General Safety Regulations
KIT Campus North
Status June 2016

Emergency Call: 3333
## List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>AServ</td>
<td>Allgemeine Services (General Services)</td>
</tr>
<tr>
<td>AServ-CSI</td>
<td>AServ – Campussicherheit (AServ - Campus Security)</td>
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<tr>
<td>AServ-WF</td>
<td>AServ – Werkfeuerwehr (AServ – Fire Department)</td>
</tr>
<tr>
<td>BBS</td>
<td>Beauftragter für die Biologische Sicherheit (Biological Safety Commissioner) (GenTG)</td>
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<tr>
<td>FAS</td>
<td>Stabstelle Fachkräfte für Arbeitssicherheit (Staff Unit Experts for Work Safety)</td>
</tr>
<tr>
<td>FIZ-Karlsruhe</td>
<td>FIZ Karlsruhe – Leibniz Institut für Informationsinfrastruktur (FIZ Karlsruhe – Leibniz Institute for Information Infrastructure)</td>
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<tr>
<td>FM</td>
<td>Facility Management</td>
</tr>
<tr>
<td>FM-BPI</td>
<td>FM - Bauprojekte und Immobilien</td>
</tr>
<tr>
<td>FM-VEA</td>
<td>FM – Ver- und Entsorgungsanlagen (FM - Supply and Waste Management Facilities)</td>
</tr>
<tr>
<td>FTU</td>
<td>Fortbildungszentrum für Technik und Umwelt</td>
</tr>
<tr>
<td>GenTG</td>
<td>Gentechnik-Gesetz (Genetic Engineering Act)</td>
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<tr>
<td>GVO</td>
<td>gentechnisch veränderter Organismus (Genetically Modified Organism)</td>
</tr>
<tr>
<td>HDB</td>
<td>Hauptabteilung Dekontaminationsbetriebe der WAK GmbH (Central Decontamination Department of the WAK GmbH)</td>
</tr>
<tr>
<td>IFSG</td>
<td>Infektionsschutzgesetz (Infection Protection Act)</td>
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<tr>
<td>ITO</td>
<td>Transportordnung für den internen Transport radioaktiver Stoffe auf dem Gelände des Forschungszentrums Karlsruhe (Transport Rules of Forschungszentrum Karlsruhe for Internal Transports of Radioactive Substances)</td>
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<tr>
<td>ITU</td>
<td>Institut für Transurane (Institute for Transuranium Elements)</td>
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<tr>
<td>KIT</td>
<td>Karlsruher Institut für Technologie (Karlsruhe Institute of Technology)</td>
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<tr>
<td>KIT-CN</td>
<td>KIT-Campus Nord (KIT-Campus North)</td>
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<tr>
<td>KISS</td>
<td>KIT Information System Sicherheit (KIT Information System on Safety) Intranet application of KIT; Address: <a href="http://www.kiss.kit.edu">www.kiss.kit.edu</a></td>
</tr>
<tr>
<td>PL</td>
<td>Projektleiter (Head of Project) (GenTG)</td>
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<tr>
<td>PKM</td>
<td>Presse, Kommunikation und Marketing (Public Relations and Marketing)</td>
</tr>
<tr>
<td>SGB</td>
<td>Sozialgesetzbuch (Social Security Code)</td>
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<tr>
<td>SSB</td>
<td>Strahlenschutzbeauftragter nach Strahlenschutz- oder Röntgenverordnung (Radiation Protection Commissioner)</td>
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<tr>
<td>SSV</td>
<td>Strahlenschutzverantwortlicher (Radiation Protection Supervisor)</td>
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<tr>
<td>StrlSchV</td>
<td>Strahlenschutzverordnung (Radiation Protection Ordinance)</td>
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<tr>
<td>SUM</td>
<td>Sicherheit und Umwelt (Safety and Environment)</td>
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<tr>
<td>SUM-BG</td>
<td>SUM – Beratung und Genehmigungen (SUM - Consulting and Licensing)</td>
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<td>SUM-ÜM</td>
<td>SUM – Überwachung und Messtechnik</td>
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<tr>
<td>WAK GmbH</td>
<td>Wiederaufarbeitsanlage Karlsruhe Rückbau- und Entsorgungs-GmbH</td>
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<tr>
<td>ZAG</td>
<td>&quot;Zyklotron AG&quot;</td>
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1 Introduction

In these “General Safety Regulations”, the Karlsruhe Institute of Technology – Campus North (KIT-CN) has compiled a set of instructions to ensure the safety of persons and property on its operating premises. These instructions are based on laws, ordinances, regulations, official licenses, licensing requirements and orders as well as on generally recognized engineering guidelines.

Protection against danger is the responsibility of the safety organization described in Annex I.

In addition to these “General Safety Regulations”, there are a number of “Special Safety Regulations” which apply to specific groups of persons or particular procedures. The most important “Special Safety Regulations” are listed in Annex II.

At the operation facilities of “Wiederaufarbeitungsanlage Karlsruhe Rückbau- und Entsorgungs-GmbH” (WAK GmbH), internal regulations with equivalent contents shall have priority over the present “General Safety Regulations”.

Should you have further questions concerning safety regulations, please consult the Abteilung “Beratung und Genehmigungen” (SUM-BG) Consulting and Licensing Division of the Dienstleistungseinheit “Sicherheit und Umwelt” (Safety t and Environment Service Unit) or the Stabsstelle Fachkräfte für Arbeitssicherheit (FAS) (Staff Unit Experts for Work Safety).

The latest version of the “General Safety Regulations” can be found on the intranet of KIT under “KIT Informationssystem Sicherheit (KISS)”; www.kiss.kit.edu.

All organizational units mentioned in the present “General Safety Regulations” are located on the premises of Campus North.

2 General Rules of Conduct

2.1 Admittance into the Center

Admittance into KIT-CN is only permitted to persons who possess a valid company pass or visitor’s pass. By their signature when granted admittance into the Center, card holders are obliged to observe and adhere to the safety regulations in KIT-CN.

The company pass for employees is issued by the “Abteilung Campussicherheit” (AServ-CSI, Campus Security Division) of the “Dienstleistungseinheit Allgemeine Services” (General Services Unit) upon request of the Human Resources Service Unit (PMA). For employees of external companies and guests staying at an organizational unit for a longer period of time, application for a company pass has to be submitted by the head of the respective unit. Company passes are made and issued by AServ-CSI after presentation of valid identity documents. The company pass is to be shown unrequested to the AServ-CSI staff and is to be surrendered on demand. When the period of employment ends, the company pass must be returned to AServ-CSI unrequested.

Visitor’s passes are issued at the Reception Desk / Main Gate of AServ-CSI after presentation of a valid identification card or passport and proof that admittance to the KIT-CN is necessary. The visitor’s pass is to be shown unrequested to the AServ-CSI staff and is to be surrendered on demand.

Security inspections of vehicles or carried-along boxes can be performed under specific instructions.
2.2 Admittance Regulations for Visitors

Visitors can enter the KIT-CN with a visitor’s pass. In the case that the visitor is unable to show any valid identification documents for the visitor’s pass to be issued, admission is only possible, when the visitor’s identity can be confirmed by the host. Visiting groups may be given a group pass, provided that the group has been registered by AServ-CSI in the form of a list (with name, given name, date of birth, and place of birth) and constantly is under the direction of a visitor’s guide.

Persons younger than 16 years are only allowed to enter the KIT-CN, if a written agreement from the head of the organizational unit to be visited has been submitted to the Reception Desk staff. Then, admittance is granted for this individual case and the rooms of the organizational unit to be visited only.

For admittance into radiation protection and security areas as well as biological laboratories of the KIT-CN of safety category S2 according to the Genetic Engineering Act and Infection Protection Act, specific regulations apply (see Sections 4 and 5).

2.3 Bringing along and Taking out Goods and Equipment

Whoever wishes to bring along or take out goods or equipment, as long as these are no private belongings, has to indicate this unrequested to the staff of AServ-CSI. In principle, the bringing along or taking out of goods must be handled through the Central Delivery Gate (building 234). Employees of the KIT and of guest institutions on the site (e.g. FIZ, ITU, WAK GmbH, and ZAG) can use the southern and northern gates for this purpose, provided they carry the corresponding forms (e.g. Ein-, Ausfuhrpapiere, Leihschein, Lieferschein).

Persons bringing items into or acquiring items within the KIT-CN itself must be able to give evidence of ownership when taking out these items from the KIT-CN. It is not allowed to bring in items for disposal.

For further details concerning the removal of materials (in particular waste, etc.), it is referred to Sections 4.6 and 6.

It is not permitted to bring into KIT - Campus North any animals, weapons (including imitation weapons or any items that look like weapons) or waste.

In justified individual cases, the “Sicherheitsbeauftragter” of the KIT-CN (Safety Commissioner of the KIT-CN) may allow exceptions on request.

2.4 Locking of Buildings and Rooms

When offices or laboratories are left unattended by persons working there for a longer period of time during the day, they must be locked. These regulations also apply at the end of the working day. After the normal working time, buildings must be locked.

2.5 Road Traffic on Site

Throughout the site, the provisions of the German Road Traffic Ordinance and the Road Traffic Registration Ordinance apply. The authorized maximum speed limit is 50 km/h.

Traffic supervision is attended by AServ-CSI. Directions and traffic regulation signals given by uniformed AServ-CSI staff must be obeyed. These take priority over general traffic regulations and specific local traffic signs.
Doors and gateways must be kept clear. In particular, marked emergency and escape routes (e.g. access routes for the fire brigade) as well as roads and entrances to the buildings must not be blocked by vehicles or objects.

To ensure an efficient exit of vehicles from the parking lots in the case of an evacuation, vehicles have to be parked in a way that it is possible for all vehicles to leave unhindered.

Industrial trucks (fork lifts, electric trucks) may only be operated by persons in possession of a “Fahrausweis für motorisch angetriebene Flurförderzeuge” (driving license for motorized industrial trucks) and an authorization in writing by the respective organizational unit to operate these vehicles for internal purposes.

