INCIDENT AND EMERGENCY CENTRE

Report of IAEA

Participation

ConvEx-3 (2008)

International Emergency Response Exercise

Laguna Verde, Mexico

9 to 11 July 2008

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CONVEX-3 (2008) EXERCISE REPORT
Incident and Emergency Centre
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Foreword

The in-house plan[1] of the IAEA's Secretariat describes the framework for systematic, integrated, coordinated, and effective preparedness and response for a nuclear accident or radiological incident or emergency involving facilities or practices that may give rise to a threat to life, health, the environment or property. The purpose of ConvEx-3 (2008) was to test and evaluate exchange of information and coordination of assistance on the international scale during the early phase of a major emergency. The ConvEx-3 (2008) provided an opportunity to identify strengths and shortcomings in the IAEA Incident and Emergency System (IES).

The ConvEx-3 (2008) was based on a Mexican national exercise. The scenario was developed by the Laguna Verde NPP together with the National Nuclear Safety and Safeguards Commission (CNSNS) for the Unit 1 of the Nuclear Power Plant. It included a release due to a controlled depressurization of the containment.

The exercise was evaluated using the methodology discussed in EPR-Exercise (2005), "Preparation, Conduct and Evaluation of Exercises to Test Preparedness for a Nuclear or Radiological Emergency." Five objectives were developed including a list of performance indicators for critical timings and functional requirements, for each objective. Evaluators used a set of checklists during the exercise to evaluate the performance. After the exercise was completed and based on evaluations, the Chief Evaluator determined if the performance was:

❑ Excellent - No corrective actions required
❑ Satisfactory – Some major or minor improvement opportunities identified
❑ Unsatisfactory – Critical improvement opportunities identified

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[1] Response Plan for Incidents and Emergencies (EPR-REPLIE 2007).

Contents

Executive Summary

The IAEA essentially met its obligations under the Early Notification and Assistance Conventions. Member States were kept informed of the situation at the Laguna Verde NPP. Most of the time they were appropriately and in a timely manner provided information about the accident and the expected path of the radioactive release. The IAEA made offers of good office at appropriate times and the Incident and Emergency Centre (IEC) coordinated international assistance offered by international organizations as well as by Member States.

However, none of the objectives have been evaluated as 'Excellent' because in all processes deficiencies were identified and improvements are necessary in those areas. Most of the identified deficiencies have to do with training and the frequency of exercises. Consequently, this calls for more time dedicated by staff members to the Agency's Incident and Emergency Response System. However, this contradicts the current lack of support from some managers and the unwillingness of some staff members to take part in such activities.

Compared to the last ConvEx-3 exercise this exercise showed that facility issues were hardly identified any longer, only the limited practicability of the standard Agency furniture and the lack of 24h air conditioning in the office area of Public Information were mentioned.

Evaluation of each exercise objective

Objective 1: To test whether response management in a nuclear emergency is efficient and appropriate.

The performance was rated: **Satisfactory**

The exercise scenario gave an opportunity to test the interface between the IEC's arrangements during normal office hours and times when the IEC is activated to full response mode. At the start of the exercise the scope of the event was rather small and therefore the normal (day-to-day) process for reacting to it was initiated. However, due to special exercise arrangements, the on-call Emergency Response Manager (ERM) and Logistics Support Officer positions were held by IEC staff members. Therefore the involvement of the on-call staff was bigger than what was observed in real events in the recent past. Nevertheless, the flow of information within the IEC was as designed. After being informed, the on-call Response Manager stayed in the IEC and assumed leadership for this event. However, according to the procedures, an Event Officer should have been assigned for such a small scale event. This was done by the Response System Coordinator by informing an IEC staff member, but without announcing this in the operations room. Consequently the more junior IEC staff member never got into the role of the event manager as his supervisor was the on-call response manager. This and the knowledge of the length of the exercise explain this overreaction early in the exercise.

During the activation of the IEC the logistics officer faced some problems in identifying staff for each position, which was a consequence of the limited participation of staff members in the exercise. However, this problem is also expected to occur in real situations as some staff will not always be able to come to the IEC for various reasons. It is highly questionable whether a reliable system can be maintained with a completely voluntary system, which offers only very limited compensation for the participation in training and response activities.

Once the IEC was activated there were many observations concerning a lack of command and control within the operations room. E.g., the ERM's absence from the operations room was negatively commented on. Consequently, some of the processes, which needed the ERM's intervention, did not work as designed. This was particularly obvious – in combination with the problem stated below - for the internal information flow. Due to a lack of staff the position of the Screening Officer was always filled by a staff member who had another role in the response system. Therefore the Screening Officer was often absent from his place at the main desk and the Communication Officer had no liaison person for new incoming messages. Response Managers showed too little flexibility in the staffing of the response organization as described in the following example. Once the exercise had progressed in full activation mode for some hours, it became apparent that the Zone 2 Liaison Officer was not very busy. At this stage it would have been better to place this officer at the main desk acting as the Screening Officer instead of keeping him in the Liaison Officer position.

While the right priority was given to the incoming messages from the "Accident" state, the verification process was not so successful. Only one message from Mexico showed that it was not verified on the ENAC web pages, but several other messages

showed errors which should have been captured before publishing the message. Some validity times were wrong and in one case the message was sent using the wrong form, which resulted in the wrong emergency classification. Another problem was how information received by phone was dealt with. While the Accident State Liaison Officers did a good job in writing the information down and introducing it in the system, this information was never made available on the ENAC web pages. Consequently there was an inconsistency in the information available in the operations rooms and the information available to Member States Contact Points. During the exercise no system was observed to deal with requests for information. Consequently, for some of them no answers were sent back to the requester.

A weakness reported by many evaluators and players were the briefings. There are no clear instructions on briefings, however, in this exercise most players felt that they were not well informed, that the time between the briefings was too long, and the briefings were not well structured. The Communications Team had to move out of their area to listen to the briefings as their room is not equipped with speakers. Also the information which players got when they were arriving for their shift was not sufficient. A system which could be used by individual players to inform them on the current status should be introduced.

In connection to the briefings, the video displays have to be mentioned. The displays were set up shortly before the exercise, and therefore no player was trained on operating the video displays and to complete the electronic status boards. However, some instructions were made available and certain staff members were told that it was their responsibility to update the status boards. There are some areas for improvement, and the IEC is planning to include the instructions for the status board in the checklist for the relevant positions. Also some positions which had to update a status board had no dedicated equipment available, which caused some problems. White boards or flip charts were missed by some players.

There were some space issues, which should be improved. The Liaison Officers have a lot of equipment on their desks and in addition they also get a lot of paper information, therefore desks with more features to place items would be beneficial. The location of the Liaison Officers could be improved, as it was felt that the Accident State Liaison Officer should be nearer to the Technical Team. The Technical Team did not have enough space. This problem also affected staff from Public Information as there was no available workspace. On the other side, two computers in the back area of the operations room were not used throughout the exercise.

Objective 2: To test whether during a nuclear emergency information is exchanged efficiently and in a timely manner.

The performance was rated: **Satisfactory**

Communication with external contact points and within the IAEA was performed satisfactorily. Most important was that information was distributed to the external contact points quite fast. Nearly all ENAC messages were posted within 30 minutes of their submission. Only one message took more than 1 hour to be published; in fact it took 3 hours and 28 minutes for reasons which could not been identified. The Communication Team was working very effectively and efficiently.

Early in the exercise, before the Communication Team was activated, there was very little checking of new messages, although there was a clear indication on the video

wall when new had messages arrived. Once the Communication Team was activated, the reaction time to new messages received by email or fax improved significantly.

There was a problem with messages received by telephone. Not all information received this way was properly recorded and introduced to the message management system. In addition, some information was made available within the IEC but not to the external contact points. This became especially apparent in a phase when there were only very few ENAC messages from the Accident State. Consequently, the public information messages, which were based on the information available in the IEC, had more and more detailed information then what was made available to the contact points.

Also, information to Agency staff was delivered inconsistently. In the beginning of the exercise several internal messages were sent to keep everyone up to date on the event. Later, however, this was stopped.

A list of native speakers should be available in the IEC and the Accident State Liaison Officer should be selected based on the language.

Objective 3: To test effectiveness of arrangements for the international assistance.

The performance was rated: **Satisfactory**

The most interesting outcome of the evaluation process of this item was that the process was only observed in the early phase of the exercise. Later, the evaluators did not observe this activity. The first two requests received from Mexico were covered by the standard procedures of the IEC. Therefore no special arrangements had to be made. However, the third request required more work. While the request was dealt with by the system, it was not visible on the status boards (should have been visible there under action items) or included in the briefings or otherwise easily observable. It was planned that the Response Manager could activate additional staff as an Assistance Manager, if needed. However, this was not done. Also, an Assistance Action Plan should have been developed, which was not done until the very last phase of the exercise and following a corrective action suggested by the controllers. This could be due to the fact that it was obvious that the provision of assistance was not necessary, otherwise some of the practical and administrative issues would have received more attention. However, the exercise showed that only ad-hoc arrangements currently exist for the involvement of registered RANET activities.

Objective 4: To test whether press releases are technically correct, timely, within the scope of the IEC's mandate and coordinated and consistent with the information released by the relevant countries or international organizations.

The performance was rated: **Satisfactory**

There was a strong involvement of the Division of Public Information in this exercise. Their arrangements were tested fully, and overall the internal process was evaluated positively. The web-based AlertLog developed for the purpose of such exercises was seen as an extremely efficient tool. However, it was apparent that there was very little pressure from the media on MTPI compared to a real situation.

The interface between the IEC and MTPI in such a situation still needs some improvement. While the presence of MTPI officers in the IEC was an advantage,

there was still a lack of coordination between MTPI and the IEC. At times the IEC was not aware that MTPI had released a press statement and at others MTPI staff was not informed when the IEC had released information to their contact points.

The coordination of press releases with other international organizations failed in most cases, as only very limited exercise arrangements were made by other international organizations. This is a persistent problem.

> ***Objective 5: To test whether the technical team can evaluate the available information to assess the condition of the nuclear power plant and to judge on the appropriateness of protective actions by possibly affected states consistent with IAEA guidance documents.***
>
> The performance was rated: **Satisfactory**

As in previous exercises, there were many issues with the Technical Team. There seems to be a lack of clarity regarding the role of the Technical Team. While it is always emphasized during training that only limited information will be available and that the function of the Technical Team is to check this information for consistency, the Technical Team got involved in issues which were definitely out of the scope of their role, as has been experienced in previous exercises.

The composition of the Technical Team was again identified as an issue. Overall there were two problems: one is the structure of the Technical Team and the second is having relevant expertise available in the Technical Team. Concerning the first issue, it was not seen as ideal to have just a single group which deals with all aspects of the emergency. This connects to the second issue: the relevant and necessary expertise was not always available during the exercise.

