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| University of Glasgow logo | | | DSEAR Assessment | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Assessment Title:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Assessment Reference Number:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **School / Service Building:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Safety Coordinator:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **1: Details of Hazardous Substance(s) Involved** (include substances generated during the procedure) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Substance Name** | | **Physical Form**  (e.g. dust, gas, mist, vapour, liquid) | | | | | **Hazard Type**  (Please tick all that apply) | | | | | | | | | | | | | | **Lower Explosive Limit**  **(LEL %)** | | | | | | | | | | | **Upper Explosive Limit**  **(UEL %)** | | | | | | | | |
| Image result for ghs explosive | | | | Image result for ghs flammable | | | | Image result for ghs oxidiser | | Image result for ghs compressed | | | |
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| **2: Brief Description of Activity** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **Specific area where activity takes place:**  (Building and Room Number) | | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **3: Details of Hazardous Activity** (Tick all that apply) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Use of Dangerous substances or generation of explosive atmospheres** | | | | | **Small Scale** | | |  | | | | **Medium Scale** | | | |  | | | | **Large Scale** | | | |  | **Storage Only** | | | | |  | | | | | **Other** | | | | |  |
| **Details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Frequent use (or generation) of hazardous substances during procedure** | | | | | **Daily** | | | |  | | | | **Weekly** | | | | |  | | | | **Monthly** | | | | |  | | | | | | **Other** | | | |  | | | |
| **Details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Maximum amount or concentration of substance used during process** | | | | | **Low** | | | |  | | | | **Medium** | | | | |  | | | | **High** | | | | |  | | | | | | **Other** | | | |  | | | |
| **Details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Potential ignition sources** | | | | | **Ignition sources present** | | | | | | | |  | | | | | | | | | **No ignitions sources present** | | | | | | | | | | |  | | | | | | | |
| **Details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Explanation of how substances used or generated could cause fire or explosion** | | | | | **Details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Who might be placed at risk** | | | | | **Details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Assessment of risk (prior to use of control measures)** | | | | | **Negligible** | | | | |  | | | **Low** | | | | | |  | | | **Medium** | | | | | | |  | | | | **High** | | | | |  | | |
| **Details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **4: Summary of Risk Control Measures** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **4.1: Procedural Control Measures** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Quantity of hazardous substance reduced to minimum amount required?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Avoid or minimise releases (planned or unintentional)?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Control potential release at the sources?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Formation of explosive atmosphere controlled / prevented?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Any releases of flammable materials contained / removed (e.g. ventilation)?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Control measures to avoid adverse conditions (e.g. exceeding temperature limits)?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Incompatible substances separated during storage and use?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Number of people in hazard area reduced to minimum?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Explosion resistant plant / equipment used?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Measures in place to control spread of fire / explosion?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Has suitable PPE been provided and staff trained in its use?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Have all ignition sources been removed from hazard area?** | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | |  | | | | |  | | |  | |
| **Has the risk of electrostatic discharge been eliminated?** | | | | | | | | | | | | | | | | | | | | | | | | | | | |  | | |  | | | | |  | | |  | |
| **Please give relevant details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **4.2: Workplace or process management systems appropriate to nature of activity** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Is workspace designed, constructed and maintained to provide adequate fire resistance?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Is workspace designed, constructed and maintained to provide adequate explosion relief?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Is all equipment / rig designed to minimise the risk of fire and explosion?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Is all equipment / rig operated in such a manner to minimise the risk of fire and explosion?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Have safe systems of work been developed and communicated to all relevant persons?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Is a permit to work scheme required for this operation and is it strictly enforced.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Have lone working procedures been developed and communicated to all relevant personnel** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Please give relevant details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **4.3: Zoning / Control of explosive atmospheres (Schedule 2 of DSEAR Regulations)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Will zoning be required to ensure this activity can be carried out safely?** \* | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **\*Please contact SEPS for further guidance in determining hazard zones** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Description of Area** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Classification of Zone** | | | | | | | | | | | | |
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| **4.4: Monitoring of flammable / explosive atmospheres** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Will fixed monitoring systems for flammable / explosive atmospheres be used?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Please give relevant details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Will portable monitoring equipment for flammable / explosive atmospheres be used?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Please give relevant details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **4.5: Storage of dangerous substances** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Are all flammable or explosive substances stored in appropriate fire resistant storage?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Are all quantities of flammable substances (in excess of 50l) kept in dedicated storage areas?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Are incompatible substances correctly stored and segregated?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Where required have storage areas been designed to provide explosion relief / resistance?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Please give relevant details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **4.6: Transport of dangerous substances** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Is there a requirement for hazardous substances to be transported?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Have all personnel involved in transport received appropriate instruction and training?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Please give relevant details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **4.7: Personal Protective Equipment (please tick all that apply)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Eye Protection** | **Face Shield** | | | | | **Gloves** | | | | | | | | **Footwear** | | | | | | | | | **Protective Clothing** | | | | | | | | | | | **Other (specify)** | | | | | | |
