Description of remedies and preventive measures against negative impacts of material issues

Material Issue	Considerate Aspects	Item	Significant Impact Items	Remedial and Preventive Measures for Material Issues' Negative Impact	Section
Climate Change and Energy Management	Negative Actual Im- pacts	3-2	Water scarcity leading to water supply constraints.	 Groundwater Extraction 2. Water Recycling Enhancement 3. Concentration Ratio Improvement for Cooling Towers 4.Strengthened Inspections 5. Installation of Water Storage Equipment Sourcing water from external suppliers such as tap water or purified water through water trucks Production Capacity Reduction 	5.2 Climate Change and Ener- gy Management 5.3 Water Resources Manage- ment 5.4 Air Pollution Control
		3-4	Insufficient measures to control air pollution.	 In 2022, an activated carbon fluidized bed was installed. In 2023, a new natural gas boiler will be built and the drying machine prevention equipment, nitrogen impact recovery system, and VCM discharge hose will be updated to reduce emissions. New emission control equipment will be added or low-pollution fuels will be used within the plant to reduce air pollutant emissions and minimize negative impacts on climate change. 	
		3-5	High increase in energy costs, par- ticularly electricity tariff adjust- ments.	 Continuously replacing outdated equipment to improve energy efficiency. Adjusting scheduling to shorten production preparation time and reduce energy waste during standby periods. 	
		3-7	Power equipment failures and unstable power supply.	 Conducting regular thermal imaging measurements to detect abnormalities early and arrange immediate improvements to reduce the probability of equipment breakdown. Performing annual maintenance and inspections to monitor equipment operation. Continuously replacing outdated equipment. 	
	Potential Negative Impacts	4-9	Increased production costs due to carbon fees.	By implementing control measures, developing a carbon reduction roadmap and improving equip- ment, the company aims to reduce greenhouse gas emissions and minimize its impact on climate change. It also aligns with national regulations on greenhouse gas reduction and management by adopting energy-saving and carbon reduction measures.	
Water Resources Management	Potential Negative Impacts	4-5	Increased production costs due to water usage fees.	 Water Recycling Enhancement Concentration Ratio Improvement for Cooling Towers Strengthen inspections and gradually add smart water meters to timely and promptly return water consumption-related data to improve water consumption management and leak tracking. The cost of replacing old water equipment with new products has been increased to 150 (tons/ hour) from 100 (tons/hour), and the conversion rate of pure water has been increased (the max- imum production of pure water is increased and water consumption is saved). 	5.3 Water Resources Manage- ment
Air pollution control	Negative Actual Im- pacts	3-4	Insufficient measures to control air pollution.	 In 2022, an activated carbon fluidized bed was installed. In 2023, a new natural gas boiler will be built and the drying machine prevention equipment, nitrogen impact recovery system, and VCM discharge hose will be updated to reduce emissions. New emission control equipment will be added or low-pollution fuels will be used within the plant to reduce air pollutant emissions and minimize negative impacts on climate change. 	5.2 Climate Change and Ener- gy Management 5.4 Air Pollution Control
	Potential Negative Impacts	4-9	Increased production costs due to carbon fees.	By implementing control measures, developing a carbon reduction roadmap and improving equip- ment, the company aims to reduce greenhouse gas emissions and minimize its impact on climate change. It also aligns with national regulations on greenhouse gas reduction and management by adopting energy-saving and carbon reduction measures.	

Material issue	Considerate Aspects	Item	Significant Impact Items	Remedial and Preventive Measures for Material Issues' Negative Impact	Section
Transportation safety	Negative Actual Impacts	3-3	Inadequate implementation of hazardous material safety trans- portation management.	 To ensure transportation safety and implement hazardous materials transportation management, the following transportation safety management measures are being implemented: Formulate management standards for vehicle transportation, loading and unloading management, emergency equipment and detection systems. Transportation contractor reviews conducted 11 times with a review rate of 100%. Improvement of 64 items in transportation safety inspections and audits, with an improvement rate of 100%. Cathodic corrosion protection inspection, visual inspections and verification inspections of underground pipelines, with a 100% inspection rate. Conducted 21 sessions of transportation emergency response planning and training, with a total of 290 participants. Negative Remediation: in the event of an accident, immediate notification is made to the relevant departments and cooperation with the emergency response team is carried out for evacuation, isolation, leak containment and fire suppression. The handling procedures are in accordance with the "Prevention of Vinyl Chloride Transportation Hazards and Emergency Response Plan" and the "Tanker Accident Emergency Response Operating Procedures." Preventive measures: according to the "Plan for the Establishment of Toxic and Hazardous Chemicals Joint Prevention organization," the following actions should be taken: familiarize oneself with the Hazard Prevention and Emergency Response Plan specific to your own facility and the emergency response plan of the joint prevention organization. Follow the emergency response notification process for incident handling and reporting. Conduct pre-employment training for personnel involved in emergency response to ensure they are adequately prepared. Participate in relevant training, drills, and group exercises related to emergency response. Conduct annual training and refresher courses	<u>6.5 Transportation Safety</u> <u>Management</u>
Financial performance	Negative Actual Impacts	3-7	Power equipment failures and unstable power supply.	In alignment with the energy management department's carbon reduction goals within the group, a thorough review of various energy-saving and carbon reduction programs, as well as water resource management programs, is conducted internally. Additionally, the group has established a green energy team to develop an overall plan and periodically review the initiatives. At the CGPC Main plant, solar power generation has been installed (currently selling excess power to the grid), applications for Taiwan Power Company's demand bidding program have been made, planned adjustments to electricity usage during maintenance periods have been implemented (using the monthly selected 8-day model), and measures for energy conservation and backup power generation equipment have been planned. This ensures that there is alternative power available in the event of a power supply interruption. Moreover, management systems such as ISO 50001, ISO 14064-1, ISO 14067, ISO 46001, and ISO 14046 have been implemented. The company remains actively engaged and committed to public sector initiatives for electricity and water conservation planning and explores alternative water sources such as water trucks.	3.2 Operational Performance 5.2 Climate Change and Ener gy Management 5.3 Water Resources Man- agement 5.4 Air Pollution Control
	Potential Negative Impacts	4-5	Increased production costs due to water usage fees.		
		4-9	Increased production costs due to carbon fees.		