The Technical Team requested more information from the Accident State, which it did through the Accident State Liaison Officer. With this additional information the technical team was able to develop a picture of the accident which helped the IEC to understand the problem. However, additional information about the power plant design and about the emergency planning zones would have been beneficial. Such information should be readily available for each nuclear power plant.

The Technical Team did not use the relevant technical guidance documents which were available, nor were the available technical tools used efficiently. This was mostly due to the fact that the technical team members were not trained on these IAEA documents and there was only little training on the technical tools before the exercise, which was also not attended by all technical team players.

Exercise Conduct

Lessons for exercise conduct were also identified. For each objective, there were two evaluators, who had to act both in two shifts each. In addition there was an Agency Chief Evaluator and the International Chief Evaluator (an IAEA staff member) present in the IEC. The evaluators were also assigned the role of controllers but there had been no clear instructions on how to control in the exercise and consequently this was not done throughout the exercise. This failure to control the exercise within the IEC allowed some mistakes to propagate beyond what was necessary. It is recommended that future evaluations be process-based rather than objective-based.

Another problem of this exercise was that the most experienced IEC staff were strictly evaluating the exercise rather than playing in it. This together with the critics that training was not sufficient before the exercise lead to errors which would have been at least corrected if more experienced staff were playing in the exercise.

The low frequency of such exercises was criticized by several evaluators and players, it was recommended that smaller drills on parts of the procedures should be run more often so that processes are more familiar in a real response.

Future exercises should be announced in time (without the exact starting time), however, the planned duration should not be made known in advance.

Issues relating to participation and compensation of staff to the response system need to be resolved at a policy level so that planning and engagement of staff can be effectively performed. A system based on voluntary contribution is not seen as the most effective system.

Annex A
Evaluation Forms

Incident and **Emergency**
Centre

Department of Nuclear Safety and Security

Evaluation Checklist

Response Management

ConvEx-3 (2008)

International Emergency Response Exercise

Laguna Verde, Mexico

9 and 10 July 2008

Evaluation area:	Response Management/Arrangements

Objective1: To test the effectiveness and efficiency of the response arrangements documented in the newly approved interim version of Response Plan for Incidents and Emergencies (EPR-REPLIE 2007).

Q1: Was the response documentation adequate to guide the response actions?

Q1.1. Can staff resolve issues on how to respond by referring to the response documents?

Yes ☐   No ☐   Partly [X]   NA ☐

The IAEA is tasked with three major functions under the Convention on Early Notification: the forthwith notification of possibly affected states, the prompt provision of additional information and the provision of public information. Instead of turning to controllers/evaluators staff should use the response documents to resolve problems.

Note: The technical team was not well familiar with TD-955 or relevant software for making off-site does calculations.

Q1.2. Does staff stay within expected boundaries, when discussing and agreeing on how to respond?

Yes [X]   No ☐   Partly ☐   NA ☐

The IAEA has to focus on exchanging official information, coming from the State Parties of the Early Notification Convention. If assistance is requested under the Conventions of Assistance the IAEA should provide or broker the assistance. The IAEA does not have the role of providing an independent assessment on the situation to the contact points or through MTPI to the media.

Q2: Did staff perform response actions as documented?

Q2.1. Was the first information concerning an event in Mexico relayed to the response system group?

Yes [X]   No ☐   NA ☐

Any incoming information on a possible event should be routed to the Response System Group with undue delay.

Q2.2. Was other IEC staff informed of the first message?

Yes [X]   No ☐   NA ☐

The Response System Group normally holds a short internal meeting on new events to agree on the course of action. If the event was more severe or if it was reported through NEWS, also the Incident Reporting Coordinator and the Head IEC are informed.

Q2.3. Were the on-call officers informed of the incoming information?

Yes [X]   No ☐   Partly ☐   NA ☐

Once it is determined that actions will be taken, and the counterpart will be contacted to verify the information the on-call officers should be informed (specially the on-call ERM).

Q2.4. Was an Event Officer assigned by the Response System Coordinator?

Yes ☐   No ☒   NA ☐

If not activation level needs to be declared (which can only be done by the ERM), the Response Coordinator assigns an Event Officer, who coordinates all tasks on the event, until it either escalates and the ERM takes over, or it is closed.

Note: The Response System Coordinator appointed an Event Officer, but this was not announced in the IEC, so it was not noticed (also not be the Evaluators). As they on-call ERM was in the IEC very early on and decided to stay there, the on-call ERM took action. This is unusual for a small event - like the exercise started – but happened due to the knowledge that this was the start of a long exercise. The appointed Event Officer handed over to the on-call ERM when he realized this.

Q2.5. Was an Event created in the "Outlook Solution"?

Yes ☐   No ☒   NA ☐

Using the first information an event is created in the "Outlook Solution", and all relevant subsequent information should be linked to the event as well.

Note: The Event Officer created an event in the Outlook solution but it was not maintained by the other staff. The Event Officer decided not to maintain it once the IEC was activated to Full Response mode, which was the correct action to do.

Q2.6. Did the ERM give priority to messages from the Accident State?

Yes ☒   No ☐   Partly ☐   NA ☐

Amongst all incoming information the ERM should focus the actions of the whole team on verifying and distributing the messages from the Accident State. Attention should be given for any new information coming from the Accident State.

Note: Apart from a single message all EMERCON messages from the Accident State were dealt with promptly. Only for 5 of 17 messages publishing tool more than 30 minutes, however the longest time span being 3 hours and 28 minutes.

Q2.7. Were the incoming messages from the accident state and affected states verified?

Yes ☐   No ☐   Partly ☒   NA ☐

The ERM should ensure that all new messages from the Accident State are verified by the Liaison Officer. If the message is not clear the Screening Officer or the Technical Team should formulate questions for clarification and route them through the ERM to the Accident State Liaison Officer.

Note: Only one message from the Accident State was published as being not verified. In a few cases the verification process failed as it showed wrong validity times or even a wrong emergency class in one case. However, of the messages from the other countries less than half were verified when published.

Q2.8. Did the ERM prioritize requests for information?

Yes ☐   No ☒   Partly ☐   NA ☐

Requests for information should be recorded and prioritized by the ERM. The priorities are on request concerning the protection of health, property and the environment, coming from the Accident State, the possibly affected States, and from MTPI.

Note: There were very few requests for information in the exercise. However, for some no individual answer could be found. This means that no system was in place to check whether such requests were finally answered.

Q2.9. Did the operations manager have all necessary resources available to fulfil his tasks?

Yes ☐　　　No ☐　　　Partly ☒ X　　　NA ☐

The Operations Manager has to act like a deputy ERM. He has to make sure that all operational steps are implemented (the protocols with the International Organizations), the information exchange as described in ENATOM, he also needs to keep the event log and the list action items up to date.

Note: The operations manager is place on the main table with the ERM, however, this table is not equipped with PCs. The operations manager however is tasked to keep the event log updated.

Q2.10. Were the status boards completed by the responsible officers/teams?

Yes ☐　　　No ☐　　　Partly ☒ X　　　NA ☐

The Technical Team should complete the Accident State Status Board, the Technical Team Leader together with the Operations Officer should complete the Event Log, the Logistics Officer should complete the IEC Staffing Chart, and the Operations Officer has to maintain the Action Items.

Note: Some status boards were not kept up to date at times. E.g., the accident state status board didn't show the correct duration of the release for a long time. On the other side, the INES level was upgraded as some time, when the Accident State Liaison Officer was not aware that this information was already available in the IEC.

Q2.11. Were the different displays used to review the available information?

Yes ☐　　　No ☐　　　Partly ☒ X　　　NA ☐

Three different layouts were prepared for displaying various information on the video wall. The ERM should instruction the IEC technician to display different layouts so he can review the information or use them in the briefings.

Early in the exercise the display boards were not used, however, this is due to process design. Once the IEC was activated to Full Response Mode the boards were used, however, with the problems given above. The time on the accident state status should not always show the current time, but the time when the information was last updated.

Q2.12. Were the activation modes declared by the ERM?

Yes ☒ X　　　No ☐　　　Partly ☐　　　NA ☐

If a) operations outside office hours are foreseen, or b) the severity of the event requires that additional staff is placed on standby (Basic Response Mode) or if the centre needs to be staffed 24/7 (Full Response Mode) the appropriate activation level needs to be declared. This needs to be done by the ERM in consultation with the Head IEC or the DDG – NS (and not by the Event Officer).

Q2.13. Was the IEC Steering Group activated?

Yes ☒ X　　　No ☐　　　NA ☐

Independent of the activation level an event might require that (strategic) decisions are made, which are not within the ERM's authority. If the severity of the event is such, that the IAEA

involvement will be know to the public, in any case the IEC Steering Group needs to be activated. The Head - IEC should communicate with the DDG – NS, who should call the group for a meeting.

Q2.14. Were tasks or requests, which were not clearly within the mandate of the IEC forwarded to the IEC Steering Group?

Yes ☐   No ☐   Partly ☐   NA ☒

This is the case, when special legal advice on the interpretation of the conventions is needed, or if EXPO's involvement is needed to clarify how to deal with a specific counterpart. Actions by any counterpart which are not in the within the spirit of the conventions also need to be made known to the IEC Steering Group.

Q2.15. Had the incoming shift a good understanding of the situation and what decisions were made during the previous shift?

Yes ☐   No ☒   Partly ☐   NA ☐

The ERM should conduct a briefing at times when staff from both shifts are in the IEC. Every officer should brief his/her successor on the current situation.

Note: Although briefings were held by the ERM, not all staff were well briefed when the started their shift. Some staff didn't brief their successors at all and at times no briefings were held when they would have been beneficial.

Q3:   Are the IEC facilities practical?

Yes ☐   No ☐   Partly ☒   NA ☐

The IEC should be designed to a) give staff sufficient space to perform their tasks, b) allow staff to discuss without too much interference from other sources, c) minimize the ways that staff need to go.

Note: The Liaison Officers and also the Technical Team seemed to be cramped. The Technical Team had to share their space with MTPI. One PC was not used at all (the one at the back of the technical team area). The PC at the international organization area was not used also (could have been used by MTPI). The Accident State Liaison Officer should be nearer to the Technical Team. There should be more UTC clocks in the IEC so everyone can see the UTC time without problems.

Q3.1. Were the briefings well understood by all staff ?

Yes ☐   No ☐   Partly ☒   NA ☐

Could staff in the different rooms listen to the briefings and did they understand the briefings. Was the ambient noise level adequate to listen to the briefings?

Note: The Communications Room is not equipped with speakers, so the Communication Assistants were normally stepping out of their room to listen to the briefings. In general there were too few briefings specially after each shift change a briefing should have been held.

