

# **POLICY ISSUE NOTATION VOTE**

November 23, 2004

SECY-04-0221

FOR: The Commissioners

FROM: Luis A. Reyes  
Executive Director for Operations

SUBJECT: MEMORANDUM OF AGREEMENT ON THE INTERAGENCY MODELING AND  
ATMOSPHERIC ASSESSMENT CENTER

PURPOSE:

The purpose of this paper is to request Commission approval to enter into the attached memorandum of agreement (MOA) with the Interagency Modeling and Atmospheric Assessment Center (IMAAC).

BACKGROUND:

The October 2004 Nuclear/Radiological Incident Annex of the National Response Plan states that, for Incidents of National Significance, "The IMAAC is responsible for production, coordination, and dissemination of consequence predictions for an airborne hazardous material release. The IMAAC generates the single Federal prediction of atmospheric dispersions and their consequences utilizing the best available resources from the Federal government."

The attached draft MOA specifies, in more details, the roles and responsibilities of Federal departments and agencies with respect to the IMAAC. After the MOA is signed, the Department of Homeland Security (DHS) and each signatory agency will jointly develop an annex that describes the details of how that signatory agency will interact with the IMAAC.

DHS requested the Nuclear Regulatory Commission (NRC) sign the MOA by December 10, 2004.

CONTACT: Stephen A. McGuire, NSIR/IRD  
301-415-6204

DISCUSSION:

NRC Coordination with the IMAAC: During a radiological Incident of National Significance in which the NRC was the Coordinating Agency, the NRC Operations Center would evaluate the situation, estimate the potential release of radioactive materials (generally using its Radiological Assessment System for Consequence Analysis (RASCAL) code), and electronically supply the estimated release source term to the IMAAC. The IMAAC would not attempt to produce its own source term. The IMAAC would use the NRC source term to produce a plume plot and forward the plot to the NRC Operations Center. Any significant differences between the IMAAC plot and the NRC's RASCAL plot would be discussed at the technical level. This process was tested during the Cooper nuclear power plant radiological emergency exercise on September 21, 2004.

In most situations, it is expected that the IMAAC and the RASCAL plots would be similar. However, in cases of complex meteorology or complex terrain, significant differences may occur. In these cases, the NRC Protective Measures Team (PMT) would deliberate with the IMAAC staff to understand the reasons for the differences and to determine the set of results that best represents the event. The PMT would then recommend these results to the NRC Executive Team (ET) and would also describe the uncertainties and precautions that should be considered in interpreting the results. As stated earlier, IMAAC will have the lead to provide the single Federal prediction of atmospheric dispersion to all affected parties.

Impact on NRC Programs and Regulated Activities: Use of the IMAAC will have little impact on how the NRC's operates. Operations Center protocols already include procedures to obtain atmospheric dispersion support from the National Atmospheric Release Advisory Center (NARAC). One of these procedures involves the supply of the RASCAL source term to NARAC if a radiological release is possible. NRC will continue to use this same procedure for IMAAC with some minor changes. Some minor changes may also have to be made to regional emergency response procedures.

There is no anticipated impact on regulated activities. States and licensees are being informed of this potential change as part of the NRP outreach workshops.

Steps Forward

Training/Exercises: As part of the ongoing training of responders, any sections of Operations Center procedures that require interactions with NARAC/IMAAC, will be given special attention. The procedures and NRC's interaction with IMAAC will be observed and evaluated in future exercises, as appropriate. Particular attention will be placed on using timely results from the IMAAC to support emergency response decision making.

RESOURCES:

Coordination with the IMAAC should not require any resources beyond those already committed to maintain Operations Center PMT capabilities and procedures, and to train NRC responders.

The Commissioners

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RECOMMENDATION:

The staff recommends that the Commission approve the signing of the attached MOA by William F. Kane, Deputy Executive Director for Homeland Protection and Preparedness.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objections. The Office of the Chief Financial Officer has reviewed this paper and has no objections regarding resource implications.

***/RA Martin J. Virgilio Acting For/***

Luis A. Reyes  
Executive Director  
for Operations

Attachment: Memorandum of Agreement on the Interagency Modeling and Atmospheric Assessment Center

**MEMORANDUM OF AGREEMENT**  
**AMONG THE**  
**INTERAGENCY MODELING AND ATMOSPHERIC ASSESSMENT CENTER**  
**OF THE**  
**DEPARTMENT OF HOMELAND SECURITY**  
**AND THE**  
**DEPARTMENT OF COMMERCE, NATIONAL OCEANIC AND**  
**ATMOSPHERIC ADMINISTRATION**  
**DEPARTMENT OF DEFENSE**  
**DEPARTMENT OF ENERGY**  
**ENVIRONMENTAL PROTECTION AGENCY**  
**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION**  
**NUCLEAR REGULATORY COMMISSION**  
**DEPARTMENT OF INTERIOR, US FORESTRY SERVICE**

**September 23, 2004**

## **I. PARTIES**

**A.** This Memorandum of Agreement (MOA) is entered into, by, and among the following agencies and departments of the United States Government that are designated Parties for the purpose of this agreement:

