

China Glass Holding

Environmental and Social Action Plan

Item	Description	Due Date	Status – February 2008
1	CGH will appoint a corporate level manager, reporting to the Vice President Operations, with responsibility for environmental and occupational health and safety management.	June 2007	Completed. A senior operational manager, reporting to VP Operations through the Chief Technology Officer has been appointed to this role.
2	CGH will commission consultants to undertake environmental and occupational health and safety audits at each manufacturing site (except Suhuada) and identify actions which must be undertaken, and action plans which when implemented will enable the sites to develop and operate environmental and occupational health and safety management systems capable of certification to ISO 14001 and OSHAS 18001 requirements respectively.	December 2007	Alternative Solution completed Audits are conducted annually by local environmental and OHS authorities. All site-based environmental and OHS staff have undergone training at the Suqian site from August to November 2008. These internal, trained staff rather than consultants have taken the lead in design of environmental and OHS management systems.
3	Obtain ISO 14001 and OHSAS 18001 certification of the environmental and occupational health and safety management systems, at each site except Suhuada, which already holds such certification.	December 2009	In progress. Work has commenced. Some sites expect to achieve this certification during 2008, for others the full time envisioned in the Action Plan will be required.
4	Identify and replicate to all sites, best practices in personal protective equipment for employees manually handling sheet glass.	September 2007	Completed? This issue has been discussed among cold end managers. All staff involved in glass handling at all sites now wear protective gloves and gauntlets.
5	Measure and report to IFC mass flow rates, and	September 2007	Partially completed. Measurements for SO ₂

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	concentrations of emissions to air of particulate matter, sulphur dioxide and nitrogen oxides arising from each operational glass furnace.		and PM have been made for all operational furnaces and reported to IFC. Some local regulatory agencies, which were requested by CGH to undertake measurement have been unable to measure NOx emissions. Continuous monitoring equipment will be installed at Beijing and Weihai.
6	Adopt primary control measures to limit emissions to air of particulate matter and nitrogen oxides from glass furnaces, and report actions undertaken and effect on emissions to IFC	March 2008	Ongoing. Primary PM control has been superseded by item 9 below.
7	Add sulphur-dioxide scrubbing systems to furnace exhausts at the three remaining untreated Weihai furnaces.	December 2008	In progress. Secondary SO ₂ control is included in the project for each furnace subject to cold repair. This will be replicated throughout CGH as furnaces are repaired.
8	Assess the need, if any, for secondary control of NOx emissions from each furnace, report conclusions to IFC and agree follow-up implementation schedule if any.	December 2008	Outstanding. Analysis is pending NOx measurement – see item 5 above.
9	If shown necessary by monitoring program(Item 6) to meet IFC guidelines, add secondary particulate control to all furnaces undergoing cold repair.	As governed by repair schedule.	In progress. Secondary PM control is being included in the cold repair cold repair program which is the subject of this investment.
10	Measure concentrations of hydrogen sulphide in areas adjacent to gas generators – especially areas to which machine operators of other personnel may have access or can be expected to be located.	September 2007	Completed. Local environmental authorities were asked to analyze this issue. H ₂ S was not detected.
11	Commission energy audits of all operational plants and report results to IFC.	June 2008	Ongoing. This issue now has executive level attention within CGH and will be

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			completed during 2008.
12	Monitor quality of storm water run off from coal storage areas, and waste water arising from the coal gasification plants.	September 2007	Outstanding.
13	Agree action, if any is shown necessary by item 12, to treat these liquid effluents, and implement according to a timescale to be agreed with IFC.	December 2007.	Outstanding – see item 12.
14	Develop and install devices to identify possible gas leaks from the gasification plants, and develop and implement a suitable emergency response mechanism to be used in the event of a gas leak, and which should include provision for communication with those adjacent to the plant.	December 2007	Completed. Carbon monoxide and hydrogen detectors were installed at Shaanxi site, and after a trial period will be installed in Wuhai and Nanjing during 2008. Emergency response procedures have been established and implemented.