

# Risk Management

## Basic Approach

After seriously reflecting on the JCO criticality accident in 1999, with risk management (RM) as a crucial part of efforts to strengthen corporate structure, SMM established an integrated risk management system (RMS) for the entire SMM Group in order to prevent another major accident.

The RMS is comprised of the Six Principles,\* including, for example, thorough compliance. We are convinced that cementing the RMS in place and that ensuring initiatives continue are mandatory for business continuity. Furthermore, RM itself is positioned as an activity that all employees

are to pursue daily, following the lead of top management. Subsequently, we added the provision "We will strive to identify risks, prevent their occurrence, and if risks occur, minimize the effects" in the SMM Group Code of Conduct applicable to officers and staff, in order to ensure that RM initiatives are a guide for the actions of our employees.

\* Six Principles: (1) Compliance is the foundation, (2) The organizational leader confronting the risk is the responsible party, (3) Awareness of risk must be shared among all parties involved, (4) Adopt an RM approach in daily work, (5) Recognize that risks can occur, and (6) Coordinate risk responses with other management systems

## Risk Management Framework

The risk management framework and responses to risk occurrence are stipulated in the Risk Management System Regulations and the Crisis Management Regulations, and are to be employed on a daily basis.

RM is supervised by the SMM president, who formulates RM policies each fiscal year. Promotion and monitoring of the risk management matters of the SMM Group overall are coordinated by the Risk Management Working Group under the CSR Committee. Specifically, the WG carries out reviews, etc. of risk responses that require Company-wide action. These include reviews related to fundamental RMS initiatives, reviews of annual RM policies, management of the progress of RM activity plans, and efforts to boost awareness of RM.

RM is pursued while taking into account the status quo in each division and at each work site, with respective general managers formulating RM activity plans or RM execution outlines. Moreover, an RM Promotion Officer is designated in each division.

## Principal Assumed Risks

At each work site, we revise the content of risk registries and identify new risks either at each inflection point in the course of business or during the annual Risk Awareness Month in September. This has brought to light the following principal risks to which we are paying attention.

### Environmental destruction

Environmental risks comprise the largest proportion of the overall risks facing the SMM Group. In addition to the mining and non-ferrous smelting and refining businesses, any type of plant must recognize that atmospheric, water and soil contamination, among other types of pollution, can be expected due to equipment breakdowns, human error in operation, natural disasters, or other causes of hazardous substance leaks. We must take sufficient measures to prevent human and environmental exposure to toxic chemicals and other substances.

### Occupational accidents

Safety mechanism deficiencies, unsafe behavior, operating errors, equipment defects, etc. can directly or indirectly cause employees to have accidents. Disasters can be particularly severe when explosions and fires occur.

### Legal violations

Ignorance of legal requirements, insufficient awareness of compliance duties, etc. can cause legal violations. Violations that lead to the loss of certifications, as well as malicious violations, not only endanger the existence of the business itself, but also invite damage to the social credibility of the SMM Group.

This officer promotes RM in the division or work site under his or her jurisdiction. RMS activities include risk assessments, identifying and registering major risks, RM internal audits, RM patrols, revising approaches during Risk Awareness Month, and promoting the PDCA cycle to prevent the occurrence of risks and mitigate them if they do occur. With regard to major risks that must be acted upon by the entire SMM Group (such as earthquakes and overseas terror attacks with massive projected damage should they occur), we have established a Crisis Management Framework.

The SMM Safety & Environment Control Department acts as a supervisory body for RM in the SMM Group and assesses and supports use of the RMS in divisions, at work sites, and at group companies. We are also making efforts on RM internal audit seminars and guidance for various forms of training, in addition to managing meetings of the RM Working Group and RM Promotion Officers, to ensure that RM activities are effective.

### Poor quality

Managerial errors and other factors during the product development process, manufacturing process, or before and after delivery can lead to supplying products that do not meet customer specifications, thereby causing considerable problems for customers and society. In particular, product incidents jeopardizing personal safety and quality incidents leading to recalls must be carefully avoided.

### Natural disasters

Measures must be put in place in preparation for large-scale earthquakes, the tsunamis they spark, torrential rains or heavy snowfalls, or pandemics, among other risks based on the type of work, geography, and climate of each worksite. In recent years in particular, we have seen abnormal weather to an unprecedented degree, indicating that the effects of climate change must be taken into consideration.

### Deteriorating security

Depending on the region in the world, we must consider the possibility of rioting and terrorism. Protecting the lives of employees is paramount and recognition of personal safety, preparations for worksite security, evacuation drills, requests for government assistance, etc. must be done on a daily basis.

