Content

1. SUMMARY OF IMPORTANT DEADLINES AND TIME CONSTRAINTS

The intention to use a radioactive sample must be initially declared on the Experimental Proposal. Detailed information requested by Diamond Health Physics Team (see Section 4) must be provided as soon as possible, and at least **15 days** before the experiment starts. If all required information has not been provided Diamond reserves the right to cancel the experiment.

Users bringing radioactive samples to Diamond in person must arrive **between 0830 and 1600 on Monday – Friday**. They should report to the User Office, who will contact the Health Physics Laboratory on their behalf (see Section 5.1). Users arriving outside these times cannot bring radioactive samples with them, samples can be sent separately to Diamond. (See section 5.1)

Samples will be held in the secure store of the AMB (Active Materials Building) and transferred from there to the beamline**.** Keys to the secure store in the AMB will be held by the Experimental Hall Co-ordinators who are authorised to supervise the transfer of the samples as required (see section 6).

Users who need to access their samples outside office hours must contact the Principal Beamline Scientist (PBS) in advance of their beamtime to let them know their access requirements, they will contact the Experimental Hall Co-ordinators if additional cover is required.

At the end of the experiment, at least one of the Users must remain at Diamond until the number and integrity of all samples has been checked by the Health Physics Team. This must take place **between 0830 and 1600 on Monday – Friday** (see Section 7).

2. DEFINITION OF RADIOACTIVE SAMPLES

Table 1 defines the minimum activity above which solid and liquid samples will be considered radioactive for the purposes of these procedures. These limits have been set by Diamond, taking into account safety considerations and regulatory requirements.

For the purposes of these procedures:
'**Solid**' samples include crystalline or amorphous samples and wet pastes.
'**Liquid**' samples include crystals suspended in a liquid.

The use of gaseous or aerosol samples containing *any* quantity of radioactive isotopes is not permitted on Diamond beamlines or in the laboratories.

Sample Description	Activity or quantity limit above which these procedures apply
Samples containing artificial radionuclides	Sum of the activities of all samples brought to Diamond > 1 Bq
Solid samples containing natural or depleted uranium	Sum of the activities of all samples brought to Diamond > 5 Bq of ^{238}U
Liquid samples containing natural or depleted uranium	Specific activity > 20 Bq of ^{238}U per litre for at least one individual sample Or Total volume of all samples brought to Diamond > 250 ml
Solid samples containing natural thorium	Sum of the activities of all samples brought to Diamond > 1 Bq of ^{232}Th
Liquid samples containing natural thorium	Specific activity > 20 Bq of ^{232}Th per litre for at least one individual sample Or Total volume of all samples brought to Diamond > 50 ml

Table 1: Definition of samples which are considered 'radioactive' for the purpose of the present procedures.

Samples containing artificial radionuclides, natural or depleted uranium or thorium below the quantity or activity limits in Table 1 must be accompanied by a document confirming this, and stating the method used for estimation or measurement of activity (if appropriate) Heath Physics staff will still need to log the arrival/departure and perform any activity check.

3. EXPERIMENTS WITH RADIOACTIVE SAMPLES WHICH ARE ALLOWED AT DIAMOND

The following sections give guidelines on the types of experiment with radioactive samples which are authorised at Diamond.

3.1 Experiments using natural or depleted uranium or thorium

Solid or liquid samples of natural or depleted uranium or thorium can be used.

Samples	Containments
Solid samples containing natural or depleted uranium (U)	Must have at least single sample containment (see Section 8) unless they are chemically stable in air, in which case no sample containment is required.
Liquid samples containing natural or depleted uranium (U)	Must have double containment
Solid samples containing natural thorium (Th)	Must have at least single sample containment
Liquid samples containing natural thorium (Th)	Must have double containment

Table 2: Maximum containment requirement for samples containing natural or depleted uranium or natural thorium.

Table 3 gives the allowed activity per sample, and the maximum total activity of all samples of a given type.

Type of sample	Maximum activity per sample	Maximum total activity of all samples of a given type
Solid samples containing natural or depleted uranium	50 kBq of DU or Nat U	7 MBq of DU or Nat U
Liquid samples containing natural or depleted uranium	500 Bq of DU or Nat U	100 kBq of DU or Nat U
Solid samples containing natural thorium	2 kBq of Nat Th	4 MBq of Nat Th
Liquid samples containing natural thorium	20 Bq of Nat Th	100 kBq of Nat Th

Table 3: Maximum activities of samples containing natural or depleted uranium or natural thorium.

