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Audit of the  
DEW Line Clean-up (DLCU) Project  
Financial, Contract and Project Management

January 2008

7053-39-15-2 (CRS)



Canada 

## CAVEAT

This report details the results of audit work conducted with regards to the DLCU Project Management Office and related contracting activities carried out in support of the DLCU Project.



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## LIST OF ACRONYMS

ADM(IE)	Assistant Deputy Minister (Infrastructure and Environment)
ADM(Mat)	Assistant Deputy Minister (Materiel)
ASA	Aboriginal Set-Aside
CRS	Chief Review Services
DCC	Defence Construction Canada
DCPSD	Director Construction and Property Services Delivery
DEEM	Director Environmental Engineering Management
DEW	Distant Early Warning
DGE	Director General Environment
DLCU	DEW Line Clean-up
DND	Department of National Defence
DRFMS	Director Realty and Facilities Management Support
DYE-M	Cape Dyer Main
ESG	Environmental Sciences Group
EWG	Environmental Working Group
FAA	<i>Financial Administration Act</i>
FY	Fiscal year
INAC	Indian and Northern Affairs Canada
MICC	Minimum Inuit Contracting Content
MIEC	Minimum Inuit Employment Content
MOU	Memorandum of Understanding
NTI	Nunavut Tunngavik Incorporated
NWS	North Warning System
NWSO	NWS Office
O&M	Operations and Maintenance
PM	Project Manager
PMI	Project Management Institute
PMO	Project Management Office
PWGSC	Public Works and Government Services Canada
SOA	Standing Offer Agreement
SSA	Specific Service Agreement
TB	Treasury Board
TPS	Third-party support



## RESULTS IN BRIEF

The Distant Early Warning (DEW) Line Clean-up (DLCU) Project was initiated to remediate contaminated soils, stabilize existing landfills and demolish excess infrastructure at 21 DEW Line sites as required in Cooperation Agreements with the Aboriginal authorities. ....  
..... and the deadline moved from 2013 to 2018. By 2002, the Project had operated for seven years without formal audit, and the cost, scope, and duration had increased significantly. Accordingly, the Assistant Deputy Minister (Infrastructure and Environment (ADM(IE))) requested an audit of the financial and management control systems governing the DLCU Project. This audit covered the period 1 April 2002 to 31 March 2005.

### Findings and Recommendations

**Accountability.** Inappropriate delegation of DLCU responsibilities and inadequate segregation of duties and functions weakened control and stewardship of DLCU Project funds. It is therefore recommended that the DLCU

Project team augment existing resources and revise the organization structure of the project management office to ensure that duties assigned to staff employed in the DLCU Project Management Office (PMO) do not place these personnel in a conflict of interest situation in the performance of their duties within the DLCU PMO.

**Contracting Practices.** Delayed application of government contracting policy with regards to the Aboriginal Set-Aside (ASA) process and the sole-sourced engineering consulting contract increased cost and raised questions regarding the openness and fairness of some contracting decisions made in support of the DLCU Project. In addition, solicitation of input for future contract activities from current DLCU contractors gave the appearance of a conflict of interest both for the contractor and the contracting authority.

The existing arrangement for provision of third-party support (TPS) services at North Warning System (NWS) sites does not permit adequate control over and accountability for DLCU contract expenditures. In this regard, the scope of contractor escort services and the necessity for overtime charges is not clearly defined, and requested contract services can be delayed or reduced as deemed necessary by the contractor providing the TPS services. As well, contract approval of surplus asset salvage activities on DLCU sites without adequate controls over the removal of possible hazardous material could have far reaching environmental and financial implications for DND.

### Overall Assessment

Chief Review Services (CRS) cannot provide assurance that all project expenditures are identified and justified and that contracting practices are effective, economical and fully compliant with Treasury Board (TB) and Department of National Defence (DND) policies and the Cooperation Agreements. While ongoing effort was evident and much improvement was observed in some areas of the DLCU Project, challenges remain in terms of the following:

- Improving contracting and contract documentation practices;
- Segregating incompatible duties;
- Creating an independent oversight function;
- Addressing expenditure certification and budget management deficiencies; and
- Developing key documentation required for successful completion of the Project.



We recommend that the DLCU Project team ensure that government contracting policies are followed and that contract management staff refrain from engaging in activities that could place DND in an untenable situation with regards to contravention of government contracting policies. It is also recommended that the responsible DND senior management take action to rectify deficiencies in the TPS service arrangement and the DLCU Project team ensure compliance with TB policy on disposal of surplus materiel on DLCU sites and implement controls to ensure removal of hazardous material from all salvaged assets.

**Contract Management.** CRS could not attest to the accuracy and completeness of the data used to generate information on Inuit employment and contracting benefits due to the lack of information in the DLCU contract files. We recommend that the DLCU Project team formalize and automate the process for calculating and reporting annual and cumulative Inuit benefits and require monitoring and periodic testing of contract files to ensure that source information is accurate, complete and current.

**Financial Management.** Despite evident improvements in budget management over the audit period, budgetary control was difficult to assess because the budget procedures, structures and formats were not standardized. As well, budget revisions and reconciliation processes were not well documented. In addition, processing of contract expenditures without adequate supporting documentation defeats the purpose of expenditure certification under the *Financial Administration Act* (FAA). We found that approximately \$1.5 million or 5.8 percent of the \$26.4 million expenditure transactions tested in five construction contracts lacked adequate support documentation. It is recommended that the DLCU Project team ensure that standard procedures and formats are implemented and adequate documentation is maintained for budget and expenditure activities.

**Project Management Documentation.** The DLCU Project has neither a formal risk management plan nor an approved exit strategy for effective management of project completion. Accordingly, we recommend that the DLCU Project team develop a risk management plan and finalize approval of an exit strategy conducive to effective project completion.

**Oversight.** The DLCU Project's size, complexity, longevity and geographic dispersion creates significant risk for DND with regards to ensuring effective stewardship and accountability for \$583.3 million in public funds. It is recommended that the DLCU Project team provide the DLCU Project Manager (PM) with the financial expertise and resources required to enable him to properly exercise his financial management responsibilities over the Project.

**Value for Money.** Inadequate organization, maintenance and storage of DLCU contract and expenditure management documentation are limiting the capability of DLCU PMO staff to demonstrate control over and best value for contract expenditures. It is recommended that the DLCU Project team make sure that DCC contract files containing DLCU Project information are reviewed and revised to ensure that an adequate audit trail is maintained and that cost-effective data retrieval is assured.

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

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## INTRODUCTION

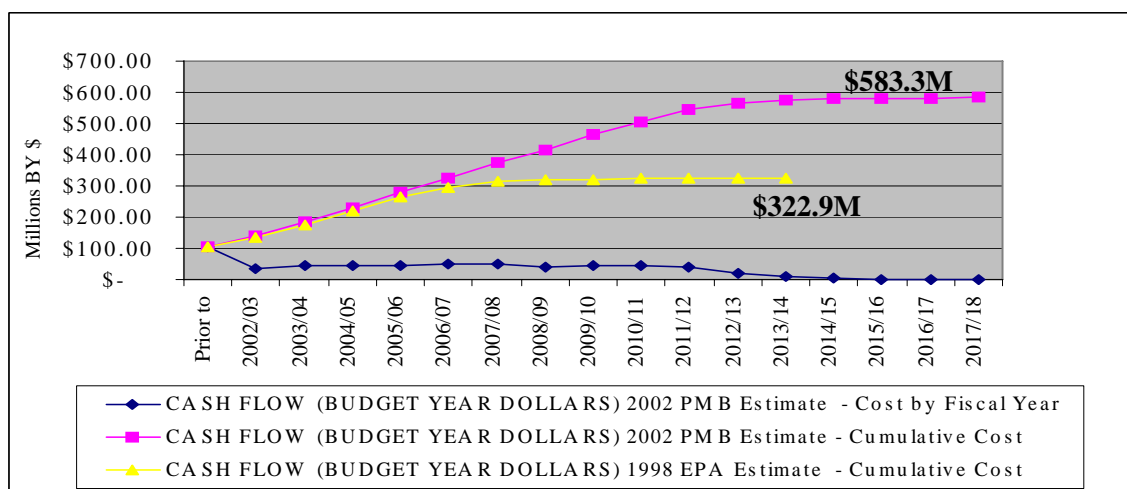
### Background

The DLCU Project involves the clean-up of chemically contaminated soils, the stabilization of existing landfill sites and the demolition of surplus infrastructure at the 21 DEW Line sites across the Arctic coastline, which are under the responsibility of DND (see Figure 1). The clean-up standards, schedule, and economic opportunities are governed by Cooperation Agreements between the respective Aboriginal groups and DND. An engineering firm out of Edmonton and the Environmental Sciences Group (ESG), currently located at Royal Military College, commenced environmental site investigations in 1989.



