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Review of 202 Workshop Depot as a Most Efficient Organization

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LIST OF ACRONYMS

202 WD	202 Workshop Depot	MASIS	Materiel Acquisition and Support Information System
ADM(Mat)	Assistant Deputy Minister (Materiel)		
ASD	Alternative service delivery	MEO	Most Efficient Organization
CAM	Chemical Agent Monitor	Mil Pay	Military Pay
CANOSCOM	Canadian Operational Support Command	MOS	Military Occupational Structure
		NP	National Procurement
CAR	Corrective Action Request	O&M	Operations and Maintenance
CF	Canadian Forces	OEM	Original Equipment Manufacturer
CFSS(U)	Canadian Forces Supply System Upgrade	OWSS	Optimized Weapon System Support
		P/NP	Productive vs Non-Productive
CLS	Chief of the Land Staff	PSMTVL	Palletization System Medium Tactical Vehicle Logistics
CRS	Chief Review Services		
DGLEPM	Director General Land Equipment Program Management	R&O	Repair and Overhaul
		SOW	Statement of Work
DGLS	Director General Land Staff	SWE	Salary Wage Envelope
DND	Department of National Defence	VCDS	Vice Chief of the Defence Staff
FY	Fiscal year		
HLVW	Heavy Logistics Vehicle Wheeled		
LAV	Light Armoured Vehicle		
LCMM	Life Cycle Materiel Managers		
LCT	Low Cost Terminal		
M113A3 w/Turret	M113A3 Armoured Personnel Carrier with Turret		



RESULTS IN BRIEF

This report is based on the results of a review completed in fiscal year (FY) 2005/06 at the direction of the Vice Chief of the Defence Staff (VCDS). Additional baseline information provided to Chief Review Services (CRS) in May 2007 by 202 Workshop Depot (202 WD) has also been considered in the report findings and recommendations.

The objective of the review was to assess 202 WD's progress against Most Efficient Organization (MEO) output, savings and performance targets stated in the MEO Instructions and to determine whether 202 WD is on track to becoming an MEO. The scope of the review was limited to the first two fiscal years of the MEO plan: FY 2002/03 (Year 1) and FY 2003/04 (Year 2).

Principal Observations and Concerns

Achievement of MEO Targets

Output (Production Hours). The target was to ensure that production levels did not decline from the baseline, as measured by total annual production hours. Achievement could not be reliably assessed due to an inability to confirm the accuracy of either original or revised baseline data and because of incomplete labour hour records for Year 1. Further, total annual production hours are an incomplete measure of productivity if output is not also considered.

Agreed-to Delivery Dates. The target of 85 percent on time for Year 1 was not met; however, in Year 2 the target of 90 percent was met. To some degree, the apparent improvement may be due to more complete record keeping as opposed to an actual improvement in performance.

Reject Rate. 202 WD did not measure reject rates in Year 1, but in Year 2 the reported rate of 0.05 percent was within the acceptable range of 2 percent or less. Customer statements confirm that product quality is excellent; however, reject rate may not be the most appropriate quality measure.

Cycle Times (Productivity). The target was to reduce the number of direct production hours required to produce a particular product over time. Results varied somewhat by product, but overall, productivity was largely stable. Many of the less favourable results were explained by the high priority placed on products for overseas deployments and the tendency to address the easiest units in a bulk order first, leaving more time-consuming items until later, in order to more quickly meet demand.

Overall Assessment

- While the review confirmed the achievement of some of the reported MEO targets for the first two years, an inability to confirm the reliability of the 1997/98 baseline data and incomplete records relating to Year 1 precluded assessing the achievement of other performance targets.
- Reported measures were not, in some cases, sufficient indicators of improved performance.
- Some MEO assumptions did not realistically reflect federal government funding and labour management regulations.



Total Avoidable Costs. The MEO Instructions targeted production-hour cost reductions of 15 percent by Year 3 and 20 percent by Year 5. No specific targets were included for Year 1 and Year 2. Based on the revised baseline data received and by prorating the incomplete Year 1 data to reflect a full year, costs per production hour appear to be declining as intended—by 12 percent in Year 1 and by 13 percent in Year 2. However, because of our inability to validate the baseline or Year 1 hours, these reductions cannot be confirmed with a high degree of certainty. Table 1 summarizes results in achieving the five criteria established in the MEO Instructions.

Measure	Year 1	Year 2
Output (Production Hours)	Unable to reliably measure	Unable to reliably measure
Agreed-to Delivery Dates	Did not meet target of 85 percent on time	Met target of 90 percent on time
Reject Rates	Not measured	Met target of 2 percent or less
Productivity Stable or Improving	Met target, productivity stable for most products	Met target, productivity stable for most products
Total Avoidable Costs (Savings)	Unable to reliably measure	Unable to reliably measure

Table 1. Achievement of MEO Performance Targets.

MEO Planning Assumptions and Constraints

The intention of the MEO Instruction was to achieve the required output and performance targets while reducing the cost of the actual production output by 20 percent over the five years. The assumptions made in establishing this goal may not have adequately considered federal government regulations relating to funding. The initial MEO proposal was based on the premise that 202 WD could use “a dollar as a dollar,” deploying its financial resources in the most effective way possible. However, the distinctions between Military Pay (Mil Pay), Salary Wage Envelope (SWE), National Procurement (NP) and other categories of funding place restrictions how these funds can be used. This precluded some cost-effective investments in facilities, training and equipment, as well as the most cost-effective staffing and contracting approaches. 202 WD mitigated the shortfall in core funding through user-pay. This caused tension with clients, not because they were unwilling to pay for services, but because the final costs were not known until late in the fiscal year, precluding effective planning.