Q3.2. Could discussions and consultations be easily held without disturbance?

Yes ☐   No ☐   Partly ☒   NA ☐

Can staff discuss at the ERM table and in the Technical Team area without disturbance from the Liaison Officer areas and other areas? Is the ambient noise level adequate to have discussions without having to raise once voice?

Q3.3. Was there sufficient space on the table of the ERM?

Yes ☐　　　　No ☐　　　　Partly ☒　　　　NA ☐

Did all the staff sitting on the ERM table sufficient space to place their documents and lists in a way allowing them to stay organized. Was the table microphone free from papers when it need to be used during the briefings

The operations officer could only perform his tasks specially the updating of one status board, by walking around and finding a computer which was not used.

Q3.4. Did the Liaison Officers have enough space for their tasks?

Yes ☐　　　　No ☐　　　　Partly ☒　　　　NA ☐

Was it possible for the Liaison Officers to place all their documents, have the logs available, have free access to the telephones, headphones, and computer keyboards?

Q3.5. Did the technical team have sufficient space?

Yes ☐　　　　No ☒　　　　Partly ☐　　　　NA ☐

Did members of the technical team have enough space to place their documents, maps, diagrams, their response documents and any supporting document on the tables provided for them?

Incident and **Emergency**
Centre

Department of Nuclear Safety and Security

Evaluator's Checklist

Communications

ConvEx-3 (2008)

International Emergency Response Exercise

Laguna Verde, Mexico

9 and 10 July 2008

Evaluation area: **Communications and Information Exchange**

Objective 2:   **To test whether during a nuclear emergency information is exchanged efficiently and in a timely manner.**

Performance Criterion

All information that is received by the IEC from official and unofficial sources should be authenticated, verified, evaluated, and distributed. The information can be in the form of a phone call, fax or ENAC message sent to the IEC. Information taken from official and unofficial websites and various forms of media releases may also be important sources of information. Emergency information should be immediately sent to the affected States so they can develop and implement the appropriate protective actions.

Q1:   Were the messages received at the IEC sent out to contact points within the performance criteria?

[Initial notification should be delivered to Warning Points of potentially affected States within 2 hours of receipt by IAEA; subsequent messages should be delivered within 1 hour of receipt]

Record the time the initial message was received:	10:30
Record the time the initial message was distributed:	11:25 on ENAC:
	16:49 by fax:

Yes ☐   No ☒

Note: At the beginning of the exercise as long as the IEC wasn't activated to full response mode the incoming faxes and emails were not continuously monitored. Only few IEC staff members seemed to be aware of the tools on the video wall indicating the receipt of new emails or faxes. There are some delays caused by the distribution process of messages and as a result that not all incoming messages are available in a central store to which everyone has access. The Accident State Liaison Officer and the Screening Officer positions were manned late which also slowed down the processing of information. The ENAC message have been published within one hour apart from a single one. According to the procedure, only critical messages were also distributed by fax (e.g., change of emergency class and changes on the release information), however, these faxes were distributed always only hours after the messages have been received.

Q2:   Were proper communication links established with States and relevant international organizations?

[The Accident Site and Zone 1 Liaison Officers should immediately get in touch with their contact points and share with them the phone number, fax and e-mail to use for communications during the event. The Zone 2 and the International Organizations Liaison Officers should confirm contact information on an as-needed basis]

Accident State:

Yes ☐   No ☐   Partly ☒   NA ☐

Note: While the Accident State Liaison Officer has established dedicated contact with the Accident State by telephone and email, the dedicated fax was not used. No Mexican website was made available. Also many of the questions and answers were not received in written form. Although the telephone records were at times introduced into the information flow, however no updates were posted on ENAC for a while, which caused later an inconsistency between the information available on the webpage and on the status boards.

Zone 1:

Yes ☐   No ☐   Partly ☒ X   NA ☐

Zone 2:

Yes ☐   No ☐   Partly ☒ X   NA ☐

International organizations:

Yes ☐   No ☐   Partly ☒ X   NA ☐

Note: There was some confusion whether the Liaison Officers should send emails directly from their computers, which resulted that some Liaison Officers did not send emails directly from their desks, while they should have sent out already approved information directly.

Q3: Did the IEC acknowledge each received message?

[The IAEA should acknowledge to the sender, the receipt of all messages determined to be of importance. This can be accomplished through phone confirmations or fax messages.]

Yes ☐   No ☐   Partly ☒ X   NA ☐

Did the IEC keep track of all incoming and outgoing messages?

[Each message received by the IAEA must be serial stamped and dated, entered into the log system, copied, and distributed. All original documents should be kept the originals folder in the communications room.]

Incoming: Yes ☒ X   No ☐   Partly ☐   NA ☐

Outgoing: Yes ☐   No ☐   Partly ☒ X   NA ☐

Q4: Was relevant IAEA staff kept informed?

[When the IEC is activated, an in-house notification should be sent to IAEA staff informing them of the event. Staff members in leadership positions should be kept informed of the status of the response.]

Yes ☐   No ☐   Partly ☒ X   NA ☐

Note: In the first 20 hours of the exercise several messages were sent, however, this was discontinued thereafter.

Q5: Were the modes communication continuously available and operational?

[The different modes of communications set up within the IEC should remain functional throughout the event. If there is a failure of a primary communication system (i.e. PROFAX system for sending faxes), the secondary system should be used until the primary system is returned to working order. For a system to be considered fully operational there must be sufficient staff to operate the system.]

Yes ☐   No ☐   Partly ☒ X   NA ☐

Please specify:

Channel	Available	Operational	Loss of capability	
			< 15 min	> 15 min
Fax	X	X		
Telephone	X	X		
Email			X	
ENAC Web site				X

Q6: Were messages disseminated according to checklists/instructions?

[The response checklists for the Screening Officer and the Communications Assistants should be used to determine the mechanism and to whom copies of messages should be distributed.]

Yes ☐   No ☐   Partly ☒   NA ☐

Note: The Screening Officer position was held in two shifts by a staff member who had also another function. However, the screening officer should have been more present at the main table. Therefore sometimes, the distribution didn't happen as planned. Some liaison officers were not aware of their desk setup and therefore missed some new messages which were delivered to their in-boxes. Once the communication officer placed new message in their absence on their chairs messages were dealt with immediately.

Was the information received disseminated within the IEC in a timely manner?

[Although there is no specific time criteria for disseminating information within the IEC, information from the accident state or marked "urgent" should be given top priority. If the Screening Officer is not able to quickly process the incoming information and messages begin getting backlogged, the ERM should arrange for an additional Screening Officer.]

Yes ☒   No ☐   Partly ☐   NA ☐

Note: As there is no specific time criteria this was rated quite positively. However, such criteria should be developed, this would improve the flow of information in the IEC. The late manning of the screening officer position also slowed down the distribution process early on in the exercise. At one point in time all Liaison Officers and all Communications Assistants had left the IEC!

Q7: Did response personnel consult official websites (Accident State, other States, and international organizations)?

[Although there is no requirement for using official websites of States or international organizations, the information posted on official sites can be treated as highly credible and used to develop a more complete picture of the event. MTPI can also include the web addresses in media releases to the general public.]

Yes ☐   No ☒   Partly ☐   NA ☐

Note: There were no exercise specific national websites made available.

Q8: Did response staff appear knowledgeable in the use of their checklists?

[The response staff should consult their checklists when there is a doubt about a specific procedure. If a checklist is not used, this is not necessarily an indication that the staff is not knowledgeable about the checklist; the staff may be very familiar with the contents and does not need to reference the checklist.

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The evaluator should periodically compare the actions to the checklist, especially when a checklist is not being used.]

Yes [X]   No [ ]   Partly [ ]   NA [ ]

Did it appear that additional checklists/instructions/tools would have been useful for certain tasks?

[This will be the case if the response staff must improvise to complete a task or procedure because there is no clear guidance available.]

Yes [X]   No [ ]   Partly [ ]   NA [ ]

Note: The Liaison Officers always did good turnovers to their successor. However, not all groups did such good turnovers. Instruction might be needed but should possibly be position specific and ideally developed by staff, which was involved in the last exercise.

If YES or PARTLY please give examples.

Shift turnover

Incident and Emergency Centre

Department of Nuclear Safety and Security

Evaluation Checklist

International Assistance

ConvEx-3 (2008)

International Emergency Response Exercise

Laguna Verde, Mexico

9 and 10 July 2008

Evaluation area: **International Assistance**

Objective: **To test effectiveness of arrangements for the international assistance.**

Q1:   Were the requests for assistance verified, before being dealt with?

The ERM should instruct the relevant Liaison Officer to verify the request, after a quick check for sense was done. If the request is not clear the Technical Team should formulate questions for the verification process.

Yes [X]   No [ ]   Partly [ ]   NA [ ]

Q2:   Did the ERM prioritize requests for assistance?

The ERM should keep a record of incoming requests for assistance. If there is more than one request at a time, the ERM should prioritize the requests by their origin (Accident State, Affected States, International Organizations, Other states) and their nature (Highest priority to requests concerning the protection of health, property and the environment).

Yes [ ]   No [ ]   Partly [ ]   NA [X]

Note: The requests for assistance were received with such timely intervals so that no prioritization was necessary.

Q3:   Did the ERM have sufficient time to deal with the request for assistance?

The ERM should finally approve all assistance arrangements, but if time doesn't allow him to deal with the request without introducing undue delay he should appoint an Assistance Officer. If needed a staff member should be activated.

Yes [ ]   No [ ]   Partly [X]   NA [ ]

Note: The first request came early and there was sufficient time for the ERM to deal with it. Also the second request was answered promptly, however, the established protocol for assistance requests have not been followed, which indicates as lack of time to deal with the assistance request.

If the previous answer was No: Did the ERM appoint an Assistance Officer?

If time doesn't allow the ERM to deal with the request without introducing undue delay he should appoint an Assistance Officer. If needed a staff member should be activated.

Yes [ ]   No [X]   Partly [ ]   NA [ ]

Q4:   Was an Assistance Action Plan developed for the requested assistance?

The IEC normally develops an Assistance Action Plan which describes the roles and responsibilities of the assistance, as well as all the counterparts and the assistance timing.

Yes [ ]   No [X]   Partly [ ]   NA [ ]

Note: Some of the requests were of small scope, e.g., for the requested meteorological products no assistance plan should be needed as this is an established operational procedure of the IEC. In other cases Assistance Action

plans should have been considered to be prepared. The standard procedure for providing international assistance was not followed.

Q5: Was staff with relevant expertise consulted for the development of the terms of reference?

The IEC normally develops an Assistance Action Plan which describes the roles and responsibilities of the assistance, as well as all the counterparts and the assistance timing.

Yes ☐   No ☐   Partly ☒   NA ☐

Q6: Were other international organizations consulted if the request was within their area of expertise?