**Figure 1. Map of the DEW Line.** *The DEW Line was a system of radar stations in the far northern Arctic region of Canada set up during the Cold War.*

..... The funding increased for a number of reasons including provision for implementation of a five-year program for monitoring site landfills resulting from the cleanup process as well as identification of a larger number of existing landfills than originally estimated.



Source: 2002 PMB Estimate for DLCU Project.

**Figure 2. Cash Flow Comparison 2002 PMB Estimated versus 1998 EPA Estimate (BY \$).** *Changes in project scope and schedule (described above) increased estimated cost for project completion by \$260.2 million or .....*



The DLCU Project is governed by a Project Charter (third version) dated 2 February 2004. Currently, the DLCU PMO consists of one departmental officer, i.e., the PM. The Charter assigns responsibility to DCC for providing project, property and contract management support services to the DLCU Project as requested by DND. DCC also acts as the contracting authority for consultant and construction services. An Edmonton-based engineering firm supports the PMO as the prime engineering consultant and the ESG is the scientific advisor for the project. The annual budget allocation for DLCU is approximately \$40 million. This covers scientific and engineering support, project management and clean-up contracts provided by the ESG, engineering contractor and DCC. DLCU contract procurement services are provided under an omnibus procurement agreement between DND and DCC.

In summer 2002, ADM(IE) requested an audit to assess the effectiveness of the financial and management systems and processes in place for the DLCU Project. In particular, senior management expressed interest in a financial verification to confirm the appropriateness of the operating costs and the various contracting fees that are charged to the DLCU Project. The project was at its mid point, which prompted the request for the audit.

## **Objectives**

The objectives of the audit are to:

- Ensure that all departmental expenditures for the DLCU Project are identified and justified;
- Verify whether the internal control system for contracting practices has been carried out with due regard for effectiveness, economy and compliance with DND and TB policies and the Cooperation Agreements; and
- Assess the project management practices for compliance with the standards developed by the Project Management Institute (PMI).

The criteria used to assess these objectives are contained in [Annex B](#).

## **Scope**

The audit covered fiscal period 1 April 2002 to 31 March 2005 and focused on the following areas of concern (see [Annex C](#) for more information):

- Audit of financial, contract, and project management controls;
- Audit of the contract and financial management expenditures for fiscal year (FY) 2002/03, 2003/04 and 2004/05;
- Audit of the DCC 2003 reasonability audit of Consulting Engineering Contract expenditures charged to the DLCU Project; and
- Audit of the PMO operations including effectiveness of DLCU contracting activity.

Environmental performance or regulatory compliance was not included in this audit.





## **Approach**

A risk-based audit approach was used to provide the DLCU Project management assurance on:

- Responsible spending and sound stewardship of tax dollars;
- Transparent and accountable decision making;
- Cost-effective management and control of DLCU resources;
- Sound performance measurement and reporting practices; and
- Acceptable risk management strategy.

## **Methodology**

The work relating to the PMO and DCC contracting portion of the audit was conducted at the DLCU Headquarters, Ottawa, Ontario, from 15 November 2005 to 28 October 2006. During this period, the audit team conducted interviews, system walkthroughs, policy and documentation reviews, procedural and substantive testing and obtained information through observation enquiry and analysis. Sample selection for transaction testing was conducted using a non-statistical sampling approach and was focused on major expenditure activities including DLCU construction, engineering, archaeology, the environment, travel, TPS, accommodation and contract salary expenditures. Additional follow-up with DLCU PMO staff was required between November 2006 and March 2007 to obtain missing documentation.



## FINDINGS AND RECOMMENDATIONS

### Accountability

*Unclear assignment of roles and responsibilities, inadequate segregation of duties and insufficient independent oversight resources in the DLCU PMO resulted in a potential conflict of interest and weakened control over and accountability for DLCU contract expenditures.*

### Roles and Responsibilities for DLCU Property Support Services

- Responsibility for providing support for all property issues related to the DLCU Project is assigned to DND's realty advisory group<sup>1</sup> in accordance with the terms of the DLCU Real Estate Charter (2003). The average annual cost for the period audited was about \$135,000.
- By splitting responsibility for property support services between co-project managers within the Director Construction and Property Services Delivery (DCPSD) and DLCU PMO organizations without adequately defining their respective responsibilities, the real estate charter obscured accountability for these activities.
- The real estate charter assigned the DCPSD co-project manager an advisory role but then required transactional services on behalf of the DLCU Project. Similar inconsistencies were evident throughout the charter.
- Inadequate procurement, oversight and expenditure approval of DLCU property support services weakened controls and increased the potential for inappropriate use of DLCU funds.

**Auditor's note:** The DLCU properties officer assumed responsibility for real estate support services effective 1 April 2006 and revised the Project Charter to show the importance of the property issue and to reflect changes in responsibility. He also developed an effective process for procurement, oversight and expenditure approval of property support services. The revised Charter had not been approved as of May 2007.

### DLCU PMO Organization Structure

The organization structure within the DLCU PMO does not assure independent and objective oversight of DCC contract management services charged to the Project because the PMO is staffed almost entirely by DCC employees. The organization structure is illustrated in Figure 3.