Labour-management constraints also received insufficient consideration in establishing MEO criteria. The MEO proposal was based on the implementation of self-managed teams, but the national classification system and national collective agreements could not accommodate this approach. Military posting priorities and determinate employee restrictions further impacted the desired flexible use of human resources within 202 WD.



Future Demand for 202 WD Services

A concern raised as part of the review was the future demand for 202 WD services. At the time of the review, other than current work requirements for the M113, the Heavy Logistics Vehicle Wheeled (HLVW) and the Leopard I, there had been little formal review of long-term markets and preparation for any future changes in operations and capacity.

Recommendations

The Assistant Deputy Minister (Materiel) (ADM(Mat)) should ensure that future 202 WD MEO reporting is based on clear, reasonable, relevant indicators that collectively provide a meaningful assessment of the production effort expended, the productivity of that effort, and the reductions in avoidable costs. For example:

- Productivity measurement (production hours per unit) could replace cycle time as a measure, with the target being to maintain or improve productivity.
- More relevant quality measures could be developed to replace or enhance the reject rate measurement.

ADM(Mat) should ensure MEO Instructions are based on assumptions that are consistent with all federal government funding and labour management regulations, and that performance criteria adequately consider these regulations.

ADM(Mat), in collaboration with 202 WD, should review future requirements for 202 WD services and prepare for any changes in operations and capacity that may be required.

Management Action: ADM(Mat) issued a memo in September 2005 requesting that 202 WD MEO implementation end in Year 3 (FY 2004/05). 202 WD will continue to pursue the MEO concept, but will cease to be considered as an alternative service delivery (ASD) candidate. As an ADM(Mat) group, 202 WD must contribute to the overall efficiency of the land equipment program, and not just to the efficiency of the unit. To that end, they will continue to develop in cooperation with other initiatives such as CF Transformation, Optimized Weapon System Support, and Whole Fleet Management.

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



INTRODUCTION

202 WD is a vehicle and equipment repair and overhaul (R&O) facility located in Montreal, Quebec, responsible for the repair of over 1,000 different products belonging to the land force. Its mission is to offer competitive services of overhaul, integration and repairs as required for combat vehicles and armament systems.

202 WD was identified as an ASD review candidate in the fall of 1997, and was given an opportunity to achieve MEO expected savings and benefits through internal means within five years beginning in FY 2002/03. [Annex B](#) provides information on ASD and MEO concepts, and [Annex C](#) summarizes the performance targets established and the reported results. Table 2 outlines the steps in the process to transform 202 WD into an MEO.

Year	202 WD MEO Chronology
1997	202 WD is identified as an Alternative Service Delivery (ASD) review candidate.
1999	Decision made to proceed with process to make 202 WD a Most Efficient Organization (MEO).
2000	VCDS, the Executive Authority, issues MEO Instructions establishing targets for performance improvement over five years.
2001	202 WD submits its MEO proposal. VCDS endorses MEO proposal; recommends that results be verified within two years of implementation.
2005	VCDS engages CRS to review 202 WD's progress.

Table 2. 202 WD MEO Chronology.

CRS hired KPMG LLP to assess 202 WD's progress against the MEO output, savings and performance targets as stated in the 202 WD MEO Instructions, and to determine whether 202 WD is on track to achieve MEO status in five years. The review took place from January to April 2005 and the results were briefed to management in April/May 2005. In May 2007, additional baseline information was provided to CRS by 202 WD. All information available was considered in reaching these reported findings.



OBJECTIVE AND SCOPE OF REVIEW

- To assess 202 WD's progress against the MEO output, savings and performance targets as stated in the 202 WD MEO Instructions (see [Annex C](#)); and
- To assess whether it is on track to achieve MEO status by FY 2006/07.

The scope of the review was limited to the first two fiscal years of the MEO results—FY 2002/03 (Year 1) and FY 2003/04 (Year 2).

METHODOLOGY/LINES OF ENQUIRY

The review methodology included:

- Interviews with 202 WD military and civilian staff, and with customers, union representatives and other stakeholders;
- Site visits to 202 WD;
- Review of documentation and reports;
- Requests for additional or new data reports; and
- Analysis of the data and interview results.

Three lines of enquiry were identified as part of the review-planning phase:

- Achievement of MEO targets, including suitability and consistency of performance measures;
- The adequacy of consideration given to federal government funding and labour management regulations in establishing MEO criteria; and
- Future demand for 202 WD services.



FINDINGS AND OBSERVATIONS

ACHIEVEMENT OF MEO TARGETS, INCLUDING SUITABILITY AND CONSISTENCY OF PERFORMANCE MEASURES

The review included confirming the suitability of available performance data and the results achieved, as claimed by 202 WD, for each MEO Instruction performance target (see [Annex C](#) for details).

Output (Production Hours)

The MEO target was to ensure that production levels, as measured by production hours, did not decline from the baseline year (FY 1997/98). “Direct” and “indirect” hours were included in the production hours, in accordance with the MEO Instructions. The established baseline value of 313,914 hours included 281,206 direct and indirect hours that were reputedly captured on time cards and subsequently recorded electronically—but for which supporting documentation did not exist at the time of the review. As well, it included an estimate for an additional 32,708 indirect hours not logged by some production workers. There was no means for this review to determine the accuracy of either number, and therefore little assurance can be given that the baseline value is complete and accurate.

