

OIL SPILL EVENTS
PROMINENT FRAMES AND POLICY IMPLICATIONS

by
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LIST OF ABBREVIATIONS

The following table displays the various abbreviations and acronyms used throughout the thesis along with their meaning. The page on which each abbreviation is first used is the final column.

Abbreviation	Meaning	Page
BOEMRE	Bureau of Ocean Energy, Management, Regulation, and Enforcement	21
BP	British Petroleum	1
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	11
CEQA	California Environmental Quality Act	11
CWA	Clean Water Act	11
DRC	Disaster Research Center	9
DWH	<i>Deepwater Horizon</i>	1
EPA	Environmental Protection Agency	10
FOSC	Federal On-Scene Coordinator	38
GOO	Get Oil Out	27
IMO	International Maritime Organization	36
INPO	Institute of Nuclear Power Operations	54
MMS	Minerals Management Service	1
NCP	National Oil and Hazardous Substances Pollution Contingency Plan	11
NEPA	National Environmental Policy Act	11
NRC	Nuclear Regulatory Commission	54
NRF	National Response Framework	40
OCSA	Outer Continental Shelf Act	11
OPA	Oil Pollution Act	11
OSLTF	Oil Spill Liability Trust Fund	11
PWSRCAC	Prince William Sound Regional Citizens' Advisory Council	34
RP	Responsible Party	23
RRT	Regional Response Team	20
USCG	United States Coast Guard	33
USGS	United States Geological Survey	18

ABSTRACT

The purposes of this thesis are twofold; to gain insight through the lens of framing as to how the framing of a spill influences policy change and discern how competing frames affect policy. The second is to offer new recommendations to help bridge the safety gap the industry currently experiences, exposed by these three spills. For this study, three oil spills were chosen due to the considerable policy changes they invoked, the media attention they garnered, and their size; the *Union Oil's Platform A* blowout in Santa Barbara, California of 1969, the wreck of the *Exxon Valdez* of 1989, and the *Deepwater Horizon* blowout of 2010. To address these questions, multiple data sources were used to gain an understanding on how key stakeholders framed oil spills and analyze the resulting policy. A content analysis was performed for all three spills on scholarly articles, media articles, after action reports, court records, policy, and policy recommendations. This study also draws on in-depth interviews with key informants that were intimately involved in at least one of the three spills. The study findings suggest that framing does significantly affect the policy that results. In *Union Oil's Platform A*, the framing was overwhelmingly suggesting that the spill was an environmental and ecological tragedy which could not happen again. The *Exxon Valdez* is essentially the story of three competing frameworks, eventually giving way to a regulatory framing of the event. The *Deepwater Horizon* also experienced three competing frames; there was a framing of the event as a slow-onset environmental catastrophe, which coincided with the framing that focused on the economic losses, and eventually the framing of the spill as failure in the regulatory structure. The implications of competing frameworks on policy in these spills are also discussed.

Chapter 1

BACKGROUND

Introduction

In the wake of three large oil spills in the U.S. with strikingly similar official causes, three very different sets of policies and solutions resulted. The blowout of *Union Oil's Platform A* in Santa Barbara (referred to in this paper as *Platform A*) was partially the fault of a waiver received from MMS (K. C. Clarke & Hemphill 2002). The resulting legislation focused on reducing future environmental threats, effectively banning new drilling off the coast of California. The Alaska Oil Spill Commission (Referred to as the Alaska Commission) officially attributed the wreck of the *Exxon Valdez* to failed policies and relaxed standard practices (Alaska Commission 1990; iv). State and federal legislation after this spill focused on improving the regulatory powers of both the state and federal government. Following the *Deepwater Horizon* blowout, the National Commission on the BP Deepwater Horizon Oil Spill (referred to as the *DWH* Commission) found systemic failure in risk management and a lack of adequate regulations and policy to be among the root causes (*DWH* Commission 2011; ix). The federal government split up the regulatory body governing offshore drilling following this spill.

Previous work in the disaster field shows that framing operates in disasters as a process to select important aspects from focusing events, set agendas, and select policy solutions to problems that allowed the disaster to take place (Birkland 2007; Entman 1993). Conversely,

research on reoccurring disasters, the change in their frame, and their policy solutions is absent. The increasing demand for oil and rapid rebound of the industry and drilling operations in the Gulf necessitates this kind of research. If the intent of disaster policy is to reduce the human and economic impact of disasters then research on policy development is necessary to provide knowledge on the process as a whole to better improve the development and implementation of policy. This research effort reviews these three spills, discerns the frames that emerged, and analyzes the policy that resulted to determine which frame (or frames) influenced policy. This question is addressed through a mixed-methods approach involving the following research techniques; literature review, in-depth interviews and informal conversations with key stakeholders as well as a review of policy, after action reports, and media articles.

Literature Review

Disaster Policy

To discuss oil spill policy, it is first necessary to define policy. Schneider and Ingram (1997) define policy as “instruments through which societies regulate themselves and attempt to channel human behavior in acceptable directions.” Kraft and Furlong (2009) then define public policy as “a course of government action or inaction in response to public problems.” When commenting on the purpose and power of policies, Sabatier and Jenkins-Smith (1993) stated that policies;

involve value priorities, perceptions of important causal relationships, perceptions of world states (including the magnitude of the problem), perceptions of the efficacy of policy instruments, and so on.

They then went on to say that if one could understand the policies, one could assess the influences of different actors on the policy.

Policies are set in policy domains. Burstein (1991) defines policy domains as “components of the political system organized around substantive issues.” These domains can range from domains focused on issues such as maritime concerns to earthquakes and oil spills and contain participants who have little overlap or little in common (Birkland 2007; 8). Domains that deal with disasters, as put by Birkland (2007), generally are fairly inactive until a large event occurs. This also leads to these domains progressing slower than other domains, due to the infrequency of large events (Birkland 2007; 7). To take this a step further, Birkland (1997) called policy change that resulted from a single occurrence “event-related policy change,” in which that event is known as a focusing event.

Birkland (1997) defined a focusing event as:

an event that is sudden, relatively rare, can be reasonably defined as harmful or revealing the possibility of future harms, inflicts harms or suggest potential harms that are or could be concentrated on a definable geographical or community of interest, and that is known to policymakers and the public virtually simultaneously.

Birkland (1997) applied the concept of focusing events to disasters and found that these events result in an increase in public attention paid to policy problems (such as oil spills). These events receive this attention because they are public examples of policy failures (Birkland 2007; 18). Larger events were typically found to receive more policy attention because they typically involved more failure; the assumption is that smaller events do not receive policy attention because they are effectively managed (Birkland 2007; 19). In this same work Birkland (1997) found that agenda-setting heavily dependent on the physical aspects of the disaster (whether it was natural or technological) as well as whom the disaster and the policy affects.

Issue Attention Cycle

Following any disaster of a large enough magnitude there is an inevitable call for change. State Representatives demand policy changes to better address risk. All parties involved develop reports detailing where the current system failed and what course of action will prevent another similar event. Response groups purchase new equipment to enhance capabilities. Programs are developed to help better educate and prepare responders and affected communities. For many reasons this ideal scenario of lasting, resilient change rapidly loses steam. Personnel changes and new leadership often does not see the mitigation measures as a necessary priority. Insufficient funding leaves only the unpopular option of raising taxes to better prepare for the next disaster. Unfortunately, many times another disaster strikes and the rest of the nation, along with their elected leaders, loses interest and fails to formulate, adopt, and implement the changes necessary to prevent a repeat of the same type of disaster.

This phenomenon, known as the issue-attention cycle, is a well-documented process in the realm of environmental policy (Downs 1972). This concept is composed of five stages that are almost always present when an environmental problem occurs and vary in duration due to the nature of the situation and the amount of media attention given to the particular issue. Sylves (2008) adapted this process to explain the development of disaster policies. In first stage the conditions for the disaster to occur may already exist but the public is either unaware or uninterested. During this stage, public interest groups are generally the only interested parties. In the second stage, the event has manifested (be it a natural or technological disaster) and solutions to divert the impending disaster or the reoccurrence of a disaster is demanded by the public and their representatives.

In the third stage, the cost of change becomes evident. The mitigation of the aforementioned event requires funding, which is often costly. This potential burden on the taxpayer leads to the fourth stage, in which policy makers and the public realize the sacrifices necessary to avoid the next impending disaster. Often, the change demanded in this stage overwhelms and slows the movement or another event garners the attention this event previously had. During the final stage the public has all but forgotten the disaster in question and little enthusiasm remains for the enactment of future policies. To some degree, however, small policy changes have become institutionalized in administrative or regulatory agencies, but they often have only minimal impacts on the major causative factors that produced the disaster (Sylves 2008; 10).

Framing

In the second stage of the issue-attention cycle, explanations of how and why the disaster took place develop, and stakeholders suggest possible solutions to these conditions. Researchers have long promoted the notion that policies do not have concrete deficiencies waiting for vigilant citizens or policy makers to discover. On the contrary, these issues are constructed and defined by stakeholders and interested parties following unfavorable events (Coburn 2006). Within the policy world, the defining of these events is referred to as *issue framing*. This process assigns meaning and creates the lens through which the event will be interpreted (Gupta 2008; 28).

This process is powerful within the policy world because it shapes how interest groups define what the issue was that lead to the disaster and also what is an acceptable solution (Knight 1999). Framing occurs from an individual level up to a group and societal level. For a frame to

garner attention and gain footing there must be frame bridging, in which individuals grasp onto a common perspective or set of grievances, leading to frame alignment and the potential for action. Personal experiences, open community and online forums, television portrayal of the event, and the creation of a shared language for discussing the event can create a long-lasting, resonating interpretive frame for the event in question (Sandstrom, Martin, & Fine 2002; 19).

Often there are competing interests at stake that lead to contradictory frameworks. National and federal legislators may be presenting the event in a way that garners them campaign attention or protects the economic interest of their constituents; environmental groups may present the event as a way to change practices with negative environmental effects; the media ultimately presents the issue in a way that engrosses audiences; while industry may try to underplay the impact of the event (Weiss 1989). Complete frame alignment within interested parties and key stakeholders, however, is unlikely and ultimately unnecessary. In the end, competing frameworks fight their wars on the political stage before lawmakers.

In this stage, inevitably, some concerns are brought to the forefront while other issues are disregarded, which unavoidably promotes solutions applicable to the problem defined by powerful or influential stakeholders (Weiss 1989). The result of this is crucial; the solutions chosen to remedy a problem, which often come in the form of legislation and regulatory change, depend on what the chosen frame suggests as the cause of the problem. The frame chosen often determines where the resources go following a disaster as well as what the resulting policy addresses. Even within a specific frame, multiple solutions may emerge, causing conflict and sometimes splitting that frame into smaller frames.

While there's a lack of research available on oil spill framing and its effect on policy, many studies have confirmed the link between framing and its affect following other disasters. The frame portrayed by the media often following a disaster is a panicked public with rampant looting and violence occurring. This is problematic, because sociologists who have investigated post-disaster behavior assert that society does not crumble following a disaster; in fact, following a disaster crime rates typically decline temporarily (Scanlon 2007). Following Hurricane Katrina news reports poured out of Louisiana, declaring that the area had spun into lawlessness, comparing it to an anarchistic state and a warzone. However, interviews later proved that media portrayed the scene in a grossly inaccurate way; many major news outlets retracted their articles contributing to the hysteria (Barsky 2006). Groups such as the National Guard and emergency responders altered their activities due to these rumors, thus rendering them less effective in areas that actually had needs. Paramedics did not enter certain areas of the city based on reports of violence that were determined to be baseless after the fact. A local sheriff called in the National Guard to assist him with a sniper, which turned out to be a leaky relief valve on a gas tank (Dwyer & Drew 2005). The impact of the way the media frames behavior after a disaster is also evident in the way legislation is used. In disasters, as seen in Louisiana following Katrina, the Governor can invoke the Insurrection Act of 1807, which allows the National Guard to perform the role of law enforcement during times of perceived lawlessness and looting following a disaster.

Studies by Kahneman and Tversky (1984) offered experimental data showing that the framing of an event significantly affected the solution chosen by the general public for a presented problem. Valkenburg et al. (1999) showed that the media used frames to keep audience

interest as well as to simplify and give meaning to events. They defined four important frames that the media most often uses; conflict, human interests, attribution of responsibility, and economic consequences. In a study by An and Growler (2009), disasters were clustered based on crisis typology and a statistical analysis of media framing of these events was performed. The results showed that the cause of the event had a significant effect on the framing by the media, and that preventable disasters typically used the attribution of responsibility and conflict frame.

