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2001-715

Final Report

Evaluation Framework Report

Environment Safety and Health Training

2003-03-25



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Executive Summary

Authority for the Project

This evaluation framework was approved by the Audit and Review Committee (ARC) as part of the 2001-2002 Plan of the Audit and Ethics Sector.

Objective

To develop an evaluation framework that will form the basis for an Evaluation of the Environment, Safety, and Health (ESH) training effectiveness for Public Works and Government Services Canada (PWGSC) managers and employees as per the Occupational Health and Safety (OSH) regulations outlined in the Canada Labour Code (CLC), Part II.

Scope

The evaluation framework was conducted prior to the new organizational structure for PWGSC of November 12, 2002, in the former following areas: Corporate, Environment, Safety and Health Directorate (CESH), Government Operational Service (GOS) and the Branches most affected by the CLC, Part II OSH training legislation, principally Real Property Services (RPS), and Government Telecommunications and Informatics Services (GTIS). Also included was the Human Resource Branch (HRB), a key delivery agent for training.

The evaluation team reviewed the existing Environment Safety and Health Training mandate, objectives, governance structure, accountabilities, corporate and job-specific training, the delivery of training, performance measures and results information.

Background

The purpose of the CLC, Part II is to prevent work place accidents and injuries. It sets out the key roles and responsibilities of employers and employees for safety and health matters.

Bill C-12 (Sept. 30, 2000), an Act to amend the CLC Part II, realigned responsibilities by placing greater onus on employers and employees to collectively ensure a healthy and safe working environment.

Environment Safety and Health (ESH) Training is one component of the Environment Safety and Health Program in PWGSC. The purpose of PWGSC ESH Training is to support the effective implementation of CLC, Part II, by training employees in safety and health matters relative to their occupational needs. PWGSC employees are responsible for complying with ESH rules and regulations by working in a manner that promotes a healthy and safe working environment

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As a result of the Act amendment, the Deputy Minister requested that an Evaluation Framework and a subsequent evaluation be undertaken.

Approach and Methodology

The methodology used to prepare this evaluation framework is based upon Treasury Board Secretariat's Results-based Management and Accountability Framework (RMAF). The approach used consisted of a document review, interviews with stakeholders at PWGSC Headquarters and telephone interviews with the Regional Managers, Safety, Security and Emergency Preparedness, Western and Atlantic Regions. The evaluation framework was validated with the Director, CESH, to ensure common understanding of program objectives; the logic model and performance indicators. A draft of this Evaluation Framework report was accepted by the Director, Corporate Environment Safety and Health, in March, 2002.

The project was conducted by the Audit and Ethics Sector, PWGSC, supported by Consulting and Audit Canada (CAC) resources.

Evaluation Framework

The objectives of the Evaluation Framework for ESH training are to:

- develop a component profile of the program;
- identify the key issues to be examined in a future evaluation; and
- determine data collection needs to enable/enhance a future evaluation of key issues.

The Framework consists of the following components:

- a program profile ;
- a logic model;
- an evaluation strategy; and
- data collection needs and analysis.

This Evaluation Framework will facilitate future formative and summative evaluations of ESH Training, as well as ongoing performance measurement of the program.

Recommended Evaluation Strategy

It is recommended that management evaluate the main success and effectiveness issues of the ESH Training program. An evaluation of these issues will determine if ESH Training meets its objectives appropriately and effectively, is cost-effective and is without unwanted outcomes. The appropriateness of its governance structure will also be assessed.

This evaluation framework report comprehensively outlines a series of sixteen evaluation questions that when answered will form the basis for an evaluation of the success and

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effectiveness of ESH Training. Suggestions are provided in the report for each of the questions proposed: performance indicators, data collection methodologies, sources for the data and timing

It is recommended that management develop an action plan to implement this evaluation strategy to ensure accurate and reliable performance information is available to facilitate ongoing performance measurement and future evaluation of ESH Training.

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1 Authority for the Project

This evaluation framework was approved by the Audit and Review Committee (ARC) as part of the 2001-2002 Audit and Ethics plan.

Objective

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Scope

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The evaluation team reviewed the existing Environment Safety and Health Training mandate, objectives, governance structure, accountabilities, corporate and job-specific training, the delivery of training, performance measures and results information.

2 Evaluation Framework Objectives

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- develop a component profile of the program;
- identify the key issues to be examined in a future evaluation; and
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3 Approach and Methodology

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4 Component Profile

The program profile presents the background of the training component of PWGSC's ESH Program. It sets out the background, mandate, objectives, a description of training, governance and structure. It includes a Logic Model, which outlines ESH training activities, their related outputs, direct and intermediate outcomes, and impacts, as they link back to the program objective. Once approved by the Director, ESH, the Profile forms the basis for further consultations with management and with clients/stakeholders to derive evaluation issues and data collection requirements.

4.1 Background

The purpose of the CLC, Part II is to prevent work place accidents and injuries. It sets out the key roles and responsibilities of employers and employees for safety and health matters.

Bill C-12 (Sept. 30, 2000), an Act to amend the CLC Part II, realigned responsibilities by placing greater onus on employers and employees to collectively ensure a healthy and safe working environment. As a result of the Act amendment, the Deputy Minister requested that an Evaluation Framework and a subsequent evaluation be undertaken.

Environment Safety and Health (ESH) Training is one component of the Environment Safety and Health Program in PWGSC. The purpose of PWGSC ESH Training is to support the effective implementation of CLC, Part II, by training employees in safety and health matters relative to their occupational needs. PWGSC employees are responsible for complying with ESH rules and regulations by working in a manner that promotes a healthy and safe working environment.

4.2 Mandate

The legal basis for occupational health and safety training stems from the Regulatory Framework of Human Resources Development Canada (HRDC) as set out in the CLC, Part II and its amendments.

The CLC, Part II, identifies specific obligations for employers to train employees.