Other motorized company vehicles are only allowed to be operated by persons in possession of a valid driving license and a “Berechtigungsausweis zum Fahren von Kraftfahrzeugen des KIT-CN” (authorization to operate motorized vehicles belonging to the KIT-CN).

KIT-vehicles, which are not registered for use on public roads, are not allowed to leave the fenced part of the site.

Washing and repairing of official vehicles is only allowed in the garage facilities of the KIT-CN. Washing and repairing of private vehicles is forbidden on the site.

2.6 Admittance Regulations for Specific Areas

Specific areas of the KIT-CN are divided off from the rest of the site by fences and other security measures and are placed under special surveillance. Movement of persons, vehicles, and materials across the boundaries of these areas is subjected to special regulations.

2.6.1 Radiation Protection Areas

Areas in which unsealed radioactive substances are allowed to be handled and “Kontrollbereiche” (controlled areas) are specially divided off and marked (see Annex IV). Admittance into these areas is subject to special requirements, see Section 4..

2.6.2 Biological Laboratories

Laboratories that are classified in safety categories according to the Genetic Engineering Act (Gentechnikgesetz) or the Infection Protection Act (Infektionsschutzgesetz) are specially marked (see Annex IV). Starting from safety category S2, admittance into these areas is subject to special requirements, see Section 5.

2.6.3 Construction Sites

Construction sites are supervised by the responsible construction manager. Admittance onto the construction site is only permitted with the consent of the construction manager and observing his instructions.

Construction site accommodation facilities (permanent or mobile) are only allowed to be set up with permission (Baustelleneinrichtungsschein) from “Abteilung Bauprojekte und Immobilien” (FM-BPI) of the Facility Management Service Unit. These facilities may be inspected for safety by SUM-BG or the “Fachkräfte für Arbeitssicherheit” (Work Safety Experts).
Fire and heating facilities may only be installed and operated with the authorization of the KIT-CN Fire Department (AServ-WF).

2.7 No Smoking, Fire, and Open Lights

Fire, open lights, and smoking are forbidden in specially signed areas. In addition, smoking is forbidden in all forest areas and in areas where unsealed radioactive substances or hazardous materials are handled.

2.8 Unauthorized Operating of Facilities and Equipment

Interventions into machines, devices, and other working equipment may only be carried out by authorized persons who are familiar with their operation, use, and maintenance.

Devices and equipment of information technology may be put into operation by authorized persons only. It is the responsibility of each organizational unit to specify regulations for admittance to and use of information technology and to control the observance of the regulations.

2.9 Photography

Taking photos, films, and videos on nonofficial occasions requires authorization. Outside of buildings, this authorization may be obtained from the Public Relations and Marketing Service Unit (PKM). For taking photos inside the buildings, authorization may be obtained from the head of the respective organizational unit.

3 Work Safety Regulations

Special work safety regulations for work with radioactive substances and for work with organisms modified by genetic engineering like infectious pathogens are given in Sections 4 and 5, respectively.

3.1 General Work Safety Regulations

In all activities, the pertinent laws, ordinances, administrative regulations, and accident prevention rules as well as the recognized guidelines of engineering must be observed and applied.

The most important work safety instructions are available in the organizational units. They can also be found on the Intranet under “KISS”. Further references are given in the specifications and documents distributed by SUM-BG to the heads of the organizational units and the “Sicherheitsbeauftragte Arbeitsschutz nach Sozialgesetzbuch VII” (Safety Commissioners according to the Social Act VII). In case of questions, consult these persons and/or the responsible “Fachkraft für Arbeitssicherheit” (Work Safety Expert). If required, work safety regulations can be requested from SUM-BG.

The most important warning signs are shown in Annex IV.

3.2 Handling Hazardous Substances at Work

Persons handling hazardous substances at work must be informed by oral instructions. Herein, these persons are informed of potential hazards and ways of averting them specific to their respective jobs before they are taking up their duties. Instructions have to be repeated
at appropriate intervals at least once a year. The contents and date of the instruction must be recorded in written form and confirmed by the signature of the person instructed. Attention must be given to the operating instructions given by the organizational units.

Pregnant or nursing mothers and persons younger than 18 years are subject to special restrictions when handling hazardous substances. For these persons, a workplace evaluation by the responsible "Fachkraft für Arbeitssicherheit" (Work Safety Expert) and/or the KIT-CN's physician is necessary before starting such work.

Hazardous substances such as laboratory chemicals may be transported on the site of the KIT-CN only in their original transport packaging or in a special box. The boxes can be obtained from the “Hauptlager” (main depot). These special boxes should also be used for transportation of chemicals within buildings. Large amounts of hazardous substances that are still in the original transport packaging must be transported in this packaging from the main depot for chemicals / central delivery gate to the recipient.

### 3.3 Preventive Medical Examinations, Information Obligations

According to the Ordinance on Preventive Occupational Medical Care (ArbMedVV), preventive medical examinations must be offered (optional examinations) or performed on a compulsory basis (compulsory examinations) for the activities listed in the annex of this ordinance. In case of compulsory examinations, the activity may be started only, if the examination has been carried out and medical unobjectionability has been confirmed. In case of optional examinations, the employees are free to let themselves be examined. The employer will be informed about medical objections or unobjectionability with the approval of the person examined only.

To ensure a central control of examination dates, the organizational units must notify SUM-BG that their employees are due for preventive medical examination (e.g. using the form “Meldung zur arbeitsmedizinischen Vorsorgeuntersuchung” - notification for preventative medical examination). SUM-BG will inform the Medical Services Unit about the examinations due. Appointments for the examinations are made by the Medical Services Unit.

Activities, during which pregnant or nursing mothers might be endangered by hazardous chemical substances, biological substances, and physical hazards (e.g. noise, vibrations, heat, etc.), require special evaluation. For this purpose, an additional hazard assessment is made by KIT's physicians and the experts for work safety.

### 3.4 Fire Prevention Measures

All work involving fire and explosive vapor/air mixtures may be carried out only with a “Erlaubnischein für Schweiß-, Schneid-, Löt-, Auftau- und Trennarbeiten” (permission form for welding, cutting, soldering, melting, and separation work).

Permission forms are issued by FM-BPI or the “Betriebsbeauftragter” (operations commissioner). No permission is required for work involving fire in specially equipped laboratories or workshops.

In addition to the permission form, allowance for execution of the work must be obtained from the “Betriebsbeauftragter” (operations commissioner of the organizational unit). This may take place only, if:

- necessary instructions have been defined,
- the fire department has signed and, if necessary, completed the permission,
Radiation Protection Regulations

- all required safety measures have been taken, and
- the contractor (e.g. external company, FM) has been informed of the safety instructions and other particulars.

The organizational unit must ensure that the **fire extinguishing equipment** is operational at all times. If fire alarm systems or parts of them are switched off for the execution of work for more than 15 minutes, surveillance of the respective area (guard or use of auxiliary fire alarm systems) is required. Access to fire extinguishing equipment must not be blocked. Staff members will be instructed in the use of fire extinguishing equipment by the fire department upon request by the organizational units.

Electrical cooking devices, such as boilers, coffee makers, and hot plates, must be put on refractory stands or mats. These items should only be used in the kitchens and amenities rooms.

### 3.5 Obligation to Report Accidents

In the event of an accident, the **“Alarmzentrale” (Emergency Control Center) – emergency call 3333 – must be contacted.**

In case of a work accident involving an employee of the KIT, the head of the corresponding organizational unit must be informed. The head of the organizational unit has to fill out the specific accident report and to forward it to SUM-BG within three days. SUM-BG transmits copies of the accident report to the “Fachkräfte für Arbeitssicherheit” (Work Safety Experts), the “Personalrat” (staff council), the accident insurance company of the KIT, and to the competent authority.

In case of accidents involving employees of external companies and persons delegated to the KIT, the head of the corresponding organizational unit and the superiors of the delegating company have to be informed. These are then obliged to report the accident to their accident insurance company. A copy of the accident report must be sent to SUM-BG.

An accident report must also be filed for accidents occurring when carrying out official activities on the way to and from the workplace, business trips, in sports within the company’s sports groups, or internal community events. In case of doubt, information can be obtained from SUM-BG or from the “Fachkräfte für Arbeitssicherheit” (Work Safety Experts).

To ensure that all work **accidents and accidents occurring on the way to and from the workplace** are reported in due time, you are required to report them to your superiors as soon as either you are involved in or witness such an accident.

### 4 Radiation Protection Regulations

Generation of ionizing radiation or any handling of radioactive substances is subject to approval or licensing by the respective authority. This means that all such activities are forbidden, unless a license has been granted or laws and regulations authorize an exception.

Persons generating ionizing radiation or handling radioactive substances, for which a permit is required or which must be reported, must observe the Atomic Energy Act, the Radiation Protection Ordinance, the X-ray Ordinance, clauses in the respective permit under the Atomic Energy Act, instructions given by the authorities, and special operating instructions. The SSB (“Strahlenschutzbeauftragte”, Radiation Protection Commissioners) appointed are responsible and authorized to give directions in matters of radiation protection. In most organi-
zational units, the names of the competent SSBs can be found on a signboard in the entrance lobby. In case of doubt, ask the head of your organizational unit.

The radiation protection regulations are compiled in the “Strahlenschutzordner” (Radiation Protection File) distributed to each SSB. Supplementary notifications of regulations concerning accounting and transportation of radioactive substances are also contained in the “Strahlenschutzordner” (Radiation Protection File). General radiation protection regulations can also be found in “KISS”.

If applicable, further radiation protection instructions of the individual organizational units for any special circumstances must be observed.

Persons working with ionizing radiation or radioactive substances must be instructed on relevant regulations as needed for their work. They also must be informed of possible hazards and protective measures before initially entering radiation protection areas and in subsequent annual radiation protection instructions. Annual radiation protection instruction is performed and documented by the responsible SSB or a qualified person appointed by him.

4.1 Radiation Protection Areas

In radiation protection areas, failure to observe the applicable rules and regulations when handling radioactive substances and/or radioactive emitters may create hazards due to:

- External exposure to ionizing radiation,
- contamination through unsealed radioactive substances,
- incorporation of radioactive substances.

