

# ENVIRONMENTAL REPORT 2011

DIGEST VERSION

For the year ended February 28, 2011





#### The social responsibility of business continuity

The Great East Japan Earthquake had an immeasurable effect, casting a shadow not only over the disaster area but also over all of Japan. I would like to offer my heartfelt sympathy and condolences to all victims of the earthquake, and I pray for a speedy recovery.

The earthquake has also affected corporate activities, causing stoppage and stagnation of production and distribution in all areas. Even major corporations that possessed business continuity plans (BCP) were not able to escape the effect of the horrible earthquake. Bearing witness to this disaster has made me painfully aware of the difficult associated with preparing for risks.

In modern society, the stoppage of a corporation's activities results in more than simply a decrease in the performance of that corporation. It is important to understand how the stoppage of one corporation disrupts the supply chain and affects a broad range of society. In this respect, I believe that guaranteeing the continuity of corporate activities during any adverse conditions is a fundamental element of CSR, or corporate social responsibility.

As a corporation which strives to contribute to the sustainable growth of society through our corporate activities, our company seeks to acquire even stronger ability to cope with risks. We shall work to exist as a corporation that responds to the trust and expectation of society.

I look forward to your continued understanding and support in the future.





HAJIME SATO President and CEO

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#### Range Covered:

Domestic/ Company offices (total of 5 locations)

Subsidiaries (total of 3 companies), Sales agents (2 companies)

Overseas/ Subsidiaries (2 main production sites)

Coverage centered on Company activities, with some affiliates such as subsidiaries/sales agents also included.

#### Period:

- The year "2011" represents the period March 1, 2010 to February 28, 2011.
- The year "2010" represents the period March 1, 2009 to February 28, 2010.



#### Progress toward ISO 14001 Certification

We have acquired ISO 14001 certification for all four of our domestic plants, all three domestic subsidiaries, two domestic sales agents and two key production sites at our overseas subsidiaries.

In conjunction with our affiliates, we will continue activities to strengthen our overall promotion of environmental activities.

#### [DOMESTIC]

Company Plants		
Special Products	Ihara Plant	Acquired March 2001
Components	Ihara Plant	Acquired March 2001
General Administration Headquarters Research & Development Department	Headquarters Plant	Acquired September 2001 (Self-conformance declaration: September 2010)
Precision Products	Fujimi Plant	Acquired February 2002
Machine Tools	Kikugawa Plant	Acquired March 2002

Subsidiaries	
Star Metal Company Manufacturing Division	Acquired April 2006
Star Metal Company Plating Division	Acquired March 2007
Micro Fujimi Company	Acquired October 2006
Micro Sapporo Company	Acquired March 2007

Sales Agents		
C.M.I. Company	Head Office/Osaka Office	Acquired January 2006
Move Company		Acquired January 2006

#### [OVERSEAS]

Subsidiaries (Key Production Sites)	
Star Micronics Manufacturing Dalian Co., Ltd. (Dalian, China)	Acquired May 2002
Shanghai S&E Precision Co., Ltd. (Shanghai, China)	Acquired February 2003

#### [Self-Conformance Declaration]

Certification for ISO14001 Environmental Management Systems was acquired by the headquarters plant in 2001. The plant has undergone the update review which is held once every 3 years and the maintenance review which is held annually.

Environmental load at the headquarters plant has been almost completely eliminated due to the 2009 transfer of the plating processing department to another factory. Furthermore, activities of our environmental management system have become firmly rooted in our organization. Therefore, we have decided to shift from a conventional conformance declaration issued by an external accrediting organization to a self-conformance declaration. In July of 2010, we conducted an internal environmental audit which confirmed our conformance to items required by the 2004 standards of ISO14001. We issued an ISO14001 self-conformance declaration in September of 2010.



#### **Environmental Audits**

#### [ Internal Environmental Audits ]

Internal environmental audits are conducted regularly each year at domestic plants and affiliates to confirm that environmental management systems are adequate and effective, and that environmental management programs are appropriate and legally compliant.