HRDC is the regulator for Occupational Safety and Health (OSH) matters which includes responsibility to monitor and enforce CLC Part II. Both the CLC Part II and the Treasury Board

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OSH Policy require that employers (Other Government Departments (OGDs)) provide information, instruction and the necessary training to ensure safety and health in the workplace. Departments are required to report annually to TBS on OSH training in the Multi-Year Human Resource Plan.

4.3 Objectives of the Training Component of the ESH Program

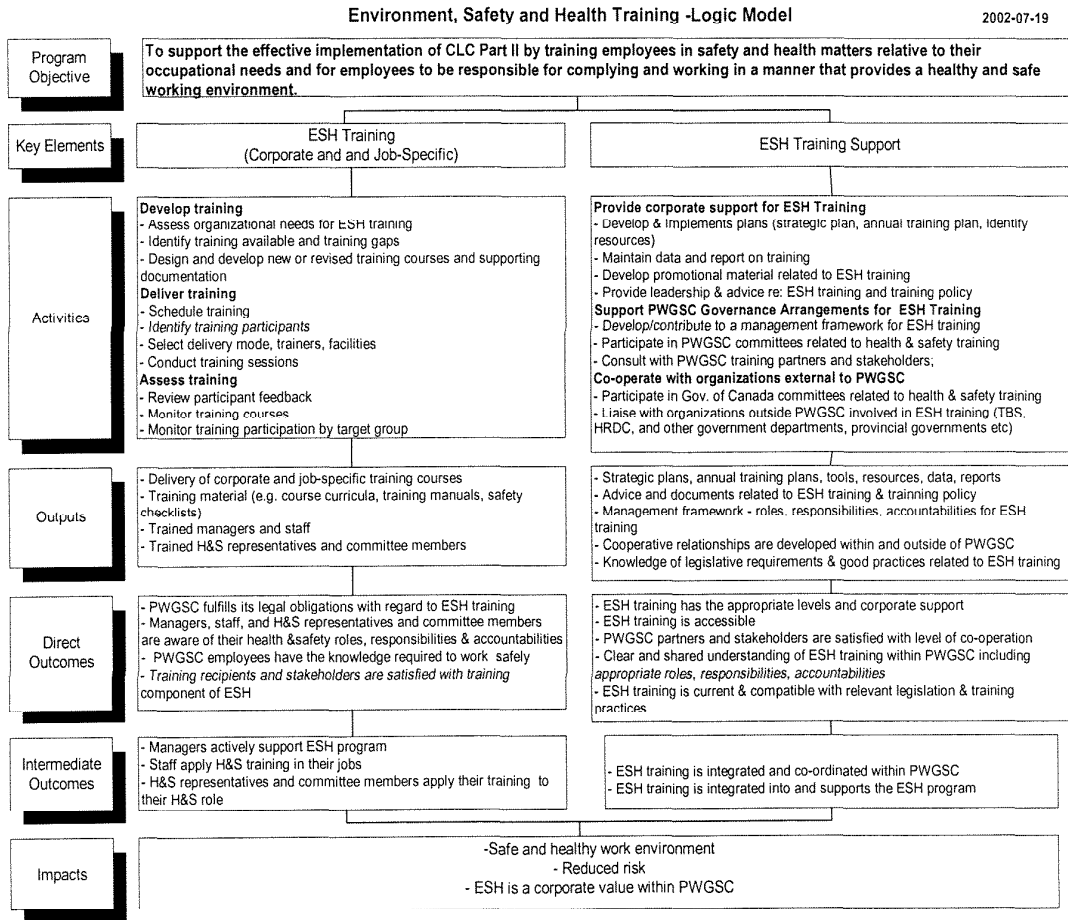
There are no formally articulated objectives for the training component of ESH as a whole. However, from the objectives of individual courses, and our interviews, the objectives of the training component of the ESH program can be described as follows:

- support the effective implementation of CLC Part II by training employees in safety and health matters relative to their occupational needs and for employees to be responsible for complying and working in a manner that provides a healthy and safe working environment;
- meet employee occupational safety needs; and
- provide employees with the knowledge to work in a manner that safeguards both themselves and their co-workers.

4.4 ESH Training Logic Model

The following is the Logic Model that was developed for PWGSC Environment Safety and Health Training. It describes the activities of Environment Health and Safety Training, their related outputs, the direct and intermediate outcomes and probable impacts.

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4.4.1 Description of Training

The National Health and Safety Committee establishes a Departmental training plan that provides corporate and job-specific training in the Department. **Corporate training** is oriented toward awareness of roles, responsibilities and accountabilities for all employees. **Job-specific training** is operational in its orientation and directed toward particular occupational requirements primarily related to trades and technical staff requirements.

| | |
|--|--|
| <p>Corporate training:</p> <p>PWGSC offers approximately 12 corporate safety and health courses. Corporate training tends to cut across the Department. ESH awareness training is mandatory for all employees and is given at 3 levels, Executives, Managers and employees. Other training courses are directed at personnel involved in health and safety issues including safety and health committees, employee health and safety representatives, and emergency floor wardens.</p> | <p>Health and Safety -Corporate Training</p> <ul style="list-style-type: none"> --Emergency Floor Warden --Emergency Procedures --ESH Awareness - Executives --ESH Awareness - Employees --ESH Awareness - Managers and Supervisors --Hazardous Occurrences -- Investigator --Hazardous Occurrences -- Investigator Self-Learning --Preventing Back Injury --Standard First Aid and CPR --Refresher First Aid and CPR --Workplace Committee member and Ergonomics Training -- Your Health and Your Computer |
| <p>Job-specific training:</p> <p>The job-specific training is targeted to the requirements of the position or the site where work takes place. The one day construction/maintenance safety awareness course and modules one and two of the hazardous awareness training have the broadest target audience and are directed to employees visiting a construction site, or who manage contractors, or employees on construction sites. Other courses such as confined space entry, electrical safety awareness, safe operation of forklifts, and workplace hazardous materials information systems training are specific to job requirements.</p> | <p>Health and Safety -Job Specific Training</p> <ul style="list-style-type: none"> --Asbestos-Building Managers --Asbestos Control in Building Asbestos Management --Basics of Confined Space Entry --Confined spaces -Refresher --Construction-Maintenance Safety Awareness --Electrical Safety Awareness -Level 1, 2,3, Recertification --Fire Extinguisher --Indoor Air Quality --Respiratory Protection --Safe Operation of Forklifts --Transportation of Dangerous Goods - Recertification --Workplace Hazardous Materials Information System (WHMIS) Site Specific Training |

