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PROCEEDINGS FROM THE SECOND WORKSHOP ON DND/CANADIAN CB DEFENCE INDUSTRIES STRATEGIC ALLIANCES: ESTABLISHMENT OF A CHEMICAL AND BIOLOGICAL DEFENCE INDUSTRI

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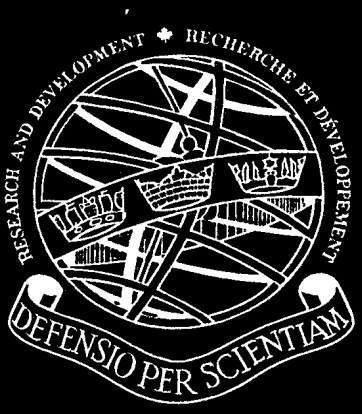

Proceedings from the Second Workshop on DND/Canadian CB Defence Industries Strategic Alliances: "Establishment of a Chemical and Biological Defence Industrial Center of Expertise (CBDICE)"

Held at Defence Research Establishment Suffield
16-17 August 1994

This workshop was coordinated by the Directorate for Research & Development in Human Performance, in collaboration with Defence Research Establishment Suffield.

National Defence | Défense nationale

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Distribution List

MINUTES FROM 16-17 AUGUST "CBDICE" WORKSHOP AT DRES

I would like to take this opportunity to thank everyone who participated in the CBDICE workshop held at Defence Research Establishment Suffield, on 16 and 17 August. Judging by the amount of lively discussion generated by the various companies, we can conclude that we achieved our basic objectives.

It is clear that there is a considerable amount of interest in pursuing the concept of forming a "company-operated" organization which facilitates access to DRES laboratories by Canadian companies. Whether or not that will entail the establishment of new or modified facilities (the name "Suffield Technical Center" may replace CBDICE) to accomodate contract work is not yet known. We propose to assess the need for new facilities once the demand is demonstrated to exceed what is available in the existing laboratories.

It is apparent from the feedback during and following the workshop, that the substantial opportunities that such an arrangement could provide to industry are becoming apparent. This arrangement will be implemented in a manner which is as fair as possible and in the best interests of Canada. We will address all concerns that were raised at the workshop.

In the next two months we will be preparing to solicit bids to setup and run the Suffield Technical Center through the open bidding process provided by the Department of Supply and Services. As indicated at the workshop, all companies that have expressed an interest in CBDICE (or STC as it may be called) through attendance at the workshop, will be provided with the opportunity (2 weeks) to review and comment on our proposed Statement of Work and evaluation criteria before it is put to contract.

A copy of the minutes and viewgraphs that were presented are included. We have also provided a compilation of company profiles from contractors that have performed R&D (or manufacturing) in CB Defence related projects in the recent past. One of our intentions is to facilitate networking or

partnering between Canadian companies. These profiles will let you know who we have done business with in the past, and what their capabilities are in the CB Defence area. If nothing else, the list of phone numbers and points of contacts should prove very useful. All companies were invited to submit profiles at the August 1993 and August 1994 workshops. If you wish to modify your profile or submit a new one, please forward them to Jack Pagotto (DRDHP-6, Tel. 613-995-7627, Fax 996-5177).

L.A. White
Director, Research and Development
Human Performance
Research and Development Branch

Encl.

Distribution List (w/Encl.)

SEE ATTENDEE LIST FROM CBDICE WORKSHOP
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MINUTES OF DND/CANADIAN CB DEFENCE INDUSTRY "STRATEGIC ALLIANCES" WORKSHOP #2

HELD AT DEFENCE RESEARCH ESTABLISHMENT SUFFIELD 16-17 AUGUST 1994

1. The second DND/Canadian Chemical and Biological Defence Industry "Strategic Alliances" Workshop was held at Defence Research Establishment Suffield (DRES) on 16 and 17 August 1994. This workshop was set up by the Directorate of Research and Development in Human Performance (DRDHP) in collaboration with DRES. DRDHP is the DND headquarters directorate responsible for the CB Defence development program.

