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Information Act (AIA). Information UNCLASSIFIED.**

## Risk Analysis of Operations and Maintenance Contracts

April 2007

7050-11 (CRS)



Canada 

## CAVEAT

This risk assessment was conducted in order to determine which audits to include in the annual Chief Review Services Work Plan. The analysis conclusions do not have the weight of an audit or formal evaluation. While sufficient to enable the development of recommendations for consideration by management, the assessments provided and conclusions rendered are not based on the rigorous inquiry or evidence required of an audit or program evaluation. Accordingly, they are not represented as such.

It should also be noted that the analysis is not intended to assess the performance of contractors; rather, it is an internal review of processes and practices within the DND/CF. Contractors have not been interviewed or otherwise asked to provide comment or feedback.



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## LIST OF ACRONYMS AND ABBREVIATIONS

ABE	Automated Buyer Environment	DND	Department of National Defence
ADM(Fin CS)	Assistant Deputy Minister (Finance and Corporate Services)	DOCC	Defence Oversight Committee on Contracting
ADM(IM)	Assistant Deputy Minister (Information Management)	DRDRA	Director Research and Development Resource Administration
ADM(Mat)	Assistant Deputy Minister (Materiel)	Eng	Engineering
ADM(S&T)	Assistant Deputy Minister (Science and Technology)	FAA	<i>Financial Administration Act</i>
ADP	Automated Data Processing	IP	Intellectual Property
ASC	Audit Services Canada	IT	Information Technology
CFHIS	Canadian Forces Health Information System	Log	Logistics
CLS	Chief of the Land Staff	MCDV	Maritime Coastal Defence Vessel
CMP	Chief Military Personnel	NDHQ	National Defence Headquarters
Commod	Commodities	O&M	Operations and Maintenance
Comms	Communications	OPI	Office of Primary Interest
CRS	Chief Review Services	PWGSC	Public Works and Government Services Canada
CSES	Combat System Engineering Support	R&D	Research and development
D Air CBM	Director Air Corporate Business Management	R&O	Repair and overhaul
DAPPP	Director Accounts Processing, Pay and Pensions	Svcs	Services
Detec	Detection	TCCCS	Tactical Command Control and Communication System
DMGPI	Director Material Group Program Integrity	Sys	System
		Tpt	Transport
		Trg	Training



## RESULTS IN BRIEF

A risk analysis of Operations and Maintenance (O&M) contracts was performed to identify higher-risk<sup>1</sup> contracts that warrant further review. A series of computer-assisted audit tests were developed to analyze 15,584 active Department of National Defence (DND) contracts tendered by Publics Works and Government Services Canada (PWGSC) worth \$22 billion in total. A risk scoring system was developed for eight automated risk criteria that ultimately identified 63 higher-risk contracts that require further review.

Chief Review Services (CRS) developed this risk analysis methodology in 2003 in response to the Deputy Minister's concerns with several contracts that had experienced significant cost escalation.<sup>2</sup> Since then, the methodology has been refined to include more automated criteria.

### Findings and Recommendations

**High-Risk Contracts.** Sixty-three O&M contracts worth \$2.3 billion, listed in [Appendix 2](#) to Annex B, have exhibited high-risk attributes that warrant review.

CRS will conduct a comprehensive audit of four O&M contracts that amount to \$505 million. Appropriate Level 1 management review teams should review the 48 contracts worth \$517 million listed at [Appendix 3](#) to Annex B. The remaining 11 contracts had either already been reviewed or audited by CRS, or they had no cost escalation.

**Automated Risk Analysis.** The automated risk analysis techniques developed by CRS and reported in 2004 have resulted in audits of service contracts with significant findings. To date the Department has not taken full advantage of this methodology to identify high-risk contracts.

### Overall Assessment

In recent years, CRS has used automated risk analysis techniques to examine the DND contract universe, thus enabling the effective employment of audit resources to identify systemic contract management issues. Given the magnitude of active contracts in DND, contract management audit or review can only be exercised with a risk-based approach. The analysis of 4,141 active O&M contracts identified only four contracts with high-risk attributes that warrant a comprehensive audit.