Chapter 2

METHODOLOGY

This study utilized three methods of data collection in order to develop a full-spectrum image of the policy change enacted following the three spills in question and how this policy affected the industry and differing levels of governments. The methods used to gather the data required for this study included: a review of policy documents preceding and as a result of the each spill; an analysis of media articles surrounding each spill; and in-depth interviews with key stakeholders involved in each event.

Policy Identification

The process of policy review began in August of 2010, just four months after the *Deepwater Horizon* blowout occurred. Early in the process the review centered on scholarly articles obtained by the Disaster Research Center (DRC) library describing existing oil-related safety policies prior to the *Exxon Valdez* spill. In the next phase, scholarly articles and policy recommendations were reviewed that resulted from the *Exxon Valdez* spill. It was during this phase that I reviewed and selected *Spill: The Wreck of the Exxon Valdez* as the basis for analysis of new policies recommended following the *Exxon Valdez*. In this report the Commission developed 59 recommendations that fell into seven categories: 1-5 (5) Comprehensive Prevention Policy (all parties); 6-9 (4) Responsibilities of Industry; 10-27 (18) State Regulation

and Oversight: 28-37 (10) Federal Regulation and Oversight: 38-47 (10) Government Response Structure; 48-55 (8) Implementing the Response; 56-59 (4) Research and Development. Of the 59 recommendations presented by the Commission, eight were selected for analysis due to their applicability to platform incidents, such as the *Platform A* and *Deepwater Horizon* blowouts, and emergency response to large-scale marine oil-release incidents.

The eight recommendations selected for analysis are:

1. Recommendation 7: Government and industry should strive to adopt the best available standard technology in establishing performance standards.
2. Recommendation 34: The United States should pursue an aggressive policy in bilateral and international regulatory forums to demand safety improvements. The practice of deferring to international transportation safety standards in U.S. waters should cease. Environmental regimes established by state or federal government should apply to tanker or barge traffic under any flag in U.S. waters.
3. Recommendation 38: The spiller should not be in charge of response to a major spill. A spiller should be obligated to respond with all the resources it can summon, but the government should command that response.
4. Recommendation 40: The EPA is not adequately funded and staffed for oil spill prevention and response. Unless the agency receives sufficient resources, these functions should be delegated to the states or transferred to agencies better able to perform them.
5. Recommendation 41: The state should empower itself to take over direction of the response to any spill in Alaskan waters.

6. Recommendation 47: The state should sponsor a system of emergency economic maintenance for persons immediately and seriously affected adversely by a spill.
7. Recommendation 54: As a prevention incentive, existing regulations should be broadened to insure that in future spills the state can recapture all expenses directly or indirectly incurred by the state, its subdivisions, and private parties to whom the state owes reimbursement or who have benefited under the state's oil spill disaster economic-maintenance program.
8. Recommendation 58: Authorities responsible for testing and approval of response technologies such as dispersants, coagulants, burning and bioremediation should evaluate and decide whether to preapprove these technologies more rapidly.

For the next phase of this analysis, policy documents were gathered and reviewed for content relevant to incidents on drilling platforms post-dating the *Exxon Valdez* spill. These documents included Federal policies, state plans, regional plans, as well as contingency plans developed by oil companies. Among the more important documents were: the Clean Water Act (CWA), the National Contingency Plan (NCP), the Oil Pollution Act (OPA), Oil Spill Liability Trust Fund (OSLTF), the One Gulf Plan, and the Southeast Louisiana Area Contingency Plan. Policy documents were then gathered that pre-dated and post-dated the *Platform A* blowout, including the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the California Environmental Quality Act (CEQA), the Outer Continental Shelf Act (OCSA), and the National Environmental Policy Act (NEPA). All documents attainable discussing policy changes following the *Deepwater Horizon* blowout were also gathered.

Media Analysis

The collection of media articles began immediately following the *Deepwater Horizon* blowout and effectively stopped in March of 2012. Approximately 350 articles have been gathered from a wide array of sources including the New York Times, Wall Street Journal, National Public Radio, and various on-line news and commentary sites. Following the *Deepwater Horizon* blowout the companies involved in the oil-release disaster distributed a flood of reports and announcements. These were also analyzed and annotated. As a whole these articles were scrutinized in an effort to decipher what exactly had happened on the *Deepwater Horizon*, who was at fault, and what was being done in attempt to remediate the environmental pollution and to cap the well. While there was less material available, the same was done for *Platform A*.

Grounded Theory and Narrowing the Policy

Grounded theory was chosen as the investigative framework for this study because this theory lends itself to the development of new ideas and perspectives on existing cases (Goulding 1999). This framework relies on an inductive, qualitative approach, leaving room for the research question to evolve as the study continues, reliant on the way the data steers it (Glaser & Strauss 1967). When this study began the research was solely based on developing an annotated bibliography of all documents in DRC's Resource Collection that discussed marine extraction and transport of oil. During this time 55 documents were annotated and over 150 were read. Over 25 policy documents were also read and annotated during this phase. Since grounded theory relies on receiving data and altering the theory and the approach based on this data, the

documents began to be sorted based on three categories: issues of emergency management: issues of oil policy: and health issues and toxic contamination.

Upon discovery of *Spill: The Wreck of the Exxon Valdez*, the research began to focus more narrowly on what impact this report had on future oil-related safety policies and practices. The recommendations were first reduced to 20 that were most relevant to marine platform drilling. After a review of the specifics of the *Deepwater Horizon* incident as well as of marine oil safety policies and practices, the number of relevant recommendations was further narrowed to ten.

The research was then broadened (following suggestions from the thesis committee) to include consideration of the *Platform A* blowout as well as a theoretical lens of framing. The inclusion of the *Platform A* blowout increased the scope of the study and allowed the paper to chronicle the changes within the industry with more detail. This incident has numerous similarities to the other two and sheds light on where much of the policy regulating the industry at the time of the *Exxon Valdez* originated from, transforming this study from a comparative analysis to a study investigating a series of interconnected events. The symbolic interactionist approach of framing was also a very beneficial addition to this study; in using this approach media articles and official reports are analyzed to understand how each spill was presented to key stakeholders and then policies are examined for their content to see if the frames identified had a molding effect on the resulting policy.

In-Depth Interviews

To gain more insight on practices in the marine oil industry, four in-depth interviews were conducted as well as three informal conversations (an informal conversation essentially covered many of the same subject areas but was not recorded or performed for the explicit purpose of this study). Purposive sampling was used for this study because it is an appropriate sampling method when information rich cases are necessary, which was the case here. Table 1 displays which incident each interviewee was involved in, the reason for their inclusion in the study, and the type of interview conducted. The interview guide (which received IRB approval on 01/13/2011) was developed to gain an understanding of what the respondent's major daily duties were, what their role was in the three spills, and what their opinion was on each of the ten recommendations. The phone interviews lasted an average of 45 minutes.

After initial interviews were conducted the importance or lack thereof for each recommendation became apparent. Two additional recommendations were dropped from analysis further at this point because they were already incorporated into existing practice and were not as applicable to platforms as others, resulting in the eight recommendations detailed above being retained for investigation. One of the real strengths of the interviewee pool was that all of the interviewees had a wealth of knowledge on not just the spill they were involved in, but also on the other two spills in question. Due to this all of the interviewees were asked for insights regarding the spills they were not involved in. The insightful comparisons drawn were extremely helpful in understanding the effect each spill had on the policy that was in place for the next spill, lending credence to the idea that these are not isolated events; rather, they are a series of interconnected spills.

Table 1: Description of Interviewees

Incident	Reason for inclusion	Type of interview
<i>Platform A</i>	Prior member of California Coastal Commission	Informal conversation
<i>Platform A</i>	Prior member of California Coastal Commission	Formal interview
<i>Platform A</i>	Lawyer in California involved in numerous cases involving oil platforms	Formal interview
<i>Exxon Valdez</i>	Alaska Oil Spill Commission	Formal interview
<i>Exxon Valdez</i>	Lawyer in Alaska involved in numerous cases involving oil in the general area	Informal conversation
<i>Deepwater Horizon</i>	United States Coast Guard	Formal interview
<i>Deepwater Horizon</i>	Government Accountability Office	Informal conversation

Analysis

The notion of policy succession holds true when it comes to oil policy; as new policies are developed, typically due to the deficiencies in existing policies, these policies form a dense environment of existing policy to sort through (Hogwood & Peters 1983). In order to add credibility to the study, triangulation of the data was used to confirm the validity of initial findings and interpretations of frames and policies. The purposive in-depth interviews and follow up e-mail conversations with interviewees were carried out to help with this process. In compliance with IRB standards and in an effort to receive honest candid responses, all respondents are guaranteed confidentiality in order protect their identities.

Analysis and interpretation of these data took place in phases. Major policy from each spill was annotated for key points, and pieces of policy relevant to each recommendation from the *Exxon Valdez* were sorted and matched with that recommendation. Any media articles

discussing issues relevant to framing or policy resulting from these spills were analyzed in relation to the relevant policy documents. This included any news articles discussing how policy was or was not properly implemented. The views of the interviewees regarding the general framing of the spills and the recommendations were also analyzed and comments were scrutinized against the media articles gathered. Using these data sources and previous studies on framing, frames were developed for each spill. These frames were then showed to interviewees to ensure that they held resonance with individuals intimately involved in the spills. State and federal policy was then analyzed to see which framework it appeared to support. Since the *Exxon Valdez* had an official commission, the recommendations were used to determine: if it was ever adopted (and if not, whether an alternative form of the recommendation adopted), how framing affected this process, and what impact it had (or could have had) on the *Deepwater Horizon* oil well blowout and consequences.

Chapter 3

CASE STUDIES

Platform A

On January 29th, 1969, *Platform A*, an oil well owned by Union Oil Company, blew out after a faulty capping attempt and ruptured the sea floor in five spots 4.5 miles off the coast of Santa Barbara, California. This oil flowed for eleven days before being plugged by chemical mud, but the damage was done; the well spilled 4.2 million gallons of heavy, unrefined crude oil that spread across an 8-by-20 mile area starting at Santa Barbara and stretching south to Rincon Point (Cray 1969). There were no human deaths reported in association with this spill, but the impact on the local ecosystem was substantial. This spill was responsible for the death of nearly 4,000 birds, numerous inundated beaches, and damage to many natural marine sanctuaries (Senate 1970). This was the largest spill in the nation's history at this time.

Platform A was a huge spark for the environmental movement in the U.S. As put by President Nixon, "the Santa Barbara incident has frankly touched the conscience of the American people" (Kennedy 2010). The nation, and especially the residents of California, had a heightened awareness to the dangers of offshore drilling following this spill; students rioted against "big oil" and environmental groups formed almost instantly, heavily affecting the legislation to result from this spill (DoE 1993). Without the OSLTF or the OPA, there was very little legal protection

for the citizens who depended on the natural resources and natural beauty for revenue. Fishermen brought suit against Union Oil, claiming that their operations were negligent in waters that they shared. The courts agreed, and awarded the fishermen a portion of their wages lost (Mulhern 1990). This same precedence was used successfully by other industries hurt by the spill (such as tourism) to gain compensation (PDED 1998).

Eventually, elements that contributed to the blowout and the limited response came to the surface. The United States Geological Survey (USGS) granted Union Oil a waiver during the permitting process that allowed them to use a shorter casing, which was below-standard and later implicated as one of the causes of the incident (K. C. Clarke & Hemphill 2002). Reports following the spill cite that Union Oil was unprepared for a spill of this magnitude, and had to bring in outside personnel from the refining division to help contain the spill (DOE 1993). The technology used for cleanup is very reminiscent of the other two spills in question. Skimmers were used to try and capture surface oil. The cleanup effort used an undocumented amount of two dispersants; Corexit and Polycomplex A-11. Booms were deployed in an attempt to stop the oil from reaching the coast, but choppy waters allowed the oil to go over the booms and contaminate the coastline (Detje 1969). Over 3000 tons of straw was used to try and absorb the oil in the tidal zone, which was so thick it muted the sound of the waves (K. C. Clarke & Hemphill 2002). Cleanup crews used high pressure sprayers to simply wash away much of the oil on the shoreline. Total cleanup costs were estimated at five million 1969 USD (DOE 1993).

