



LABORATORY AUDIT INFORMATION

ENVIRONMENTAL HEALTH & SAFETY AUDIT CHECKLIST - General
Office of the Vice President for Research

| GENERAL DATA OF AUDIT | | | | | | |
|---------------------------------------|---|------|-------------------------------|---|--|--|
| Name of Audited P.I.: | John Doe | | | | | |
| Lab Number(s): | 1234 | 5678 | | | | |
| Building: | L-5 | | | | | |
| Main Lab Contact/Manager: | Jane Doe | | | e-mail: | janedoe@uchc.edu | |
| Lab Telephone Number: | Lab # 860-123-4567 | | Cell Telephone Number: | | | |
| Alternate Contact Information: | | | | | | |
| Audit Date: | Thursday, May 10, 2018 | | | | | |
| Audit Team: | Robert Gottlieb, Environmental Health & Safety Specialist | | | Rob Speers, Research Safety Specialist | | |
| | David Bourret, Research Safety Specialist | | | Ryan Cawley, Research Safety Specialist | | |
| | Robert Lawson, Research Safety Specialist | | | | | |

| LABORATORY SAFETY TRAINING INFORMATION <i>(Provide baseline & refresher Information for future internal/external audit compliance)</i> | | | | | | |
|--|------------|------------------|--------------------------|--------------------------------------|--|-------|
| Last Name | First Name | e-mail | Last Lab Safety Training | Refresher Needed (Y/N) & Date if Yes | | Notes |
| Doe | Jane | janedoe@uchc.edu | 4/11/2018 | Yes | | |
| | | | | Yes | | |
| | | | | Yes | | |
| | | | | Yes | | |
| | | | | | | |

| Example of Laboratory Conformance Scoring System Requirements | | | |
|---|-----------------|---|---|
| Score | Classification | Description | Example |
| 0 | Non-conformance | Absent or inappropriate | No documents available |
| 1 | | Planned or in the process | <= 50 % compliance |
| 2 | | Limited number of compliance found but needs work | >= 50% but < 85% |
| 3 | Conformance | Most items audited found to be in compliance | >90 % staff trained |
| 4 | | All applicable items audited in section found to be in compliance | 100 % of audited requirements in section in conformance |

Or:
 Not Applicable = no score
 0 - Absent or inappropriate
 1 - Planned or approximate
 2 - Partially conform or partially implemented
 3 - Largely conform or largely implemented
 4 - Fully conform or fully implemented



ENVIRONMENTAL HEALTH & SAFETY CHECK LISTS - General

CHECKLIST 1

I. GENERAL CHEMICAL SAFETY

| CHECKLIST SUMMARY | N. of Req. | Applicable | Total score | % Scoring | Non-conformance |
|--------------------------|-------------------|-------------------|--------------------|------------------|------------------------|
| | 11 | 11 | 32 | 72.7 | 4 |

| No. | I. GENERAL CHEMICAL SAFETY | Conformance Level | Status | EH&S Observations | Completion/Target Date | EH&S Comments-(Required for Non-Conforming/Red Only) |
|------------|---|--|---------------|------------------------------|-------------------------------|---|
| 1.1 | GHS information/transfer labels in use on transfer containers? | 0 – Absent or inappropriate | | missing labels | 5/10/2018 | |
| 1.2 | Chemicals stored by compatibility? | 4 - Fully conform or fully implemented | | | | |
| 1.3 | Flammable chemicals found near electrical or heat sources? | 1 - Planned or approximate | | | | |
| 1.4 | Toxic to the eye or corrosive chemicals stored above eye level? | 2 - Partially conform or partially implemented | | | | |
| 1.5 | Acutely hazardous chemicals used outside of the fume hood? | 2 - Partially conform or partially implemented | | | | |
| 1.6 | Chemicals found open when not transferring? | 4 - Fully conform or fully implemented | | | | |
| 1.7 | Chemicals properly labeled? | 3 - Largely conform or largely implemented | | | | |
| 1.8 | Hazardous chemical liquids stored in secondary containers? | 4 - Fully conform or fully implemented | | | | |
| 1.9 | Acute chemicals, Select Carcinogens, PHS's- have LSOPs? | 4 - Fully conform or fully implemented | | | | |
| 1.10 | Signage to demarcate items in above #9, is in use? | 4 - Fully conform or fully implemented | | | | |
| 1.11 | Hydrofluoric Acid/Sodium Fluoride in use-Calcium gluconate available? | 4 - Fully conform or fully implemented | | | | |