- Baseline hours could not be verified as complete or accurate;
- Indirect hours were not fully captured in Year 1;
- Any changes in output (production hours) could not therefore be reliably measured; and
- Achievement of Production Hour MEO targets cannot be confirmed.

As of FY 2002/03 (Year 1), 202 WD has used the Materiel Acquisition and Support Information System (MASIS) as its primary time reporting tool. This has improved tracking employee time and assessing project productivity. The system was not fully implemented for all of Year 1, however, and as a result as much as 31 percent of indirect production time was not recorded in this system¹. 202 WD is now recording all indirect hours, and strongly emphasizes having all employees—including those not directly involved in production—record how their time is spent. As a result, the total number of hours *recorded* has grown substantially, even though the employee base has remained relatively stable. Therefore, because indirect hours were not measured consistently over time, the data for Year 1 and Year 2 is not consistent with the baseline (FY 1997/98) data.

If it is assumed that the baseline data provided is sufficiently accurate, and Year 1 indirect hours are prorated to reflect all available hours, it appears that the productivity target of 313,904 hours was exceeded in Year 1 and Year 2, as shown in Table 3.

¹ Determined based on employee strength and total hours available.



Type	1997/98 (Baseline)	Year 1	% of Baseline	Year 2	% of Baseline
Direct Hours	189,843	260,645	137%	269,499	142%
Indirect Hours	124,061	119,694	96%	122,842	99%
Total Production Hours	313,904	380,339	121%	392,341	125%

Table 3. Production Hours by Type by Year with Percentage Change.

During the review, 202 WD significantly changed its estimate of the distribution of direct versus indirect baseline hours. Since source documentation no longer exists, neither the original nor the revised estimate can be confirmed. The table reflects the revised baseline information as provided in May 2007.

Year 1 recorded indirect hours were 74,042 which, according to 202 WD, could represent only 69 percent of total indirect hours during that year². Given that similar activities occurred during Year 1 and Year 2, the incomplete Year 1 figure was adjusted by an estimate based on the ratio of indirect to direct hours in Year 2.

While total production hours appear to have increased, given the significance of the assumptions made to arrive at a result it cannot be stated with any degree of certainty that 202 WD achieved the MEO output target with regards to production hours. In addition, total production hours are, at best, an incomplete measure of productivity if output is not also considered.

Agreed-to Delivery Dates

Initial, renegotiated and actual delivery dates from the production plan schedules were analysed to assess performance targets. The data was corroborated through interviews with 202 WD customers. Yearly trends for similar products were also analysed.

The MEO Instructions set targets for meeting promised delivery dates of 85 percent for Year 1 and 90 percent for Year 2. 202 WD did not report any results for Year 1; for Year 2, it reported 97.2 percent success in meeting planned delivery dates, but noted that this measure was against “renegotiated” delivery dates in some instances. Delivery dates were renegotiated when customers either changed their requirements (change in specifications) or initiated higher priority taskings and accepted a postponement of earlier jobs to accelerate the higher priority work. On this basis, the renegotiated dates are the appropriate measure.

²Based on employee strength and total available hours.



202 WD was asked to provide data to support its calculation of success in meeting delivery targets. The data provided covered the period from 1999 to 2004. It was allocated among fiscal years based on the completion date of the task. Table 4 provides the results of an analysis of this data.

Description	1999 - 2002	Year 1	Year 2	Year 3
Number completed (target dates provided)	417	94	113	55
Number with renegotiated dates	177	53	69	37
Number completed at or before target	112	40	101	41
Percent completed at or before target	27%	43%	90%	75%
202 WD reported results	N/A	N/A	97%	

Note: Year 3 data are for the first six months of the year only.

Table 4. Analysis of Completion Date Data.

Over half of the jobs in Year 1 and Year 2 involved renegotiated delivery dates. This appears to be up significantly from the earlier period; however, 202 WD did not clearly record changes in the earlier period as less attention was paid to measuring on-time delivery. It is not clear to what degree the apparent improvement in Year 1 and Year 2 is as a result of improved recording and reporting, as opposed to actual improved performance. Year 1 results were significantly below the MEO Instruction target of 85 percent. Year 2 results were somewhat lower than claimed (97 percent) in the annual report, but met the MEO Instruction target of 90 percent. The performance in the first half of 2004/05 (Year 3) is not as good, dropping to 75 percent completed at or before the target date. 202 WD explained that this drop was largely the result of shifting production resources to urgent jobs related to overseas deployments. Given the preliminary results for Year 3, close attention to delivery performance is warranted in future years.

Delivery of products by negotiated date appears to have improved significantly in both Year 1 and 2. The target of 90 percent for Year 2 was met.

The customer interviews did not identify substantial concerns with delivery dates for the majority of taskings. However, concerns were raised that delays are not always communicated to customers in a timely manner, particularly when the delay is not the result of a customer-initiated change.



Reject Rates

An item is considered rejected if a Corrective Action Request³ (CAR) is raised. The reject rate is calculated by dividing the total number of CARs by the total number of completed production orders.

