A Historical Analysis of Louisiana Oil Spills

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Table of Contents

List of Figures

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1.0 Introduction

Louisiana is the third largest producer of crude oil in the United States. If one counts federal production on the outer continental shelf serviced by Louisiana, then the state becomes the largest crude oil producer in the U.S. As a major player in the oil production arena, Louisiana has an oil spill problem to solve. The state and the oil industry in Louisiana have approached the problem from many directions and have enlisted scientific researchers and engineers, among other professionals. Most of the research approaches taken thus far have focused on one of two strategic categories: cleaning up spills and preventing them. Improvements in remediation and prevention are driven by, and depend upon, an improving understanding of oil and oil spills.

Thanks to this research, we know a great deal more now about in situ burning, bio-remediation, and the absorptive properties of different substances and substance shapes than we used to. We understand and can model the movement of spilled oil through water and earth under various conditions, in ways that far surpass the research capacities of only a few years ago. We have more precise measurements of the effect of oil on marsh grasses and other vegetation. All of this, one hopes, will lead to less damage from spilled oil. Nevertheless, dramatic reductions in spill related damage remain elusive.

Although few studies of prevention tactics are undertaken, aside from local safety program evaluations, everyone agrees that the best way to reduce the damage from oil spills is to prevent them, not refine cleanup techniques. The development of prevention strategies, however, demands an improved understanding of oil spills themselves. A study of oil spills, we believe, will reveal cheaper and simpler ways to dramatically reduce not only the number of oil spills, but perhaps more importantly, the number of gallons of oil that are spilled. It is not surprising that this study has not yet been undertaken. When faced with a decision to either buy a better oil spill boom system or pay someone to discover potentially useful things about oil spills, it is usually easier for a business to justify the first, more tangible option. Thus, scant attention has been paid to simply analyzing data about oil spills.

The current project has begun conducting this neglected research. The project has two main tracks. The first track (Sections 2.0 and 3.0 below) involves analyzing difficult to handle data about oil spills. Section 2.0 presents oil spill data and Section 3.0 presents a review of newspaper coverage about oil spills. Taken together, these sections offer a multi-faceted perspective of the history of oil spills in Louisiana. The second track involves distributing the data in a convenient CD format. Section 4.0 provides an overview of this effort.

2.0 Oil Spill Data Analysis

There was a general and fairly substantial decline in the number of all types of crude oil spills nationwide through the 1990s as domestic production declined and imports rose (Figure 1). Louisiana generally follows that pattern (Figure 3), except for an increase from 1993 through 1996. This increase was mostly caused by platform spills, which were so frequent that they dominated even when all the states are taken together (Figure 1).

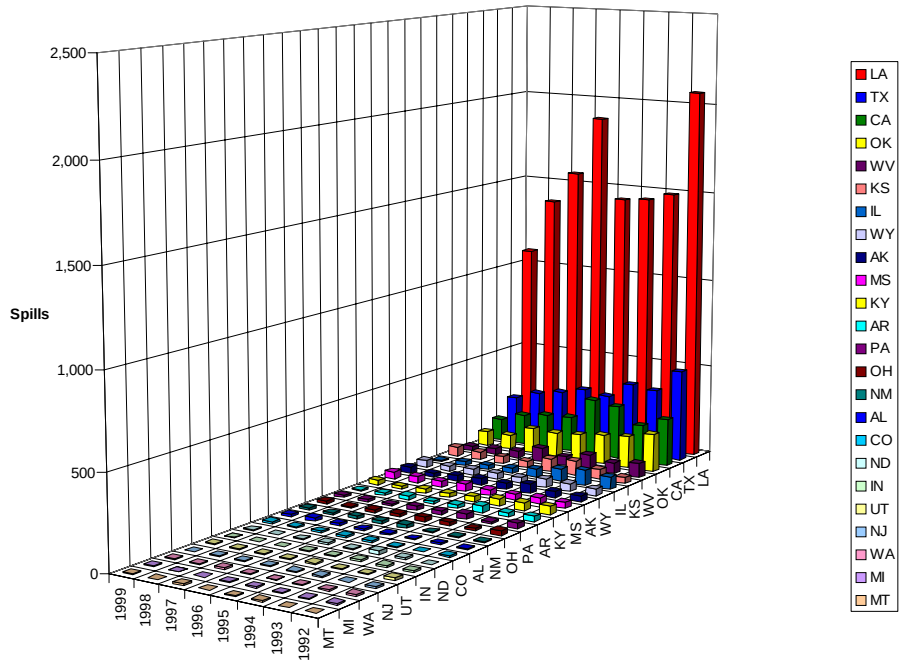

Figure 1: Crude oil spills by state through the 1990s.

Louisiana had the greatest number of crude oil spills in the nation (12,304) by far (Figure 1) followed by Texas (2,708), California (1,760), and Oklahoma (1,132). Out of 21,224 crude oil spills in the nation as a whole for the years 1990 through 1999, Louisiana accounts for almost 58% of spills. However, the nation spilled 24,326,930 gallons (Figure 2). Louisiana spilled just over 11% (2,776,497 gallons, NRC data 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999). Not bad for a major producer. Better than Texas (8,637,817 gallons, 36%), Oklahoma (3,756,943 gallons, 15%), and California (2,945,663 gallons, 12%). Measured in gallons spilled, Louisiana is doing as well or better as would be predicted by production and other indicators.

In the only year for which we can reliably compute a total production figure that includes federal offshore production (1995), Louisiana was the third largest producer of crude (446,897,623,000 bbls) behind both Texas (578,524,944,000 bbls) and Alaska (541,654,000,000 bbls) (Minerals Management Service, Crude Oil and Natural Gas Production, Energy Information Agency, Production of Crude Oil by PAD District and State 1995). Louisiana ranks third in number of refineries (17). Both Texas (28) and California (23) have more such facilities[Environmental Protection Agency (EPA) Sector Facility Indexing Project (SFIP) data 1999]. If one assumes that more oil and more oil handling result in more oil spilled, Louisiana spills about as much oil as would be expected.

