



# **Guidelines for laboratory moves and/or terminations**

**Guide and checklist**

**Facilities Office, Central Administration**



**Karolinska  
Institutet**

# KI's guide for laboratory moves and/or terminations

The aim of this guide is to simplify laboratory moves and/or terminations for KI - personnel. Good planning will minimize risks for entrepreneurs, laboratory staff and all other personnel as well as risks for property loss and damages to equipment and/or scientific samples.

Contact information and links to supporting documents are listed at the last page of this document.

## 1. Definitions

- 1.1** "Termination". Refers to the process where the PI and laboratory staff decontaminates, empties and cleans the laboratory areas in order to prepare the facilities for the next tenant.
- 1.2** "Biological material". All human-, plant- or animal pathogens; all human blood, blood components and products, tissues and bodily fluids; all human- or animal cell lines; all infected tissues from humans and animals; all cultured microorganisms, that is microbiological units that can breed or transfer genetic material including viruses and prions as well as recombinant DNA- material; all biological toxins. Also including "Sharps /infectious waste" and "Biological waste".
- 1.3** "Decontamination". The process wherein the PI together with laboratory staff disinfect, decontaminate and clean laboratory surfaces and equipment. The choice of decontamination method is dependent on the type of laboratory activities that has been performed in the area but must be proven effective for the types of contaminations present. Included in laboratory areas are, in addition to floors, walls and roofs, siphons and ventilation ducts all the way to the central canal, including filter units. Certain types of laboratory activities require a certificate of decontamination from a licensed decontamination firm.
- 1.4** "Dangerous goods". Substances whose packing, labelling and transport on public roads are regulated by law. This includes substances that are flammable, corrosive, reactive, toxic, radioactive, poisonous, carcinogenic, infectious or in other ways posing danger to human health or the environment.
- 1.5** "Abandoned laboratory". A laboratory where the research group has moved out but laboratory material (biological, chemical, radioactive), equipment or waste remain.

## 2. Roles and responsibilities

- 2.1** Principal investigator /unit manager or similar

- Is responsible for conducting a risk analysis prior to the move. The risk analysis shall include the required measures to minimize the risks before, during and after the move.
- Ensures that everything required for a safe move and proper termination of the old facilities is available.
- Ensures that the old laboratory areas are emptied and decontaminated. The facilities may have to be restored to their original state in case of more than reasonable wear.
- Covers the cost of the move.

## 2.2 Head of department or similar

- Responsible for allocating enough resources for the coordination of the move.
- Intendent or similar partakes in the inspection of the facilities after the move.
- Covers the cost of decontamination of ventilation ducts and siphons, see section 1.3.
- In cases of abandoned laboratories, the department where the PI was employed will have to manage termination and decontamination of the laboratory including cost.

## 2.3 The central administration

- Responsible for procuring entrepreneurs for move and transport of dangerous goods
- Ensures that KI has a safety adviser for transport of dangerous goods.
- A representative from the Facilities Office will partake in the inspection of vacated laboratories and will collect certificate of decontamination and “avflyttningsdeklaration”.

# 3. Procedure

## 3.1 Planning the move /termination

Task	Responsibility
<b>Risk assessment prior to the move<sup>1</sup>, see KI template for risk analyses. Security and emergency routines for all phases of the move shall be established, e.g. spillage, thefts, fire, slips, trips and cuts.</b>	<b>PI /unit manager</b>

<sup>1</sup> AFS 2001:1 Systematic work environment management, section 8, 2:nd and 3:rd paragraph: ” When changes to the activity are being planned, the employer shall assess whether the changes entail risks of ill-health or accidents which may re-quire measurements.  
The risk assessment shall be documented in writing. The risk assessment shall indicate which risks are present and whether or not they are serious.”

