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Dispersant Scrutiny Mirrors Larger Debate Over U.S. Chemical Control Policy

by Charles L. Franklin

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Dispersants have been a critical oil spill response tool for decades, used in at least 66 documented spill responses worldwide, and 25 spills in or near U.S. waters.[1] Oil dispersants can reduce the coastal impact from a spill, hasten the post-spill recovery process for affected waters and shores, and reduce the need to resort to other, more damaging response methods. For most of their history, dispersants have held a low profile in the public consciousness. Dispersants remained technical footnotes to the spills themselves—until the Deepwater Horizon disaster.

At times during the months-long response in the Gulf, public and media scrutiny of dispersant use rivaled the attention given to the spreading oil. This scrutiny likely resulted, in part, from the unprecedented size and scope of the Deepwater Horizon release and the use of dispersants at unprecedented depths and untested conditions. At a more fundamental level, however, concerns regarding federal dispersant policy reflect the tensions that have been raised with federal chemical control policy as a whole.

The chemicals used in dispersants, like so many of the chemicals used in commercial, industrial, and personal products, have become critical—even indispensible—to modern society. Few members of society have the option, let alone the inclination, to go chemical-free in their personal, work, or school lives. At the same time, few members of society have the resources to assess independently the risk of each chemical product they use or encounter in daily life. Instead, individuals rely upon their government systems to regulate the import, manufacture, and use of chemicals throughout the marketplace and economy, and to provide relevant information about the risks and benefits. As confidence in such regulatory systems dissipates, it should come as no surprise that concerned stakeholders call for more structure and certainty in the regulatory process.

This Article reviews the recent scrutiny of oil spill dispersants in the context of the larger and more long-standing debate over whether and how to update the nation's core chemical control law and policies, as embodied in the Toxic Substances Control Act (TSCA).[2] The Article then identifies some of the likely policy issues reform advocates will have to address to make progress on either issue.

I. Historical Use and Regulation of Dispersants

Chemical dispersants break down spilled oil into smaller drops that mix vertically and horizontally in the water column, allowing microscopic organisms to act to degrade oil within the droplets and reduce the risk of adverse impacts to coastal resources.

Despite an ignominious introduction to the world stage during the response to the *Torrey Canyon* tanker spill off the English Coast in 1967,[3] early dispersant use showed enough promise that the U.S. Congress included dispersant provisions in the 1970 Amendments to the Clean Water Act (CWA).[4] In addition to requiring development of a national contingency plan (NCP) to address the risk of future releases of oil and other hazardous substances, the new law directed the U.S. Environmental Protection Agency (EPA) to work with states to: (1) identify "dispersants and other chemicals" for use in NCP response efforts; (2) identify the waters in which such dispersants and chemicals may be used; and (3) determine the quantities of such dispersant or chemical that can be used

1. *Incident News*, National Oceanic and Atmospheric Administration (NOAA), Office of Response and Restoration, http://www.incidentnews.gov/ (last visited Sept. 14, 2010) (searching reported incidents in which dispersants were evaluated and used).

2. 15 U.S.C. §§2601-2692, ELR Stat. TSCA §§2-412 (1976).

3. U.S. Dept. of Transportation, U.S. Environmental Protection Agency (EPA), Doc. No. OSWER 89VALDZ, The Exxon Valdez Oil Spill: A Report to the President, (May 1989), app. D-23 [hereinafter Exxon Valdez Report] (discussing the failed use of dispersants in the *Torrey Canyon* spill); National Research Council, Committee on Effectiveness of Oil Spill Dispersants, Using Oil Spill Dispersants on the Sea 6-7 (1989) (discussing *Torrey Canyon* spill); *Incident News*, *supra* note 1 (identifying eight spills between 1967 and 1971 in which dispersants were evaluated and applied as part of the spill response effort).

4. 33 U.S.C. §§1251-1387, ELR Stat. FWPCA §§101-607 (1970).

