

**Rocky Mountain Arsenal
Medical Monitoring Program**

Emergency Preparedness Implementation Report

October 2001

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I Background:

The Medical Monitoring Advisory Group (MMAG) submitted its final report in October 1998 to the Colorado Department of Public Health & Environment. The Emergency Preparedness recommendation was one of twelve sets of recommendations submitted to and accepted by the Department. Twenty-nine individual recommendations make up the Emergency Preparedness recommendation.

II Emergency Preparedness Recommendations:

These recommendations will complement the Rocky Mountain Arsenal's emergency response procedures and improve community understanding about potential Rocky Mountain Arsenal-related emergencies. The recommendations listed below are grouped according to the appropriate Rocky Mountain Arsenal entity, public health agency or the local emergency response entity. Some recommendations appear more than once if they apply to various agencies. The recommendation is followed by the implementation action.

Medical Monitoring Advisory Group (MMAG)

1) 4.1.1(a) - The Public Involvement and Education Group (PIE) of the MMAG should assess the creation of an information package for the potentially affected communities which incorporates suggestions from all of the MMAG work groups.

The Public Involvement & Education subcommittee of the MMAG developed a communication plan for the RMA Medical Monitoring Program that incorporated all other subcommittee's communication-related recommendations. This recommendation is Appendix L of the MMAG Final Report.

2) 4.1.1(b) - The PIE in coordination with Tri-County Health Department should provide an information phone number with multiple lines and bilingual capabilities for the surrounding communities to review all ongoing RMA remediation activities.

The Tri-County Health Department has an information line specifically for RMA cleanup and general questions. TCHD has expanded this service in 2001 to include a second line with the cleanup information in Spanish.

Colorado Department of Public Health and Environment

1) 4.1.1(c) - All local area hospitals and the Rocky Mountain Poison and Drug Center (RMPDC) should be educated and informed of the RMA chemicals of concern via the Health Professional Education Program.

Health Professional Education: 300 Health Educator notebooks were distributed to local health care providers of Commerce City, Montbello, Green Valley Ranch and Henderson. 700 Health Educator notebooks were mailed out to personal care providers around the Denver-Metro area. These notebooks contain information regarding the RMA chemicals of concern, environmental risk assessment materials, RMPDC RMA health consultation contact information and other references for health care providers. The RMPDC has been provided with a copy of the Health Professional Education notebook. In addition, Colorado Department of Public Health and Environment (CDPHE) and the Remediation Venture Office have provided RMA orientation sessions for the RMPDC that included information on the RMA air pathway analysis, environmental cleanup and the contaminants of concern.

CDPHE will provide additional informational mailings to health care providers when there is important new information to share or enough time has elapsed and there may be significant turnover in the health care provider population (e.g., an informational mailing provided health care providers information about the Sarin bomblets, the destruction method and schedule, and how to obtain medical-related assistance).

2) 4.1.1(d) - A Citizen Advisory Board should be formed after the MMAG's dissolution to ensure proper implementation of the MMAG's recommendations. In this respect, the CAB should possess some decision-making authority and should be provided sufficient resources to ensure its existence.

The state health department's RMA medical monitoring program staff has formed a Citizen Advisory Board (CAB). The first meeting was held August 18, 1999 in Commerce City. Meetings are held quarterly or on an as-needed basis and are open to the public. Interested individuals may call (303)692-3310 to be placed on the meeting announcement mailing list.

3) 4.4.4(e) - The RMA surrounding communities should be informed of all medical monitoring program information in an open and objective manner.

Medical Monitoring Program information is available to the surrounding communities through a variety of means including regularly scheduled citizen advisory board meetings that are open to the public, CAB community representatives providing outreach to their fellow community members, the "Health Matters" publication, program web site and program staff or CAB citizen representative participation in RMA and community events. Community input will be regularly solicited through the CAB and other avenues, to ensure that the program is responding effectively to community concerns.