3.2 Samples containing artificial radionuclides

All samples must have at least double containment (see Section 8)

3.3 Restrictions on sample modification

Experimental methods which involve modification of the physical and/or chemical state of radioactive samples must be stated in the ERA. This includes heating, cooling and pressurising.

4. INFORMATION REQUIRED PRIOR TO ARRIVAL AT DIAMOND

When a proposal has been accepted by Diamond, the Principal Investigator must provide the Diamond Health Physics Team with a document as part of the Experimental Risk Assessment, containing all the necessary information to allow a complete safety analysis. This must include:

- A detailed list of all samples (number of samples, isotopic composition, weight, activity of the individual isotopes and total activity, physico-chemical state). Examples of how the activity of a sample can be given are:
  - Direct measurement with calibrated gamma spectrometry
  - Estimation from measurement of mass or size
  - Estimation from sample preparation (liquid samples or wet pastes)
  - Estimation from count rate from survey monitor

- A detailed description of the sample holders / containment. This description must explain how the necessary level of containment is achieved.

- A detailed description of the experimental set-up, including how the sample holder is to be mounted on the beamline.

- A detailed description of the quantity (activity in Bq, mass, volume) and type (solid or liquid) of any radioactive waste (contaminated gloves etc.) produced during the experiment. Diamond can dispose of radioactive waste under its Environmental Permit.

- In the case of liquid samples, a description of the decontamination procedure in case of spillage, taking into account the physico-chemical properties of the samples.

- A certificate from the Principal Investigator (PI) indicating competence of all users in the group to work with radioactive materials. To satisfy this requirement, form TDI-HP-PRC-0005 (see Appendix 3) must be completed and supplied to Diamond Health Physics before work commences. Diamond may request further written evidence of competence.

- A detailed description of any sample shielding, if required.

- If samples are to be sent to Diamond from another country within the European Community, the contact address for the competent authority in that country must be included with the information sent before the experiment starts. (see also Section 9.1)

Where possible the information above should be submitted via the UAS (User Administration System) so that it can be seen by the whole experimental team ***at least 15 days*** before the experiment is due to start.
Any information not entered on the UAS can be sent by e-mail to:
Healthphysics@diamond.ac.uk
or by post to:

Health Physics Team
Diamond Light Source Ltd
Harwell Science and Innovation Campus
Didcot
Oxfordshire
OX11 0DE

If the samples can only be prepared a short time before the experiment, and therefore their exact activity will only be known at that time, an approximate maximum activity estimate will be accepted in the first instance. The exact number of samples and their activities may be advised to Diamond Health Physics at a later stage, ***but in any case no later than one week before the experiment is due to start***. Once all details are agreed between the Principal Investigator and Diamond Health Physics Team, specific safety rules and procedures for the experiment will be included on the ERA session page. All conditions set out in the ERA must be complied with. In particular, it is forbidden to bring any radioactive sample not specified in the experimental proposal to Diamond.

The following information should be on ERA 15 days before the samples arrive at Diamond:

- Completed ERA with the following sample information mass, activity, isotopic composition, physical and chemical state. This is required for all radioactive samples including natural and depleted uranium and thorium.

- Gamma spectrometry results

  - For uranium and thorium samples with activity > 1 kBq, a qualitative spectrum for every sample with identification of peaks to prove absence of other isotopes (It is understood daughters may be present).
  - For uranium and thorium samples with activity < 1 kBq, a spectrum for every sample measured at contact for at least 5 minutes, to prove low activity and absence of other isotopes (It is understood daughters may be present).
  - For samples containing artificial radionuclides, a quantitative spectrum for each sample with peak identification and calculation of the activity of each isotope.
  - For pure alpha or beta emitters, a spectrum measured for at least 5 minutes to prove absence of gamma emitters.

The above documents must be signed by a Radiation Protection Adviser or Radiation Protection Supervisor from the Principal Investigator's home institute.

Exceptionally, Diamond can accept samples without these spectrometry results. Requests for such an exception to be made must be sent, with justification, to Diamond Health Physics Team ***at least 15 days*** before the samples are brought to Diamond. The User will be informed by e-mail as to whether this is acceptable for their particular samples.

Failure to provide one or more of these documents within the timescales stated will result in cancellation of the experiment, unless prior permission has been obtained from Diamond Health Physics Team.

The Health Physics Team will complete the form in appendix 5 and send this to the Experimental Hall Co-ordinators once all the information required has been received.

