

College of Life Sciences



**Databases for Radiation Protection Supervisors
and
The RADPER System**

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1 Accessing the Databases

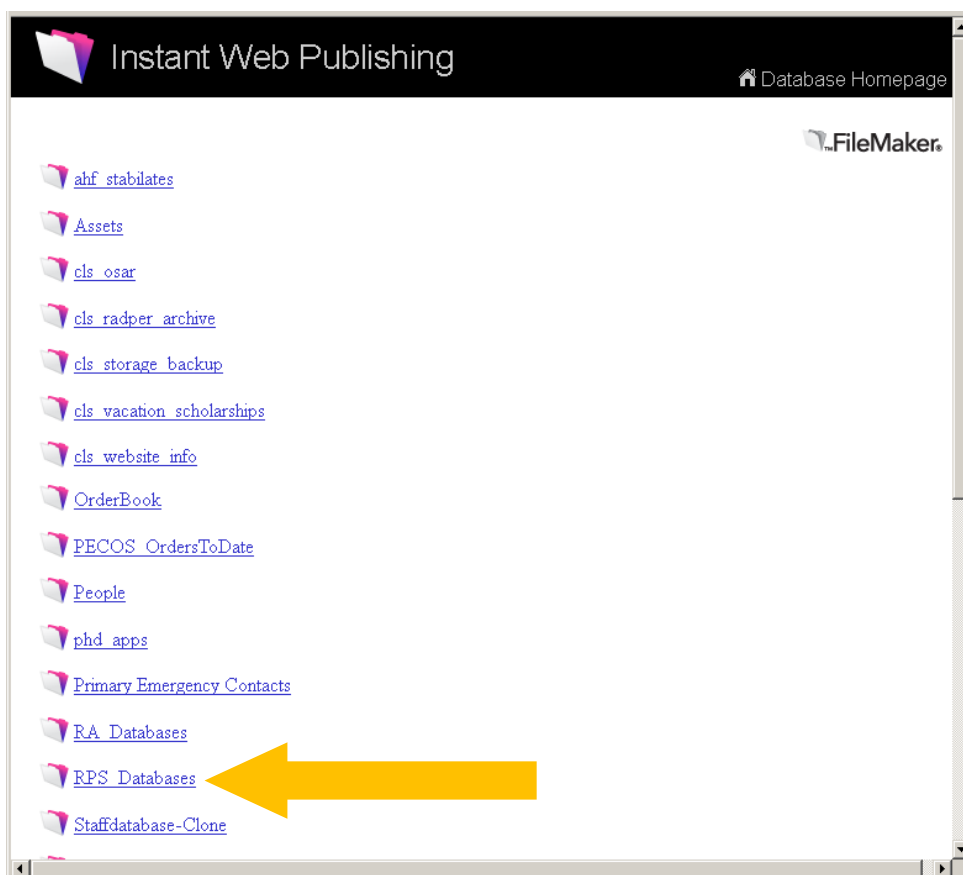
1.1 Basic Requirements

The databases are accessed via a web browser. All up to date browsers should be compatible but Mozilla Firefox appears to be least problematic.

You must have a Life Sciences Directory (LSD) account name and password to log in to the database. Most CLS personnel will already have these. If you do not, contact CLS IT Support for advice.

1.2 Logging In

Navigate to https://filemaker.lifesci.dundee.ac.uk/fmi/iwp/res/iwp_auth.html and log in with your LSD account name and password, then select RPS Databases from the FileMaker Instant Web Publishing (IWP) menu.



The database will open at the Main Menu page, shown below.

