All organizations involved in the emergency plan, internal as well as external, make use of an information system that runs on PCs connected via the Internet ("Elektronische Lagedarstellung" – electronic representation of the current status). All organizations provide comprehensive input on the actual status and about individual activities on this system. Background information about the power plants is also available. All organizations have access to the information. In this way, everybody is informed on-line about the actual status. It relieves the stress on the organization to supply information to a large number of partners. This was already recognized as a good practice in an earlier OSART mission to Switzerland, but at that time the system was not yet fully utilized by some organizations. Today, all involved parties are connected to the system: the power plants, the NAZ (national alarm center), the HSK (regulator), the cantonal police and the federal government. Press releases are also entered into the public sector of this system, which helps the different organizations to give a uniform message to the public.
Strong long term relationships with off-site entities, especially rescue services, lead to an efficient and common response. Relationships with off-site entities (local authorities, medical assistance, hospitals, fire brigades, ...) are extremely well developed and continuously maintained through regular contacts.

In the case of external fire brigades, this leads to the following actions and results:
- Set-up of a common mixed commission, called "fire commission", which meets every 2 months in order to confirm the arrangements and to initiate corrective actions if needed.
- A document has been developed jointly by Civaux and the off-site fire brigades to optimise fire fighting on the site.

This document ("PER" in French) is used by the off-site fire brigades. It gives an accurate indication of all plant locations, including details regarding sensitive plant equipment like main and auxiliary power transformers. It also lists the main industrial safety and radiological risks encountered on the plant.

After receiving a phone call from the plant, the relevant fire brigades simply need to refer to a detailed chart indicating the number of human and material resources required to fight a fire according to its specific conditions and location. Especially for sensitive equipment, fire-fighting plans included in the document have been drawn up by the off-site fire brigades. Moreover, this plan has been drawn up using standard formats and wording used by the fire brigades.

This document has the added advantage of directing fire-fighters to the location of the fire even before arrival at the plant. The document also provides a clear definition of responsibilities assigned to the fire fighters and to Civaux staff.

The PER is an important tool for fire-fighting since it defines the resources to be used and ensures that fire fighters and the site are using the same frame of reference. It makes it easier for fire fighters to operate and meets their expectations.

It is reviewed periodically (every 2 months) not only for updating purposes but also for raising awareness of the concerned personnel. This includes regular joint visits of the installations.

The document is available at the main entrance building, in the vehicles of the off-site emergency services, the second response team vehicle (PCOM) and at the logistics command centre (PCM).

The off-site fire brigades thus have a high quality, updated operational document.
- Review of on-site EPP-arrangements to involve a management function (PCD2) in the field to become Civaux interlocutor with the fire brigade officer.
- Organization of more exercises with external rescue services than required by the national doctrine (3 per year instead of 1) with effective deployment on the site.
- Organization of common training (plant staff and fire brigades) to promote mutual exchanges, discussions and common understanding.
- Organization, if needed or in function of turnover of personnel, of educational exercises with various specific objectives, such as the protection and decontamination measures to be taken in the case of interventions in RCA.
- Establishment of a training centre, located near to the Civaux site and partially funded by EDF, to perform most of the common training sessions.

Concerning the relationships with the hospital of Poitiers, similar arrangements are in place also to perpetuate the relationships between the plant staff and the medical rescue teams. Examples are:
- mixed training at the plant and at the hospital of Poitiers,
- 2 of 3 exercises per year with a specific medical section,
- management of the personal protection equipment dedicated to the Poitiers hospital personnel by the Civaux plant staff using sealed boxes, contributing to perpetuate the
relationships between the plant and the hospital staffs. Finally, close contacts exist between the plant staff and the local authorities (prefecture, mayors of the villages within the 10 km EPZ, local information commission, ...). In that frame, proactive communication from the Civaux NPP would limit the adverse effects of inappropriate response of the population in case of an emergency. These relationships promote team working and common understanding of the concerned actors as part of an ongoing improvement process.

