

# 12. The Division of Health and Safety Promotion

The Division of Health and Safety Promotion is devoted to preventing work-related accidents, to ensuring safe and sound operation of machinery and equipment, and to maintaining safe and healthful environment for researchers, technical staff, co-researchers and students. The division is composed of ten offices, as shown in Fig. 1. The division of health and safety promotion conducts the environmental safety, environmental hydraulics monitoring, radiation monitoring, safety education and radiation training. Furthermore, the division of health and safety promotion patrols around the working areas regularly during maintenance term. In FY2016, preparation for deuterium experiment occupied a large weight.

## 1. Environmental Safety Control Office

This office has a responsibility to keep safe work space and environment. Although the other nine offices of the division of health and safety promotion cover most of the risks that exist in the institute, some problems fall wide of them. The role of this office is to cope with such problems. Therefore, this office has a broad range of tasks.

- (i) Management to solve the problems pointed out by the safety and health committee.
- (ii) Maintenance of card-key system for the gateways of controlled area.
- (iii) Maintenance of the fluorescent signs of evacuation route and caution marks.
- (iv) Consultant on the fire drill planning in LHD building and Fusion Engineering Research Laboratory.

Following matters were carried out in this fiscal year.

- (1) Enhancement of entry and exit management system for security reinforcement.
- (2) Installation of the car gate equipment for security.
- (3) Maintenance of smoking areas.
- (4) Removal of discarded waste.
- (5) Arrangement of the discarded materials disposal facility

## 2. Health Control Office

The main role of this office is to keep the workers in the institute to be healthy, which include co-researchers and students. The tasks of this office are summarized as follows.

- (i) Medical checkups both for general and special purposes.
- (ii) Mental health care services.
- (iii) Health consultation.
- (iv) Immunization of influenza.
- (v) Accompany the inspections of the health administrator and the occupational physician.
- (vi) Maintenance of AEDs.

Two lecture meetings on physical health and mental health were held on June 16 and March 24. On-line stress-check for workers and students was held in November. Work-life-balance lecture were held at February 10 and 14.

## 3. Fire and Disaster Prevention Office

The main role of this office is to prevent or minimize damages caused by various disasters including earthquakes, storms, fires and accidents, as well as of providing restoration work after such damages. The tasks of this office are summarized as follows.

- (i) Making self-defense plans for fires and disasters.
- (ii) Designing and providing simulated drills.
- (iii) Designing and providing LHD fire-fighting drills.
- (iv) Promotion of first-aid workshops.
- (v) Attending at on-site inspections by a local fire department.
- (vi) Maintenance of fire-defense facilities twice a year.
- (vii) Training of the CO2 fire extinguisher.
- (viii) Renewal of the Disaster prevention manual.
- (ix) Management of the AED class.

All workers have to attend the disaster prevention training held every year, and they practice at evacuation and fire extinctions. The training in this fiscal year was held on September 30. And the fire drill on LHD was held on February 10.

## 4. Radiation Control Office

The main role of this office is to keep the radiation safety for researchers and environment. Legal procedure for radiation safety and the regular education for the radiation area workers are also important role of this office. Nine radiation monitoring posts are placed at the site boundary and five radiation monitoring posts are placed near the laboratory buildings to monitor the radiation related to the experiments.

Towards the start of deuterium experiment, we increased the number of members for increasing radiation management work. The tasks of this office are summarized as follows.

- (i) Radiation Application to Local government.
- (ii) Registration of Radiation area Workers.
- (iii) Guard on Radiation from Devices.
- (iv) Observation of Radiation at the Peripheral area.
- (v) Maintenance of Radiation monitor.
- (vi) Control dose to Radiation area Workers.
- (vii) Both hardware and software preparations for the Deuterium Experiments in LHD.

