

REPORT
For the audit of the
Environmental Management System



Performance Assurance Sector
Correctional Service of Canada

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EXECUTIVE SUMMARY

In 2003, Correctional Service Canada (CSC), issued a policy and guidelines to formalize a national approach for the implementation of environmental standards across CSC. These documents foster the use of an Environmental Management System (EMS) by providing managers and staff with a clear understanding of their roles and responsibilities with respect to:

- what constitutes unlawful or unacceptable conduct;
- key responsibilities; and
- monitoring practices used to ensure compliance with policy and to maintain EMS performance and integrity

The audit of the Environmental Management System (EMS) was conducted as part of the CSC audit calendar for 2004/2005. The verification phase of this audit was performed during the months of January and February 2005, at which time the audit team visited nine (9) institutions. Two institutions per region were targeted, except in the Atlantic where only one institution was visited.

The objectives established for the audit were as follows:

Objective 1: To assess the institutional procedures for the operation of their Environmental Management System.

Objective 2: To assess the institutional procedures for energy conservation and measuring actual energy consumption.

Objective 3: To assess if the institution has the procedures and equipment required to respond to environmental emergencies.

Objective 4: To assess the institutional procedures for the overall management of halocarbons

Objective 5: To assess institutional procedures for the storing, measuring, inventorying and managing the hazardous waste produced

Objective 6: To assess if required quality analysis of wastewater treatment is conducted and that records are properly maintained.

Objective 7: To assess the institutional procedures for the reduction and management of solid waste.

Objective 8: The institution effectively and responsibly manages water consumption.

The specific audit criteria identified for each of these objectives are included in Appendix B.

Overall, the findings of this audit show that staff are aware of the policies issued by Correctional Service Canada and Treasury Board relating to Environmental Management, but it appears that since the last audit on the Sustainable Development Strategy Review done by the Performance Assurance Sector in 1999, this portfolio has not sustained a high level of priority.

The specific findings of this audit can be summarized as follows:

- An Environmental Committee and a permanent sub-committee have recently been established in all the institutions visited
- A permanent filing system was in place in only two of the nine institutions visited.
- In most sites visited, an annual report, summarizing the overall environmental performance of the preceding year, is not being prepared. The two institutions that had completed the report had not shared it with the Regional Environmental Officer and the Environmental Manager at NHQ as required in the Guidelines.
- Documentation indicating that the Chief, Plant Maintenance conducted an annual review of the institution's energy systems to ensure proper maintenance was found in six of the nine sites visited.
- In general, Environmental Emergency Plans were not present at the sites visited.
- A proper inventory of halocarbons was maintained at most sites visited.
- A number of deficiencies were noted with respect to the management of hazardous material. These deficiencies related to issues such as packaging, storage, signage and inspections.
- Wastewater managers/operators are not providing periodic reports to the Environmental Management Committee on the efficiency of the institutional wastewater treatment system.
- Most sites do not have a system in place for measuring monthly quantities of solid waste sent to landfills or incinerators, items recovered for recycling and composting residues.
- Sites have not all identified and cannot monitor their sectors / areas that use the largest amount of potable water.

The audit team also identified a need to improve monitoring at both the Regional and National levels, which will serve to enhance compliance with the Environmental Guidelines. Other challenges noted by the audit team include:

- A need to increase the level of priority of the environmental programs within CSC;
- Lack of site resources (financial, material and human);
- Staff rotation (individuals that were formally trained in EMS are no longer in the relevant positions and there are numerous individuals in acting positions at the AWMS and CPM levels);

- A need to review the current EMS Guidelines to ensure that expectations are attainable and that appropriate equipment and resources are available.

In addition, the audit team also identified and noted good practices. Some of these are reported in Appendix E.

As part of the Management Control Framework (MCF) process implemented by the Performance Assurance Sector, three (3) monitoring packages were developed in 2004. The first package covers the Environmental Management and Conservation Programs, while the other two cover Waste Management and the Environmental Emergency Plan. The Drinking Water Quality Management portion will be included in one of the existing packages later this year.

These packages were completed by the sites as follows:

- Environmental Management and Conservation Programs, January 31st, 2005 (results from the present audit – objectives 1, 2 and 8 - were used to analyze the validity of the results submitted for this MCF package);
- Waste Management, May 31st, 2005;
- Environmental Emergency Plan, December 31st, 2005.

It is important to note that this report also refers to the overall results of the departmental Management Control Framework (MCF) process performed in January 2005. This process applied only to objectives 1, 2 and 8 as the other objectives were covered in by MCFs completed after the verification phase of this audit. Overall, the low levels of compliance reported in the regional MCF results reflect the findings of this audit and support that all sites (not just those visited during the audit) need to be more active in order to meet the requirements of the Guidelines.

The conclusions and recommendations being made in this internal audit report are based on the assessment of findings against pre-established objectives agreed upon by the Performance Assurance Sector (NHQ) and the Environmental Protection Programs, Engineering Services (NHQ) and reflect the audit work carried out from January to February 2005 in a sample of nine CSC sites. Furthermore, results from this audit were analyzed against the results of the first EMS MCF package reported on January 31st 2005.

It is the opinion of the Performance Assurance Sector that sufficient audit work has been performed and the necessary evidence has been gathered to support the conclusions contained in this audit report. Audit teams conducted debriefings at the local, regional and national levels, at which time audit findings were discussed. In many instances, specific areas requiring improvement have been, or are in the process of being, addressed locally, regionally or nationally.

INTRODUCTION

In response to amendments to the Auditor General (AG) Act of 1995, in which the Government formally committed itself to “Sustainable Development”, CSC promulgated the “Sustainable Development Strategy” in December 1997. The Strategy refined Correctional Service Canada's (CSC) “Green Plan of 1992”, as well as the “Environmental Pledges” and “Design Guidelines for Construction Projects” produced in 1993. A review of CSC's Sustainable Development Strategy (SDS) was conducted as a part of CSC's audit calendar for 1998/1999. The primary focus of that review was to determine to what extent each of the targets had been addressed and to establish a clearer understanding of the Service's environmental performance and progress. Since that time, NHQ has issued national guidelines as well as various correspondence on environmental topics.

The Environmental Management System (EMS) was put into effect in June 2003 with the promulgation of Commissioner's Directive (CD) 318, *Environmental Programs*. In addition, nine *Environmental Guidelines* were also promulgated. In February 2005 a 10th Guideline was introduced. Current guidelines include:

- Guidelines 318-.1, Environmental Management System (EMS)
- Guidelines 318 - 2, Energy Measurement and Conservation
- Guidelines 318 - 3, Environmental Emergency Plan (EEP)
- Guidelines 318 - 4, Management of Halocarbons
- Guidelines 318 - 5, Hazardous Waste Management
- Guidelines 318 - 6, Management of Wastewater Treatment Systems
- Guidelines 318 - 7, Solid Waste Measurement and Management
- Guidelines 318 - 8, Management of Petroleum Storage Tanks
- Guidelines 318 - 9, Water Measurement and Conservation
- Guidelines 318 - 10, Drinking Water Quality Management

The primary goal of this policy and guidelines is to contribute, through efficient EMS, to the conservation of natural resources, the reduction of pollution in all its form, and the implementation and maintenance of preventive measures consistent with the protection of the environment

Audit Scope and Objectives

The scope of the audit examined the controls in place to monitor adherence to Commissioner's Directive (CD) 318 Environmental Programs and the Environmental Guidelines during fiscal year 2003-2004. In particular, high risk areas were determined in consultation with the Manager, Environmental and Sustainable Development Policies and a review of the related Environmental Guidelines, which reflect the requirements of:

- the Auditor General Act (1995),
- the Canadian Environmental Protection Act and Regulations (1999),

- the Canadian Environmental Assessment Act (1992) (amended in 2003, Bill C-9) and
- the Fisheries Act (1985).

The Guidelines on the “Management of Petroleum Storage Tanks” were excluded from this audit as petroleum storage tank inspections (audits) are scheduled to be conducted by qualified consultants in 2005 and/or 2006.

The eight objectives established for the audit were as follows:

Objective 1: To assess the institutional procedures for the operation of their Environmental Management System.

Objective 2: To assess the institutional procedures for energy conservation and measuring actual energy consumption.

Objective 3: To assess if the institution has the procedures and equipment required to respond to environmental emergencies.

Objective 4: To assess the institutional procedures for the overall management of halocarbons

Objective 5: To assess institutional procedures for the storing, measuring, inventorying and managing the hazardous waste produced

Objective 6: To assess if required quality analysis of wastewater treatment is conducted and that records are properly maintained.

Objective 7: To assess the institutional procedures for the reduction and management of solid waste.

Objective 8: The institution effectively and responsibly manages water consumption.

The audit report also addresses the issue of the overall management framework and monitoring of the EMS program.

Audit Methodology and Approach

The audit consisted of file reviews, interviews and direct observation during operational site visits. During site visits, the audit teams examined:

- Inventory records, institutional plans and other required documentation,
- Documentation such as inspection and disposal schedules,
- Environmental Emergency Plan, and
- Environmental Management System files

Audit tools were developed to test the sites' compliance with policies and procedures in the identified risk areas as outlined in the objectives noted above. The content of these tools was mainly based on the areas covered in the MCFs on Sustainable Development.

The audit team conducted a preliminary testing of the audit tools in the Quebec Region and reviewed the results with the Manager Environmental and Sustainable Development Policies and the Corporate Coordinator Environmental Protection Programs in the Technical Services, Engineering Division at National Headquarters. Subsequently, any adjustments required to the tools were made prior to proceeding to the next phase of the site visits. The audit team visited a sample of nine institutions, as identified in Appendix A. No Community Correctional Centers and no Institutions housing women offenders were visited.

Because of the specificity of this audit, the different audit teams consisted of a member from the Performance Assurance sector and an environmental specialist (selected in consultation with the Environmental Sector at NHQ). Furthermore, the selection of the environmental specialist was based on the premise that they would not be auditing their own region.

Debriefings occurred with the Wardens and the Regional Deputy Commissioner in each region. At each debriefing, a narrative report was provided outlining the audit team's preliminary observations and findings. Upon completion of the site visits, briefings were also held with representatives from the Environmental Programs Division at NHQ and the Assistant Commissioner, Corporate Services.