1. Department of Homeland Security (DHS)
2. Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA)
3. Department of Defense (DoD)
4. Department of Energy (DOE)
5. Environmental Protection Agency (EPA)
6. National Aeronautics and Space Administration (NASA)
7. Nuclear Regulatory Commission (NRC)
8. Department of Interior, US Forestry Service (DOI)

## **II. AUTHORITIES**

**A.** The DHS authority for entering this agreement is Public Law 107-296, the Homeland Security Act of November 2002 which charges the Secretary of the Department of Homeland Security with the responsibility for coordinating Federal operations within the United States to prepare for, respond to, and recover from terrorist attacks, major disasters and other emergencies. Homeland Security Presidential Directive #5 (HSPD-5) assigns the Secretary the role of principal federal official for domestic incident management.

**B.** Subsequent annexes to this MOA will cite the appropriate legal and programmatic authorities pursuant to Section VII, **IMPLEMENTATION OF ANNEXES**. These authorities may include but are not limited to the following statutes:

1. 31 USC Sec. 1535, the Economy Act, which provides that an agency may place an order with a major organizational unit within the same agency or another federal agency for goods or services if (a) amounts are available (b) the ordering agency decides the order is in the best interest of the U.S. Government; (c) the agency filling the order is able to provide or obtain by contract the ordered goods or services; and (d) the agency decides the ordered goods or services cannot be obtained by contract as conveniently or economically by a commercial enterprise.

2. Public Law 107-296, Sec. 102 (a) (3) (b) (2) The Secretary of the Department of Homeland Security] “shall have the authority to make contracts, grants, and cooperative agreements, and to enter into agreements with other executive agencies, as may be necessary and proper to carry out the Secretary’s responsibilities under this Act or otherwise provided by law.”

### **III. BACKGROUND AND PURPOSE**

A. Homeland Security Presidential Directive #5 (HSPD-5) assigns the Secretary of the Department of Homeland Security the role of principal federal official for domestic incident management. Additionally, the Homeland Security Act of 2002, charges the Secretary with the responsibility for coordinating Federal operations within the United States to prepare for, respond to, and recover from terrorist attacks, major disasters, and other emergencies.

Consistent with approval and direction by the Homeland Security Council this Memorandum of Agreement specifies the roles and responsibilities of federal departments and agencies with respect to the Interagency Modeling and Atmospheric Assessment Center (IMAAC). The goal of the IMAAC is to enhance our national capability through robust scientific cooperation among federal agencies that incorporates the best practices from federal and other programs as it seeks to improve federal modeling and assessment capabilities.

In the event of an inconsistency between this Memorandum of Agreement (or its annexes) and the policy guidance provided by the National Response Plan (NRP) or its annexes or the National Incident Management System (NIMS), the NRP/NIMS guidance will prevail.

B. The IMAAC will provide atmospheric hazards predictions in support of the lead federal agency for incidents of national significance. The IMAAC products will be recognized as the single source of federal hazards prediction and will be provided to federal, state, and local emergency responders and other government officials as necessary. The IMAAC will leverage existing federal capabilities and will be responsible for providing accurate, reliable estimates of predicted hazard areas, with associated concentrations, which will serve as the foundation for decisions by the authorized emergency managers. The IMAAC is not intended to replace or supplant the atmospheric transport and diffusion modeling activities that are currently in place to meet agency-specific mission needs. The purpose of this umbrella MOA is to ensure optimum efficiency and maximum benefit to the United States by establishing a framework for cooperation and coordination among all of the Parties for the execution of the IMAAC. This MOA is necessary and essential to further the mission of the Parties in that it will serve as the overarching agreement that sets forth the general terms and conditions under which the Parties may execute the various functions of the IMAAC. It also acts as the instrument to more effectively carry out the responsibilities associated with these identified functions.

C. This MOA and efforts under this MOA are subject to the availability of appropriated funds. This MOA does not serve to obligate funds.

#### **IV. MUTUAL INTEREST OF THE PARTIES**

This MOA is in the mutual interest to the Parties because it is designed to enable each Party to apply its capabilities and expertise in cooperation with the other Parties to provide a single source of hazards predictions during the response and recovery phases of incidents of national significance.

## V. PARTY REPRESENTATIVES AND JOINT RESPONSIBILITIES

A. Each Party has designated an Executive Agent for the execution of the umbrella MOA toward the preparedness, planning, prevention, response, and recovery of nationally significant events.

The parties to this Agreement will:

1. Support the development and implementation of a set of IMAAC products capitalizing on the Federal agencies' suite of meteorological and atmospheric transport and diffusion models.
2. Share information on existing and planned research and development programs and new technological advances in atmospheric modeling and assessment.
3. Support existing standards and guidelines and, as required, the development of new or improved national standards, guidelines, and protocols for model verification, validation and accreditation for IMAAC use. This MOA will utilize the DoD instruction 5000.61 for the definition of verification, validation, and accreditation. They are as follows:

**Verification:** The process to determine a model's implementation and its associated data accurately represent the developer's conceptual description and specifications.

