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Audit of a Health Services Centre Recapitalization Project

June 2011

7053-73 (CRS)



Canada 

Caveat

This audit is not intended to assess the performance of contractors; rather, it is an internal assessment of practices within the Department of National Defence (DND).



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Acronyms and Abbreviations

ADM(Fin CS)	Assistant Deputy Minister (Finance and Corporate Services)
ADM(IE)	Assistant Deputy Minister (Infrastructure and Environment)
CF	Canadian Forces
CMP	Chief Military Personnel
CO	Change Order
CRS	Chief Review Services
DCC	Defence Construction Canada
DCL	Defence Construction Limited
DCPD	Director Construction Projects Delivery
DGHS	Director General Health Services
DGME	Director General Military Engineering
DHSD	Director Health Services Delivery
DMPAP	Director Military Pay and Accounts Processing
DND	Department of National Defence
DPA	<i>Defence Production Act</i>
FAA	<i>Financial Administration Act</i>
FAM	Financial Administration Manual
FY	Fiscal Year
HCFRP	Health Care Facilities Recapitalization Program
IP	Intellectual Property
MND	Minister of National Defence
MOU	Memorandum of Understanding
OPI	Office of Primary Interest
PAG	Project Approval Guide
PCRI	Primary Care Renewal Initiative
PM	Project Manager
PPA	Preliminary Project Approval
QMS	Quality Management System
RFP	Request for Proposal
SLA	Service-level Agreement
SOA	Standing Offer Agreement



SOCR	Statement of Construction Requirement
SOR	Statement of Requirement
SOR(I)	Statement of Requirement (Infrastructure)
VFM	Value for Money



Financial Management. Contracts for DND infrastructure projects specify that DCC may perform audits as a means of minimizing risks to the Crown. ||| Further, the DCC standard contract requires that payment documents be retained for two years, as opposed to six years as required by both the *Defence Production Act* (DPA) and the DND Financial Administration Manual (FAM). |||

It is recommended that ||| and suggest DCC modify the document retention period in its standard contracts to six years after contract completion.

Key Project Management Documents and Processes. Some key project management documents were not consistent with the guidance provided in the DND Project Approval Guide (PAG) or the DCPD Quality Management System (QMS). As well, DCPD QMS does not provide clear guidance on the development of these documents.

It is recommended that Director Health Services Delivery (DHSD) update the Project Charter for the Greenwood project, continue the development of the Statement of Requirement (Infrastructure) (SOR(I)) and ensure lessons learned are documented to benefit future HCFRP projects. As well, it is recommended DCPD update the QMS to include the SOR(I) in the steps of design process and ensure there is consistency between the Statement of Construction Requirement (SOCR) policy and practice.

Note: For a more detailed list of CRS recommendations and management response, please refer to [Annex A](#)—Management Action Plan.

Introduction

Background

The CF PCRI aims to improve the continuity of care in the CF, and develop the associated management structure and administrative framework to sustain these improvements.¹ The 14 Wing Greenwood Project is the third of 23 HCFRP projects (see [Annex C](#)) associated with this initiative. Observations from the Greenwood project can be applied to benefit future HCFRP projects due to the high degree of commonality in the design of these projects.

The purpose of this infrastructure project is to deliver a new two-storey medical, dental and mental health services centre at 14 Wing Greenwood, and demolish the existing health care facility.

In April 2006, the project received Preliminary Project Approval (PPA) funding of \$1.3 million for the definition phase. Procedural delays were encountered due to a constrained annual funding level for the HCFRP² and the additional time required for departmental approval.³ In March 2010, the project received implementation funding of \$21.2 million to complete the construction of the Greenwood health services centre.

Currently, the project is in the implementation stage. The construction contract was awarded in July 2010, and the expected completion date is September 2012.

Objectives

The objective of this audit is to assess the adequacy of risk management, governance and controls in place for the HCFRP 14 Wing Greenwood Project.