PART 1
Audit Findings and Recommendations

Objective 1: To assess the institutional procedures for the operation of their Environmental Management System (EMS).

The Guidelines on "Environmental Management Systems (EMS)" (GL 318-1) provide the following definition of EMS:

"An Environmental Management System is a tool for ensuring that an institution meets all of the environmental legislation and performance requirements for which its Institutional Head is accountable. According to ISO 14004, an EMS provides the framework to help an organization to manage its environmental agenda and to document, evaluate, and communicate its environmental performance. An EMS will assist federal organizations to ensure that major environmental risks and liabilities are properly identified, minimized and managed. At a minimum, an EMS helps institutions ensure that operations are conducted in compliance with environmental laws."

In order to assess this objective, the audit team targeted the following areas:

- An Environmental Management Committee is in operation at the institution,
- The institution is maintaining the required information and documentation for the Environmental Information System, and
- The reporting of environmental performance is completed as required.

Finding #1 - An Environmental Committee and a permanent sub-committee have recently been established in all the institutions visited.

The Environmental Guidelines establish a number of requirements relating to the institutional Environmental Management Committee (EMC), such as:

- The Institutional Head will establish a permanent Environmental Management Committee (EMC) and may also establish a permanent subcommittee of the EMC.
- The EMC's membership should normally include the Institutional Head (Chairperson), the Assistant Warden, Management Services (AWMS) (Deputy Chairperson), the Deputy Warden or the Assistant Warden, Correctional Programs (AWCP) (or both), the Corcan Operations Manager, the Chief, Plant Maintenance (CPM), and the Chief, Food Services. The Institutional Head may also request others to be present.

- The subcommittee would normally include the AWMS (Chairperson), the Corcan Operations Manager, the CPM and any other contributor as requested by the AWMS.
- The full EMC chaired by the Institutional Head must meet at least once annually, preferably in April. The subcommittee should meet quarterly.

The audit team found that the completion of the Environmental Management Systems MCFs in January 2005 helped to regenerate the Environment Management System. In all institutions visited, the Environmental Committee and a permanent sub-committee were established around the month of January 2005 with meetings held or planned before the end of the fiscal year. However, although the Committees were established, the audit team findings show that in some cases the selected members did not meet the requirements of the Guidelines. The audit team clarified the requirements during debriefings at the sites visited, however Regional Environmental Services Officers should communicate with all sites to reemphasize the proper membership of the EMC and permanent sub-committee.

Finding #2 - A permanent filing system was in place in only two of the nine institutions visited.

The Guidelines on "Environmental Management System (EMS)" (GL 318-1) specify the documentation and content requirements for EMS and indicate that the CPM will establish and operate the institution's Environmental Information System (EIS). The EIS consists mainly of a paper filing system and computer files. The EIS must be comprehensive, containing files or groups of files concerning at least the following topics:

- a set of files pertaining to every Environmental Guideline;
- records concerning the SDS and other environmental documents, federal government laws, regulations, guidelines, etc., and provincial and municipal government laws, regulations, guidelines, etc. that affect the environmental affairs of the institution;
- meetings of the EMC, including minutes and follow-up action reports;
- organization, position description, and temporary assignment description files for officers assigned responsibility for environmental activities;
- environmental performance assessment records; and
- records concerning other matters, such as training, audits, examinations and/or reviews (internal and external) that apply to the institution's environmental program as a whole.

Of the nine sites visited, only two fully complied with these requirements. The other sites visited were lacking some or all of the following; a standardized structure for Environmental record keeping, organization, position description, and temporary assignment description files for officer's assigned responsibility for environmental

activities. Here again, the audit team noted that the improvements that had been made were a result of the recent MCF exercise.

Recommendation #1

That RDCs ensure that all sites have implemented an EMS filing system that respects the requirements listed in GL 318-1 paragraphs 1 and 3.

Action: RDCs

Finding #3 - In most sites visited, an annual report, summarizing the overall environmental performance of the preceding year, is not being prepared. The two institutions that had completed the report, had not shared it with the Regional Environmental Officer and the Environmental Manager at NHQ as required in the Guidelines.

GL 318-1 "Environmental Management System" addresses the reporting structure that sites must follow and requires that: "Once annually, a draft report is prepared summarizing the overall environmental performance of the institution during the preceding year". The audit team found that the required report was only completed by two of the nine sites visited, although they had not forwarded the report as required by the Guidelines. This report is essential since it is the principal part of the briefing for the annual EMC meeting.

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Overall, as previously stated, the audit team found that there has been renewed emphasis on EMS with the necessary completion of the MCF for January 2005. Since the first objective of this audit examined procedures for the operation of institutional Environmental Management Systems, the results of this section are not strong but the completion of the two remaining MCF packages on EMS should increase awareness of EMS requirements and improve the level of institutional compliance with these.

As illustrated in Appendix C, the results of the various testing conducted for this objective indicate an overall result of 42% for the 9 sites visited. The 8 elements assessed to establish the scoring for this objective can be found in Appendix B.

Objective 2: To assess the institutional procedures for energy conservation and measuring actual energy consumption.

According to the "Energy Measurement and Conservation" Guidelines (GL 318-2), CSC's primary commitment in this field is to promote effective and responsible management of energy consumption in all institutions through CSC's Energy Monitoring

Protocol, a program to track energy use on a regular basis. To review this area, the audit team focused their efforts on assessing that:

- The institution has implemented a process to review and record energy consumption data. This was assessed by ensuring that data was entered by the CPM into the National Energy Monitoring Protocol.
- The institution has developed and implemented an energy conservation plan. The assessment was based on two factors. First, that there was documentation to support that an annual review of the institution's energy systems was conducted to ensure proper maintenance. (This could be recorded through the Angus system or a similar system.) Second, that energy efficiency factors were taken into account as part of the different phases of institutional capital projects.

Finding #4 - Documentation indicating that the Chief, Plant Maintenance had conducted an annual review of the institution's energy systems to ensure proper maintenance was found in six of the nine sites visited.

The only area of non-compliance for this objective was the lack of documentation in three sites visited to demonstrate that the Chief, Plant Maintenance (CPM) had conducted an annual review of the institution's energy systems to ensure proper maintenance. The documentation in and from the Angus system, or a similar one, was not sufficient in both sites visited in the Prairies region and in one institution visited in the Ontario region to ensure compliance.

Full compliance was achieved in the areas relating to the completion by the CPM of the Energy Monitoring Protocol and that energy efficiency factors were taken into account as part of the different phases of institutional capital projects.

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As illustrated in Appendix C, the results of the various testing conducted for Objective #2 indicate an overall result of 88% for the 9 sites visited. Overall, the audit team did not identify major concerns with respect to the issues examined in this area, however, there is a need for further documentation to support annual reviews. The 3 elements assessed to establish the scoring for this objective can be found in Appendix B.

Objective 3: To assess if the institution has the procedures and equipment required to respond to environmental emergencies.

The "Environmental Emergency Plan (EEP)" Guidelines (GL 318-3) establish the specific requirements of the Environmental Emergency Plan (EEP), which serves to:

- Ensure preparedness to react in the event of accidental spills of hazardous materials in accordance with pollution prevention rules and obligations.
- Establish formal response procedures that will minimize damage which may occur as a result of accidental spills of hazardous substances.
- Respond to accidental spills of hazardous materials, provide specific training, and to hold drills, to ensure preventive and responsible environmental protection management.
- Prepare staff and inmates for quick and effective responses to equipment failure, accidents, sabotage, or other incidents that could cause environmental damage (impacts).

Finding #5 - In general, Environmental Emergency Plans were not present at the sites visited.

"Preparation of an Environmental Emergency Plan:

While equipment failures, accidents, or sabotage can happen in any organization, the possibility of malicious events leading to environmental damage (although these events usually occur on a small scale) may be higher in a CSC institution than in many other settings. The Chief, Plant Maintenance (CPM) should first attempt to identify all of the types of incidents that could occur at the institution that would cause significant environmental damage. These should then be screened for materiality, as preparations to respond to an incident scenario are time consuming and expensive. The CPM should judge whether an incident scenario is material based on whether the likelihood that it would occur is "not insignificant", whether if it did occur it would be a big or small event, and whether the big or small event would cause much environmental damage."¹

Only three of the nine institutions visited had established Environmental Emergency Plans. However, the audit team noted that these plans were outdated as they need to be updated to reflect current practices. In one case, sign-off from the Warden was also required.

The audit team was able to assess some criteria at the remaining sites. Although plans were not in place, some related documentation existed. The main problem areas were the lack of:

- Response planning
- Related training
- Drills (simulations)

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¹ GL 318-3 Environmental Emergency Plan, 2003-06-11, page 9

As illustrated in Appendix C, the results of the various testing conducted for Objective #3 indicate an overall result of 23% for the 9 sites visited. The overall performance of this objective was diminished as most sites did not have such a plan and in some cases the plans were outdated. The MCF relating to the EEP is scheduled for completion in December 2005. Discussion on this topic during the different debriefings (sites, RHQ and NHQ) should provide senior management with an opportunity to react to this situation and achieve high level of compliance for the December MCF. The 12 elements assessed to establish the scoring for this objective can be found in Appendix B.

Recommendation #2

That RDCs ensure that all facilities have an operational Environmental Emergency Plan.

Action: RDCs

Objective 4: To assess the institutional procedures for the overall management of halocarbons.

The primary goal of the “Management of Halocarbons” Guidelines (GL 318-4) is to protect the stratospheric ozone layer. More specifically, to:

- Eliminate halocarbon emissions, i.e. ozone depleting substances originating from federal installations (refrigeration and air conditioning systems that utilize halocarbons) on federal lands.
- Formalize practices regarding the management of halocarbons, such that applicable procedures and responsibilities are clear, compliant with federal and provincial requirements, and consistently implemented.

Finding #6 – A proper inventory of halocarbons was maintained at most sites visited.

Sites visited in four regions met all of the inventory requirements of the guidelines. Only the two sites visited in the Prairie region were not in full compliance. At one site, the inventory did not name the custodian or list the amount of halocarbon each unit contains. At the other, the Angus system was missing 16 air conditioning systems, two of which are identified as larger than 19 kW. The Angus system for refrigeration was missing 18 systems.

