



# Risk Management

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Identifying and controlling various risks is an important element of corporate governance. The Nippon Kayaku Group works to mitigate risks by following the Risk Management Action Plan approved by the Risk Management Committee.

## Activities Promoting Risk Management

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The Nippon Kayaku Group carries out TOP5 Risk Control Activities as part of its Risk Management Action Plan. The "TOP5 risks" are those identified as the five most critical risks for our business operations.

TOP5 Risk Control Activities cover all subsidiaries of the Nippon Kayaku Group, that are in turn broken down into more than 70 individual groups.

Through TOP5 Risk Control Activities, a performance report is compiled for the Risk Management Committee that includes an analysis of the risks present and identification of sustainable trends that can be adopted by management. These include risks present for the Company as a whole, whether risks are being dealt with regardless of their severity, and whether risk management is being carried out effectively.

## Information Security Initiatives

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The Information Security Subcommittee was established under the Risk Management Committee to help reinforce information security of the entire company, with the goal of managing and monitoring company-wide information security at all times and preventing risks such as information leakages before they happen. Based on the Corporate Information Management Regulations, which covers the entire company, persons in charge of corporate information are appointed in each workplace to draft regulations for their own respective workplaces, and provide ongoing training on information security for each and every employee to raise the awareness about information security.

In fiscal year 2018, we had all employees carry out an information security self-check to identify issues at the individual level. This information will be used for future improvement plans.

## Risk Management Training

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The Nippon Kayaku Group implements the Plan, Do, Check, Act (PDCA) cycle continuously so that it can minimize and raise awareness of risks. As part of these efforts, we conduct risk management training for all employees. Also, a separate risk management training session is organized for new hires, newly appointed managers, and Japanese expatriate employees being assigned overseas.

## Risk Management System

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We have established a "Risk Management Manual" and "BCP Manual" in preparation for risks that could have a serious impact on corporate activities.

The first version of the Risk Management Manual was created in FY 2000, so that various risks surrounding the Nippon Kayaku Group's business operations could be managed and addressed in a proper manner.

The Risk Management Manual has been through several revisions due to various situations faced since then, currently being the fourth revision which was updated in FY 2018.

## The Nippon Kayaku Group's Business Continuity Plan Initiatives

We have conducted business continuity plan (BCP) training at the head office since FY 2012, utilizing the lessons learned from the Great East Japan Earthquake and tsunami that struck Japan on March 11, 2011. This section takes a closer look at our BCP initiatives.

### Preparing BCP Manuals

The Nippon Kayaku Group has launched a cross-organizational BCP project, under which all business divisions and plants in Japan have established their BCP manuals, based on the premise that the business must be recovered within a given time after a contingency. In addition, the Nippon Kayaku Group has begun preparing BCP manuals at overseas group companies in order to respond to global risks. In FY 2016, two Chinese subsidiaries established BCP manuals and put them into practice.

### BCP Training

Ongoing BCP training is critical to putting the plans established in the BCP Manual into action promptly. We hold BCP training every year, attended by executive officers, including the president.

In FY 2018, we conducted a simulation of first-response actions in the event of a major earthquake at our Central Headquarters for Disaster Countermeasures.

Going forward, we will continue to carry out BCP training based on a wide variety of scenarios.



### Fire and Disaster Prevention Activities

Starting in FY2011, the Nippon Kayaku Group has gathered and summarized information regarding the Disaster Prevention Training Activities at each group company.

[> FY 2018 Nippon Kayaku Group Disaster Prevention Training Activities Summary sheet](#) 

#### Takasaki Plant Fire and Disaster Prevention Activities

Since the Great Hanshin-Awaji Earthquake, increasing the ability to respond to large-scale disasters has become an important issue. Given this, the Fire Services Act was partially revised, and the Disaster Prevention Management System was newly established in accordance with the current Fire Prevention Management System.

The size of the Takasaki Plant necessitates disaster prevention management, so in addition to the conventional fire fighting training (held annually), the plant now holds a new training drill with the scenario of a major earthquake.