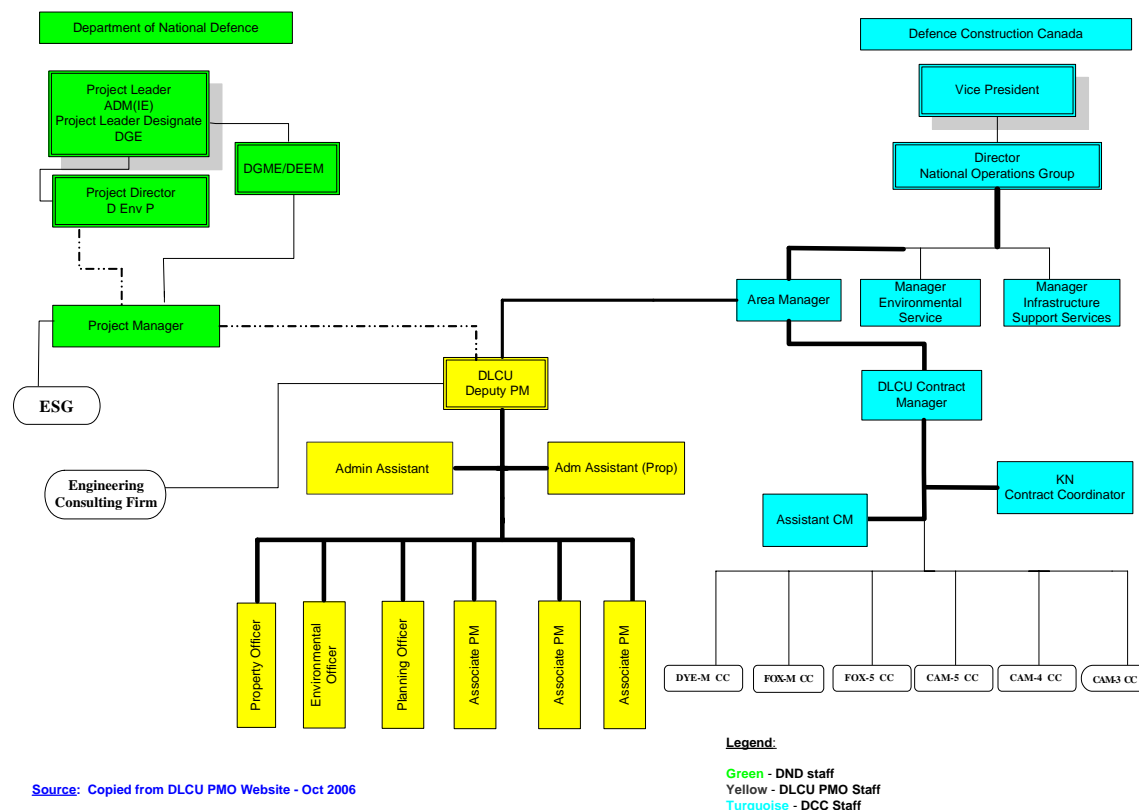
### Segregation of Duties

The DCC Manager assigned the role of DLCU Deputy PM approves timesheets associated with the calculation of DCC service fees charged to the DLCU Project, reviews the related invoices and, in effect, recommends invoice approval under Section 34 of the FAA by the DLCU PM.

<sup>1</sup> The DLCU Project Charter states that "DRFMS is responsible for providing support regarding all property issues related to the DLCU Project via a proactive property program management approach." Director Realty and Facilities Management Support (DRFMS) was formerly Director Construction and Property Services Delivery (DCPSD).



This is contrary to the delegation of authority principles in the FAA, and gives the appearance of a conflict of interest for both DCC and DND staff.



**Figure 3. Organization Structure for DLCU PMO.** *The overlapping reporting relationships and geographical dispersion makes the DLCU Project difficult to manage and control.*

## Recommendations

OPI	RECOMMENDATION
ADM(IE)/DGE	<b>Roles and Responsibilities for DLCU Property Support Services.</b> Revise the Project Charter to reflect changes in responsibilities for property issues and formalize the current process for procurement of real estate support services.
ADM(IE)/DGE	<b>DLCU PMO Organization Structure.</b> Review the organization structure within the DLCU PMO and make the changes necessary to ensure that the DLCU PM is provided with an independent contract management oversight capability.
ADM(IE)/DGE	<b>Segregation of Duties.</b> Ask ADM(IE) staff for administrative assistance with regards to certification of DCC invoices under Section 34 of the FAA and re-assign applicable responsibilities accordingly.

## Contracting Practices

*DCC contracting policies and procedures were generally consistent with TB and DND policy. DCC processes and practices used to address contracting requirements for the DLCU Project were found to be compliant with government policy and the Aboriginal Cooperation Agreements with the exception of the issues discussed below.*

### Aboriginal Set-Aside (ASA)

- Delays in implementing the ASA contracting process for the 2004 camp outfitter contract at the CAPE Young, (PIN 2) site significantly reduced the contract-tendering period.
- One bid was received and the resulting contract cost was \$100,000 above the DCC estimate.
- There were indications in the contract file that delays in implementing the ASA contracting process had resulted in a reduction in bids and an increase in cost due to short time frame for requesting air charter services.
- The DCC practice of restricting contract bidding for ASA contracts to firms on an Inuit-contractor list, provided by Nunavut Tunngavik Incorporated (NTI) was rejected by Indian and Northern Affairs Canada (INAC) for the 2003 outfitter contract.
- INAC rejected the ASA classification because the process did not provide the Aboriginal community within Canada equal opportunity for contract work and TB concurred with this policy interpretation.
- The contracting approach was revised and invitations to tender were issued to the contractors on the Inuit list for the 2003 contract, and the 2004 contract was ultimately advertised as an ASA contract on MERX.
- Acceptance of the 2004 tender was determined to be less costly than delaying clean-up work.

### Sole Sourcing

- There was no evidence on the contract files that TB sole-source contracting requirements were properly considered in awarding an Edmonton-based engineering company a \$550,700 directed one-year contract in 1996 that formed the basis of a long-term, multi-million dollar contract. The value of this contract is expected to reach \$39 million by project completion.
- The contract file did not demonstrate that the decision to sole-source the 1996 contract had been adequately justified prior to entering the contract and the contractor did not sign the contract until after the work was completed.
- According to the contract file, DCC decided to assign the Edmonton engineering firm future contract work for engineering support services to the DLCU Project plus additional work. This approach created the right conditions for both scope and cost creep.
- A Memorandum of Understanding (MOU) effective 1 August 1998 between DCC and the engineering company designated the original sole-source contract as a multi-year directed consulting contract for the provision of engineering support services to project completion.
- It appears that the DLCU PMO may have been insufficiently resourced at the outset to adequately manage such a large and complex project. As a result, some PM support services were bought from the outside engineering company at comparably higher prices.

- The contracted engineering firm originally was required to perform landfill-monitoring and reporting services for clean-up activities emanating from its own design work. This company is currently restricted to performing landfill-monitoring activities during the first year of the landfill-monitoring program in order to establish a baseline for long-term monitoring activities.

**Auditor's note:** The engineering-design support contract files contained evidence that DCC officials had directed their staff to “find ways of providing opportunities for others while not compromising cost-effectiveness.” In this regard, the Edmonton-based engineering firm had performed clean-up design work for 10 DLCU sites under a previous Public Works and Government Services Canada (PWGSC) contract and DCC was concerned that the firm be held responsible for their design work. Because of the contracted firm's extensive clean-up design experience, DCC staff considered it impractical to involve other consultants except for stand-alone technical studies. However, DCC staff eventually took steps to improve control over and accountability for the selected company's contract scope and cost (see [Annex D](#)—Lessons Learned).

### Third-Party Support (TPS)

- The approach taken for acquisition of TPS services for the DLCU Project at NWS sites does not ensure adequate control over and accountability for DLCU contract expenditures, and value for money cannot be assured.
- The NWS Operations and Maintenance (O&M) contract assigns the contractor responsibility for providing TPS services to authorized third-party personnel on NWS sites involved in operations and activities not directly associated with the O&M of the NWS sites. Third-party users must request TPS services and the contractor must provide these services. However, the contractor can delay or reduce the nature and extent of service provision depending upon the availability of resources.
- The NWS Office (NWSO) staff has first priority on hours worked by the contract staff. If DLCU staff requires service, the contractor either has staff work overtime or hires additional staff from outside. At the time of the audit, TPS escort services were time-based but were billed at fixed cost using overtime rates.
- The NWS contract requires the use of contractor escorts for “third-party personnel visiting any NWS work location.” But the scope of the contractor escort services is not defined and there is a lack of clarity regarding the necessity for overtime charges. This prevents DLCU PMO staff from effectively ensuring best value for expenditure of public funds. Budget estimates for TPS services totaled \$158,000 for FY 2004/05.
- DND might also be paying double for the services of contractor staff who may be performing on-site tasks on a fixed-price basis for the NWSO while charging DLCU PMO escort service fees.
- The lack of control over the availability of TPS services could be detrimental to the cost-effective and timely completion of DLCU Project activities and the absence of a separate contract could put DND at increased risk of liability.
- Data provided by the DLCU PM in December 2007 indicates that TPS escort costs reached \$272,098 in FY 2006/07 and budget estimates for FY 2007/08 totaled \$447,403.



**Auditor's note:** DLCU staff have since successfully negotiated the same charge-out rates for DLCU TPS services as those enjoyed by NWS Project staff and worked with NWS staff to ensure removal of contractor escort requirements for DLCU activities on large portions of short-range radar sites.