2. Advance copies of the agenda were distributed to all that expressed an interest in attending, so that any issues of concern could be included. The first workshop responded to the concerns expressed by companies located in eastern Canada, over the relocation of the former Protective Sciences Division from Defence Research Establishment Ottawa. This second workshop provides a chance for companies to become familiar with DRES, and how to access the high containment laboratories and restricted agents. Annex A contains the final agenda agreed upon.

3. Invitations to the workshop were extended to approximately 75 companies. Other government departments (Public Works and Government Services, Alberta Research, Canadian Commercial Corporation, Health and Welfare Canada, External Affairs, etc), and directorates within the Department of National Defence, which have dealt with CB Defence contractors were also invited. The list of companies was obtained from a survey of more than 100 organizations involved with R&D and/or production of CB Defence related technologies. Response to the proposed agenda was extremely good with approximately 70 people from 45 different companies or organizations attending. Annex B contains a list of people that attended the workshop.

4. Dr. John Moldon, Chief of DRES, welcomed everyone to the workshop. He provided an introduction to DRES, outlining the operating budget, organizational structure, the connection with Canadian Forces Base Suffield and some historical background that led to the establishment of the laboratory and the range. Dr. Moldon said that there was a desire by

CRAD (Chief of Research and Development*) and DRES to encourage partnerships and collaboration between Canadian companies and with DND. It is becoming more difficult and impractical to deal with industry on a one on one basis. He explained how the future will involve industry working on site at DRES in shared facilities, on a much greater frequency and in a greater number than we have ever seen in the past. Dr. Moldon highlighted some unique capabilities at DRES that DND could contribute to the partnership with industry. He described the objective of creating an environment in Canada where a "community of companies" can form to respond to urgent or large requirements that are not achievable by any one company on its own. We (CRAD) can help market R&D products (through technology demonstrators and advanced development models) to larger audiences than industry can because we are often involved with multinational equipment trials. Dr. Moldon described several examples where Canadian industry capabilities resulted from DRES R&D projects.

5. Dr. Lloyd White, Director of DRDHP presented a briefing on the "Re-engineered CRAD." A copy of his presentation is included as Annex C. Dr. White explained CRAD's intention to move towards a 70/30 ratio for extramural/intramural R&D. We will be involving the client (Canadian Forces (CF)) and Canadian industry more in the tech base program** than we have in the past. CRAD is now establishing a new structure for how it does business. Dr. White supported Dr. Moldon's statements concerning the fact that some of our R&D requirements cannot be met by a single company - consortiums are the way of the future and their formation will be strongly encouraged.

6. Mr. Pagotto, staff officer responsible for CB technology transfer in DRDHP, and director for a project to establish a Chemical and Biological Defence Industrial Centre of Expertise (CBDICE), presented background on the rationale for a contractor-operated government-owned facility (see Annex D). He also described how all companies that attended the first workshop were invited to formally express an interest in the concept of a "CBDICE." He said that at least two companies had already expressed an interest in establishing a CBDICE-like arrangement at DRES. The general plan for the project was outlined. The first phase is a front-end analysis that includes a survey of the potential demand for a

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* An acronym also used to describe the DND R&D Branch as a whole.

** "tech base" is the term used to refer to the research component of the R&D program; It is also frequently called the strategic or applied research program.

government-owned company-operated facility at DRES. The contractor that conducted the analysis, Racal Filter Technologies Ltd. will provide a briefing on the results from this phase later in the agenda. The next phase, which was proposed to involve the conversion of unused buildings at DRES, into a contractor laboratory was described. The plan was to initiate a CBDICE by establishing a laboratory with the minimum facilities needed to safely perform routine, standard chemical warfare agent tests of materials. It was suggested that while there was substantial demand for this testing within Canada, the services of such a facility could be marketed internationally. Providing this venture could become self-supporting, industry could then take the initiative to expand CBDICE to include other areas such as providing a "staging area" for biological warfare R&D projects that require periodic access to the Level III containment facilities in the main DRES laboratories.