Now, the plant holds a comprehensive fire prevention drill as part of fire prevention management during the spring, and a comprehensive disaster prevention training using the scenario of a major earthquake (seismic intensity of 6 upper) as part of its disaster prevention management in the fall each year.



All employees participate in both trainings, in which they assigned to teams with their designated roles, and practice evacuation, rescue, communications (using satellite phones), and protection measures.

The Takasaki Plant is surrounded by rivers and forests, which also exposes it to the risk of wild fires. With this in mind, the plant's firefighting brigade conducts fire extinguishing drills at the same time as those mentioned above, using the plant's own fire truck. On the day of the drills, all participants take part earnestly and the nearby fire chief visits to assess the drill every year. These activities make the training quite beneficial to all involved.

Also, fire drills using actual fire extinguishers are conducted as part of the annual safety training for new hires, and AED training is offered during Safety Week in October each year.

Furthermore, following the Great East Japan Earthquake, we have stocked up provisions of food rations (1,000 meals), drinking water and fuel (diesel and gasoline) in preparation for any emergency in the future.

### **Kayaku Safety Systems de Mexico (KSM) Disaster Prevention Training**

KSM conducts disaster prevention training so that it can prepare for and be able to respond appropriately during emergency situations.

The disaster prevention training is designed based on risks that could occur at the KSM site, in accordance with Mexican laws and regulations.

KSM's plant has a high risk of fire, so training focuses mainly on fire prevention. Details such as causes of fires, preventive measures and chain of communication during emergencies are explained on a monthly basis. Employees are taught what to do and who to contact in the case they find potential causes for fires, as well as how to respond to an evacuation warning.

KSM has an emergency response brigade that comprises of 40 employees representing each department. Training for this emergency response brigade takes place at an offsite institution certified by the government, with experts in the field brought in as trainers. This training involves not only lectures concerning theoretical fire prevention, but also field training that includes exercises for safe fire extinguishing activities, first aid, rescue and responses to leakages of hazardous substances.

For example, training on the use of fire extinguishers and fire hydrants uses actual kerosene and other flammables to train with an open flame. First aid training covers emergency scenarios with potential injuries that occur inside a plant, such as burns, cuts, as well as breathing difficulty and suffocation.

Rescue training focuses on saving people from hazardous areas safely, including those with injuries, and from difficult to reach places and locations with low visibility.

Furthermore, training on leakages of hazardous substances was held onsite at our own facilities and mainly involved the collection of leaked substances and decontamination methods for the polluted site.



### **Kayaku Safety Systems Malaysia Sdn. Bhd. (KMY) 2018 Evacuation Training and Chemical Spill Training**

KMY held evacuation and chemical spill training on December 26, 2018. This training was designed to be compliant with the laws and regulations of Malaysia's fire departments and focused in particular on risks that could potentially occur during normal everyday work.

The evacuation training was jointly organized by the Safety, Health and Environment Department and the emergency response team (ERT), and ensuring that all employees predetermined evacuation route and rendezvous points during an emergency situation.



The chemical spill training involved the person in charge of the department that caused the spill to promptly report to ERT members, and carry out appropriate cleanup as well. At the same time, it is the ERT's responsibility to provide set up spill controls and personal protection equipment so as to ensure that chemicals being handled can be obtained easily.

The training also fulfilled the goal of educating ERT members about the KMY command system and fostering understanding about their individual roles and responsibilities. It was also confirmed that KMY's firefighting, support and first aid teams, along with the production staff are all standing by and ready to assist during an emergency, with all fire fighting facilities in place and ready for use.