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4.5 Training Delivery

Nationally, corporate training is delivered through the Director Corporate Environment, Safety and Health (CESH). Job-specific training may be delivered by a number of organizations within PWGSC. Some organizations rely on CESH for the delivery of job-specific training, while others, including the Director General, Architectural and Engineering Services and the Director General, Assets and Facilities Management Services, deliver their own job-specific training. In the regions, both corporate and job-specific training are delivered through regional Environment, Safety and Health divisions. The Human Resources Branch plays a support role in developing training from a pedagogical perspective, including scheduling and logistics support. Other co-deliverers include the various training units within each Branch and regional Safety and Health units.

4.6 Target Population

PWGSC has approximately 12,500 employees. As of August 2002, out of 5,000 Headquarters employees, 2,200 of them have received the mandatory ESH awareness training. It is difficult to report on the number of people trained, as the tabulation is dependent on whether the names are input into the Human Resources Branch Integrated Training system (ITS). The Director CESH anticipates that all employees will have received the ESH Awareness Training in the next two to three years.

4.7 Governance and Structure

4.7.1 Overview of Accountabilities

HRDC is the regulator for Occupational Safety and Health (OSH) matters which includes responsibility to monitor and enforce CLC Part II.

Treasury Board OSH Policy requires that employers provide information, instruction and the necessary training to ensure safety and health in the workplace. Departments are required to report annually to TBS on OSH training in the Multi-Year Human Resource Plan.

The DM, PWGSC, has the overall accountability for the effectiveness and administration of the health and safety program. The DM has delegated responsibility for the provision, evaluation and reporting of ESH training, to the ADM, GOS.

The ADMs, CEOs, Regional Directors General, Directors, HQ and regional managers are accountable for ensuring employees are provided with ESH training and education.

The DG, Safety, Health, Security and Emergency Preparedness provides corporate leadership across PWGSC to ensure the security of human resources, physical assets, contracts and information technology, and is accountable to the DM, Associate DM and ADM, Corporate Policy and Infrastructure Services.

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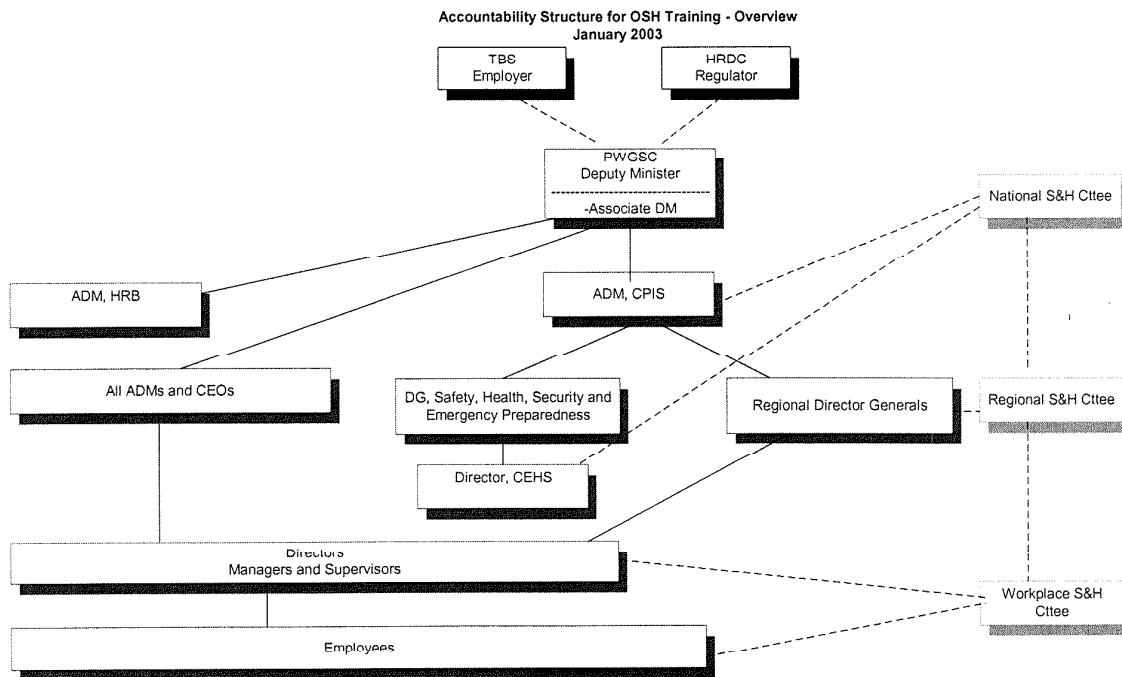
The National Safety and Health Committee participates in the development, implementation, and review education programs for employees.

Regional Safety and Health Committees including the National Capital Area Committee establish training plans for their respective regions.

The local Workplace Health and Safety Committees and Representatives have active roles in identifying training requirements, monitoring training, and establishing and promoting health and safety education

The operational responsibility rests with the Director, Corporate Environment, Health and Safety (CESH), who reports to the Director General, Safety, Health, Security and Emergency Preparedness. CESH is responsible for the provision, identification, development & revision of ESH training as well as the analysis of training data. It ensures the effectiveness of branch/regional health and safety training programs and provides advice to managers on ESH training.

In the regions, ESH managers report to Regional Directors General (RDGs). They co-ordinate the identification of training needs, the delivery of job-specific/corporate ESH training, maintain training records and report on regional health and safety training. The following Chart shows the reporting relationships.



Legend: Full lines demonstrate the reporting relationship
Dotted lines demonstrate the consultative role of the Union Mgt Cttees

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4.7.2 CESH Resources

At the time this evaluation framework was developed CESH had a complement of 19 full time equivalents (FTEs) to deliver the ESH program. For the fiscal year 2001-2002 CESH had a budget of \$2,353,900.

