

AN OPPORTUNITY TO MAKE IT RIGHT

Relating to the Policy & Science of
Oil Spills, Dispersant Use & Human Health

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*“We were there to assure the public that everything was good
and everything was safe and that everything was under control.
And that just was not true.”*

Terry Odom, former BP Safety Officer
BP Deepwater Horizon oil spill

EXECUTIVE SUMMARY

This report concerns EPA’s final rules governing use of dispersants (and other products) to mitigate harm from oil spills, effective on December 11, 2023. The final rules revised Subpart J of the National Contingency Plan (NCP), which was established under the Clean Water Act to “provide for efficient, coordinated, and effective action to minimize damage from oil and hazardous substance discharges...” [33 U.S.C. § 1321(d)(2)].

The revisions are substantial—and for good reason. The last major overhaul of Subpart J was in 1994, *thirty years ago*, in response to the Oil Pollution Act and the *Exxon Valdez* oil spill. EPA’s current standards address persistent gaps and deficiencies in its 1994 implementing regulations that were identified in the aftermath of the next major maritime oil spill, the 2010 BP Deepwater Horizon oil disaster. As Admiral Thad Allen, the lead federal On-Scene Coordinator at the time, succinctly put it, “the social and political nullification” of the NCP by the oiled Gulf Coast states undercut the efficiency, coordination, and effectiveness of the overall response.

This report analyses EPA’s current standards to determine if the revisions address three gaps and deficiencies in the previous implementing regulations, namely:

- the need to find less toxic and more efficient products (in Part I Testing & Listing Rules);
- the need to fill a critical gap in national preparedness by building out first-level local/state involvement in and capabilities for oil spill response (in Part II Authorization of Use Rules); and
- the need to address the human dimensions—the toxic impacts—of oil spills, which have historically been viewed as environmental disasters, affecting nature (in Part III Transition Period Guidelines).

EPA’s current standards, analyzed in Parts I and II, concern either authorization of use (AU rules) or accountability by requiring specific information that determines whether the burden of liability lies with the manufacturer or the public (BL rules). The legal authority for these rules is the Clean Water Act [33 U.S.C. § 1321(d)(2)(G)(i)–(iii)], referred to as Duties 1–3. Our analysis focuses on dispersant use, given the inconvenient truth that the primary dispersants used in oil spill response (Corexit 9500 and Corexit 9527) cause acute and long-term respiratory, neurological, and cardiovascular damage from the cellular to organism levels in humans and animals, and the fact that all coastal states still preauthorize their use in state (coastal) and federal waters.

In Part I, we found that the new screening tests and listing criteria (pass/fail standards) are likely to eliminate use of more toxic dispersants (AU-3) but not necessarily the use of ineffective dispersants (AU-2). When considered along with the general information required for product listing (BL-1 to -5), test results fulfill EPA’s two objective-based duties under the Clean Water Act. However, supplemental testing and information are needed *prior to use* to fulfill EPA’s third

performance-based duty to determine what quantities of products *can be used safely* in waters or with oils of intended use, as summarized in Table 1 at the end of Part I.

Further, the general information required for listing increases transparency and accountability that collectively shift the burden of liability to manufacturers and plan holders to support fulfilling these mandatory duties. Holding these parties responsible for the consequences of product use increases the likelihood that products will only be used as intended to avoid costly consequences.

In Part II, we found that revised authorization of use rules *provide the authority* to strengthen state and local involvement in planning the geographic-specific details that are unique to Area C-Plans and that provide the foundation for an effective, efficient, and coordinated response. To *accomplish this in practice*, however, EPA relies on cooperation with states to conduct area-specific testing to fulfill this duty, as it has in the past, unsuccessfully.

To determine whether the 2023 regulations would address the gaps and deficiencies in the 1994 regulations, we reviewed the history and relationship of citizen involvement in oil spill disaster preparation and response, specifically in Area Committees and Regional Citizens' Advisory Councils (authorized in the Oil Pollution Act), from the context of the National Response Framework and the National Preparedness System.

From our review, we found that the authorizing statutes in OPA established a three-level framework that distributed the responsibility (power/authority) of decision-making among oil spill planners and responders across all three levels from local/state to regional to national. However, in practice, the primary function of Area Committees (a first-level entity)—that of preparing Area C-Plans—was subsumed by regional planners within Regional Response Teams (RRTs) (a second-level entity). This top-down approach disempowered local and state authorities, more so in some states than others.

In RRTs with token involvement of state and local planners, the RRT *planners* largely defaulted on the legal duty to determine if products could be used safely in waters of intended use (largely due to lack of knowledge), leaving the On-Scene Coordinators (OSC)—the *responders*—with the responsibility to decide what products to use, based on preauthorization plans that allowed use of *any product* listed on the NCP Product Schedule. This shift to *responders* as primary decision-makers also skewed the power distribution, further disempowering state and local authorities and opening a wide door for abuse of agency discretion—and the social and political nullification of the NCP by disenfranchised states, as discussed in the case study.

EPA's current standards seek to restore the power distribution established in law, in order to fulfill its third duty under the CWA, i.e., to determine the quantities of products that can be used safely

in the waters of intended use. The current standards use three means to restore the power distribution to achieve its end, including:

- clarifying the authority of and empowering state and local governments and Area Committees (AU-6 to -11);
- curbing abuse of agency discretion (BL-6 to -9, -11, -15); and
- shifting the burden of responsibility (liability) to product manufacturers and industry plan holders (BL-10, -12 to -14), as summarized in Table 2 at the end of Part II.

Achieving the desired outcome hinges on formation of Area Committees *as established under OPA*, meaning autonomous entities separate from RRTs but with a shared resource—a Regional Citizens’ Advisory Council (RCAC). At this critical juncture, several options are presented. Congress may choose to provide funding to fulfill its 1990 mandate to implement Area Committees. Alternatively, states may seek federal funding to implement Area Committees through national preparedness grants to build local capabilities for oil spill planning and response. EPA may choose to establish a network of RCACs to support states in their decision to decide what products, if any, can be used safely in waters and with oils of intended use. RCACs could be funded by plan holders in each region for operational costs (as per OPA) and/or through the Oil Spill Liability Trust Fund for research to inform area-and ecosystem-specific oil spill planning and response activities.

In Part III, we present another reason for states to become more proactive. EPA’s current standards establish a two-year transition period while old products, including the toxic dispersants that precipitated this rulemaking, will remain conditionally listed until the new Product Schedule becomes effective on December 12, 2025. States provide the primary line of defense for preventing history from repeating itself with use of outdated, conditionally-listed dispersants.

We recommend that local, state, and regional planners proactively adopt precautionary guidelines in preauthorization plans and/or Area C-Plans during the transition period to restrict use of conditionally-listed products (P-1 to -3) and dispersants in particular that may be or are known to be extremely harmful to people and wildlife when used during oil spill response (P-4 to -12), as summarized in Table 3 at the end of Part III.

We also recommend initiating reviews to update existing plans, including preauthorization plans, Area C-Plans (or developing new plans), and Regional C-Plans, to address changes in law, policy, and science that impact conditions of product use. These are mandatory reviews, triggered by the new rules now in effect (AU-7, -8, -10, and -11 in Table 2). Further, **we recommend** that states that are disenfranchised by the RRTs immediately withdraw approval of RRT-driven preauthorization plans (AU-9).

Finally, **we recommend** that RRTs use this mandatory review process as an opportunity to work cooperatively with local, state, and Tribal partners in co-establishing and co-implementing Area Committees and RCACs to address critical gaps in national preparedness.

ABOUT THE AUTHOR

Dr. Riki Ott has a keen interest in maintaining and strengthening our nation's oil spill prevention and response laws and regulations, especially ones designed to protect worker and public health during emergency responses to oil spills. Ott currently serves as co-chair of the 2023 Health and Safety Task Force, chartered by Regional Response Team 10 and the Northwest Area Committee to evaluate the need and specific ways to incorporate health monitoring programs for response workers and the exposed public into the Northwest Regional Contingency Plan.

Her interest stems from 20 years of first-hand experience in the aftermath of the 1989 *Exxon Valdez* oil spill as an Alaskan commercial salmon fisherwoman with academic training in marine toxicology. Ott is the author of two books on the oil spill's long-term harm to wildlife and the environment (*Sound Truth and Corporate Myths*) and to people and communities (*Not One Drop*). She was the lead character in a documentary about the oil spill's lasting impacts to communities, wildlife, and the environment (*Black Wave*).

After the 2010 BP Deepwater Horizon oil disaster, Ott embedded for a year in Gulf Coast communities across the four oiled states (AL, FL, LA, MS) to coach residents and fishermen how to anticipate and mitigate the long-term social, economic, environmental, and physical harm. She returned bi-annually through 2017 to document the emerging human health tragedy for the *Huffington Post* and an investigative documentary to expose the cover up of long-term harm to human health (*The Cost of Silence*, 2020).

During this time, Ott founded A Locally Empowered Response Team (ALERT) as a project of Earth Island Institute and co-authored two *Toxic Trespass* training manuals with, for, and by residents of Gulf Coast environmental justice communities. She also spearheaded a multi-year effort with Gulf Coast allies to petition, then sue (successfully), the EPA to update the rules governing use of toxic chemical dispersants during oil spills (*ALERT/EII et al. v. Wheeler et al.*, Civ. No. 3:20-cv-00670-WHO (N.D. Cal. 2021)).

Ott authored *The Opportunity to Make It Right* to promote understanding of EPA's current standards governing dispersant use. It is hoped that better understanding will encourage local and state involvement in oil spill preparedness and response—and better support to do so from the agencies and policymakers involved in emergency response.

TABLE OF CONTENTS

| | |
|---|----|
| EXECUTIVE SUMMARY | 3 |
| ABOUT THE AUTHOR | 6 |
| TABLE OF CONTENTS | 7 |
| GLOSSARY | 8 |
| INTRODUCTION | 11 |
| OVERVIEW: POLICY FRAMEWORK & FAULT LINES | |
| I. TESTING & LISTING RULES: TO IDENTIFY SAFER PRODUCTS FOR USE | 16 |
| SCREENING TESTS & LISTING CRITERIA FOR DISPERSANT USE | 16 |
| Reference oil | |
| Efficacy test | |
| Toxicity tests | |
| Saltwater environments | |
| GENERAL INFORMATION CONCERNING ACCOUNTABILITY | 22 |
| Defining use parameters for increased transparency | |
| Public disclosure: No secret ingredients | |
| Truth or consequences: Grounds for delisting (removing) a product | |
| IN BRIEF: POLICY ANALYSIS SUMMARY & TABLE 1 | 26 |
| II. AUTHORIZATION OF USE RULES: TO DECIDE WHAT CAN BE USED SAFELY | 28 |
| POLICY FRAMEWORK & FAULT LINES | 28 |
| National preparedness: Citizen involvement in oil spill planning & response | |
| Area Committees & national preparedness with a case study | |
| Regional Citizens' Advisory Councils & national preparedness | |
| DO THE CURRENT STANDARDS DETERMINE IF PRODUCTS CAN BE USED SAFELY? | 39 |
| Empowers state involvement in areas with a preauthorization plan | |
| Curbs abuse of agency discretion | |
| Shifts the burden of liability (responsibility) | |
| IN BRIEF: POLICY ANALYSIS SUMMARY & TABLE 2 | 46 |
| III. TRANSITION PERIOD GUIDELINES: TO KEEP HISTORY FROM REPEATING ITSELF | 49 |
| POLICY FRAMEWORK & FAULT LINES | 49 |
| The SYMPTOMS | |
| The SCIENCE | |
| The DISPERSANTS | |

| | |
|--|-----------|
| WHAT IS NEEDED TO ENSURE USE OF SAFER PRODUCTS DURING THE TRANSITION PERIOD? | 54 |
| Adopt precautionary guidelines for use of conditionally-listed products | |
| Any product: Restrictions on use | |
| Dispersants: Additional restrictions on use | |
| Dispersants: Accountability for use | |
| Priority implementation: Review & update Area C-Plans & Regional C-Plans | |
| IN BRIEF: SUMMARY OF TRANSITION PERIOD GUIDELINES & TABLE 3 | 67 |
| SUMMARY & RECOMMENDATIONS | 70 |

GLOSSARY

| | |
|-----------|---|
| ACP | Area Contingency Plan or Area C-Plans |
| ALERT | A Locally Empowered Response Team |
| BP | British Petroleum |
| BREESI | Brief Environmental Exposure Survey and Inventory |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act of 1980 |
| CDC | Center for Disease Control |
| CRS | Congressional Research Services |
| CWA | Clean Water Act of 1972 |
| DHHS | Department of Health and Human Services |
| E&P waste | exploration and production waste |
| EPA | Environmental Protection Agency |
| ESF | Emergency Support Function |
| EPCRA | Emergency Planning and Community Right-to-Know Act of 1986 |
| ERHMS | Emergency Responder Health Monitoring and Surveillance |
| FR | Federal Register |
| GAP | Government Accountability Project |
| HAZWOPER | Hazardous Waste Operations and Emergency Response |
| LEPC | Local Emergency Planning Committee |
| NAS | National Academy of Sciences |
| NCP | National Oil and Hazardous Substances Pollution Contingency Plan |
| NIOSH | National Institute for Occupational Safety and Health |
| NIMS | National Incident Management System |
| NRF | National Response Framework |
| NRT | National Response Team |
| OPA | Oil Pollution Act of 1990 |
| OSC | On Scene Coordinator |
| OSHA | Occupational Safety and Health Act |
| OSLTF | Oil Spill Liability Trust Fund |
| PBI | Proprietary Business Information |
| PHA Unit | Public Health Assessment Unit |
| PPD | Presidential Policy Directive |
| ppb | parts per billion |
| ppm | parts per million |
| ppt | parts per thousand |
| QEESI | Quick Environmental Exposure Survey and Inventory |
| RCAC | Regional Citizens' Advisory Councils |
| RCP | Regional Contingency Plan or Regional C-Plan |
| RRT | Regional Response Team |

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|------|--|
| SARA | Superfund Amendments and Reauthorization Act |
| SDS | Safety Data Sheet (also formerly Material Safety Data Sheet, MSDS) |
| SERC | State Emergency Response Commission |
| SOAs | Secondary Organic Aerosols |
| SPR | Strategic Petroleum Reserve |
| SSDI | Subsea Dispersant Injection |
| TEPC | Tribal Emergency Planning Committee |
| TERC | Tribal Emergency Response Commission |
| VOC | Volatile Organic Compound |
| UOG | Unconventional Oil and Gas |
| USCG | United States Coast Guard |
| WAC | Washington Code |

INTRODUCTION

On May 31, 2023, under a court-supervised deadline, the U.S. Environmental Protection Agency (EPA) published its final action on rules governing use of chemical and biological products¹ developed to mitigate harm from oil spills to waters and waterways of the United States, coasts and inland environments, and wildlife and humans that depend on these things—which is essentially all of us.

Driving the rule revisions was the need to find less toxic and more efficient products than those used during response to the 2010 BP Deepwater Horizon oil spill—specifically, Corexit chemical dispersants—and to empower local and state involvement in decision-making regarding their use, if any, in the unique area-and ecosystem-specific waters under their jurisdiction.

Another key driver was a lawsuit brought by ALERT and allies,² who were frustrated by EPA's failure to keep the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) current for oil spills and releases of other hazardous substances. The last substantial overhaul of the NCP in 1994 was in response to the Oil Pollution Act of 1990 and the *Exxon Valdez* oil spill in Alaska. Imagine if your community's fire department relied on emergency response plans that were 30 years old!

The laws matter. Fulfilling legal duties under these laws and keeping the implementing regulations current, matter. Our nation's two largest maritime oil spills occurred over 20 years apart yet were governed by the same set of emergency response tactics, i.e., use of toxic chemical dispersants and other chemical products, with the same deadly outcomes of long-term harm in people³ and wildlife.⁴ These tactics have needlessly endangered people and wildlife time and time again.

¹ 88 FR 38280. EPA, 2023. National Oil and Hazardous Substances Pollution Contingency Plan; Product Schedule Listing and Authorization of Use Requirements. Final action on EPA-HQ-OPA-2006-0090, RIN 2050-AE87, Doc. number 2023-11904. 6/12/2023, effective 12/11/2023.

This is the final action of a rulemaking that was issued in two parts. The first part concerned environmental monitoring requirements for (primarily) dispersant use. 86 FR 40234. NCP; Monitoring Requirements for Dispersants and Other Chemicals. Effective Jan. 24, 2022.

² *ALERT/Earth Island Institute et al. v. Wheeler et al.*, Case 3:20-cv-00670-WHO (N.D. Cal. 2021). <https://alertproject.org/lawsuits/>

³ Murphy K, 2001. Exxon oil spill's cleanup crews share years of illness. *Los Angeles Times* 5/11/2001. <https://www.latimes.com/archives/la-xpm-2001-nov-05-mn-372-story.html>

Sneath S, Laughland O, 2023. "They cleaned up BP's massive spill. Now they're sick—and want justice," *The Guardian* 4/20/2023. <https://www.theguardian.com/environment/2023/apr/20/bp-oil-spill-deepwater-horizon-health-lawsuits>

⁴ Peterson C, et al., 2003. Long-term ecosystem responses to the *Exxon Valdez* oil spill. *Science* 302:2082–86. <https://pubmed.ncbi.nlm.nih.gov/14684812/>

EPA's final action focuses on rules governing product use in Subpart J of the NCP—and dispersant use, in particular, which is the focus of this report. Corexit dispersants have been the preferred product of the US Coast Guard and industry for oil spill response activities since before the NCP or EPA were even established⁵—and well before the long-term harm to humans and wildlife from dispersant use was understood.

Corexit dispersants are currently pre-authorized and stockpiled for immediate use in all coastal states.⁶ Dispersants are petroleum-based products, which contain ingredients that are, by nature, hazardous to humans and wildlife. For example, Corexit 9527A contains a significant amount (30% to 60%) of 2-butoxyethanol,⁷ a cancer hazard and a reproductive hazard that can damage developing fetuses in mammals (including humans), as well as the lungs and respiratory system, eyes, skin, liver, kidney, and blood.⁸

The Safety Data Sheets for the most used dispersants, Corexit 9500A and Corexit 9527A, state the products are “toxic to aquatic life” (9527A only) and, under “accidental release,” that measures be taken “to ensure runoff does not reach a waterway.”⁹ Now consider that over 2 million gallons of Corexit dispersants were *intentionally applied* (not accidentally released) on the sea surface (a waterway) and in subsurface waters during the BP Deepwater Horizon oil disaster. Had it been crude oil, it would have been the sixth largest oil spill ever in the United States. The public vehemently and vocally opposed use of these toxic chemical mixtures, but EPA had no rule or process to halt use of a product that did not perform in the field as intended. Given this, it is easy to understand why dispersant use is so controversial.

EPA's final rules did *not* address several other key issues of public concern. For example, EPA did not consider how to dispose of existing stockpiles of dispersants that become delisted¹⁰ or address

Schwacke L, et al. 2017. Quantifying injury to common bottlenose dolphins from the BP DHOS using an age-, sex- and class-structured population model. *Endangered Species Res.* 33:265–279. doi: 10.3354/esr00777 <https://repository.library.noaa.gov/view/noaa/15430>

⁵ 1969 Santa Barbara oil spill. Wikimedia Foundation. Visited 11/9/2023. Wikipedia. https://en.wikipedia.org/wiki/1969_Santa_Barbara_oil_spill

⁶ “Dispersant stockpiles will be required in all areas where preauthorization has been established by the Regional Contingency Plan or Area Contingency Plan under 40 CFR Part 300.” US Dept of Homeland Security, US Coast Guard, 2009. Dispersants/On-Water Oil Removal Capacity (CAPS). Visited 11/09/2023. <https://homeport.uscg.mil/Lists/Content/DispForm.aspx?ID=327&Source=/Lists/Content/DispForm.aspx?ID=327>

⁷ Corexit Environmental Solutions (formerly Nalco), 2019. Safety Data Sheet. Corexit EC9527A. Composition, at 2.

⁸ New Jersey Dept. of Health, 2008. Right to Know: Hazardous Substance Fact Sheet, 2-butoxy ethanol. Organ damage, at 1; cancer hazard and reproductive hazard, at 2; teratogen, at 5.

⁹ *Supra*, note 7, Corexit 9527A SDS, 2019, at 6 (toxic to aquatic life), at 3 (ensure runoff does not reach a waterway); Corexit 9500A SDS, 2019, at 3 (runoff).

¹⁰ *Supra*, note 1, EPA 88 FR 38280, at 38299. “While the final provisions provide for the retesting of expired products, the disposal of products, including expired products, is outside the scope of this action.”

the controversial practice of disposal of recovered *mixed hazardous* oil spill waste, i.e., oil contaminated with dispersant, in public landfills.¹¹ Further, issues that relate to protecting worker and public health—an oft-stated priority during oil spill response—were considered beyond the scope of this rulemaking.¹²

Minimizing harm to workers and the exposed public during NCP responses is of paramount interest to ALERT and Government Accountability Project (GAP)—the authors of *DEEP IMPACT*. EPA’s current standards address persistent gaps and deficiencies in its 1994 implementing regulations that were identified in the aftermath of the next major maritime oil spill, the 2010 BP Deepwater Horizon oil disaster.

This report is divided into three parts to assesses EPA’s current standards and determine if the revisions address three gaps and deficiencies in the 1994 implementing regulations:

- I. TESTING & LISTING RULES to identify less toxic and more efficient products and to require more transparency in data sharing to support informed decision-making;
- II. AUTHORIZATION OF USE RULES to empower local and state involvement in decision-making regarding product use, if any, in waters under their jurisdiction and to fill a critical gap in national preparedness; and
- III. TRANSITION PERIOD GUIDELINES to safeguard waters of the U.S. during the 2-year transition period when the same Corexit dispersants *may still be used* for oil spill response and to address the human dimensions—the toxic impacts—of oil spills.

