

STATE EMERGENCY RESPONSE PREPAREDNESS



State Emergency Response Programs Analysis



Removal Action Focus Group

April 2009

Association of State and Territorial
ASTSWMO
Solid Waste Management Officials

ASTSWMO

REMOVAL ACTION FOCUS GROUP

STATE EMERGENCY RESPONSE PROGRAMS ANALYSIS

Acknowledgements

This document was prepared by the ASTSWMO Removal Action Focus Group, with assistance from the U.S. Environmental Protection Agency under Cooperative Agreement RT-83377401.

ASTSWMO thanks the following members for their participation in development of this report:

John Regan, NH (Chair)
David Sweeney, NJ (Vice-Chair)
Ellen Malenfant, DE
David Reuland, GA
Bruce Everetts, IL
Marshall Cedilote, TX
Leo Henning, KS
Brad Johnson, UT
Jim Tjosvold, CA

Cover Photos (Clockwise) Flooding During Hurricane Floyd, Plane Crash in Newark N.J., and Anthrax at Hamilton Post Office N.J.

TABLE OF CONTENTS

Introduction, Project Scope and Objectives	3
I. Planning	4
II. Coordination	6
III. Preparedness and Exercises	9
IV. Health and Safety	11
V. Funding and Contracting	13
VI. Communications	16
VII. Response Equipment	18
VIII. Experience	21
Conclusions	23
Appendix A: State Response Documents	24
Appendix B: State Response Documents Arranged by Subject Matter	26
Appendix C: Emergency Response Resources on the Web	28
Appendix D: State Contacts Willing to Share Information	31
Appendix E: ASTSWMO Survey	33

Introduction, Project Scope and Objectives

In recent years, State and Territorial environmental programs have identified the need to further define their roles in preparing for and responding to emergency incidents. The responses to the World Trade Center attack in New York on September 11, 2001, and Hurricanes Katrina and Rita disasters in August and September of 2005 required extensive involvement of State environmental agencies to ensure proper response to the incident and subsequent recovery and handling of residual waste materials. The 2002 Winter Olympic Games in Salt Lake City, Utah, and the July 2004 Democratic National Convention in Boston, Massachusetts, also required extensive planning that included State environmental agency involvement in preparation for a possible response to a chemical incident.

Effective planning and preparation by State environmental agencies is essential to ensure that releases or potential releases of hazardous substances or oil during an emergency incident are addressed to protect human health and the environment. Coordination with multiple local, State, federal and private entities provides an effective response that minimizes the adverse impacts associated with the incident. Establishing communication links between those agencies also facilitates a smooth response and recovery.

One objective of this document is to present the findings of research conducted by the Focus Group on State removal and environmental emergency response programs. That research sought to identify the State resources, capabilities, and preparation for responses to large-scale events and natural disasters. Another goal of this document is to provide a resource to States as they improve their abilities to prepare for, coordinate, and perform environmental emergency response activities by documenting and sharing successful elements of State emergency response and disaster preparedness programs. This document describes core State program elements, protocols, strategies, and methodologies that aided and enhanced their abilities to prepare for and respond to the release of hazardous substances during large-scale emergencies. These protocols differ based on the nature of the emergency, contamination, and media effected. The research was conducted by preparing and distributing a questionnaire regarding emergency response issues to all States and Territories. ASTSWMO did not use any cooperative agreement funds to prepare and distribute the questionnaire. Responses were received from 42 States and the District of Columbia. In the document that follows, when percentages of respondents are referenced they refer to the 43 data points we received, and future reference in this document to the responses from "States" is inclusive of the information provided by the District of Columbia.

This document will be distributed to all fifty States, the District of Columbia, six Territories, the EPA, and other entities, as appropriate, to educate stakeholders about State environmental agencies' roles in environmental emergency response and assist States in their response preparations.

In support of the above listed objectives, the Focus Group conducted research regarding the resources and capabilities of State removals and environmental emergency response programs in the following seven areas:

1. Planning, e.g., written response plan(s);
2. Coordination, e.g., State-federal and intra-program (intra-State);
3. Communication;
4. Response equipment;
5. Preparedness exercises;
6. Contracting; and
7. Funding.

The Focus Group researched core State program elements, protocols, strategies and methodologies associated with each of the above elements in relation to the following general types of incidents:

- Terrorist incidents at infrastructure, e.g., water supply systems, dams, power plants (including nuclear);
- Large-scale natural disasters, including earthquakes, wildfires, floods, and hurricanes;
- Response to disease such as avian flu and BSE (mad cow); and/or
- Terrorist threats at large events, e.g., Olympics, political party meetings.

Selected case studies from States with experience in environmental emergency response and preparedness are included in this document to highlight the major program elements outlined above, so that other States may use the examples cited as learning tools. To the extent possible, this document attempts to highlight how States have made changes to protocols and procedures during actual emergencies in order to streamline processes and enhance their preparedness to respond to future emergencies. The Focus Group worked closely with US EPA's Office of Emergency Management program in development of this document.

I. Planning

Planning is essential for States' emergency response programs to be effective. Not surprisingly, 100% of States' environmental agencies reported that they are involved in planning for emergency incidents. Similarly, 100% of State environmental agencies plan for incidents involving chemicals, petroleum and natural disasters. Some States also include biological (75%) and radiation/nuclear (70.5%) in their planning exercises. One-third of responding States listed other types of emergency incidents they plan for: drinking water, waste water, dam safety, fire fighting, indoor mercury spills, methamphetamine labs, animal epidemic carcass disposal, and weapons of mass destruction incidents as they pertain to hazardous materials. All states confirmed having a reporting system to ensure proper response routing, while 96% have a Duty Officer on call 24 hours/day who determines the need for an emergency response and the resources necessary.



Leaking Truck Accident, NJ

All States reported they coordinate emergency response actions with solid and hazardous waste programs. Ninety percent of States also coordinate with drinking water, waste water, and air programs, while only 80% of States coordinate with radiation programs. Other programs and agencies with which States coordinate emergency response actions included dam safety, wetlands, US Coast Guard, fire companies, agriculture, transportation, pipeline safety, wildlife/wetlands management, petroleum storage tanks, and coal mines. Seventy-five percent of States have their own Department of Homeland Security with emergency response authority. A nearly equal percentage of State environmental agencies reported that they either have haz-mat teams themselves (43%) or have haz-mat teams in other State agencies (45%). Surprisingly, 12% of States reported not having haz-mat teams. Ninety-six percent of States responded that they comply with requirements of the National Incident Management System (NIMS).

Eighty-two percent of States reported evaluating their emergency response powers regarding regulatory authorities that can be implemented and rules that can be waived during disasters. Eighteen percent of States have not evaluated these powers or were unsure.



Tornado Recovery, Greensburg, KS 2007

Eighty-four percent of States have prepared guidance documents for emergency or disaster response; however, a minority (36%) of these States have these documents on a website. Reasons cited for not posting on a website included security concerns, documents being internal-only documents and posted on their intranet, and documents being available on request. Surprisingly, 16% of States have not prepared guidance documents for emergency or disaster response.