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| LEGEND (Status): | | Conformance |
| | | Non-Conformance |



ENVIRONMENTAL HEALTH & SAFETY CHECK LISTS - General

CHECKLIST 2

II. SATELLITE STORAGE AREAS

| <i>CHECKLIST SUMMARY</i> | N. | Applicable | Total score | % Scoring | Non-conformance |
|--------------------------|----|------------|-------------|-----------|-----------------|
| | 10 | 1 | 4 | 100.0 | 0 |

| No. | II. SATELLITE STORAGE AREAS | Conformance Level | Status | EH&S Observations | Completion/Target Date | EH&S Comments-(Required for Non-Conforming/Red Only) |
|------|---|--|--------|-------------------|------------------------|--|
| 2.1 | At or near the point of generation? | Click to Select | | | | |
| 2.2 | Acceptable condition? | Click to Select | | | | |
| 2.3 | S.A.A. sign is posted? | Click to Select | | | | |
| 2.4 | Chemical residues observed in S.A.A. containers? | Click to Select | | | | |
| 2.5 | Waste containers are properly labeled? | Click to Select | | | | |
| 2.6 | Waste chemicals are closed unless actively transferring? | Click to Select | | | | |
| 2.7 | Chemical waste segregated by compatibility? (e.g.) oxidizers from solvents | Click to Select | | | | |
| 2.8 | Chemical wastes found stored in fume hood? | Click to Select | | | | |
| 2.9 | The laboratory generators have had waste management training? | Not Applicable | | | | |
| 2.10 | P-Listed waste <1 quart or 1 kg/2.2 pounds & if in use there is P-list waste? | 4 - Fully conform or fully implemented | | | | |

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| LEGEND (Status): | | Conformance |
| | | Non-Conformance |



ENVIRONMENTAL HEALTH & SAFETY CHECK LISTS - General

CHECKLIST 3
III. PERSONAL PROTECTIVE EQUIPMENT

| <i>CHECKLIST SUMMARY</i> | N. | Applicable | Total score | % Scoring | Non-conformance |
|--------------------------|----|------------|-------------|-----------|-----------------|
| | 9 | 1 | 4 | 100.0 | 0 |

| No. | III. PERSONAL PROTECTIVE EQUIP | Conformance Level | Status | EH&S Observations | Completion/Target Date | EH&S Comments-(Required for Non-Conforming/Red Only) |
|-----|---|--|--------|-------------------|------------------------|--|
| 3.1 | SDS's available for PPE recommendations? | Click to Select | | | | |
| 3.2 | High hazard or chlorinated chemicals in use dictating PPE assessment? | Click to Select | | | | |
| 3.3 | If yes to # 21 above, does the lab have the PPE? | Click to Select | | | | |
| 3.4 | Has the lab performed a PPE assessment and documented it? | Click to Select | | | | |
| 3.5 | Respirators needed; Medical clearance & fit test/paperwork? | Not Applicable | | | | |
| 3.6 | Lab employees are wearing adequate PPE per the task? | Not Applicable | | | | |
| 3.7 | Has the lab submitted a PPE Assessment to EH&S for review? | Not Applicable | | | | |
| 3.8 | Is air or exposure monitoring needed? | Not Applicable | | | | |
| 3.9 | Respiratory protection necessary or to be reviewed? | 4 - Fully conform or fully implemented | | | | |

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| LEGEND (Status): | | Conformance |
| | | Non-Conformance |