Scope

The main focus of this audit was the Greenwood HCFRP Project from the identification phase in November 2004 to the tendering of the construction contract in July 2010. Other HCFRP projects were also reviewed to identify opportunities for improvements for future infrastructure projects.

Methodology

- Interviewed staff members of Chief Military Personnel, Assistant Deputy Minister (Infrastructure and Environment) (ADM(IE)), Assistant Deputy Minister (Finance and Corporate Services) (ADM(Fin CS)), DCC and health services providers;

¹Rx2000 CF Clinic Model Implementation Strategy, November 2004.

² Prior to 2008, funding level for all HCFRP projects was limited to \$7.5 million per year, then increased through the accrual budgeting process.

³ DND capital project approval process was examined in 2009 CRS Treasury Board and Minister of National Defence Submission Process Review.



- Reviewed project documents, including Project Complexity and Risk Assessment, Project Charter, Synopsis Sheets, Statement of Requirements (SOR), MOU and Service-level Agreement (SLA) with DCC, and Request for Proposal (RFP);
- Reviewed DND, DCC and Public Works and Government Services Canada contract management practices, including project procurement strategies, and the application of *Financial Administration Act* (FAA) Sections 33 and 34;
- Reviewed best practices for design and construction of health facilities;
- Analyzed relevant data extracted from the Defence Resource Management Information System and the Financial Managerial Accounting System; and
- Visited 8 Wing Trenton and 14 Wing Greenwood.

Audit Criteria

The audit criteria and rating can be found at [Annex B](#).



Findings and Recommendations

Contract Management Value for Money

The contract IP clause and procurement method could have provided better value to the Crown.

Intellectual Property

To achieve efficiencies during the design phase, the DCPD PM developed an RFP that would engage the same design consultant and design for both the Greenwood and Comox projects.

According to the DCC⁴ IP standard clauses⁵ incorporated in the Greenwood contract, any copyright for documents prepared for the project shall belong to the consultant. Therefore, DND cannot use the Comox/Greenwood design for other HCFRP projects without the permission of the design consultant. As well, the contract does not specify the fee to be paid should DND want to re-use the documents in another project. Not negotiating this fee up-front creates future cost uncertainties.

DND has realized the potential benefit of re-using design documents among projects that have a high level of commonality. In June 2008, the Construction Senior Review Board decided to evaluate the possibility of re-using the design for HCFRP projects. In July 2010, the IP rights for the design of the Borden project were purchased, at a cost of \$86,000, for re-use of elements of the design in the remaining HCFRP projects. For each remaining HCFRP project, the re-use of the foreground information⁶ is expected to result in savings of approximately \$100,000 and two months' time in the design process.

Procurement Method

DCPD PM improved the efficiency of the tendering process by:

- combining the design of the Greenwood and Comox projects into one RFP so that only one tender was needed for the two projects; and
- developing a business case for the Borden project which allowed DND to retain the same consultant used for both the Kingston and Greenwood project, thereby reducing tendering and project familiarization time.

Good Management Practice

The Borden business case estimated that by using the same consultant as was used in Kingston, the level of effort and cost of the project could be reduced by approximately 25 percent.

⁴ DCC is the contracting authority for DND infrastructure projects.

⁵ DCC, Consultant Agreement Standard Clauses, Section A, A1.13.1 and A1.13.2.

⁶ "Foreground information" means all IP first conceived, developed, produced or reduced to practice as part of the Work under the Contract. Foreground information acquired includes but is not limited to Room Data Sheets, Block Diagrams, Work Flow, Expansion Strategies (including modular concepts within each block), Massing of the Building, and Concept Layouts.



However, further improvements would have increased the benefit to the Crown. A standard contract has been the main procurement method for the design of the HCFRP projects. Alternative methods of supply, such as SOAs or source lists, are “one step⁷” tendering processes that could provide both time and cost savings.