II. Coordination

Coordination between all levels of response agencies prior to an incident is essential to ensuring an effective and efficient response during an emergency situation. The Coordination section of the questionnaire gathered information about the level of communication between State environmental agencies and other response organizations, including State, federal, and local responders. The responses indicate that the majority of State environmental agencies coordinate response preparedness with numerous local and federal agencies. The degree of coordination and the agencies involved varied greatly and probably depend on the needs and circumstances of each individual State. All respondents

reported they coordinate with other State agencies and only a small number reported that they do not coordinate with local or federal agencies.

All of the respondents reported that they coordinate with the State Public Safety/Emergency Management agencies. The majority of respondents also coordinate with the State Health, Agriculture, and Transportation agencies. In addition to the State agencies listed in the research project, a number of States reported that they also coordinate with the State natural resources, wildlife, and fisheries agencies. Other State agencies that were mentioned less frequently include commerce, social services, radiation control, the attorney general, and information technology. All State governments are organized differently and may have unique circumstances and needs. The environmental agencies reported they coordinate their activities with all other appropriate state agencies as they prepare to respond to emergency situations.



Terrorism Exercise, NJ

All but one of the respondents reported that they participate in the State Emergency Response Commission (SERC). The SERC can provide a good forum for environmental agencies to develop working relationships with a number of response agencies, including local emergency planning committees (LEPC). Some respondents also provided narrative clarification of their role on the SERC. Some respondents reported that they chair the SERC, while others are in a support capacity. Only 4 of the 43 respondents reported that they do not coordinate with local emergency response agencies.

The majority of the respondents reported they coordinate response preparedness with federal agencies and participate in the Regional Response Team (RRT). Only one State confirmed they do not coordinate with federal agencies or the RRT. All respondents agreed that they coordinate preparedness with the

Environmental Protection Agency. A high percentage of State environmental agencies also coordinate with the Department of Homeland Security and the National Guard. Coordination among State environmental agencies and the Department of Defense and the Department of Energy is less frequent. In addition to the federal agencies listed in the research project, 14 respondents specifically mentioned that they also coordinate with the U.S. Coast Guard. The Federal Bureau of Investigation, the Nuclear Regulatory Commission, and the Department of Interior were also frequently mentioned. Individual State needs and capabilities dictate the level of federal agencies' involvement in State environmental agency preparedness and response activities.

A small number of respondents also mentioned that they coordinate response preparedness with Canada. States with international borders need to coordinate with Canada or Mexico, as necessary. Coastal States encounter issues with international waters that could require coordination with international organizations.

The following table lists various State agencies that were mentioned by research project respondents. State environmental agencies may want to consider coordinating with these agencies during preparedness activities.

STATE AGENCIES		
Administrative Services	Health	Natural Resources
Agriculture	Homeland Security	Poison Control
Attorney General	Human Services	Public Safety
Commerce	Information Technology	Public Utilities
Emergency Management	Labor	Radiation Control
Fire Marshal	Marine Wildlife	Social Services
Fish and Wildlife	Marine Patrol	Transportation

The following table lists various federal agencies that were mentioned by the research project respondents. State environmental agencies may also want to consider coordinating with these agencies during preparedness activities.

FEDERAL AGENCIES	
Agriculture	Fish and Wildlife
Alcohol, Tobacco and Firearms	Forest Service
Bureau of Land Management	Homeland Security
Coast Guard	Interior
Corps of Engineers	National Guard
Customs	National Oceanic and Atmospheric
Department of Defense	Administration
Department of Energy	Nuclear Regulatory Commission
Drug Enforcement Agency	Postal Service
Environmental Protection Agency	Transportation
Federal Bureau of Investigation	Transportation Safety Administration

The results of the research project indicate that state environmental agencies are coordinating their response preparedness with numerous local, State, and federal agencies and organizations. It is apparent that each State tailors their coordination to their individual needs and circumstances.

III. Preparedness and Exercises

Other critical activities of a robust emergency response program are exercises to prepare for incidents by testing and improving program capabilities. Planning, training, resources, and equipment are important considerations for State environmental programs as they prepare for and conduct exercises, testing their ability to respond to a variety of emergency situations.

All of the States reported that their environmental agencies have an emergency response plan specifically for their agency. Two States reported that their emergency response plans were part of larger State-wide plans, which assign specific duties to the environmental agency. As part of their emergency response plans, a majority (63%) of States reported that they conduct table-top or functional exercises and all States indicated that they participate in statewide table-top or functional exercises. Michigan indicated they have been participating in exercises related to nuclear facility incident response and have begun to conduct exercises of their hazardous materials response capabilities. Ninety-one

percent of the State environmental agencies reported that they were members of the State-wide emergency response team.

Training is another important part of being prepared to respond to emergency incidents. Nearly all (95%) of the States provide training to agency staff responding to emergency incidents. Approximately 60% of the States provide training and equipment for staff to respond to incidents in level A or B personal protective equipment (PPE). Conversely, it also means that 40% of the State environmental agencies do not have staff that can respond in Level A or B PPE, although some State environmental agencies can provide support and expertise if needed. One State indicated that it provides training but that their personnel do not carry level A and B equipment. Nearly all (98%) of the States reported that their agency representatives are required to complete Incident Command System (ICS) training.

About one half of the States indicated that their environmental agency has an emergency operations center (EOC) to use during an emergency incident. Three States indicated they do not have an agency EOC and instead use a State EOC facility. Two States reported they have offices that can be converted to EOCs, if needed. Two other States were in the process of developing an EOC. The capacity of the EOC varied from State to State. Most are equipped with communications equipment, workstations with Internet access, GIS access, and plenty of extra space for emergency response personnel. Over half of the EOCs have air dispersion modeling capability, satellite communications, back up electrical generators, and are not located in areas susceptible to natural disasters. A little more than a third had secured phones and fax machines. The following table is a summary of the information provided by responding States:

Summary of State Emergency Operation Center Resources	
Communication equipment (phones, fax)	96%
Adequate work station with internet access	88%
Access to GIS systems	83%
Sufficient space	79%
Location not susceptible to natural disasters	54%
Air dispersion modeling tools	54%
Satellite communications	50%
Backup generator	46%
Secure phones and fax machines	38%

With respect to the clean up activity that follows emergency response work, nearly all (88%) of the States reported that the State emergency response agencies use standards and criteria published by the State environmental agency. One State reported that the determination of how clean is clean is made on a case-by-case basis. The States also reported excellent (93%) cooperation in transitioning from emergency response cases to their remedial or removal programs when conditions warrant. One State responded that they need to work on the transitions from emergency response to removal or remedial work.



Tornado Recovery, Greensburg, KS 2007

In summary, all responding State environmental agencies reported they have their own or are included in a State-wide emergency response plan. A majority of States reported they conduct exercises. Most States provide PPE and ICS training to their staff. Approximately half of the States reported they have Emergency Operations Centers but the capabilities/resources of the EOCs vary from State to State. Most States have a system for transitioning from the emergency response phase to longer term cleanup where conditions warrant.