In August 2001, management established priorities for training and approximately 8 FTEs from the RPS (Operational Support Services) were transferred to CESH.

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5 Evaluation Strategy

The following is a suggested comprehensive model to do an evaluation. Management will need to decide what it can afford to do, as a cost-benefit analysis has not been done. The proposed evaluation strategy is presented in the form of a Table which summarizes 16 possible Evaluation Questions, and suggested Performance Indicators, Data/Methodology, Source and Timing for Data Collection/Analysis Reporting.

These questions are focussed on **Success** and **Effectiveness**, as identified in the Treasury Board Secretariat Evaluation Policy, dated April 1, 2001:

- **Success** (is the policy, program or initiative effective in meeting its objectives, within budget and without unwanted outcomes?)
- **Effectiveness** (are the most appropriate and efficient means being used to achieve objectives, relative to alternative design and delivery approaches?)

The strategy also discusses data and methodological issues that will impact on the execution of an evaluation and briefly presents the evaluation options and recommendations.

Implementation of ongoing comprehensive monitoring will be required to provide data for use both in managing the program and as input to evaluation. This will require management agreeing to implement new data gathering mechanisms and refining and modifying existing methods. These requirements are presented in more detail in section 5.1 Methodology and Timing

Summary of Evaluation Strategy - Table 1

| Evaluation Question | Performance Indicator | Data/Methodology | Source | Timing for Data Collection/Analysis / Reporting |
|---|---|--|---|--|
| Success: Objectives Achievement and Impacts | | | | |
| Issue 1: Training Appropriateness (Objectives Achievement) | | | | |
| <p>1. Is the ESH training program appropriate in terms of accessibility, currency, relevancy, the use of qualified instructors, delivery mechanisms and pedagogical tools? (Reaction)</p> | <ul style="list-style-type: none"> • Trends in course "participation" & "no show/drop out" rate • High rating by participants of instructors, • High rating of course content, currency, and relevancy by participants • High rating of instructors, course content, currency, and relevancy, delivery mechanisms and pedagogical tools by ESH monitors • Stakeholders agree training is appropriate | <ul style="list-style-type: none"> • Review admin data related to participation • Document review of course evaluations • Analysis of accident/injury occurrence to assess training needs • Observation • Document review: • Expert assessment: of curriculum, tools, delivery • Stakeholder consultation | <ul style="list-style-type: none"> • Instructor's reports, course participation stats • Feedback from course evaluation, records of follow-up re problems • ESH course monitoring • Reports written by ESH course monitors • Independent ESH training expert from another department, HRDC, province or private sector • Interviews or focus groups - deliverers, H&S training committee mbrs, mgrs, participants, unions | <ul style="list-style-type: none"> • Ongoing collection & annual report - CESH Formative¹ (Form) & Summative² (Sum) evaluation. • Ongoing collection & annual report - CESH Form & sum eval. • Periodic monitor-CESH Summative eval. • Form & sum eval. • Form & sum eval |

¹ Formative Evaluation is usually conducted early (about 2 years)

² Summative Evaluation is an evaluation of a mature program (about 5 years)

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Summary of Evaluation Strategy - Table 1

| Evaluation Question | Performance Indicator | Data/Methodology | Source | Timing for Data Collection/Analysis / Reporting |
|---|---|---|--|--|
| 2. Are ESH clients & stakeholders satisfied with the level & quality of the training program? (Reaction) | <ul style="list-style-type: none"> Majority of clients & stakeholder indicate satisfaction with training, including advice & leadership | <ul style="list-style-type: none"> Stakeholder consultation | <ul style="list-style-type: none"> Interviews or focus groups with ESH training committee members, managers, trainees | <ul style="list-style-type: none"> Form & sum eval. |
| 3. Does ESH training have the appropriate levels and kinds of support required to deliver operational and corporate ESH training? | <ul style="list-style-type: none"> Extent plans have been implemented Budgets are sufficient to support training plans Declining gap between needs identified and courses offered Gaps in support are minor Availability of current, reliable, comprehensive data & systems Stakeholders perceive support is adequate, appropriate & gaps are few | <ul style="list-style-type: none"> Document review &/or expert assessment comparative analysis Study to assess data & systems Review of admin data Stakeholder consultation | <ul style="list-style-type: none"> Budgets, needs analysis, training plans, strategic reports Independent ESH training expert Independent review ITS, SIMS, reports Interviews with key reps of CESH, H&S training committee & operational managers | <ul style="list-style-type: none"> Form & sum eval Form & sum eval One time effort Summative eval Form & sum eval |

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Summary of Evaluation Strategy - Table 1

| Evaluation Question | Performance Indicator | Data/Methodology | Source | Timing for Data Collection/Analysis / Reporting |
|--|---|--|--|---|
| 4. Has PWGSC's ESH training met the legislated requirements under CLC Part II? | <ul style="list-style-type: none"> High correlation between ESH training policy and prog. elements and regulatory framework Increasing % of staff have the current operational & corporate ESH training required Decreasing #, or severity of, HRDC enforcement actions Decreasing # cases where lack of training is a factor in accidents/incident's | <ul style="list-style-type: none"> Document review: comparative analysis Expert assessment Review of admin data: comparative analysis of trends # staff requiring training vs # trained (by target group for corp. & operational training) Document review: comparative analysis | <ul style="list-style-type: none"> Annual training plans, training delivery reports, course syllabus, HRDC regulatory requirements, audits, evaluations Indep. ESH expert ITS training data, stand alone training records (e.g. regional H&S units) individual training plans, competency profiles, operational requirements HRDC directives & enforcement action reports, internal PWGSC investigations | <ul style="list-style-type: none"> Form & sum eval Form & sum eval Ongoing collection - RC managers & annua report - CESH Summative eval Ongoing collection & annual report - CESH Summative eval |