The Guidelines on the “Management of Halocarbons” also require that every system which has been repaired, leak tested, dismantled, decommissioned or disposed of have

a permanent notice (label) on it, and that a copy be kept on site. The visual review performed by the audit team showed that in only one institution visited had the required permanent notices (labels). It should be noted that in the majority of cases this task is performed by a contract person and not by a CSC staff member. However, even though the responsibility to install the permanent notice resides with the contractor, the audit team feels that CSC also has a responsibility to ensure that the permanent notice is installed, up-to-date and a copy kept on file. Because of the lack of a filing system as previously discussed in this report, the audit team had some difficulties finding a paper trail on file to prove that the task was performed by the contract person as per the requirement of the Guidelines since the permanent notices (labels) were missing in 8 out of the 9 sites visited.

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Since the publication of the Federal Halocarbon Regulations (FHR) promulgated in 1999 and revised in 2003, CSC has received several warning letters (infraction notices) in the last three years from Environment Canada for not respecting certain requirements of the FHR. In order to ensure compliance with the FHR in terms of management of halocarbons, NHQ Environment Programs has undertaken several measures including correspondence, training sessions and publication of the Guidelines. Results showed that CSC is making an effort to achieve this goal. However, improvement is still needed in some areas. Because the Management of Halocarbons is important in the protection of the stratospheric ozone layer, efforts must be made to ensure proper management and follow-up.

As illustrated in Appendix C, the results of the various testing conducted for Objective #4 indicate an overall result of 64% for the 9 sites visited. The 12 elements assessed to establish the scoring for this objective can be found in Appendix B.

Recommendation #3

That RDCs ensure that the inventory of halocarbons is established at all sites in their region to reflect current numbers and that a procedure be put in place to ensure that it is kept up to date.

Action: RDCs

Objective 5: To assess institutional procedures for the storing, measuring, inventorying and managing the hazardous waste produced.

This portion of the audit consisted of a visual inspection of hazardous storage areas to ensure sites had procedures in place (in accordance with Guidelines 318-5 on "Hazardous Waste Management") to:

- Prevent the release of persistent hazardous wastes into the environment by reducing the amount of hazardous materials.
- Avoid the contamination of the environment and adverse ecological impacts attributed to poor hazardous waste disposal practices.
- Comply with management of hazardous waste requirements of applicable federal, provincial and local regulations.
- Establish a system for inventorying and measuring the hazardous waste produced and/or stored, in order to gather, record and save reliable, auditable data, thereby allowing for the ongoing monitoring.

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| Finding #7 - Hazardous material is not managed in accordance with the guidelines. |
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Packaging

When storing hazardous waste, the “Hazardous Waste Management” Guidelines (GL 318-5) require that packaging must be:

- a) leak-proof;
- b) constructed of materials appropriate to the nature of the hazardous waste; and
- c) strong enough to remain intact during handling, storage, transportation and disposal, so as to prevent leaks, spills or injuries.

The audit team found that six of the sites visited did not package hazardous material according to policy. In addition, the audit team observed during their visits that some material was left outside unprotected from the weather and without proper catch basins to contain and prevent leaks or spills, was not stored in a separate storage area, and some containers had no lids. Furthermore, the sites where these deficiencies were noted were storing hazardous material in various parts of the institution and various individuals were involved.

All sites visited were fully compliant with the section of Environmental Guidelines 318-5 requiring that all floor surfaces of hazardous storage areas be crack-free and impermeable therefore reducing risk as they serve as a physical barrier in case of leakage from packaging.

Labeling

The audit team found that containers or receptacles do not meet the requirements of Environmental Guidelines 318-5, which states that all containers or receptacles that contain hazardous waste must contain a label or sign that unmistakably identify its content, quantity (if possible) and storage date.

Sites visited in three regions were not correctly identifying their hazardous waste as required. The audit team also noted deficiencies in areas such as:

- waste containers were stored outside with no clear label or storage date,

- not all containers were identified with a storage date, however, all the information was recorded in a log book.

Signage

Physical inspections during the audit revealed that, in five of the nine sites visited, areas (eg., buildings, sheds, cupboards) where hazardous wastes are stored were not complying with the requirements of the Environmental Guidelines 318-5 which specify that where hazardous waste is stored, buildings, sheds or cupboards must be properly identified with appropriate signs warning individuals of the presence of hazardous material.

Institutional plans

As per the requirement of the Environmental Guidelines 318-5, buildings, sheds, cupboards that store hazardous waste must be identified on facility plans. The audit team found that institutional plans do not identify all buildings / areas that store hazardous waste.

Deficiencies noted included:

- Three sites visited did not have an institutional plan.
- One site had an institutional plan but the plan was missing some of the building/areas where hazardous waste was being stored.
- Another site had an Emergency Environmental Plan but it did not include a site plan that identified the hazardous waste storage areas.

Technical controls

The Environmental Guideline 318-5 require that storage areas must have the technical controls required by applicable legislation, codes and directives, depending on which hazardous materials are stored. These controls may include:

- a) internal fire resistance, fire suppression or containment components;
- b) external ventilation;
- c) secondary containment equipment, catch basins, interception ditches in case of spills, drain inlets;
- d) absorbent materials (spill kits), extinguishers, first-aid kits, etc.;
- e) explosion-proof facilities, accessories and electrical equipment;
- f) where applicable, a refrigeration capacity.

The audit team found that storage areas did not have all the technical controls required by applicable legislation, codes and directives, for the storage of hazardous materials. For instance:

- Sites visited in the the Atlantic and Ontario Regions did not have some of the necessary technical controls in place to store their hazardous materials. As examples, they were missing internal fire resistance or containment components, external ventilation, secondary containment and explosion-proof facilities.
- In the Pacific Region, one site visited was storing flammable materials. Although the building met fire regulations, it did not have a sprinkler system. In addition, the storage areas did not have absorbent materials.

Inspections

This part of the audit consisted of reviewing file documentation to confirm that regular inspections are conducted of hazardous waste storage areas. A visual inspection of the storage areas also allowed the audit team to determine whether or not the area was safe and well maintained

The “Hazardous Waste Management” Guidelines require that sites must develop and maintain a schedule for regular inspections of hazardous waste storage areas (room or building). The audit team found that sites visited in three regions have not developed or implemented a process to ensure regular inspections of their hazardous waste storage areas. Furthermore, when conducted, these inspections are not always being documented.

Disposal

The Guidelines further require that hazardous waste be disposed of at least once per year. In order to assess this area, the audit teams looked at file documentation from fiscal year 2003-04 to confirm whether hazardous waste is disposed of at least once annually.

The audit team found that seven of the nine sites visited were not disposing of their hazardous waste at least annually. More specifically:

- In the Atlantic region, the auditors found a disposal manifest for 2003 but none was found for 2004.
- In the Ontario Region, one site disposed of their hazardous waste in 2003. A disposal had been planned for fall of 2004 but due to lack of funding, it was postponed to April 2005. At the other site, there was no disposal schedule in place. In addition, the auditors could not determine the amount and location of disposal as various individuals were disposing of their waste. Finally, interviewees indicated that a disposal manifest had not been requested due to the additional cost associated with securing a manifest.
- In the Pacific Region, no documentation was available at the sites visited to support that disposal had occurred.
- One site visited in the Prairie Region had not disposed of their hazardous waste since 2001.

- The two sites visited in the Quebec Region fully met the above requirement.

With the exception of one institution, all sites visited were compliant with the section of the “Hazardous Waste Management” Guidelines requiring that only contractors/carriers who are experienced and licensed to handle and transport the type of hazardous waste used for disposal. The exception related to a Chief, Plant Maintenance who was transporting used oil to an appropriate disposal area. However, the audit team advised the site that an external professional hazardous waste transportation company must conduct all hazardous waste transportation (as per the “*Transportation of Dangerous Goods Act*”). Furthermore, the auditors were unable to locate any supporting documentation on the transportation of hazardous waste to the specialized disposal sites.

GENERAL OBSERVATION

As indicated in the chart in Appendix C, the two sites visited in the Quebec Region obtained noticeably better results in Hazardous Waste than any other region (85% as compared to a National average of 46%). Interviews indicated that this could be the result of an initiative a few years ago, where the region hired two students in the environmental field to visit all the institutions and assist them in setting up hazardous waste accordingly.

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As illustrated in Appendix C, the results of the various testing conducted for Objective 5 indicate an overall result 46% for the 9 sites visited. Compliance can be improved if sites ensure that packaging of hazardous waste is done properly, that all containers are properly labeled and include a storage date, that the buildings/sheds/cupboards are properly identified with appropriate signs, that institutional plans identify all buildings/areas where hazardous waste is stored, that the necessary technical controls are in place to ensure safe storage, and that inspections are conducted regularly and documented. The 11 elements assessed to establish the scoring for this objective can be found in Appendix B.

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| Objective 6: To assess if required quality analysis of wastewater treatment is conducted and that records are properly maintained. |
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NOTE: Only 4 of the 9 sites visited were responsible for their own wastewater treatment operation as the other 5 institutions are connected to the municipal wastewater treatment. They are Springhill Institution (Atlantic Region), Joyceville Institution (Ontario Region), and Cowansville & La Macaza Institutions (Quebec Region).

The audit team did note that, where applicable, all sites visited were complying with the following requirements of the Guidelines:

- to ensure that the facility/equipment is maintained to screen sewage effluent before it enters trunk lines leading to the municipal sewage lines or the CSC sewage treatment plant.
- to conduct their visual inspections of their wastewater treatment facility at least once a week according to conditions of system accessibility.

Finding #8 - The Wastewater managers/operators are not providing periodic reports to the Environmental Management Committee on the efficiency of the institutional wastewater treatment system.

In accordance with the requirements of the “Management of Wastewater Treatment Systems” Guidelines (GL 318-6), the institutional wastewater manager shall periodically provide a report to the Environmental Management Committee (EMC) on the efficiency of the institutional wastewater treatment system.

The audit team noted that in most cases, the Wastewater manager/operator were conducting the required sampling but were not preparing and providing to the EMC periodic reports on the efficiency of the institutional wastewater treatment system because the EMC at the majority of the sites had only recently been put in place. (Refer to Objective 1 of this report.)