**Tianwan, China**

Mission Date; 26 Jan.-12 Feb., 2004

There is a good working relationship between TNPS and officials at all levels. The provincial and local emergency command organizations are very well staffed, trained and drilled in their respective responsibilities for facilitating the implementation of public protective actions. During the exercise in October 2003, authorities implemented actual traffic control, evacuation, contamination surveys, as well as realistic simulation of the distribution of stable iodine. This exercise involved extensive “extent-of play”, hundreds of community members participated in the simulations. This exercise gave the local authorities the opportunity to really test implementation of their procedures on large numbers of area residents.

**Cernavoda, Romania**

Mission Date; 22 Jan.-10 Feb., 2005

A well-developed and comprehensive "shift deployment sheet" leads to keeping of shift personnel emergency preparedness. At the beginning of the shift, Shift Supervisor completes a "Shift Deployment Sheet" where shift staff is deployed along with normal duties and for all emergency tasks/positions (intervention coordinator, assessment coordinator, monitoring teams, response teams, etc.). This practice presents the following advantages:
- Shift Supervisor can appoint for all emergency tasks/positions qualified persons, who have all necessary knowledge (theoretical and practical)-emergency qualification to perform their emergency responsibilities and duties.
- All appointed personnel know in advance, in case of accident his place and responsibilities during the emergency. In this way the emergency organization can be set up in timely manner and can perform the emergency activities more efficiently.
- In addition these daily procedures keep the shift personnel prepared on emergencies all times.
Cernavoda, Romania

Mission Date: 22 Jan.-10 Feb., 2005

The periodical control of the Exclusion marked Zone.

The plant has an instruction named “Control of the Exclusion Zone” (SI-01365-RP12) that is used as fifth barrier for defense in depth. Inside the exclusion zone there exists the rule of interdiction of the pasturage and positioning of animal farms or permanent residence. The zone is clearly defined by 130 land marking indicators which are periodically verified (twice per year). Using these marking indicators helps to:

- Recognize easily the exclusion zone area in order to respect all the rules established for the Exclusion Zone;
- Identify all the contractors inside the exclusion zone and to conclude with them conventions regarding the control measures for the Exclusion Zone.

South Ukraine3, Ukraine


Round table discussions for plant Emergency Planning Preparedness representatives

Round table discussions are regularly organized with the plant Emergency Planning Preparedness representatives in the course of the public information process.

At the SUNPP they routinely organize "round table discussions" (1-2 times per month) involving representatives of public authorities, institutions of local governing, social and party organizations, mass media and enterprises.

"Round table discussions" are carried out on regional and local levels. NPP managers, including Emergency Response Department Head, take part in them.

During 2006 (from February to July) the following "round table discussions" took place:
- on regional level - 2;
- on local level- 5; and
- on enterprise level - 1;

About 359 representatives of off-site organizations participated in the "round table discussions".

"Round table discussions" allowed NPP visitors to understand the principles of the SUNPP safe operation including EPP tasks. The visitors receive comprehensive and qualified answers to all questions, what creates the atmosphere of openness and trust towards nuclear power engineering.
South Ukraine, Ukraine  

There is a very strong and regular based co-operation with local authorities involved in EPP tasks.

Every month two NPP representatives as staff members take part in the meetings of so-called local committee on technological and environmental safety and emergency situations formed out of the town organizations.

In 2006:
- 10 committee meetings were held;
- 21 questions related to the prevention and elimination of the consequences of potential emergency situations on NPP site and in the town were raised,
- 7 schedules of activities were approved; and
- 3 exercises were conducted.
This reflects good interaction between plant and town ERO organizations in the frame of territorial subsystem of United State system of prevention and response to man-caused and environmental emergency situations.