### **Solicitation of Consultant Services Contractor Input**

- The practice of requesting DLCU contractor input into contract solicitation documents upon which the same contractor could subsequently submit contract proposals contravenes government contracting principles of openness and fairness and creates the appearance of a potential conflict of interest situation for both DCC and DND.
- There was no evidence on the contract file that would justify contravening government policy.
- On 17 December 2004 DCC contract staff requested the DLCU archaeological contractor to provide input into a draft statement of work prepared by DCC for establishing a future Standing Offer Agreement (SOA) for archaeological services to the DLCU Project. The existing SOA, valued at \$80,000 over a two-year period was scheduled to terminate on 15 July 2005.
- The DCC request required the contractor to identify minimum consultant qualifications and any special requirements to undertake the required work, as well as qualified consultant firms or individuals currently approved to conduct the DLCU archaeological work.
- The contractor sub-contracted the work to a firm providing ongoing archaeological services to the DLCU Project. DCC accepted the sub-contractor's proposal on 18 January 2005.
- On 18 April 2006, DCC staff requested and the aforementioned sub-contractor submitted a fee proposal for archaeological field investigations and report preparation work, apparently under the new DLCU Archaeological Services SOA. This SOA is valued at \$160,000 over a four-year period.
- This action reinforces the appearance of a conflict of interest and casts doubt on the openness and impartiality of DLCU consultant contracting practices.

### **Disposal of Surplus Material on DLCU Sites**

- Contract authorization for reuse or recycling of DLCU material by contractors and external third parties has the potential to increase environmental risk and financial liability.
- The DCC contract issued for clean-up of the Cape Dyer Main (DYE-M) site included a provision that the contractor may salvage any material shown for demolition provided they sign a waiver releasing DND from future liability, and ensure all hazardous material associated with the item is removed.
- There was no evidence on file to indicate that controls were in place to ensure that contractors actually removed hazardous material from items being salvaged. This could result in DND being held liable for future health concerns arising from the use of possible contaminated equipment. In addition, the value of the waiver to DND is questionable.
- The nature and extent of material salvage activities authorized in past DLCU construction contracts and outside the contracting process is unknown. This creates an environmental risk for the project and for DND, which needs to be addressed by the contracting authority.

## Documentation

- According to the Service Level Agreement for the DLCU Project, DCC is responsible for preparing and maintaining project documents.
- Ineffective filing, storage and retrieval of DLCU contract information is detrimental to cost-effective and timely execution of the DLCU project management activities.
- Contract files were neither indexed nor consistently organized in chronological order and were at times incomplete. As well, the location of documents found on interrelated files was not evident in the contract file.
- Considerable duplication of information existed in the files and often it was difficult to identify original documents. Moreover, documents were sometimes missing from the contract files and they were either found on unrelated files or were not found by the termination of the audit.
- The procedure for signing out contract files was not always followed and it was at times necessary to check with several staff in order to locate files. The impact of these documentation deficiencies and the recommended action for their resolution is included under the Value for Money finding in this report.

## Recommendations

OPI	RECOMMENDATION
ADM(IE)/DGE	<b>ASA and Sole Sourcing.</b> Ensure that ASA and sole-source contracting practices used within the context of the DLCU Project comply with TB contracting policy and demonstrate fairness, transparency and value for money in the expenditure of public funds.
ADM(IE)	<b>Third-Party Support (TPS).</b> Request ADM(Mat) to include a provision in the NWS operating and maintenance contract that gives DLCU staff adequate control over negotiation of TPS services required for DLCU activities on NWS sites.
ADM(IE)/DGE	<b>Solicitation of Contractor Input.</b> Direct DCC contract and project management staff assigned to the DLCU Project to avoid soliciting DLCU consultants for contract services that would appear to give consultants unfair advantage over their competitors for future contract work.
ADM(IE)/DGE	<b>Disposal of Surplus Material on DLCU Sites.</b> Ensure compliance with TB directive on disposal of surplus materiel at NWS sites and implement controls to verify that hazardous material is removed from surplus assets prior to their disposal.  Research hazardous material salvaged during the DLCU Project and develop an action plan to mitigate associated environmental risks to DND.  Request a legal opinion on the value of the waiver for DND.



## Contract Management

*The absence of an adequate audit trail prevented CRS staff from determining the reliability of Minimum Inuit Employment and Contracting data reported in the annual and cumulative Inuit benefit reports as well as the effectiveness of contract management controls over engineering design contract expenditures charged to the DLCU Project.*

### Contract Management Practices

- Some under-achievement of the established Minimum Inuit Employment Content (MIEC) rates, prescribed under the Aboriginal Economic Agreement, was evident for the majority of construction contracts tested during the period under audit (see Table 1). In addition, information required to evaluate the reported rates was fragmented and incomplete. The established Minimum Inuit Contracting Content (MICC) rates were for the most part achieved and in a number of cases were significantly exceeded.

Clean-up Sites Tested	Required MIEC Rate	Actual MIEC Weighted Avg Rate	Actual MIEC Weighted Avg Variance	Required MICC Rate	Actual MICC Weighted Avg Rates	Actual MICC Weighted Avg Variance	Comments
PIN-3	78.2	75.5	2.7	68.3	75	6.5	MIEC not achieved during contract. MICC achieved in all years of contract.
CAM-2	77	75.8	1.2	63.5	58.4	5.1	MIEC/MICC not achieved during contract.
FOX-M	78	75.44	2.56	72	86.78	14.78	MIEC not achieved to date. MICC achieved in all years to date.
FOX-5	77.5	78.85	1.35	72	75.27	3.27	MIEC achieved in one of four years. MICC achieved in all years to date.
Overall Weighted Avg Excl DYE-M	77.68	76.15	1.53	68.95	73.86	4.91	
DYE-M	71.7	50.63	21.07	68.4	69.86	1.46	MIEC not achieved to date. MICC achieved in two of three years of contract.

**Information Source:** DCC Annual MIEC/MICC reports Dated 27 November 2006.

**Note:** Positive variance denoted by [blue](#) numbers. Negative variance represented by [red](#) numbers.  
Final Cumulative MIEC/MICC rates for closed contracts are shaded in [Green](#)  
Cumulative MIEC/MICC rates to date for ongoing contracts are shaded in [Blue](#)

Overall Weighted Average represents total of site weighted averages divided by number of sites tested.

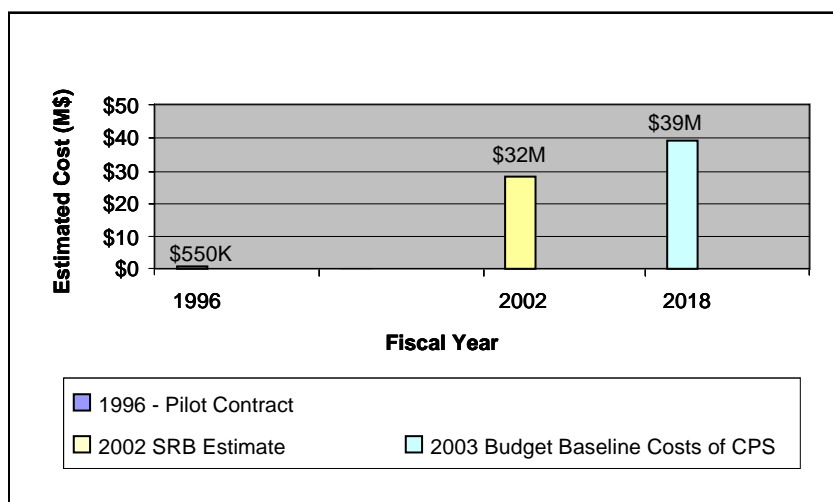
**Table 1. MIEC/MICC Cumulative Benefit Analysis—Actual Versus Required Results 2002-2006.** *The weighted average variance for selected sites, excluding the DYE-M site, shows that for the most part the established rates related to the Aboriginal contracting benefits have been met.*



