

# Outline of Environment and Safety Activities

In order to advance its medium-term environment and safety policies, the UBE Group strives to improve its environment and safety activities through the use of the PDCA cycle.













Fiscal 2022 evaluation: Plans were mostly achieved.

	FY2022 Action Plans	FY2022 Results
<b>Common to All</b>	<p><b>Cultivate a culture of safety</b></p> <ol style="list-style-type: none"> <li>Ensure that everyone makes safety the top priority               <ol style="list-style-type: none"> <li>1-1. Ensure that each business site is well informed and surveys understanding levels</li> <li>1-2. Clarify and reinforce basic rules at each business site</li> </ol> </li> <li>Cultivate a culture of safety               <ol style="list-style-type: none"> <li>2-1. Implement plan to cultivate a culture of safety and establish framework</li> </ol> </li> <li>Strengthen change management responsiveness (particularly for Chemical Group companies)               <ol style="list-style-type: none"> <li>3-1. Clarify change management targets and step up risk assessments</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>Ensured that everyone makes safety the top priority               <ol style="list-style-type: none"> <li>1-1. Developed guidelines for assessing understanding of stance that safety is the top priority and conducted comprehension survey</li> <li>1-2. Each business site clarified and again enforced basic rules</li> </ol> </li> <li>Cultivated a culture of safety               <ol style="list-style-type: none"> <li>2-1. Audited activities to confirm progress and provide guidance</li> <li>2-2. Each business site continued activities in line with its goals for improving a culture of safety</li> </ol> </li> <li>Strengthened change management responsiveness (particularly for Chemical Group companies)               <ol style="list-style-type: none"> <li>3-1. Audited and guided change management procedures and implementation progress</li> <li>3-2. Each site is deploying change management efforts based on procedures</li> </ol> </li> </ol>
<b>Occupational Safety and Health</b>	<p><b>Occupational safety</b></p> <ol style="list-style-type: none"> <li>Eliminate major disasters               <ol style="list-style-type: none"> <li>1-1. Continue implementing measures (and ensuring implementation) to address significant risks</li> <li>1-2. Undertake safety activities (and enhance their effectiveness) with contractors</li> <li>1-3. Educate and train personnel to enhance safety awareness</li> </ol> </li> </ol> <p><b>Enhance workplace environments</b></p> <ol style="list-style-type: none"> <li>Improve workplace environments               <ol style="list-style-type: none"> <li>1-1. Reinforce measures for workplaces needing improvements (in management categories II and III)</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>Eliminated major disasters               <ol style="list-style-type: none"> <li>1-1. Identified work that could lead to major accidents at each business site, formulating and implementing plans to reduce risks (such as those for intrinsic safety)</li> <li>1-2. Included joint patrols with contractors and subcontractors, participation in safety meetings, and stronger audits in environmental and safety management plans at each business site to foster integrated safety activities</li> <li>1-3. Included education and training to raise safety awareness in environmental and safety management plans at each business site, and are undertaking efforts</li> </ol> </li> <li>Improved workplace environments               <ol style="list-style-type: none"> <li>1-1. Reviewed workplaces needing noise control measures and expanded management area</li> </ol> </li> </ol>
<b>Process Safety and Disaster Prevention</b>	<p><b>Eliminate facility accidents</b></p> <ol style="list-style-type: none"> <li>Eliminate facility accidents (prevent recurrences of similar incidents)               <ol style="list-style-type: none"> <li>1-1. Share and disseminate accident information</li> <li>1-2. Strengthen facilities maintenance and management</li> </ol> </li> </ol> <p><b>Eliminate environmental accidents</b></p> <ol style="list-style-type: none"> <li>Eliminate environmental accidents               <ol style="list-style-type: none"> <li>1-1. Identify environmental risks and deploy environmental risk reduction measures</li> </ol> </li> </ol> <p><b>Enhance safety of high-pressure gas accredited business sites</b></p> <ol style="list-style-type: none"> <li>Enhance safety of certified high-pressure gas sites (including at UBE Elastomer Co. Ltd.)               <ol style="list-style-type: none"> <li>1-1. Pursue ongoing improvements by stepping up use of safety evaluation</li> </ol> </li> </ol> <p><b>Natural disaster countermeasures</b></p> <ol style="list-style-type: none"> <li>Undertake natural disaster countermeasures               <ol style="list-style-type: none"> <li>1-1. Identify weaknesses at each business site and implement plans</li> <li>1-2. Identify issues common to all business sites in Ube and implement plans</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>Eliminated facility accidents (prevented recurrences of similar incidents)               <ol style="list-style-type: none"> <li>1-1. Shared and disseminated accident cases in accident information liaison meetings</li> <li>1-2. In safety management liaison meetings, shared and disseminated examples of activities at designated special safety management guidance workplaces within the