We also conduct skills enhancement seminars for internal environmental auditors to improve the expertise of people conducting internal audits.

A comprehensive environmental audit report is created listing items that fall below the expected standards, and the report is submitted to management as data for use in compiling the end-of-year environmental review. Thus audits contribute to improvements in the following year.



Training for auditors

#### [External Environmental Audits]

Domestic plants and affiliates that have acquired ISO14001 certification are subject to environmental audits (environmental management system inspection) by an external inspection authority. Certification maintenance inspections take place once a year, while renewal inspections are conducted every three years.

The results of these inspections are submitted to management as data for use in compiling the endof-year environmental review, thereby contributing to improvements in the following year.



Conducting an environmental audit

#### **Environmental Training**

Star Micronics and its domestic affiliates believe that to maintain, and further improve, the level of our environmental activities, we need to change the mindset of every single employee. We therefore offer training opportunities for all employees from new hires to management. Training comprises four core categories: general, rank-based, leader-oriented, and specialist. In 2011 (domestic), we conducted events such as an introductory environmental seminar, an environmental manual seminar, an environmental impact evaluation seminar, a waste products seminar, a seminar on the cultivation of internal auditors, and an environmental law seminar.



#### [Environmental Training Structure]

Training Category	Personnel Eligible	Internal/External Seminars Offered		
General training	Regular employees	Introductory seminar, general seminar, waste products separation		
Rank-based training	Managers	Managers' seminar		
Karik-Daseu trairiirig	Top management	Top management seminar		
Leader-oriented training	Environmental leaders	Environmental manual seminar (including document management)		
	Environmental survey team	Environmental impact evaluation seminar		
	Internal environmental auditors	Auditor development seminar (internal/external)*		
	Personnel in charge of environmental law	Environmental law seminar*		
Specialist training	Public-sector environmental experts	Qualification seminar/test based on laws and regulations		
	Personnel in charge of procurement	Green procurement seminar		
	Personnel in charge of waste products	Waste products seminar		
	Harmful substance handler	OJT by personnel with public-sector environmental qualifications		
	Noise measurement personnel	OJT by certified internal environmental experts		

<sup>\*</sup>For the certified internal environmental experts

### [Public, Environmental Qualified Person Related to Environment]

Name of Qualification	Number of Persons Qualified (Number of Persons Qualified in 2011)	Name of Qualification	Number of Persons Qualified (Number of Persons Qualified in 2011)		
Safety manager 5(1)		Dangerous substance handler	78(0)		
Public health manager  12(0)  Manager in charge of handling of toxic and harmful substances		handling of toxic and	3(0)		
Pollution prevention manager	10(0)	Manager in charge of X-ray operations	1(0)		
Manager in charge of industrial waste requiring special management	18(1)	Manager in charge of organic solvent operations	34(1)		
Fire prevention manager	9(0)	Manager in charge of specific chemical substance operations	7(0)		
Promoter of energy management and planning	3(3)				

Note: For the parent company only. Excludes domestic affiliates.

#### **Emergency Response**

Every year, Star Micronics and its domestic affiliates plan and conduct emergency-related training of relevant parties and disaster prevention drills, as well as simulation-based drills for individuals and entire facilities based on manuals, which are evaluated as part of the process. These drills anticipate every conceivable accident or emergency (earthquake, typhoon, explosion, fire, blackout, chemicals leak, and airborne hazard, etc.).

#### [Simulation-based Drills]



Oil leakage response drill (Ihara Plant)



Response training for leakage of chemical substances (Fujimi Plant)

#### [Disaster Prevention Drills]



Evacuation drill (Ihara Plant)



Firefighting training (Headquarters Plant)

#### Status of Legal Compliance

Star Micronics and its domestic affiliates have stipulated internal regulations for the application of environment-related laws, and compliance with these laws is evaluated in accordance with a list of specific items to be monitored and measured.

