



[THE ENVIRONMENTAL ELEMENT]

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# Simplification of oil spill prevention, response compliance

In the year 1861, Charles Minard drew what many still regard as the finest statistical map ever made.

"Of all the attempts to convey the futility of Napoleon's [invasion of] Russia and the utter destruction of his Grande Armée in the last months of 1812, no written work or painting presents such a compelling picture as does Minard's graphic," the Center for Spatially Integrated Social Science (CSISS; University of California) said on its Web site.

You may wonder what Napoleon and war maps have to do with environmental regulation. There's no literal connection, but the principles underlying Minard's 150-year-old example can tame the information overload that characterizes compliance. Minard's diagram succeeds because it leverages human visual processing strengths. Pictures present multiple ideas simultaneously, allowing us to perceive relationships that might not have been obvious had we received the same information sequentially through written text or verbal instruction, as is usually the case with regulation.

The graphic displayed below does not approach the caliber of Minard's work, but it condenses the proverbial "thousand words"

by depicting the combined scope of the oil spill prevention and response regulations with which Texas operators must comply. These programs have been characterized by 30 years of complicated evolution. Multiple state and federal agencies claim authority, and their jurisdictions are based on both geography and operations. Each agency maintains multiple regional offices, none of which coincide with those defined by co-regulators. The degree of regulatory complexity is so great that, under certain conditions, oil could pass through six regulatory jurisdictions in as many minutes.

Operators need to maintain a strong working knowledge of this complexity for several reasons. First, the approval process is exacting (e.g., the Facility Response Plan [FRP] programs run by both the Environmental Protection Agency [EPA] and the U.S. Coast Guard [USCG]) and, at times, prevailing enforcement programs focus only on certain regulations (e.g., the Spill Prevention, Control & Countermeasure [SPCC] inspection process employed by EPA Region 6). Second, in an emergency, operators need instant access to critical information, and the sheer volume of their paperwork

can hamper retrieval speed unless they know their materials well. Third, operators need to anticipate and understand regulatory reporting frameworks when spills occur.

Memorizing all that detail can be a monumental task, but operators are not alone in suffering because of programmatic redundancy. State and federal agencies lose credibility when regulations "snowball." The reaction from the regulated community, when they perceive the extent of the redundancy is, "You regulators demand that our spill response plans be perfect, but this jurisdictional morass is the best you can offer us in return?!"

It is difficult for operators to keep track of the regulations that govern them, but it is even more difficult for agencies to grasp the combined management challenges imposed by each others' programs, because intra- and interagency coordination are both rare. The Integrated Contingency Plan (ICP, Chapter 61 of the Federal Register, page 28642) initiative described commonalities among seven stand-alone federal emergency response planning regulations, but program consolidation has not occurred. Regulators typically do not receive formal training with

respect to competing programs. With small operating budgets, agencies struggle to run their own programs, and they lack the resources that would be needed to evaluate the impact of those run by their peers.

Perhaps one day, regulatory graphics could help to generate ideas regarding com-

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pliance streamlining, just as Minard's graphic provides ideas on how to avoid catastrophic military failures. In the meantime, we encourage the use of our example graphic as a general reference and training resource.

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