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safely in such waters.[5] In 1975, EPA promulgated its initial dispersant review requirements, establishing the first list of dispersants and identifying basic data requirements for substances proposed for inclusion on the list.[6]

Fifteen years later, in response to the *Exxon Valdez* spill, Congress passed the Oil Pollution Act (OPA) of 1990[7] to address perceived faults in the current oil spill-response framework.[8] The OPA increased federal authority and flexibility in responding to spills and imposed additional responsibilities on companies and federal, state, and local governmental authorities to work together to develop contingency plans for responding to worst-case oil spills and other release scenarios, including contingency provisions for the use of dispersants.[9] EPA updated its dispersant regulations in 1994 to reflect this increased federal authority and related contingency planning obligations.[10]

II. Dispersant Regulation Today

While Congress has amended NCP requirements through several subsequent statutory amendments, today's framework for regulating oil spill dispersants remains relatively unchanged from the process codified in 1975. Manufacturers submit data on the composition, chemistry, physical properties, efficacy, and acute toxicology of proposed dispersants as a precondition of EPA adding dispersant products to a centralized schedule of potential spill-response chemicals.[11] EPA reviews this data to assess the efficacy of the product in different kinds of oil and to characterize the toxicity of the product. If the proposed product meets EPA's minimum efficacy threshold for the proposed types of use conditions and the producer has submitted the required supporting data, EPA will add the product to the Dispersant Schedule, along with information disclosing its relative efficacy under various test conditions and general estimates of its acute toxicity derived from standardized tests using shrimp and small fish.[12]

Once a product is listed on EPA's NCP Dispersant Schedule, Regional Response Teams (RRTs) composed of federal, state, and local officials within established regional boundaries can "preauthorize" the use of specific scheduled dispersants for use in the event of a release by incorporating dispersant use scenarios into regional contingency plans (RCPs) and area contingency plans (ACPs) that, in the event of a release, allow federal On-Scene Coordinators (OSCs) to select and use certain response tools without further consultation.[13] If site conditions do not match the conditions anticipated in a product's preauthorization, the OSCs can still select a scheduled product for use, but must first consult with relevant federal, regional, and state officials.[14] If, in the judgment of the OSC, the use of a specific product is necessary to prevent or substantially reduce a hazard to human life, an OSC can even select products not listed on the NCP Product Schedule.[15] In short, preauthorization is an important step in the process of providing future responders with options in the case of an emergency. At the end of the day, however, it is the government official, serving as the OSC, and the other federal, state, and local officials involved with regional and local planning that make the real-time determinations and risk-benefit balancing calculations regarding what products will be used when.

III. Chemical Control Policy Under TSCA

Like federal dispersant policy, regulation of commercial and industrial chemicals and their precursors is a relatively recent phenomenon, first formalized with TSCA's passage in 1976.[16] TSCA authorized EPA to regulate chemical substances manufactured in, or imported into, the United States that "present an unreasonable risk of injury to health or the environment, and to take action with respect to chemical substances and mixtures which are imminent hazards."[17] TSCA requires manufacturers and importers to notify EPA before manufacturing or importing "new" chemical substances, provide basic information about the substances' physical and chemical properties, submit any test data "in the possession or control of the applicant," and describe any other data con-

5. 33 U.S.C. §1321(c)(2)(G).
6. National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule, 40 Fed. Reg. 6281, 6298 (Feb. 10, 1975) (codified at 40 C.F.R. §300.115) [hereinafter Contingency Plan] (establishing rules for use of "Chemicals and Other Additives to Remove Oil and Hazardous Substances Discharges").
7. 33 U.S.C. §§2701-2761, ELR Stat. OPA §§1001-7001 (1990).
8. In the hours after the spill, for example, inadequate stockpiles of dispersants or application equipment delayed the deployment, and potential value, of dispersants in the initial response effort. Exxon Valdez Report, *supra* note 3, at 17.
9. *See, e.g.,* OPA §1011 (Consultation on Removal Actions), §4202 (National Planning and Response System).
10. National Oil and Hazardous Substances Pollution Contingency Plan, 59 Fed. Reg. 47384 (Sept. 15, 1994).
11. 40 C.F.R. §300.900-920 (1982). *Id.* §300 app.
12. *Id.* §300.920(a); U.S. EPA, NCP Product Schedule Notebook (8/23/2010).
13. Exec. Order No. 12777, 56 Fed. Reg. 54757 (Oct. 22, 1991) (designated 13 preexisting RRTs to serve as the initial Area Committees for the purpose of NCP planning).
14. 40 C.F.R. §300.910(b).
15. *Id.* §300.910(d).
16. While TSCA is the primary federal authority for regulating the *manufacture and import* of commercial and industrial chemicals as a general matter, the chemical industry is governed by an extensive interlinkage of federal and state statutes implemented by multiple federal and state regulatory agencies. Indeed, virtually every major environmental and public health statute includes provisions that pertain to *some aspect* of the chemical industry life cycle. For example, the Clean Air Act regulates air pollutant emissions from chemical industry stationary sources and regulates the chemicals used in fuels; the Clean Water Act establishes effluent standards for chemical industry stationary sources; the Safe Drinking Water Act establishes maximum contaminant levels for industrial chemicals, agricultural chemicals, and breakdown products in drinking water; the Resource Conservation and Recovery Act establishes standards for the treatment, storage, and disposal of hazardous waste generated during the manufacture and use of chemicals and chemical-containing products; and the Occupational Safety and Health Act establishes permissible exposure limits and hazard communication requirements for chemical industry workplaces.
17. Pub. L. No. 94-46, 100 Stat. 2898 (1976) (codified at 15 U.S.C. §§2601 et seq. (1976)).