5. BRINGING RADIOACTIVE SAMPLES TO AND FROM DIAMOND

5.1 General

Whether the samples are delivered to Diamond by the User in person, or they are sent by post, the Health Physics Team must be informed in advance (Healthphysics@diamond.ac.uk) of the expected date and time when they will arrive. Users are responsible for ensuring that samples are

packaged and transported in accordance with the relevant UK (CDG 2009) and / or international transport regulations (ADR 2009) for Class 7 dangerous goods.

Users who are bringing samples with them to Diamond must report to the User Office, who will contact the Health Physics Team on their behalf. ***This must be done between 0830 and 1600 on weekdays only***. Users arriving at Diamond outside these hours cannot bring any radioactive samples with them. In this case, the samples must be sent separately to Diamond.

When the Health Physics Team log in any samples they will take photos of the samples and add this to the calendar appointment along with the store used for the EHCs.

The Health Physics Team will perform a contamination check on the outer containment of all the samples. It should be assumed that sample containment may have been damaged or breached during transport. Health Physics will confirm that they have the most up-to-date information on the samples.

If the sample is in containment that has a safety cover, the containment must be secured (e.g. clamped) before the cover is removed to perform the contamination check. The cover must be replaced before the sample is moved.

All radioactive samples which are posted to Diamond should be shipped to the following address:

Health Physics Team,
Diamond Light Source Ltd,
Harwell Science and Innovation Campus,
Didcot,
Oxfordshire,
OX11 0DE

Samples which have been sent by post will (unless informed otherwise) will be stored in the AMB secure store.

Shipping of radioactive material by international public mail is forbidden. In the UK, the Royal Mail will not accept radioactive materials and samples that are classified as radioactive in Table 2-12 of the latest edition of the International Civil Aviation Organisations' (ICAO) Technical Instructions. If you wish to send samples by Royal Mail, it is advised to first check with their Customer Service Centre on 03456 000 606.

If a User wishes to send samples back to their home institute at the end of the experiment, rather than taking them away in person, they must have made the necessary arrangements with an approved transport company beforehand. If no such arrangement has been made, Diamond will

send the samples back using a company of Diamond's choice, and will charge the User's institute. If samples are to be transported by air, return transport must be arranged in advance, and evidence of the arrangements must be presented to Diamond Health Physics Team before the samples are sent to Diamond.

It is forbidden to take radioactive samples onto the beamline(s) or laboratories before they have been checked by the Diamond Health Physics Team. It is forbidden at all times to take radioactive samples to Ridgeway House or to any area other than the beamline(s) or laboratories which have been authorised for their use.

6. SAFETY PROCEDURES DURING THE EXPERIMENT

Access to all samples must be supervised by an EHC or Health Physics Team staff.

Where possible samples from different user groups will be in different safes.

All samples removed from the AMB and returned to it, must be recorded in the log book.

During all experiments graded HIGH risk rating with radioactive samples, at least one member of the User Group or beamline staff must be present on the beamline at all times, unless the hutch door can be physically locked or access restricted to specified individuals via access card system. If an experiment is left unattended, section 3 of TDI-HP-PRC-0004 must be completed (see Appendix 4). If a physical lock is used the key must be retained by the user, a spare key should held by the EHC office. For access to the Experiments Hutch, at least two people must be present, although the second person may be a Beamline staff or an Experimental Hall Coordinator.

Any work with radioactive samples in the lab must be done in accordance with TDI-HP-LR-00015 AMB Laboratory Local Rules.

All experiment-specific safety procedures specified in the ERA in advance by Diamond Health Physics Team (see Section 4) must be obeyed.

Additional requirements for experiments involving Plutonium or Neptunium are detailed in Appendix 2.

7. PROCEDURES AT THE END OF THE EXPERIMENT

At the end of the experiment, Users must report to the Health Physics Team who will confirm that all radioactive samples are present, perform a contamination check and check the samples have

not been damaged during the experiment. ***This procedure must take place between 0830 and 1600 on Monday – Friday.***

If the samples are being transported as an excepted package Diamond Health Physics will supply the users with a transport document and act as consignor.

Users are responsible for removing all samples from Diamond premises.

8. SAMPLE HOLDERS AND CONTAINMENT

8.1 Sample Holders

Detailed information on sample holders must be provided to Diamond Health Physics Team before the experiment starts (see Section 4).