In addition, one site in particular had no documentation to support that they had sampled/characterized the quality of its wastewater effluent in the past 5 years.

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As illustrated in Appendix C, the results of the various testing conducted for this objective indicate an overall result 75% for the 4 applicable sites visited. In order to improve this area, all sites must keep up-to-date data from quality analysis of effluents from wastewater systems and ensure that period reports are provided to the Environmental Management Committee. The 4 elements assessed to establish the scoring for this objective can be found in Appendix B.

Objective 7: To assess the institutional procedures for the reduction and management of solid waste.

All the sites visited have access to a database called the “Solid Waste Monitoring Protocol” (commonly called the “Y Drive on Environment”) in order to record monthly quantities of solid waste sent to landfills or incinerators, recycling and composting.

Site visits indicated that all institutions met the contracting requirements of the "Solid Waste Measurement and Management" Guidelines (GL 318-7) relating to the disposal of all their solid waste (food, office, construction and demolition waste). In addition,

none of the sites were burning, incinerating, landfilling or using kitchen garbage disposals for disposing their waste on CSC's grounds.

Finding #9 – Most sites do not have a system in place for measuring monthly quantities of solid waste sent to landfills or incinerators, items recovered for recycling and composting residues.

The “Solid Waste Measurement and Management” Guidelines require sites to have a system in place for measuring monthly quantities of solid waste sent to landfills or incinerators, items recovered for recycling and composting residues. However, the majority of the sites visited cannot record all the necessary information as waste is picked up at numerous locations and trucks are only weighed once at the landfill site. The primary objective for measuring solid waste is to provide performance feedback to occupants and improve on waste reduction.

As a result of the above, it is currently impossible to know who generates what and how much waste. Depending on the contract requirements, some companies provided on their invoice the weight of solid waste sent to landfill when waste was picked up only at one specific site, but this is not always the case for recycling or composting. In the majority of cases, not all the necessary information can be entered in the database as trucks are not weighed per site, nor are sites equipped to weigh their own waste. As a result, it is currently impossible for the sites to enter all the necessary data into the Solid Waste Monitoring Protocol. Various options are available, for example that hauler reports provide information on the amount of material recycled and sent to landfill in weight or volume for a specific site, as negotiated with the service provider, or that sampling measurement methods are adopted. The audit team was informed that the Quebec Public Works and Government Services Canada (PWGSC) has developed a strategic, comprehensive approach and has been quite successful with their sampling measurement.

The 2004 Report of the Commissioner of the Environment and Sustainable Development, Chapter 3, entitled “Sustainable Development Strategies: Using the Tax System and Managing Office Solid Waste” identified that at the six (6) departments and agencies examined (CSC was not part of this review), there is a lack of reliable measurements and inconsistent feedback to building occupants on their waste management performance, and departments and agencies are not likely achieving the level of performance that is possible. This is not the model of excellence the government desires. In addition, a comprehensive solid waste management program needs to include targets to address waste reduction and waste diversion.

The audit team noted that all sites visited were taking steps to reducing their solid waste sent to landfill by participating in recycling and some in composting. The chart below lists all the initiatives undertaken by site. The hooks “√” represent information provided to the audit team during site visit interviews.

The "X" represents up-to-date information following a June 2005 survey on Solid Waste Management within CSC Institutions requested by the Corporate Coordinator, Environmental Protection Programs, Engineering Services, CSC-NHQ.

| | Paper | Cardboard | Metal | Wood | Plastic | Glass | Cans | Construction | Compost | Inmate Clothing |
|--------------|-------|-----------|-------|------|---------|-------|------|--------------|---------|-----------------|
| Springhill | ✓ | ✓ | X | | ✓ | ✓ | ✓ | X | ✓ | |
| La Macaza | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | X | ✓ | ✓ | |
| Cowansville | | ✓ | ✓ | | | | ✓ | ✓ | | |
| Kingston Pen | ✓* | ✓ | X | | ✓ | ✓* | ✓* | X | ✓ | |
| Joyceville | ✓ | ✓ | X | | | | ✓ | | X | ✓ |
| Sask Pen | ✓ | ✓ | | | | | ✓ | | ✓ | |
| RPC | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Mission | X | ✓ | X | | | | ✓ | ✓ | X | |
| Matsqui | ✓ | ✓ | X | | | | ✓ | | | |

- * Program in administrative building only.

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As illustrated in Appendix C, the results of the various testing conducted for Objective 7 indicate an overall result of 70% for the 9 sites visited. In order to increase compliance in this area, sites must have an appropriate action plan to reduce solid waste and it must be implemented and maintained. However, the best way to improve and reduce solid waste is to know first hand what and how much is produced, and by whom. This can be accomplished through a solid waste audit. Once this is established, the sites will be in a better position to reach full compliance and meet the general objective of the Guidelines, which is to implement a system for measuring the solid wastes produced, by category, in order to gather, record, and save reliable, auditable data, so that this environmental aspect can be formally managed. By extension, solid waste sent to landfills can be reduced to the benefit of recycling and/or composting initiatives. The 5 elements assessed to establish the scoring for this objective can be found in Appendix B.

Recommendation #4

That the RDCs, in consultation with the ACCS, ensure that all sites implement a system for measuring solid waste produced, by category, in order to gather, record, and save reliable, auditable data.

Action: RDCs and ACCS

Objective 8: The institution effectively and responsibly manages water consumption.

The "Water Measurement and Conservation" Guidelines (GL 318-9), require the proper management of a water conservation plan. This requires the identification of the

systems and subsystems that use the largest amount of potable water and then equip them with meters in order to properly measure usage. Water usage must then be monitored and should a significant increase arise, immediate action must be taken to rectify the situation (i.e., repairs, staff awareness).

Finding #10 - Sites visited have not all identified and cannot monitor their sectors/ areas that use the largest amount of potable water.

Based on the above requirement, the audit team found that sites visited in all regions (except the one visited in the Atlantic region) do not have sufficient water meters within their facilities. As a result, there is no means to allow proper monitoring of water consumption and sites cannot identify or address over consumption. While some sites monitor their global water consumption, they do not have the capability of monitoring by systems and subsystems as required by the Guidelines.

Information obtained during the audit also indicated that NHQ had previously provided funding for meters but these funds were not always used for this purpose.

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In order to address the above deficiencies, sites must identify all their systems and subsystems which consume large amount of potable water. Main institutional sectors/areas or buildings should be equipped with water meters in order to adequately monitor and rectify over consumption. Once the monitoring equipment is in place, the sites will be able to set targets and forecast water use at each measurement point.

As illustrated in Appendix C, the results of the various testing conducted for this Objective indicate an overall result 60% for the 9 sites visited. The 3 elements assessed to establish the scoring for this objective can be found in Appendix B.

Recommendation #5

Action be taken to ensure that all sites are equipped with water meters for main institutional sectors/areas which consume large amount of potable water, to set targets, forecast use, and monitor consumption.

Action: RDCs

Overall Conclusion

The results of the audit and the MCF process indicate that very little progress has been made with respect to EMS in the last few years. The audit team also identified a need to improve monitoring at both the Regional and National levels, which will serve to enhance compliance with the Environmental Guidelines. As indicated by the results of

the initial MCF package, the completion and implementation of corrective actions for the next two packages should help increase CSC's performance in this area. However, the monitoring of the MCF results is not sufficient to achieve compliance with the EMS. Other challenges reported to the audit team include:

- A need to increase the level of priority of the environmental programs within CSC;
- Lack of site resources (financial, material and human);
- Staff rotation (individuals that were formally trained in EMS are no longer in the relevant positions and there are numerous individuals in acting positions at the AWMS and CPM levels);
- A need to review the current EMS Guidelines to ensure that expectations are attainable and that appropriate equipment and resources are available.

It is important to note that the next section of this report also refers to the overall results of the departmental Management Control Framework performed in January 2005. This process applied to objectives 1, 2 and 8 only since the other objectives will be covered in future MCFs in 2005.

The National MCF results for those objectives concur with the audit with the exception of objective 1. The audit team feels that the discrepancies result from the misinterpretation of the Guidelines and not wrongdoing from the part of the sites. The Guidelines are very specific as to who should be on the EMS Committees and what and how the information is to be filed. During site debriefings, the audit team was able to clarify the composition of the different committees with local management. Overall, however, the low levels of compliance in the regional MCF results reflect the findings of this audit and support that all sites (not just those visited during the audit) need to be more active in order to meet the requirements of the Guidelines.

The audit team, in conclusion, makes the following general recommendations.

Recommendation #6

That ACCS and RDCs ensure that required processes are in place to monitor the level of compliance with respect to all the EMS Guidelines so that any issues can be reported and addressed on a timely basis.

Action: ACCS and RDCs

Recommendation #7

That the ACCS reviews the EMS Management Framework to ensure that sufficient financial, material and human resources are in place to achieve compliance to existing policies.

Action: ACCS

PART 2 **Analysis of MCF Results**

The following analysis is based on three sources of information:

- findings of the current audit,
- copies submitted by the institutions visited of completed Appendix Cs; and
- MCF attestations (initial and final) from the MCF web application.

Given that some of the audit tools used were similar to the MCF testing instrument (Appendix C), it was possible for the audit team to perform a comparative analysis of the results.

Background on the MCF

Management Control Framework (MCF) tools were prepared for all of the areas identified by CSC's Senior Management as the higher risk for the organization at the institution and community levels. All sites (Institutions and District Offices) reported on the results of the first set of tools in October 2003. At that time, all results were done manually. On April 1st, 2004, the MCF Application came into force. The Application allowed the required individuals to electronically sign-off on Attestations (Appendix A) according to a reporting schedule and also provided access to the Appendix Bs and Cs.

The reporting schedule identifies which manager is responsible for signing-off on each MCF (Attestation/Appendix A) and provides a calendar for completion.

Appendix A: Certification/ Attestation document to be completed by the manager identified in the reporting schedule. The manager signing the Appendix A attests to being in compliance with the criteria identified in this document **as well as** the related requirements outlined in the Appendix B (except where deficiencies are noted).

Appendix B: This document identifies the specific compliance requirements for which managers are signing off under Appendix A. It is to be used as a reference tool only, there is no information to be completed on this document.

