Safety Office

1. License & Regulation

JASRI submitted two major applications to modify the license for accelerators in 1999, *i.e.*, the eighth modification of the SPring-8 license and the first modification to New SUBARU's license. The former, accepted on 20th May and approved on 23rd June, consists of the construction of nine beamlines (BL02B2, BL04B2, BL15XU, BL28B2, BL29XU, BL35XU, BL38B1, BL38B2, BL40B2, and BL40XU) and the extension of one beamline (BL33LEP) to build the second beamline hutch. The latter, accepted on 6th September and approved on 11th December, includes six new beamlines (No.1A, 1B, 6, 7A, 7B, and 9). We are also preparing the next (ninth) application to construct three beamlines (BL12B2, BL19LXU, and BL20XU) and the 1000m extension of BL29XU. The ninth application will be submitted early in 200l.

Legal inspections were carried out three times in 1999, two surprise inspections to evaluate the emergency system and on the legal records in March, and one performance and safety inspection of New SUBARU in December. To our relief, no major trouble was found in these inspections. We are expecting to receive an official letter soon to state that New SUBARU has passed its inspection.

2. Safety Reassessment

On 30th September, there was a critical accident at JCO, a nuclear fuel processing plant in Tokai-mura, Ibaraki prefecture. No one had imagined that such an accident would be possible in our country. Everyone believed that Japan's regulations concerning nuclear/radiation facilities are very conservative and restrictive. This accident made the society aware of the possibility of the serious problem of nuclear and radiation safety in our country. So, we made reassessments of the safety system at SPring-8. According to the analyses, we are planning to construct a simulator of the experimental hutch for the users. Users are not always familiar with the operation of SPring-8's experimental hutch nor with the synchrotron radiation experiment itself, thus some users may trigger an accident due to poor knowledge of SPring-8's facilities. So, we believe that a proper off-line training program for beamline operations will be helpful for such users and will improve their safety significantly.

3. Bio-safety Committee

Several projects utilizing SPring-8 are planning to use samples that may cause some biological hazards to the users themselves, to other users working in the experimental hall, or to the environment of SPring-8, *e.g.*, infectious virus, biologically polluted tissues or organs, noxious insects, and so on. SPring-8 formed a Bio-Safety Committee as an advisory to the chairman of SPring-8. Under the counsel of the committee, we are now drawing up safety rules for using such kinds of samples at SPring-8. In the present draft, we are considering a system where SPring-8 can accept samples with bio-safety levels not more than 2, provided that safety measures of the experiment are properly designed.

4. Radiation Workers

In 1999, 649 staff members and 1,338 users were registered as SPring-8's radiation workers. No measurable radiation dose has been recorded on any of their dosimeter. This result is not surprising since SPring-8 employs conservatively thick radiation shielding and is being operated with very small beam loss.