The sample holder must be compatible with the set-up of the beamline on which it is to be used, and must guarantee the stability of the sample, taking into account its physical and chemical properties. Due to the possible corrosive effects of certain acid or basic solutions, it is preferred that materials such as PTFE are used for liquid sample holders. Users should be aware that PTFE has a limited radiation resistance, and alternatives should be considered if possible for long exposures. The use of glass is forbidden because of the risk of breakage.

If sample holders do not conform with the description provided under the requirements of Section 4, the experiment will be cancelled.

8.2 Sample Containment

The requirements for sample containment are defined in Section 3. Whether the sample holder can be considered as a first level of containment will depend on its design details, e.g. liquid samples simply sealed with a kapton foil will not be considered as adequately confined. The Diamond Health Physics Team will decide whether a sample holder can be considered as a first level of containment, based on information supplied by the User.

If the sample holder cannot be considered as the first level of containment, or if double containment is required, heat-sealed plastic bag containment is compulsory.

8.3 Shielding against external irradiation from sample

If dose rates from the sample will lead to Diamond's corporate dose limit (1 $mSv.y^{-1}$ or 0.5 $\mu Sv.h^{-1}$) being exceeded in an area which is accessible to people, shielding must be provided. As a general rule, the dose rate at 30 cm must not exceed 0.5 $\mu Sv.h^{-1}$, and the dose rate at contact, except on

the windows for incoming and outgoing beams, must not exceed 15 $\mu Sv.h^{-1}$. If a sample requires shielding, the details of the shielding must be provided in the information requested under Section 4.

9. REQUIREMENTS FOR SAMPLES ARRIVING FROM OVERSEAS

9.1 Requirements for samples from outside the overseas

The User is responsible for ensuring that the relevant regulations in their home country and for international transport are complied with. Diamond will co-operate in this by completing any declarations which are required from the recipient of the radioactive material.

9.2 Sending samples to and from Diamond by air

When radioactive samples are shipped by air, the IATA transport regulations for dangerous goods must be obeyed. The User is responsible for ensuring that they have complied with these regulations, and customs requirements. They must present Diamond Health Physics Team with evidence that the necessary arrangements for return of the samples has been made, before the samples are sent to Diamond.

APPENDIX 1. HANDLING PROCEDURE FOR EXPERIMENTS INVOLVING NEPTUNIUM AND PLUTONIUM AT DIAMOND

This is a general guide for radionuclide sample handling. A separate, detailed written protocol (Experimental Method) must be specifically prepared prior to each experiment. By default, this should include or consider the standard handling procedures described herein plus any additional conditions for safe sample handling and contamination monitoring for specific samples.

All persons present in the AMB or the Beamline must read and understand the 'AMB Local Rules', 'Use of Radioactive Sources at Diamond' and 'Procedures for the use of radioactive samples on the Diamond beamlines' (TDI-HP-LR-00015, TDI-HP-PRC-0002 and TDI-HP-PRC-0006).

READING OF THIS MANUAL HANDLING PROTOCOL CANNOT BE CONSIDERED AS SUITABLE TRAINING FOR HANDLING RADIOACTIVE MATERIAL. ONLY SPECIALISED TRAINING IN A SUITABLY EQUIPPED LAB IS APPROPRIATE. IT SHOULD BE NOTED THAT DIFFERENT LEVELS OF TRAINING AND EXPERIENCE APPLY FOR HANDLING DIFFERENT RADIONUCLIDES AND DIFFERENT ACTIVITY LEVELS.

HANDLING OF SAMPLES EXCEEDING COMPETENCE LEVEL IS UNACCEPTABLE.

ANY SAFETY CONCERNS SHOULD BE RAISED IMMEDIATELY WITH DLS STAFF.

1. SOLID, LIQUID AND PASTE SAMPLES – SPECTROSCOPY BEAMLINES

1.1 Experiment Pre-Requisites (to be setup prior to any work)

Any Users handling samples or performing contamination checks must be declared competent by the Principal Investigator (PI) using form TDI-HP-PRC-0005.

The DLS pre-approved protocol(s) applicable to the experiment must be printed and displayed in the AMB and on the beamline before starting the experiment.

The Logbook for recording background radiation and measured contamination must be present before starting the experiment.

The PI for the experiment should be present and, if not the PI, a User with detailed knowledge of the sample (chemical composition, radioisotope content and containment levels).

PPE must be donned upon crossing the AMB barrier or Beamline (by ALL entering)

- Lab coat (Howie type)
- Safety glasses

- Gloves (if handling)

A suitable contamination monitor must be selected and checked for correct operation. Users must ensure they can operate properly.