SOA. When considering the procurement method for the design of the Greenwood project in 2006, DCC suggested establishing an SOA that would identify one consultant per region (Eastern, Western and Quebec). By assigning a single consultant per region, this procurement method would have reduced the up-front planning and familiarization work required, resulting in time savings of two to three months, and reducing the risk of cost escalation. An SOA can be set up for up to five years including extension, thereby providing time for funding approvals to be put in place.

However, the PM wanted to progress the Greenwood project and decided to proceed with the project without waiting for an SOA to be set up. If an SOA had been established in 2006, 15 of the 23 clinics could have benefited from its use as shown in [Annex C](#).

Source List. A source list can be set up for up to five years including extensions. Like an SOA, a source list provides time savings and flexibility in allowing time for project approvals to be in place. An SOA is with one consultant; whereas a source list may have multiple consultants in the list, and additional bids could be used to select a consultant from the list.

In December 2010, the PM selected the source list as the procurement method for the HCFRP projects. Two source lists for the HCFRP projects in the Eastern⁸ and Western⁹ regions were finalized. The two source lists cover a total of 10 HCFRP projects, excluding the Quebec region¹⁰ and projects valued at less than \$1 million. Had the source lists been established in 2006, four additional projects could have benefited.

Recommendation

For future HCFRP projects and for programs where projects present a high degree of commonality in their design, consider modifying the IP clause so a fee for the re-use of IP documentation is specified, and consider the benefits of establishing a source list or SOA early in the program.

OPI: ADM(IE)/DGME/DCPD

⁷ The step relating to the expression of interest can be avoided.

⁸ Eastern region centers: Halifax, Shearwater, Gaagetown, Moncton, North Bay, Meaford.

⁹ Western region centers: Edmonton, Esquimalt, Winnipeg, Cold Lake.

¹⁰ The three centers in the Quebec region (St-Jean, Valcartier and Bagotville) are excluded from the source lists because of differences in regulations that would restrict the range of potential bidders for the Eastern and Western regions.



Financial Management

|||||

A consultant was contracted for the design phase of the Greenwood project. Standard DCC contract clauses were utilized for this contract.

Audit Clauses

DCC uses standard contracts for both consultant and construction contracting for DND infrastructure projects. Both types of standard contracts contain clauses that enable the Crown to perform audits or inspections on either consultants’ time sheets and cost records,¹¹ or contractors’ estimated and actual cost of the work, tender calls, quotations, contracts, correspondence, invoices, receipts and vouchers.¹²

This audit did not raise concerns to indicate that DCC should perform an audit of the vendor associated with the Greenwood consulting contract. |||

||||| . This includes most consultant contracts and some change orders (CO) for construction contracts. Based on the capital investment plan for construction, the value of these contracts between 2011 and 2021 is estimated at \$1.5 billion.¹³

Document Retention Clause

In order to exercise FAA Sections 33 and 34 financial authorities delegated to DCC by the Minister of National Defence (MND), DCC must adhere to the policies and functional direction issued by ADM(Fin CS).¹⁴ This includes the FAM, which requires all supporting documents regarding a payment to be retained for a minimum of six years.¹⁵ The DPA further requires that accounts and records for defence projects, including buildings,¹⁶ be retained for six years after the end of the calendar year in which the contract is terminated or completed.¹⁷

¹¹ DCC, Consultant Agreement Standard Clauses, Section A, A1.11.1.
¹² DCC, Standard Construction Contract Documents 2008 Version, General Condition—DCL 32, 2.8.1.
¹³ ADM(IE), Capability Investment Plan (Infrastructure) 2011-2021 Plan V5, October 19, 2010. \$1.5 billion includes design costs and CO costs for both design and construction for DND infrastructure projects planned for 2011-2021.
¹⁴ DND, Defence Construction Canada—Delegated Financial Authorities, ministerial letter, April 26, 2008.
¹⁵ DND FAM 1016-3—Account Verification—FAA Section 34, April 1, 2001.
¹⁶ Department of Justice, Defence Production Act, Sentence 2, December 14, 2010.
¹⁷ Department of Justice, Defence Production Act, Sentence 23, December 14, 2010.