The screenshot shows the FileMaker IWP interface for the 'RADPER' database. The top toolbar includes buttons for 'New Record', 'Edit Record', 'Delete Record', 'Records', 'Find', 'Sort', 'Home', 'Log Out', and 'Help'. The main content area features the University of Dundee logo and the title 'Databases for Radiation Protection Supervisors'. Below this is a 'Main Menu' section with three items: 'RADPER', 'Sealed Radioactive Sources', and 'Radiation Protection Contacts'. A footer note says 'Click a button once to open a database. Return to the Main Menu at any time by clicking The University'. Several callout boxes provide additional context: 'FileMaker status area' points to the top toolbar; 'Click the UoD logo on any layout to return to this main menu' points to the logo; 'A database containing information on all officially registered radioisotope users on the Main Campus.' points to the 'RADPER' menu item; 'Log out and return to the FileMaker IWP menu.' points to the 'Log Out' button; 'A database containing information on all officially registered sealed sources on the Main Campus.' points to the 'Sealed Radioactive Sources' menu item; and 'Link to a web page showing contact details for all CLS RPSs and Deputies.' points to the 'Radiation Protection Contacts' menu item.

2 Sealed Radioactive Sources Database

The opening screen displays a summary of all Sealed Radioactive Sources on the Main Campus.

The screenshot shows the 'Sealed Radioactive Sources' database interface. The top navigation bar includes buttons for 'New Record', 'Edit Record', 'Delete Record', 'Records', 'Find', 'Sort', 'Home', 'Log Out', and 'Help'. Below the navigation bar are buttons for 'Add Entry', 'Delete Entry', 'Search', and 'List All'. The main content area displays a table of sources with columns for Radionuclide, Max MBq, Description of Sealed Source, Area, Room No, Check Due?, and Wipe Due?. Callout boxes provide instructions for various actions: 'Click to view the next/previous 25 records.' (pointing to the record count), 'Click a column header to sort by that category. Click again to invert the sort order.' (pointing to the 'Check Due?' header), 'Create a new record with the 'Add Entry' button.' (pointing to the 'Add Entry' button), 'Enter find mode.' (pointing to the 'Search' button), 'List all records in the database.' (pointing to the 'List All' button), 'Click an arrow head to view source details.' (pointing to the expandable arrow in the first row), 'Click 'Check Due' to see all sources due/overdue their 6 monthly check.' (pointing to the 'Check Due?' column), and 'Click 'Wipe Due' to see all sources due/overdue their yearly/two yearly wipe test.' (pointing to the 'Wipe Due?' column).

Radionuclide	Max MBq	Description of Sealed Source	Area	Room No	Check Due?	Wipe Due?
> Cesium 137	0.037	Source for gamma ray spectroscopy	JBC Ground	Ewing E3	18/03/2015	15/10/2015
> Manganese 54	0.037	Source for gamma ray spectroscopy	JBC Ground	basement	18/03/2015	15/10/2015
> Manganese 54	0.037	Source for gamma ray spectroscopy	DEEP	Ewing E3	26/02/2015	07/02/2015
> Cesium 137	0.037	Source for gamma ray spectroscopy	DEEP	Ewing E3	26/02/2015	07/02/2015
> Barium 133	0.037	Source for gamma ray spectroscopy	JBC Ground	basement	18/03/2015	15/10/2015
> Cadmium 109	0.037	Source for gamma ray spectroscopy	DEEP	basement	26/02/2015	21/10/2015
> Cadmium 109	0.037	Source for gamma ray spectroscopy	JBC Ground	basement	18/03/2015	15/10/2015
> Cobalt 57	0.037	Source for gamma ray spectroscopy	JBC Ground	basement	18/03/2015	15/10/2015
> Cobalt 57	0.037	Source for gamma ray spectroscopy	DEEP	Ewing E3	26/02/2015	21/10/2015
> Cs137/Zn65	0.037	Source for gamma ray spectroscopy	JBC Ground	basement	18/03/2015	15/10/2015
> Americium 241	0.005 x 9	Source for instrument testing	DEEP	Ewing E3	26/02/2015	07/02/2015
> Strontium 90	0.005 x 9	Source for instrument testing	DEEP	Ewing E3	26/02/2015	07/02/2015
> Cobalt 60	0.185 x 1	Source for instrument testing	JBC Ground	BASEMEN	18/03/2015	15/10/2015
> Strontium 90	0.333 x 9	Source for instrument testing	DEEP	Ewing E3	26/02/2015	07/02/2015

Clicking 'Add Entry' or the arrow head to the left of a row on the opening screen will take you to the Source Details layout, shown below.