“Radiation Protection Areas” for the purpose of these “General Safety Regulations” are:

- “Kontrollbereiche” (controlled areas, areas where effective doses exceeding 6 mSv/year are possible),
- “Sperrbereiche” (exclusion areas, areas within a “Kontrollbereich”, with a local dose rate exceeding 3 mSv/hour being possible),
- “Überwachungsbereiche” (supervised areas, operating areas not belonging to a “Kontrollbereich” where effective doses exceeding 1 mSv/year are possible or areas, in which unsealed radioactive substances are handled above the exemption level defined by the Radiation Protection Ordinance and with an existing risk of contamination).

“Kontrollbereiche” and “Sperrbereiche” are marked at the entrance by a warning sign indicating the associated potential hazards (Annex IV, 6.).

"Kontrollbereiche" are to be kept closed at all times.

4.1.1 Admittance Requirements

Before entering a marked radiation protection area to carry out or maintain operation processes, anybody has to ask the competent SSB about the admittance regulations and the applicable rules of conduct in the area(s) in question.

Before working in a radiation protection area for the first time, anybody has to ask for specific instructions by the competent SSB or a qualified person appointed by him/her. Before working in a radiation protection area, persons have to attend a radiation protection instruction session. If necessary, a medical examination has to be undergone before starting to work. In any case, anyone working in a radiation protection area must seek the approval of the competent SSB.
Pregnant and nursing women and persons younger than 18 years are subject to special protection according to the Radiation Protection Ordinance. Women, as soon as they have informed their employer that they are pregnant or nursing, may only work in radiation protection areas when the working conditions are such that an internal occupational radiation exposure is excluded and when the responsible SSB has agreed.

Persons under the age of 18 are not allowed to handle unsealed radioactive substances without explicit permission of the authorities, if a license is necessary to handle the radioactivity.

Special regulations for admittance into “Kontrollbereiche” (controlled areas) also apply to visitors. These regulations can be found in “KISS” and in the “Strahlenschutzordner”.

4.1.2 Specific Measures When Entering and Leaving Radiation Protection Areas Where Unsealed Radioactive Substances Are Handled

Only materials needed for the work at hand may be taken into radiation protection areas where unsealed radioactive substances are handled. It is forbidden to bring food, cigarettes, beverages, and cosmetics into these areas.

Books and journals from the KIT Library may not be brought into these areas. Books on permanent loan, which are needed in these areas in exceptional cases, must remain there and marked permanently.

Protective clothing provided by the SSB must be worn in radiation protection areas where there is a risk of contamination, (Annex V). Upon leaving the area, the protective clothing has to be removed. Hands, shoes, and, if applicable, clothes are to be subjected to a contamination control. The contamination monitors are installed at the exits of radiation protection areas with a risk of contamination. On suspicion of a personnel contamination or when a contamination is detected by the monitor, the responsible radiation protection staff must be informed immediately. The person(s) involved must await radiation inspections and measures. When the personnel contamination cannot be removed by simple means (e.g. washing) or on additional suspicion of incorporated radioactive substances, the SSB or the “Alarmzentrale” (Emergency Control Center) must be informed immediately. These, in turn, will inform the Medical Services Unit. The phone numbers of the competent SSB or the radiation protection staff are posted next to the contamination monitor. Further measures will be taken by the Medical Services Unit. The affected people are always transported by special vehicles of the Medical Services Unit.

Items (materials and objects) to be removed from areas in which unsealed radioactive substances are handled are subject to special regulations (see Section 4.6).

4.2 Radiation Protection Monitoring of Persons

The competent SSB applies to SUM-BG for including occupationally exposed personnel of the KIT-CN in radiation protection monitoring (“Personendosisregister”) using the form “Erhebungsbogen Strahlenschutz” (radiation protection application form). Persons from external companies that are occupationally exposed to radiation in the radiation protection areas at KIT-CN are dealt with by the central “Strahlenpassstelle” (Radiation Passport Office). Non-occupationally exposed persons (personnel of the KIT or persons from external companies) who wish to enter “Kontrollbereiche” (controlled areas) of the KIT-CN must also register with the central “Strahlenpassstelle”.

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4.2.1 Individual Dose Monitoring

Depending on the risk of exposure, persons registered for dose monitoring according to Section 4.2 are classified in different monitoring categories. The personal dosimeters distributed to these employees (the authority’s and/or operator’s dosimeter) must be worn for the time of their employment in KIT-CN’s radiation protection areas. Under special exposure conditions, the instructions given by the local SSB concerning the number, mode of wearing, and use of additional dosimeters or other monitoring methods must be observed.

In case the competent SSB orders to have regular incorporation measurements or additional monitoring measures carried out due to a suspected incorporation, these must be tolerated by the persons concerned for their own protection.

Employees of the KIT who work outside the KIT in “Kontrollbereichen” (controlled areas) as occupationally exposed personnel must be in possession of an officially registered, valid radiation passport and an official personal dosimeter. SUM-BG (phone 23021) is responsible for the registration and control of radiation passports (“Strahlenpass”). Details can be found in a radiation protection instruction for the implementation of Article 15 of the Radiation Protection Ordinance, which can be requested from SUM-BG.

4.2.2 Radiation Protection Instruction

Persons handling radioactive substances or using ionizing radiation under a license have to be instructed about potential hazards and their prevention before taking up their work. These instructions must be repeated annually. Also visitors of “Kontrollbereiche” (controlled areas) are obliged to take part in radiation protection instructions.

The competent SSB is responsible for the instruction contents and dates. He/she is also responsible for the documentation of the names of the persons so instructed in written form and for these documents being signed by the persons instructed.

Whoever does not participate in a scheduled instruction in time is prohibited from performing activities in radiation protection areas of the KIT by the “Strahlenschutzverantwortlichen” (SSV) until the person is given instruction.

4.2.3 Medical Surveillance and Information Obligations

Persons are only allowed to work in a “Kontrollbereich” (controlled area) or handle unsealed radioactive substances, if a valid medical certificate of health from an authorized physician exists. The medical examination has to be repeated at fixed intervals. The necessary medical examinations must be tolerated by the persons concerned.

In case the necessary medical certificate is not submitted in time to start work, the person is prohibited from performing these activities by the SSV.

Persons handling unsealed radioactive substances must inform the SSB or the authorized physician without delay about any diseases or lesions of the skin and immediately stop working with unsealed radioactive substances (cf. Section 4.4.2).

Female employees who are occupationally exposed to radiation are obliged to report pregnancies immediately to the SSB to ensure that the child is protected during pregnancy and nursing. The SSB has to ensure that the women’s working conditions exclude any incorporation and the dose limit specified for the unborn child by the Radiation Protection Ordinance is not exceeded. The dose monitoring measures to be taken in addition in this case are outlined in a separate radiation protection instruction that can be found in “KISS” or obtained from SUM-BG.
4.3 Work with the Risk of an Increased Radiation Exposure

Work with the risk of an increased radiation exposure is such work in which:

- An effective dose of 2 mSv or more is to be expected, or
- existing or foreseeable contamination requires protective measures exceeding the protective clothing defined in the Clothes and Zone Rules (Annex V), e.g. the use of respiratory protection gear or additional foil-type protective clothes, etc., or
- persons from external institutes/departments, who are not under continuous supervision, are working
  a) in “Kontrollbereiche” (controlled areas), or
  b) in “Überwachungsbereiche” (supervised areas) in which unsealed radioactive substances above 10 times the exemption level are handled, without these radioactive substances being enclosed by a solid enclosure or barrier, or
  c) on systems enclosing radioactive substances with activities above 10 times the exemption level (e.g. closed loops and their protection systems, etc.), or
  d) on systems that may affect safety in the areas mentioned under a) through c) (e.g. control rooms, ventilation systems, etc.).

This work is only allowed to be conducted with an “Arbeitserlaubnis-Strahlenschutz” (work permit – radiation protection).

The work permit is to be issued by the persons responsible in agreement with the SSB (Radiation Protection Commissioner), possibly involved external companies, and the local radiation protection staff in compliance with the regulations outlined in “KISSL” or the “Strahlenschutzordner” (Radiation Protection File).

4.4 Safe Handling of Radiation Sources

4.4.1 General

Radiation sources are all devices or systems emitting, or able to emit ionizing radiation. This includes, for example, X-ray facilities, particle accelerators, large-scale gamma sources, and neutron generators. Radiation sources also include sealed or unsealed radioactive substances.

Radiation sources are only allowed to be passed on – or loaned out – when it is ensured that the recipient is entitled to take possession to handle these sources.

Sealed radioactive substances or facilities that generate ionizing radiation but do not contain radioactive substances (X-ray facilities) are hazardous only due to external radiation exposure. Unsealed radioactive substances and damaged sealed radioactive substances pose hazards due to contamination and incorporation.

Nuclear fuels are classified as a special type of radioactive substances. In addition to measures against internal and external radiation exposure, appropriate control and monitoring measures have to be taken.
4.4.2 Measures against External Radiation Exposure

Persons operating or handling radiation sources must familiarize themselves with their properties and their correct, safe handling and observe valid handling instructions. For example, the following safety precautions have to be taken:

- Sufficient barriers and signs must be posted within hazardous areas, as shown in Annex IV, 6. In case of doubt, the competent SSB or the local radiation protection staff is to be consulted.
- Active materials and their containers must be correctly marked and labeled.
- Time spent in the radiation field is to be kept as short as possible.
- All work is to be carried out in such way that the radiation exposure of persons potentially affected is minimized to the extent possible.
- For an activity where the body dose is expected to be 2 mSv or more, an “Arbeitserlaubnis-Strahlenschutz” (work permit – radiation protection) must be obtained (see Section 4.3).
- On suspicion of inadmissibly high radiation exposure, the competent SSB and the local radiation protection staff have to be informed immediately.
- The loss of a radiation source is to be reported immediately to the competent SSB and the “Alarmzentrale” (Emergency Control Center, phone: 3333).

