



### INSTRUCTIONS FOR COMPLETING AN EXPOSURE INVESTIGATION (RP Form #3)

In the absence of a quarterly reported radiation dose, this document will become the legal record of the person's radiation exposure. Before forwarding the Exposure Investigation Report to the Dosimetry Program Office, please review the information provided and verify that it is complete and the dose assignment is substantiated.

It is recommended that RP Form #3 is completed electronically. If it is not, errors should be denoted by a single line through them. Any changes that are made must be initialed and dated. No WhiteOut or similar compound should be used on these forms and they must be completed in ink. If you have questions regarding this form or the Exposure Investigation process, contact the Dosimetry Program Manager at X8386.

1. The DATE referenced should be the initiation date of the exposure investigation.
2. The WEAR PERIOD refers to the quarterly wear period of the affected badge. If the EI is only addressing a portion of the wear period, these dates should be put here.
3. Print the name of the badge wearer on the appropriate line. This should be the individual's legal name, not a nickname.
4. Section A: Personnel Information
  - a. The letters N, V, and C after Fermilab ID refer to the employment status of the individual. N is for employees; V is for visitors and C is for contractors. If the information is not available, indicate this on the form. This section may be used to help clarify details included in the report.
  - b. Indicate whether or not the person is on permanent badge service by circling YES or NO.
5. Section B: Circumstances Requiring Investigation

In this section, mark the box indicating the reason why the exposure investigation is being performed. It is the responsibility of the division/section to review the dosimetry reports for exposures that might require investigation. (See Part 7 of Chapter 5 of the FRCM). The Dosimetry Program Office is available as a resource. You will be notified by the Dosimetry Program Office if the badge could not be processed or if the individual has been placed on the ALERT list. Often, the Dosimetry Program Office may also identify those persons with unexpected neutron exposure, shallow doses or suspected inaccuracies. Suspected inaccuracies should also be checked in the event that the investigation is a result of the badge wearer questioning his/her reported dose result. If the badge has been lost, the date the loss was discovered should be documented. High exposures, relative to the others in the work group should be categorized by OTHER.

6. Section C: Dosimetry Data
  - a. Record the badge number of the affected badge. The badge number is the five digit number in the lower left corner of the badge or the number reported as the participant number on the dosimetry reports. If you do not know what the badge number is, contact the Dosimetry Program Office.
  - b. For all circumstances, dosimetry information must be included. If the investigation is for a missing badge or one that could not be processed, this should be indicated in the table. If the badge wearer did not wear a pocket dosimeter or other supplemental dosimetry, note this in the blanks with NA, not worn, etc.

7. Section D: Analysis and Dose Assessment

- a. Under the Interview with Badge Wearer portion, record highlights of any communication between you and the affected badge wearer. If this communication involved email messages, attach a copy of the message. Reference any radiological areas entered, dates of entry, lengths of time in the area, work being performed and any other pertinent information. Define all terms and acronyms where applicable. If all efforts to contact the badge wearer have been unsuccessful, note this here and document what efforts you made. If the badge wearer is unavailable, but it is possible to interview his/her colleagues or supervisor, do so. Document who was being interviewed and the relationship to the badge wearer. Somewhere in this section, the dose equivalent being assigned, including an assignment of "Minimal", needs to be calculated and the basis for that assignment. Note that assignments based solely on pocket dosimeter readings will NOT be accepted. If additional space is needed to appropriately document the dose assessment, you can attach extra sheets.
- b. Where appropriate, provide the dosimetry data for at least two co-workers of the badge wearer. This may mean that the EI can not be completed until this information is available. Again, Pocket Dosimeter readings may be included, but will not be accepted by themselves.
- c. If the badge has been lost or damaged, the next table must be completed. For many badge wearers, this is essentially the dose that they received during the three most recent quarters. However, some people have assignments that are cyclical in nature. For example, a person may be involved in a Li lens change out during the first quarter of a year. If he/she then does this again during the second quarter of the following year, it may make more sense to consider the exposure received during the previous Li lens work and not the most recent quarters. If the work is unique, one-time-only, then document this fact.
- d. For supporting documentation, include as an attachment, ALL documents that you referred to in completing the exposure investigation. You are not limited to the documents listed on the form. This is to ensure that the referenced document is retained for the same period and is immediately available for review. If you are unable to attach a document, a reference to this document may be provided with the approval of the Dosimetry Program Manager. The pocket dosimeter total for the quarter may be recorded without copies of all pocket dosimeter cards.
- e. In this area, record any actions that you have taken as a result of this investigation. This may include recommendations for a procedural change, reassessment of the individual's dosimetry needs, instructions or training provided to the person on how to wear and care for his/her dosimetry, notification of the person's supervisor/contact, and anything else that you feel is relevant. This section must be completed if the Exposure Investigation is being conducted because the person has been placed on the ALERT List.

8. Section E: Exposure Adjustment

Check the applicable box and complete the table for all additions or subtractions. Please include the sign of the number being added or subtracted. If the exposure investigation results in a dose assignment of less than the selected limit of 10 mrem, the addition of 'SL' must be indicated. There is no threshold on dose adjustments.

If an investigation is being performed for a suspected inaccuracy (questioned by the Dosimetry Program Manager, RSO or badge wearer) and the dose is found to be valid, the 'no adjustment necessary' box must be checked, supporting documentation attached, and the form still sent to the Dosimetry Program Manager.

9. Section F: Approvals

The investigator must sign and date the form in addition to the badge wearer. If the badge wearer is unavailable and you have documented this in Section D, the badge wearer's supervisor or lab contact can sign for him/her. The form then needs to be forwarded to the Dosimetry Program Office, MS 119. The Dosimetry Program Manager will review the completed report. If there are no problems or concerns, he/she will approve the completed EI. If the Dosimetry Program Manager has questions, the form will be returned to you with RP Form #3b and the concerns noted. If a subtraction is recommended, this must be approved by the Dosimetry Program Manager and the Associate Head for Radiation Protection. If the EI is performed due to the person being placed on the Alert List, the ALARA coordinator must also sign the form.