Format for

Succinct summary of representative risk management measures (RMMs) and operational conditions (OCs)

Version 1.1

August 2015

Format for the Succinct summary of representative RMMs and OCs

Format to be used in the applications for authorisation to describe the Summary of Risk Management Measures and operational conditions extracted from the Chemical safety report (CSR). **Once completed the table shall be pasted into Part A, Section 1 "Summary of risk management measures" of the CSR** *(Please note that the page setup for the table is "landscape" while the CSR section it has to be placed in is "portrait". Section breaks required to be able to paste it in)*.
The applicant will summarise each exposure scenario (ES), listing the main parameters to describe briefly the most relevant risk management measures (RMM) and operational conditions (OC) in place. Each parameter takes up a column. A description to understand the nature and impact of each parameter is provided in the next pages.

[Exposure Scenario (ES) Name]

ECS and WCS	**Task (ERC/spERC or PROC)**	**Annual amount per site (tonnes /year)**	**Technical RMMs, including:** *Containment, *Ventilation (general, LEV…) *customized technical installation, etc	**Organisational RMMs, including:** *Duration and Frequency of exposure *OSH management system *Supervision *Monitoring arrangements *Training, etc	**PPE (characteristics)**	**Other conditions**	**Effectiveness of waste water and waste air treatment (for ERC)**	**Release factors: water, air and soil (for ERC)**	**Detailed info. in CSR (section)**
ECS n									
WCS 1									
WCS 2									
WCS 3									
WCS n									

Abbreviations: WCS=Worker contributing scenario, ECS=Environmental Contributing Scenario,* ERC=Environmental Release Category (or spERC if available) , PROC= Process category, LEV=Local Exhaust Ventilation, PPE=Personal Protective Equipment

Summary Table. Explanations

The applicant shall fill in each column of the table for each one of the exposure scenarios with information already available in the CSR. The columns labelled: "Technical RMMs", "Organisational RMMs", "PPE" and "Other conditions" are all relevant for worker contributing scenarios (WCS), whereas the columns with the header: "Effectiveness of waste water and waste air treatment" and "Release factors: water, air and soil" are applicable for environmental contributing scenarios (ECS).
Below are additional remarks with some key messages for each parameter in the table.

Task (PROC)

The description of the task should be concise but thorough enough to be understandable.

Annual amount per site

This is mainly applicable for the Environmental Contributing Scenarios (ECS), however it can also be a relevant information for workplace exposure. This tonnage shall be presented for each exposure scenario like in the non-confidential version of the CSR.

TECHNICAL RMMs

The list on the column heading of the table is not exhaustive as every workplace and process is different and, therefore, likely to have their own set of specific technical RMMs. Containment and ventilation are two of the most general measures. As and if needed, other parameters judged relevant in individual cases can be listed in this column as well.

Containment of a process

Containment of a process decreases the occupational exposure level by either avoiding any kind of manual manipulation during the process through automated control of closed process equipment or by encapsulating relevant handling areas by e.g. ventilated booths or glove boxes. A number of industrial processes require some degree of containment, for example: weighing/dispensing of solid raw materials, addition of solid/liquid and /or gaseous reagents to reaction vessels, the controlled reaction of chemicals with subsequent product and by product generation, purification steps which may involve the addition and removal of materials, crystallisation of a solid product, removal of the product to containers, milling and blending, transfer operations involving liquids (loading and unloading of tankers).

Containment tends to be used as a control measure to reduce the level of exposure from the following hazard properties or class: Flammability, Explosivity and Toxicity.

The effectiveness of such containments can vary depending on the technique and operation of the setup and is thus important to be considered in the exposure estimation. The description of the process in the application must be detailed, including all of the tasks which have to be performed by workers (e. g. maintenance/service, filter exchange, cleaning work,…) this will help to have a clear picture of the containment as, sometimes, the level of containment can be different (for example, in a closed or a semi-closed system).

General Ventilation and Local Exhaust Ventilation (LEV)

Industrial ventilation can provide an effective means of controlling worker exposure to hazardous substances. In order to be effective, ventilation systems need to be well designed and maintained. Ventilated enclosures designed to fit around and partially enclose process equipment or activities. Note this does not include complete containment devices such as isolators and glove boxes which, if applicable, should be listed under the "Containment of process" category above.

Both, general ventilation and LEV systems should be defined by quantifiable parameters (for example the number of changes per hour, % efficiency, airflow per hour,… should be reported).

ORGANISATIONAL RMMs

Organisational measures, such as management systems, training schemes (also in relation to PPE), operating practises and monitoring arrangements, that covers both the operation and maintenance of the process and risk management equipment can support in ensuring that the RMMs are effective. This can also include risk management measures implemented as a result of local/national occupational safety and health regulations (OSH management). One of the most specific organisational measures is the determination of the duration and frequency of exposure.

Duration and frequency of exposure

The duration and frequency of the activity on a day is usually a very important factor that determines the exposure over a working shift. The duration and frequency of the workers activity should be related to the specific uses provided by the applicant for each contributing scenario which reflects the task performed by the workers.

Personal Protective Equipment (PPE)

PPE items are designed to protect the human body from interaction with chemicals and/or contact with energy hazards. There are many types of PPE and include types for: Respiratory protection, hand protection, face/eye protection and body protection. The main characteristics of the PPE should be listed.

Other conditions

Include factors which may determine the process characteristics and/or the worker's exposure (e.g. **Temperature**), the surroundings where the substance is used (e.g. either **indoors or outdoors**), the **concentration of the substance** (eg. 100% if it is undiluted, 50% if it is diluted by half, etc) for each task

Effectiveness of the measure for waste water and waste air treatment and release factors (for ERC)

Environmental releases may occur as a result of any process or activity during the life cycle of a chemical. Among the most common determinants of exposure are: the release factors from processes and products (before abatement) and the effectiveness of waste water and waste air treatment.

Release factors to environment compartments: water, air and soil (for ERC)

Releases can occur to air, surface fresh and marine water, wastewater and soil and are estimated separately for every environmental compartment and each relevant stage of the life cycle. Release estimation in terms of data or assumptions needs to be quantified and considered during the life cycle stages and uses of a substance, taking into account the different release pathways, receiving environmental compartments and the spatial scale of the releases.

Detailed information in CSR (section)

It specifies the section(s) of the public version of the CSR where the RMM/OC is listed and to which the Authorisation Decision refers to. If the enforcement authority wishes to scrutinise the information more closely, such section(s) will contain expanded information.