The 0.05 percent reported reject rate for Year 2 was within the acceptable range of 2 percent or less; however, we found the measurement method to be unsatisfactory. Many defects may not result in a CAR; small defective parts may simply be thrown out, while minor defects on larger items may be corrected by base or field maintenance units rather than being returned to 202 WD. It is not clear that simple reject rates can be either meaningfully measured or useful without considerable effort. For example, when is an M113 a reject?—When a track falls off?—When the engine seizes?—Or simply when a mirror is improperly adjusted? The MEO Instructions refer to defects identified during final inspection. While this may be a useful internal measure, it is the defects *not* identified and resolved in final inspection that are of most significance to the customer and that are more indicative of 202 WD's effectiveness.

- Customers find product quality is excellent.
- Improved approaches to measuring quality are required.

During interviews, none of the customers contacted expressed concern with the quality of 202 WD services, and several commented positively on product quality. In fact, some customers report using 202 WD as a quality control facility to, for example, test products produced by contractors or inspect equipment to determine R&O requirements.

We would therefore conclude that 202 WD is meeting adequate quality standards and the reject rate target at present, but needs to develop clear, measurable and relevant indicators to ensure its long-term success.

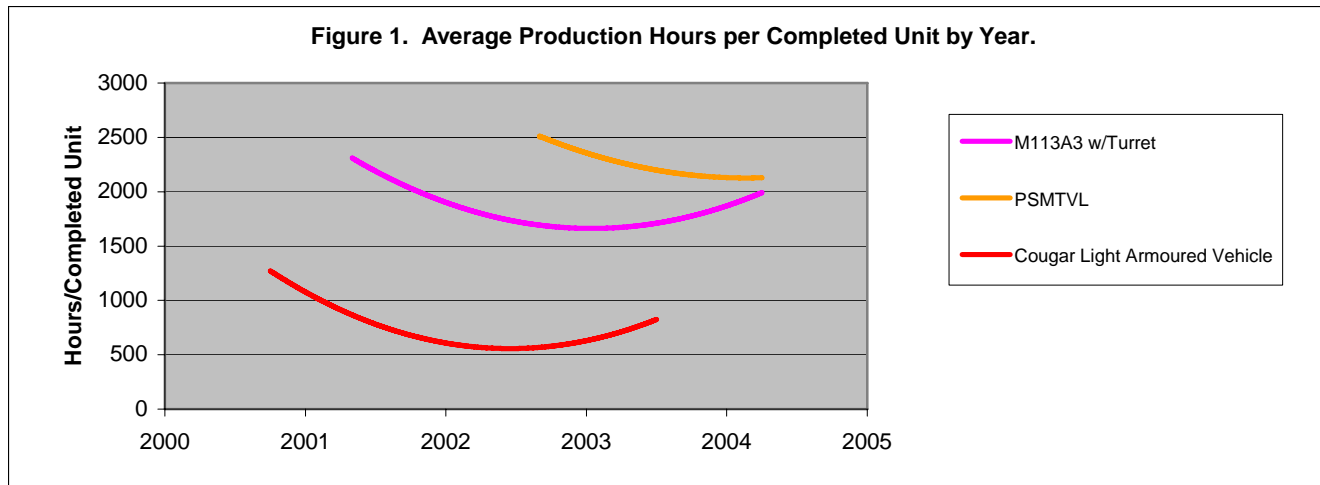
Cycle Time (Productivity)

The MEO Instructions measure for cycle time productivity is a “percentage reduction from baseline cycle time for discrete tasks.” This does not provide a clear measurement of performance. Also, 202 WD did not have the information available to adequately assess the results and the number of discrete tasks with a cycle time reference.

³ A Corrective Action Request is a standard quality assurance term used by 202 WD with the implementation of ISO 9001. It is a written record of an observed nonconformity and of activities taken to prevent that nonconformity from recurring.



Cycle time is best measured on an individual product basis, allowing comparison over time periods. Data on production hours per unit were obtained and assessed. The production hours per unit were graphed by product to determine if productivity was improving or at least stable. A target for improvement was not set; however, deterioration would not be consistent with good performance. We found that there are differing trends for various products—some positive, some negative with explanations.



In an ideal situation, production hours per completed unit would start high due to the development of techniques, skills and familiarity, decline quickly as production stabilizes, and then remain flat or continue a small decline reflecting continuous improvement gains.

The production hours of 24 projects were analysed. Figure 1 shows the results for three of these projects. The Palletization System Medium Tactical Vehicle Logistics (PSMTVL) shows the curve one would expect from an efficient operation. The M113A3 Armoured Personnel Carrier with Turret (M113A3 w/Turret) shows an upswing apparently caused by decreased volume combined with more difficult units being left to the end and taking longer to complete. For the Cougar Light Armoured Vehicle, production hours per unit began to rise even while the production volume remained substantial.

Overall, for the 24 projects analysed, productivity as measured by production hours per completed unit appeared to be stable at least, in particular for Year 1 and Year 2. As reported by 202 WD, several factors contributed to the occasional negative results:

- In 2003/04, the most skilled resources were diverted to overseas missions such as Operation ATHENA;
- To quickly build serviceable inventory, the easiest units are generally dealt with first, leaving the more difficult/time-consuming units to repair later;
- Some units may be stripped of parts to provide parts for other units. The stripped-down units then take more hours to rebuild at the end of the process; and
- Customer requirements change during the production process.

Productivity trends vary by product. Productivity should be measured more extensively in routine management and future MEO reporting.

