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| **SUMMARY OF THE ASSESSMENT OF CONTROL**  **SATISFACTORY**  *Refer to page 1 for Defects & Recommendations* |

**COMMISSIONING/INITIAL THOROUGH EXAMINATION AND TEST**

**OF LOCAL EXHAUST VENTILATION (LEV) PLANT**

**In Compliance with Regulation 9 of CoSHH Regulations 2002**

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| **system details & ID** | | | |
| **Site Name:** | \* | **System ID:** | \* |
| **Site Address:** | \* | **Location:** | \* |
| **Date of TExT:** |  | **Process:** | \* |

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|  | **EXAMINERS/COUNTERSIGNATORIES** | | |
| **Examiner Name** | **Designation** | **Date** | **Signature** |
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| **Examiner Qualification(s)** | **Date(s)** | **Certificate No(s)** | |
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| **Countersignatory** | **Designation** | **Date** | **Signature** |
|  |  |  |  |
| **Client Representative**  **Accepting Report** | **Title** | **Date** | **Signature** |
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| **eXECUTIVE SUMMARY** |
| [John Doe] visited site on [xx yyy 20xx] to conduct the thorough examination of this LEV System to comply with Regulation 9 of CoSHH 2002 (As amended).  The system is a [dust extraction system] installed in [20xx]. The system consists of [enclosed hoods], [duct], [mechanical shake filter unit], [fan] and [discharge stage] which [terminates outside]. The system extracts [Silica dust from … a process …..] and is designed to be used with a maximum of [3 dampers open at any one time].  [We conducted quantitative assessments at the hoods and at a number of test points within the ducting, (at least 6-8 duct diameters from turbulence). Qualitative assessments were undertaken using a Tyndall Beam Lamp/Smoke Tubes with the operator conducting normal process tasks]. [The operator was observed to be using the LEV system correctly]. Based upon the collective findings we find this system to be operating [Satisfactorily/Unsatisfactorily/Inconclusive} if properly used and maintained].  Our findings are further detailed within this report.  This is Report is only valid for the LEV Control system as seen and arranged at the time of the Examination.  **Note: Any changes to the LEV system or significant process changes will render this Report invalid.** |

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| **DEFECTs & recommendations** | | | | | |
| **LEV Examiner** | | | **Employer’s Use** | | |
| **Item in LEV System** | **Action Required** | **Priority\*** | **Person to Take Action** | **Target Date** | **Date Completed** |
| [Hoods] | [Retrofit hood gauges] | [1] |  |  |  |
| [LEV] | [Keep this report safe for 5 years to comply with CoSHH] | [4] |  |  |  |
| Shade Red any Critical Defects Found | |  |  |  |  |
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| *\*Priority – e.g. 1 = high, 2 = normal, 3 = routine, 4 = awareness* ***Shade RED all Critical Defects*** | | | | | |

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| 1. **SYSTEM GENERAL DESCRIPTION** | | **SYSTEM PHOTOGRAPH(S)** |
| *Refer to diagram*  *Include notes on any changes since previous INITIAL and/or from original design/installation (where appropriate)* | | *Annotate photographs and state what they relate to and their significance* |
| 1. **METHODOLOGY FOR TExT** | | |
| *Outline all parameters you would expect to measure, how measurements were taken (eg no readings at a hood face, no of Test Point holes at duct poaition and how traverses were undertaken)*  *If required – refer to more detailed Methodology in an Appendix (eg use of equal area duct traverse, face velocity test points chosen etc)*  *[IT IS USUALLY ACCEPTABLE TO HSE IF THE METHODOLOGY IS GOING TO BE THE SAME FOR A NUMBER OF SIMILAR SYSTEMS – THAT THIS SECTION IS TAKEN OUT AND MADE A GENERIC METHODOLOGY STATEMENT (say) AT THE FRONT OF OR AS AN APPENDIX TO A BATCH OF REPORTS FOR ALL THE SYSTEMS AT SITE]* | | |
| 1. **PLANT,PROCESS & LEV ARRANGEMENT AT TExT** | | |
| **Was the Plant, Process and the LEV/Control System Operating Normally at TExT? If not explain how TExT undertaken.** | *HSE may say that the TExT will be “Inconclusive” if the process cannot be run or simiulated during TExT.* | |
| **If not explain how TExT undertaken.** | *Process simulated? If so how?* | |

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| **TEST FREQUENCIES** | |
| **Interval Between Routine Examinations:** | [1/6 or 12 months] *remember may need to stipulate more frequent intervals depending on findings* |
| **Date next TExT due:** | \* |

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| **available documentation** | |
| **Commissioning Report Available?** | \* |
| **LEV System Manual Available?** | \* |
| **LEV System Log Book Available?** | \* |
| **CoSHH Health Risk Assessments?** | \* |
| **DSEAR Risk Assessments?** | * State if not Applicable |