In contrast, DCC standard contracts require such documents to be retained for only two years after the completion of services for consultant contracts, or issuance of the Final Certificate for construction contracts. This does not comply with the FAM nor the DPA requirements, |

Design Consultant Deliverables

The Statement of Work for the Greenwood project design consultant listed 34 design stage deliverables, of which five were key deliverables. |

It is suggested that DCPD review the list of required deliverables and ensure the receipt of key consultant deliverables by linking them to payment. A previous CRS audit on the Fleet Maintenance Facility Cape Breton Consolidation project recommended linking payments to key deliverables for design contracts. Management has developed an action plan to work with DCC to develop linkages between payments and measurable deliverables.

Payment Certification

In examining payments associated with the Greenwood project, only minor certification issues were observed. However, it is difficult to determine if these processes are sufficiently rigorous for DND infrastructure projects in general.

According to the 2008 MND’s delegation of FAA authorities to DCC, DND will perform semi-annual reviews of DCC’s FAA Sections 33 and 34 processes for third-party contracts to ensure the authorities are exercised properly.

Director Military Pay and Accounts Processing (DMPAP) staff have performed only two such reviews in the last two years at DCC’s National Capital Region offices. Some base comptrollers have also reviewed the Sections 34 processes in place for DCC site offices at various CF Bases. |

The Director Infrastructure and Environment Comptrollership and DMPAP are currently working together to ensure that DCC is adhering to the MND delegation of authorities.

Recommendation
| and suggest that DCC modify the document retention period in its standard contracts to six years after contract completion.
OPI: ADM(IE)/DGME/DCPD

Key Project Management Documents and Processes

Key project documents were not completed or used as important management tools.

Key Project Management Documents

As stated in the PAG and the QMS,¹⁸ project documents are important management tools, and may have a direct bearing on the decision making and management of the Defence Services Programme.¹⁹ Listed below are the Greenwood project documents that need improvement:

- A generic Project Charter²⁰ and SOR²¹ have been produced for some HCFRP projects; however, they are not specific to the Greenwood project nor have they been updated to reflect the status of the project. They cannot, therefore, be used to manage the project or to communicate the operational requirement as stated in the PAG.
- The SOCR, developed based on the generic SOR, also has not been updated to reflect the evolution of the project, and therefore does not serve the purpose of providing project construction requirements.
- Lessons learned have not been formally documented on an ongoing basis as required by the Project Charter²². Lessons learned documentation would provide important guidance to aid future HCFRP projects.

Good Management Practices

- Ongoing communication occurred between stakeholders regarding project requirements; and
- A rigorous review process was in place to ensure design quality.

Design Process and Procedures

- The QMS was developed by DCPD to provide guidance to construction project managers. Some inconsistencies were observed in the QMS regarding the design process and procedures. The requirement for an SOR(I) was not included as part of the QMS design process,²³ although the QMS states that the SOR(I) is a key project document and the basis of project indicative cost estimate.²⁴
- Currently the QMS requires that the SOCR and design be produced by different consultants.²⁵ In practice, however, the same consultant usually produces them.

¹⁸ The QMS is the quality policy developed by DCPD.

¹⁹ DND PAG, Chapter 4-5.

²⁰ The generic Charter was produced for nine health care recapitalization projects, which, however, does not reflect the governance reality of individual projects.

²¹ The generic SOR for all health facilities was developed in 2002, which is now obsolete and does not reflect the requirements for individual projects.

²² Evidence of informal discussion were found in e-mail.

²³ QMS Section 7.

²⁴ QMS 7.30BW06.

²⁵ QMS 7.30AP01.