In compliance with the new Treasury Board Internal Audit Policy Implementation Plan, CRS will continue to enhance computer-assisted contract risk analysis in order to develop annual audit work plans. These methodologies will be shared with Level 1 management review teams in order to provide greater assurance of contract management control frameworks in the Department.

<sup>1</sup> "Higher risk" will be used throughout the report to refer to projects that scored highest on certain risk indicators/criteria. It is not to be confused with any risk assessment performed by contract managers.

<sup>2</sup> *Preliminary Risk Analysis of DND Contracts*, January 2004.



As the Department's centre of procurement expertise, Assistant Deputy Minister (Materiel) (ADM(Mat)) should employ an automated risk analysis tool once a year to identify those high-risk contracts that are to be briefed to the Defence Oversight Committee on Contracting (DOCC). It is also recommended that high-risk O&M contracts be taken into consideration for the oversight process surrounding *Financial Administration Act* (FAA) Section 33 certification.

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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

Due to concerns with several contracts that experienced significant cost escalation, in 2003 the Deputy Minister directed CRS to develop a means of determining which contracts could become problematic. CRS successfully developed an automated risk analysis process that was reported in January 2004. The report, *Preliminary Risk Analysis of Contracts*, identified 38 service contracts that required further review by CRS. This work has led to five contract management audits that will be completed by March 2007.

As there are at least 5,000 DND contracts tendered and awarded by PWGSC each year, CRS decided to conduct another risk analysis of contracts in order to analyze those contracts awarded since 2003. This analysis could include up to 10,000 new contracts since the last risk analysis. The CRS 2006/07 Work Plan also included a risk analysis of capital projects that focused solely on capital acquisition contracts. A risk analysis of goods contracts has also been recently completed by CRS. Therefore, this risk analysis of contracts was limited to O&M contracts.

### Objective

To identify higher-risk O&M contracts that warrant audit by CRS or follow-up by appropriate Level 1 managers.

### Scope

- 15,584 active contracts in June 2006 amounting to \$22 billion.
- DND tendered contracts were excluded from the analysis. The value of these contracts was immaterial compared to the PWGSC tendered contracts. Furthermore, the DND tendered contract database does not include sufficient data to apply automated risk criteria.

### Methodology

#### Sources of Data

- June 2006 PWGSC Automated Buyer Environment (ABE) database extract of DND contracts.
- Audit Services Canada (ASC) summary of audits completed since April 2003.

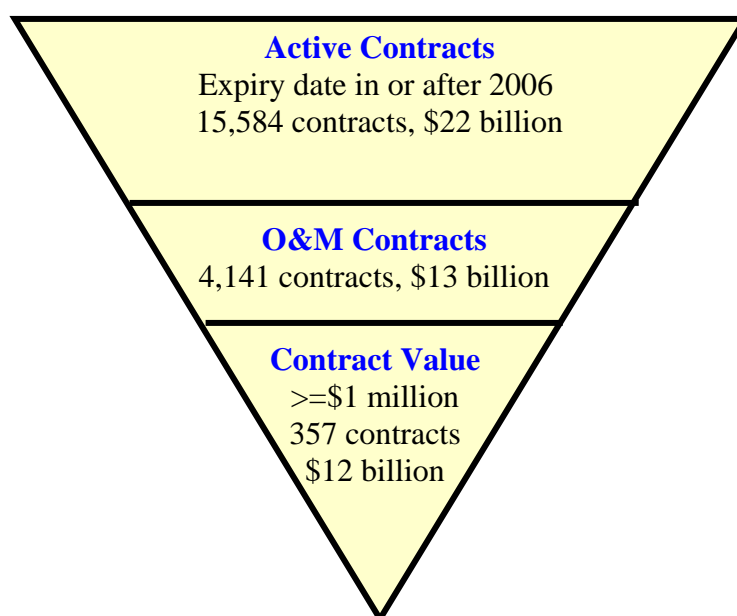
### Global Filters

Figure 1 shows the three global filters that reduced the number of active PWGSC tendered contracts to a manageable sample size.

- **Filter 1.** Although the PWGSC database included 87,610 contracts worth \$34 billion, only 15,584 contracts worth \$22 billion were found to still be active in 2006.