Yes ☐   No ☐   Partly ☒   NA ☐

The ERM should ensure that through the Liaison Officer for international organizations communication is established with the relevant organization (e.g., WHO for medical or human health issues, WMO for plume modelling, FAO for agricultural issues), and specially WHO, WMO and FAO as they are state parties to the convention on assistance.

Note: Check list of the International Organization LO has a list of international organizations to contact ("Implementation of actions", Page 4 of 11). This list needs to be deleted, as international organizations are to be contacted as applicable depending of the details of the emergency. Presence of the list created confusion, as only those orgs which were in the list were contacted (e.g. Interpol was not contacted).

Q7: Were teams and capabilities from providing states identified from the list of registered RANET capabilities?

Yes ☐   No ☒   Partly ☐   NA ☐

Some Member States have provided a list of teams/expertise or home based capabilities (like laboratories) which they could make available if requested through the RANET (Response Assistance Network) approach. The ERM should ensure that first these teams are looked at, however, geographical proximity or specific language skills might still

Note: The offered cooperation of WHO is part of the operational procedures, even though the cooperating centres are not all registered as RANET members. The offer of France was at the time of the exercise not a registered RANET team either. Even if it would have been there was no process which took account of the registered RANET members.

Incident and **Emergency**
Centre

Department of Nuclear Safety and Security

Evaluator's Checklist

Public Information

ConvEx-3 (2008)

International Emergency Response Exercise

Laguna Verde, Mexico

9 and 10 July 2008

Evaluation area: **Public Information**

Objective 4:   **To test whether press releases are technically correct, timely, within the scope of the IEC's mandate and coordinated and consistent with the information released by the relevant countries or international organizations.**

Performance Criterion

The MTPI Liaison Officer should produce media releases with the assistance of the Technical Team Leader. The Emergency Response Manager must approve all releases prior to publication.

Q1:   Were the pre and post exercise media advisories clearly stated and problem free?

[A pre-exercise media advisory is posted the day before the exercise to alert the media that an exercise will be taking place. The advisory should not cause any concerns, but if there are problems relating to the advisory be sure to note them. A post-exercise media advisory will also be posted when the exercise ends.]

Yes X   No ▢   Partly ▢   NA ▢

Q2:   Did the press releases (simulated) contain only information that is appropriate for the IAEA to release?

[The press releases should contain official, verified, and authenticated information obtained from the Accident State, the role and activities of the IAEA in relation to the accidents, and information that helps relates this accident to others in scope. There should be no speculation about the cause or potential impact of the accident and unverified sources should not be included in the press releases.]

Yes X   No ▢   Partly ▢   NA ▢

Note: However, due to limited contact from real media there was only limited pressure on MTPI compared to a real event. Public information injects (simulating media such as CNN, press inquiries, etc.) should be incorporated in the next exercises.

Q3:   Were press releases coordinated with the Accident State and affected States?

[Press releases should be coordinated with the accident state and/or affected States. The accident state has the primary responsibility for issuing statements concerning protective measures and the accident condition and prognosis. Likewise, affected states have the primary responsibility for issuing statements concerning protective measures in their respective States. Coordinating releases with these States ensure that the information is accurate, current, and consistent.]

Yes ▢   No X   Partly ▢   NA ▢

Note: Although improved there is still a need to strengthen the interfaces between the technical staff and the public information staff. Both sides should be clear about that releases of information on either side have to be well communicated to the other group. Emergency procedures for each MTPI staff member should be developed.

Q4:   Were relevant messages and official websites consulted by public information personnel writing press releases?

[The information included in press releases can be obtained through many sources. The MTPI Liaison Officer must have access to key messages to make sure the information is verified and accurate. Official websites may offer additional details and can be considered verified information.]

Yes X   No ▢   Partly ▢   NA ▢

Q5: If a press release talked about cross cutting issues was it coordinated with relevant international organizations for review before final issue to the media?

[If a press release contains information that may impact other international agencies, the release should be coordinated in accordance with the EPR-JPLAN]

Yes ☐   No ☒   Partly ☐   NA ☐

Note: The coordination with other international organizations was insufficient. However, this was largely the result of a lack of commitment from other organizations. On the other hand when MTPI staff were in contact with other international organizations the IEC staff (Liaison Officer or ERM) were not aware, better coordination is needed.

Q6: Were copies of issued press releases provided to the relevant international organizations and affected Member States?

[Copies of issued press release or other public information posted on the IAEA website relating to the accident must be provided to the affected States and relevant international organizations.]

Yes ☐   No ☐   Partly ☒   NA ☐

Note: 7 hours after the activation to full response mode, and after the 15th message from Mexico was published a link to the exercise public webpage with the press releases was published on ENAC. Also later links to the press releases number 7 and 8 were made available on ENAC. However, this was not done for any other press releases. This shows, that there was no proper procedure for the ERM in place to deal with the press releases.

Q7: Were the participants adequately prepared for the 'press conference'?

[The participants of the press conference should present the information on the accident in clear and understandable terms. They should answer questions to which they have the information (and it has been verified). The participants of the press conference should determine (in advance) the order in which they will speak, who will respond to specific questions and the time limits of the conference.]

Yes ☐   No ☒   Partly ☐   NA ☒

Note: The press conference showed clearly that IEC staff need media training.

Q8: Was the information presented in the press conference consistent with the provisions of public information listed in the EPR-REPLIE?

[Information presented at a press conference should contain official, verified, and authenticated information obtained from the Accident State, the role and activities of the IAEA in relation to the accident, and information that helps provide a sense of perspective of the severity of this accident (using the INES or relating to prior accidents). There should be no speculation about the cause or potential impact of the accident and nor should unverified sources be cited.]

Yes ☒   No ☐   NA ☐

Incident and **Emergency**
Centre

Department of Nuclear Safety and Security

Evaluation Checklist

IEC Response Capabilities

ConvEx-3 (2008)

International Emergency Response Exercise

Laguna Verde, Mexico

9 and 10 July 2008

Evaluation area: IEC Response Capabilities

Objective: **To test whether the technical team can evaluate the available information to assess the condition of the nuclear power plant and to judge on the appropriateness of protective actions by possibly affected states consistent with IAEA guidance documents.**

Q1:   Was the composition of the technical team appropriate for the emergency phase?

The Technical Team Leader should inform the ERM and the Logistics Officer of the needed skills of the technical team members. The focus should be on staff from NSNI when the event is of relevance on-site only, shift towards staff from NSRW once off-site effects are possible. Staff members from NSNS should be represented when there is a security component. Additional staff should be brought in based on specialized knowledge needed.

Yes ☐   No ☐   Partly ☒ X   NA ☐

The exercise participants were pre-determined based on availability and willingness to participate. The technical teams were not developed based on the skills or experience of the members. However, the Technical Team Leaders did effectively utilize the talents of their team. Experts for the type of emergency were only arriving late in the IEC. At the beginning of the exercise experts with specific knowledge of such kind BWR reactors would have been an   asset.
The IEC should have two technical teams/groups:

Facility group: the composition of this group should be from staff who have knowledge of facility design, basic safety analysis, thermo hydraulics, severe accident management, operation, core design, etc. There should be a roster of experts IAEA wide (not limited to NS Department), that are knowledgeable of different technologies and designs incl. different research reactors, reprocessing plants, etc.

Environmental group: to request and analyse atmospheric dispersion products, countermeasures. The composition of this group should be from staff, knowing meteorology, plume dispersion, environmental monitoring and sampling, dosimetry, protective actions.

Q2:   Did the technical team get the "Accident State" messages for a quick review and for formulating additional questions for the verification process?

Messages from the Accident State which are not clear should be routed to the Technical Team for their review and for formulating questions. The ERM should assign the Technical Team the task to review the messages, if the Screening Officer has still issues with the message after his initial review.

Yes ☐   No ☐   Partly ☒ X   NA ☐

Overall, the Technical Teams responded well to the messages received from the Accident State and they did ask for clarification and additional information when needed. One EMERCOM message reported the plant status as "Site Area Emergency" when the plant had already declared a "General Emergency". This apparent change of status was not verified with the Accident State and the message was published.

Q3: Could the technical team perform their tasks with the information available in the EMERCON forms?

The Technical Team should develop a good understanding of the event, and possibly on its progression. The only official information should be the EMERCON forms from the Accident State and maybe official web-pages with additional information, which the Accident State provided through the Liaison Officer.

Yes ☐   No ☐   Partly ☒ X   NA ☐

The information provided to the technical team from the Accident State was sufficient to understand the scope of the accident and act on the information. The team did request additional information from the Accident State and only used approved sources of information. However, the technical team missed some plant flow diagrams or graphs showing evacuation routes or emergency planning zones.

Q4: If needed, did the technical team request additional information from the Accident State in order to complete their tasks?

The Technical Team should only use official information from the Accident State and maybe official web-pages with additional information. They should not use unofficial information which was not verified with the Accident State!

Yes ☒ x   No ☐   Partly ☐   NA ☐

There was very good coordination between the Accident State Liaison and the Technical Team Leader in obtaining additional information needed.

Q5: Were the actions of the technical team within the scope of the IEC's mandate?

The Technical Team should perform assessments only for internal use, to check whether they come to the same conclusion concerning the emergency class, the protective measures and the identification of possibly affected countries. Their assessments should not be communicated outside the IEC, however, the Technical Team should clarify why it came to different conclusions.

Yes ☐   No ☐   Partly ☒ x   NA ☐

The Technical Team routinely assessed the information from the Accident State and provided their assessments during the IEC briefings. There were several instances when the technical team focused on activities outside of the scope of the IAEA's responsibilities. For example, one shift spent a few hours trying to determine the source term of the release and even tried to base the source term off the Chernobyl accident. They finally referred to the checklist and it became clear to them what actions they should be taking.

Q6: Did the Technical Team use IAEA guidance documents on emergency response and IAEA reference criteria to assess the situation?

The Technical Team should be using IAEA standards and guidance documents and the levels therein for their assessment. Amongst them the most important are SS-115 (Basic Safety Standards), GS-R-2 (Requirements document on emergency preparedness and response), TECDOCs 955, 1162, 1092, EPR-Series D – values, EPR- Series – First Responders Manual).

Yes ☐   No ☐   Partly ☒ x   NA ☐

The Technical Teams did not effectively use the IAEA Standards and Guidance Documents for much of the exercise. It took several hours of "discussion" and player frustration for them to decide to use these tools. Once they did begin using the IAEA documents, the team seemed to function more effectively and cohesively.

Q7: **Did the technical team use tools available on their computers?**

The Technical Team has 4 PCs dedicated for their use; some software is preinstalled on these   computers.
Note: Document if additional tools are wanted or if Technical Team members go back to their offices to use or get additional tools.