Rocky Mountain Arsenal - Remediation Venture Office (RVO)

1) 4.2.2(a) - The RVO should place the safety of the communities surrounding the RMA, its workers and visitors at paramount importance throughout the remediation of the RMA. The RVO should establish and remain strong, pro-active safety policies and procedures. This is consistent with the goals of the Emergency Planning and Community Right-to-Know Act (EPCRA). This act was created to facilitate and promote planning for chemical emergencies at the state and local levels, and to provide information to the public about the chemicals used, stored and released in their communities. More specific recommendations follow.

The RVO has many plans and procedures in place to ensure safety of the communities surrounding the RMA and its workers and visitors throughout the cleanup. The RMA Emergency Response Integrated Contingency Plan, the RVO Health & Safety Plan, the Site-Wide Air Quality and Odor Monitoring Plans and the RMA Visitor Access Plan are some of the key plans in achieving this objective. OSHA recognized the RVO's commitment to safety by awarding the RVO's program management contractor, Foster-Wheeler, the Voluntary Protection Program Star Status Award.

2) 4.2.2(b) - The RVO should ensure that site-specific safety plans are developed and implemented to cover visitors and RMA employees during the RMA remediation.

The RVO requires all subcontractors to the program management contractor to produce a site-specific safety plan before the start of their project. The RVO examines each remediation project for potential impacts on the visitor access program and makes any necessary adjustments before work begins.

3) 4.2.2(c) - The RVO should periodically test emergency notification systems to ensure that visitors, RMA employees and contractors understand their use, meaning and response procedures.

The RVO tests all emergency notification systems on a monthly basis. Employees and contractors are trained to recognize sirens through annual classroom training and by hearing the sirens when they are tested. Trained personnel accompany people who visit the RMA.

4) 4.2.2(d) - The RVO should form a current mutual or automatic aid agreement to include DIA and Denver county.

The RVO finalized a mutual aid agreement with DIA on October 24, 2000. A Denver Fire Department mutual aid agreement was finalized on June 19, 2001. The RVO has a mutual aid agreement in place with Adams County which includes the Bennett Fire Protection District, Brighton Fire Protection District, Byers Fire Protection District, the City of Federal Heights, the City of Thornton, the City of Westminster, North Washington Fire Protection District, Sable-

Altura Fire Protection District, South Adams County Fire Protection District, Strasburg Fire Protection District and West Adams County Fire Protection District.

These agreements specify the circumstances for providing such aid and the type of aid.

5) 4.2.2(e) - The RVO and DIA should finalize the current Memorandum of Understanding which includes mutual aid, including but not limited to airplane crashes, fires and hazardous materials incidents.

The RVO finalized an agreement with DIA on October 24, 2000. The reciprocal agreement provides for emergency service personnel and equipment to fight fires caused by aircraft crashes on Airport or Arsenal property.

6) 4.2.2(f) - The RVO should provide DIA with emergency response transportation routes from the RMA out to 5 miles surrounding the RMA. These routes should be added to all response maps.

The RVO has provided DIA with emergency response transportation routes from the RMA out to 5 miles surrounding the RMA. DIA has hard copies of these maps and an electronic version. The access points from DIA onto RMA include the gates at 7th Avenue, 8th Avenue and Eagle Watch. Furthermore, Denver's emergency, rescue and firefighting personnel are granted permission to cut through the Arsenal fence to the extent necessary to gain access to the crash site with appropriate equipment.

7) 4.3.3(a) - The RVO should establish a communication system that notifies emergency response personnel on-post and off-post. This system should incorporate radios, cellular phones, analog and/or alphanumeric pagers.

In addition, if a specified area is scheduled to be remediated and has a potential for a release, the RVO should give, at least, a 24 hour notice to local emergency response entities in order that they may enact emergency standby procedures. They should also establish continuous coordination among various emergency response entities.

The RVO has established a communication system that notifies personnel, to include emergency response personnel, on-post and off-post. The on-post system includes radios, cellular phones and alphanumeric pagers. The off-post system includes direct 911 to contact Denver, direct radio communication to contact the Adams County Communication Center which accesses the neighboring cities via direct radio communication, and direct radio communication to contact Denver International Airport.