- **Filter 2.** O&M contracts were extracted with use of the North American Free Trade Agreement codes for each contract. This filter reduced the active contract population to 4,141 O&M contracts worth \$13 billion.
- **Filter 3.** To reduce the sample further, only O&M contracts greater than or equal to \$1.0 million were considered. Although the population was thereby reduced from 4,141 to 357 contracts, an 8.6 percent sample, the value of these contracts totaled \$12.4 billion—92 percent of the value of all O&M contracts.



**Figure 1. Global Contract Filters.** *The use of these filters reduced the contract population sample from 15,584 active contracts to 357 O&M contracts, each greater than or equal to \$1.0 million.*

## Criteria

The eight automated risk criteria listed below were applied to each of the 357 O&M contracts. The detailed description of each criterion and the risk scoring ranges are provided at [Annex B](#).

- |                             |                              |
|-----------------------------|------------------------------|
| • Contract Value            | • Contract Award Process     |
| • Contract Value Escalation | • Types of Service Contracts |
| • Types of Payment          | • High-Risk Vendors          |
| • Basis of Payment          | • Procurement Expertise      |



## FINDINGS AND RECOMMENDATIONS

### High-Risk Contracts

*Sixty-three O&M contracts worth \$2.3 billion have exhibited high-risk attributes and warrant review.*

The risk analysis of O&M contracts included the application of eight automated criteria to 357 active contracts in 2006—each contract with a value greater than \$1.0 million. The detailed results are provided in [Appendix 2](#) to Annex B.

Of these 357 contracts, worth \$12.4 billion in total, the analysis identified:

- 63 contracts worth \$2.3 billion that received a total risk score of 19 or greater (with the highest score achieved being 23 of a maximum 28).
- Four contracts listed in Table 1, amounting to \$505 million, warrant an audit by CRS due to the contract value and escalation to date. Other risk attributes included:
  - Multiple types of payments;
  - Sole-source tendering;
  - Exclusive rights;
  - Fixed time rate basis of payment; and
  - Historically high-risk vendors with over-claims and excess profit.
- 11 contracts worth \$1.3 billion were already audited or reviewed by CRS, or were high value but with no cost escalation. The remaining 48 lower-value contracts worth \$517 million (all with individual values less than \$50 million) exhibit sufficient risk indicators to be examined by Level 1 management review teams.

Contract Number	Contract Value	Vendor Name	Type of Service	Contract Escalation
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....

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**Table 1. O&M Contract Audits.** *With a maximum possible risk score of 28, the scores for these contracts ranged from 19 to 22, and were selected based on the factors explained above.*

#### Recommendations:

- CRS conduct a comprehensive audit of the O&M contracts listed in Table 1.
- Level 1 management review teams examine the 48 contracts (and any follow-on contracts) listed at [Appendix 3](#) and advise CRS on significant contract management issues.



## Automated Risk Analysis

*The automated risk analysis techniques developed by CRS and reported in 2004 have resulted in audits of service contracts with significant findings. To date, the Department has not taken full advantage of this methodology to identify high-risk contracts that require additional monitoring by Level 1 management.*

**Contract Risk Analysis.** Due to concerns by senior management in 2003 with several contracts that had experienced significant cost escalation, the Deputy Minister directed CRS to determine what other contracts could become problematic. A risk analysis methodology was successfully developed by CRS and reported in the *Preliminary Risk Analysis of Contracts* January 2004. It was recommended that the procurement centre of expertise, ADM(Mat), employ the same methodology to determine high-risk contracts. To date, this recommendation has not been fully implemented because of resource limitations in ADM(Mat).

The risk analysis has been successfully employed in other CRS projects.

- *Risk Analysis of Contracts Managed by CF Health Services Group* (January 2005);
- *Risk Analysis of Service Contracts* (January 2005); and
- *Risk Analysis of Defence Research and Development Canada Contracts* (June 2006).

**Contract Management Audits.** Four audits of service contracts that were selected with the CRS risk analysis methodology have resulted in significant findings. This risk-based approach to the audit of repair and overhaul contracts has consistently identified:

- Opportunities for value-for-money improvements;
- Payment certification weaknesses and potential overcharges;
- Poor management of DND inventory by vendors;
- Weaknesses in vendor reporting frameworks; and
- Failure to take advantage of warranties.