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Summary of Evaluation Strategy - Table 1

| Evaluation Question | Performance Indicator | Data/Methodology | Source | Timing for Data Collection/Analysis / Reporting |
|---|---|---|---|---|
| 5. Has PWGSC's ESH training met organizational ESH needs? | <ul style="list-style-type: none"> • Close correlation between corporate and job-specific training needs identified and courses offered • Majority of ESH stakeholders agree training meets needs of the organization, including specific operational needs • Increasing % of employees meet their ESH corporate & operational training requirements | <ul style="list-style-type: none"> • Expert assessment • Document review: comparative analysis • Consultations with stakeholders • Review admin data comparative analysis by target group | <ul style="list-style-type: none"> • Independent ESH expert • ESH corporate & operational training plans, course calendar, minutes of H&S training committee meetings, reports on training needs & training results • Interviews or focus groups with H&S committee members, H&S representatives, managers, representatives of trade and occupational groups • Integrated Training System (ITS) training data, individual training plans, competency profiles, operational requirements | <ul style="list-style-type: none"> • Form & sum eval • Form & sum eval • Form & sum eval • Ongoing collection - RC managers & annual report- CESH • Summative eval |
| 6. Has ESH training supported and contributed to the achievement of the overall goals of the ESH program? | <ul style="list-style-type: none"> • Majority of ESH stakeholders agree ESH training contributes to the overall ESH program goals | <ul style="list-style-type: none"> • Consultations with stakeholders | <ul style="list-style-type: none"> • Interviews with senior managers, H&S committee members, H&S reps, union | <ul style="list-style-type: none"> • Form and sum eval. |

Summary of Evaluation Strategy - Table 1

| Evaluation Question | Performance Indicator | Data/Methodology | Source | Timing for Data Collection/Analysis / Reporting |
|--|---|--|---|---|
| Issue 2 - Training effectiveness (Objectives Achievement) | | | | |
| <p>7. Do PWGSC employees have and re-ain the knowledge to work in a manner that safeguards themselves and their co-workers? (Learning)</p> | <ul style="list-style-type: none"> High level of individual learning reported on training courses (by job-specific course; by type of staff for ESH awareness - manager, employee, H&S representative, committee member) Increasing % of employees, managers, H&S committee members & reps have current corporate & operational ESH training required Increased &/or improved reporting of accidents and hazardous incidents High % of staff show ESH awareness & operational knowledgeable | <ul style="list-style-type: none"> Document review: analyze test results before and after Review admin data comparative analysis by target group Review admin data analyze changes in reporting (#, quality of reports) Observation Document review | <ul style="list-style-type: none"> Before and after tests Course evaluation should ask participants if they now have a better understanding of their roles and responsibilities under the Bill C-12, an Act to amend the CLC Part II | <ul style="list-style-type: none"> Ongoing collection - course deliverers, annual review & report by CESH & HR Summative eval Ongoing collection - RC managers, annual report - CESH & HR Summative eval Ongoing collection - CESH Summative eval Ongoing collection, annual report - CESH Summative eval |
| | | | <ul style="list-style-type: none"> ITS training data, stand alone training records (e.g. regional H&S units) individual training plans, competency profiles, operational requirements SIMS data base, incident reports ESH monitoring program Reports and statistics from monitoring program | |

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Summary of Evaluation Strategy - Table 1

| Evaluation Question | Performance Indicator | Data/Methodology | Source | Timing for Data Collection/Analysis / Reporting |
|---|---|--|--|--|
| 8. Do employees apply the ESH training in their daily work activities? (Transfer) | <ul style="list-style-type: none"> High % of staff apply appropriate safety and health measures (e.g. use of equipment, protective gear, following safety WHMIS, confined spaces procedures) | <ul style="list-style-type: none"> Observation through regular inspections Document Review | <ul style="list-style-type: none"> Observation by supervisor Document review ESH monitoring program Reports & statistics from monitoring program, e.g. observations before and after group training & observation of employees behaviour by ESH expert | <ul style="list-style-type: none"> Ongoing collection, annual report - CESH Summative eval |

Summary of Evaluation Strategy - Table 1

| Evaluation Question | Performance Indicator | Data/Methodology | Source | Timing for Data Collection/Analysis / Reporting |
|--|--|--|---|--|
| <p>9. Do managers and Health and Safety committee members within the Department actively support the ESH program? (Commitment)</p> | <ul style="list-style-type: none"> Increasing % of staff have current & required ESH training Increasing % of manager display support for ESH policy & procedures Increase in level of compliance with ESH rules and regulations in the workplace <p>Staff perceive managers & H&S committee members & representatives support ESH</p> <ul style="list-style-type: none"> Increased activity of H&S committee (e.g. participation in meetings & committees, progs. developed, relevance of issues brought forward & timeliness of resolution, staff concerns identified) | <ul style="list-style-type: none"> Review admin data: re course participation Observation (e.g. H&S signage clearly posted, accessible ESH procedures & docs, corrective action implementation) Document review (improvements in staff participation rates on ESH courses, timely & complete accident reports, impl & use of staff ESH profiles) Stakeholder consultation Safety and health workplace inspections Document review: analyze various reports | <ul style="list-style-type: none"> ITS data and course participation statistics ESH monitoring program Reports on accidents and incidents, ESH action plans, competency profiles, ESH staff profiles, training plans, staff course participation, no-show, dropout rates Focus groups with staff Independent compliance inspections Minutes of meetings, reports re programs implemented, courses developed, action plans developed & implemented | <ul style="list-style-type: none"> Ongoing collection, annual report - CESH Summative eval Ongoing collection, annual report - CESH Summative eval Form & sum eval Form & sum. eval. Summative eval |

