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Lessons Learned from 14 OSART Missions Performed in France

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Plenary Session T 13: International Experience

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1. Introduction

Next May will take place in Civaux, the latest French nuclear power plant, located in the south west of the country, the 15th OSART (Operational Safety Assessment Review Team) mission from IAEA in France, over a total of 120 in the world, that is to say the importance that France attaches to this IAEA service.

Indeed, after an initial period for testing this IAEA service with a mission every 3 years, the Nuclear Safety Authority (ASN), on behalf of the French Government, uses now, for more than 10 years, to request for a new OSART mission on one of its nuclear power plants every year. That makes that, within 5 weeks, 14 of the 19 French NNP sites (comprising 58 nuclear reactors) will have received an OSART mission together with, for 9 of them, an OSART follow-up mission.

In addition, I will mention that the reports from these missions are made available by the ASN to the general public, as part of our transparency policy. Reports from OSART mission and OSART follow-up visit performed in France since 1995 are available on our website (http://www.asn.gouv.fr/international/osart.asp).

After having briefly introduced the nuclear industry context in France, which is unique, I will give my views on the possible benefits of these OSART missions to the operator, to the regulator and generally speaking to the safety. And I will conclude with a more general view on international exchange of experience.

2. The nuclear industry context in France : a unique situation

Before debating on the nuclear safety in France in connection with OSARTs, I should recall the unique specificity to nuclear industry in France:

- A single Regulatory Body for nuclear safety and radiation protection:	DGSNR
- A single Technical Support Organisation performing nuclear safety research:	IPSN
- A single scientific organisation in charge of nuclear research:	CEA
- A single nuclear power reactor operator:	EDF
- A single fuel manufacturer and reprocessing operator:	COGEMA
- A single power reactor manufacturer:	FRAMATOME
- A single radioactive waste management Agency:	ANDRA

In addition to that it should be reminded of the special features of the French nuclear power plant fleet operated by EDF, which, with a 63 GWe installed power, provides for nearly 80% of the electricity in the country. It consists in 58 PWR, which are divided in only three standardised series: 34 units of 900 MWe, 20 units 1300 MWe and 4 units of 1400 MWe.

This standardised PWR fleet shows numerous advantages in terms of manufacturing and maintenance costs as well of rapid increase of the experience feedback. But the drawback of this advantage is that it requires a greater attention to detect issues with potential generic aspect.

In addition it should be ensured that the devolution to EDF corporate services of the response to these generic issues would not lead to a lack of any sense of responsibility at the local level.

In this connection, I will add that it is the main reason for France having requested the IAEA to conduct this year 2003 a PROSPER mission to the EDF Corporate services, in order to assess the operating feedback management witin the company, both individual NPPs and central corporate services.

3. OSART in France: stimulation of safety issues awareness for the operator

In compliance with the international Convention on Nuclear Safety, primary responsibility for nuclear safety naturally resides in France with the nuclear installation operator. The operator then is interested in having, in advance to the regulator, a clear view of the safety issues likely to affect its facilities. That is why EDF has its own internal supervision unit, the Nuclear Inspectorate (IN), which performs regular overall safety assessments (EGS) on each of its NPP. In addition to that EDF invites every year a WANO "Peer review", with international experts, to review the operational safety of one of its NPP. But, since the results of two types of independent safety assessments remain within the operator, it is difficult for the regulator to a its own direct view on them.

As mentioned before, the regulator is associated to the OSART mission from their beginning and the results of these reviews (recommendations, suggestions and good practices) are made available to the public. That is why EDF takes great care of these reviews and that the EDF Nuclear Inspectorate organises an internal "preparatory OSART" about 18 months before the actual one.

It is then always clearly observed by the regulator that the NPP concerned by a future OSART uses to make a lot of effort to "clean" the plant, both in improving the housekeeping and in updating operation documents and procedures. Their aim is to have a number of good practices to be considered as by international expert.

In a second step, it is also observed that each NPP continues its efforts after the OSART in order to have all the recommendations (around 20 in average) and if possible all the suggestions (around 40 in average) resolved before the OSART Follow-up mission which takes place about 18 month later.

These recommendations and suggestions are usually found resolved for 90-95% during the follow-up mission, however this OSART follow-up marks somewhere also the end of the external stimulus.

4. OSART in France: opportunity of an external view on safety for the regulator

As I said in the beginning of my speech, the unique situation with a very limited number of players (a single nuclear operation) together with an important nuclear industry makes essential for France the openness to the outside.

For the French Nuclear Safety Authority, openness is first the parliamentary supervision (through the hearings of the Parliamentary Office for assessment of scientific and technological options), the High Council for Nuclear Safety and Information (comprising representatives from regulator, operator, government, parliament, associations) and the Local Information Committees set up close to each important nuclear facility. But all this remains limited to French Stakeholders.

Then the openness has to be to other countries' practices, notably through the IAEA. Though the standardisation of the important nuclear power plant fleet gives to France the largest experience feedback database, we still consider that any information coming from an other country is likely to help us continuing to improve safety.

After 14 OSART missions already performed in France, there were never important issues discovered by the teams of which the ASN was not already aware. However, the views resulting from expert having different experiences have provided us with a lot of 'small' findings or ideas on good practices on even on inspection methodology which help us to continue to improve our supervision system.

On the other hand, the fact that OSART mission's result, representing an international view on national practices, will be made public encourages the operator to improve the cleanliness of its plants.

In addition, by giving the possibility to the Head of the Nuclear Safety Authority to comment the main findings of each OSART at the Exit meeting, in front of a large part of the NPP staff, it is a good opportunity, in this solemn context, to remind each personnel its essential duties as regard the safety.

Finally, by giving the opportunity to the general public for having an external view – and an international one - on the safety of French nuclear power plants, we are developing our transparency policy, which already led us to provide the public with our own assessments and inspection findings on nuclear facilities. This in turns helps to confirm the independence, the competence and the rigour, which the other ASN basic values needed to obtain and maintain public confidence.

5. Conclusion

The safety of nuclear power plants can only take benefit from multiple and independent assessments. This is of major importance in a country with an important nuclear power plant fleet, and moreover when the number of operator is small, as in France.

As regard to the regulator, it has to be noted that, after 14 OSART mission in France, no major safety issues, which were not already known by him, were discovered. However a lot of small findings of interest for improving safety were brought to him.

As regard to the operator, a major fact is that, due to the media impact of an OSART, he clearly undertakes thorough operations for improving housekeeping of its plant before an OSART, and for resolving most, if not all, of the recommendations and suggestions between the mission and the OSART follow-up. However it is clear that this stimulus has a tendency to fall down later.

As regard to the public, the Nuclear Safety Authority considers important that independent safety reviews, such as IAEA OSART missions conducted by foreign experts, continue to be organised in France, to increase the confidence in the work perform by its own staff.

In addition, I consider that external assessment should not be restricted to operator and that is why France has recently requested from the IAEA a TranSAS mission, to be conducted early 2004, in order to assess the safety of radioactive transport as a whole, that is by assessing not only the operators but also the regulatory framework including the Regulatory Authority.

Finally I will conclude by saying that more generally we are also very favourable to other opportunities of sharing international experience that could improve regulators efficiency in a different way than IAEA OSART, such as :

- Performance of cross inspections, involving foreign inspectors,
- Exchange of inspectors between regulators,
- Harmonisation of safety practices, notably through Western European Nuclear Regulator Association (WENRA).