



**Appendix A Designated Substance Assessment Form**

**RECORD OF DESIGNATED SUBSTANCE ASSESSMENT**

**SUBSTANCE:** Lead Solder

**DATE:** January 16, 2008

**COMPANY:** McMaster University, Department of Civil Engineering

**DEPARTMENT OPERATIONS:**

Lead solder is used in room ADL/108 for general maintenance and fabrication of electronic components, and strain gauge installation.

**LOCATIONS:**

ADL 108

**ASSESSMENT PREPARED BY:**

David Perrett, Department of Civil Engineering, ADL, Ext22031

**TITLE:** Technician

**DATE PREPARED:** January 16, 2008

**APPLICATION – WORKSHEET 1: IS THE DESIGNATED SUBSTANCE PRESENT?**

1. Do any material safety data sheets from your suppliers indicate the presence of the substance?

YES

NO

2. If substance is present, indicate the department where it is used, nature of the use (i.e. Direct or Indirect), and the quantity used per month or year:

Product Name	Department	How Used? Direct / Indirect	Quantity Per Month / year
Lead Solder	Civil Engineering	Direct use during soldering operation	900 grams per year

**CONCLUSIONS**

Read statements and check applicable box:

Substance not present anywhere in the workplace; regulation does not apply

**No Assessment needed**






Processes / activities have been identified where substance present.

**Proceed to worksheet 2**



**ASSESSMENT – WORKSHEET 3: PROCESS DESCRIPTION**

NAME OF PROCESS: Soldering

<b>Process Flow</b>	<b>Description</b>	<b>Likely Exposure Yes / No</b>
1. <b>Turn on fume extractor(absorber) and soldering iron</b> 	Extractor used to remove soldering fumes(see pg A-5)	No, if fume extractor is used
2. Perform soldering 	Solder used for assembly, disassembly of components	“
3. Turn off fume extractor and soldering iron 		No
4. Wash hands 	Use sink in ADL/101,104 or105	No, if hands are washed after soldering
5. 		

**ASSESSMENT – WORKSHEET 4: EXISTING CONTROLS**

<b>Process Flow Stage</b>	<b>Control Description</b>	<b>Problems / Recommendations</b>
1	<p><b>Engineering Controls:</b></p> <p>Weller Fume Absorber Model WSA350</p>	Fume absorber not turned on.
4	<p><b>Work Practices:</b></p> <p>Wash Hands</p>	<p>Hands not washed .</p> <p>Place note on soldering station reminding user to use the absorber and to wash hands when finished soldering.</p>

**ASSESSMENT – WORKSHEET 5: EXISTING CONTROLS (cont.)**

Process Flow Stage	Control Description	Problems / Recommendations
4	<p><b>Hygiene Facilities and Practices:</b> Wash hands after soldering. Washroom in room 101 or 104</p>	N/A
2	<p><b>Training / Information:</b> <b>MSDS for solder and this assessment should be reviewed .</b></p> <p><b>Emergency Procedures / Equipment:</b> N/A</p> <p><b>Personal Protective Equipment:</b> Wear Safety Glasses to protect against solder splash.</p>	N/A

**ASSESSMENT – WORKSHEET 6: JOB EXPOSURE ANALYSIS**

<b>Process Flow Stage</b>	<b>Job Title</b>	<b>Total Number of Employees</b>	<b>Tasks where Exposure Likely</b>	<b>Duration Hrs per Week</b>	<b>PPE Req'd to be Used</b>
1	Technician	1	Soldering	2	Turn on fume extractor & use safety glasses
	Grad student	1	Inhalation possible		Wash hands afterwards
<b>CONCLUSIONS</b>					
Jobs / tasks to be noted during walk-through survey:					

Availability of fume extractor

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**APPLICATION – WORKSHEET 6: HEALTH EFFECTS**

1. Any reported health effects? If so, describe.

Molten lead produces fumes or vapors that may be toxic and/or respiratory irritants.