Yes ☐   No ☐   Partly ☒   NA ☐

The computers were used for different purposes, all of which were necessary technical team activities. The MTPI Liaison Officer was seated at the Technical Team Table and occupied one of the computers. Another computer was used to update the status board and the final two were used for assessments. The Technical Team did not have technical information for the reactor or even a good schematic diagram. It would be helpful to have more comprehensive information immediately available in the IEC for each plant or type of plant in existence.

Q8: **Did the technical team use atmospheric dispersion products from the WMO to identify possibly affected states?**

The IAEA has agreed a concept of operations with the WMO on the provision of atmospheric dispersion products. The Technical Team completes a specific request form (available as template) and asks the communication officer to send it to the RSMCs. Once the products are available the Technical Team should interpret them to identify the possibly affected states.

Yes ☐   No ☐   Partly ☒   NA ☐

The Technical Team initially requested atmospheric dispersion products according to the procedures. However, when they asked that the request be sent to the RSMCs, they were told (incorrectly) that the RSMCs were not playing. They used an alternative method to obtain the products, but this caused problems with the WMO players. The products were not promptly forwarded to the Accident State and other Member States. The failures in this area were partly due to players not following procedures and partly due to insufficient player instructions about which organizations were participating.

ANNEX B
Player Comments

CONVEX -3 Player's Evaluation

Question 1: Based on you observations as a player, list the top 3 issues and/or areas that need improvement:

Question 2: Suggestions and steps that should be taken to address the issues identified above. For each action step, indicate if it is a High (H), medium (M), or low (L) priority.

Player A: Technical Team Member

1. Guidance on what events should be logged / recorded (queries to the Accident State, changes in plant status, changes in weather conditions, changes in emergency levels, etc.)

> *Clarification only. I actually don't know if it is already addressed in the procedure.*

2. There is a very real possibility that the Technical Team may not have the experience to cover all type of nuclear installations.

> *Roster of who has what type of experience (PWR, BWR, CANDU, WWER, RR, FCF, etc.)*

Player B: ENAC Editor

1. Processing of EMERCON Messages

- The verification and publication process for EMERCON messages submitted to ENAC could probably have been quicker. According to the ENAC Editor's procedure, a new incoming EMERCON message should be printed and handed over to the Communications Assistant for further processing. However, the message did not appear to get the level of attention / priority that it should have, and publishing was probably delayed.

> *(H) Considering simplifying processing of EMERCON messages. For example, the ENAC Editor can give the EMERCON messages directly to the ERM or Operations Officer for verification.*

- During the second shift, not many EMERCON Messages were submitted to the IEC by the Accident State. However, it seemed like the Accident State Continued to provide new information over the phone, but these messages were not published on ENAC or forwarded to Contact Points. On the other hand, new MTPI press releases continued to be issued, and at least one Contact Point pointed out that the press releases were more up to date than ENAC.

> *(H) Encourage Accident State to provide any essential information in written (ENAC, Fax, or E-mail) rather than oral, and if appropriate using the pre-defined EMERCON forms, for easy relay to all Contact Points.*

2. WMO/RSMC interface for requesting meteorological products:

- The WMO/RSMC websites where metrological products are downloaded are confusing. It was difficult to identify the product to download.

> *(M) Review the processes and interfaces for requesting/receiving meteorological products from WOM/RSMCs for ease of use. Cooperate with WMO and RSMCs to improve them.*

3. General communications:

- It was not clear what level of logging /clearance/internal distribution is needed for replies to Contact Points regarding trivialities, e.g. on how to communicate with the IEC via email/fax/ENAC etc. This point is based on a discussion with a Liaison Officer.

> *(M) Consider clarifying the procedures for communicating with contact points regarding trivialities/practicalities.*

Player C: ENAC Editor

1. Shift Lengths and Frequency

> *(M) Shift lengths should be shortened and teams should rotate more frequently to avoid errors and interpersonal mishaps due to fatigue.*

2. Player contribution to checklists based on lessons learned

> *(H) Using this evaluation form and verbal feedback from players, update training sessions and checklists.*

3. Member State contacts' lack of English creates roadblocks in communicating Emergency Messages

> *(H) Consider making it a requirement for contact points to speak a minimum amount of English or provide MS contacts with short specific written messages they can recognize and act upon when called by the LIO. For example: "Check ENAC"*

Player D: Communications Officer

1. Understaffing during CONVEX exercise compared to persons trained in player briefings

> *Recruit more staff for on-call duties in the IEC*

2. Response checklist of Communications Officer regular duties and paper flow do not correspond to actual practice (i.e. outgoing)

> *Revise Task and Duties for the different positions according to lessons learned front the exercise.*

3. Technical Team area

> *Better and more comprehensive training/briefing of the staff in various positions (e.g. Tech Team area)*

Player E: Operations Officer

1. Training

> *(H) Do partial exercises more frequently (1 per month or 2 months)*

2. Prioritization of Tasks

> *(M) Improve system to prioritize tasks, give target deadlines*

3. Production of outgoing messages (ENAC, MTPI, etc.)

> *(M) Training*

Player F: Communication Assistant

1. Electronic filing system for incoming/outgoing faxes and e-mails would be a huge advantage. Manual filing takes too much time in case of a real emergency.

> *(H) Establishment of an electronic filing system. Fax/email would be automatically registered (e.g. by country) and forwarded (by mail) to the screening officer. He could then forward the information electronically to the respective persons. This would save time and increase the efficiency of incoming mail. A quicker response to incoming mail would be guaranteed.*

2. Emails should either be sent out by the Communications Assistants or the players – currently there is a mix-up.

3. Time until an incoming fax/e-mail reaches corresponding person is too long.

Player G: Communications Assistant

1. Electronic log (communications tracking system) for the incoming and outgoing correspondence should be implemented. The current logging, approving and processing of the incoming and outgoing correspondence is unacceptable. It is very labour intensive, very time consuming, and it's easy for operators to make mistakes.

> *Electronic Communication Logging / Approval System should be purchased and implemented.*

2. Responsibilities for the Communication Officer and communication Assistants should be re-visited. The Communication Officer should delegate more responsibility with team members. At times, as the Communication Officer insisted to log all incoming/outgoing correspondence and to distribute the correspondence and to follow up with the ERM on all issues, the incoming correspondence accumulated for a long time before they can be distributed to the recipients.

Communications Team should work differently to improve bottleneck situations

Player H: Accident State Liaison Officer

1. Checklist of the position needs corrections and consistency check with the Communications Officer checklist.

Step 1 (H) Organize follow-up meetings rapidly to collect feedback from players on the little mistakes and deficiencies they identified during their shift, and to exchange viewpoints, suggestions for improvement. Players will forget very soon what disturbed them during the exercise

Step 2 (M) Based on step 1, IEC revise the processes, and modify the checklists accordingly, in cooperation with the players.

Step 3 (M) Organize more exercises to build up experience and to test the adjustments made.

2. Message circulation in the IEC needs to be revised.

3. Criteria for message distribution in the IEC has to be revised

Player I: Logistic Support Officer

1. Communications between ERM and LSO (found out by chance that we are fully activated)

ERM should be better made aware through training the LSO is right hand in logistics.

2. Training and call-out list should reflect the correct training staff received.

3. Training for all other positions (G) to have better overview.

4. Security Staff should be better trained or aware (retrieving money from imprest fund took too long).

5. Food – did not know how many outside players were there to be fed (i.e. MTPI on the 4th floor).

Player J: Spokesperson MTPI

1. Hourly meetings – more punctual and structured with public information being a key agenda item. Structured seating

(H) Meetings on the hour with established agenda (including public information), and with action delegated

2. Risk communication/ media training needed for those likely to brief media.

(H) As above – training needed. Technical spokespeople identified.

3. Better understanding of MTPI's role so technical staff are better aware of their responsibility to brief us.

MTPI briefs IEC, NSNI staff on our work/role

Player K: Technical Team Member

1. Training in process - how to do the various actions/activities – i.e. the logistics

The training for all the above must involve actual exercises or practicals.

Processes- actual exercises in each of the potential actions/activities, and in accessing and using (rather than just browsing) to find information, etc.

2. Training in the specific roles – technical team (in my case) – i.e. technical training

Roles – practical exercises in determining radioactive release effects; assessing monitoring data; etc.

3. Training in the use of tools and the data in the TECDOCs.

Tools- practicals that require the player to uses the various tools in realistic scenarios.

This training should occur relatively frequently.

Training should be such that players would need to consult the manuals/checklists only as a backup.

Player L: Technical Team Member / Screening Officer

1. Training prior to the exercise was inadequate.

(H) Players should take part in at least one IAEA International Exercise during which they are coached / mentored before being authorized to undertake a role.

2. Insufficiently structured processes

(H) Specify and proceduralise required protocols (e.g. questions asked to member states; actions items status for tech team)

3. Insufficient plant-specific info available

(H) Provide plant schematic, technical details, geographic maps, for each nuclear facility. Note: A Godoy in ESS is developing a database of such info as part of the implementation of the seismic safety centre. I have spoken to him about this and he is happy to share it with the IEC.

Player M: Public Information Assistant (MTPI)

1. I thought we had given notice of our teams and participation but IEC did not seem to be aware of the extent of MTPI's participation

(H) MTPI needs to be more integrated in the event. Two PIOs should be in the IEC at all times. The rest of the PI team should also be recognized by the IEC.

2. The food provided was poor and badly timed

(M) Food in the evening does not need to be warm. Healthy light snacks, full grain bread, crackers, cheese, hummus, fruit is enough. One warm meal, at a normal meal time. Pizzas are not a healthy meal.

3. The press conference was poor and in a real life scenario would have been a disaster

(H) The Technical Officers need media training. MR. ___ was the only one on the podium who showed any warmth and spoke clearly and comprehensively, In a real life scenario, this press conference would have cost the IAEA its reputation.

Player N: Technical Team Member / Screening Officer

1. Training, Training, Training

The Tech Team needs detailed practical training. From what I have seen there was a finite number of actions that we are likely to take – we should be well drilled for these. For example, what types of "met products" are reasonable to request.

Player O: Operations Officer

1. Although I understand that ConvEx 3 is a training exercise, I feel thqat the pre-exercise training should be more complete. The pre-exefcise training would cover parts of the general exercise, including: a) use of software by the technical teams, b) use of TECDOC procedures – complete an example, C) communications templates and hardware, d) fill in some forms , and so on.

Some more pre-exercise training, as far as the players routines allow.

2. The IEC conducts this work not for internal use, but for external clients. It would be interesting to know the comments from these external clients, mostly Member States.

It would be interesting to know what they really want and expect from the IAEA, and to ask whether the IEC is delivering.