Change Order Procedure

According to the QMS CO procedure for consultant contracts, the PM is responsible to identify the requirement for a change, prepare an estimate and submit a requisition to DCC. DCC, in turn, is responsible to negotiate the price and issue the CO to the consultant.²⁷

This procedure was not always followed for the Greenwood and Comox projects. Although the purview of DCC, the consultant was authorized to perform additional work without prior notification to DCC²⁸. As a result, DCC staff received a CO claim for ||| of original contract cost) for work commenced without their knowledge. |||

Cost of COs
The cost of COs was approximately ||| of the original design contract cost versus a 6.2 percent DCC average.²⁶

DCC advised the audit team that there has been improvement in the management of COs for this and other projects. It is suggested that DCPD ensure compliance to the QMS CO procedure through continual training of PMs and performance of risk-based quality assurance sampling of projects CO process.

Recommendations

Update the Project Charter²⁹ for the Greenwood project, continue the development of the SOR(I) for future HCFRP projects, and ensure lessons learned are documented to benefit future HCFRP projects.

OPI: CMP/DGHS/DHSD

Update the QMS to include the SOR(I) in the design process and ensure there is consistency between the SOCR policy and practice.

OPI: ADM(IE)/DGME/DCPD

²⁶ DCC, Defence Construction (1951) Limited Annual Report, FY 2005 – FY 2008.

²⁷ QMS 7.30.

²⁸ The inappropriate authorization of the CO resulted in the replacement of personnel.

²⁹ Subsequent to the audit, the audit team is informed that project management is taking actions to update the Project Charter for the Greenwood project.



Annex A—Management Action Plan

Contract Management Value for Money

CRS Recommendation

1. For future HCFRP projects and for programs where projects present a high degree of commonality in their design, consider modifying the IP clause so a fee for the re-use of IP documentation is specified, and consider the benefits of establishing a source list or SOA early in the program.

Management Action

The inclusion of the purchase of IP rights in design contracts has been discussed with DCC. Where projects have a high degree of commonality in their design with potential future projects, a provision for re-use or design site adapt into the procurement documents will be included in the standard terms and conditions. DCPD will continue to pursue vigorously the identification of potential savings using this approach. Source lists will be used by DCPD as one of the procurement processes to speed up the selection of consultants.

OPI: ADM(IE)/DGME/DCPD

Target Date: Complete and ongoing

Financial Management

CRS Recommendation

2. ||| and suggest that DCC modify the document retention period in its standard contracts to six years after contract completion.

Management Action

||| An audit was requested informally in February 2010 for a contract related to a design consultant. DCPD will continue to pursue the completion of the requested audit and will follow up with other requests on a frequent basis. DND will work with DCC to modify the time period for retention of records to six years from the standard government of Canada provisions of two years.

OPI: ADM(IE)/DGME/DCPD

Target Date: November 2011



Key Project Management Documents and Processes

CRS Recommendation

3. Update the Project Charter for the Greenwood project and continue the development of the SOR(I) for future HCFRP projects, and ensure lessons learned are documented to benefit future HCFRP projects.

Management Action

The Project Director and the Project Manager will work together to update the Project Charter and ensure that the cash flow and timelines reflect the current implementation and construction phase of this project.

OPI: CMP/DGHS/DHSD

Target Date: July 2011

As well, the Project Director and his staff continue to improve the SOR(I) to reflect specific requirements for each project site as opposed to the generic SOR(I) used for the first three projects in Kingston, Greenwood and Comox. In addition, they will ensure that lessons learned are documented to benefit future HCFRP projects. The most important improvement will be the comprehensive room data sheets which support the space table for each project.

OPI: CMP/DGHS/DHSD

Target Date: May 2012

CRS Recommendation

4. Update the QMS to include the SOR(I) in the steps of the design process and ensure there is consistency between the SOCR policy and practice.

Management Action

DCPD has recently hired a new Quality Assurance manager, and one of his primary tasks is the review and updating of the DCPD Quality Management Manual. Part of this review will incorporate the use of the SOR(I) in the design process.