IV. Health and Safety

In order to protect the health and welfare of the public during an emergency response incident, it is necessary to have trained emergency response staff and have the systems and resources in place to prepare and protect them before, during and after the incident. The national worker safety requirements for hazardous waste operations and emergency response are identified in Occupational Safety and Health Administration (OSHA) regulations 29 CFR 1910.120 and include requirements for emergency response programs, site assessments, health and safety plans, responder training, and medical surveillance. As part of this research ASTSWMO asked six questions related to worker Health and Safety issues and the results are discussed below.

The majority of the States are involved with emergency response. Fifty-six percent of the 43 States that responded to the questionnaire have First Responders and 84% have Support Personnel involved with emergency response. Two of the responding States have neither.

Seventy-nine percent of the responding States indicated they have site safety experts to assist during emergencies. Sixty-three percent of the responding States (26 out of 43) answered “Yes” to all the Health and Safety questions indicating strong programs. Only one of the responses indicated their State did not comply with the health and safety standards in OSHA 1910.120 or 40 CFR Part 311.

Of the 41 States that indicated they have either First Responders or Support Personnel, 85% indicated their responders participate in a medical surveillance program. Two States indicated they are considering implementing medical surveillance for responders. A lesser percentage (75%) of these States indicated they have a system in place to document actual or potential exposures.



EPA/NJ DEP/Burlington County Exercise

The ASTSWMO Removal Action Focus Group believes that in order to protect responders' health and comply with OSHA 1910.120, it is necessary to have a medical surveillance program and a system in place to document potential exposures. Additional efforts are needed in some States to improve their health and safety programs.

V. Funding and Contracting

Funding and contracting are critical parts of emergency planning. State environmental agencies must have the resources and mechanisms in place to respond to emergency situations. The Removal Action Focus Group included several questions to obtain information on State funding and contracting status.

The Focus Group is interested in how State environmental agencies are funding their emergency response planning and preparedness activities. The research project provided four possible sources: EPA, Homeland Security, State Funds, and Other. The respondents were to check all sources of funding received by their States, and some reported more than one source. There were 42 States that responded to this question. The research results listed below show the most common source of funding for these activities were State Funds. The "Other" sources of funding listed included Health and Human Services and Center for Disease Control, State Trust Funds, State Superfund, Grants, Solid / Hazardous Waste Fees, and User Fees.

<u>Funding Source</u>	<u>Responses</u>	<u>Percentage</u>
EPA	12	28.6%
Homeland Security	19	45.2%
State Funds	36	85.7%
Other	11	26.2%

The Focus Group is interested in whether the funding is adequate for emergency response activities. Below are results of the question asking if adequate funds were budgeted for emergency response activities.

<u>Response</u>	<u>Responses</u>	<u>Percentage</u>
Yes	18	41.9%
No	25	58.1%

The results are interesting. Almost 60% of the States environmental agencies are not provided adequate funding to maintain their equipment, supplies, and training. The Removal Focus Group considers funding for these activities to be the minimum amount of funding to maintain capability for a response action.

The Focus Group is interested in whether the State environmental agencies have the funding sources to conduct emergency clean-ups. Below are the responses to this question.

<u>Response</u>	<u>Responses</u>	<u>Percentage</u>
Yes	36	83.7%
No	7	16.3%

The results show that most States could respond if the responsible party is unwilling or unable to respond. An interesting result is 16.3% of the States could not fund a response action if the responsible party was unwilling or unable. Presumably the EPA would be requested to provide emergency responses in these states.



Shelving Unit Containing Abandoned Chemicals, NJ

A follow-up question to the one above asked if the State environmental agencies documented the emergency response action to facilitate cost recovery efforts. The results are shown below.

<u>Response</u>	<u>Responses</u>	<u>Percentage</u>
Yes	39	90.7%
No	4	9.3%

The overwhelming response to this question was “Yes”. From the results of this research project, it appears that most of the States document their costs and seek reimbursement from the responsible party or parties.

The Focus Group is interested in whether the State environmental agencies have contracts in place to conduct emergency cleanups. The question was included to determine whether the agency could respond to emergency situations in a timely manner with resources that were above and beyond their internal capabilities. The results of the question are listed below.

<u>Response</u>	<u>Responses</u>	<u>Percentage</u>
Yes	39	90.7%
No	4	9.3%

The results indicate that most of the States have contracts in place with emergency response contractors to help respond to emergencies. About 10% of the states do not have contracts in place; therefore they may need to request assistance from EPA or other state agencies to respond to some emergencies.



Tornado Recovery, Greensburg, KS 2007

In conclusion, it appears from the research results that States provide the majority of funding for emergency response activities with some funds coming from EPA and Homeland Security. The research

results indicate funding for maintaining the emergency response capabilities is inadequate. Responses further show funding is not adequate to maintain equipment calibration and training for the responders. The majority of the State environmental agencies have adequate funding to respond to incidents where the responsible party is unwilling or unable to respond. The majority of States document their time and expenditures and seek reimbursement from the responsible parties. Finally, most States have contracts in place to respond to incidents that exceed their capabilities.



Terrorism Exercise, NJ

VI. Communication

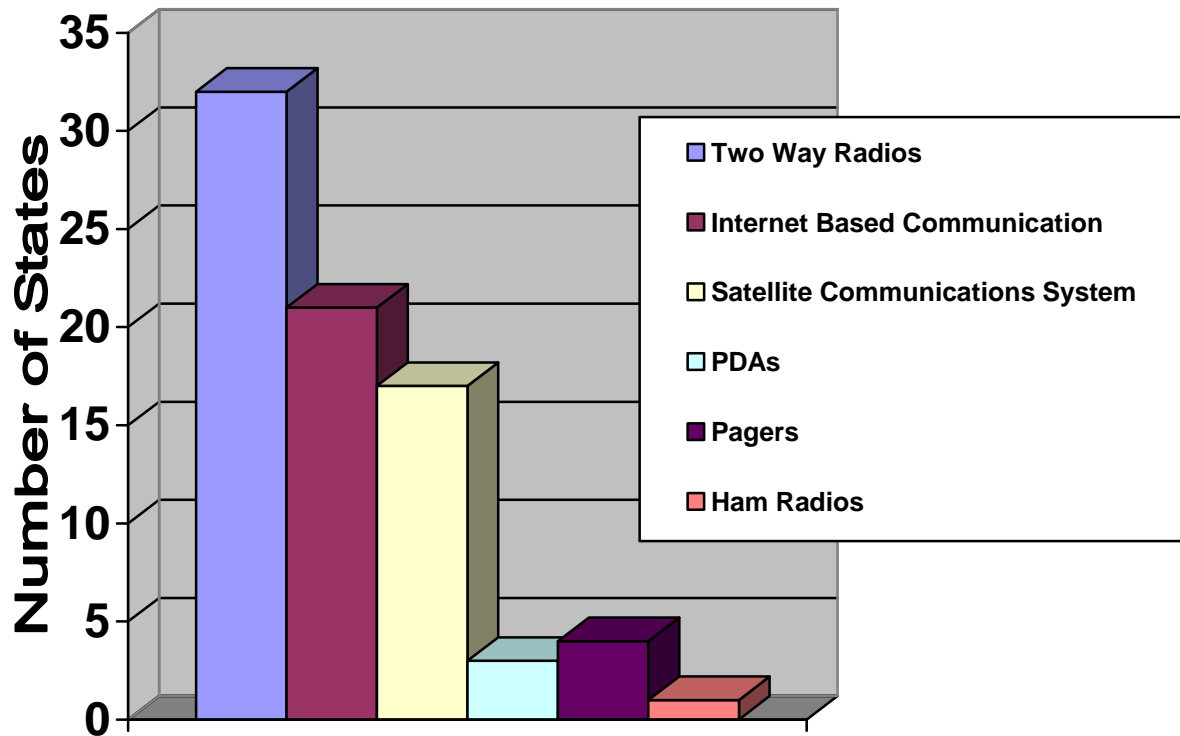
The majority of States that responded (83%) indicated that they possess emergency communication equipment beyond a telephone-based system. Of those States, most (89%) had, at a minimum, handheld 2-way radios. Approximately half of the States also had satellite telephones and other, internet-based communication systems.