Exxon Valdez

On March 23rd, 1989, at 9:12 pm the *Exxon Valdez* supertanker left Valdez, Alaska with 51 million gallons of crude oil in route to Los Angeles, California. At four minutes past midnight on March 24th, 1989, the *Exxon Valdez* grounded on Bligh Reef, dumping approximately 10.9 million gallons of Prudhoe Bay crude oil into the waters of Prince William Sound (Alaska Commission 1990; i). The spill of the *Exxon Valdez* was the largest spill in U.S. waters to date, and is only superseded by the *Deepwater Horizon* blowout (Freudenburg & Gramling 2011; 13). There were no reported deaths resulting directly from the disaster, but there was one life lost during the cleanup effort. The economic and environmental impacts, however, were tremendous. Fishermen and others with jobs directly dependent on fishing were among the hardest hit by the spill, especially in more rural areas of Alaska where fishing controls a large part of the economy (Marshall, Picou, & Schlichtmann 2004). Twenty years after the spill less than half the wildlife impacted by the spill has returned to pre-spill levels (Boyd 2010).

Exxon Co., the company that owned the oil tanker, had contracted the Alyeska Pipeline Company to contain and clean up any spill they were responsible for in Alaskan Waters. The Alaska Department of Environmental Conservation warned the state of Alaska that the Alyeska Pipeline Company was not adequately prepared for a large spill. Reportedly, the Alyeska terminal superintendent received a call almost immediately after the spill, made a couple phone calls, and returned to bed. The plan the company had in place has been called fanciful and was not properly implemented (Alaska Commission 1990; 37). This plan called for two measures: the immediate dispatch of booms to contain the oil; and subsequent use of dispersants to break up the oil, allowing it to more easily evaporate.

It took the Alyeska Pipeline Company 12 hours to reach the spill site and 36 hours to get some booms in place which allowed the oil to disperse widely and hampered the effectiveness of booming (Pain 1989). On top of this the Alyeska safety barge, the ship that was supposed to transport the boom, was unavailable because it was under repair. The company also only had 4000 gallons of dispersant on site in Alaska; the rest was on planes in Arizona. To complicate this further, the Regional Response Team (RRT) did not respond to the initial requests for approval to use dispersants. When a response finally came the following morning, it came in the form of a requirement for a formal request to use dispersants along with a demonstration of their effectiveness (L. Clarke 1990).

Initially, many claimed that human error caused the spill; the third mate was captaining the ship at the time and proceeded to navigate outside of the predesignated shipping lanes. Upon further analysis though it became apparent that human error was not the primary problem. The state and federally enacted regulations put into place to prevent a spill were being broken on a regular basis. For example, at this time it was standard practice for ships to receive clearance to violate policy and leave the shipping lanes to avoid ice and, in turn, decrease lost time. The eventual chief causes of this accident and the ensuing disaster cited by the Alaska Commission were a lack of regulatory oversight, failed policies, relaxed standardized practices, and an absence of spill response research and development (Alaska Commission 1990; i).

The legal battle related to this spill has been stretched out and hard fought, so much so that one out of five of the claimants in the case against the Exxon Corporation was dead by the time their cases closed (Freudenburg & Gramling 2011; 17). In total Exxon has paid out \$3.4 billion USD in penalties, fines, and claims thus far. The punitive damages trial ended in 1994

with \$5.2 billion USD being awarded to various parties, but this ruling has been appealed and there is still litigation that has been stretched out over 20 years (Yardley 2011).

Deepwater Horizon

The *Deepwater Horizon* semisubmersible rig was built in 2001 by Hyundai Heavy Industries in South Korea for \$350 million USD for R&B Falcon which merged later in 2001 with Transocean, the largest contractor in the world for offshore drilling rigs (Amster 2010). Transocean registered the rig in Majuro, Marshall Islands and then leased to British Petroleum (BP) from 2001 to September 2013. This was a hefty investment by BP; the cost to lease this rig is reportedly up to one million dollars a day. The rig was seen as a powerhouse in the fleet; in 2009 this rig drilled the worlds deepest well, measuring a vertical depth of 10,683 meters (*DWH* Commission 2011; 3).

The Mineral Management Service (MMS) leased Mississippi Canyon Block 252 well site to BP in 2008. This federal organization (now known as BOEMRE) within the department of the interior is responsible for leasing, environmental compliance, gathering royalties, and managing oil and natural gas on the outer continental shelf as well as on federal lands and Native American reservations. Through this leasing operation MMS collects and disburses an average of \$13.7 billion USD a year (MMS 2010). This was a central reason for the creation of the MMS by Secretary Watt in 1982; to gather the financial influx from the massive expansion of drilling in the Gulf (*DWH* Commission 2011; 53). While turning in this revenue, MMS is also responsible for overseeing the drilling and operation of all offshore drilling operations they lease, which

leaves them in the unique spot of policing the industry that signs their checks (*DWH Commission 2011; 55*).

On January 21st, 2010, the *Deepwater Horizon* arrived at the Macondo lease site with a staff of 126 workers. This exploratory well site is in the Gulf of Mexico and more specifically 209 kilometers offshore from New Orleans and in 1,552 meters of water (Escalante 2010). The target oilfield was 4 kilometers below the seabed in a rich hydrocarbon field. These formations are the future frontier for the oil industry and are nicknamed "elephants" for their size. BP is not the only company after these reserves; many of the world's largest oil companies are now attempting to tap the potential of these large oil reserves, using new technologies to drill to depths over a mile deep (*DWH Commission 2011; 2*). At 12:40 A.M. CDT on April 20th, 2010, Halliburton, the company BP had contracted to handle the cement job, declared the cement job a success.

At 9:48 P.M. CDT April 20th, 2011, an explosion tore through the exploratory *Macondo* well, killing eleven crewmen and injuring seventeen others. Flames quickly consumed the rig; nothing was salvageable when the rig sank two days later, causing the piping to collapse and gush oil from several cracks. A combination of unique efforts eventually capped 87 days after the explosion on July 15th and permanently sealed and pronounced "dead" by Admiral Allen, the 23rd Commandant of the Coast Guard and National Incident Commander for the Deepwater Horizon spill, on September 19th. Released oil estimates started circulating almost immediately after the blowout, ranging from as little as 1,000 to 60,000 barrels a day. Official government reports eventually estimated the total spill at 210 million gallons of crude oil, which averages out

to roughly 62,000 barrels a day. The duration and high flow rate combined to make this spill the largest peacetime offshore oil spill ever documented (Freudenburg & Gramling 2011; 13).

BP was required to respond with all available resources to clean up the spill (NCP 2001). In recovery plans sent to the Mineral Management Service (MMS) in 2001, BP claimed they had the capacity to remove 497,721 barrels of oil daily (Kindy 2010). In reality, by the month of July BP only managed to remove roughly 238,000 barrels total (Freudenburg & Gramling 2011; 14). In November of 2010 the federal government released the *Oil Budget Calculator*, claiming that only 49% of the oil spilled had been disposed of through a combination of burning, skimming, dispersant use, and direct recovery from the wellhead (Team 2010).

On May 22nd, 2010, President Obama ordered the creation of the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling. This Commission was to be an independent group charged with the task of investigating the causes of the spill and making recommendations to improve the safety of offshore drilling. The *DWH* Commission found that this spill was not inevitable; steps could have been taken to prevent this from happening. They found that the cause of this incident and resulting disaster was due to mistakes made by BP, Transocean, and Halliburton (*DWH* Commission 2011; iv). Among these mistakes the Commission emphasized that risk management policy and practices failed to keep up with the rapidly advancing technology of deepwater drilling.

BP, as the legal operator of the rig, was legally the responsible party (RP). Under current law, the RP is liable for up to \$75 million USD in cleanup charges unless found negligent (OPA 1990; 11). BP, however, quickly declared that they would waive the cap and pay for all

legitimate claims. As of February 1, 2012, BP has paid roughly 7.7 billion USD in the form of claims and government payments (BP 2012). The actual damages from a spill of this magnitude may never be known. The Gulf of Mexico is home to a rich, diverse ecosystem; ecological damages, as with the *Exxon Valdez*, will continue to compound for years to come (Boyd 2010).

Chapter 4

DATA ANALYSIS AND DISCUSSION

Figure one below is here to give a visual representation the history of oil in America, as well as how oil policy has directly succeeded spills. With this in mind, it becomes extremely important to analyze how this policy succession occurs and what drives it. Framing is the important driving force in setting agendas and deciding on policy to address exposed deficiencies in existing policies presented in the discussion below. When discussing the framing of and resulting policy following these three spills, I will look at the following elements;

- How did the media frame this incident?
- Who was framed as the victims?
- Who was framed as the responsible party?
- What sort of state and federal policy came out following this focusing event?
- What is the focus of this legislation? What frame does it support? What frame does it ignore?

Figure 1: Timeline of Oil Spills and Policy

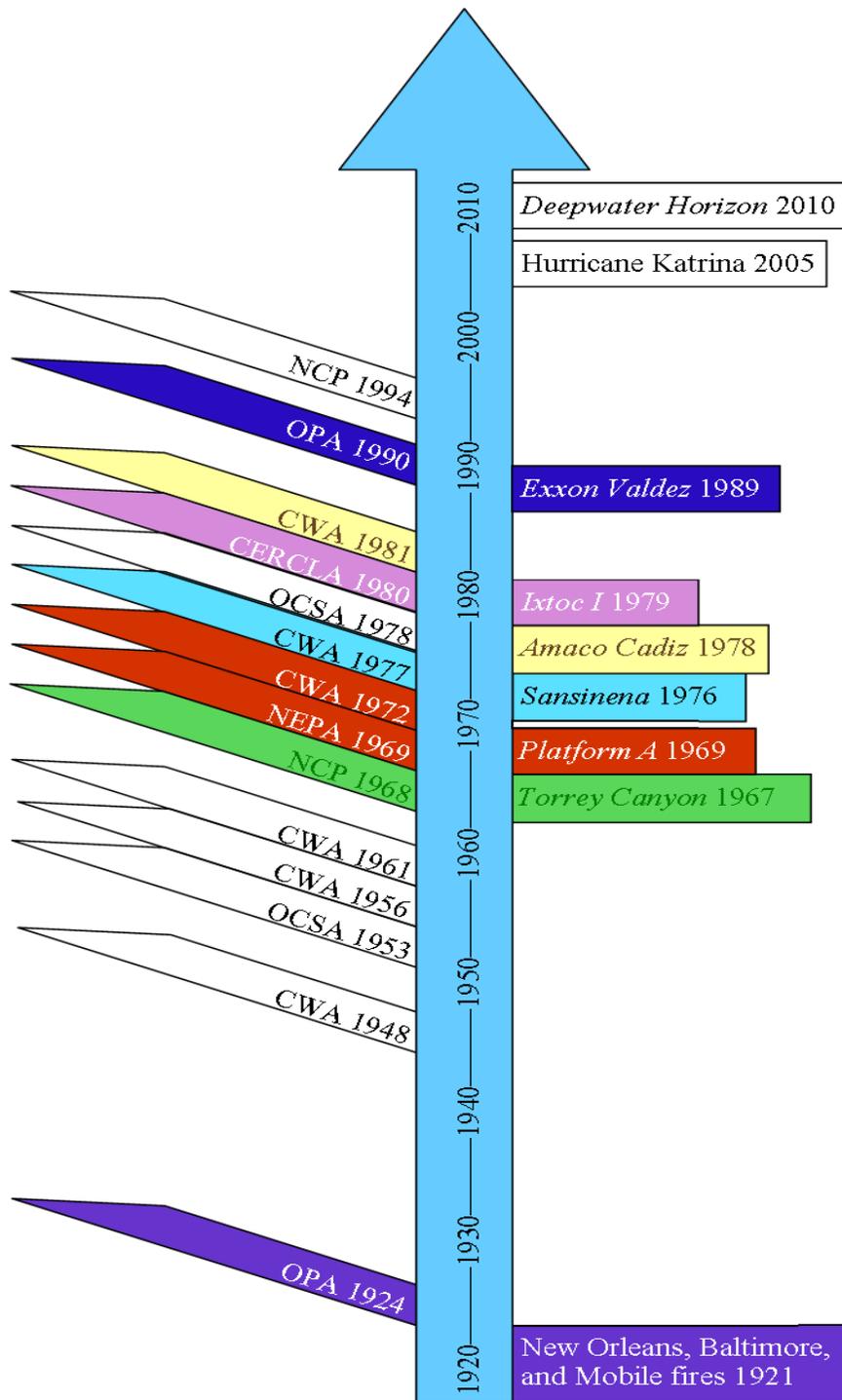


Figure one shows the major oil spill policies outlined on the left, with the major spill events sparking the policy change on the right. If the left and right items have the same colored box and text, it indicates that the event helped spark the corresponding policy change.