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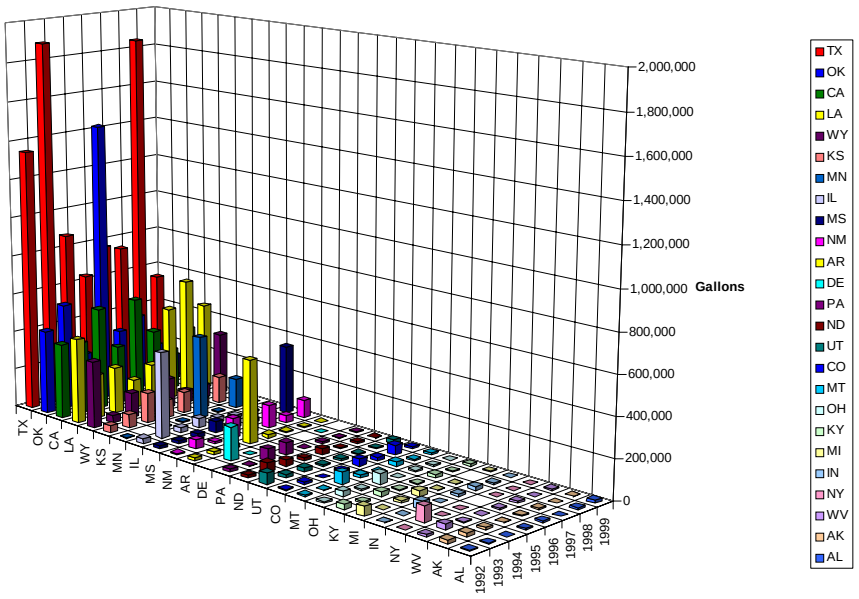
Figure 2: Gallons spilled by state through 1992 through 1999 in the NRC Data with Coordinates Added



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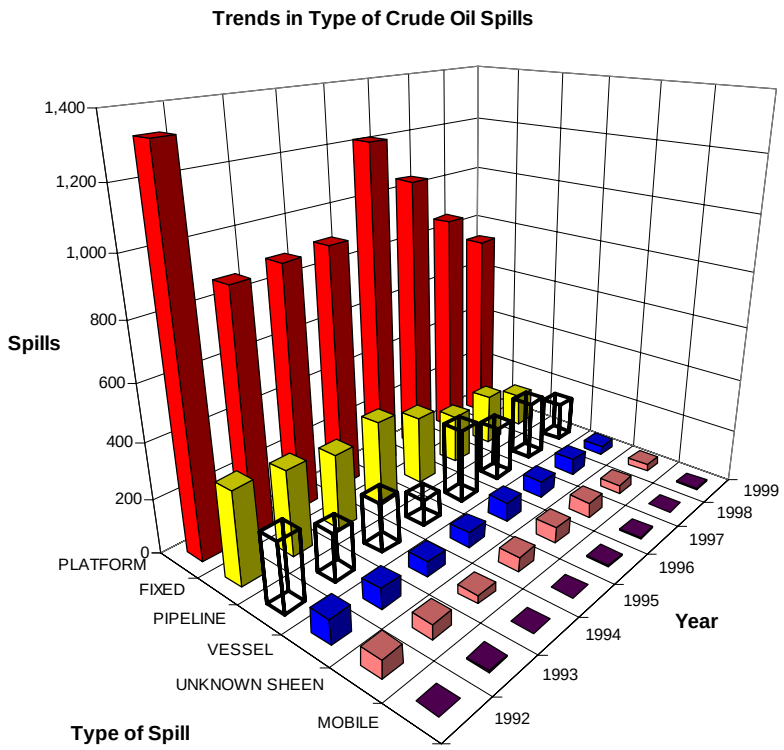

Figure 3: Spills in the 1990s by type of spill.

By graphing spills as in Figures 3 and 4, one can quickly see a few major points. Perhaps most striking is the general pattern that the number of spills in a given category is not a good predictor of the amount of oil spilled. Although platform spills are the most numerous by far, they do not result in more oil spilled. Also, although the number of spills at fixed locations has generally declined over the decade (Figure 3, one of the few trends discovered here), the amounts spilled have not declined (Figure 4).

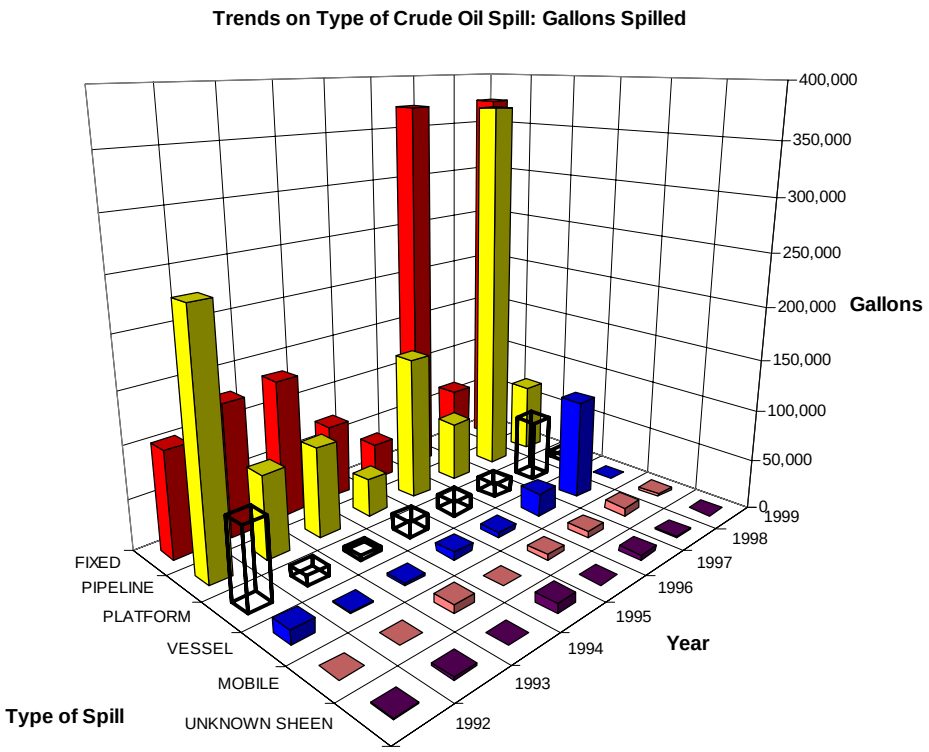

Figure 4: Gallons spilled in the 1990s by type of spill.