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cerning the environmental and health effects of the substance to the extent it is known to, or reasonably ascertainable by, the applicant.[18] TSCA also regulates "existing chemicals"—those already in commerce in 1979 or subsequently added to the TSCA inventory following EPA premanufacture notice and review.[19]

TSCA grants EPA authority under multiple provisions to obtain chemical and use data needed to carry out its regulatory obligations.[20] Where EPA identifies an unreasonable risk to human health and/or the environment from a new or existing chemical, TSCA authorizes EPA to take reasonable action to mitigate such risks.[21] TSCA also provides manufacturers with protections against the disclosure of trade secrets and other confidential business information (CBI) submitted in support of a regulatory review.[22] The protections ensure that EPA obtains the data it needs to carry out its risk management responsibilities without undermining the intellectual property and competitive interests of the regulated industry's closely guarded intellectual property.[23]

At the product level, TSCA largely works in tandem with other, more targeted product-specific laws. Even in the case of dispersants, which are regulated at the product level under the CWA, TSCA does play a regulatory role. Before any manufacturer may incorporate a chemical substance into its product, the manufacture must ensure that the substance is already listed on EPA's TSCA Inventory of existing substances (or submit a premanufacture notice to EPA providing information on the substance, its proposed uses, and available health and safety data).[24] If EPA has previously identified the need for risk mitigation measures in association with certain uses of that chemical, the manufacturer will have to comply with those requirements in any relevant use of the product.[25] If EPA determines that a particular substance in a dispersant product may pose unreasonable risks to human health or the environment, EPA can use its rulemaking authority to seek additional health and safety information on the product and/or impose appropriate risk mitigation measures, from labeling to use restrictions, as necessary.[26] Such restrictions could, in theory, extend to restrictions on the use of substances of concern in oil spill-response chemicals like dispersants.

While TSCA was groundbreaking when passed, it has fallen short of expectations for many critics who assert, inter alia, that EPA lacks the legal authority needed to collect the requisite data or require the requisite risk mitigation measures to manage the risks of chemical substances and chemical-containing products manufactured in, or imported into, the United States.[27] Along with these substantive concerns, TSCA's critics commonly argue that the statute's protections for confidential business information submitted by manufacturers go too far, interfering with the public's "right to know" which substances are being used in, and released into, the natural and human environment, and how its government is managing the risks of these substances.[28]

Despite these concerns, previous efforts to amend TSCA's core regulatory approach have failed. While Congress has added five new titles addressing substance-specific issues such as asbestos, lead-based paint, and, most recently, formaldehyde-containing construction materials, the core regulatory framework for the 80,000 existing and thousands of new chemicals in U.S. commerce remains largely unchanged.[29]

IV. The First Winds of Change

As President Barack Obama entered the White House in early 2009, industry groups, environmentalists, and policymakers appeared to coalesce around a consensus view that federal chemical control policy was outdated, if not broken. Industry groups, long opposed to any tinkering with the risk-benefit balancing approach embodied in TSCA, saw TSCA reform as a way to curb the growth of state chemical control efforts; leverage the data being developed for Europe's new Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) regulation; and combat the public distrust in the current product regulatory system. Environmental advocacy groups, long advocates for tightening the controls on new and existing chemicals, saw the change in Administration, the presence of Democratic majorities in both chambers of Congress, and Europe's trailblazing enactment of REACH as indications that TSCA reform's time had come.