Of the States that indicated they possess emergency response communication equipment, the specific types of equipment and how many states possess them are listed below:

EQUIPMENT TYPE

Two Way Radios – includes base station systems, vehicle radios, boat radios, 800 MHz radios, and Interoperability Level 4 capability systems

Internet Based Communication – includes air card laptop computers, whiteboards, teleconferencing, and Web EOC software
Satellite Communications System – includes BGAN or other satellite-based systems
PDA's
Pagers
Ham Radios



Only seven States (17%) responded they do not have emergency communication equipment. Geographically, those States were spread throughout the country reaching six (6) different EPA Regions. The results do not appear to reflect any regional deficiencies.

Most State agencies (76%) responded they have interoperable equipment that would enable them to communicate with other State and federal agencies. Several States commented that the types of communications equipment vary significantly between different agencies and can be limited due to

geographically remote locations and mountainous or sparsely populated terrain. Many agencies possess communications equipment, but the ability to link all of them into one interoperable network remains a challenge.

Most States commented on that fact that communication implementation and interoperability is an ongoing issue. As situations dictate and funding levels vary, keeping communications equipment current and operable remains a constant challenge with State environmental agencies. Only with cooperation between many State and federal agencies will complete interoperability be achieved.



EPA/NJ DEP/Burlington County Exercise

VII. Response Equipment

The research project section involving specific response equipment identified the equipment capabilities that State environmental agencies have in their possession. In order to adequately understand a State's capability, it is important to realize equipment is often available through other State, County, or Local agencies or contractors. This was pointed out by several respondents in the narrative portion of this section, who also noted which other State agencies would be called upon for assistance. Since one of the goals of this research project was to identify the planning and cooperation occurring within the States, this type of equipment sharing is a positive observation.

In general, responses indicate that the majority (79% yes; 21% no) have prepared for emergencies by acquiring some level of equipment. The type of equipment procured provides a good indicator of the complexity and sophistication of each State's response program. All of the respondents indicated their

agency has prepared for emergencies by acquiring a cache of materials or equipment for emergency preparedness.

The responses to this section indicate States generally have the ability to mobilize appropriate vehicles during an emergency. Several States noted in the comment section that they utilize contractors for specialized vehicles such as boats and helicopters. Given the infrequent use of some types of transportation equipment, this is not viewed as a deficiency.

The responses to this section indicate robust capability in communication and data handling (phones, radios, computers, digital cameras). There was a drop off in capability indicated for more complex or dangerous activities (43.9% had level A PPE equipment, 61% have level B PPE, and 80.5% have level C capability). States may opt to engage contractors for these types of responses.



Tornado Recovery, Greensburg, KS 2007

States were asked about sample collection equipment for various environmental media that could be used during an emergency. Research project respondents identified the ability to sample media as follows:

Air/Smoke – 64.1%

Groundwater – 94.9%

Soil – 94.9%

Surface Water – 97.4%

Hazardous Waste – 84.6%

Many responses in this section noted that other media specific programs within the environmental agency would be called upon for the sampling activities. This would leverage subject matter expertise and specialized equipment needs.

RESPONSE EQUIPMENT IDENTIFIED IN RESEARCH PROJECT	
Laptop computer	98%
Internet Access	76%
Ability to send and receive data and photos	76%
Digital Camera	98%
Portable Printer	56%
Cellular Phone	100%
Satellite Phone	44%
Handheld Radio	76%
Mobile (vehicle) radio	61%
Direct connect cellular feature (i.e Nextel)	39%
PDA's	39%
Level A PPE	44%
Level B PPE	61%
Level C PPE	81%
All season clothing and safety gear	95%
State agency credentials (including badges)	83%
Identification clothing displaying government logo	71%
PFD coat or "Mustang" suit	32%

Reference Materials	95%
Multi-gas Meters	78%
Photo-Ionization Detector	85%
Flame Ionization Detector	39%
PH Measuring Instrument	83%
Haz-Mat Kit	63%
WMD Meters	32%
Radiation Monitoring and Dosimeters	76%
Mobile Laboratory	29%
Field Qualitative Analysis (Field IR, GC-Mass Spec)	56%
Radiation isotope identification	32%
Mobile Command Post	37%
Mobile communication vehicle	17%

VIII. Experience

Over half of the States responding (24 out of 42) indicated their environmental agencies had past success stories, such as responses to disasters or good coordination that they would be willing to share with ASTSWMO. States were also asked whether they had any Standard Operating Procedures (SOPs), After Action Reports, or Lessons Learned documents prepared that could be shared with other States. Eighteen States responded that, after responding to emergencies, they had prepared Standard Operating Procedures, After Action Reports, and Lessons Learned documents that could be shared with other states.



Athos 1, Delaware River NJ

Nineteen States answered they would be willing to share these documents or examples with ASTSWMO, to assist other States by sharing their experiences and/or providing examples of best practices. Of the States that indicated they were willing to share their documents, seven States provided electronic copies or web links to documents.

The results of State responses to questions about their State’s experience and willingness to share information show that a majority of States do not have documents available to share with other States. Some States responded that they did not have documents prepared that they could share. Some States indicated that their documents are available on their State website and they are willing to email documents. One State responded that they were willing to participate in discussions on topics that would interest other State partners, but that they do not have documents and links easily available. Although this ASTSWMO research project did not ask for rationales, the unavailability of documents may be a result of the non-public nature of emergency response plans, standard operating procedures, and related response documents.

As part of this research project, the ASTSWMO Removals Focus Group is sharing the information States provided. State documents and web links submitted by States are listed in Appendix A and B of this report. Documents are arranged by State and by subject matter respectively.

In addition, in Appendix C the ASTSWMO Removals Focus Group has included links to federal websites and general reference websites that the group feels could be helpful to States in their emergency response planning efforts. Finally, Appendix D lists State contact information for States that indicated

they would be willing to discuss and share information and documents that are not part of the public domain.