Spills at fixed locations and pipeline spills remain our most chronic and severe problems. It is also worth repeating that reducing the number of spills does not directly translate into a reduction in the amount of oil spilled. Vessel and platform spills can be quite large, and working to prevent them must be a priority. But preventing fixed and pipeline spills should be our primary effort.

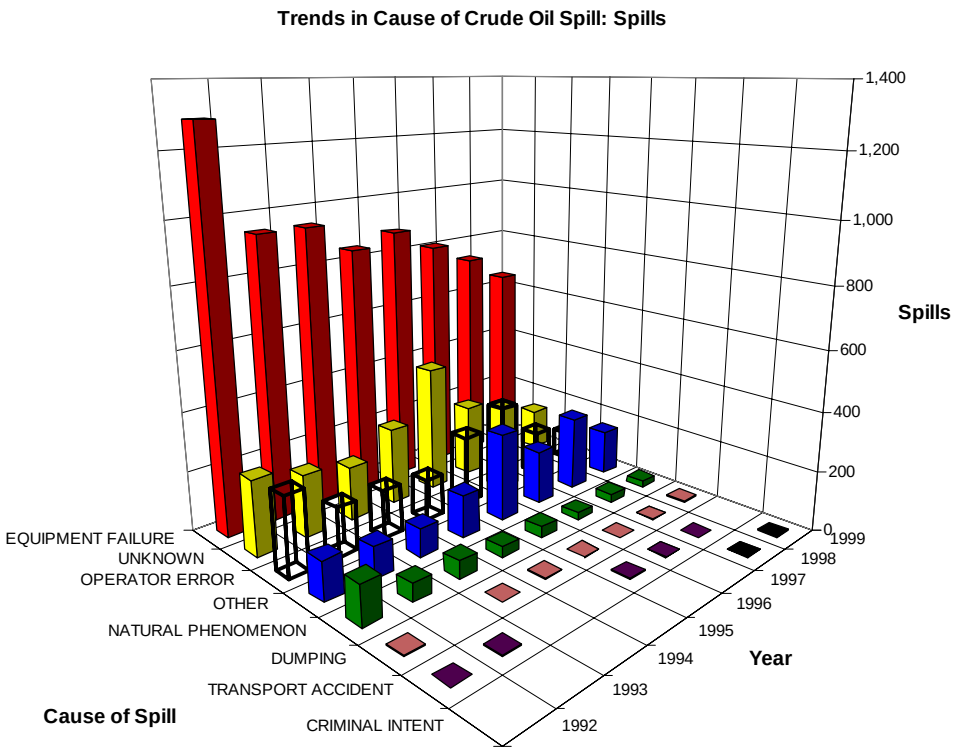

Figure 5: Spills in the 1990s by cause of spill.

Spills caused by equipment failures declined dramatically in the last 10 years (a second apparent trend). Even so, equipment failure and operator error appear to be the most common known causes of spills (Figure 5) and account for much of the oil spilled overall (Figure 4). Spills caused by natural phenomena are relatively rare, but can spill large amounts of oil. The large number of spills due to unknown causes makes these conclusions somewhat tenuous, however. Presumably, all of the spills of unknown cause would be distributed to other spill causes were the investigations more thorough. A redistribution of spill causes could change the current picture entirely. Again, one notices that the number of spills bears little relationship to the amount spilled. (Figures 5 and 6)

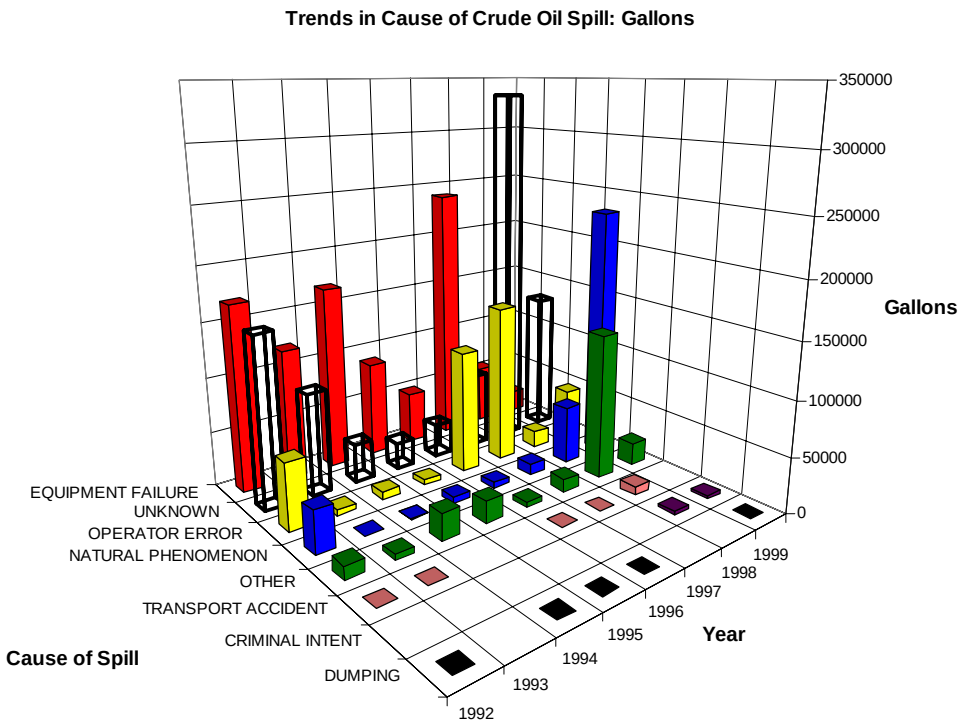

Figure 6: Gallons spilled in the 1990s by cause of spill.