Platform A

When examining the reaction to the *Platform A* blowout of 1969, it becomes apparent that the media, general public, and legislatures framed the spill as an environmental and ecological tragedy. While the spill did originate from a rig in federal waters, the oil washed up on the California coast and affected people who did not benefit directly from the oil revenue. The spatial and temporal elements of this spill are exceptionally important. The area the oil impacted, as put by one interviewee, is “an environmentally aware area which is much more dependent on tourism, lodging, and fishing than they are on oil” (Lawyer 2012). Local officials were fighting against oil drilling in federal waters even before this spill. On top of this, Molotch (1970) described the affected people as primarily “middle and upper middle class,” giving them more power to influence the environmental framing of this disaster. Media portrayed them as blameless victims and, as Molotch put it, “with moral indignation and high self-confidence, they set out to right the wrong so obviously done to them” (Molotch 1970).

Public interest groups and the media swarmed to this event (Kurtz 2004). Many interest and advocacy groups formed following the spill, including Get Oil Out (GOO) and the Environmental Defense Center (EDC) (EDC 2011). Environmental studies programs were started at University of California Santa Barbara in response to the spill (UCSB 2011). As described by Molotch and Lester (1975), there was a nearly unanimous front from the local public and local and national interest groups against offshore oil in California. The issues important to these groups were portrayed by the media, which typically revolved around the volume of oil spilled, the short-term and long-term environmental impacts of the spill, and the

degradation of the natural beauty of the coastline caused by the presence of the platforms (Molotch & Lester 1975).

The “environmental tragedy” frame was not the only frame applied to this spill. Fred Hartley, the President of Union Oil at the time of the spill, said “I don't like to call it a disaster, because there has been no loss of human life. I am amazed at the publicity for the loss of a few birds” (Irvine 2009). Through statements like this it is obvious that to Union Oil this was not an environmental disaster by any means, and it was absolutely in their best interest to downplay the environmental impact of this event. MMS also had stock in downplaying this event. As the regulatory agency in charge of leasing, approving drilling plans, and collecting the deepwater drilling revenue at the time, they were responsible for granting the waiver on the shorter casing which ultimately failed (K. C. Clarke & Hemphill 2002). Due to a perceived slow reaction by legislatures, public claims started to surface that the state legislatures were “in the pocket of big oil” and were afraid to upset that relationship (Molotch 1970).

Legislation would come though, and when it did it echoed this environmental framing of the spill. On a state level, the spill had dramatic political ramifications, which resulted in an influx of environmental policy. Directly after the spill in 1970, then Governor of California Ronald Reagan signed into effect the California Environmental Quality Act, which requires the state to “create and maintain conditions under which man and nature can exist in productive harmony to fulfill the social and economic requirements of present and future generations” (NEPA 2012). Pursuant to the Submerged Lands Act of 1953, the California state government owned and therefore directly regulated waters up to three miles offshore. A voter initiative in California created the California Coastal Commission to help regulate oil development in

California. The California Coastal Act of 1976 made this commission permanent. Development cannot commence unless either this commission approves the lease or has given local government the ability to do so. The commission has not approved any new drilling permits since the spill (Lawyer 2012). In 1984 the federal government followed suit, issuing a moratorium on federal funding supporting new development off the coast of California (Hecht 2010).

The world's first offshore drilling began off the coast of Summerland California in 1896 adjacent to Santa Barbara, so to ban new leases following this spill was a drastic step (K. C. Clarke & Hemphill 2002). The idea that this technology was not worth the risk to the state of California came out in the interviews. As one interviewee put it, "we all felt like deepwater drilling was an experiment and it had failed. We were very surprised to hear they planned to continue trying it" (CZM 2012). There has not been a new drilling permit issued off of California's coast since the 1969 spill, and there are currently less than 40 active drilling permits off the coast of California (CZM 2012).

Recently, due to the economic crisis the state is currently experiencing and rising oil prices, the moratorium on new drilling operations off the coast of California has come into question (CZM 2012). A new proposal under debate in California developed recently which would allow new slant drilling in Santa Barbara; the first drilling in California waters in 40 years, in exchange for the dismantling of four older rigs and a promise to end all drilling operations in California and remove old rigs within 14 years (Leovy 2010). This legislation even garnered support from environmental agencies such as GOO, but this negotiation stalled after the blowout of the Deepwater Horizon and political complications, effectively putting an indefinite

halt on the deal (Hiltzick 2010). In effect, the environmentalists representing the people of California felt that it was a beneficial trade to allow short-term drilling to eliminate the chance for future drilling and eliminate the impact the rigs had on the natural beauty of the state (CZM 2012).

This spill garnered changes on the federal level which also reflects the environmental framing of this spill. As the event prompted additional hearings in Congress, interest groups began to lobby for legislation to address issues such as a drilling moratorium, spill liability, and the ability for victims to seek compensation (Kurtz 2004). In 1969, Congress adopted NEPA, which required organizations to consider possible environmental ramifications and submit an impact statement to the government before undertaking actions that could significantly affect the environment (NEPA 2012). Due to this spill and a number of other environmental concerns, Congress approved the creation of the Environmental Protection Agency (EPA) on December 2, 1970, which now has a major role in the recovery process following chemical spills (EPA 2011). The EPA is responsible for managing on-land oil spills, command of the Regional Response Teams, and regulating the use of dispersants.

Following NEPA in 1972, a complete rewrite of the original 1948 Federal Water Pollution Control Act took place, resulting in the CWA. Revisions to the CWA occurred in 1977, 1981, and 1987 in response to the Sansinena, Amaco Cadiz, and Ixtoc I spills, respectively (Copeland 2010). This act formally made it illegal to release oil in any body of water without a permit. One of the major impacts of this act was that it prompted the EPA to set wastewater standards for the oil industry and to define penalties for discharges. Through the Spill Prevention, Control, and Countermeasures (SPCC) requirements built into the act, the CWA also

requires that spill prevention plans are developed by the driller and confirmed by a Professional Engineer (PE), verifying plausibility and accuracy (EPA 2011). In practice this legislation was ineffective in curtailing the release of oil, they were more symbolic; the liability cap for a spill was a fine up to \$250,000, which was not near enough to dissuade spills (Kurtz 2004). As the dominating frame for this spill was one of environmental tragedy, it's logical that environmental laws following this spill would be strong and that the only piece of legislation to come from the spill that hints at regulation and enforcement be weak. This would not be the case following the *Exxon Valdez*.

Exxon Valdez

The framing of the *Exxon Valdez* spill was very different from the *Platform A* blowout. The *Exxon Valdez* is essentially the story of three competing frameworks; the framing of the spill as an environmental injustice put upon blameless victims, the framing of the spill as the result of human error, and the framing of the spill as failure in the regulatory structure meant to ensure the safety of the oil industry (which is eventually what made it into the bulk of policy). The environmental injustice frame was well represented in the media. Alaskan natives, who survived by subsistence fishing which was no longer viable, started terming the spill “the day the water died,” citing that the spill had caused irreparable damage to the sea and their way of life (Picou & Gill 1997). Studies by sociologists discovered that the average fisherman lost 30% of their income, reported cases of domestic violence increased, and alcohol and drug abuse rose dramatically following the spill (Picou & Gill 1997). Iconic images immediately poured out, showing beaches and birds covered in crude oil. In 2009 on the 20th anniversary of the spill, media reports came out still clinging to this environmental frame, discussing how the spill was

such an environmental tragedy and that there was still damage being done by oil from the spill (Associated Press 2009).

At the same time, the world almost instantaneously had a face to blame for this spill; the man in charge of navigating this vessel, Captain Joseph Hazelwood. The media portrayed this man as an irresponsible drunk who could not even legally drive a car in the state of New York due to a revoked license which resulted from three DUIs (Sanborn 2004). While the courts dropped formal DUI charges following the wreck, media and official reports commonly stated that the Captain was inebriated and sleeping at the time of the wreck (Supreme Court 2007). Captain Hazelwood had left Gregory Cousins, the third mate who did not possess the required license to drive in that area, in charge of navigating the ship out of Prince William Sound. The courts and media started questioning why Exxon left this man in charge of their ship.

When looking at the money involved Exxon, who owned the ship and the oil, had a lot at stake here and every motivation to put the blame on anyone or anything but their own company. In an unsurprising move, Exxon took swift action in directing part of the blame by immediately firing Captain Hazelwood, citing that Captain Hazelwood had violated company policy (Shabecoff 1989). In an official statement given by Exxon Co. Lawrence Rawls, the chairman of Exxon, acknowledged that Captain Hazelwood was drunk at the time of the accident and that it was bad judgment on Exxon's part to allow him to continue piloting the ship after his previous missteps (Picou 2009).

Exxon also came out and said that they would cover all costs associated with the clean of the spill in a move of "corporate responsibility," but later blamed the United States Coast Guard

(USCG) for delaying the cleanup, impacting its ultimate effectiveness (Matthews & Peterson 1989). Exxon was not the only entity that could gain from framing this spill simply as human error. Initial reports coming from government entities involved in the spill also stated that this spill was primarily the result of human error. Rear Admiral Joel D. Sipes reported almost exactly a year after the spill that "...the primary cause of the *Exxon Valdez* spill is apparently attributable to human error aboard the *Exxon Valdez*" (Sipes 1990). In a later statement, US Coast Guard Admiral James M. Loy, when reporting before the Department of Transportation on the OPA, cited that 80% of all accidents are attributable to the human element (Loy 1999).

Soon the third framework started to emerge; that of a failure of the regulatory structure in place. Other factors leading to the wreck started to emerge which made it impossible to reduce the cause to one single man. National Transportation and Safety Board investigations showed that the crew was overworked on the day of the wreck; this included Gregory Cousins (Alaska Commission 1990; 164). A USCG report showed that 60% less oil would have spilled had Exxon installed double hull tankers, which lawmakers had fought with the industry about in the late 1970s but later dropped due to industry pressure (Alaska Commission 1990; 173). The ship was outside shipping lanes at the time of the wreck in an attempt to avoid ice and save time, which was against protocol but allowed by the USCG (Dare 2001). The ability of the Alyeska Pipeline Company tasked with responding to the spill was described as "unexpectedly slow and woefully inadequate" (Alaska Commission 1990; 28). Allegations even surfaced that the USCG was a little "too close" to the oil industry, resulting in lax enforcement of existing regulations (Alaska Commission 1990; 186). This caused a shift in the framing and the language used to discuss the spill.

The Alaska Oil Spill Commission, which was created by the Alaska legislature to find the cause of the event and suggest changes to keep a similar occurrence from happening, even went as far as to say that the deficiencies in the current system made a spill more than just a possibility; it was inevitable (Plater 2011). They felt the system was broken and that the regulatory regime must change to insure that this did not happen again. The state of Alaska heeded this warning, and set up the Prince William Sound Regional Citizens' Advisory Council (PWSRCAC) in February of 1990. This local group was established essentially to ensure compliance with regulatory law; this council was to provide citizen oversight of compliance with shipping laws by oil tankers and terminals (PWSCRAC 2011). In communications with an individual personally connected to the group, they stated that the group was necessary because "they had to make sure that the industry and regulators didn't fall asleep on their duties."

Since the theoretical lens of this paper is framing, the following discussion will focus on the recommendations the Alaska Commission made and what legislation resulted from these recommendations as a way to look at the policy that resulted from this spill. Both the *Platform A* and *Deepwater Horizon* blowouts are referenced in this section to discuss the impacts and implications of these recommendations. In the introductory pieces of the report from the Alaska Commission, the document states that the failure to properly regulate the industry (termed as prevention) and the inability to adequately respond to a spill is what ultimately influenced the recommendations they purposed and the resulting legislation (primarily the OPA). While the Alaska Commission and ultimately lawmakers acknowledged that there was a human factor involved, they also noted that this spill was not the result of one man's folly and was entirely

avoidable. Insufficient regulations and a lack of adherence to established regulations allowed the human factor to manifest, resulting in a wreck.

1. Recommendation 7: Government and industry should strive to adopt the best available standard technology in establishing performance standards.