- Excluding contract mobilization and de-mobilization years and the Cape Dyer, DYE Main contract, contractors consistently under-achieved the established annual MIEC levels by a average 1.3 percentage points over the five-year period tracked by DCC. The actual cumulative MIEC rate was an average 2.9 percent below the expected level for the same period.
- MIEC rates for mobilization and de-mobilization years, excluding the Cape Dyer, DYE Main clean-up site, were an average 8.7 and 7.0 percent below the established annual and cumulative rates, respectively.
- The Cape Dyer, DYE Main clean-up contract was well below the expected MIEC rate for all years recorded in the DCC annual and cumulative MIEC reports. Following the first year of the contract, the annual MICC rates improved significantly and the contractor achieved the cumulative MICC rate in 2006.
- DCC contract benefit files for tracking and evaluating MIEC/MICC information were found to be incomplete and to lack current information required to test the accuracy and reasonability of reported MIEC/MICC rates for the sites selected for audit. As a result, CRS staff could not attest to the accuracy and completeness of the figures used to generate the MIEC/MICC information contained in the DCC MIEC/MICC reports.
- The DLCU PM indicated that he had discussed the discrepancies between established and actual MIEC/MICC levels with the NTI Steering Committee. This group has indicated that the minor fluctuations between actual and established rates were acceptable and that they would rather leave the established rates at the current levels.

#### Contract Management Strategy (Consulting Engineering Contract)

- Evidence of considerable scope and cost escalation for the DLCU engineering design contract was found in the DCC contract files. In this regard estimated contract costs increased ..... to \$32 million in the 2002 Senior Review Board budget estimate. The estimated contract cost to project completion quoted in an e-mail dated 3 September 2004 is \$39 million.



**Figure 4. Engineering Cost Escalation.** *Because of the approach taken to manage this consultant contract, it was difficult to link increased costs to scope changes and to readily identify and address trends in contract growth.*

- DCC contract management staff pointed out in the DLCU engineering contract file that merging of budget and contract management activities had distorted the scope/cost relationship normally used to control contracts.
- Information in the contract files also indicated that the line between project and contract management activity was not clear. In this regard, the project engineer appeared to be processing requests for budget increases through the change order process, which, in effect, increased the value of the contract.
- Absence of a strong challenge function on the part of DND was also evident in the files.
- Contract files were incomplete, fragmented and not conducive to cost-effective retrieval of required information. Information gaps in contract files prevented CRS staff from determining the effectiveness of contract management controls and whether value for money was received for the engineering consultant services contract expenditures charged to the DLCU Project.
- Invoices tested for FYs 2002/03 and 2003/04 totaling \$1 million and \$1.1 million respectively had been processed for payment without adequate supporting documentation and TB travel policy was not always enforced for items such as tips, personal phone calls and gratuitous meals.
- While the same discrepancies existed with regards to invoices tested for FY 2004/05, there was evidence that weaknesses in policy compliance and inadequate substantiation for engineering contract expenditures charged to the DLCU Project were being properly identified and rectified by DCC contract management staff. The total value of invoices tested for FY 2004/05 is \$1.5 million.

**Auditor's note:** Both the management control framework and the documentation of engineering contract activities have improved over the years. In addition, DCC staff removed a number of conflicting and non-essential activities from the engineering contract. They also instituted a revised change management process to ensure that work specified in change order requests is not included elsewhere in the contracted engineering firm's mandate and that the requested change in scope and cost is given the proper level of scrutiny.

DCC has established and effectively implemented excellent procedures for processing engineering invoices to ensure that engineering contract expenditures are properly documented, processed and approved. Lessons learned from this contracting approach that could be beneficial when contracting engineering services in future projects are contained in [Annex D](#).

### Contract Closure Documentation

Prior CRS audit work disclosed that contract closure documentation had not been completed in a timely manner, resulting in a number of DLCU construction contract files containing outdated and incomplete information.

Based upon a follow-up review of completed construction contract files provided by PMO DLCU staff and discussions with responsible personnel, CRS staff determined that current notification practices for contract closure are adequate and are being followed. As well, the backlog of closure notification documents had been satisfactorily resolved. The DLCU PM should make sure that this activity is monitored on an ongoing basis to ensure that corrective action is maintained.



## Recommendations

OPI	RECOMMENDATION
ADM(IE)/DGE	<p><b>Contract Management Practices (Aboriginal Benefits Issue).</b></p> <p>Formalize and automate the process for calculating and reporting on the annual and cumulative MIEC/MICC benefits activity and generate electronic reports at least quarterly.</p> <p>Monitor MIEC/MICC benefit files on an ongoing basis and conduct periodic reasonability tests on data to ensure that source information is accurate, complete and current.</p>



## Financial Management

*Deficiencies in budget management, expenditure certification and contractor billing procedures, processes and practices, as well as the lack of adequately documented information prevent proper identification, justification and control of contract expenditures charged against the DLCU Project.*

### DLCU Budgetary Process

- Standardized procedures and practices for budget preparation, amendment, analysis and approval have not been formalized, and DLCU budgets continue to be diversely structured and formatted. The absence of standardized budget structures and formats limits the availability of consistent, complete, comparable and transparent data for budget analysis. This reduces the overall utility of the information for budgetary control purposes.
- DLCU PMO lacks an adequate audit trail to support budget revisions and follow-up activities. As these events are verbal in nature, we were not able to assess the adequacy of budget review, analysis and approval activities.
- Explanations provided for increases and decreases in budget forecasts were found to be fairly generic and standardized in a number of instances and were not overly informative. Hence, the value of the DLCU variance analysis activity as a budget control tool is questionable.
- DLCU PMO budget reconciliation process requires enhancement to include investigation and satisfactory documentation of the reasons for year-end budget discrepancies.
- Annual DLCU budget expenditures for the period under audit ranged between \$31 and 33 million.

**Auditor's note:** Much effort was made during the audit period to improve the DLCU budget preparation and management process. DLCU budget activities were designed to coincide with DND annual budgetary requirements and budgets were compiled, consolidated by functional activity and disseminated to key stakeholders. We believe that rectification of the issues noted above would increase the utility of the DLCU budget process and further strengthen control over DLCU budget expenditures.

### Delegated Spending and Payment Authority

- DND's delegation of signing authority to DCC for approval of third-party contract expenditures made on behalf of the DLCU Project has been effectively implemented in accordance with the draft MOU between DND and DCC and the ADM(IE) Comptroller memorandum dated 20 July 2005.
- DND staff is processing DCC service invoices for immediate payment as required in the MOU. However, this practice is contrary to the TB policy regarding payment of invoices on due date. The rationale for this practice is that it is "both crucial to DCC operations and beneficial from a cost perspective to DND."
- While this approach is considered reasonable in the circumstances, there is still a requirement for authoritative substantiation of this decision. CRS staff is awaiting information from the ADM(IE) Comptroller regarding the resolution of this concern.



## DCC Audit of Engineering Contractor's Billing Practices

- DCC senior management identified and DCC finance staff audited possible discrepancies in engineering design service charges levied against the DLCU Project.
- ADM(IE) requested CRS staff to assess the validity and reasonability of the DCC Finance staff's audit work as part of the DLCU audit.
- CRS staff found that the DCC audit on the engineering firm's billing practices had been conducted in a professional and competent manner. The methodology used was sound and based upon suitable criteria properly applied and sufficient, appropriate audit evidence was on file to substantiate the reported audit results.

**Auditor's note:** DCC re-negotiated the existing MOU between DCC and the engineering contractor to clarify and strengthen the financial aspects of the contractor's service agreement. They also recovered an effective overcharge to the DLCU Project of \$250,000 and implemented comprehensive procedures for processing engineering invoices. A follow-up audit in February 2006 by the DCC Finance group indicated that the engineering contractor's billing rates were being implemented according to the terms of the revised MOU.