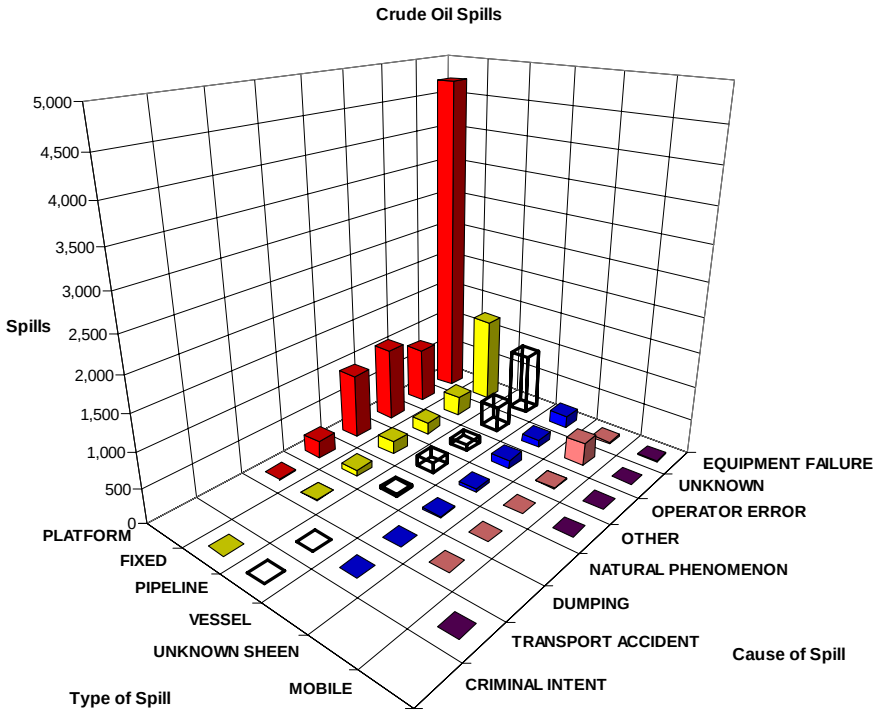

Figure 7: Spills: Cause by type.

Taking all years together (or separately for that matter), one can cross spill types with spill causes and get a more complete picture, which mostly confirms the analysis so far. The number of spills continues to be a poor indicator of the amount spilled (Figures 7 and 8). As stated above, fixed and pipeline spills result in far more oil spilled than other types, and platform spills though numerous, are generally small. Again we see that equipment failure and operator error are the cause of large oil spills, especially at fixed facilities and on pipelines, platforms, and vessels. Natural phenomena cause relatively few spills, but the spills they do cause are large, at least at fixed facilities and on platforms. As before, the large amounts of oil spilled due to unknown causes complicate the analysis since they would be more appropriately placed in one of the other cause categories. Were the spills in the "unknown cause" category properly reassigned, the picture presented here would be significantly different.

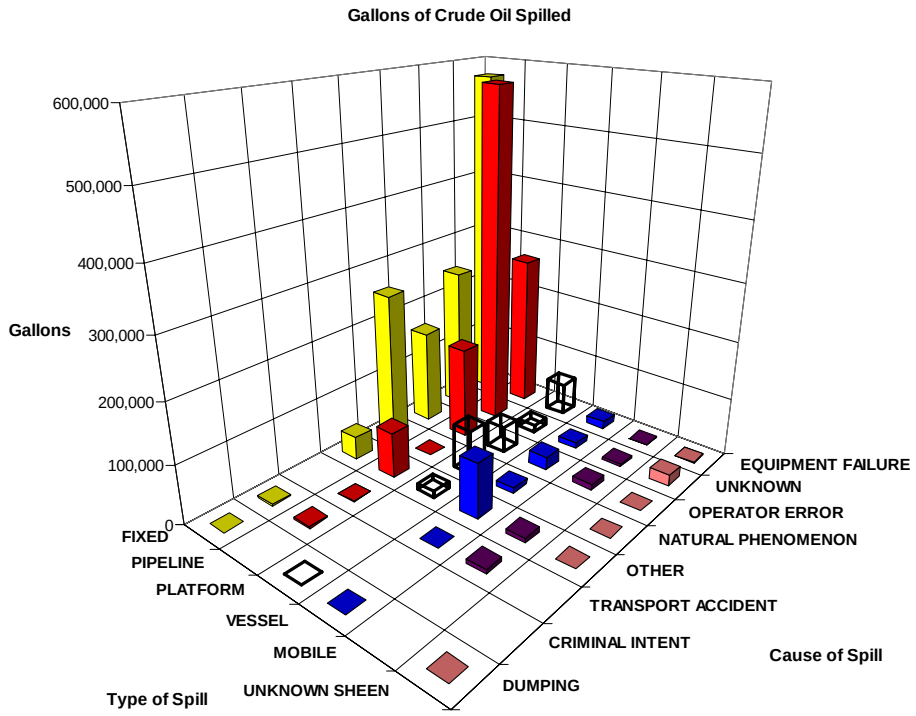

Figure 8: Gallons spilled: Cause by type.

The data and database program delivered with this report make possible, for the first time, mapping and GIS spatial analysis of oil (or other hazardous substance) spills in Louisiana.

