
Deepwater Horizon Response
Alternative Response Technologies Evaluation System
MC 252
Mobile
Houma
New Orleans
Pensacola
Tallahassee
Jacksonville
Tampa
Orlando
Miami ICP
Houma ICP
Mobile ICP
New Orleans ICP

Definitions:

ARTES: Alternative Response Technology Evaluation System (a NOAA evaluation tool)

ART: Alternative Response Technology (traditionally means response technologies, other than mechanical cleanup methods, that can be employed to address an oil spill.

- Dispersants & other chemical countermeasures (OSCAs)
- In-situ, or “controlled” burning

During the Deepwater Horizon response, the volume and variety of innovations generated by responders, vendors, and the general public needed to be effectively managed.

Framework for the Use of ARTs

Traditional Spill

- ART technical specialist works within Planning Section
- Dispersant and In-Situ burn staffed in both Planning and Operations sections
- Vendors suggest products and services for use; all ARTs are funneled through the ART specialist
- Separate ARTES program may not be established
- Scope and magnitude usually within limited jurisdiction, one RRT
- Typically the spill is not a continuous release

Deepwater Horizon

- Declared a Spill of National Significance -- several Incident Command Posts and an Unified Area Command
- Unified Command implements rigorous ARTES Program to meet needs and expectations.
- Dispersants and In-Situ Burn had their own teams, outside ARTES technology review
- Two RRTs, policies not identicial
- Scope and duration of operations led to changing operational needs, and public expectation that all resources be brought to address the spill.

ARTES Houma

- **Coast Guard** (Research and Development, Testing and Evaluation, CG reserve)
  - Project manager, technical review, field testers, public outreach
- **California Office of Spill Prevention and Response** (through NOAA)
  - Subject matter experts, technical reviewer, field testers, agency liaison, public outreach
- **Washington Department of Ecology** (through NOAA)
  - Subject matter expert, technical reviewer, field tester, public outreach

ARTES Organizational Elements

- Database management and coordination
- Triage

  Primary, Secondary, Tertiary

- Houma ARTES Team

  USCG, CA OSPR, WA DOE, organized under the unified ICP

- High Interest Technology Test “HITT” team

  BP team with USCG representation

- Strike Teams as needed

  Bioremediation, Sand Treatment

- Liaison Officers

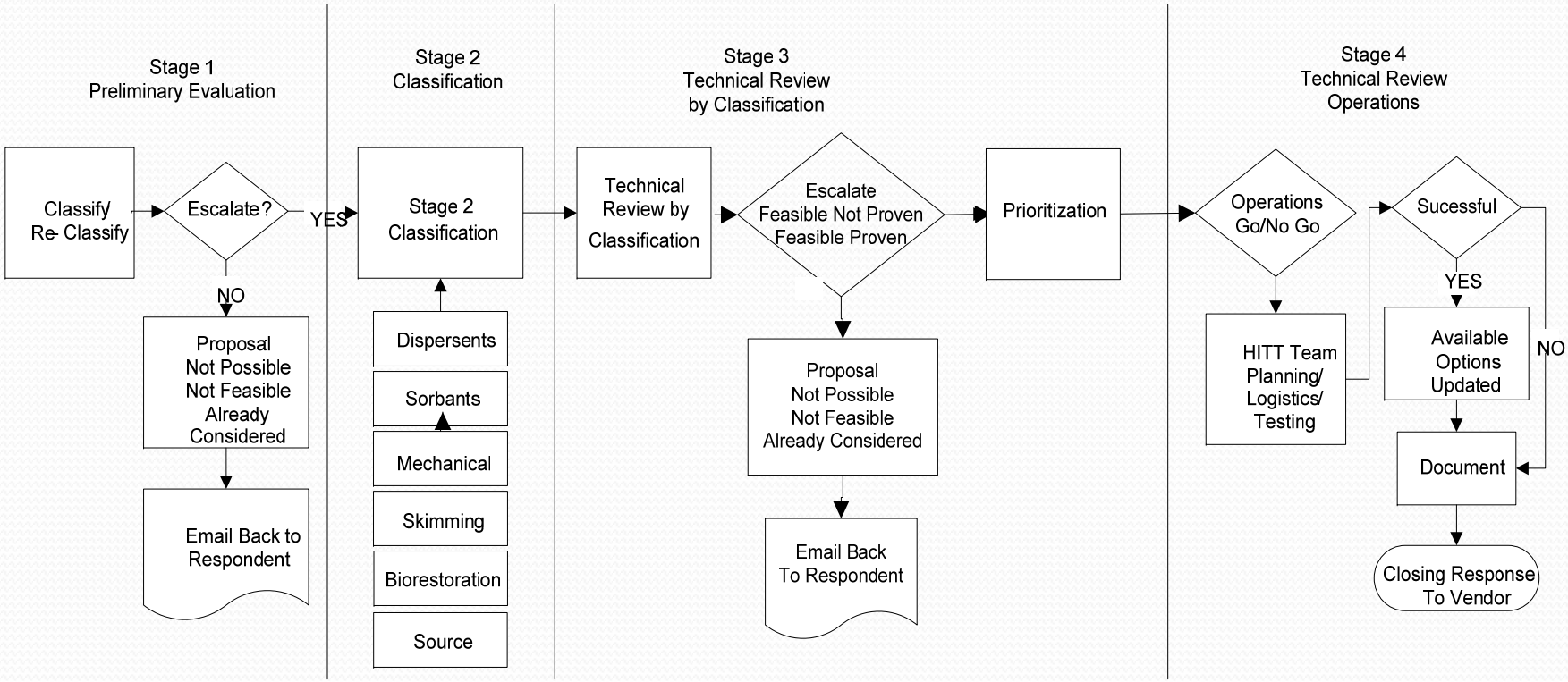
  ICP Houma and Mobile, Unified Area Command, IATAP

