

Process Safety and Disaster Prevention/BCP

The Nippon Soda Group places emphasis on ensuring process safety and disaster prevention in order to prevent serious accidents at all plants and ensure the continuation of safe and stable production. We are also constantly improving our business continuity plan (BCP) to ensure a stable supply of products and services.

Basic Policy

- Regular inspections, repair and renewal of equipment and training of operators at each manufacturing site.
- Improvement of the risk management system through emergency drills and education to prepare employees for possible accidents and disasters.
- Safety reviews by our internal experts to verify safety when facilities are constructed or renovated. Regular diagnoses of our disaster prevention capabilities by external specialists.
- Regular reviews and improvement of our business continuity plan (BCP), which is designed to ensure preparedness for natural disasters such as large-scale earthquakes and other emergencies that could result in extensive damage.

Process Safety and Disaster Prevention

Risk Management

Risk assessment of process safety and disaster prevention	We conduct risk assessments related to safety and disaster prevention for facilities, machines and manufacturing processes. Identified risks are prioritized and, accordingly, measures to ensure the safety of facilities are implemented and inspections are conducted in sequence.
Establishment of an emergency risk management system	We give the highest priority to preventing accidents and disasters. On the other hand, to prepare for unavoidable accidents and disasters, we have established an emergency risk management system and conduct periodic drills and exercises to maintain the system in a sound condition.
Standards on Emergency Response	The Standards on Emergency Response have been developed to ensure prompt and appropriate communication, response, and instruction in the event of a disaster or accident, and their effectiveness is reviewed and revised periodically, and confirmed through training.

Safety Management

► Safety audit to confirm the safety of plants

To ensure the safety of processes in the construction and renovation of facilities, the Nippon Soda Group undergoes safety reviews and audits by managers and internal experts. Facilities and operations are inspected for safety, work environment, quality and other factors.

Facilities of Group manufacturing companies undergo periodic RC audits to assess the management conditions of manufacturing facilities, and the results are incorporated into activities to improve process safety and disaster prevention.

Education and Drills for Disaster Prevention

Nippon Soda provides a variety of process safety and disaster prevention training for employees to acquire the knowledge and skills to ensure their safety. We will continue to promote safety and disaster prevention activities with the aim of further improving our safety and disaster prevention activities to achieve the target of “no major accidents at facilities.”

► Group training

Each worksite and department conducts continuous education and training in accordance with the CSR action plan. Further, for new employees assigned to our manufacturing sites, we provide manufacturing training programs as a form of new employee training. These programs include experiential education and training related to safety and basic work practices.

In FY 2021, the programs were cancelled to prevent the spread of the COVID-19 pandemic.

► Disaster prevention system involving local communities

Each Nippon Soda site implements regular disaster drills, which include drills conducted in cooperation with other nearby plants and local governments.

Process Safety and Disaster Prevention/BCP

Safety audits prior to trial operation by the Head Office

① Nihongi Plant, April 7, 2020

Safety audit prior to trial operation following construction of medium-scale cellulose derivative trialing equipment

As a result of document and on-site audits, 28 safety issues were identified. After implementing countermeasures for all of these safety issues, trial operation was complete.

② Nihongi Plant, September 11, 2020

Safety audit prior to trial operation following comprehensive countermeasure construction work for wastewater infrastructure

As a result of document and on-site audits, 16 safety issues were identified. After implementing countermeasures for all of these safety issues, trial operation was complete.

③ Nihongi Plant, December 4, 2020

Safety audit prior to trial operation following the construction of the E line to increase HPC production capacity

As a result of document and on-site audits, 33 safety issues were identified. After implementing countermeasures for all of these safety issues, trial operation was complete.

④ Nihongi Plant, March 4, 2021

Safety audit prior to trial operation following construction work to increase production capacity of Mg-E spherical fine particulates grade

As a result of document and on-site audits, 45 safety issues were identified. After implementing countermeasures for all of these safety issues, trial operation was complete.



