

Unsettling facts on Temelín

Factsheet, version 2.2

concerning faulty welding work and documentation in Temelin block 1

Jiri Tutter
Vaclav Vasku
Jan Haverkamp
12 March 2002

This sheet reveals the facts concerning unauthorised welding work and faulty welding documentation in the first block of the Temelín nuclear power plant. It puts a special focus on the role of the so-called "independent" nuclear regulatory office SUJB in this affair.

The facts listed here are based upon documentation as made available to Greenpeace by SUJB and CEZ, cross-examined information from different witnesses whose identity unfortunately needs to be safeguarded in fear of repercussions, interviews with SUJB management on this issue, information revealed to Greenpeace by the police during their investigations, as well as media information.

The issue started receiving attention in July 2000 on the basis of a witness statement of one of the people directly involved in welding work in Temelín. This witness still wants full protection of his/her identity. Greenpeace received further witness information from circles around the subcontractor responsible for welding, Modranska potrubni a.s.

Reasons why witnesses are not prepared to reveal their identity are listed in Appendix 1.

This factsheet gives rise to some devastating conclusions:

1. Temelín cannot be considered safe. Because of the found facts, the assembly procedures and subsequently Temelín itself do not meet basic technological and nuclear safety requirements operated in all Western Europe concerning safety, including the Czech atomic law.
2. The witness statement that an illegal repair was carried out on one of the primary cooling circuit pipes in Temelín block 1 directly on the reactor has to be judged as very credible.
SUJB cannot exclude the event as alleged by Greenpeace.
SUJB cannot exclude that the quality of welding seams on the reactor vessel has been compromised.
3. The police was misled in its first investigation of the welding seam and investigated another seam than the one indicated by the witness. Both SUJB and CEZ at that time were informed about which welding seam was indicated by the witness.

4. SUJB did not carry out other investigations to the alleged welding seam than a check on documentation. This documentation is not complete, a compulsory part is not available at all, and the available part shows actions that went against prescribed procedures. SUJB has an internal protocol of this investigation that it refuses to publish and from which it in some instances denies existence.
5. Documentation on welding work in the primary cooling circuit of Temelín block 1 is still incomplete and what is there still indicates violation of technology procedures.
6. SUJB management plays an active role in covering up this information by failing to publish incriminating information, diverting attention from the subject, and giving willingly false information. With that the SUJB position of independent nuclear regulatory office is violated.
7. On the basis of information available and its seriousness, SUJB should – as far as we can judge even according to the atomic law in the Czech Republic – have refused to give permission for fuel loading as well as test operation of Temelín, regardless of the extra delays and costs it would bring. This would mean that all the processes started from the loading of the fuel in year 2000, subsequent tests as well as current mode of operation are illegal.
8. The disclosed facts prove that the quality and nuclear safety control mechanism failed on all levels up to and including the “independent” state nuclear authority. It casts doubt on the quality of other control operations carried out by SUJB.
9. Temelín's test operation should stop without delay in order to prevent further breaks of law. As SUJB's independence has to be put into doubt, also other responsible authorities (i.e. the Czech Government, Temelín operator CEZ) should be active in this process.

Summary of Facts

1. In July 2000, an anonymous witness¹ informed Greenpeace CZ that while working on the Temelín construction site, he participated in a repair of one of the welding seams directly between the primary cooling circuit and the reactor of block 1 of the Temelín nuclear power plant. He claims that the main pipe was connected 180° wrong. This was discovered only after the welding work on the pipe was virtually finished. Modranska potrubni a.s. ordered the welding teams to cut directly on the seam on the reactor vessel, turn the pipe and re-weld it. He claims that documentation must have been adapted to hide this case. He also claimed that this procedure was against technical regulations and that the responsible companies – the subcontractor Modranska potrubni a.s. and main contractor Skoda Praha a.s. – agreed on keeping this incident secret. On request of the police, CEZ and SUJB, the witness identified to Greenpeace the welding seam on a map provided by CEZ. This information was passed on to SUJB on the 22.9.2000 during a meeting between Jan Haverkamp and Jiri Tutter of Greenpeace and SUJB president Ing. Dana Drabova and SUJB inspector Ing. Jana Kroupova. **The indicated welding seam was later identified by SUJB as the seam number 1-4-5.**^{2 3}

2. After receiving a criminal complaint from Greenpeace on 28.8.2000 on endangering the public and possible fraud with documentation concerning welding work, the police in Ceske Budejovice started investigations. Part of the investigations was an independent analysis of the incriminated welding seam, carried out by an external expert team from Prague. Greenpeace did not give the police the information about which welding seam was indicated by the witness. If the police did receive indications, they must have come from SUJB, or indirectly from SUJB via Modranska potrubni a.s., Skoda Praha a.s. or CEZ. **The independent investigators investigated welding seam number 1-1-5.**⁴ Welding seam 1-4-5 was not considered nor analysed.
Halfway January 2002, the police in Ceske Budejovice re-opened investigations into the case on the basis of this information.