Appendix C: This detailed review checklist can be used to assess compliance against the requirements. This document is provided as a tool for managers to verify that controls/processes are actually in place and working. The results of this checklist are used to complete the Appendix A.

The identified Manager **must** perform an assessment of their operation and complete an initial attestation early within the 60 day reporting cycle (suggested within the first 10 days but no later than 25 days). This initial attestation must be entered into the MCF Application. A site achieving Full Compliance has no further reporting requirement.

A site achieving non-compliance results for any MCF criterion is required to document their corrective action in the comments section of the initial attestation. Once the

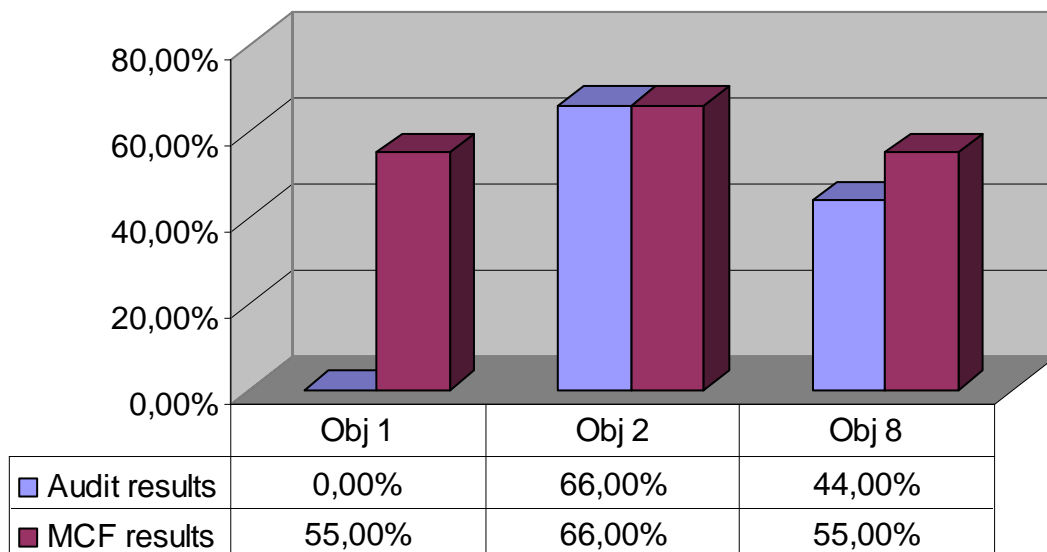
corrective action has been taken and the responsible Manager is satisfied that full compliance has been achieved, the Manager must amend the initial attestation to reflect this compliance (the attestation should only be amended once).

The MCF Executive Governance reporting process requires both the initial and final attestation be reported within the system. By doing so, we meet the requirements of central agencies such as the Auditor General and Treasury Board to show progress made to achieve full compliance.

As a general practice, if there is non-compliance noted in an Appendix C then the attestation should reflect this, since full compliance is not achieved.

Results of the MCF vs. the results of the 9 sites audited

The following chart compares the results gathered by the audit team to the results reported by sites visited in the MCF web application. **It should be noted that some of the results under “Audit results” for this section differ from those found elsewhere in the current report (Annex B) due to the fact that the MCF tools did not cover all the audit aspects. The data comparison is based strictly on identical information only.**



Analysis of objective 1:

- Audit: all 9 institutions had at least one area of non-compliance for this objective
- MCF final attestation: 6 institutions reported full compliance

Based on the audit findings, all 9 attestations should have reflected non-compliance with action plans submitted. The audit team feels that the discrepancies result from the interpretation of the Guidelines and not wrongdoing from the part of the sites. The Guidelines are very specific as to who should be on the EMS Committees and what information should be filed and how. During interviews and site debriefings, the audit team was able to clarify the requirements to the responsible managers.

Analysis of objective 2:

- Audit: 3 of the 9 institutions had at least one area of non-compliance
- Final attestation: 6 institutions reported full compliance

It should be noted that there were two institutions that identified non-compliance in their appendix C (detailed checklist) but reported full compliance in their initial attestation. One of these institutions changed their attestation to reflect non-compliance afterwards. Furthermore, out of the three institutions where non-compliance was scored by the audit teams, one scored their attestation as a full compliance and one changed their scoring in the final attestation from initially reflecting a full compliance to later show to non-compliance.

In conclusion, based on the audit findings, at least three attestations should have been non-compliance with action plans submitted but in two cases were reported at the final attestation as being full compliance. Even if the chart shows that the results are equivalent, there is still a problem with the reporting of the results and the link between the Appendix Cs and the final attestations.

Analysis of objective 8:

- Audit: 5 of the 9 institutions had at least one area of non-compliance
- Final attestation: 5 institutions reported full compliance

Problems were noted in five institutions. One institution scored full compliance in the Appendix C as well as in the final attestation, whereas the audit team noted areas of non-compliance. In addition, three institutions reported non-compliance in area(s) of the Appendix C, but reported full compliance in the initial attestation. There was no indication on the file that there had been corrective action taken between the completion of the Appendix C and the sign-off on the attestation. However, two of these sites changed their results to reflect non-compliance in the final attestation.

In conclusion, based on the audit findings, at least five of the nine attestations reviewed should have reflected non-compliance with action plans submitted, but in two cases were reported at the final attestation as being full compliance.

National results of the MCF (January 2005) for all remaining sites

All Regional Deputy Commissioners sent their regional roll-ups for the EMS MCF package 1 to the Assistant Commissioner Performance Assurance (ACPA) in February 2005. All regions noted areas of non-compliance and set forward action plans to ensure compliance in the near future.

The following table summarizes the findings reported by sites in the MCF application:

| | Non-compliance | Total submitted | % of non-compliance |
|-------------|----------------|-----------------|---------------------|
| Objective 1 | 17 | 51 | 33% |
| Objective 2 | 12 | 48 | 25% |
| Objective 8 | 14 | 47 | 29% |

The low levels of compliance in the regional MCF results reflect the findings of this audit and support that all sites (not just those visited during the audit) need to be more active in order to meet the requirements of the Guidelines.

In addition, two policy issues were raised. The Atlantic region raised a policy issue with respect to the Environmental Guideline 318-2, section 3, paragraph 1, which states "Where two or more institutions' use of energy is reported on a common bill, metered data **should** be used to prorate the relative portion of the total energy purchase that is used by each institution". The MCF states that the metering process **must** be used. The region is requesting a change in the wording of the MCF to reflect the actual policy which appears to leave some flexibility with regards to the use of metering. The Performance Assurance Sector at NHQ made the required change on February 28th 2005.

Furthermore, the Prairies region raised an issue in their MCF roll-up of January 2005 with respect to "Environmental Officer positions not completely dedicated to support the Sustainable Development Program at Institutions. Workplace safety issues are combined with Environmental Officer duties to the detriment of the Sustainable Development Program. The challenge remains to secure adequate funding to support the overall Sustainable Development Program, for example, metering systems to allow for accurate monitoring of energy consumption." (please refer to recommendation 7).

Recommendation #8

That the ACPA and ACCS examine the results of the Management Control Framework (MCF) exercises for EMS (January, May and December) in order to address any accountability issues contained therein and to take any action necessary to ensure the accurate and consistent reporting of results.

Action: ACPA and ACCS

APPENDIX A
Sites visited

ONTARIO REGION

Joyceville Institution
Kingston Penitentiary *

ATLANTIC REGION

Springhill Institution

QUEBEC REGION

Cowansville
La Macaza

PRAIRIES REGION

RPC *
Saskatchewan Penitentiary *

PACIFIC REGION

Mission *
Matsqui *

* : *Institutions that do not have Wastewater Treatment Systems*

APPENDIX B
Audit objectives, criteria and assessment factors

| | |
|--|--|
| Objective 1: To assess the institutional procedures for the operation of their Environmental Management System. | |
| <i>1.1 An Environmental Management Committee is in operation at the institution.</i> | |
| a) Verify that the Warden has established an Environmental Management Committee (EMC) and a permanent sub-committee. Membership should include | |
| <ul style="list-style-type: none"> • Institutional Head (Chairperson) • Assistant Warden Management Services (Deputy Chairperson) • Deputy Warden or AWCP (or both) • CORCAN Operations Manager • Chief, Plant Maintenance • Chief, Food Services | GL 318-1, Section 3 para. 1-4 & Annexe B |
| Sub-committee <ul style="list-style-type: none"> • AWMS (Chair) • CORCAN Operations Manager • CPM • Any others requested by AWMS | idem |
| b) Review the minutes of the EMC meetings to ensure that the EMC is chaired by the Institutional Head and that the committee meets at least once a year | GL 318-1, Section 3, para. 5 |
| c) Review the minutes of the EMC meetings to ensure that the sub-committee meets at least on quarterly basis. | idem |
| <i>1.2 The institution is maintaining the required information and documentation for the Environmental Information System.</i> | |
| a) Ensure that the Chief, Plant Maintenance (CPM) has an Environmental Information System (EIS) filing system in place which includes all of the following documents: <ul style="list-style-type: none"> • A set of files pertaining to all Environmental Guidelines. • Records concerning the SDS | GL 318-1, Sec 4 para. 1 & 3 |
| b) Ensure that all documents required in the Environmental Guidelines (audits, data, records) are kept on site for five years following the date of issue | GL 318-1, Section 4 para. 5 |
| <i>1.3 The reporting of environmental performance is completed as required.</i> | |
| a) Verify that a draft report is prepared annually, summarizing the overall environmental performance of the preceding year. | GL 318-1, Section 4, para. 7 |
| b) Ensure that a copy of the final report is sent to the Regional Environmental Officer and the Environmental Manager at NHQ. | idem |
| Objective 2: To assess the institutional procedures for energy conservation and measuring actual energy consumption. | |
| <i>2.1 The institution has implemented a process to review and record energy consumption data</i> | |
| a) Verify in the Energy Monitoring Protocol that the CPM is entering energy data from various sources (electricity, natural gas, heating oil, propane, diesel oil) | |
| Note: If the facility is located in a complex and if one common bill is received, ensure that meter data is used to calculate the relative portions by each institution | 318-2, Section 3 para. 1 |
| <i>2.2 The institution has developed and implemented an energy conservation plan</i> | |
| a) Review file documentation to ensure that the CPM has conducted an annual review of the institution's energy systems to ensure proper maintenance. | 318-2, Section 3 para. 5. |
| b) Review EMS records to ensure that energy efficiency factors were taken into account as part of the different phases of institutional capital projects. | 318-2, Section 3, para. 6. |
| Objective 3: To assess if the institution has the procedures and equipment required to respond to environmental emergencies. | |