The screenshot shows the 'Source Details' layout in FileMaker IWP. The interface includes a toolbar at the top with buttons for navigation and actions, and a main form area for data entry. Callout boxes provide instructions and notes for various elements:

- Use this tool to flip through the records.** (Points to the navigation arrows in the toolbar)
- Create a new record with the 'Add Entry' button.** (Points to the 'Add Entry' button)
- Enter find mode.** (Points to the 'Search' button)
- Return to the list of all sources.** (Points to the 'List All' button)
- Log out and return to the FileMaker IWP menu.** (Points to the 'Log Out' button)
- Link to a pdf of the source details for printing.** (Points to the 'sealedsource.pdf' link)
- Remember to update the date the source was last checked. This allows the system to flag up overdue checks.** (Points to the 'Date Checked' field)
- It's important to keep an up to date, detailed account of the sources history.** (Points to the 'History & additional information' text area)
- Email a photograph of any newly added source to CLS H&S for uploading to the database.** (Points to the photograph of the source)

The form fields include: Radionuclide (Cesium 137), Max Activity (MBq) (65379000), Description (Source inside Biological Sample Irradiator), Area (CLS Gamma Irradiator Facility), Room (GL1-33), RPS (Grayson, Lisa), Manufacturer (CIS UK Ltd), Source Serial No/ Lot No (R267), Date Acquired (16/12/98), Disposal, Date Checked (21/08/2014), Date Wipe (12/7/2014), and Unique Record (85). The history section notes service dates and wipe testing results.

Please note: RPSs cannot delete an existing record. If you intend to dispose of a sealed source inform Martin Rollo (m.rollo@dundee.ac.uk) and CLS H&S (cls-safety@dundee.ac.uk). CLS H&S will archive then delete the entry once Martin confirms that the source has been safely removed from University premises.

3 RADPER Database

The RADPER Database is the main file in the suite. It is based on the old, paper RADPER form but contains more information, e.g. training record, history of amendments. The opening screen lists all Registered Users on the Main Campus.

The screenshot shows the RADPER Database interface. At the top, there is a toolbar with buttons for 'New Record', 'Edit Record', 'Delete Record', 'Records', 'Find', 'Sort', 'Home', 'Log Out', and 'Help'. Below the toolbar is a navigation bar with buttons for 'Add User', 'Delete User', 'Custom Search', 'PreSet Search', 'List All Users', 'Print Radper', 'Still to Attend SS Seminar', and 'Archive Withdrawn Radpers'. The main area displays a table of users with columns for 'Radper Number', 'Name', 'Area', '(Re)Registration Date', and 'Renewal Overdue?'. The table contains 14 rows of user data. Callout boxes provide instructions for various actions: 'Click to view the next/previous 25 records.' (pointing to the record navigation icons), 'Create a new record with the 'Add User' button.' (pointing to the 'Add User' button), 'Enter find mode.' (pointing to the 'Find' button), 'Choose from a selection of pre-defined searches.' (pointing to the 'PreSet Search' button), 'List all records in the database.' (pointing to the 'List All Users' button), 'List users still to attend the New Users Course.' (pointing to the 'Still to Attend SS Seminar' button), 'Log out and return to the FileMaker IWP menu.' (pointing to the 'Log Out' button), 'Click a column header to sort by that category. Click again to invert the sort order.' (pointing to the 'Renewal Overdue?' header), 'Click 'Renewal Overdue' to see registrations requiring 3 yearly renewal.' (pointing to the 'Renewal Overdue?' column), and 'Select a serial number to view details on a particular user.' (pointing to a row in the table).