3. The video screens in the IEC are a good step forward. However, it was not easy to see the "time line" of the events, or see the whole picture of the event, including for example, the plant locations, the countermeasure taken, the area evacuated (or not), the wind direction, and foreseen future events.

Change the format of the video screens slightly; perhaps have a more organized set of information for the technical team.

4. As a minor detail, there were times that I had to write and external communication, and this needed some 20 minutes work. The computers that I sat down on had "dedicated users" with many urgent tasks who were polite enough to say…can you please tell me how long you are going to occupy the (my) computer?

Make one or two terminals with templates, etc. available for general use

Player P: Communications Officer

1. Screening Officers and Liaison Officers did not understand the paper correspondence flow.

Screening Officers and Liaison Officers need to be trained to understand the paper correspondence flow.

2. Changes to the e-mail addresses / fax numbers were posted on the video wall but were not communicated to the Communications room.

Changes of email addresses/fax numbers must be communicated to the Communications Room and not just posted on the video board.

3. Liaison Officers were sending out e-mails without stating EXERCISE on them.

This must be part of the training and put in the checklists.

Player Q: Liaison Officer / Screening Officer

1. The reliable and continuous functioning of the ENAC website should be strengthened. The breakdown of the access to ENAC at some point triggered a great number of concerned/angry/complaining messages from the outside world.

Investigate the reason of the problems and improve backup options (additional resources) to guarantee continuous access to ENAC

2. The interference between the LO telephone conversations and the plenary briefings is very disturbing.

Provide sound isolation between the LO area and the briefing area

3. Performing more than one function at a time can be very overwhelming, affecting work performance.

Involve more people in the next exercise to make sure proper staffing is solved

Player R: Communication assistant? (anonymous)

1. Lack of communication between the main area and the communications area. I discovered into my second shift that Mexico had issued a new fax number and e-mail address at the beginning of the exercise for use throughout. The communications staff were not informed of this change and continued to use the number given to us in the contact list. Although details were up on the board in the main room, we were unaware that the numbers were different to those listed in the list of contacts. Our workload and staffing levels were such that we rarely left the comms room and did not have time to check the board for information – verbal communication of this type of information would have been appreciated.

2. More training in specific areas of professional staff – some appeared to be unaware of administrative procedures to follow (i.e dispatch of messages, faxes, etc.)

3. Lack of staff available for shift rotation.

Training and identification of additional staff – high priority

Player S: Zone 1 Liaison Officer

1. Participation of players/ENAC confirmation messages

   Exercise agreement

2. Working place equipment

   Kist of contact addresses, fax cover sheets, litter box

Player T: Emergency Response Manager

1. Training of all staff involved, special need for training of staff in key positions: ERM, Operations Officer, Technical Team Leader, and Tech Team Members.

   Training: prepare the training modules; establish a training program; establish a drill program; drill with the on-call team; drill with specific positions (players); give positive feedback from training/drills

2. Enlarge the pool of human resources for the IES, look for staff with more knowledge on EPR or willing to learn more on EPR.

   Enlarge call-out list: revise reference docs (REPLIE, SEC/NOTE) to allow wide IAEA participation; liaise with other departments; enlarge on-call list; enlarge call-out list.

3. Revise the IES reference documents looking at classifications: tasks to be preformed, by whom, time deadlines, ways to perform tasks.

   Revisions: revise RP,RCL,IN; develop new RCL,IN; revise setup of video wall; revise the need for more tech equipment in the Technical Team and Liaison areas.

Player U: Liaison Officer

1. More detailed initial briefing

   (H) What information (communication) was sent out to Member States and international organizations

   (H) Explanation of the place where we can find required forms

2. List of participating international organizations

   (H) Provide a list of participating international organizations

   (H) Provided Response Checklist could not tell the participating organizations

3. Assigning a trouble shooter

   (H) Too many evaluators. At least one of them should have played as a trouble shooter or assistant when a player found some difficulty.

Player V: Writer / Editor (MTPI)

1. In the case of a real incident, the press would be bringing enormous pressure to bear for information and, most importantly, comments from experts. During the exercise, we were hard pressed to get usable comments/responses to questions, claims and rumours raised in the injects; as well as information to feed to journalists covering the story.

   Identify experts and ensure they make time to comment to the press in clear, concise terminology. Training if necessary.

Player W: Communications Assistant /ENAC Editor

1. Training

   (H) More training for all people involved and maybe more often. Some people were not quite aware of all things in the check list for their position.

2. ENAC System

There were application errors. In my case, the person in charge of providing assistance for the system suggested to leave it as it is. I had to improvise to send out the messages, and with a huge delay.

3. Delegations of Tasks

People should be told exactly what they have to do by their superior, which was not the case.

Player X: Logistics Support Officer

1. Making sure that all the players that register their participation are keen and fully committed to come in at any time they are called – this seemed to be lacking with quite a few of the staff members registered and trained for the exercise.

(H) Staff should to be totally committed if they are on an on-call duty list – or registered to participate in an emergency exercise. This means on-call at any time of the day or night – regardless of private matters etc. a real emergency would require this from anyone. Perhaps compensation for P-staff should be looked into – or that emergency exercises/on-call duty be included in the job description of those staff members involved.

2. Food should be delivered to the Gate (which I believe was done on the other shifts, but the pre-ordered rolls was a bit cumbersome to collect and an LSO probably should not leave their post – as staff was a bit short at 7:00 a.m. it was difficult to get an extra staff member to collect the food from Billa (quite far away as well) – so LSO was one hour away from post and the goods were very heavy to carry for one person.

(H) Although food should not be "a la carte" or exceptional service – I do feel that it should be delivered to Gate 1 and that a reasonably good meal be served at least once a day. One important point – which I believe has been considered – is to have food from the commissary stored in a special storage place for a real emergency which can be used for a good few hours until shops/restaurants are open if the emergency begins late in the evening – including coffee and tea and perhaps an investment in an urn for 50 cups, so that staff do not have to rely on machine coffee/tea. Supplies should be well thought out and should be products which last a good 6 months or more.

3. I found the forms a little difficult – to chase staff when they had come in for their shift and then to catch them to sign off. May be better to have the signing off and signing on put near the TALMS reader with a big sign "PLEASE DON'T FORGET TO SIGN OFF AND ON" – however, perhaps have an extra sheet for each shift with the LSO, so when she hands over the shift, they can see if everyone came and if anyone needed to be called. It is not very easy to work with as staff came and left at different times than what the shift indicated. If the LSO had to organize a team to fly for medical help, or translation or Legal papers to prepare – they would have definitely needed an assistant. The whole exercise was a little understaffed – a few more staff members would have been more helpful.

(M) The forms could be perhaps a little more simplified with each shift A,B,C,D on separate pages and indicating on each page the next shift the person comes in – and get them to confirm that they can come in at this time, but as mentioned above, if a person begins the exercise they have to be committed to attend all shifts he has been allocated – regardless of how they are – in real circumstances this would be the case.

Player Y: Accident State Liaison Officer

1. Coordination (keeping the role assigned, follow up of actions, who is in charge of what, fix debriefing times, etc.)

2. Communications (some understanding of all of what needs to be done and how)

3. Training (more training to the specific functions, shorter checklists)

Question 3: List checklists, instructions, or forms that should be revised:

Player B: Update ENAC Editors checklist/instruction to: take into account question 1 and 2 above; consider refining /completing the part on downloading metrological products; incorporate the procedure for updating the status display; and ensure that ENAC messages are properly saved to the file (I think the current procedure saves blank documents).

Player C: ENAC Checklist

Player E: A simplified checklist in the form of a plastic card (like the one used for the filling of the video wall could be prepared. Forms should have additional categories for prioritization (normal, routine and urgent classification seems to me as not enough).

Player H: Checklist of ASLO needs to better clarify the contact with the Communications Officer, Screening Officer, ENAC Editor, Operations Officer, and the Technical Team. The checklist should say that all ENAC messages from the Accident State have to be verified on an urgent base.

Player I: LSO checklist had some helpful details missing

Player K: The technical team players and the IEC should meet in a workshop to go through the checklists, etc. in detail. This should occur relatively soon while the exercise is fresh in out minds.

Player M: I was not advised on the correct procedures of the submission of information. The injects were addressed differently if they came in by e-nail or were carried in by one of the PIOs.

Player P: The checklist for the Comm. Officer and Assistant should be revised so that the communications team only makes 1 copy of the incoming message to keep and only hand the original to the Screening Officer who them marks it for distribution, which is normally more than 3 anyway.

Player Q: I made some comments in the zone 2 LO checklist which was placed on the table.

Player R: The pace was such during the exercise that there was no time to read through checklists or instructions. I had a folder of instructions on how to do things but only managed to consult it on one or two occasions.

Player T: FO3110, FO3120, Incoming/outgoing communication logs, ECL 261, 202, IN410, and Technical Team Response Checklists and Instructions.

Player U: RCL-414 (ver 1-2) page 4 – list of international organizations. RCL-412 (Ver 1-3) page 7 on the bottom of the page should read "by phone" and not "on ENAC".

Player V: ENAC Editor Checklist: procedures should be a little changed, as a lot of messages were delayed in the communications room (logging, copying & distributing). The technical team had no time to review some messages and give feedback.

Player X: As mentioned above, the check lists for staff coming in and leaving should perhaps be put at the TIMECLOCKS and then after each shift collected by the LSO and copied. This becomes a difficulty, however, if staff members cannot come on the next innings of their shift. I don't have any concrete ideas on this yet – not had time to think about it – but it was not so good as it was.

Player Y: In general, review checklists to shorten and to reflect the actions actually needed. The ASLO checklist needs review. Telephone log form: review to include a box indicating when info is provided by the accident state (incoming info) or the IAEA sent info to them (outgoing message). There were different understandings on the meaning of "incoming" and "outgoing". Incoming information was recorded as outgoing because the IAEA called the Member State.

Question 4: Were there any checklists, instructions, or forms that you feel you would need, but were missing?

Player D: As the ASLO was sending out and receiving messages on/from IEC4, maybe a separate in and out log should be kept by the ASLO, apart from the one in the communications room.

Player H: No. However, there were some incoming messages (weather forecast for example) were not distributed to the ASLO, who needed them for discussions with the accident state.

Player I: Position missing – assistant for the LSO. In this CONVEX scenario it was fine. However, if there had been arrangements (mission) to be organized, it would have been too much / close to impossible to handle both.

Player K: The affected Member State was asked similar questions on several occasions. A structured process is necessary to manage this aspect effectively.   Not clear if incoming or outgoing when the Accident State Liaison Officer called the Accident State and received info – how does the screening officer deal with.

Player N: Probably adequate for now (with future additions of more practical checklists). The documentation would be more user-friendly if processes were described with diagrams (flowcharts).