POLICY FRAMEWORK & FAULT LINES

The Clean Water Act directs the President to prepare and publish a National Contingency Plan (NCP) for oil spills that includes a schedule, prepared in cooperation with the states, to identify **what** spill mitigating products, if any, *may* be used in carrying out the Plan, **where** (the waters in which) such products *may* be used; and **how much** (the quantity) of a product that *can* be used safely in the waters of intended use.¹³

¹¹ *Ibid.*, at 38304. “The NCP addresses the disposal of oil and contaminated materials recovered in cleanup operations in accordance with the RCP, ACP, and any applicable laws, regulations, or requirements under § 300.310(c). Waste disposal is outside the scope of this final action.”

¹² *Supra*, note 1, EPA FR 38280 (2023), at 38294. “The NCP includes provisions for OSCs to address health and safety concerns of workers under § 300.150. The NCP recognizes that the OSC may call upon DHHS to assist in determining public health threats throughout any response action (see § 300.135(h)). In addition, the OSC may monitor air quality to identify potential public health concerns from air residues from in-situ burning.”

¹³ 33 U.S.C. § 1321(d)(2)(G). The Clean Water Act, the NCP for oil spills, and the EPA all co-evolved in the early 1970s. This section of the Clean Water Act has changed little over the decades. For an historic framework, see

The President delegated these duties to EPA.¹⁴ “May” implies permission or something that is allowed, while “can” implies demonstrated ability to perform as described. To address the first two permitted objectives, EPA developed a national testing protocol to compare and screen products and to help guide selection of less toxic and more efficient ones from the Product Schedule.

To address the performance-based objective, EPA relies on “cooperation with the states” to conduct area-specific testing to determine which of the listed products, if any, can be used safely in the waters of intended use. This implies a conferred duty to the states and a responsibility of EPA (and Congress) to ensure that this duty is fulfilled.

The distinction between relative toxicity and environmental toxicity is critical. It is the difference between using hearty standard lab test creatures versus using ecologically and economically important species to assess the adverse impact of a product on area-specific populations. This is literally the difference between what *may* be used and what *can be used safely*. And this is where the old (pre-2023) rules failed: Products have been selected for use in oil spill response based on relative toxicity rather than environmental toxicity.

Following the *Exxon Valdez* oil spill, Congress stepped up its oversight role after intense public controversy led to a fundamental loss of public trust in the oil industry.¹⁵ The ineffective and inefficient response, experimental use of toxic products including Corexit dispersants,¹⁶ and harm to wildlife¹⁷ proved a need to demonstrate that products can be used safely—*prior to use*—as mandated by the CWA and expected by the public.

Congressional Research Services (CRS) Report R43251, *Oil and Chemical Spills: Federal Emergency Response Framework*, coordinated by Bearden DM, Ramseur JL. Updated Aug. 29, 2017.

¹⁴ Executive Order 12777 (most recently). However, this duty was delegated to EPA soon after EPA was established. *Supra*, note 13, CRS R43251, 2017, NRF, Appendix, at August 1971, August 1973, August 1981, and October 1991.

¹⁵ “The *Exxon Valdez* disaster caused “fundamental changes in the way the U.S. public thought about oil, the oil industry, and the transport of petroleum products by tankers.... ‘Big oil’ was suddenly seen as a necessary evil, something to be feared and mistrusted.” National Research Council (NRC), *Oil in the Sea III: Inputs, Fates, and Effects*, NAS, February 2003, at 11. In: CRS RL33705, *Oil Spills: Background and Governance*, by JL Ramseur, updated 6/22/2023, at 2.

¹⁶ Two of the products used, INIPOL EAP22 and Corexit 9527A, contained 2-butoxyethanol. Even then, the Material SDS forewarned that the material may be absorbed through the skin and that prolonged exposure may cause eye and skin irritation and blood and kidney damage. Exxon, 1989, MSDS Inipol, 7/28/1989, at 5. Nalco, 2008, MSDS Corexit 9527A, 10/15/2008, at 1. Inipol is no longer manufactured (since 2005). EPA, 2023. NCP Product Schedule, 12/11/2023, at iv. https://www.epa.gov/system/files/documents/2023-12/ps_dec23_508.pdf

¹⁷ *Supra*, note 4, Peterson, et al., 2003. Long-term ecosystem responses.

To accomplish this and fulfill the third duty under the CWA, Congress established Area Committees, comprised of federal, state, and local agencies,¹⁸ and tasked them with developing Area Contingency Plans (Area C-Plans),¹⁹ including the task of determining what products, *if any*, can be used safely in the specific area under their jurisdiction.²⁰ Yet these critical planning and decision-making functions continued to remain largely under the control of regional planners—the Regional Response Teams (RRTs)—without regular participation of state and local agencies.

Unfortunately, this was the situation we, as a nation, found ourselves in during the BP Deepwater Horizon oil disaster. Few had noticed the lack of public engagement in area planning and decision-making on product use until the media spotlighted, once again, the intense public controversy over dispersant use.

As the National Commission on the BP Deepwater Horizon disaster noted in hindsight, “Before the Deepwater Horizon spill, state and local elected officials were not regular participants in Area Committee meetings or familiar with local Area Contingency Plans. The Coast Guard and Area Committee member agencies had done little to reach out to state and local elected officials.”²¹

What followed was a repeat of history that Congress and the nation had hoped to prevent with passage of OPA. The RRT member agencies, as planners, had not determined what products, if any, could be used safely by responders in the oiled region. This led to use of pre-approved products based only on the screening tests. The experimental release of chemical dispersants—this time in unprecedented quantities and durations on the sea surface and at depth—led to predictably disastrous long-term consequences for people and wildlife. And this is what finally precipitated extensive changes to the rules governing use of dispersants and oil-spill mitigating products—that, and the citizens’ lawsuit mentioned earlier.²²

¹⁸ 33 U.S.C. § 1321(j)(4)(A).

¹⁹ 33 U.S.C. § 1321(d)(4)(B).

²⁰ 33 U.S.C. § 1321(d)(4)(C)(iv) “list the equipment (including firefighting equipment), dispersants or other mitigating substances and devices, and personnel available to an owner or operator, Federal, State, and local agencies, and tribal governments, to ensure an effective and immediate removal of a discharge, and to ensure mitigation or prevention of a substantial threat of a discharge;” (emphasis added).

²¹ National Commission on BP *Deepwater Horizon* and Offshore Drilling. 2011. *Deep Water: The Gulf Oil Disaster and the Future of Offshore Drilling. A Report to the President.* <https://nrt.org/sites/2/files/GPO-OILCOMMISSION.pdf>, at 268.

²² *Supra*, note 2, *ALERT/Earth Island Institute et al. v. Wheeler et al.*

I. TESTING & LISTING REQUIREMENTS: TO IDENTIFY SAFER PRODUCTS FOR USE

Part I focuses on changes to EPA’s data and information requirements for listing a product on the NCP Product Schedule. Only products that are listed may be considered for use. EPA does not require use of any products.

Again, the discussion focuses on dispersant use. Since dispersants cause oil to enter the water beneath the sea surface (aka the water column)—and they contain chemicals that are quite harmful to marine life and humans, it is critical that these products are adequately screened to eliminate the least effective and more toxic ones.

The current standards are discussed in two sections—

- rules concerning screening tests to determine what products may be listed and *authorized for use* (AU rules); and
- rules concerning accountability: requiring specific information from those who want to list a product for use determines whether the *burden of liability* lies with the manufacturer or the public (BL rules).

SCREENING TESTS & LISTING CRITERIA FOR DISPERSANT USE

To be listed on the Product Schedule and considered for use in oil spill response, products must now meet certain listing criteria for efficacy and toxicity screening tests, a pass/fail standard intended to screen out the less effective and more toxic products. Further, the screening tests use “reference oils” to allow products to be compared within categories, e.g., one dispersant to another, and between categories, e.g., a dispersant to a surface washing agent, to assess relative efficacy and toxicity. Knowing a product’s relative toxicity and efficacy will help guide selection of less toxic and more efficient products—in theory, as products perform differently in the field.

These rules are summarized IN BRIEF and in Table 1. The numbers below are a cross-reference to the table. The screening tests are covered in authorization of use rules AU-1 to AU-4 and the general information concerning accountability in burden of liability rules BL-1 to BL-5.

Reference oil

AU-1. EPA’s current standard²³ changed the reference oil used in the screening tests to one from a government-owned strategic petroleum reserve (SPR), the Bryan Mound (TX), to avoid future oil supply disruptions in obtaining and maintaining reference oils. There had been

²³ § 300.915(b)(1)–(3) Dispersant Testing and Listing Requirements.

availability issues with the previous reference oils, which would have prevented retesting of products in a timely manner under the current standards.

Efficacy test

Imagine your child coming home from school and announcing that they had passed an important math test—only to find out that every child had passed because the individuals with the lowest scores (including your child) were allowed to average their score with the highest score (the class brainiac) and use the higher number to pass the test!

This was essentially the situation with EPA’s outdated screening protocol for efficacy that averaged individual results from two reference oils. By averaging dismal results with high results and using the average number, products could pass the efficacy test—on paper. However, in the field, dispersants used on the heavier weight reference oil (an Alaska North Slope crude) yielded dismal results, just as in the lab without averaging.

In practice, this deception allowed the government to approve of oil spill contingency plans for Alaska North Slope oil field activities like exploration, development, and transportation, while knowing that the contingency plans were not viable! Chemical dispersants are ineffective in waters below the optimal salinity and/or temperature, as in sub-Arctic and Arctic waters—and deep waters offshore.²⁴ Environmental cleanup under these contingency plans would be ineffective.

AU-2. The current standards²⁵ require that the dispersant must demonstrate a minimum effectiveness of oil dispersion into the water column at each of two test temperatures, 5°C and 25°C (no averaging of results), using the reference oil (SPR Bryan Mound). However, the higher mixing energy of the new testing protocol results “in the possibility of better dispersion...” and may bias the results towards passing the listing criteria.²⁶ This could build false and unrealistic expectations that dispersants can effectively mitigate harm from oil spills, especially in very cold waters, and lead to government approval of contingency plans—and oil activities—in areas where oil spills cannot be cleaned up effectively, if at all.

²⁴ *Infra*, notes 32–35 and accompanying discussion.

²⁵ § 300.915(b)(1) Dispersant efficacy test and listing criteria; methodology in Appendix C to part 300, Section 2.0 Baffled Flask Dispersant Efficacy Test.

Efficacy tests and listing criteria are now required for surface washing agents (c) and bioremediation products (d), but not for solidifiers, herding agents, or sorbents. § 300.915(d) Bioremediation Agent Testing and Listing Requirements. Methodologies are in Appendix C to part 300, Section 5.0, for Bioremediation Agents.

²⁶ *Supra*, note 1, EPA final rules (2023), at 38309. The EPA replaced the accepted standard Swirling Flask Test, developed by the EPA Canada, with a nonstandard Baffled Flask Test, designed by industry. EPA’s reasoning was that the higher, consistent turbulent mixing energy of the new test provided more repeatable and reproducible test results.

Oil activities should not be allowed unless area-specific testing has demonstrated that dispersants (or any other products) can be used effectively in waters of intended use. Otherwise, what is the point of using them? Plans without area-specific testing are a nonstarter—dead on arrival. Government approval of a contingency plan should signify that the plan is viable in the waters of intended use and for the sources and types of oil that are likely to be spilled.

Past examples of failed oil spill responses, based on government approval of contingency plans that should have been nonstarters, foretell future scenarios. For example, Alaskans learned of the ineffectiveness of the primary response tools—dispersants and booming—only after the tanker *Exxon Valdez* spilled well over 11 million gallons of crude oil into Prince William Sound in 1989.²⁷ Exxon's inability to effectively clean up the spilled oil disrupted the ecosystem and the fishery-based economy for decades.

Yet this mess was all completely predictable. The Corexit dispersants allowed under the federal and state government-approved contingency plans were known to be ineffective on Alaska North Slope crude, the oil that spilled, *as this was also the reference oil with the dismal efficacy test results (before averaging)*. Yet the economic benefit to the nation (and owners and operators of oil facilities and tankers) from North Slope oil production, which was about 25 percent of the U.S. domestic oil during peak production in the early 1990s, was apparently deemed worth the risk of spills and an ineffective cleanup.

The risk to people, the environment, and regional economies has increased exponentially since then, as oil drilling has marched offshore into deeper and deeper waters. The nation and world learned of the deception after the 2010 BP Deepwater Horizon oil disaster when massive use of Corexit dispersants—near daily over three months, in the deep sea and at the sea surface—failed to prevent the oil from coming ashore. Subsea dispersant injection in waters below 5°C was ineffective, as it failed to prevent the bulk of the oil released at depth from rising to the sea surface. Surface spraying by plane and boat was ineffective, as it failed to prevent the oil on the sea surface from reaching the shore. More dispersant is not the answer when dispersants prove to be *ineffective* in field conditions.

²⁷ According to a 1991 Alaska Department of Law investigation, the *Exxon Valdez* spilled at least 30 million gallons (MG). Calculations as follows: Exxon reported that the *Exxon Valdez* was carrying 53.04 MG of which 42.2 MG was lightered onto three Exxon tankers bound for Exxon refineries to recover the oil from the oil-seawater cargo. Before the water content of the lightered cargo was known, Exxon reported a spill volume of 10.8 MG ($53.04 - 42.2 = 10.8$). Exxon never corrected its estimate to account for the water. The State determined that the lightered cargo contained 19.2 MG of seawater, and that the tanker spilled at least 30 MG of oil ($10.84 + 19.2 = 30$ MG), not accounting for the water content in cargo offloaded onto barges. (Alaska Department of Law, 1991. Files on ACE investigation, 1989–1991. Alaska Resource Library and Information Services, Anchorage.)

For more detail, see Ott R, 2004, *Sound Truth and Corporate Myths: The Legacy of the Exxon Valdez Oil Spill* (Dragonfly Sisters Press: Cordova, Alaska), Sidebar 1 at 4 and Table 1 at 7. Digital copy: <https://rikiott.com/wp-content/uploads/2013/07/Sound-Truth.pdf>

The reasons for this failure to perform as expected during the BP disaster were obvious once independent studies became public. Subsea dispersant injection (SSDI) was ineffective at dispersing oil at depth—the well blowout dynamics did that very effectively, shredding the pressurized oil into droplets of all sizes.²⁸ SSDI was also ineffective at trapping the oil droplets at depth, beyond the 5% or less of the liquid oil that was trapped in the deep intrusion layer with or without dispersant use.²⁹ And, SSDI was ineffective at moving gaseous components, e.g., methane and hazardous VOCs (Volatile Organic Compounds), into the water column beyond the significant amount that was forced to entrain (become part of the liquid water column) by the crushing pressure and frigid ocean temperatures.³⁰ Surface spraying of dispersants by plane and boat was also ineffective, because rapid photo-oxidation of surface oil weathered the oil too quickly (within 0 to 4 hours) for effective dispersant use.³¹

EPA's current standard for dispersant efficacy gives the same false sense of assurance about field performance. While lab conditions can be manipulated to show otherwise, dispersant efficacy drops drastically below 5°C,³² meaning that dispersants would be ineffective in most deep ocean

²⁸ Fingas M, 2014. A review of literature related to oil dispersants, 2011–2014, for the Prince William Sound Regional Citizens' Advisory Council, Anchorage, Alaska, Section 4.6 at 24–25. <https://www.pwsrcc.org/wp-content/uploads/A-Review-of-Literature-Related-to-Oil-Spill-Dispersants-2011-2014.pdf>

²⁹ “Available evidence from Deepwater Horizon indicates that deep intrusion layers were preferentially enriched in soluble hydrocarbon components compared to the liquid oil droplets. Evidence from various sources is compiled by Gros et al. (2017) and indicates that ~5% or less of the liquid oil was trapped in the deep intrusion layers. Evidence preceding the onset of SSDI [Subsea Dispersant Injection] is similarly consistent with low percentages of liquid oil in the deep intrusion layers. In other words, “only a small fraction of liquid oil was trapped in the layers with and without SSDI.” NAS, 2020. *The Use of Dispersants in Marine Oil Spill Response* (Washington, DC: The National Academies Press), at 46. <https://doi.org/10.17226/25161>; Gros et al., 2017. Petroleum dynamics in the sea and influence of subsea dispersant injection during [BP] Deepwater Horizon. *Proc Nat Acad Sci*, 114 (38):10065–10070. doi.org/10.1073/pnas.1612518114.

³⁰ “Almost all the methane released from the wellhead entered this subsurface intrusion layer along with significant fractions of other dissolved compounds and some tiny (order 100 microns) oil droplets (Lehr et al., 2010). The oil remaining in larger droplets rose to the sea surface, forming slicks.” NAS, 2022. *Oil in the Sea IV: Inputs, Fates, and Effects* (Washington, DC: The National Academies Press), at 19 (Box 1-1). <https://doi.org/10.17226/26410>; Lehr et al., 2010. Deepwater Horizon oil budget calculator: A report to the national incident command. Federal Interagency Solutions Group, Oil Budget Calculator Science and Engineering Team: National Incident Command.

Paris CB, et al., 2018. BP Gulf Science Data reveals ineffectual subsea dispersant injection for the Macondo blowout. *Front Mar Sci* 5:389. doi.org/10.3389/fmars.2018.00389

³¹ Ward CP, et al. 2018a. Photochemical oxidation of oil reduced the effectiveness of aerial dispersants applied in response to the Deepwater Horizon spill. *Environ Sci & Technol Lett* 2018a 5:226-231. [doi: 10.1021/acs.estlett.8b00084](https://doi.org/10.1021/acs.estlett.8b00084);

Ward CP, et al. et al. 2018b. Partial photochemical oxidation was a dominant fate of *Deepwater Horizon* surface oil. *Environ Sci Technol*. 52, 1797–1805. [doi: 10.1021/acs.est.7b05948](https://doi.org/10.1021/acs.est.7b05948)

³² Fingas, M, L Ka'ahue, 2005. A literature review of the variation of dispersant effectiveness with salinity," *Proc 28th Arctic Marine Oil Spill Prog Technical Seminar*, Environment Canada, Ottawa, ON, pp. 377-389, 2005 in SL Ross Environmental Research, 2010. <https://www.researchgate.net/publication/290752300>

water, which is between 0–3°C³³—blowout dynamics aside. Further, as EPA stated, “[i]n general, the effectiveness of dispersants decreases as the salinity of the water decreases.”³⁴ So, for example, efficacy tests conducted in seawater of 20 ppt (parts per thousand) salinity would overstate environmental effectiveness in cold sub-Arctic and Arctic waters, especially if diluted by ice melt, although these waters are still technically saltwater environments.³⁵

This false security is especially true with contingency plans for *unconventional oil*. The outdated rules—in fact, the entire NCP—were written for spill responses to conventional oil, not unconventional oil and gas, such as tar sands-derived oil (very heavy-weight oil the consistency of peanut butter) and oil derived by hydraulic fracturing (very light-weight oil, bubbly with gases). Unconventional oil is increasing in use (and therefore increasingly spilled) as conventional oil supplies decline. The traditional response tools—boom, burning, and dispersants—are even less effective on spills of unconventional oil that sinks or explodes when spilled.³⁶

Perhaps this is why EPA’s final rules are silent on screening tests for unconventional oil.³⁷ Instead, EPA leaves the responsibility to state and regional planners to tailor the scope of the preauthorization plan to account for different sources and types of oil, including unconventional oils.³⁸

Toxicity tests

Imagine going to visit your doctor for a health screening only to find that the doctor was using test procedures that were 50 years old! This was essentially the situation with EPA’s outdated (i.e., pre-2023 revisions) screening protocol for dispersant toxicity, which was based on

³³ Deep ocean water temperature: <https://www.windows2universe.org/earth/Water/temp.html>

Arctic sea temperature: <https://seatemperature.info/arctic-ocean-water-temperature.html>

³⁴ *Supra*, note 1, 88 FR 38280, at 38313.

³⁵ SL Ross Environmental Research, 2010, for U.S. Dept. of Interior MMS, 2005, Literature Review of Chemical Oil Dispersants and Herders in Fresh and Brackish Waters.

³⁶ The Enbridge tar sands-derived oil spill in 2010 required years and more than a billion dollars to clean up, making it the costliest inland spill in U.S. history. It highlighted the hazard of pumping heavy, corrosive, and abrasive tar sands-derived oil through pipelines. *Inside Climate News*, 2016, Hasemyer D, Enbridge’s Kalamazoo spill saga ends in \$177 million settlement, 7/20/2016.

When a train carrying highly flammable light oil, derived from hydraulic fracturing, derailed in Lac-Mégantic (Quebec) in 2013, the resulting explosions and fire killed 47 people, forced evacuation of 2,000 others, and leveled half the town. Such “bomb trains” crisscross the U.S. and Canada, yet most communities they pass through are unprepared for another Lac-Mégantic. *Earth Island Journal*, 2014, Federman A, Warning: Highly Flammable, Summer 2014 feature.

³⁷ “The required reference oil is not intended to be representative of every type of oil or condition that may be encountered during a response where a product may be considered for authorization. Rather, the final rule recognizes different types of oil under the authorization of use provisions.” *Supra*, note 1, EPA, Final Rules, 2023, at 38310. See also *infra* note 126 and text discussion on addressing spills of unconventional oil.

³⁸ *Supra*, note 1, EPA final action (2023), at 38310.

test procedures from the 1970s for acute toxicity testing only, performed on adult organisms to determine the level (concentration) of product that outright kills 50 percent in two or four days. Never mind that the same concentration might kill 100 percent of eggs or juvenile life stages, or that even a slightly longer exposure time might kill the adults or harm their ability to produce viable offspring. The outdated rules did not even set a listing criterion—a pass/fail standard to rule out the more toxic products. In practice, this allowed a lot of very toxic chemical dispersants like Corexit 9500A and 9527A to be used for oil spill response.