<p><b>Conduct an inventory of all material that shall be moved as well as what shall be disposed of as waste:</b></p> <ul style="list-style-type: none"> <li>- Are there radioactive materials or equipment that is contaminated by radioactivity?</li> <li>- Are there chemicals that are classified as dangerous goods? <i>Advice: see section 14 in the safety data sheet, if the chemical has a UN number it is classified as dangerous goods.</i></li> <li>- Are there reactive and / or unstable chemicals (e.g. perchloric acid, sodium, peroxide forming chemicals)?</li> <li>- Are there old or unlabeled chemicals with unknown contents?</li> <li>- Are there chemicals that require a permit? If so, a new permit for the new premises must be in order BEFORE the move.</li> <li>- Are there biological material that is classified as dangerous goods (advice: read KI's instruction "How to know whether your sample is classified as dangerous goods")? <b>N.b.! transport of biological material belonging to biosafety level 3 requires special handling. Contact KI's biosafety coordinator if you intend to transport material or equipment that belong to biosafety levels 3 or 4.</b></li> <li>- Are there narcotics or narcotic precursors<sup>2</sup>?</li> <li>- Are there equipment that may be contaminated by dangerous chemicals or biological materials?</li> <li>- Do you own extra valuable equipment?</li> <li>- Are there gas bottles?</li> <li>- Are there siphons or waste water tubing that is presumed to be contaminated with amalgam or mercury? Decontamination must be reported to Miljöförvaltningen (Solna Stad, Stockholm or Huddinge kommun depending on where your laboratory is located) at least six weeks prior to start of decontamination.</li> </ul>	<p><b>PI / unit manager together with staff. Ask the departmental chemicals representative, your department's biosafety delegate and the radiation protection representative for assistance.</b></p>
<p><b>Make a list of equipment and material that shall be discarded from the laboratory (chemicals, biological material, radioactive isotopes, gas bottles, equipment. <i>N.b., equipment and furniture that are to be discarded or left behind must be also decontaminated!</i></b></p> <p><b>Also consider non-laboratory materials such as books, stationaries, folders and other materials that you do not intend to move to the new laboratory.</b></p> <p><b>Order extra waste containers since more material than what is normal is discarded during a move:</b></p> <ul style="list-style-type: none"> <li>- Yellow and black boxes + labels.</li> <li>- Buckets and UN-labelled cans for chemical waste.</li> <li>- Ordinary waste containers for non-laboratory waste.</li> <li>- Containers for papers with secret information.</li> </ul>	<p><b>PI / unit manager together with staff</b></p>

<sup>2</sup> SFS 1992:1554 Förordning om kontroll av narkotika.

<p><b>Make a list of equipment and rooms that require decontamination as well as the suitable methods for decontamination. Are you able to decontaminate everything yourself or do you need to contact a designated firm for decontamination?</b></p> <p><i>In general:</i></p> <p><b>Radiation safety – all laboratories involved with radioactive isotopes require clearance. Please, contact KI:s radiation protection expert regarding laboratories located at KI facilities, and the medical physicists at Medicinsk strålningsfysik &amp; Nuklearmedicin regarding laboratories located at hospital facilities.</b></p> <p><b>Biological materials - use a suitable disinfectant where there maybe biological contamination. The disinfectant must have a proven effect for the biological material in question. Common disinfectants are 70% ethanol or 10% chlorine (1:10, freshly made) for door handles, furniture and equipment. Read the risk assessment and your report to the Swedish Work Environment Authority for information on suitable disinfectants.</b></p> <p><b>Biological Safety Cabinets, including filter units, and similar equipment where potentially infectious material has been in use must be decontaminated by a licensed entrepreneur. Such equipment must undergo re-certification after the move in order to ensure its proper function.</b></p> <p><b>Chemicals – clean with soapwater. If there is reason to suspect contamination of particularly poisonous or persistent chemicals, additional decontamination may be required.</b></p> <p><b>Ventilated work places (fume hoods, suction tables, suction points) MUST be decontaminated. Notify intendent if chemicals may remain in the ventilated work place, e.g. perchloric acid, mercury et c.</b></p> <p><b>All siphons in laboratory areas, including siphons adjacent to ventilated work places MUST be decontaminated by procured decontamination entrepreneur.</b></p>	<p><b>PI / unit manager together with laboratory staff</b></p>
<p><b>Contact decontamination entrepreneurs and make an appointment for decontamination of equipment and premises.</b></p>	<p><b>PI / unit manager</b></p>
<p><b>Order extra pick-up of waste. It is of particular importance to order pick-up of chemical waste well in advance. Consult KI's rules for laboratory waste as well as general rules for sorting of waste.</b></p> <ul style="list-style-type: none"> <li>- Be extra careful with old chemicals and / or unlabeled bottles with unknown content.</li> <li>- Thermometers containing mercury must be removed from equipment and sorted as hazardous waste.</li> <li>- Vacuum-pumps must be emptied of oil and the oil shall be handled as hazardous waste.</li> <li>- Empty gas bottles / containers shall be returned to their supplier.</li> </ul>	<p><b>PI / unit manager together with laboratory staff</b></p>