The OPA created two groups responsible for researching oil spill response technology. The first was the Interagency Coordinating Committee on Oil Pollution Research (ICCOPR) which Congress created to coordinate research between federal agencies, state government, other countries, industry, and universities on oil pollution and technology development (ICCOPR 2012). The second was the Oil Spill Recovery Institute (OSRI), which Congress mandated to identify and develop the best available technology, techniques, and equipment for responding to a spill in arctic and sub-arctic waters (OSRI 2011). This indicates that Congress saw part of the problem as a lack of adequate response technology. However, when looking at the technology used 21 years later to respond to the *Deepwater Horizon* blowout as a proxy for the advancement in technology, it's not apparent that the technology is any different from that used in the *Exxon Valdez* or even after *Platform A*. In all three spills booms, skimmers, and dispersants are the most referenced methods for responding to the spills.

The framing of “best available technology” would determine if a lack of substantial advancement in cleanup technology is acceptable or not. To one interviewee directly involved in the response to the *Deepwater Horizon* blowout:

the issue of what's the best standard technology requires more examination, but the tried and true methods of skimming and booming might have less room to progress where other methods still have room to expand.

On the other hand, an interviewee involved in the response to the *Exxon Valdez* spill stated that “There’s been very little good research done on spill response in recent years. In fact, it’s very little different than what it was during the *Exxon Valdez*” (USCG 2011). The *DWH* Commission agreed, stating that production technology had changed dramatically since the *Exxon Valdez* spill, but cleanup technology had remained stagnant (*DWH* Commission 2011; 133).

2. Recommendation 34: The United States should pursue an aggressive policy in bilateral and international regulatory forums to demand safety improvements. The practice of deferring to international transportation safety standards in U.S. waters should cease. Environmental regimes established by state or federal government should apply to tanker or barge traffic under any flag in U.S. waters.

In accordance with the CWA, foreign vessels entering U.S. waters or platforms operating in the U.S. Exclusive Economic Zone (EEZ) are required to meet standards set by the International Maritime Organization (IMO) (Copeland 2010). Within this system though vessels and platforms (which are technically vessels since they float) can register their vessel with any country they choose. The practice of not flagging in the nation the ship owner is working out of, also known as "flagging for convenience" or "flagging out," has been in place since the 1920s, and is done because there is not international consistency on the flagging process (MTC 2003). The benefits of this for ship owners are typically low or no taxes, cheap registration fees, the ability to employ inexpensive labor, and the chance to mask true ownership of the vessel (MTC 2003).

These factors have led to 40% of the world fleet (in terms of deadweight tonnage) flying the flag of Liberia, Panama, or the Marshall Islands (Secretariat 2009). For instance, Transocean registered the *Deepwater Horizon* in Majuro, Marshall Islands and then leased to British Petroleum. This is obviously an issue when many of these countries reportedly have substandard regulations which can contribute to the causes of a spill, such as the overworked crew reportedly did in the *Exxon Valdez* spill. While these vessels are still required to meet international requirements, countries that want to instate tougher regulations or deny entry of ships flying certain flags are often viewed internationally as violating the sovereignty of the flagging state (Goldie 1991). International regulation tends to focus on oil tankers too, and offers little guidance regarding platforms. IMO simply states that the country near which drilling is occurring is responsible for ensuring the safety of operations. This is due to the fact that platform laws haven't been revisited since the push to deeper waters (Harrison 2010).

The OPA did enact some regulation that exceeded requirements by international law. Double-hull tankers were a part of this requirement, which as mentioned earlier could have greatly reduced the size of the *Exxon Valdez* spill (Alaska Commission 1990). In addition, through the Port State Control Program, the USCG can board vessels coming into the U.S. to ensure that they are meeting all international and U.S. standards (Alaska Commission 2011). If they do not meet these standards, the USCG can deny the ship entry. According to one interviewee involved in the response to the *Deepwater Horizon*, since the perceived violation of sovereignty is an issue, the U.S. prefers to default to international regulations which they say the U.S. routinely lobbies to be raised (Alaska Commission 2011). The interviewee involved in the response to the *Exxon Valdez* spill saw this as problematic; they attended IMO meetings in the

past and noted that smaller countries are allegedly selling their votes to oil companies and since it's a one country one vote system, it is difficult to pass meaningful regulatory legislation (USCG 2011).

3. Recommendation 38: The spiller should not be in charge of response to a major spill. A spiller should be obligated to respond with all the resources it can summon, but the government should command that response.

According to the NCP, when the RP is known, the Federal On-Scene Coordinator (FOSC) has three routes of action. The FOSC is supposed to first wait and see if the RP removes the oil properly and in a timely manner. They can also guide the response but use the RP as the cleaners. If the RP does not do this or the spill threatens public health or welfare the FOSC can "federalize" the response by deeming the spill a "Spill of National Significance" (SONS) and take over the spill response, leaving the RP to solely write the checks for the response effort. As one interviewee put it, "the NCP that it establishes a framework that is a coordinated collaborative effort between the responsible party, the state agency, and the Coast Guard or EPA depending on if it's inland or coastal zone" (USCG 2011).

So in essence, Congress chose to not put this recommendation into law because the federal government is not currently immediately responsible for responding to major spills; it is a discretionary decision on the part of the FOSC. While the FOSC can take complete control when they deem necessary, current legislation does not put the federal government in charge of responding to major oil spills by default. The *DWH* Commission agreed with the Alaska Commission and recommended once again that the federal government take this duty away from

the RP and make it default to the federal government (*DWH Commission 2011; 267*). While legislation does not explicitly state it in this way in, leaving the RP in charge of spills keeps cost down to the federal government and protects them from handling the process of reimbursements.

This then makes the issue of who the federal government frames as the RP direly important. In the *Platform A* blowout and the *Exxon Valdez* spill, there was one entity responsible for the spill. In the case of the *Deepwater Horizon* blowout, there were three corporations that could have shouldered the blame; BP, Transocean, and Halliburton. In a calculated move to salvage public relations, BP took responsibility and waived the liability cap almost instantaneously in a move of “corporate responsibility,” but then sued Halliburton and Transocean for the full cost of the cleanup plus court costs in 2011 (Bergin 2011). When left to respond to a spill, this means that who the RP is becomes direly important because they may respond to the spill in different ways. This idea scared one interviewee, who questioned if the best job would always be done since companies may default to the cheapest method possible (USCG 2011).

4. Recommendation 40: The EPA is not adequately funded and staffed for oil spill prevention and response. Unless the agency receives sufficient resources, these functions should be delegated to the states or transferred to agencies better able to perform them.

Even though Congress created the EPA partially in response to the *Platform A* blowout, their role in offshore oil spills has been limited. The NCP only requires the EPA to offer their expertise and support in offshore spills to the FOSC on the use of dispersants and bioremediation (NCP 2011). In Alaska, much of the frustration directed at the EPA results from the fact that the

EPA was not able to offer many alternatives or challenge the liberal use of Corexit, Exxon's own patented dispersant. The use of dispersants is typically highly contested due to fear of the side effects of the dispersants themselves on the natural environment (Alaska Commission 1990). While it was described by the interviewee involved in the response to the *Deepwater Horizon* blowout as a close working relationship between the two agencies, the EPA held the same role in this spill as it did in the *Exxon Valdez* spill (Alaska Commission 2011).

5. Recommendation 41: The state should empower itself to take over direction of the response to any spill in Alaskan waters.

According to the NCP, the USCG is the ultimate authority in offshore spills and is to work in accordance with state and local representatives (NCP 2011). This is confusing for states because the top-down approach to spill management is in apparent contradiction of the bottom-up approach for disasters laid out in the National Response Framework (NRF). According to the NRF, local government typically controls the response to disasters. However, there is a clause that states that the NRF does not supersede other documents such as the NCP. According to one interviewee, the federal government should retain the right to direct spill response because "the federal government brings an incredible amount of expertise and experience to bear" and that it is important to have the federal government in charge when a spill crosses jurisdictional boundaries as it did in the *Deepwater Horizon* blowout (USCG 2011). While some states may actually respond more efficiently than the federal government, the interviewee notes that this would "put a huge burden on the states to build up such a response capability some states may have the ability to do that some may not" (USCG 2011).

6. Recommendation 47: The state should sponsor a system of emergency economic maintenance for persons immediately and seriously affected adversely by a spill.

In 1986 Congress created the OSLTF, which President George H. W. Bush first authorized for use in 1990 in response to the *Exxon Valdez* spill. The states do not manage the OSLTF because the states do not have authority to direct oil spill response. Instead, the FOSC is responsible for managing the fund. The FOSC can access the OSLTF for two reasons. If the federal government becomes involved in the cleanup process, the FOSC can use the OSLTF to pay for contracted oil spill removal companies, equipment necessary, overtime for government employees, testing of water samples, and time spent documenting the costs accrued (OSLTF 2011). The FOSC can also use the OSLTF for claims, which cover damages to persons, natural resources, and property as well as lost revenue. Congress established and replenishes the OSLTF primarily through three sources; a tax-per-barrel of oil produced or imported to the United States, transfers from other pollution funds, and by spillers paying back costs incurred during cleanup efforts (OSLTF 2011). This tax was five cents per barrel when established, but congress raised the tax through the Energy Improvement and Extension Act of 2008 to eight cents per barrel (OSLTF 2011).

7. Recommendation 54: As a prevention incentive, existing regulations should be broadened to insure that in future spills the state can recapture all expenses directly or indirectly incurred by the state, its subdivisions, and private parties to whom the state owes reimbursement or who have benefited under the state's oil spill disaster economic-maintenance program.

The OPA mandates that the RP must pay for all economic damages incurred by all involved parties up to the established liability cap (OPA 1990). However, if the RP is found negligent then the liability cap is waived and they have to pay for all costs incurred. Once the cost passes the liability cap, the OSLTF can contribute up to one billion dollars to the effort. If the cost passes this limit, the FOSC is required to ask Congress to appropriate funds. The liability cap is, and has been since its instillation, 75 million dollars. This was set at the time so that smaller oil companies would not have one spill and not ever be able to recover. As of February of 2011, BP has paid or approved the payment of eight billion dollars worth of claims, making the amounts authorized by the OPA woefully inadequate to cover a spill of this magnitude where negligence is not found (BP 2012). The *DWH* Commission supported a cap raise and a raise to the amount that can be paid out of the OSLTF, but Congress has dead-locked any attempt to raise the cap (Hargreaves 2010).

8. Recommendation 58: Authorities responsible for testing and approval of response technologies such as dispersants, coagulants, burning and bioremediation should evaluate and decide whether to preapprove these technologies more rapidly.

According to the NCP, RRTs are charged with making site-specific pre-approvals for dispersant use (NCP 2011). There are 13 RRTs which the USCG and EPA co-chair and have state and federal representation incorporated. This pre-approval allows the FOSC to use dispersants in the first hours after a spill, which is the most critical time in which to use dispersants to maximize their utility. Past the initial response phase, the FOSC must go to the RRT to request approval for dispersant use. The problem during the *Exxon Valdez* spill, as put by the Alaska Commission, was that these technologies were not fully tested which resulted in a

slow, inefficient response. According to one interviewee living in Alaska at the time of the spill, “...normally we’re opposed to dispersants in the fishing communities up here because we don’t trust them to not poison the fish” (Alaska Commission 2011) This opposition caused conflict over when dispersants should be used and how much should be allowed into Alaskan waters which ultimately slowed the response.

The same thing happened during the *Deepwater Horizon* blowout. The RRT had given pre-approval for the use of specific dispersants in the area, but had not specified the ultimate volume or duration of dispersant use. A month after the spill occurred, EPA Administrator Lisa Jackson stated that the government had told BP to greatly reduce the amount of dispersants used. The RRT then told BP to stop all surface application of dispersants except in rare cases where the RRT could grant an exemption. BP, however, continued sending requests to use dispersants to the FOOSC. This caused a conflict of frames to emerge between the USCG and the EPA; the USCG, an organization focused on prevention and regulation viewed the use of dispersants as powerful tool to eliminate oil, and the EPA, who is more environmentally focused saw the dispersants as harmful to the environment and preferred mechanical recovery methods (*DWH* Commission 2011; 160).