## Real Estate Support Service Expenditures

- Specific Service Agreements (SSA) referencing generic property support services for the DLCU Project were drafted by the contractor (PWGSC) and approved for procurement by a DCPSD co-project manager.
- PWGSC invoices charged to the DLCU Project were continually certified under Section 34 of the FAA with neither adequate description of deliverables on the invoice nor documentary evidence of service delivery. Discussion with responsible staff indicated that the practice of processing PWGSC invoices related to SSA documents without adequate supporting documentation was not uncommon within ADM(IE).
- PWGSC time-based SSAs were being invoiced and processed as fixed-price contracts with minimal information of either unit price, service hours charged or the specifics of services provided.

**Auditor's note:** The DLCU properties officer has reduced the potential for over-funding of services by significantly decreasing lump sum payments assigned to PWGSC contracts and by clearly defining the specific deliverables. He has also listed support documents to be submitted with PWGSC invoices for payment of service charges. However, the practice of processing SSA charges without adequate support documents appears to be more widespread. Consequently, the ADM(IE) Comptroller might want to review the expenditure certification process followed for projects using the SSAs and ensure deficiencies in policy compliance are rectified.

## Certification under the FAA

- In a number of instances contractor invoices were processed without adequate supporting documentation to substantiate charges. In this respect, documentation for disbursement costs was missing to some degree for the majority of construction contract (76 percent), DCC cost recovery (40 percent) and service contract (100 percent) transactions tested. The value of transactions tested without adequate support documents as a percent of total expenditures tested for the period 1 April 2002–31 March 2005 is reflected in Table 2.



Contract Types	Expenditures Processed	Expenditures Tested	Percent of Expenditure Values Tested	Expenditure Values Tested Without Support Documents	Percent of Expenditure Values Tested Without Support Documents
Construction	\$34,156,874	\$26,354,236	77.1%	\$1,529,921	5.8%
Service	\$ 1,381,813	\$ 1,381,813	100%	\$ 916,687	66.34%
Recoverable Fees	\$ 3,149,739	\$ 507,597	16.12%	\$ 134,775	26.55%
<b>Totals</b>	<b>\$38,688,426</b>	<b>\$28,243,646</b>	<b>73.00 %</b>	<b>\$2,581,383</b>	<b>9.14%</b>

**Table 2. Summary of Contract Expenditures Lacking Adequate Substantiation.** *The majority of deficiencies noted for construction and service contract expenditures were due to inconsistent application of the DCC expenditure verification process, which is well documented and highly effective when followed.*

- DCC site staff signed off the construction and service contract invoices certifying that services had been delivered but supporting documentation was not always included in the contract file.
- DCC certifies DLCU third-party contract expenditures under Section 34 of the FAA on DCC progress claims designed for this purpose without adequate reference to the invoices being certified. There should be a reference on the DCC documents to the applicable invoice number to reduce the potential for duplication of invoice submission and payment.

## Recommendations

OPI	RECOMMENDATION
ADM(IE)/DGE	<b>DLCU Budgetary Process.</b> Oversee the development and effective implementation of standard procedures and formats for the DLCU budget process, and ensure that adequate documentation of budget revision, variance analysis, and reconciliation activities is maintained on DLCU budget files.
ADM(IE)/DGE	<b>DCC Audit of Engineering Contractor's Billing Practices.</b> Incorporate requirement for audit of the contracted engineering firm's billing process to project completion in the DLCU Project Charter.
ADM(IE)/DGE	<b>Certification under the FAA.</b> Ensure adequate supporting documentation is on file to substantiate all third-party contract expenditures charged to the DLCU Project.



## Project Management Documentation

*Overall, the audit team noted a high degree of compliance with the Project Management Body of Knowledge standards and criteria endorsed by the PMI. However, specific issues exist with regards to project documentation that warrant action.*

### DLCU Documentation

- The DLCU Project team had not yet finalized the real property strategy for the DLCU Project at the time of audit completion. This plan is expected to establish a basis for relinquishment of surplus NWS sites to responsible property owners and signal the closure of the DLCU Project. Considerable effort has been made to date to resolve stakeholder concerns and garner support for this draft exit strategy.
- The current risk management strategy developed by DLCU PMO staff provides an excellent foundation for generating a formal risk management plan for the DLCU Project. What remains is for DLCU staff to use this framework to establish a risk management plan specific to the overall Project whereby detailed application can be made at the contract and site levels and outputs summarized at the project level.

### Recommendation

OPI	RECOMMENDATION
ADM(IE)/DGE	<b>DLCU Documentation (Risk Management Plan and Exit Strategy).</b> Finalize and obtain approval for a formal risk management plan and an exit strategy conducive to successful termination of the DLCU Project in 2018.

## Oversight

*The absence of dedicated, objective financial management expertise within the DLCU PMO could impede sound financial analysis, informed decision making and challenge review.*

## Monitoring and Challenge Review

- The DLCU Project's size, complexity, longevity and geographic dispersion creates significant risk for DND with regards to ensuring effective stewardship and accountability for \$583.3 million in public funds.
- In order to effectively execute his financial management responsibilities and ensure value for money is received for funds expended, the DLCU PM must make informed and cost-effective expenditure management decisions.
- The DLCU PM must be able to identify, evaluate and challenge weaknesses in budgetary and expenditure plans, unsound financial decisions and policy contravention and indicators of potential financial irregularities.
- This activity requires sound financial analysis based upon relevant, reliable and timely information. It also involves dedicated financial advice and ongoing technical assistance in such areas as financial policy interpretation and compliance, budget preparation and reporting, expenditure reconciliation, financial control assessments and risk analysis.

## Recommendation

OPI	RECOMMENDATION
ADM(IE)/DGE	<b>Monitoring and Challenge Review.</b> Provide the DLCU PM with the financial resources and expertise required to properly exercise effective stewardship and accountability for \$583.3 million in DLCU budget expenditures.



## Value for Money

*In a number of instances, value for money was either questionable or there was insufficient and inadequately organized information on file to allow a reasonable assessment of the issue with regards to DLCU expenditures.*

### Contracting and Expenditure Management Documentation

- In regards to the DLCU real estate support activities, SSAs obscured deliverables, invoices were processed for payment without adequate information and support documents, time-based services were charged on a fixed-price basis and SSAs were lump-sum funded on an annual basis. Lump sum SSA expenditures averaged approximately \$135,000 annually or \$405,000 for the three-year period under audit.
- Similarly, inadequately negotiated agreements for TPS services and the lack of information available with regards to the scope of escort services and overtime hours charged to the DLCU Project prevent DLCU staff from ensuring cost-effective TPS services. The annual expenditures for these services were not evident for the period under audit.
- Deficiencies in contract and expenditure management documentation for the engineering contract over the years clearly limits the capability of DLCU PMO staff to demonstrate best value for contract expenditures. Estimated cost to project completion totalled approximately \$39 million.
- The absence of supporting documentation to substantiate 21 out of 26 expenditure transactions tested for construction and service contracts ranging from \$300,000 to \$3 million prevents the DLCU PM from ensuring responsible spending of Project funds.

### Recommendations

OPI	RECOMMENDATION
ADM(IE)/DGE	<b>Contracting and Expenditure Management Documentation.</b> Implement a revised filing process to facilitate cost-effective and timely retrieval of DLCU contracting and expenditure data and ensure an adequate audit trail is maintained to demonstrate due diligence and proper stewardship of DLCU funds.