OPI: ADM(IE)/DGME/DCPD

Target Date: May 2012



Annex B—Audit Criteria

Criteria Assessment

Level 1 (Satisfactory); Level 2 (Needs Minor Improvement); Level 3 (Needs Moderate Improvement); Level 4 (Needs Significant Improvement); Level 5 (Unsatisfactory)

Risk Management

1. **Criteria.** Risks are identified, assessed, ranked, mitigated, quantified, and reported by the PMO and by the vendors.

Assessment. Level 2—Consultant risk reporting only informal; risks not quantified per QPM; PPRA not developed.

Governance

2. **Criteria.** Roles and responsibilities are defined and appropriate skills, staff and resources are available to govern the project.

Assessment. Level 1—National SLA clarified DND and DCC roles and responsibilities as outlined in the QMS Joint Procedure # 1.

3. **Criteria.** Relevant, reliable, timely and integrated information for decision making is available to ensure project performance.

Assessment. Level 2—PPA cost estimate methodology was not sufficiently communicated by the PM. (briefed).

Management Control Framework

4. **Criteria.** Controls are in place to manage project cost and schedule.

There were some concerns raised with regards to the process for substantive project definition estimates. The CRS 2011/2012 risk based audit plan has identified the project estimating process as a priority audit.

5. **Criteria.** Assets are managed and payments are made in accordance with the FAA and Treasury Board/DND policies.

Assessment. Level 3— |||||
|||||



Annex B

6. **Criteria.** The procurement plan, bid evaluation, and terms and conditions for consultants provided value for money assurance.

Assessment. Level 3—The consultant contract IP clause and the procurement method for the project did not provide best value for money; CO process did not follow QMS.

7. **Criteria.** Requirements relating to Defence construction policy, Rx2000 and CF PCRI, best practices, and user needs are valid, complete, prioritized and adhered to throughout the project's activities.

Assessment. Level 3—Project Charter and SOR were not specific to the project; the QMS had discrepancies regarding SOR(I) and SOCR.



Annex C—Potential Source List or SOA HCFRP Projects

Location	PPA date	Included in 2010 Source List?	Included if a Source List was established in 2006	Included if an SOA was established in 2006
Trenton	Not Applicable	No	No	No
Kingston	June 2005	No	No	No
Greenwood	April 2006	No	Yes	Yes
Comox	November 2006	No	Yes	Yes
Borden	May 2009	No	Yes	Yes
Petawawa	July 2009	No	Yes	Yes
St-Jean	March 2010	No, Quebec	No	Yes
Valcartier	July 2010	No, Quebec	No	Yes
Edmonton	July 2010	Yes	No	Yes
Gagetown	August 2010	Yes	No	Yes
North Bay	September 2010	Yes	No	Yes
Moncton	December 2010	Yes	No	Yes
Meaford	October 2011	Yes	No	Yes
Esquimalt	October 2011	Yes	No	Yes
Halifax	October 2011	Yes	No	Yes
Cold Lake	November 2012	Yes	No	Yes
Winnipeg	November 2012	Yes	No	Yes
Shearwater ³⁰	December 2013	Yes	No	No
Bagotville	December 2013	No, Quebec	No	No
Wainwright ³¹	Not Applicable	No, less than \$1M	No	No
Goose Bay	Not Applicable	No, less than \$1M	No	No
Suffield	Not Applicable	No, less than \$1M	No	No
RMC Kingston	Not Applicable	No, less than \$1M	No	No

Table 1. Potential Source List or SOA HCFRP Projects. There are 23 planned projects that fall under the PCRI initiative to recapitalize health care facilities. Four of these projects could have benefited if a source list were established in 2006. Up to 15 projects could have benefited if an SOA were established in 2006.

³⁰ This project is included with Halifax.

³¹ The audit team was informed in August 2011 that the Wainwright project PPA date had been scheduled for November 2011, with an estimated cost of \$3 million. It was included in the 2010 source list.