Under the requirements of the Adams County Condition Precedent Number 7 to the Hazardous Waste Landfill Certificate of Designation, the RVO will notify the Adams County School District 14 Environmental/Risk Management Department of any remediation project that has the potential to impact fence line locations, thereby possibly affecting local schools.

8) 4.3.3(c) - The RMA should have a written mutual aid agreement with Denver Fire Department.

A mutual aid agreement with Denver Fire Department was finalized on June 19, 2001. The parties to the agreement, Rocky Mountain Arsenal Fire and Emergency Services and the City and County of Denver Department of Fire, agree to mutually assist the other party, when necessary, by providing additional firefighting, fire code inspection and enforcement services and other emergency response equipment and personnel.

9) 4.4.4(c) - There should be bi-annual discussions among interested groups, including, but not limited to, area schools regarding events occurring at the Arsenal.

There are a variety of opportunities for discussion among interested groups regarding RMA events. These opportunities include RMA Restoration Advisory Group meetings, Medical Monitoring Program Citizen Advisory Board meetings, and Site-Specific Advisory Board meetings. Community events are also held two or three times a year at the Arsenal which allow for information exchange about the cleanup and emergency preparedness. The RVO has invited local school officials to visit the Arsenal to learn about the site cleanup, visitor safety and wildlife resources. The RVO will conduct a briefing for Adams County School District 14 concerning RMA emergency preparedness. In order to enhance community awareness, the RVO will include an article about emergency preparedness in the RMA community bulletin "Milestones" within the next year.

10) 4.4.4(f) - As state-of-the-art procedures and equipment become available, the emergency preparedness entities should incorporate those procedures and equipment into their process during remediation to ensure the highest level of public health and safety.

The RVO incorporates state-of-the-art procedures and equipment by revising applicable procedures and training emergency response personnel as appropriate.

11) 4.5.5(a) - The RVO should emphasize extensive training of contractors and employees regarding the execution of remediation projects on the Arsenal. This training should specifically address the following: (a) identifying hazards and their prevention, (b) identifying unexploded ordnance (UXO) and recovered chemical warfare materials and what to do if they are found, and (c) identifying how to deal with chemical spills, releases, and other emergencies.

All contractors and employees are required to attend extensive training regarding the execution of remediation projects on the Arsenal. This training includes but is not limited to site-specific health and safety training, Central Remediation Access procedures training including UXO safety, and RMA remediation orientation training.

The Integrated Contingency Plan (ICP), now under revision, will provide separate response

protocols for UXO, recovered chemical warfare materials, hazardous materials releases and other emergencies. At the Arsenal, the term “UXO” is commonly used to refer to the broader category of ordnance and explosives (OE). OE includes ammunition, ammunition components, chemical or biological warfare material or explosives that have been abandoned, expelled from demolition pits or burning pads, lost, discarded, buried or fired. UXO is explosive ordnance that have been primed, fused, armed or otherwise prepared for action, and have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installation, personnel, or material and remain unexploded either by malfunction, design, or any other cause. UXO is a subset of OE. The revised ICP response protocol will be renamed “UXO/OE” to be more accurate. At RMA, the same emergency response action is implemented when either UXO and OE is discovered.

12) 4.5.5(b) - To protect residents around the RMA, its workers and its visitors, the RVO should train their dispatchers to use the Computer-Aided Management of Emergency Operations (CAMEO) system during actual emergencies and training exercises. Further, during emergencies, CAMEO should be additionally used to decide whether chemical releases potentially endanger residents, workers and visitors.

All dispatchers on the RMA are trained to use the Computer-Aided Management of Emergency Operations (CAMEO) system during actual emergencies and training exercises. In addition, the RVO has obtained the Emergency Management Information System (EMIS) dispersion modeling capability. This model is designed for emergencies and training exercises involving military chemical agent.