Between January 2009 and early 2010, the Obama Administration had outlined "Essential Principles for Reform of Chemicals Management Legislation,"[30] the U.S. Senate and the U.S. House of Representatives had held multiple hearings on TSCA reform[31] and, for the first time ever, panels of environmental, industry, and government witnesses appeared to

18. *Id.* §2604(d).
19. *Id.* §2605.
20. *See, e.g., id.* §§2603-2605, 2607(b), 2614.
21. *Id.* §§2604-2606.
22. *Id.* §2613.
23. *Id.*
24. *Id.* §2604(a).
25. *Id.* §2614.
26. *Id.* §2605(a)-(d).
27. *See, e.g.*, *Actions Are Needed to Improve the Effectiveness of EPA's Chemical Review Program*: *Before the S. Comm. on Envtl and Public Works*, 109th Cong. 2 (2006) (statement of John B. Stephenson, Director, Natural Resources and Environment) at 1-2.
28. *See, e.g.*, Richard A. Denison, *Ten Essential Elements in TSCA Reform*, 39 ELR 10020, 10026 (Jan. 2009).
29. *See* Asbestos Hazard Emergency Response Act of 1986, Pub. L. No. 99-519, 100 Stat. 2970 (1986) (codified at 15 U.S.C. §§2641-2656 (1986)); Radon Education and Control Programs, Pub. L. No. 100-551, 102 Stat. 2755 (1988) (codifying indoor radon abatement provisions at 15 U.S.C. §§2661-2671 (1988)); Lead-Based Paint Exposure Reduction Act, Pub. L. No. 102-550, 106 Stat. 3924 (1992) (codified at 15 U.S.C. §§2681-2692 (1993)); Energy Independence and Security Act of 2007, Pub. L. No. 110-140, 121 Stat. 1640 (2007) (codifying provision to promote "Healthy, High Performance Schools" at 15 U.S.C. §§2695-2695d (2007)); Mercury Export Ban Act of 2008, Pub. L. No. 110-414, 122 Stat. 4341 (2008) (amending 15 U.S.C. §§2605 and 2611 to address mercury export issues); Formaldehyde Standards for Composite Wood Products Act, Pub. L. No. 111-199, 124 Stat. 1359 (2010) (codified at 15 U.S.C.S. §2697 (2010)).
30. U.S. EPA, Essential Principles for Reform of Chemicals Management Legislation (Sept. 29, 2009), *available at* http://www.epa.gov/opptintr/existingchemicals/pubs/principles.html.
31. For a list of hearings held in the 111th Congress on core TSCA reform, see American Bar Association, Pesticide, Chemical Regulation, and Right to Know (PCRRTK) Committee, Practitioner's E-Reference on Reauthorizing the Toxic Substances Control Act (Aug. 5, 2010) (PCRRTK TSCA E-Reference), *available at* http://www.abanet.org/environ/committees/pesticides/.

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agree on the need to "modernize," if not "reform," TSCA.[32] In mid-April 2010, the House and Senate released separate draft bills proposing to radically overhaul U.S. chemical control policy.[33] These bills gave EPA significantly greater authority over new and existing chemicals, raised the regulatory standard and shifted the burden to industry to demonstrate the safety of new and existing chemicals, and required manufacturers to submit extensive health and environmental dossiers supporting safety assertions, often prior to commercialization.[34] The bills also limited the confidentiality protections available to manufacturers, reflecting the drafters' strong preference for a policy emphasizing public disclosure over business sensitivity. While the focus was on general chemical policy rather than dispersants, these proposals, by their breadth and scope, had the potential to shake up the dispersant industry every bit as much as other chemical sectors.

In short, while chemical control reform remained well back in the pack in the race for lawmaker attention, the issue had generated the most serious dialogue in years. Policymakers and stakeholders from all perspectives moved from offering general consensus statements on the need to revisit TSCA to the difficult job of identifying and resolving the divisive legal, policy, and political issues implicit in comprehensive chemical control reform.

