Date: 1/22/2018

To: Provost, Deans, Graduate and Professional Schools, Department Chairs

From: Felice T. Porter, Asst. Dir., Q/A Manager for EHS

Re: Minors, Volunteers, and Visitors in University Laboratories

Case Western Reserve University has developed guidelines and procedures that have impact on the presence and participation of minors, volunteers, and visitors in laboratories. The University adopted these guidelines in order to meet obligations imposed by state, federal, and local regulations. The University's procedures are intended to assure compliance with the guidelines while optimizing students' laboratory experiences and minimizing disruption in the University's research laboratories, facilities, and clinics.

Please note that these guidelines pertain only to the presence of minors, volunteers, and visitors in all University-based research laboratory settings. While the participation of these individuals in fieldwork falls outside the scope of these guidelines, investigators are responsible for their safety in fieldwork settings and are therefore, encouraged to consult the EHS if they have questions regarding the appropriate participation of minors, volunteers, and visitors in these University activities.

1/22/2018

EFFECTIVE DATE: 1/2018

APPROVED BY: Department of Environmental Health & Safety (EHS) CONTACT: Department of Environmental Health & Safety

Case Western Reserve University (CASE)

Service Building 1st floor, 2220 Circle Drive, Cleveland, OH 44106

PHONE: 216.368.2907

EMAIL: https://case.edu/ehs/

SUBJECT: Minors, Volunteers, and Visitors in Case Western Reserve University

Laboratories

AUTHORITY

- 29 CFR 1910.1450 Occupational Safety & Health Administration Occupational Exposure to Hazardous Chemicals in Laboratories
- CASE Human Resources Policy
- CASE EHS Laboratory Safety Manual

APPLICABILITY

• These guidelines apply to all facilities involved in laboratory operations that must follow the requirements of the OSHA Laboratory Standard (29 CFR 1910.1450), US Department of Labor, and Ohio Department of Commerce or have biological, radiological, or physical hazards. These guidelines will become effective in October 2008 and will not be retroactive. Any notifications or other actions associated with these guidelines must be reviewed and approved before implementation.

DEFINITIONS

- **Collaborator** any person employed by an outside company or research institution who has been given permission by their employer and the CASE department to perform laboratory work at CASE. They are usually scientists or their staff members who come to carry out specific experiments.
- **Guest** a participant in a special program or tour who is not a student of or employed by the University that enters a laboratory on campus to observe laboratory work.
- Hazards Chemicals, Bloodborne pathogens, radioactive materials, animals, laboratory equipment (to include electrical, mechanical, and/ or hydraulic equipment) or any other potentially harmful apparatus, procedure, or environment (chemical fume hoods, storage rooms, etc.) that could cause injury.
- Laboratory/ Facility/ Clinic Any area where chemical, radioactive, biological, or physical research (ex. Lasers) or service manipulations are being conducted.
- **Minor** Any person under the age of eighteen (18) years who is not a Case Western Reserve University student.
- Responsible Person any person approved by a Principal Investigator (PI)/ Laboratory Manager to oversee and/or directly supervise the activities of a visitor/volunteer/ minor/ contractor while in the research facility.
- **Visitor** Any collaborator or guest who enters a laboratory, facility, or clinic upon the express or implied invitation of the host department. This shall include interns working on a stipend, spouses, or unpaid post-doctoral researchers.
- **Volunteer** any person, who of his/ her own free will, provides services to the host department with no monetary or material compensation.

PURPOSE

The EHS works in the interest of the university by supporting compliance and service programs for research. The structure of the program is continually refined to minimize restrictions on research activities while ensuring compliance with the requirements of all regulatory Federal, State, and Local agencies.

Compliance with EHS programs on the part of faculty, staff and students requirements is generally excellent and members of our Community have generally demonstrated a good understanding of the broad areas of safety covered by University safety programs. Nonetheless, both perceived real risk associated with participation or visitation of minors, volunteers, and visitors in laboratories with chemicals, biologicals, radioactive materials and potentially dangerous equipment has raised a number of questions that has required development of general guidelines for visiting by and/or participation of these individuals in our laboratories. Therefore, the following guidelines have been developed to assure compliance with Federal, State and local laws and regulations while optimizing the laboratory experiences of interested individuals who visit or volunteer in our laboratories.

Rationale: These guidelines have been developed to prevent exposure of minors, volunteers, or visitors to hazards or other potential dangers found in research laboratories and/ or research facilities. The University workplace is a diverse environment of classrooms, offices, clinics, facilities, and laboratories where many different activities are performed. Visitors to the workplace are generally welcome, and in some settings encouraged to participate. However, appropriate precautions and limitations on visitation are necessary to protect health and safety, and to maintain productivity and regulatory compliance. These guidelines will ensure that all visitors entering laboratories have been informed of potential hazards and receive appropriate safety training. Adherence to these guidelines will limit both personal and Institutional liabilities that may accrue if safety of visitors and volunteers is not ensured at a programmatic level.

These guidelines allow us to effectively inform those who, albeit unintentionally, jeopardize safety or the continued favorable relationship between the university and the regulatory agencies. They are designed to encourage the participation and cooperation of researchers and to ensure safety of minors, volunteers, and visitors while in the University workplace in a manner consistent with the Federal, State, and Local rules and regulations as interpreted by the Department of Environmental Health & Safety.

