

State of Science: A Synopsis of Scientific Research on Dispersants

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**Coastal Response
Research Center
(NOAA \$)**

**Center for Spills in the
Environment
(All Other \$)**

- Conduct and Oversee **Basic** and **Applied** Research and Outreach on Spill Response and Restoration
- Transform Research **Results into Practice**
- Serve as **Hub for Oil Spill R&D** (ALL Stakeholders)
- **Facilitate Collaboration** on R&D Among Stakeholders



Mission Impossible: 25 Minute Synopsis of Scientific Research on Dispersants



Caveats

- Focus Primarily on Current
 - Since 2010 DWH
- Cognizant of Rich Literature prior to DWH
- Mix of Traditionally Peer-Reviewed Literature and “Gray” Literature



Remembering Pre-DWH Dispersants Work



NRC Dispersant Report

- Oil Spill Dispersants:
Efficacy and Effects (2005)



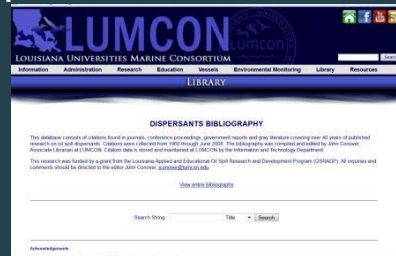
Dispersants Research Between 2005 and 2010

- NRC Report Stimulated R&D on Dispersants
- CRRC Dispersants Workshop (September 2006)
 - Dispersants Working Group - annual meeting since 2005
 - Database of research efforts



LUMCON Dispersants Bibliography

- Louisiana Universities Marine Consortium
 - John Conover, Librarian
 - Funded by LA OSRADP



Dispersants R&D Post DWH

- R&D Needs Identification
 - ICCOPR R&D Survey and Prioritization
 - Several Workshops
 - CRRC/CSE
 - OSTP
 - GOMRI



Some Dispersant R&D Efforts Post DWH

- API
- BSEE
- COOGER-DFO
- CRRC/NOAA
- Environment Canada
- GOMRI
- ITOPF
- JIP Arctic Response Technology
- KillSpill (EU)
- PWS RCAC
- USCG
- USEPA



Some Topics of Dispersants R&D

- Efficacy and Effectiveness
- Behavior (Physical Transport and Chemical Behavior)
- Fate and Degradation
- Impacts (Toxicity and Sub lethal Impacts)



Some Topics of Dispersants R&D

- Conditions:
 - Cold Water and Ice
 - Subsurface (Subsea)
- Public Health and Food Security (Seafood Safety)
- Risk Communication



CRRC-NOAA State of Science Effort

- Goals:
 - Evaluate state of science and reviewing uncertainties regarding dispersant use
 - Focus on Arctic waters
 - Includes non-Arctic R&D



CRRC-NOAA State of Science Effort

- Specific Objectives:
 - Identify primary research/reference documents on Dispersants and Dispersed Oil
 - Determine what is known definitely about the state of the science regarding Dispersants and Dispersed Oil
 - Determine what uncertainties, knowledge gaps or inconsistencies remain regarding



CRRC-NOAA State of Science Effort

- Gather literature from existing sources and databases
 - Peer-reviewed and gray literature
- Convene scientists to discuss literature
- Produce document on state of science
 - For senior leaders of Federal agencies
 - Available to other interested parties



CRRC-NOAA State of Science Effort

- CRRC will facilitate the scientific discussions in January
- Arctic focus with non-Arctic science reviewed
- Interagency steering committee for planning
 - Includes RCACs and ACS representatives



CRRC-NOAA State of Science Effort

- Precludes my opinion today on State-of-Science
- Need a representative group of scientists to identify what:
 - Definitely known
 - Uncertainties
 - Knowledge gaps
 - Inconsistencies



Some Areas for Consideration



Public Health and Dispersants

- NIH / NIEHS Study
- Gulf Long-Term Follow-up Study
 - 10 years
 - Clean-up workers, volunteers, community researchers
 - Interviews examining biological and environmental samples
 - 33,000; 11,000
 - 83% Gulf coast, 17% non-Gulf coast
 - 76% helped with clean-up; 24% traveled, but no clean-up



Other Public Health

- New GOMRI Consortium
- Many Peer-Reviewed Articles



Thank You

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