# FY2018 Nippon Kayaku Group Disaster Prevention Training Activity Summary Sheet

☒ : Unrealized due to lease limitations    — : Non-applicable

\* : Notification, evacuation, fire fighting, and other training in cooperation with the Fire Departments overseeing Comprehensive Disaster Prevention Exercises

☎ : Training in placing the monthly satellite phone calls, starting June 2012, required by the Satellite Phone Training section of the BCP

Business site/ Company name	Comprehensive disaster prevention training*	Notification training, evacuation training	Early stage fire-fighting training : Use of fire extinguishers and fire hydrants, firefighting skills Satellite phone training	Earthquake simulation training	First-Aid training, AED training	Lectures, study sessions	Leakage Response training, Sandbag training
Head Office, NIPPON KAYAKU CO., LTD.	●	●	● ☎	●	●	●	—
Fukuyama Plant/ NIPPONKAYAKU FUKUYAMA CO., LTD.	●	●	● ☎	●	●	●	●
Asa Plant	●	●	● ☎	●	●	●	●
Tokyo Plant/ NIPPON KAYAKU TOKYO CO., LTD.	●	●	● ☎	●	●	●	●
Takasaki Plant	●	●	● ☎	●	●	●	●
Himeji Plant	●	●	● ☎	●	●	●	●
Kashima Plant	●	●	● ☎	●	●	●	●
Tokyo business CENTER/ Tokyo R&D Administration office	●	●	● ☎	●	●	●	—
POLATECHNO CO., LTD.	●	●	●	●	●	●	●
MOXTEC, INC.	×	●	●	×	×	●	—
WUXI POLATECHNO OPTICS CO., LTD.	●	●	●	●	—	●	●
Dejima Tech B.V.	×	●	●	×	●	●	—
POLATECHNO (HONG KONG) CO., LIMITED	—	●	×	×	×	×	—
NIKKA FINE TECHNO CO., LTD.	—	●	/	●	—	●	—
Nippon Kayaku Korea Co., Ltd.	—	/	●	/	/	●	—
NIPPON KAYAKU AMERICA, INC.	—	/	●	/	●	●	—
Euro Nippon Kayaku GmbH	—	—	●	—	—	×	—
KAYAKU CHEMICAL (WUXI) CO., LTD.	●	●	●	×	●	●	×
MicroChem Corp.	●	●	●	—	●	●	●
Wuxi Advanced Kayaku Chemical Co., Ltd.	●	●	●	●	●	●	●
Shanghai KAYAKU International Trading Co., Ltd.	—	●	●	—	—	●	—
NIPPON KAYAKU FOOD TECHNO CO., LTD.	●	●	●	●	●	×	—
Tumor Diagnosis Support Co., Ltd.	/	/	●	/	/	×	—
NAC Co., Ltd.	●	●	●	●	●	●	—
Taiwan Nippon Kayaku Co., Ltd.	●	●	●	—	●	●	—
Kayaku Safety Systems Europe a.s.	●	●	●	—	●	●	●
Kayaku Safety Systems (Huzhou) Co., Ltd.	●	●	●	—	●	●	●
Kayaku Safety Systems de Mexico, S.A. de C.V.	●	●	●	—	●	●	●
Kayaku Safety Systems Malaysia Sdn.Bhd.	●	●	●	—	●	●	●
Nishiminato Driving School Corporation	/	●	●	×	×	×	—
Okiura Golf Center Co., Ltd.	—	●	●	×	●	×	—
Kayaku (Shanghai) Co., Ltd.	—	●	●	—	—	●	—
JHMS Co., Ltd.	—	●	●	●	●	—	—
Wako Toshi Kaihatsu Co., Ltd.	●	●	●	●	●	●	—
Kouwa Sangyo Co., Ltd.	●	●	●	●	●	●	●
Gunnan Sangyo Co., Ltd.	●	●	●	●	●	●	●
Head Office, Kayaku Japan Co., Ltd.	●	●	●	●	●	●	—
Asa Plant, Kayaku Japan Co., Ltd	●	●	●	●	●	●	●
Sanko Kagaku Kogyo Co., Ltd.	×	●	●	●	×	●	—
Head Office, KAYAKU AKZO CORPORATION	●	●	●	●	●	●	—
Asa Plant, KAYAKU AKZO CORPORATION	●	●	●	●	●	●	●