| | |
|---|---|
| <i>3.1 The responsibility to implement the Environmental Emergency Plan (EEP) has been assigned and procedures have been developed to address various emergencies.</i> | |
| a) Confirm that the Warden has formally assigned the responsibility for the development-maintenance of a state of preparedness for staff and inmates to implement the Environmental Emergency Plan (EEP). | Environmental Emergency Plan (EEP), 318-3, Section 2 para 1 |
| b) Review the EEP to ensure that it is comprised of the following stages: <ul style="list-style-type: none">• The response plan,• The related training, and• Drills (simulations) | EEP, 318-3, Section 2, para 3 |
| c) Ensure that the Chief Plant Maintenance (CPM) has identified and described incident scenarios to be addressed by the EEP | EEP, 318-3, Section 2 para 4 |
| d) Verify that none of the above scenarios are duplicated in other institutional emergency response plans | EEP, 318-3, Section 2 para 4 |
| e) Review a sample of EEP incident scenarios and ensure the CPM has coordinated the development of a response plan that: <ul style="list-style-type: none">• Describes each incident scenario,• Identifies and describes the tasks that must be carried out to respond to the incident effective | EEP, 318-3, Section 2 para 5 |
| <i>3.2 The institution has identified the various risk areas as well as the procedures required to respond to associated emergencies.</i> | |
| a) Review the institutional site plan to ensure that it includes a list of all hazardous materials commonly used at the institution, their location, and quantity | 318-3, Section 3, para 3 |
| <i>3.3 Proper response equipment is available and an inventory is maintained</i> | |
| a) Ensure that the required response equipment is sufficient in quantities and availability. This equipment could include: <ul style="list-style-type: none">• Environmental emergency kits,• Absorbents,• Protective clothing,• Recover containers,• Fire-fighting equipment,• Neutralizi | EEP, 318-3, Section 3, para 4&5 |
| b) Ensure that the site plan indicates where the equipment can be found. | idem |
| c) Verify that procedures are in place and that the responsibility has been delegated to ensure: <ul style="list-style-type: none">• Emergency kits are replenished,• Equipment is maintained and in good working condition,• Inventory is maintained,• Any new areas/buildings (at risk) are provided with necessary equipment. | EEP, 318-3, Section 3, para 6 |
| <i>3.4 Required training and simulations are provided to staff and documented</i> | |
| a) Ensure that all required staff (and if appropriate inmates) have had proper training. | EEP, 318-3, Section 5 para 1-3 |
| b) Verify that the CPM has kept a log book that indicates all training and simulations that took place. | idem |
| c) Review documentation to ensure that the institution's environmental emergency response capability is tested annually in a simulation exercise. Note: This requirement is waived in a particular year if the institution has responded to a real incident d | 318-3, Section 2 para 6. & Section 5 para. 2 |
| Objective 4: To assess the institutional procedures for the overall management of halocarbons | |
| <i>4.1 Institution is maintaining the required inventory records of all large system functioning with halocarbons.</i> | |
| a) Verify that an up-to-date inventory is maintained of all large systems functioning with halocarbons (CFCs, HCFCs, HFCs, blends, etc) that have a refrigeration capacity over 19 kilowatts (= 5.4 tons exists = 25,5 Hp). | 318-4 Section 2, para 5. |

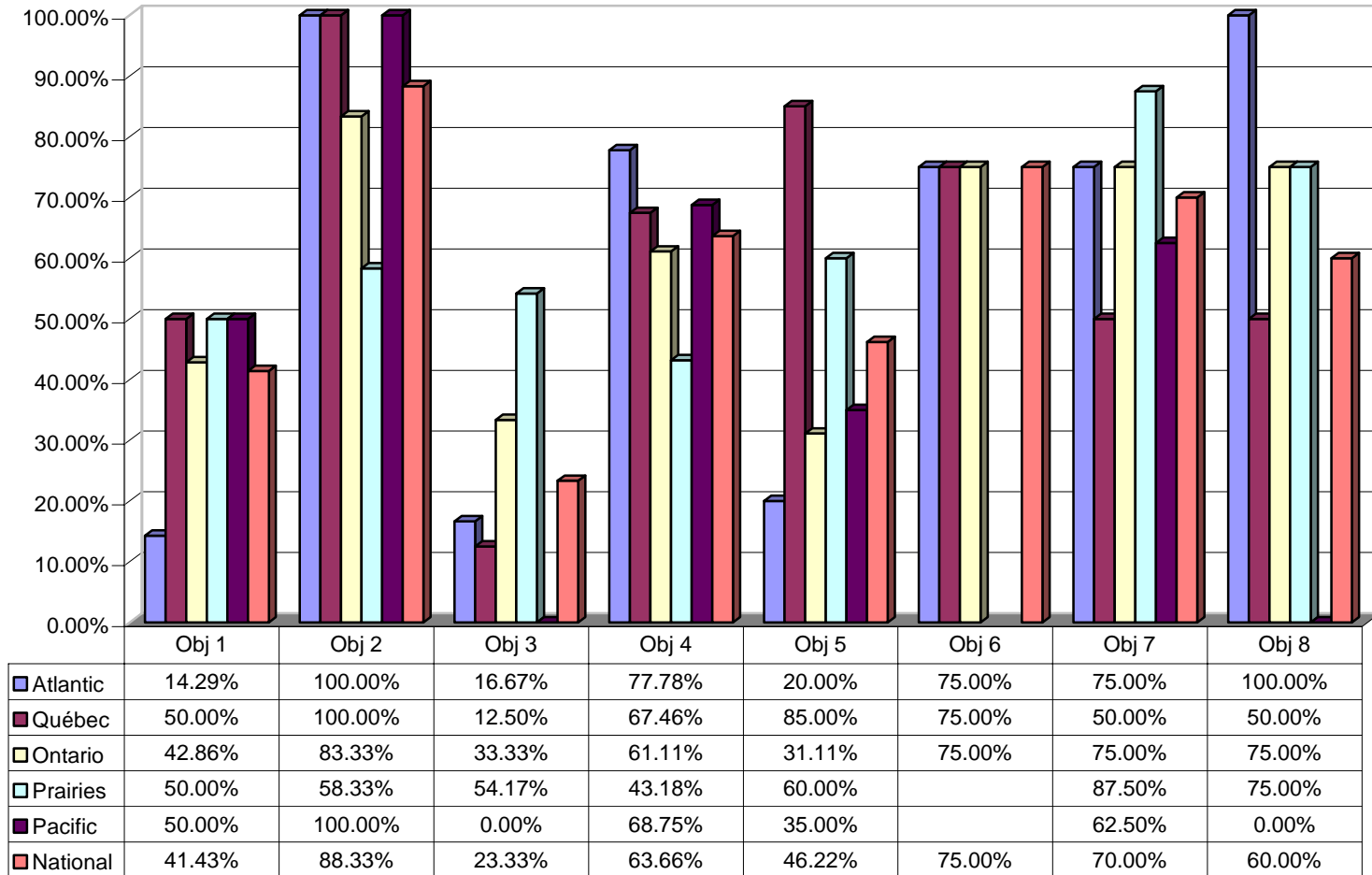
| | |
|---|--|
| b) Confirm that the inventory contains the following information for each system: Ø uniquely identifies and categorizes each system Ø Name its custodian Ø list amount and type of halocarbon it contains Ø describe its maintenance and inspection arrangements | 318-4, Section 2, para 6 |
| c) Confirm that all documents required by the Environmental Guidelines (records, service logs, reports, and notices) are kept on site in the form of a central registry of halocarbons for a period of at least 5 years from their date of issue. | 318-4, Section 4, para 2 |
| <i>4.2 Institutional is complying with the requirements for the installation, maintenance and testing of these systems.</i> | |
| a) Verify that there have been no new purchases (last 12 months) of equipment operating with a CFC | 318-4, Section 2, para 2. |
| b) Check any refrigeration or air conditioning equipment that has been recently refilled to ensure no CFC was used. | 318-4, Section 2, para 3 |
| c) Ensure that no recently charged or refilled air conditioning systems in motor vehicles operates with CFCs | 318-4, Section 2, para 4 |
| d) Confirm that a certified person conducts an annual leak test on any large systems to ensure they meet current design criteria | 318-4, Section 3, para 1, 2, 3 |
| e) Verify that every system which has been repaired, leak tested, dismantled, decommissioned or disposed of have a permanent notice (label) on it, and that a copy is kept on site. | 318-4, Section 3, para 4, 8b) & 9 |
| f) Ensure that whenever a refrigeration or air conditioning system that has a capacity over 19kw is installed, serviced, leak tested, repaired, or charged, a written record containing the information in Appendix D of Guideline 318-4 is kept on site. | 318-4, Section 4 para 1 |
| <i>4.3 Mechanism is in place to ensure the required reporting of the accidental release of halocarbons.</i> | |
| a) If an accidental release of 100kg or more of halocarbons has occurred: i) Verify that a verbal or written report was transmitted to the Regional Environmental Officer (REO) within 24 hours of detection, and | 318-4, Section 4, para 3 & 4 |
| ii) A written report is submitted to the REO within 14 days. | idem |
| b) If more than 10kg and less than 100kg has been release, ensure that this is recorded in a bi-annual report sent to the REO (January and July). | idem |
| Objective 5: To assess institutional procedures for the storing, measuring, inventorying and managing the hazardous waste produced | |
| <i>5.1 Local procedures have been established and are implemented to ensure the proper identification and storage of hazardous waste material and the associated areas</i> | |
| a) Verify that packaging of hazardous waste is: <ul style="list-style-type: none"> • Leak-proof, • Constructed of materials appropriate to the nature of the hazardous waste, • Strong enough to remain intact during handling, storage, transportation and disposal, so as to prevent leaks, spi | Storage of PCB Material Regulations (9) Hazardous Waste Management 318-5, Section 3, para 2 |
| b) Verify that all containers or receptacles being used for storage of hazardous waste show clear labels or signs that unmistakably identify the contents, the quantity (if possible), and the storage date. | Storage of PCB Material Regulations (12) Hazardous Waste Management 318-5, Section 3, para 3 |
| c) Ensure that buildings, sheds, cupboards, etc where hazardous wastes are stored are identified with appropriate signs. | Storage of PCB Material Regulations (12) Hazardous Waste Management 318-5, Section 3, para 6 |
| d) Also confirm that institutional plans (contingency plans) identify all buildings/areas that store hazardous waste. | idem |

