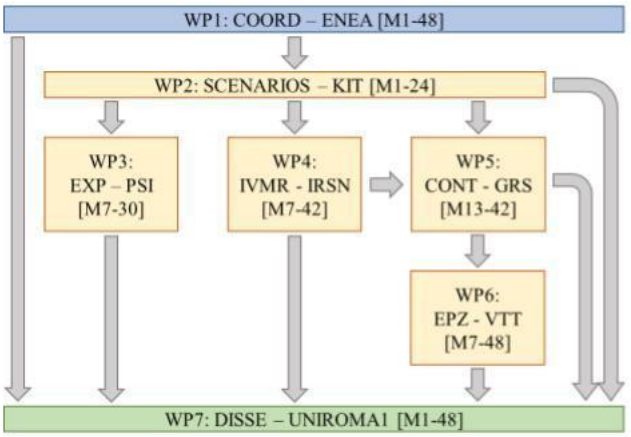

Figure 1 – SASPAM-SA structures

Figure 2 - A picture of IRSN headquarters.

2.1 Subheading in a Heading Section

Sub- and sub-subheadings are recommended to provide clarity of ideas. The subheading should be in **bolded 11-point Arial** font. The first letter and the first letters of the main words only are in upper case. Subheadings are numbered with a period separating the section number and the subheading number (e.g., 2.1 and 2.2 are subheadings in section 2). The subheading title is separated from the subheading number by a tab space 5 mm from the left margin. The body of text in the subheading section is aligned and formatted identical to other sections. A single line is used to separate a subheaded section from other subheaded sections and other text in the same heading section.

2.1.1 Sub-subheading in a subheaded section

When a sub-subheading is necessary, the same principles apply as that for the subheading. The first letter of the subheading is in upper case and all other remaining letters are in lower case. The sub-subheading

title is in ***bolded italic 11 point Arial*** font.

3. FORMULAE/EQUATIONS

For formulae, equations are numbered in their order of appearance in round brackets and are referred in the text if necessary. Equations (1) and (2) are prepared by using Equation Option of Microsoft Word as follows;

$$c = \sqrt{a^2 + b^2} \quad (1)$$

$$\langle j_g \rangle = \frac{1}{A} \int \alpha \overline{V_{zi}} dA \quad (2)$$

NOMENCLATURE section should then be provided too between **4. CONCLUSIONS** and **REFERENCES** to properly explain the meaning of each of terms and symbols used in the equations.

4. CONCLUSIONS

The pdf manuscript of Extended Abstract (Draft) should be submitted by e-mail to SASPAM_WS_SMR_SAFETY@irsn.fr before May 31, 2024.

We hope that the authors find this template useful and the guide easy to use. If there are any problems or questions regarding this template, please contact the workshop Secretariat at: (SASPAM_WS_SMR_SAFETY@irsn.fr)

Wish your success in the manuscript preparation.

References in the text can be made to literature listed in the **REFERENCES** section, located at the end of the paper, by numbering the literature with numbers in square brackets e.g., [1]. The references are incremented in sequence of appearance in the text. Repeated references to the same literature should be made by using the same reference number [1]. The format of **REFERENCES** is as follows:

Concerning papers, Name of Authors (authors are separated by commas), "Title of paper in a couple of quotation marks with the first letter upper case and the rest lower case unless the word requires upper case", *Journal name in italics*, Vol. number, Issue number (year) and pages [1].

Concerning conference proceedings, underline the conference name [2].

REFERENCE

[1] A. Author, B. Author, "Title, Title, Title, Title, Title, Title, Title, Title, Title, Title, Title,", *Journal Journal Journal Journal Journal* , Volume ## (##??), Article ID ####.

[2] A. Author, B. Author, and C. Author, "Title, Title, Title, Title, Title, Title, Title, Title, Title, Title, Title", Proc. of Conference (Abbreviation of the conference), vol. #, pp. ###–###, , State, Month ####.