2. Any current Medical Program? If so, describe.

N/A

3. Previous exposure monitoring results? If so, describe.

N/A

**CONCLUSIONS**

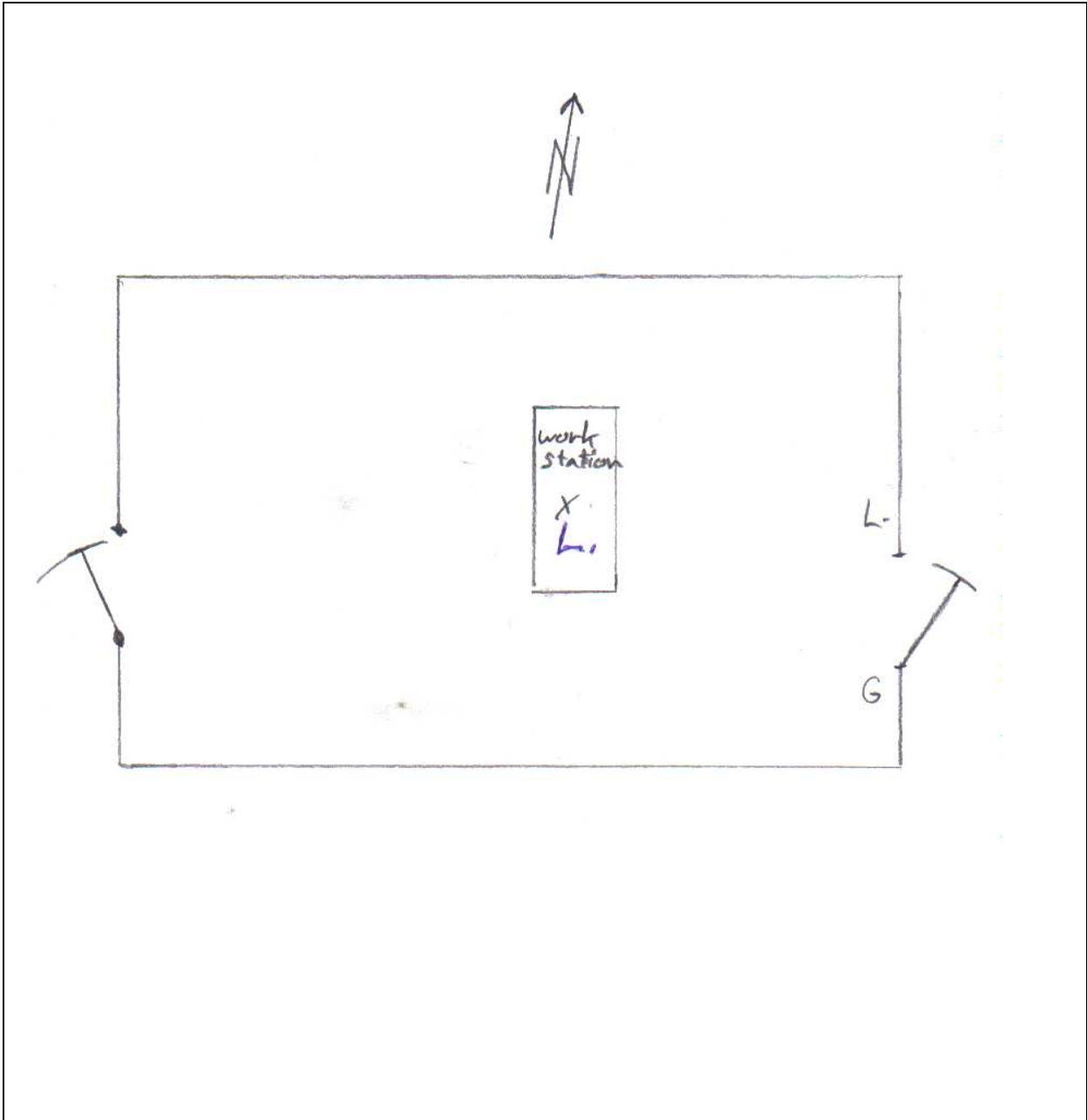
Health effects known at this stage: YES  NO

Further information required: YES  NO

**APPLICATION – WORKSHEET 7: FLOOR PLAN**

**LOCATION:** JHE 113A

**DATE:** Jan 16, 2008



**DIMENSIONS:** L 7m W 6m H 5m

- WORK STATION – enter number from job title – Worksheet 5
- EXPOSURE SOURCE – enter number from Process Flow – Worksheet 3
- VENTILATION – enter L for local exhaust, and G for general ventilation

**APPLICATION – WORKSHEET 8: WALK THROUGH**

**Evidence of Contamination:**

None

**Hygiene Facilities and Work Practices:**

Sink available in washrooms 101 or 104.

Safety glasses provided.

Note placed on soldering station : Use Fume Extractor and wash hands after soldering.

**Ventilation Systems:**

General Room ventilation vents and Fume Extractor.

**Storage Facilities:**

N/A

**APPLICATION – WORKSHEET 8: WALK THROUGH (cont.)**

**Dispensing Procedures:**

Lead Solder Dispensed from spool

**Housekeeping:**

N/A

**Personal Protective Equipment:**

Safety Glasses  
Fume Extractor

**Emergency Facilities / Procedures:**

If lead is ingested, drink large quantities of water, and call a physician

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**APPLICATION – WORKSHEET 9: WALK THROUGH CONCLUSIONS**

1(a). Were any areas found where controls are required or where existing controls may require improvement?

YES  NO

1(b). If YES, indicate the areas where the controls may be required or where existing controls may require improvement.

**AREA**

**SUGGESTED IMPROVEMENTS**

2(a). Personal exposure monitoring is required.

YES  NO

2(b). If YES, indicate where:

3. Indicate any workers for whom medical testing and / or examinations may be required.

N/A

**APPLICATION – WORKSHEET 6: HEALTH EFFECTS**

CONCLUSION A: NO WORKER'S HEALTH MAY BE AFFECTED

CONCLUSION B: A WORKER'S HEALTH MAY BE AFFECTED.

**OVERALL CONCLUSION**

A control program is necessary.

YES

NO

Improvements needed in existing program:

DATE Jan 16, 2008

SIGNED

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