## ANNEX A—MANAGEMENT ACTION PLAN

Ser	CRS Recommendation	OPI	Management Action	Target Completion Date
<b>Accountability</b>				
1.	<b>Roles and Responsibilities for DLCU Property Support Services.</b> Revise the Project Charter to reflect changes in responsibilities for property issues and formalize the current process for procurement of real estate support services.	ADM(IE)/ DGE	<p>The sites owned by ADM(Mat)/North Warning System Office (NWSO) with properties support provided by DRFMS. The PM DEW Line Clean Up (DLCU) is rewriting the DLCU Project Charter and will clarify properties handover as a DRFMS and NWSO responsibility. A DEW Line Property Strategy has been drafted to confirm responsibilities for final disposition of the DND land reserves.</p> <p>In the interim, the DLCU PMO Property Officer has set up an improved process for oversight and expenditure approval of DLCU property support by PWGSC to ensure proper accountability for PWGSC support.</p>	March 2008
2.	<b>DLCU PMO Organization Structure.</b> Review the organization structure within the DLCU PMO and make the changes necessary to ensure that the DLCU PM is provided with an independent contract management oversight capability.	ADM(IE)/ DGE	<p>The management of the DLCU Project has had both revolutionary and evolutionary changes. Recently, the head of the DCC DLCU PMO and the head of the DLCU Contract Management (CM) both started reporting to the same DCC Area Manager. Also CM has increased its ability through more staff and better retention. Reporting along two separate DCC chains would mean involving another DCC manager in the DLCU project and thus incur the additional cost to DND for their time billed in initially learning about the project and then keeping abreast of project issues. DCC has recognized the inherent challenges and has taken steps to mitigate risk.</p>	



ANNEX A

Ser	CRS Recommendation	OPI	Management Action	Target Completion Date
<b>Accountability (cont'd)</b>				
			The current situation is made to work by good and open communication between the PM and the DCC members of the PMO. This situation is unavoidable short of hiring a DND PMO, which is not feasible at year 12 of 17 for the project. The PM will continue to carefully monitor the situation and take appropriate action when the rare conflict does occur. The hiring of a second DND member of the PMO will improve DND oversight of the project.	January 2008
3.	<b>Segregation of Duties.</b> Ask ADM(IE) staff for administrative assistance with regards to certification of DCC invoices under Section 34 of the FAA and re-assign applicable responsibilities accordingly.	ADM(IE)/ DGE	A new DND Assistant PM (Eng-4) is in the process of being hired and financial management would be a key part of the duties of this new position. This person will review all invoices before recommending them to the PM for signature of Section 34. As an interim measure some support is being provided by the DEEM financial analyst with DCC Team Leader continuing to recommend DCC invoices.	Completion is ongoing and a new Eng-4 will be in position by January 2008.
<b>Contracting Practices</b>				
4.	<b>ASA and Sole Sourcing.</b> Ensure that ASA and sole-source contracting practices used within the context of the DLCU Project comply with TB contracting policy and demonstrate fairness, transparency and value for money in the expenditure of public funds.	ADM(IE)/ DGE	As per the Cooperation Agreement with Nunavut Tunngavik Inc. (NTI) – the land claims agency, the approach being used for awarding contracts for the clean-up work is a competitive process with Minimum Inuit Content for Contracting (MICC) and Minimum Inuit Employment Content (MIEC) for site cleanups. ASA will continue to be used judiciously only in rare circumstances if requested by NTI or the DCC Contract Services Division and if it is the best option. Any use of ASA will be done in accordance with TB policy.	Completed



ANNEX A

Ser	CRS Recommendation	OPI	Management Action	Target Completion Date
<b>Contracting Practices (cont'd)</b>				
5.	<b>Third-Party Support (TPS).</b> Request ADM(Mat) to include a provision in the NWS operating and maintenance contract that gives DLCU staff adequate control over negotiation of TPS services required for DLCU activities on NWS sites.	ADM(IE)	The DLCU PMO has suggested alternative approaches to dealing with TPS but we have been advised that they cannot be implemented without reopening the contract between the contractor and PWGSC. Higher-level discussions are required amongst PWGSC, ADM(Mat) and ADM(IE) to ensure DND is getting value for money for any TPS from the contractor. The DLCU PMO has raised this issue with the project director who will address this matter with the appropriate PWGSC and ADM(Mat) staff.	May 2008
6.	<b>Solicitation of Contractor Input.</b> Direct DCC staff assigned to the DLCU Project to avoid soliciting DLCU consultants for contract services that would appear to give consultants unfair advantage over their competitors for future contract work.	ADM(IE)/ DGE	The case cited was a special situation where regulatory demands had to be met in order to avoid potential high risk/very high cost situation. The DCC Area manager reviewed the file and signed the Change Order. The PMO will avoid this situation in future.	Ongoing
7.	<b>Disposal of Surplus Material on DLCU Sites.</b> Ensure compliance with TB directive on disposal of surplus materiel at NWS sites and implement controls to verify that hazardous material is removed from surplus assets prior to their disposal.  Research hazardous material salvaged during the DLCU Project and develop action plan to mitigate associated environmental risks to DND.  Request a legal opinion on the value of the liability waiver for DND.	ADM(IE)/ DGE	Environmental stewardship and the high cost of shipping materials to the Arctic impose a need for the DLCU project to continue to support wise use of government resources through contractor salvage. The 3Rs (reduce, reuse and recycle) are normally integrated into DND/DCC demolition contracts with the requirement for the contractor to sign a waiver releasing DND from future liability and ensuring that hazardous substances are properly managed. The PMO will review current documentation to ensure that the contractor responsibility and liability for salvaged material are clear.  The issue of locals taking unused DND materials for their own use has been addressed where possible. For example, a pamphlet warning of the health dangers of a low temperature incineration of PCB painted materials has been distributed to the Inuit.	Written salvage process by March 2008



ANNEX A

Ser	CRS Recommendation	OPI	Management Action	Target Completion Date
<b>Contracting Practices (cont'd)</b>				
			DND lawyers will be requested to provide their opinion on the current waiver being used to protect DND from future liability.	Salvage waiver form to be reviewed by DND Legal March 2008
<b>Contract Management</b>				
8.	<b>Contract Management Practices (Aboriginal Benefits Issue).</b> Formalize and automate the process for calculating and reporting on the annual and cumulative MIEC/MICC benefits and generate electronic reports at least quarterly.  Monitor MIEC/MICC benefit files and conduct reasonability tests on contractor data to ensure that source information is accurate, complete and current.	ADM(IE)/ DGE	PMO created a MICC and MIEC database in summer 2004 and is now developing the database to include the sites completed before 2004. Hard copies of the contractors' submissions will now be filed on the benefit file of each site.  The PMO monitors the data weekly during the construction season and will create the mechanism to have a master digital database with current MICC & MIEC data that can be reported as required.  The database will be audited periodically to ensure correct data entry compared to the site documentation and correct formulae in the database.	December 2007          April 2008
<b>Financial Management</b>				
9.	<b>DLCU Budgetary Process.</b> Oversee the development and effective implementation of standard procedures and formats for the DLCU budget process, and ensure that adequate documentation of budget revision, variance analysis, and reconciliation activities is maintained on DLCU budget files.	ADM(IE)/ DGE	The budget structures and formats have now been standardized which allows better budget analysis. The budget management procedures have also been improved to ensure better explanation and documentation of decisions made.  A basic Cost Management Plan will be written to clarify budgetary procedures for all involved, particularly variance analysis and expenditure reconciliation.	Completed       June 2008
10.	<b>DCC Audit of Consultant Engineering Billing Practices.</b> Incorporate requirement for audit of the engineering contractor's billing process to project completion in DLCU Project Charter.	ADM(IE)/ DGE	DCC conducts audits of its contracts based on a risk management approach. The engineering contractors' billing is carefully reviewed monthly and recent audits have shown no major problems. The decision to audit will be based on the DCC risk analysis.  The requirement for audits will be included in the revised Project Charter.	          March 2008