AU-3. The current standards³⁹ still require old-school acute toxicity tests using the same test species (the hardy non-native silverside minnow and mysid opossum shrimp) with a dispersant, and with a dispersant mixed with reference oil. However, several things have changed. Now there are listing criteria to eliminate the more toxic dispersants. Also, EPA will determine if dispersants mixed with the reference oil are likely to cause more harm than the reference oil alone—with EPA itself (not the product manufacturer or other vested party) conducting the oil-only acute toxicity tests. This may also help eliminate the more toxic products.

Third, and perhaps most significantly, the current standards require developmental and subchronic toxicity tests for dispersants (no other products). These tests use *sensitive life stages* like purple sea urchin eggs (developmental toxicity test) and fathead minnow (subchronic toxicity test). And the tests have *listing criteria* that are ten times lower than for the acute toxicity tests. This means that the more sensitive test results will determine eligibility for listing on the NCP Product Schedule, not the acute toxicity test results, which will eliminate the more toxic dispersants.

Bear in mind that even the more sensitive developmental and subchronic toxicity tests for dispersants are still *under-protective* of marine life, albeit more protective than EPA's outdated rules. The maximum acceptable levels for the more sensitive toxicity tests are *100 to 1,000 times higher* than the levels of crude oil⁴⁰ that have sickened individual marine organisms and reduced entire populations of fish, birds, and mammals.⁴¹

In practice, this means it is imperative for regional and state planners to conduct further area-specific toxicity testing to fulfill the third performance-based objective of the CWA, that is, to

³⁹ § 300.915(b)(2) Dispersant toxicity tests and listing criteria; methodology in Appendix C to part 300, Section 3.0 Dispersant Toxicity Testing.

For all other products, acute toxicity tests with product only and "listing criteria" (the maximum acceptable level) are now required for (surface washing agents § 300.915 (c), bioremediation agents (d), solidifiers (e), and herding agents (f) with methodologies in Appendix C to part 300, Section 4.0. For sorbents (g), neither toxicity nor efficacy tests are required, and sorbents are listed separately on a Sorbent Product Schedule.

⁴⁰ Maximum acceptable levels are no greater than 10 ppm (parts per million) for the acute toxicity tests and 1 ppm for the more sensitive toxicity tests. Individual and population level harm has been found at 1–20 ppb (parts per billion), levels that are 100–1,000 times lower than the listing criteria for dispersant use.

⁴¹ Supra, note 4, Peterson, et al., 2003. Long-term ecosystem responses.

determine if dispersants *can be used safely* in any quantity in waters of intended use. To encourage this area-and region-specific testing, EPA added a new rule regarding supplemental testing, which is discussed in Part II.

Saltwater environments

AU-4. In its final action, EPA restricted dispersant use to “saltwater environments,”⁴² but did *not* restrict the areas where dispersants may be used in saltwater environments, the quantities that may be used, or the duration of any use. This essentially allows unrestricted use of dispersant everywhere except in freshwater, and it invites a repeat of the BP Deepwater Horizon dispersant scenario—although, in its final action, EPA required additional data and information that *may* restrict use, as discussed next.

GENERAL INFORMATION CONCERNING ACCOUNTABILITY

Several of EPA’s general information rules shift the burden of liability (responsibility) for use to the manufacturers and plan holders, the so-called “responsible parties” (the owners and operators who hold contingency plans for offshore oil activities) where it belongs.

Holding these parties responsible for the consequences of product use increases the likelihood that products will only be used as intended to avoid costly consequences. If the burden of liability lies with the public to prove harm from product use to obtain compensation from a court of law, the manufacturers and plan holders are much more likely to take the risk of an oil spill in trade for the certainty of profiteering from their risky behavior. Again, the law matters.

Defining use parameters for increased transparency

BL-1. EPA now requires that persons submitting technical data for listing a product must identify the specific environments of intended use and how a product affects the oil to mitigate harm.⁴³ The agency also requires use ratios to quantify how much product to use. For example, during the BP Deepwater Horizon, the target dispersant-to-oil ratio was 1:100, resulting in application of 2 million gallons of dispersant for 200 million gallons of oil spilled. Further, the agency requires use parameters (as in preferred temperatures or salinity) and any application restrictions (limitations) such as weathering states of oil.⁴⁴ Available information on environmental fate like persistence,

⁴² § 300.915(b)(3). EPA’s use of the term “saltwater environments” (33–37 ppt salinity) likely includes brackish water (partly salty or 0.5–30 ppt) because the toxicity and efficacy screening protocols for dispersants are conducted with 20 ppt salinity seawater with the exception of the developmental toxicity test, which is conducted at a salinity of 34 ppt. Appendix C to Part 300, Table 1 (Section 2) and Table 7 (Section 3).

⁴³ § 300.915(a)(9).

⁴⁴ § 300.915(a)(10).

biodegradability, bioconcentration, etc., of the product *and all its components* is also required by EPA.⁴⁵ While salinity and temperature restrictions have been long known to affect dispersant efficacy, photochemical oxidation was found more recently to be a dominant fate of surface oil⁴⁶ and one that rapidly reduces effectiveness of dispersants sprayed onto the sea surface.⁴⁷

By requiring the manufacturers and plan holders to provide this information, EPA eliminates the guesswork (i.e., experimental use) in response and establishes accountability for use. Combined with the truth in reporting rules (BL-4, BL-5),⁴⁸ these listing requirements **may** eliminate use in suboptimal conditions (e.g., waters with lower salinity and/or very low temperatures) and, also, the political pressure during response to use dispersants in waters where they are demonstrably ineffective—or likely to be very toxic (nearshore waters close to populated areas) or in ways that increase toxicity of the oil (aerial or surface spraying) (see Precautionary guidelines, Table 3, P-4 to P-8).

BL-2. EPA also requires full disclosure of product components, concentrations, weight percentages, and more, including information that was previously shielded as confidential business information.⁴⁹ Without such information, it is understandably difficult for EPA to fulfill any of its three duties concerning product use under the Clean Water Act.

Public disclosure: No secret ingredients

BL-3. Under the old rules, certain information such as a product's individual ingredients and components and/or concentrations could be withheld from the public as confidential business information. In contrast, under the current standards,⁵⁰ identities of all product components and the intended use are available for public disclosure to support informed choices about use and informed medical treatment of cases of overexposure. The formula will remain protected as proprietary business information.

When people who will live with or die from the consequences of their choices are aware that some products—like the Corexit dispersants 9500A and 9527A—can cause cancers, reproductive damage and more,⁵¹ common sense may prevail in the product selection process. EPA *does not*

⁴⁵ § 300.915(a)(11).

⁴⁶ Ward CP, Overton EB, 2020. How the 2010 *Deepwater Horizon* spill reshaped our understanding of crude oil photochemical weathering at sea: a past, present, and future perspective. *Environ Sci Process Impacts*. 2020 May. 22(5):1125-1138. doi: [10.1039/d0em00027b](https://doi.org/10.1039/d0em00027b); Supra, note 31, Ward CP, et al., 2018b. Partial photochemical oxidation dominant fate.

⁴⁷ Supra, note 31, Ward CP, et al., 2018a. Photochemical oxidation reduces dispersant effectiveness.

⁴⁸ § 300.970.

⁴⁹ § 300.915(a)(13).

⁵⁰ § 300.950 Submission of proprietary business information (PBI).

⁵¹ Infra, notes 174–178 and accompanying discussion.

require use of any of the listed products. In the past, these choices were determined largely by industry pressure and government complacency to the point of complicity.

This revision is one of two in the final action that is precedent setting, in that the regulation may be applied to biocides, such as pesticides, fungicides, and herbicides, and other consumer products in general that may contain unhealthy, even hazardous, components that have not been publicly disclosed due to claims of confidential business information.

Truth or consequences: Grounds for delisting (removing) a product

The second precedent-setting regulation involves the new process for removal of a product from the Product Schedule, a process that previously was triggered only by failure to comply with EPA's limited liability restrictions, including misrepresentation that EPA "approved" the product and/or failure to affix EPA's liability disclaimer conspicuously on the product.

BL-4, BL-5. One of these current standards makes it refreshingly clear that "statements or information that are misleading, inaccurate, outdated, or incorrect regarding the composition or use of the product to remove or control oil discharges made to any person, or private or public entity, including on labels, advertisements, technical literature, or electronic media, or within the product submission to EPA" are grounds for delisting (removal) from the Product Schedule.⁵²

Misinformation is *rampant* in risk communication about dispersant use, and the deluge is biased towards promoting use while downplaying health risk.⁵³ Application of this new rule alone should result in removal of targeted dispersants.

The other truth-in-reporting rule provides, as grounds for product delisting, ignoring or failing to report "new or relevant information not previously considered concerning the impacts or potential impacts of the product to human health or the environment."⁵⁴

⁵² § 300.970(a)(1)

⁵³ For example, BP's 2010 shoreline cleanup training manual for workers contains the following statements, any of which could be used as grounds for removal of Corexit dispersants in use. "Dispersants used in the Gulf contain no ingredients that cause long-term health effects, including cancer." "The ingredients in dispersants are similar to many household petroleum products and detergents... health effects would be similar to exposure to any mild dispersant." TEEX [Texas A&M Engineering Extension Services]. 2010. Module 3 – Shoreline Cleanup (incomplete document). Posted courtesy of Downs Law Group as part of the BP papers cited in court documents. See Exhibit C *in* Case 2:22-cv-04391-CJB-DPC, document 14-3, filed 12/29/22, at 70. https://downslawgroup.com/wp-content/uploads/2023/03/ShorelineCleanupTrainingModules_CandB.pdf

⁵⁴ § 300.970(a)(4)

This error of omission is also rampant in risk communication. The bulk of the science showing harm from dispersant use was published years after the BP Deepwater Horizon oil disaster,⁵⁵ and epidemiology studies are still ongoing, but safety and risk communications have not been updated to include the current science.⁵⁶ This omission could now lead to product delisting and removal from use.

These radical rules are like sunshine laws. While they acknowledge the legal right of corporations (as artificial persons) to lie,⁵⁷ the rule creates consequences for doing so. Providing misleading information, including through omission, or providing inaccurate, outdated, or incorrect information, can now be grounds for and lead to delisting (removing) a product from the NCP Product Schedule—essentially banning the product from use.

Successful application of these rules should also trigger a much needed and thorough overhaul of *all safety and risk communication* regarding a dispersant's nature and use in the NCP, oil spill worker safety training manuals, and public health advisories.⁵⁸ These rules could also set precedent for other consumer products, especially those that contain undisclosed ingredients that are known human health hazards.

⁵⁵ McGowan CJ, et al. 2017. Respiratory, dermal, and eye irritation symptoms associated with Corexit™ EC9527A/EC9500A following the BP Deepwater Horizon Oil Spill: Findings from the GuLF STUDY. *Environ Health Perspect.* Sep, 125(9): 097015. doi: [10.1289/EHP1677](https://doi.org/10.1289/EHP1677)

Alexander M, et al. 2018. The BP Deepwater Horizon Oil Spill Coast Guard cohort study: A cross-sectional study of acute respiratory health symptoms. *Environ Res.* Apr, 162:196-202. doi: [10.1016/j.envres.2017.11.044](https://doi.org/10.1016/j.envres.2017.11.044)

⁵⁶ Infra, note 58, SpillPrevention.org/API, Fact Sheet, circa 2012, at 2 and 3. “Long-term studies to document potential short term exposure effects of dispersed oil to responder personnel and the public are ongoing.”

⁵⁷ *First National Bank of Boston v Bellotti* 435 U.S. 765 (1978) is a U.S. constitutional law case that defined the free speech right of corporations for the first time as the right to spend money to influence ballot initiative campaigns. This became the foundation for the court theory that money is protected speech, which was later refined to include the right of negative speech like false and misleading statements including the error of omission (as the right *not* to speak) [*Pacific Gas & Electric v. Public Utilities Commission*, 475 U.S. 1 (1986)].

⁵⁸ For example, the Alaska Dept. of Environmental Conservation posts “fact sheets” about dispersants on its public website titled, “Oil Dispersant Guidelines: Unified Plan, Annex F, Appendix 1: <https://dec.alaska.gov/spar/ppr/response-resources/non-mechanical/dispersant/> The “fact sheets” are from the American Petroleum Institute (API): <http://www.oilspillprevention.org/>.

The material includes statements like: “... adding dispersant in low levels at the appropriate application rates does not increase the toxicity of the oil” (false) and “(m)ost dispersants are biodegradable [false/misleading] and contain ingredients which are similar to those found in many common household soaps, cosmetics, detergents, and shampoos and even food” (misleading, understates risk). SpillPrevention.org/API, circa 2012 (based on latest citation). Dispersants—Human Health & Safety, at 1. <https://dec.alaska.gov/media/14212/dispersants-human-health-and-safety.pdf>

IN BRIEF: POLICY ANALYSIS SUMMARY & TABLE 1

In summary, in general, the new screening tests and the specific information required for product listing fulfill EPA's two objective-based duties under the Clean Water Act, but supplemental testing and information are needed *prior to use* to fulfill EPA's performance-based duty to determine what quantities of products *can be used safely* in waters or with oils of intended use.

Specifically, regarding the current standards for screening dispersant products:

- The change in reference oil to crude from government-owned strategic petroleum reserves will eliminate problems with supply chain reliability and support the screening tests required for EPA to fulfill its duties (AU-1); and
- The addition of developmental and subchronic toxicity tests that use more sensitive life stages, and the requirement to use the more sensitive test results to determine eligibility for listing on the NCP Product Schedule, will very likely eliminate the more toxic dispersants, but not the need for area- and ecosystem-specific testing (AU-2).
- However, the change in protocols for the efficacy test will likely bias results towards passing the listing criteria and build unrealistic expectations that dispersants can effectively mitigate harm from oil spills, especially in very cold waters (deep sea and Arctic waters) (AU-3); and
- The unrestricted use of dispersant in any saltwater environment, including low salinity waters, delegates the duty of determining what quantities of dispersants can be used safely in area- and ecosystem-specific waters to state and regional planners (AU-4).

Further, the general information required for listing increases transparency and accountability through declarations of intended use and waters of use (BL-1), agency and public disclosure of product components (BL-2, BL-3), and truth-in-reporting that makes misleading or false information or errors of omission grounds for product removal (BL-4, BL-5). These individually and collectively shift the burden of liability to manufacturers and plan holders where it belongs and support fulfilling Duties 1-3).

The rule revisions are summarized in Table 1, which also indicates our vote of confidence on whether rules fulfill—or fall short of—legal duties to identify **what** products *may* be used (Duty 1), **where** such products *may* be used (Duty 2), and **how much** (the quantity of) product that can be used safely in waters of intended use (Duty 3).⁵⁹ The asterisk indicates where additional actions are needed to fulfill non-discretionary duties.

⁵⁹ 33 U.S.C. §1321(d)(2)(G)(i)–(iii), respectively.

Table 1. Rules to support use of safer products—Will they work?

| | | Key | |
|---------------|-----------------------|-------------|--------------------------|
| Ref. # | Reference Number | Vote | |
| AU | Authorization for Use | Y/N | Yes/No |
| BL | Burden of Liability | * | Additional action needed |

| Rule | Ref. # | What does it do? (<i>Does it fulfill a legal duty?</i>) | Vote |
|--|------------------|---|------|
| Screening tests & listing criteria for dispersant use | | | |
| Reference oil § 300.915(b) (1)–(3) | AU-1 | Change in reference oil for screening tests to government-sourced oil from a Strategic Petroleum Reserve. (<i>Lessens likelihood of supply problems from other countries and private sources; supports new testing requirements to fulfill all duties.</i>) | Y |
| Efficacy test § 300.915(b)(1) | AU-2 | Unknown if the new efficacy screening test will prevent less effective dispersants from being listed. (<i>Partially fulfills Duty 1; *Supplemental testing is needed prior to use to fulfill Duty 3.</i>) | N* |
| Toxicity tests § 300.915(b)(2) | AU-3 | New developmental and subchronic toxicity screening tests are likely to prevent more toxic dispersants from being listed. (<i>Partially fulfills Duty 1; *Additional testing needed for Duty 3.</i>) | Y* |
| Saltwater environments § 300.915(b)(3) | AU-4 | Allows unrestricted use in saltwater environments if dispersant meets the efficacy and toxicity listing requirements; meant to fulfill Duty 2. (<i>*Supplemental testing is needed to fulfill Duty 3.</i>) | N* |
| General information concerning accountability | | | |
| Environmental use & fate § 300.915(a) (9)–(11) | BL-1 | Requires product limitations and use parameters that shift the burden of liability to manufacturers and plan holders; With rules BL-4 and 5 (truth in reporting), these rules may reduce use in waters where dispersants are less effective or more toxic and reduce political pressure during response to use products that are toxic or ineffective. (<i>*Supplemental testing is needed for Duty 3.</i>) | Y* |
| Full disclosure § 300.915(a)(13) | BL-2 | Requires full disclosure <u>to EPA</u> of identity, concentration, and weight composition, name, and intended function of each component in the product. (<i>Supports Duties 1-3.</i>) | Y |
| Public disclosure § 300.950 | BL-3 | Makes name, identity, and intended function for each component in a product available <u>for public disclosure</u> . (<i>Supports Duty 3.</i>) | Y |
| Product removal § 300.970(a)(1) § 300.970(a)(4) | BL-4 BL-5 | Grounds for removing a product from the Schedule include: <ul style="list-style-type: none"> • Statements or information that are misleading, inaccurate, outdated, or incorrect about a product’s composition or use. • Statements that fail to include (omit) new or relevant information about impacts or potential impacts to human health or the environment. <i>(Supports Duties 1–3.)</i> | Y |

II. AUTHORIZATION OF USE: TO DECIDE WHAT CAN BE USED SAFELY

“The NRF [National Response Framework] is based on the concept of tiered response with an understanding that most incidents start at the local or tribal level... Implementation of the concepts within the NRF... are mandatory for federal departments and agencies.

“The federal government’s support and response during disasters build on and are affected by the capacity of state, tribal, territorial, insular, and local governments, as well as the business community and NGOs. Preparedness efforts with partners at all levels increase the effectiveness of tiered response.”

US Dept. Homeland Security (2019)⁶⁰

“[To close a] critical... gap in the government’s existing response capacity... EPA and the Coast Guard should bolster state and local involvement in oil spill contingency planning and training and create a mechanism for local involvement in spill planning and response similar to the Regional Citizens’ Advisory Councils mandated by the Oil Pollution Act of 1990.”

National Commission (2011)⁶¹

POLICY FRAMEWORK & FAULT LINES

Part II focuses on whether EPA’s final action fulfills its duty to determine which products, *if any, can* be used safely in the waters and with the oils of intended use. As noted previously, EPA relies on cooperation with states to conduct area-specific testing to fulfill this duty. EPA’s final rules strengthen state and local involvement in planning the geographic-specific details that are unique to Area C-Plans and that provide the foundation for an effective, efficient, and coordinated response.⁶² To accomplish this, EPA’s final rules clarify the authorities of Area Committees, including authority to conduct area-specific testing, among other things.

While this may seem straightforward, it is not, as layers of law and the passing of decades have resolved into to a high-level jurisdictional squabble between EPA (which favors mechanical

⁶⁰ US Dept of Homeland Security, 4th ed., Oct. 28, 2019. National Response Framework (NRF), at 48–49 (The NRF is based on...), at 7 (The federal government’s support...) https://www.fema.gov/sites/default/files/2020-04/NRF_FINALApproved_2011028.pdf

⁶¹ Supra, note 21, National Commission, 2011, *Deep Water*, at 265 (critical issues or gaps), and 268 (recommendation C:3).

⁶² Supra, note 13, CRS R43251, 2017, NRF, at 10.

response) and the US Coast Guard (which favors dispersant use)⁶³ that has now come to a head in EPA's rules governing dispersant use in Subpart J of the NCP.

In its final rules, EPA clarified the role of *Area Committees—local, state, and regional planners—* in deciding what products are used, *as part of* developing and maintaining Area C-Plans.⁶⁴ This move is likely to restrict dispersant use as the public has learned of its deadly consequences.⁶⁵ In response, Coast Guard OSC *responders* who have long applied a rubber-stamp process for dispersant use (i.e., “preauthorization”) are attempting to take over Area Committees to retain control of decision-making⁶⁶ and, thus, to continue largely unrestricted dispersant use in saltwater environments under its jurisdiction from shorelines seaward to 200 miles.

To understand what is at stake and who must do what to prevent a serious breach of national preparedness, we first review the history of and relationship between Area Committees and Regional Citizens' Advisory Councils from the context of the National Response Framework and the National Preparedness System, then discuss the status of each and what this portends for national preparedness.

National preparedness: Citizen involvement in oil spill preparation & response

Half a century ago, the Clean Water Act required a three-tiered response for discharges of both oil and hazardous substances as a basic element of the early NCP.⁶⁷ The concept of a tiered response to disasters is not new. “Historically and legislatively, preparedness for disasters and emergencies is the responsibility of state, local, tribal, and territorial governments.”⁶⁸ This is

⁶³ Supra, note 21, National Commission, 2011, *Deep Water*, at 160-61, section entitled, “Continued Conflicts about Dispersant Use (May 10–July 14).”

⁶⁴ § 300.910(a). Use of Agents.

⁶⁵ GAP, 2013. Deadly dispersants in the Gulf: Are public health and environmental tragedies the new norm for oil spill cleanups? Written by Devine S, Devine T. www.whistleblower.org

⁶⁶ In 2018, the USCG Commandant directed each of 37 Sector Captain of the Ports to create stand-alone Area Contingency Plans that are distinct from Regional Contingency Plans. See USDHS/US Coast Guard, 2018.