POLICY

The responsibility for safe use of chemical and biological materials is placed on the researchers as well as on the Department of Environmental Health & Safety. A system of consequences for violations of regulations concerning the safety of minors, volunteers, and visitors will be used for educating and alerting the researcher, motivating the research staff, and determining future participation in any programs involving minors, volunteers, and visitors.

For the purpose of these guidelines, hazardous areas are defined as any university operation or space where any of the following are present:

- · Chemicals or radioactive materials in use or storage
- Biological or infectious hazards
- Live animals
- Construction or renovation activities
- Utility equipment spaces, tunnels, rooftops, mechanical rooms, heavy machinery, cranes high noise levels, electrical hazards,
- Other areas deemed hazardous by the host department

Those who are not matriculating students and who work for one week or more in laboratories or other hazardous areas must receive safety training equivalent to that required for employees in the same environment. These individuals must also have safety measures and emergency procedures explained to them, and must be provided with personal protective equipment appropriate to the environment being visited. Minors must be escorted and/ or directly supervised by an adult (18 years of age or older) from the host department at all times during the visit.

- No person under the age of fourteen (14) may work or volunteer at CASE.
- No person under the age of 18 may enter a CASE laboratory unless he/she is participating in an
 organized educational program sponsored by his/ her school or municipality and approved by the
 EHS or by invitation of a faculty member, chair of a department, or dean of a school.
- No person between the ages of 14 and 18 may enter a CASE laboratory except:
 - As part of a group or individual educational program approved in advance by the EHS.

Or

- As part of a relationship in which a CASE faculty member or researcher is acting as a mentor to the young person, the young person will not be present in a CASE laboratory for more than three hours a day on any school day, and the young person's activities in the laboratory have been approved by the EHS.
- All persons under the age of 18 who enter a CASE laboratory must complete all required safety training, must adhere to all restrictions imposed by the EHS, and must have direct adult supervision at all times.
- Participants in the educational and mentoring programs between the ages of 16 and 18 may not be
 paid according to an hourly, weekly, or monthly rate, but they may receive a lump sum stipend
 approved, in advance, by the Department of Human Resources. Persons under the age of 16 may
 not receive any type of payment in connection with their presence in a CASE laboratory.
- CASE faculty members sponsoring minors shall be responsible for obtaining all authorizations required under these rules. These materials can be obtained through EHS and are included in this document.
- Prior to beginning as a volunteer, a waiver must be signed by the parent/ guardian and a copy of the high school certificate of insurance which covers the volunteer must be provided to the EHS.
- No minor should work or volunteer in a capacity that is determined to be hazardous or detrimental to the minor's health or well-being including, but not limited to the following:
 - A task that would increase risk of exposure to infectious diseases transmitted via aerosol.
 - A task that would potentially expose the minor to blood or body fluids, infectious diseases, or hazardous chemicals, which are included in the <u>Laboratory Safety Manual</u> Hazardous Substance List.
 - Any area where there is a potential exposure to radiation, which does not meet state and federal regulations regarding allowable exposures for the public.
 - Prior to the assignment of minor in an area where such exposure potential exists, contact EHS to make the determination as the appropriateness of the assignment.

Unless enrolled as a Case Western Reserve University student, minors, volunteers, and visitors are not allowed to work or conduct research in CASE laboratories, clinic areas, or animal facilities except as identified specifically below. In addition, minors, volunteers, and visitors are prohibited from operating University vehicles and from working in machine shops.

All Minors are prohibited from working or conducting research in the following:

- Any laboratory or facility designated as BSL-3, ABSL-3 or higher for recombinant or infectious organisms.
- Any laboratory or facility where select agents or explosives are used or stored.
- Minors are prohibited from working with any of the following materials
 - Radioactive materials (29 CFR 570.120) or radiation (X-rays, open bench lasers)
 - Cytotoxic levels of Acute Toxins
- Minors are allowed to work or conduct research in laboratories/facilities if the following requirements are met in full:
 - The Case Western Reserve University EHS Minors, Volunteer, and Visitors in Workplace Guidelines has been agreed to in writing.
 - Proof of Hepatitis B vaccination (Within 10 days from the start of work)
 - Certificate of Insurance from high school or municipality.
 - A MINORS REGISTRATION FORM is submitted to and approved by the EHS. Included in this
 form is The Potential Hazards Information sheet which requires a parental /guardian signature
 indicating he/she has read of potential risks. (Volunteer Orientation Form and Volunteer Waiver)
 - Hazard specific safety training is completed by the Principal Investigator/Sponsor with the minor as approved by EHS.
 - Personal protective equipment, specific to the hazard, is provided to the minor with instructions for use and disposal.
 - The minor is directly supervised at all times while in the facility and never left alone.
 - Hours of work comply with Federal Regulation 29 CFR 570.35.
 - Employment shall be confined to the following periods:
 - Outside school hours
 - Not more than 40 hours in any 1 week when school is not in session
 - Not more than 18 hours in any 1 week when school is in session
 - Not more than 8 hours in any 1 day when school is not in session
 - Not more than 3 hours in any 1 day when school is in session
 - Between 7 am and 7 pm in any 1 day, except during the summer (June 1 through Labor Day) when the evening hour will be 9 pm.
 - The laboratory/facility is in full compliance with all applicable EHS safety programs and regulations.