ANNEX A

Ser	CRS Recommendation	OPI	Management Action	Target Completion Date
<b>Financial Management (cont'd)</b>				
11.	<b>Certification under the FAA.</b> Ensure adequate supporting documentation is on file to substantiate all third-party contract expenditures charged to the DLCU Project.	ADM(IE)/DGE	DCC has recognized the inadequate documentation. Staff training and a process review are ongoing. DCC will ensure that files are kept in better order with improved supporting documentation. ADM(IE) Comptroller staff will assist DCC and PMO with this process review.	May 2008
<b>Project Management Documentation</b>				
12.	<b>DLCU Documentation (Risk Management Plan and Exit Strategy).</b> Finalize and obtain approval for a formal risk management plan and an exit strategy conducive to successful termination of the DLCU Project in 2018.	ADM(IE)/DGE	<p>There is a risk management strategy that will provide a foundation for generating a formal risk management plan. Risk analysis is already a key component of all project decisions.</p> <p>There is a draft real property strategy to establish the basis for relinquishment of surplus NWS sites to the appropriate property owners. Finalization of the strategy has been delayed due to the long-term implications of involving several levels of governments and land claims groups.</p> <p>There is a draft Close-out Plan for the project that highlights the actions and the documentation required to fully close out the DLCU project. This plan is being trialed on a site before being finalized.</p>	<p>Risk Management Plan – December 2008</p> <p>Property Strategy approved by May 2008</p> <p>Close-out Plan by December 2007</p>
<b>Oversight</b>				
13.	<b>Monitoring and Challenge Review.</b> Provide the DLCU PM with the financial resources and expertise required to properly exercise effective stewardship and accountability for the \$583.3 million in DLCU budget expenditures.	ADM(IE)/DGE	Improved DND financial management expertise is required within DLCU PMO and this will be provided through the hiring of the Asst PM (Eng-4) and additional assistance from IE Compt staff.	March 2008



ANNEX A

Ser	CRS Recommendation	OPI	Management Action	Target Completion Date
<b>Value for Money</b>				
14.	<b>Contracting and Expenditure Management Documentation.</b> Implement a revised filing process to facilitate cost-effective and timely retrieval of DLCU contracting and expenditure data and ensure an adequate audit trail is maintained to demonstrate due diligence and proper stewardship of DLCU funds.	ADM(IE)/ DGE	A project filing process will be developed in conjunction with the Project Close-out Plan. Procedures will be established so that contract files will be organized, indexed and documented to facilitate cost-effective retrieval of information (it should be noted that file management is improving due to the continuity of permanent (vice seasonal) site CM staff hired since 2006). The writing of the Environmental Disclosure Reports (EDR) for each site will be another check to confirm that files for each site are complete.	December 2008



## ANNEX B—AUDIT CRITERIA

Objective	Area Assessed (Optional)	Criteria
Ensure that all departmental expenditures on environmental assessment, remediation and monitoring services for the DLCU Project are identified and justified.	Assignment of Project funds to various service providers	The DLCU budget clearly spells out activities and rationale for spending. Business plan linked to budget sets expenditure priorities/expectations.
	Monitoring and challenging budget expenditures	Expenditures are monitored against budget and changes/variances explained. An adequate audit trail exists for all budgetary and expenditure decisions.
Verify whether the internal control system for contracting practices has been carried out with due regard for (1) effectiveness and economy and (2) compliance with DND and TB policies and the Cooperation Agreements.	Contractor selection process	Selection process is fair, open, properly recorded and assures best value for money. Contract is awarded in a timely manner in accordance with TB and DND Policy.
	Contract implementation and expenditure verification activities	Ongoing site visits, reports, file reviews ensure effective/timely service delivery. Complete, accurate, and current data on contract status is maintained and readily accessible, including MIEC/MICC records. Invoices properly certified under Section 34 of FAA by qualified, authorized staff include adequate supporting documentation. DLCU staff responsibilities and reporting relationships are clearly defined, communicated and continually assessed for effective implementation.
Assess the project management practices for compliance with the standards developed by the PMI.	Project planning, documentation and management processes	A Project Charter is in place that identifies scope, resource, organization, budget, policy and other key requirements. Sufficient and appropriate project plans exist to guide the project to cost-effective completion by ensuring (a) project scope, cost and timeframes are correctly identified and controlled; (b) appropriate personnel are acquired and properly trained; (c) project risk management and exit plans are promptly developed; and (d) effective quality assurance and communication mechanisms exist.



## ANNEX C—AUDIT COVERAGE DCC AND DLCU PMO PHASE FOR PERIOD 1 APRIL 2002–31 MARCH 2005

Audit Coverage—Nature and Extent	
<b>Interviews</b>	PMO DLCU, DC Pol, CFLA staff PMO NWS, PWGSC contract staff DRFMS, ADM(IE) Comptroller DCC contract, finance and information management staff CAC and DCC external audit staff
<b>Procedural Testing</b>	<i>Document, Walk Through and Procedural Testing of Control Processes:</i> DCC Construction Contracting DCC Professional Services Contracting (EWG and Archaeological Services) DCC Service Contracting (Outfitter and TPS) DCC Recoverable Fees Contracts (Site Salaries, Site Travel and Rent) DCC Construction Phase Services (Design/Engineering) DLCU PMO Expenditure Approval and Payment (FAA 34, 33) DLCU PMO Budget Management Activities DLCU PMO Project Management Activities DLCU PMO Property Support Activities
<b>Substantive Testing</b>	<i>Samples selected at random and detailed testing conducted for the following:</i> DCC Professional Services Contracting (Archeological, EWG Services) DCC Recoverable Fees Services (Site Salaries, Site Travel and Rent) DCC Construction Phase Services (Design/Engineering) DCC Service Contracts (Outfitter and TPS) DCC Construction Activity (Site Clean-up)
<b>Sample Selection</b>	<i>Data Source:</i> DCC Expenditure Listing, FMAS Printouts, DRFMS invoice file <i>Period Covered:</i> 1 April 2002–31 March 2005 <i>Selection Approach:</i> Non-statistical sample selection (at random) <i>Sample Focus:</i> Cross-section of various contract categories and values awarded within the audit period, with emphasis on high-dollar and high-risk contracts. <i>Results Applied:</i> Because we did not employ statistical sampling methodology, we cannot extrapolate the test results to all the DLCU PMO and DCC expenditures for DLCU activities.
<b>Key Activities</b>	The nature and extent of audit coverage for each of the expenditure activities noted above is summarized for the audit period (1 April 2002–31 March 2005) in the following table:



ANNEX C

Audit Coverage						
Expenditure Period: 1 April 2002–31 March 2005						
Contract Activity	Total # of Payments	Sample # of Payments	Coverage as Percent of Total # of Payments	Total Value of Payments	Sample Value of Payments	Coverage as Percent of Total Value of Payments
Construction	41	21	51.22%	\$60,930,714	\$26,354,236	43.25%
Consultant	84	19	22.62%	\$10,201,385	\$4,432,846	43.45%
Operation	86	6	6.98%	\$1,698,652	\$55,709	3.28%
Recoverable Cost	93	23	24.73%	\$5,829,767	\$583,824	10.01%
Service	5	5	100.0%	\$1,381,813	\$1,381,813	100.0%
<b>TOTAL</b>	<b>309</b>	<b>74</b>	<b>23.95%</b>	<b>\$80,042,331</b>	<b>\$32,808,428</b>	<b>40.99%</b>



## **ANNEX D—LESSONS LEARNED DIRECTED CONTRACT APPROACH**

- Sufficiently resource the PMO at the outset;
- Provide clear, structured definition of the nature, extent and cost of directed contract work prior to contract award;
- Maintain complete, organized record of contracting decisions and actions;
- Separate contract/budget management activities for clarity of scope/cost relationship;
- Segregate incompatible duties such as project/contract management;
- Ensure a strong, independent challenge review process is in place and operating effectively; and
- Implement periodic audits of long-term directed contracts early on in the project.