Commandant Change Notice 16000. Subject: CH-1 to U.S. Coast Guard Marine Environmental Response and Preparedness Manual, COMDTINST M1600014A. Sept. 26, 2018.

https://media.defense.gov/2018/Oct/01/2002046528/-1/-1/0/CCN_16000_2018_9_26.PDF

U.S. Coast Guard, 2023. Sixkiller Memo: Bouboulis M W, Rear Admiral, USCG, Thirteenth Coast Guard District. Letter 5090 to Casey Sixkiller, EPA, Region 10, Seattle, Washington, regarding status of contingency planning efforts with enclosure USCG NWRCP Legal Review. 4/10/2023. <https://alertproject.org/wp-content/uploads/2024/01/230626-EPA-Sixkiller-memo.pdf>

⁶⁷ Tier 1 is the facility/local level, Tier 2 the state/regional level, and Tier 3 the country/trans-boundary level. See Law Insider, Dictionary. Visited 11/26/2023. <https://www.lawinsider.com/dictionary/tiered-response> The NCP established the National Response System.

⁶⁸ Congressional Research Services (CRS) Report R46696, *National Preparedness: A Summary and Select Issues*, coordinated by Reese S, Stienstra L, at 1. Updated Feb. 26, 2021.

because “incidents begin and end locally, and most are managed at that level as well”⁶⁹—“that level” being the first level: the local/state (or Tribal) level.

However, as disasters became bigger, there was a need to adjust to an “all-of-Nation” integrated, capabilities-based approach to ensure that partners at all three levels from local to state to national were prepared, as a matter of national preparedness.⁷⁰ Even so, a basic premise of the National Response Framework,⁷¹ which followed the Clean Water Act many decades and disasters later, is still “that incidents are generally handled at the lowest jurisdictional level possible,”⁷² i.e., the local/state level.

The Clean Water Act required mechanisms to coordinate roles of local, state, and federal governments during disasters, and specific response procedures.⁷³ Tiered response with coordinated participation of local and state governments was codified for natural disasters and chemical releases under CERCLA and SARA,⁷⁴ and for oil spills under the Oil Pollution Act (OPA).⁷⁵

OPA consolidated the existing federal oil spill laws under one program.⁷⁶ The 1990 law expanded the existing liability provisions within the Clean Water Act and created new freestanding requirements regarding oil spill prevention and response.⁷⁷ Among the new provisions was a multilayered planning and response system to improve preparedness and response to oil spills in marine environments.⁷⁸ For example, the NRT established the National Response System to coordinate national response strategies among multilayered jurisdictions. The NRT listed Area Committees as “key components” of the National Response System⁷⁹—but it left out another key component.

To address government-industry complacency—a main contributing factor in the *Exxon Valdez* oil spill⁸⁰—OPA established Area Committees as part of a local community network that also included *two Regional Citizens’ Advisory Councils (RCACs)* in Alaska. The latter were established

⁶⁹ FEMA, 2008. Introducing... National Response Framework, at 4 (tiered response).

https://www.fema.gov/pdf/emergency/nrf/about_nrf.pdf

⁷⁰ Presidential Policy Directive PPD-8, 2011. Obama, *National Preparedness*, Mar. 30, 2011, at 1.

⁷¹ Supra, note 69, FEMA, 2008.

⁷² FEMA online. Tiered response. Visited 11/26/2023. https://emilms.fema.gov/is_0800d/groups/32.html

⁷³ Supra, note 13, CRS R43251, 2017, NRF, at 3.

⁷⁴ Ibid., at 3, 18-19 (CERCLA, Dec. 1980, SARA, Oct. 1986, EPCRA, Mar 1990).

⁷⁵ Ibid., at 4, 17, (OPA Oct. 1990, Executive Order 12777 Oct. 1991), and 19 (NCP revisions Sept. 1994).

⁷⁶ Supra, note 15, CRS RL33705, 2023, *Oil Spill Governance*.

⁷⁷ Ibid., at 12.

⁷⁸ Ibid., at 13.

⁷⁹ Ibid., at 23.

⁸⁰ 33 USC § 2732(a)(2)(B), (C), (G), and (H).

as demonstration programs in Alaska⁸¹ with the stated intent that “similar programs should eventually be established in other major crude oil terminals in the United States because the recent oil spills in Texas, Delaware, and Rhode Island indicate that the safe transportation of crude oil is a national problem.”⁸²

Area Committees were composed mostly of local and state agencies and others, and they were the political branch of the network, tasked with developing the Area C-Plan.⁸³ RCACs were the science and technical support for the Area Committees, and they tasked with conducting the research, environmental monitoring, and contingency plan reviews needed to demonstrate safe environmental practices.⁸⁴ RCACs would generate quality area-specific information for the Area Committees to make informed decisions in developing and updating the Area C-Plans. RCACs were meant to counter government-industry complacency and reduce controversy by involving local citizens in the process of preparing, adopting, and reviewing oil spill contingency plans.

Congress was serious about RCACs: It tied the annual funding for the Alaska programs to approval of contingency plans required of owners and operators in Cook Inlet and Prince William Sound—the regions where the RCACs were established.⁸⁵ In other words, if plan holders fail to fund RCACs, the government cannot approve their contingency plans—Or oil activities. Clearly Congress considered RCACs as key components of local community networks along with Area Committees, even though Congress did not provide a funding mechanism for Area Committees, and it left the establishment of RCACs in other areas of the country up to future Congresses.⁸⁶

Consequently, even though citizens, local government, and state government are now recognized as key partners⁸⁷ in preparing and responding to disasters⁸⁸ including oil spills under the National

⁸¹ 33 USC § 2732(b). RCACs were established in Prince William Sound and Cook Inlet, Alaska.

⁸² 33 USC § 2732(a)(2)(J).

⁸³ 33 USC § 1321(j)(4)(B)(i).

⁸⁴ 33 USC § 2732(d)(6).

⁸⁵ 33 USC §2732(k). OPA required funding for each RCAC to be provided by owners and operators of oil facilities and tankers: “Approval of the contingency plans required of owners and operators of the Cook Inlet and Prince William Sound terminal facilities and crude oil tankers while operating in Alaskan waters in commerce with those terminal facilities shall be effective only so long as the respective Association and Council for a facility are funded...”.

⁸⁶ 33 USC § 2732(a)(2)(J). “Similar programs should eventually be established in other major crude oil terminals in the United States because... the safe transportation of crude oil is a national problem.”

⁸⁷ *Supra*, note 69, FEMA, 2008, *Introducing... NRF*, at 2. E.g., “The Framework defines the key principles, roles, and structures that organize the way we respond as a Nation. It describes how communities, tribes, States, the Federal Government, and private-sector and nongovernmental partners apply these principles for a coordinated, effective national response.”

⁸⁸ FEMA, 2023. *National Preparedness Report*, at 47. E.g., *Building Resilient Infrastructure and Communities* supports state, local, tribal, and territorial governments as they undertake hazard mitigation projects, limiting risks faced from disasters and natural hazards. https://www.fema.gov/sites/default/files/documents/fema_2023-npr.pdf

Preparedness System,⁸⁹ Area Committees were not implemented as intended under OPA, and RCACs were not established by future Congresses. Under the National Preparedness System, if first-level preparation and capability-based activities by citizens and communities are compromised, then response throughout the system is compromised. This is a breach of national preparedness that requires immediate government action.

Area Committees & national preparedness

OPA established Area Committees as autonomous entities distinct from Federal On-Scene Coordinators (FOSCs), Coast Guard strike teams, and Coast Guard District Response Groups.⁹⁰ Area Committees were to be the core of planning and preparation for oil spill response for state and local governments,⁹¹ tasked with developing geographic-specific Area C-Plans under the direction of FOSCs. State and local response planners under the NCP were also to coordinate preparation and response efforts with the parallel system of emergency response under SARA and EPCRA—the State (or Tribal) Emergency Response Commissions (SERCs or TERCs)⁹² and the Local (or Tribal) Emergency Planning Committees (LEPCs or TEPCs). The latter were tasked with developing SARA Title III local emergency response plans.⁹³ OPA required that activities of various entities must be coordinated to provide for effective, efficient, and coordinated response.⁹⁴ This is consistent with subsequent law and policy.⁹⁵

However, instead of creating Area Committees as autonomous entities, the EPA consolidated regional and area contingency plans under Regional Response Teams. The move subsumed the

⁸⁹ Ibid., at 31, which highlights the role of citizen science.

⁹⁰ 33 U.S.C. § 1321(d)(2)(L). These other entities were tasked to support the Area Committees. For example, FOSCs were tasked with providing direction to Area Committees. 33 U.S.C. § 1321(j)(4)(B). The Coast Guard National Response Unit was tasked with providing certain information to the Area Committees and technical assistance as needed, among other things. 33 U.S.C. § 1321(j)(2)(A), (D), (F), and (G). Coast Guard District Response Groups were tasked with providing technical assistance in the preparation of Area C-Plans and reviewing the plans. 33 U.S.C. § 1321(d)(3)(C)(iv) and (d)(4)(A)(i) and (ii).

⁹¹ 40 CFR § 300.205(c) Area, (d) State, and (e) Local.

⁹² EPA, 2020. Guide to the Emergency Planning and Community Right-to-Know Act, updated fall 2020, at 1. https://www.epa.gov/sites/default/files/2020-10/documents/guide_to_epcra.pdf

⁹³ 40 CFR § 300.205(e). Local.

⁹⁴ 33 U.S.C. § 1321(d)(2) and 40 CFR § 300.210(b) Regional C-Plans and (c) Area C-Plans. See also Figure 4 Relationship of Plans, § 300.205.

⁹⁵ For example, the Post-Katrina Emergency Management Reform Act of 2006 (PKEMRA; P.L. 109-295), required the President to develop a national preparedness goal, as well as a system for achieving that goal. Supra, note 68, CRS R46696, *National Preparedness*, 2021, at 1. Presidential Policy Directive 8 directed each national planning framework to include guidance to support corresponding planning for state, local, tribal, and territorial governments. Supra, note 70, PPD-8, 2011, at 3. The NCP is consistent with and can be invoked under the National Response Framework although in practice it rarely is as the NRF is a broader administrative mechanism for coordinating the array of federal emergency response plans, not an operational plan like the NCP that dictates a step-by-step process. Supra, note 13, CRS R43251, 2017, NRF, at summary.

primary function of Area Committees, i.e., developing Area C-Plans, under the control of the FOSC and regional planners.⁹⁶ This is not what Congress intended, as it failed to build out first-level local/state capabilities for oil spill response, which created a critical gap in national preparedness. Under OPA, Congress established Area Committees “under the direction of the FOSCs” (EPA or the Coast Guard)⁹⁷ to see that Area C-Plans get done and provide for an effective, efficient, and coordinated response that can be done safely.

Under the control of regional planners, Area C-Plans included “preauthorization plans”⁹⁸ that gave nearly carte blanche authority to the OSC (federal or state) during an oil spill response to decide what dispersants to use and where without first demonstrating what quantity of the products *can* be used safely as part of the planning process. Skipping this crucial intentional step was not what Congress intended,⁹⁹ as OPA had specifically established Area Committees and pilot Regional Citizens’ Advisory Councils to *evolve* a process of preparing, adopting, and reviewing Area C-Plans that involved local people. Yet now all coastal states have preauthorization plans for dispersant use—and such use remains controversial, as discussed in the case study below.

Congress did not correct this initial agency overreach. Thirty years later, in its final rules, EPA sought to shift power back to local and state governments by requiring Area Committees and RRTs to address as part of their planning activities whether preauthorization of dispersants (or other products) is appropriate¹⁰⁰ and, if so, then to develop preauthorization plans through, or in consultation with, Area Committees.¹⁰¹

However, another agency—the US Coast Guard—is now trying to take over Area Committees to institutionalize top-down control in the local planning processes, which will have predictably disastrous results, as demonstrated in the following case study.

⁹⁶ EPA Office of Inspector General, 2013. EPA Could Improve Contingency Planning for Oil and Hazardous Substance Response. Report No. 13-P-0152. 2/15/2013. “EPA’s contingency planning structure has exceeded the three levels of plans established by the OPA and outlined by the NCP. Regions 5, 6, 8, 10, and Alaska have each taken a different approach to planning. All have one plan that generally serves as a guidance document, typically the RCP-ACP for the region. One regional response manager described the RCP-ACP as “overarching guidance,” and another described it as seen at “the 70,000-foot level. Four out of the five regions in our review also have lower-level operational plans in the form of subarea contingency plans or geographic response plans,” at 6-7.

⁹⁷ 33 U.S.C. § 1321(d)(4)(B).

⁹⁸ Congress had incentivized use of dispersants under the CWA by requiring an expedited decision-making process for this product, although it did not require actual use. 33 U.S.C. § 1321(j)(4)(B)(iii) and (4)(C)(v). OPA implemented the mandate as “preauthorization plans” in several sections, e.g., 300.910(a).

⁹⁹ OPA Sec. 5002(a)(2) Findings.

¹⁰⁰ § 300.910(a). “Area Committees and RRTs shall, as appropriate, include applicable approved preauthorization plans in ACPs and RCPs.”

¹⁰¹ § 300.910(a)(1). “Preauthorization plans are to be developed by Area Committees or the RRT in consultation with the Area Committee(s).”

Case study

During the BP Deepwater Horizon disaster response, it quickly became evident that the “Area Contingency Plan” was that in name only, as it lacked the buy-in and support from state and local governments. In developing the so-called Area C-Plan, the Coast Guard had misconstrued the concept of “under the direction of” with “*under the control of*” the FOSC.¹⁰² Under the Coast Guard’s interpretation, relevant state agencies had participated in Unified Command response operations and in pre-spill planning activities with the Regional Response Team¹⁰³ *as figureheads with no real decision-making ability*.¹⁰⁴ Area C-Plans that devolved to sector C-plans were arguably a rubber-stamp process for whatever the Coast Guard (and plan holders) wanted to do.

In this case, it was to request unrestricted use of unlimited quantities of dispersants, daily, in areas and in ways that had not been anticipated in the so-called Area C-Plan.¹⁰⁵ Not surprisingly, the unintended uses proved very controversial amongst the public and states—and were even questioned by EPA. When there was pushback from Louisiana officials, the matter quickly turned oppressive.¹⁰⁶

Frustrated by federal control that ignored state and local concerns, governors of Louisiana, Mississippi, and Alabama rejected the pre-spill plans, in what FOSC Admiral Thad Allen later called “the social and political nullification” of the NCP.¹⁰⁷ When other state and local officials who were not career oil-spill responders became involved, the states created their own competing response structures and conducted separate response actions outside the Unified Command

¹⁰² For example, the statement, “each Coast Guard sector is an “Area” with an Area Contingency Plan created by relevant state and federal agencies,” is true only if the process is under the direction of, not the control of, the relevant FOSC, meaning that state and local government participants have decision-making authority on behalf of those they represent. *Supra*, note 21, National Commission, 2011, *Deep Water*, at 139.

¹⁰³ *Ibid.*, at 138. “At the outset of the spill, the pre-designated State On-Scene Coordinators for Louisiana, Alabama, and Mississippi participated in Unified Command. These individuals were career oil-spill responders: familiar with the National Contingency Plan, experienced in responding to spills, and accustomed to working with the Coast Guard...”

¹⁰⁴ *Ibid.*, at 268. “The response to the *Deepwater Horizon* disaster showed that state and local elected officials had not been adequately involved in oil spill contingency planning, though career responders in state government had participated extensively in such planning. Before the Deepwater Horizon spill, state and local elected officials were not regular participants in Area Committee meetings or familiar with local Area Contingency Plans. The Coast Guard and Area Committee member agencies had done little to reach out to state and local elected officials...”

¹⁰⁵ Atypical use of dispersants was first authorized in EPA’s final action, effective Dec. 11, 2023.

¹⁰⁶ State of Louisiana, Dept. of Health and Hospitals. 2010. LETTER from Levine A, Secy, LA Dept Health & Hospitals, Hatch P, Secy LA Dept Environmental Quality, Barham R, Secy LA Dept Wildlife & Fisheries, to Rainey DI, VP, Gulf of Mexico Exploration, BP America, Inc. Re: Response to inquiry about unprecedented use of subsea dispersants. May 13, 2010. https://alertproject.org/wp-content/uploads/2024/01/2010-LA_BP-LTR.pdf

¹⁰⁷ National Commission, 2011, *Deep Water*, at 139.

framework.¹⁰⁸ This “undercut the efficiency of the response overall.”¹⁰⁹ Properly structured and functioning Area Committees could have circumvented all of this.

To recap, first-level planning and response is about local control and decision-making. It is about federal agencies *coordinating* efforts to develop Area C-Plans with first-level planners, not offering token participation on second-level Regional Response Teams without local-level planning and support. Properly structured and fully functional Area Committees are integral to oil spill response, which means they are integral to national preparedness. When Area Committees are dysfunctional, response is dysfunctional.

Area Committees are not just a name. They are complex, integrated structures that include state and local governments that have decision-making authority on behalf of their constituents—the citizens, communities, and states. Without meaningful participation of these entities, and coordination with them, the Coast Guard cannot fulfill its obligation to protect public health and welfare¹¹⁰ This is the jurisdiction of state and local governments.

In practice this means that the current attempt by the Coast Guard to take over Area Committees¹¹¹ is misdirected, as the “sector C-plans” that result from such top-down control are not robust, and they are a demonstrated threat to national preparedness. It means that this maneuver must be redirected with the Coast Guard supporting and guiding local efforts. Also, it means that state and local involvement in Area Committees and the implementation of Area C-Plans should be considered mandatory¹¹² and funded through the Oil Spill Liability Trust Fund, which could be broadened to include the preparation and planning for oil spills that are critical for an efficient, effective, and coordinated response.¹¹³ Area Committees could also be funded through the National Preparedness System to build critical infrastructure: community and state capabilities and capacities for oil spill response.¹¹⁴

¹⁰⁸ *Ibid.*, at 138-139.

¹⁰⁹ *Ibid.*, at 268.

¹¹⁰ *Supra*, note 21, National Commission, 2011, *Deep Water*, at 193, re: The Commission’s finding that during the BP Deepwater Horizon response, industry and government responders failed to adequately anticipate or address the magnitude of potential health impacts. This is addressed in Part III.

¹¹¹ *Supra*, note 66, U.S. Coast Guard, Commandant Instruction M1600014A, Sept. 26, 2018, and Sixkiller Memo, 2023.

¹¹² NCP regulations currently “encourage” state and local government agencies to include contingency planning for responses, consistent with the NCP, RCP, and ACP in all emergency and disaster planning. 40 CFR § 300.180(c).

¹¹³ CRS IF11160, 2019. The Oil Spill Liability Trust Fund Tax: Background and Reauthorization Issues in the 116th Congress, coordinated by JL Ramseur, April 3, 2019.

¹¹⁴ *Supra*, note 88, FEMA, 2023, *National Preparedness Report*, at 2. “States, local governments, tribes, and territories can leverage federal funding—including \$1.2 trillion through the Infrastructure Investment and Jobs Act and \$1.16 billion through FEMA’s Building Resilient Infrastructure and Communities, and Flood Mitigation Assistance programs—to build climate change resilience at the local level.”

Regional Citizens' Advisory Councils (RCACs) & national preparedness

After the BP Deepwater Horizon oil disaster, it was revealed that wildlife identified in BP's Oil Spill Response Plan for the *Gulf of Mexico* ecosystem had largely been copied and pasted from material on NOAA websites on the *Gulf of Alaska* ecosystem without any changes for applicability. As a result, BP's plan "described biological resources nonexistent in the Gulf—including sea lions, sea otters, and walruses"¹¹⁵ and seals, all species that never see Gulf of Mexico waters.¹¹⁶ This unfortunate practice was not an aberration as it was also quickly discovered that Chevron, ConocoPhillips, ExxonMobil, Shell, and other companies operating in the Gulf of Mexico had repeated the same mistake of listing sea lions, sea otters, and walruses in their oil spill contingency plans.¹¹⁷

The National Commission described this reveal as "inescapable... striking, and profoundly unsettling." None of the responsible federal agencies had reviewed the plan with sufficient attention to detail to catch the marine mammal faux pas or any of the other numerous inadequacies that all contributed to faulty preparation and a chaotic response. "These response plans were not distributed to any federal agencies for review and comment outside of MMS... no provision was made for any form of public review or comment..."¹¹⁸

To remedy this, the Commission recommended that "EPA and the Coast Guard should bolster state and local involvement in oil spill contingency planning and training and create a mechanism for local involvement in spill planning and response similar to the Regional Citizens' Advisory Councils mandated by the Oil Pollution Act of 1990."¹¹⁹ Note that bolstering involvement and creating a mechanism are separate, interrelated actions.

There is precedent for a national network of RCACs. Under the NCP, EPA created Community Advisory Groups¹²⁰ by region for chemical releases and Superfund sites.¹²¹ EPA may have the statutory authority under OPA to create a parallel structure of RCACs for oil spills as this is the critical link for the EPA to fulfill its duty under the CWA to demonstrate that products *can be used safely* in waters of intended use.

¹¹⁵ Supra, note 21, National Commission, 2011, *Deep Water*, at 84.

¹¹⁶ Ibid., at 133.

¹¹⁷ Ibid., at 84. The contractor who prepared BP's plan for the Macondo well also prepared similar plans for other owners and operators.

¹¹⁸ Ibid., at 266.

¹¹⁹ Ibid., at 268. See recommendation C:3.

¹²⁰ U.S. EPA. Superfund Community Advisory Groups. <https://www.epa.gov/superfund/superfund-community-advisory-groups> Last updated Nov. 7, 2023.