Radper Number	Name	Area	(Re)Registration Date	Renewal Overdue?
1 383A	Watts, Colin	WTB2	30/05/2012	No
2 186C	Hawley, Simon	JBC 2	07/08/2017	No
3 9	Stark, Michael J R	WTB MEZ	07/02/2012	No
4 598A	Wyllie, Susan	WTB1	04/08/2017	No
5 259	Fairlamb, Alan H	WTB1	23/10/2012	No
6 92	Ferguson, Michael A J	WTB1	23/10/2012	No
7 93A	Guther, Maria Lucia Sampaio	WTB1	10/04/2012	No
8 94	Mehlert, Angela	WTB1	10/04/2012	No
9 636C	Keane, Doreen	WTB2	07/04/2017	No
10 625A	Khoudoli, Guennadi	WTB MEZ	27/06/2012	No
11 622	Porter, Iain	WTB MEZ	20/05/2017	No
12 159	Ryder, Ursula	WTB MEZ	02/05/2012	No
13 544	Rocha, Sonia	JBC MEZ	08/10/2013	No
14 279	Blow, Julian	WTB MEZ	02/05/2012	No

Clicking a Serial Number or the Add User button on the opening screen will take you to the user details layout:

The screenshot shows the RADPER user details layout. The top navigation bar includes buttons for 'Add User', 'Delete User', 'Custom Search', 'PreSet Search', 'List All users', 'Print Radper', 'New Radper Approved', 'Amendment Approved', and 'Renewal Approved'. The main content area is divided into tabs: 'General Info', 'Radioisotope Usage', 'Training &', 'Badges Issued', and 'Additional Information'. The 'General Info' tab is active, showing fields for 'Current RADPER' (167 A*), '(Re)Registration' (01/07/2016*), 'Surname' (Grayson), 'First Name(s)' (Lisa), 'Email Address' (l.grayson@dundee.ac.uk), 'Staff Type' (Other), 'Other' (RPS), 'Tel Extn' (84244), 'Sex' (Female), 'Age if under 18', 'School/College' (College of Life Sciences), 'Area' (CLS Gamma Irradiator), 'Unit/Division', 'Group' (CLS), 'Group Leader' (N/A), and 'RPS' (Grayson, Lisa). A 'radper.pdf' link is visible in the 'Additional Information' section. Callout boxes provide the following information:

- Use this tool to flip through the records.
- Create a new record with the 'Add User' button.
- Enter find mode.
- Choose from a selection of pre-defined searches.
- Return to the list of all users.
- Click the index tabs to see more info.
- Log out and return to the FileMaker IWP menu.
- An asterisk (*) denotes a Safety Services only field.
- Link to a pdf of the RADPER for printing.
- Automatically entered when an Area is selected.
- Automatically entered when a Group is selected.

4 Performing a Find

Once you enter Find Mode the icons on the status area will change accordingly. Type in your search criteria then click 'Perform Find'.

The screenshot shows the RADPER Database interface. At the top, there is a toolbar with icons for navigation and actions. Below the toolbar is a search area with a text input field containing '1' and a 'Perform Find' button. The main content area displays a table with columns for Radper Number, Name, Area, (Re)Registration Date, and Renewal Overdue?. A single record is visible with Radper Number 1 and Name Lisa. Below the table, there is a note: 'Click on the left-hand index number to view further information on a'. Callout boxes provide additional information: 'If your find is composed of multiple requests, use this tool to flip through them.' points to the first record; 'FileMaker status area' points to the top toolbar; 'Find Mode specific icons' points to the 'Perform Find' and 'Cancel Find' buttons; 'Log out and return to the FileMaker IWP menu.' points to the 'Log Out' button; and 'Enter search criteria then click the perform find icon.' points to the search input field and the 'Perform Find' button.

If your find is composed of multiple requests, use this tool to flip through them.

FileMaker status area

Find Mode specific icons

Log out and return to the FileMaker IWP menu.

Enter search criteria then click the perform find icon.