Company</li> </ol> </li> <li>Eliminated environmental accidents               <ol style="list-style-type: none"> <li>1-1. Ensured efforts to implement environmental risk reduction measures and prevent environmental accidents (using Guidelines for Environmental Accident Prevention to identify environmental risks and reduce risks)</li> </ol> </li> <li>Enhanced safety of certified high-pressure gas sites               <ol style="list-style-type: none"> <li>1-1. Clarified issues at business sites in light of Security Improvement Center assessment and self-evaluation of security capabilities, formulated and implemented improvement plans</li> </ol> </li> <li>Undertook natural disaster countermeasures               <ol style="list-style-type: none"> <li>1-1. All business sites and Group companies formulated and implemented three-year action plans</li> <li>1-2. Identified issues and assessed progress, transitioning to regular management</li> </ol> </li> </ol>
<b>Environmental Conservation</b>	<p><b>Reduce environmental risks</b></p> <ol style="list-style-type: none"> <li>Reduce environmental risks               <ol style="list-style-type: none"> <li>1-1. Implement and confirm effectiveness of measures to reduce environmental risks</li> <li>1-2. Roll out at other business sites</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>Reduced environmental risks               <ol style="list-style-type: none"> <li>1-1. Each business site continued to install additional environmental meters and additional temporary storage tanks to handle leakages</li> <li>1-2. Created Guidelines for Environmental Accident Prevention to identify issues and roll out risk reduction initiatives at each business site</li> </ol> </li> </ol>
<b>Environmental Issues</b>	<p><b>Low-carbon economy contributions and responses</b></p> <ol style="list-style-type: none"> <li>Step up efforts to tackle environmental issues</li> <li>Keep helping to improve ESG evaluations and develop internal human resources</li> <li>Lay groundwork for disclosing product greenhouse gas (GHG) emissions</li> </ol> <p><b>Keep reducing environmental impact</b></p> <ol style="list-style-type: none"> <li>Push ahead with improvement plans to attain medium-term goals               <ol style="list-style-type: none"> <li>1-1. Reduce industrial waste                   <p>Benchmark: External landfill disposal amount Fiscal 2022 target: 85% reduction (from fiscal 2000 level)</p> </li> <li>1-2. Chemical substance emissions reductions                   <p>Benchmark: Total emissions of 20 priority chemical substances*2 Fiscal 2022 target: 35% reduction (from fiscal 2010 level)</p> </li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>Planned and implemented measures to reach environmental targets               <ol style="list-style-type: none"> <li>1-1. GHG emissions in fiscal 2022 were 3,820 kt-CO<sub>2</sub>e/y (for the UBE Group)</li> <li>1-2. Environmentally friendly products and technologies accounted for 46% of sales in fiscal 2022 for the UBE Group</li> </ol> </li> <li>Educated employees about environmental issues               <ol style="list-style-type: none"> <li>2-1. Provided environmental education at two business sites</li> <li>2-2. Provided e-learning for all employees</li> </ol> </li> <li>Streamlined data collection for each business               <ol style="list-style-type: none"> <li>3-1. Completed logic for calculating GHG emissions intensities by product</li> <li>3-2. Completed phase 1 of systematic GHG emissions intensity calculations by product</li> </ol> </li> <li>Reduced external landfill disposal amount               <p>Fiscal 2022 result: 84% reduction (from fiscal 2000 level) <a href="#">See page 11 for trends in landfill disposal and intermediate treatment amounts</a></p> </li> <li>Reduced emissions of 20 chemical substances               <p>Fiscal 2022 result: 38% reduction (from fiscal 2010 level) <a href="#">See page 12 for time trends for substances subject to PRTR Law*3 and VOCs*4.</a></p> </li> </ol>
<b>Environmental and Safety Audits and Inspections</b>	<ol style="list-style-type: none"> <li>Implement environment and safety audits and inspections</li> </ol>	<ol style="list-style-type: none"> <li>Implemented environment and safety audits and inspections               <ol style="list-style-type: none"> <li>1-1. Audited eight headquarters sites and four machinery divisional sites</li> <li>1-2. Inspected six headquarters sites and one machinery divisional site</li> </ol> </li> </ol>
<b>Dialogue with Communities</b>	<ol style="list-style-type: none"> <li>Promote dialogue with communities</li> </ol>	<ol style="list-style-type: none"> <li>Held RC Regional Dialogue Meetings** with community stakeholders               <ol style="list-style-type: none"> <li>1-1. Results of 14th RC Chiba Regional Dialogue Meeting (conducted by sharing and reviewing documents): SDG initiatives in Chiba Prefecture Environmental Administration (Chiba Prefecture Environmental Policy Division), presentations by two companies (Nippon Soda Co., Ltd., and Koei Chemical Company, Limited), and questionnaire survey</li> <li>1-2. Results of 17th RC Ube Regional Dialogue Meeting (conducted online): Ube Method and Environmental Conservation Agreement (Environmental Policy Section of Ube City's Environmental Department), Member Company Activity Reports (UBE Corporation's Ube Chemical Factory east and west area, Fujimagari Area, Ube site of Techno-UMG Co., Ltd., and Ube plant of Central Glass Co., Ltd.)</li> </ol> </li> </ol>