Deepwater Horizon

The way stakeholders are framing the *Deepwater Horizon* blowout is very reminiscent of the aftermath following the *Exxon Valdez* spill, but on a potentially much larger scale both temporally and spatially. Initially, there was a frame presented of the event as a slow-onset environmental catastrophe, which coincided with a frame that focused on the economic losses,

and eventually a frame which presented the spill as failure in the regulatory structure meant to ensure the safety of the oil industry. Due to the large area affected by the spill, the media framed many different groups of people and industries as the victims of this tragedy. Initial attention focused on the individuals who lost their lives in the explosion, and their families as well. Then attention shifted to the residents living around the Gulf of Mexico. The people affected by this spill depended on oil in a similar way to the victims of the *Exxon Valdez*. As one interviewee put it, “in the Gulf, oil and a gas are part of their culture and a huge part of their economy” (Lawyer 2012). Vital industries in the area such as tourism, fishing, and oil itself suffered enormous losses in the wake of this spill (Longstreth & Bergin 2012).

Choosing a responsible party was not as simple of a task as in the other spills cited. Unlike the other two spills, three parties contributed to the failure that resulted in the blowout; BP who leased the rig and owned the rights to the well, Transocean who owned the rig and provided a majority of the staff, and Halliburton who performed the faulty cementing job. Even though only eight of the 126 workers on the rig the day of the explosion were BP employees, BP provided the engineers that gave final approval on all drilling decisions (A. Clarke 2010). Luckily, sorting out whom to hold liable was not necessary. As mentioned earlier, BP claimed responsibility and decided to sort out the costs associated with Halliburton and Transocean in court.

As with the *Exxon Valdez* and *Platform A*, the media and the government immediately picked up the environmental frame. News outlets and President Obama designated this incident “the worst environmental disaster America has ever faced” (Fahrenthold & Mui 2010). Images of oiled birds and sea turtles saturated newsfeeds. Louisiana Governor Bobby Jindal told the media

that the oil reached sensitive bird nurseries by May of 2010, threatening that sensitive ecosystem (Bigg et al. 2010). BP made it apparent that they did not agree with this environmental framing. Tony Hayward, the CEO of BP at the time of the spill said that “the Gulf of Mexico is a very big ocean, and the volume of oil we are putting into it is tiny in relation to the total volume of water” (DWH Commission 2011; 144).

Scientific uncertainty on the flow rate and ultimately how much oil the blowout released flooded the airwaves and the web, casting disparity on the trust put into the response. According to official reports from the Unified Command at the site of the spill, initial reports had the flow rate at less than 5000 barrels per day. By early May, reports started to emerge bringing the Unified Command's number into question. Ian MacDonald, an oceanographer at Florida State University with a history of analyzing surface oil deposits, claimed that the rate was easily four to five times more than early estimates (Ramseur 2010). Later that same month experts claiming the flow rate may be as much as 100,000 barrels a day released other reports. Ultimately, official reports settled that the flow rate was around 62,000 barrels per day (DWH Commission 2011; 167).

Due to the size and area affected by this spill, stakeholders have also framed this spill as an economic catastrophe. The spill severely shook the world economy. International oil prices reacted harshly to this spill; prices per barrel increased by roughly 30% and gas peaked to an average of four dollars per gallon. BP's own stock dropped by 12% following the spill, resulting in huge losses for stock holders (BBC 2010). This event also significantly affected the British economy: BP is Europe's second largest oil company (Sullivan 2011). In fact, London Mayor

Boris Johnson expressed fear that the spill permanently damaged the image of the United Kingdom in the United States (BBC 2010).

The impact on the way of life in the Gulf was enormous and is hard to understate. The Gulf region is heavily reliant on three economic development engines: oil production and refinement, tourism, and fishing. Up to 88,522 square miles of the sea were closed to fishing for months, and concerns about the safety of the seafood caught contributed to a stigma put on seafood from the Gulf (IEM 2010). Even though the FDA declared the seafood caught in open fishing areas safe, the industry still experienced a 77% decline, or 120 million dollar loss (IEM 2010). The media pointed out that this is not just a problem for those that live in the Gulf area; Louisiana alone accounts for 40% of U.S. seafood each year (Bigg et al. 2010). The U.S. government reinforced this frame and declared this event a “fishery disaster” in Louisiana, Alabama, and Mississippi, which makes these states eligible to receive federal funds to make up for some of the losses sustained from the spill (Rudolf 2010).

Since this spill hit right before summer, tourism in the Gulf region experienced a temporary heavy downturn contributing to the development of the economic frame. The Florida tourism industry started running campaign ads in an attempt to convince travelers that their coastline was clear. BP almost instantly pitched in \$70 million to try and negate tourism losses and ultimately mitigate losses they would be liable to reimburse (Jansen 2010). In a survey done in August of 2010, 29% of planned trips to Louisiana were cancelled or postponed due to the spill (Tourism 2010). Florida, with the largest tourism base of any of the Gulf States, bore a brunt of the impact. Pinellas County in Florida estimated 70 million USD in losses by June of 2010 and the Florida panhandle is estimated to have lost billions (DWH Commission 2011; 393).

While it's still early, the regulatory frame, as was the case with the *Exxon Valdez*, appears to be the frame that the federal government is promoting through action, while being mindful as to not undermine the economic frame. Official reports make it evident that the failure and ultimate catastrophe is the result of three issues; a relaxed regulatory agency, a lack of adherence to regulation by the industry, and a less-than-perfect response by both industry and the federal government. The waving of NEPA requirements (coming from the aftermath of *Platform A*) for the Gulf area neutralized much of the policy in place before the spill requiring safe drilling in the Gulf. With this in mind, the only safety nets left are the OCSA and regulatory visits by USCG and MMS regulators. Regulators missed 16 of the once a month required visits from 2005 up to the spill and were reportedly not confident in their own abilities when they did show up (*DWH Commission 2011; 77; Strickler 2010*).

The technology for cleanup was also grossly inadequate, but ignored. BP did not clean up near what they said they could, and were still using much of the same technology used in the *Exxon Valdez* spill and the *Platform A* blowout (*DWH Commission 2011; 133*). BP's Oil Spill Response Plan (OSRP) claimed that there was no chance that an oil spill would adversely impact any endangered marine mammals; they started being found dead only days following the spill (Freudenburg & Gramling 2011; 153). In this same plan approved by the MMS, BP cited a wildlife expert they would rely on in the case of a spill; however, he had died several years before the plan had even been submitted (*DWH Commission 2011; 133*). The regulatory and safety system in place tasked with preventing oil spills failed, and the *Deepwater Horizon* met a fate that could have hit any current platform in similar circumstances. MMS would agree with

this statement too; just prior to the spill MMS named the *Deepwater Horizon* a finalist for the 2009 MMS Safety Award for Excellence (Freudenburg & Gramling 2011; 164).

Since this spill is still relatively recent, it is impossible to say that no state legislation will come from this. When asked if the Gulf States passed any legislation resulting from the *Deepwater Horizon* blowout, an informant intimately connected with the response to the spill that works in the Gulf area stated that:

[There has been] no legislation that I'm aware of in Gulf States. [The] biggest push is for national legislation giving a portion of potential future fines to states for restoration, etc. [There is] also big is a push to expedite drilling permits. Counterintuitive, but impacted states have not used the opportunity to beef up state oil spill response capability, etc. Economic situation, not environmental or oil spill considerations, is driving policy now.

This statement clearly shows that unlike the situation following *Platform A*, the states are not interested in self-empowerment (or the abandonment of oil altogether). Instead, using the economic frame, the states are looking to push permits through and allow the federal government to instate any regulatory change they deem necessary.

The federal government immediately supported this regulatory framework by dismantling the regulatory agency in charge prior to the spill and reconfiguring it in an attempt to fix inherent issues in its structure. On May 19, 2010, Secretary of the Interior Ken Salazar ordered MMS to split into three independent agencies to better carry out the primary three duties it already had referenced earlier in this paper. MMS was renamed the Bureau of Oceanic Energy Management, Regulation and Enforcement (BOEMRE) in an attempt to better align its name with the goals of the agency. In June of 2010 President Obama asked Michael Bromwich, a former Inspector General, to lead this reorganized agency. At the time of the spill, MMS had roughly 1,700 employees which were divided into these new agencies (Straub 2010).

On October 1, 2010, the Office of Natural Resources Revenue began operation under the Department of the Interior's Office of Policy, Management, and Budget. This new office has roughly 700 employees and is responsible for collecting and distributing royalties and revenue functions as well as conduct audits and compliance verification (Barkoff & Etchart 2010). This was a move to keep the revenue stream separate from the leasing and regulatory side. The Bureau of Ocean Energy Management (BOEM) is responsible for managing the development of the OCS through planning of new well sites, the evaluation of drilling plans, and the actual leasing itself. This branch has roughly 700 employees. The Bureau of Safety and Environmental Enforcement (BSEE) is responsible for carrying out inspections, oversight of environmental protection, and safety regulations. This office inherited the least amount of employees; it only has approximately 300 (Straub 2010). It's important to note though that this process has not in any noticeable way made the permitting process longer or more costly, so this action does nothing to directly undermine the economic framing of this spill.

On May 27th, 2010, President Obama instated a very controversial six month ban on deepwater drilling, which called for all exploratory wells to stop production and for a ban on permitting. President Obama put this in a regulatory frame by stating that BOEMRE needed time to review drilling regulations and ensure safety before drilling continued (Barkoff 2010). It was at this point though that Texas and Louisiana started to push back with the economic frame, stating that the ban was an unacceptable economic loss for the Gulf States. Groups with names such as the Gulf Economic Survival Team lobbied with state and business support to lift the moratorium (Schmidt 2010). The attorney general for both Louisiana and Texas even sued the federal government in an attempt to lift the drilling ban, citing that the ban violated the OCSA

which requires the federal government to consult with the states and consider the economic impacts of policy (Fowler & Hatcher 2010).

Chapter 5

CONCLUSIONS

Framing

This study makes a meaningful contribution to the literature on how the framing of an event has a substantial shaping effect on the policy that follows. By expanding on earlier work by Birkland and other disaster scholars on focusing events, this work shows that in oil spills policy does follow large-scale focusing events. Through the discussion and the timeline this study confirms work by Downs and Sylves on the issue attention cycle, showing that policy has a short window and often the price of heightened regulation or a new focusing event closes that window rapidly. This study also takes the previous works cited a step father to show that the frame portrayed by key stakeholders affects the type of policy regulators instate.

In the case of the *Platform A* blowout key stakeholders almost unanimously viewed the spill as an environmental disaster. The oil impacted people described as “environmentally aware with the time and money to act” (CZM 2012). Interviewees stated that the environmental impact of the spill and risk of future damage was unacceptable. The legislation (especially NEPA, CEQA, and iterations of the CWA) resulting from this spill aimed at preventing environmental damage from oil spills in the future. The state (with the legislative support of the federal government) saw the environmental risk of oil in California as unacceptable and carried this out

to the point to where the state has not permitted a new rig since the spill. Environmentalists are even attempting to have existing rigs taken down.

The *Exxon Valdez* was a very different story. While *Platform A* undeniably had stakeholders with competing interests, the *Exxon Valdez* had contradictive frameworks and alternative causes of the spill proposed. Reports emerged calling this spill an environmental injustice upon a blameless populous. Since there was a face to connect to this event, reports also framed this event (popularly by Exxon Co.) as the onetime result of human error. Pursuant to the report of the Alaska Commission, legislation ultimately framed the problem as a failure in the regulatory structure meant to ensure the safety of the industry. The PWSRCAC and the OPA empowered both the citizens of Alaska and the federal government with more regulatory power over the industry.

The Deepwater Horizon also had multiple, highly visible frameworks competing for attention. The length of time it took to stop this spill, the uncertainty over the amount of oil spilled and where it was impacting, and the huge area affected by this spill lent itself to the frame of a slow-onset environmental catastrophe which the media initially employed. The economic frame took hold due to many of the same reasons, as well as the fact that the spill hit right before the tourism season was set to take off for the area. This framework gained prominence during the moratorium debates and potentially had a longstanding effect on the future legislation when compared to the reaction to the indefinite moratorium still observed in California. The regulatory frame was evident early with the restructuring of MMS into three separate organizations falling under the umbrella of BOEMRE. The new name even includes the word “regulatory” in it, supporting the idea that frame alignment develops common language.

Regulation

Even with all the differences previously identified, there are apparent themes contributing to these spills. Shortcuts by both industry and government show up in all three spills. For *Platform A*, the MMS approved inadequate casing. In the *Exxon Valdez*, the USCG gave approval to navigate outside established shipping lanes to save time. In the case of the *Deepwater Horizon*, MMS skipped numerous inspections and BP used cement that had failed two out of three previous negative-pressure tests. A culture of maximizing production while minimizing regulations also surrounded every event. *Platform A* drilled right outside California waters in an attempt to avoid stiffer regulations. Activists fought for double-hulling tanker requirements in the early 1970s but industry lobbyists eventually silenced this. Allegations flew following the *Deepwater Horizon* of an overworked crew and a culture within BP stressing maximized productivity at all costs.