¹²¹ U.S. EPA. What are Community Advisory Groups? The Superfund Amendments and Reauthorization Act (SARA) <https://www.epa.gov/superfund/where-are-community-advisory-groups> Last updated Oct. 30, 2023.

Both types of community networks were intended to complement and enhance effective governmental oversight, not substitute for it, and both types are effective because people rely on and care about the local ecosystems that support their economy, health, and way of living. For example, RCACs established in Alaska (by OPA), Maine, and California to advise on environmental management of the marine oil trade or other resource-extractive industries have demonstrated that citizens can make important contributions to the policy process, industry safety, and environmental safeguards.¹²²

Concerned citizens have tried to establish RCACs after major oil spills. For example, there were concerted, creative efforts by residents in several states in the western Great Lakes region to use settlement funds from the 2010 Enbridge tar-sands oil spill into the Kalamazoo River in Michigan to support a Lake Michigan RCAC and an Upper Mississippi RCAC. Residents also proposed using settlement funds from 2013 BP Whiting refinery tar-sands oil spill into Lake Michigan to support a Lake Michigan RCAC.¹²³ Oil-impacted Gulf Coast residents successfully urged the National Commission on the Deepwater Horizon oil disaster to recommend establishing an RCAC for the Gulf of Mexico, as noted previously.¹²⁴ None of these were established despite a proven need and available funds.

The need is still present—and becoming more urgent as the oil industry pushes into deeper waters offshore and Arctic waters where dispersants are demonstrably less effective.¹²⁵ The need is even more pressing where unconventional oil is concerned. EPA’s final rules encourage local, state, and regional planners to address unconventional oil when developing preauthorization plans and to address area-specific concerns by gathering additional information to make informed choices.¹²⁶

¹²² Steiner R, Citizens’ Advisory Councils to enhance civil society oversight of resource industries. United Nations Environment Program, June 2013, *Perspectives* 10. https://8a1c58ac-086b-43cb-9cbc-bdf64c639c37.filesusr.com/ugd/92a90d_b9082c9bece64d3e8fc83edb23c6dcf5.pdf

¹²³ ALERT, 2016a. Coalition public comments in response to US DOJ Environment and Natural Resources Division’s Notice of Lodging of Proposed Consent Decree Under the Clean Water Act and the Oil Pollution Act in the lawsuit entitled *United States v. Enbridge Energy, Limited Partnership, et al.*, D.J. Ref. No. 90-5-1-1-10099, 1:16-cv-00914 ECF No. 1 (Complaint), 1:16-cv-00914 ECF No. 3 (Consent). August 24, 2016. https://secureservercdn.net/45.40.150.47/k43.4d3.myftpupload.com/wp-content/uploads/2016/07/CAFO_0015jointOS4-FINAL.pdf

ALERT, 2016b. Coalition public comments in response to US EPA Region 5 Docket No. CWA 05–2016–0015 BP Products North America, Inc., the proposed Consent Agreement and Final Order between U.S. EPA Region 5 and BP Products North America, Inc. July 12, 2016. https://secureservercdn.net/45.40.150.47/k43.4d3.myftpupload.com/wp-content/uploads/2016/07/CAFO_0015jointOS4-FINAL.pdf

¹²⁴ *Supra*, note 21, National Commission, 2011, *Deep Water*, at 268. <https://www.govinfo.gov/content/pkg/GPO-OILCOMMISSION/pdf/GPO-OILCOMMISSION.pdf>

¹²⁵ *Supra*, note 32, Fingas and Ka’ahue, 2005. A literature review.

¹²⁶ “The provisions under § 300.910(a)(1) provide RRTs with the flexibility to tailor the scope of the preauthorization plan to account for different types of oil, including unconventional oils. In addition, § 300.910(g) provides for, among other provisions, the supplementary efficacy testing to provide greater flexibility to tailor testing conditions to address

This is not very reassuring for states that lack the funds, expertise, and/or political will to deal with this additional workload. Regulation of transportation of materials carried by tankers, trains, pipelines, and trucks comes under federal jurisdiction when materials crosses state lines. This may be another “all-of-Nation” issue, commanding everyone’s participation to determine how unconventional oil can be transported safely, if at all.

As for the OPA template, annual funding for the RCACs should still be required by owners and operators of oil facilities and tankers in each region of operation and tied to approval of contingency plans required of owners and operators.¹²⁷ The annual funding should be increased to account for inflation since 1990.¹²⁸ Further, while the area-specific testing authorized under EPA’s final rules falls under the environmental monitoring requirement,¹²⁹ the required scope of work should be expanded to include human health monitoring as part of community-and state-directed plans.¹³⁰ Finally, local and state government representatives should have non-voting seats like the federal and industry members, as the former entities are well-represented in Area Committees and the latter in regional and national response teams, respectively.

Other potential funding sources include the Oil Spill Liability Trust Fund for scientific and technical research¹³¹ and the National Preparedness System for Area Committees to build community and state capabilities and capacities.¹³²

Summary

In summary, we find that the authorizing statutes in OPA established a three-level framework that distributed the responsibility (power/authority) of decision-making across all three levels and among oil spill planners and responders. This specifically included state and local governments in decision-making capacities regarding product use (Area Committees), and regional citizens’ advisory councils in research, review, and environmental monitoring capacities to support informed area-and region-specific choices.

The 1994 authorization of use regulations implemented the law as intended *on paper but not in practice*. The primary function of Area Committees (a first-level entity), i.e., preparing area-

area-and site-specific concerns relative to the use of a product for planning and authorization of use. This provision provides RRTs with the flexibility to gather additional information for different types of oil, including unconventional oils.” Supra, note 1, EPA, 2023, Final rules, at 38310.

¹²⁷ 33 USC §2732(k)(1).

¹²⁸ 33 USC §2732(k)(2). E.g., \$2 million in 1990 is about \$5 million in today’s dollars.

¹²⁹ 33 USC §2732(e)(2)(C).

¹³⁰ Regional Response Team 10/Northwest Area Committee (RRT 10/NWAC), 2024. Report of the 2023 Health & Safety Task Force. <https://www.rtt10nwac.com/>

¹³¹ Supra, note 112, CRS Report IF11160, 2019, *OSLTF Tax*.

¹³² Supra, note 88, FEMA, 2023, *National Preparedness Report*, at 2.

specific Area C-Plans, was subsumed by regional planners within RRTs (a second-level entity). This disempowered local and state authorities, more so in some states than others, as determined by whether state and local governments were actively involved with RRTs or served as token figureheads. Those with active involvement of local level planners have the functional equivalent of Area C-Plans; those without, have sector c-plans that lack state support and may result in a dysfunctional response when needed such as during a major spill, as revealed in the case study.

In the latter case, the RRT *planners* largely defaulted on the legal duty to determine if products could be used safely in waters of intended use, in part, because of lack of quality information (local knowledge and technical material) to make informed choices. The lead OSC *responders* were then left with the responsibility to decide what products to use, based on preauthorization plans that allowed use of any product listed on the NCP Product Schedule—and a lot of pressure from plan holders to use Corexit dispersants. This shift to *responders* as primary decision-makers also skewed the power distribution, further disempowering state and local authorities and opening a wide door for abuse of agency discretion.

EPA's current standards seek to restore the power distribution established in law in order to fulfill its duty under the CWA. This is discussed next in the policy analysis.

DO THE CURRENT STANDARDS DETERMINE IF PRODUCTS CAN BE USED SAFELY?

Our focus remains on whether EPA's final action fulfills its mandatory duty to determine which products, if any, *can be used safely* in the waters and with the oils of intended use. It is EPA's responsibility to implement necessary actions to fulfill this duty. It is Congress's responsibility to oversee EPA and ensure that the agency fulfills its duty.

EPA plans to rely on cooperation with states to do the area-and ecosystem-specific testing necessary to fulfill this duty, but it has entrusted states with this duty in the past unsuccessfully. The new rules take us down the same path because the responsibility to decide what products to use, if any, during oil spill response—rightfully and reasonably—lies with the local and state governments and the people who will live with or die from the consequences of their decisions.

Will the revisions lead us to the desired outcome this time (30+ years later)? If not, why not? What else is needed?

EPA seeks to strengthen state and local involvement by restoring the power distribution through three means, including:

- clarifying the authority of and empowering state and local governments and Area Committees;
- curbing abuse of agency discretion; and

- shifting the burden of responsibility (liability) to product manufacturers and industry plan holders.

The current standards are discussed in these groupings below and are summarized IN BRIEF and presented in Table 2. The numbers below are cross-referenced to this table for authorization of use (AU) rules that empower state and local governments and rules that shift the burden of liability (BL) for product use—or that fail to do so—directly to product manufacturers (“manufacturers”) and owners and operators who hold contingency plans for offshore oil activities (“plan holders”) or indirectly by curbing abuse (boundary creep) of agency discretion.

Empowering state involvement in areas with a preauthorization plan

AU-5. In this current standard,¹³³ there is a new stated emphasis, up front, on the role of Area Committee *planners* to address whether preauthorization is appropriate to include in Area C-Plans. Since preauthorization is needed for dispersant use, this rule, in effect, challenges Area Committees (specifically, local and state governments) to step up and rethink dispersant use, based on the new and relevant science finding that chemically-dispersed oil is more harmful to humans and wildlife than crude oil alone. The current standards provide grounds for product removal if such information is not considered or is in any way inaccurate, misleading, etc. (BL-5 and BL-4, respectively).

AU-6. The new restriction¹³⁴ on OSC *responders* limits use of pre-authorized products “for the purpose for which they were specifically listed.” Since manufacturers and plan holders are now required to provide such information (BL-1, BL-9), Area Committees and regional planners can make informed choices about the waters where products may be used. (For example, dispersants cannot be used as surface washing agents and vice versa.)

This rule redistributes power by shifting emphasis to Area Committees and RRT *planners’* preferences in authorizing use. In effect, it curbs agency abuse of discretion, such as the former power of OSC *responders* under the outdated rules to make discretionary calls to allow use of products for purposes that were not specified in the preauthorization plan, such as subsea dispersant use and prolonged use of unlimited quantities at depth and on the sea surface.

AU-7. This current standard¹³⁵ requires *planners* (Area Committees and RRTs) to address new information about restrictions on use (like limits for the quantities and duration of use) and parameters of use (like water depth, distance to shoreline, and proximity to populated areas), as part of rethinking dispersant use.

¹³³ § 300.910(a).

¹³⁴ *Ibid.*

¹³⁵ § 300.910(a)(1).

AU-8. This rule¹³⁶ also emphasizes the role of state and local *planners*, as part of Area Committees, in *developing* preauthorization plans, meaning to take an active role in deciding what products to authorize for use, if any. In effect, the rule is aimed at building the capacity and capabilities of these first-level local planners, as distinct from second-level planners in RRTs, as intended by OPA.

AU-9. This rule¹³⁷ adds a new tool to deal with preauthorization plans that have been withdrawn (disapproved) by specified level-two regional *planners*, including RRT representatives from states. It authorizes and requires local, state, and regional *planners, as part of Area Committees* and RRTs, to address the withdrawal of approval in a timely manner (within 30 days).

In effect, this rule provides *planners* with a control on product use. For example, if pre-authorized products do not perform as intended, or if products are authorized for use in ways not specified in the plans, or if plans were not developed by Area Committees, then this rule provides a tool for second-level planners to stop use and regroup with first-level planners.

AU-10. This rule¹³⁸ adds a new mandatory responsibility, i.e., the duty to review and revise, as needed, an approved preauthorization plan on a “regular timeframe”—or after triggering events like lessons learned after a major oil spill or revisions to the Product Schedule or the new listings of threatened and/or endangered species.

For example, mandatory reviews of preauthorization plans should also be triggered *now* to apply the new rules that are in effect to conditionally-listed products to determine what products, if any, can be used safely in waters and with oils of intended use—and to consider adopting precautionary guidelines during the transition period, as discussed in Part III. Failure to do either of these things sets up the potential for use of the same toxic Corexit products—and a repeat of the long-term harm to humans and wildlife that occurred after the BP Deepwater Horizon oil disaster.

AU-11. Further, this new rule¹³⁹ also authorizes and requires second-level RRT *planners*, including the RRT representatives from the states, to review, approve with modification, or disapprove any revisions to these plans. In effect, this rule provides another control for product use. Plans can now be updated based on the latest science, technology, law, and lessons learned from an oil spill rather than having to wait 30 years or longer for rule changes at the federal level (as was the case with these rules).

¹³⁶ *Ibid.*

¹³⁷ § 300.910(a)(2).

¹³⁸ § 300.910(a)(3).

¹³⁹ *Ibid.*

Curbs abuse of agency discretion

The next set of rules, with one exception, further empower the *planners* by restricting the power of OSC *responders* to decide what, where, and how much product to use by holding the responders accountable to the planners. These rules (except one) also empower the *planners* by requiring product manufacturers and industry plan holders to provide specific information about product use, with which they can be held accountable.

BL-6, BL-7. These rules¹⁴⁰ concern spill responses that are not addressed by a preauthorization plan. Instead of a blank slate for response options, like under the outdated rules, the current standards limit the OSC *responder* to using listed products for the specific purposes for which they were listed (BL-6), consistent with AU-6. Also, the OSC must *document* in the authorization request to the RRT the justification for product use, considering specified information and product use limitations (BL-7), consistent with AU-7.

These rules hold the OSC accountable to RRT *planners*, including state members, which is novel. In effect, the rules curb abuse of agency discretion, such as the former power of OSC *responders* under the outdated rules to make discretionary calls to allow experimental use of products, as with subsea dispersant use and prolonged use of unlimited quantities at depth and on the sea surface.

BL-8, BL-9. These rules¹⁴¹ restrict use of a temporary exemption intended to prevent or substantially reduce an imminent threat to human life that was so broadly written under the outdated rules that it undermined all planning efforts—and worker safety and health.

The new rules restrict use of the exemption to the above circumstances but only when they cannot be *immediately addressed* under the NCP (BL-8). This prevents use of the exemption for the duration of a “temporary” response that is intended to mitigate harm from the spill. In fact, these new rules specifically state that the exemption shall not be used as a substitute for compliance with worker health and safety rules (BL-8).

Further, these rules (BL-9) require the OSC to document the circumstances and reasons for use of the exemption—and limit use to no more than 24 hours with mandatory compliance with other rules (AU-5 to AU-11, BL-5, BL-6) after that. These rules hold the OSC accountable to the RRT *planners*, including state members.

¹⁴⁰ § 300.910(b).

¹⁴¹ § 300.910(d).

BL-11. In essence, this new rule¹⁴² prohibits use of a product past its expiration date or stored under conditions other than those specified by the manufacturer unless the product is retested, and it still meets the listing requirements of the screening tests based on testing within the 12 months before the requested use.

While this rule prevents dumping of outdated products and products of uncertain quality due to improper storage conditions under the cover of an oil spill response, it is silent on how to dispose of conditionally-listed products that are not relisted by December 12, 2025 (see precautionary guideline P-3).

BL-15. This new rule¹⁴³ requires the OSC to provide updated information to the public, including during a response, on what products are used (type and name), where, when, and in what quantity *and concentration*.

During the BP Deepwater Horizon oil disaster, separate records were kept for dispersant use in federal waters and state waters. The OSC ordered records of dispersant use in state waters to be removed from daily reports¹⁴⁴—despite the public’s concern and need to know to make informed choices in areas where people lived, worked, and recreated. The total volume of dispersants applied in coastal waters during the BP Deepwater Horizon is still not accounted for. Neither is the duration of use. Photo-documentation by residents show that dispersant spraying in coastal waters occurred near Pass Christian, Mississippi, on August 21, 2010, five weeks after aerial spraying stopped in federal waters offshore.¹⁴⁵ The official reports did not include use in state waters.

Location, quantity, and duration of use are critical information that must be communicated to the public to support worker and public health assessments, relevant medical treatment to mitigate long-term harm, and informed choices to minimize exposure, as this new rule now requires.

¹⁴² § 300.910(f).

¹⁴³ § 300.910(i).

¹⁴⁴ National Archives and Records Administration (NARA), Ft. Worth, FOSC Documents, USCG Phase V, Admiral Nash Documents, Dispersants. 7/3/2010 email from EPA Mathy Stanislaus to RDML James Watson and others. Subject: Follow Up to Yesterday’s meeting, at 37–38 (reports of dispersant use was removed from daily reports). <https://alertproject.org/wp-content/uploads/2023/02/NARA-FOSC-coastal-disp-use-7.3.2010.pdf>

¹⁴⁵ Ott R, 2018. Photo-documentation supplement to written evidence on behalf of intervenor North Shore No Pipeline Expansion (NSNOPE). Hearing Order OH-001-2014 Trans Mountain Pipeline ULC (Trans Mountain) Application for the Trans Mountain Expansion Project. City of Vancouver, BC. Written evidence. <https://www.congress.gov/116/meeting/house/109117/documents/HHRG-116-IF18-20190313-SD021.pdf> Photo-documentation supplement, at 5. <https://www.congress.gov/116/meeting/house/109117/documents/HHRG-116-IF18-20190313-SD022.pdf>

Shifts burden of liability

BL-10. Instead of increasing accountability by curbing abuse or shifting the burden of liability to the manufacturers and/or plan holders, this rule protects the latter by allowing products that *indirectly* sink oil. The rule only prohibits products that “*directly*” sink oil “to the bottom of a water body.”¹⁴⁶ This does not include dispersants, which *indirectly* act to sink oil by increasing the presence of microdroplets in the water column (the water mass under the sea surface), which interact with bacteria, minerals, and organic material, causing the oil to sink.¹⁴⁷ Up to 20 percent of the BP Deepwater Horizon oil disaster may have sunk through such dispersant-mediated interactions.¹⁴⁸

Dispersants also do not meet the definition of “sinking agents,” as dispersants are *not* introduced into an oil discharge for the express purpose of “submerging the oil to the bottom of a water body.”¹⁴⁹ So, in effect, this rule only extends the delusion that sinking agents are prohibited, while still allowing use of products that the rule professes to prohibit. It is left up to Area Committees and RRTs to decide whether they want to tolerate this charade (see precautionary guideline P-9).

BL-12. This rule breathes new life into an old rule that was underutilized. The rule¹⁵⁰ now authorizes second-level RRT planners *and responders* to use supplemental toxicity and efficacy testing to specifically address area-and ecosystem-specific concerns, regarding product use. The rule further requires the product manufacturer or plan holder to provide additional monitoring or testing data upon request of the RRT or OSC.

This rule, combined with the public disclosure rule (BL-3) and the truth-in-reporting rules (BL-4, BL-5), provides the tools for regional and area planners and responders to obtain information to determine whether a product can be used safely in waters of intended use.

¹⁴⁶ § 300.910(e)(1). “The OSC may not authorize the use of... sinking agents... or any substance that is used to directly sink the oil to the bottom of a water body.”

¹⁴⁷ “Formation of marine snow, and resulting sedimentation, is greatly enhanced by dispersants, which increase the formation of microdroplets in the water column ... with efficiency by up to 80%–100%...” Chiu, M.-H., Vazquez, C.I., Shiu, R.-F., et al. 2019. Impact of exposure of crude oil and dispersant [Corexit] on aggregation of extracellular polymeric substances, *Sci of the Total Environ*, 657, 1535-1542. <https://doi.org/10.1016/j.scitotenv.2018.12.147>

“Up to 20% of the oil spilled as a result of the Deepwater Horizon explosion in the Gulf of Mexico in 2010 was deposited as degraded oil compounds on the seafloor,” at 1. “... sinking marine oil snow and oil-sediment aggregations during the Deepwater Horizon contributed appreciably to the unexpected, and exceptional, accumulation of oil on the seafloor...” Francis S, Passow U, 2020. Transport of dispersed oil compounds to the seafloor by sinking phytoplankton aggregates: A modeling study. *Deep Sea Res Part 1 Oceanographic Res Papers* 156(18):103192. [doi:10.1016/j.dsr.2019.103192](https://doi.org/10.1016/j.dsr.2019.103192)

¹⁴⁹ § 300.5 Definitions. “Sinking agents are substances introduced into an oil discharge for the purpose of submerging the oil to the bottom of a water body.”

¹⁵⁰ § 300.910(g).

This rule holds the manufacturers and plan holders accountable for information and data provided to the RRTs, the RRTs accountable for choices regarding product use to the EPA, and the EPA accountable for fulfilling its duty to Congress and the public under the CWA. Preauthorization plans that lack such information for conditionally-listed products need to be withdrawn until such information is available, reviewed, and considered (see AU-9 and precautionary guideline P-8).

BL-13, BL-14. These new rules¹⁵¹ concern recovery of certain chemical products and substances (sorbents) from the environment after use—and their containment, collection, storage, and disposal (BL-13). While dispersants are not meant to be recovered—and in fact make recovery of spilled oil more difficult—disposable materials that become contaminated with chemically-dispersed oil are recoverable and they are hazardous wastes, yet they are currently classified as *exempt* hazardous waste from offshore oil and gas exploration and production.¹⁵²

This is how, for example, hazardous waste wound up in nine municipal landfills in Gulf Coast communities during the BP Deepwater Horizon disaster, which created a public uproar not only because of the hazardous nature of the materials, but also because the landfills were in predominately people-of-color communities.¹⁵³

The rule goes on to recommend that the OSC “should, at a minimum,” consider safety of response workers and harm to the environment in determining, basically, how aggressively to pursue recovery to do no more harm. While this rule is not meant to deal with disposal of oiled debris per se, it does flag the importance of dealing with this and other recovered products and substances as part of *planning* and development of Area C-Plans and RCPs (BL-14), as well as the issue of “how clean is clean?”

What pertains here is that the NCP allows Area Committees and RRTs to identify disposal options available during a response and describe what disposal requirements are mandatory and may not be waived by the OSC.¹⁵⁴ Precautionary guideline P-12 recommends that oil spill waste generated by offshore oil and gas exploration and production be managed as non-exempt mixed hazardous waste, especially when dispersants are used.