ENVIRONMENTAL HEALTH & SAFETY CHECK LISTS - General

CHECKLIST 4
IV. CHEMICAL FUME HOODS

| <i>CHECKLIST SUMMARY</i> | N. | Applicable | Total score | % Scoring | Non-conformance |
|--------------------------|----|------------|-------------|-----------|-----------------|
| | 11 | 11 | 19 | 43.2 | 6 |

| No. | IV. CHEMICAL FUME HOODS | Conformance Level | Status | EH&S Observations | Completion/Target Date | EH&S Comments-(Required for Non-Conforming/Red Only) |
|------|---|--|--------|-------------------|------------------------|--|
| 4.1 | Are chemicals or hazardous wastes stored in fume hood? | 0 - Absent or inappropriate | | | | |
| 4.2 | Is the hood used for malodorous chemicals & inhalation hazards? | 1 - Planned or approximate | | | | |
| 4.3 | Is the flow adequate per volumeter test? | 3 - Largely conform or largely implemented | | | | |
| 4.4 | Does the hood alarm at set points? | 4 - Fully conform or fully implemented | | | | |
| 4.5 | Are laboratory people trained on fume hood usage? | 1 - Planned or approximate | | | | |
| 4.6 | Is the hood crowded causing reduced airflow? | 3 - Largely conform or largely implemented | | | | |
| 4.7 | Are the inspections marked, acceptable & up to date, < 1 year? | 3 - Largely conform or largely implemented | | | | |
| 4.8 | Are electrical/heat sources in use with flammables? | 3 - Largely conform or largely implemented | | | | |
| 4.9 | Is the sash operable and used at the optimum working height? | 0 - Absent or inappropriate | | | | |
| 4.10 | Are malodorous chemicals kept in the fume hood? | 1 - Planned or approximate | | | | |
| 4.11 | Are solvent containers allowed to dissipate fumes in the fume hood? | 0 - Absent or inappropriate | | | | |

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| LEGEND (Status): | | Conformance |
| | | Non-Conformance |



ENVIRONMENTAL HEALTH & SAFETY CHECK LISTS - General

CHECKLIST 5 V. HIGH HAZARD CHEMICAL ISSUES

| CHECKLIST SUMMARY | N. | Applicable | Total score | % Scoring | Non-conformance |
|-------------------|----|------------|-------------|-----------|-----------------|
| | 9 | 7 | 23 | 82.1 | 2 |

| No. | V. HIGH HAZARD CHEMICAL ISSUES | Conformance Level | Status | EH&S Observations | Completion/Target Date | EH&S Comments-(Required for Non-Conforming/Red Only) |
|-----|--|--|--------|-------------------|------------------------|--|
| 5.1 | Outdated Peroxides in use or stored? | Click to Select | | | | |
| 5.2 | Non-inhibited peroxides in use? | 4 - Fully conform or fully implemented | | | | |
| 5.3 | Peroxide safety and LSOP in use? | Click to Select | | | | |
| 5.4 | Hydrofluoric Acid/Sodium Fluoride LSOP, training and emergency protocol? | 1 - Planned or approximate | | | | |
| 5.5 | EPA P-List chemicals in use without P-listed waste? | 4 - Fully conform or fully implemented | | | | |
| 5.6 | Sodium Azide stored on metal shelf or contaminated with metals? | 4 - Fully conform or fully implemented | | | | |
| 5.7 | Reactive materials or high energy oxidizers in use without LSOP's? | 4 - Fully conform or fully implemented | | | | |
| 5.8 | Explosive or acute chemicals in use requiring LSOP's & or EH&S approval? | 4 - Fully conform or fully implemented | | | | |
| 5.9 | DEA schedule drugs in use, storage without license or not locked up? | 2 - Partially conform or partially implemented | | | | |

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| LEGEND (Status): | | Conformance |
| | | Non-Conformance |



ENVIRONMENTAL HEALTH & SAFETY CHECK LISTS - General

CHECKLIST 6
VI. CHEMICAL INVENTORY-VERTERE

| <i>CHECKLIST SUMMARY</i> | N. | Applicable | Total score | % Scoring | Non-conformance |
|--------------------------|----|------------|-------------|-----------|-----------------|
| | 4 | 4 | 11 | 68.8 | 2 |

| No. | VII. OTHER EH&S CONCERNS | Conformance Level | Status | EH&S Observations | Completion/Target Date | EH&S Comments-(Required for Non-Conforming/Red Only) |
|-----|--|--|--------|-------------------|------------------------|--|
| 6.1 | Hazardous chemicals per OSHA in Vertere? | 2 - Partially conform or partially implemented | | | | |
| 6.2 | Are all hazardous chemicals bar-coded? | 1 - Planned or approximate | | | | |
| 6.3 | Are the bar coded chemicals expired & subject to chemical waste rules? | 4 - Fully conform or fully implemented | | | | |
| 6.4 | Are all bar codes turned in when done? | 4 - Fully conform or fully implemented | | | | |