4.4.3 Additional Measures When Handling Unsealed Radioactive Substances

Persons dealing with unsealed radioactive substances must familiarize themselves with the chemical and physical properties of the respective substances and must observe the local work and radiation protection rules and instructions. The following safety precautions must be taken in addition to the measures required in Section 4.4.2:

- Work is only allowed after verifying that any necessary equipment is intact and that the workplace is sufficiently equipped for handling the substance envisaged taking into account the type, condition, quantity, and activity of the substance.
- It is forbidden to remove larger quantities from storage vessels and, consequently, higher activities than necessary for the work at hand.
- Records of the activity and history of the radioactive substance during the work process must be kept.
- It is absolutely forbidden to pipette liquids by mouth: Only suitable systems available for this purpose are to be employed.
- Residual radioactive substances are only to be collected in the specially prepared and distinctly marked containers. If major quantities of residues arise, these must be collected separately in the following categories: State (liquid, solid); type (organic, inorganic); property (fire hazard, burnable, unburnable); activity (high level, radioactive, potentially radioactive).
- Precautions must be taken to prevent any discharge of radioactive substances into rain-water drainage or household sewage systems.
- Type and volume of contaminations are to be marked.
Work in contaminated areas, in which respiration protection gear must be worn, may only be carried out if a “Arbeitserlaubnis-Strahlenschutz” (work permit – radiation protection, see Section 4.3) is obtained. In addition, training in the use of the respiration protection gear has to be performed. Finally, physical fitness of the personnel involved has to be confirmed by KIT-CN’s physician in a preventative medical examination (see Section 3.3).

In cases of:
- contamination,
- suspicion of personal contamination or incorporation, and
- accidents,
- release of radioactive substances into drainage systems not approved for this purpose,

further spreading of the radioactive substances must be prevented, the local radiation protection unit must be called, and the competent SSB as well as the ”Alarmzentrale” (Emergency Control Center, phone 3333) must be informed.

Further measures to be taken at the workplace in order to confine damage are agreed upon by the competent SSB and the local radiation protection unit.

On suspicion of a personal contamination or incorporation, the Medical Services Unit establishes further measures to be taken (examinations, measurements, treatment, if necessary). The transport of persons from the workplace to the Medical Services Unit takes place exclusively by special vehicles provided.

### 4.4.4 Additional Measures When Handling Nuclear Fuels

For persons handling nuclear fuels, Sections 4.4.2 and 4.4.3 apply. In addition, these persons must observe the following rules:
- They must keep records about the origin, current location, and whereabouts of the nuclear fuels in accordance with existing instructions.
- Waste from nuclear fuels is to be kept at a minimum. Upper limits for measured waste, as specified by EURATOM in the “Besondere Kontrollbestimmungen” (Particular Safeguards Provisions), may not be exceeded under any circumstances.
- Changes in nuclear fuel inventories and current location are to be documented.

In case of doubt, the competent SSB or SUM-BG is to be consulted.

### 4.5 Storage and Transport of Radioactive Substances

Radioactive substances are to be packed, stored, and transported, according to the relevant regulations, in specific containers with adequate shielding and clear labeling.

Radioactive substances are only allowed to be stored in suitable containers and must be in safe-keeping in such way that unauthorized access and improper use are excluded. In rooms where radioactive substances are handled, flammable materials (e.g., flammable liquids, cardboard packaging) and ignition sources are to be restricted to the absolute minimum. No other objects which may affect the safety (e.g. explosive materials, unnecessary pressurized gas bottles) may be kept there.
Contaminated objects are to be packaged leak-tight to prevent radioactivity from penetrating to the outside. They are to be marked with the correct label displayed in Annex IV, 7.

Radioactive liquids are to be stored in a way to prevent any leak of the container. Precautions are to be taken to ensure that any accidental spill of radioactive liquid material is prevented. The liquid is to be absorbed by an absorber material or spreading must be prevented reliably by a collecting system.

Transports of radioactive substances within an institute, i.e. transport within buildings and under the same license, are authorized handling activities. The safety precautions are laid down by the competent SSB.

Internal transports of radioactive substances are all transports of radioactive substances within the fenced site of the KIT-CN, with the exception of transports within buildings described in the previous paragraph. These transports are covered by a special license in connection with the “Transportordnung für den internen Transport radioaktiver Stoffe auf dem Gelände des Forschungszentrums Karlsruhe” (ITO, transport rules of the Forschungszentrum for internal transports of radioactive substances). The competent SSBs are responsible for the application of these regulations.

External transports of radioactive substances, i.e. transportation to and from the KIT-CN, are subject to regulations for the transport of radioactive substances under the German traffic laws and the Atomic Energy Act. At KIT-CN, the Beförderungsleitstelle (transport control office) of “Abteilung Überwachung und Messtechnik” (SUM-ÜM, phone 22644) is responsible for the organization and clearance of external transports of radioactive materials.

4.6 Removal of Materials from Radiation Protection Areas of the KIT-CN

In principle, all materials and objects that are to be removed from radiation protection areas, in which radioactive substances are handled, are subject to radiation protection control. This also applies to materials from buildings, of which only parts have been declared as radiation protection areas, where unsealed radioactive substances are handled under a license.

As a rule, the radiation protection controls are performed by the radiation protection staff of SUM-ÜM in accordance with the corresponding work instructions. The competent SSB of SUM-ÜM is responsible for the result of the measurements; the SSB of the radiation protection area involved is responsible for the substances being registered for radiation protection control.

The following removal activities have to be distinguished:

- Transfer of radioactive substances to another area under a separate handling license within the KIT-CN, including the removal of contaminated materials to HDB of WAK GmbH for decontamination,
- delivery of radioactive substances as radioactive waste to the “Landessammelstelle” (state collection center) at HDB of WAK GmbH,
- removal of objects for repair or reuse,
- clearance of former radioactive substances as non-radioactive substances for unrestricted use or disposal, and
- removal by waste collections from buildings, in which only parts have been declared as radiation protection areas.

For each of these removal activities, specific regulations apply.
4.6.1 Transfer of Radioactive Substances to Another Area within the KIT-CN under a Separate Handling License

In principle, transfer of radioactive substances from one to another area with a separate handling license has to take place via the competent SSB, as he/she is responsible for observing the removal conditions, for accounting of material, and for executing internal transports or for arranging correct transportation through the “Beförderungsleitstelle” (Transport Control Office) of SUM-ÜM (see Section 4.5). Radioactive substances removed from areas, in which unsealed radioactive sources are handled, must be marked by SUM-ÜM with the corresponding label according to Annex IV, 7.3 or 7.4.

4.6.2 Delivery of Radioactive Residues to the "Landessammelstelle" at HDB of WAK GmbH

Radioactive residues may only be delivered to the "Landessammelstelle", if they fulfil the "Landessammelstelle’s" criteria for the delivery of radioactive substances and if a properly completed “Begleitschein für radioaktive Reststoffe” (consignment note for radioactive residues), signed by the competent SSB, has been submitted. This note may be obtained from HDB of WAK GmbH. For transportation, see Section 4.5.

4.6.3 Removal of Objects for Repair or Reuse

The removal of objects, e.g. tools, instruments, measurement devices, clothes, books, etc. from radiation protection areas is subject to instructions given by the “Sicherheitsbeauftragte of the KIT” (Safety Commissioner of the KIT). These radiation protection instructions may be found in "KISS". They are also part of the competent SSB’s “Strahlenschutzordner” (Radiation Protection File).

Accordingly, objects may only be removed from radiation protection areas after a contamination control measurement has been performed by staff of SUM-BG. Objects controlled have to be marked by SUM-BG with the label according to Annex IV, 7.1, and may then be handled freely. These labels have to be removed when taking these objects out of the KIT-CN.

If contamination is found on any object during measurement, the object must remain in the respective radiation protection area or may only be removed according to Section 4.6.1 or 4.6.2.

4.6.4 Clearance of Former Radioactive Substances as Non-radioactive Substances for Unrestricted Use or Disposal or for proper management

In case objects or materials are to be removed as non-radioactive substances for unrestricted use or disposal or for proper management, an official clearance procedure must be initiated with the competent authority by the local SSB via SUM-BG. Execution of this procedure is subject to a radiation protection instruction according to Article 29 of the Radiation Protection Ordinance, which is also part of the “Strahlenschutzordner” (Radiation Protection File) and contained in "KISS".

Observance of clearance conditions specified in the authorities’ decision must be confirmed by the competent SSB of SUM-BG. After this, the materials may be handled freely or disposed by FM-VEA.
4.6.5 Removal by Waste Collections from Buildings, of Which Only Parts Have Been Declared as Radiation Protection Areas

Materials collected regularly on the site of the KIT-CN include e.g. wastes similar to domestic waste, styrofoam parts, styrofoam chips, paper, cardboard, glass, and office waste (toner cartridges, ink cartridges, data carriers, etc.).

Removal of such materials also is subject to a radiation protection instruction, the revised version of which is contained in “KISS”.

5 Regulations for Biological Laboratories with a Safety Classification

5.1 Areas, in Which Genetically Modified Organisms and Infectious Pathogens Are Handled (Biological Protection Areas)

Genetic engineering activities and work with infectious pathogens are classified in various safety categories depending on their hazard potential (S1 to S4; GenTG, S2 to S4; IfSG). Classification is based on the risks for human health and the environment posed by the (micro)organisms and their properties (pathogenesis, infectiousness, transmission paths, etc.). According to the state of science, no risks for the human organism and the environment can result from related working processes and from the organisms used (risk group I) in facilities of safety category S1. Safety category S2 laboratories pose an inherent small risk for man and the environment. Accordingly, categories S3 and S4 are associated with a moderate and high risk, respectively. The safety requirements to be met in terms of equipment, personnel (qualification), and protection systems in the laboratories increase from levels S1 to S4. For example, admittance to S2 laboratories is restricted, installation of a personnel double door system is required for S3, and a double door system combined with a reduced pressure system must be installed from S4. The “Beauftragte für die Biologische Sicherheit” (Biological Safety Officers) are responsible for the safety of genetic engineering activities at “Gentechnische Anlagen” (genetic engineering plants).