¹⁵¹ § 300.910(h).

¹⁵² *Infra*, notes 235, 237–240 and accompanying discussion.

¹⁵³ Bullard R, 2010. Blog: BP’s Waste Management Plan Raises Environmental Justice Concerns. Dissident Voice. 7/29/2010. <https://dissidentvoice.org/2010/07/bp%e2%80%99s-waste-management-plan-raises-environmental-justice-concerns/>

¹⁵⁴ § 300.310(c).

IN BRIEF: POLICY ANALYSIS SUMMARY & TABLE 2

In summary, we address our initial three questions, posed at the beginning of Part II. Will EPA's revisions, discussed above, lead us to the desired outcome? If not, why not? What else is needed?

EPA's revised authorization of use rules lead us closer to the desired outcome by realigning the power distribution between the Area Committees and the RRT planners, between the *planners* and the *OSC responders*, and between the government regulators and the regulated (product manufacturers and plan holders).

In effect, this realignment empowers Area Committees by:

- establishing authority and tools (information, data) to develop Area C-Plans as their primary function (see Table 2, AU-5 to AU-11);
- limiting agency (OSC) abuse of power during response (restricting choices, adding accountability for choices) (see Table 2, AU-6, BL-6 to BL-9, BL-11, 14, 15); and
- shifting the burden of liability for product use to the regulated entities (disclosure of components, declaration of use limitations, restrictions, and environmental fate) (see Table 2, BL-10, 12, 13).

These rules provide the *potential* to strengthen local and state involvement in planning the geographic-specific details that are unique to Area C-Plans and that provide the foundation for an effective, efficient, and coordinated response. What is still missing, however, are Area Committees to fulfill this function.

The desired outcome hinges on implementation of Area Committees *as established under OPA*, meaning autonomous entities separate from RRTs but with a shared resource—a Regional Citizens' Advisory Council, as discussed in the Policy Framework section.

At this critical juncture, several options are presented.

- Congress may choose to provide funding to fulfill its 1990 mandate to implement Area Committees.
- Alternatively, states may seek federal funding to implement Area Committees through national preparedness grants to build local capabilities and capacities and fill this critical gap in national preparedness for oil spill responses.
- EPA may choose to establish a network of RCACs to support states in their decision to decide what products, if any, can be used safely in waters and with oils of intended use.
- RCACs could be funded by plan holders in each region (as per OPA) for operational costs and through the Oil Spill Liability Trust Fund for research to inform area- and ecosystem-specific oil spill planning and response activities.

There is another reason for states to become more proactive. During the two-year transition period that is in effect until December 12, 2025, the states are the primary line of defense to prevent history from repeating itself with the use of toxic, conditionally-listed dispersants. This is the topic of Part III.

Table 2. Rules to support active state & local government involvement in oil spill planning & response—Will they work?

| | | Key | |
|---------------|-----------------------|-------------|--------------------------|
| Ref. # | Reference Number | Vote | |
| AU | Authorization for Use | Y/N | Yes/No |
| BL | Burden of liability | * | Additional action needed |

| Rule | Ref. # | What does it do? (<i>Does it fulfill a legal duty?</i>) | Vote |
|---|--------|---|------|
| Provides authorization for use (AU) | | | |
| With a plan § 300.910(a) | AU-5 | • Shifts focus to state and local <i>planners</i> | Y* |
| | AU-6 | • Limits OCS’s authority to use certain products for stated purposes and specific discharges as specified in the plan | Y* |
| Plan— Development § 300.910(a)(1) | AU-7 | • Requires consideration of product limits like where, how much of, and how long a product may be used and more | Y* |
| | AU-8 | • Requires Area Committees to develop preauthorization plans—or the RRT—in consultation with Area Committees | Y* |
| Approval § 300.910(a)(2) | AU-9 | • Authorizes RRTs, including state members, to withdraw approval of a plan, if needed, and regroup with Area Committees (mandatory) to address concerns | Y* |
| Review § 300.910(a)(3) | AU-10 | • Requires regular review of a plan based on the latest science, technology, law, and lessons learned from other spills | Y |
| | AU-11 | • Requires Area Committees to be part of review process | Y* |

Table 2 continued...

| Curbs abuse of agency discretion | | | |
|---|-------|---|----|
| Without a plan § 300.910(b) | BL-6 | <ul style="list-style-type: none"> Limits OSC’s authority to use of products listed on the NCP Product Schedule for specified purposes only and with concurrence of certain RRT members including states | Y |
| | BL-7 | <ul style="list-style-type: none"> Requires OSC to consider the same specified info and product limits as in AU-7 to increase accountability | Y |
| Temporary exceptions § 300.910(d) | BL-8 | <ul style="list-style-type: none"> Limits OSC’s authority to use ANY products, including ones not listed, to 24 hours; eliminates use of exception as a substitute for compliance with other rules | Y |
| | BL-9 | <ul style="list-style-type: none"> Requires OSC to document circumstances and reasons for exception to increase transparency and accountability | Y |
| Storage & use § 300.910(f) | BL-11 | <ul style="list-style-type: none"> Limits OSC’s use (dumping) of old products that have been stored improperly or have exceeded their expiration date unless products are tested and still meet efficacy and toxicity listing criteria | Y |
| Reporting use § 300.910(i) | BL-15 | <ul style="list-style-type: none"> Requires OSC to provide detailed information about product use to RRT and the public in a timely manner, including during a response | Y |
| Shifts burden of liability | | | |
| Sinking agents § 300.910(e) | BL-10 | <ul style="list-style-type: none"> Professes to prohibit use of any product that is used to directly sink the oil to the bottom of a water body | N |
| Supplemental testing § 300.910(g) | BL-12 | <ul style="list-style-type: none"> Requires manufacturer or user to provide additional monitoring or testing data to address site-, area-, and ecosystem-specific concerns if requested by RRT planners (including state) or OSC | Y* |
| Recovery of products § 300.910(h) | BL-13 | <ul style="list-style-type: none"> Requires plan holders to ensure that removal actions adequately contain, collect, store, and dispose of certain products (not including dispersants) | Y |
| | BL-14 | <ul style="list-style-type: none"> Recommends OSC considers personnel safety and environmental harm in considering removal options, flagging these issues for planners to address | Y |

III. TRANSITION PERIOD GUIDELINES: TO KEEP HISTORY FROM REPEATING ITSELF

“Where uncertainty exists in exposure assessment, it is wise to utilize an approach known as the “precautionary principle” when making safety and health decisions. Under this principle, it is best to err on the side of safety when any decision concerning human health and safety is in the balance.”

National Response Team, 2012¹⁵⁵

POLICY FRAMEWORK & FAULT LINES

Part III focuses on the transition period to the new NCP Product Schedule. Effective December 11, 2023, old products, including the toxic dispersants that precipitated this rulemaking, will remain conditionally listed until December 12, 2025.¹⁵⁶ At that time, all products that have not passed the new screening tests and submitted the required data and information for listing in the new Schedule will be removed.

The concern is the risk of repeating history during the transition period if the same toxic Corexit dispersants are used during the next major oil disaster in the same way as they were used during the BP Deepwater Horizon response—i.e., large quantities on the sea surface and at depth for prolonged durations.

To address this concern, immediate action is needed. While EPA provided no guidelines to mitigate the risk of a repeat during the transition period, EPA’s revised authorization of use rules are in effect. However, these rules will also take time to be fully implemented as they triggered mandatory reviews of ALL existing plans (preauthorization, Area C-Plans, and Regional C-Plans), in ALL areas, states, and regions.

Given the urgent need to be proactive by anticipating and mitigating known risks to people and wildlife from the next major oil disaster, we recommend two simultaneous actions—

- **adopting precautionary guidelines for use of conditionally-listed products** in preauthorization plans or Area C-Plans to eliminate use of conditionally-listed products that are known or likely to cause long-term harm to people and wildlife, effective immediately; and
- **reviewing (or developing) Area C-Plans** (including preauthorization plans) **and reviewing Regional C-Plans** by working in cooperation with area planners from local and state

¹⁵⁵ NRT, 2012. Emergency Responder Health Monitoring and Surveillance (ERHMS) Technical Assistance Document (TAD), 1/26/2012, at 39 (“precautionary principle”). https://www.nrt.org/sites/2/files/ERHMS_Final_060512.pdf

¹⁵⁶ § 300.955(f).

governments as Area Committees, Tribes, and regional planners to address changes in law, policy, and science that impact conditions of product use.

To provide context for the significance and urgency of these recommendations, we highlight three points from a report by the 2023 Health & Safety Task Force chartered by RRT 10 and the Northwest Area Committee (RRT 10/NWAC):¹⁵⁷

- People—emergency response workers, cleanup workers, and the public—are getting sick (symptomatic) below exposure levels thought to be protective, and the initial symptoms of exposure are now linked with long-term harm;
- The science of immunology supports these observations (in above point); and
- Dispersants used in emergency response make oil spills more toxic.

The SYMPTOMS

“Valdez Crud” (Exxon Valdez oil spill, 1989)¹⁵⁸

“World Trade Center Cough Syndrome” (2001)¹⁵⁹

“BP Syndrome” (BP Deepwater Horizon oil spill, 2010)¹⁶⁰

Well aware that emergency responders are getting sick (symptomatic) below exposure levels thought to be protective and then suffering debilitating long-term illnesses and rare cancers, the NRT recommended in 2012 a comprehensive health monitoring system to resolve persistent and significant gaps and deficiencies in its capacity to protect emergency response workers, public health personnel, and cleanup, repair, and restoration workers.¹⁶¹

Significantly, the NRT’s Emergency Responder Health Monitoring and Surveillance (ERHMS) system introduced “uncertain exposures” in health risk assessment for incidents where individual exposure constituents may not exceed Occupational Exposure Limits (OELs), but the complex mixture of chemicals may pose a threat. When complex mixtures of chemicals are present, the NRT recommends “additional exposure monitoring, medical monitoring, or biological monitoring...” to determine health risk.¹⁶²

¹⁵⁷ Supra, note 130, RRT 10/NWAC, 2024, Health & Safety Task Force Report.

¹⁵⁸ Supra, note 3, Murphy, 2001, Exxon oil spill’s cleanup crews.

¹⁵⁹ Prezant DJ, 2007. World Trade Center Cough Syndrome and its treatment. *Lung*. 2008;186 Suppl 1:S94-102. doi: 10.1007/s00408-007-9051-9. <https://pubmed.ncbi.nlm.nih.gov/18027025/>

¹⁶⁰ Supra, note 3, Sneath & Laughland, 2023, They cleaned up BP’s massive spill.

¹⁶¹ Supra, note 155, NRT, 2012, ERHMS TAD, at 39.

¹⁶² *Ibid.*, at 39.

In practice this means the NRT—and its associated agencies and departments—recognize that, in disasters involving complex mixtures of chemicals including oil spills, environmental monitoring alone is unreliable for assessing health risk *without monitoring for symptoms of exposure*.

Also in 2012, NRT member OSHA revised its mandatory health hazard communication standard to recognize *symptoms as evidence of exposure* in situations where health hazards and/or complex mixtures of hazardous chemicals make risk assessment based on standard OELs unreliable.¹⁶³ The standard describes symptoms of acute exposure for skin sensitizers (A.2), respiratory sensitizers (A.8.2.2.1), and neurological irritants (A.8.2.2.2). These descriptions *are* identical to those described in literature reviews¹⁶⁴ and on-going epidemiology studies¹⁶⁵ as initial symptoms of oil spill exposure that are now also linked with long-term harm.¹⁶⁶

In practice this means health and safety risk communication for workers and the public must be updated to include this mandatory health hazard information. Protecting worker health and safety, and public health and welfare, are top priority goals during oil spill response, as stated throughout the NCP. Achieving these goals hinges on whether workers are trained and the public informed to recognize signs and symptoms of potential exposure. Without such information, people are unlikely to report symptoms that can be mistaken for common maladies such as colds or flu, headaches, vertigo, or skin rashes. Without reporting,¹⁶⁷ there can be no intervention measures. This can lead to illness outbreaks, as evidenced from past oil spills and other disasters.

¹⁶³ OSHA, 2012. 1910 Subpart Z. Toxic and Hazardous Substances. 1910.1200 Appendix A – Health Hazard Criteria (Mandatory). <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1200AppA>

¹⁶⁴ Aguilera F, Méndez J, Pásaro E, Laffon B, 2010. Review on the effects of exposure to spilled oils on human health. *J Applied Tox* 30(4):291–301.

¹⁶⁵ Supra, note 55, Alexander et al., 2018, Coast Guard cohort study respiratory.

Quist AJL, Rohlman DS, Kwok RK, et al. 2019. Deepwater Horizon oil spill exposures and neurobehavioral function in Gulf STUDY participants. *Environ Res*. Dec;179(Pt B):108834. doi: 10.1016/j.envres.2019.108834.

¹⁶⁶ Rusiecki J, et al., 2022. Incidence of chronic respiratory conditions among oil spill responders: Five years of follow-up in the Deepwater Horizon oil spill Coast Guard cohort study. *Environ Res*. Jan; 203:111824. doi: 10.1016/j.envres.2021.111824.

Lawrence KG, et al., 2022. Associations between airborne crude oil chemicals and symptom-based asthma. *Environ Int*. 167:107433. doi: 10.1016/j.envint.2022.107433

¹⁶⁷ OSHA currently exempts recording and reporting of cold and flu symptoms under its recordkeeping requirements for work-related illnesses. [29 CFR § 1904.5(b)(2)(viii)] ALERT and allies petitioned OSHA in 2023 to require recording and recordkeeping of cold and flu symptoms during oil spill response actions under the NCP. ALERT and allies (2023). Petition to OSHA to change a key rule that would provide greater protection to oil spill response workers. Feb. 13, 2023. <https://alertproject.org/wp-content/uploads/2023/02/EII-ALERT-OSHA-Petition-FINAL-021323.pdf>

The SCIENCE

The 2012 OSHA health hazard communication standard also describes respiratory and skin sensitization as a two-phase process, involving “induction of specialized immunological memory in an individual by exposure to an allergen...”, in which the immune system learns to react, followed by “elicitation, i.e., production of a cell-mediated or antibody-mediated allergic response by exposure of a sensitized individual to an allergen.”¹⁶⁸ Clinical symptoms arise when the subsequent exposure is sufficient to elicit a visible reaction. OSHA notes, “Usually, for both skin and respiratory sensitization, lower levels are necessary for elicitation than are required for induction” (A.4.1.4),¹⁶⁹ which means *hypersensitivity is independent of OELs*.

In other words, this cellular level reaction explains why people can become symptomatic to levels of contaminants that are below protective standards.

The mechanism for the two-phase process for chemical sensitization is now understood as cell-mediated immunology, which operates within cells.¹⁷⁰ This involves a different branch of the immune system than for an antibody-mediated true allergic response, which operates outside cells.¹⁷¹ The cell-mediated response is rapid, as mast cells¹⁷² are paired directly with nerve cells, and it involves cellular memory, a function that can amplify response with subsequent triggering events even at low levels of chemicals that were previously tolerated—which can lead to chemical intolerance (i.e., hyper-sensitization).¹⁷³

In practice this emphasizes the need to provide medical monitoring and surveillance of *all* on-site public and private field workers and for the medical program to be *conducted by qualified occupational and environmental doctors* who have been trained to recognize, diagnose, and treat signs and symptoms of potential chemical exposure as distinct from cold-and flu-like symptoms or heat stress, which can express initially as similar symptoms.

¹⁶⁸ Supra, note 163, OSHA 1910.1200 Appendix A, 2012, at A.4.1.2.

¹⁶⁹ Ibid., at A.4.1.4.

¹⁷⁰ Masri S, et al., 2021. Toxicant-induced loss of tolerance for chemicals, foods, and drugs: Assessing patterns of exposure behind a global phenomenon. *Environ Sci Eur* 33:65. <https://doi.org/10.1186/s12302-021-00504-z>

¹⁷¹ Miller CS, Palmer RF, Dempsey TT, et al. 2021. Mast cell activation may explain many cases of chemical intolerance. *Environ Sci Eur.* 33, 129. <https://doi.org/10.1186/s12302-021-00570-3>

Hoffman TILT Program. 2023. University of Texas Health–San Antonio. Provider resources. <https://tiltresearch.org/provider-resources/>

¹⁷² Ibid., Miller, et al., 2021. Mast cells evolved as the first defenders in the immune systems of all vertebrates, including humans, some 500,000 million years ago. With repeated exposures to chemicals, mast cells operating within cells can become more reactive to or intolerant of future exposures.

¹⁷³ Miller CS, et al., 2023. What initiates chemical intolerance? Findings from a large population-based survey of U.S. adults. *Environ Sci Europe.* 35 (1) DOI: [10.1186/s12302-023-00772-x](https://doi.org/10.1186/s12302-023-00772-x)

The DISPERSANTS

For literally decades past, dispersants have received blanket preauthorization in federal waters—based on little science, no environmental monitoring, and plenty of convenient calculations (models) that always showed a net benefit with use. This charade fell apart under scientific scrutiny after the BP Deepwater Horizon oil disaster.

Studies on animals¹⁷⁴ and humans¹⁷⁵ all found overwhelming evidence that Corexit dispersants 9500 and 9527 cause respiratory damage from the cellular¹⁷⁶ to organism levels. For example, Corexit dispersants triggered biological processes consistent with several common lung diseases such as COPD, asthma, and cystic fibrosis,¹⁷⁷ which the authors found unsurprising given the dispersants' components.

The major component of Corexit 9527 (up to 60%) is 2-butoxyethanol, a cancer hazard and reproductive hazard that can also damage the eyes, skin, liver, kidney, and blood.¹⁷⁸ OSHA Sweden found that this chemical is readily absorbed across the skin, especially in humid or wet conditions and that dermal uptake of 2-butoxyethanol vapor from ambient air is appreciably higher than respiratory uptake. The study cautioned that a worker exposed to 2-butoxyethanol

¹⁷⁴ Corexit dispersant and oil combinations promoted genotoxicity/DNA damage, cell death, inflammation (one of the hallmarks of cancer), and tumor formation in the pulmonary system of mice. Corexit 9527 treatments with mice tissue triggered more cancer pathways than Corexit 9500 (19 versus 7, respectively). Liu YZ, et al., 2020. The impact of the Deepwater Horizon oil spill upon lung health-mouse model-based RNA-seq analyses. *Int J Environ Res Public Health* 17(15):5466. doi: [10.3390/ijerph17155466](https://doi.org/10.3390/ijerph17155466)

Airway hyperresponsiveness, inflammation, and pulmonary emphysema was found in rodents exposed to airborne crude oil pollutants at levels modeled after the Deepwater Horizon oil spill exposure. Significantly, the death of large numbers of alveolar septal cells in peripheral regions of lungs was sufficient to cause emphysema without inflammation, which is different than the inflammatory mechanism for cigarette smoke-induced emphysema. Amor-Carro O, et al., 2020. *Environ Health Perspect* 128(2): 27003. <https://doi.org/10.1289/EHP4178>

¹⁷⁵ Oil-dispersant mixtures promote double-and single-stranded DNA breaks and activation of DNA damage response mechanisms, indicating that oil-dispersant mixtures induce genotoxic effects. Major D, et al., 2016. Effects of Corexit oil dispersants and the WAF [water-accommodated fraction] of dispersed oil on DNA damage and repair in cultured human bronchial airway cells, BEAS-2B. *Gene Rep* 3:22-30. doi: [10.1016/j.genrep.2015.12.002](https://doi.org/10.1016/j.genrep.2015.12.002)

¹⁷⁶ Corexit 9527, with and without oil, elicited the most pronounced effects on DNA damage and proliferation, including, specifically, initiating eight cancer pathways, including small cell lung cancer (aka neuroendocrine tumors), prostate cancer, chronic myeloid leukemia, and non-small cell lung cancer, among others. Liu YZ, et al., 2017. Carcinogenic effects of oil dispersants: A KEGG pathway-based RNA-seq study of human airway epithelial cells. *Gene* 602:16-23.

¹⁷⁷ Ibid., Liu et al., 2017.

¹⁷⁸ Supra, note 8, New Jersey Dept. of Health, 2008, 2-butoxyethanol. Organ damage, at 1; cancer hazard, reproductive hazard, at 2; teratogen, at 5.

vapors may not be adequately protected by using a respiratory protection mask alone.¹⁷⁹ That assessment was made in 1991—almost 20 years before the BP Deepwater Horizon oil disaster!

Aerial spraying of dispersants from planes and surface spraying from boats are of particular concern. Inhalable oil mists, chemically-dispersed oil aerosols, and secondary organic aerosols are now known to be the dominant fate for surface oil¹⁸⁰ and can be carried far inland.¹⁸¹ In southeast Louisiana during the first *five months* after the BP Deepwater Horizon well blowout, average ambient levels of benzene and fine particulate matter (PM_{2.5}) with an aerosol-signature (i.e., spill-derived, not exhaust) were found to exceed health protective standards in coastal and rural areas and pose a public health risk.¹⁸²

Dispersants make oil spill-related air emissions even more toxic by increasing the ratio of nano-to-micro-size oil droplets *without altering the concentration* of particle-bound polycyclic aromatic hydrocarbons (PAHs).¹⁸³ This particular fraction of crude oil is considered to be very hazardous to human health.¹⁸⁴ By increasing the number of airborne particles across the entire nano-scale range, dispersants can dramatically increase the total mass of aerosolized particles compared to that of crude oil alone.¹⁸⁵ Ultrafine particles can travel longer distances and penetrate more deeply into the alveoli region of the human respiratory system than larger particles.¹⁸⁶

¹⁷⁹ Whole body uptake is 3–4 times higher across the skin than via inhalation (at 788), increased skin hydration enhances skin absorption... like in hot and humid work situations (at 791–2); respirator inadequate protection (at 792). Johanson G, Boman A (National Institute of Occupational Health, Sweden, and Dept. of Occupational Medicine, Univ. Hospital, Sweden), 1991. Percutaneous absorption of 2-butoxyethanol vapour in human subjects. *Brit J Industrial Med*, 48:788–792. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1035455/>

¹⁸⁰ Supra, note 31, Ward CP, et al. 2018b. Photochemical oxidation a dominant fate.

