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| Health and safety services |

Risk assessment form

Use and maintenance of vacuum pumps

**RISK ASSESSMENT FORM – SCHOOL OF EARTH AND ENVIRONMENT**

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| **RISK ASSESSMENT DETAILS** | | | | | **DEGREE OF RISK** | | | **RISK RATING MATRIX** | |
| |  |  | | --- | --- | | Faculty/School/Service | **SEE** | | Team | **Cohen** |  |  |  | | --- | --- | | Risk Assessment Title | **Use and maintenance of vacuum pumps** | | Risk Assessment Log Reference | **N/A** | | Date | **9/2/2016** | | Name of Assessors | Andy Connelly | | Manager Responsible | Caroline Peacock | | Location | Cohen West wing Level 9 and level 8 | | Details of Activity  **Use and maintenance of vacuum pumps used in Cohen labs. This covers replacing oil in pumps and other basic procedures such as replacing mist filters.**  **DOES NOT COVER pumping of solvents, mercury, corrosive or obnoxious substances.** | |   Other assessments which might also be required, ✓ if needed:  Manual Handling REF  COSHH  Personal Protective Equipment (PPE) REF  Noise REF  Other REF | | | | | |  |  | | --- | --- | | **LIKELIHOOD (L)** | | | 5 | Inevitable | | 4 | Highly Likely | | 3 | Possible | | 2 | Unlikely | | 1 | Remote Possibility | | | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  |  | **SEVERITY** | | | | | | **LIKELIHOOD** |  | 1 | 2 | 3 | 4 | 5 | | 1 | 1 | 2 | 3 | 4 | 5 | | 2 | 2 | 4 | 6 | 8 | 10 | | 3 | 3 | 6 | 9 | 12 | 15 | | 4 | 4 | 8 | 12 | 16 | 20 | | 5 | 5 | 10 | 15 | 20 | 25 | | |
| |  |  | | --- | --- | | **SEVERITY (S)** | | | 5 | Very High -Multiple Deaths | | 4 | High - Death, serious injury, permanent disability | | 3 | Moderate - RIDDOR over 3 days | | 2 | Slight - First Aid treatment | | 1 | Nil - Very Minor | | | | **PERSONS AT RISK** | |
| |  | | --- | | PERSONS AT RISK | | Employees | | Students | | Clients | | Contractors | | Members of the public | | Work Experience students | | Other Persons | | |
| |  |  | | --- | --- | | **REVIEW DATES** | | |  |  | |  |  | |  |  | | | | | | |  |  | | --- | --- | | RISK RATING SCORE | ACTION | | 1 - 4 | Broadly Acceptable - No action required | | 5 - 9 | Moderate - Reduce risks if reasonably practicable | | 10 -15 | High Risk - Priority Action to be undertaken | | **16 -25** | Unacceptable **-Action must be taken IMMEDIATELY** | | | | | |
| **HAZARD AND RELATED ACTIVITIES**  e.g. trip, falling objects, fire, explosion, noise, dust, violence etc. | **PERSONS**  **AT RISK**  e.g. Employees, Customers, Contractors, Members of the public | **POSSIBLE OUTCOME** | **RISK RATING BEFORE CONTROLS (LxS)** | **EXISTING CONTROLS**  e.g. Guards, Safe Systems of Work, Training, Instruction, Authorised Users, Competent Persons, Personal Protective Equipment (PPE) | | **RISK RATING AFTER CURRENT CONTROLS (LxS)** | **FURTHER CONTROLS REQUIRED?** | | **RISK RATING AFTER ADDITIONAL CONTROLS (LxS)** |
| High temperature | Trained users and others working in laboratory | Possible thermal burns on exposed skin | 3(l)x3(s)=9 | SOP to be followed. Including use of standard PPE | | 2(l)x3(s)=6 | No | |  |
| Electric Shock | User | Electrocution or electric burns | 2(l)x4(s)=8 | Regular PAT testing of all electrical equipment | | 1(l)x4(s)=4 | No | |  |
| Any piece of glassware under vacuum | Lab users | Implosion and flying glass leading to cuts and lacerations | 3(l)x4(s)=12 | Lab coats and safety glasses should be worn.  Only suitable glassware should be used. Glassware should be free from chips, cracks or flaws. Only experienced staff should set up vacuum systems involving glassware. | | 1(l)x4(s)=4 | No | |  |
| Expulsion of oil mist and contamination from pump outlet. | Lab users | Contaminants/oil mists being exhausted into the laboratory causing irritation and damage to other equipment | 4(l)x3(s)=12 | Either a trap should be used on the outlet or exhausted should be vented. Trap should be changed yearly. | | 1(l)x3(s)=3 | No | |  |
| Outlet obstructed. | Lab users | There is a danger of explosion | 2(l)x4(s)=12 | Visual check of outlet before use - SOP to be followed. | | 1(l)x4(s)=4 | No | |  |
| Pump oil possibly contaminated with solvents, mercury, corrosive or obnoxious substances. | Where such materials are being pump a separate Risk Assessment and COSHH must be completed. | | | | | | | | |
| Handling users samples | Before using ovens and furnace users must carry out risk and COSHH assessments to identify issues with their samples. Any lab users at risk from the samples must be informed. | | | | | | | | |

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| **MANAGEMENT AGREED**  **ADDITIONAL CONTROL MEASURES REQUIRED** | | **ACTIONED BY** | | | **ACTION COMPLETE** | | |
| **POSITION** | **NAME** | **DATE** | **MANAGER SIG** | | **DATE** |
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| **COMMUNICATION OF RISK ASSESSMENT FINDINGS TO STAFF** | | | | |
| **REFERENCE OF FORMAL COMMUNICATION TO STAFF** | **METHOD** | **YES** | **DATE** | **COMMENTS** |
| Copy of risk assessment issued to staff |  |  |  |
| Controls covered in team procedure issued to staff |  |  |  |
| Staff Handbook issued to staff |  |  |  |
| Other - Training | **YES** | **On going** |  |
| **ADDITIONAL METHODS OF COMMUNICATION** | Induction |  |  |  |
| Toolbox Talk |  |  |  |
| Team Meeting |  |  |  |
| E-mail circulation |  |  |  |
| Other - |  |  |  |

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| **COMMENTS AND INFORMATION**  (Use this section to record any dynamic risk assessment comments and information) |
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| **Do additional controls adequately lower high risk activities to an acceptable level?** | **YES / NO**  If NO explain in comments box above | **SIGNATURE OF MANAGER**  "The risks identified in this assessment are controlled so far as is reasonably practicable" | |
| Signature: | Date: |

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| **DATE OF REASSESSMENT**  (Every two years minimum) | **ARE THERE ANY CHANGES TO THE ACTIVITY SINCE THE LAST ASSESSMENT?** | **SIGNATURE OF MANAGER** |
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| **LOCATION OF CURRENT SIGNED RISK ASSESSMENT** |  |

**RISK ASSESSMENT LOG - SAMPLE**

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| RISK ASSESSMENT LOG | | | | | | | | | | | |
| Directorate: | | | | | | Area: | | | | | |
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| Section/Team | Risk Assessment Title | Version No. | Risk Assessment Category | Code  /Location | Risk Assessor | Manager responsible for signing off risk assessment | Date assessment signed off | Review Due | Review Date | Outstanding Controls/Actions  Yes/No | Comments |
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