V. Dispersants Take Center Stage

On April 20, 2010, only days after the House and Senate released competing TSCA reform bills, an explosion and fire on the Deepwater Horizon drilling platform triggered the largest oil spill in U.S. history, initiating a tragedy that would take the lives of 11 people and release more than 4.9 million barrels of crude oil into the center of the Gulf of Mexico.[35] The unprecedented scope of the spill; its risk to the waters, coastal areas, and economies of the Gulf states; and the initial concerns that spreading oil might even reach states along the eastern seaboard catapulted the spill to the top of the media and political radar screen.[36]

The spill also directed a spotlight onto certain elements of federal chemical control policy. As responders released more and more dispersants into the Gulf, policymakers and advocacy groups started to question the impact of such chemicals on the Gulf's complex ecosystems, the data supporting their safety, and the basis by which responders had selected the specific products used in the response effort.[37] Environmental groups questioned the transparency regarding the identity and makeup of the dispersants being used in such high volumes.[38] These concerns prompted hearings in both the House[39] and Senate[40] during the spring and summer of 2010. Ultimately, both chambers introduced bills addressing dispersant regulatory issues raised by the Gulf spill response.[41] The bills imposed additional data requirements on dispersant products proposed for listing on the federal dispersant schedule, required EPA to consider this information in making regulatory decisions, and mandated public disclosure of information supporting the oil spill dispersants used in federal response actions.[42] In short, the bills addressed, at the product level, many of the same issues commonly raised in TSCA reform debates at the substance level.

In the course of the controversy, dispersant manufacturers agreed to release confidential product ingredient information (a step that required them to waive their confidentiality claims under TSCA), and EPA conducted additional health and safety testing of the dispersants, stepping well beyond the standard requirements under its existing regulations.[43] The test results generally validated the Agency's earlier assessments and assumptions regarding the relative toxicity of the dispersants used in the response.[44] These actions, combined with the ultimate cessation of oil from the Macondo well and the cessation of dispersant use in the response effort, reduced the intensity of public interest on federal dispersant policy. Nevertheless, the intense public, media, and legislative scrutiny dispersants received during the early months of summer

32. Sara Goodman, Greenwire, *Industry Group Calls for "Modernization" of Toxic Chemical Law*, N.Y. Times Green Inc. Blog, Feb. 27, 2009, http://www.nytimes.com/gwire/2009/02/27/27greenwire-industry-group-calls-for-modernization-of-toxic-9908.html.
33. *See* Safe Chemicals Act of 2010, S. 3209, 111th Cong. (1st Sess. 2010); House Discussion Draft: Toxic Chemicals Safety Act of 2010 (released Apr. 15, 2010) (amended and subsequently introduced as Toxic Chemicals Safety Act, H.R. 5280, 111th Cong. (1st Sess. 2010) (TCSA-2010). Links to each bill plus related documentation are available as part of the PCRRTK TSCA E-Reference.
34. *Id.*
35. Deepwater Horizon Unified Command, U.S. Scientific Teams Refine Estimates of Oil Flow From BP's Well Prior to Capping (Aug. 2, 2010).
36. *See, e.g.,* Paul Voosen, Greenwire, *NOAA: Oil Tendril "Likely" Headed Into Loop Current*, N.Y. Times, May 18, 2010.
37. *See, e.g.*, Elisabeth Rosenthal, *In Gulf of Mexico, Chemicals Under Scrutiny,* N.Y. Times, May 5, 2010; Press Release, State of Louisiana, *DHH, DEQ, LDWF Secretaries Send Letter to BP Outlining Concerns, Requesting BP Release Information on Dispersants* (May 8, 2010), *available at* http://emergency.louisiana.gov/Releases/05082010-DHH-DEQ-LDWF.html; Leslie Kaufman et al., *Worry About Dispersant Rises as Men in Work Crew Complain of Health Problems,* N.Y. Times, May 27, 2010, http://www.nytimes.com/2010/05/28/science/earth/28workers.html.
38. Environmental Defense Fund (EDF), *Oil Dispersants in the Gulf: A Vast Uncontrolled Chemical Experiment: Dispersants Are Being Used With Too Little Transparency and Insufficient Testing* (June 22, 2010), http://www.edf.org/article.cfm?contentID=11162; Richard Denison, EDF, *Does Dispersant Toxicity Count? No Toxicity Standard Limits EPA's Listing of Oil Spill Dispersants (*June 24, 2010).
39. Elana Schor, Greenwire, *EPA Chief Calls for More Authority Over Dispersants*, *N.Y. Times* website, July 15, 2010; *Hearing on Combating the BP Oil Spill: Hearing Before H. Comm. on Energy and Commerce, Subcomm. on Energy and Envt.*, 111th Cong. (1st Sess. 2010), *transcript available at* http://energycommerce.house.gov/documents/20100527/transcript.05.27.2010.ee.pdf.
40. *Hearing on Use of Dispersants in Response to the Oil Spill: Hearing Before S. Appropriations Comm., Subcomm. on Commerce, Justice, Science, and Related Agencies*, 111th Cong. (1st Sess. 2010); *Oversight Hearing on the Use of Oil Dispersants in the Deepwater Horizon Oil Spill: Hearing Before S. Full Comm. and Subcomm. on Oversight*, 111th Con. (1st Sess., 2010).
41. H.R. 5608, Better Oil Spill Response Plan Act (introduced June 25, 2010) (BOSRPA-2010); S. 3661, The Safe Dispersants Act (introduced July 28, 2010) (SDA-2010).
42. *Id.*
43. Elana Schor, Greenwire, *Ingredients of Controversial Dispersants Used on Gulf Spill Are Secrets No More*, N.Y. Times, June 9, 2010; *Press Release: EPA Releases Second Phase of Toxicity Testing Data for Eight Oil Dispersants* (Aug. 2, 2010); U.S. EPA, Dispersed Oil Toxicity Testing (July 31, 2010); U.S. EPA, Office of Research and Development, Comparative Toxicity of Louisiana Sweet Crude Oil (LSC) and Chemically Dispersed LSC to Two Gulf of Mexico Aquatic Test Species (July 31, 2010).
44. *Id.*