Legal compliance is confirmed by checking that results measured are in line with management figures, and the data is stored as an environmental record. When installing, introducing, changing, or disposing of facilities and equipment, we conduct an assessment of the facilities and equipment to evaluate legal compliance.

In 2011, our company worked to ensure compliance with environmental laws and emissions standards at all domestic offices and affiliated companies. As a result, there were no violations of regulations or complaints from citizens in areas surrounding our facilities.



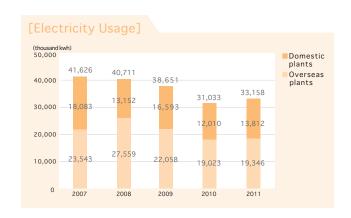
# **ENVIRONMENTAL LOAD ASSOCIATED WITH BUSINESS ACTIVITIES**

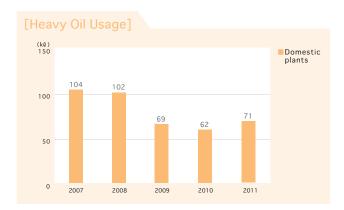
Our company uses a variety of resources and energy during the process of conducting business activities. This results in the emission of CO<sub>2</sub> and the generation of waste products. Our company assesses the environmental load associated with our activities and promotes activities to decrease environmental load by reducing the amount of energy consumed, reducing the amount of waste products generated and decreasing the amount of hazardous materials used.

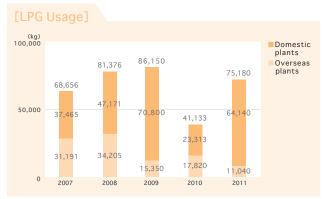
In 2011, there was an increase in energy consumed and waste products generated as a result of increased production for machine tools and precision parts.

\*Scope of Analysis: domestic (Star Micronics Co., Ltd. and affiliated domestic companies), overseas (Star Micronics Manufacturing Dalian Co., Ltd.; Shanghai S&E Precision Co., Ltd.; Star Micronics Precision (Thailand) Co., Ltd.: from 2010)

#### Change in Input Amount (Major Items)

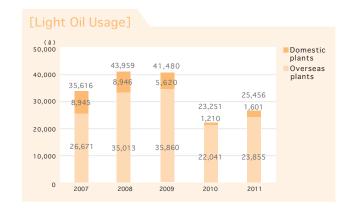


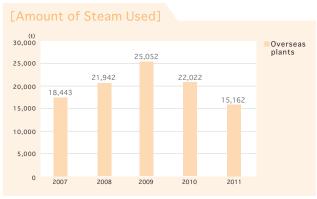






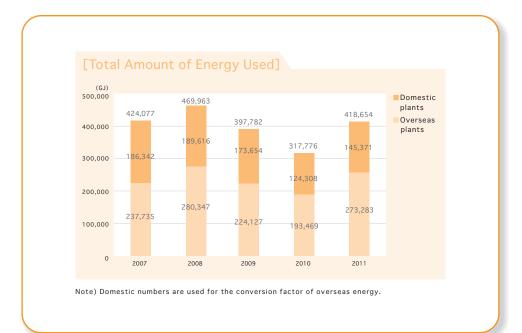




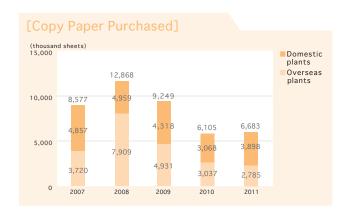


<sup>\*</sup>Due to stagnation of production activities, the amount of steam used at overseas production plants continued to decrease until the first half of 2011. However, production increased in the second half of 2011, thus causing the amount of steam used to also increase.