Conclusions

The research project yielded many useful insights into the current state of emergency response capabilities at the State environmental agency level. Since there is no national model for States to emulate (as there is in the RCRA and Superfund cleanup programs) each State has independently developed their own emergency response program. There is tremendous variation in the structure of emergency response from State to State with the emergency response role being shared among State and local agencies. In some States, the environmental agency is the lead, and in others, it provides technical and scientific support.

Positive findings were that there is a considerable effort at coordination within States and between State and federal partners. This high level of coordination has become important since 2001 with the implementation of many new programs aimed at preventing and responding to terrorism. Likewise, the recent disasters involving hurricanes and floods have reinforced the need for State environmental agencies to participate in “all hazards” planning. Responses to the questions on planning, exercising, and training all pointed to an appropriate level of consideration being given to these issues. The highly variable structure of emergency response was further evidenced in the responses regarding State equipment capability. It is clear that there is sharing of resources within States, especially on the more complex and expensive response resources. This points to the ability to access needed equipment without unnecessary duplication of costs. Further responses indicated that many States utilize private sector emergency contractors to obtain specialized but infrequently used resources.

Negative findings were that most States identified a shortfall in funding for obtaining equipment, maintaining the equipment they have, and training the personnel in their agencies. Responses indicated a wide variety of funding sources directed toward emergency response, but the absence of a stable, predictable national funding structure for agencies is an Achilles heel. Existing grants (such as the domestic preparedness programs) fund portions of the resource needs (such as buying equipment) but are not able to fund ongoing equipment maintenance or personnel to operate the equipment. States have done a good job of applying funding from various sources towards emergency response, but the majority of the funding has come from State budgets. Given the current status of State budgets, it will be difficult to maintain a high level of readiness for emergency responses.

Other negatives were that several States identified gaps in their understanding of requirements under the National Incident Management System, and health and safety laws. The Removal Action Focus Group believes that the resources identified in the appendices to this report will help provide additional information for States to use.

APPENDIX A

State Response Documents

Documents are available on the ASTSWMO website; all are in PDF form.

Delaware

Delaware Department of Natural Resources and Environmental Control, Emergency Prevention and Response Branch, [*Robots and Hazardous Materials Response*](#), PDF from original PowerPoint presentation, 2007

Missouri

Missouri Department of Environmental Protection, Environmental Services Program Technical Bulletin, [*Common Incident Command Center Situations, Organic Chemicals*](#), May 2005

Missouri Department of Environmental Protection, Environmental Services Program Technical Bulletin, [*Common Incident Command Center Situations, Petroleum Releases*](#), May 2006

Missouri Department of Environmental Protection, Environmental Services Program Technical Bulletin, [*Common Incident Command Center Situations, Radiological Incidents*](#), September, 2006

Missouri Department of Environmental Protection, Environmental Emergency Response/Division of Public Safety-Division of Fire Safety fact sheet, [*Hazardous Substances Emergency Response Cost Recovery Information*](#), September 2005

Missouri Department of Environmental Protection, Environmental Services Program fact sheet, [*Ethanol and Gasoline Fuel Blend Releases*](#), February, 2008

Missouri Department of Environmental Protection, Environmental Services Program fact sheet, [*Management of Petroleum and other Materials from Damaged Boats*](#), January 2007

Missouri Department of Environmental Protection, Department of Public Safety Technical Bulletin, [*Response to Small Fuel Spills*](#), January 1998

Missouri Department of Environmental Protection, Department of Natural Resources fact sheet, [*What to do After a Flood—Regulatory and Permitting Requirements*](#), May 2007

Missouri Department of Environmental Protection, Department of Natural Resources fact sheet, [*Disaster-Related Animal Production Mortalities Emergency Procedures*](#), March 2006

Missouri Department of Environmental Protection, [*Declaration of Hazardous Materials Emergency Form*](#)

Missouri Department of Environmental Protection, [Abandoned Container Response Report Form](#)

Missouri Department of Environmental Protection, [Site Health and Safety Plan Form](#)

Missouri Department of Environmental Protection, [Site Health and Safety Plan Form \(Mercury Pickup\)](#)

Nevada

Nevada Division of Environmental Protection, Bureau of Corrective Actions, [Emergency Operation Center Operations Manual](#), August 2007

Nevada Division of Environmental Protection, Bureau of Corrective Actions, Carson City, [Spill Call Guidance Manual](#), 2007

Nevada Division of Environmental Protection, [Environmental Response Team Standard Operations Procedures](#), August 2007

North Carolina

<http://www.enr.state.nc.us/html/apex.html> (web site includes documents on the APEX hazardous waste TSD fire remedial action)

Oklahoma

Oklahoma Department of Environmental Quality, [DEQ Response to Floods 2007 Halfway to an Ark](#), PDF from original PowerPoint presentation, 2007

Rhode Island

<http://www.dem.ri.gov/programs/director/emeresp/pdf/lawnterr.pdf> (emergency response reports including after action report for a 2004 Mercury spill)

Washington

<http://www.ecy.wa.gov/programs/spills/spills.html> (includes various spill documents and bulletins)

APPENDIX B
State Response Documents Arranged by Subject Matter
Documents are available on the ASTSWMO website; all are in PDF form.

Animal carcass disposal

Missouri Department of Environmental Protection, Department of Natural Resources fact sheet, [*Disaster-Related Animal Production Mortalities Emergency Procedures*](#), March 2006

Cost Recovery

Missouri Department of Environmental Protection, Environmental Emergency Response/Division of Public Safety-Division of Fire Safety fact sheet, [*Hazardous Substances Emergency Response Cost Recovery Information*](#), September 2005

Debris management

Missouri Department of Environmental Protection, Department of Natural Resources fact sheet, [*What to do After a Flood—Regulatory and Permitting Requirements*](#), May 2007

Lessons learned

<http://www.dem.ri.gov/programs/director/emeresp/pdf/lawnterr.pdf> (emergency response reports including after action report for a 2004 Mercury spill)

Oklahoma Department of Environmental Quality, *DEQ Response to Floods 2007* [*Halfway to an Ark*](#), PDF from original PowerPoint presentation, 2007

Delaware Department of Natural Resources and Environmental Control, Emergency Prevention and Response Branch, [*Robots and Hazardous Materials Response*](#), PDF from original PowerPoint presentation, 2007.

