

Annex C-3: Resources, Safety, Training and Cessation

	4000 Litre Reaction vessel	kilo-Lab	Pre-fabricated Mobile Lab
1. Raw Materials	The aim behind this expansion was increased flexibility and backup. The reaction vessel will not contribute to an increase in the consumption of raw materials in a direct way.	The kilo-Lab does not utilise specific raw materials and consumes materials from the plant inventory.	Same type as those used in the rest of the facility. The amounts of starting materials will be negligible compared to the quantities currently being used in the installation.
2. Energy	The reaction vessel shares energy with the rest of the plant and no changes were done to the infrastructure which was previously in place.	The kilo-Lab consumes a fraction of the total energy consumed by the current installation. No changes in the infrastructure were required to support the installation of the kilo-Lab.	This installation is a relatively small laboratory unit and there are no devices which are considered as having high energy consumption. A power load analysis indicates that the unit will be adequately serviced by the current substation and does not need an additional power connection.
3. Water	When required, the reaction vessel is fed from the same source as the rest of the plant. Consumption is incorporated with that of the plant.	The kilo-Lab has a mains water supply which is being fed from the same source as the rest of the plant. Due to the small size of the reaction vessels housed in this unit, the consumption as compared to that of the rest of the installation is negligible.	This installation is a relatively small laboratory unit and is estimated to consume less than 1% of the water consumption of the current installation.
4. Fire Prevention	The reaction vessel is installed between the first and second floors of the Production Plant, and is served by the same fire prevention system as the rest of the plant. The production process related to this reaction vessel is in no way different from what existed originally and the infrastructure was found to be adequate to support the installation.	The kilo-Lab is installed on the second floor of the Production Plant, and is served by the same fire prevention system as the rest of the plant. The production processes in the kilo-lab are identical to those of the rest of the plan, although at a fraction of the scale. This fact makes the installed infrastructure perfectly adequate to support the kilo-Lab installation. A fire extinguisher is also located in the room.	The fire detection system will include all the necessary elements, bus connected to the existing plant control system. Before any outbreak of fire, sirens will be heard in each module. Escape doors will be clearly marked and accessible. The air conditioning system will be designed to stop in case of fire, preventing the spread of smoke and fire to the rest of the units. Fire extinguishers will be located in each room.

5. Health & Safety	<p>No new or specific safety hazards have been identified since the technology used is identical to that previously installed in the facility. The manufacturer is the same as the one of the original reaction vessels.</p> <p>The installation of the 4000 litre reaction vessel falls within the current Health & Safety management plan and no additional requirements have been identified.</p>	<p>No new or specific safety hazards have been identified since the technology used is no different from that which was previously being used. Furthermore, the chosen suppliers were known to Medichem before.</p> <p>The kilo-Lab falls within the current Health & Safety management plan and no additional requirements have been identified.</p>	<p>The laboratory will be designed specifically for handling high potency materials and will be equipped with state-of-the-art containment technology that will ensure adequate protection to all employees working in the facility.</p> <p>Manipulation of any potent compound will be carried out in a specially designed closed system, double contained with continuous liners and/or in a glove box. The air will be free from particles and HEPA-filtered at the exhaust of the HVAC system.</p>
6. Training	<p>All employees go through intensive induction training. No specific training was required after installing the new reaction vessel, since the new reaction vessel operates identically to the ones already installed. No new technology or process was introduced. The Head of Department, Brian Spiteri, delivers training as required from time to time.</p>	<p>All employees go through intensive induction training. The kilo-Lab is run by graduate chemists, therefore minimal training was required since the operations of the kilo-Lab are similar to those in a laboratory (as the name implies). The Head of Department, Adrian Borg, delivers training as required from time to time.</p>	<p>So far, only the Head of Department, Dr. Niksa Kulisic, has been employed. Dr. Kulisic is currently undergoing intensive training at our Spanish site. He has also attended specialized external training on working with highly potent materials.</p>
7. Cessation	<p>The installation falls within the current, permitted plan for cessation of operations.</p>	<p>The installation falls within the current, permitted plan for cessation of operations.</p>	<p>The installation consists of pre-fabricated units which are mobile and easily removed in case of cessation of work.</p>