#### Change in Discharge Amount (Major Items)







# ENVIRONMENTAL ACCOUNTING

#### [Environmental Protection Costs]

(thousands of yen)

Category		Initiatives	Domestic		Overseas	
		ilitiatives	Investment	Expenses	Investment	Expenses
Costs within	Pollution Prevention Cost	Prevention of air/water/ground contamination	0	8,037	145	5,033
	Environmental Preservation Cost	Energy conservation	3,547	640	0	725
Business Area	Resource Recycling Cost	Treatment/disposal of waste		8,463	0	58
Upstream/Downstream Cost		Green procurement difference	0	78	0	0
Management Activity Cost		EMS operation, education, on-site planting	0	42,923	0	3,200
Research & Development Cost		R&D, WEEE/RoHS measures		2,190	0	0
Social Contribution Cost		Donations, financial support	0	496	0	0
Environmental Damage Response Cost		Repairs for ground/water contamination	0	0	0	110
Total		I	3,547	62,827	145	9,126

Note: Excludes depreciation expense.

## [Financial Impact Resulting from Environmental Protection Measures]

(thousands of yen)

	Catagory	Domestic	Overseas
	Category	Impact	Impact
Earnings	Gains from sales of marketable waste from business activities	9,317	34,245
	Total energy expense (electricity/heavy oil/LPG/measured substances/gasoline/light oil)reductions	△16,124	17,635
Expense Reductions	Reductions in water/well water usage expense	△2,130	8,739
(Year on Year)	Reductions in copy paper purchase expense	△9	202
	Reductions in waste disposal expense	△1,275	△569
	Others	0	0
	Total	△10,221	60,252

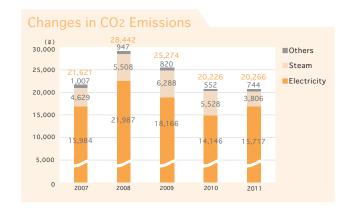
Note: In the expense reduction figures, a minus indicates that a reduction was not achieved and the expenses increased.

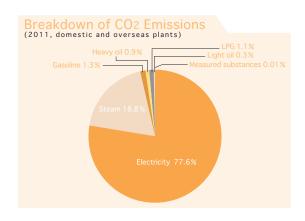


## REDUCTION OF CO2 EMISSIONS AMOUNT~TO PREVENT GLOBAL WARMING~

Our company is taking a variety of actions to reduce the amount of energy consumed and is working to prevent global warming.

CO<sub>2</sub> emissions in 2011 increased by 40 tons compared to the previous fiscal year. This increase was caused by increased production of machine tools and precision parts. Additionally, our company is performing activities such as those listed below in order to further promote the conservation of energy.





#### [Less Air Conditioning]

#### Cool Biz Campaign

- 1. Period Conducted: June to September
- Air conditioning temperature: Set to 28°C
   (Although the campaign does not apply to manufacturing and reception areas, these are included as much as possible.)
- 3. Attire: No neckties or uniforms are worn

#### Warm Biz Campaign

- 1. Period Conducted: December to March
- 2. Heating temperature: Set to 22°C
- 3. Attire: Employees are encouraged to wear warm clothes

#### [Lights-Down Campaign]

This year, our company once again participated in the Lights-Down Campaign held by the Ministry of the Environment. The rooftop neon logo signs at our headquarters plant, Ihara plant and Fujimi plant were turned off at 8:00 PM for the 6 days from July 2nd (Friday) to July 7th (Wednesday) of 2010. As a result, the amount of power used during the 6-day period decreased by 482 kwh.

#### [Installation of Solar LED Lighting]

We installed solar LED lighting for the nighttime lighting on the premises of headquarters. These lighting facilities use solar energy and therefore do not consume energy in any way that contributes to CO<sub>2</sub> emissions.

Furthermore, we are working to replace spotlights in our headquarters' showroom with LED lights.