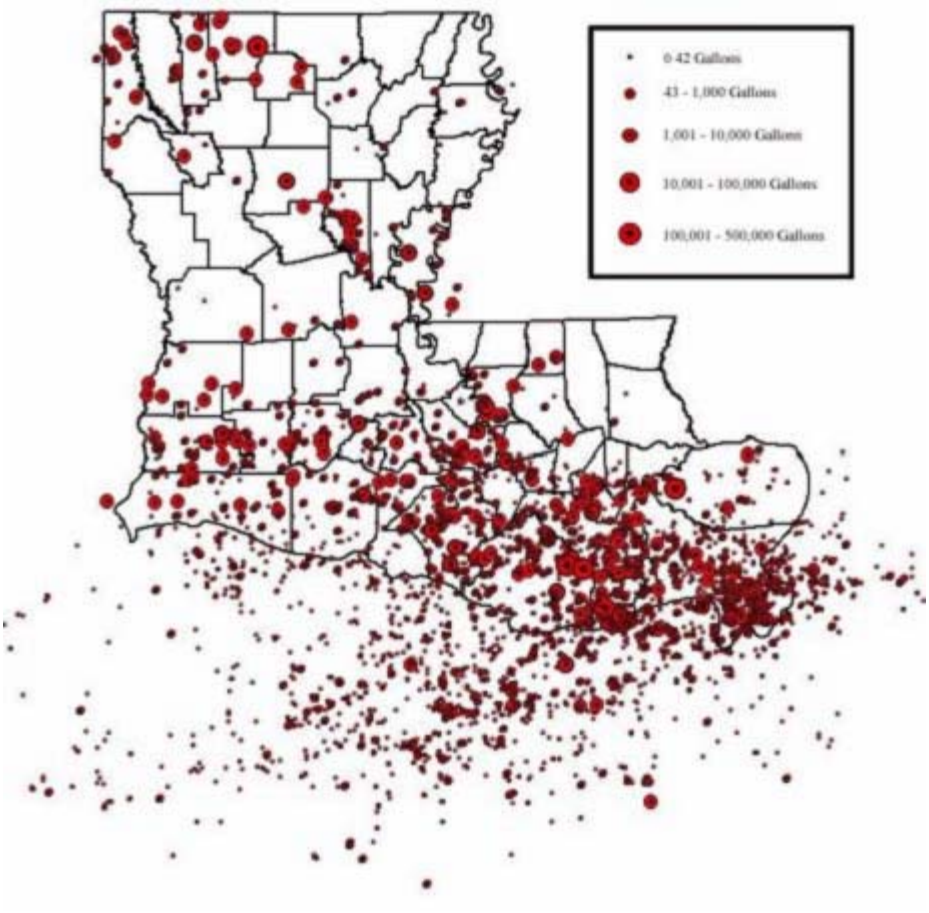

Figure 9. Crude oil spills 1992 – 1999.

Of course, one can determine which spills occurred in which parishes without the latitudes and longitudes. But for many purposes such a geography is too crude. With the latitudes and longitudes provided here and a good mapping (GIS) application, one can now ask and answer such specific questions as: Which spills occurred within five miles of the Baton Rouge city limits? Which spills were within the coastal zone? Which spills were within 500 yards of a navigation canal? Which spills occurred in brackish marshes? Which spills occurred near seabird colonies? Has more oil been spilled in densely populated areas or in sparsely populated areas? In short, if something can be placed on a map, then its spatial relationship to spills can now be specified.

3.0 Oil Spills 1950 to 2000 in the Press

This section provides a qualitative and quantitative analysis of Louisiana oil spills in the journalistic media. Specifically, we examine how the oil industry becomes news and how over time different aspects of the oil industry become worthy of media coverage. We do this by examining oil spills in the Louisiana media from 1901 through 2002.

3.1 The Importance of the Media in the Perception of Social Problems

The role of the media in the construction of social problems is well documented (Best 1987; Cohen 1972; Chermak 1995; Crouch and Damphousse 1992; Forsyth and Gramling 1988; Forsyth and Oliver 1990; Forsyth, Roberts and Gramling 1993; Forsyth and Shover 1986; Ganson et al. 1992; Goode and Ben-Yehuda 1999; Spector and Kituse 1977). Our purpose is to capture the media's social construction of oil spills in its reporting of this phenomenon.

A cache of research has addressed the interpretive process of stakeholders/participants involved in environmental issues, resource use, and social impacts. Much of this research has used frame analysis to explain public disputes as agendas for change or more generally in the dynamics of social movements (Freudenburg and Gramling 1993; Krogman 1996; Benford 1993). Framing refers to the tendency of individuals or groups, to construct accounts/stories of reality on the basis of their place within a socially organized situation or locality (Goffman 1974; Krogman 1996). According to this perspective, people voice motives that are consistent with the norms and roles guiding their behavior. This perspective recognizes that people often take positions that are consistent with their individual or group interests, and that such positions may represent values or linguistic means to achieve a particular outcome.

Frame analysis recognizes that disputes exist where there are conflicts over interpretive matters. Individuals may disagree on the nature and consequences of a problem and on the reasons and avenues for changing the actual circumstances. Stakeholders are individuals or groups who have interests, claims, or shares in an outcome. Several researchers have specified different types of framing contests or accounts for discrepancies in the framing of stakeholders (Aronoff and Gunter 1992; Benford 1993; Berger and Luckman 1976; Best 1987; Burke 1945; Erikson 1994; Freudenburg and Gramling 1994; Krogman 1996; Lukes 1974; Spector and Kituse 1977; Zurcher and Snow 1981). These models of frame accounts assume that individuals are the definers of reality, that they divert attention to topics that cater to their own interests, and/or that they use anecdotes or stories that are at the same time both sufficiently complex to be representative of the subject and simple enough to be understood (Krogman 1996). The frames used in this paper represent the variety of issues that were identified from the content of the newspaper articles. As such, the choosing of the event represents the first construction of the event’s reality for most individuals. Similarly, if the media does not cover an oil spill, most citizens will not know that the spill exists or will assume that it is not important. If the media does choose to cover a spill, it does so using a particular form and interpretation. This then becomes the public's portrait or the social construction of the spills’ reality. The media thus influences how “real” an oil spill seems to the average citizen. In this context, the media is a major stakeholder in the "effects" of any oil spill.

This research presents the media's data in an unbiased fashion (on the part of the researchers). Our intent was to introduce the reader to the role of the media in the presentation of this data.

3.2 Methods

The *New Orleans Times Picayune* was searched for oil related news from 1901 until April of 2002. The archives of the University of Louisiana library were used. Several local libraries (for example Morgan City, Cameron, Abbeville, and Houma) were visited to search for specific dates and/or events indicated in the *Times Picayune*. The local newspapers were not a vast source of data, and in no case did these sources uncover anything which the *Times Picayune* had not already revealed.

Prior to 1950, the *Times Picayune* did not pay much attention to oil spills. We thus decided to summarize this period using prose rather than tables. The media's focus on oil spills begins in 1950. Eight summary tables are used to facilitate the analysis of data from 1950 through early 2002. Our analysis ends in April 2002 to coincide with the beginning point of our analysis.