Safety audit prior to trial operation of wastewater infrastructure (Nihongi Plant, September 11, 2020)



Safety audit prior to trial operation of E line of HPC production (Nihongi Plant, December 4, 2020)



Safety audit prior to trial operation of Mg-E spherical fine particulate grade production equipment (Nihongi Plant, March 4, 2021)

▶ Diagnosis of disaster prevention capabilities by a third party

The disaster prevention capabilities of Nippon Soda and its manufacturing Group companies are diagnosed by Sampo Risk Management Inc. (Third-party diagnosis was cancelled in FY 2021 to prevent the spread of the COVID-19 pandemic.)

Process Safety and Disaster Prevention/BCP

► Disaster prevention system working in cooperation with local communities

Each Nippon Soda site implements regular disaster drills, which include drills conducted in cooperation with other nearby plants and local governments. These drills are conducted taking into account the environment and other characteristics unique to each region so that they can be applied in real settings.



Comprehensive plant disaster drill (Chiba Plant/Chiba Research Center, June 12, 2020)



Harmful substance (NaOH) leak response drill (Mizushima Plant, July 15, 2020)



Comprehensive spring plant disaster drill (Nihongi Plant, July 30, 2020)



Communications authority transfer drill (Chiba Plant, August 26, 2020)



Environmental abnormality response drill (Takaoka Plant, October 7, 2020)



Response drill for accidents during product transportation (paper-based drill) (Mizushima Plant, October 19, 2020)



Comprehensive autumn plant disaster drill (NBL) (Takaoka Plant, November 5, 2020)



Comprehensive autumn plant disaster drill (Nihongi Plant, November 16, 2020)



Disaster drill for predicted nighttime and holiday plant emergencies (Chiba Plant, February 18, 2021)

Process Safety and Disaster Prevention/BCP

Emergency Drills (FY 2021)

