

**[ES1 - IW1 – Formulation of CrO<sub>3</sub>]**

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)
<b>ECS 1</b>	Formulation (ERC 2, spERC eurometaux 2.2c.v2.1 for air releases)	15 t/year	Wet scrubber to prevent release to the atmosphere, On-site waste water treatment plant.	ISO 14001**	-	-	Waste water treatment: reduction, neutralization, decantation leading (reduction of Cr(VI) to Cr(III)) Air treatment: wet scrubbers with waste water treated as detailed above.	Water: 2.43E-02 % (waste water concentration <0.1ppm) Air: 0.01% Soil 0%	9.0.2.1 9.1.1
<b>WCS 1</b>	Storage and handling (PROC 1)	15 t/year	Closed system General ventilation: 5-10 ACH	ISO 45001**, Safety training, specific medical trimestral survey, specific hygiene and safety instructions. Exposure monitoring related to Cr(VI) OEL. Closed and locked area, restriction of access. <1h per shift, 1 operation per week.	Nitrile gloves, Safety Goggles, Protective suit.	Ambient temperature, Indoor, purity 99.7%	-	-	9.1.2
<b>WCS 2</b>	Dissolution of CrO <sub>3</sub> flakes into water (PROC 4)	15 t/year	Open system General ventilation: 5-10 ACH Semi-automated process Filler funnel fitted with a fixed capturing hood and enclosed in a fume cupboard like device.	ISO 45001**, Safety training, specific medical trimestral survey, specific hygiene and safety instructions. Exposure monitoring related to Cr(VI) OEL.	Nitrile gloves, Full face respirator, Disposable	Ambient temperature, Indoor, purity 99.7%	-	-	9.1.3

			Operator in the far field.	Restricted access when operating. ≤45 min per shift, 1 operation per week.	all-in-one suit.				
<b>WCS 3</b>	Manual maintenance (repair) of machinery (PROC 28)	15 t/year	Open system General ventilation: 5-10 ACH	ISO 45001**, Safety training, specific medical trimestral survey, specific hygiene and safety instructions. Exposure monitoring related to Cr(VI) OEL. Device of concern is abundantly washed with clean water prior to intervention. 2 hours per shift, twice a month.	Nitrile gloves, Full face respirator, Disposable all-in-one suit.	Ambiant temperature, Indoor, Conc. in mixture: extremely small	-	-	9.1.4

**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

\*\* Will be certified within two years after the start-up of the plant. Process managed and monitored by competent personnel from CFL SARL (Wiltz, Luxembourg).