Summary of Evaluation Strategy - Table 1

| Evaluation Question | Performance Indicator | Data/Methodology | Source | Timing for Data Collection/Analysis / Reporting |
|--|---|---|---|--|
| Issue 3: Governance (Objectives Achievement) | | | | |
| 10. Does the governance structure support the ESH training program objectives? | <ul style="list-style-type: none"> Objectives, roles, responsibilities & accountabilities for ESH training program are clearly documented Increased integration & co-ordination of ESH training Stakeholders perceive ESH training as integrated & co-ordinated, agree on objective, roles & resp. are clear | <ul style="list-style-type: none"> Document review: analyse policies, procedures, course development, review TORs roles, responsibilities etc for acceptance, compliance, consistency, duplication, contradictions Stakeholder consultation | <ul style="list-style-type: none"> Mgt framework, TORs for committees & mbrs, mgt directives, training directives, accountability documents, articulated ESH training objectives Interviews or focus group with committee members, union, sr managers & key managers in CESH & HR | <ul style="list-style-type: none"> Form & sum eval Form & sum eval |

Summary of Evaluation Strategy - Table 1

| Evaluation Question | Performance Indicator | Data/Methodology | Source | Timing for Data Collection/Analysis / Reporting |
|---|--|---|--|--|
| <p>11. Are partners involved as intended with regard to ESH training? (internal and external)</p> | <ul style="list-style-type: none"> Internal committees are used as intended Stakeholder perceive internal committees & organizations involved in ESH training (CESH, HRB, regions, etc) perform their roles & work in partnership Internal partners are satisfied with level of co-operation Nature & extent of co-operation with internal & external partner organizations (e.g. meetings, share best practices, training, co-monitoring) | <ul style="list-style-type: none"> Document review compare roles and responsibilities for training with committee actions Stakeholder consultation Stakeholder consultation Stakeholder consultation Stakeholder consultation Partnership map | <ul style="list-style-type: none"> Committee members Stakeholders Document review Interviews and or focus groups with unions, sr manager, Citee mbrs, key mgrs in CESH, HR, regions etc As above Interviews as above for internal & with external organizations - other federal dept, province, private sector Document internal & external partners, nature of relationships & changes over time | <ul style="list-style-type: none"> Form & sum eval Form & sum eval Form & sum eval Form & sum eval Form & sum eval Initial development and periodic update- CESH Summative eval |

Summary of Evaluation Strategy - Table 1

| Evaluation Question | Performance Indicator | Data/Methodology | Source | Timing for Data Collection/Analysis / Reporting |
|---|---|---|---|---|
| Issue 4 - ESH Training Impacts (Impacts) | | | | |
| 12. Has ESH training contributed to reduce organizational risk for safety and health within the work environment? | <ul style="list-style-type: none"> • Reduction in accident rate and accident severity • Decline in worker's compensation costs & related legal fees and compensation • Stakeholders perceive ESH training to have reduced risk | <ul style="list-style-type: none"> • Review of admin data assess longer-term trends for accidents • Review of admin data review financial info for trends related to worker's compensation, legal fees & compensation • Stakeholder consultation | <ul style="list-style-type: none"> • Accident data from SIMS database & other sources • Financial data base, legal files, worker's comp files • Interviews or focus groups with sr managers, union, operational mgrs | <ul style="list-style-type: none"> • Summative eval • Summative eval • Summative eval |
| 13. Has ESH training contributed to ESH being perceived as a corporate value within PWGSC? | <ul style="list-style-type: none"> • Increased awareness of ESH & application of ESH procedures • Perception by PWGSC employees that ESH is a corporate value • PWGSC is recognized by others as an organization that values ESH | <ul style="list-style-type: none"> • Observation • Stakeholder consultations • Stakeholder consultations | <ul style="list-style-type: none"> • ESH monitoring program • ESH monitoring prog • PWGSC pubs, annual reports, strategic plans, speeches & directives by sr mgt, ESH budgets, etc) • Interviews & focus groups with sr managers, managers, union, staff • Interview with external partners & stakeholders OGDs, TBS, HRDC | <ul style="list-style-type: none"> • Ongoing collection, annual report - CESH • Summative eval • Summative eval • Form & sum eval • Summative eval |

Summary of Evaluation Strategy - Table 1

| Evaluation Question | Performance Indicator | Data/Methodology | Source | Timing for Data Collection/Analysis / Reporting |
|---|---|--|---|---|
| 14. Have there been any unintended outcomes or impacts as a result of ESH training component? | <ul style="list-style-type: none"> Stakeholder/CESH examples of unintended impacts | <ul style="list-style-type: none"> Stakeholder consultations | <ul style="list-style-type: none"> Interviews or focus groups with PWGSC sr. mgrs, operational mgrs, union, staff, delivery agents, CESH & HR staff involved in H&S issues | <ul style="list-style-type: none"> Form & sum evaluations |
| Issue 5: Training Effectiveness | | | | |
| 15. Could ESH training be provided in a more cost-effective manner? | <ul style="list-style-type: none"> PWGSC ESH training costs are similar to ESH training costs in comparable organizations Stakeholders perceive delivery as effective (identify best practices & few areas for improvement) | <ul style="list-style-type: none"> Review admin data develop unit costs and review trends in the costs of delivering ESH training Document review compare ESH training offerings & costs with offerings & costs of other orgs. (public and private sector) Stakeholder consultation | <ul style="list-style-type: none"> PWGSC financial systems Training cost data from PWGSC, OGDs (e.g. DND, Coast Guard), & private sector Interviews or focus group with ESH training delivery staff & mgrs | <ul style="list-style-type: none"> Form & sum eval Form & sum evals Form & sum eval. |

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Summary of Evaluation Strategy - Table 1

| Evaluation Question | Performance Indicator | Data/Methodology | Source | Timing for Data Collection/Analysis / Reporting |
|--|---|---|--|---|
| 15. Has ESH training been managed effectively? | <ul style="list-style-type: none"> • Areas of high ESH risk are identified & addressed/mitigated • Steps have been taken to address data needs and monitoring requirements • Appropriate ESH training tools are used • ESH training is updated as required • Stakeholders perceive ESH training to be managed well | <ul style="list-style-type: none"> • Document review analyze risks, training plans, training requests & needs identified • Document review, assess progress in implementation of monitoring requirements • Document review, assess progress in implementing tools • Document review assess drivers, frequency, nature of course changes • Stakeholder consultation | <ul style="list-style-type: none"> • ESH training plans, requests, risk assessments • Strategic plan, annual plans, data bases, data elements, reports on implementation of recommendations from data assessment studies, framework, audits, etc • Reports of course & trainer eval, ongoing course monitoring, course & content changes, reports on currency & relevancy of training • Interviews or focus groups with internal partners & mbrs of H&S committees | <ul style="list-style-type: none"> • Form & sum evals • Summative eval • Summative eval • Form & sum eval • Summative eval |

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5.1 Methodology and Timing

This section describes data collection needs to enable/enhance a future evaluation. It suggests individual data collection methodologies, which are cross-walked against the evaluation questions. Suggestions have been made in a management letter regarding Data Elements and Evaluation Priorities.

