DIRECTORATE OF ESTATES AND FACILITIES

PROCEDURE AND INFORMATION MANUAL

EPM HS20 – Mercury presence during construction and maintenance activities - Operational Guidance

Mercury Operational Guidance **Version amendment history**		
Version	Date	Reason for change
v.02	5 December 2019	• New format for procedure in accordance with the University Policy Framework • Replaced *Health & Safety Officer (Projects)* with Estates & Facilities Health & Safety Team
v.03	1 March 2021	• Replaced *Capital Project* and *Design Services* with Project Team • Replaced *Maintenance Services* with BEM Team

1. Induction

On a number of previous campus projects, mercury has been discovered within construction site areas and this has resulted in the requirement to carry out remediation works.

A University guidance document (*Safety Services Guidance - Mercury spills and legacy issues*) provides further procedural and technical detail.

The overriding aim of the guidance is to limit the potential for exposure to mercury via all construction and building operations and activities.

2. Purpose

This document sets out information and guidance for all staff engaged in building and construction works and associated activities, where it is envisaged that they may encounter mercury deposits. It seeks to provide advice on the control, management and minimisation of the risk of exposure to mercury within the University of Manchester.

Detailed University procedures can be found in document *Safety Services Guidance - Mercury spills and legacy issues*.

3. Scope and definitions

This policy is applicable to Project Managers and Client Representatives, and Principal Designers and Principles Contractors (as defined by the Construction (Design and Management) Regulations 2015).

4. General Principles

The major risk of exposure arises from the inhalation of mercury vapour. Vapour can often be released when construction work disturbs previously installed materials (e.g. flooring, concrete etc).

There is a legal duty to reduce exposure “so far as is reasonably practicable”.

Current Workplace Exposure Limit[1] for mercury vapour is 20 µg/m3 - airborne concentration averaged over an 8 hour working day.

The responsible person for ensuring this procedure and compliance is the Client Representative.

For the purposes of this procedure, The Client Representative (CR) is defined as the person who acts as the primary University officer for a Project, taking delegated responsibility for the delivery of a project on behalf of the funding department and/or Project Committee.

This will be the person appointed by (regardless of whether employed by the University or not) and working directly for Project Team or BEM Team, to oversee the delivery of construction and maintenance work.

The CR will generally act on behalf of the client (the University of Manchester), acting as the focal point for communication with the Project Team and will speak as the client on all contractual matters.

Additional information on the definition of roles can be found in the ‘Project Sponsor Handbook (Capital Projects)’ and EPM PM4 ‘Client Representative (University Project Manager) for Capital Projects‘.

The Estates & Facilities Health & Safety Team are responsible for providing input into all instances of mercury monitoring or management (led by the Project Manager or Client Representative).

It should always be noted that historical data regarding previous building use and occupation may not be available or reliable.

[1] http://www.hse.gov.uk/pubns/books/eh40.htm

5. Procedure Content

(i) PRE-START CHECKS

The basic tenet is to adopt a safety first approach. If there is any doubt whatsoever whether mercury may be present, then the guidance procedure must be invoked.

At the outset of a project, the responsible person (such as the Client Representative, Project Manager, or BEM Team Supervisor) is required to :

- *Carry out research on the former use of the area under consideration*
- *Request information from University records on previous or current occupiers and activity*
- *Liaise with Faculty Estates Teams, on the former use of the space.*

The next stage is to assess this information, calling in when required the Estates Safety Team, depending on the complexity of the works at hand.

This will establish specific Risk Assessments and accompanying Method Statements.

Careful monitoring of the project may be required and this may require the provision of specialist services.

Guidance on vapour concentrations and recommended actions can be found in figure 1 on page 4 of *Safety Services Guidance - Mercury spills and legacy issues*

Guidance on the procedure for carrying out project work (fig 2) in affected areas can be found on page 9 of *Safety Services Guidance - Mercury spills and legacy issues*

(ii) INCIDENTS

Records will have to be kept of any mercury contamination found – this should be held on the project file and a brief summary report provided to the Estates Safety Team and BEM Team (both parties will then need to inform Safety Services).

If there is an incident during the project, the responsible person needs prior awareness of and to be prepared for appropriate evacuation procedures and how to secure and then make safe an area where mercury vapour is present.

For the purposes of this procedure, evacuation refers to the clearance of the construction site where appropriate measures to vent the location have been safely applied, until permanent remedial measures can be agreed and executed

– *It is important that the Estates & Facilities Health & Safety Team are immediately notified along with the Head of Unit of any incidents and that the Client Representative assume the lead role on any required investigation.*

– *The Client Representative will also need to record the details of any staff who think they have been exposed to a vapour release and to ensure that any medical testing takes place for anyone who may be exposed and the results collated.*

– *At the end of any reported incident, a final report will be required outlining the issues that led to the release and how the site was finally secured and sealed and works completed (for the Estates & Facilities Health & Safety Team and BEM Team, who are will ensure records will be retained).*

Presence of Mercury – Some Indicators

Local knowledge will be valuable here and it is suggested that Faculty Estates Teams may be able to assist in identifying those stakeholders who may be able to assist in this regard.

Previous history of research involving pressure and/or temperature where analogue measuring instruments containing mercury may have been in use previously.

Mercury may have been used on floors above the area in question and that a previous spillage may have resulted in the element migrating to the area in question over a period of time.

Mercury has been discovered under wooden block flooring, in a pit and within vacuum pipe tubing, so care should be exercised when construction operations commence, especially in current or former research areas (which may have been subsequently converted to teaching or office space).

Mercury may also be found in original building materials (e.g. cement or concrete made from native limestone, mercury-tainted fly ash or products manufactured in natural gas heated kilns).

Evaluating the cost implications

It may be necessary to have an analyst in attendance at critical stages of the construction process in order to control the potential for release. Dependant upon the scale of contamination the removal of mercury can also be costly, hence the need to ensure such costs are included within estimates provided to clients.

It should be noted that additional costs arising as a result of the implications of a suspected or actual mercury presence have to be covered by the funding client.

Specialist Contractors

Inevitably, specialist technical support may be required, either in the detection and monitoring of mercury vapours or for the correct removal of the substance.

Suppliers who are qualified and trained to do this must be used and it is recommended that a standing list of specialist suppliers is held for use on all Estates activities affected by such circumstances.

Listed suppliers must meet a series of specified requirements, which will include a proven knowledge of hazardous substances (including mercury) and known issues and evidence of effective and compliant procedures for their detection, monitoring, containment and if necessary, safe removal.

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