Player T: Apart of the RCL/IN for the Operations Officer (and other docs, later to be defined by the IEC Technician), instructions and checklists were in place but were not followed because of lack of training. With more training and drills, we will notice the need for more documents, if needed.

Player X: If anything, there were too many forms/checklists – I think the less, the better, in any emergency, they seem to be the last think that one can concentrate on. The event form for LSO was not really necessary – this perhaps is necessary however, if we had to sent a team to the accident country or act on legal issues or translation issues – to follow up on the activities therein.

Player Y: I. To think about – how to improve communication between Accident State Liaison and Technical Team. a) New form either on paper or electronic. b) Positioning the ASLO closer to the technical team. II. A form to hand over to the shift which would include the main actions/issues pending for the next shift.

Question 5: What do you think about the level of noise in the IEC?

Acceptable: 21

Distracting: 3

>Player H: A few conversations were difficult because of the noise.

>Player Q: Generally acceptable, during briefings hard to do anything else

>Player T: Distracting at some stages during this exercise. Might be the case during a more efficient play.

Unacceptable: 0

Questions 6: What additional resources/capabilities (equipment, software tools, reference document, databases, etc.) would you suggest to improve IEC response efficiency?

Player A:

Technical information regarding each design, if not each facility, would be very helpful.

Player B:

Potentially an improved electronic messaging system replacing some of the internal paper-based information flows.

The new status display seemed to be very helpful.

Player C:

Phone logs should be electronic. It took too much time to hand-write phone logs, especially when calling several MS with the same message.

ENAC Website:

1. New messages should be visible with a pop-up notification and the "submitted messages" page should refresh automatically.

 2. On "submitted messages" page, there should be a section for new message, one for messages that have already been read, and another for messages that have been publishes on ENAC (you have to navigate through several pages to see published messages).

3. Make clear to other players that ENAC editing/publishing rights are strictly reserved for the ENAC Editor.

4. When you click on "downloadable printable version" of a message and you go to "save as", the files ended up being blank

Player D:

 If the Communications Officer is supposed to be the link between the main area and the Communications Assistants, more staff in the communications area are needed. The information exchange about changed procedures/changed contacts should be better.

A computer for the Communications Officer.

Player E:

Databases with reactor descriptions

Links to existing internet sites with meteorological products and data (present condition, forecasts, etc.) previously identified as useful for different regions.

In advance prepare text for media release

Improved software for simple dose rate/source term assessment/verification

Player F:

Electronic data bank for incoming/outgoing correspondence

Player G:

Electronic communications tracking system should be implemented

Player H:

A large map of the region (hardcopy or electronic) should be accessible on a large board, to get an idea of the site

The communications tools to interact with the Accident State (phone with headset, fax, e-mail) are just great! A few brief video conferences with the Accident State would have helped..

Player I:

Computer for the Logistic Support Officer. I have my own as staff of IEC but other LSO will not so easily have access if regularly needed.

Player K:

2 computers for the Tech Team were too few. They don't need to be connected to the wall display

UTC needs to be displayed more prominently in the tech team area.

Each tech team computer seemed to be set up differently – it was hard to find things at times.

The modelling and assessment tools need to be re-appraised.

Player L:

Climate control was poor (4th floor). MTPI had no air conditioning – in winter this would have been a health issue

Player S:

I could have used the earphones

Player T:

1. A TECDOC 955 covering all types of NPPs (extended/dedicated to CANDU)

2. INTERRAS with a capability to produce the gamma dose rate values at various locations/moments after the release as a tool to refer to the field measurements performed during/after the plume passage.

3. Technical means (more) to display the actions/tasks of the different teams /positions during the response in the IEC.

Player W:

More computers

Player X:

Urn, long lasting food supplies. Pockets in the jackets, for pens, mobiles etc.

Player Y:

The panel was helpful. However, it was a bit crowded with information. During briefings, it can be better used to provide the latest status and an overview of the plant status and environmental conditions.

Questions 7: Was the training adequate for the duties you had to perform?

Player A: Partly

I would imagine an actual event occurring, further removed from the training we received (times-twice) would be much more confusing or chaotic initially, unless the IEC staff initially gets the center up and running with other technical staff coming in later.

Note: I was not there at the beginning, so I don't know how it went initially.

Player B: Yes

Yes, training was adequate for my duties. However, also consider including in the overview training a brief account for the relevant parts of ENQATOM as well as how the internal information routing/flow works (workstation in/out boxes, routing slips, etc.)

Player C: Partly

The hands-on training for ENAC focused mainly on entering information from a fax into ENAC, but I didn't have to do this during the exercise.

Player D: Partly

Training was scarce and do not give the chance to do practical exercises

Player F: Partly

Training might be a bit too theoretical. Maybe a more practical training would be better.

Player G: Partly

Many tasks were learned during the hands-on participation at the exercise

Player H: Partly

Theoretical training was perfect, and there was nothing else to be taught.

Practical training was insufficient, because this was my first exercise. There should have been other type of practical training before.

Player I: Partly

Some things I had to figure out during CONVEX. I could have saved time by knowing that before. What needs to be in the event log – no idea!

Player J: Yes

Player K: No

The training must involve practical exercises, listening to a .ppt and passive reading is not enough, nor is playing with a software tool. All players have many other demands on their time, so the training for IEC roles must be structured into that workload.

All tech team members should have performed actual structured exercises, before the exercise, in ordering WMO products, using HOTSPOT, using the data, equations, etc in the TECDOCs etc.

Player L: No

I had no idea how to use the source term software or what to do with the paper floe including actions. The short presentation-based training was inadequate to re-enforce these aspects. Role play in an internal exercise is necessary to enhance competence to a professional level.

Player M: Partly

The procedure for communicating was not clear. If something was urgent and was hand carried upstairs it seemed to have been dealt with differently than if it was sent up to the IEC by email.

Player N: No

I have to state a confession first – I have not taken any of the formal training offered, so it is a bit unfair for me to answer. However, I could observe my own tech team in action, and they lack the practical training necessary for the job.

Player O: Partly

Player P: Yes

Player Q: Yes

Player R: Yes

Player S: Yes

Player T: Partly

We are not able to make training a regular issue on our calendar

We do not perform enough "on the job" exercises and drills

We do not perform an evaluation of the performance of the trainees following the training.

Player U: Partly

More practical training with the same room arrangement is required

Player V: Yes

Player W: Partly

There were things that we had to figure out ourselves (the improvisation I had to do in ENAC). But again, training performed more often will allow a better knowledge of systems, Tasks, etc.

Player X: Yes

I still believe it would be more apt to have either training, or an emergency exercise every six months (small scale perhaps) to keep staff efficiently trained on all emergency duties and updated on new equipment or methods. It would perhaps also enable the improvements/suggestions to be tested – instead of having a big scale exercise every two years and such then evaluations being made and then the suggestions being overridden or not fully incorporated into the system.

Player Y: Partly

Training should be provided for each position. I got the role / actions to do my position by treading the checklist In general, I prefer/find more effective shorter training sessions, but more frequent.

Question 8:   **What is your assessment of the exercise design and conduct? (5-point scale)**

The exercise was beneficial:	4.64 ± 0.57
The tools prepared and used were useful throughout exercise:	3.72 ± 0.89
The players were the right people in terms of level and mix of disciplines:	3.96 ± 0.91
I would need more training:	3.72 ± 1.60
Logistics (food, drinks etc) was well prepared:	3.92 ± 1.12
Working in shifts was well planned:	3.84 ± 1.14

Question 9: What changes would you make to improve the exercise?

Player C:

EMERCON messages on video wall – more information on each message would be helpful (rather than message number for example)

Player E:

Needs to think.

Player F:

Maybe it would be better to decrease the hours/shift. Working 10 hours at night is really exhausting. I think 9 hours/shift would be a good alternative.

Player G:

More G staff should be recruited.

Player H:

Organize more practical training of different kinds (just for a position, just for IEC without member states, bilateral communication with Member States).

IEC should try to get benefit from exercises organized at national level by Member States, to train it's teams. For example, when France is having an exercise, IEC should ask if the IEC point of contact could be activated in the country, so that the IEC could play partially (without communicating to other MS). A further step could be to ask France (or any other country) if a few other MS can be associated, just to simulate Zone 1 and 2,

Player I:

Evaluators should be trained to be invisible.

Better / more accurate callout list according to training given. If volunteer as player, then should be available when called-out instead of arguing that don't have time or are tired.   Have enough players to cover all shifts and be able to rotate positions.

Player J:

Consider whether putting key people as evaluators is realistic and wise, as some of the best people removed.

More test of our response to press reports, press demand, misinformation, and response to the public.

Player K:

The following comments are made without my knowing about the design of the exercised, or its level of detail etc.

1. In assigning zone 1 countries, an extra step should have been made to create a map with the locations for the purpose of the exercise. This would have made the role of the Level 1 countries more realistic – i.e. not all would be necessarily affected.

2. The plan for the exercise should have included a realistic set of dose/monitoring data, with an appropriate time line, for the accident state, and affected and non-affected Zone 1 Member States. These data could include spurious/wrong data.

3. There would be a predetermined time line for the whole exercise, for the accident state and Zone 1 countries. The latter could be meteorologically dependent – i.e. the pre-determined response would be conditional on the actual weather conditions.

4. Super-imposed on the structured set of inputs, would be those actions etc. generated by IEC in response to the accident state and Zone 1 inputs.

Player O:

Although not the fault of the IEC, it would have been useful for the exercise to have gone on to include monitoring results from the field and checking countermeasures.

Also, I understand that some "inputs" or injects" were made confusing on purpose, but I would have appreciated a little more realism as to the information received and also as to the timeliness of the information.

For example, it is not realistic to have no off-site measurements after say 20 hours after the event. By making the scenario unrealistic, you end up training for unrealistic emergencies.

Player Q:

Repeat it! Second time it will get much better, even if you do not change anything.

The flow of information must be reconsidered, or at lease make the players better understand it. (Is a telephone call incoming or outgoing info?)

Player T:

Exercise has to be controlled at all levels (National, IO, IAEA)

Introduce the "coaching" function or assign experienced staff to assist less experienced staff in the exercise: ERM, Operations, TT Leader and members, Communications Officer and Assistants.

Employ (IAEA) external evaluators for CONVEX-3 exercises

Player U:

More practical training. Working for 10 hours was too long. Assigning a trouble-shooter or counsellor.

Player V:

The shifts worked well although I found the 10-hour shift less than perfect. It cut into the day and night, leaving players feeling tired and discombobulated. Suggest 12 hours would be more efficient, allowing a full day or night of sleep.

Player W:

The training system- more often. People should really know their tasks. Maybe even consider people's ability for a certain task when preparing shifts.

Shifts – 12 hours/12 hours rest. In 10 hours you get no more than 3 maybe 4 hours sleep, and that decreases your capacity to work fully 12 hours again.