|  |  | | | | |  | | | | | | | |  | | | | | | | | |  | | | | | | | | | | |  | | | | | | |
| **Dust Mask** | **Respirator** | | | | | Image result for ppe symbols respirator  **Powered Respirator** | | | | | | | | Image result for breathing apparatus symbol  **Breathing App.** | | | | | | | | | Image result for chemical suit symbol  **Gas Tight Suit** | | | | | | | | | | | **Other (specify)** | | | | | | |
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| **Please give relevant details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **4.8: Waste management and Disposal** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Type of Waste** | | | | | | **Physical Form (e.g. flammable liquid)** | | | | | | | | | | | | | | | | | | | | **Expected Quantity** | | | | | | | | | | | | | | |
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| **Have safe systems for storage of waste been identified?** | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | | | |  | | | | | **No** | | |  | |
| **Has a safe disposal route been identified (using an approved contractor)?** | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | | | |  | | | | | **No** | | |  | |
| **Has provision been made for the cost of disposing of waste?** | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | | | |  | | | | | **No** | | |  | |
| **Please give relevant details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **4.9: Information, instruction, training and supervision** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Has information, instruction and training been provided which is appropriate to the risk?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Please give relevant details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Are special instructions required to carry out this task safely?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Please give relevant details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Is special training required to safely carry out this task?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Please give relevant details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Work should not be carried out without direct personal supervision from competent person?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Please give relevant details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Work may not be carried out without advice / approval of supervisor?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes** | | |  | | | | | **No** | | |  | |
| **Please give relevant details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Contact details for supervisor / competent person responsible for approval** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Name:** | | | | | | **Tel:** | | | | | | | | | | | | | | | | | **E-mail:** | | | | | | | | | | | | | | | | | |
| **4.10: Safe System of Work (to be communicated and followed by all users)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| **5: Emergency Procedures** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **5.1: Have emergency procedures been developed and communicated for:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Adverse process conditions e.g. exceeding limits of temperature** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes / No** | | | | | | | | | | | | |
| **Fire and explosion** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes / No** | | | | | | | | | | | | |
| **Evacuation of hazard areas in the event of a dangerous occurrence** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes / No** | | | | | | | | | | | | |
| **Dealing with spillages and releases of hazardous substances** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes / No** | | | | | | | | | | | | |
| **Failure of pressurised containers e.g. gas cylinders** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes / No** | | | | | | | | | | | | |
| **Please give further details as required:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **5.2: Spillage or release of material** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Spill control kit available in laboratory?** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes / No** | | | | | | | | | | | | |
| **Evacuate and secure the affected area** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes / No** | | | | | | | | | | | | |
| **Consider ventilation if safe to do so** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes / No** | | | | | | | | | | | | |
| **Inform security and emergency services if required (major spills only)\*** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes / No** | | | | | | | | | | | | |
| **Inform competent person (e.g. principal investigator, safety officer)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes / No** | | | | | | | | | | | | |
| **Please give further details as required:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **\*A minor spill is considered to be any release that can safely be cleaned up using one standard spill control kit.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **5.3: Fire safety precautions** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Automatic fire detection system** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes / No** | | | | | | | | | | | | |
| **Automatic fire suppression system** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes / No** | | | | | | | | | | | | |
| **Automatic shut-off of flammable gas / liquid supply** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes / No** | | | | | | | | | | | | |
| **Provision of portable fire-fighting equipment (e.g. fire extinguisher)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | **Yes / No** | | | | | | | | | | | | |
| **Type of fire-fighting equipment provided (tick all that apply)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Water** | **Foam** | | | | | **Carbon Dioxide** | | | | | | | | **Dry Powder** | | | | | | | | | **Fire Blanket** | | | | | | | | | | | **Other (specify)** | | | | | | |
|  |  | | | | |  | | | | | | | |  | | | | | | | | |  | | | | | | | | | | |  | | | | | | |
| **5.5: Emergency contacts** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Name** | | | | | | **Position** | | | | | | | | | | | | | | | | | **Contact Number** | | | | | | | | | | | | | | | | | |
| **Campus Security (Gilmorehill)** | | | | | | **Security** | | | | | | | | | | | | | | | | | **4444** | | | | | | | | | | | | | | | | | |
| **Campus Security (Garscube)** | | | | | | **Security** | | | | | | | | | | | | | | | | | **2222** | | | | | | | | | | | | | | | | | |
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| **Please give relevant details:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Assessment Details** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Assessed By:** | | | | | | | | | | | | | | | | | | | | | | | **Date:** | | | | | | | | | | | | | | | | | |
| **Approved By:** | | | | | | | | | | | | | | | | | | | | | | | **Date:** | | | | | | | | | | | | | | | | | |
| **Date of next review** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**DSEAR Assessment Acknowledgement**

By signing this document I acknowledge that I have read and understood the attached DSEAR Assessment and familiarised myself with the safety control measures and protective equipment necessary to carry out the task safely. I hereby agree to follow the safe system of work required and implement the necessary safety procedures fully.

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| **Full Name** | **Signature** | **Date Completed** |
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