An effective evaluation is dependent upon the availability of accurate and complete data. The preliminary interviews conducted during the development of this framework have raised some concerns relative to current data availability, accuracy and completeness. Without accurate and complete data, it will be more difficult to develop many of the quantitative indicators proposed in the framework and to conduct trend analysis.

The accuracy and completeness of recorded ESH training information in the HRB ITS needs improvement. Because accidents are not always being consistently reported, the Security Information Management System (SIMS) data may be incomplete. In accident reporting there is inconsistent and irregular identification of the absence of training as a key cause of the more serious accidents. Consequently, this relevant information is not being captured in existing reporting systems.

There is also a lack of data related to overall training. There is no regular monitoring of ESH training which would provide consistent data on the delivery of training courses (delivery methods, pedagogical tools, instructors, content), the amount of learning acquired, the retention of learning information, or the application of ESH knowledge and improvements in the workplace.

Currently there is limited baseline data available for ESH training to undertake comparative analyses and assess progress. Implementing the data collection recommended in the evaluation framework, where cost-effective, will be important to establish both baseline information and to ensure reliable, relevant, and complete data is available to manage the program and provide key evaluation information.

5.1.1 Methodology

The evaluation framework suggests six different methodologies:

- Document review;
- Review of administrative data;
- Consultations with stakeholders;
- Expert assessment;
- Observation; and
- Studies.

5.1.1.1 Document Review

Document review is a key methodology in the evaluation framework. It is recommended for use in addressing all but two of the evaluation questions and will require access to a wide variety of documentation. In some cases there will be a requirement to implement procedures so that documentation is compiled on an ongoing basis and assessed on a periodic basis. These data will provide input into the evaluations but their prime purpose is to manage the program. Although there is a participant evaluation form for each training activity, there is a need to ensure a systematic compilation of overall course results, problem identification and resolution. There is also a need to extend this analysis to the program level to ensure that systematic problems are identified and resolved. In addition, there is a need for a program to monitor, report, and improve ESH course delivery, instructor performance, course content, delivery mechanisms (e.g. computer-based learning, facilitated sessions, professional trainers, staff trainers) and pedagogical tools.

To provide ongoing management data and to ensure the required documentation is available for input to an evaluation, the following changes to ongoing data collection are suggested:

- Expand the participant course evaluation; and
- Implement a formal program to monitor ESH training.

5.1.1.2 Review of Administrative Data

Administrative data refers to numerical data stored by a variety of means including shared and stand-alone data bases, spreadsheets, and paper records. This methodology is suggested for use in addressing seven of the evaluation questions. The administrative data required comes from the ITS, SIMS, and financial data bases and files, regional records related to ESH training and course participation data, which may be found in a variety of formats and places. When reviewing trends in accident statistics, careful attention should be paid to analyzing the data to ensure that increases in reported accidents do not merely reflect an increase in accident reporting rather than an increase in actual accident occurrence.

Improvements to the current administrative data are required to improve data integrity for the evaluation and ongoing program management. Interviews indicate the ITS data base needs improvement in data input to ensure the data are accurate and comprehensive. Some regions maintain local data related to ESH training because of inaccuracies in the ITS data. Data on course participation are not readily accessible in a data base format and will be required to address a number of evaluation questions.

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In summary the following changes or improvements to administrative data are required to manage the training program and to provide data for the evaluation:

- A data base in which the quality and integrity of the data are ensured;
- A data base to track participation in ESH courses.

5.1.1.3 Consultations with Stakeholders

Stakeholder consultation, via interviews and focus groups, is an important methodology for both the formative and summative evaluations. Consultations will enrich and provide context to improve the interpretation of the available quantitative data, are necessary to assess stakeholder satisfaction and expectations; and, where quantitative data are in short supply, are the main data gathering mechanism. Interviews are recommended for gathering data from senior managers, the union, and representatives from organizations other than PWGSC. Focus groups are an effective means of gathering data from groups where interests and concerns are similar such as managers, operational staff, and H&S committee members.

5.1.1.4 Expert Assessment

Expert assessment is recommended as a methodology to assess four of the questions related to training appropriateness. Implementing this methodology would require using an independent ESH expert with a good knowledge of training from HRDC, another department, level of government, or the private sector. This methodology would be useful not only to assess the current situation but to provide information and feedback required to improve the program and to ensure the resources are available to deliver it.

5.1.1.5 Observation

Our interviews and research have indicated that the most effective way of assessing training effectiveness, that is, retention and behaviour is through observation. While some indication of learning can be obtained through document review (e.g. comparing differences in pre-and post-training tests) measuring retention of knowledge requires other methods. Retention levels and application of learning in the work place (behaviour) can be assessed through interaction between staff and an ESH expert as well as observation of work procedures and tasks. This methodology would require that the Department establish an ongoing ESH monitoring program. This program would require an ESH expert to make regular work place monitoring visits, produce reports, make recommendations for improvements, and follow-up on implementation. In instances where an entire work unit was scheduled for training, the program could include before and after site monitoring visits to assess changes in behaviour.

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A component of the ESH monitoring program could include an ESH expert exchange whereby ESH experts from other departments would participate in PWGSC's monitoring program and PWGSC experts would participate in their monitoring programs. This would provide an opportunity to increase learning and an exchange of good practices. The main purpose of the monitoring program would be to provide information to manage the training program. The evaluation would use the documentation produced by the program.