13) 4.5.5(c) - The RVO should periodically conduct both full-scale and table top exercises to test and train their emergency response personnel. These exercises need to be planned to provide realistic exercises that the RVO and surrounding communities can monitor and evaluate in order to define the need for additional personnel, training, equipment requirements and process weaknesses. However, there is a need to restrict the minimum number of personnel planning the exercise in order to ensure an unrehearsed and realistic response by personnel.

The RVO periodically performs full-scale exercises including tornado threats and tabletop and response drill exercises for site-specific projects. These may include local emergency response teams and DIA. Site-wide incident and severe weather drills involving multiple organizations on-site are conducted annually. Also, each RMA contractor must perform tabletop and site specific exercises. The RVO also periodically hosts an Information Day and training which is available for all local fire department personnel.

14) 4.4.4(d) - Local emergency response entities, including DIA, should periodically participate in RMA emergency response exercises.

Local emergency response entities may participate in RMA emergency response exercises (to

include full scale and tabletop exercisesThe RVO is planning to provide training for DIA Disaster Preparedness personnel.

15) 4.5.5(e) - DIA should be included in ongoing training regarding 1) entrance to RMA, 2) special conditions that may exist on RMA in specific situations, and 3) aircraft scenarios.

DIA is included in ongoing training with the Rocky Mountain Arsenal and other emergency response entities. DIA and the RVO agree that such training should be conducted annually. The Reciprocal Agreement provides that the Arsenal will train the Airport's personnel in the proper methods of protection from and decontamination of chemical warfare materiel. In addition, the Agreement states that the Airport will train the RMA Fire and Emergency Service personnel in the proper method of fighting fires caused by aircraft crashes.

City and County of Denver (to include Denver Fire Departments)

1) 4.2.2(h) - The fire departments should have the same definition and understanding of "automatic aid".

Automatic Aid activates the participating fire department(s) directly at the time of the emergency call (both the primary and automatic aid agencies are notified at the same time). This notification based on specific criteria defined in Intergovernmental Agreements that may specify a type of call or other criteria for automatic aid.

Mutual Aid is based on an as needed evaluation of the situation by the primary response agency that can then request response from the mutual aid agency.

Agencies participating in mutual or automatic aid typically commit these agreements to writing. The agreements spell out the conditions under which aid will be provided and the type of aid.

2) 4.3.3(c) - The RMA should have a written mutual aid agreement with Denver Fire Department.

A Denver Fire Department mutual aid agreement has been developed and was finalized on June 19, 2001. The parties to the agreement, Rocky Mountain Arsenal Fire and Emergency Services and the City and County of Denver Department of Fire, agree to mutually assist the other party, when necessary, by providing additional firefighting, fire code inspection and enforcement services and other emergency response equipment and personnel.

3) 4.4.4(a) - The City and County of Denver should routinely educate their residents on the meanings of various sirens, including dates and times of testing, and on the evacuation procedures and general emergencies.

The City and County of Denver provide this information by several means. Information on

sirens and siren testing is announced via local media including radio, television, and/or newspapers. Presentations are made at neighborhood associations and other public meetings. These concerns are also discussed in various newsletters. Denver also makes detailed information readily available on the Internet at its main web page [<http://www.denvergov.org/>] and at that of the Office of Emergency Management's [<http://www.denvergov.org/dephome.asp?depid=49>].

4) 4.4.4(b) - Interested groups, including, but not limited to, area schools should have the opportunity to be represented on the Local Emergency Planning Commission.

Most if not all Local Emergency Planning Commissions (LEPCs) have varied representation and involvement. All meetings are posted and open to the public. Denver publishes a notice of all LEPC meetings on the Office of Emergency Management web page (<http://www.denvergov.org/OEM/default.asp>) the City and County Building common bulletin board.

5) 4.4.4(f) - As “state of the art” procedures and equipment become available, the emergency preparedness entities should incorporate those procedures and equipment into their process during remediation to ensure the highest level of public health and safety.

Denver incorporates state-of-the-art procedures and equipment by revising applicable procedures and training emergency response personnel as appropriate.

6) 4.5.5(d) - Local emergency response entities, including DIA, should periodically participate in RMA emergency response exercises.