Dukovany, Czech  
Mission Date: 6-23 Jun., 2011

Strong support for the public to be effectively prepared for an emergency.
The Civic Safety Committee operating within the Emergency Planning Zone plays an active role in preparing the public for emergencies. Members of the committee are authorized to enter the plant, read plant documents and to discuss issues with plant staff to understand how the plant is operated safely as desired by the public. The members of the committee receive the same daily report from the plant about the operational events as the regulatory body. One member of the committee and his counterpart from the plant deal with emergency preparedness matters. The members of the committee reported that the plant is open in sharing all information with the public, important for their preparation for emergencies.
Biannually the plant provides a calendar that contains detailed instructions on how the public should proceed in an emergency. The content is approved by the regional and national authorities. Pre-defined forms are attached to the calendar and used to provide the most important preliminary information by the citizens to the authorities to support effective evacuation. The forms, submitted to the local authorities in advance, contain information about how many persons are expected to evacuate, if there are disabled in the household, if they need any special treatment/medication, who can assist them after evacuation and the main communication means that can be used to contact them. There are also forms to be put on the door after evacuation about how many persons, how and when they left and if there are animals left behind.
Public information, education and interaction with external authorities.

The plant has an educational bus that visits communities within a 16km radius of the plant. The bus teaches both school children and adults about the activities that take place on the plant and the actions that they should take in the event of an emergency declaration. In the last two years, approximately 1000 people have utilised this service, which represents around 10% of the population living within the 16 km zone. Almost 50% of these people visit the plant information centre as a result of participating in the educational programme. The statistics show that almost 100% of these people have a positive opinion of the plant following these interactions.

An extensive, robust communications system is in place to notify the relevant external bodies in the event of an emergency. This includes a maintained radio system that is effective to a range of 80km from the site which is supplemented with dedicated direct phone lines to relevant authorities and satellite phones.

A committee, chaired by a government department, meets 4 times a year and reviews the coordination of the response to an event. This committee has sub-committees that ensure that all relevant issues are addressed to maintain an adequate capability.

In the event of an emergency the offsite emergency control centre has the capability to track the public being received in the evacuation centres within the evacuation zone. This allows the site to track the arrival of approximately 13000 people at evacuation centres with a high degree of accuracy in the event of an offsite release.

The plant carries out an annual census that includes visiting all households within the 16km exclusion zone. During this census, the plant representative provides a member of the household with a copy of the emergency calendar and reinforces the actions to be taken in the event of an emergency by personally briefing the householder.

The plant maintains all roads within a 16km radius of the plant and provides evacuation points, evacuation route signage and has a dedicated supply of buses available to ensure that all people living within a 5km radius of the plant are evacuated in a timely manner.
Fleet-wide standardized process for emergency preparedness and response with strong involvement from Corporate offices, qualified personnel and high availability of facilities, equipment and materials.

Some of the components are:
• Exelon has developed a standard Emergency Plan and procedures that allow support from corporate offices and other Exelon stations in drills/exercises control and evaluation, review of procedures, and verification of off-site facilities and equipment.
• The review of procedures and the plan takes advantage of having a team of EP managers that ensures that intended changes are appropriate.
• Corporate offices are responsible for the relationship with external agencies, allowing the station EP group to concentrate in onsite activities. This relationship allows better understanding and participation of external organizations in the station emergency plan.
• Common set of performance indicators allows the comparison among fleet EP programmes fostering healthy competition and driving the effort for improvement.
Corporate offices have a good tool to assess the performance of the EP process in all fleet stations.
• A standardized training programme has been developed using a detailed job task analysis for each Emergency Response Organization position, including performance-based activities. Most of the training material is common to the fleet helping to ensure better use of resources.
• Having standardized processes facilitates corporate offices to operate common facilities such as the Emergency Operations Facility (EOF) and the Joint Information Center (JIC) and the purchase and storage of supplies such as KI tablets.
• Standard criteria for the evaluation of drills and exercises allow support from other stations and corporate offices, comparisons in performance and dissemination of lessons learned from drills/exercises. More than 300 criteria allow detailed tracking and monitoring of performance.
Most of the performance indicators are challenging and are 100% or in the high 90s, for example: equipment availability, staffing and qualification of personnel, and drills participation.
Having a common process for all the stations in the fleet improves not only the level of preparedness but also, on the level of response, and allows better support from corporate offices and other stations in the fleet.