5.2 Admittance

Admittance to genetic engineering laboratories is restricted from safety category S2 (GenTG). In addition, admittance to facilities, where work with infectious pathogens (IfSG) is performed, is subject to access restrictions. Admittance restrictions also apply to persons in charge of maintenance work and laboratory cleaning.

5.3 Work in Biological Protection Areas

Work with genetically modified organisms (e.g. bacteria, cell cultures) may only be performed in specially marked laboratories according to the valid operation instructions and hygiene plans. These are explained in a personnel safety instruction given prior to the start of any work (wearing of protective clothing, disinfection measures, etc.; Section 5.4).

When handling genetically modified organisms, working with biological examination materials and potentially infectious pathogens as well as when safely disposing of contaminated waste, pertinent regulations (operations instructions, hygiene plans, disposal plans) of the organizational units have to be observed.
In laboratories classified in safety category S2 or higher, maintenance and installation work is subject to additional requirements. For example, laboratories and test objects (e.g. microbiological workbenches) must be decontaminated, if necessary, prior to the start of maintenance work.

Disposal of contaminated waste is described in the hygiene plans of the organizational unit.

### 5.4 Instructions

Before taking up work in laboratories with a safety classification, new employees must receive a general safety instruction about the regulations of the facility and the work requirements. For employees of genetic engineering and infection laboratories, safety instructions have to be repeated at intervals of twelve months and whenever the type of genetic engineering activity or room conditions are changed. Safety instructions must be documented (instruction contents, signature of the staff, name of the instructor). The documentation of the instructions must be sent to SUM-BG. Responsible staff of external companies (e.g. cleaning companies) has to be familiarized with the relevant safety requirements prior to the start of work. The contracted company is obliged to instruct its working personnel.

### 5.5 Medical Surveillance and Information Obligation

Persons working in genetic engineering laboratories or in laboratories for work with pathogens according to “§§ 44 ff. Infektionsschutzgesetz (IfSG)” (Articles 44ff. of the Infection Protection Act), which have been assigned to safety category S2 or higher, have to be examined by the KIT’s physician before taking up their activity. These medical examinations are then to be repeated at regular yearly intervals. In case the necessary medical certificate is not submitted in time, the person is prohibited from this activity (for registration for medical examination and the control of examination dates, see Section 3.3).

Medical examinations of persons working in S2 to S4 laboratories (genetic engineering, infection protection) must be carried out annually and within six weeks prior to the expiry of the examination deadline as well as prior to the termination of employment.

Female employees who work in S2 laboratories (genetic engineering, infection protection) are obliged to report pregnancies. In addition, persons working in areas classified S2 or higher are obliged to inform their superiors about changes in their state of health (e.g. impairment of the immune system). In these cases, contact the competent head of project, head of your organizational unit, or the “Betriebsärztin / Betriebsarzt” (KIT’s physician).

### 6 Waste Disposal

#### 6.1 Delivery of Wastes

Wastes from “Kontroll-/Überwachungsbereichen” (controlled/supervised areas) are subject to specific regulations (cf. Section 4.6).

The Waste Management Center of the KIT-CN (phone 22222) is responsible for the disposal measures. This includes, for example,

- advice and information for the grading and collection of waste and for the internal waste management,
- packaging for internal registration of waste products,
collection of waste products from the organizational units, and delivery to the intermediate waste storage facility (building 604),

planning and execution of all waste management procedures, and

overall administration of waste management.

All accumulated waste must be handed over with an “interner Abgabeschein” (internal delivery form) to the Waste Management Center or registered for collection. This does not apply to recyclable or valuable materials (regular wastes like paper, cardboard boxes, spent glass, styrofoam, packaging material) as well as to industrial waste (residual waste) that have to be kept ready for collection at collection points (waste depots). Waste produced by external companies, e.g. construction materials, components, or operation media, remain the property of the external companies and must be disposed of by these external companies or their authorized contractors.

In every organizational unit, a contact person to the Waste Management Commissioner must be appointed. This person manages the internal delivery forms and is responsible for the coordination of waste management of the related organizational unit. The “Betriebsbeauftragter für Abfall” (Waste Management Commissioner) may be contacted by all employees of the KIT and external companies, if necessary (phone 24848).

Specific wastes for utilization or disposal will be collected regularly. These are industrial waste (residual waste) and recyclable materials, such as paper/cardboard, glass, styrofoam, and valuable materials (metals, plastics, composite materials, packaging). Collection takes place at the central waste depot of the organizational unit according to a defined schedule (semi-annual disposal calendar) organized by the “Abfallwirtschaftszentrale” (Waste Management Center). The organizational units are obliged to sort waste, if necessary, and to transfer the sorted cardboards, old glasses, styrofoam, and valuable materials to the waste depot. Waste paper and refuse bins in the rooms are emptied by the cleaning staff. Waste paper with data protection-relevant contents can be collected upon request (phone 22222). All other wastes either have to be delivered to the waste store (building 604) for disposal with the “Interner Abgabeschein” (internal delivery form) or the units must notify the “Abfallwirtschaftszentrale” (Waste Management Center) for their collection (phone 22222).

Wastes with hazardous properties, i.e. toxic, caustic, infectious, highly flammable, explosive materials, materials hazardous to health, and materials hazardous to the environment are no usual wastes and must be delivered to the Waste Management Center with an internal delivery form.

6.2 Collection of Non-radioactive Waste

Non-radioactive waste may only be collected in suitable and clearly labeled containers provided for internal refuse collection. These containers must be put up in such a way that unauthorized access, misuse, and hazards to man and the environment are excluded.

Information about the registration and collection of waste can be obtained from the Waste Management Commissioner (phone 24848), the Water Protection Commissioner (phone 24511), or the Waste Management Center (phone 22222). It also supplies the necessary collection containers.
6.3 Documents Accompanying Waste Transports

For the removal of waste that does not need to be controlled for utilization, a special delivery receipt issued by the Waste Management Center is required. For this, an internal delivery form must be submitted to the Waste Management Center by the respective organizational unit. All other wastes may be brought out only, if the complete waste management documentation and in particular the “Begleitschein” (delivery note), “Übernahmeschein” (transfer note), “Beförderungserlaubnisse” (transportation permits), and “Entsorgungsfachbetriebszertifikate” (waste management expert certificates) have been submitted.

7 Water Protection Regulations

The existing laws and internal regulations concerning water protection must be strictly adhered to during utilization of the KIT-CN's sewage systems and the handling of substances hazardous to water.

In case of doubt, please contact:
- the “Kontaktperson zum Gewässerschutzbeauftragten” (contact person of the Water Management Commissioner) of your organizational unit,
- your "Betriebsbeauftragter” (operation commissioner), or
- the Water Protection Commissioner (SUM-ZB, phone 24511).

7.1 Sewage

Sewage collection, treatment, and safe discharge into a surface water body are managed by the “Abteilung Ver- und Entsorgungsanlagen” (FM-VEA, Supply and Waste Management Facilities Division) in separate systems:
- Rainwater drainage system,
- domestic sewage (offices and amenities),
- chemical effluents (workshops, laboratories, technical facilities).

Note that:
- Domestic sewage or chemical effluents may never be introduced into the rainwater drainage system, as the rainwater is discharged into a surface water body (Hirschkanal) without any further treatment.
- Cooling water which is not altered chemically may be discharged into the rainwater drainage system, if FM-VEA (phone 24362 or 26118) has been previously informed.
- The following types of chemical effluents are distinguished:
  a) **Chemical effluents I** (non-radioactively contaminated effluents),
  b) **chemical effluents II** (potentially radioactively contaminated effluents),
  c) **chemical effluents III** (radioactively contaminated effluents).

These differences are to be observed on all accounts when discharging effluents and sewage. It is strictly prohibited to dispose of chemicals (chemical residues) or waste via the sewage systems (for proper disposal, see Section 6).
7.2 Handling Substances Hazardous to Water

In case substances hazardous to water enter the ground, groundwater or any of the sewage systems, call the “Alarmzentrale” (Emergency Control Center), phone 3333).

8 Regulations in the Event of an Alarm

The alarm plan of the KIT-CN encompasses all measures to be taken to render assistance and maintain/restore safety in cases of imminent danger to persons, the environment or objects or in cases of safety-relevant events (hereinafter referred to as alarms). The alarm plan is detailed and complemented by follow-up plans drawn up by the respective organizational units.

8.1 Precautional Obligation to Inform

Besides the regulations summarized in this section, all employees must familiarize themselves with the emergency measures pertinent to their specific areas of work. In this way, prompt repairs of breakdowns and defects are guaranteed without impairing safety.

The heads of the organizational units must therefore ensure that necessary instructions are given and all employees are sufficiently informed. The information is contained in instructions, operating manuals, follow-up plans, and fire-fighting plans (for each building).

8.2 Notification in Case of an Alarm

Every employee is obliged to inform the “Alarmzentrale” (Emergency Control Center) by phone 3333 as soon as it is recognized that the safety of persons, the environment or objects is endangered.

The “Alarmzentrale” (Emergency Control Center) can be reached by the emergency call 3333.

In the case of notifying an emergency to the Emergency Control Center, the following information must be given:

- **Location**: institute/department (or name of external company), building number, building section, room number in which the event has occurred,
- **Type**: of event (short, clear details about the emergency, e.g. fire, explosion, etc.),
- **Name**: of the person calling, and
- **Phone number**: under which the caller can be reached after the report.

The caller has to wait for the Emergency Control Center to repeat his report. Then, the caller’s superior is to be informed. If the caller is not in his organizational unit, then the management of the organizational unit affected by the alarm is to be informed. **Injured and ill persons will be transported by the Medical Services Unit.** Arriving emergency forces are to be informed about the details. If necessary, an information chain has to be maintained until all emergency forces have arrived.
Some areas are equipped with automatic alarm systems. Whoever sees or hears an alarm signal must inform the Emergency Control Center (phone 3333) and the persons responsible for the area affected.

8.3 Information about the Alarm

KIT-CN buildings and facilities are equipped with loudspeaker systems. The Emergency Control Center can use these for messages to all areas.

General messages are introduced by a gong sound.