| | |
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| e) Ensure that necessary technical controls are in place dependant on what hazardous waste is being stored. These controls may include: <ul style="list-style-type: none"> • Internal fire resistance or containment components. • External ventilation. • Secondary containment equipment, catch basins, interception ditches in case of spill, drain inlets. • Absorbent materials (spill kits), extinguishers, first-aid kits. • Explosion-proof facilities, accessories and electrical equipment. • Where applicable, refrigeration capacity. | Storage of PCB Material Regulations (9) (10) Hazardous Waste Management 318-5, Section 3, para 9 |
| f) Conduct an inspection of storage area to ensure that hazardous waste is sheltered (unless specified in the NFC, the NBCC or other regulations eg: <u>propane gas tanks</u>). | Hazardous Waste Management 318-5, Section 3, para 10 |
| g) Verify that floor surfaces of storage areas are crack-free and impermeable. | Hazardous Waste Management 318-5, Section 3, para 11 |
| <i>5.2 The institution conducts regular inspections of, and appropriate disposal from, hazardous waste storage areas.</i> | |
| a) Review documentation to ensure that CPM has developed and implemented a schedule for regular inspections of hazardous waste storage areas (room or building). | Storage of PCB Material Regulations (11) Hazardous Waste Management 318-5, Section 3, para 12 |
| b) Review documentation to ensure that hazardous waste is disposed of at least once annually. | Hazardous Waste Management 318-5, Section 3, para 14 |
| c) Confirm that only contractors/carriers who have had experience and are licensed to handle the type of hazardous waste are used for disposal. | Hazardous Waste Management 318-5, Section 3, para 17 |
| <i>5.3 Proper records are being maintained to control the inventory and disposal of hazardous waste</i> | |
| a) Verify that CPM is maintaining a record/register to show the yearly quantities by hazardous waste category and disposal manifests, and that all documents required by Environmental Guidelines (audits, measurement data, records, register) are kept on site of at least 5 years following the date of issue. | Hazardous Waste Management 318-5, Section 4 para 1 |
| Objective 6: To assess if required quality analysis of wastewater treatment is conducted and that records are properly maintained. | |
| <i>6.1 The institution conducts the analysis and treatment of the wastewater</i> | |
| a) Review procedures in place to ensure that facilities/equipment are maintained to screen sewage effluent before it enters trunk lines leading to the municipal sewage lines or the CSC sewage treatment plant. | 318-6, Section 3 para 8 |
| <i>6.2 Institution maintains the require records of their wastewater treatment operation</i> | |
| a) Data from quality analysis of effluents originating from the wastewater treatment system must be kept up to date at all times and recorded in the appropriate file of the institution's Environmental Management System (EMS). | 318-6, Section 2 para 2 |
| b) Confirm that the wastewater manager/operator provides periodic reports to the Environmental Management Committee on the efficiency of the institutional wastewater treatment system. | 318-6, Section 4 para 4 |
| <i>6.3 Required inspections carried out of the wastewater treatment facility</i> | |
| a) Review documentation to ensure that visual inspections of the wastewater treatment facility are conducted at least once per week according to conditions of accessibility to the system | 318-6, Section 3 para 11 |
| Objective 7: To assess the institutional procedures for the reduction and management of solid waste. | |
| <i>7.1 The Institution has developed and implemented an action plan for solid waste reduction.</i> | |
| a) Verify that an action plan for the reduction of solid waste has been developed by the institution and that plan has been implemented and maintained. | 318-7, Section 2 para 4 |

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| <i>7.2 Institutional procedures for the disposal for solid waste are in compliance with policies</i> | |
| a) Ensure that the institution has service contract/methods established to dispose of all solid wastes (food, office, construction, and demolition waste) as burning, incinerating, landfilling, and use of kitchen garburetors on CSC's sites are prohibited. | 318-7, Section 2, para. 1, 2, 3 |
| <i>7.3 The institution has a system for measuring and recording garbage disposal</i> | |
| a) Review documentation to confirm that a system is in place for measuring and recording garbage disposal and that entries are entered monthly. | 318-7, Section 3, para 3 |
| b) Review above documentation to ensure that reports reflect monthly quantities of solid waste sent to landfills or incinerators, items recovered for recycling and composted residues are recorded. | 318-7, Section 4 para 1 |
| <i>7.4 The institution has a reliable auditable process for monitoring results and environmental performance of measuring solid waste</i> | |
| a) Ensure that all above documents are kept on site for at least five years (reports reflect monthly quantities of solid waste sent to landfills or incinerators, items recovered for recycling and composted residues) | 318-7, Section 4 para 2 |
| Objective 8: The institution effectively and responsibly manages water consumption. | |
| <i>8.1 The institution has developed and implemented procedures for the management of water consumption and conservation.</i> | |
| a) Review documentation to ensure that the Chief Plant Maintenance has identified the water systems and subsystems that use the largest amount of potable water for utility purposes | 318-9, Section 3, para. 1 |
| <i>8.2 The institution has a system for measuring and recording water consumption</i> | |
| a) Confirm that the CPM has put in place a system for measuring (in terms of litres/occupant/day), recording and managing potable water use from the main supply system by: Once a month, recording water use from water bills or the main water meter. • Every month, analyzing water consumption data "Water Consumption Measurement Protocol" and compare it to the total water use for current year with the comparable period of the previous year • Setting targets for or forecasting water use at each measurement point • Comparing actual water use with targeted or forecasted use at each measurement point, investigating significant over-consumption (possible leaks, taps left on, etc) and making repairs or promoting changes in water use practices | 318-9, Section 3, para. 3. |
| b) Confirm that all documents required in the Environmental Guidelines (audits, measurement data, records) are kept on site for at least five years following the date of issue | 318-9, Section 4 para. 2 |

APPENDIX C

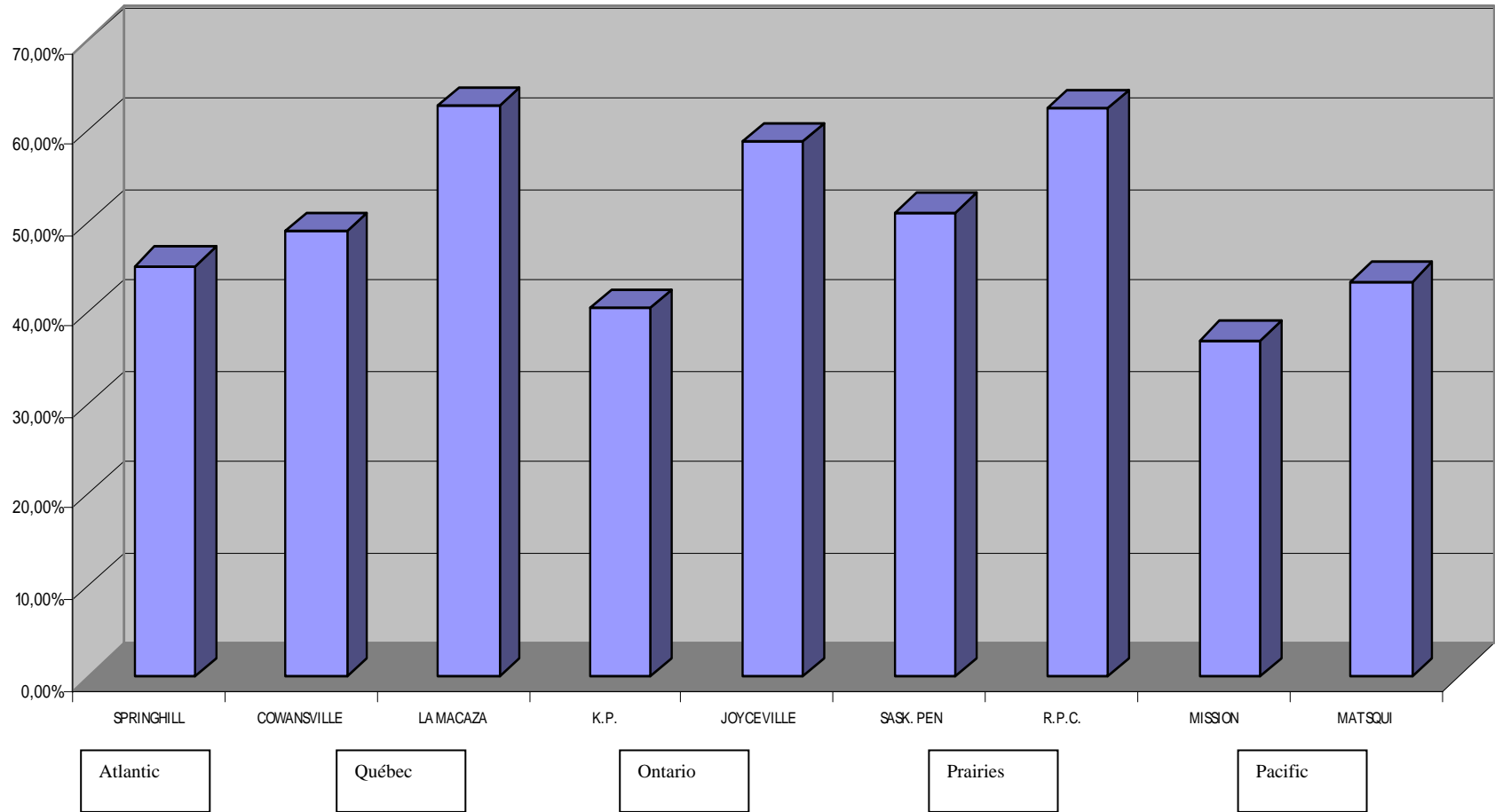
Compliance rate per objectives



Note - Objective 6 was not applicable for the institutions visited in the Pacific, Prairies and Kinston Penitentiary in Ontario since there is no waste water treatment system

APPENDIX D

Compliance results for the entire audit per sites visited



APPENDIX E

Summary of good practices

- The audit team found a good practice with respect to EMS documentation. The RPC (Prairies) has set up an automated process whereby all message/minutes/documents sent on any of their distribution lists are automatically cc'd to the CR. Those documents are then printed and filed by CR staff.
- A good practice was noted at RPC (Prairies) where they recycle worn out offender clothing into maintenance materials for painting and cleaning.