Project Sources

- ARTES database – direct submissions & BP call center
- Operations & field-derived
- VIP submissions – inputs received at Unified Area Command and Incident Commanders
- “Open House” meetings held at parishes

All ideas were directly or indirectly submitted to ARTES database for tracking and scoring

Alternative Response Technology
Triage Process



Products, Services & Equipment Database

- Products, services and equipment were placed in a parallel database that was available to BP Logistics Section as an alternative sourcing tool

Submission Status

	Current
• **Total number of ART Submissions to the Database**	*122,870*
• Number of Submissions for Source Control	*79,498*
• Number of Submissions for Oil Spill Response	*43,372*
• For the Spill Response Submissions:	
• Records in *Stage 1 & Stage 3* Review	*14*
• Submissions Field Tested and Recommended for Use	*23*
• Submissions Field Tested But Not Recommended for Use	*33*
• Remaining Planned Field Tests (most highly ranked candidates in Stage 3)	*26*
• Submissions Advanced to Stage 3, No Field Test Planned	*160*

Boom

Sorbent and Solidifier

Biofilter

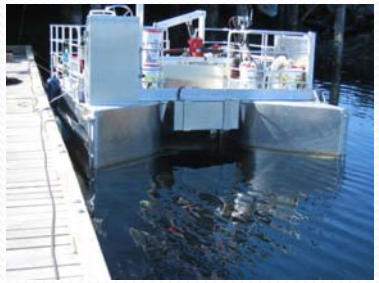
Rigid Pipe

Oil Skimmers

A WHALE

Big Gulp

Bluewave Marine



Tar Ball Skimmer

Low Pressure Marsh Flusher/Grapnel

Large Scale Initiative
Sand Treatment System Review

- After bulk oil removed, sand treatment became a priority
- Balance local resident demands for action with the need to properly evaluate the response technologies for this response
- ARTES took the lead in compiling an inventory of treatment options and helped lead an Area-wide discussion to address the needs of stakeholders and resource trustees

Other Technologies Reviewed

- Water surface, water column or buried oil detection
  - Fluorometers, spectrometers, sonar buoys
- Oiled boom collection
  - Rollers, cleaners, compactors, incinerators
- Tar ball collectors and sifters
  - Water surface, sandy beach
- Oil-stained sand cleaners
  - Warm water and/or chemical washing
- Sediment relocation
  - Surf washing

Additional Value Added by ARTES

- ARTES was able to identify or resolve major fatal flaws in submissions “as-is”

- ARTES helped identify and negotiate environmental permitting issues during and after technology field-testing (examples: tar ball net trawls rigid pipe boom, sand sifting and cleaning machines

Future Efforts

- Continue to support remaining testing, BioChemical Strike Team (BCST), and sand and marsh cleanup efforts
- Debrief and package the ARTES concept for future use in future large spills
- Transition elements of ARTES projects to BP's new company, the Gulf Coast Restoration Organization, to advance spill response technology
- Some projects that were more conceptual may be selected by EPA and USCG for future R & D projects

Some Lessons Learned About ARTES During the Deepwater Horizon Response

The ARTES team was able to provide:

- A focus on technology review and interactions with new product vendors
- A dedicated team with the ability to liaison with all other ICS entities
- The necessary discipline to enter everything into a single database and tracking system
- Critical feedback to submitters, earning trust and reducing impact to Operations/Logistics by providing a single point of contact
- Timely testing via a collaboration between a technical review team and an output-oriented test team
- ARTES is a new concept; better marketing of this tool within the response will greatly improve effectiveness
- Important to build on lessons learned via future ICS training and a ready-to-go database solution

Questions?