(Continued on page 2)

Self-Evaluation

★★★: Achieved   ★★: Mostly achieved   ★: Not achieved

Self-Evaluation	FY2023 Action Plans	SDGs	RC** Code
★★	1. Ensure that everyone makes safety the top priority 1-1. Ensure that each business site is well informed and surveys understanding levels 1-2. Clarify and reinforce basic rules at each business site 2. Cultivate a culture of safety 2-1. Assess effectiveness of implementation of plans to cultivate a culture of safety 3. Strengthen change management responsiveness 3-1. Set up change management mechanisms at all Group companies	—	—
★★	1. Eliminate major disasters (Halve number of occupational accidents and eliminate lost work time injuries) 1-1. Deploy major risk countermeasures to enhance intrinsic safety 1-2. Undertake safety activities with contractors 1-3. Educate and train personnel to enhance safety awareness		<b>Occupational Safety and Health</b>
★★	1. Improve workplace environments 1-1. Keep enhancing measures at workplaces requiring improvements 1-2. Build self-regulated chemical substances management system		
★★	1. Eliminate facility accidents (prevent recurrences of similar incidents) 1-1. Keep sharing and disseminating accident cases 1-2. Continue to strengthen facilities maintenance and management		<b>Process Safety and Disaster Prevention</b>
★★	1. Eliminate environmental accidents 1-1. Push ahead with environmental risk reduction measures based on improvement plans 1-2. Share and disseminate accident information		
★★	1. Enhance safety of certified high-pressure gas sites 1-1. Keep undertaking and confirming improvements		
★★	1. Undertake natural disaster countermeasures 1-1. Keep pushing ahead with natural disaster action plans 1-2. Strengthen Group company initiatives		<b>Environmental Conservation</b>
★★	1. Eliminate environmental accidents 1-1. Identify environmental risks and deploy environmental risk reduction measures		
★★	1. Step up efforts to tackle environmental issues 2. Keep helping to improve ESG evaluations and develop internal human resources 3. Lay groundwork for disclosing product GHG emissions	    	
★★	1. Push ahead with improvement plans to attain medium-term goals 1-1. External landfill disposal amount Fiscal 2023 target: 87% reduction (from fiscal 2000 level) <a href="#">See page 11 for medium-term targets for reducing industrial waste</a> 1-2. Total emissions of 20 chemical substances Fiscal 2023 target: 29% reduction (from fiscal 2010 level) <a href="#">See page 12 for medium-term targets for reducing chemical substance emissions</a>	  	
★★★	1. Implement environment and safety audits and inspections	—	<b>Management System</b>
★★★	1. Promote dialogue with communities		<b>Dialogue with Communities</b>

Glossary

\*1 *Responsible Care (RC): Under RC, corporations that handle chemical substances voluntarily preserve the environment, safety, and health throughout product life cycles, from the development of chemicals through their manufacture, distribution, use, and final consumption to disposal and/or recycling, and communicate and engage with society by disclosing activity outcomes.*

\*2 *20 chemicals selected independently: methyl alcohol, butyl alcohol, toluene, epsilon-caprolactam, styrene, ammonia, cyclohexane, cyclohexanone, oxalic acid, vinyl acetate, xylene, n-hexane, ethylbenzene, chloromethane, benzene, dimethyl phthalate, N,N-dimethylacetamide, boric acid compound, phenol, hydrogen fluoride and its water-soluble salts*

\*3 *PRTR (Pollutant Release and Transfer Register) Law: This legislation requires companies to identify business site chemical substance emissions and transfer volumes and report to the government. The Ministry of the Environment discloses the submitted information on its website. Such disclosure is designed to encourage voluntary efforts to improve chemical substance management.*

\*4 *Volatile organic compounds (VOCs): These organic chemicals evaporate or sublime easily, entering the atmosphere as gases. They are factors in the forming of suspended particulate matter (PM) and photochemical oxidant pollution.*

\*5 *Responsible Care (RC) Regional Dialogue Meetings: Local members of the RC Committee of the Japan Chemical Industry Association are encouraged to engage with residents, civic groups, government officials, and other local stakeholders and convene meetings regarding RC implementation items (environmental conservation, safety and disaster prevention, etc.). A dialogue meeting is held in each district to deepen mutual understanding of initiatives.*