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| **Occupational hygiene** | |
| **Process Description:** | \* |
| **Substance(s) USED IN THE PROCESS:** | \* |
| **Substance(s) PRODUCED BY THE PROCESS** | \* |
| **Workplace Exposure Limits** *(if available)***:** | \* |
| **Substance Benchmark**  **(Use WEL or Control Banding):** | \* |
| **Has Occupational Hygiene Monitoring been Carried out in Area?** | Yes/No |
| **If ‘Yes’, Summarise Findings:** | \* *And note a Reference for the Occ Hygiene Report* |

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| **fan specification & TEST RESULTS** | |
| **Fan Manufacturer & Type:** | [Centrifugal/Axial/Bifurcated] |
| **Model & Serial Number:** | \* |
| **Drive:** | [Direct/Belt/Compressed air] |
| **Motor Speed (RPM):** | [Backward curve/Forward curve] |
| **Motor Rating/Current:** | [415/50/3Ph] |
| **Impeller Type:** | [Backward curve/Forward curve] |
| **Rotation Direction:** | [Clockwise/counter clockwise] |
| **Fan Rotating in Correct Direction?** | [Yes/No] |
| **Method used to Determine Fan Direction** | [Fan Phase Rotation Tester or other method – describe] |
| **Fan Inlet Static Pressure (Pa)** | \* |
| **General Condition of Fan:** | [Acceptable, signs of rust on casing, Noise, Vibration?] |

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| **10a. filter/Air cleaner SPECIFICATION Tick if NOt Applicable □** | |
| **If Multiple Element Filtration State Arrangement:** | \* *And describe info in below boxes for each type.* |
| **Filter Manufacturer & Type:** | [Mechanical shake/Reverse jet/Packed tower scrubber] |
| **Model & Serial Number:** | \* |
| **Primary Filtration Media Type:** | \* |
| **Air Recirculated back into the Workplace?** | \* |
| **If ‘Yes’, Is there Suitable Secondary Filtration?** | [Yes/No] |
| **Secondary filter media type:** | \* |
| **10B. FILTER/AIR CLEANER EXAMINATION & TEST TICK IF NOT APPLICABLE □** | |
| **General Physical Condition of Filter:** | \* |
| **Filter Media Condition?** | Internal inspection? If not state why not possible |
| **Evidence of Contaminant Break-through?** | \* |
| **Primary Filter Pressure Drop:** | \* |
| **Recirculating Filter efficiency:** | [eg Results of real-time or ‘Indicative’ particle count] |
| **Cleaning Mechanism Operating correctly?** | \* |
| **Condition of bin seals/media seals?** | \* |
| **Condition of door seals?** | \* |

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| **atex/dsear Tick if NOt Applicable □** | |
| **Is the Substance Explosive?** | [yes/no/recommend dust testing] |
| **Filter Explosion Relief Type:** | \* |
| **Does Explosion Relief Vent to a Safe Place and in Safe Manner?** | \* |
| **Non-return valves in duct?** | \* |

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| **duct specification** | |
| **Duct Type:** | [Circular galvanised with flexible hose connections] |
| **Duct Temperature 0C:** | \* |
| **Barometric Pressure: mB:** | \* |
| **External Condition of Duct:** | \* |
| **Damper settings?** | \* |
| **Inspection Hatches Fitted?** | \* |
| **Internal Examination (visual/borescope)** | \* |

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| **stack/termination Tick if NOt Applicable □** | |
| **Stack Type:** | [Vertical offset discharge] or Recirc system exhausting inside? |
| **Stack Height:** | \* |
| **Stack Height Sufficient to Ensure Dispersion?** | \* |
| **Weatherproof Termination?** | \* |
| **Condition of Stack:** | \* |

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| **make-up air Tick if NOt Applicable □** | |
| **Make-up air Type:** | [automatic damper opens when LEV is switched on] |
| **Adequate Quantity?** | \* |
| **Induced/Unwanted Drafts?** | \* |
| **Comments:** | \* |

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| **ALARMS/INDICATORS** | |
| **Hood/Enclosure:** | Fitted? Yes/No. What type? |
| **Duct:** | \* |
| **Air Cleaner:** | \* |
| **Air Mover/Fan:** | \* |
| **Returned Air:** | Eg VOC/Particle Count Monitor\* |
| **Comments:** | \* |