The productivity issue is very important to the success of the MEO project. Declining productivity could easily offset gains in the cost of production hours. Although our analysis would suggest that 202 WD mostly met the productivity target set in the MEO Instructions, productivity should be monitored on an ongoing basis to identify and resolve problems as quickly as possible.

Reductions in Avoidable Costs

Avoidable costs are defined in the MEO Instructions as costs controllable by 202 WD such as military and civilian payroll, facilities, services, and operation and maintenance—but not costs such as parts, which are not under their control and therefore unavoidable. The MEO Instructions set a target of a 15 percent avoidable cost saving by Year 3 and 20 percent by Year 5, measured after considering the effects of inflation and the actual number of production hours worked each year. Reports on avoidable costs, the amount of funding received from all sources and actual production hours were analysed to assess the reasonableness of the data and the achievement of the target.

As previously noted, baseline data cannot be verified for accuracy, and much of the increase in production hours between Years 1 and 2 resulted from improved reporting, not necessarily an actual increase in production-related activity. The reduction or savings in avoidable costs per production hour cannot therefore be accurately measured. However, if the same assumptions as those made when measuring “Production Hours” performance were to be used, Table 5 compares the first two years of the MEO versus the baseline year.



Measure	Year 1		Year 2	
	Baseline Inflated	Actual	Baseline Inflated	Actual
Total Avoidable Costs	\$27,951,000	\$29,673,000	\$28,491,000	\$30,819,000
Total Production Hours	313,904	380,339	313,904	392,341
Cost Per Hour	\$89.04	\$78.02	\$90.76	\$78.55
Percent Savings (15% Target by Year 3)	(12%)		(13%)	

Table 5. Avoidable Costs Relative to Target Based on Total Production Hours.

The per hour savings is the result of increased production hours being reported—not reduced total costs. The savings target of 15 percent by Year 3 was nearly met in both Year 1 (12 percent) and Year 2 (13 percent). However, total operating costs continued to rise.

Keeping in mind that the 15 percent cost reduction target does not apply until Year 3, the findings suggest that 202 WD was on track to meet the target. However, this conclusion is indicative only given the limitations and unreliability of the supporting data.

Reductions in avoidable costs cannot be reliably measured because of unreliable production hour information.



MEO PLANNING ASSUMPTIONS AND CONSTRAINTS

Several planning assumptions and constraints influenced the development of the 202 WD MEO Proposal (see [Annex C](#) for details.) Some of these assumptions, in particular those concerning funding and human resources, did not give enough consideration to federal government regulations and departmental policies.

Funding

202 WD stipulated that the baseline funding (budget allocation) to cover civilian and military salaries, Operations and Maintenance (O&M), facilities, information technology support and capital requirements was not sufficient for the activity levels in Year 1 (see Table 6). 202 WD therefore charged customers for a portion of the work requested (i.e., user-pay). As a result, between the baseline funding and the user-pay funding, 202 WD was able to access sufficient funding.

Total Funding	MEO Instructions	Budget Allocation	Under/(over)funding
Year 1	\$29,077	\$26,868	\$2,209
Year 2	\$29,640	\$30,819	(\$1,179)

Table 6. Baseline Funding Per Year (\$'000s).

In Year 2, after charging customers for an anticipated shortfall, 202 WD received approximately \$2 million in additional SWE. The SWE windfall was a one-time occurrence resulting from a reallocation within ADM(Mat) and the Division. The SWE windfall combined with the postponement of some client projects, resulted in 202 WD returning approximately \$4.7 million to customers, leaving net user-pay of only \$234,000 at the end of Year 2. The reimbursement required significant administration and created problems for customers, who were returned the funding late in the fiscal year.

Overall, while customers have not been opposed to the user-pay concept, a lack of advance knowledge as to which jobs will incur costs and which will be completed using baseline funding, combined with the requirement to commit funds long before, or regardless if, payment is actually made, has made planning difficult.

Furthermore, 202 WD had assumed there would be increased flexibility to freely use funds of various types (i.e., O&M, Capital, Salary, Mil Pay, etc.) to meet funding requirements. However, this is not consistent with federal government policy and should have been considered when establishing criteria and targets.



Human Resources

Self-directed Team Concept. The self-directed team concept was one of the pillars of the MEO Proposal. Empowering workers and motivating them to work together as self-directed teams was expected to improve productivity, build commitment to organizational goals, and reduce the requirement for supervisory staff. A supervisory level was eliminated, which focused more of the paid effort on direct production activities. However, efforts to have the new concept and increased responsibilities recognized through increased pay were unsuccessful as they were not consistent with federal collective agreements, and consequently, a number of supervisory positions were re-established.

Staffing Regulations. 202 WD currently employs a combination of determinate and indeterminate staff. The mix provides staffing flexibility in terms of both number of employees and their relative skills, and is responsive to changes in requirements. However, the new “sunset requirement”⁴ for determinate staff reduces their flexibility in this regard.

Military Postings. Because the Department of National Defence’s (DND) first priority is operations, not R&O, 202 WD is ranked low in military posting priorities. Increased operational demands have resulted in some military positions being left vacant or being filled with lesser-qualified individuals.

⁴ Sunset requirements—Section 7.2 of the Treasury Board Term Employment Policy—states that where a person has been employed in the same department/agency as a term employee for a cumulative working period of **three (3) years** without a break in service longer than sixty (60) consecutive calendar days, the department/agency must appoint the employee indeterminately at the level of his/her substantive position.



