

Experimental/Procedural Safety Review for Building 211 # _____

Title: _____

Date Submitted _____ Date Approved _____ Short Review _____ (1 yr or less)

Check a box if the conditions are present Full Review _____ (2 yr or less)

Name of Experimenters, Principal listed first

* is the person to contact if a spill occurs

Safety

Note: All experiments must be done in accordance with the ANL ESH Manual and the Chemistry Division's "Chemical Hygiene" plan.

What specific training will be necessary for this experiment

Are you going to be working with high voltage(208V) or high amperage (40 A) electrical equipment?

Are you going to be working with machinery or chemicals for which you will need special eye protection beyond the required safety glasses?

What personal protective equipment will be needed?
respirator Gloves _____ Safety shoes
 other _____

Will you need Ground Fault Interrupt devices on any equipment?

Will you be lifting equipment that weighs over 50 lbs?

Will you be using compounds for which you do not have MSDS sheets.

Emergency Preparedness

Do you have appropriate spill control items?
 Do you know where the nearest fire extinguisher is?
 Are there special cleanup procedures for use in the case of a spill - if so attach a summary of the cleanup procedures.

Industrial hygiene

Are volatile chemicals involved?
 Are you using acutely hazardous compounds?
 Will there be unattended work

Will materials be shipped off-site or be used for experiments on animals(informational only-approval must be obtained).

List the class of compounds and approximate quantities used. Include relevant information about toxicity, carcinogenicity, mutagenicity and flammability.

Where will the work be performed?

Bench top working fume hood
glove box hot cell
see protocol

Work with or generate?

RF or microwaves ozone UV
 Lasers Intense light sources Noise

What type of waste will be generated?

	Chemical	Mixed	Radioactive	Non-hazardous
Gas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Liquid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Solid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Corrosive Waste?

What kind of waste containers will be used?

Are all Waste containers sealable so that they will not spill?

How much waste will be generated _____

Experimental Description

Is this experiment similar to an experiment that has been previously reviewed If so, describe where reviewed

Is a protocol attached?

If not a complete experimental protocol

Maximum hazard expected and mitigations

Possible environmental impacts and mitigations

Health Physics

- Is Ionizing radiation used
 - Any radioactivity or radionuclides used
- If neither - skip the remainder of section.
- Are volatile radionuclides involved?
 - Is there any reason to believe that the integrated external dose will exceed 100 mRem skin dose for the experiment, airborne contamination above 10% of a DAC or contamination above appropriate limits.
- What isotope(s) will be used _____
 How Much? _____
 Lifetime and emitted particle and energy _____

How will exposure be limited

- No exposure
- Exposure time limited to _____ minutes/cycle
- Shielding (what) _____
- Remote work using tweezers tongs etc.
- Remote work in a hot cell

Movement of samples

- Shielding pigs in 211
- Shipping containers
- Vehicle
- Special shielding

Security and Labeling

How are you going to secure the radioisotopes:
 Inside a locked room Locked pig?
 Locked vault Other _____

Accelerator

- Will an accelerator be used?
 - Linac Van de Graaff
- Peak current, average current and pulse repetition mode

Activation hazards - Isotope(s) and lifetime(s), and estimated amounts

Requirements for experiment

(to be filled out by the review committee including a representative from ESH-HP if appropriate)

General

Chemical

Health Physics

- Coverage
 - Intermittent
 - Continuous
 - On call
- External dosimetry required
 "film badge" for β/γ
 "film badge" for β/γ neutron
 ring badge

Support equipment needed

- Alarming dosimeters
- Portable Survey Instruments
- Hand and shoe α monitors
- Hand and shoe β monitors

Internal Dosimetry Urine fecal WBC

Frequency: Weekly Monthly

Quarterly Semi-annually

Other

Attachments

Signatures

Investigator _____

Safety Review Committee _____

Divisional Approval _____

Accelerator operator (if appropriate) _____

Health Physics(if appropriate) _____