Inmate recycling offender clothing into maintenance materials for painting and cleaning.

- A good practice was noted at the RPC Prairies where motion sensor taps have been installed in the staff washrooms. Motion sensor water controls have also been installed on the sink and urinals in the staff washrooms.



APPENDIX F

Management Action Plan

| Recommendations | Action Plans |
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| <p>Recommendation #1</p> <p>That RDCs ensure that all sites have implemented an EMS filing system that respects the requirements listed in GL 318-1 paragraphs 1 and 3.</p> <p>Action: RDCs</p> | <p>ATLANTIC- QUEBEC – ONTARIO: All three (3) regions have reported that EMS filing systems respecting the requirements listed in GL 318-1 paragraphs 1 and 3 have now been established. Action completed</p> <p>PRAIRIES: The Regional Environmental Officer visited each facility between May 5th and June 16th, 2005 to determine shortfalls, non-compliance issues and to assist the sites in meeting the Environmental Policy. Non-compliance issues were identified at each site, the issues were given high priority to resolve and all outstanding issues have been addressed. Action completed</p> <p>PACIFIC: The Regional Environmental Service Officer will conduct reviews of filing systems to ensure compliance. This will be conducted during upcoming comprehensive reviews of each site's EMS. Target date 2006-06-30.</p> |
| <p>Recommendation #2</p> <p>That RDCs ensure that all facilities have an operational Environmental Emergency Plan.</p> <p>Action: RDCs</p> | <p>ATLANTIC - QUEBEC - ONTARIO – PACIFIC: All four (4) regions are working on action plans to address this recommendation. Target date 2006-06-30.</p> <p>PRAIRIES: As per the response to Recommendation #1, corrective actions have been taken and all sites now have operational Environmental Emergency Plans. Action completed.</p> |
| <p>Recommendation #3</p> <p>That RDCs ensure that the inventory of halocarbons is established at all sites in their region to reflect current numbers and that a procedure be put in place to</p> | <p>ATLANTIC: Results of a recent regional audit were sent to the sites with recommended actions on areas of non compliance and areas requiring improvements. Actions resulting from that audit have been conducted by Springhill, Nova and Atlantic. Westmorland and Dorchester will be completing their outstanding items by the end of May 2006.</p> |

| Recommendations | Action Plans |
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| <p>ensure that it is kept up to date.</p> <p>Action: RDCs</p> | <p>QUEBEC : Response provided by Quebec region indicate that various actions were taken to address the inventory of halocarbons. Action completed.</p> <p>ONTARIO: A full Ontario Region inventory undertaken through Tech Services in 1999; updating of changes by sites has been intermittent and should be completed by 2006-07-31.</p> <p>PRAIRIES: As per the response to Recommendation #1, action plan completed.</p> <p>PACIFIC: We conducted a comprehensive regional on-site audit of halocarbon management at each site this past fiscal year. The sites will be advised of the deficiencies identified in the audit for follow-up action. Target date 2006-10-31.</p> |
| <p>Recommendation #4</p> <p>That the RDCs, in consultation with the ACCS, ensure that all sites implement a system for measuring solid waste produced, by category, in order to gather, record, and save reliable, auditable data.</p> <p>Action: RDCs and ACCS</p> | <p>NHQ: Environmental programs completed a comprehensive survey of solid waste practices in institutions (action completed in August 2005 with a 100% participation rate). The data collected was analyzed and guidance was provided to the regions in a memo of 31 January 2006. Further information was also published in an article in the April 2006 edition of Let's Talk. Action completed.</p> <p>ATLANTIC: There is one case in which one institution is responsible for the combined waste collection for two sites. Discussion has taken place with NHQ to determine options for these sites to allow them to record data. A short-term action plan for our combined waste collection sites to estimate the amount of solid waste coming from both institutions has been discussed and will be put together by the end of December. Proper solid waste management is also being discussed at the Institutional EMS Committee and Sub-Committee meetings. Target date 2006-12-31.</p> <p>QUEBEC – ONTARIO - PRAIRIES: Responses provided by these three (3) regions indicate that actions have been taken to address recommendation. Action completed</p> |

| Recommendations | Action Plans |
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| | <p>PACIFIC: Previously, the contracted solid waste hauler for this region provided weights of waste going to landfill; however, the current contract does not appear to include this provision. Regional Supply Depot has been advised to rectify this oversight when the contract is reissued. In addition, RHQ plans to conduct a regional review of solid waste management requirements for all sites this FY, which will include provision of the ability to measure the various waste categories Target date 2006-10-30</p> |
| <p>Recommendation #5</p> <p>Action be taken to ensure that all sites are equipped with water meters for main institutional sectors/areas which consume large amount of potable water, to set targets, forecast use, and monitor consumption.</p> <p>Action: RDCs</p> | <p>ATLANTIC: Institutions will be requested to evaluate their metering requirements (based on large consumers) to determine a cost effective approach to better manage water consumption and to ensure proper monitoring. Since this recommendation implies a lot of variables, the timeframe on the evaluation of the metering requirements had been established for October 2006. The issue is presently being discussed at the EMC Committee and Sub-Committee meetings. The region will identify, in coordination with the various institutions, the best option to conduct this evaluation. Target date October 2006</p> <p>QUEBEC: During the visits planned for the 2006-2007 fiscal year, Regional TS intends to validate the complete inventory of existing, functional water meters at all institutions in the region. TS has also provided funds in the current fiscal year to several institutions so they can replace outdated air-conditioning units that otherwise discharge potable water in an open circuit in sewage systems. Much equipment will be replaced during the 2005-2006 fiscal year, and monitoring of the work will be done in order to replace the equipment with new closed-circuit equipment. A follow-up of the work will be done during the 2006-07 fiscal year. Ongoing</p> <p>ONTARIO:</p> <ol style="list-style-type: none"> 1. All sites now have sub-metering equipment. Action completed. 2. Develop mechanism, in consultation with NHQ, to record forecasts/actuals of existing submetered systems for assessment/target setting. Target date 2006-07-31. |

| Recommendations | Action Plans |
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| | <p>3. Implement data collection and assessment of submeter systems. Target date 2006-09-29.</p> <p>PRAIRIES: As per the response to Recommendation #1, action plan completed.</p> <p>PACIFIC: RHQ retained a consultant to conduct a regional review of the drinking water distribution systems last fiscal year. As part of the review, the requirements for flow monitoring were identified for those sites that are inadequately metered. We have requested funds from NHQ to install new main meters at four institutions and replace two existing meters this fiscal year. Target date 2007-03-31.</p> |
| <p>Recommendation #6</p> <p>That ACCS and RDCs ensure that required processes are in place to monitor the level of compliance with respect to all the EMS Guidelines so that any issues can be reported and addressed on a timely basis.</p> <p>Action: ACCS and RDCs</p> | <p>NHQ: The Environmental programs unit at HNQ monitors very closely those aspects of the operations that are most critical to the performance of the program and the reputation of CSC. The current MCF program covers a wide spectrum of the issues and will continue to be used. Ongoing</p> <p>ATLANTIC – QUEBEC – PRAIRIES: Responses from RDCs of these three (3) regions provided action plans detailing processes implemented to monitor level of compliance to EMS guidelines. Action completed.</p> <p>ONTARIO: EMS Auditing training for Regional Environmental Officer (REO) approved through Regional Training Plan; REO to develop a self-audit tool for sites and assist each site with implementation (to include items to be rolled up to RHQ). Sites to compile performance data through Environmental Committees, Environmental & Safety Officers, etc.. Target date 2006-05-31.</p> <p>PACIFIC: Staffing three environmental officers who would each be responsible for three sites and would report directly to the Regional Environmental Services Officer would ensure compliance to the EMS guidelines. However, we have not been successful in staffing additional environmental resources despite the continuing need for resources to develop and support local and regional initiatives.</p> |

| Recommendations | Action Plans |
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| <p>Recommendation #7</p> <p>That the ACCS reviews the EMS Management Framework to ensure that sufficient financial, material and human resources are in place to achieve compliance to existing policies.</p> <p>Action: ACCS</p> | <p>During the Excom meeting on January 17-19 2006, as a result of significant budgetary pressures, a decision was taken to reduce the current funding level provided to the regions for the coming fiscal year. Therefore, it will not be possible to eliminate the gap between expectations and resources in the near future. The proposed actions to respond to this recommendation will therefore focus on prioritizing CSC's environmental activities to ensure compliance with obligatory requirements and seeking additional external funding for the environmental program.</p> <p>Action #1: <u>Prioritize CSC's environmental activities.</u> Identify, in order of priority, a list of environmental activities that CSC can use as a basis for determining how to maximize the use of the limited resources that are available. Action completed.</p> <p>Action #2: <u>Seek additional external funding for the environmental program.</u> Submissions seeking additional resources for the environmental program were prepared earlier in the fiscal year requesting an additional \$3M in Capital and \$2.5M in O&M funding on an annual basis. Submissions will continue to be prepared on an ongoing basis as opportunities arise. Ongoing</p> |
| <p>Recommendation #8</p> <p>That the ACPA and ACCS examine the results of the Management Control Framework (MCF) exercises for EMS (January, May and December) in order to address any accountability issues contained therein and to take any action necessary to ensure the accurate and consistent reporting of results.</p> <p>Action: ACPA and ACCS</p> | <p>Direction was given to RDCs to communicate with the managers in their region to reinforce their responsibility and accountability in ensuring that the information they are signing off as part of the attestation process reflects the operational reality of their responsibility centre. In addition, regions are to be more diligent in the overall monitoring of the results being reported to ensure that they do not conflict with other information or concerns they may have on the subject being reviewed. Action completed.</p> |