FUTURE DEMAND FOR 202 WD SERVICES

The major 202 WD product support categories include national R&O, individual tasks, operational support, and major fleet projects. With respect to equipment, 202 WD key capabilities focus on the main weapon platforms such as the Leopard (transitioning from the Leopard 1 to the Leopard 2), M113, and Wheeled Light Armoured Vehicle (LAV) fleets. Associated with these platforms are the communications, electronics, and weapon systems. Working with the life cycle managers, 202WD uses in-house expertise to provide support to these equipments in synergy with any existing Optimized Weapon System Support (OWSS), such as the OWSS for the LAV III and Coyote. While support is principally provided in-house, personnel could also be deployed to meet national requirements in conjunction with, or as an alternative to, contractor field service representatives.

Given its convenient location at the port of Montreal, and the synergy of the unit within the Force Generation construct, 202 WD has a logical and key role preparing equipment for deployment and repairing on redeployment (Inspection Repair and Paint Program). Similar to contractor support, this would principally occur in the workshop, but could also take place at the contractor facilities, as was the case for the RG-31, or in the theatre of operations as part of a Technical Assistance Visit.

At the time of the review, 202 WD had not produced a documented plan that outlines future demand for its services and the changes that must be undertaken to effectively and efficiently meet this demand, especially in the longer term.



ANNEX A—MANAGEMENT ACTION PLAN

CRS Recommendations	OPI	Management Action Plan
<p>1. ADM(Mat) should ensure that future 202 WD MEO reporting is based on clear, reasonable, relevant indicators that collectively provide a meaningful assessment of the production effort expended, the productivity of that effort, and the reductions in avoidable costs.</p>	<p>ADM(Mat) DGLEPM CO 202 WD</p>	<p>202 WD will incorporate the comments within the report into the performance measures within the realm of feasible and viable indicators. First of all, ADM(Mat), DGLEPM and 202WD will use the business planning process to establish, adjust, validate and report on 202 WD's annual objectives and performance indicators. This annual process will facilitate the analysis and ensure the establishment of relevant and updated performance indicators. In particular:</p> <p>Output (production hours): This measure has been revisited to ensure the intention and concept of efficiency is captured. It will include a systemic overview of overhead, individual effectiveness, and actual output. Product benchmarking will be considered where feasible; however, given the variety and complexity of tasks this will not always be feasible.</p> <p>Cycle time (productivity): Cycle time will only apply to specific products as agreed with customers or stakeholders.</p> <p>Total avoidable costs: The existing measure will be used as a collective analysis of efficiency, and as a means of establishing user pay rates, but will be reviewed in conjunction with specific output. Furthermore, the cost indicators will be reviewed annually through the BP process to ensure the use of valid assumptions.</p> <p>Reject rates: The existing measures will be maintained to address internal rejects. Client surveys will be routinely used to address external concerns. After Action Reports will be used for specific areas of interest. Individual product quality tags will be used to encourage feedback from end users.</p> <p>Agreed-to delivery dates: A priority system has been established. Subsequently, changes will be categorized as external or internal to segregate changes in the scope or priorities initiated by the client with respect to the actual efficiency of 202 WD.</p>



ANNEX A

CRS Recommendations	OPI	Management Action Plan
<p>2. ADM(Mat) should ensure MEO Instructions are based on assumptions that are consistent with all federal government funding and labour management regulations and that performance criteria adequately consider these regulations.</p>	<p>ADM(Mat) DGLEPM CO 202 WD</p>	<p>202 WD has completed a capacity and capability analysis, as well as a future requirements assessment that has resulted in a business case that will stabilize the production and funding model. The business case is under final review.</p> <p>The business case responds to the CRS recommendations, and the annual business plan reflects the government funding issues. Individual issues associated with cash flow management have been specifically addressed; however, the process is influenced by the broader requirement for financial management at divisional and group level.</p> <p>The concept of participative management will continue to be promoted through a team-based concept. 202 WD has adjusted the management structure to adapt to labour management practices.</p> <p>202WD will validate the assumptions associated with government funding and labour management practices, as well as the initial cost assumptions to ensure they are in line with industry standards.</p>
<p>3. ADM(Mat), in collaboration with 202 WD, should review future requirements for 202 WD services and prepare for any changes in operations and capacity that may be required.</p>	<p>ADM(Mat) DGLEPM CO 202 WD</p>	<p>202 WD has developed a long-term workload forecast. The specific demands of DND dictate that this plan must remain flexible in order to maximize the strategic capacity within a dynamic Land Equipment Program. 202 WD:</p> <ul style="list-style-type: none"> • will continue to be considered for strategic capabilities and national efficiencies; • is now better integrated into the DGLS OWSS concept; • will continue to be involved in Task Force equipment deployment and redeployment and will now be tasked directly by CANOSCOM for operational equipment support; and • will continue to be considered as a source for major projects.



ANNEX B—ASD AND MEO CONCEPTS

Alternative Service Delivery

Definition

Alternative Service Delivery (ASD) is one of several continuous improvement tools helping DND/CF modernize business practices and gain maximum value for each Defence dollar. An alternative service delivery solution offers the most cost-effective option to deliver a service. It replaces an existing departmental service delivery mechanism with one that is not a traditional structure within the department, and typically means a change of employment status for affected employees. DND/CF initiatives that create new military capabilities or enhance existing capacities do not fall within the realm of Alternative Service Delivery.⁵

Most Efficient Organization⁶

Definition and Background

A “Most Efficient Organization” (MEO) is one that has achieved the highest level of effectiveness and efficiency with the resources available, as stipulated in the Statement of Work (SOW).