Solar LED Lighting



#### [Heat-shielding using roof shades]

We installed heat-shielding panels on the roof surface of Building No. 5 at our Kikugawa Plant. As a result, we were able to alleviate the drastic temperature increases associated with summer. Compared to before installation, the roof surface temperature decreased by approximately 2°C. This has led to an annual decrease of 7,800 kwh in energy used for air conditioning.



Roof shades

#### [The Number of Company Cars Owned]

In order to reduce the amount of CO<sub>2</sub> emissions by company cars, our company has implemented the use of lightweight cars and hybrid cars. We have also reduced the number of company cars used by our company, and we encourage employees driving company cars to turn off the engine when stopped.

(Number)

Type of Car Year	Ordinary Cars (Leased)	Ordinary Cars (Purchased)	Mini Cars (Leased)	Hybrid Cars (Leased)	Total
2010	39	6	8	4	57
2011	36	6	8	4	54

#### [No-Car Campaign]

Every year, our company holds a No-Car campaign for employees who commute by car or motorcycle to offices within Shizuoka City. Continuing from last year, we implemented a 2-week No-Car campaign in both spring and autumn of this year.



#### Implementation Report

Period: Monday, May 10 - Friday, May 21, 2010

Monday, October 18 - Friday, October 29, 2010

Participants: 93 individuals

Total days: 297 days

Eco-commute distance: 4,643 km

CO2 reduced: 1,068 kg

(calculated based on fuelconsumption of 10 km/  $\varrho$  )

#### [Carbon Offset —Use of Emission Credit Trust—]

Considering the Kyoto Protocol's target for reducing greenhouse gases, our company has calculated that we should eliminate 5,000 tons of CO<sub>2</sub> emissions for the 5 years between 2007 and 2012. In August of 2008, we purchased 5,000 tons of CO<sub>2</sub> emissions credits as emission credit trust beneficiary rights from Mizuho Trust & Banking Co., Ltd. Our company then used the resulting decrease in CO<sub>2</sub> emissions amount to conduct a "carbon offset" that compensates for the CO<sub>2</sub> generation during production of the TSP100ECO printer, which was released in April 2010. We also used the carbon offset to compensate for the standby power and power consumed during use of the printers over a 5-year period. Our company bears 100% of the associated cost, thus enabling users of the ECO printer to participate in environmental conservation without incurring any additional burden. (Please refer to our company's official homepage for further details.)





ECO printer with carbon offset

#### Response to the Revised Energy Conservation Act

#### [ Establishment of a Energy Conservation Panel ]

In order to achieve the Kyoto Protocol's target for reducing CO<sub>2</sub> emissions, the Energy Conservation Act was enacted in Japan in April of 2010.

Our company is a targeted business under this revised law. Therefore, in April of 2010, we established an Energy Conservation Panel to act as an organization for promoting compliance throughout our company.

In 2011, the panel played a central role in expanding a variety of energy conservation measures throughout our company.

#### [ Enactment of an employee code of "Compliance Items for the Promotion of Energy Conservation" ]

The Revised Energy Conservation Act requires that business decrease the amount of energy (measured by consumption rate) used by 1% or more each year (over a 5-year average). The first action taken by our company to conserve energy was to completely eliminate wasted energy. In July of 2010, we enacted our "Compliance Items for the Promotion of Energy Conservation." Through these items, we thoroughly require each employee to save electricity used in their immediate area and to completely eliminate standby electricity.



# LOWERING ENVIRONMENTAL CONTAMINATION RISK

#### Managing Chemical Substances

Star Micronics and its domestic affiliates have created and implemented internal regulations for the management of harmful substances and dangerous materials handled by the Company in order to ensure proper and safe management of chemical substances. These internal regulations, based on the relevant laws and statutory regulations, are designed to ensure that the environment is taken into account in the purchasing, storage, use and disposal of such substances.

#### [Response to PRTR Law]

In accordance with the PRTR (Pollutant Release and Transfer Register) Law, we have continued to submit notification regarding the emission and transfer volume for Class I Designated Chemical Substances. The annual handling volume of such substances has decreased greatly due to the use of powder paints which do not contain organic solvents (including substance subject to PRTR) and to a change to alternative materials. As a result, there are no longer any offices or affiliated companies for which submission is required.