5 Edit Mode

To begin editing a record, simply click in a field. Notice that the icons on the status area change accordingly. Once you have entered/amended the data, click the 'Submit' button on the status area to save changes. Clicking on a different index tab will also submit your changes. Data entered but not submitted will be lost.

The screenshot shows the RADPER application interface in Edit Mode. The top status bar includes a 'Submit' button (green arrow), a 'Cancel' button (red X), and a 'Revert' button (blue arrow). The interface is divided into several sections:

- Index tab:** Located at the top left, it shows the current record number (1) and the total number of records (285).
- Save changes and exit Edit Mode:** A callout box pointing to the 'Submit' button.
- Discard changes and exit Edit Mode:** A callout box pointing to the 'Cancel' button.
- Undo changes but remain in Edit Mode:** A callout box pointing to the 'Revert' button.
- FileMaker status area:** A callout box pointing to the 'Home', 'Log Out', and 'Help' icons.
- Portals to related tables:** A callout box pointing to the 'Additional Information' tab, which displays a list of related records.

The main data table is titled 'Radioisotope Usage' and contains the following data:

Isotope	Maximum MBq to be handled at one time	Estimated frequency of usage of max amount	Time max amount handled (min)	Point Source of Max MBq at 15cm for Time Handled		Point Source of Max MBq at 30cm for Time Handled	
				Skin Dose (mSv)	Deep Tissue Dose (mSv)	Skin Dose (mSv)	Deep Tissue Dose (mSv)
3H	18.5	M	5	0.00000	0.00000	0.00000	0.00000
14C	3.7	M	5	0.00000	0.00000	0.00000	0.00000
32P	18.5	M	5	0.72767	0.00000	0.18192	0.00000
35S	37	M	5	0.00000	0.00000	0.00000	0.00000
125I	18.5	M	5	0.00000	0.00241	0.00000	0.00060
33P	37	M	5	0.00000	0.00000	0.00000	0.00000

Below the table is a 'Comments' field. At the bottom of the interface, there is a list of 'Ionising Radiation Risk Assessments read by Igrayson' with the following entries:

- IRRA1 Labelling proteins with Iodine 125
- IRRA10 Experiments performed in Low Level Areas with 3H open sources
- IRRA11 Experiments performed in Low Level Areas with I-125 open sources
- IRRA12 Experiments performed in Low Level Areas with 14C open sources
- IRRA13 Experiments performed in Low Level Areas with 35S open sources
- IRRA14 Experiments performed in Low Level Areas with 33P open sources
- IRRA3 32P Cell Labelling
- IRRA4 Positron Annihilation Experiments
- IRRA8 Metabolic labelling with [35S]-methionine and [35S]-cysteine for protein synthesis inhibition studies
- IRRA9 Experiments performed in Low Level Areas with 32P open sources

6 The RADPER System

This section gives specific details as to how the RADPER System operates.

6.1 Registering a New User

1. A member of staff informs their RPS that they wish to use radioisotope for the first time.
2. The RPS gathers the necessary details and enters them into a new record in the Radioisotope Users Database.
 - The next consecutive RADPER number is entered automatically when a new record is created.
 - The RPS cannot access any fields marked with an asterisk (*) – these fields are for Safety Services (SS) use only.
 - A field marked with a circumflex (^) is automatically updated when data is entered into a preceding, related field. This cuts down on manual entry and avoids errors.
 - The RPS can sit down with the applicant and enter all the information directly into the database, if they wish, but it may be easier to print a blank* RADPER and give it the user to fill in manually. The RPS can then enter the details into the database at their leisure. *A blank RADPER form can be downloaded at https://www.lifesci.dundee.ac.uk/services/healthandsafety/radiation/logs_and_forms/RADPER.pdf.
3. Once all the necessary information is entered, the RPS prints a hard copy RADPER, signs it and gets the applicant to sign it.
4. The signed form is posted to SS.
5. The Radiation Protection Adviser or Officer (RPA or RPO) reviews the application and, if everything is in order, adds his comments, signs the hard copy and passes it to the SS Administrator.
6. The Administrator looks up the New User in the RADPER Database and:
 - Enters:
 - the registration date;
 - training requirements;
 - TLD badge allocation;
 - additional comments;
 - any other SS only information.

