

**APPENDIX 1**  
**USEPA Region 6**  
**Columbia Lessons Learned/Hotwash**

**I. Background**

On June 3, 2003, the Environmental Protection Agency's (EPA) Region 6 hosted a day-long Hotwash to discuss issues related to the Columbia Shuttle Response. Attendees were comprised primarily of EPA Region 6 On-Scene Coordinators (OSCs) along with representatives from EPA Headquarters and Region 7.

**II. Purpose**

The Columbia Shuttle response was a dry run for the EPA National Approach to Response (NAR) and the June 3<sup>rd</sup> Hotwash served as an internal forum for Region 6 responders to systematically analyze their operations and procedures and discuss the positive aspects of the response as well as bring forward areas that need improvement. Many of the issues identified will feed into the formation of national policy such as the draft order for implementing Incident Command System (ICS) and the Federal Response Plan. Discussions were framed by the following ICS components:

- A. Overall ICS Management**
- B. Planning**
- C. Operations**
- D. Logistics**
  - 1. Facilities
  - 2. Communications
  - 3. Infrastructure
  - 4. Supplies
- E. Staffing**
- F. Information Management**
  - 1. Data Management
  - 2. Public Information
- G. Health and Safety**
- H. Financial Management**
- I. Liaisons with other Agencies**
- J. Other Issues**

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Due to time constraints Sections F (*Information Management*) and G (*Health and Safety*) were not discussed during the Hotwash. The information contained in those Sections was received and considered by Region 6 staff in the weeks following the Columbia Shuttle Response.

**A. Overall ICS Management**

This portion of the Hotwash discussed issues related to general ICS management. Special attention was given to the implementation and integration of ICS.

***Positive Aspects to Build on:***

- A paradigm shift in support of the ICS is occurring.
- Overall, the ICS worked very well.
- EPA was more effective in implementing ICS in this response than in previous responses.
- ICS proved to be effective in integrating help from outside the response branch.

***Areas for Improvement:***

- ICS was not implemented fast enough in the Regional Response Center (RRC) & Disaster Field Office (DFO).
- EPA needs clearly identified and pre-qualified individuals for ICS positions.
- Increased training is needed for all staff.
- ICS needs to be consistently integrated into every EPA response, even if an abbreviated model. It is typically used only 50% of the time due to frequent small responses with limited personnel.
- More personnel were needed to fill all ICS roles (both at the DFO and at the RRC).
- For effectiveness on emergent, large-scale events, EPA should “over-respond” and then scale back as needed (similar to Forest Service responses). Ramping down is much simpler than ramping up.
- The role of Area Command at the RRC needs to be clarified.
- There is a need for a federally consistent ICS Package.
- The use of Incident Management Teams (IMT) similar to the United States Forest Service (USFS) model could be beneficial.
- EPA could be too dependent on the U.S. Coast Guard (USCG). For example, USCG assets were recalled when the threat level was raised to Orange.

**B. Planning**

Discussions focused on developing plans and processes to accomplish response objectives.

***Positive aspects to build on:***

- The planning process worked as a management information tool.
- Planning outputs were generally useful.
- Personnel rotation set up by Region 7 was extremely effective.

***Areas for Improvement:***

- Planning documents and products need a standard format for all agencies.
- Personnel roles need to be clearly defined at all ICS levels.
- There was a moving target/unclear priorities in the early stages of the response.
- A pre-deployment package should be standard for all responders.
- At RRC there exists a need to define the basics for the planning process.

- Unified Command System (UCS)/ICS training for all personnel is needed.
- Steps need to be taken to ensure that all have an understanding of what ICS “planning” is.
- It is possible to adjust some forms to better suit our culture, and EPA should do this whenever possible.

### **C. Operations**

Discussion focused on the tactical operations used to carry out the planning efforts. Columbia Shuttle operations was a broad effort that encompassed several Federal, State, and local agencies, and crossed county and state lines.

#### ***Positive aspects to build on:***

- Proper ICS implementation was key in creating successful operations.
- The participation of OSCs set the pace and standard for other agencies to follow.
- EPA maintained technical excellence throughout the recovery.
- Operationally, EPA worked very well with local entities, and worked very hard to bridge gaps with local agencies and citizens.
- There was a very defined operations structure.
- EPA Incident commanders participated in the Unified Command System with the other agencies.
- Nightly operations calls were very useful.

