### LAMP Safety System – Summary Table

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>Detection System</td>
<td>ESL fire panel</td>
<td>Zellweger System 16</td>
<td>EPO</td>
<td>Photohelic gages</td>
<td>Switches</td>
<td>Lifeline sensor</td>
<td>Lifeline sensor</td>
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<tr>
<td>System location</td>
<td>Middle door</td>
<td>Lab main entrance</td>
<td>Middle door</td>
<td>Left end-side wall (silane cabinet)</td>
<td>WF6 cabinet</td>
<td>H2 gas cabinet</td>
<td></td>
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</tbody>
</table>

#### Automated System Response

**ALARM Level 2**
- Audible and visual alarms (clean-room, preclean-room, hallway), UMPD notified (2), building alarm activation, gas interlock shutdown (4)

| Automated system response | | |
|---------------------------|---------------------------|
| • ESL Panel 3 Zone LEDs | • Syst 16 Panel 3 Point LEDs |
| • ESL audible alarm | • Printout menu (concentration, zone) |
| EPO audible and visual alarm above main door (in lab) | |

**Alarm level 1**
- Gas interlock shutdown (1)(6)

**Immediate lab evacuation, pull manual station for building evacuation if not activated**
- Call 911 (3) to confirm alarm (JM Patterson, bldg 083, room 2225, notify potential silane leak)
- Call lab manager (*50499) (4)

**Manual action**
- Contact lab manager (*50499)
- Abort process

**Alarm shutdown**
- ESL Reset button
- System 16 Reset button
- Pull EPO button
- Reset gas interlock panel after deactivating all sensor relays (return to normal conditions)

**Manual action**
- Immediate lab evacuation, pull manual station for building evacuation if not activated

- Call 911 (3) to confirm alarm (JM Patterson, bldg 083, room 2225, notify potential silane leak)
- Call lab manager (*50499) (4)

**Alarm shutdown**
- ESL Reset button
- System 16 Reset button
- Pull EPO button
- Reset gas interlock panel after deactivating all sensor relays (return to normal conditions)

(1) Gas interlock shutdown: closes all gas lines to Ulvac tool as well as silane bottle and tungsten hexafluoride bottle
(2) UMPD will notify the Fire Department. If accidental alarm, call #53333 to cancel.
(3) Though UMPD should automatically be contacted via the 24h monitoring unit, 911 should be called to confirm they received the alert.
(4) List of other people to be contacted if lab manager not available on next page.
(5) If power shutdown, MDA alarm interface and System 16 gas detector have a few minutes UPS back-up. The ESL fire station can also be powered by a built-in 24 V battery.
(6) Sensors and H2 gas cabinet to be installed within 90 days from first utilization of silane. H2 and HF sensor will be connected to MDA alarm interface within these 90 days