MANAGEMENT OVERSIGHT:

- All services within Case Western Reserve University, which utilize individuals under the age of 18, shall notify the EHS.
- Any person under the age of 18 shall be assigned to tasks where there will be direct and continuous adult supervision.
- o If there is a question as to the appropriateness of the individual's assignment, contact the EHS.

PROCEDURES

The University's procedures are intended to assure compliance with the policy while optimizing students' laboratory experiences and minimizing disruption in the University's research activities.

Minors, Volunteers, and Visitors must complete and return the following to EHS before beginning their laboratory experience:

- If between the ages of 14 and 18
 - o Before they attend safety training you must have the following:
 - Provide a copy of the high school Certificate of Insurance

- Provide verification of Hepatitis B vaccination or waiver signed by parent or guardian
- Complete the waiver form, which must be signed by the parent/ guardian
- Laboratory Use Agreement & Waiver of Liability
- Potential Hazard Information
- Before starting any work in the laboratory:
 - Complete all required training
 - Complete and sign the Registration form.
- No minor will be allowed in any research building, facility, laboratory, or any other area where hazards
 associated with research might exist unless the parent/ guardian has obtained the specific written
 approval of the Department of Environmental Health & Safety (EHS).
- The EHS may grant exceptions to the policy in those cases where:
 - The minor is participating in a supervised program at CASE and working in the laboratory is required as part of the course.
 - The minor is part of a supervised tour through the building as a guest of CASE.

If an individual faculty member or Chair of a Department wishes to bring a minor between the ages of 16 and 18 into his/ her laboratory or department for an educational program, the faculty member must submit a request that provides the name and age of the student and describes the educational intent of the proposed experience. EHS will review the request for educational appropriateness. The EHS will make sure that appropriate laboratory inspections are performed and that the faculty member is alerted to any measures that must be taken to assure the safety of minors in the laboratory.

If the Chair of a Department or the Dean of a School wishes to bring a minor between the ages of 16 and 18 into his/ her laboratory for an educational program or wishes to implement a department- or school-wide program that includes educational opportunities for minors between the ages of 16 and 18, he/she should submit a request that provides the name(s) and age(s) of the student(s) and the educational intent of the proposed program to the EHS. The EHS will provide guidelines and contact information to facilitate any necessary approvals, review and approve these requests within two weeks.

If a faculty member, Chair, or Dean wishes to mentor a student under the age of 18, he/she should follow the guidelines and require the student to be present in the laboratory no more than three hours per day. The EHS will review and approve these requests.

General

- Colleagues, prospective students, and others may be invited into laboratories for academic and research purposes. Non-work related visitors are discouraged unless part of an approved event or University program.
- The laboratory must be in full compliance with all safety regulations and programs (Chemical Hygiene and Exposure Control Plans, Radiation Safety Program, Animal Care Committee, Institutional Biosafety Committee (IBC), etc.) All personnel must also be current in the applicable trainings. Violations found during internal laboratory inspections or by external agencies must be corrected or resolved prior to visitors entering the laboratories.
- Each individual working in a laboratory should prudently consider the risks of their work to visitors.
- No visitors are allowed in a laboratory actively conducting work with materials that are infectious to humans or indigenous animals.
- Investigators must consult with the EHS Biosafety Specialist if an exception is necessary.
- No visitors are permitted in a select agent laboratory or storage area, except Centers for Disease Control (CDC) inspectors or authorized facility maintenance individuals.
- Visitors must wear appropriate personal protective equipment as outlined in the Laboratory Safety Manual, based on the hazards and level of visitor's activities in the laboratory.

Process

- Anyone who wishes to bring a visitor into a laboratory must first obtain the approval of the Pl/laboratory manager and Department. Unauthorized persons will be reported to the Pl/laboratory manager.
- If the area does not meet the definition of laboratory, general rules for visitors to campus apply.
- The PI/laboratory manager is responsible for ensuring that a visitor or volunteer has appropriate training and is aware of emergency response, waste handling, and other relevant procedures. They visitor or volunteer must provide confirmation that they have appropriate training from their institutions and they take the EHS Hazard Awareness Training.
 - The visitor/ volunteer should inform their employer of his/her planned activities prior to commencing work at CASE.

Laboratory observations and tours

- Guests are not allowed in laboratories unless accompanied and directly supervised by the PI/ laboratory manager or tour guide (only CASE laboratory personnel over the age of 18)
- School-aged students occasionally may enter laboratories as part of educational programs under carefully controlled and directly supervised conditions for a walk-through or tour (only CASE laboratory personnel over the age of 18). Approval for these programs must be obtained in writing from EHS.
- Before bringing visitors into a laboratory, a briefing should be provided regarding the location of eyewash stations and safety showers, activities currently underway in the laboratory, what not to touch, what to do in case of an emergency, and building exit routes.
- For the Laboratory Observations and Tours, the following is needed:
 - Certificate of Insurance
 - Laboratory Use Agreement & Waiver of Liability
 - Documentation listing the names of the individuals/ schools, date of event, duration of event, location, PI name, and Direct Supervisor.