TABLE 1 presents ACCIDENTS IN THE GULF OF MEXICO. This includes all accidents involving oil spills that occurred in the open waters of the Gulf. Seven categories of accidents were found:

1. ship hitting rig
2. weather affecting rig
3. weather affecting ship
4. rig blowout
5. fire on rig
6. fire on ship
7. spills with no cause

TABLE 2 presents ACCIDENTS ON WATERWAYS. This includes accidents on the all of the waterways in Louisiana, but primarily the Mississippi River and to a lesser extent the Greater Intracoastal Waterway (GIWW). Five categories of accidents were found:

1. collision of vessels
2. water supply affected
3. single vessel without collision
4. industry on river
5. spills with no cause

TABLE 3 presents PIPELINE accidents. Two categories of accidents, based on location, were found: land and offshore.

TABLE 4 presents spills on ROADWAYS WITH VEHICLE. Four categories were found:

1. accidents
2. single vehicle spill
3. none accident related
4. spills with no cause

TABLE 5 presents oil spills on LAND. Five categories were found:

1. pit fire
2. storage tank leaking
3. industrial explosion/fire

4. spill with no cause

TABLE 6 presents oil spills involving a RAILROAD. Three categories were found:
1. fire explosion
2. leak
3. accident with vehicle

TABLE 7 presents oil spills involving AIRCRAFT.

TABLE 8 presents a summary of ALL CATEGORIES of accidents over six decades: 1950-1959, 1960-1969, 1970-1979, 1980-1989, 1990-1999, and 2000-2002.

3.3 Findings

3.3.1 The Early Period: 1901-1949

As previously explained, the media did not pay much attention to oil spills prior to 1950. Our analysis of this period concentrates on explaining how Louisiana's media framed the issue of oil.

Discovery and Announcements of Wells

Media attention to oil in Louisiana began on September 21, 1901 when the press announced the state's first oil well in Jennings. Although accidents with oil occurred early in the industry's history, it was half a century before the term "oil spill" was used by the *Times Picayune*. Oil spills were reported in Texas and Oklahoma before they were reported in Louisiana.

Wasting Oil

On December 28, 1907 the first oil well blowout in Louisiana was reported between Lafayette and Breaux Bridge. The word "spill" was not mentioned in connection with the blowout. The term "oil spill" did not become an oil industry/media phrase until much later in the 20th Century. On October 7, 1909 oil was "wasted" next to a wharf in Gretna.

Damage Cost

In May (9th) 1913, the first large damage attributed to oil occurred in Amesville. Several homes were burned, which caused an estimated damage cost of $70,000. This is the first time that the *Times Picayune* reported on the potential damage and risk associated with the oil industry and the mining and use of its products.

Response To Accidents

On September 26, 1933 in Amite a large fire was caused by oil. Chemicals had to be brought from New Orleans to stop the fire. The idea of being prepared to respond to oil accidents emerged from this disaster. Preparedness in this context meant having chemicals readily available where they might be needed.

From Back Page to Front Page

Most news about oil was contained on the back pages of newspapers. However, several new oil fields established in south Louisiana gradually made front page news. As oil exploration became more newsworthy, other aspects of the oil industry were also deemed more newsworthy. For example, the discovery of several new fields was mentioned on the *Times Picayune's* front page in 1940. This was the first time the discovery of an oil field made the paper's front page. On March 30, 1940 the discovery of a field in Jefferson Davis Parish made the front page. This was quickly followed in April 1940 by the announcement of the 99th and 100th oil fields in Erath Louisiana. These events marked the introduction of oil into the media limelight. The attention is all positive at this point.

Deeper Investigation

Oil was now a news topic worthy of the front page, which meant that nearly everything about oil was news. This resulted in more in depth investigations and more thorough research for stories about "black gold." The attention started to become negative very quickly in a 1940 five day series of front page articles investigating the overproduction of oil fields as well as kickbacks to both state and local public officials. The idea of imported oil versus domestic production also became an issue in the 1940s. The oil industry was becoming more regulated, and the regulations were becoming more visible to the public because of press attention. However, through 1940 there was no mention of the impacts of spilled oil.

Increased Attention Starts; But Is Slowed by World War II

In the 1940s, the media coverage of oil activity began to increase, but there was still no mention of oil spill impacts. The spilling of oil was still referred to as "wastage." Press in the 1940s was dominated, predictably, by news of World War II. Similarly, during the years 1946, 1947, 1948 and 1949, the media devoted no attention to the oil industry, as the press was dominated by the end of World War II and the post-war economy.

3.3.2 The Later Period: 1950-2002

The year 1950 represented the onset of the media's focus on oil spills. From this point on, media attention began to spiral.

The Oil Slick and Fire

It was not until 1951 that the term "oil slick" was used in reference to a quantity of pit oil that ignited. In 1954, the press mentioned illegal dumping and fire and smoke in connection with other oil fires. Oil fires were portrayed as short-term problems. There was no discussion of long-term impacts; the only consequence mentioned was that the fires' black smoke was a hazard to automobile traffic. Fire remained the most severe impact of oil related accidents through 1956. Starting in 1956, the media began to report a high number of accidents involving collisions and explosions. Several deaths resulted from these accidents, which caused a progressively louder public outcry. Nevertheless, the press still did not mention long-term impacts from blowouts and fires.

1960 and the Beginning of Impact Recognition

In the 1960s, the public began to acknowledge environmental impacts from oil spills. For example, the media more deeply addressed threatened water supplies in the New Orleans area. Parishes in the greater New Orleans area take their water from the Mississippi River; the water intake is located below the low water mark of the river. An oil slick's depth (proximity to the intake valve) determines the threat to the water supply. This threat is mitigated by such factors as current speed, river depth, water temperature, and the fact that oil tends to sink as it travels. In the 1960s, the media began giving space to stories covering shipping accidents on the Mississippi River near highly populated areas such as Baton Rouge and New Orleans, accidents in the open waters of the northern Gulf of Mexico, pipeline accidents, and oil spills on Louisiana roadways. As the number of accidents increased, the ability to response to accidents and the impact of such accidents gained increasing levels of attention.

The framing of oil spills in the media involves both selecting a specific oil spill to cover and presenting the chosen spill. Such framing determines how the cause and effect of a spill is portrayed. The examples below show a variety of such media frames.