3. On the first meeting between SUJB and Greenpeace on 29.08.2000, SUJB implied that the witness mixed up a similar incident that occurred on pipe

¹ Name and address known to Greenpeace CZ. For reasons why the witness does not want to reveal his/her identity, see Appendix 1. A duly signed affidavit is available to Greenpeace.

² See copy of the drawing in the hands of SUJB , Appendix 2.

³ Code-numbering as follows: first number indicates the reactor block, second number the pipe, third number the welding seam. In this case it is Temelin block 1, pipe 4, welding seam number 5.

⁴ SUJB, *Stanovisko Státního úřadu pro jadernou bezpečnost k problematice svarů primárního potrubí DN 850 na Jaderné elektrárně Temelín.* (no date, 2001, http://www.sujb.cz/Temelín/Potrubí_stanovisko.pdf), page 2 third paragraph: "Welding seam 1-1-5, criticized originally was sufficiently analysed in the framework of the police investigation...". ; Oral confirmation during meeting SUJB – Greenpeace, 4.10.2001

number 1-1, welding seam number 1-1-6, not in the reactor area but already in the assembly hall. This repair was well documented and carried out according to prescribed procedures. Greenpeace checked this theory with the witness, who strictly denied that that was the case he was describing. Greenpeace informed SUJB of this.

4. Greenpeace organised several meetings between the witness and international experts. Partly on request, partly on own initiative, Greenpeace also organised two telephone talks and one personal meeting (in which the identity of the witness was kept obscured) with the responsible SUJB inspector, Ing. Jana Kroupova. Mrs. Kroupova stressed at these occasions that she kept SUJB management informed in detail about these contacts.

All involved experts, including Mrs. Kroupova, concluded that the witness was not a querulant, but completely credible. Furthermore, his statements appeared to be consistent.

5. During a meeting between Greenpeace and SUJB on 04.10.2001, SUJB president Drabova and SUJB director of the nuclear installations control division Ing. Petr Brandejs stated that SUJB by May 2001 had received full documentation from Modranska potrubni a.s. concerning all welding work in the primary circuit. They restated this after being asked whether anything had changed since a statement received by Greenpeace on 09.01.2001 from SUJB management⁵, in which Ing. Pavel Böhm, deputy chair of SUJB for nuclear safety declares that the documentation "shows formal and factual faults, and was not handed over in complete form." In this letter, Ing. Böhm continues, "the working order for assembling the pipes to the reactor had not followed the prescribed technical regulations." This statement was confirmed in the first quarterly report for 2001 by SUJB to the Czech government⁶.

6. During the meeting on 04.10.2001, however, Mr. Brandejs and Mrs. Drabova claimed that all documentation was there and in order. There, where there had been discrepancies, SUJB had requested from CEZ additional checks that were reported by an independent consultant, Prof. Jaroslav Nemeč⁷. These checks involved analysis of documentation and physical tests of the welding seams around the alleged repair on tube 1-1 (seams 1-1-6 and 1-1-6a), as well as two seams near the circulation pump in the pipes 3 and 4 (seams 1-4-11 and 1-3-8). Although not stated clearly in the report, Mr. Brandejs and Mrs. Drabova claimed it also included a complete analysis of documentation by prof. Nemeč. Welding seam 1-4-5 had not been considered and tested physically. Mrs. Drabova and Mr.

⁵ Ing. Karel Böhm, letter to Greenpeace on 09.01.2001- (SUJB reference number ČJ707/to/01)

⁶ SUJB, *Situační zpráva o hodnocení jaderné bezpečnosti stavby jaderné elektrárny Temelín, 1. čtvrtletí 2001*, <http://www.sujb.cz/Temelín/1-2001.htm>, point 3.1, 13th paragraph.