	First half (dates of drills)	Second half (dates of drills)
Nihongi Plant	Comprehensive spring plant disaster drill (July 30, 2020) Drill to report high-pressure gas leaks to the disaster prevention office (July 17, 2020) Emergency report drill (August 25, 2020)	Comprehensive autumn plant disaster drill (November 16, 2020) Drill to report high-pressure gas leaks to the disaster prevention office (February 17, 2021)
Takaoka Plant	Emergency contact drill (using <i>Otsutae-kun</i>) (April 23, 2020) Comprehensive spring plant disaster drill (cancelled) Initial-response education/drill for abnormalities in sluice pipe wastewater flow For deputy commanders of nightwatch (June 8/9/12, 2020) For commanders of nightwatch (June 23/25/26, 2020) *Alternative to environmental abnormality response drill Three-day nighttime emergency report drill (Organic 2, Formulation, NBL) (August 18/19/20, 2020) Unannounced emergency call drill (time until arrival at workplace) (August 25, 2020) 119 report and contact drill (monthly)	Environmental abnormality response drill (for Industrial chemical section) (October 7, 2020) Disaster drill for high-pressure gas transfer (Toyama City) (October 8, 2020) Fire drill (October 16/19/20/23, 2020) Emergency contact drill for when transporting high-pressure gases and poisonous/deleterious substances (October 23, 2020) Emergency contact drill to report high-pressure gas leaks to regional disaster prevention offices (October 23, 2020) Comprehensive autumn plant disaster drill (NBL) (November 5, 2020) Emergency response drill (for Hokusan Koatsu) (December 3, 2020) Emergency contact drill (using <i>Otsutae-kun</i>) (December 1, 2020) Nighttime emergency report drill (February 15/16/17/18, 2021) Fire drill (March 15/16/17/18, 2021)
Mizushima Plant	Harmful substance (HCN) leak response drill (April 17, 2020) Harmful substance (NaOH) leak response drill (July 15, 2020)	Response drill for accidents during product transportation (paper-based drill) (October 19, 2020) Joint in-plant disaster/evacuation drill (November 27, 2020) New Year firefighters' event by the plant disaster prevention team (January 6, 2021) Harmful substance (HCN) leak response drill (February 18, 2021)
Chiba Plant	Comprehensive joint plant disaster drill for predicted worksite disasters (June 12, 2020) Group disaster drill with the Goi Disaster Prevention Team (July 7/8/9/10, 2020) Disaster drill for predicted nighttime and holiday emergencies (August 26, 2020) (Only disaster prevention team) Communications authority transfer drill (August 26, 2020) Comprehensive plant disaster drill (September 24, 2020) *Changed to earthquake response drill due to approaching typhoon Emergency report drill (April 22, June 24, August 4/27, September 16/18, 2020)	Environmental abnormality response drill (October 30, 2020) Drill to deploy vehicles from head office (October 30, 2020) Comprehensive plant disaster drill (November 26, 2020) (Only disaster prevention team; predicted joint worksite disaster) Joint public water-discharge drill (cancelled) Disaster drill for predicted nighttime and holiday plant emergencies (February 18, 2021) (Only disaster prevention team) Evacuation drill (desk-based training for predicted leakage of harmful gases from other companies) (March 2021) Emergency report drill (November 19, December 15/24, 2020; January 27, 2021)
Odawara Research Center (Odawara)	Safety confirmation system response drill (September 30, 2020)	Departmental disaster drill (five departments; October 2020–March 2021)
Odawara Research Center (Haibara)	Safety confirmation system response drill (September 30, 2020)	Group-based disaster drill (five groups; November 2020)
Odawara Research Center (Bandal)	Safety confirmation system response drill (September 30, 2020)	Disaster drill (November 24, 2020)
Chiba Research Center	Comprehensive plant disaster drill (June 12, September 24, 2020) Disaster drill for predicted nighttime and holiday emergencies (August 26, 2020) Emergency report drill (April 22, August 4, 2020) Research center disaster drill (desk-based training; September 17, 2020) Emergency response drill (desk-based training; held at each department throughout September)	Comprehensive plant disaster drill for predicted disaster at the Chiba Research Center (November 26, 2020) Disaster drill for predicted nighttime and holiday emergencies (February 18, 2021) Evacuation drill (desk-based training; held at each department between March 11–22, 2021)
Head Office	Safety confirmation report drill (September 2, 2020)	—

Process Safety and Disaster Prevention/BCP

Business Continuity Plan (BCP)

▶ Basic concept of the BCP

In the event of a natural disaster such as a large-scale earthquake or other crisis that can result in serious damage to Company worksites, our social responsibility is to ensure the safety of local residents, full-time and temporary employees and affiliated company employees. Based on this concept, the principles of the BCP are defined as follows:

- ① The highest priority is placed on checking the status and ensuring the safety of Nippon Soda's own employees, affiliated company employees and temporary employees and their families, and ensuring the safety of residents in communities where the Company's business sites are located.
- ② The consciousness of serving the public and community is shared among all personnel throughout the Company.
- ③ Efforts are focused on protecting the safety of the affected Head Office, plants, research centers, branch offices and sales offices.
- ④ Measures should be taken to establish a system that allows Nippon Soda's employees, affiliated company employees and temporary employees who are engaged in ensuring safety and security to act flexibly and at their discretion according to the circumstances.

