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Safety of Installations, Major Accident Prevention, Handling of Substances Hazardous
to the Environment

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**Securing Industrial Facilities Against Deliberate Acts Causing
Chemical Releases (Prevention/Preparedness/Protection)**

**Evaluation of Approaches to Prevent Deliberate Acts by „Internal
Offenders“ and Classification of Information for Reasons of Public
Safety**

by

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Summary

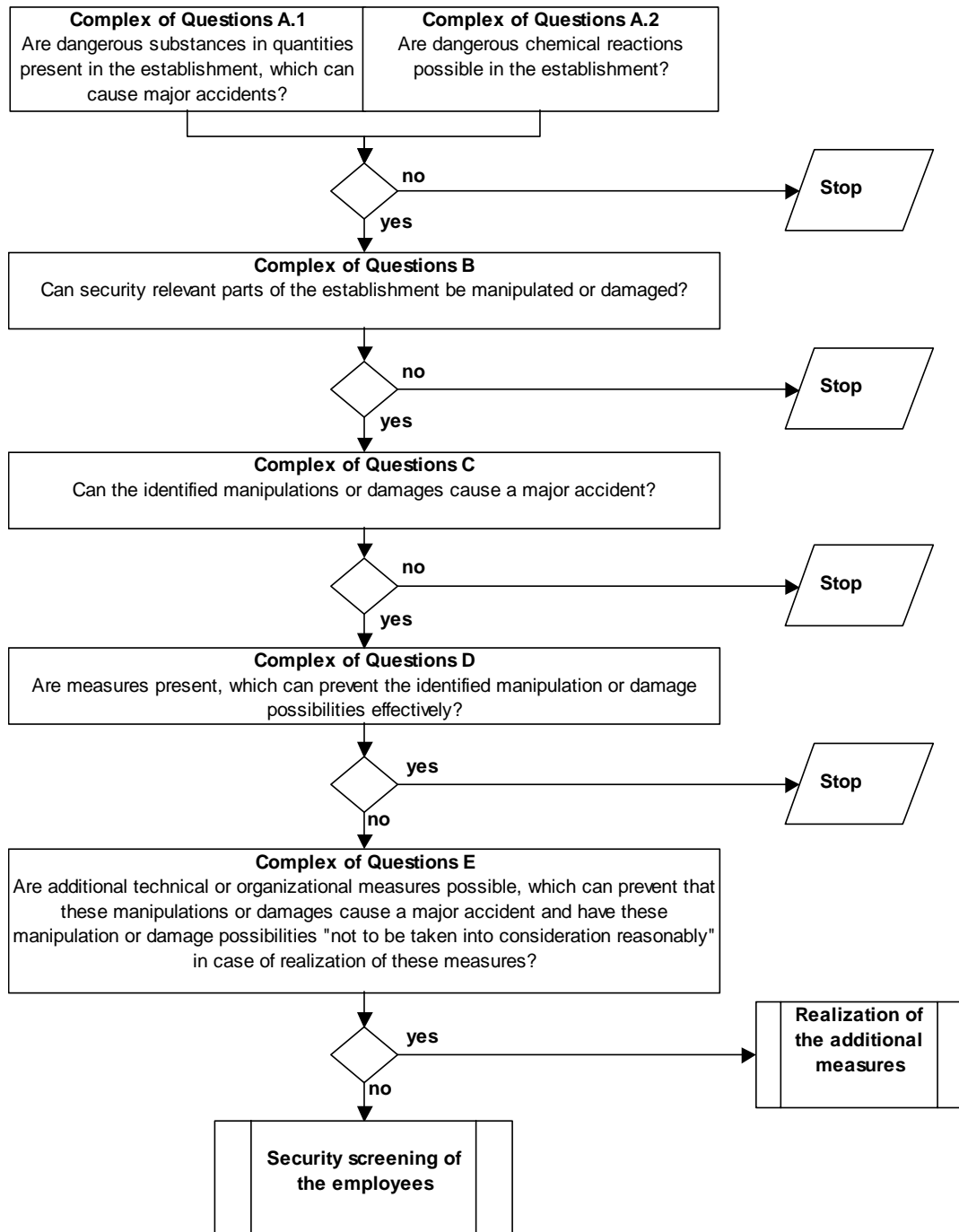
For the prevention of major accidents operators of industrial establishments are obligated also to consider “unauthorized intervention”. As a consequence of the terroristic attacks on September 11th 2001 in the USA politically or ideologically motivated attacks on industrial establishments could no longer be regarded as “reasonably not to consider” in Germany. In October 2002 the German Hazardous Incidents Commission accepted the guideline “Combating Interference by Unauthorized Persons” ([SFK-GS-38](#)) which gave first adapted recommendations concerning the security against interferences by “unauthorized persons”. In particular the proceeding for the set up of a security concept against interferences by “unauthorized persons” from outside the establishments on the basis of a threat and hazard analysis was presented and recommended for application. In this research project should be clarified, how operators can improve the security against internal offenders by security screening on trustworthiness (Part A.1) and by the prevention of harmful behavior of employees (Part A.2) and which conditions have to be fulfilled to allow restrictions of the free access to information for reasons of public safety (Part B).

Part A.1 „Security Screening on Trustworthiness of Employees”

Part A.1 examines the possibility of security screening on trustworthiness of employees as preventive measure against potential safety relevant interferences by ideologically or politically motivated internal offenders on the basis of the Security Screening Law (Sicherheitsüberprüfungsgesetz - SÜG), considering the equivalent regulations and proceedings in Air Traffic and Atomic Energy Law. For establishments with extended obligations according to the Hazardous Incident Ordinance (Störfall-Verordnung - 12. Ordinance according to the Federal Impact Control Act) the SÜG is the required legal basis according to the Security Screening Establishing Ordinance (Sicherheitsüberprüfungsfeststellungsverordnung - SÜFV) of August 9th 2003.