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| LEGEND (Status): | | Conformance |
| | | Non-Conformance |



ENVIRONMENTAL HEALTH & SAFETY CHECK LISTS - General

CHECKLIST 7

VII. OTHER EH&S CONCERNS

| CHECKLIST SUMMARY | N. | Applicable | Total score | % Scoring | Non-conformance |
|-------------------|----|------------|-------------|-----------|-----------------|
| | 9 | 4 | 8 | 50.0 | 3 |

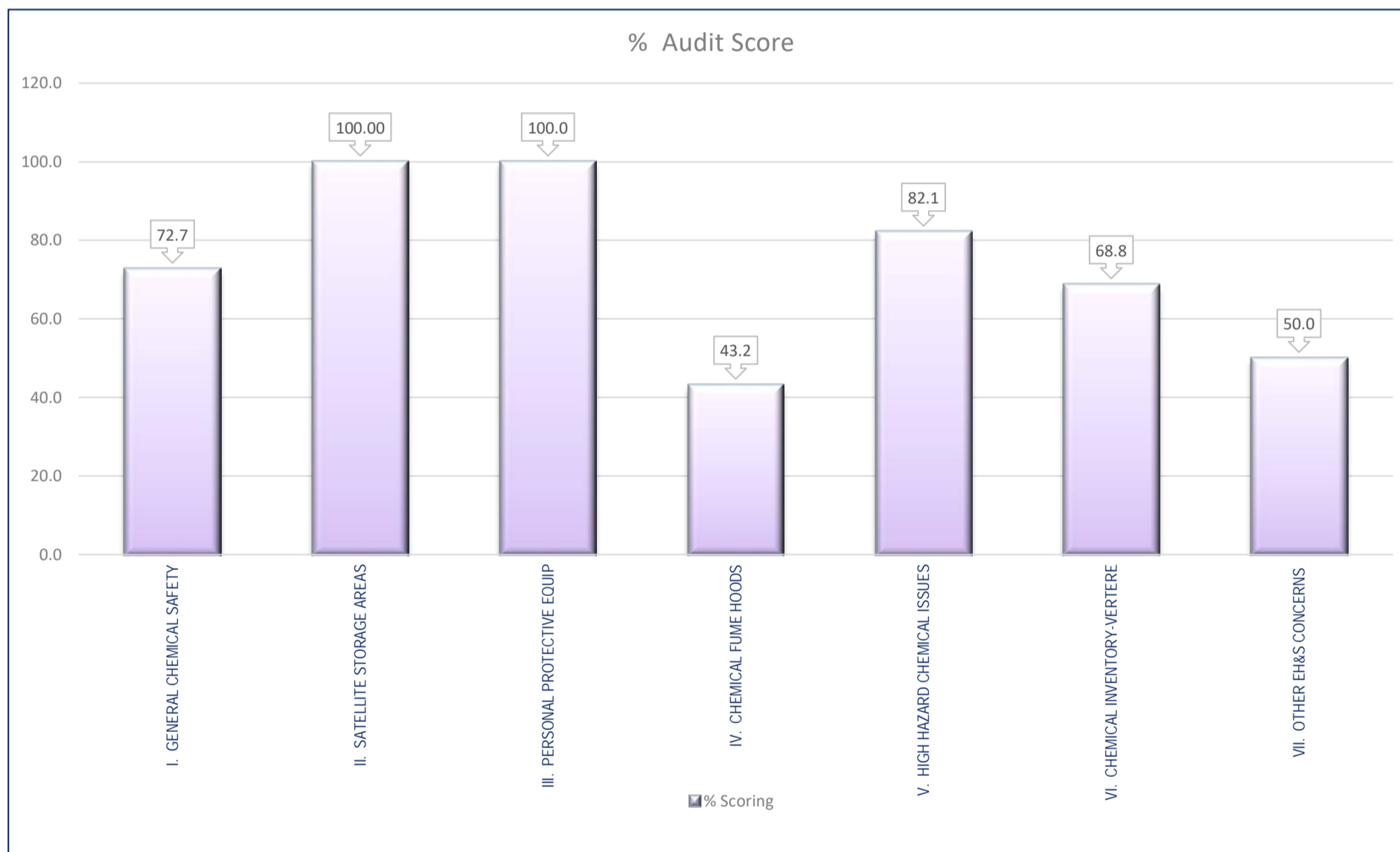
| No. | Component | Conformance Level | Status | EH&S Observations | Completion/Target Date | EH&S Comments-(Required for Non-Conforming/Red Only) |
|-----|---|--|--------|-------------------|------------------------|--|
| 7.1 | Students working without having had EH&S lab safety training | Click to Select | | | | |
| 7.2 | Radioactive issues observed-(e.g.) door ajar, no-one in lab? | Click to Select | | | | |
| 7.3 | Excessive clutter, uncleanliness-(e.g.) combustible consumables | Click to Select | | | | |
| 7.4 | Dry ice and LN2's stored in walk-ins? | 2 - Partially conform or partially implemented | | | | |
| 7.5 | Biohazard waste improperly packed? | Click to Select | | | | |
| 7.6 | Glass boxes filled with biohazard sharps? | Click to Select | | | | |
| 7.7 | Excess flammables not stored in H-Room, or outside flammable storage cabinet? | 0 - Absent or inappropriate | | | | |
| 7.8 | Emergency equipment is maintained & adequate? | 2 - Partially conform or partially implemented | | | | |
| 7.9 | Weekly Eyewash test and sign-off is up-to-date & adequate? | 4 - Fully conform or fully implemented | | | | |