#### ***Areas for Improvement:***

- The differing missions of the Federal Bureau of Investigation (FBI) (recovery of human remains) and EPA (recovery of debris and Hazmat) created operational and data management conflicts. As joint operations with FBI or similar agencies is likely the future model, the agencies should pursue relationship building, exercises and program evolution as needed to ensure smooth integration.
- Continuity problems occurred with changing operations chiefs.
- A need for better communication across levels (DFO, RRC, HQ, Field) exists.
- RRC operations need to be better defined.
- Roles for senior managers (non-response program personnel and HQ) should be more clearly defined in order to support the ICS process and avoid confusion.
- As with all team members within an ICS operation, input from senior managers and joint agencies should reflect the respective roles and be subject to IC review and adaptation. This is critical to retaining the strength of ICS, which is logical, methodical decision-making that meets the need.
- Incident commanders should make decisions, but must stay focused on the big picture and delegate as needed within the ICS structure.
- Interagency operations coordination could have been better.

### **D. Logistics:**

Logistics provides resources and all other services needed to support the overall incident. The

discussion encompassed facilities, communications, supplies and procurement.

***Positive aspects to build on:***

- When EPA took care of its own needs, logistical issues ran smoothly.
- Favorable facilities contributed to the success of the Palestine office.
- Remote access to Local Area Network system via Aventail was very beneficial.
- Good support was received from Environmental Response Team (ERT) and R6 Management Division.
- Logistics support at the DFO was very good.
- Purchase of equipment through the R6 channels was very good (including contractors, cameras, Global Positioning Systems, IPACs).
- The logistics chief having a purchasing card was useful.
- EPA OSC worked well as logistics officer at San Augustine.
- Essential equipment was available to the field.

***Areas for Improvement:***

- A national pool of computer specialists/technicians should be created
- Facilities were not always adequate, i.e. some camps had much better facilities.
- EPA should have given more and earlier input to Federal Emergency Management Agency (FEMA) in choosing the DFO facility in order to secure adequate space and infrastructure.
- Field camp locations were selected very early in the event. The lack of awareness of the potential magnitude and intensity of the pending operation and the lack of historical USFS/EPA interactions prevented either agency from offering/requesting adequate input in choosing those locations.
- EPA should be able to manage their own needs (bus, response vehicle, trailer).
- Civil Support Teams (CSTs) are useful on the front end, but not available for long-term.
- Need to develop standard basic Command Post (CP) specifications.
- Cell phones and satellite phones were not reliable, which had a significant impact on operations.
- Conference bridge space at the RRC needs to be expanded.
- A national pool of communications technicians should be created.
- Two-way radios in the field were compromised at first. However, when Forest Service came in and set up, the repeaters worked well.
- A need for consistency in managing acquisition of supplies exists.
- A “Go kit” for response personnel should be developed.

## **E. Staffing**

Due to the intensity, complexity and duration of the Columbia Shuttle Response, “Staffing” was a major topic of discussion during the June 3<sup>rd</sup> Hotwash. Primary issues of concern included the

extended work hours and an overall system to maintain staffing levels.

***Positive aspects to build on:***

- Staffing needs were considerable but generally met.
- EPA Region 7 (backup Region for R6) was very good for staffing needs.
- Repeat performers (staff) with experience was a significant advantage.
- 2-3 week tour of duty ideal.
- Records capture unit was deployed late but it was successful once initiated.
- START contractor staffing requirements were generally met.
- R7 dive team performed well and was critical to the success of the recovery efforts.
- Response Support Corps (RSC) was structured to accommodate both field level and technical experts.
- Overall, RSC concept was validated and contributed to the overall success of EPA's response.
- Use Regional Incident Coordination Team (RICT) to manage the development of the RSC.

***Areas for Improvement:***

- EPA needs further consistency in staffing decisions.
- Not all START contractors used were "field ready".
- Need consistent overall system for maintaining staffing levels.
- The needs of the field should be clearly communicated to decision makers.
- The durations of shifts and some tours were too long.
- RRC ran understaffed for 24-hr operations.
- Need ICS organization with defined roles.
- There needs to be better accountability/security at check-in.
- Need to match qualifications of staff with needs.
- DFO was understaffed during phase 1.
- Qualifications should be matched with needs and locations.
- Ground rules must be clear (tours, shifts, equipment needed, etc.) and advertised to all, including volunteers.
- Training for RSC might not be adequate.
- Pre-qualified RSCs and out-of-region OSCs were not always called first. This management decision caused operational problems (i.e., impeded matching roles with capabilities) and could be avoided in future responses with adequate planning and awareness.
- There is a need for clerical personnel to handle the phone, take notes, administrative support; it may be possible to use contractors as HQ did.

**F. Information Management**

Information Management was a key aspect to the success of response effort. Although not discussed during the June 3<sup>rd</sup> Hotwash, these comments were derived from feedback received by Region 6 in the weeks following the Columbia Shuttle Response.