Volunteers

- All volunteers must sign an Acceptance of Risk, Waiver and Release. The department in charge
 of the laboratory or facility must maintain a signed copy of the form.
- Volunteers must complete appropriate safety training equivalent to that required for employees involved in similar tasks in the same environment prior to entering the laboratory.
- Volunteers working in laboratories must undergo activity/area specific training provided by PI/laboratory manager or Chemical Hygiene Officer.
- Volunteers must be aware of basic institutional life safety policies and must be familiar with the EHS Laboratory Safety Manual.
- Volunteers who will use radioactive material or ionizing radiation must have approval from Radiation Safety (368-2906).

Minors

- The minor and parent/legal guardian must sign an Acceptance of Risk, Waiver and Release prior to working in a laboratory. A signed copy of the form must be submitted to EHS for approval prior to commencement of work.
- o Hours of participation shall be limited per Federal Regulation 29 CFR 570.35. Less than 20 hours per week is recommended.
- The minor must complete safety training equivalent to that required for employees in the same environment prior to working in the laboratory. The PI/laboratory manager must provide hazard specific training to the minor.
- No volunteer under the age of eighteen may handle radioactive materials or be alone in a laboratory.
- No volunteer under the age of eighteen can handle human blood, human cell lines, or other material defined as "other potentially infectious materials" by OSHA (Bloodborne Pathogens Standard 29 CFR 1910.1030).

- No one under the age of fourteen (14) shall be allowed in any University laboratory, except as per the Laboratory Observations and Tours Section.
- Children who are not CASE students, CASE employees, part of a program, or volunteers are not allowed in laboratories.

ENFORCEMENT

- A violation will result in:
 - Immediate verbal notification of the researcher by the EHS.
 - Written notification sent to the researcher by the EHS with copies sent to the researcher's Department chair and to both the Laboratory Safety & Radiation Safety Committee chairpersons stating that the researcher is precluded from allowing minors or volunteers from working in his or her laboratory until cleared by EHS and the Department Chairperson.

APPEAL PROCESS

• Researchers will have the opportunity to appeal a decision made either by the EHS or by the Safety Committees. The appeal will be a formal written response from the researcher to the EHS, which will consult with the investigator, the Department chair person and the investigator. Unresolved issues can also be brought to the Chairpersons of the Laboratory Safety or Radiation Safety Committees as appropriate for resolution. Until the matter is resolved, minors, volunteers, and visitors will be precluded from participation in laboratory activities and their parents or sponsors notified. Violation of this restriction will be considered a major violation of general University safety guidelines.

REFERENCES

- CASE EHS Laboratory Safety Manual
- CASE EHS Radiation Safety Manual
- 29 CFR 1910.1450 Occupational Exposure to Hazardous Chemicals in Laboratories
- 29 CFR 1910.1030 Bloodborne Pathogens Standard
- 29 CFR 570.34 CFR Title 29, Chapter V, Part 570, Subpart C, Section 34 Permitted Occupations for minors 14 and 15 years of age
- 29 CFR 570.35 CFR Title 29, Chapter V, Part 570, Subpart C, Section 35 Hours of Work and conditions of employment permitted for minors 14 and 15 years of age
- 29 CFR 570.120 CFR Title 29, Chapter V, Part 570, Subpart G, Section 120 Eighteen Year Minimum
 - To protect young workers from hazardous employment, the Act provides for a minimum age of 18 years in occupations found and declared by the Secretary to be particularly hazardous or detrimental to health or well being for minors 16 or 17 years of age.
- 42 CFR 73 Centers for Disease Control Possession, Use and Transfer of Select Agents and Toxins
- 10 CFR 1207 Federal Guidelines for Radiation Use
- ODH 3701.138.12G State Radiation Guidelines
- US Department of Labor Fair Labor Standard Act (FLSA) Advisor Prohibited Occupations for Non-Agricultural Employees
 - http://www,dol.gov/elaws/esa/flsa/docs/haznonag.asp
 - A youth 18 years or older may perform any job, whether hazardous or not