Water Supply. In 1960, there is mention of an oil slick from a barge that sank in the Mississippi River; the concern was whether the oil would enter the New Orleans water system.

Shipping On the Mississippi River. In 1960, two barges broke loose from moorings along the levee and crashed into a ESSO tanker on the Mississippi River near Baton Rouge. This event was very significant because the media began to project what could have happened if the worst had occurred, and they saw a potentially large and costly impact. Also in 1960, an oil slick five miles long and 100 feet wide floated pass the City of New Orleans. The slick was the result of a broken hose.

One of the worst of these shipping accidents in the Mississippi River occurred in October of 1962 when the Norwegian Tanker Boheme had a collision with a string of oil barges towed by a tug. The tanker caught fire after an explosion on the bow, and the flames quickly covered the whole ship, causing other explosions. A huge oil slick resulted, and over 20 people died. The tanker was beached on the east bank of the Mississippi River and posed a threat to the levee system for several days. This accident gained a great deal of media attention because so many risk factors were "frameable."

Ferries pose another type of potential disaster. Ferry crossing areas along the river are a hazard to navigation. Because of the potential for loss of life, these accidents are an even greater threat when they involve a vessel carrying oil. In December 1963 the Jackson Avenue Ferry in the New Orleans area collided with an oil barge carrying high-octane gasoline.

In 1967, a Chinese freighter collided with a barge carrying 9000 barrels of crude oil under the Greater New Orleans Bridge. The ship burst into flames and sank in the Mississippi River. The media covered the ship story for many years; it was portrayed as a hazard to navigation and a reminder of existing accident/risk potential of the area.

Accidents in the Gulf. Accidents in the Gulf of Mexico are the result of fires, weather, blowouts and collisions with ships.

A British Freighter hit an oil well near the Eugene Island area in July 1960, marking another type of threat. The media acknowledged the oil spill's impact and ran this story for over a week. Another type of accident occurred in the summer of 1964 when the worst accident in offshore drilling history occurred south of Morgan City, Louisiana. Twenty people were killed and more than that number were injured. Accidents to oil rigs posed by hurricanes also became a media topic in 1964 when Hurricane Hilda hit the Louisiana coast.

In 1967, an oil slick in the Gulf is said to have affected a 15 square mile oyster bed. This is the first time an impact on fisheries is addressed.

Oil Spills on Roadways. In 1950, a gasoline truck collided with a school bus and burst into flames. In 1960, a drum of oil fell off a truck and broke open on a New Orleans street. The fire department responded and acknowledged that they were not prepared for the spill. A much larger spill occurred in 1962 when over 1000 gallons of fuel oil are spilled in New Orleans' Central Business District.

Pipeline Accidents
The first pipeline accident occurs in Vermilion Parish in 1959.

These topics of media coverage, along with explosions, fires, and well blowouts continued to gain the media spotlight into the 21st Century. Of these topics, accidents involving merchant shipping began to gain the greatest media attention because they presented the greatest threat to humans and the environment. These topics concern either the collision of freighters or tankers with oil barges or with permanent structures within the Mississippi River. Rarer events include: accidents involving tankers in the Gulf of Mexico, accidents involving any vessels with an oil structure in the Gulf, or explosions on oil structures. Although they occur less frequently, they receive more widespread coverage because they impact a greater population and are more visible.

In 1964, Humble Oil Company was criticized for not reporting an oil spill. A suit was filed in federal court regarding damages. One of the damage claims asserts that because the spill was not reported, the City of New Orleans did not respond, and the drinking water was fouled for several days.

Several trends merge in this intense media coverage: increased traffic on the Mississippi River, interest in the environment, and the post-Vietnam insightfulness and acumen of the media. By the end of the 1960s, the media was focused on the oil industry.
With each oil related accident, the oil industry became a more likely target, and with each new type of accident the target widened. By the end of the 1960s, all the major contributors to oil spills had been identified. In the 1970s, the oil embargo put oil in more focus. Also during this time, two types of events gained the bulk of media focus: accidents in the Mississippi River that cause oil spills, and accidents in the Gulf of Mexico that cause oil spills. Major oil spills in other parts of the world may have been fueled the increasing focus of the media.

As shown in Tables 1 through 8, this attention continued to increase throughout the study period. Only 301 oil spills were reported in the media. Over 64 % or 176 of these 301 oil spills occurred on water (this category combines three categories: in the Gulf, on waterways, and near offshore pipelines). We would expect this because the impact of oil spills on water is not localized, so it affects more stakeholders, is more visible, and its effects and cleanup are more costly. On land, oil spills are localized, less visible, and less costly to clean up. Indeed, spills on land may not be seen as newsworthy, whereas those on water usually become public and are more likely to become media focal points. The media's reporting of spills may not accurately reflect the proportion of actual oil spills. We already know by comparing the data from number of spills reported in the 1990s that the media covers only a small fraction of this total. This may reflect the positive relationship between Louisiana residents and the oil industry (Freudenburg and Gramling 1994).

As indicated in Table 1, there were 46 accidents involving oil spills in the Gulf of Mexico since 1950. Although seven categories of accidents were found, the highest number of spills reported by the media were caused by rig blowouts—15 in all. Fires on ships, oil rigs, and rig blowouts account for over two-thirds of the oil spills in the Gulf. As shown in Table 8, the highest number of accidents in the Gulf occurred in two decades: 1960-1969 and 1970-1979. Forty of the 46 accidents (87%) reported in the media occurred during this 20 year period.

As shown in Table 2, 104 accidents occurred on waterways over the study period. This represents the category with the highest number of media reported accidents. Fourteen cases of oil spills affecting the water supply of a community were reported. The greatest cause of the accidents reported was the collision of vessels—45. For the most part, these accidents occurred on the Mississippi River. Table 8 shows that the highest number of accidents on waterways reported in the media occurred in the two decades 1960-1969 and 1970-1979, although there was not a sharp decrease in reporting for the remaining decades of the 20th century.

Thirty-six oil spills were attributed to pipelines reported in the media, as exhibited in Table 3. Of the two categories of pipeline accidents reported, those offshore represented almost three-fourths of the total. Again as seen in Table 8, the highest number of pipeline accidents reported by the media were in two decades: 1960-1969 and 1970-1979. There was a sharp decrease in reporting of pipeline accidents for the remaining decades of the 20th century.