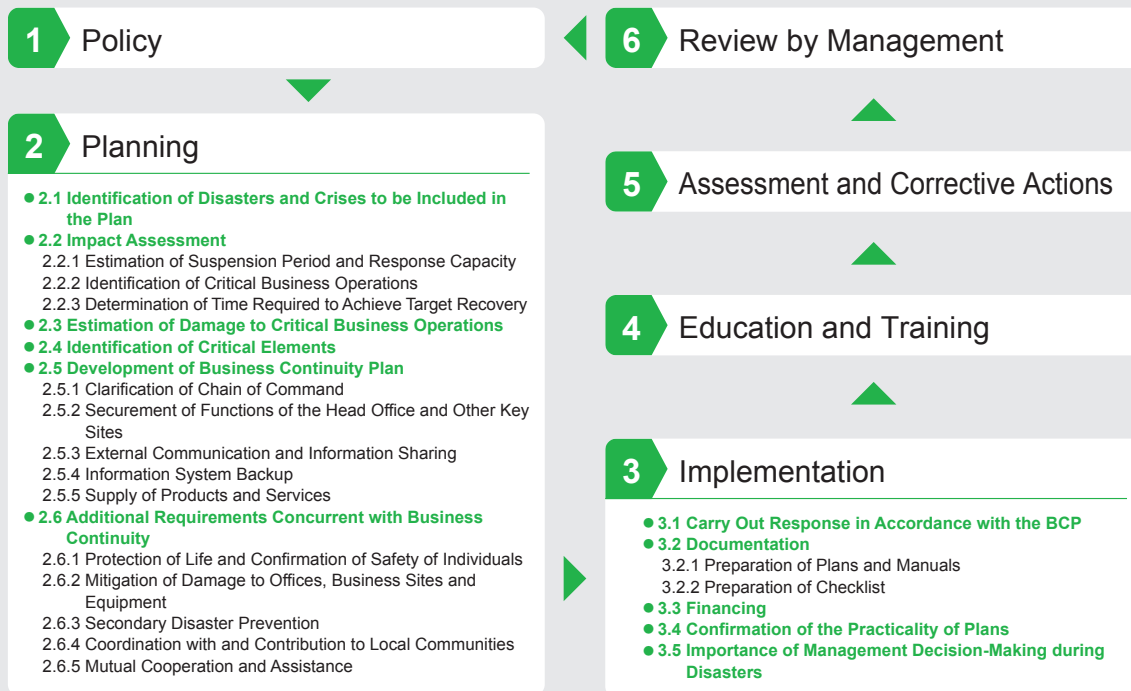
▶ Continuation of supply of products according to customer needs

The BCP of Nippon Soda aims to ensure, in the event of a natural disaster or other crisis, safety as well as the supply of products to customers as requested. To achieve this objective, improvement is accelerated using the PDCA cycle.

Process Safety and Disaster Prevention/BCP

Efforts for Business Continuity

Following is a flowchart of the procedures for continuing business operations.



Disasters and Risks Covered by the BCP

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| 1 Earthquake | 8 A large number of affected employees (their houses and families) | 14 Suspension of the supply of raw materials (including logistics) |
| 2 Typhoon | 9 Electric power outage | 15 Suspension of product distribution |
| 3 Heavy rainfall, flood, tsunami, heavy snowfall | 10 Suspension of industrial water supply | 16 Occurrence of quality problems |
| 4 Storm, tornado | 11 External communication failure | 17 Terrorism |
| 5 Volcanic eruption | 12 Computer system failure | 18 Nuclear power accident |
| 6 Abnormal conditions of facilities | 13 Emergency at water discharge destinations | 19 Missile attack |
| 7 Influenza, infectious diseases, etc. | | 20 Others |

► FY 2021 targets and achievements (KPIs) (Achievement levels ●: ≥ 90% ◐: 80-90% ◑: 60-80% ×: ≤ 60%)

- Major accidents at facilities: Target: Zero accidents Achievement level ●: No major accidents at facilities In FY 2021, there were no major accidents at facilities nor related occupational accidents
- Maintenance and improvement of the BCP: Achievement level ●: The 10th version was distributed and the 11th version was prepared.

► Efforts for the future

We will continue our efforts to achieve the target of “no major accidents at facilities” through the constant improvement of safety management, risk management, education, disaster prevention drills and other measures. We will also improve and review the BCP in a systematic manner.