⁷ Prof. Ing. Dr. Jaroslav Nemeč DrSc. Dr hc, *Posudek kvality, životnosti a provozní spolehlivost svari hlavního cirkulačního potrubí DN 850 JE Temelín*, (Praha, 29.6.2001; http://www.sujb.cz/Temelín/Potrubí_posudek.pdf)

- Brandejs refused to tell who carried out the tests, allegedly because they did not know, but they assured that the tests had been carried out well.
7. A source from the circles around Modranska potrubni a.s.⁸, however, clearly and unmistakably claims that up to 05.10.2001, documentation received by SUJB from Modranske potrubni a.s. in this case is not complete and shows still discrepancies with technology regulations. He furthermore stated: "What you know now is only a fraction of what went really wrong".
 8. The same source revealed that staff from Modranska potrubni a.s. and CEZ in fact had carried out the tests for prof. Nemeč's report. He stresses that this is known to SUJB.
 9. During the meeting between Greenpeace and SUJB on 04.10.2001, SUJB president Drabova and SUJB inspector Ing. Brandejs claimed that there were no discrepancies in the documentation concerning welding seam 1-4-5 and that they only heard now for the first time about the fact that the witness had indicated this seam via Greenpeace to Ing. Kroupova, notwithstanding the fact that Mrs. Drabova was present in the meeting where that happened. They furthermore denied that they knew that Ing. Kroupova had had two telephone contacts and one personal contact with the witness, and declared they only knew about one telephone contact. (For the opinion of Ing. Kroupova, see point 4). During the same meeting on 04.10.2001, Ing. Kroupova confirmed that she had been informed about the identity of this welding seam and that she had informed SUJB management of this.
 10. Greenpeace asked insight in the SUJB investigation results on welding seams in an official request, dated 28.06.2001. This request was several times refused. In the final refusal on 12.10.2001, following a Greenpeace appeal, SUJB president Dana Drabova writes: "An inspection directed on a repair of a welding seam in the 850 DN pipes of the primary cooling circuit of the 1st block by Modraske a.s. **was not carried out** and therefore this material [inspection protocol, JT] also cannot be provided. Controls on the process of welding of the 850 DN pipes in the primary cooling circuit of the first block of the Power Station Temelín, including inspection protocols, were only carried out in Temelín. ."⁹
This is **not true** and herewith **SUJB tries to hide a report that was made by its own inspectors**. Proof for this comes from the following documentation:
 - 9.1.2001 – letter from SUJB management to Greenpeace, SUJB ref. number 707/TO/01
"On 12.12.2000 SUJB launched control procedures of the system quality at Modranska portubni a.s."
 - 19.1.2001 – letter from SUJB management to Greenpeace, SUJB ref. number 1135/TO/01
"As far as the criminal complaint [submitted by Greenpeace,; JH] is

⁸ Name and address known to Greenpeace. The source holds a major position in which he has access to all information concerning Modransa portubni a.s. in this case. This source is prepared to witness in court.

⁹ All mentioned correspondence is in the hands of Greenpeace and can be made available upon request.

- concerned, SUJB started a direct investigation. It did not find an immediate risk emerging from unsafety and an in-depth investigation continues at the subcontractor (Modranska potrubni a.s.) [...]"
- 9.3.2001 – letter from SUJB management to Greenpeace, SUJB ref. number 3632/TO/2001
"4. Modranska potrubni a.s.
At the moment it has to be observed, that [there are] in the framework of the mentioned inspection positive results [...]"
 - 9.3.2001 – fax SUJB management to Greenpeace, (no ref. Number SUJB)
"We cannot give you the concrete name of the inspector [that carries out] the safety investigation in Modranske portubni a.s.. The investigation is carried out by a group of qualified inspectors of SUJB, directly resorting under the deputy chair for nuclear safety."¹⁰
 - 11.4.2001 – Letter from SUJB management to Greenpeace, SUJB ref. Number 5180/TO/2001
"On the basis of the collected information and performed interviews with all concerned, and after basic investigation of all available documentation on the 12.12.2000 an investigation was carried out at one of the involved parties, that until date has not been concluded [...] written reporting of the inspections carried out since its opening on 12.12.2000 of course exists. As long as the investigations carried out at the company Modranka potrubni a.s. continue, the requested information can for the time being not be given to you following § 11, first subparagraph of law number 106/1999 Sb. [The law on public access of information, JH]. Only after conclusion of the investigations it will be possible to consider the amount of information that can be provided."
 - 25.7. 2001 – Letter of SUJB management to Greenpeace, rejection of the request of Greenpeace for the above mentioned report
"Again you request us to provide you with a copy of the final protocol of the inspection carried out by SUJB at Modranska potrubni a.s. concerning a repair in a tube in the primary circuit of the NPP Temelín. To my regret I am forced to answer again, that SUJB cannot provide you with this material. Your request needs the permission of a person that does not relate to the conditions of law 106/1999 Sb. and from the present conditions under law 552/91 follows our confidentiality in relation to personal data of investigated persons [...] At present I am in the position to let you know, that in relation to the inspection in Modranska potrubni a.s. further inspection will be carried out, and this directly at the Nuclear Power Station Temelín."
 - In one of the documents attached to the rejection of the request of Greenpeace, "*Position of SUJB concerning the problem of welding at*