Recently, the Director Materiel Group Program Integrity (DMGPI) has been created in ADM(Mat) and their mandate includes the responsibility for contracting policy, monitoring and compliance. Given the thousands of active contracts in the Department, DMGPI should employ an automated contract risk analysis tool to narrow the population to a reasonable sample size for review purposes. This exercise is possible once a year when the PWGSC ABE database is updated in April. Recently CRS staff has been working with DMGPI to provide the most current ABE data as well as the results of Audit Services Canada audits.

### Recommendations:

- ADM(Mat) employ an automated risk analysis tool once a year to determine those higher-risk contracts for briefing to the DOCC.
- ADM(Fin CS) ensure high-risk O&M contracts be taken into consideration for the oversight process surrounding FAA Section 33 certification.



**ANNEX A—MANAGEMENT ACTION PLAN**

Ser	CRS Recommendation	OPI	Management Action	Target Date
1.	<b>High-Risk Contracts.</b> Level 1 management review teams examine the 48 contracts (and any follow-on contracts) listed at <a href="#">Appendix 3</a> and advise CRS on significant contract management issues.	CLS	CLS Area management review teams are conducting a review of the four CLS O&M contracts identified.	In progress
		CAS/D Air CBM	D Air CBM has included the two CAS high-risk contracts in the annual review plan. Results will be forwarded to CRS.	Apr 08
		CMP	The CMP annual review plan will include the three O&M contracts identified by CRS.	Apr 08
		ADM(IM)	ADM(IM) will review the 14 O&M contracts and advise CRS on significant contract issues.	Apr 08
		ADM(Mat)/DMGPI	DMGPI, in collaboration with CRS, will employ risk analysis techniques to conduct a cursory review of contracts managed within ADM(Mat), with the purpose of identifying those presenting the highest potential risk. A detailed review will be undertaken on those ranking highest in the initial review. Corrective and preventative action will be undertaken in conjunction with the findings. A summary of findings will be provided to CRS.	Apr 08
		ADM(S&T)/DRDRA	DRDRA will take a risk-based approach to the review of the two ADM(S&T) O&M contracts depending on the cause and amount of cost escalation for each contract.	Apr 08



## ANNEX A

Ser	CRS Recommendation	OPI	Management Action	Target Date
2.	<p><b>Automated Risk Analysis.</b> ADM(Mat) employ an automated risk analysis tool once a year to determine those higher-risk contracts for briefing to the DOCC.</p>	ADM(Mat)/ DMGPI	DMGPI, in collaboration with Materiel Group procurement directorates and L1 comptrollers, will be implementing a risk management regime to identify and manage high-risk contracts. An automated tool will assign weighted scores to risk elements of all goods, R&O, capital, service, construction, and professional services contracts greater than \$2 million—the Procurement Review Committee review threshold. Procurement officers will access the tool to address associated high-risk elements of contracts to mitigate and report on appropriate risks iaw the <i>Procurement Administration Manual</i> and other DND guidance.	Apr 07
	High-risk O&M contracts be taken into consideration for the oversight process surrounding FAA Section 33 certification.	ADM(Fin CS)/ DAPPP	DAPPP will establish a high-risk contract section as part of the FAA Section 33 certification process.	Jun 07



## ANNEX B—AUTOMATED RISK CRITERIA

The eight automated risk criteria described below involved the analysis of the PWGSC ABE database. This database contains contract information on all DND contracts tendered by PWGSC. With the assistance of audit software (Audit Command Language), automated risk criteria were applied to 347 O&M contracts that amounted to obligations of \$12 billion.

- Each contract was greater than \$1 million; and
- All contracts were active in 2006.

The results of the risk criteria are provided at [Appendix 1](#) to Annex B. For each criterion, all the contracts were assigned a risk score.

- Contracts that were scored higher were deemed to be higher risk.
- The highest possible accumulated risk score per contract for all eight criteria was 28.
- The top 53 high-risk contracts are listed at [Appendix 2](#) to Annex B.