Despite these similarities there has not been a consistent approach to address deficiencies following oil spills in the United States. Each time, Congress used a different type of policy to try and curtail a similar event. When it appears that past policy had the potential to be effective, exemptions appear in new policy (such as NEPA exemptions in the Gulf) to maximize production. This brings into question the national memory of the impact of oil spills, as noted in the last stage of the issue attention cycle. New oil policy also has displayed the alarming pattern of only coming out following major events. This is especially problematic since major spills in the U.S. have happened in roughly 20 year increments, but technology advances much quicker,

moving the industry into more dangerous areas. The *DWH* Commission terms this system as a "prescriptive regulation with inspection" model, a reactive sort of regulation that relies on accidents to drive new policies. This is a model that was used widely by other nations such as Norway, the United Kingdom and Canada until large spills in the late 1980s caused these countries to move to a more risk-based approach (*DWH* Commission 2011; 69). The U.S. did not follow in suit.

The current state of regulation in the oil industry does not take into account all of the risk taken. When large spills have occurred in the U.S., the response effort has left much to be desired. Other risky technologies, such as the nuclear and aviation industries in the United States, rely on a combination of governmental and self-regulation and policing to bridge this safety gap (*DWH* Commission 2011; 229). The *DWH* Commission recommended self-policing of the oil industry in the end of their official report, but officials opted to split MMS instead. This system definitely deserves a second look though, as that many industries with striking similarities to the oil industry use this system with a fair bit of success in the United States. Self-regulation has worked well in industries with technically complex systems where only a small number of people are qualified to regulate (*DWH* Commission 2011; 231). The qualified individuals typically end up working for the industry, since government cannot compete with the salaries offered (*DWH* Commission 2011; 240). This self-policing also works well in industries that bring in huge revenues and have reputations tied together.

The nuclear industry, also a high-revenue reputation dependent industry, developed the Institute of Nuclear Power Operations (INPO) in 1979 following the Three Mile Island incident as a nonprofit agency designed to work with the Nuclear Regulatory Commission (NRC) to

promote the safety of the nuclear industry. The INPO uses nuclear plant employees to conduct inspections of other nuclear plants, and issues reports to the plant they inspected and to the INPO board (which consists of executives from the nuclear companies). Inspectors also publish lessons learned on an online clearing house, so this along with using employees for inspections allows for the cross-fertilization of knowledge. The INPO meets regularly with the NRC, and has the ability to take serious concerns to the NRC directly. A tax on the plants based on the number of reactors owned funds this organization (*DWH Commission 2011; 239*).

While a system like this would require a tax on the oil industry, spills like that from the Deepwater Horizon damage the reputation and long-term viability of the industry as a whole. It should be acknowledged though that this is not a fix all system that would work perfect from day one without modification, essentially ending the risk associated with offshore drilling. The oil industry is structure differently than the nuclear industry, with integrated oil companies dominating the market but with independent drillers also leasing. Instating a system that relies on a control board would encounter more difficulties in this type of management structure. The industry also inherently has a greater diversity of technology from one rig to the next with many more rigs than there are reactors to regulate. However, with the challenges to instating a model such as the INPO acknowledged, the history of large spills necessitates a change to how the oil industry is regulated in the United States.

Past a move to self-regulation, there are a many other changes that could be made to improve safety. Before going any further though it is necessary to state that there is no simple, catch all solution available to make the oil industry and regulators error free and make all stakeholders happy. When investigating the problematic past of deepwater drilling the main

thing that becomes evident is that this is a highly complex problem and essentially necessitates a complex solution. One thing that stands out is that a clear understanding of how all levels of government and the industry implement policy would help lawmakers to formulate effective policy. With the USGS granting waivers on casing and the USCG authorizing ships to go outside shipping lines it is evident that attention must be paid to policy implementation and understanding what policies are likely to be violated and why they are violated. Key stakeholders should meet on a biannual basis to discuss problematic policy and to suggest solutions to ensure the effectiveness and proper instillation of new policy.

Since cleanup technology has essentially been stagnant since *Platform A*, a renewed investment in research and development is necessary. Interested parties tend to agree that they would like to see more oil recovered following spills, but when looking at the *Deepwater Horizon* it's apparent that there has not been adequate investment in cleanup technology. As mentioned earlier, other oil producing nations protect their workers significantly better than the U.S. currently does. Lawmakers should investigate the regulations these other countries enforce, and U.S. regulations should be moved to a level that is at least as demanding as they are.

The Federal government should offer expertise and regulations on the cementing process, which was not in place during the *Deepwater Horizon* blowout. NEPA exclusions should be removed or altered, and site-specific Oil Spill Response Plans and safety cases should be required for any lease. Industry and regulatory bodies should make research on the following three fronts a priority; development of safer systems, practices, and equipment to prevent oil spills and respond once an oil spill has occurred. Since one of the major shortcomings is that

U.S. policy is far too reactive, it should be required that BOEMRE, USGS, and EPA meet annually to review current policy and recommend changes.

Limitations and Future Research

While this study makes significant contributions to the understanding of policy development, a few important limitations of this study must be acknowledged. As mentioned previously, this was a purposeful sample. Since the study necessitated information rich cases, this was the most appropriate sampling method. I attempted to interview to exhaustion, but with purposive sampled in-depth interviewing there is the possibility of missing key informants that may present a contradictive viewpoint. The timing of the study also limited the data gathered. Since the *Deepwater Horizon* blowout occurred so recently, it was incredibly easy to get statistics, official reports, and media articles. Interviews with involved parties, on the other hand, were not as easy to come by. I made numerous attempts to speak to the EPA, BOEMRE, and organizations like Smit Salvage and BP to no avail. On the other hand, the *Platform A* blowout occurred over 40 years ago, so important information may be missing and key stakeholders may have passed away or moved on by the time of this study.

Since this paper confirmed that framing affects the policy, additional research will follow to determine what affects which frame Congress chooses. An area I am currently pursuing is whether or not state-level oil production GDP impacts the frame chosen. The paper explores major offshore oil spills in the United States from the 1960's to today, the resulting policy, and GDP changes over the same period. Specifically, this paper compares oil and gas industry data for Alabama, Alaska, California, Florida, Louisiana, Mississippi, and Texas, and compares GDP

data and policy. Initial findings indicate that state sentiment can modify oil production but national policy does not change oil industry growth overall.

Many spills in other countries changed U.S. oil spill policy in a meaningful way. A future study looking into the framing of these spills and the policy that resulted (in both the U.S. and overseas) could really broaden the current body of literature. A few spills stand out that will be pursued in future studies. The wreck of the *Torrey Canyon* supertanker in 1968 and the subsequent response problems caused the U.S. to reconsider its response structure and ultimately instate the NCP which is still in use today. The blowout of the *Ixtoc I* exploratory well in 1979 caused the United States to rethink how they addressed spills that affected the U.S. but either didn't have a RP or the RP could not legally be held accountable. Congress released CERCLA to address this issue, which has had longstanding impacts on a number of issues related to pollution. There are also spills that curiously escaped national attention and framing but were of a large magnitude. A look into the lack of attention shown to the oil spills caused by Hurricane Katrina and Rita (which were responsible for seven million gallons of crude oil spilled) may shed some light regarding complex disasters and how the media and politicians choose which issues to frame as significant (Borger 2005).

In an interview with a key stakeholder in California following the *Platform A* blowout, the interviewee expressed the sentiment that “who the players are is more important than the legislation...someone has to enforce it for it to be useful” (CZM 2012). There is evidence to support this stance too; as previously mentioned in the *Exxon Valdez*, the ship exited shipping lanes against existing regulation but with permission from the USCG. The inference that the people in charge are more important than the actual policy is not something within the scope of

this study. A future study comparing what policymakers intended policy to do and what is actually enforced would help to explain the impact of policy and how industry and government interpret that policy.

The environmental damage Hurricanes Katrina and Rita caused was so extensive the EPA said at the time that it was the biggest disaster the agency had ever confronted (Nwazota 2005). Combined, Katrina and Rita accounted for 361 crude oil releases from offshore facilities and pipelines (Kaiser and Pulsipher 2007). There were also numerous large on-land spills attributed to these hurricanes; Katrina produced the largest single site on-land oil spill in U.S. history (Steinberg et al. 2008). While there are conflicting reports, official estimates by NOAA put the total oil released into navigable waterways by the hurricanes at roughly 8 million gallons, making it the third largest spill in U.S. history (NOAA 2011). Mysteriously though, there were very few media reports discussing the spills that resulted from the hurricanes. A future study will be undertaken to discern how this complex, hugely detrimental collection of spills essentially evaded any media attention or discernible legislation.

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Appendix A

INTERVIEW SCHEDULE

Disaster in the Gulf: The Evolution of Policy

INTERVIEW GUIDE

INTERVIEWER: _____

CONTACT INFORMATION: _____

INTERVIEWEE: _____

CONTACT INFORMATION: _____

DATE: __/__/_____

Interview Schedule

Demographics

1. First, could you tell me what your position is in your organization?

a. How long have you been with your organization?

b. What is the relation of your position to the National Contingency Plan?

2. Could you give me a brief description of what you do day-to-day for your organization?

a. What are your primary responsibilities?

3. Have you ever been involved in oil spill planning or response?

If no:

a. Who has in your organization?

4. Was your organization involved in the response to the Deepwater Horizon Oil Spill of 2010?

If yes:

a. Was this the national or regional office?

b. What was the role of your organization in this spill?

c. What was your personal role in response to the oil spill?

d. When did your organization become involved with the spill?

e. How did your organization become involved with the spill?

Following the wreck of the Exxon Valdez, the Alaska Legislature created the Alaska Oil Spill Commission in hopes of recommending policy remedies. I have selected some of their recommendations that I felt were most relevant to the recent spill with the intent to analyze the impact they had, or in some cases could have had, on the Deepwater Horizon spill. I'd like to ask you a few questions relating to these recommendations.

Recommendations

- 5. Do you feel that the government employs the best available standard technology in establishing performance standards? That is, in both day to day operations by the industry and in spill response capabilities.

- a. From what you know about industry, in your opinion do you feel they employ the best available standard technology in establishing performance standards?

- b. In your opinion, were the best available standard technologies employed in the Gulf spill?

- 6. Another recommendation made was that crew levels on tank ships and drilling platforms must be established to reflect manning needs under emergency conditions, not just normal operating circumstances, and must reflect the need to avoid fatigue and overtime among those with responsibility for safe navigation. In your opinion is this being done?

- a. In your opinion, were the crew levels adequate on the Deepwater Horizon?

If no:

- b. Why do you think this is the case?

- 7. In a review of current policy I found that the current protocol is that when a ship is from outside the U.S. and enters U.S. waters authorities' default to international regulatory law. In your opinion is this the case?

If no:

- a. What is the current practice?

If yes:

- b. Why do you think the policy is to default to international law?

- c. Do you feel is this the best policy?

- d. In your opinion how did this policy affect the regulation of the Deepwater Horizon, the response to the spill, and the recovery phase following the spill?

8. One of the most discussed issues has been who is in charge of spill response. The Alaska Oil Spill Commission recommended that the spiller not be in charge of oil response. The spiller would be obligated to respond until the government arrived and then turn over the response. This only seems to be happening on Spills of National Significance. Is this the case?

a. In your opinion why is the spiller normally in charge of response?

b. What qualifies as a Spill of National Significance?

If no:

c. What is the current practice?

d. What organization was in charge of the response to the spill in the Gulf?

9. The members of the Alaska Oil Commission felt that the EPA was not adequately funded and staffed for oil spill prevention and unless they receive sufficient support and funding response and responsibility should be shifted to a more able agency. Is this true?

If yes:

- a. Who should be in charge of oil spill prevention?

- b. In your opinion was the EPA adequately funded and staffed for oil spill prevention relevant to the gulf spill?

10. Another recommendation made was that the state should empower itself to take over direction of the response to any spill in their own waters. Do you agree with this?

If no:

- a. Who should be in charge?

If yes:

- b. Why isn't the state currently empowered to do so?

- c. In your opinion should Louisiana have had the authority to take over the response to the Gulf spill?

11. Is there any economic maintenance plan in place to immediately assist individuals impacted by an oil spill?

If yes:

a. How does it work?

b. Is this at the Federal, state, or local level?

c. How quickly after a spill can these funds be accessed?

d. How did this program work in the Gulf spill?