Oil Spill Response

Missouri Department of Environmental Protection, Environmental Services Program fact sheet, [*Ethanol and Gasoline Fuel Blend Releases*](#), February, 2008

Missouri Department of Environmental Protection, Environmental Services Program fact sheet, [*Management of Petroleum and other Materials from Damaged Boats*](#), January 2007

Missouri Department of Environmental Protection, Department of Public Safety Technical Bulletin, [*Response to Small Fuel Spills*](#), January 1998

<http://www.ecy.wa.gov/programs/spills/spills.html> (includes various spill documents and bulletins)

Operations Plan

Missouri Department of Environmental Protection, Environmental Services Program Technical Bulletin, [Common Incident Command Center Situations, Organic Chemicals](#), May 2005

Missouri Department of Environmental Protection, Environmental Services Program Technical Bulletin, [Common Incident Command Center Situations, Petroleum Releases](#), May 2006

Missouri Department of Environmental Protection, Environmental Services Program Technical Bulletin, [Common Incident Command Center Situations, Radiological Incidents](#), September, 2006

Remedial Action Plans

<http://www.enr.state.nc.us/html/apex.html> (web site includes documents on the APEX hazardous waste TSD fire remedial action)

Response Forms

Missouri Department of Environmental Protection, [Declaration of Hazardous Materials Emergency Form](#)

Missouri Department of Environmental Protection, [Abandoned Container Response Report Form](#)

Missouri Department of Environmental Protection, [Site Health and Safety Plan Form](#)

Missouri Department of Environmental Protection, [Site Health and Safety Plan Form \(Mercury Pickup\)](#)

Standard Operating Procedures

Nevada Division of Environmental Protection, Bureau of Corrective Actions, [Emergency Operation Center Operations Manual](#), August 2007

Nevada Division of Environmental Protection, Bureau of Corrective Actions, Carson City, [Spill Call Guidance Manual](#), 2007

Nevada Division of Environmental Protection, [Environmental Response Team Standard Operations Procedures](#), August 2007

Appendix C

Emergency Response Resources on the Web

Chemical Information

<http://environmentalchemistry.com/yogi/chemistry/dictionary/>
<http://www.atsdr.cdc.gov/toxfaq.html>
<http://cameochemicals.noaa.gov/>
<http://chembiofinderbeta.cambridgesoft.com/>
<http://www.cas.org/>
<http://www.neis.com/>
<http://sis.nlm.nih.gov/chemical.html>
<http://www.chrismanual.com/>
<http://phmsa.dot.gov/hazmat/library/erg>
http://www.etc-cte.ec.gc.ca/home/water_e.html
<http://hazmap.nlm.nih.gov/index.html>
<http://www.chem.purdue.edu/chemsafety/Chem/solvents.htm>
<http://www.intox.org/databank/index.htm>
<http://www.msdssearch.com/>
<http://www.cdc.gov/niosh/npg/>
<http://www.osha.gov/web/dep/chemicaldata/#target>
<http://entweb.clemson.edu/pesticide/index.htm>
[http://response.restoration.noaa.gov/type_subtopic_entry.php?RECORD_KEY%28entry_subtopic_type%29=entry_id,subtopic_id,type_id&entry_id\(entry_subtopic_type\)=328&subtopic_id\(entry_subtopic_type\)=3&type_id\(entry_subtopic_type\)=3](http://response.restoration.noaa.gov/type_subtopic_entry.php?RECORD_KEY%28entry_subtopic_type%29=entry_id,subtopic_id,type_id&entry_id(entry_subtopic_type)=328&subtopic_id(entry_subtopic_type)=3&type_id(entry_subtopic_type)=3)
<http://www.usfa.dhs.gov/fireservice/subjects/hazmat/>
<http://siri.org/msds/>
<http://webwiser.nlm.nih.gov/getHomeData.do;jsessionid=8517A07D0A662CC1F246EF313EB0A40C>
<http://www.aist.go.jp/RIODB/db005/index.html>
<http://www.csb.gov/index.cfm>

Debris Management

<http://www2.ergweb.com/bdrtool/login.asp>

Drug Labs

<http://www.clialabs.com/>
<http://oregon.gov/DHS/ph/druglab/>
http://www.kci.org/meth_info/links.htm

General Resources

<http://www.chemtrec.com/Chemtrec/>

<http://www.domesticpreparedness.com/>
<http://www.epa.gov/emergencies/>
<http://householdproducts.nlm.nih.gov/>
<https://www.llis.dhs.gov/index.do>
<http://www.hz.genium.com/>
<http://www.firstresponder.gov/Pages/Default.aspx>
<http://www.cdc.gov/nceh/ehs/ETP/default.htm>
<http://www.chemalliance.org/>
<http://psc.tamu.edu/>
<http://www.ehso.com/>
<http://www.epaosc.org/>
<http://www.nicsinfo.org/>
<http://www.incidentnews.gov/>
<http://www.nrt.org/>
<http://www.uwm.edu/Dept/EHSRM/EHSLINKS/>
<http://www.weather.gov/view/national.php?map=on>
<http://www.frtr.gov/>

Incident Command

<http://www.fema.gov/emergency/nims/rm/guide.shtm>
<http://www.firescope.org/ics-hazmat-pos-manuals.htm>
http://www.nimstabletop.com/download_center/index.htm#powerpoint
<http://www.nimsonline.com/>
<http://www.usfa.dhs.gov/fireservice/subjects/incident/imt/imt-training.shtm>

Laws

<http://www.access.gpo.gov/nara/cfr/cfr-table-search.html#page1>
<http://www.epa.gov/lawsregs/index.html>
<http://www.gpoaccess.gov/cfr/index.html>
<http://thomas.loc.gov/>

Nuclear

<http://www.iaea.org/NewsCenter/News/2006/firstresponders.html>
http://www.philrutherford.com/radiation_software.html

Oil Spill

<http://www.crrc.unh.edu/>
<http://freshwaterspills.net/>
<http://www.api.org/ehs/water/spills/index.cfm>
<http://www.epa.gov/oilspill/>

WMD

<http://www.fda.gov/oc/opacom/hottopics/bioterrorism.html>

<http://www.bt.cdc.gov/>

<http://chppm-www.apgea.army.mil/dts/glchemfs.htm>

<http://www.domesticpreparedness.com/>

<http://www.homelanddefense.org/Default.aspx?AspxAutoDetectCookieSupport=1>

<http://www.homelandsecurityweekly.com/>

<http://www.state.nj.us/health/lh/lincs/biotwebs.htm>

<http://www.mipt.org/>

<http://www.wmdfirstresponders.com/>

APPENDIX D

State Contacts Willing to Share Information

State Contact	State	Agency	Title	Phone	email
Greg Stasinos	Colorado	Colorado Dept. of Public Health and Environment	Tactical Communication Coordinator	303-692-3023	greg.stasinos@state.co.us
Greg Lee	Florida	Department of Environmental Protection	Environmental Administrator	850-245-2869	greg.lee@dep.state.fl.us
Dave Daugherty	Indiana	Indiana Department of Environmental Management	OSC	317-308-3030	ddaughter@idem.in.gov
Kathy Lee	Iowa	Iowa DNR	Senior Environmental Specialist	515-725-0384	kathy.lee@dnr.iowa.gov
Albe Simenas	Massachusetts	Department of Environmental Protection	Emergency Response Section Chief	617-292-5507	albe.v.simenas@massmail.state.ma.us
Cory R. Jorgensen	Missouri	Department of Natural Resources	Environmental Emergency Response -Unit Chief	573-522-2492	cory.jorgensen@dnr.mo.gov
Sam Jackson	Nevada	Division of Environmental Protection	Environmental Scientist	775-687-9381	jacksons@ndep.nv.gov
David Sweeney	New Jersey	Department of Environmental Protection	Chief, Bureau of Emergency Response	609-633-2168	David.Sweeney@dep.state.nj.us
Dennis Farrar	New York State	Department of Environmental Conservation	Chief, Emergency Response Coordination Section	518-402-9543	djfarrar@gw.dec.state.ny.us
Steve Lewis	North Carolina	Dept of Env & Nat Resources Div	Emergency Response Coordinator	919-733-5083	steve.lewis@ncmail.net