**Contract Value.** Higher-value contracts that are poorly managed result in higher-risk impact. The sample of contracts ranged from \$1.0 million in value to those that were greater than \$400 million. Although the average contract value was \$34.6 million, the median contract value was only \$2.9 million due to several high-value contracts that affected the overall average. Contract value was stratified into five ranges, with larger values receiving a higher-risk score.

**Contract Value Escalation.** The escalation of a contract's value was determined by comparing the original contract value to the current contract value. Exercised option years were not included in this analysis. The median contract value escalation was 23.7 percent over the average contract term of three years. Contracts with higher-than-average escalation could indicate poor value for money or out-of-scope work. Therefore, those contracts with significant escalation in value were considered to be higher risk.

72 contracts worth \$1.5 billion were found to have a contract value escalation greater than 130 percent.

**Type of Payment.** Some payment types have more potential to impair the proper verification of services received. Payment for services on delivery is the most straightforward verification once the service has been delivered. For monthly progress claims for services provided over several years, it is more difficult to verify the exact progress of the work unless specific milestones are set with acceptance criteria. The greatest risk to the Department is advance payments with no deliverables or multiple payments that include progress claims, invoices, and advance payments. Contracts with this type of payment were scored accordingly.

**Basis of Payment.** It is more difficult to ensure value for money for a contract with a cost-plus-profit basis of payment. Similarly, those contracts with payments based on the vendor's time and material do not provide any assurance of vendor efficiency. For this criterion these bases of payment were scored as higher risk.

56 percent of the contracts (196), worth \$6.2 billion, had a time and materiel basis of payment.



ANNEX B

**Contract Award Process.** There are a number of circumstances that result in a contract not being awarded on a basis of best value. For example, the lowest bid may be accepted rather than a higher bid with a superior technical evaluation<sup>3</sup>. In some cases only one bid may be received or the contract awarded without competition due to intellectual property rights or operational urgency. A higher-risk score was assigned in those cases where best value was not the basis of contract award or only one contractor was considered.

**Type of Service.** In recent years, there have been certain contracted services that have required greater scrutiny by the Department such as information technology, advertising, transportation, and research and development. These types of contracts were considered higher risk.

43 contracts worth \$1.2 billion were awarded to vendors with past over-claims of \$350,000 or more and excess profits greater than 4.0 percent.

**High-Risk Vendors.** By analyzing data from ASC audit reports dating back to 2003, CRS identified vendors with a history of over-claims or excess profits on past contracts. Those current contracts with vendors who had a history of at least 4.0 percent excess profit, or over-claims greater than \$350,000, were rated as higher risk.

**Contract Management Expertise.** It is recognized that contracting expertise for complex contracts resides with the procurement staff in ADM(Mat). Contracts administered by other National Defence Headquarters (NDHQ) organizations and bases/wings were considered to be higher risk.

<sup>3</sup> It was assumed that contracts with the best technical evaluation and the lowest bid were designated as “best value” contracts in the PWGSC ABE database.