<ul style="list-style-type: none"> <li>- Sharp objects shall be collected and discarded as “Sharps / infectious waste”.</li> <li>- All radioactive waste must be taken to the Department’s room for radioactive waste.</li> </ul> <p>Book extra pick-up of bulky waste (furniture, refrigerators / freezers, equipment, et c).</p>	
<p>Order material required for the move. In addition to cardboard boxes, you may need plastic bags, absorbant material, labels (e.g. “fragile”, “this side up”), silver tape and material for handling spills of chemicals or biological material. Safety equipment and absorbant material must be accessible both for packing, transport and unpacking.</p> <p>If you are transporting dangerous goods – remember that special packing material and labels are required (different types depending on the type of dangerous goods).</p>	PI / unit manager together with laboratory staff
<p>Communicate with all affected parties (intendent, janitor, staff et c) when and how the move and decontamination will take place.</p>	PI / unit manager

### 3.2 During the move / termination

Task	Responsibility
<p>All equipment that has been decontaminated shall be labelled with the label ”KI Sanerad utrustning”. Only equipment with this label will be transported, either to the new location or as waste.</p>	PI / unit manager together with personnel who conduct the decontamination
<p>Ensure that all equipment is labelled with content, warning labels, destination, owner and telephone number to contact persons ( and, if applicable ”fragile” or ”this side up”).</p>	PI / unit manager together with laboratory staff
<p>Ensure that dangerous goods is correctly classified, packed, labelled and transported with a licensed transport firm. If there are any uncertainties, contact KI’s safety adviser for transport of dangerous goods.</p>	PI / unit manager
<p>Liquid nitrogen must be transported by a transport firm with corresponding license.</p> <p>All reactive or unstable chemicals, e.g. perchloric acid, sodium, peroxide forming chemicals et c must be transported by a transport form with corresponding license.</p>	PI / unit manager
<p>Biological material must be packed by laboratory staff.</p> <ul style="list-style-type: none"> <li>- The minimum standard packaging consists of a leak-proof primary container, absorbant material and a leak-proof, sealable secondary container.</li> <li>- All biological material shall be labelled correctly. The label shall include: name, PI / unit manager, destination, the type of biological agent, biosafety level, telephone number and if applicable with ”fragile”. Biological material that is classified as biosafety level 2 shall be labelled with the biosafety symbol.</li> </ul>	PI / unit manager together with laboratory staff

<ul style="list-style-type: none"> <li>- The biological material must be transported directly to the destination not via lunch rooms or other public spaces.</li> <li>- Freezers can be transported with biological materials inside provided that the transportation is within the same campus (not public roads) and that they are filled with packing material so that the biological material is fixated during transport. Refrigerators and incubators must be empty and decontaminated prior to transport.</li> <li>- Lab coats but not gloves shall be worn during transport. Gloves and emergency spill equipment, including a suitable disinfectant, must be available during transport.</li> </ul> <p>For detailed instructions, read "How to pack specimens correctly".</p>	
Laboratory equipment and furniture. Provide information to the transport firm if the equipment / furniture require special handling.	PI / unit manager
Shut off alarms to freezers and other equipment on the day of the move.	PI / unit manager
Ensure that keys and lock-combinations are available.	PI / unit manager
All CLP-classified chemicals must be stored according to KI rules upon arrival at the new facilities, <i>i. e.</i> ventilated cupboards or fire safety cabinets. Chemicals cannot be stored together if this in any way increases risks.	PI / unit manager

### 3.3 After the move / termination

Task	Responsibility
Ensure that all remaining waste and equipment is disposed of in the correct manner. Equipment or waste must not remain in corridors or laboratories without prior arrangement with the intendent. Check that all drawers, cupboards et c are empty. Make sure that no sharp objects remain in siphons or fume hoods.	PI / unit manager together with laboratory staff
Decontaminate the laboratory areas when all equipment has been moved and remaining waste has been disposed of. All visible contamination and dirt must be cleaned and removed.	PI / unit manager together with laboratory staff
Do not forget laboratory corridors, and common laboratory areas such as equipment rooms, freezers rooms, cell culture labs, gel rooms et c.	
Once the laboratory areas have been decontaminated, all warning signs and symbols are to be removed.	PI / unit manager together with laboratory staff.
Fill in "Avflyttningsdeklarationen" one per laboratory, and ensure that all necessary decontamination certificates are attached as appendices.	PI / unit manager
Book appointment for inspection of the laboratory areas with intendent or other representative of your department , a representative from the Facilities office and a representative of the land lord. The completed "Avflyttningsdeklaration" shall be handed over to the intendent and the Facilities office, who will decide whether decontamination is satisfactory. If additional decontamination is considered required, this will be noted in	PI / unit manager

the "Syn och åtgärdsprotokoll".