**Alarm reports are preceded by an intermittent sound of a horn.**

The loudspeaker system is checked regularly by test transmissions. Any defects detected should be reported to the Emergency Control Center.

8.4 Emergency Measures

In the event of an alarm, the personnel of the facility affected has to take all necessary measures specified in the operations instructions in order to repair the damage or to reduce the consequences until the emergency forces arrive.

8.5 Task Force Management

The role of the task force leader is assumed by the commander of KIT-CN’s Fire Department or the shift leader as his deputy. The task force leader acts on behalf of the Presidential Committee or the Safety Commissioner (see Annex I).

**The instructions of the “Einsatzleiter” (Task Force Leader) are to be carried out by all persons.** This also applies when duties are assigned, which normally are not part of a person’s activities.

In the event of an alarm, the Task Force Leader, in close cooperation with the head of the affected organizational unit, defines the measures to be taken and arranges for their execution. Measures which cannot be delayed will be initiated without previous discussion.

If an alarm is restricted to the premises of an external institution (e.g. ITU, FIZ, WAK GmbH), the **responsible operations manager** of this institution acts as the Task Force Leader.

8.6 Evacuation of the KIT-CN

8.6.1 Evacuation Causes

**External:**

Evacuation of the KIT-CN may be necessary on the basis of information from:

- the “Regierungspräsidium Karlsruhe”,
- the “Landespolizeidirektion” (police headquarter) Karlsruhe,
- the “Landratsamt Karlsruhe”,
- the “Bürgermeisteramt” (mayor’s office) of Eggenstein-Leopoldshafen.
Internal:
Evacuation of the premises, parts of the premises, buildings or facilities of the KIT-CN may be necessary in the event of an alarm, if required by an emergency situation. In this case, the “Einsatzleiter” (Task Force Leader) gives the necessary instructions.

8.6.2 Evacuation
An evacuation is ordered by the Task Force Leader via the loudspeaker system. All persons staying in the affected areas must obey the evacuation order.

The order for evacuation can be issued in two steps:
- “Räumungsbereitschaft” (evacuation alert),
- “Soforträumung” (immediate evacuation).

In case of a “Räumungsbereitschaft” (evacuation alert), all activities must be stopped immediately and a safe state of facilities must be ensured. All those affected must wait for further instruction and be prepared for an evacuation.

If “Soforträumung” (immediate evacuation) is ordered, all activities must be stopped at once and a safe state of facilities must be ensured. All persons must immediately leave the building and behave as described in the following sections 8.6.3, 8.6.4, and 8.6.5.

In accordance with internal regulations of the organizational units, the necessary shutdown and emergency measures must be taken by those employees commissioned to perform these duties.

During evacuation, excessive haste and hurry must be avoided. By being careful, accidents or injuries can be avoided.

8.6.3 “Gesamträumung” (Complete Evacuation)
If immediate evacuation of the complete KIT-CN is ordered, all persons, with the exception of the safety services, are to leave for home. For safety and efficiency reasons in the case of a complete evacuation, the KIT-CN site is subdivided into two evacuation areas, north and south (Annex VI). Persons in the northern evacuation area when the evacuation is ordered should use the northern gate to leave the site and persons in the southern evacuation area use the southern gate.

Primarily private cars are to be used for the evacuation. Car owners are obliged to give lifts to persons without cars. Persons who are unable to find a lift are to gather near the southern gate, in front of the FTU (building No. 101) or next to the northern gate (building No. 1600).

The duration of an evacuation – unless otherwise provided – is in principle limited to the one working day. The duration of an evacuation of the KIT-CN in the event of a disaster is variable. You can keep informed through the general communication channels (newspapers, radio).

8.6.4 Evacuation of Parts of the KIT-CN
If immediate evacuation of a part of the KIT-CN is ordered, all persons, with the exception of the safety services, are to proceed to the assembly point “FTU”. There, further instructions are to be waited for.
Depending on the danger situation, the “Einsatzleiter” (Task Force Leader) may give other instructions. Listen to the loudspeaker message.

8.6.5 Evacuation of Buildings and Facilities
If immediate evacuation of buildings and facilities is ordered, all persons, with the exception of the safety services, are to proceed to the designated assembly point of this building/facility.
Depending on the danger of the situation, the “Einsatzleiter” (Task Force Leader) may give other instructions. Listen to the loudspeaker message.

8.6.6 Specific Regulations
For the safety services and the technical emergency services of single organizational units, specific regulations apply. They are described in detail in the alarm plan or in the “Gebäudeanschlussplan” (follow-up plans) for these specific buildings.
9 Annexes

9.1 Annex I: Safety Organization of the KIT

- **„Präsidium“**
  - Executive Board

- **„Sicherheitsbeauftragter“**
  - Safety Commissioner

- **„Einsatzleiter“**
  - Task Force Leader

- **„Einsatzstab“**
  - Task Force

- **„Ständige Sicherheitsdienste“**
  - Regular Safety Services

- **AServ**
  - **„Allgemeine Services“**
    - General Services
    - Campus Security
    - Fire Department

- **FM**
  - **„Facility Management“**
    - Maintenance
      - Electric, heating, ventilation, plumbing systems
    - Supply and Waste Management Facilities
      - Electricity, Water, Sewage, Heat

- **MED**
  - **„Medizinische Dienste“**
    - Medical Service
    - First aid Station
    - Radiation accident Station (RSZ) and Toxicological Laboratory with decontamination vehicle

- **SUM**
  - **„Sicherheit und Umwelt“**
    - Safety and Environment
    - Radioanalytic Laboratories
    - Staff unit
      - Monitoring of exhaust air and the surrounding area
    - Monitoring and measurement instrumentation

- **WAK GmbH**
  - **„Wiederaufarbeitungsanlage Karlsruhe Rückbau- und Entsorgungs-GmbH“**
    - Radiation measurement and decontamination

- **Ambulance**

- **Radiation measurement**

---

23
## Annex II: Special Safety Regulations

<table>
<thead>
<tr>
<th>Event</th>
<th>Persons Responsible</th>
<th>Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alarms</td>
<td>&quot;Einsatzleiter&quot; (Task Force Leader), head of the respective organizational unit, employees holding functions in the safety organization</td>
<td>&quot;Alarmplan&quot; (Alarm plan) and &quot;Anschlusspläne&quot; (follow-up plans)</td>
</tr>
<tr>
<td>Work safety</td>
<td>Head of the respective organizational unit, &quot;Betriebsbeauftragte&quot;, &quot;Fachkräfte für Arbeitssicherheit&quot; (Work Safety Experts), &quot;Sicherheitsbeauftragte für den Arbeitsschutz nach Sozialgesetzbuch VII&quot; (Safety Commissioners for Work Safety according to the Social Act VII)</td>
<td>&quot;Arbeitsschutz-Merkblätter, Band 1 und 2&quot; (work safety leaflets, volumes 1 and 2), &quot;Unfallverhütungsvorschriften&quot; (accident prevention regulations), &quot;Merkblätter 'Gefährliche Arbeitsstoffe'&quot; (data sheets on &quot;hazardous substances&quot;)</td>
</tr>
<tr>
<td>Waste management</td>
<td>&quot;Abfallwirtschaftszentrale&quot; Waste Management Center, &quot;Kontaktpersonen zum Abfallbeauftragten) contact persons of the Waste Management Commissioner</td>
<td>Regulations for the recycling and disposal of waste at KIT-CN (&quot;Abfallordnung&quot;)</td>
</tr>
<tr>
<td>Delivery of radioactive residues</td>
<td>&quot;Landessammelstelle&quot; at HDB, the respective SSB (Radiation Protection Commissioner)</td>
<td>&quot;Bedingungen für die Annahme radioaktiver Stoffe&quot; (criteria for the delivery of radioactive substances) of the &quot;Landessammelstelle&quot; at the HDB</td>
</tr>
<tr>
<td>Special events (radiological)</td>
<td>SSB, &quot;Einsatzleiter&quot; (Task Force Leader), &quot;Leiter der Organisatationseinheit&quot; (head of the organizational unit) &quot;Projektleiter in Biologischen Sicherheitsbereichen&quot; (head of project in biological protection areas)</td>
<td>&quot;Regelung zur Meldung sicherheitstechnisch bedeutsamer Ereignisse und zur Übermittlung besonderer Informationen an die atomrechtlichen Aufsichtsbehörden&quot; (Reporting and information regulations)</td>
</tr>
<tr>
<td>Special events in the fields of</td>
<td>&quot;Einsatzleiter&quot; (Task Force Leader), &quot;Leiter der Organisatationseinheit&quot; (head of the organizational unit) &quot;Projektleiter in Biologischen Sicherheitsbereichen&quot; (head of project in biological protection areas)</td>
<td>&quot;Melderegulung&quot; (Reporting regulations)</td>
</tr>
<tr>
<td>- work safety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- environmental protection</td>
<td></td>
<td></td>
</tr>
<tr>
<td>External transport of hazardous radioactive substances</td>
<td>&quot;Beförderungsleitstelle des SUM-ÜM&quot; (Transport Control Office of SUM-ÜM), &quot;Gefahrgutbeauftragter&quot; (Hazardous Goods Commissioner)</td>
<td>GGVSEB/ADR, ICAO-TI/ATA-DGR, &quot;Strahlenschutzordner&quot; (Radiation Protection File),</td>
</tr>
</tbody>
</table>