- A youth 16 or 17 years old may perform any non-hazardous job
- A youth 14 and 15 years old may not work in the manufacturing or mining industries, or in any hazardous job.
- US Department of Labor FLSA Child Labor Rules Advisor Exemptions from Child Labor Rules in Non-Agriculture
 - http://www.dol.gov/elaws/esa/flsa/cl/exemptions.asp
 - There are no similar exemptions from the hazardous occupations rules for youth younger than 16 years. 14 and 15 year olds, however, may be employed in approved school-administered and school supervised Work Experience and Career Exploration Programs. Such programs allow variations in the rules and permit employment during school hours, for as many as 23 hours in school weeks, and in otherwise prohibited occupations for which an official exception has been authorized by the Department of Labor.
 - Note: All states have child labor rules and mandatory school attendance laws.
- Ohio Department of Commerce Division of Labor & Worker Safety Ohio Minor Labor Law ORC Chapter 4109: Employment of Minors (ORC 4109.10)
 - Minor Any person less than 18 years of age who has not obtained a high school diploma or its
 equivalence and/or individuals subject to the exemptions contained within section 4109.06.
 - Minor Wage Agreement An agreement, prepared in duplicate, as to the wages and or compensation the minor shall receive for each day, week, month, year, or per piece.
 - Break Requirement All minors are required to have a 30 minute uninterrupted break when working more than 5 consecutive hours, which must be documented.
 - When school is IN session minors 14 & 15 years cannot:
 - Be employed before 7 am or after 7 pm
 - Work more than 3 hours on any School Day
 - Work more than 18 hours in any School Week
 - Work during school hours, unless employment is incidental to bona fide vocational training program
- When school is NOT in session minors 14 &15 years cannot:
 - Be employed before 7 am or after 9 pm
 - Work more than 8 hours per day
 - Work more than 40 hours per week
- When school is IN session minors 16 & 17 years cannot:
 - Be employed before 7 am or 6 am if not employed after 8 pm the previous night or after 11 pm Sunday through Thursday
 - There is no limitation in hours per day or week
- When school is NOT in session minors 16 & 17 years have no limitation as to the starting and ending time and no limitation in hours per day or week.
- Ohio Department of Commerce Division of Labor & Worker Safety Prohibited Occupations for Minors – ORC Chapter 4109: Employment of Minors (OAC 4101:9-2-01)
 - To prevent the employment of minors, 'individuals under 18', in any occupations found hazardous or detrimental to the health and well-being of minors, the Director of the Ohio Department of Commerce is authorized to issue rules pursuant to Section 4109.05 of the Ohio Revised Code prohibiting the employment of minors in occupations determined to be hazardous.

References regarding Minors

- Federal OSHA requirements prohibit minors 16 years and under from working in hazardous areas.
- NIH-CDC BSL2 and BL3 Special Practices.
 - BSL2 Animals not involved in the work being performed are not permitted in the lab.

- BSL3 Animals and plants not related to the work being conducted are not permitted in the laboratory.
- NIH Guidelines for Research Involving DNA Molecules, prohibition against persons under the age of 16 entering a BSL-3 laboratory.
- National Cancer Institute guidelines Prohibit children under 14 years of age from labs that work with cancer/ oncogene agents.
- International Basic Safety Standards IAEA Safety Series 115, 1996
 - No person under the age of 18 can be unsupervised (direct/eye contact type supervision).
 - No person under the age of 16 shall be subjected to occupational exposure
 - No person under the age of 18 years shall be allowed to work in a controlled area unless supervised and then only for the purpose of training.

Approved: Felice Thornton Porter, Asst. Dir., Q/A Manager, EHS Date: 1/22/2018

School Certificate of Insurance

Field trip insurance is strongly recommended for all minors, volunteers, and visitors registered to volunteer at the University. Students must have regular school insurance or adequate personal coverage. A field trip is a journey by a group of people to a place away from their normal environment. The purpose of the trip is usually observation for education or non-experimental research. The aim of this research is to observe the subject in its natural state and possibly collect samples. Field trips are extracurricular educational field studies a class makes. The duration of the field trip can vary.

There is a controversy as to whether or not it is appropriate to do field trips. Some people believe they are unnecessary because the liability increases when students are taken off school property, requiring extra insurance. To mitigate these risks and expenses, most school systems now have formalized field trip procedures.

Field trip insurance must be paid for before the date of the trip. The insurance policy requires that the event be sponsored and supervised. The policy does not provide coverage for any injuries or sickness related to personal side trips before, during, or after the university-related trip, nor related to any athletic game, event, or tournament.

Coverage:

- Accidental Medical Expenses: \$10,000; Accidental Death and Dismemberment: \$10,000; There is some coverage for expenses related to dental injury and sickness; Deductible: \$0.
- Covered Activities:
 - Activities that are sponsored and supervised by the University during the field trip specified.

Important Notice:

This summary is designed to give you a general overview of the insurance coverage. It should be construed as a representation or legal interpretation of insurance coverage.

These forms must be completed before a minor, volunteer or visitor has access to any Case Western Reserve University laboratory, facility, clinic, and equipment. Please complete all forms in ink, no pencil please!

MINORS, VOLUNTEER, & VISITORS REGISTRATION FORM

(Minor & sponsors/ supervisors fill this out together)

Return this form to the EHS for approval <u>BEFORE</u> you begin hands-on work in the laboratory/ facility/ clinic, etc. You will need the following: Proof of Hepatitis B vaccination, School Certificate of Liability Insurance, CASE Volunteer Waiver and Release Form, and the Waiver of Liability Form.