		of Water Quality		x548	
Kevin Clouse	Ohio	Ohio EPA	Manager, Emergency Response & Special Investigations	614-836-8752	kevin.clouse@epa.state.oh.us
Montressa Jo Elder	Oklahoma	Department of Environmental Quality	Emergency Response Coordinator	405-702-9132	monty.elder@deq.state.ok.us
Michael Zollitsch	Oregon	Department of Environmental Quality	Emergency Response Unit Leader	503-229-6931	zollitsch.michael.j@deq.state.or.us
Kerry A. Leib	Pennsylvania	Department of Environmental Protection	Director, Environmental Emergency Response	717-787-5715	kleib@state.pa.us
Michael J. Mulhare, P.E.	Rhode Island	RI Department of Environmental Management	Emergency Response Administrator, Chief office of Emergency Response	401-222-4700 ext. 7124	michael.mulhare@dem.ri.gov
Kim McIntosh	South Dakota	Department of Environment and Natural Resources	Environmental Senior Scientist	605-773-3296	Kim.Mcintosh@state.sd.us
Kelly Cook	Texas	TCEQ	Homeland Security Coordinator	512-239-0044	kcook@tceq.state.tx.us
John Butler	Washington	Dept of Ecology	Response Section Policy Analyst	360-407-6970	jbut461@ecy.wa.gov

APPENDIX E
ASTSWMO Survey

Introduction

This document has been distributed to State personnel that were identified as the Environmental Emergency Response Contact in a recent ASTSWMO outreach effort. The ASTSWMO Removal Action Focus Group requests your assistance in obtaining accurate and complete information for their project. If you are not the correct person to provide the information requested, please forward the link to this survey to the appropriate person in your agency.

Purpose

This research is being conducted to gather information about the roles and capabilities of State environmental agencies as they relate to emergency response actions that involve hazardous materials. This project is focused specifically on the environmental response aspects of these emergency response actions.

There are two main parts to the Focus Group's research. The first is to gather information regarding your State's current capabilities and coordination activities. The second (i.e., Section IX) seeks to identify response tools such as Standard Operating Procedures, protocols, and experienced-based lessons that you are willing to share with other States. This valuable knowledge base will be a significant output of the Focus Group's research.

ASTSWMO hopes to gather information from State environmental agencies re: their capability for: types of State emergency response systems; planning and coordinating response activities conducted by States; and, specific guidance documents or tools that the States have generated. ASTSWMO believes States learn best from other States, and therefore the Focus Group envisions their final report will exist as an overall look into State environmental emergency response programs, including the roles they play in the effective coordination of emergency preparedness and response efforts for large-scale events and natural disasters.

INSTRUCTIONS:

ASTSWMO recognizes that States are organized in different ways to address hazardous substance releases and homeland security issues. These questions have been designed to allow for objective responses and to allow ASTSWMO to tally these responses in a numerical summary. To aide in ASTSWMO's understanding, we encourage States to provide additional narrative responses at the end of each section, to clarify the unique way the State addresses each particular function of emergency response activities.

Please contemplate all of your answers in terms of the following types of events:

List of Example Events:

Primary Types of Environmental Incidents:

- Chemical spills
- Oil spills
- Radiation
- Biological

Pre-Planning:

- Major national or international events such as the Olympics, World Cup Soccer, National Political Conventions
- Shipment of radioactive materials or waste
- Natural disasters

Actual Emergencies:

- Major emergency response actions such as the Space Shuttle disaster
- Natural disasters such as floods, forest fires, hurricanes, tornadoes, volcanic eruptions, earthquakes
- Major oil or chemical spills such as the Exxon Valdez, AK; Athos, NJ; North Cape, RI

RESPONDENT CONTACT INFORMATION:

Name:

State:

Agency:

Title:

Phone Number:

Email:

I. Planning

1. Is the State Environmental Agency involved in state-wide planning for responses to emergency incidents such as industrial accidents, transportation accidents, natural disasters, and terrorist attacks?

- Yes
- No

2. Which of the following types of emergency response situations involve the State Environmental Agency? (Please check all that apply.)

- Chemical
- Biological
- Radiation/Nuclear
- Petroleum
- Natural disasters
- Other
- List Other Types of Incidents

3. Does the State Environmental Agency have haz-mat teams? If no, please check either b. or c.

- Yes
- No, but State has teams in a different Agency
- No, State does not have teams

4. Is the State Environmental Agency required to comply with the training requirements of the National Incident Management System (NIMS)?

- Yes
- No
- Don't Know

5. Has your State established a Department of Homeland Security with emergency response authority?

- Yes
- No

6. Is the State Environmental Agency the lead for the Emergency Support Function 10 (Hazardous materials Incidents)?

- Yes
- No
- Don't Know

7. Has the State Environmental Agency evaluated its emergency powers (regulatory authorities that can be implemented and rules that can be waived) for use during disasters?

- Yes
- No
- Don't Know

8. Has the State Environmental Agency coordinated emergency response actions with following programs? (Check all Programs that have been involved.)

- a. Solid Waste
- b. Hazardous Waste
- c. Drinking Water
- d. Wastewater
- e. Air
- f. Radiation
- g. If other, please specify

9. Has the State Environmental Agency prepared guidance documents for emergency or disaster response?

- Yes
- No

10. Does the State Environmental Agency have their emergency response documents on a web site?

- Yes
- No

For questions 9-10: Please list guidance or other relevant documents and provide web addresses to these if available:

11. Does the State Environmental Agency have a reporting system for emergencies and the proper routing for an emergency response incident?

- Yes
- No

12. Does the State Environmental Agency have a Duty Officer on call 24 hours a day that evaluates the emergency reports to determine if a response is needed and the resources for the response?

- Yes
- No

13. Comments/clarifications on any of the above questions in this section (use additional space or provide attachments as necessary):

II. COORDINATION

1. Does the State Environmental Agency coordinate emergency response preparedness activities with local response agencies?

- Yes
- No

2. Does the State Environmental Agency coordinate emergency response preparedness activities with other state agencies?

- Yes
- No

3. If yes, which other state agencies? (Please check all that apply.)

- a. Public Safety/Emergency Management
- b. Health
- c. Agriculture
- d. Transportation
- e. Other

List Other State Agencies

4. Does the State Environmental Agency coordinate emergency response preparedness activities with federal agencies?

- Yes
- No

5. If yes, which federal agencies? (Please check all that apply.)

- a. EPA
- b. Homeland Security
- c. National Guard
- d. Department of Defense
- e. Department of Energy
- f. Other

List Other Federal Agencies

6. Does the State Environmental Agency participate in the Regional Response Team?

- Yes
- No
-

7. Does the State Environmental Agency participate in the State Emergency Response Commission (SERC) or its equivalent in your state?