However, from the perspective of appropriate handling of chemical substances, we will continue to gather data on emission and transfer volume.

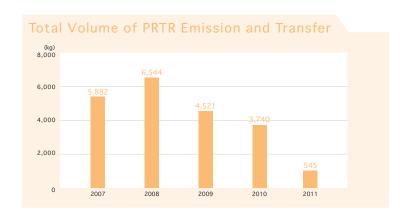
The emission/transfer amount of substances in 2011 was as follows:

#### [PRTR Reports for all Domestic Plants and Affiliates]

(kg)

Year Substan No.				Emmissions Volume			Transfer Volume		
	Substance No.	Chemical Substance Name	Use		Public Drainage Areas	Ground within Plant	Landfill within Plant	Washed into Sewage	Waste within Plant
	309	Nickel Compound	Chroming	0	0	0	0	1	90
2011	300	Tolueme	Coating	446	0	0	0	0	4
	374	Hydrogen fluoride and water-soluble salt	Polishing	0	0	0	0	0	4
	Total			446	0	0	0	1	98

<sup>\*</sup>The PRTR (Pollutant Release and Transfer Register) Law is a means of obtaining, collating and disclosing emission and transfer volume data for harmful chemical substances.





#### Air pollution measures

#### [Reduction of VOC Emissions Amount (Powder Coating)]

Our subsidiary company Star Metal Co., Ltd. has adopted a method of powder coating which does not use organic solvents (solvents containing substances subject to the PRTR Law). This powder coating method is used in the coating process for sheet-metal parts of the CNC automatic lathe in the Machine Tools Division. Use of the powder coating method allows our company to reduce environmental load at the manufacturing stage.

This new method has realized the environmental effect of cutting atmospheric pollutants (VOC) in half and reducing industrial waste by one-third.





Powder coating

#### Response to EU Environmental Regulations

Environmental regulations in the European Union (EU) have had a significant impact not only within the EU region but also in various countries around the world, and many Japanese manufacturing industries have been forced to respond in some way.

For our products that fall under WEEE and RoHS directives, we are operating based on our internal regulations for management of substances that burden the environment and on green purchasing guidelines. Furthermore, we are implementing response to the REACH Regulation and to the EuP Directive. The EuP Directive is a framework for eco-design of energy-related products in Europe and it defines requirements for environmental design in Europe for 2013.

We also completed notification for chemicals which are subject to the CLP Regulation (an EU regulation related to the classification, display and packaging of chemicals).

#### [Introduction of X-ray Fluorescence Spectrometers]

We use X-ray fluorescence spectrometers to measure levels of chemical substances contained in components of our printers that fall under the WEEE and RoHS directives, as well as to conduct inspections on receipt of the components.

Our machine tools do not fall under these directives, but we have taken aggressive measures such as introducing X-ray fluorescence spectrometers to measure the composition of components with a view to reducing harmful substances. Components used in the actual machines in our key products are 99.3% RoHS compliant, excluding certain NC control equipment.



X-ray fluorescence spectrometer (Ihara Plant)



## PROMOTION OF REDUCTION AND RECYCLING ACTIVITY OF WASTE

Star Micronics and its domestic affiliates have created and implemented internal waste management regulations in order to properly dispose of waste produced from corporate activities in line with the requirements of the Waste Disposal Law and to promote voluntary activities.

#### Volume of Waste Generated and Recycling Rate





Waste products generated in 2011 increased by 90 tons compared to the previous fiscal year. This increase was caused by increased production of machine tools and precision parts.

The recycling rate of 99.6% was the same as the previous year's rate. Our company shall continue to instruct group employees regarding the dismantling and separation of trash in order to improve our recycling rate.