Minor/ Volunteer/ Visitor Name:		Date of Birth:		
Name of School:				
Department:				
Email:	Email: Phone:			
Faculty Sponsor Name	e/ Title:			
		itor:		
Number of Work Hours per Week: Duration of Work:		Duration of Work:		
This work will be performed in what location (Building/ Room):				
Is this for (check one):				
Science Fair Project_	VolunteeringEmploymen	tInternship Other		
Project Title (if applica	ble):			
Troject Title (II applica				
Materials and Equipme	ent to be used – Check and list	all that apply:		
Chemicals	Biological Material	Equipment		
Flammables	Recombinant DNA	Chemical Fume Hood		
Reactive	Bacteria	Biosafety Cabinet		
Carcinogenic	Viruses	Laminar Clean Benches		
Toxic	Fungi	Autoclave		
Corrosive	Parasites	Centrifuge		
Oxidizer	Human source material	Analytical Instruments		
Oxidizer	Insects	Industrial Machinery		
Cryogen	Plants	Noise Producing Equipment		
Pharmaceuticals	Animals	Laser Equipment		
Other	Other	X-Ray Equipment		
		UV Equipment		
		Other Equipment		
December wheat was will	lha daine.			
Describe what you will	i be doing:			
				

MINORS, VOLUNTEER, & VISITORS REGISTRATION FORM

(Minor & sponsors/ supervisors fill this out together)

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I agree to sponsor (volunteer's name)	, and by my signature below, agree that:
 and Visitors Guidelines". The potential hazard Individual completed safety training equivalent I have completed this Volunteers, Minors, and 	ne Case Western Reserve University "Minors, Volunteers d information signature sheet is included. t to that required for employees in the same environment. /or Visitors Hazard Specific Safety Training. Training was
 This individual will be directly supervised at all The hours of work will comply with Federal Re My laboratory is in full compliance with all app and regulations. If radioactive materials used in laboratory, the wear a body badge while in the laboratory. radiation materials and/or equipment. 	, and specific to, laboratory hazards will be provided. Itimes while in the laboratory and never left alone. In a signification 29 CFR 570.35 Ilicable Case Western Reserve University safety programs The individual may observe only and must be trained and the student is prohibited from working directly with the idual must be trained and must have direct supervision.
Name of Faculty Sponsor Date	
and/or Visitors Guidelines.	e Case Western Reserve University Minors, Volunteers Signature
Department of Environmental Health & Safety (EH	IS) Approval

RETURN THIS FORM AND THE PAGE WITH THE PARENT'S SIGNATURE TO:

DEPARTMENT OF ENVIRONMENTAL HEALTH & SAFETY 1ST FLOOR SERVICE BUILDING 2220 CIRCLE DRIVE, CLEVELAND, OH 44106 OFFICE: 216.368.2907 FAX: 216.368.2236

POTENTIAL HAZARD INFORMATION

Scientific research involves exposure to various hazards. When deciding to allow your child to participate in research projects conducted in Case Western Reserve University laboratories, you need to be aware of the potential hazards he or she may encounter. The following information provides the most common potential hazards, but is not intended to be an exhaustive list of all potential hazards. Questions may be addressed to the minor's specific sponsor. If you have any further questions or concerns regarding this information please contact the Department of Environmental Health & Safety at 216.368.2907.

Definitions

- Allergens substances capable of producing an allergic reaction
- Asphyxiant a substance such as a gas or a toxin that causes a decrease in oxygen concentration or an increase of carbon dioxide concentration within the body
- Carcinogens substances capable of producing cancer
- Mutagenic agent (chemical or physical) capable of inducing genetic mutation
- Pathogens bacteria, viruses, prions, fungi, and parasites capable of causing diseases
- Recombinant materials DNA that has been genetically engineered (altered), usually incorporating DNA from more than one species of an organism
- Transgenic an organism that has had genes from another organism inserted into its genes
- Toxins poisonous substances produced by living organisms, plants, and animals
- Zoonotic diseases diseases that can be passed from animals to human

Potential Hazards

The research project may involve one or more of the following potential hazards. A table is attached with examples.

- Chemicals can be unstable, making them reactive and prone to explosion. Potential injuries include skin and eye burns, respiratory problems, allergic reactions, skin, eye, and mucous membrane irritation, and illnesses.
- Pathogens found in human, animal, and plant tissue can cause infections and acute or chronic illnesses.
- Recombinant materials/ technology can interact with the human body and its cells and produce potentially hazardous results.
- Mechanical/electrical equipment and instrumentation can cause electrocution, burns, cuts, scrapes, and injuries from pinch points. High noise levels can cause hearing loss.
- Radiation/ irradiation can cause skin and eye damage, cellular damage and long-term health problems.
- Animals can bite, scratch, and transmit zoonotic diseases, such as rabies, toxoplasmosis, pox virus, cat bite fever, rat bite fever, and various parasitic infections or release allergens.
- Gas cylinders/ compressed gases gas cylinders with compressed gases can explode, causing injury from high-speed projectiles. Released gases can cause eye and skin irritations, respiratory problems, light-headedness, asphyxiation, and fainting.