¹⁰ SUJB Drabova already indicated in a letter dd. ##### that one of these inspectors would be Ing. Jana Kroupova. From the earlier mentioned source from circles around Modranske potrubni, we know that amongst these inspectors were at least the late CSc. Ing. Tendra and Ing. Kroupova.

the primary pipes DN 850 at the NPP Temelín"¹¹:

"On the basis of this assessment in-depth investigation activities were carried out not only at the operator, *in casu* CEZ a.s. Nuclear Power Station Temelín, but also at the subcontractor for welding work, that in this case was Modranska potrubni a.s. In this organisation, SUJB concentrated completely on the investigation to assure the quality of work in its entire course (preparation, realisation and following controls)."

SUJB furthermore informed the Government of the Czech Republic regularly about the progress of the investigation:

- *Situation report on the assessment of nuclear safety during building of the nuclear power station Temelín – 4th quarter 2000*¹²
"In the framework of the control of the system quality of the contractor for the NPP Temelín SUJB started an investigation into the system quality at Modranska potrubni a.s. Praha."
- *Situation report on the assessment of nuclear safety during building of the nuclear power station Temelín – 1st quarter 2001*¹³
"SUJB in this period carried out an in depth investigation into the documentation of the quality system at the subcontractor Modranska potrubni a.s. Praha, [...] especially for the area of production and installation of the main circulation pipes in the 1st block of the NPP Temelín."
- *Situation report on the assessment of nuclear safety during building of the nuclear power station Temelín – 2nd quarter 2001*¹⁴
"In the concerned period the investigation was closed directed to the verification of the quality of welding seams of the main circulation pipes in the 1st block initiated by Greenpeace. This investigation linked into the investigation carried out in the subcontractor Modranska potrubni a.s. Praha."

Also the earlier mentioned source around Modranska potrubni a.s. testifies that specifically SUJB inspectors carried out an in-depth investigation that amongst others resulted in the discovery that documentation on the welding work was incomplete and showed irregularities in working procedures. He also states that an internal SUJB report on this exists.

¹¹ SUJB, *Stanovisko Státního úřadu pro jadernou bezpečnost k problematice svarů primárního potrubí DN 850 na Jaderné elektrárně Temelín*. (no date, 2001, http://www.sujb.cz/Temelín/Potrubí_stanovisko.pdf)

¹² SÚJB, *Situační zpráva o hodnocení jaderné bezpečnosti stavby jaderné elektrárny Temelín, 4. čtvrtletí 2000*, Praha (2000); point 3.1, 18th paragraph (<http://www.sujb.cz/Temelín/4-2000.htm>)

¹³ SÚJB, *Situační zpráva o hodnocení jaderné bezpečnosti stavby jaderné elektrárny Temelín, 1. čtvrtletí 2001*, Praha (2001); point 3.1, 13th paragraph (<http://www.sujb.cz/Temelín/1-2001.htm>)

¹⁴ SÚJB, *Situační zpráva o hodnocení jaderné bezpečnosti stavby jaderné elektrárny Temelín, 2. čtvrtletí 2001*, Praha (2001); point 3.1, last paragraph (<http://www.sujb.cz/Temelín/2-2001.htm>)

APPENDIX 1

Reasons why witnesses want to have their identity safeguarded.

To prevent any speculation on this point, Greenpeace here summarises the reasons that have been given by witnesses in this case to ask for safeguarding of their identity.

- Colleagues of one of the witnesses have been intimidated on the working place to prevent them from talking about the issue.
- One witness was directly intimidated on his job.
- One of the witnesses and his family were intimidated by financial authorities.
- Witnesses fear for exclusion from their profession.
- The stop of police investigations on the day after the police received important new evidence scared witnesses and made them loose trust in police and the legal system in the Czech Republic.
- The un-cooperative attitude and praxis of SUJB management (always finding reasons not to have to give information that could possibly back up claims from witnesses);
- No adequate legal protection for whistleblowers under Czech law.

APPENDIX 2

Photocopy of the pipe lay-out drawing in the hands of SUJB

This is a photocopy of the drawing that was handed over to SUJB during a meeting with SUJB president Dana Drabova and inspector Jana Kroupova on 22.09.2000.

The arrow (right side) points to the place that was indicated by the witness.