The RVO is planning to provide training for DIA Disaster Preparedness personnel. DIA and RVO agree such training should be conducted annually.

7) 4.5.5(f) - The surrounding local authorities should be trained in order to properly respond to any hazardous materials emergency under the home rule state.

Denver Hazardous Materials team receives numerous and ongoing training opportunities. Denver Fire Department receives ongoing training through the Academy. Most Denver Fire Department firefighters are trained at the operations-level for hazardous materials response through the Occupational Health and Safety Administration (OSHA). The Denver Hazardous Materials Response Team located Downtown receives more intensive hazardous materials training (20-plus firefighters per shift trained at OSHA technician level). The operations-level firefighters are the first responders and are trained to set up a hazardous materials incident management system. The hazardous materials response comes from the Downtown station. If the incident is too large for Denver to handle alone, a regional response is initiated by requesting aid from surrounding hazardous materials response teams to assemble the best capability available.

Denver International Airport (DIA)

1) 4.2.2(e) - The RVO and DIA should finalize the current Memorandum of Understanding which includes mutual aid, including but not limited to, crashes, fires and hazardous materials incidents.

The RVO finalized an agreement with DIA on October 24, 2000. The reciprocal agreement provides for emergency service personnel and equipment to fight fires caused by aircraft crashes on Airport or Arsenal property.

2) 4.2.2(f) - The RVO should provide DIA with emergency response transportation routes from the RMA out to 5 miles surrounding the RMA. These maps should be added to all response maps.

The RVO has provided DIA with emergency response transportation routes from the RMA out to 5 miles surrounding the RMA. DIA has hard copies of these maps and an electronic version. The entry points from DIA onto RMA include the gates along the eastern fence line at 7th Avenue, 8th Avenue and Eagle Watch. Furthermore, Denver's emergency, rescue and firefighting personnel are granted permission to cut through the Arsenal fence to the extent necessary to gain access to the crash site with appropriate equipment.

3) 4.2.2(g) - DIA should incorporate a hazardous materials response team to their currently existing emergency response personnel.

Denver International Airport Department firefighters are trained at the operations-level for hazardous materials response through the Occupational Health and Safety Administration (OSHA). The Denver Hazardous Materials Response Team located Downtown receives more intensive hazardous materials training (20-plus firefighters per shift trained at OSHA technician level). The operations-level firefighters are the first responders and are trained to set up a hazardous materials incident management system. The hazardous materials response comes from the Downtown station. If the incident is too large for Denver to handle alone, a regional response is initiated by requesting aid from surrounding hazardous materials teams to assemble the best capability available.

4) 4.4.4(f) - As “state of the art” procedures and equipment become available, the emergency preparedness entities should incorporate those procedures and equipment into their process during remediation to ensure the highest level of public health and safety.

DIA incorporates new procedures and equipment by revising applicable procedures and training emergency response personnel as appropriate.

5) 4.5.5(d) - Local emergency response entities, including DIA, should periodically

participate in RMA emergency response exercises.

DIA is included in ongoing training with the Rocky Mountain Arsenal and other emergency response entities. DIA and the RVO agree that such training should be conducted annually.

6) 4.5.5(e) - DIA should be included in ongoing training regarding 1) entrance to RMA, 2) special conditions that may exist on RMA in specific situations, and 3) aircraft scenarios.

DIA is included in ongoing training with the Rocky Mountain Arsenal and other emergency response entities. DIA and the RVO agree that such training should be conducted annually. The Reciprocal Agreement provides that the Arsenal will train the Airport's personnel in the proper methods of protection from and decontamination of chemical warfare materiel. In addition, the Agreement states that the Airport will train the RMA Fire and Emergency Service personnel in the proper method of fighting fires caused by aircraft crashes.

Adams County (To include South Adams County Fire Department and other Fire Departments in Adams County)

1) 4.2.2(h) - The fire departments should have the same definition and understanding of "automatic aid".