POTENTIAL HAZARD INFORMATION

	Definition	Hazards	Examples
Chemicals	Refined compound that could be in the form of a solid, liquid, or gas. These may or may not be hazardous. Some compounds may have numerous hazard classifications (flammable, toxin &	Carcinogens: may cause some sort of cancer with long-term exposure – usually many years in the future.	Benzene, acrylamide
	carcinogen).	Teratogen: shown to affect the reproductive system of males & females. May cause birth defects in the developing fetus.	Alcohol, thalidomide, X-Rays, acrylamide
		Neurotoxins: may affect the nervous system.	Ethidium Bromide, snake venom
		Flammables: will burn or explode	Alcohol, acetone, xylene
		Reactives: will react explosively	Peroxides, acrylamides
		Corrosives: will cause tissue damage with contact through inhalation, eye, skin, etc.	Acids & Bases
		Toxins: may cause illness or death upon exposure	Cyanide
Compressed Gases	High-pressure cylinders that hold gases. These are usually large and heavy. Gas may be harmless, toxic, corrosive, or flammable.	Physical hazard: Explosion hazard if they rupture. Asphyxiant hazard if they vent the gas to the workplace and it displaces oxygen.	Asphyxiant: Nitrogen, helium, any other non-oxygen gas. Flammable: Hydrogen. Toxic: Ammonia
Radiation/ Radioactive Materials	High energy particles (alpha & beta) or waves (x-rays)	Tissue & Organ damage with high doses	Uranium, Phosphorus 32, Sodium 35, X- Rays
Physical Hazards	Hazards from noise, machinery, heat, cold, etc.	Tissue damage, hearing loss	Scrapes, cuts Cold: Liquid nitrogen, dry ice Heat: Burners
Biological Agents	Living organisms or products of living organisms such as Viruses, Bacteria, Fungi, Prions & Parasites	Level 1 – No hazard	Baker's Yeast & E. Coli K12
	Hazards from infection with these agents are organism dependent &	Level 2 – Mild to severe illness	Influenza, Polio & Salmonella

	can range from mild treatable to severe untreatable. Classification of hazard in four groups called biological safety levels with Level 1 as the least hazard & Level 4 as the extreme hazard.	Level 3 – Severe illness & possible death Level 4 – Not allowed at Case Western Reserve University	Tuberculosis & AIDS Hepatitis B Hemorrhagic Fever
Recombinant DNA	Genetically modified organisms with variations in genes within the organism.	Often unknown consequences once introduced to the human body.	Viral vectors like Adeno & Adeno- associated viruses used to transfect or express genes.
Toxins- Microbial, Plant, Animal	Poisons produced by plants, living organisms or animals.	Tissue & organ damage or death.	Plant-Ricin Animal-Fish/Snake venom Microbial-Staph, Tetanus

I HAVE READ AND UNDERSTAND the Potential Hazard Information Sheet describing the potential risks and dangers associated with my child's research project.

I AGREE AND UNDERSTAND that my child's research project may be suspended at any time, at the discretion of Case Western Reserve University and its officers, agents, and employees, if the safety of my child, the employees and other volunteers of Case Western Reserve University become a concern.

Name of Child	
Signature of Parent or Legal Guardian	
Phone	
Date	

RETURN THIS FORM AND THE PAGE WITH THE PARENT'S SIGNATURE TO:

DEPARTMENT OF ENVIRONMENTAL HEALTH & SAFETY 1ST FLOOR SERVICE BUILDING 2220 CIRCLE DRIVE, CLEVELAND, OH 44106 OFFICE: 216.368.2907 FAX: 216.368.2236

MINORS/ VOLUNTEERS/ VISITORS LABORATORY USE AGREEMENT AND WAIVER OF LIABILITY

These forms must be completed before a volunteer or visitor has access to any Case Western Reserve University laboratory, facility, clinic, and equipment. Please complete all forms in ink, no pencil please!

AT LEAST 18 YEARS OLD, PLEASE COMPLETE THIS SECTION.	
plan to participate in (name of educational pro	
offered by and held at Case Western Reniversity. Because I am not a University student or employee, I understand that I will not be cover by health and/or accident insurance while I am volunteering or visiting these facilities. I anticipate be university facilities for the period/ to/; howe aderstand that the University has made no commitment to make the laboratory/ office facilities avair any specific time period and I will leave and remove my personal property when asked to do so.	red by eing at ever, I
agree to review any applicable laboratory safety procedures and protocols prior to participating is coratory activity and to follow all rules and directions from University personnel regarding use collities and equipment. I understand, appreciate, and acknowledge there is a risk of injury from using inversity facilities and equipment, including the potential for serious injury. I voluntarily assume the ray injuries I may incur due to negligence or accidental occurrences while I am using University facilities and equipment. I agree that if I am personally injured or suffer any loss of or damage to personal proportunity to claim coverage under any University insurance policy. Further, in consideration apportunity to use University facilities and equipment, I, on behalf of myself, my agents, heirs and may hereby release Case Western Reserve University and its trustees, officers, employees and agents by responsibility or liability for personal injury, including death, and damage to or loss of personal proportions of the proportion of the propor	of the ang the risk of cilities perty, I of the lext of s from operty,
certify that I have health and/or accident insurance coverage that will cover any personal injury that istain while using University facilities and equipment, regardless of cause, and I agree to provide protoch insurance upon request. The University may seek to recover, and I agree to pay, the costs to repair any equipment or other University property I damage while using the facilities, and I other to be personally responsible for my own acts and for any medical care that may be rendered to obtain a summer of the risk of damage to or loss of my personal property that may occur during my the facilities and equipment.	roof of eplace erwise me. I
the undersigned, am at least eighteen (18) years of age and am competent to sign this release. I	have
DLUNTEER/ VISITOR SIGNATURE	
gnature: Print Name:ddress:	
none Number: Date:	

MINORS/ VOLUNTEERS/ VISITORS LABORATORY USE AGREEMENT AND WAIVER OF LIABILITY

IF UNDER 18 YEARS OF AGE, PLEASE COMPLETE THIS SECTION.