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| 1. **SCHEMATIC** | | | | | | | | | |
| *Schematic must record all relevant details, eg duct sizes, junction angles and types, baffles, dampers etc*  *Might need to also do a simple floor plan illustrating/showing any other systems or processes which may interact or interfere with the system under test*  For Schematics could use:   * Word drawing tools * Draftsight, a free to use CAD software. Copy & paste and crop, resize accordingly. | | | | | | | | | |
| 1. **DUCT QUANTITATIVE RESULTS** | | | | | | | | |
| **Describe Style and Type of Ducting:** | | |  | | | | | |
| **Ducting suitable for**  **Process/Substances?** | | | *Also comment on appropriateness (or not) of the POSITION of the test points* | | | | | |
| **Test Point ID** | **Description** | **Diameter /Dimension** | **Duct Area** | **Static Pressure** | **Average**  **Velocity Pressure y** | **Duct Velocity** | | **Duct Volume flow x** |
| **Measured \*** | **Min Transport Velocity** |
|  |  | **(mm)** | **(m2)** | **(Pa)** | **(Pa)** | **(m/s)** | **(m/s)** | **(m3/s)** |
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|  | *Do not under ANY circumstances pierce flexible ducting!!* |  |  |  |  |  |  |  |
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| **Y** *Indicate in Appendix how readings were obtained (eg 2 holes 900 and how many readings in each traverse?)*  **X** *Indicate how reading was calculated, ie from duct velocities and area or from hood data*  **\*** *If flexible indicate if velocity was calculated from hood flowrate and duct diameter* | | | | | | | | |

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| **18. HOODS** | | | |
| **Hood Suitable for Substance/Process (Benchmark)?** | *If “Yes” – also explain why!* | **Hood(s) Suitable for Substance/Process (Benchmark)?** | \* |
| **No. Hoods on System:** | *\*Discuss any diversity eg 28 fume cupboards but only 23 designed to be operational/used at the same time (see also opposite)* | **No Hoods to be used at any one time?** |  |
| **Hood Static Pressure Gauges or Indicators Installed?** | \* | **Hood Pass /Fail Labels Fitted?** | \* |
| **Were operators working at process during TExT?** | \* | **Captor Hood “Effective Distance” Labels Attached?** | \* |
| **If so – Describe how operators were using/interfacing with system:** | *\*Make comments here of your observations of inappropriate use eg welder working with hood positioned too far from welding operation etc It might be you need to consider what impact this would have on the Satisfactory or Unsatisfactory conclusion. General consensus is that would still be Satisfactory (if system all OK) but you might want to background shade the front page “Satisfactory” box – eg in Orange to draw client’s attention to fact that system is OK but way they are using it is not (which is out of your control). You would also need to put comments/recommendations about inappropriate use etc* | | |

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| **19. HOOD QUANTITATIVE RESULTS** | | | | | | | | | |
| **Hood ID** | **Hood Type/Description** | **Hood Open Area** | **Sash or Opening Height** | **Face Velocity** | | **Hood** | **Capture Distance** | | **Volume Flow Rate** |
| **Actual *‡*** | **Min Required** | **Static Pressure** | **Fletchers Calculated Distance** | **Confirmed? (State Method)\*** |
|  |  | **(m2)** | **(m)** | **(m/s)** | **(m/s)** | **(Pa)** | **(mm)** |  | **(m3/s)** |
|  |  |  |  |  |  |  |  | [Yes/No] |  |
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| *Fletcher’s Equations*      *Fletcher used to calculate Captor Distance of Captor Hoods.*  *Use OXYL8 (free) App or OXYL8 (free) Excel Spreadsheet* | | ***‡*** *For Booths etc - use Appendix Form to show individual readings at each hood and show max +/- deviations from ‘Mean’ for every reading (ie all within +/- 20% of ‘Mean’?)*  ***\**** *It is expected that Fletcher will be used to calculate the “Distance” to be put on a Captor hood Effective Distance label …. but that the TExT examiner would ALSO use smoke release to ‘prove’ that that distance could be achieved and that there were no draughts (eg from HVAC air inputs etc) that would affect the control distance.* | | | | | | | |

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| **20. QUALITATIVE TESTS & VISUAL INSPECTION REPORT** |
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| **21. INSTRUMENTS USED** | | |
| **Instrument Description** | **Serial Number** | **Last Calibration Date** |
| \* *Can use a generic at the front of a series of reports if same instruments used throughout* | \* | \* |
| \* | \* | \* |
| \* | \* | \* |
| \* | \* | \* |
| **22. STATEMENT OF SYSTEM PERFORMANCE OR ioP IF KNOWN** | | |
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| **23. REFERENCES** |
| HSG258; Controlling airborne contaminates at work. A guide to local exhaust ventilation (LEV); HSE Books |
| L5; The Control of Substances Hazardous to Health Regulations (CoSHH) 2002. Approved Code of Practice and guidance (Sixth Edition) HSE Books |
| Management of Health and Safety at Work Regulations; The stationary office 1999 SI 1999/3242. |
| The Dust Lamp: a simple tool for observing the presence of airborne particles. MDHS82/2; HSE Books 2015 |
| EH40/2005 Workplace Exposure Limits: Containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations 2002 (as amended); January 2020; ISBN: 9780717667031 |
| Industrial Ventilation: A Manual of Recommended Practice for Design, 30th Edition; ISBN: 978-1-607261-08-7 2019 |