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1 Many of these regulations can also be found on the intranet under www.kiss.kit.edu
<table>
<thead>
<tr>
<th>Event</th>
<th>Persons Responsible</th>
<th>Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water protection</td>
<td>“Verantwortlicher Betriebsleiter für Abwasser” (head of Wastewater Treatment Plant), “Gewässerschutzbeauftragter” (Water Protection Commissioner), head of the respective organizational unit, “Betriebsbeauftragte”</td>
<td>“Abwasserordner” (Sewage File)</td>
</tr>
<tr>
<td>Internal transport of radioactive substances</td>
<td>Dispatchers and recipients of radioactive substances, “SSB” (Radiation Protection Commissioner), “Transportverantwortliche” (personnel responsible for transporting radioactive substances), “Transporteure” (carriers)</td>
<td>“Genehmigung nach § 9 Atomgesetz” (License under Art. 9 of the Atomic Energy Act) and “Transportordnung für den internen Transport radioaktiver Stoffe auf dem Gelände des Forschungszentrums Karlsruhe” (transport regulations of the Forschungszentrum Karlsruhe for the internal transporting of radioactive substances)</td>
</tr>
<tr>
<td>Nuclear materials safeguards</td>
<td>Head of the respective organizational unit, “SSB” (Radiation Protection Commissioner), “Kontaktpersonen zur Erfüllung der Meldepflichten für Kernmaterial und sonstige radioactive Stoffe” (contact persons for compliance with the reporting obligations for nuclear material and other radioactive substances), persons handling nuclear material</td>
<td>“Strahlenschutzordner”, (Radiation Protection File)</td>
</tr>
<tr>
<td>Radiation protection</td>
<td>“SSB” (Radiation Protection Commissioner) under the Radiation Protection Ordinance and the X-ray Ordinance</td>
<td>“Strahlenschutzordner”, (Radiation Protection File)</td>
</tr>
<tr>
<td>Activities of staff of KIT-CN in external facilities or installations according to Art. 15 Rad. Prot. Ord.</td>
<td>Central “SSB” (Radiation Protection Commissioner) for Art. 15 Rad. Prot. Ord. with SUM-BG</td>
<td>“Strahlenschutzordner”, (Radiation Protection File)</td>
</tr>
</tbody>
</table>
### 9.2 Annex III: Tasks of the SUM, FAS and AServ

#### “Sicherheit und Umwelt” (SUM)

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiation protection</td>
<td>Observance of the Radiation Protection and X-ray Ordinances, advice, operations and time monitoring, documentation of all person-related radiation protection data and reporting, appointment of Radiation Protection Commissioners (SSB), issuing of “Strahlenspässe” (radiation passports). Compliance with the obligations concerning activities of staff of the KIT-CN in external institutions and installations, for which permits are required</td>
</tr>
<tr>
<td>Monitoring of radioactive substances</td>
<td>Accounting and reporting of nuclear materials, accompanying inspectors from IAEA and Euratom, accounting and reporting of other radioactive substances. Accounting and reporting for the clearance of radioactive substances. Internal transportation: Documentation</td>
</tr>
<tr>
<td>Work safety</td>
<td>Plant and workplace monitoring, safety information, consultancy and training, accident analyses</td>
</tr>
<tr>
<td>Waste management</td>
<td>Regulations for internal waste management, monitoring of recycling/disposal of wastes, working towards avoiding and recycling of waste, information and documentation</td>
</tr>
<tr>
<td>Hazardous goods</td>
<td>Monitoring and control of authorized personnel and transportation procedures, notification of defaults and working towards their avoidance, information, instruction, and guidance for employees concerning the transporting of hazardous goods, documentation</td>
</tr>
<tr>
<td>Water protection</td>
<td>Regulations concerning the removal of sewage and the handling of substances hazardous to water, control and monitoring, information and documentation</td>
</tr>
<tr>
<td>Emission protection</td>
<td>Regulations concerning the reduction of emissions of combustion and district-heating plants, control and monitoring of emissions, radiological exhaust air and environmental monitoring, information and documentation</td>
</tr>
<tr>
<td>Licenses</td>
<td>Coordination and execution of all licensing procedures, except for licenses according to the “Landesbauordnung” (State Building Regulations)</td>
</tr>
</tbody>
</table>

#### “Stabsstelle Fachkräfte für Arbeitssicherheit” (FAS; Work Safety Experts Unit)

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work safety</td>
<td>Operations and workplace monitoring, Safety information, consultancy, training, Accident analyses. Duties of the Work Safety Experts according to “§ 6 Arbeitssicherheitsgesetz” (Art. 6 Work Safety Act)</td>
</tr>
</tbody>
</table>

#### „Allgemeine Servides” (AServ, General Services)

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security</td>
<td>Emergency Control Center, action plans relating to the alarm system, task force documents and reports, access controls and monitoring of the operation premises</td>
</tr>
<tr>
<td>Fire Department</td>
<td>Task force management during incidents and accidents, structural and preventive fire protection, fire fighting / technical assistance, training, alarm drills of the safety services</td>
</tr>
</tbody>
</table>
9.3 Annex IV: Signs in the Workplace

1. Prohibition Signs

- **P000** Prohibition
- **P001** No smoking
- **P002** No fire, open lights or smoking
- **P003** No pedestrian access
- **P004** No fire-fighting with water
- **P005** Not suitable for drinking
- **P006** Unauthorized access forbidden
- **P007** No floor conveyors
- **P008** Forbidden to touch
- **P009** Do not touch, housing under voltage
- **P010** Do not switch
- **P011** Forbidden to people with heart pace-makers
Annex IV:  Signs in the Workplace

1. Prohibition Signs

- **P012**  Do not leave or store objects
- **P013**  No transport of persons (passengers on cableway prohibited)
- **P014**  No animals allowed
- **P015**  Do not step on this area
- **P016**  Forbidden to people with metal implants
- **P017**  Do not spray with water
- **P018**  No mobile radio communication
- **P019**  No eating or drinking
Annex IV: Signs in the Workplace

2. Warning Signs

- W000 Warning against a danger area
- W001 Warning against flammable substances
- W002 Warning against explosive substances
- W003 Warning against toxic substances
- W004 Warning against caustic substances
- W005 Warning against radioactive substances or ionizing radiation
- W006 Warning against suspended loads
- W007 Warning against floor conveyors
- W008 Warning against dangerous electric voltage
- W009 Warning against optical radiation
- W010 Warning against laser radiation
- W011 Warning against fire-promoting substances
Annex IV: Signs in the Workplace

2. Warning Signs

- W012 Warning against electromagnetic radiation
- W013 Warning against magnetic fields
- W014 Warning: Risk of tripping
- W015 Warning: Risk of falling
- W016 Warning: Biological hazard
- W017 Warning against cold temperatures
- W018 Warning against harmful substances
- W019 Warning against gas containers
- W020 Warning against danger caused by batteries
- W021 Warning against explosive atmosphere
- W023 Warning against being squashed in
- W024 Warning against tilting danger during rolling
Annex IV: Signs in the Workplace

2. Warning Signs

- W025 Warning against automatic start of operations
- W026 Warning against hot surfaces
- W027 Warning: Risk of hand injuries
- W028 Warning: Risk of slipping
- W029 Warning against a conveyor system in the rails
- W030 Warning: Risk of objects being drawn-in

Warning against dangerous radioactive substances or ionizing radiation (on source cover)
Annex IV: Signs in the Workplace

3. Mandatory Signs

M000 General mandatory sign
M001 Wear protective eye goggles
M002 Wear protective helmet

M003 Wear ear protection
M004 Wear breathing apparatus
M005 Wear protective footwear

M006 Wear protective gloves
M007 Wear protective clothing
M008 Use protective face screen

M009 Use belt against falling
M010 Pedestrian access
M011 Wear safety belt

* Only together with additional sign!
Annexes

Annex IV: Signs in the Workplace

3. Mandatory Signs

M012 Use crossing provided
M013 Pull mains plug before opening
M014 Clear before work
M015 Wear life jacket
Annex IV: Signs in the Workplace

4. Escape Signs

- E001 Direction of first-aid facilities, escape routes, emergency exits*
- E002 Direction of first-aid facilities, escape routes, emergency exits*
- E003 First-aid station
- E004 Stretcher bearer
- E005 Emergency shower
- E006 Eye washing facilities
- E007 Emergency telephone
- E008 Physician
- E009 Escape route / emergency exit**
- E010 Escape route / emergency exit**
- E011 Assembly point

* Direction arrows may only be used in connection with other escape signs
** Only displayed along with a direction arrow
Annex IV: Signs in the Workplace

4. Escape Signs

E012 Escape route*

E013 Escape route*

E014 Emergency exit

E015 Emergency exit

E016 Emergency exit

E017 Automatic external defibrillator

Combination of escape route (E010) and direction (E001)

* On the escape route sign, the arrow may also point to the upper or lower corner of the door opening so as to mark the further course of the escape route, e.g. stairs
Annex IV: Signs in the Workplace

5. Fire Protection Signs

- F001 Direction
- F002 Direction
- F003 Extinguishing hose
- F004 Ladder
- F005 Fire extinguisher
- F006 Telephone for reporting fires
- F007 Equipment for fighting fires
- F008 Fire alarm (manual)

5a. Classification of Radiation Protection Areas for the Fire Department

Classification of radiation protection areas in danger groups I to III (I being the lowest risk, III being the highest)

* Only displayed along with an additional fire protection sign
Annex IV: Signs in the Workplace

5b. Master Switches, Switch-off and Emergency Stop Systems

Switching station of electricity supply for building sections

Master switch of electric equipment (e.g. ventilation system*)

Emergency stop system (e.g. water*)

* The designation of the system is to be indicated on the sign when using it.
Annex IV: Signs in the Workplace

6. Radiation Protection Signs

<table>
<thead>
<tr>
<th>Annex IV: Signs in the Workplace</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1 Warning notice* indicating “Sperrbereich” (exclusion area)</td>
<td>6.2 Warning notice* indicating “Kontrollbereich” (controlled area)</td>
<td>6.3 Warning notice* indicating general ionizing radiation</td>
</tr>
<tr>
<td><img src="image" alt="Sperrbereich Kein Zutritt" /></td>
<td><img src="image" alt="Kontrollbereich" /></td>
<td><img src="image" alt="Radioaktiv Vorsicht Strahlung Kontamination Kernbrennstoffe" /></td>
</tr>
<tr>
<td>* The information of the type of danger below these radiation warning signs is defined by the competent Radiation Protection Commissioner in the light of existing conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.4 Warning notice indicating an area of increased radiation</td>
<td>6.5 Warning notice indicating a contaminated area</td>
<td>6.6 Warning notice indicating a “Kontrollbereich für Röntgenstrahlung” (controlled X-ray area)</td>
</tr>
<tr>
<td><img src="image" alt="Vorsicht Erhöhte Strahlung" /></td>
<td><img src="image" alt="Vorsicht Kontamination" /></td>
<td><img src="image" alt="Röntgen Kein Zutritt für Unbefugte" /></td>
</tr>
<tr>
<td>&gt; 10 μSv/h</td>
<td>Radionuklid [ ] μSv/h</td>
<td>Datum [ ] Name [ ]</td>
</tr>
<tr>
<td>maximal [ ] μSv/h</td>
<td>Oberfl.-Kont. [ ] Bq/cm²</td>
<td>Datum [ ] Name [ ]</td>
</tr>
<tr>
<td>Datum [ ] Name [ ]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Annex IV: Signs in the Workplace

7. Radiation Protection Labels

7.1 Clear for Reuse

This label is used to mark objects which are to be removed for repair or reuse from radiation protection areas, in which unsealed radioactive substances are handled (Section 4.6.3). Only devices marked in this way may leave these radiation protection areas.