Note: Only SS and CLS H&S can access the above fields. Entry of the registration date signifies official registration of the user. If this field is blank the applicant is not yet officially registered to work with radioisotopes.

- Updates the RADPER History accordingly.
- Files the hard copy bearing the necessary signatures.
- Emails the New User a copy of their completed RADPER (copying the RPS in) informing them that registration is complete and drawing their attention to training requirements and any other comments added by the RPA/RPO. The

email also contains links to the codes of practice that all New Users are expected to read and understand before commencing work. New Users are instructed to reply to confirm receipt of the email and their authorised RADPER.

6.2 Updating Training & Supervision Details

1. As the registrant undergoes further local training the RPS updates the relevant fields on the Training and Supervision layout. This local information does not have to be notified to SS.
2. The SS Administrator records attendance at SS training courses.

6.3 Making Amendments to an Existing RADPER

1. A member of staff informs the RPS that their radioisotope usage, or some other detail, is about to change.
2. The RPS amends the relevant record in the Database and updates the RADPER History with a description of the change e.g. “added 32P to usage table” or “changed group from CW to NDP”.
3. The RPS prints a hard copy RADPER for themselves and the User to sign and manually highlights the amendment.
4. The signed form is posted to SS along with a note to say this is an amended RADPER being submitted for approval.
5. The RPA/RPO reviews the amended RADPER and, if everything is in order, adds his comments, signs the hard copy and passes it to the SS Administrator.
6. The Administrator looks up the User in the RADPER Database and:
 - updates the RADPER revision number and registration date.
 - enters any additional training requirements or comments.
 - updates the RADPER History accordingly.
 - files the hard copy.
 - Emails the User a copy of their amended RADPER (copying the RPS in) informing them that the amendment has been approved and drawing their attention to any additional training requirements and any new comments added by the RPA/RPO. Users are instructed to reply to confirm receipt of the email and their amended RADPER.

6.4 Renewing a Registration

1. The SS Administrator checks every month for overdue renewals.
2. As soon as one is flagged up, they Email the User (copying in the RPS) asking them to confirm with their RPS that the information is up-to-date.
3. If no changes are required the RPS Emails the Administrator to confirm this.
4. The Administrator updates the revision number, registration date and RADPER History accordingly, then Emails the User a copy of their renewed RADPER (copying the RPS in) informing them that the renewal has been approved. Users are instructed to reply to confirm receipt of the email and their renewed RADPER.
5. If the RADPER has to be amended continue as in section 6.3 from point 2 onwards.

6.5 Withdrawing a Registration

1. A member of staff informs their RPS that they no longer require to use radioisotope or are leaving the University.
2. The RPS amends the RADPER History accordingly and Emails the SS Administrator informing them of the date the User will cease to use radioisotope/intends to leave UoD.
3. On the specified date the Administrator marks the registration as “withdrawn” on the RADPER History.
4. Once a month, the Administrator runs a database script that:
 - searches for all withdrawn registrations;
 - archives these records into a separate file;
 - deletes them from the main database.

6.6 Reinstating an Archived RADPER

Withdrawn RADPER records can be reinstated from the archive if a previously registered user wants to start using radioisotopes again. Email CLS H&S with the person’s full name and, if known, former RADPER number.

6.7 Adding a Group Leader

If a Group Leader’s initials do not appear in the Group field menu, inform the CLS H&S by Email giving the initials, full name and title of the Group Leader.

6.8 If an Area is Missing or RPS Name is Incorrect

If an area does not appear on the Area field menu or if the RPS for an Area is wrong, inform CLS H&S by Email giving a precise description of the error and the correct information.