**Validation:** The process to determine the degree a model and its associated data are an accurate representation of the real world from the perspective of the intended uses of the model.

**Accreditation:** The official certification of a model, simulation, or federation of models and simulations and its associated data are found acceptable for use for a specific purpose.

4. Models used for emergency planning and response by the IMAAC must meet verification, validation and accreditation guidelines. Accreditation approves its use under stated circumstances as determined through the results of the accreditation process. Models recommended for accreditation will be submitted by the IMAAC Director to the Senior Management Council for final approval. Each party will facilitate the implementation of existing communications systems for the rapid distribution of model results to federal, state, and local responders, and new communications requirements as needed.
5. Support the IMAAC through participation in exercises designed to test and examine the ability of the IMAAC to provide atmospheric modeling and assessment results to federal, state, and local responders.
6. Support the IMAAC in establishing and maintaining a repository and clearinghouse for reports and lessons learned from actual incidents, training, and exercises as well as best practices, for atmospheric modeling and assessment.



7. Each Executive Agent will provide a member to the SMC at the Assistant Secretary (or equivalent) level. Furthermore, each Party signatory to this MOA will be offered an opportunity to nominate a subject matter expert to participate in the Senior Scientific Advisory Council.
8. Agency specific IMAAC responsibilities will be detailed in the form of an annex agreed to by DHS and the Party.

#### **B. DHS Responsibilities**

1. The Under Secretary for Science and Technology will establish a DHS-led Senior Management Council (SMC). The Senior Management Council will establish the mission priorities for the IMAAC. DHS will designate the chairperson of this body.
2. The DHS will establish the Senior Scientific Advisory Council to provide scientific guidance and advice to the IMAAC Director consistent with mission priorities established by the Senior Management Council. The SSAC may occasionally consult with subject matter experts and other stakeholders outside the federal government.
3. The IMAAC will be led by a Director who is a Federal employee. The IMAAC Director will report to the Assistant Secretary for Programs, Plans, and Budget within the Science and Technology Directorate, or his designee.
4. DHS will assign the necessary resources to support the IMAAC. Staffing will be coordinated with the IMAAC and provided through individual agency agreements.

#### **C. The Executive Agents are:**

- a. For the Department of Homeland Security (DHS):  
Dr. Charles McQueary  
Under Secretary for Science and Technology
- b. For the Department of Commerce (DOC):  
Vice Admiral Conrad C. Lautenbacher  
Under Secretary for Oceans and Atmosphere
- c. For the Department of Defense, (DoD):  
Honorable Paul McHale  
Assistant Secretary of Defense for Homeland Defense

- d. For the Department of Energy (DOE):  
Ambassador Linton F. Brooks  
Under Secretary of Energy for Nuclear Security/Administrator of the National Nuclear Security Administration
  - e. For the Environmental Protection Agency (EPA):  
Jeff Holmstead  
Assistant Administrator for Air and Radiation
  - f. For the National Aeronautics and Space Administration (NASA):  
A.V. Diaz  
Associate Administrator for Science Mission Directorate
  - g. For the Nuclear Regulatory Commission (NRC):  
William F. Kane  
Deputy Executive Director for Homeland Protection and Preparedness
  - h. For the Department of Interior, US Forestry Service (DOI):
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## **VI. CONTACTS (Specified for each agency)**

Contacts for each participating agency are specified in Interagency Annexes

## **VII. PERIOD OF AGREEMENT, MODIFICATION, OR TERMINATION**

- A. This MOA will become effective upon the date of the last signature and shall remain in effect for 5 years.
- B. This MOA may be amended at any time by mutual written consent of the relevant Parties.
- C. Any Party may terminate its participation in this MOA by providing written notice to the other Parties 180 days in advance of the termination.

## **VIII. RESOLUTION OF DISAGREEMENTS**

- A. To ensure consistency, annexes will follow a format similar to this MOA and will be subject to all applicable statutory, regulatory, and other legal and administrative clearance requirements of the Parties.
- B. Nothing herein is intended to conflict with current department or agency directives. If the terms of this MOA are inconsistent with existing directives of any of the Parties entering into this MOA, then those portions of this MOA which are determined to be inconsistent shall be

invalid, but the remaining terms and conditions not affected by the inconsistency shall remain in full force and effect. At the opportunity for review, all necessary changes will be accomplished by either an amendment to this MOA or by entering into a new MOA, whichever is deemed expedient to the interests of the Parties.

- C. Should disagreement arise on the interpretation of the provisions of this MOA, or amendments and/or revisions thereto that cannot be resolved at the operating level, the area(s) of disagreement shall be stated in writing by each Party and presented to the other Parties for consideration. If agreement on interpretation is not reached within 30 days, the Parties shall forward the written presentation of the disagreement to respective higher officials for appropriate resolution.
- D. In case of a conflict between an annex and this MOA, the terms and conditions of this MOA will govern and prevail, with the exception of any provision dealing with the termination date of an annex. Each annex shall have its own termination date, which will supersede the termination date of this MOA.