The following change is recommended to provide data to manage the program and provide input to the evaluation:

- Implement an on-site ESH monitoring program.

5.1.1.6 Studies

The final methodology recommended is a study to examine the extent to which the existing systems and data are problematic and to make recommendations to improve the quality and completeness of the data and the systems could be useful in illustrating the linkages between training and the expected impacts.

In summary the following recommendation is made with respect to studies:

- Implement a study to assess data integrity and systems capability.

The following Table 2 below is a Cross Walk of the evaluation questions and Proposed Data Collection Methodologies.

Table 2 – Cross Walk of Questions and Proposed Data Collection Methodologies

| Evaluation Question | Doc. Review | Admin Data | Stakeholder Consultation | Expert Assessment | Observation | Studies |
|---|-------------|------------|--------------------------|-------------------|-------------|---------|
| 1. Is the ESH training program appropriate in terms of accessibility, currency, relevancy, the use of qualified instructors, delivery mechanisms and pedagogical tools? | x | x | x | x | x | |
| 2. Are ESH clients and stakeholders satisfied with the quality & level of the ESH training program? | | | x | | | |
| 3. Does ESH training have the appropriate levels and kinds of support required to deliver operational and corporate ESH training? | x | x | x | x | | x |
| 4. Has PWGSC's ESH training met the legislated requirements under CLC Part II? | x | x | | x | | |
| 5. Has PWGSC's ESH training met organizational ESH needs?? | x | x | x | x | | |
| 6. Has ESH training supported and contributed to the achievement of overall goals of the ESH program? | | | x | | | |
| 7. Do PWGSC employees have and retain the knowledge to work in a manner that safeguards themselves and their co-workers? | x | x | | | x | |
| 8. Do employees apply the ESH training content in their daily work activities? (Transfer) | x | | | | x | |
| 9. Do managers and Health and Safety committee members within the Department actively support the ESH program? | x | x | x | | x | |
| 10. Does the governance structure support the ESH training program objectives ? | x | | x | | | |
| 11. Are partners involved as intended with regard to ESH training? (internal and external) | x | | x | | | x |
| 12. Has ESH training contributed to reduce risk to safety and health within the work environment? | | x | x | | | x |
| 13. Has ESH training contributed to ESH being a corporate value within PWGSC? | x | | x | | x | |
| 14. Have there been any unintended outcomes or impacts of the ESH training component? | | | x | | | |
| 15. Could ESH training be provided in a more cost-effective manner? | x | x | x | | | |
| 16. Has the ESH training program been effectively managed? | x | | x | | | |

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5.2 Data Elements

Examples of output data and data elements have been included in a management letter to management to help develop the required performance indicators.

5.2.1 Timing and Prioritization

The timing for the data collection, analysis and reporting is summarized in the evaluation framework. Ongoing data collection refers to data that are perceived to be useful in the management of the program. The framework also suggests where responsibility for gathering, analyzing and reporting could lie. These responsibilities will have to be confirmed by those involved in ESH training. A number of the data collection activities will require a commitment of time and resources to plan and implement these methodologies or improve current activities.

A formative evaluation is usually conducted early in a program (about 2 years after implementation) and tends to look at implementation issues, program improvements, and progress in reaching objectives. Given that this program has been ongoing for some time, PWGSC has indicated that it would like to undertake a formative evaluation soon after the completion and acceptance of the evaluation framework. The merits to this approach are that it will provide some baseline data against which future progress can be measured and provide direction on how to improve training appropriateness, governance and program effectiveness. However, there will not be time to implement the data gathering mechanisms suggested in the framework so the formative evaluation will be highly dependent upon two methodologies, document review and stakeholder consultations. Finally, in light of the recent new organizational structure of the Department, the evaluation should not take place until the new structures are consolidated and functioning.

A summative evaluation tends to be an evaluation of a mature program (at least 5 years out) and tends to focus on objectives achievement, impacts, and continuing need (rationale issues). In this case rationale issues are not applicable. The summative evaluation should focus on progress toward meeting longer term objectives achievement and impacts. Although ESH training is, in reality, a mature program, its data collection mechanisms and governance structure are not. The summative evaluation should focus on assessing impacts and training effectiveness for which data should be available once the framework is implemented.

Priorities for the evaluation questions to be addressed in the summative and formative evaluations have been included in a management letter. The following Table identifies suggested timing to implement the data collection mechanisms.

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| Table 3- Timing to Implement Data Collection | | |
|--|---|----------------------|
| Data Gathering Requirements | Responsibility | Timing |
| Training effectiveness <ul style="list-style-type: none"> • Expanded participant evaluation of training | HR and CESH | In progress |
| Training effectiveness <ul style="list-style-type: none"> • Regular monitoring of ESH training | HR and CESH | Within 1 year |
| Training effectiveness <ul style="list-style-type: none"> • On-site ESH monitoring | HR and CESH in partnership with regions and HQ operations | Within 2 years |
| Consolidated participation data base | HR and CESH in partnership with regions | Within 1 year |
| Employee ESH profiles (ESH training needs vs. training received) in a data base | RC manager, HR, CESH | Within 2 years |
| Data integrity & system capability study | HR, CESH, Regions | After formative eval |

6 Recommended Evaluation Strategy

It is recommended that management evaluate the main success and effectiveness issues of the ESH Training program. An evaluation of these issues will determine if ESH Training meets its objectives appropriately and effectively, is cost-effective and is without unwanted outcomes. The appropriateness of its governance structure will also be assessed.

This evaluation framework report comprehensively outlines a series of sixteen evaluation questions that when answered will form the basis for an evaluation of the success and effectiveness of ESH Training. For each of the questions proposed performance indicators, data collection methodologies, sources for the data and timing suggestions are provided in the report.

It is recommended that management develop an action plan to implement this evaluation strategy to ensure accurate and reliable performance information is available to facilitate ongoing performance measurement and future evaluation of ESH Training.