Player X:

They were the right people but the staff participating, were not sufficient to fulfil all the activities of the exercise.

Player Y:

1) More training, but shorter sessions, covering all positions.

2) Some understanding of communications issues to all (Technical Team, ASLO, Communications Officer).

3) When in Basic Mode, only the on-call staff and some IEC should be in. This would enable after some hours to send home ½ of the IEC and prepare them for the shifts (rested staff = less errors).

4) Food was well organized, but for the night shift looked like leftovers of an old kitchen! Breakfast was wonderful – warm – with a good selection.

5) Updated contact points is an issue to continue working on. It may not depend on the IEC staff, as lines may experience problems.

6) Keep the schedule of briefings and communicate them to all. People got tired and went for coffee or other activities and later on, it was difficult to get all around the table. Use the panels for the briefings, as in the 2005 exercise. It is easier to get the status of plant/environment if a recap is done, especially when shifts changes.

7) Reemphasize that this is an exercise. When I came in for my first shift – most emails were sent/received without any mark. It took me about an hour (very slow, indeed) to change that.

8) Ensure that all incoming/outgoing info is sent to the ASLO – I did not receive some ENAC messages, faxes, etc.

Question 10: Any additional comments?

Player A:

I did not get to see the initiation of the exercise. When I got involved, it was quite calm and slow moving.

Player B:

I think the exercise was very well prepared!

Player C:

Overall, an enriching experience. Thank you for the opportunity to participate. I'd be happy to sit down and talk about any potential improvements to the ENAC web system and to the checklist and training.

Player D:

My comments should be seen from my position as a Communication Officer and the difficulties I encountered in filling this position. It is in way meant as a criticism of individuals (ex – my mention of the technical team area, which seemed very disorganized regarding paper flow).

Player E:

Some positions are overloaded (LO zone 1) and others are more relaxed ((LO zone 2)

ERM needs a deputy ERM (probably the Operations Officer)

All personnel showed high professionalism

Stable IEC staff looked devoted to support and assist the rest of the personnel and this spirit must be remarked and maintained

The additional effort of professionals to implement and emergency response system and to be "always ready" needs recognition. This should be re-considered in order to ensure sustainability.

Player F:

There should be periodic and quite frequent (2 or 3 per year) exercises.

There were quite a few mistakes from different players, that can only be corrected and improved by practical experience.

I think the overall performance of the IEC team was very good. I really enjoyed being part of that. I look forward to other opportunities. I learned a lot. There will always be possible improvements, and that is why we need to practice a lot.

The operational organization of the exercise by the IEC staff was excellent and very friendly. The atmosphere of the exercise was very good.

In relation to my experience in France with exercises, I think it was an excellent idea to really play the assignment of positions and the shifts, it was very realistic, and I think it worked really well.

It took more than 24 hours to realize that the Communications Officer was not using fax and e-mail for Mexico that were given at the beginning of the exercise.

Involve players in the follow-up activities.

Player I:

Get key for night shifts from security for exit of B building (saves a lot of time).

Set up deal with outside catering

Compensation needs to be discussed with MTHR

Player J:

Coordination with PIOs at other international organizations one-sided (we send messages, press releases, etc. but received little – no input from them).

Player K:

Thanks to the IEC team- I think the exercise was worthwhile, and it was enjoyable. But there is a strong need for practical training, repeated at frequent intervals.

And the food was good (special thanks to Sonia)

Player L:

The exercise was beneficial in terms of getting experience but more time prior to this is necessary in a coached/mentored environment, rather than learning by making mistakes as was the case in the Mexico exercise.

Some potential players will be turned off by the experience of not being able to do a professional job, and will be less likely to volunteer in the future.

Having said this, I'm happy to support future IEC work but would prefer the Operations Officer/ Emergency Response Manager role rather than the detail of the tech team / Screening Officer.

Player N:

The ERM briefings tended to describe only what had already occurred. It would help if the briefings were more anticipatory – suggesting likely scenarios to come, preparation in anticipation of events.

Everyone should have a common understanding of the role and purpose of the IEC.

My colleagues performed in a professional manner, so this made the exercise pleasant.

Participation in CONX+VEX-3 raised my awareness of emergency response in the IEC

Player R:

Regular refresher training sessions for both professional and support staff would be beneficial for future exercises and in the event of a real emergency.

Player S:

The Video wall is excellent

The wide open working area gives a good overview to find any contact or person of interest.

A few messages did not come to the LO 1 & 2.

Player T:

More detailed preparation is needed for future full-scale exercises.

We should include in our training schedule, "Table Top"CONVEX-3 for the IAEA IES only. Imagine how efficient the play might imagine how efficient the play might have been if we would have had a "general repetition/rehearsal" before the actual play.

Should we peruse the expansion of the resources in the IEC in order to create a core group which would be able to carry most of the "load" in such a response? The basic composition could be: Operations Officer, 2-tech team members, 2-3 liaison/comms officers (6 staff members). Multiply by 3, that is a core of 18 staff.

Player U:

Working on a team seeking the same goal is fun.

Player V:

Very important to ensure that air conditioning functions during the night shift! Last week it was turned off, making working conditions awful for folks in MTPI.

Player W:

Profax was not installed on IEC-3; technician installed it when called

Some problems with the stamps at the beginning- missing/jumping numbers

Food in the Centre, brought in by our IEC people

Player X:

Unfortunately I will not be able to attend the Monday evaluation session. However, if I think of anything additional after I have had a good sleep, I will notify you in the near future.

ANNEX C
Action Plan

Based on the comments from the evaluators and the players, a list of issues was created. Every issue was assigned an urgency and a priority. When possible, a solution was sketched out, otherwise a task was written to identify a possible solution. Below, the relations between the tasks have been setup where possible. With this information the action plan to rectify the issues identified has been developed.

The main issues of the action plan are presented below. The team responsible for the implementation of the solutions is the response group team within the IEC with support and cooperation of all IEC staff. IAEA MTIT specialised staff will support the developments related to the information flow and ENAC site corrections. A tentative timetable for the actions is presented for each of the main issues.

Change of some operational arrangements
Some small modifications will be made to the room setup and the allocation of working space for certain positions. New specialized furniture should be a major improvement. This was already identified in the previous exercise, however, due to different reasons the implementation of this task was considerably delayed, and therefore only took place in the 2nd quarter of 2009. The new furniture, allows for the implementation of the other actions associated with room layout in an efficient way. The workspaces of the Accident State Liaison Officer and the Liaison Officer for the International Organizations will be swapped so that the Accident State Liaison Officer will be closer to the Technical Team. While the proximity of the Accident State to the Technical Team will be advantageous, it is also important that information between those two is not shortcut in a way that bypasses the rest of the response organization. Therefore, this action needs to be complemented with the improvement of the information flow, especially of information received by telephone or email only.

The video wall was used for the first time in such a big exercise and the status boards were developed only shortly before the exercise. Therefore players did not have detailed instructions on what to enter on the interface, which supplied the information on the status board. Overall the status boards were welcomed by most players, however, there were also many comments on how the use of the video wall could be improved.

Timetable for implementation: second quarter of 2009 for the IEC room layout, fourth quarter of 2009 for the video wall updates.

Improve the information flow in the IEC
A recurring issue identified in all recent exercises is the management of information in the IEC while in full response mode. Many small issues were identified, but the most important is that some positions were either overwhelmed with information while others did not receive all the information they needed. The big project in which we want to address these issues is the development of an information management system which will address all incoming and outgoing information received by email, fax, and telephone. The system will categorize the information allowing for easy identification of the information.

Due to budget restrictions, this project will only start with the new budget cycle, so its finalization is not foreseen before 2011. Several smaller scale changes need to be made immediately. As mentioned above, some of the information needs to be better displayed, therefore clear criteria will be developed on what needs to be entered on the status boards, as well as which information needs to be presented in the briefings. Further attempts to decentralize the communication to the contact points will be made. The instructions for the Liaison Officers, Screening Officer and the Communication Assistants will be updated accordingly. Training sessions on the revised procedures will be offered by the IEC. A revised procedure will be implemented that makes sure information received by telephone or email is also made available on the website, if the information is of benefit to the contact points.

Timetable for implementation: status board updates and updates on instructions / procedures – fourth quarter 2009; implementation of information flow - end of 2009 – 2011 biennium

Review the existing documentation

There were some comments on the documents available for responders. Of course it is impossible to identify a format that will satisfy everyone. However, there were some comments indicating that overview flowcharts would be helpful to outline the activities for each position. The Technical Team procedures will be reviewed with staff from the technical divisions. Many small changes will be made based on the feedback from the players.

Timetable for implementation: small changes on the Technical Team procedures - fourth quarter of 2009; development of overview flowcharts for the technical positions – second quarter of 2010.

ENAC website

There were problems with the ENAC webpage during the exercise, which are being followed up on already. Also the exercise clearly showed that different ENAC website users need separate accounts. This will be implemented in the new website which is currently under development.

Timetable for implementation: correction of problems with the ENAC webpage – third quarter 2009; separate accounts for new website users – first semester of 2010.

Increase the frequency of training and exercises

A lot of comments were received on the need for more training and especially practical training. Scheduled training was prepared by the IEC and is being implemented. Theoretical training will be converted to online training modules, which will allow the users to schedule the training according to their own time schedule.

Timetable for implementation: basic on-line training modules – fourth quarter 2009; training delivery according to the training schedule – ongoing, on a yearly basis.

Staffing issues

A big effort will be made to improve the staffing situation. As has sometimes been experienced with the on-call roster, the IEC is facing problems to motivate mainly P-staff to participate in IEC activities. While some staff members are quite committed others are harder to motivate. The first few months of this year also show the same pattern for training activities offered by the IEC. The IEC will work with higher management in the department and with Human Resources to explore the possibilities to better motivate staff to work on IEC issues.

Timetable for implementation: introduction of training sessions in the HRconnect calendar for trainings – third quarter 2009.

Conducting exercises

Many small issues have been identified on the way to conduct exercises. One controversial issue is and has always been the length of the shifts. While a few staff members would increase the length of the shift (which would also increase the length of the resting period in between shifts), more staff members are voting to reduce the length of the shifts. However, the resting periods in between would become rather short unless we change to a 3 team approach. This would mean that one shift would work in the IEC and would have two shifts (manned by other teams) resting periods. This would allow to reduce the length of a shift (to 9 hours incl. turnover times) and to increase the resting periods (to 15 hours). However, the disadvantage of this approach is that the IEC would need a third more volunteers, committing themselves to training and exercises. In the next exercise, a better control system will be setup and a coach/trainer will be available for the players to clarify issues during the exercise.

Timetable for implementation: end of 2010, pending improvements on staffing issues.