Designated work areas with spill trays will be assigned by DLS. Add signage if required.

A suitable spill kit must be present and contents checked (DLS provides one in the each AMB laboratory with protocol for usage).

1.2 Check-Out of Sample from AMB secure store room to Bring to Beamline

An EHC (or HP staff member, if EHC is not available) must be called to supervise sample access in the AMB.

The work area must be monitored and background radiation level recorded before any work begins (there must be no assumption that the area has not been contaminated between visits to the laboratory).

A sample can be retrieved from storage and placed on work area.

Before returning any containers (e.g. storage jar) to locked storage outer surfaces and hands must be monitored for contamination. Swab materials are available if required.

Working over the work area: The surface of the outer level of containment of the sample must be checked for contamination.

All contamination measurements must be recorded (using a numerical value) on the DLS supplied form.

Following any sample manipulation, e.g. removal of any packaging, the outer surface of the sample and any other surfaces in contact must be re-checked for contamination.

If the sample is exposed to non-standard conditions or is disrupted (e.g. the sample is dropped, unexpectedly heated) the sample should not be moved from that location (to prevent potential spread of contamination) and the outer containment level checked for contamination. Results should be recorded.

Any sample showing visible indication of containment damage should be monitored and placed into additional containment. DLS HP, EHCs and the Beamline should be promptly informed. The sample should be clearly labelled as damaged and must not be used and should be returned to

locked storage before being returned to the Users home institute. Additional containment is available from DLS HP.

Once a sample has been contamination checked and cleared, it can be placed in a sealed, leak-proof, plastic box suitable for sample transport to the beamline. Prior to placing the sample in the box, the box should be monitored for contamination.

The sample must be logged out of the AMB and beamline destination recorded in the log book.

Gloves must be checked for contamination before leaving the laboratory.

1.3 Transport to Beamline

- Users must be prepared and sure of the actions to take if the sample is damaged or exposed during transport to the beamline
- The sample (in transport box) can be transported to the beamline
- A contamination monitor must accompany the sample during transport between the AMB and the Beamline
- 2 Users to accompany sample (1 to attend sample; 1 to summon help if required)
- PPE is not required during sample transport
- If the sample is dropped, and the transport box breached, the sample outer containment should be visually checked for breach, before contamination check (swab if necessary)
- Do not swab if obvious sample breach – instead follow emergency protocol
- If the transport box is not breached the sample (in box) should be returned to the AMB to be checked
- At lab, if a sample breach suspected or proved by swab, the Emergency contamination protocol should be followed. DLS HP, EHCs and Beamline staff should be informed immediately

1.4 At the Beamline

Pre-requisites: as per Section 1.1.

- Upon sample arrival, the sample plus box must only be placed on the work area
- The sample should be removed from transport box and both the box and outer containment level checked for contamination
- The contamination monitoring results must be recorded in the radiation logbook at the Beamline experiments hutch
- The sample can be mounted in the approved sample holder
- The Beamline search door mut be locked with a padlock following the search when a sample is present

- Beamline Experiment can be performed
- At least one person must be present at all times when a sample is in the hutch (this can be users, beamline staff or EHCs)
- PPE should not be worn in the Beamline control room
- If sample handling is complete, following handling and monitoring of gloves and PPE, hand washing is recommended

1.5 Upon Completion of Individual Sample Spectra Collection

- PPE must be donned on entering Beamline experiments hutch
- The sample outer containment should be monitored for damage (beam damage is possible at some beamlines)
- Monitoring should be performed in-situ at the sample position or within the designated work area – whichever is considered the most appropriate to monitor effectively while reducing risk of spread of any contamination. Any other surfaces contacted by the sample, sample holder, gloves etc., should also be monitored
- The contamination monitoring results should be recorded in the Beamlines logbook

1.6 Transport and Check Back into AMB

- EHCs or HP must be called to allow access and supervise sample logging in and out, and physical sample exchange
- The sample can be returned to the AMB, in a box suitable for transport, as per transport instructions in Section 1.4
- The sample should be recorded as logged back into the AMB Logbook
- The sample can be returned directly to the container intended for return transport of the sample to the User home institute; outer containment can be monitored if desired

1.7 Upon Completion of Entire Experiment (End of Visit)

- All samples should be returned to the AMB secure store room, following monitoring and logging-in procedures outlined above
- EHCs (or HP) should be called to return all samples to secure storage
- When all active samples have been removed from the beamline, DLS HP, or EHCs should monitor the beamline to confirm no contamination
- The designated work area and any signage can be removed
- Samples are to be returned to User home institution
- Any waste generated during the experiment must be recorded
- HP must perform a contamination check of each sample
- DLS to confirm all samples have been removed from the store before leaving Diamond

2. SAMPLE ENVIRONMENTS (NON-GENERIC)

2.1 Sample Environments

Sample environments to be used with the samples must be cleared for use by DLS HP and Beamline Staff.