# SOCIAL CONTRIBUTION ACTIVITIES RELATED TO THE ENVIRONMENT

#### **Environmentally Friendly Policies**

#### Awareness of Farth Environment (from the Star Micronics Group Code of Conduct)

- (1) In our efforts to control CO<sub>2</sub> emissions, comply with global warming directives and streamline business efficiency, we will implement business strategies utilizing energy saving equipment to help achieve our goals.
- (2) We will guide the establishment of the sustainable economic society with ecological awareness and promotion of environmental activities.
- (3) We will guide the realization of the recycling society, trying to utilize all possible resources at all steps from designing to disposal of our products and promoting the environmental load reduction.
- (4) We will recognize environmental issues worldwide and engage in them as a global company group.
- (5) We will report our environmental protection activities widely and promote the environmental communications with the society.



#### Social Contribution Activities

CSR activities at Star Micronics entail an active role in contributing to society with the co-operation of our employees. We will strengthen our social involvement on a local and global scale, continuing to contribute through participation in local clean-up activities and assistance for NGOs/NPOs.

#### [Clean-up Activities at Ohama Beach]

Until last year, volunteer clean-up activities sponsored by the Association for Environmental Safeguards of Shizuoka City were held at Miho-Masaki Beach. This year, the activities were moved to Ohama Beach. Every year, we recruit volunteers from within our company to participate in these clean-up activities. 18 employees and 8 family members participated in the most recent activities, for a total of 26 volunteers. The clean-up was held on June 5th (Saturday) and was blessed with refreshing warm weather of early summer. 650 volunteers from 55 member corporations of the association spent 30 minutes cleaning up a 1 kilometer stretch of the shoreline.







Participants from Star Micronics

#### [River Okitsu Clean-up Activities]

On Saturday, September 4, 2010, volunteers worked to clean up the River Okitsu watershed area. This event was jointly organized by the Association for Environmental Safeguards of Shizuoka City and the River Okitsu Preservation Society. Participants from Star Micronics comprised 14 employees of Star Micronics together with 3 members of their families. In total, approximately one thousand people from Shizuoka City participated, managing to clear away 1,070 kilograms of garbage in about one hour. Although this is an annual activity, we are happy that the amount of garbage is steadily decreasing every year.



Clean-up activities



Participants from Star Micronics



On April 10th, 2010 (Saturday) tree-planting activities were held at Star Micronics Manufacturing Dalian Co.,Ltd., a major overseas production center of our company located in Dalian, China. The activities were sponsored by the Dalian City Greening Committee and featured participation from 31 volunteers. A total of 100 people spent 2 hours planting 600 gingko trees in 13 locations throughout Dalian.

Additionally, Star Micronics Manufacturing Dalian Co.,Ltd. also holds a weekend mountain climbing event on nearby Mt. Dahei. On May 29th (Saturday) of 2010, the company held the first ever event in which participants pick up garbage while climbing the mountain. 204 people participated in the event and collected 56 bags of garbage in 4 hours.





Clean-up activities

Clean-up activities

#### [Assistance for NGOs/NPOs]

We became a corporate member of OISCA (The Organization for Industrial, Spiritual and Cultural Advancement International) in September 2006, at the same time establishing the Chubu branch of OISCA's Shizuoka Prefecture office.

OISCA is an international NGO that has been involved in human resource development, agricultural development, and global environmental problems, mainly in the Asia-Pacific region, since 1962. Its activities have been praised by international organizations and governments of numerous countries, and it has been awarded the UN Earth Summit Award.

#### Publication of the Environmental Report

From the perspective of conserving the environment through such measures as reducing energy usage and saving resources,

Star Micronics does not publish its Environmental Report in paper form. Instead,
the report is published on the Star Micronics website as a PDF-format file.

Environmental activities of Star Micronics...http://www.star-m.jp/company/co05.htm

For enquiries regarding this environmental report, please contact the CSR Promotion Group within the General Affairs Office

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