| | | |
|-------------------------|--|-----------------|
| LEGEND (Status): | | Conformance |
| | | Non-Conformance |



ENVIRONMENTAL HEALTH & SAFETY OFFICE

| CHECKLIST AUDIT SUMMARY | | | | | |
|--------------------------------|------------|------------|-------------|-----------|-----------------|
| Audit Score | N. of Req. | Applicable | Total score | % Scoring | Non-conformance |
| I. GENERAL CHEMICAL SAFETY | 11 | 11 | 32 | 72.7 | 4 |
| II. SATELLITE STORAGE AREAS | 10 | 1 | 4 | 100.0 | 0 |
| III. PERSONAL PROTECTIVE EQUIP | 9 | 1 | 4 | 100.0 | 0 |
| IV. CHEMICAL FUME HOODS | 11 | 11 | 19 | 43.2 | 6 |
| V. HIGH HAZARD CHEMICAL ISSUES | 9 | 7 | 23 | 82.1 | 2 |
| VI. CHEMICAL INVENTORY-VERTERE | 4 | 4 | 11 | 68.8 | 2 |
| VII. OTHER EH&S CONCERNS | 9 | 4 | 8 | 50.0 | 3 |





ENVIRONMENTAL HEALTH & SAFETY AUDIT REPORT

Non-Conforming Results Requiring Corrective Action

| Absent or Inappropriate-(Requires Immediate Corrective Action) < 2 Business Days | | | |
|--|----------------|---------------|---------------|
| No. | Comment/Action | Date Assigned | Date achieved |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

| Planned or Approximate-(Requires Corrective Action) < 5 Business Days | | | |
|---|----------------|---------------|---------------|
| No. | Comment/Action | Date Assigned | Date achieved |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

| Partially Conform or Partially Implemented-(Requires Corrective Action) < 10 Business Days | | | |
|--|----------------|---------------|---------------|
| No. | Comment/Action | Date Assigned | Date achieved |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

| OTHER AUDIT OBSERVATIONS OR PROCEDURAL CONCERNS | | | |
|---|--|--|--|
| | | | |