Displayed in Table 4 are roadway spills reported by the media. Only 14 such spills were reported during this period. Virtually all (93%) occurred between 1950-59 and 1960-1969.

As indicated in Table 5, 72 spills on land were reported. Of the five categories of these spills, explosions or fires at industrial sites comprised nearly two-thirds of the total. Although industrial fires and explosions are always the leading cause of oil spills in this category, pit fires were a significant media focus only in the early period because the pits themselves are for the most part eliminated. Over 76% of these accidents occurred in the decades 1950-59 and 1960-1969.

Exhibited in Table 6 are oil spills involving railroads. Only two such spills were reported by the media during the entire period.

Table 7 presents oil spills involving aircraft. Only one such spill was reported.

Table 8 presents a summary of all categories of accidents over six decades: 1950-1959; 1960-1969; 1970-1979; 1980-1989; 1990-1999; and 2000-2002. The highest number of accidents reported in the media occurs in the decade 1960-1969, with 100 oil spills reported, followed by 1970-1979, with 82 oil spills reported. Since the 1960s, there has been a general decline in media reporting about oil spills.

3.4 Discussion

This section of this report has presented both a qualitative and quantitative review of the media's portrayal of oil spills in Louisiana. Further research should also examine the role of the media in the social construction of oil spills over time. Whether such reporting is biased or exaggerated in the selection of oil spills or oil spill effects should be examined. The oil industry is interested in public relations and has devoted a large amount of resources to this task. However, the media represents an important source of information that is all but overlooked by those documenting the effects of oil spills. The media view offers insight into both the social and economic effects of oil spills. How people construct environmental information becomes the basis for contesting claims as to basic rights, responsibilities, and responses to technological disasters. For this reason, all aspects of claims making activity should be examined from a social constructionist's perspective of disaster. In other words, a review of television, newspaper, and magazine reporting would inform industry or others about the social construction of the event.

The media portrays the documented effects as perceived by the public. Further research should examine how media reporting compares to structural variables such as the number of rigs or shipping traffic on the waterway in question. Another comparison should analyze the number and type of spills reported versus the number and type reported in the media.

Although the actual number of oil spills, the amount spilled, and the success of cleanup efforts is indeed more important than media reporting of same, the influence of media coverage is of vital importance to the oil industry. The authors hope that this research will serve as a starting point for those investigating the media's influence on the public's view of reality.

4.0 The Louisiana Oil Spill Database CD Program

After several years of studying Louisiana oil spills, we have been working with massive, complex databases that allow us to sift through hundreds of thousands of oil spill records. However, the databases had to be manipulated by expensive and difficult to master programs installed on high-end computers. Despite the sophisticated hardware, these databases often crashed our machines and sometimes our brains.

Most industry and government decision makers in matters of oil spill preparedness and prevention are not as well equipped as the authors, and not so peculiarly trained. Yet these decision makers are the very people who need to access and analyze complex oil spill information. Thus, we are now trying to make the facts more widely available by means of a simple, intuitive, free computer program on a CD.

This essay will introduce a simple stand-alone computer program called the Louisiana Oil Spill Database CD, which attempts to make the data accessible to a broad variety of oil spill decision makers. Starting sometime in 2004 the program will be available on a CD upon request to the Louisiana Oil Spill Coordinator. This stand-alone program enables interested parties to query a large database of hazardous spills, generate tables, and do their own customized analyses. We submitted the program to the Office of the Louisiana Oil Spill Coordinator in August of 2003.

We drew 30 variables from multiple tables in the larger database and merged them into a single table for use by the CD program. The variables were drawn from the NRC data (described in the Appendix) and the Latitudes and Longitudes Table developed by the authors for the Louisiana Applied and Educational Oil Spill Research and Development Program. Along with the appendix in this document, the About and Help buttons in the program (pictured above) should answer most user questions. To supplement this information, we have included below a list of the variables output by a query of the Louisiana Oil Spill Database CD. We have also provided advice on use and installation.

Othmane: the author sent the CD separately. Your office has a copy. Not sure if you want to put the contents on the html page or make it available separately.

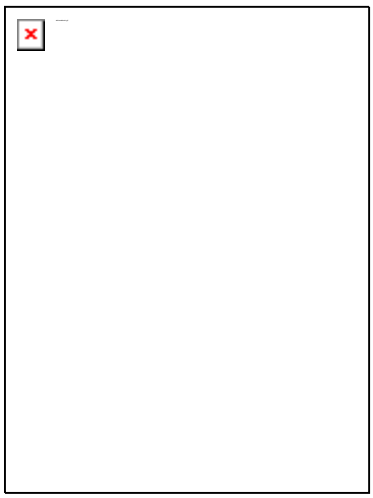

Table 9: Variables output by the CD Program

The database CD is designed to autorun from the CD drive of a desktop computer with a Windows operating system. That is, when the user inserts the CD in the drive, the program should automatically begin. Be patient. If that does not work (some people have turned off their autorun feature) use My Computer or Windows Explorer (NOT Internet Explorer) to open the CD and click (possibly double-click) on "OilSpill" (or "OilSpill.bat" if the extension is visible). First a black screen with legal verbiage pops up, then a window like the one at the top of this ("An Oil Spill CD") section appears.

Users can also copy all the files from the CD into an empty new folder on the hard drive (C: usually) made especially for the files from the CD ("C:\Louisiana Oil Spill Database Program" perhaps). Then, as before, click on "OilSpill" in the new folder. From the hard drive, the program runs faster, making this option preferable for those who work with the program often. When one presses the "Search" button, new windows appear that enable the user to select output. Users can select only those spills that match the search criteria chosen from various drop down lists, check boxes, and text entry fields. Note: The check boxes at the bottom right of the search window ("Oil", "Bio," and "Rad") refer to variables that were only added by the NRC in recent years and are, therefore, of limited utility. They are included with the expectation that as the data are updated in the future, the check boxes will be of more use.

Comments and suggestions are encouraged and should be sent to George Wooddell, wooddell@louisiana.edu, at the University of Louisiana, Lafayette.

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