Automatic Aid activates the participating fire department(s) directly at the time of the emergency call (both the primary and automatic aid agency are notified at the same time). This notification based on specific criteria defined in Intergovernmental Agreements that may specify a type of call or other criteria for automatic aid.

Mutual Aid is based on an as needed evaluation of the situation by the primary response agency that can then request response from the mutual aid agency.

Both Automatic and Mutual Aid agreements are written agreements between the participating agencies. These agreements define the scope of each agreement and are available from those agencies.

2) 4.3.3(b) - To ensure consistency in the notification process between counties, ADCOM should also be placed on the MET system. This process will take approximately one month to connect with a \$300 hook up fee and a \$25.00 monthly charge.

ADCOM now participates in the MET system. They also test the system on a regular basis.

3) 4.3.3(d) - The South Adams County Fire District (SACFD) should create automatic aid agreement with the RMA to ensure immediate and adequate emergency response coverage.

An automatic aid agreement between RMA and SACFD is not deemed appropriate at this time. It could (dependant on the type of calls identified for automatic aid) unnecessarily increase the training and response burden on the volunteer fire fighters that staff SACFD. Currently a mutual aid agreement exists and this level of aid has been historically adequate. A copy of the mutual aid agreement is available from RMA or South Adams County Fire Department.

4) 4.3.3(e) - The Adams County Communications Center (ADCOM) should have highly trained personnel to determine whether situations require the notification of organizations for emergency response situations.

First responder agencies (fire and law enforcement) dispatched to situations by ADCOM have the trained staff to make initial situation assessments and call for appropriate assistance from other agencies. They may also request that ADCOM provide appropriate notice to others. In addition, intergovernmental agreements could be written to provide other notifications.

5) 4.4.4(a) The (City and County of Denver) and Adams County should routinely educate their residents on the meanings of various sirens, including dates and times of testing, and on the evacuation procedures and general emergencies.

Only one emergency siren is located in Adams County at about 82nd & Washington. Adams County provides a variety of disasters planning information for individuals and businesses. This is primarily done via printed material.

6) 4.4.4(b) - Interested groups, including, but not limited to, area schools should have the opportunity to be represented on the Local Emergency Planning Commission.

Membership on LEPCs should be representative of the community served (1st responders, emergency planners (federal, state, local), facility representatives, community members, environmental groups, etc). Interested individuals may receive information on meeting dates and locations by calling (303)289-5442 and requesting e-mail or fax notice of meetings or meeting minutes.

7) 4.4.4(d) - Adams County should have TCI television cable interrupt capabilities as does Denver in order to communicate with their citizens during an emergency.

ADCOM has obtained a reverse 911 plan. This allows more focused direct notice to phone customers (a much larger group than cable subscribers) and should address the need identified above.

8) 4.4.4(f) - As “state of the art” procedures and equipment become available, the emergency preparedness entities should incorporate those procedures and equipment into their process during remediation to ensure the highest level of public health and safety.

The Adams / Jeffco Haz-mat Team and South Adams Fire Protection District undergo regular training and continually evaluate the appropriate equipment necessary to provide for protection of the served community.

9) 4.5.5(e) - Local emergency response entities, including DIA, should periodically participate in RMA emergency response exercises.

Adams County emergency response entities participate in RMA emergency response exercises (to include full scale and tabletop exercises).

10) 4.5.5(f) - The surrounding local authorities should be trained in order to properly respond to any hazardous materials emergency under the home rule state.

The area surrounding RMA in Commerce City and Adams County is served either by the South Adams Fire Protection District which has trained hazardous materials responders or by the Adams / Jeffco Haz-mat Team. Hazardous materials responders receive extensive training (awareness, operations and technician levels) and testing RVO has a mutual aid agreement in place with Adams County which includes the Bennett Fire Protection District, Brighton Fire Protection District, Byers Fire Protection District, the City of Federal Heights, the City of Thornton, the City of Westminster, North Washington Fire Protection District, Sable-Altura Fire Protection District, South Adams County Fire Protection District, Strasburg Fire Protection District and West Adams County Fire Protection District.