Protocols for environment use, operation, sample handling and emergency must be covered in a separate protocol, specific to the experiment (historical protocols must be cleared for use prior to beamtime to ensure no change or potential to improve).

Extra sample handling and contamination monitoring should be clearly described.

Temporal changes of the sample following sample insert or removal from the environment should be considered e.g. due to temperature change, pressure change, chemical reaction.

All levels of the sample containment must be assessed for suitability in the environment before, during and after removal.

EMERGENCIES

If at any time there is a suspected sample breach, or improper means to check for contamination the experiment must be stopped immediately and samples left in-situ. The experiment hutch shutter should be closed to stop exposure of the sample to the synchrotron beam. DLS HP, EHC and Beamline staff must be informed immediately.

Users should not enter the experiment hutch until DLS staff arrive. Users should only enter the hutch by themselves if required to stop further spread of contamination AND such action is safe AND has been described in the experimental risk assessment.

If the sample containment has been breached, DLS staff will transfer the sample to suitable containment before removing the sample from the beamline to the AMB. DLS staff will then co-ordinate a check for any contamination and arrange for beamline decontamination if required.

If the contamination monitor has failed, alternative monitoring equipment will be issued and the experiment can continue.

HP Tel: 01235 77(8605), 07825 523391 EHC Tel: 01235 77(8787)

APPENDIX 2.

Declaration of Competence in use of radioactive materials
To be completed by the Principal Investigator

I certify that the following named individuals have received appropriate training and are competent in working with the radioactive materials listed.

FULL NAME (please print)	AFFILIATION

Please print details of radioactive materials to be used, listing isotopes, activities, sealed or open as appropriate:

Principal Investigator's signature:

Print name: **Date:**

APPENDIX 3.

SOURCE LOAN FORM

Section 1 of this form must be completed for each source borrowed. It should be displayed at the location where the source is in use, along with 'Radioactive Source in Use' sign(s).

A temporary handover of responsibility during attended use of the source should be recorded under Section 2.

If it is necessary for the source to remain in use whilst unattended, the relevant details should be entered in Section 3.

Please refer to TDI-HP-PRC-0002 'Use of Radioactive Sources at Diamond' for further information.

SECTION 1 LOAN DETAILS

Source ID	Nuclide	Activity	Location of intended use	Expected return date/time

Loaned to (PRINT NAME)	Signature	Date / time

SECTION 2 TEMPORARY HANDOVER OF RESPONSIBILITY

From (Name / sign)	To (Name / sign)	Date / time

SECTION 3 SOURCE IN UNATTENDED USE

Person responsible	Contact number(s)	Date/time left	Expected return date/time

Persons (other then the person listed above) entering the room whilst the responsible person is absent must enter details below:

Name (PRINT)	Date	Time in	Time out

SKETCH DIAGRAM SHOWING LOCATION OF SOURCE IN UNATTENDED USE

APPENDIX 4. EXPERIMENT SAMPLE INFORMATION SHEET FOR RADIOACTIVE HIGH & MEDIUM GRADED SESSIONS

EXPERIMENT & SAMPLE INFORMATION SHEET (FOR HIGH & MEDIUM GRADED)

Experiment Number: **Beamline:**

Date:

User Contact:

Experiment/Sample description:

Hazard source:

Risks:

Likely points of failure to look out for:

Security Requirements

☐ Restricted access to beamline/lab is required for this experiment (detail below)
☐ Experiment/Samples must not be left unattended unless beamline/lab is locked
☐ A count in/out of samples is required for this experiment

Other/detail:

Supervision Requirements

☐ Experiment/Samples must not be left unattended on the beamline/lab
☐ Experiment/Samples must not be left unattended unless beamline/lab is locked
☐ Experiment/Sample set-up must be checked by EHC/Local Contact before experiment commences.
☐ Experiment/Sample must be checked by EHC/Local Contact throughout the experiment.
Frequency:

☐ Samples require special storage/disposal/emergency arrangements.

Other/Detail: