

Chemical and Biological Defense Realignment (MED-15)

This paper addresses the issues of realigning Naval Support Activity (NSA) Crane's Chemical Biological Defense (CBD) Development and Acquisition functions to Edgewood Chemical Biological Center, Aberdeen Proving Ground, MD

In summary, the CBD realignment from Crane to Aberdeen seems to have little or, probably, negative value: 1) It doesn't materially increase Aberdeen's (or DOD's) development expertise or capacity; 2) it does increase risk by reducing the capability to responsively support the warfighter; 3) it doesn't have any significant cost benefits; and, 4) it does lower the effectiveness of a key homeland defense union.

First: Crane's CBD expertise and functions do not overlap, duplicate or match those at Aberdeen.

The Crane CBD organization is devoted to CBD sustainment. This effort includes:

- ▶ Acquisition of Navy legacy CBD systems
- ▶ Acquisition Engineering support for Navy CBD systems, which leverages extensive knowledge and experience with marine and shipboard environments. This is also co-located and draws on expertise gained from similar electro-optic Navy systems.
- ▶ Shipboard installation of CBD systems, which leverages Crane's extensive shipboard installation expertise in systems ranging from electro-optics to electronic warfare.
 - Maritime sensor installation requirements are significantly different due to shipboard chemical interferences and high radiation effect considerations.
- ▶ In-Service Engineering support of Navy CBD systems:
 - Direct fleet support of engineering, technical and logistics issues
 - Development, delivery and maintenance of Navy training plans and materials
 - Shipboard technical assistance
 - Product improvement plans, engineering change proposals and obsolescence studies of fielded Navy and CBD systems
- ▶ Integrated logistics support of Navy CBD systems
- ▶ Repair and maintenance of CBD systems

Crane has the Navy unique support structure required to execute the CBD sustainment function. This includes: Distance Support Capability, the virtual expert assistance given to the fleet world wide through interactive technology; Fleet collaborative reporting and tracking capability; and, co-located Navy supply system, a Fleet Industrial Supply Center (FISC).

Although Crane's engineering work was "binned" into the D&A category, that misrepresents the focus of the Crane CBD organization. Crane's focus is one of operational readiness and responsiveness as opposed to acquiring current and developing future capability and consists of efforts which are:

- ▶ In-service engineering, logistics support, and repair oriented
- ▶ Focused on legacy and fielded Navy systems, drawing on extensive knowledge of shipboard and marine environments
- ▶ Focused on new, joint systems as the Navy acquisition engineering agent, in-service engineering agent, installer, and repair depot

Crane has no significant CBD RDA workload!

Second: The realignment fractures synergistic expertise at Crane and increases risk to Navy CBD support.

- ▶ Crane uses the same technical expertise to support its repair and depot mission as well as acquisition and in-service engineering. In turn, the technical expertise gained from the hands on repair work significantly increases Crane's ability to perform its acquisition and in-service engineering role and enables rapid response to emergent problems encountered by users in the field. The separation of the technical and industrial functions degrades both capabilities, reduces efficiencies, and increases costs.
- ▶ Crane's CBD work and expertise also benefits from the extensive electronic component and system test and analysis laboratories used for in-depth construction and failure analysis.
- ▶ Crane's extensive expertise in electro-optics, batteries and other power source systems assist in giving a total CBD system capability including system and component level.
- ▶ Crane provides full life cycle support post development for Navy & CBD systems with each ingredient synergistic with all others.
- ▶ In addition, specialized maritime system engineering, logistics, and Fleet support expertise, established over many years, will be lost as a result of relocation. Currently there is a close working relationship between Edgewood and Crane as 40% of Crane's CBD workload comes from Edgewood Joint Program Offices for sustainment of CBD systems. The low risk alternative is to allow the current relationship to continue as is without relocation

While Crane's military value for RDA is not high; if computed, a composite sustainment military value with the ingredients of acquisition engineering, in-service engineering, integrated logistics, and maintenance and repair would no doubt show Crane to be at the top.

Third: There can be little or no cost savings by moving the technical CBD functions from Crane.

- ▶ Splitting the technical support required for repair from that required for acquisition and in-service engineering will cause duplication in the overall DOD.
- ▶ Locality pay is higher in Aberdeen than Crane therefore, like positions will cost more there.
- ▶ There is no redundancy in the work being performed at the two sites. Therefore, there will be no reduction of personnel required for the workload.
- ▶ Because of the synergies between the functional areas associated with the sustainment support and the industrial workload the Joint Program Executive Office for Chem-Bio Defense assigned Crane as the Joint Organic Depot for existing Industrial workload. These synergies and associated cost and operational efficiencies will be lost upon relocation.
- ▶ Crane CBD was supported by a 25,000 SF MILCON which became fully operational in 2001. The realignment recommendation will require a new MILCON.
- ▶ The Navy unique support structure for a sustainment function would have to be replicated at Aberdeen in order to continue cost effective, efficient performance of the sustainment function

No return on investment will result from this realignment and, surely from a DOD standpoint cost will increase for the same level of support to the warfighter.

Fourth: Moving the CBD technical resource from Crane degrades the State of Indiana's Homeland Defense capability and the synergy in CBD that DOD also gains from the Cooperative Research and Development Agreement between Crane and the State.

► Crane, the State of Indiana's Counter-Terrorism and Security Council, Purdue University's Homeland Security Institute and Indiana University's Center for Applied Cyber-security Research have signed a Cooperative Research and Development Agreement to leverage each institution's capability and form an extensive cooperative alliance to increase the State's and Navy's capability to combat and respond to terrorism including chemical and biological defense.

Removing a large part of Crane's technical CBD resource from this alliance significantly reduces its capability and the benefits to the Navy and DOD as well as the State.

NON-STANDARD

NAVY COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT

BETWEEN

**CRANE DIVISION, NAVAL SURFACE WARFARE CENTER
AND
STATE OF INDIANA COUNTER-TERRORISM AND SECURITY COUNCIL
AND
PURDUE UNIVERSITY
AND
INDIANA UNIVERSITY**

AGREEMENT TITLE: Development of military and civilian technologies with anti-terrorism and small unit warfare applications.

AGREEMENT NUMBER: NCRADA- NSWCCD-04-047

AGREEMENT ADMINISTRATORS:

CRANE DIVISION, NAVAL SURFACE WARFARE CENTER

Technology Transfer Office: **Brian Bailey, Code 054, 812 854 2379**
Legal Counsel: **Pedro DeJesus, Code OC, 812 854 1130**
Principal Investigator: **Robert Karcher, Code 404, 812 854 5803**

STATE OF INDIANA COUNTER-TERRORISM AND SECURITY COUNCIL

Preferred Contact: **Earl S. Morgan, 317 232 8998, emorgan@ctasc.state.in.us**
Legal Counsel: **Micah Cox, 317 232 - 7609, mcox@cji.state.in.us**

PURDUE UNIVERSITY

Preferred Contact: **Rick Evans, 765 494 1059**
Principal Investigator: **Alok R. Chaturvedi, 765 494 9794**

INDIANA UNIVERSITY

Preferred Contact: **Steven Martin., 812 855 3963**
Principal Investigator: **Fred Cate, 812 855 1161**

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NON-STANDARD

NAVY COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENT

BETWEEN

**CRANE DIVISION, NAVAL SURFACE WARFARE CENTER
AND
STATE OF INDIANA COUNTER-TERRORISM AND SECURITY COUNCIL
AND
PURDUE UNIVERSITY
AND
INDIANA UNIVERSITY**

PREAMBLE

Under authority of the U.S. Federal Technology Transfer Act of 1986 (Public Law 99-502, 20 October 1986, as amended), CRANE DIVISION, NAVAL SURFACE WARFARE CENTER, (NSWC Crane) located at 300 Highway 361, Crane, Indiana, 47522 and STATE OF INDIANA COUNTER-TERRORISM AND SECURITY COUNCIL (herein after "State of Indiana"), located at Indiana Government Center North, 100 North Senate Avenue, Rm 340, Indianapolis, IN 46204; and PURDUE UNIVERSITY (herein after "Purdue"), whose offices are located at 610 Purdue Mall, Hovde Hall, West Lafayette, IN 47907; and INDIANA UNIVERSITY (herein after "IU"), whose offices are located at Franklin Hall 116, Bloomington, IN 47405, enter into this Cooperative Research and Development Agreement (CRADA), which shall be binding upon the Collaborators and their assignees according to the clauses and conditions hereof and for the term and duration set forth.

The U.S. Federal Technology Transfer Act of 1986, as amended, provides for making the expertise, capabilities, and technologies of U.S. Federal laboratories accessible to other Federal agencies; units of State or local government; industrial organizations (including corporations, partnerships and limited partnerships, and industrial development organizations); public and private foundations; nonprofit organizations (including universities); or other persons in order to improve the economic, environmental, and social well-being of the United States by stimulating utilization of U.S. Federally funded technology developments and/or capabilities.

NSWC Crane has extensive expertise, capabilities, and information in Anti-Terrorism/ Force Protection, including physical security, night vision/electro-optics, chemical-biological detection, small arms, radar systems and expeditionary warfare., and, in accordance with the U.S. Federal Technology Transfer Act, desires to make this expertise and technology available for use in the public and private sectors.

The State of Indiana, Indiana Counter-Terrorism and Security Council, has the interest, resources, capabilities, and technical expertise to transition the results of Naval research and development for public use. The Indiana Counter-Terrorism and Security Council coordinates homeland security initiatives for the State of Indiana and seeks assistance in developing and evaluating technologies for use in homeland security and in providing training of military and security personnel.

Purdue is an internationally known research and educational institution and has the interest, resources, capabilities, and technical expertise to transition the results of Naval research and development for public use through the Purdue Homeland Security Institute.

IU is an internationally known research and educational institution and has the interest, resources, capabilities, and technical expertise to transition the results of Naval research and development for public use through their expertise in life sciences and the Center for Applied Cybersecurity Research.

NOW THEREFORE, the Collaborators agree as follows.

Article 1. DEFINITIONS

As used in this Agreement, the following terms shall have the meanings defined below, which are equally applicable to both the singular and plural forms of nouns or any tense of verbs.

1.1 “Agreement” means this Cooperative Research and Development Agreement (CRADA) with its Appendices.

1.2 “Classified Information” means all Data classified in accordance with the national security laws of the United States.

1.3 “Collaborator” means the Navy participant or the Non-Navy participant represented and bound by the signatories of this Agreement.

1.4 “Controlled Unclassified Information (CUI)” means Government Data, Information, or materials provided to or resulting from this Agreement that may be export controlled, sensitive, for official use only, or otherwise protected by law, executive order, or regulation.

1.5 “Cooperative Work” means research, development, engineering, or other tasks performed under this Agreement by NSWC Crane or State of Indiana, or Purdue, or IU working individually or together, pursuant to the Objectives (Article 2) and the Statement of Work (Appendix A).

1.6 “Data” means recorded information of any kind regardless of the form or method of the recording, including computer software.

1.7 “Effective Date” means the date of the last signature of the Collaborators executing this Agreement.

1.8 “Exclusive License” means the grant by the owner of Intellectual Property of the exclusive right to make, use, or sell a patented invention.

1.9 “Government” means the Government of the United States of America.

1.10 “Government Purpose Rights” means the right of the Government to use, duplicate, or disclose Data, in whole or in part, and in any manner, for Government purposes only, and to have or permit others to do so for Government purposes only. Government Purpose

Rights includes competitive procurement, but does not include the right to have or permit others to use Data for commercial purposes.

1.11 “Information” means all data, trade secrets, and commercial and financial information. (Chapter 5 Subsection II of Title 5 USC)

1.12 “Intellectual Property” means the property of ideas, examples of which include, but are not limited to, patents, trademarks, copyrights, and trade secrets.

1.13 “Invention” means any invention or discovery that is or may be patentable or otherwise protected under Title 35, United States Code, or any novel variety of plant that is or may be patentable under the Plant Variety Protection Act. (15 USC 3703(9))

1.14 “Invention Disclosure” means the document identifying and describing to organizational management the Making of an Invention.

1.15 “Made” when used in conjunction with any Invention means the conception or first actual reduction to practice of such Invention. (15 USC 3703(10))

1.16 “Militarily Critical Technologies (MCT)” means those technologies identified in the Militarily Critical Technologies List and under the Export Administration Act of 1979, as amended.

1.17 “Non-Subject Data” means any Data that are not Subject Data.

1.18 “Non-Subject Invention” means any Invention that is not a Subject Invention.

1.19 “Patent Application” means an application for patent protection for an Invention with any domestic or foreign patent-issuing authority.

1.20 “Principal Investigator (PI)” means that person having the responsibility for the performance of the Cooperative Work on behalf of a Collaborator.

1.21 “Proprietary Information” means information that embodies trade secrets developed at private expense or business, commercial, or financial information that is privileged or confidential provided that such information:

is not known or available from other sources without obligations concerning its confidentiality;

has not been made available by the owners to others without obligation concerning its confidentiality;

is not already available to the Government without obligation concerning its confidentiality; and

has not been developed independently by persons who have had no access to the information. (FAR/DFARS Definition)

1.22 “Restricted Access Information” means Subject Data generated by NSWC Crane that would be Proprietary Information if the Information had been obtained from a non-Federal Collaborator participating in a CRADA (15 USC 3710a). Under 15 USC 3710a(c)(7)(B), the

Collaborators mutually may agree to provide appropriate protection to Subject Data generated by NSWC Crane (Restricted Access Information) against public dissemination or release under the Freedom of Information Act (FOIA) for a period of up to five (5) years after development of the Information.

1.23 "Subject Data" means that Data first recorded in the performance of the Cooperative Work.

1.24 "Subject Invention" means any Invention Made in the performance of the Cooperative Work.

1.25 "Tangible Property" means personal or real property that can be physically touched or held.

1.26 "Unlimited Rights" means the right to use, modify, reproduce, release, disclose, perform, or display Data or Computer Programs in whole or in part, in any manner and for any purpose whatsoever, and to have or permit others to do so.

Article 2. OBJECTIVES

This Cooperative Research and Development Agreement will be the vehicle under which the Parties will collaborate with the Indiana Center for Military and Law Enforcement Technology, Tactics, and Training (hereafter referred to as "Center) in developing/applying various applications associated with both military, anti-terrorism and small unit warfare applications. The Center will provide a unique central focus unifying the creation of anti-terrorist technologies, their tactical implementation, and the training of military and security personnel. The Center will be important to the State's anti-terrorism efforts because it will facilitate the evolution of Indiana's growing "homeland security industry," by providing a central focus through which to interact with major federal funding sources and other stakeholders.

The parties will collaborate to improve the application of technology to homeland security by reviewing available technologies for reuse in homeland security including technologies created or manufactured in Indiana; and

Develop an evaluation system that enables non-technologically proficient personnel to understand the advantages and disadvantages of public safety technologies, to-wit a simple report that reduces technology jargon and explains advantages and disadvantages of deployment to public safety procurement agencies; and

Purdue will initiate through the Purdue Homeland Security Institute (hereafter referred to as "Institute"), efforts to increase the development of military and civilian technologies with anti-terrorism and small unit warfare applications. The Institute will provide a unique central focus, which unifies the creation of anti-terrorist technologies, their tactical implementation and the training of military and security personnel. The Institute will link Purdue University faculty with external resources at IU and the State of Indiana in these related fields; and

Purdue will create within the Purdue Homeland Security Institute, the Indiana Center for Military and Law Enforcement Technology, Tactics and Training. The Center will provide a focus which unifies the creation of anti-terrorist technologies, their tactical implementation and the training of military and security personnel. The Director of the Center will report to the Director of the Institute and its operations will be consistent with other operations of the Institute; and

IU's Center for Applied Cybersecurity Research (hereafter referred to as "CACR") has as its mission the enhancement of the security and integrity of information systems, technologies, and content by facilitating research and education informed by, and integrated with, the practice of information assurance. The CACR will serve as a meeting ground for cybersecurity scholars, teachers, and practitioners and provide a clearinghouse for information on cybersecurity research, teaching, and practice. The CACR will also link IU faculty and staff with external resources at Purdue and the State of Indiana in cybersecurity and related fields. Ultimately, it will improve the practice of information assurance by drawing on the results of research in cybersecurity and related fields; and partner with federal and state governments, business, and other education institutions to improve the quality of information assurance practice, research, and teaching; and

IU will work with Collaborator's to identify and coordinate the participation of researchers within its faculty ranks that are leading experts in the life sciences that may be needed for research and training initiatives identified through the collaboration outlined in this agreement; and

Purdue and IU's faculty and graduate students will both contribute to and benefit from research in advanced homeland security and cybersecurity technologies and techniques. This partnership recognizes the extensive and growing interactions of university researchers with each other and public and private sector entities throughout the State; and

Identify public policy barriers to public safety technology advancement, on the local and state level, and make recommendations for lifting those barriers, including modification of rules, regulations, policies and law to allow for test-beds and to enhance proliferation and use of such technologies.

The synergies among the parties promises to broaden the interactions and importance to the State's technology-based economic development efforts as well as the State's anti-terrorism planning, and increases military effectiveness by creating a dynamic and multidisciplinary research environment.

Article 3. RESPONSIBILITIES

The Collaborators shall provide personnel, facilities, and equipment necessary for, and shall perform, the Cooperative Work.

3.1 NSWCR Crane Personnel and Facilities

The Cooperative Work done by NSWCR Crane will be performed under the program guidance of Robert Karcher, Defense Security Systems Division, Code 404, who has the responsibility for the scientific and technical conduct of the Cooperative Work performed within the facilities of NSWCR Crane or done on behalf of NSWCR Crane by third parties in support of this Agreement.

State of Indiana personnel who perform Cooperative Work at NSWCR Crane facilities will be supervised by the State of Indiana PI.

Purdue personnel who perform Cooperative Work at NSWCR Crane facilities will be supervised by the Purdue PI.

IU personnel who perform Cooperative Work at NSWCR Crane facilities will be supervised by the IU PI.

3.2 State of Indiana, Purdue, IU Personnel and Facilities

For State of Indiana:

The Cooperative Work done by the State of Indiana will be performed under the program guidance of Earl S. Morgan, State of Indiana, PI, who has the responsibility for the scientific and technical conduct of the Cooperative Work performed at facilities of the State of Indiana, or done on behalf of State of Indiana, by third parties in support of this Agreement.

NSWC Crane personnel who perform Cooperative Work at State of Indiana facilities will be supervised by the NSWC Crane PI.

For Purdue:

The Cooperative Work done by Purdue will be performed under the program guidance of Dr. Alok R. Chaturvedi, Purdue PI, who has the responsibility for the scientific and technical conduct of the Cooperative Work performed within the facilities of Purdue, or done on behalf of Purdue, by third parties in support of this Agreement.

NSWC Crane personnel who perform Cooperative Work at Purdue facilities will be supervised by the NSWC Crane PI.

For IU:

The Cooperative Work done by IU will be performed under the program guidance of Fred Cate, IU PI, who has the responsibility for the scientific and technical conduct of the Cooperative Work performed within the facilities of IU or done on behalf of IU by third parties in support of this Agreement.

NSWC Crane personnel who perform Cooperative Work at IU facilities will be supervised by the NSWC Crane PI.

3.3 Security Regulations and Directives

Each Collaborator will abide by the safety and security regulations and directives of the host facility in which the Cooperative Work is being performed.

Article 4. REPRESENTATIONS AND WARRANTIES

4.1 NSWC Crane's Representations and Warranties

NSWC Crane hereby warrants and represents to State of Indiana, Purdue, IU as follows:

4.1.1 NSWC Crane is a Federal laboratory of the U.S. Department of the Navy (Navy) as defined by 15 USC 3710a(d)(2)(A) and Department of Defense Instruction 5535.8, dated May 14, 1999.

4.1.2 The performance of the activities specified by this Agreement is consistent with the Defense Security Systems and technology transfer missions of NSWC Crane

(15 USC 3710a).

4.1.3 The Department of the Navy official executing this Agreement for NSWC Crane has the requisite power and authority to enter into this Agreement and to bind NSWC Crane to perform according to the terms of this Agreement.

4.2.a State of Indiana's Representations and Warranties

State of Indiana hereby warrants and represents to NSWC Crane as follows:

4.2.1.a The State of Indiana is not directly or indirectly controlled by a foreign company or government (Executive Order 12591, Section 4 (a)). The State of Indiana, as of the Effective Date of this Agreement, is a State government duly organized, validly existing, and in good standing under the Constitution laws of the State of Indiana.

4.2.2.a The official executing this Agreement for the State of Indiana has the requisite power and authority to enter into this Agreement and to bind the State of Indiana to perform according to the terms of this Agreement.

4.2.3.a The government officials of the State of Indiana have taken all actions required by law in the State of Indiana to authorize the execution and delivery of agreements, such as this Agreement.

4.2.4.a The execution and delivery of this Agreement does not contravene any material provision of, or constitute a material default under, any agreement binding on the State of Indiana. Furthermore, the execution and delivery of this Agreement does not contravene any material provision of, or constitute a material default under, any valid order of any court, or any regulatory agency or other body having authority to which the State of Indiana is subject.

4.2.5.a The State of Indiana is not presently subject to debarment or suspension by any agency of the Government. Should the State of Indiana be debarred or suspended during the term of this Agreement or thereafter, the State of Indiana will notify NSWC Crane within thirty (30) days of receipt of a final notice. NSWC Crane may then elect to terminate this Agreement and any licenses and options granted under this Agreement.

4.2.6.a The State of Indiana is not a small business as defined in 15 USC 632 and implementing regulations (13 CFR 121.101 et seq.) of the Administrator of the Small Business Administration.

4.2.b Purdue's Representations and Warranties

Purdue hereby warrants and represents to NSWC Crane as follows:

4.2.1.b Purdue is not directly or indirectly controlled by a foreign company or government (Executive Order 12591, Section 4 (a)). Purdue, as of the Effective Date of this Agreement, is a university duly organized, validly existing, and in good standing under the laws of Indiana.