## APPENDIX 1 TO ANNEX B—CRITERIA SCORING/RESULTS

Criteria	Risk Score	Range Description	Contract Count	Percent of Count	Percent of Total Contract Value	Total Contract Value
Contract Value	1	<\$1.5M	94	26%	1%	\$112,491,819
	2	>=\$1.5M and <\$3M	89	25%	2%	\$188,463,719
	3	>=\$3M and <\$7M	85	24%	3%	\$384,686,005
	4	>=\$7M and <\$50M	59	17%	8%	\$967,852,335
	5	>=\$50M	30	8%	87%	\$10,718,911,941
Contract Value Escalation	1	<=0	151	42%	61%	\$7,495,713,423
	2	>0 and <23.7%	34	10%	17%	\$2,099,323,613
	3	>=23.7% and <70%	47	13%	3%	\$328,295,305
	4	>=70% and <130%	53	15%	7%	\$903,417,679
	5	>=130%	72	20%	12%	\$1,545,655,799
Type of Payment	1	Payment on Delivery	100	28%	5%	\$630,063,140
	2	Progress Claim, Milestone	169	47%	51%	\$6,292,016,844
	3	Advance, Multiple	88	25%	44%	\$5,450,325,835
Basis of Payment	1	Firm Unit/lot Price	134	38%	47%	\$5,767,211,929
	2	Fixed Time Rate	196	55%	50%	\$6,161,468,969
	3	Cost plus	27	8%	4%	\$443,724,921
Contract Award Process	1	Best Value	134	38%	40%	\$4,970,760,009
	2	Lowest Bid	110	31%	44%	\$5,483,400,355
	3	IP Right, Urgency, One Bid	113	32%	16%	\$1,918,245,455
Type of Service	1	Others	128	36%	63%	\$7,813,324,633
	2	Engineering, R&O	84	24%	17%	\$2,140,443,814
	3	R&D, Advertising, Tpt Svcs, IT	145	41%	20%	\$2,418,637,372
High-Risk Vendor	1	Others	253	71%	80%	\$9,836,659,999
	2	\$ <350K or Percentage < 4%	61	17%	11%	\$1,341,373,507
	3	\$ >=350K or Percentage >=4%	43	12%	10%	\$1,194,372,313
Contract Management Expertise	1	ADM(Mat)	196	55%	66%	\$8,130,994,729
	2	NDHQ not including ADM(Mat)	104	29%	18%	\$2,197,139,000
	3	Bases or Units	57	16%	17%	\$2,044,272,090
		<b>Each criterion adds up to:</b>	<b>357</b>	<b>100%</b>	<b>100%</b>	<b>\$12,372,405,819</b>



## APPENDIX 2 TO ANNEX B—TOP 63 HIGH-RISK O&amp;M CONTRACTS

L1 OPI	Contract Number	Vendor Name	Contract Value	Contract Description	Total Score
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
CMP	.....	.....	.....	.....	...
CAS	.....	.....	.....	.....	...
CLS	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(S&T)	.....	.....	.....	.....	...
ADM(IM)	.....	.....	.....	.....	...
ADM(IM)	.....	.....	.....	.....	...
ADM(IM)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
CMP	.....	.....	.....	.....	...
CLS	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
CAS	.....	.....	.....	.....	...
ADM(S&T)	.....	.....	.....	.....	...
ADM(IM)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(IM)	.....	.....	.....	.....	...
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## APPENDIX 2 TO ANNEX B

L1 OPI	Contract Number	Vendor Name	Contract Value	Contract Description	Total Score
ADM(IM)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
CMP	.....	.....	.....	.....	...
CLS	.....	.....	.....	.....	...
CLS	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(IM)	.....	.....	.....	.....	...
CMP	.....	.....	.....	.....	...
CLS	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(S&T)	.....	.....	.....	.....	...
ADM(S&T)	.....	.....	.....	.....	...
ADM(S&T)	.....	.....	.....	.....	...
ADM(IM)	.....	.....	.....	.....	...
ADM(IM)	.....	.....	.....	.....	...
ADM(IM)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(IM)	.....	.....	.....	.....	...
ADM(IM)	.....	.....	.....	.....	...
ADM(IM)	.....	.....	.....	.....	...
ADM(IM)	.....	.....	.....	.....	...
ADM(IM)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...

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L1 OPI	Contract Number	Vendor Name	Contract Value	Contract Description	Total Score
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
		<b>Total of 63 contracts</b>	<b>\$2.3B</b>		

**Four highlighted contracts will be audited by CRS.**

**\*Indicates previous CRS audit/review.**

**\*\*Indicates no escalation.**





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## APPENDIX 3 TO ANNEX B

L1 OPI	Contract Number	Vendor Name	Contract Value	Contract Description	Total Score
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(Mat)	.....	.....	.....	.....	...
ADM(S&T)	.....	.....	.....	.....	...
ADM(S&T)	.....	.....	.....	.....	...
CAS	.....	.....	.....	.....	...
CAS	.....	.....	.....	.....	...
CLS	.....	.....	.....	.....	...
CLS	.....	.....	.....	.....	...
CLS	.....	.....	.....	.....	...
CLS	.....	.....	.....	.....	...
CMP	.....	.....	.....	.....	...
CMP	.....	.....	.....	.....	...
CMP	.....	.....	.....	.....	...
		<b>Total of 48 contracts</b>	<b>\$517,110,782</b>		

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