7. Mr. David Pike of Racal Filter Technologies presented a briefing on the first part of the "Front End Analysis for Establishment of a CBDICE at DRES." Results from a survey of industry and government on the potential demand for access to or use of a CBDICE were presented. Even if some estimates may have involved double-counting the same requirement, evidently the demand was for several (six?) person-years of contractor work in a CBDICE facility. Mr. Pike suggested that despite the strong response, CBDICE would likely start as a very small operation and could gradually increase in scope over two to three years. General discussion ensued on the following points:

(a) In response to the question "what would the CBDICE company expect from DRES?", Mr. Pike replied that CBDICE would be ideally situated to exploit technology transfer from DRES. Discussion followed which led to the consensus that it was critical that CBDICE becomes self-sufficient.

(b) Mr.Larry Cooper (Scientific Instrumentation Ltd.) commented that the major advantage of a CBDICE-type arrangement is the "great opportunity for networking" with other companies and DRES scientists.

(c) Dr.Brian Farnworth (META Research) said that the companies involved with CBDICE would have a privileged position because of the close contact with the tech base program that would be possible. This stimulated considerable discussion, Dr.Myles and Dr.Moldon concurred that a CBDICE could have a separate function of facilitating industry access to the DRES tech base program. It was mentioned that this access would not be

restricted to the company operating CBDICE but would be extended to some form of an association of CBDICE members or users.

(d) Mr.Pierre Messier (Hydro Biotech Inc.) suggested that a mechanism should be provided where a company could "reserve" exclusive rights to exploit a particular invention that may be available out of the tech base program, for a period of x years.

8. Following a break for lunch, a tour of the buildings that are available for CBDICE was conducted. Following the tour, Mr.Pike resumed the briefing, outlining a phased approach where modifications to selected areas of the buildings could be made to gradually bring CBDICE to fruition, starting with the setup of a CW agent testing laboratory. A copy of this briefing is included as Annex E. Mr.Pike ended the briefing by proposing a set of guidelines or principles that the company or companies that would operate CBDICE should be required to follow (see Annex E). Mr.Pike summarized the conclusions of the study and then reemphasized that the report was not to be considered a "Racal" position paper. The report (a condensed copy of which was handed out to attenders and is also included in Annex E) presents an analysis that addresses the requirements of the Statement of Work in the contract.

9. Mr.Pike then took the opportunity to convey the Racal position on CBDICE. He emphasized that a CBDICE would require personnel who have expertise in CB Defence from the operator's point of view. The company that operates CBDICE must have a "vested interest" in the survival of the concept so that the pitfalls that inevitably occur, can be overcome.

10. Dr.White invited everyone to provide response to the Racal briefing and proposals. A lively discussion followed, some key points are summarized below:

(a) Dr.Moldon replied to the question of "why do we need the middle man (CBDICE) to get access to high containment facilities?". He said that a CBDICE would greatly simplify and improve the interface between DRES and industry. CBDICE could facilitate or provide the "contractor-to-DND" management resources that would otherwise have to be provided by the Defence Scientists and Technologists. It also could offer a "cleaner" mechanism for recovering funds back into the program that normally would be absorbed into the Receiver General's account.

(b) John Winship (Gentex) expressed the opinion that

industry has had great difficulty in getting products evaluated by DND in the past. He then suggested that DND should drop product and process development and sell evaluation and test services to industry. Mr.WInship suggested that some equipment that was in the buildings toured earlier were clearly for process development. Dr.Moldon replied that it has always been CRAD's position to have industry do advanced development. Discussion with Gentex followed which indicated some confusion over the rationale for the utility of fabric impregnation equipment in an R&D laboratory. It was explained that certain types of equipment are not available in industry and are necessary to conduct exploratory development of new materials.

