PUBLIC MEDIA INFORMATION UPDATE

National Nuclear Regulator PO Box 7106, Centurion 0046
Tel: +27 12 674 7100, Fax: +27 12 663 5513

EXECUTIVE SUMMARY

23 April 2009

REPORT ON NNR INVESTIGATION FOLLOWING THE DECLARATION OF SITE EMERGENCY AT NECSA ON 16 MARCH 2009

At approximately 10H07 on Monday, 16 March 2009, the NNR received notification from Necsa that a site emergency had been declared following the release of noble gas from Building P1701. The NNR maintained contact with the Necsa emergency controller throughout the site emergency which was terminated at approximately 10H50 following a determination by Necsa that the radiological conditions on the site had returned to a safe state.

Following its initial investigation of the event, the NNR published a media release to provide reassurance that there was no risk to the workers and the general public. Although the NNR was satisfied that there was no danger to the workers and members of the public the NNR launched an independent investigation into the event.

The objectives of the NNR investigation were to–
(i) Review and determine the sequence of events leading to the declaration of a site emergency on 16 March 2009;
(ii) Review the impact of the environmental releases from the Necsa Radiochemicals Facility (Building P1701) and –

a. confirm the actual releases made by the facility on 16 March 2009,

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b. confirm whether there was an exceedance of the approved release limits for the facility;

(iii) Conduct an environmental survey to determine if there was any radioactive contamination in the environment as result of the releases from the Necsa Radiochemicals Facility (Building P1701);
(iv) Review the meteorological data for the day and determine the impact (dose) resulting from the releases made by the Necsa Radiochemicals Facility;
(v) Review the actions taken by Necsa emergency functionaries during the emergency.

The NNR independent investigation concluded that –

(i) The impact of the event was limited to the Necsa Pelindaba site and that the event presented no danger to the workers on the site or the public off the site.
(ii) The above was confirmed by the NNR environmental survey, conducted over the period 23-25 March 2009, which identified no detectable levels of radiation above background levels present on the Necsa site.
(iii) The total release of iodine from the Necsa Radiochemical facility, for the period 05H00 on 16 March 2009 to 05H00 on 17 March 2009, was quantified as being 138.618×10^{6} Bq (which is approximately one order of magnitude lower than the daily release limit).
(iv) The total release of noble gas from the Necsa Radiochemicals facility, on 16 March 2009, was quantified as being $3{,}935 \times 10^{13}$ Bq (which is approximately one order of magnitude lower than the daily release limit).

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(v) The releases of noble gas and iodine from the Necsa Radiochemicals facility (Building P1701) on the day did not exceed the daily regulatory limits for releases from the facility.

(vi) Whilst the Necsa emergency functionaries were activated promptly the NNR raised findings relating to –

a. Failure, by emergency functionaries, to follow procedure after arrival at the Necsa Emergency Control Centre;
b. Problems in deployment of the Necsa field teams.

The NNR required Necsa to register events on the Necsa event management system for the above and will monitor the implementation of the corrective and preventative actions. Furthermore, these will be included as specific evaluation objectives for the NNR planned emergency exercise to be held later in the year.

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For more information

Gino Moonsamy
Manager: Stakeholder Communications
Tel: +27 12 674 7844
Mobile: 082 535 5365
Fax: +27 12 663 5513
Email:gmoonsamy@nnr.co.za