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served notice that dispersant products would no longer be relegated to footnote status.

VI. Looking Forward

Notwithstanding the sound and fury of the hearings and press statements on chemical and dispersant reform during 2009 and 2010, it remains unlikely that policymakers will attempt to pass, let alone succeed at passing, chemical or dispersant legislation in the waning days of the 111th Congress. Public angst about chemical product safety may still be high in some pockets, but consensus solutions to the failings of the current policies remain elusive and, with the Gulf spill now contained, dispersant regulation, like broader chemical control reform, lacks the urgency needed to earn priority treatment in the current economic and political landscape.

Instead, the hearings, stakeholder meetings, and legislative materials introduced during the 111th Congress will serve as preamble in the legislative history of future efforts, perhaps in the next Congress, to pass comprehensive chemical control reform or dispersant legislation. If so, policymakers will face the same challenges, trade offs, and competing priorities legislators faced during the 111th Congress, but likely with smaller voting margins in the House and Senate to move a contentious bill forward. In this political environment, absent a sudden event or crisis that thrusts chemical safety back into the political spotlight, legislation will only be successful if it addresses concerns raised by stakeholders on all sides of the chemical control issue, and addresses stakeholders' divergent goals. Successful legislation must appeal to stakeholders eager to strengthen federal oversight of chemicals and chemical-containing products such as dispersants, and it must also appeal to industry stakeholders eager to maintain and advance the country's leadership in chemical, technological, and economic innovation.

Policymakers will also need to recognize the inherent-risk trade offs that exist within contemporary society and in every sector of the U.S. economy. If policymakers seek legislation requiring zero-risk, 100% scientific certainty, and unlimited disclosure of confidential business information for all chemicals in commerce, they will do so at the expense of U.S. leadership in the global chemical industry and, in the 21st century, technologies that rely on chemical and material innovations for success (e.g., renewable energy, energy-efficient materials).[45] On a more personal level, policymakers will find themselves at the close of the next Congress with the same outcome predicted for this one—a desk covered with draft bills, hearing testimony and constituent letters, and the same chemical control and dispersant policies established in the 1970s.

45. *See, e.g.,* Charles L. Franklin, *Congressional Hearing Schedule Highlights Potential for Conflicting Policy Priorities*, ClimateIntel.com, Feb. 24, 2009.