An organization can become an MEO in two ways. The first involves evolutionary change and improvement through internal methods—it is a cooperative undertaking of management and employees to attain and maintain a standard of excellence in providing services. In the second approach, an internal organization may be given an opportunity to become an MEO through the structured, procurement-based method of an ASD review.

The MEO step precedes competitive tendering. The intent is to give the current organization an opportunity to demonstrate that it can achieve the savings and benefits targeted through ASD by internal means. Management, the workforce and the union are encouraged to collaborate to develop a “winning” solution.

All affected organizations are given an opportunity to develop an MEO proposal unless a strategic decision has been made to outsource. When the MEO process is initiated, the organization is expected to develop a proposal that is fully compliant with the SOW written to solicit proposals from the private sector. An MEO proposal will emphasize internal improvements, process re-engineering and restructuring as appropriate. It may also use delivery elements like contracting, employee takeover, partnering and shared services with other government departments. However, the MEO proposal must propose that the majority of personnel delivering the services will continue to be DND/CF personnel.

⁵ Department of National Defence Policy on Alternative Service Delivery, page 2.

⁶ Department of National Defence Guide on Alternative Service Delivery, Annex B.



ANNEX B

Elements of the MEO Process

GENERAL	When an ASD Case Analysis demonstrates that an MEO arrangement could be viable, the competition for private sector bidders is put on hold. The ASD Review Team refines and confirms the nature and level of services to be provided and establishes a savings target. The Executive Authority invites the MEO Team to develop a proposal. The proposal is assessed independently, and a recommendation made to the Executive Authority. If the Executive Authority accepts the proposal, the MEO Team is authorized to implement its proposal. If the Executive Authority does not accept the proposal, an offer is made to the MEO proponent to revise its proposal. If the proponent rejects the offer, or the revised proposal is still not acceptable, the competition resumes with private sector bidders only.
SAVINGS TARGET	The Executive Authority establishes the minimum savings to be achieved by the MEO. An MEO is expected to provide savings similar to what would be achieved through competitive bidding. Savings targets should consider information such as benchmarking studies for similar services in the private sector.
FINANCIAL SUPPORT	The Executive Authority ensures the MEO Team receives adequate and equitable funding and support to develop its proposal. The amount of financial and other support depends on the scope and complexity of the project, and should be assessed against the estimated potential savings and other benefits.
PROPOSAL VALIDATION	The ASD Review Team produces a SOW based upon the Case Analysis. The MEO proposal responds to the SOW requirements and is evaluated in accordance with the applicable assessment criteria. The Executive Authority ensures that documentation is maintained to substantiate the decision on whether or not to implement the MEO proposal.
MEO INSTRUCTIONS TO THE PROPONENT	In Instructions to the MEO Proponent, the Executive Authority provides details of the required services to be reviewed, savings target and other benefits, and the process for developing and assessing the MEO proposal.
INDEPENDENT ASSESSMENT	The MEO proposal is assessed independently to determine whether it meets the requirements and can deliver the required services at required levels and meet the savings target. The assessment is conducted by an individual external to the department responsive for his/her conclusions to the Executive Authority, but with no vested interest in the outcome.
ACCOUNTABILITY AND VERIFICATION	If the MEO proposal is accepted, the Executive Authority ensures that an appropriate accountability framework is set up, and that authorities, responsibilities and performance targets are understood. This framework is formalized through a Service Level Agreement or the business planning process. The Executive Authority also conducts an audit, within two years after the MEO proposal has been accepted, to verify progress, performance and results against the agreed framework.



ANNEX C—202 WD MEO INSTRUCTIONS AND REPORTED RESULTS

Targets and Intended Measurement Regime⁷

	BASELINE YEAR FY 1997/98	YEAR 1 FY 2002/03	YEAR 2 FY 2003/04	YEAR 3 FY 2004/05	YEAR 4 FY 2005/06	YEAR 5 FY 2006/07
Output (in production hours)	313,000 hours	313,000 hours	313,000 hours	313,000 hours	313,000 hours	313,000 hours
Meet Agreed-to Delivery Dates	Not available	85%	90%	90%	95%	95%
Reject Rate (by product)	Not available	2% or less	2% or less	2% or less	1% or less	1% or less
Cycle Times (for 80% work)	As exists for each discrete task	5% reduction from baseline		10% reduction from baseline		Maintain standard
Total Avoidable Costs (constant dollars)	\$24.7M	Reduce by 15% by end of Year 3			Reduce by 20% by end of Year 5	

OUTPUT	Production level determined in production hours; intended to ensure production levels do not decline through cost savings.
MEET AGREED-TO DELIVERY DATES	Percentage of projects completed by the target date negotiated with the customer.
REJECT RATE	Quality measure.
CYCLE TIMES	Time between the arrival of a unit to be overhauled and the delivery date.
TOTAL AVOIDABLE COST/SAVINGS	Reduction in cost of 202 WD activities (ignoring parts cost and some other non-avoidable costs). The Instructions clearly indicate that the measurement should reflect inflation (which the MEO Instructions forecast) and consider the production level actually achieved (i.e., target costs should be prorated to consider any increase or decrease in production hours from the target production level).

⁷ 202 WD MEO Instructions.