### Others

Other risks include those originating from moral misconduct, fraudulent accounting, information leaks, human rights issues, and malpractice.

## Principal Initiatives

The FY2016 RM policy specified the objectives of "ensuring thorough, constant RM implementation by the entire organization, led by the top management of each business site and division, while further enhancing the RMS, reaffirming the Six RM Principles, and promoting individual work site initiatives." Responses to major risks and risks that confront all business sites cannot be advanced without the leadership of top management. Consequently, we resolved to further promote management driven by the organization's top leaders in FY2016. Additionally, we moved forward with preparing the release of RM Guidelines clarifying ideal standards for business site general managers.

### Responding to natural disaster risks

At each worksite, we put in place measures to respond to damage caused by torrential rains or heavy snow, landslides, earthquakes, and pandemics. We also carried forward previous initiatives, such as building revetments, strengthening buildings against earthquakes, stocking emergency food and water, and implementing response drills for the cases when risks arise. Furthermore, in recent years, we have worked to increase wastewater treatment volumes, install water storage tanks, and re-examine the emergency equipment kept on hand.

### Implementing drills

Since it is meaningless if responses cannot be executed when risks occur, we are dedicated to training at each work site following the crisis management framework and emergency response guidelines. In FY2015, we offered workshop-based training where participants contributed ideas for the issues to discuss. The 48 workshops held across the SMM Group doubled the number of the previous fiscal year. Furthermore, we held 30 sessions combining workshops and hands-on, in-service training in order to add a "multiplier effect" to training. We are also starting to incorporate "blind scenario" training that fosters the

capacity for instantaneous judgment by varying the types of situations participants tackle. In order to elevate the level of training, the SMM Safety & Environment Control Department holds drill planning skills development courses and provides guidance that allows each worksite to select and execute drills based on their own objectives.

### Revising fire and explosion risks

In light of the fires and explosions that have occurred in regions around the world, we inspected fire and explosion risk assessment conditions at every SMM Group work site in April 2015, while also revising the content of risk registries. By the end of October 2015, 41 fire risks and 35 explosion risks were added or updated. Going forward, we are dedicated to implementing emergency response training for these risks, while enhancing prevention, avoidance, and pre-mitigation measures.

### Risk communication training

From these RM evaluations, we inferred that daily communication between general managers for each business site and subordinates is crucial for assessing risks, responding to risks, and responding in emergencies, that is to say, when risks occur. Thusly, we are holding training twice a year from March 2015, in order to provide opportunities to think carefully on ways to effectively gather information on potential problems and reflect on the roles of top management. Through these risk communication training seminars, we are laying the groundwork for the general managers of each work site to be able to create better workplaces.

### RMS adoption at overseas business sites

Regarding overseas business sites, the SMM Group has promoted adoption of RMS with the help of overseas group companies that have RMS and with the business divisions having responsibility taking a leadership role. At worksites that have adopted RMS, we are using reference material from internal audit seminars in order to promote thorough awareness.



Risk communication training



Disaster drill at overseas business site (fire rescue training at THPAL)



Participation of the Pogo Gold Mine team in a rescue competition



A drill at CBNC for handling sulfuric acid leaks

## Issues and Targets

The SMM Group's RM is based on each business division and business site taking action independently. With regard to assessed and registered risks, we are continually working to mitigate risks, based on the PDCA cycle, following the RM activity plans formulated each fiscal year, and to make improvements by evaluating our actions and implementing further efforts. We are also working to bolster our emergency response capabilities by including drills in RM activity plans for cases assuming risks occur, and by evaluating the results of drills.

In recent years in Japan, the increase in damage by natural disasters has been striking. While recovery from disasters is expected, we understand that companies have a social responsibility to quickly restart interrupted business because of the urgent need for products and services by those who receive them even at the time of disaster. Consequently, we will continue to refine our business continuity plan (BCP) to ensure that it is formulated for swift, effective results. For instance, one of SMM's mainstay products is cathode materials for secondary batteries. Since these materials are used in electric vehicles, it is extremely vital for our customers and for ourselves to continue stable

supply. To date, the Isoura Plant has been the only production base for cathode materials for secondary batteries. The Sumiko Energy Materials Naraha Plant (Fukushima Prefecture, Futaba County, Naraha Town) completed on March 24, 2016 allowed us to diversify the risk of interrupted supply.

At overseas facilities, the RMS is progressing to implementation following introduction, however, there are significant unabated risks of terrorism and employee kidnapping, among others. Consequently, it is paramount to strive for safe daily conduct and to take preventative measures, while not being negligent in continuing to conduct drills for when risks occur.



Isoura Plant



Sumiko Energy Materials Co., Ltd. Naraha Plant