(c) Mr.Winship then asked why DND or DRES did not consider operating CBDICE if it seems like a good idea. Dr.Moldon replied that the existing cost recovery mechanism is not effective and DND or DRES do not have the people to run such a facility.

(d) Dr.Wertheimer (Polyplasma Inc.) expressed strong support for the conclusion that all indications suggest that the CBDICE idea has to work - expertise is leaving the government (DND) through cash outs and other reductions, and the facilities available at DRES are unique and not being used to capacity.

(e) Mr.Cooper (Scientific Instrumentation Ltd.) raised the concern that CBDICE could "mutate" into a competitor to Canadian companies that are not intimately part of it. Dr.Moldon replied that the intention would not be to direct exclusive contracts to CBDICE. Stephanie Duggan (Public Works and Government Services) mentioned that CBDICE might not be able to compete for contracts if it is shown to be government supported in any way.

11. The following day (17 August) commenced with a briefing on the Integrated Protective Clothing and Equipment major development project, by the project director LCol Lucas Hellemans. This project will produce a technology demonstrator to illustrate the potential concepts and technologies that could be incorporated in the next generation of clothing. A copy of the briefing complete with narrative is provided as Annex F. A video was presented which displayed a similar development project that was being conducted in the United States.

12. Dr.White then presented a briefing outlining the CB Development program. A copy of this briefing is provided as Annex G.

13. Dr. White presented a briefing on the plans for a major development on a Biological Agent Detector. A copy of this briefing is included as Annex H. In response to a question on whether the detector would be mounted on a vehicle, Dr.White confirmed that it would be truck-mounted. He added that there was major international sales potential with this detector system. In addition, it was likely that there would be very good potential for commercialization in environmental and clinical applications.

14. Dr.White finished the development program briefings with a presentation on Militarily Significant Vaccines. Annex I contains the viewgraphs from this briefing.

15. Dr.Myles, Director of the Defence Sciences Division, presented the DRES perspective of CBDICE. Main points are provided in Annex J, a copy of his briefing viewgraphs.

16. Dr.Myles followed the above with an overview of the DRES tech base program in CB Defence (see Annex K).

17. Dr.Luoma, Head of the Hazard Avoidance Section was not able to attend the meeting so Dr.Myles presented an overview on the R&D areas on his behalf (see Annex L).

18. Dr.Kent Harding, Head of the Medical Countermeasures Section briefed on his section's R&D areas (Annex M).

19. Dr.John Bovenkamp, Head of the Physical Protection Section, briefed on his section's R&D areas (Annex N). Dr.Bovenkamp started his presentation by emphasizing the differentiation between the R and D portions of his program. Development work is almost always contracted out. However, due to the requirement to access specialized facilities or equipment in DRES (formerly DREO), much of the development work in his section has been done on site, by contractors, in the past.

20. Dr.Moldon asked that the workshop now return attention to what the "essence" of the activity that we have been calling "CBDICE." He drew the analogy that it was very much like a group of blind men trying to describe an elephant. Dr.Moldon then offered his interpretation of what CBDICE should be. The objective should be to draw together a framework that will improve the interface between industry and DRES. It should be an "organizing entity" which provides a conduit or smooth path for allowing contractors to access DRES facilities. Dr.Moldon expressed some concern over the "comfort zone" in terms of how big a first step do we want to take (i.e., funding). We already have some under used

facilities that CBDICE as an entity could start to use right now. Dr.Moldon encouraged industry representatives to provide Mr.Pagotto with the necessary feedback so that a statement of work for the selection of a contractor or group of contractors to operate a CBDICE, can be drafted.

(a) Mr.Cooper (Scientific Instruments Inc.) raised the suggestion that a board of directors was needed with appropriate representation, to select the right person(s) to manage the CBDICE. The board could consist of volunteers from industry who would be paid nothing except travel costs.