¹⁸¹ de Gouw JA, et al., 2011. Organic aerosol formation downwind from the [BP] Deepwater Horizon oil spill. *Mar Science* 331:1295–99. [10.1126/science.1200320](https://doi.org/10.1126/science.1200320)

Middlebrook AM, et al., 2012. Air quality implications of the Deepwater Horizon oil spill. *Proc Nat Acad Sci Phys Sci* 109:20280–5. [doi:10.1073/pnas.1110052108](https://doi.org/10.1073/pnas.1110052108)

Perring AE, et al., 2011. Characteristics of black carbon aerosol from a surface oil burn during the Deepwater Horizon oil spill. *Geophys Res Lett*, 38: 1–5. [doi: 10.1029/2011GL048356](https://doi.org/10.1029/2011GL048356)

¹⁸² Nance E, King D, Wright B, Bullard RD. 2016. Ambient air concentrations exceeded health-based standards for fine particulate matter and benzene during the BP DHOS. *J Air Waste Manag Assoc. Jan*, 66(2):224-36. [doi: 10.1080/10962247.2015.1114044](https://doi.org/10.1080/10962247.2015.1114044)

¹⁸³ Afshar-Mohajer N, et al. 2018. A laboratory study of particulate and gaseous emissions from crude oil and crude oil-dispersant contaminated seawater due to breaking waves. *Atmospheric Environ.* 179:177-186. <https://doi.org/10.1016/j.atmosenv.2018.02.017>

¹⁸⁴ World Health Organization, 2010. WHO Guidelines for Indoor Air Quality: Selected Pollutants, Chapter 6, Polycyclic Aromatic Hydrocarbons by Choi H, Harrison R, Komulainen H, Delgado Saborit JM. <https://www.ncbi.nlm.nih.gov/books/NBK138709/>

¹⁸⁵ Afshar-Mohajer N, et al., 2020. Impact of dispersant on crude oil content of airborne fine particulate matter emitted from seawater after an oil spill. *Chemosphere* 256; 127063. [doi: 10.1016/j.chemosphere.2020.127063](https://doi.org/10.1016/j.chemosphere.2020.127063)

¹⁸⁶ For example, inhalation of dispersant-mediated particulate emissions increased the total mass burden of *nano* particles inhaled and deposited in upper respiratory tract and trachea-bronchial region of humans by about 10 times, compared to slicks of crude oil without dispersants. Afshar-Mohajer N, Fox MA, Koehler K. 2019. The human health

Dispersant spraying operations in coastal waters also created a unique health risk. Workers operated shallow, flat-bottom mud boats while spraying dispersants without using respiratory protection or skin protection. The deck height was only slightly higher than the spray release point (as shown in the photo)¹⁸⁷—a small difference that greatly increased the health risk of exposure to oil aerosols for workers and nearby boaters.

The implications of all this are profound.¹⁸⁸ It means that real harm from dispersant use, especially aerial and surface spraying, outweighs any theorized benefits. Relevant to EPA's new rules, it means that, until the current standards are fully implemented, it is critical to put in place precautionary guidelines to minimize harm to workers and the public during oil spill response.

WHAT IS NEEDED TO ENSURE USE OF SAFER PRODUCTS DURING THE TRANSITION PERIOD?

The precautionary guidelines we propose are based on EPA's current standards, a body of new scientific literature, and several key guidances, notably:

- two reports by task forces chartered by Regional Response Team 10 and the Pacific Northwest Area Committee on dispersant science (2020) and health and safety (2024);
- the National Response Team's 2012 guidance for comprehensive health monitoring and surveillance of emergency responders (including use of the precautionary approach); and
- the final report of the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling (2011).

In addition, guidelines we propose prioritizing implementation of EPA's current standards based on the status of involvement of state and local governments in the various RRTs.

These sets of recommendations are discussed separately.

Precautionary guidelines for use of conditionally-listed products

The NRT recommends a precautionary approach when making safety and health decisions, especially when dealing with uncertain exposures that involve complex mixtures of chemicals present in multiple phases simultaneously, as occurs during oil spills: "Under this

risk estimation of inhaled oil spill emissions with and without adding dispersant, *Sci of the Total Environ* 654:924-932. doi: [10.1016/j.scitotenv.2018.11.110](https://doi.org/10.1016/j.scitotenv.2018.11.110)

¹⁸⁷ Supra, note 145, Ott, 2018, Photo-documentation supplement, at 5.

¹⁸⁸ Supra, note 130, RRT 10/ NWAC, 2024, Health & Safety Task Force Report, for a more detailed discussion of ongoing efforts to better protect response workers and public health during oil spills and chemical releases.

principle, it is best to err on the side of safety when any decision concerning human health and safety is in the balance.”¹⁸⁹

The decision about what products to use, where, and how much *can be used safely* in specific areas and ecosystems is up to Area Committees and RRT planners and, under certain circumstances, the lead OSC responder during a spill. Table 3 (IN BRIEF) provides guidelines for these decision-makers. The reference numbers in the table are cross-referenced to this narrative. The first three guidelines apply to any conditionally-listed products, the remainder to dispersants.

Any conditionally-listed product

P-1. Guideline P-1 recommends that use of any conditionally-listed product be considered on a case-by-case basis in cooperation with states and Tribes. Further, it recommends that if there is a conflict with other guidelines, the guideline with the most precautionary approach applies.

In effect, product use decisions on a case-by-case basis replace preauthorization plans but do not eliminate any products from consideration. This approach is needed during the transition period to eliminate use of products that are known to or likely to cause long-term harm to people and wildlife.

For example, despite the known risks of dispersant use, most states still currently preauthorize use in adjacent federal waters seaward of 3 nautical miles (nm) in most states (seaward of 12 nm in Maine and New Hampshire and seaward of 24 nm in Alaska.¹⁹⁰ However, oil mists, chemically-dispersed oil aerosols, and secondary organic aerosols created 40 nm offshore during the BP Deepwater Horizon spill response traveled far inland, posing a public health risk.¹⁹¹

State and local governments (as part of Area Committees) and Tribes should consider withdrawing blanket preauthorization of dispersant use in federal waters. The oil industry’s contingency plans authorized through the Department of Interior are not reviewed by other agencies and the public. (Remember the Gulf walrus?)¹⁹² DOI-approved contingency plans rely on dispersant use to create the illusion of viable C-plans in order to secure permits to lease and develop offshore oilfields.¹⁹³ It may be of little direct concern to industry or DOI whether such

¹⁸⁹ Supra, note 155, NRT, 2012, ERHMS TAD, at 39.

¹⁹⁰ RRT 10/NWAC, 2020. Report of the 2019 Dispersant Science Task Force, at 17–20.
<https://rrt10nwac.com/Files/FactSheets/210730115016.pdf>

¹⁹¹ Supra, note 174–187 and accompanying discussion.

¹⁹² Supra, notes 115–118 and accompanying discussion.

¹⁹³ U.S. Dept. of Interior, Bureau of Ocean Energy Management, Regulation and Enforcement, 2010. National Notice to Lessees and Operators (NTL) of Federal Oil and Gas Leases, Outer Continental Shelf. Statement of Compliance with Applicable Regulations and Evaluation of Information Demonstrating Adequate Spill Response and Well

plans actually work, but coastal residents, local and state governments, and Tribes bear a disproportionate share of the risk of offshore oil and gas activities. These key stakeholders need plans that work.

There is precedent for considering dispersant use on a case-by-case basis in state *and federal* waters. Working through RRT 10, the Makah Tribe in northwest Washington state signed a Memorandum of Agreement with the U.S. Coast Guard in 2013 to reaffirm and build upon the federal government’s fiduciary responsibility to the Tribe and its maritime resources.¹⁹⁴ Under this agreement, the Makah retain decision-making authority on a case-by-case basis for dispersant use in their Usual and Accustomed Area from the shoreline seaward to 200 miles.¹⁹⁵

Guideline P-1 recommends that states and Tribes retain decision-making authority on use of dispersant and other products in state and federal waters, and in Usual and Accustomed Areas of Tribes, to build upon the federal government’s fiduciary responsibility to Tribes, the American public, and maritime resources, including the adjacent shores and sealife that are public trust responsibilities.¹⁹⁶

P-2. Guideline P-2 recommends that if a delisting process is initiated for a conditionally-listed product, then that product must not be used until the outcome of the delisting process is settled, including any related lawsuits.

Under rules now in effect [§ 300.970], EPA may delist a product (remove it from the NCP Product Schedule) for several reasons that apply to any product, but again the example pertains to dispersants.

For example, “statements or information [made by manufacturers or plan holders] that are misleading, inaccurate, outdated, or incorrect regarding the composition or use of the product...”

Containment Resources. NTL No. 2010-N10. <https://www.bsee.gov/sites/bsee.gov/files/notices-to-lessees-ntl/notices-to-lessees/10-n10.pdf>

This Notice required operators to demonstrate that they had access to and can deploy surface and subsea containment resources, including subsea dispersant injection equipment. The Notice was issued seven months after the BP Deepwater Horizon well blowout and at least 7-10 years in advance of the scientific studies that determined subsea use during a well blowout was ineffective. *Supra*, note 30, Paris CB, et al. 2018 BP Gulf Science Data reveals ineffectual subsea dispersant injection; *Infra*, note 210, NAS, 2022, *Oil in the Sea IV*, at 46.

¹⁹⁴ Tierney MP, 2015. Sovereign cooperation: The Makah Tribe’s Office of Marine Affairs and the fundamentals of partnering with Uncle Sam. Boston College Law School. <https://alertproject.org/wp-content/uploads/2024/01/Makah-E-Law-Paper-Tierney-1.pdf>

¹⁹⁵ *Ibid.*, at 2.

¹⁹⁶ Quirke D, 2016. Public Trust Doctrine: A Primer. University of Oregon School of Law Environmental and Natural Resources Law Center. https://law.uoregon.edu/sites/law2.uoregon.edu/files/mary-wood_0/mary-wood/PTD_primer_7-27-15_EK_revision.pdf

are grounds for removal.¹⁹⁷ BP and its contractors made many such statements during the BP Deepwater Horizon spill response to downplay public fears about dispersant use. Such statements and information can now be used as grounds for removal.

Also, besides propaganda, another common tactic used by those who manufacture or use these products is to simply not consider new or relevant information concerning impacts or potential impacts of product use, especially if it conflicts with their messaging. Failure to consider new and relevant information can also now be used as grounds for removal.¹⁹⁸

When a product is under consideration for delisting, a precautionary approach requires holding off on use until the outcome of the delisting process is known—as recommended by guideline P-2.

P-3. Guideline P-3 recommends that conditionally-listed products be considered for use only if they have a written and approved plan for disposal of inventory should the product be delisted or not pass the new relisting requirements.

This is a concern because EPA’s current standards are silent on how to dispose of products that are likely to be or become delisted. This applies to any conditionally-listed product. This silence creates a chance for the owners of any product inventory, such as the stockpiles of Corexit dispersants that exist in all coastal states and elsewhere, to literally dump their inventory during an oil spill under the pretext of a response—or to ship it off to another country that still allows the product.

Dispersants: Restrictions on use

P-4. Guideline P-4 recommends **no use** of Corexit 9500 or Corexit 9527, given the overwhelming evidence from animal and human studies that these dispersants can cause damage in multiple systems from the cellular to the organism level, including cancers of the lungs and blood.

During the BP Deepwater Horizon response, industry and government responders failed to adequately anticipate, recognize, or address the magnitude of potential health impacts¹⁹⁹ because the “National Contingency Plan *overlooks* the need to respond to widespread concerns about human health impacts” (emphasis added).²⁰⁰ Literally. Oil spills have historically been viewed as environmental disasters, affecting nature—and even under this view, responses were inadequate.

¹⁹⁷ § 300.970(a)(1); Supra, notes 51–55 and accompanying discussion.

¹⁹⁸ § 300.970(a)(4); Supra, notes 51–55 and accompanying discussion.

¹⁹⁹ Supra, note 21, National Commission, 2011, *Deep Water*, at 193.

²⁰⁰ *Ibid.*, at 277.

OPA and related policies offer fewer tools for addressing the human dimensions of such disasters,²⁰¹ and the current tools are inadequate for reasons discussed at the start of this section.

Regarding public health, “the NCP contains no specific guidance for responding to public health impacts of an oil spill or hazardous substances release. By contrast, the National Response Framework—which provides the structure for a national response to terrorist attacks, major disasters (natural and man-made), and other kinds of emergencies—incorporates a protocol for responding to public health exigencies.”²⁰²

At a minimum, a precautionary approach should eliminate use of products *known to cause* short- and long-term human health impacts, especially during oil spill responses where protective measures are not in place and/or are inadequate to protect workers or the public—as recommended by guideline P-4.

P-5. Guideline P-5 recommends **no use** of dispersants in waters within territorial seas from the mean low-water mark seaward to 12 nautical miles (nm) and in water depths less than 400 ft (about 120 m).

There is precedent for this in Regional C-Plans, which currently restrict dispersant use within typically 3 nm of the coast and/or in water depths less than 30 feet (10 m) where there is insufficient water volume to mix and dilute these toxic products sufficiently to reduce the health risk to people, wildlife, and the environment.²⁰³ However, Standing Letters of Agreement of EPA, USCG, DOI (Dept. of Interior), DOC (Dept. of Commerce) and the coastal states preempt the ban on dispersant use in state waters.²⁰⁴

There is precedent for restricting dispersant use in territorial seas (seaward of coast to 12 nm) and even in the U.S. Contiguous Zone that extends out to 24 nm from the coast.²⁰⁵ The average depth of the continental shelf in the Gulf of Mexico, which supports thriving fisheries, is 120 m (about 400 ft).²⁰⁶

²⁰¹ *Ibid.*, at 191.

²⁰² *Ibid.*, at 278.

²⁰³ *Supra*, note 38, NAS, 2022, at 139. “Dispersants are typically not used in shallow waters with limited water circulation and dilution potential or in waters with high sediment load, typically found close to the shore and in estuaries.”

²⁰⁴ See for example, USCG AL, MS, Northwest FL Area C-Plan, 2202, Region 4 Response Team, Annex J, p. 59. <https://r4data.response.epa.gov/r4rrt/wp-content/uploads/2018/05/Annex-J-Oil-Spill-Countermeasures.pdf>

²⁰⁵ *Supra*, note 166, RRT10 Dispersant review (2020). E.g., Maine and New Hampshire prescribe partial preauthorization of dispersant use between 3–12 nm in waters deeper than 10 m, at 17. Alaska prescribes dispersant use on a case-by-case basis between the shoreline and the 24nm U.S. Contiguous Zone or the 1,000m isobath, whichever is further seaward, at 20.

²⁰⁶ NOAA online, National Centers for Environmental Information. Accessed Dec. 21, 2023. <https://www.ncei.noaa.gov/maps/gulf-data-atlas/atlas.htm>

Given the human health impacts of chemically-dispersed oil, a precautionary approach must eliminate dispersant use close to human populations and in waters of insufficient depth to provide adequate dilution, as recommended by guideline P-5.

P-6. Guideline P-6 recommends **no use** of dispersants in subsurface waters or waters colder than 5°C.

There is precedent for restricting dispersant use in the deep sea.²⁰⁷ The main reason is that unprecedented subsurface dispersant use during the BP Deepwater Horizon failed, spectacularly, to protect wildlife on the water surface and keep oil from the shoreline, which are two of the professed reasons for dispersant use.²⁰⁸ It also failed to effectively disperse the oil at depth: “only a small fraction [of oil] was trapped in the layers [at depth] with and without [subsea dispersant injection].”²⁰⁹ Effectiveness is another of the professed reasons for dispersant use, but the subsurface oil distribution was driven by well blowout dynamics—based on BP’s own database, analyzed and interpreted by independent scientists.²¹⁰ The other reason is that, well-blowout dynamics aside, dispersant efficacy drops drastically below 5°C. Most deep ocean water is between 0–3°C.²¹¹

The temperature of deep water in the Arctic Ocean is fairly constant at -0.9°C (about 30 °F), and the average temperature of surface water is not much warmer at -1 to -2°C.²¹² Dispersants are not effective at these temperatures, especially if the saltwater is also diluted by ice melt.²¹³

Knowing this, a precautionary approach must not allow dispersant use in areas or situations where use is known to be ineffective, as recommended by guideline P-6.

²⁰⁷ Supra, note 190, RRT 10/NWAC, 2020, Dispersant review, at 19. “California’s pre-approval zones... do not involve subsea application... for more than 5 days.”

²⁰⁸ Fingas M, 2023. Backup to the review of literature on spill dispersants: Summary report. 2017–2021. For the Prince William Sound Regional Citizens’ Advisory Council. At iii.

²⁰⁹ Supra, note 30, NAS, 2022, Oil in the Sea IV, at 46, Box 2.2. “ ~5% or less of the liquid oil was trapped in the deep intrusion layers...” and “only a small fraction of liquid oil was trapped in the layers with and without SSDI.”

²¹⁰ Supra, note 30, Paris CB, et al. 2018 BP Gulf Science Data reveals ineffectual subsea dispersant injection for the Macondo blowout. *Oct. Front Mar Sci.* doi.org/10.3389/fmars.2018.00389 Turbulent blowout dynamics mechanically dispersed the oil by atomizing it into micro-droplets at depth and by dissolving a substantial portion of the water-soluble gases (VOCs/BTEX) into the seawater, along with semi-soluble PAHs and some of the lighter alkanes (saturated hydrocarbons).

²¹¹ Supra, notes 32–33.

²¹² Homework.Study.com online. Accessed Dec. 21, 2023. <https://homework.study.com/explanation/what-is-the-average-winter-temperature-of-the-arctic-ocean.html>

²¹³ Supra, note 35, SL Ross Environmental Research, 2010, A Review.

P-7. Guideline P-7 recommends **no use** of dispersants on surface waters seaward of 12 nm.

There is precedent for restricting surface use, e.g., RRT 9 and the state of California consider use on a case-by-case basis for surface use over five days, and some regions strongly recommend against use in national sanctuaries and monuments.²¹⁴

As discussed earlier,²¹⁵ dispersant use on the sea surface increases the health risk of oil spill exposures. Aerial or surface spraying dramatically increases the formation of nano-particles and corresponding human health risk. Oil-derived nano-particles and secondary organic aerosols are distributed widely, at least 80 miles inland (the limit of one study on the BP Deepwater Horizon) and can present a public health risk in coastal and near-coastal communities.

In addition, surface use of dispersants is ineffective more than 5 nm from the source due to rapid photo-oxidation of surface oil,²¹⁶ while aerial spraying within 5 km from the source endangers emergency responders working in this area.²¹⁷

A precautionary approach must not allow dispersant use in areas or situations where use is already known to harm human health, as recommended by guideline P-7.

Dispersants: Accountability for use

If state and local governments *still* want to consider dispersant use on a case-by-case basis, then consider these additional precautionary guidelines to protect worker and public health.

P-8. Guideline 8 recommends that a dispersant only be considered for use if supplemental testing data, monitoring data, and other information specified in the current standards are available, provided, *and address* area- and ecosystem-specific concerns relative to product use in waters of intended use.

EPA does not require use of any product. Instead, the decision of what products to use and the responsibility of determining what quantities can be used safely in the waters of intended use were assigned to the Area Committees and RRTs. EPA cannot fulfill its mandatory duty under the CWA without the cooperation of states, which is why EPA empowered its state partners with authority to make these decisions and tools to make informed decisions such as the supplemental testing [§ 300.915(g)].

²¹⁴ Supra, note 190, RRT10/NWAC, 2020, Dispersant review, at 19.

²¹⁵ Supra, notes 174–187 and accompanying discussion.

²¹⁶ Supra, note 31, Ward, et al. 2018. Photochemical oxidation reduced effectiveness.

Supra, note 46, Ward & Overton, 2020. Photochemical weathering at sea.

²¹⁷ Supra, note 55, McGowan, et al., 2017. Respiratory, dermal, and eye irritation symptoms associated with Corexit.

A precautionary approach must use the best available tools and data to inform choices about dispersant use, as recommended by guideline P-8.

P-9. Guideline P-9 recommends any dispersant use must include environmental monitoring and that if the monitoring finds such use increases the rate of sinking the spilled oil (fresh or weathered), then product use must halt, pending consideration and consensus of local, state, and regional planners on next steps.

EPA's new rules on environmental monitoring of dispersant use are limited to any subsurface use, prolonged surface use for more than 96 hours after the initial application, and any surface use in response to major spills of over 100,000 U.S. gallons in a 24-hr period.²¹⁸ These rules are silent on smaller spills, which happen more frequently. A precautionary approach would scale down EPA's monitoring rules to apply to smaller spills, especially when using products that are known to harm human health.

There is a concern about products that simply sink spilled oil, rather than attempt to remove it from the environment. While EPA prohibits the use of sinking agents, the definition of sinking agents still allows use of products that result in increased sinking of oil, as discussed previously.²¹⁹

At a minimum, a precautionary approach must require that dispersant use be reconsidered by those with the most at stake—especially, the state and local planners and those whom they represent—with cooperation and consensus on next steps, if environmental monitoring finds that such use increases the rate of sinking of the spilled and/or weathered oil, as recommended by P-9.

If states really want to prohibit use of products that result in sinking oil, then a decision to terminate dispersant use would be supported with monitoring data and documentation.

