

**RESPONSE OF THE CZECH COMPETENT AUTHORITY TO THE  
MAIN FINDINGS OF THE TEMELIN NPP ART.35 VERIFICATION  
OF MARCH 2005**

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Translated text:

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Ambassador Jan Kohout  
Permanent Representative of the Czech Republic to the EU

Brussels, 27 November 2006  
Ref 6140/2006-SZ/SEA

**Re: response to recommendations contained in European Commission report on  
Article 35 verification, Euratom Treaty**

Dear Director-General,

In accordance with Article 35 of the Euratom Treaty, a team of experts from the European Commission visited the Czech Republic's Temelín nuclear power plant in March 2005. The main findings of the verification were conveyed to the Czech Republic in report No CZ-05/2. All the recommendations contained in the report were assessed by the State Office for Nuclear Safety (SONS) and discussed with the power plant operator.

The enclosure to this letter sets out the measures adopted by the Czech Republic with respect to the individual recommendations.

Sincerely,

*[signature]*

**Matthias Ruete**  
Director-General for Energy  
European Commission  
Brussels

### **Recommendation 1**

*It is recommended that the SONS should consider whether requesting the operator to commission parallel and redundant sampling provisions at the Temelín NPP would not be beneficial, especially with regard to fully ensuring the continuity of airborne sampling activities.*

The SONS assessed the recommendation and decided not to insist at the moment on parallel and redundant sampling of gaseous discharges. However, it reached agreement with the NPP operator on the following measures:

- (a) exchange of the filter (sampling) will be allowed only if the PIG (Particles-Iodine-Gas) device shows steady values;
- (b) the aerosol filter exchange time will be statistically evaluated;
- (c) the uncertainties in establishing selected quantities (e.g. flow through sampler, flow through stack, activity of sample) will be compared with the uncertainty caused by shortening the sampling time by 0.05% of the entire exposure period.

The reason for this decision is assessment of the impact of the time during which the taking of gaseous samples is halted on the overall balance of the activity of the discharges. Since the filter exchange time is about five minutes and the weekly exposure of the filter is some 11 thousand minutes, such discontinuity will cause an error of about 0.05% in establishing the activity discharged. By comparison with the error inherent in radiometric measurement as such, the error caused by the discontinuity in taking the gaseous samples is negligible.

### **Recommendation 2**

*It is recommended that the SONS should consider whether the current practice of quantifying Kr-85 in gaseous discharges from the Temelín NPP should be maintained and if in the affirmative, to consider whether the use of the operator's monitoring capabilities would not be the preferred solution, especially with regard to obtaining representative data.*

The SONS considered this recommendation and decided that the NPP operator will also quantify the Kr-85 in the gaseous discharges – on the basis of gamma spectrometric on-line measurement making use of a noble gas monitor. This obligation will be placed on the operator in the updated discharge monitoring programme currently being approved by the SONS.

### **Recommendation 3**

*It is recommended, in the framework of general quality assurance and control, that the SONS requires the operator to ensure that the chain of custody for discharge samples, when transferred between the on-site radiochemical laboratory and the Environmental Radiation Monitoring Laboratory, be fully traceable.*

The NPP operator has introduced obligatory use of what is known as the sample-taking log. This document tracks the transfer of responsibilities linked with the handling and transport of the samples taken. The SONS agrees with this administrative measure, and adherence to it will be included among the matters verified during SONS checks

#### **Recommendation 4**

*It is recommended that the SONS considers the benefits of revising its regulatory requirements for substitutions of analytical results below detection limits (for liquid discharge samples) by bringing these requirements in line with Commission Recommendation 2004/2/Euratom and ISO standard 11929-7:2005.*

The SONS considered this recommendation and decided to require the NPP operator to use the approach set out in Commission Recommendation 2004/2/Euratom when balancing the activities of liquid discharges. Nevertheless, this substitution introduces a considerable amount of conservatism into the assessment. Therefore, it has agreed with the NPP operator that a verification substitution of the volumetric activities of the individual radionuclides in liquid discharges be carried out for 2005 (in line with Commission Recommendation 2004/2/Euratom), along with an evaluation of the impact of the adopted conservatism on the effective dose of the critical group (using existing conversion factors).

#### **Recommendation 5**

*It is recommended that the SONS ensures that the operator of the Temelín NPP reviews the balancing methodologies it applies to liquid discharges, with the aim to remedy the current overestimations (and or underestimations) these methodologies entail.*

The SONS considered this recommendation and decided to require the NPP operator to review the balancing methodologies. On the basis of the results of talks with the SONS, the NPP operator has already altered the sampling method in such a way that the volumes of the aliquot parts taken from the individual samples to prepare the decanted sample guarantee complete proportionality with the discharged volumes. The NPP operator will assess the possible technical measures that could increase the accuracy of the reading of the volumes of the liquid radioactive discharges released. The assessment results will be the object of verifications conducted by the SONS.