(b) Mr.Laderoute (Hydro Biotech) suggested that we should have a "consortium" that will address all three aspects of expertise in CB defence - medical, chemical and biological. He said that we should go with the facilities that we have available now to create a "success story" which we can then build on.

(c) Mr.Hank Mottl (Dycor Industrial Research) concurred with the previous two comments and suggested that we should have a sales/marketing entity to solicit work for the CBDICE and that if a board of directors was established, the chairperson should be from DND or another government department.

(d) Mr.Pierre Messier (Hydro Biotech) emphasized that we need an action plan to get CBDICE started. He suggested that Canadian industry must get to foreign markets to survive and we either do that individually or through an association such as CBDICE could offer. Mr.Messier recommended that the board of directors for CBDICE be given the responsibility and authority to spend funds, select marketing personnel, a general manager and so on. The CBDICE sales associate can probably represent all of the member companies and technologies.

(e) Mr.Earl Laurie (Acton Rubber) recommended that we start immediately but by taking a small step without committing a large amount of funds. Dr.Moldon concurred with the approach saying that even without spending any construction money at all, there was a substantial capacity for accommodating CBDICE with existing facilities.

(f) Mr.Mottl (Dycor) said that we need a means for going after foreign contracts. A marketing plan has to be formulated which would include such things as generating a marketing brochure that describes CBDICE's capabilities for example.

21. Dr.Moldon interjected the debate by asking for suggestions on how we (DND) can obtain a consensus of what industry wants CBDICE to become. Considerable discussion followed with comments from Hydro Biotech, Alberta Research Council and Dr.Myles. The general theme being that some form of an 'ad hoc' committee or a permanent board of directors be formed to establish the business plan for CBDICE and get it started.

22. Mr.Pike (Racal Filter Technologies) expressed the very strong opinion that a consortium or board of directors approach would not work. He emphasized the advantages of having a single company operate CBDICE. He said that a fair competition should be held so that all have an equal opportunity to run CBDICE. Mr. Pike suggested that the idea of having a capability that covers medical, biological and chemical aspects was a good one but one that could be provided by a single contractor. The window into DRES would best be achieved and maintained by a single company with direct line responsibilities. He raised the question of who would be responsible for failure of CBDICE if decisions are being driven by a group of people with no strong vested interests. Mr.Pike said that 40 years of experience has proven to Racal that consortiums do not work in this type of requirement. He raised the example of the great difficulty that he has witnessed in recent years when Canadian companies could not get together to organize a simple sales trip to market products in a concerted manner.

23. Dr.Moldon expressed the concern that we at least get broad acceptance of the Racal proposal with no strong objections. Mr.Messier (Hydro Biotech) raised the point that the idea of a Board of Director is a commonly used management tool that works well for industry. Mr.Laurie (Acton Rubber) suggested that we take a few weeks to digest what has been discussed and to have DND take the lead, possibly by soliciting votes or some other means of getting a consensus.

24. Dr.Wertheimer (Polyplasma Inc.) suggested that CBDICE was very much like a company in it's "infant" stage. The originators (everyone at the workshop) obviously have faith in the viability and the need for a CBDICE. "What we need now is someone or some organization to "champion" the idea so that it will happen."

25. Mr.Steve Mann (Patlon Aircraft/Karcher Representative) said that he supports Racal's proposal of having a single company run CBDICE since this approach has been used in many other similar instances such as the operation of some DND bases. Dr.Moldon asked what suggested method should be used

to evaluate proposals if we were to take the Racal approach. He indicated that there was a polarization of views forming in terms of some companies being in favour of a nonpartisan Board of Directors or committee approach while others prefer to have a competitive process select a single "entity" (be it a single company or clearly defined consortium of companies).