12. Is there a standardized process for the responding agencies to receive compensation from the responsible party?

If yes:

- a. Is this process the same for federal, state, local, and individuals?

- b. What happened in regards to this process after the spill in the gulf?

13. Are private parties drilling for oil required to submit a worst-case scenario spill response plan?

If no:

- a. In your opinion, should they be required to submit these plans?

- b. Who should they be required to submit these plans to?

If yes:

- c. Does your organization receive these plans?

d. What is done with these plans?

e. Did the companies involved in the Gulf spill submit worst-case scenario spill response plans?

14. Is there a process you're aware of for the pre-approval of dispersants, coagulants, burning, or bioremediation of spills?

If yes:

a. What is the process necessary to receive this pre-approval?

b. Was there pre-approval granted for use in the Gulf spill?

15. Is there anything else you think I should know about oil spill response or the policy that drives it, especially relating to the Gulf spill?

16. Do you have any documents or photographs relevant to the Gulf oil spill that I could take a look at or copy?

Thank You Very Much for Your Time

Notes

Appendix B

LISTING OF RECOMMENDATIONS

***indicates recommendations used in study**

Comprehensive Prevention Policy

1 – Prevention of oil spills must be the fundamental policy of all parties in the maritime oil transportation system.

2 – All parties must instill the attitude that spilled oil in the water is unacceptable into the approach of the maritime transportation industry in the United States and abroad.

3 – Because many individuals and communities are placed at risk by modern oil transportation systems, citizens should be involved in oversight arrangements at every level of government.

4 – The nation and the state need strong, alert regulatory agencies fully funded to scrutinize and safeguard the shipment of oil.

5 – State laws protecting the environment from oil spills should be applied to foreign flag vessels equally with other vessels engaged in the transportation of oil.

Responsibilities of industry

6 – The nation and the state need a private oil transportation system with management that is committed to environmental safety.

*7 - Government and industry should strive to adopt the best available standard technology in establishing performance standards.

8 – Every company shipping oil through the United States should identify a full-time environmental safety officer empowered to take recommendations to the highest level of the company.

9 – Tank farm capacity at Valdez should be increased to meet the original design requirement for maximum throughput.

State Regulation and Oversight

10 - The people of Alaska should recognize they are the stewards of vast natural resources that are the mainstay of their livelihood and a natural treasure. Among the obligations of state stewardship is the duty to protect these resources as much as possible from harm.

11 – The state should adopt stringent standards regulating the transportation of oil in its own waters without fear of federal preemption.

12 – A citizens' advisory council should be established in the office of the governor and given responsibility for overseeing the safe transportation of oil, gas and other hazardous substances.

13 – The state should expand and exercise its regulatory authority over environmental safety. Measures voluntarily adopted by industry should be backed up by state regulation. Federal technical standards and safety requirements should not preclude more stringent state standards.

14 – The state should renew and strengthen its authority to conduct inspections and spill response drills on vessels calling at Alaska ports and marine terminals.

15 – Government agencies should be given space at the Alyeska terminal to carry out their duties.

16 – A state licensing system should be established for oil transportation system safety personnel, including pipeline pump station and terminal managers.

17 - To the extent it does not already have such authority, the state should seek from Congress authority to require and enforce prevention and response regimes on vessels trading in Alaska or adjacent waters.

18 – The State of Alaska should negotiate interstate compacts with other coastal states and provinces for the development of prevention strategies, storage of response capabilities and to effect coordination of assets in case of another major spill.

19 – The state should require maintenance and personnel audits at oil transportation facilities to provide information and pinpoint problems in spill prevention.

20 – Training and experience standards for marine pilots in Alaska should be upgraded to require actual experience in Alaska operations of vessels at thresholds of 60,000 and 150,000 deadweight tons.

21 – Insurance policies should identify the State of Alaska as an additional insured or named beneficiary.

22 – The state should set rigorous requirements for private oil spill prevention and response capability in remote locations. The state also should develop response plans for major spills and articulate a prevention program from the Aleutian Islands to the Arctic.

23 – Given the high risk involved in arctic oil transportation, the options for developing

systematic environmental safety protections for this region should be a priority for scientific authorities.

24 – The state should establish a task force to review the environmental safety of the trans-Alaska pipeline system independently or in concert with a federal counterpart.

25 – The state should create harbor administration offices for Prince William Sound and Cook Inlet to help regulate traffic and navigation and to implement terminal and vessel inspections.

26 – A system of regional advisory councils should be formalized under state authority to oversee harbor administration, state and federal regulation and private safety functions.

27 – Local governments should be represented on the regional advisory councils and harbor administrations.

Federal Regulation and Oversight

28 – Double hulls and other technological advances in tank vessel design should be required on an accelerated timetable, including prohibition of nonqualifying vessels, regardless of flag registry, in all U.S. waters.

29 – Mandatory traffic control systems should be installed in due course in Cook Inlet, Prince William Sound and all waters of the U.S. where an equivalent or greater risk occurs.

30 – Crew levels on tank ships must be established to reflect manning needs under emergency conditions, not just normal operating circumstances, and must reflect the need to avoid fatigue and overtime among those with responsibility for safe navigation.

31 – The mission of the USCG to protect the safety of navigation should be defined to specifically include the safe transportation of oil by sea. Sufficient funding, resources and institutional support should be given to insure the strengthening this purpose.

32 – Congress should revisit the antitrust exemption granted to marine industrial insurance to require that premiums reflect design and operational considerations in accident prevention and pollution abatement.

33 – Congress should require corporations transporting oil or hazardous substances to file environmental safety reports as part of their Securities and Exchange Commission 10K filing. These corporations also should include a separate environmental report card in their annual reports to shareholders.

*34 – The United States should pursue an aggressive policy in bilateral and international regulatory forums to demand safety improvements. The practice of deferring to international transportation safety standards in U.S. waters should cease. Environmental regimes established by state or federal government should apply to tanker or barge traffic under any flag in U.S. waters.

35 – Tanker lanes should be established to keep tankers and fuel barges in the Gulf of Alaska and North Pacific trade at least 100 miles offshore.

36 – A system of tracking large vessels in the North Pacific should be developed.

37 – Congress should ask the president to require the administrator or the EPA and the secretaries of Transportation and Commerce to issue a special report on the safety of oil transportation by sea. Annually thereafter, the Office of Science and Technology Policy or the

Council on Environmental Quality should report on progress made by all parties, close encounters and accidents during the year, and emerging issues in the field.

Government Response Posture

*38 – The spiller should not be in charge of response to a major spill. A spiller should be obligated to respond with all the resources it can summon, but the government should command that response.

39 – Congress should either strengthen the Coast Guard’s oil spill response capability or transfer oil spill containment and cleanup responsibilities to the U.S. Army Corps of Engineers.

*40 – The EPA is not adequately funded and staffed for oil spill prevention and response. Unless the agency receives sufficient resources, these functions should be delegated to the states or transferred to agencies better able to perform them.

*41 – The state should empower itself to take over direction of the response to any spill in Alaskan waters.

42 - Post-removal site control may be conducted by: (1) The affected state or political subdivision thereof or local units of government for any removal; (2) Potentially responsible parties; or (3) EPA’s remedial program for some federal-lead Fund-financed responses at NPL sites. (m) OSCs/RPMs conducting removal actions shall submit OSC reports to the RRT as required by § 300.165.

43 – The state should establish community-based response depots under the management of the state Department of Military and Veterans Affairs.

44 – Local volunteer and part-time spill response units should be established, trained and equipped under the direction of the state Department of Military and Veteran Affairs.

45 – The state should develop regional response plans reviewed by appropriate regional advisory committees. Private contingency plans should be developed that mesh with the regional response.

46 – The regional response capability designated in the regional response plan should be able to respond to a major spill with the speed of a fire department to protect habitat and contain, transform, recover or destroy a major spill before it reaches shore.

*47 – The state should sponsor a system of emergency economic maintenance for persons immediately and seriously affected adversely by a spill.

48 – A formal command structure, known as the Incident Command System, should be used to direct response to oil spills.

49 – A substantive role should be given to affected communities in any response system.

50 – The state Department of Environmental Conservation should continue to insure spill response capability. For smaller spills this responsibility can be carried out or supported through private contract. In a major spill, where mobilization of private resources and multigovernmental agency response is required, the Department of Military and Veterans Affairs, with the advice of DEC, may determine that the spill be taken over by the state.

51 – Responsibility for the management and preparedness of emergency local response activity should be vested in the Department of Military and Veterans Affairs.

52 – An immediate funding mechanism must be available after a spill to allow the earliest commitment of response resources.

53 – A declaration of emergency should trigger the ability of the governor or other appropriate officials to release funds collected from state oil revenues to cover all impact costs, including economic maintenance programs and local impacts which become an extra burden on local services, whether provided by state or local government.

*54 – As a prevention incentive, existing regulations should be broadened to insure that in future spills the state can recapture all expenses directly or indirectly incurred by the state, its subdivisions and private parties to whom the state owes reimbursement or who have benefited under the state's oil spill disaster economic-maintenance program.

55 – Private parties carrying oil must have a state-approved plan of response to spills of all sizes, including a worst-case scenario that can be used under private, federalized, or “Alaskanized” spill response.

Research and Development

56 – The United States, the State of Alaska and Canada should establish cooperative research programs to develop and disseminate knowledge on oil spill prevention and response.

57 – The state should establish, in the University of Alaska system, an institute for research on oil spill prevention and response policy, technology, testing and evaluation

*58 – Authorities responsible for testing and approval of response technologies such as dispersants, coagulants, burning and bioremediation should evaluate and decide whether to preapprove these technologies more rapidly.

59 – The West Coast states should create a training center using simulators to advance the knowledge of masters, mates, pilots and shipboard bridge crews in the operations of very large vessels in West Coast Ports.

Appendix C

IRB APPROVAL FORMS



RESEARCH OFFICE

210 HULLIHEN HALL
UNIVERSITY OF DELAWARE
NEWARK, DELAWARE 19716-1551
Ph: 302/831-2136
Fax: 302/831-2828

DATE: January 13, 2011

TO: Alex Greer, BS
FROM: University of Delaware IRB

STUDY TITLE: [212225-1] Disaster in the Gulf: The Evolution of Policy

SUBMISSION TYPE: New Project

ACTION: APPROVED (E. Peloso)
APPROVAL DATE: January 13, 2011
EXPIRATION DATE: January 12, 2012
REVIEW TYPE: Expedited Review

REVIEW CATEGORY: Expedited review categories 6 & 7

Thank you for your submission of New Project materials for this research study. The University of Delaware IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the study and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the study via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the signed consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All SERIOUS and UNEXPECTED adverse events must be reported to this office. Please use the appropriate adverse event forms for this procedure. All sponsor reporting requirements should also be followed.

Please report all NON-COMPLIANCE issues or COMPLAINTS regarding this study to this office.

Please note that all research records must be retained for a minimum of three years.

Based on the risks, this project requires Continuing Review by this office on an annual basis. Please use the appropriate renewal forms for this procedure.

If you have any questions, please contact Jody-Lynn Berg at (302) 831-1119 or jlberg@udel.edu. Please include your study title and reference number in all correspondence with this office.



RESEARCH OFFICE

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DATE: January 4, 2012

TO: Alex Greer, BS
FROM: University of Delaware IRB

STUDY TITLE: [212225-2] Disaster in the Gulf: The Evolution of Policy

SUBMISSION TYPE: Continuing Review/Progress Report

ACTION: APPROVED
APPROVAL DATE: January 4, 2012
EXPIRATION DATE: January 12, 2013
REVIEW TYPE: Expedited Review

REVIEW CATEGORY: Expedited review category # 6, 7

Thank you for your submission of Continuing Review/Progress Report materials for this research study. The University of Delaware IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the study and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the study via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the signed consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All SERIOUS and UNEXPECTED adverse events must be reported to this office. Please use the appropriate adverse event forms for this procedure. All sponsor reporting requirements should also be followed.

Please report all NON-COMPLIANCE issues or COMPLAINTS regarding this study to this office.

Please note that all research records must be retained for a minimum of three years.

Based on the risks, this project requires Continuing Review by this office on an annual basis. Please use the appropriate renewal forms for this procedure.

If you have any questions, please contact Jody-Lynn Berg at (302) 831-1119 or jlberg@udel.edu. Please include your study title and reference number in all correspondence with this office.