

## A SWEDISH DOSE PASSPORT - CONTRACTORS POINT OF VIEW

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### **Background**

Westinghouse Atom is situated in Västerås approximately 100 km west from Stockholm. The company is owned by BNFL. The two largest divisions are the Nuclear Fuel Operations and The Global Reactor Services division.

The Nuclear fuel operations manufacture fuel for BWR and PWR-reactors. The raw material used is Uranium hexafluoride, which is converted to Uranium dioxide powder through the wet AUC-process. The concession is 600 tonnes of  $UO_2$  per year. Last year the production was approximately 900 fuel elements.

There is also a control rod production line within the fuel factory. Last year the production of control rods was approximately 160.

The Global Reactor Services Division performs tests on different types of equipments used in nuclear power plants. In addition there is also a well-established service structure that provides a wide range of field services, for instance sipping of fuel elements.

The total amount of people working in Västerås is currently around 800. The majority of those, work at the fuel factory.



**Westinghouse Atom**  
Nuclear fuel operations



**Westinghouse Atom**  
Global reactor services

Our personnel working within reactor services visit nuclear power stations all around the world and hence, they are strongly dependent on a properly working dose registering procedure. In Sweden we have a system commonly owned by the Swedish nuclear installations. The system is called CDIS and is administered by a Swedish IT-contractor. According to Swedish regulation all the doses for workers have to be fed into the system on a monthly basis.

## **Purpose**

The purpose of this paper is to describe the somewhat awkward situation for our employees when working as external personnel on German nuclear installations. Our Swedish personnel are currently using German dose passports. Since Sweden joined the European Union in 1995 this is in contradiction to the EU-directives. Hence, Westinghouse Atom has applied for a license for the use of Swedish dose passports in Germany. The amount of people performing service jobs in Germany is approximately 80 persons.

## **Description of the procedure for German dose passports**

Today, when our employees are travelling to Germany for field service missions they are using a German dose passport, which is administered and issued by Westinghouse Reaktor in Mannheim.

If a new German dose passport is to be issued Westinghouse Atom has to send a dose excerpt from the Swedish registry, a witnessed copy of the persons passport and a signed German dose passport to Westinghouse Reaktor. This procedure takes approximately 1 month for a new dose passport.

Westinghouse Reaktor sends the dose passport to the respective nuclear power plant along with the film dosimeter. When our person has completed his work and leaves the nuclear power plant the dose passport and the dosimeter are returned to Westinghouse Reaktor in Mannheim. After 3 months health physics office at Westinghouse Atom receive a letter stating the dose received by the employee during his period of work at the power station. If our employee is performing multiple works on several power stations he takes the German dose passport along with him until he has finished his last job. The health physics office on the last installation returns the dose passport to Westinghouse Reaktor.

As a contractor it is important to apply for a license to use Swedish dose passports in Germany because:

1. we want to be responsible for our personnel that we send to Germany.
2. the results from the dose evaluation will be obtained faster.
3. cost savings are substantial.
4. the administration would be minimised.

## **Description of the Swedish dose passport**

The competent authority, Swedish radiation protection institute (SSI), issues dose passports in Sweden. The only data required is an excerpt from the Swedish dose registry, CDIS, stating the effective dose over the past five years, the annual effective dose and the life time effective dose. The SSI then needs a maximum of 3 days to process the request.

The Swedish dose passport is somewhat different from the German dose passport. The Swedish dose passport is only valid for a period of 6 months. The German dose passport is valid for a lifetime or until the dose passport is filled with records. Unlike the German dose passport the Swedish competent authority issues the Swedish passport. The Swedish authority does not require the result from the radiological health examination. They consider the result as personal and have therefor chosen not to state the result in the dose passport. Consequently, our external personnel are obliged to bring their medical examination record and the Swedish dose passport when they go on their service missions to Germany.

The legal basis for the Swedish dose passport is found in the ordinance SSI FS 1996:3, published by the SSI.

## **Description of the licensing procedure to use Swedish dose passports in Germany**

The EU-directives 90/641/Euratom and 80/836/Euratom provides the basis for the use of dose passports for external personnel working at nuclear facilities in the European Community.

The Swedish application was outlined in accordance with the requirements from the German competent authority Bayerisches Landesamt für Umweltschutz (LfU). The following data had to be submitted:

1. Application according to §20 Radiation Protection Ordinance.
2. Declaration form for the person responsible for radiation protection.
3. Letter from the Swedish radiation protection institute stating that Westinghouse Atom has a dosimetry service compliant to the Swedish regulations.

4. Excerpts from the Swedish criminal record for the president of Westinghouse Atom and the person responsible for radiation protection.
5. Documents confirming the educational level of the person responsible for radiation protection.
6. Document stating the legal relationship between Westinghouse Atom in Västerås and Westinghouse Reaktor in Mannheim.

### **German legal demands for us as a contractor using Swedish dose passports**

The legal demands on Westinghouse Atom as a contractor on German nuclear installations are based on the German Radiation Protection Ordinance.

In our case we sent the application to LfU in München. They processed the application and agreed on a license for a 5 years period. However, the license is coupled to several demands before the license can enter into force in Germany.

1. All of the German nuclear installations that we visit must sign an agreement with us on the health physics issues. The holder of the license must prove to LfU that an agreement, regarding administrative and organisational issues related to health physics, has been made between Westinghouse Atom and the relevant German nuclear installations.
2. The holder of the license has to present a radiation protection instruction regarding the internal routines relevant for health physics.
3. All of our external personnel have to be listed. The holder of the license is responsible for ensuring that the listed workers receive proper information about the conditions on the relevant nuclear installation.
4. The holder of the license must, without delay, inform the person responsible for radiation protection of the nuclear installation if the activity- or dose limits are exceeded.
5. The holder of the license shall
  - measure the dose with a TL-dosimeter qualified by the Swedish competent authority, SSI.
  - make sure that the listed workers carry the dosimeters provided by the installation.
  - let the workers go through whole-body measurement at LfU:s qualified measurement station for radio toxicology.
6. The holder of the license has to make sure that the external personnel follow the instruction given by the health physics office on site.
7. The holder of the licence must update the Swedish dose registry as well as the dose passports.
8. The results from the monthly dose evaluation of the listed workers have to be forwarded to LfU every month.
9. The list of workers has to be sent to LfU once every third month or when there are changes done to the list.
10. The Swedish dose passports have to be registered at the LfU.
11. When a listed worker stops working at German nuclear installations, the dose passport shall be left with him.

The agreement between Westinghouse Atom and the nuclear installations has not yet been reached. Therefore, we are still working with German dose passports for our external personnel.

### **Summary**

Westinghouse Atom has applied for a license to use Swedish dose passports in Germany, however there are still some issues to deal with before the license can enter into force.

The procedure for making Swedish dose passports a reality in Germany has been a lengthy process, but with the good and continued help from the German competent authority, LfU, the process will hopefully be concluded in the near future.

Finally, I ask myself:

Could a European- or even global dose passport simplify or even eradicate these situations from arising in the future for all of us?