26. Some discussion was generated on the many possibilities for work that could fall under CBDICE. Examples included: providing a test and certification service for validating the CB resistance/efficacy of various materials or treatments; provision of a training facility for the military (Canadian and/or foreign militaries); a marketing/sales service which smaller companies could use to get their ideas/products into the international marketplace; and other suggestions. Mr.Cooper (Scientific Instrumentation Inc.) raised the concern that the scope of potential operations that could fall under CBDICE have expanded beyond what a single company could manage. Dr.White agreed that we must start by identifying what the "core elements" of CBDICE are.

27. Since it was evident that a consensus was not about to happen at this workshop, it was suggested that we involve industry in the drafting of the Statement of Work, and what is most important, the evaluation criteria for selection of the CBDICE operator(s). Dr. White suggested that DRDHP would have to find some means for soliciting industry's approval of the evaluation criteria used to select the CBDICE operator, so that we can ensure that there is broad acceptance of the organization, otherwise we may find that it is not used to the maximum benefit of all. Mr.Laurie (Acton Rubber) agreed with the suggestion and added that industry also be provided a chance to comment on the Statement of Work (SOW), before it is sent out to contract.

28. Mr.Messier (Hydro Biotech Inc.) raised the question of the possibility of selecting a management company who has no self-interest in CB defence technologies, to manage CBDICE. This would ensure the neutrality of the organization. Dr.Wertheimer (Polyplasma Inc.) suggested that personnel that were leaving DND through the program reductions such as the Civilian Reduction Program, could provide a source of such a company. Dr.Moldon said that we are already expecting to receive bids from these types of people anyway.

29. Dr.Al Gray (Chemboss Company Ltd.) diverted the debate momentarily to suggest that we consider renaming "CBDICE" with a more generic name such as the "Suffield Technical Centre". Dr.Moldon agreed that the CBDICE name may not be ideal and something like the Technical Centre may be

preferred*.

30. The question of who should evaluate the proposals for CBDICE was raised. Suggestions varied from using the CB Defence committee that currently reviews the DND CB Defence program, since they are a relatively impartial group. Another suggestion was to use the Defence Science Advisory Board. After some discussion of the pros and cons of various ideas, the proposal was raised that DND make the decision on behalf of Canadian Industry. Dr.Myles asked the industry representatives if there was any objection with this approach since it would likely be most expeditious. Mr.Laurie (Acton Rubber) said that he agreed fully and that after having the opportunity to provide feedback on the SOW and evaluation criteria, industry should let DND make the decision that is best for Canada.

31. Dr.Moldon summarized the way ahead. A draft SOW and Evaluation Criteria will be prepared by DRDHP which attempts to incorporate all of the concerns expressed at the workshop. This will be provided to all companies that attended the workshop or expressed an interest but could not attend. Two weeks would be allowed for feedback to be provided to DRDHP-6 (Mr.Jack Pagotto). Mr.Pagotto added that the SOW will likely include guidelines or principles similar to what were proposed in Dr.Pike's briefing. The Request for Proposal (RFP) would ask that a marketing plan be proposed. It was also require a plan for how technology exploitation would be facilitated by CBDICE. A management plan and substantiation of the management experience that would be available at CBDICE (or STC as the name may become) would also be required. A business plan for coordinating on-site contractors including the mechanism for cost recovery, and a proposal for how new facility construction/modifications would be funded and managed if the demand were to exceed what is available in the main laboratories.

32. Dr.White thanked everyone for attending and declared the workshop closed. Mr.Pagotto said that copies of the minutes would be distributed to all that attended and reiterated the request that any company who had not already submitted a company abstract for inclusion in a "catalog of companies involved with CB Defence technologies" do so when possible. This collection will also be distributed with the minutes and plans are to update it annually.

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*Note that the name "Suffield Technical Centre" has been tentatively adopted and you may hear CBDICE called this (or STC) in the future.

List of Annexes

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*Due to the large number of pages in the full report (includes all replies from industry survey), only a condensed version with the essential information is provided. A full copy will be made available at DRES, DRDHP, or through DSIS.