NOTICE: Volunteers and Visitors under eighteen their parent or guardian.	(18) years of age must have this agreement signed by
educational program)off Case Western Reserve University. I understand my this visit. I realize there are hazards inherent in a damage to property and thereby give consent for	to participate in (name of ered by and held at y child will walk to and from various destinations while on my travel, including risk of personal injury and death and my child to travel to and from this education facility. If her best behavior and orderly conduct while present at
Western Reserve University, and their respective from all claims, costs, liabilities, expenses, or judg may arise out of or be connected in any way with r Reserve University from any liability resulting from responsible manner. This release shall bind my he University from any and all liabilities incident to my	officers, trustees, employees, agents, and volunteers, gments, including attorney's fees and court costs, which my child's participation. Further, I release Case Western my child's refusal to conduct him/ herself in a proper and eirs and personal representatives and hold harmless the minor child's involvement as a Volunteer/ Visitor, EVEN UNIVERSITY, to the fullest extent permitted by law. I consent are entirely voluntary.
By my signature and permission below, I also a expenses should the staff have to seek medical atte	assume total responsibility for payment of all medical ention for my child during this activity.
PARENT/ GUARDIAN SIGNATURE	
Signature:Address:	
Phone Number:	
Work Phone	
Print Student's Name	Student's Age

MINORS/ VOLUNTEERS/ VISITORS LABORATORY USE AGREEMENT AND WAIVER OF LIABILITY

NOTE: THIS PAGE IS FOR INTERNAL USE ONLY

LABORATORY SUPERVISOR, PI, AND/OR DEPARTMENT HEAD:

Please sign below to indicate your approval of the Minors/Volunteer/Visitor (named on the attached Laboratory Use Assumption of Risk and Release of Liability for Minor/ Volunteers/ Visitors) to use your laboratory facilities.

Recommended:	
Signature:	Print Name:
Title:	Date:
Department	Phone:
Approved:	
Signature:	Print Name:
Title:	Date:
Department	Phone:

RULES FOR MINORS, VOLUNTEERS, VISITORS WORKING IN LABORATORIES, FACILITIES, AND CLINICS

- Never work alone in any laboratory environment without direct, adult supervision from the sponsor or someone designated by the sponsor.
- Always follow the instructions of the sponsor or laboratory supervisor.
- Always report any accident (regardless of severity) immediately to the sponsor or laboratory supervisor.
- Always wear the personal protective equipment as directed and dispose of it appropriately. This personal protective equipment includes glasses, appropriate gloves, laboratory coats/ gowns, and other face/ body protection as dictated by the hazard being worked with or around.
- Always keep your hands away from your face and wash them well with soap and water prior to leaving any laboratory area.
- Never eat, drink, chew gum, apply cosmetics or lip balm, or touch contact lenses while in any laboratory area
- Always wear close-toed shoes while in any laboratory and buttoned laboratory coat.
- Always tie back hair to keep it out of all the hazards listed above.
- Always wear clothing that reduces the amount of exposed skin (no shorts, tanks).
- Always ask questions if you don't understand the safety requirements.

Key Points to Finding Hazards

- Every job has health and safety hazards
- You should always be aware of these hazards
- Find out about chemicals at work by checking labels, reading MSDSs, and getting training

Controlling Hazards

- First Choice: Remove the Hazard
 - Use safer chemicals
 - Put guards around hot surfaces
- Next Choice: Improve Work Policies and Procedures
 - o Give workers safety training
 - Assign enough people to do the job safely
- Last Choice: Use Protective Clothing & Equipment
 - Wear buttoned laboratory coat, appropriate gloves, goggles, covered legs, closed-toe shoes
 - o If needed, use a respirator

Key Points to Make the Job Safer

- OSHA requires employers to provide a safe workplace
- It's best to get rid of a hazard completely, if possible
- If your employer cannot get rid of the hazard, there must be a way to protect you from it
- Your employer must have both the Chemical Hygiene and Exposure Control Plans for the laboratory

Key Points for Emergencies at Work

- Every workplace should have an emergency action plan
- The plan should cover:
 - What to do in different emergencies
 - o Where shelters and meeting places are
 - Evacuation routes
 - o Emergency equipment and alert systems
 - Who's in charge
 - Procedures to follow when someone is injured

- The workplace should have practice drills
- Workers should be trained on everything in the plan

Key Points to Know Your Rights

- Federal and State Labor Laws
 - o Set minimum age for some tasks and dangerous work
 - o Protect teens from working too long, too late or too early
- OSHA says every employer must provide:
 - A safe workplace
 - Safety training on certain hazards
 - Safety equipment
- By law, your employer is not allowed to fire or punish your for reporting a safety problem.