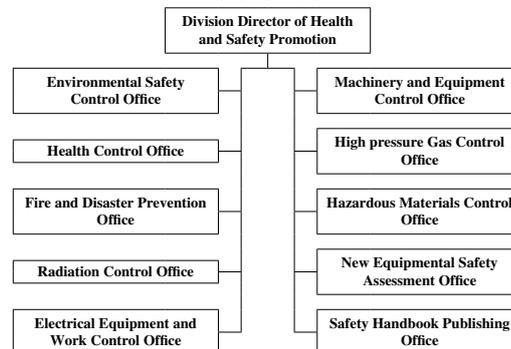


Fig. 1 Division of Health and Safety Promotion

- (viii) Revise official regulations and establish new rule.
- (ix) Application of the radiation equipment to the Agency.
- (x) Revision of the radiation damage Ordinance on Prevention.

Two educational lectures were held on February 3 and March 17 for the Radiation area Workers. Non-Japanese worker can be educated and trained in English.

#### 5. Electrical Equipment and Work Control Office

The main role of this office is to keep the electrical safety for researchers, technical staff and students. For this purpose, this office gives an electrical safety education every year and patrols with Safety Officer every month. The tasks of this office are summarized as follows.

- (i) Check electric facilities according to the technical standard.
- (ii) Check qualification of electric handler, and security of construction.
- (iii) Give permission of connecting to the Electric Power Line.
- (iv) Discussion with local government offices about procedure.
- (v) Discussion with commercial electric power supplier.
- (vi) Safety lecture to the Researchers and Workers.
- (vii) Annual check of the electric equipment with the blackout.

Annual inspection in this site was carried out on June 4-5.

#### 6. Machinery and Equipment Control Office

The main role of this office is to keep the safe operation of cranes. The tasks of this office are summarized as follows.

- (i) Inspection and Maintenance of cranes.
- (ii) Management of the crane license holders.
- (iii) Schedule management of crane operations.
- (iv) Safety lecture to the crane users.

#### 7. High Pressure Gas Control Office

This office has very important role in NIFS, because the main experimental machine LHD is the superconducting machine which needs cooling by the liquid helium and many other machines have cryogenic pumping systems, which also need cooling down. The tasks of this office are summarized as follows.

- (i) Safety operation and maintenance of high pressure gas handling facilities (LHD cryogenic system, diborane gas supply facility, etc.) in NIFS.
- (ii) Daily operation, maintenance, system improvement, and safety education according to the High Pressure Gas Safety Low.
- (iii) Safety lecture to Researchers and Workers.

#### 8. Hazardous Materials Control Office

The main role of this office is the management of the safe treatment of hazardous materials and keeping safety for researchers against the hazardous events. The tasks of this office are as follows.

- (i) Research the request for Hazardous Materials and the storage status.
- (ii) Management to ensure safe storage the Waste.
- (iii) Monitoring of discharging water to prevent the water pollution.
- (iv) Training and education of the users for safely handling.
- (v) Research the information of storage materials.
- (vi) Safety lecture to Researchers and Workers.
- (vii) Preparation to the Labor Standards Law revision.
- (viii) Implementation of chemical substance risk assessment.

#### 9. New Experimental Safety Assessment Office

The main role of this office is to check the safety of experimental devices other than LHD. For this purpose, researchers who want to setup new experimental apparatus must apply for the safety review. Two reviewers are assigned from members of this office and other specialists. The safety review is carried out with the applicant. Decisions are made in meetings of this office. If the equipment is judged to be safe, a registration certificate is issued to the applicant and his manager. The judgment is made at the office meeting. If the check sheet does not pass the safety review, the applicant is notified and a new application is made. If the renewal is approved, a registration certificate is issued to the applicant. The tasks of this office are summarized as follows.

- (i) Examine new experiments for safety problems and advise on safety measures. (New experiments in LHD are reviewed by the LHD experiment group)
- (ii) Improve safety in each experiment and reinforce the safety culture at the NIFS by annual reviews by themselves.

#### 10. Safety Handbook Publishing Office

The tasks of this office are publication of the Safety Handbook in Japanese and in English and update them as necessary. And the regular safety lectures were held in April 27 and May 20. All workers including the co-researchers and students have to take this safety lecture every year. Safety Handbook for the Deuterium Experiments was issued.

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Detailed information is opened in our web-site:

<http://www.nifs.ac.jp/>