P-10. Guideline P-10 recommends any dispersant use must include incident-specific, symptom-based health monitoring of on-site field workers and the exposed public.

Quality information on the causal or correlative relationships between oil and dispersant exposure and initial health symptoms and long-term harm is critical to inform appropriate choices and use of response tools and protective methods.²²⁰ For example, during the BP Deepwater Horizon oil disaster, “[w]hether or not respirators should be required for cleanup workers emerged as a major

²¹⁸ 86 FR 40234. NCP: Monitoring Dispersant Use. § 300.913.

²¹⁹ *Supra*, notes 146–149 and accompanying discussion.

²²⁰ *Supra*, note 21, National Commission, 2011, *Deep Water*, at 278. For example, respiratory protection may not be adequate for workers exposed to Corexit 9527 vapors.

Supra, note 179, Johanson & Boman, 1991, and accompanying discussion.

controversy in the response.”²²¹ Employees on nearby drilling rigs were wearing respirators, but not the citizen responders who were working, for example, on the in-situ burn teams or nearshore dispersant-spraying operations.²²² Health monitoring would likely have resolved the controversy, but it was not consistently conducted—or even attempted—in a way that would provide definitive answers.²²³ The NRT has since developed a program for comprehensive symptom-based health monitoring and surveillance for emergency responders, as previously discussed.²²⁴

Regarding public health, a medical services protocol similar to the ESF-#8 Public Health and Medical Services Annex of the National Response Framework should be incorporated to ensure emergency medical care, timely dissemination of public health information and medical monitoring and surveillance.²²⁵ Note that the Public Health and Medical Services Annex provides for long-term monitoring of potentially exposed individuals and requires the Department of Health and Human Services to “assist State, tribal, and local officials in establishing a registry of potentially exposed individuals... and conducting long-term monitoring of this population for potential long-term health effects.”²²⁶

A precautionary approach must involve incident-specific programs that require the collection of adequate baseline health data and long-term health monitoring for workers and the exposed public to assess the human dimensions of oil spills with greater accuracy. Guideline P-10 recommends developing and implementing such programs.

P-11. Guideline P-11 recommends that any dispersant use must include chain-of-custody accounting with records of storage areas, staging areas, decontamination areas, and use.

²²¹ Supra, note 21, National Commission, 2011, *Deep Water*, at 353 endnote 28.

²²² Supra, notes 178–187 and accompanying discussion of health hazards and health risk. See also court statements of BP-contracted Captain John Wunstell who was one of the seven fishermen who suffered acute respiratory failure and was medevacked from an in-situ burn operation in late May 2010.

Wunstell et al v BP. 2023. Case 2:10-cv-02543-JTM-KWR, document 93-1, filed 3/30/2023. Memorandum in Support of Motion to Compel. https://alertproject.org/wp-content/uploads/2024/02/2-10CV02543-Wunstell-230330_93.pdf

²²³ In: BP Deepwater Horizon BELO cases, Case 3:19-cv-00963-MCR-HTC, F Northern District of Florida, Pensacola Division. [Document 547, 10/28/22](#). Plaintiffs’ Motion for Admission of Plaintiffs’ Expert Opinions Because of BP Defendants’ Spoilage of Evidence of Plaintiffs’ Exposures, at 12.

²²⁴ Supra, notes 158–167 and discussion on The Symptoms.

Supra, note 130, RRT 10/NWAC, 2024, Health & Safety Task Force Report. The work to develop and implement such a program in emergency response operations continues in 2024.

NRT, 2012. ERHMS: A Guide for Key Decision Makers. 1/26/2012. https://www.nrt.org/sites/2/files/ERHMS_Decisionmakers_060512.pdf

²²⁵ Supra, note 21, National Commission, 2011, *Deep Water*, at 278.

²²⁶ Dept. Health & Human Services, 2008. Emergency Support Function #8 – Public Health and Medical Services Annex at 10. <https://www.fema.gov/pdf/emergency/nrf/nrf-esf-08.pdf>

During the BP Deepwater Horizon disaster response, separate records were kept for dispersant use in federal waters and state waters. However, the OSC ordered records of dispersant use in state waters to be removed from daily reports²²⁷—despite the public’s concern and right to know to make informed choices in areas where people lived, worked, and recreated.²²⁸

Besides not knowing when dispersants were sprayed in coastal waters, residents were also not forewarned about the staging operations in public marinas, neighborhoods, and other public coastal areas where tanks were filled with dispersants on land and loaded on (and off) the mud boats. Photos show such operations near Pass Christian (Mississippi) and a neighborhood on Dauphin Island (Alabama).²²⁹ Impromptu staging and decontamination sites also popped up to clean boats and equipment, creating a health risk for nearby residents.²³⁰ The photo shows a staging/decon site in Bayou La Batre (Alabama).²³¹ These examples are not unique.

Residents who lived near these staging and decontamination areas for dispersant-spraying boats and equipment were at risk of exposure to fugitive vapors and/or aerosol spray drift. This is what happened to a resident of Coden, Alabama, who suffered chemical burns after skin contact with Corexit 9527A,²³² nearly died, and now suffers from long-term health impacts.²³³

The total volume of dispersants applied in coastal waters during the BP Deepwater Horizon is still not accounted for. *Neither is the duration of use*, as discussed in the section on curbing abuse of agency discretion.²³⁴ Location, quantity, and duration of use are critical information to support worker and public health assessments, relevant medical treatment to mitigate long-term harm, and inform choices to minimize exposure risk. A precautionary approach must involve accurate and complete chain-of-custody recordkeeping for dispersants, as recommended by guideline P-11.

²²⁷ National Archives and Records Administration (NARA), Ft. Worth, FOISC Documents, USCG Phase V, Admiral Nash Documents, Dispersants. 7/3/2010 email from EPA Mathy Stanislaus to RDML James Watson and others. Subject: Follow Up to Yesterday’s meeting, at 37–38 (reports of dispersant use was removed from daily reports). <https://alertproject.org/wp-content/uploads/2023/02/NARA-FOISC-coastal-disp-use-7.3.2010.pdf>

²²⁸ *Supra*, note 8, New Jersey Dept. of Health, 2008, 2-butoxyethanol, at 2.

²²⁹ *Supra*, note 145, Ott, 2018, Photo-documentation supplement, at 5.

²³⁰ *Ibid.*, at 5. The Safety Data Sheets (SDS) for both dispersants Corexit 9500A and Corexit EC9527A, shown in totes in the photos, warn to “ensure the runoff does not reach a waterway.” Nalco, 2019. SDS Corexit EC9500A, at 3. Nalco, 2019. SDS Corexit EC9527A, at 3.

²³¹ *Supra*, note 145, Ott, 2018, Photo-documentation supplement, at 6.

²³² *Ibid.*

²³³ Government Accountability Project (GAP), Devine S, Devine T. 2013. Deadly dispersants in the Gulf: Are public health and environmental tragedies the new norm for oil spill cleanups? www.whistleblower.org.

Alabama Public Radio, 4/16/2020. Oil dispersant chemicals are causing concerns 10 years after the BP oil spill. <https://www.apr.org/news/2020-04-16/oil-dispersant-chemicals-are-causing-concerns-ten-years-after-the-bp-oil-spill>

²³⁴ *Supra*, note 145, Ott, 2018, Photo-documentation supplement, at 5.

P-12. Guideline P-12 recommends that oil spill wastes generated from an offshore oil and gas facility must be managed as non-exempt mixed hazardous wastes, especially if dispersants are used, and in accordance with environmental justice principles.

Over 626 million pounds (313,000 tons) of mixed hazardous wastes, generated by the BP Deepwater Horizon oil spill response, received a petroleum exemption for disposal in Class D landfills and was disposed of in nine municipal landfills.²³⁵ The majority of these were in low income and people-of-color communities, as noted in the section on shifting the burden of liability.²³⁶

Hazardous wastes require higher standards for storage and disposal of materials in special facilities to protect public health and ground and surface waters, and soil from contamination. However, some oil and gas exploration and production (E&P) wastes are excluded under the logic that if these hazardous wastes were injected back into a deep actual or potential geological reserve, humans would not be exposed.²³⁷ However, a public landfill hardly qualifies a deep geologic reserve.

Further, mixtures of exempt and non-exempt materials have special rules.²³⁸ Solvents such as oil dispersants *are NON-exempt*, as are mixtures of exempt and non-exempt wastes that exhibit any of the hazardous characteristics of the hazardous waste or a characteristic not exhibited in the exempt material alone.²³⁹ This should apply to waste containing chemically-dispersed oil, which is more toxic to humans and wildlife than crude oil alone.²⁴⁰ Instead, such materials should be managed and disposed of as non-exempt E&P hazardous wastes.

Finally, the racial disparity in the dumping defies President Clinton's Environmental Justice Executive Order 12898,²⁴¹ "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." This Order requires federal agencies, including the Coast Guard and EPA, to ensure that minority and low-income populations do not bear an adverse and disproportionate share of the burdens and negative impacts associated with an oil spill.

²³⁵ US EPA, 2011. EPA Should Clarify and Strengthen Its Waste Management Oversight Role with Respect to Oil Spills of National Significance. Report No. 11-P-0706. Sept. 26, 2011. <https://www.epa.gov/sites/default/files/2015-10/documents/20110926-11-p-0706.pdf>

²³⁶ *Supra*, notes 151–154.

²³⁷ US EPA, 2002. Exemption of Oil and Gas Exploration and Production Wastes from Federal Hazardous Waste Regulations. Oct. 2002. EPA 530-K-01-004. <https://archive.epa.gov/epawaste/nonhaz/industrial/special/web/pdf/oil-gas.pdf>

²³⁸ *Ibid.*

²³⁹ *Ibid.*

²⁴⁰ *Supra*, notes 174–178 and accompanying discussion.

²⁴¹ Clinton W, U.S. President. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, February 11, 1994. Federal Register 59 FR 7629, No. 32 (2/16/1994). <https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf>

A precautionary approach must manage hazardous waste generated from oil spill response as non-exempt E&P hazardous waste and dispose of this material according to environmental justice principles, as guideline P-12 recommends.

Priority implementation: Review & update Area C-Plans & Regional C-Plans

The new rules in effect require Area Committees and RRTs to determine whether preauthorization plans are appropriate as part of developing Area C-Plans and, if so, to review and approve or disapprove such plans.

The problem is that the critical and time-consuming organizing of local and state oil spill planners and responders into autonomous Area Committees did not happen. However, since the passage of OPA, some RRTs developed the functional equivalent of Area C-Plans with active involvement of state and local governments, while others did not.

The RRTs with token state and local involvement are more likely to have sector c-plans with preauthorization plans that lack scientific foundation, meaningful state support, and public review—and run the risk of “social and political nullification” by disenfranchised state and local governments and the people during a major oil spill response, as discussed in the case study.²⁴²

To address these concerns, we recommend different initial approaches to implementing EPA’s new rules.

RRTs with active involvement of states and Tribes:

- initiate immediate reviews of preauthorization plans, the functional equivalents of Area C-Plans (that may exist as separate sections within RCPs), and Regional C-Plans to address law, policy, and science that impact conditions of product use, including the precautionary guidelines, and the impacts or potential impacts of the product to human health or the environment, and
- during a spill response, use the existing preauthorization plan, modified with precautionary guidelines, until approval of an updated plan developed by RRTs, Tribes, and Area Committees with full involvement of local and states governments.

States and/or Tribes that may have been disenfranchised by RRTs or sector c-plans:

- withdraw approval of sector-driven preauthorization plans to initiate a review process involving local and state governments and Tribes, and

²⁴² Supra, notes 102–109 and accompanying case study text.

- during a response, insist that RRTs use precautionary guidelines until approval of a preauthorization plan developed by Tribes and Area Committees with full involvement of state and local governments.

Further, we recommend that each RRT works with local and state governments and Tribes to establish a Regional Citizens' Advisory Council to provide research and monitoring support to inform their decisions—and to build local capacity and capabilities for oil spill preparation and response, in parallel to what the SERCs have done for natural disasters.

IN BRIEF: SUMMARY OF GUIDELINES FOR THE TRANSITION PERIOD & TABLE

In summary, the EPA's current standards establish a transition period while products are considered for listing under the new rules (Part I, Table 1). The transition period maintains the status quo of product use for another two years (until 12/12/2025). However, the revised authorization of use rules already in effect (Part II, Table 2) provide the authority and tools *to change the status quo during the transition period*.

In Part III, we recommend adopting and implementing precautionary guidelines during the transition period to restrict use of conditionally-listed products, in particular dispersants, that may be or are known to be harmful to people and wildlife and/or are ineffective when used during oil spill response. We also recommend reviewing and updating existing plans—or developing new plans, based on the new authorities and tools, and using this process as an opportunity to fulfill a legal duty to involve local, state, and Tribal partners in emergency planning.

The precautionary guidelines in Table 3 derive their *authority* from the Clean Water Act's mandate to determine the quantities of product, if any, that can be used safely in the waters of intended use, and the delegation of this duty by the EPA to the local, state, and regional planners. The precautionary guidelines derive their *content* from actions by state and regional planners to implement this duty and new or relevant science concerning human health impacts from oil spills or oil dispersants.

The precautionary guidelines restrict use of any conditionally-listed product by considering use on a case-by-case basis and *not considering* use of a product that is involved an ongoing delisting process or that does not have a written and approved disposal plan for inventory should the product be delisted (P1–3).

Table 3. Precautionary guidelines for use of conditionally-listed products

| Applies to: | No. | Guideline description |
|-------------|-------------------------------|---|
| Any product | Restrictions on use | |
| | P-1 | Product use must be considered on a case-by-case basis in cooperation with states and Tribes. If there is a conflict with other guidelines, e.g., P-4, the guideline with the most precautionary approach applies. |
| | P-2 | Once a delisting process for a product is initiated under § 300.970, then that product must not be used until the outcome of the delisting process is settled, including any related lawsuits. |
| | P-3 | Products must not be used if there is no written and approved plan for disposal of inventory should the product be delisted or not pass the new relisting requirements by Dec. 12, 2025. |
| Dispersants | Restrictions on use | |
| | P-4 | No use of Corexit dispersants 9500 & 9527 , given the overwhelming evidence from animal and human studies that these dispersants can cause damage in multiple systems from the cellular to the organism level, including cancers of the lungs and blood. |
| | P-5 | No use of dispersants in waters within territorial seas from the mean low-water mark seaward to 12 nautical miles (nm) and in water depths less than 400 ft (about 120 m). |
| | P-6 | No use of dispersants in subsea waters or in waters colder than 5°C. |
| | P-7 | No use of dispersants on offshore surface waters seaward of 12 nm. |
| | Accountability for use | |
| | P-8 | Only consider a dispersant for use if supplemental testing data, monitoring data, and other information specified in the current standards are available, provided, <i>and address</i> area- and ecosystem-specific concerns relative to product use in waters of intended use. |
| | P-9 | Any dispersant use must include environmental monitoring. If environmental monitoring finds such use increases the rate of sinking the spilled oil (fresh or weathered), product use must halt, pending consideration and consensus of local, state, and regional planners on next steps. |
| | P-10 | Any dispersant use must include incident-specific, symptom-based health monitoring of on-site field workers and the exposed public. |
| | P-11 | Any dispersant use must include chain-of-custody accounting with records of storage areas, staging areas, decontamination areas, and use. |
| | P-12 | Manage oil spill wastes generated from offshore oil and gas exploration and production as non-exempt mixed hazardous wastes, especially if any dispersants are used, and in accordance with environmental justice principles. |

The precautionary guidelines restrict use of conditionally-listed dispersants by:

- avoiding use of products that are linked with causing short-and long-term harm in people and animals, specifically, Corexit dispersants 9500A and 9527A (P-4);
- avoiding use in situations where products are known or likely to be more toxic, such as in shallow waters, or less effective due to physical parameters such as temperature and salinity, or chemical reactions with the environment like photo-oxidation (P-5, P-6); and
- avoiding use in applications and/or situations that increase aerosolization of the spilled oil (P-7).

Further, the precautionary guidelines restrict dispersant use by adding accountability for use through:

- avoiding use if supplemental testing and other information required in the current standards is not available to make informed choices (P-8);
- stopping use for reconsideration if environmental monitoring determines that use increases the rate of sinking of the oil or if health monitoring or surveillance for workers or the public detects a health risk (P-9, P-10);
- requiring chain-of-custody accounting records for dispersant storage, staging, and decontamination areas, as well as product use locations and data, to link with health monitoring records (P-11); and
- managing oil spill wastes as non-exempt mixed hazardous wastes, especially if dispersants are used (P-12).

SUMMARY & RECOMMENDATIONS

This report, *An Opportunity to Make It Right*, addresses the implementation of EPA's current standards to address persistent gaps and deficiencies in its previous (1994) regulations governing use of dispersants during oil spill responses. The previous regulations got it wrong, as evidenced by the inefficient and uncoordinated response to 2010 BP Deepwater Horizon oil disaster, and the public controversy over use of toxic dispersants—all déjà vu from the 1989 *Exxon Valdez* oil spill, and things that Congress addressed in the Oil Pollution Act of 1990 to prevent a repeat in the next major oil spill.

The authorizing statutes in OPA established a three-level framework that distributed the responsibility (power/authority) of decision-making among oil spill planners and responders across all three levels from local/state to regional to national. This framework is now institutionalized in the National Preparedness System. Local preparedness is the foundation of emergency response because, as stated by FEMA in its 2008 introduction to the National Response Framework, “incidents begin and end locally, and most are managed at that level as well.”

However, the 1994 implementing regulations allowed the Regional Response Teams to by-pass the critical local/state level along with testing of dispersant suitability for area- and ecosystem-specific concerns. Dispersant use was preauthorized in RRT-driven plans and decisions of how much dispersant to use and where were made by the lead On-Scene Coordinator.

This top-down approach disempowered local and state authorities and created a critical gap in national disaster preparedness at the local level that led to “the social and political nullification” of the NCP by the oiled Gulf Coast states during the BP Deepwater Horizon response, which undercut the efficiency, coordination, and effectiveness of the overall response.

EPA's current standards restore the power distribution established under OPA by:

- clarifying existing authorities, providing new authorities to empower state and local governments to participate as decision-makers in Area Committees, and requiring state and local involvement in plan development, review, and approval—or withdrawal of approval;
- curbing abuse of On-Scene Coordinator discretion by limiting its existing authorities and by requiring documentation of its decisions for accountability;
- shifting the burden of responsibility (liability) to product manufacturers and industry plan holders to disclose product components and provide accurate, timely, and relevant information about a product's intended use, parameters (limitations) of use, environmental fate, and potential impacts to human health or the environment; and
- providing the public with a process to initiate removal of products.

The current standards create an opportune moment to make it right *now*, before the next major spill—to significantly improve national disaster preparedness from the bottom up.

The new rules have triggered mandatory reviews of preauthorization plans and Area C-Plans with the participation of and approval by Area Committees involving state and local planners. The mandatory review must consider the new information regarding product use, provided by manufacturers and plan holders, and this information must be accurate. The mandatory review must also consider new and relevant information about a product's impacts or potential impacts to human health or the environment, of which plenty is available, with the bulk of it showing that chemically-dispersed oil (oil combined with dispersants) is causally linked with long-term harm to people and wildlife—and that harm is greater than the harm from oil alone.

The new rules also triggered a mandatory review of Regional C-Plans because many currently serve as combined region-area contingency plans under the outdated rules. Since Regional C-Plans include guidance policies such as preauthorization plans for dispersant use, these plans must also be updated, based on consideration of the new information on parameters of use and impacts to human health and the environment, noted above.

In the process of completing these reviews, there is an *implied mandatory requirement* for RRTs to work cooperatively with local, state, and Tribal partners to co-establish and co-implement Area Committees, which are required to approve the updated final plans—but which currently do not exist as autonomous local/state infrastructure at the first level of disaster response. The reviews are extensive as much of the information is new. Working together through it all presents an opportunity to get everyone on the same page with the same understanding and purpose. It is a perfect time to spin off autonomous Area Committees. Creating these key infrastructure components also addresses a critical gap in national preparedness.

It is also a perfect time for local, state, and regional planners to *proactively adopt* precautionary guidelines in preauthorization plans, Area C-Plans, and Regional C-Plans during the transition period to restrict use of conditionally-listed products that may or are known to be extremely harmful to people and wildlife when used during oil spill response.

Since supplemental testing and information will be needed to support informed decisions by the planners, it is also perfect timing to *consider the role of RCACs* during the review process and moving forward to provide EPA with the area- and ecosystem-specific information to enforce its duty to determine quantities of dispersant (or other products) that can be used safely in waters and with oils of intended use. EPA could work cooperatively with state and regional planners to create and support a national network of RCACs for each RRT.

Given that impacts to human health are now on the table to consider with the new rules, this makes *evidence-based monitoring of public health* now a consideration for planning and review purposes, especially from the perspective of state and local governments that have jurisdiction over public health matters. To the extent that the laws allow, it also makes evidence-based worker health monitoring and surveillance a consideration for planning and review purposes. Several RRTs have already moved in this direction and provide models of how to do this.

And finally, at this critical juncture, Congress may establish and/or fund what is needed, such as Area Committees and RCACs, and provide oversight to make sure the federal agencies are implementing laws as intended—not 30 years later, but now as it is happening.

For all the above reasons, this is an opportune moment to significantly improve national disaster preparedness by building critical local and state capacity and developing state-of-the-art contingency plans. Such actions would mitigate harm to people and wildlife in future oil-chemical disasters, including the long-term harm that has historically followed these events.

The nation's first responders and the public rely on government to protect people's health and safety during emergencies that involve oil and other hazardous pollutants. EPA's new rules and tools provide the means to hold corporations accountable for harm.

It is time to seize this moment and change history. *Carpe diem!*