***Positive Aspects to build on:***

- EPA was able to consolidate data collected daily into the database so responders could determine where to search the next day.
- Use of personal digital assistant (PDA) technology was a very efficient tool that greatly aided in debris recovery.
- Internet website set up by EPA-START contractor was extremely beneficial.

***Aspects for Improvement:***

- Having several agencies touching the same data at various stages in its life cycle is a serious challenge to data integrity and security.
- Having many agencies accept debris calls led to confusion, lack of followup and “double reports” and affected data quality.
- Data collection should be centralized as much as possible.

**G. Health and Safety**

Health and Safety personnel during the Columbia Shuttle Response were responsible for ensuring risks in the field and field offices were properly controlled. Although not discussed during the June 3<sup>rd</sup> Hotwash, these comments were derived from feedback received by Region 6 in the weeks following the Columbia Shuttle Response.

***Positive aspects to build on:***

- Health and Safety overall was managed well.
- A comprehensive health and safety training program was offered as new personnel arrived.
- Lack of serious injuries during field operations speaks well of health and safety efforts.

***Areas for Improvement:***

- Different agencies had different site safety concerns and protocols for the same operations.
- Prior to conducting field operations, a Federal Health and Safety Plan should be developed and federal personnel and contractors briefed.
- Determine what assets may be available to support the OSC by being the on-site safety officer for large-scale, wide area disasters.
- Additional field audits of health and safety procedures should have been performed.
- Excessive hours worked by EPA and contractors was a safety concern.

**H. Financial Management**

Financial management encompasses contracting, cost tracking, and all cost analysis aspects.

***Positive aspects to build on:***

- RRC covered most of the finance officer functions for all locations.
- It is beneficial to send regional office personnel out in the field to see the operation.
- Support unit for remedial emergency and field administrative support overall worked well.
- Mission assignment was well managed.

- HQ procurement experts were useful in the field.

***Areas for Improvement:***

- Use RCMS to track all costs.
- Contracting and procurement needs to be in ICS structure.
- It is beneficial to have finance and logistics co-located.
- Finance section was severely understaffed (often a one person operation).
- Finance Section needs a continuous rep in RRC.
- Inter-regional inconsistencies in contract management is a problem.
- The finance section needs to coordinate with documentation unit.
- Financial management training needs to be nationally consistent.
- Overtime cap is a national issue that HQ should address.
- Problem with not all regions using the same system for procurement, documentation, etc.

**I. Liaison**

The ICS Liaison role assists with information exchange within the agency as well as with other agencies/stakeholders. Because of the scope of the Columbia Shuttle response, liaisons provided a critical role in the success of the response.

***Positive aspects to build on:***

- Upper management made good use of the RRC.
- Great to have HQ liaison assistance at Region 6.
- HQ support for this response was beneficial especially in encouraging other regions to respond and assist Region 6.
- Support from Region 7 was critical to the success of the operation.

***Areas for Improvement:***

- Some HQ offices not going through Liaison, especially at the political level (e.g., AA-DRA level communication not shared with command).
- Political level decisions that have tactical impact should not be unilateral and must go through the ICS structure via the respective roles.
- HQ/OMB relationship should be strengthened and practiced.
- Strengthen the National Incident Coordination Team (NICT)/RICT links.
- Inconsistent communication with other regions led to skewed perceptions.

**J. Other Issues**

Although not specifically discussed during the June 3<sup>rd</sup> Hotwash, these comments were among the many received by Region 6 staff in the weeks following the Columbia Shuttle Response.

- USFS would be a great resource to EPA even when a declaration is not made. In some circumstances, USFS could be preferable to USCG strike team because they have resources

and contracts to stand up immediately, large-scale and long-term. USCG does not have the contractor or purchasing authority to bring the resources such as command posts and needed supplies to the scene.

- The operations did not appear to fully subscribe to the concept of recycling.
- Some EPA-HAZMAT collection processes were not consistent between the field sites, creating confusion among the various locations.
- If EPA is not the Lead Federal Agency (LFA) for a future similar type of event, the EPA internal lessons learned need to be transferred to the new agency.
- Planning and funding for high-speed Internet capabilities and satellite communications must be made available for responses to remote areas or when the communications infrastructure has been destroyed or is unreliable.
- Critical Incident Stress Management (CISM) should be implemented immediately at the onset of a major incident where deaths have occurred or where the response situation is dangerous to EPA personnel.
- The DFO should assign people to a field command post rather than to an individual.
- Field command posts should insure that people being de-mobilized check out at the DFO.

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