Ensure that registers, permits, reports and licenses are updated with information on the new facilities, e.g.:

PI / unit manager

- Chemical inventory in the Chemical product database KLARA.
- Notifications and permits for work with micro-organisms and GMM:s to the Swedish Work Environment Authority.
- Local license for work with ionizing radiation to the radiation protection expert.
- **Do not forget permits for A- and B-chemicals, which must be renewed prior to the move!**

## 4. Further reading, documents and contact information:

### 4.1 Waste

#### 4.1.1. KI rules

KI rules for sorting of waste:

[http://ki.se/en/staff/waste-management?\\_ga=2.84409052.455238038.1513332307-1313263478.1459754773](http://ki.se/en/staff/waste-management?_ga=2.84409052.455238038.1513332307-1313263478.1459754773)

KI rules for laboratory waste:

<http://ki.se/en/staff/laboratory-waste>

#### 4.1.2. Contact information

*Extra vessels for waste and pick up of bulky waste:*

Campus Flemingsberg: Veolia AB  
Tomas Arlinder  
Tel: 08-54610852  
E-mail: [Tomas.Arlinder@veolia.se](mailto:Tomas.Arlinder@veolia.se)

Campus Solna: Liselott Lööf AB  
Sebastian Lindroos  
Tel: 070-7504131  
E-mail: [sebastian.lindroos@llbolagen.se](mailto:sebastian.lindroos@llbolagen.se)

For paper with sensitive information, contact:

Reisswolf, Stena Recycling  
E-mail: [reisswolf@stenarecycling.se](mailto:reisswolf@stenarecycling.se)

*Chemical waste and extra pick-up of "Sharps/infectious waste" and "Pharmaceutical waste":*

Stena Recycling AB, Phone: 08 – 83 23 00  
E-mail: [sthlm.order.transport@stenarecycling.se](mailto:sthlm.order.transport@stenarecycling.se)

Sorting and chemical issues:

Kasper Andersson, Stena Recycling AB  
Phone: 010-445 72 24  
E-post: [kasper.andersson@stenarecycling.se](mailto:kasper.andersson@stenarecycling.se)

### 4.2 Biosafety

KI rules for handling of biological agents are available on the KI staff portal:

<https://staff.ki.se/biosafety>

Homepage with information on methods for disinfection for various biological agents:  
<http://www.phac-aspc.gc.ca/lab-bio/res/psds-ftss/index-eng.php>

**4.3 Labels "KI Sanerad utrustning" och "KI Ej laboratorieutrustning"** These labels shall be attached to all furniture / equipment prior to transportation, whether the items are transported to the new facilities or whether they are to be discarded as waste. It is important that furniture or equipment that may be contaminated with chemicals, biological agents or other hazardous compounds are correctly labeled in order to prevent risks to humans, the society and the environment.

<b>KI</b>
<b>Laboratorieutrustning!</b>
Typ av förorening.....
.....
Saneringsmetoder:.....
.....
Datum:.....
Utförare:.....
Intygas av chef:.....
Tel. nr.:.....

<b>KI</b>
<b>Ej laboratorieutrustning</b>
Datum:.....
Kontaktperson:.....
Tel. nr.:.....

**4.4 KI instructions for laboratory moves, "avflyttningsdeklaration" and "syn- och åtgärdsprotokoll"**

These documents are only available in Swedish. Anvisning avseende intern avflyttning, "Avflyttningsdeklaration" and "Syn och åtgärdsprotokoll" are possible to download at the KI staff web: <http://ki.se/medarbetare/infor-flytt-ocheller-avveckling-av-laboratorielokaler>

**4.5 Radiation safety**

Please, read more about radiation protection guidelines and who to contact at <https://staff.ki.se/radiation-safety>.

#### **4.6 Risk assessment**

See KI's templates and supporting documents here (Swedish only):

<https://medarbetare.ki.se/media/31235/download>

Broschure with instructions from the Swedish Work Environment Authority (Swedish only):

<https://www.av.se/globalassets/filer/publikationer/broschyror/riskbedomning-infor-andring-i-verksamheten-broschyr-adi575.pdf>

#### **4.7 Decontamination**

Use procured firm for decontaminations, which is found [here](#).

#### **4.8 Transport of dangerous goods**

Read more about transport of dangerous good [here](#) (e.g. KI's instruction "How to know whether your sample is classified as dangerous goods and "Pack the specimen correctly" – instruction from Folkhälsomyndigheten on how to pack, label and transport biological samples).

KI's safety adviser for transport of dangerous goods can also be found at the above page.

Questions on this material shall be directed to: [kemikaliesakerhet@ki.se](mailto:kemikaliesakerhet@ki.se)