ANNEX C

Years 1 & 2 Results as Reported by 202 WD⁸

	BASELINE YEAR 1997/98	YEAR 1 – 2002/03 TARGETS	YEAR 1 – 2002/03 ACTUAL RESULTS	YEAR 2 – 2003/04 TARGETS	YEAR 2 – 2003/04 ACTUAL RESULTS
Output (in production hours)	313,000 hours	313,000 hours	334,687 hours ⁹	313,000 hours	392,341 hours
Meet Agreed-to Delivery Dates	Not available	85%	Indicator to be developed in Year 2	90%	97.2%
Reject Rate (by product)	Not available	2% or less	Quality indicator to be developed with ISO 9001 implementation	2% or less	0.05%
Cycle Times (productivity) (for 80% work)	As exists for each discrete task	Transition to 5% reduction from baseline	93% met the cycle time	85 days	128 days
Total Avoidable Costs (constant dollars)	\$24.7M (97/98 \$)	\$29.07M (02/03 \$)	\$26.8M (02/03 \$)	\$29.6M (03/04 \$)	\$24.58M (03/04 \$)
Savings Target		15% of avoidable costs by end Year 3		15% of avoidable costs by end Year 3	

⁸ 202 WD 2002/03 and 2003/04 Annual Reports.⁹ Revised figure – 327,400 production hours originally reported in MEO Communiqué No.18.

ANNEX C

202 WD MEO Proposal Assumptions¹⁰

MANDATE	The Service Level Agreement, as stipulated in the MEO Instructions, will reflect a five-year period and allow for a possible extension, if deemed necessary.
SAP IMPLEMENTATION	A “per capita” approach to implementing costs will be applied; the implementation and operating costs will be spread across 202 WD and between all other potential corporate users.
PRODUCTS AND SERVICES	The potentially most “profitable” market niches have been identified. 202 WD intends to negotiate with its customer to select the products and services—within the framework of customer business sectors and army repair needs—to optimize customer satisfaction.
INTERNAL OUTSOURCING	202 WD will have the latitude to outsource selected functions or internal processes in compliance with Treasury Board and other government regulations.
DIRECT ORIGINAL EQUIPMENT MANUFACTURER (OEM) NEGOTIATIONS	OEMs could ask to use 202 WD’s capacity for specific projects, either because of a lack of capability or a profit motive. Since this is not considered competition with industry, it is assumed that 202 WD will be encouraged to negotiate with OEMs, either directly or through the equipment project manager, to provide optimal remanufacturing and repair services to the army.
MILITARY OCCUPATIONAL STRUCTURE (MOS) REVIEW	In accordance with the MOS review, the core military strength of 202 WD is 65 positions.
LENGTH OF MILITARY POSTINGS	Planned requirements are as specified in the Human Resources Plan.
MILITARY COURSES AND TASKS	The loss of a military member to a course or operational tasking directly impacts production output in that output falls. Losses incurred because of mandated military operational and/or training activities should be considered.
NATIONAL SUPPLY SYSTEM	Spare parts comprise most of 202 WD’s non-avoidable costs; thus, 202 WD will retain only a minimum inventory of spare parts. CFSS(U) will support the MEO by giving 202 WD access to national supply system services (or any upgrade) and stocks at no additional cost during the MEO period.

¹⁰ 202 WD MEO Proposal FY 2001–2006, Part V, Section 1, 5.1.1a.



ANNEX C

202 WD MEO Proposal Assumptions (cont'd)

FINANCES	<p>Operating as an MEO requires some financial flexibility, as stated in the following agreements:</p> <ol style="list-style-type: none"> 202 WD will receive a single operating budget, excluding military pay. 202 WD is responsible for securing agreements from all its current “budget owners.” The user-pay concept, as applicable, will allow a single operating budget; Upon application, 202 WD may be authorized to carry forward no more than 2 per cent of its budget surplus to the following FY; and 202 WD will be able to operate in a “line of credit “ mode, but only where the practice satisfies customer needs and complies with sound business practices. <p>If required, 202 WD will be authorized to borrow against future years’ budgets for planned capital acquisition.</p>
PRODUCTIVE VS NON-PRODUCTIVE (P/NP) RATIO	P/NP ratio of 2:1 is appropriate and is the correct factor for related calculations in this MEO proposal.

202 WD MEO Proposal Constraints¹¹

AGGREGATE PRODUCTION PLAN	The plan presented in this proposal will go beyond the 313,000-hour target. The increase is due to higher customer demands and private industry’s interest in involving 202 WD in specific projects.
UNDERFUNDING	The projected baseline funding is expected to be significantly lower than the allotments specified in the MEO Instructions. This is a serious concern for 202 WD given that the MEO process required that the Unit produce at a certain level (313,000 hrs), and that it did not plan to provide the funds required to meet the MEO Instructions output level or satisfy the customers requirements. This translates into a reduced capacity for the first few years.
DIRECTORATE BUSINESS PLANNING THREE-YEAR CYCLE	The three-year cycle may impose a new constraint since the MEO conversion period is five years.
FOURTH-LINE STATUS	202 WD is ranked last in military posting priorities. Individuals with medical restrictions are posted to 202 WD. As they are unable to accomplish heavy industrial tasks, these individuals are assigned to non-productive task, which has a negative impact on 202 WD production output target.

¹¹ 202 WD MEO Proposal FY 2001–2006, Part V, Section 1, 5.1.1b.