The enforcement of the SÜG is done in a two-stage procedure. In the first stage the “security sensitive parts” of an establishment and the group of examination-requiring persons are to be specified in a preset selection procedure. In the second stage the procedure of the individual security screening is done for the specified persons.

The preset selection procedure is only insufficiently regulated in the SÜG. Therefore in this study a suggestion for this selection procedure was developed for the establishments concerned. First a check is to be done in steps in order to identify the “security sensitive parts” of an establishment. The concept for this check is:



Second it has to be examined for the identified parts of the establishment whether they fulfill the further criteria (organizational independence, sufficient limitation of access) to be specified as a “security sensitive part”. Especially the enforcement of the SÜG to industrial establishments raises a lot of questions related to this specification procedure. These problems are discussed in the research report (Part A.1 chapter. 4) and suggestions are given for the enforcement of the SÜG.

Third step is the specification of the group of examination-requiring persons. For the specification of the relevant persons the research report considers a functional sense for employment, which includes in principle all persons having access to the security sensitive parts and carry out activities there, which enable them to sabotage actions. According to that the obligation for security screening is relevant for the following kinds of persons:

1. Employees of the operators enterprise, regularly at work at the security sensitive parts or to become regularly at work there.
2. Employees of subcontractors, having access to these parts and able to carry out relevant interferences.
3. Employees of other departments, having access to the relevant parts, e.g. security guards.
4. Management personnel of the enterprise, having access to security sensitive information or allowed to give orders to (security screened) employees, which may cause security relevant interferences.
5. Security personnel.
6. Exceptions: No obligation for security screening for persons already security screened according to other legal requirements. Beside that special arrangements should be met for short-term occupation and necessary repair personnel according to the evaluations of the study.

The enforcement of the SÜG on establishments according to the Hazardous Incident Ordinance was introduced only briefly before end of the research project, due to that there are no practical enforcement experiences so far.

Part A.2 management and prevention of intended harmful behavior of employees

Part A.2 does not concern especially the prevention of criminal offences, but the behavior of employees in general, who intend to harm an enterprise by deliberate acts for reasons of dissatisfaction, anger or conditions of work and risk major accidents by them. According to surveys this harmful behavior is more frequent, than assumed by managers in general. Well-known motives and reasons of motive emergence are discussed in the research report in detail:

- Harmful behavior as reaction to discrimination
- Harmful behavior as opposition
- Harmful behavior for stress compensation
- Harmful behavior due to frustration because of restrictions for the realization of individual goals, because of not granted rewards for activities, because of objections against gain or recall of competence
- Harmful behavior as reactance on losses of freedom for activities
- Harmful behavior as self made justice for actions or conditions felt to be unfair (e.g. "unfair" salary)
- Harmful behavior as symptom of emerging conflicts

The research report presents instruments and strategies for the avoidance of the emergence of motives and evaluates them in an overall concept. Part A.2 is supplemented by a guideline for good practice in the reduction of intended harmful behavior of employees in organizations.

The main recommendations are:

- By suitable work conditions (avoidance of stress factors),
- by organization of the task of work (as much as possible action autonomy),
- by suitable leadership behavior (supporting, esteeming, development offering) and a functioning (i.e. behavior-effective value supporting) enterprise and safety culture,
- by participation and appreciation of employees

a working environment should be created, which motivates to work and avoids contributions to work discontent as a basis for the prevention of intentional harmful behavior of employees.

In order to achieve this goal, an action strategy tailored to the enterprise culture is to be developed. The guideline presents the single steps, which are necessary for the development of such an action strategy.

With a systematic procedure, as it is recommended in the research report, hazards of major accidents by deliberate acts of employees can be avoided or reduced at least.

As side effect may be the decrease of any unwanted deviating employee's behavior (from small offences up to withholding the work by dawdling or absenteeism).

Part B Limitation of the Access to Information for Reasons of Public Safety

Part B clarifies conditions for the classification of documents (in particular the safety report according to § 9 the Hazardous Incident Ordinance) for reasons of public safety. On the basis of the relevant laws (Federal Impact Control Law and Environmental Information Law – UIG) and ordinances decision criteria for the restriction of the rights of access to information of the public are developed and examined by two examples.

In summary the examination of the legal conditions for restriction of the rights of access to information of the public due to the necessity for the classification for reasons of public safety resulted in the following criteria:

- In the actual threat situation there is sufficient evidence that offenders may be present, who may take an opportunity for a deliberate interference.
- Relevant is only such information, which is not so far public-known and still controlled.
- Secrecy justifying are only such potential interferences, which can cause accidents, exceeding the thresholds for major accidents.
- The assessment of potential interferences has to base on a hazards prognosis, for which actual clues are necessary that the publication of the information increases the probability of interference. These clues must refer to concrete interference scenarios.
- With multi-layer safety concepts information on all layers can be cumulatively necessary, to carry out an accident-causing interference. In these cases the secrecy is only required for information on one of these safety layers.

- The degree of the required evidence of the clues is determined by the principle of the risk proportionality: The more seriously the possible effects of an interference, the smaller have to be the requirements of evidence of the clues of an increase of the probability of an interference.

If the aforementioned conditions are fulfilled, the information concerned is secrecy able.

Before a final decision on the secrecy is made there has to be a weighting between the rights on information concerned and the interests on secrecy.

In view of the restrictions for withholding information in relation to the public, which should enforced restrictive, there result in principle several possibilities to deal with the conflict of the aims (guaranteeing the right of information of the public vs. publishing no information which is suitable to facilitate the planning or realization of unauthorized interferences).

The part B of the research report presents the pro and cons of different options and gives recommendations.