- Yes
- No

8. Comments/clarifications on any of the above questions in this section (use additional space or provide attachments as necessary):

III. PREPAREDNESS AND EXERCISES

1. Does the State Environmental Agency have an emergency response plan specifically for the agency?

- Yes
- No

2. If the answer to #1 above is yes, does that State Environmental Agency conduct table-top or functional exercises of the agency plan?

- Yes
- No

3. Does the State Environmental Agency participate in state-wide table-top or functional exercises?

- Yes
- No

4. Does the environmental agency provide training for agency staff to respond to emergency incidents?

- Yes
- No

5. Does the state environmental agency provide training and equipment to agency staff to respond to an emergency incident in level "A or B" PPE?

- Yes
- No

6. Are representatives of the environmental agency required to complete training in the Incident Command System (ICS)?

- Yes
- No

7. Does the State Environmental Agency have an Emergency Operations Center?

- Yes
- No

8. If yes for number 7, please check the boxes that apply to the Emergency Operations Center. (If no for number 7, skip to question 9.)

- | | |
|--|--|
| a. Sufficient space | e. Communication equipment (phones, fax) |
| b. Has a backup generator | f. Secure phones and fax machines |
| c. Located in an area not susceptible to natural disasters | g. Satellite communications |
| d. Adequate workstations with internet | h. Access to GIS systems |
| | i. Air dispersion modeling tools |

9. Is the State Environmental Agency a member of the State-wide emergency response team? (i.e., Is the State Environmental Agency involved in a State-wide emergency response in either a supporting role or first response capacity?)

- Yes
- No

10. Do emergency response agencies utilize cleanup standards or criteria from your Agency?

- Yes
- No

11. Is there a process to transition emergency response cases into the State site remedial program or removal program when warranted?

- Yes
- No

12. Comments/clarifications on any of the above questions in this section (use additional space or provide attachments as necessary):

IV. HEALTH AND SAFETY

1. Does the State Environmental Agency have emergency responders? (If yes, check either or both a. and b. as applicable.)

- 1st Responders
- Support personnel
- None of the above

2. Does the State Environmental Agency have these responders on a medical surveillance program?

- Yes
- No
- Don't Know

3. Does the State Environmental Agency comply with the health and safety standards in OSHA 1910.120 or 40 CFR Part 311?

- Yes
- No
- Don't Know

4. Does the State Environmental Agency have site safety expertise to assist during emergencies?

- Yes
- No

5. Does the State Environmental Agency have a system in place to document actual or potential exposures?

- Yes
- No

6. Comments/clarifications on any of the above questions in this section (use additional space or provide attachments as necessary):

V. FUNDING & CONTRACTING

1. What is the source of funding for the State Environmental Agency to participate in emergency planning and preparedness activities? (Please check all that apply.)

- a. EPA
- b. Homeland Security

- c. State Funds
- d. Not applicable

- e. Other
- List Other Funding Sources

2. Is funding adequate to maintain equipment calibration requirements, supplies, and training?

- Yes
- No

3. Does the Agency have the capability to conduct a publicly funded clean up if the responsible party is unwilling or unable to conduct the response?

- Yes
- No

4. If the State Environmental Agency responds to an incident, are emergency response actions documented to facilitate cost recovery efforts?

- Yes
- No

5. Does the State Environmental Agency have contracting procedures in place to procure contractor support as necessary to respond to an emergency incident?

- Yes
- No

6. Comments/clarifications on any of the above questions in this section (use additional space or provide attachments as necessary):

VI. COMMUNICATION

1. Does the State Environmental Agency have emergency communication equipment, other than routine communication systems such as telephone and cell phones, for use during an emergency incident?

- Yes
- No

2. If yes, what types of equipment? (Please check all that apply.)

- a. Handheld Radios
- b. Satellite Telephones
- c. Internet based systems
- e. Other
- List Other Communication Equipment

3. Is the State Environmental Agency communication equipment interoperable with other State and Federal Agencies?

- Yes
- No

4. Comments/clarifications on any of the above questions in this section (use additional space or provide attachments as necessary):

VII. RESPONSE EQUIPMENT

1. Does the State Environmental Agency have equipment specifically for emergency response?

- Yes
- No

2. Does the State Environmental Agency maintain an inventory of equipment that the agency could use during an emergency incident to assist with the response?

- Yes
- Don't Know
- No

3. Listed below is some typical equipment that may be needed to respond to an emergency. In each category, please check all the equipment that could be provided by your State agency or existing contractors in the event of an emergency response in your State.

Transportation

- Properly equipped vehicles
- Properly equipped boats
- Pre-arranged helicopters
- 4-wheel drive vehicles

Response Equipment

- Laptop computer
- Internet access
- Ability to send and receive data/photos
- Digital camera
- Portable printer
- Cellular phone
- Satellite phone
- Handheld radio
- Mobile (vehicle) radio
- Direct connect cellular feature (i.e., Nextel)
- PDA's
- Level A PPE

- Level B PPE
- Level C PPE
- All season clothing and safety gear
- State Agency credentials (including badges)
- Identification clothing displaying government logo
- PFD coat or “Mustang” suit
- Reference materials
- Multi-gas meters
- Photo-Ionization Detector
- Flame Ionization Detector
- PH measuring Instrument
- Haz-Cat Kit
- WMD meters:
 - Radiation Monitoring and dosimeters
 - Mobile Laboratory
 - Field qualitative analysis (Field IR, GC-Mass Spec)
 - Radiation isotope identification
 - Mobile command post
 - Mobile communications vehicle
- Field sample collection equipment for:
 - Air/Smoke
 - Surface Water
 - Groundwater
 - Hazardous Waste
 - Soil

3b. Comments/clarifications on any of the above questions in this section (use additional space or provide attachments as necessary):

VIII. EXPERIENCE

Instructions: Please contemplate your answers to the questions in this section in terms of the list of example events below question

1. Does the State Environmental Agency have any past success stories (responses to disasters or good coordination) that it would be willing to share with ASTSWMO?

- Yes (If yes, see question 3 below)
- No

2. After responding to emergencies (see examples below) were any Standard Operating Procedures, After Action Reports or Lessons Learned documents prepared that could be shared with other States?

- Yes (If yes, see question 3 below)
- No

3. If “yes” in numbers 1 and/or 2 above, would your State be willing to share these documents or examples with ASTSWMO, to assist other States with lessons learned and/or provide examples of best practices? If so, please provide electronic link to the document(s) below or e-mail a copy of the document(s) to ASTSWMO at: samp@astswmo.org.

List of Example Events

Primary Types of Environmental Incidents:

- chemical spills
- oil spills
- radiation
- biological

Pre-Planning:

- Major national or international events such as the Olympics, World Cup Soccer, National Political Conventions
- Shipment of radioactive materials or waste

Actual Emergencies:

- Major emergency response actions such as the Space Shuttle disaster
- Natural disasters such as floods, forest fires, hurricanes, tornadoes, volcanic eruptions, earthquakes
- Major oil or chemical spills such as the Exxon Valdez, AK; Athos, NJ; North Cape, RI