7.2 Label for Wastes

This label is used to mark wastes to be collected regularly from buildings, of which only parts are radiation protection areas where unsealed radioactive substances are handled (Section 4.6.5). Only waste marked in this way may be collected.

7.3 Radioactive

This label is used to characterize radioactive objects or packaging without external contamination. The packaging may only be removed in a radiation protection area.

7.4 Radioactive Contamination

This label is used to characterize radioactively contaminated objects. The object may only be handled unpackaged in a “Kontrollbereich Kontamination” (controlled area contamination).
### 9.4 Annex V: Clothes and Zone Rules When Handling Unsealed Radioactive Substances

<table>
<thead>
<tr>
<th>Zone</th>
<th>Activity(^1) of unsealed radioactive substances</th>
<th>Minimum posting according to Art. 68 Rad. Prot. Ord.</th>
<th>Protective clothes(^3) (permanent staff)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone I</td>
<td>≤ Exemption level(^2)</td>
<td>None</td>
<td>Working clothes without yellow or green marking or own clothes</td>
</tr>
<tr>
<td>Operating premises</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- grey/blue -</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zone II</td>
<td>&gt; Exemption level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Überwachungsbereich” (Supervised area) with risk of contamination and “Kontrollbereich” (controlled area) with low risk of contamination</td>
<td>≤ (10^2) times the exemption level</td>
<td>Radioactive Caution - radiation Contamination</td>
<td>Laboratory coat with yellow or green marking</td>
</tr>
<tr>
<td>- green/yellow -</td>
<td></td>
<td></td>
<td>Working shoes or private shoes with overshoes</td>
</tr>
<tr>
<td>Zone III</td>
<td>&gt; (10^2) times the exemption level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Kontrollbereich” (Controlled area)</td>
<td>≤ Scope as listed in license</td>
<td>Radioactive Caution – radiation Contamination</td>
<td>Yellow contamination protection clothing, laboratory coat only in connection with working clothes (grey/blue)</td>
</tr>
<tr>
<td>- yellow -</td>
<td></td>
<td></td>
<td>Yellow working shoes</td>
</tr>
<tr>
<td>Zone IV</td>
<td>≤ Scope as listed in license</td>
<td>Radioactive Caution – radiation Contamination</td>
<td>Yellow combination protection clothing</td>
</tr>
<tr>
<td>Contamination area in a “Kontrollbereich” (controlled area)</td>
<td></td>
<td></td>
<td>Yellow working shoes and overshoes or special protective clothing</td>
</tr>
<tr>
<td>- red -</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) Activity: Activity in functionally connected rooms, determined using the sum formula.

2) Exemption level according to Annex III, Tab. 1, column 2, Rad. Prot. Ord., determined using the sum formula.

3) In agreement with SUM-ÜM, deviations from the Clothes Rules may be permitted.

Note: The classification of zones can be modified in agreement with SUM-ÜM to include higher protection measures and on the basis of operations experience.
9.5 Annex VI: Evacuation Areas

Northern Entrance Gate

Evacuation directions

Southern Entrance Gate

Northern evacuation area

Southern evacuation area
9.6 Annex VII: Persons and Bodies with Safety Functions

"Arbeitsschutzausschuss" (Work Safety Committee)
An advisory body to the employer in which all groups involved in work safety are represented (Employer's Representatives, Works Physicians, Work Safety Experts, Safety Commissioners according to the Code of Social Law VII, members of the staff council). Any staff member may draw the committee's attention to issues to be treated through the secretary of the Work Safety Committee.

"Beauftragter für die Biologische Sicherheit" (Biological Safety Commissioner);
"Gentechnikgesetz" (GenTG)
The Biological Safety Commissioner (Beauftragter für die Biologische Sicherheit) is responsible for the safety of genetic engineering activities. According to the Genetic Engineering Act, responsibilities include the specification of safety measures (equipment, materials), the advising of the heads of projects (GenTG) as well as the monitoring and control of the genetic engineering facilities/work.

"Betriebsärzte" (works Physicians) and “Fachkräfte für Arbeitssicherheit” (Work Safety Experts)
Works physicians and Work Safety Experts are required to support the employer in matters of work safety and accident prevention whenever questions of work safety arise (Articles 3 and 6, Work Safety Act).

"Betriebsbeauftragter" (operations commissioner)
Supports the heads of the organizational units in all matters related to run a technical-scientific organizational unit. The operations commissioner is responsible for ensuring that all technical infrastructure systems are in functioning order, operated economically, and that safety regulations (work safety, environmental protection) are implemented and observed in the organizational unit. The operations commissioner is the consulting partner for the central infrastructure institutions and works together closely with the other “commissioners and officers”.

"Betriebsbeauftragter für Abfall" (Waste Management Commissioner)
He is responsible for monitoring waste streams from their origins to their utilization or disposal and for ensuring that all laws pertaining to waste management are observed. He informs employees of possibilities of avoiding and reusing waste and of dangerous environmental impacts, which could arise from waste. He works on improving waste disposal techniques and documents the whereabouts of waste.

"Einsatzleiter" (Task Force Leader)
The Task Force Leader assumes the tasks mentioned in the alarm plan of the KIT-CN. The Task Force Leader in principle acts on behalf of the “Präsidium” (Presidential Committee) or the “Sicherheitsbeauftragter” of the KIT (Safety Commissioner of the KIT).

"Gewässerschutzbeauftragter" (Water Protection Commissioner)
He controls and overlooks the observance of rules and regulations in the KIT-CN for the protection of water, the proper use of sewage systems, and the handling of substances hazardous to water. He informs the employees of new regulations and works on implementing them and improving the protection of water at the KIT.

"Gefahrgutbeauftragter" (Dangerous Goods Commissioner)
He controls and overlooks the transportation of dangerous goods and persons authorized to transport such goods. He works on eliminating any transport problems. He is obliged to inform, consult, and train the employees in matters of dangerous goods transportation. He gives an annual report and, if necessary, sets up an accident report.
“Immissionsschutzbeauftragter” (Immission Control Commissioner)

Controls and supervises the immission control regulations in the KIT-CN and the safe operation of combustion plants and of the district-heating plant. He informs the employees of new regulations and works on implementing them and improving the KIT-CN’s immission protection.

“Laserschutzbeauftragte” (Laser Protection Commissioners)

Have the duty to advise the employer in matters of protection against laser radiation when dealing with the purchase and commissioning of laser facilities. In addition, they are responsible for instructing employees in laser facilities and for monitoring the observation of safety and protection measures.

“Projektleiter für gentechnische Anlagen” (Head of Project in Genetic Engineering Facilities)

Are responsible for planning, managing, and supervising genetic engineering activities in an accordingly designated genetic engineering facility. In addition, they are responsible for the qualification and instruction of employees as well as for preventative medical examinations. The Head of Project immediately reports any events with an unforeseen course during the genetic engineering activities and possible hazards to the Biological Safety Commissioner and the licensee (licensee is the KIT; SUM-BG is in charge with fulfilling the duties for the Presidential Committee of the KIT).

“Sicherheitsbeauftragter des KIT” (Safety Commissioner of the KIT)

Acts on behalf of the Presidential Committee of the KIT in accordance with his service instructions. He assumes all functions relating to conventional and radiological safety.

“Sicherheitsbeauftragte Arbeitsschutz nach Sozialgesetzbuch VII” (Work Safety Commissioners According to the Social Act VII)

Are responsible for the individual organizational units and support the heads of the organizational unit and Work Safety Experts in the execution of work safety measures.

“Strahlenschutzbeauftragte” (Radiation Protection Commissioners SSB)

The SSB fulfil their duties according to the Radiation Protection Ordinance and the X-ray Ordinance and manage and control activities of relevance to the Atomic Energy Act. Their areas of competence include the observation of general radiation protection regulations, safety regulations, and the observance of the permits granted under the Atomic Energy Act with their requirements, directives, and instructions of the competent authority. They are responsible for the implementation of the General Safety Regulations of KIT-CN and the internal instructions of the “Sicherheitsbeauftragter” (Safety Commissioner) of the KIT (KISS, “Strahlenschutzordner” (Radiation Protection File), unless these tasks are fulfilled by SUM under a cooperative agreement concluded between the SUM and the respective organizational unit. “Strahlenschutzverantwortlicher” is the KIT as body corporate with the legal responsibility for radiation protection according to the Radiation Protection Ordinance and the X-ray Ordinance. As a natural person, a Chairman of the Presidential Committee is named to the authorities. He is responsible for the correct implementation of radiation protection regulations especially by appointing a sufficient number of Radiation Protection Commissioners. To fulfil his tasks, he encharges the “Sicherheitsbeauftragter” of the KIT (Safety Commissioner of the KIT) and his “KIT Sicherheitsmanagement” (KIT Safety Management Service Unit).

“Verantwortlicher Betriebsbeauftragter für Abwasser“ (Head of the Wastewater Treatment Plant)

Is responsible for supervising the treatment of all sewage and the operation and maintenance of sewage facilities of the FM-VEA within the framework of the permit held by the KIT under the laws pertaining to the use of water.
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