

AN ENVIRONMENTAL MANAGEMENT SYSTEM FOR THE BRAZILIAN ANTARCTIC STATION "COMANDANTE FERRAZ"

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The Brazilian Antarctic Program (PROANTAR) recently approved the implementation of an Environmental Management System (EMS) for the Brazilian Antarctic Station "Comandante Ferraz".

The main objective is to strengthen the compliance with the principles governing the protection of the Antarctic environment established in the Madrid Protocol, thus limiting the negative environmental impacts on atmospheric, terrestrial and marine environments. The EMS for the Brazilian Antarctic Station will be implemented according to the requirements of ABNT NBR ISO 14001:2004, a certification standard granted following an audit by a certification body that verifies if all the requirements are fulfilled.

The EMS in an organization aims to diagnose and define significant environmental aspects and impacts resulting from the several activities, besides establishing procedures and creating plans to meet goals arising from the definition of feasible indicators. Everything is periodically reviewed, characterizing the process of continuous improvement.

The development of the EMS is being conducted by the INCT-APA (The Brazilian National Science and Technology Institute for Antarctic Environmental Research). This includes the diagnosis, elaboration and the whole implementation phase of the EMS, all of which will be done with the supervision of the MMA (Ministério do Meio Ambiente - Ministry of the Environment). By the end of this period, the Environmental Management System should be totally incorporated into the routine

procedures of the Brazilian Antarctic Station, as part of PROANTAR.

EMS related activities started during Antarctic Operation XXVIII, in the summer of 2010, with the presence of INCT-APA and MMA representatives at the Brazilian Antarctic Station. Work included the evaluation of the Station's level of compliance to the ISO 14001:2004 standards, at this moment (i.e. before any action regarding the implementation), and the result was considered good, with 42.3% compliance.

Besides mapping out the relevant processes and activities conducted at the Brazilian Antarctic Station, the Environmental Aspects and Impacts Assessment and related significance evaluation was undertaken, considering Risk Analysis criteria – severity, magnitude and frequency. 231 aspects and impacts concerning the Station were identified (Figure 1 and 2).

Benchmarking related activities were also conducted and, at this initial stage, involved visits to other Stations in Admiralty Bay, such as Arctowski (Poland), Copacabana (USA) and Machu Picchu (Peru).

The environmental management system will improve the procedures of the Brazilian Antarctic Station by establishing controls for safety and efficiency of the processes identified. Therefore, it should create cost reductions and many advantages for the partners of PROANTAR – Brazilian Navy, Ministry of Science and Technology and Ministry of the Environment – which will be deeply involved in the implementation of the EMS.



Figura 1. Internal structures of a manufactory sector at the Brazilian Antarctic Station Comandante Ferraz. Photo: Alexandre de Ávila Leripio.

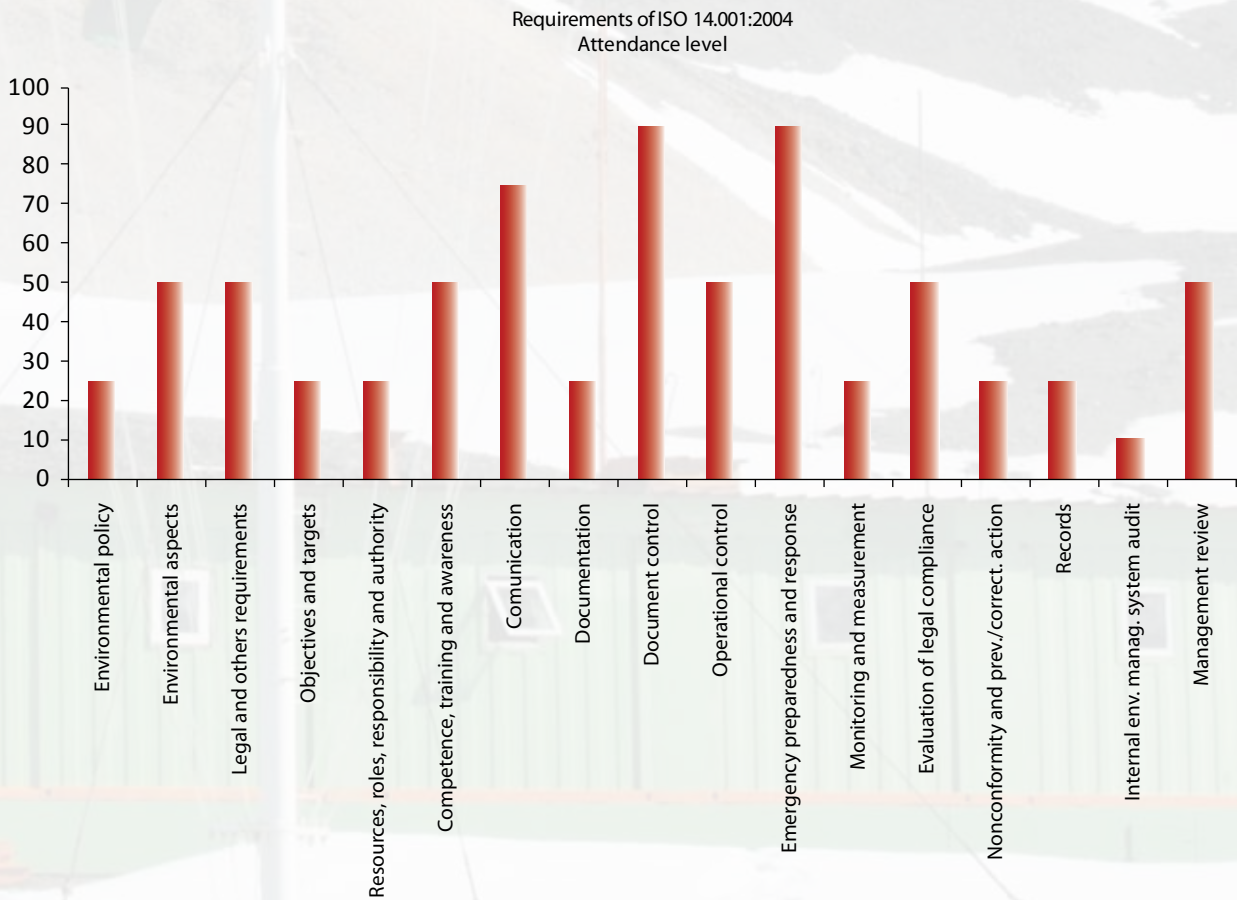


Figure 2. Requirements of ISO 14.001:2004 (Attendance level).